CITY OF GOODLETTSVILLE
MUNICIPAL PLANNING COMMISSION
MEETING AGENDA

Monday September 14, 2026 5:00 PM

ITEM #1 Approval of September 14, 2026 Agenda

ITEM #2 Approval of August 3, 2026 Meeting Minutes

ITEM #3 Public Forum on Planning Related Topics

ITEM #4 Goodlettsville 56 Subdivision (Copper Valley)/Stivers Land Surveying: Request final plat approval for phase one of the subdivision development containing 53 single family residential lots and four open space parcels on 25.53 acres along Moncrief Avenue and McCoin Drive. The property is referenced as Davidson County Tax Map/Parcel# 02505500 and is zoned MDRPUD, Medium Density Residential Planned Unit Development. Property Owner: QLC Development, LLC

ITEM #5 Allen Farms/Collier Engineering Co, Inc.: Request final master plan approval for thirty-four (34) single-family lots located on 91.55 acres, along Allen Road with 35.82 acres of open space. The properties are referenced as Sumner County Tax Map 139 Parcels 98, 61, and 62.01 and Map 143 Parcel 33 and are zoned LDRPUD, Low Density Residential Planned Unit Development. Property Owner: Allen Farms Investment, LLC

ITEM #6 1043 Madison Creek Rd/Crawford & Cummings, P.C.: Request preliminary subdivision plat approval for four (4) residential lots on 19.66 acres. The property is referenced as Sumner County Tax Map 143 Parcel 18 and is zoned R-40, Low-Density Residential. Property Owner: Friends of Welch, LLC

ITEM #7 Rivergate Mall Redevelopment/CESO INC: Request revised final subdivision plat to consolidate and reconfigure the existing mall properties to create 21 lots. The properties are referenced as Davidson County Tax Map/Parcels# 02614006200 and 02614006300. The properties are zoned RC1, Regional Center Planned Unit Development High Intensity. Property Owners: Rivergate MP Holdings, LLC.

DISCUSSION ITEM

- Eubanks 5-Lot Subdivision (Brick Church Pike at Bell Street)

GOODLETTSVILLE CITY HALL MASSIE CHAMBERS

A government committed to operating with efficiency and integrity in all we do as we strive to enhance the quality of life for the community we serve.

CITY OF GOODLETTSVILLE
MUNICIPAL PLANNING COMMISSION
AGENDA STAFF REPORT

MONDAY SEPTEMBER 14, 2026 5:00 PM

ITEM #1 Approval of September 14, 2026 Agenda

STAFF NOTES: N/A

MOTION OPTIONS:

1. Approve as listed
2. Approve with agenda amendments as determined by the Planning Commission

ITEM #2 Approval of August 3, 2026 Meeting Minutes

STAFF NOTES: N/A

MOTIONS OPTIONS:

1. Approve as listed
2. Approve with minute amendments as determined by the Planning Commission

ITEM #3 Public Forum on Planning Related Topics

STAFF NOTES: N/A

MOTION OPTIONS: N/A

ITEM #4 Goodlettsville 56 Subdivision (Copper Valley)/Stivers Land Surveying: Request final plat approval for phase one of the subdivision development containing 53 single family residential lots and four open spaces on 25.53 acres along Moncrief Avenue and McCoin Drive. The property is referenced as Davidson County Tax Map/Parcel# 02505500 and is zoned MDRPUD, Medium Density Residential Planned Unit Development. Property Owner: QLC Development, LLC

STAFF NOTES:

The final plat for Goodlettsville 56 (Copper Valley) Subdivision, Phase 1, consists of 53 single-family residential lots and four common open-space parcels on approximately 25.53 acres along Moncrief Avenue and McCoin Drive.

The applicant also submitted a declaration of covenants and restrictions establishing the ownership and maintenance obligations of the common open space.

MOTION OPTIONS:

1. Approve the subdivision plat based on the plat meeting the City’s requirements

2. Deny the subdivision plat based on the plat not meeting the City's requirements as determined by the Planning Commission
3. Defer the request for the applicant to provide additional information at the October Planning Commission meeting

Staff recommendation to be provided at meeting

ITEM #5 **Allen Farms/Collier Engineering Co, Inc.:** Request final master plan approval for thirty-four (34) single-family lots located on 91.55 acres, along Allen Road with 35.82 acres of open space. The properties are referenced as Sumner County Tax Map 139 Parcels 98, 61, and 62.01 and Map 143 Parcel 33 and are zoned LDRPUD, Low Density Residential Planned Unit Development. Property Owner: Allen Farms Investment, LLC

STAFF NOTES:

The revised final master plan for Allen Farms Subdivision consists of 34 single-family residential lots located on 91.55 acres along Allen Road, with 35.82 acres of open space.

Below is a summary of prior actions on the development:

- **May 7, 2018:** Planning Commission approved plan of services for annexation
- **August 9, 2018:** City Commission approves first reading of rezoning, annexation, and plan of services
- **August 23, 2018:** City Commission approves second and final reading of rezoning, annexation, and plan of services
- **October 1, 2018:** Planning Commission defers final master plan for seventy-seven (77) single-family residential units
- **November 5, 2018:** Planning Commission approves final master plan for seventy-one (71) single-family residential units

Comprehensive Plan

Based on the recently updated Comprehensive Plan, the property lies within the Residential Neighborhood Preservation District. The district seeks to preserve existing residential subdivisions and neighborhoods by maintaining average lot sizes and limiting zoning uses in order to provide consistent property uses and densities. The district seeks to ensure that the development of vacant properties are generally consistent with the density and design of adjacent areas.

Surrounding Zoning

The proposal is zoned LDRPUD, Low Density Residential Planned Unit Development and R-25, Low Density Residential. The nearby Copper Creek Development is zoned MDRPUD, Medium Density Residential Planned Unit Development.

Dwelling Units per Acre

The current master plan, approved in November 2018, consisted of seventy-one (71) lots for single-family homes. This revised final master plan consists of thirty-four (34) lots for single-family homes. Thus, the latest proposal is a significant decrease in dwelling units per acre from 0.8 to 0.4. Lot sizes range from 0.69 acres to 2.11 acres.

Utility Approvals

The applicant has submitted proposed off-site utility improvements to White House Utility District (WHUD) for review and approval. The City will require water service and sewer service utility commitment letters from the White House Utility District (WHUD). The City will also require utility commitment letters from Piedmont Natural Gas and Nashville Electric Service (NES).

Traffic Impact Study

The initial Traffic Impact Study (TIS) based on the 71-unit development triggered minor widening improvements to the shoulders along Allen Rd. Given the smaller 34-unit development is anticipated to generate less vehicle traffic, the applicant is in the process of revising the Traffic Impact Study to determine if those improvements are still necessary.

Roadway Access

The revised proposal includes one roadway entrance to the subdivision off of Allen Rd and an internal loop street within the subdivision to serve the residential lots. The cross section of the roadway consists of two 11-ft travel lanes (with a 15-ft grass median at the entrance), two 2-ft curb and gutter, two 7-ft grass strip, and two 5-ft concrete sidewalks.

According to the Fire Code, where there are more than 30 dwelling units accessed from a single public or private fire apparatus access road and all dwelling units are equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3, access from two directions shall not be required. Given that the single entrance serves 32 dwelling units, all units must be equipped with an automatic sprinkler system.

The gated entrance will comply with the City’s emergency-access gate requirements.

Open Space

The revised final master plan proposes 35.82 acres or thirty-nine (39) percent of the subdivision as open space, significantly higher than the required ten (10) percent dedicated to open space.

Setbacks

The final master plan meets setback requirements, and 35-ft rear setbacks exceeds minimum rear setback requirements of 20 feet for lots.

Parking

The final master plan appears to meet parking requirements of four spaces per unit, however a parking schedule is needed to confirm the number of parking spaces required and spaces provided for each dwelling type and for the development as a whole, and also indicates the number of parking spaces provided at the mail kiosk.

Landscaping

The landscaping plan exceeds requirements for overall tree-density by providing 11,137 acquired caliper inches (ACI), nearly double the required 6,408 ACI. It also exceeds the street-tree requirements by providing 181 trees, slightly more than the required 172 trees. It is unclear whether buffer type requirements are met.

Lighting

Awaiting submission of lighting plan.

Outstanding Issues

Staff's review identified outstanding issues that still need to be addressed, including the following:

- **Drainage and Stormwater:** Show details of the stormwater detention pond and two bioretention ponds and drainage details; Provide structural details for ponds along the face of fill retaining walls
- **Utilities Issues:** There are some inlets and storm pipes that are very deep (35'). The City will need to approve these depths since they will be responsible for maintenance of the storm sewer system.
- **General Issues:** Need lighting plan, updated traffic impact study, and declaration of covenants and restrictions establishing the ownership and maintenance obligations of the common open space

STAFF STIPULATIONS:

1. Obtain approval from WHUD on proposed water and sewer infrastructure.
2. Submit and receive staff approval of lighting plan
3. Update traffic impact study
4. Submit and receive staff approval of declaration of covenants and restrictions establishing the ownership and maintenance obligations of the common open space
5. Provide fire flow calculations for hydrants once complete
6. Complete City's Engineer Consultant plan review comments prior to any project land disturbance permit issuance
7. Obtain TDEC approvals for necessary permits

MOTION OPTIONS:

1. Approve the final master plan with the defined staff stipulations.
2. Deny the final master plan and define the needed plan amendments based on the Planning Commission's determination during the meeting that the final master plan does not meet the City's Subdivision Regulations and Zoning Ordinance
3. Defer the request for the applicant to provide additional requested information as determined by the Planning Commission during the meeting discussion.

Staff recommendation to be provided at meeting

ITEM #6 **Madison Creek Rd/Crawford & Cummings, P.C.:** Request preliminary subdivision plat approval for four (4) residential lots on 19.66 acres. The property is referenced as Sumner County Tax Map 143 Parcel 18 and is zoned R-40, Low-Density Residential. Property Owner: Friends of Welch, LLC

STAFF NOTES:

The preliminary plat subdivides 19.66 acres into four (4) residential lots served by two easements, one easement off Madison Creek Road and a second easement off Crencor Drive.

The City of Goodlettsville Subdivision Regulations state the following:

Provided, further, that when a permanent easement to a public street is used as access to a lot or tract of land having been or being separated by deed or plat from other property, such easement shall be at least fifty (50) feet in width from and after the time of adoption of these regulations and shall not be used to provide access to more than one lot or tract of land.

The preliminary plat proposes a 50-ft easement off Madison Creek Road to serve Lot 1 and Lot 2 and a 50-ft easement off Crencor Drive to serve Lot 3 and Lot 4. However, in functionality, all lots will utilize the easement off Madison Creek Road for access to and from their property. Given that an easement from the public street cannot serve more than one additional lot, the proposal for all four lots to utilize the 50-ft easement will not meet the subdivision regulations. It will also not meet the fire code. The fire code requires a fire-apparatus road when there are more than two residential dwelling units. In addition, the fire-apparatus road must be an asphalt, concrete, or other approved all-weather surface capable of supporting fire apparatus weighing up to 87,000 pounds. The Fire Code also notes that a dead-end fire apparatus road over 750 feet requires special approval from the Fire Code Official.

Flood Hazards

The existing driveway along Madison Creek Rd lies with the FEMA floodway. Widening of the existing bridge will require the applicant to prepare an engineering design to demonstrate no rise or alteration of the FEMA base flood elevation in the area before the City permits construction. The widened bridge cannot increase the modeled 1%-annual-chance flood elevation at any location upstream or downstream.

The applicant will likely need to obtain a TDEC ARAP Aquatic Resource Alteration Permit for altering the creek area.

Fire Hydrant

The Fire Code requires that fire hydrants shall be located within six hundred (600) feet of any residential, commercial or industrial lot. However, lots of five acres or greater are except. Lot 2 is the only lot below five acres, and it lies within 600 feet of the existing fire hydrant along Madison Creek.

MOTION OPTIONS:

1. Approve the subdivision plat based on the plat meeting the City's requirements
2. Deny the subdivision plat based on the plat not meeting the City's requirements as determined by the Planning Commission
3. Defer the request for the applicant to provide additional information at the September Planning Commission meeting

Staff recommendation to be provided at meeting

ITEM #7 **Rivergate Mall Redevelopment/CESO INC:** Request revised final subdivision plat to consolidate and reconfigure the existing mall properties to create 21 lots. The properties are referenced as Davidson County Tax Map/Parcels# 02614006200 and 02614006300. The properties are zoned RC1, Regional Center Planned Unit Development High Intensity. Property Owners: Rivergate MP Holdings, LLC.

STAFF NOTES:

The final plat for Rivergate Mall Redevelopment consolidates and reconfigures the existing mall properties to create 21 lots.

MOTION OPTIONS:

1. Approve the subdivision plat based on the plat meeting the City's requirements
2. Deny the subdivision plat based on the plat not meeting the City's requirements as determined by the Planning Commission
3. Defer the request for the applicant to provide additional information at the October Planning Commission meeting

DISCUSSION ITEMS

Eubanks 5-Lot Subdivision (Brick Church Pike at Bell Street)

STAFF NOTES:

The City of Goodlettsville's Planning Commission approved the Eubanks 5-lot subdivision plat in January 2023. Although the underlying R10-Medium Density Residential zoning permits duplexes and single-family units, the plat has the following restrictions/limitations:

- Minimum 1,000 SF one family detached dwelling required with an attached one-car garage with the one-car garage minimum dimension of nine (9') feet x twelve (12') feet

The developer desires to build 10 single-family units (two units per lot) and requests for the Planning Commission to consider an amendment to the subdivision plat to remove the single-family detached dwelling restriction in order to do so.

OFFICIAL MINUTES OF THE MEETING

GOODLETTSVILLE PLANNING AND ZONING COMMISSION

August 3, 2026 Goodlettsville City Hall
5:00 p.m. Massie Chambers-Auditorium

Present: Chairman Scott Trew, Billy Barnfield, Commissioner Cisco Gilmore, Jeff Parnell, Mayor Rusty Tinnin and Judy Wheeler.

Absent: Terry Coats

Also Present: Sean Pfalzer (Staff), Tim Ellis-City Manager, Julie High-Assistant City Manager, Russell Freeman-City Attorney, Sharon Reed (Staff), and Jenni Spivey (Staff).

Trew called the meeting to order, and Commissioner Gilmore offered prayer.

Item #1 Approval of Agenda: Wheeler made a motion to approve the agenda, Barnfield seconded the motion. The motion passed.

Item #2 Approval of July 6, 2026 Meeting Minutes: Parnell made a motion to approve the minutes of the July 6, 2026 meeting, Mayor Tinnin seconded the motion. The motion passed.

Item #3 Trew opened the Public Forum on Planning Related Topics.
No one requested to speak at the meeting.
Commissioner Gilmore made a motion to close the public forum, seconded by Mayor Tinnin. The motion passed.

The Public Forum was closed.

AGENDA

Item #4 Meridian Capital Group, LLC, Dry Creek Cottages: Requests letter of credit one-year extension.

Item Representative: Sean Pfalzer, Staff

Staff Discussion:

- The current $ 235,000 performance bond expires August 26, 2026.
- The project construction has lapsed.
- The project plan includes sixteen (16) cottage style residential units set up as fourteen (14) detached one family condo style lots and a two (2) unit attached dwelling.
- The remaining project improvements include utilities, private drive and parking, sidewalks, retaining wall, storm water, landscaping, and lighting.
- The recorded project master deed includes the fourteen (14) detached one family condo style lots.
- Staff recommends any approved bond extension be increased by two (2%) for inflation for the 2026-2027 bond period.

- **Motion Options:**
  1. Approval for one-year bond extension and bond amount increase to $ 239,700 two (2%) percent increase. (Staff Recommendation)
  2. Approval of one-year bond extension at amount determined by Planning Commission based on information provided during meeting.
  3. Denial of one-year bond extension to direct staff to request payment on bond to prioritize and complete the remaining project improvements.

Planning Commission Discussion:

- Parnell asked if we know how much longer they have before they get started or the approval becomes void?
- Pfalzer responded that this dates back to 2017 and they have been here with different proposals that have been turned down so there is movement towards moving forward.

Motion: Motion by Mayor Tinnin for approval of one-year bond extension and bond amount increase to $ 239,700 a two (2%) percent increase, seconded by Parnell. The motion passed unanimously.

Item #5 Rose Hill Park/ Southern Precision Land Surveying, Inc.: Requests final subdivision plat for three (3) residential lots and roadway cul-de-sac construction on 2.87 acres at the end of Rosehill Drive. Property referenced as Davidson County Tax Map/Parcel# 02508004600 and is zoned R-10, Medium Density Residential. Property Owners: Rosehill Park, LLC

Item Representative: Brian McCain, Surveyor and Tom Harris, Accoa

Staff Discussion:

- At the March 2 meeting, the Planning Commission approved preliminary subdivision plat for six (6) units on three (3) residential lots and construction plan approval with staff stipulations.
- The final plat subdivides 2.87 acres into three (3) residential lots, right-of-way dedication, and common open space.
- The plat also depicts water and sewer service line connections.

- **Staff Stipulations:**
  1. Obtain approval from Madison Suburban Utility District on proposed water infrastructure and label water lines and fire hydrants accordingly.
  2. Identify and label the proposed bioretention pond.
  3. Provide documentation confirming that all easements necessary to connect to City sewer system are in place.
  4. Post a performance bond in the amount of $243,540 to guarantee completion of the required roadway and sewer infrastructure.
  5. Prepare and submit a declaration of covenants and restrictions establishing the ownership and maintenance obligations of the common open space for review and approval by the City.

- **Motion Options:**
  1. Approve the subdivision plat with staff stipulations based on the plat meeting the City's requirements.

2. Deny the subdivision plat based on the plat not meeting the City's requirements as determined by the Planning Commission.
3. Defer the request for the applicant to provide additional information at the September Planning Commission meeting.

Planning Commission Discussion:

- McCain stated that items one (1) through three (3) have been addressed.
- McCain stated that item four (4) the owner is in contact with the engineer and pretty much taken care of that.
- McCain stated that item five (5) the owner is working with his attorney to make sure the HOA documents are done correctly.
- McCain stated that all five (5) items are minor and would like to ask for conditional approval for the five (5) items.
- Trew asked how long it would take to get all this done.
- McCain responded the only thing that may take time would be the HOA documents.
- Parnell asked, are there any changes from what we have seen and approved previously?
- McCain responded the only thing would be the bioretention and the placing of the fire hydrant on there.
- Commissioner Gilmore commented that it was discussed in the past about this being gated, but was changed last meeting is that correct?
- Harris responded that it would be public and open instead of private with a gate.
- Barnfield asked where will the retention pond drain, will it drain onto the property next door or where?
- Harris responded it will drain to the creek. It is just a holding area and will let loose slowly out into the creek in a flash flood situation.

Motion: Motion by Parnell to approve the subdivision plat with staff stipulations, seconded by Commissioner Gilmore.

- Commissioner Gilmore commented they have talked about this project for a while now, and the community is eager to see some construction begin.

The motion passed unanimously.

Discussion Items

Cedarside at Dry Creek (Commercial Parcels)

- The City of Goodlettsville's Planning Commission approved the master plan for Cedarside at Dry Creek in 2022 that included 117 townhomes and approximately 3 acres for commercial space.
- More than half of the townhomes have been completed, however no construction has begun on the commercial pads given market conditions.
- Given that no tenants have occupied two bays at the recently completed Avalon gas station and convenience store just south of Cedarside at Dry Creek along Dickerson Pike, and the second building with four bays not constructed yet, Cedarside at Dry Creek believes there are challenges to developing commercial space along this segment of the corridor.

- The developer has created an alternative concept that proposes an additional 30 residential townhouse units instead of commercial space for consideration by the Planning Commission.

Michael Natelli, Developer

- Natelli stated that the Cedarside site plan shows 117 townhomes and the Avalon gas station and convenience store which we did not develop.
- Natelli stated that the original concept for Dry Creek Farms subdivision conceived of a retail component on all of that land including the Avalon station, a retail center anchored by a grocery store.
- Natelli stated twenty-five (25) years later the only retail that has been constructed on that land is the Avalon gas station and convenience store.
- Natelli stated they have only constructed one (1) building and since that building was completed, two (2) bays in that building are empty, and they have not begun construction on the other building with four (4) bays.
- Natelli stated that we have probably built in 150 communities over time and many of those communities have large retail components including tenants like McDonalds, Starbucks, day care facilities and national grocery chains, and none of those retailers have expressed any interest in occupying pads on this site.
- Natelli stated given the 25-year history of the site and the lack of retail interest on our site, we ask that you please consider allowing us to construct town homes on the commercial pads on our site.
- Natelli stated all the homes are constructed in Phase II and Phase I is about halfway done.
- Trew commented he would hate to give up the commercial side of the development.
- Natelli stated that they would love to find a retail user and would be happy to work with our Economic Development team to find someone interested in the commercial pads.
- Commissioner Gilmore asked of the tenants you have worked with in the past, did they give you any reason why they are not interested in this particular property?
- Natelli responded they do not give reasons, but I am guessing it is a bit of an island and there is not much other retail around it.
- Commissioner Gilmore commented he echoed what chairman Trew stated he would hate to lose commercial space to more residential on the main thoroughfare.
- Parnell asked if the commercial pads are separate lots and could they be sold separately?
- Natelli responded yes plats for each of those parcels could be created.
- Barnfield commented since I have been on the board, commercial space is premium and if you cannot find what you would need to put on there, I would say sell because I'm not inclined to do houses on it.
- City Manager Ellis commented over the past decade, this board has preserved the road frontage for commercial through that entire corridor. This board's work is to plan for the future, so personally and professionally I would hate to see a variance from what has been established.
- Trew commented that this is not a voting item, but I think I speak for everybody when I state we want to preserve as much commercial property as we can, especially on the road frontage on this busy highway.

DRAFT

Zoning Map Update

- The City of Goodlettsville's Community Development Services Department has utilized an online zoning map for the last four to five years to help navigate zoning districts by parcel across the City.
- The map is utilized internally by city staff on planning and zoning requests. It is publicly available and can also be used externally by commissioners, property owners, developers, engineering firms, surveyors, real estate agents, etc.
- The current version allows users to search zoning by address, view zoning districts, zoning overlays, city limits, and counties, and toggle between different basemap options.
- The current version of the application will no longer be hosted and the frequent requests received by the Community Development Services department, staff identified the following enhancements to incorporate into an update to the zoning map.
    - **Add Relevant Links:** Links to Comprehensive Plan, Zoning Ordinance, Subdivision Regulations, and Design Guidelines available in the "Header" tab
    - **Add Additional Layers:** Sewer system coverage area, floodplains, sidewalk network, etc. data layers available under the "Layers" icon
    - **Add Relevant Plans:** Master plans, site plans, plats, etc. available in the pop-up window.
- Staff provided a link to a draft version of the Zoning Map for review and input and asked them to share comments, questions, concerns, and/or suggestions to make this application a useful tool for all.

Public Chapter No. 980 – Senate Bill No. 2509- Tennessee Child Care Red Tape Reduction Act.

- Passed in the legislature this year to reduce unnecessary challenges or obstacles to building childcare facilities within the State.

With no further business, the meeting was adjourned at 5:52 pm.

_____ _____

Scott Trew, Chairman Sharon Reed, Planning Assistant

DRAFT

SURVEYOR'S NOTES-

1. The purpose of this plat is to subdivide the property into 53 residential lots and 4 open spaces.
2. The utility information shown hereon was taken from actual field evidence, utility agency records, or any other available evidence. Other utilities may exist and may not be shown, or may vary from where shown. No guarantee is expressed or implied in regard to the utility locations shown hereon. The Owner(s) and Contractor(s) should assume responsibility to verify utility existence, size, location, depth, and availability of service, and be solely responsible for contacting the utility location service prior to commencing construction.
3. Subsurface and environmental conditions were not examined or considered as a part of this survey. No statement is made concerning the existence of underground containers, facilities, wells wetlands, sinkholes, unmarked grave sites, or debris that may affect the use or development of this tract.
4. This drawing was prepared in accordance with my field survey notes. It shows improvements as they exist to the best of my knowledge, but is not guaranteed to be correct in each and every detail.
5. The property shown hereon is located in, Goodlettsville, Davidson County, Tennessee. All matters pertaining to construction, use, location of improvements, signage, parking, noise, vibration, emissions, fire hazards, landscaping, radiation, illumination, setback provisions, etc., are subject to the Zoning Regulations as interpreted and regulated by the Department of Planning and Codes.
6. The Surveyor's liability for this document shall be limited to the party shown in the title of the survey, and does not extend to any unnamed person or entities without an expressed re-certification.
7. This property is zoned MDRPUD, Medium Density Residential Planned Unit Development.

LINE	BEARING	DISTANCE
L1	S 29°31'46" W	4.42'
L2	N 50°47'13" E	17.23'
L3	S 50°47'13" W	8.88'
L4	S 23°25'10" W	24.88'
L5	N 50°47'13" E	30.00'
L6	S 50°48'13" W	30.00'
L7	N 39°11'47" W	9.33'
L8	S 34°01'39" W	10.80'
L9	S 64°44'22" W	61.44'

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	25.00'	28.77'	27.20'	N 66°33'39" W	65°55'32"
C2	315.00'	249.45'	242.98'	N 56°17'02" W	45°22'20"
C3	25.00'	28.70'	27.15'	N 46°05'15" W	65°45'54"
C4	225.00'	167.95'	164.08'	N 34°35'20" W	42°46'03"
C5	175.00'	128.80'	125.92'	S 45°01'49" E	42°10'15"
C6	25.00'	46.68'	40.19'	S 29°32'36" W	106°58'35"
C7	315.00'	88.55'	88.26'	S 74°58'42" W	16°06'24"
C8	315.00'	51.13'	51.07'	S 62°16'29" W	9°18'01"
C9	315.00'	51.13'	51.07'	S 52°58'28" W	9°18'01"
C10	315.00'	51.13'	51.07'	S 43°40'27" W	9°18'01"
C11	315.00'	52.02'	51.96'	S 34°17'36" W	9°27'41"
C12	275.00'	55.22'	55.13'	S 35°18'56" W	11°30'21"
C13	275.00'	46.65'	46.59'	S 45°55'39" W	9°43'07"
C14	225.00'	28.09'	28.07'	S 47°12'39" W	7°09'07"
C15	225.00'	49.41'	49.31'	S 37°20'37" W	12°34'57"
C16	225.00'	29.97'	29.95'	S 27°14'09" W	7°37'58"
C17	125.00'	19.56'	19.54'	S 18°56'14" W	8°57'52"
C18	125.00'	45.16'	44.92'	S 04°06'17" W	20°42'01"
C19	125.00'	45.16'	44.92'	S 16°35'44" E	20°42'01"
C20	125.00'	45.16'	44.92'	S 37°17'46" E	20°42'01"
C21	125.00'	45.16'	44.92'	S 57°59'47" E	20°42'01"
C22	125.00'	72.04'	71.05'	S 84°51'27" E	33°01'18"
C23	125.00'	104.72'	101.68'	S 77°23'07" E	47°59'59"
C24	25.00'	48.27'	41.12'	S 01°57'00" W	110°38'16"
C25	25.00'	38.75'	34.98'	S 89°35'24" W	88°47'59"
C26	175.00'	169.08'	162.58'	N 73°41'21" W	55°21'30"
C27	75.00'	135.62'	117.88'	N 49°33'56" W	103°36'20"
C28	75.00'	27.73'	27.57'	N 12°49'42" E	21°10'57"
C29	175.00'	83.59'	82.80'	N 37°06'12" E	27°22'02"
C30	325.00'	120.39'	119.70'	N 40°10'29" E	21°13'27"
C31	265.00'	88.15'	87.75'	N 39°05'33" E	19°03'35"
C32	265.00'	95.74'	95.22'	N 58°58'22" E	20°42'02"
C33	265.00'	95.74'	95.22'	N 79°40'24" E	20°42'02"
C34	265.00'	95.74'	95.22'	S 79°37'34" E	20°42'02"
C35	265.00'	136.42'	134.92'	S 54°31'40" E	29°29'47"
C36	25.00'	43.94'	38.50'	S 10°34'23" W	100°42'21"
C37	130.00'	46.97'	46.71'	N 79°37'33" W	20°42'03"
C38	130.00'	46.97'	46.71'	S 79°40'24" W	20°42'03"
C39	130.00'	46.97'	46.71'	S 58°58'22" W	20°42'03"
C40	130.00'	43.24'	43.05'	S 39°05'33" W	19°03'35"
C41	460.00'	50.24'	50.22'	S 47°39'28" W	6°15'29"
C42	40.00'	19.11'	18.92'	S 37°06'12" W	27°22'02"
C43	260.00'	80.43'	80.11'	N 56°30'32" W	17°43'31"
C44	260.00'	93.94'	93.43'	N 37°17'46" W	20°42'01"
C45	260.00'	93.94'	93.43'	N 16°35'44" W	20°42'01"
C46	260.00'	93.94'	93.43'	N 04°06'17" E	20°42'01"
C47	260.00'	40.68'	40.64'	N 18°56'14" E	8°57'52"
C48	360.00'	47.98'	47.92'	N 27°14'09" E	7°37'58"
C49	360.00'	79.06'	78.90'	N 37°20'37" E	12°34'57"
C50	360.00'	44.94'	44.91'	N 47°12'39" E	7°09'07"
C51	140.07'	23.71'	23.68'	S 45°56'59" W	9°41'50"
C52	140.07'	28.15'	28.11'	N 35°20'35" E	11°30'59"
C53	450.00'	73.28'	73.20'	N 34°22'15" E	9°19'50"
C54	450.00'	72.96'	72.88'	N 43°40'52" E	9°17'24"
C55	450.00'	72.96'	72.88'	N 52°58'16" E	9°17'24"
C56	450.00'	72.96'	72.88'	N 62°15'40" E	9°17'24"
C57	450.00'	72.45'	72.38'	N 71°31'07" E	9°13'31"
C58	460.02'	217.69'	215.66'	S 78°04'47" W	27°06'48"
C59	1308.00'	233.83'	233.52'	N 74°39'02" E	10°14'35"
C60	508.00'	108.70'	108.49'	N 63°23'57" E	12°15'37"
C61	508.00'	107.09'	106.89'	N 51°13'47" E	12°04'43"
C62	508.00'	143.80'	143.32'	N 37°04'51" E	16°13'07"
C63	1795.18'	257.74'	257.52'	N 33°23'18" E	8°13'34"
C64	409.27'	149.92'	149.08'	N 48°02'25" E	20°59'16"
C65	283.15'	108.42'	107.76'	N 69°30'24" E	21°56'21"
C66	283.15'	48.14'	48.08'	N 85°20'48" E	9°44'27"



VICINITY MAP
NOT TO SCALE

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
1	127,144.61	2.92
2	9,632.81	0.22
3	9,632.80	0.22
4	9,632.79	0.22
5	9,467.55	0.22
6	7,560.19	0.17
7	7,560.72	0.17
8	7,561.25	0.17
9	8,112.94	0.19
10	7,560.00	0.17
11	7,560.00	0.17
12	7,560.00	0.17
13	7,560.00	0.17
14	7,560.00	0.17
15	7,560.00	0.17
16	7,560.00	0.17
17	7,560.00	0.17
18	7,560.00	0.17
19	10,300.52	0.24
20	7,560.00	0.17

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
21	7,560.00	0.17
22	7,560.00	0.17
23	7,560.00	0.17
24	7,560.00	0.17
25	7,514.86	0.17
26	9,270.24	0.21
27	9,389.03	0.22
28	9,389.03	0.22
29	9,389.03	0.22
30	8,352.08	0.19
31	7,560.00	0.17
32	7,560.00	0.17
33	7,560.00	0.17
34	7,560.00	0.17
35	7,560.00	0.17
36	8,234.40	0.19
37	8,671.76	0.20
38	8,191.93	0.19
39	7,560.00	0.17
40	7,560.00	0.17

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
41	7,560.00	0.17
42	7,560.00	0.17
43	7,560.00	0.17
44	7,549.55	0.17
45	7,541.35	0.17
46	7,543.42	0.17
47	8,510.14	0.20
48	8,679.63	0.20
49	8,359.90	0.19
50	8,345.51	0.19
51	8,345.37	0.19
52	8,346.17	0.19
53	14,537.64	0.33

Open Space Areas		
PARCEL	SQ. FT.	ACRES
OS-1	340,543.26	7.82
OS-2	182,217.94	4.18
OS-3	27,382.27	0.63
OS-4	4,039.50	0.09

STIVERS LAND SURVEYING

PREPARED BY
STIVERS LAND SURVEYING
RLS 2219
1134 LAKEWOOD DR., GALLATIN TN. 37066
615-939-1171

OWNER INFORMATION:
CLQ DEVELOPMENT, LLC
MARK HANSON
PO BOX 264,
ARRINGTON, TN. 37014

LEGEND

CONCRETE MONUMENT	MON(O)
POWERPOLE	
IRON ROD (NEW)	IR(N)
GUY WIRE	
FENCE LINE	X X
SANITARY SEWER MANHOLE	S
PROPERTY LINE	
FIREHYDRANT	
CURB INLET	
AREA DRAIN	
SANITARY SEWER LINE	SA
STORM SEWER LINE	ST
JOINT TRENCH	JT

JASON J. STIVERS
REGISTERED LAND SURVEYOR
AGRICULTURE
COMMERCE
5/8/14
TENNESSEE NO. 2219

CERTIFICATION OF COMMON AREAS DEDICATION

(Owner) in recording this plat has designated certain areas of land shown hereon as common areas intended for use by the homeowners within

Name of Subdivision: Copper Valley Final Plat

for recreation and related activities. The above described areas are not dedicated for use by the general public, but are dedicated to the common use of the homeowners within the named subdivision.

The "Declaration of Covenants and Restrictions," applicable to the above named subdivision, is hereby incorporated and made a part of this plat.

20
Date Owner

CERTIFICATE OF ACCURACY

I (we) hereby certify that this is a true and accurate survey of the property shown hereon to the accuracy required by the Goodlettsville Planning Commission and that the monuments have been placed as required by those regulations. This is a category I Land Survey and the ratio of precision of the unadjusted survey is equal to or greater than 1:10,000.

20
Date Registered Land Surveyor, Number ___

CERTIFICATE OF OWNERSHIP AND DEDICATION

I (we) hereby certify that I am (we are) the owner(s) of the property shown and described hereon as evidenced in Book Number___, page ___, County Registers Office, and that I (we) hereby adopt this plan of subdivision with my (our) free consent, establish the minimum building restriction lines and that offers of irrevocable dedication for all public streets, utilities, and other facilities have been filed.

20

Title (if acting for partnership or corporation)

CERTIFICATE OF APPROVAL OF WATER SYSTEM

I hereby certify that the water system(s) outlined or indicated on the final subdivision plat entitled Copper Valley has/have been installed in accordance with current local and state government requirements, or a sufficient bond or other surety has been filed to guarantee said installation.

20
Date Madison Suburban Utility District
Jim Wade

CERTIFICATE OF APPROVAL OF SEWER SYSTEMS

I hereby certify that the sewer systems outlined or indicated on the final subdivision plat entitled Copper Valley have been installed in accordance with current local and state government requirements or a sufficient bond or cash has been filed which will guarantee said installation.

20
Date City of Goodlettsville
Steve Diviney

CERTIFICATE OF APPROVAL OF STREETS OR BOND POSTING

I hereby certify: (1) that all designated public streets on this final subdivision plat have been installed in an acceptable manner and according to the specifications of the Goodlettsville Subdivision Regulations, or (2) that a performance bond or other surety has been posted with the planning commission to guarantee completion of all required improvements in case of default.

20
Date Director of Public Works

CERTIFICATE OF APPROVAL FOR RECORDING

I hereby certify that the subdivision plat shown hereon has been found to comply with the Goodlettsville Subdivision Regulations, with the exception of such variances, if any, as are noted in the minutes of the planning commission, and that it has been approved for recording in the Office of the County Register.

20
Date Secretary, Planning Commission

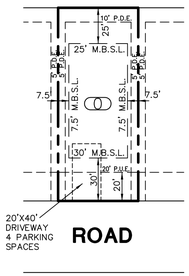
FINAL PLAT OF
COPPER VALLEY FINAL PLAT PHASE 1

SUBD-

CITY OF GOODLETTSVILLE, 10TH CIVIL DISTRICT, DAVIDSON COUNTY, TENNESSEE

TOTAL ACRES = 25.53 ±	TOTAL LOTS = 53
53 SINGLE FAMILY RESIDENCES AND 4 OPEN SPACES	
OWNER: CLQ DEVELOPMENT LLC	CIVIL DISTRICT: 10TH
SCALE: 1" 50'	CITY OF GOODLETTSVILLE
SURVEYOR: JASON J. STIVERS	JOB #25-18
DAVIDSON COUNTY	STATE OF TENNESSEE
DATE: AUGUST 28, 2026	SHEET NO. 1 OF 3

TYPICAL LOT LAYOUT



MONCRIEF AVE.

BOBBY MCGEE WAY

IR(O) W/CAP

ANDREW F. DAHLHAUSER
IN-20140908 0081941

DETENTION POND

PARCEL ID 0250000055.00
CLO DEVELOPMENT, LLC
IN. 20251230103563

FRANKLIN HEIGHTS
PHASE 2, SECTION 2
PB 8250, PG 219 RODCT

10' RETAINING WALL EASEMENT

100' TVA EASEMENT PER BOOK 1163, PG 403 RODCT

DRAINAGE EASEMENT

MATCH LINE SHEET 2 / SHEET 3

13

14

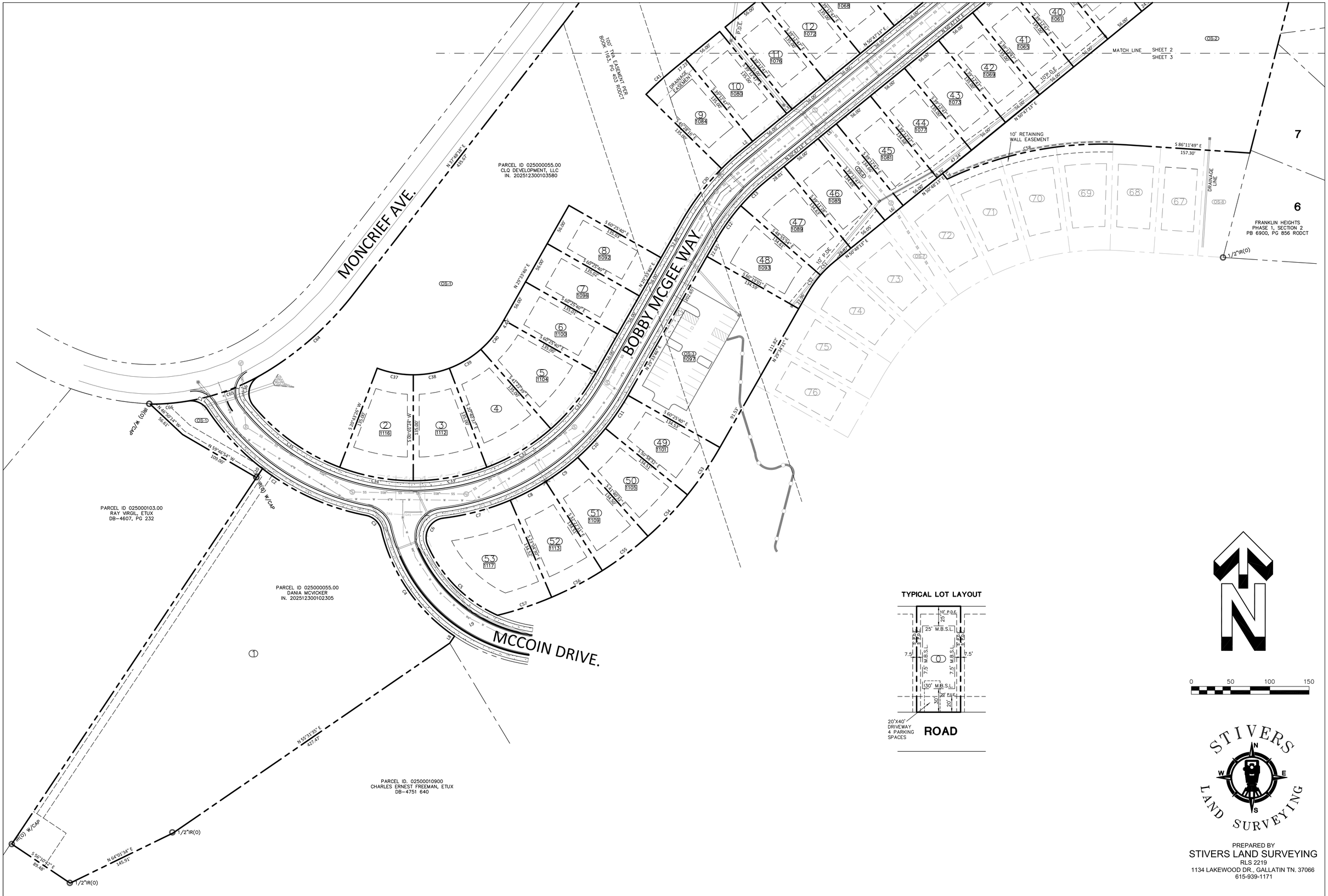
12

8

0 50 100 150

STIVERS LAND SURVEYING

PREPARED BY
STIVERS LAND SURVEYING
RLS 2219
1134 LAKEWOOD DR., GALLATIN TN. 37066
615-939-1171


MONCRIEF AVE.
BOBBY MCGEE WAY
MCCOIN DRIVE.
PARCEL ID 025000055.00
CLQ DEVELOPMENT, LLC
IN. 202512300103580
PARCEL ID 025000103.00
RAY VIRGIL, ETUX
DB-4607, PG 232
PARCEL ID 025000055.00
DANIA MCVICKER
IN. 202512300102305
PARCEL ID. 02500010900
CHARLES ERNEST FREEMAN, ETUX
DB-4751 640
100' TVA EASEMENT PER BOOK 1163, PG 403 RODCT
10' RETAINING WALL EASEMENT
MATCH LINE SHEET 2 SHEET 3
FRANKLIN HEIGHTS
PHASE 1, SECTION 2
PB 6900, PG 856 RODCT
DRAINAGE LINE
DRAINAGE EASEMENT
TYPICAL LOT LAYOUT
25' M.B.S.L.
30' M.B.S.L.
7.5' M.B.S.L.
20'X40' DRIVEWAY 4 PARKING SPACES
ROAD
0 50 100 150
STIVERS LAND SURVEYING
PREPARED BY
STIVERS LAND SURVEYING
RLS 2219
1134 LAKEWOOD DR., GALLATIN TN. 37066
615-939-1171
SHEET 3 OF 3

AFTER RECORDING RETURN TO:

_____

_____

_____

_____

EMAIL: _____

DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR

COPPER VALLEY HOMEOWNERS ASSOCIATION, INC.

DAVIDSON COUNTY, TENNESSEE

Declarant: **CLQ DEVELOPMENT, LLC, a Tennessee limited liability company**

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DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR
COPPER VALLEY HOMEOWNERS ASSOCIATION SUBDIVISION

This Declaration of Covenants, Conditions and Restrictions (the "**Declaration**") is made by **CLQ DEVELOPMENT, LLC,** a Tennessee limited liability company ("**Declarant**"), and is as follows:

R E C I T A L S:

A. This Declaration is filed with respect to that certain real property located in Sumner County, Tennessee, as more particularly described on Exhibit "A" attached hereto and incorporated herein for all purposes (the "**Property**"). Declarant owns the Property.

B. Declarant desires to create and carry out a uniform plan for the development, improvement, and sale of the Property.

C. Upon Recordation of this Declaration, the Property is subject to the terms and provisions of this Declaration.

NOW, THEREFORE, it is hereby declared: (i) that the Property (or any portion thereof) will be held sold, conveyed, and occupied subject to the following covenants, conditions and restrictions which will run with such portions of the Property and will be binding upon all parties having right, title, or interest in or to such portions of the Property or any part thereof, their heirs, successors, and assigns and will inure to the benefit of each owner thereof; and (ii) that each contract or deed conveying the Property (or any portion thereof) will conclusively be held to have been executed, delivered, and accepted subject to the following covenants, conditions and restrictions, regardless of whether or not the same are set out in full or by reference in said contract or deed.

This Declaration uses notes (text set apart in boxes) to illustrate concepts and assist the reader. If there is a conflict between any note and the text of this Declaration, the text will control.

ARTICLE 1
DEFINITIONS

Unless the context otherwise specifies or requires, the following words and phrases when used in this Declaration will have the meanings hereinafter specified:

"**Applicable Law**" means all statutes, public laws, ordinances, policies, rules, regulations and orders of all federal, state, county and municipal governments or their agencies having jurisdiction and control over the Property in effect at the time a provision of the Restrictions is applied, and pertaining to the subject matter of the Restriction provision, and all other ordinances, and any other applicable building codes, zoning restrictions and permits or other applicable regulations. Statutes and ordinances specifically referenced in the Restrictions are "Applicable Law" on the date of the Restrictions, and are not intended to apply to the Property if they cease

to be applicable by operation of law, or if they are replaced or superseded by one or more other statutes or ordinances.

"**Architectural Control Committee**" or "**ACC**" means the committee created pursuant to this Declaration to review and approve or deny plans for the construction, placement, modification, alteration or remodeling of any Improvements on a Lot. As provided in *Article 7* below, Declarant acts as the ACC and the ACC is not a committee of the Association until Declarant has assigned its right to appoint and remove all ACC members to the Association in a Recorded written instrument.

"**Assessment**" or "**Assessments**" means all assessments imposed by the Association under this Declaration.

"**Assessment Unit**" has the meaning set forth in *Section 6.7.2*.

"**Association**" means Copper Valley Homeowners Association, a Tennessee nonprofit corporation, which will be created by Declarant to exercise the authority and assume the powers specified in *Article 4* and elsewhere in this Declaration. The failure of the Association to maintain its corporate charter from time to time does not affect the existence or legitimacy of the Association, which derives its authority from this Declaration, the Charter, the Bylaws, and Applicable Law.

"**Board**" means the Board of Directors of the Association.

"**Bulk Rate Contract**" or "**Bulk Rate Contracts**" means one or more contracts which are entered into by the Association for the provision of utility services or other services of any kind or nature to the Lots. The services provided under Bulk Rate Contracts may include, without limitation, cable television services, telecommunications services, internet access services, "broadband" services, security services, trash pick-up services, propane service, natural gas service, lawn maintenance services, wastewater services, and any other services of any kind or nature which are considered by the Board to be beneficial to all or a portion of the Property. Each Bulk Rate Contract must be approved in advance and in writing by Declarant until expiration or termination of the Development Period.

"**Bylaws**" means the bylaws of the Association, which may be initially adopted and Recorded by Declarant or the Board of the Association and Recorded as part of the initial project documentation for the benefit of the Association. The Bylaws may be amended, from time to time, by Declarant until expiration or termination of the Development Period. Any amendment to the Bylaws proposed by the Board must be approved in advance and in writing by Declarant until expiration or termination of the Development Period. Upon expiration of the Development Period, the Bylaws may be amended by a Majority of the Board.

"**Charter**" means the Charter of the Association, filed in the Office of the Secretary of State of Tennessee, as the same may be amended from time to time.

"**City**" means the City of Goodlettsville, Tennessee.

"**Common Area**" means any property and facilities that the Association owns or in which it otherwise holds rights or obligations, including any property or facilities held by Declarant for the benefit of the Association or its Members. Common Area also includes any property that the Association holds under a lease, license, or any easement in favor of the Association. Some Common Area will be solely for the common use and enjoyment of the Owners, while other portions of the Common Area may be for the use and enjoyment of the Owners and members of the public.

"**Community Manual**" means the community manual of the Association, which may be initially adopted and Recorded by Declarant or the Board of the Association and Recorded as part of the initial project documentation for the benefit of the Association and the Property. The Community Manual may include the Bylaws, Rules and Regulations and other policies governing the Association. The Bylaws, Rules and Regulations and other policies set forth in the Community Manual may be amended or supplemented, from time to time, by Declarant until expiration or termination of the Development Period. Any amendment to the Bylaws, Rules and Regulations and other policies governing the Association prosecuted by the Board must be approved in advance and in writing by Declarant until expiration or termination of the Development Period. Upon expiration or termination of the Development Period, the Community Manual may be amended or supplemented by a Majority of the Board.

"**Community Systems**" means any and all cable television, telecommunications, alarm/monitoring, internet, telephone or other lines, conduits, wires, amplifiers, towers, antennas, satellite dishes, equipment, materials and installations and fixtures (including those based on, containing and serving future technological advances not now known), if installed by Declarant pursuant to any grant of easement or authority by Declarant within the Property.

"**Declarant**" means, collectively, **CLQ DEVELOPMENT, LLC,** a Tennessee limited liability company, and its respective successors or assigns; provided that any assignment(s) of the rights of **CLQ DEVELOPMENT, LLC,** a Tennessee limited liability company, as Declarant, must be expressly set forth in writing and Recorded.

Declarant enjoys special rights and privileges to help protect its investment in the Property. These special rights are described in this Declaration. Many of these rights do not terminate until either Declarant: (i) has conveyed all Lots which may be created out of the Property; or (ii) voluntarily terminates these rights by a Recorded written instrument.

"**Design Guidelines**" means the standards for design, construction, landscaping, and exterior items proposed to be placed on any Lot adopted pursuant to *Section 7.2.3*, as the same may be amended from time to time. The Design Guidelines may consist of multiple written design guidelines applying to specific portions of the Property. At Declarant's option, Declarant may adopt or amend from time to time the Design Guidelines for the Property or any portion

thereof. Notwithstanding anything in this Declaration to the contrary, Declarant will have no obligation to establish Design Guidelines for the Property or any portion thereof.

"**Development Period**" means the period of time beginning on the date when this Declaration has been Recorded, and ending forty (40) years thereafter, unless earlier terminated by a Recorded written instrument executed by Declarant. The Development Period is the period in which Declarant reserves the right to facilitate the development, construction, and marketing of the Property, and the right to direct the size, shape and composition of the Property. The Development Period is for a term of years and does not require that Declarant own any portion of the Property.

"**Homebuilder**" means an Owner (other than Declarant) who acquires a Lot for the construction of a single-family residence for resale to a third party. Upon the written designation of an applicable Homebuilder by Declarant, each Homebuilder shall be afforded the rights and protections reserved in favor of Declarant set forth in *Section 2.3* (Conceptual Plans), *Section 2.4* (Single-Family Residential Use), *Section 2.9* (Mining and Drilling), *Section 2.10* (Noise), *Section 2.18* (Signs), *Section 2.22* (Temporary Structures), *Section 2.35* (Model Homes), *Section 3.2* (Fences; Sidewalks), *Section 3.3* (Drainage), *Section 3.4* (Construction Activities), *Section 4.2.2* (Easement of Enjoyment – Common Area), *Section 4.5.11* (Construction on Common Area), *Section 4.6* (Conveyance of Common Area to the Association), *Section 9.4* (Enforcement), *Section 9.14* (View Impairment), *Section 9.15* (Safety and Security), *Article 10* (Easements), *Section 11.1* (Development by Declarant) and *Section 11.2* (Special Declarant Rights). Notwithstanding the foregoing, the rights conferred upon a Homebuilder pursuant to *Section 11.1* shall be narrowly construed to mean only the right to pursue the development, construction and marketing of the Property.

"**Improvement**" means all physical enhancements and alterations to the Property, including but not limited to grading, clearing, removal of trees, alteration of drainage flow, and site work, and every structure and all appurtenances of every type and kind, whether temporary or permanent in nature, including, but not limited to, buildings, outbuildings, storage sheds, patios, tennis courts, sport courts, recreational facilities, swimming pools, putting greens, garages, driveways, parking areas and/or facilities, storage buildings, sidewalks, fences, gates, screening walls, retaining walls, stairs, patios, decks, walkways, landscaping, mailboxes, poles, signs, antennas, exterior air conditioning equipment or fixtures, exterior lighting fixtures, water softener fixtures or equipment, and poles, pumps, wells, tanks, reservoirs, pipes, lines, meters, antennas, towers and other facilities used in connection with water, sewer, gas, electric, telephone, regular or cable television, or other utilities.

"**Lot**" means any portion of the Property designated by Declarant in a Recorded written instrument or as shown as a subdivided lot on a Plat other than Common Area.

"**Majority**" means more than half.

"**Manager**" has the meaning set forth in *Section 4.5.8*.

"**Members**" means every person or entity that holds membership privileges in the Association.

"**Mortgage**" or "**Mortgages**" means any mortgage(s) or deed(s) of trust securing indebtedness and covering any Lot.

"**Mortgagee**" or "**Mortgagees**" means the holder(s) of any Mortgage(s).

"**Owner**" means the person(s), entity or entities, including Declarant, holding all or a portion of the fee simple interest in any Lot, but does not include the Mortgagee under a Mortgage prior to its acquisition of fee simple interest in such Lot pursuant to foreclosure of the lien of its Mortgage.

"**Plat**" means a Recorded subdivision plat of any portion of the Property, and any amendments thereto.

"**Property**" means that certain real property located in Sumner County, Tennessee, as more particularly described on Exhibit "A" attached hereto and incorporated herein for all purposes, subject to such additions thereto and deletions therefrom as may be made pursuant to *Section 11.3* and *Section 11.4* of this Declaration.

"**Record**", "**Recordation**", "**Recorded**" **and** "**Recording**" means recorded or to be recorded in the Register of Deeds of Sumner County, Tennessee.

"**Resident**" means an occupant or tenant of a Lot, regardless of whether the person owns the Lot.

"**Restrictions**" means the restrictions, covenants, and conditions contained in this Declaration, the Design Guidelines, Bylaws, Community Manual, Rules and Regulations, or in any other rules and regulations promulgated by the Association pursuant to this Declaration, as adopted and amended from time to time. *See Table 1* for a summary of the Restrictions.

"**Rules and Regulations**" means any instrument, however denominated, which Declarant may adopt as part of the initial project documentation for the regulation and management of the Property or the Common Area, including any amendments to those instruments. The Rules and Regulations may be amended or supplemented from time to time by Declarant during the Development Period. Upon expiration or termination of the Development Period, the Rules and Regulations may be amended by a Majority of the Board.

"**Solar Energy Device**" means a system or series of mechanisms designed primarily to provide heating or cooling or to produce electrical or mechanical power by collecting and transferring solar-generated energy. The term includes a mechanical or chemical device that has the ability to store solar-generated energy for use in heating or cooling or in the production of power.

TABLE 1: RESTRICTIONS	
Declaration (Recorded)	Creates obligations that are binding upon the Association and all present and future owners of Property.
Charter (Recorded)	Establishes the Association as a Tennessee nonprofit corporation.
Bylaws (Recorded)	Governs the Association's internal affairs, such as elections, meetings, etc.
Community Manual (Recorded)	Establishes Rules and Regulations and policies governing the Association.
Design Guidelines (if adopted, Recorded)	Governs the design and architectural standards for the construction of Improvements and modifications thereto. Declarant shall have no obligation to adopt the Design Guidelines.
Rules and Regulations (if adopted, Recorded)	Regulates the use of property, activities, and conduct within the Property or the Common Area
Board Resolutions (adopted by the Board of the Association)	Establishes rules, policies, and procedures for the Property, Owners and Association.
Notice of Withdrawal of Land (Recorded)	Withdraws and removes land from the Property so that such land is no longer burdened by the terms of this Declaration and no longer under the jurisdiction of the Association.
Notice of Addition of Land (Recorded)	Adds additional land to the Property, so such land will be considered part of the Property and subject to the terms of this Declaration and under the jurisdiction of the Association.
Notice of Plat Recordation (Recorded)	Identifies specific residential Lots within a Plat. Upon recordation of a Notice of Plat Recordation, the Property included within the Plat not comprising a residential Lot will automatically be withdrawn from the terms and provisions of this Declaration. Declarant shall have no obligation to Record a Notice of Plat Recordation.

ARTICLE 2
GENERAL AND USE RESTRICTIONS

All of the Property shall be owned, held, encumbered, leased, used, occupied, and enjoyed subject to the following limitations and restrictions:

2.1 General.

2.1.1 Conditions and Restrictions. All Lots within the Property will be owned, held, encumbered, leased, used, occupied and enjoyed subject to the Restrictions and Applicable Law.

2.1.2 Ordinances. Ordinances and requirements imposed by local governmental authorities are applicable to all Lots within the Property. Compliance with the Restrictions is not a substitute for compliance with Applicable Law. Please be advised that the Restrictions do not purport to list or describe each restriction which may be applicable to a Lot located within the Property. Each Owner is advised to review all ordinances, requirements, regulations and encumbrances affecting the use and improvement of their Lot prior to submitting plans to the ACC for approval. Furthermore, approval by the ACC should not be construed by the Owner that any Improvement complies with the terms and provisions of any ordinances, requirements, regulations or encumbrances which may affect the Owner's Lot. Certain encumbrances may benefit parties whose interests are not addressed by the ACC.

NOTICE

The Restrictions are subject to change from time to time. By owning or occupying a Lot, you agree to remain in compliance with the Restrictions, as they may change from time to time.

2.2 Compliance with Applicable Law. The Association, each Owner, Homebuilder, Resident or other user of any portion of the Property must comply with the Restrictions and Applicable Law.

2.3 Conceptual Plans. All master plans, site plans, brochures, illustrations, information and marketing materials relating to the Property or the Common Area (collectively, the "**Conceptual Plans**") are conceptual in nature and are intended to be used for illustrative purposes only. The land uses and Improvements reflected on the Conceptual Plans, including but not limited to any amenity center(s), are subject to change at any time and from time to time, and it is expressly agreed and understood that land uses within the Property or the Common Area may include uses which are not shown on the Conceptual Plans. Neither Declarant nor any Homebuilder or other developer of any portion of the Property or the Common Area makes any representation or warranty concerning such land uses and Improvements shown on the Conceptual Plans or otherwise planned for the Property or the Common Area and it is expressly agreed and understood that no Owner will be entitled to rely upon the Conceptual Plans or any statement made by Declarant or any of Declarant's representatives regarding proposed land uses, proposed or planned Improvements in making the decision to purchase any land or Improvements within the Property. Each Owner who acquires a Lot within the Property acknowledges that development of the Property or the Common Area will likely extend over many years, and agrees that the Association will not engage in, or use Association funds to support, protest, challenge, or make any other form of objection to development of the Property or the Common Area or changes in the Conceptual Plans as they may be amended or modified from time to time.

2.4 Single-Family Residential Use. The Lots shall be used solely for private single family residential purposes.

No professional, business, or commercial activity to which the general public is invited shall be conducted on any Lot, except an Owner or Resident may conduct business activities within a residence so long as: (i) such activity complies with all Applicable Law; (ii) the business activity is conducted without the employment of persons other than the residents of the home constructed in the Lot; (iii) the existence or operation of the business activity is not apparent or detectable by sight, i.e., no sign may be erected advertising the business on any Lot, sound, or smell from outside the residence; (iv) the business activity does not involve door-to-door solicitation of residents within the Property; (v) the business does not, in the Board's judgment, generate a level of vehicular or pedestrian traffic or a number of vehicles parked within the Property which is noticeably greater than that which is typical of residences in which no business activity is being conducted; (vi) the business activity is consistent with the residential character of the Property and does not constitute a nuisance, or a hazardous or offensive use, or threaten the security or safety of other residents of the Property as may be determined in the sole discretion of the Board; and (vii) the business does not require the installation of any machinery other than that customary to normal household operations. In addition, for the purpose of obtaining any business or commercial license, neither the residence nor Lot will be considered open to the public. The terms "business" and "trade", as used in this provision, shall be construed to have their ordinary, generally accepted meanings and shall include, without limitation, any occupation, work, or activity undertaken on an ongoing basis which involves the provision of goods or services to persons other than the provider's family and for which the provider receives a fee, compensation, or other form of consideration, regardless of whether: (x) such activity is engaged in full or part-time; (y) such activity is intended to or does generate a profit; or (z) a license is required.

Leasing of a residence shall not be considered a business or trade within the meaning of this subsection. This subsection shall not apply to any activity conducted by Declarant or a Homebuilder.

Notwithstanding any provision in this Declaration to the contrary, until the expiration or termination of the Development Period:

(i) Declarant and/or its assignees may construct and maintain upon portions of the Common Area, any Lot, or portion of the Property owned by Declarant, such facilities and may conduct such activities, which, in Declarant's sole opinion, may be reasonably required, convenient, or incidental to the construction or sale of single family residences or other Improvements constructed upon the Lots, including, but not limited to, business offices, signs, model homes, and sales offices. Declarant and/or its assignees shall have an easement over and across the Common Area for access and use of such facilities at no charge; and

(ii) Declarant and/or its assignees will have an access easement over and across the Common Area for the purpose of making, constructing and installing Improvements upon the Common Area.

2.5 **Rentals**. Nothing in this Declaration shall prevent the rental of any Lot and the Improvements thereon by the Owner thereof for residential purposes; provided that all rentals must be for terms of at least six (6) months. Advertising of any Lot or the Improvements located thereon through Airbnb, HomeAway, VRBO or any other short-term rental website or platform is expressly prohibited. All leases shall be in writing. The Owner must provide to its lessee copies of the Restrictions and shall notify its lessee of any changes or additions thereto. Notice of any lease, together with such additional information as may be required by the Board, will be remitted to the Association by the Owner on or before the expiration of ten (10) days after the effective date of the lease.

2.6 **Subdividing**. No Lot shall be further divided or subdivided, nor may any easements or other interests therein less than the whole be conveyed by the Owner thereof without the prior written approval of the ACC; provided, however, that when Declarant is the Owner thereof, Declarant may further divide and subdivide any Lot and convey any easements or other interests less than the whole, all without the approval of the ACC.

2.7 **Hazardous Activities**. No activities may be conducted on or within the Property and no Improvements may be constructed on or within any portion of the Property which, in the opinion of the Board, are or might be unsafe or hazardous to any person or property. Without limiting the generality of the foregoing, no firearms or fireworks may be discharged upon any portion of the Property unless discharged in conjunction with an event approved in advance by the Board and no open fires may be lighted or permitted except within safe and well-designed fireplaces or in contained barbecue units while attended and in use for cooking purposes. No portion of the Property may be used for the takeoff, storage, or landing of aircraft (including, without limitation, helicopters) except for medical emergencies.

2.8 **Insurance Rates**. Nothing shall be done or kept on the Property which would increase the rate of casualty or liability insurance or cause the cancellation of any such insurance on the Common Area, or the Improvements located thereon, without the prior written approval of the Board.

2.9 **Mining and Drilling**. No portion of the Property or the Common Area may be used for the purpose of mining, quarrying, drilling, boring, or exploring for or removing oil, gas, or other hydrocarbons, minerals of any kind, rocks, stones, sand, gravel, aggregate, or earth. This provision will not be construed to prevent the excavation of rocks, stones, sand, gravel, aggregate, or earth or the storage of such material for use as fill provided that such activities are conducted in conjunction with the construction of Improvements and/or the development of the Property or the Common Area by Declarant. Furthermore, this provision will not be interpreted to prevent the drilling of water wells by Declarant or otherwise approved in advance by the ACC which are required to provide water to all or any portion of the Property. All water wells must also be approved in advance by the ACC and any applicable regulatory authority. No representation or warranty, express or implied, is made as to the ownership of the minerals, resources and groundwater or any portion thereof or any interest therein.

2.10 **Noise**. No noise or other nuisance shall be permitted to exist or operate upon any portion of the Property so as to be offensive or detrimental to any other portion of the Property or to its Residents. This *Section 2.10* shall not be construed to include noise caused by construction activities by Declarant or a Homebuilder.

2.11 **Animals – Household Pets**. No animals, including pigs, hogs, swine, poultry, fowl, wild animals, horses, cattle, sheep, goats, or any other type of animal not considered to be a domestic household pet within the ordinary meaning and interpretation of such words may be kept, maintained, or cared for on or within the Property. The Board may determine, in its sole discretion, whether a particular pet is a domestic household pet within the ordinary meaning and interpretation of such words. No Owner may keep on such Owner's Lot more than three (3) cats and dogs, in the aggregate. No animal may be allowed to make an unreasonable amount of noise, or to become a nuisance, and no domestic pets will be allowed on the Property other than within the Owner's residence, or the fenced yard space associated therewith, unless confined to a leash. The Association may restrict pets to certain areas on the Property. No animal may be stabled, maintained, kept, cared for, or boarded for hire or remuneration on the Property, and no kennels or breeding operation will be allowed. No animal may be allowed to run at large, and all animals must be kept within enclosed areas which must be clean, sanitary, and reasonably free of refuse, insects, and waste at all times. No pet may be left unattended in yards, porches or other outside area. All pet waste will be removed and appropriately disposed of by the owner of the pet. All pets must be registered, licensed and inoculated as required by Applicable Law. If the Board determines, in its sole discretion, that a pet becomes a source of unreasonable annoyance to others, or the owner of the pet fails or refuses to comply with these restrictions, the Owner, upon written notice, may be required to remove the pet from the Property.

2.12 **Rubbish and Debris**. As determined by the Board, no rubbish or debris of any kind may be placed or permitted to accumulate on or within the Property, and no odors will be permitted to arise therefrom so as to render all or any portion of the Property unsanitary, unsightly, offensive, or detrimental to any other property or Residents. Refuse, garbage, and trash must be kept at all times in covered containers, and such containers must be kept within enclosed structures or appropriately screened from view. Each Owner will contract with an independent disposal service to collect all garbage or other wastes, if such service is not provided by a governmental entity or the Association.

2.13 **Trash Containers**. Trash containers and recycling bins must be stored adjacent to or inside of the garage of the single-family residence constructed on the Lot. The Board shall have the right to specify additional locations on each Owner's Lot in which trash containers or recycling bins must be stored.

2.14 **Maintenance**. The Owners of each Lot shall jointly and severally have the duty and responsibility, at their sole cost and expense, to keep their Lot and all Improvements thereon in good condition and repair and in a well-maintained, safe, clean and attractive condition at all times. The Board, in its sole discretion, shall determine whether a violation of the maintenance obligations set forth in this *Section 2.14* has occurred. Such maintenance includes, but is not

limited to the following, which shall be performed in a timely manner, as determined by the Board, in its sole discretion:

(i) Prompt removal of all litter, trash, refuse, and wastes.

(ii) Lawn mowing and edging.

(iii) Tree and shrub pruning.

(iv) Watering of lawn and landscaping.

(v) Keeping exterior lighting and mechanical facilities in working order.

(vi) Keeping lawn and garden areas alive, free of weeds, and attractive.

(vii) Keeping planting beds free of turf grass.

(viii) Keeping sidewalks and driveways in good repair.

(ix) Complying with Applicable Law.

(x) Repainting of Improvements.

(xi) Repair of exterior damage, and wear and tear to Improvements.

2.15 **Street Landscape Area-Owner's Obligation to Maintain Landscaping**. Each Owner will be responsible, at such Owner's sole cost and expense, for maintaining mowing, replacing, pruning, and irrigating the landscaping between the boundary of such Owner's Lot and the curb of any adjacent right-of-way, street or alley (the "**ST Landscape Area**") unless the responsibility for maintaining the ST Landscape Area is performed by the Association and/or the City. If the maintenance of any ST Landscape Area is the responsibility of the City, and the City fails to properly maintain the ST Landscape Area, as determined in the sole and absolute discretion of the Board, the Association, if allowed by Applicable Law, may have the responsibility for maintaining such ST Landscape Area and the costs incurred, or estimated to be incurred, by the Association shall be discharged through Assessments.

2.16 **Antennas**. Except as expressly provided below, no exterior radio or television antennas or aerial or satellite dish or disc, shall be erected, maintained or placed on a Lot without the prior written approval of the ACC; provided, however, that:

(i) an antenna designed to receive direct broadcast services, including direct-to-home satellite services, that is one meter or less in diameter; or

(ii) an antenna designed to receive video programming services via multipoint distribution services, including multi-channel multipoint distribution

services, instructional television fixed services, and local multipoint distribution services, that is one meter or less in diameter or diagonal measurement; or

(iii) an antenna that is designed to receive television or radio broadcast signals,

(collectively, (i) through (iii) are referred to herein as the "**Permitted Antennas**") will be permitted subject to reasonable requirements as to location and screening as may be set forth in rules adopted by the ACC, consistent with Applicable Law, in order to minimize obtrusiveness as viewed from streets and adjacent property. Declarant and/or the Association will have the right, but not the obligation, to erect an aerial, satellite dish, or other apparatus for a master antenna, cable, or other communication system for the benefit of all or any portion of the Property.

2.17 Location of Permitted Antennas. A Permitted Antenna may be installed solely on the Owner's Lot and shall not encroach upon any street, Common Area or any other portion of the Property. A Permitted Antenna shall be installed in a location on the Lot from which an acceptable quality signal can be obtained and where least visible from the street and the Property, other than the Lot. In order of preference, the locations of a Permitted Antenna which will be considered least visible by the ACC are as follows:

(i) Attached to the back of the principal single-family residence constructed on the Lot, with no part of the Permitted Antenna any higher than the roof fascia, soffit, or bargeboard and screened from view of adjacent Lots and the street; then

(ii) Attached to the side of the principal single-family residence constructed on the Lot, with no part of the Permitted Antenna any higher than the roof fascia, soffit, or bargeboard and screened from view of adjacent Lots and the street.

The ACC may, from time to time, modify, amend, or supplement the rules regarding installation and placement of Permitted Antennas.

Satellite dishes one meter or less in diameter, e.g., DirecTV or Dish satellite dishes, are permitted, HOWEVER, you are required to comply with the rules regarding installation and placement. These Rules and Regulations may be modified by the ACC from time to time. Please contact the ACC for the current rules regarding installation and placement.

2.18 Signs. Unless otherwise prohibited by Applicable Law, no sign of any kind may be displayed to the public view on any Lot without the prior written approval of the ACC, except for:

(i) signs which are expressly permitted pursuant to the Design Guidelines or Rules and Regulations;

(ii) signs which are part of Declarant's or Homebuilder's overall marketing, sale, or construction plans or activities for the Property;

(iii) a maximum of two (2) school or youth affiliated signs shall be permitted, provided the sign(s): (a) is located in the landscaping bed of the front yard and blends in with the existing landscaping; (b) is no larger than 36" x 42" and does not exceed five feet (5') in height above natural ground; (c) is constructed of wood, plastic or metal and are not flags or banners, as determined in the sole and absolute discretion of the Board; (d) is kept in good condition and repair, as determined in the sole and absolute discretion of the Board; (e) does not cause embarrassment, discomfort and/or annoyance to other Owners, as determined in the sole and absolute discretion of the Board; and (f) does not contain any telephone numbers or commercial advertisement;

(iv) one (1) temporary "For Sale" sign placed on the Lot. The sign must be professionally made and shall be limited to a maximum face area of five (5) square feet on each visible side and, if free standing, is mounted on a single or frame post. The overall height of the sign from the finished grade of the Lot at the spot where the sign is located may not exceed four (4) feet. The sign must be removed within two (2) business days following the sale or lease of the Lot;

(v) in accordance with Tenn. Code Ann. § 2-7-143, candidate or measure signs may be erected provided the sign: (a) is erected no earlier than the sixtieth (60th) day before the date of the election to which the sign relates; (b) is removed no later than one (1) day after the date of the election to which the sign relates; and (c) is ground-mounted. Only one sign may be erected for each candidate or measure. No sign may be larger than four (4) square feet.;

(vi) permits as may be required by legal proceedings; and

(vii) permits as may be required by any governmental entity.

(viii) one "no soliciting" or "security warning" sign near or on the front door of the residence, provided that the sign may not exceed twenty-five (25) square inches.

For Lease and For Rent signs are expressly prohibited.

2.19 Flags – Approval Requirements. An Owner is permitted to display the flag of the United States of America, the flag of the State of Tennessee, an official or replica flag of any branch of the United States armed forces, or one (1) flag with official insignia of a college or university ("**Permitted Flag**") and is permitted to install a flagpole no more than five feet (5') in length

affixed to the front of a residence near the principal entry or affixed to the rear of a residence ("**Permitted Flagpole**"). Only two (2) Permitted Flagpoles are allowed per residence. A Permitted Flag or Permitted Flagpole need not be approved in advance by the ACC. Approval by the ACC is required prior to installing vertical freestanding flagpoles installed in the front or back yard area of any Lot ("**Freestanding Flagpole**").

2.20 Flags – Installation and Display. Unless otherwise approved in advance and in writing by the ACC, Permitted Flags, Permitted Flagpoles and Freestanding Flagpoles, installed in accordance with the Flagpole Application, must comply with the following:

(i) No more than one (1) Freestanding Flagpole OR no more than two (2) Permitted Flagpoles are permitted per Lot, on which only Permitted Flags may be displayed;

(ii) Any Permitted Flagpole must be no longer than five feet (5') in length and any Freestanding Flagpole must be no more than twenty feet (20') in height;

(iii) Any Permitted Flag displayed on either a Permitted Flagpole or a Freestanding Flagpole may not be more than three feet in height by five feet in width (3'x5');

(iv) The flag of the United States of America must be displayed in accordance with 4 U.S.C. Sections 5-10 and the flag of the State of Tennessee must be displayed in accordance with Tenn. Code Ann. Section 4-1-406;

(v) The display of a Permitted Flag, or the location and construction of a Permitted Flagpole or Freestanding Flagpole must comply with all Applicable Law, easements and setbacks of record;

(vi) Each Permitted Flagpole and Freestanding Flagpole must be constructed of permanent, long-lasting materials, with a finish appropriate to the materials used in the construction thereof and harmonious with the residence;

(vii) Any Permitted Flag, Permitted Flagpole, and Freestanding Flagpole must be maintained in good condition and any deteriorated Permitted Flag or deteriorated or structurally unsafe Permitted Flagpole or Freestanding Flagpole must be repaired, replaced or removed;

(viii) A Permitted Flag may be illuminated by no more than one (1) halogen landscaping light of low beam intensity which shall not be aimed towards or directly affect any neighboring Lot; and

(ix) Any external halyard of a Permitted Flagpole or Freestanding Flagpole must be secured so as to reduce or eliminate noise from flapping against the metal of the Permitted Flagpole or Freestanding Flagpole.

2.21 Tanks. The ACC must approve any tank used or proposed in connection with a residence, including tanks for storage of fuel, water, oil, or liquid petroleum gas (LPG), and including swimming pool filter tanks. No elevated tanks of any kind may be erected, placed or permitted on any Lot without the advance written approval of the ACC. All permitted tanks must be screened from view in accordance with a screening plan approved in advance by the ACC. This provision will not apply to a tank used to operate a standard residential gas grill.

2.22 Temporary Structures. No tent, shack, or other temporary building, Improvement, or structure shall be placed upon the Property without the prior written approval of the ACC; provided, however, that temporary structures necessary for storage of tools and equipment, and for office space for Declarant, Homebuilders, architects, and foremen during actual construction may be maintained with the prior approval of Declarant (unless placed by Declarant), approval to include the nature, size, duration, and location of such structure.

2.23 Outside Storage Buildings. Outside storage buildings located in a fenced rear yard of a Lot are allowed with the prior written approval of the ACC. One (1) permanent storage building will be permitted if: (i) the surface area of the pad on which the storage building is constructed is no more than one hundred (100) square feet; (ii) the height of the storage building, measured from the surface of the Lot, is no more than eight (8) feet; (iii) the exterior of the storage building is constructed of the same or substantially similar materials and of the same color as the principal residential structure constructed on the Lot; (iv) the roof of the storage building is the same material and color as the roof of the principal residential structure constructed on the Lot; and (v) the storage building is constructed within all applicable building setbacks. No storage building may be used for habitation.

2.24 Unsightly Articles; Vehicles. No article deemed to be unsightly by the Board will be permitted to remain on any Lot so as to be visible from adjoining property or from public or private thoroughfares. Without limiting the generality of the foregoing, trailers, graders, trucks other than pickups, boats, tractors, campers, wagons, buses, motorcycles, motor scooters, all-terrain vehicles and garden maintenance equipment shall be kept at all times except when in actual use, in enclosed structures or screened from view and no repair or maintenance work shall be done on any of the foregoing, or on any automobile (other than minor emergency repairs), except in enclosed garages or other structures. Service areas, storage areas, compost piles and facilities for hanging, drying or airing clothing or household fabrics shall be appropriately screened from view, and no lumber, grass, plant waste, shrub or tree clippings, metals, bulk materials, scrap, refuse or trash shall be kept, stored, or allowed to accumulate on any portion of the Property except within enclosed structures or appropriately screened from view. No: (i) racing vehicles; or (ii) other vehicles (including, without limitation, motorcycles or motor scooters) which are inoperable or do not have a current license tag shall be permitted to remain visible on any Lot or to be parked on any roadway within the Property or the Common Area.

2.25 **Parking**. All Owners and Residents are encouraged to park vehicles in the garage on their Lot and use the driveways on their Lot as overflow parking. On street parking is limited to guests and visitors. Parking in the mail box kiosk parking lots is limited to guests and visitors and transient parking by Owners and Residents for purposes of collecting mail from the mail box kiosks unless otherwise determined by the Association. No vehicle may obstruct the flow of traffic, constitute a nuisance, or otherwise create a safety hazard. No vehicle may be parked in a manner that obstructs or otherwise blocks ingress and egress to any part of the Property by an emergency vehicle. The parking of vehicles in the yard of any Lot is not permitted.

2.26 **Mobile Homes, Travel Trailers and Recreational Vehicles**. No mobile homes, travel trailers or recreational vehicles shall be parked or placed on any street right of way, Lot, or used as a residence, either temporary or permanent, at any time. However, such vehicles may be parked temporarily for a period not to exceed seventy-two (72) consecutive hours during each two (2) month period.

2.27 **Basketball Goals; Permanent and Portable**. Permanent basketball goals are permitted in the driveway on a Lot. Permanent basketball goals are not permitted in any street right-of-way. The basketball goal backboard must be perpendicular to the street and mounted on a metal pole permanently installed in the ground. Portable basketball goals are permitted but must be stored inside the garage when not in use. Portable basketball goals are not permitted in any street right-of-way. Basketball goals must be properly maintained and painted, with the net in good repair.

2.28 **Compliance with Restrictions**. Each Owner, their family, Residents of a Lot, tenants, and the guests, invitees, and licensees of the preceding shall comply strictly with the provisions of the Restrictions, as they may be amended from time to time. Failure to comply with any of the Restrictions shall constitute a violation of the Restrictions and may result in a fine against the Owner in accordance with *Section 6.12* of this Declaration, and shall give rise to a cause of action to recover sums due for damages or injunctive relief, or both, maintainable by Declarant, the Board on behalf of the Association, the ACC, or by an aggrieved Owner. Without limiting any rights or powers of the Association, the Board may (but shall not be obligated to) remedy or attempt to remedy any violation of any of the provisions of Restrictions, and the Owner whose violation has been so remedied shall be personally liable to the Association for all costs and expenses of effecting (or attempting to effect) such remedy. If such Owner fails to pay such costs and expenses upon demand by the Association, such costs and expenses (plus interest from the date of demand until paid at the maximum lawful rate, or if there is no such maximum lawful rate, at the rate of one and one-half percent (1½%) per month) shall be assessed against and chargeable to the Owner's Lot(s). Any such amounts assessed and chargeable against a Lot shall be secured by the liens reserved in this Declaration for Assessments and may be collected by any means provided in this Declaration for the collection of Assessments, including, but not limited to, foreclosure of such liens against the Owner's Lot(s). **Each such Owner shall release and hold harmless the Association and its officers, directors, employees and agents from any cost, loss, damage, expense, liability, claim or cause of action incurred or that may arise by reason of the Association's acts or activities under this *Section 2.28* (including any cost, loss, damage,**

expense, liability, claim or cause of action arising out of the Association's negligence in connection therewith), except for such cost, loss, damage, expense, liability, claim or cause of action arising by reason of the Association's gross negligence or willful misconduct. "Gross negligence" as used herein does not include simple negligence, contributory negligence or similar negligence short of actual gross negligence.

2.29 **Liability of Owners for Damage to Common Area** . No Owner shall in any way alter, modify, add to or otherwise perform any work upon the Common Area without the prior written approval of the Declarant during the Development Period, and the Board thereafter. Each Owner shall be liable to the Association for any and all damages to: (i) the Common Area and any Improvements constructed thereon; or (ii) any Improvements constructed on any Lot, the maintenance of which has been assumed by the Association, which damages were caused by the neglect, misuse or negligence of such Owner or Owner's family, or by any tenant or other Resident of such Owner's Lot, or any guest or invitee of such Owner or Resident. The full cost of all repairs of such damage shall be an Individual Assessment against such Owner's Lot, secured by a lien against such Owner's Lot and collectable in the same manner as provided in *Section 6.10* of this Declaration.

2.30 **No Warranty of Enforceability**. Declarant makes no warranty or representation as to the present or future validity or enforceability of the Restrictions. Any Owner acquiring a Lot in reliance on one or more of the Restrictions shall assume all risks of the validity and enforceability thereof and, by acquiring the Lot, agrees to hold Declarant harmless therefrom.

2.31 **Party Wall**. A fence or wall located on or near the dividing line between two (2) Lots and intended to benefit both Lots constitutes a "**Party Wall**" and, to the extent not inconsistent with the provisions of this *Section 2.31*, is subject to the general rules of law regarding party walls and liability for property damage due to negligence, willful acts, or omissions and are subject to the following.

2.31.1 Encroachments & Easement. If the Party Wall is on one Lot due to an error in construction, the Party Wall is nevertheless deemed to be on the dividing line for purposes of this *Section 2.31.* Each Lot sharing a Party Wall is subject to an easement for the existence and continuance of any encroachment by the Party Wall as a result of construction, repair, shifting, settlement, or movement in any portion of the Party Wall, so that the encroachment may remain undisturbed as long as the Party Wall stands. Each Lot is subject to a reciprocal easement for the maintenance, repair, replacement, or reconstruction of the Party Wall.

2.31.2 Right to Repair. If the Party Wall is damaged or destroyed from any cause, the Owner of either Lot may repair or rebuild the Party Wall to its previous condition, and the Owners of both Lots, their successors and assigns, have the right to the full use of the repaired or rebuilt Party Wall. No Party Wall may be constructed, repaired, or rebuilt without the advance written approval of the ACC in accordance with *Article 7* of this Declaration.

2.31.3 Maintenance Costs. The Owners of the adjoining Lots share equally the costs of repair, reconstruction, or replacement of the Party Wall, subject to the right of one Owner to call for larger contribution from the other under any rule of law regarding liability for negligence or willful acts or omissions. If an Owner is responsible for damage to or destruction of the Party Wall, that Owner will bear the entire cost of repair, reconstruction, or replacement. If an Owner fails or refuses to pay his or her share of costs of repair or replacement of the Party Wall, the Owner advancing monies has a right to file a claim of lien for the monies advanced in the Register of Deeds of Sumner County, Tennessee, and has the right to foreclose the lien as if it were a mechanic's lien. The right of an Owner to require contribution from another Owner under this *Section 2.31* is appurtenant to the Lot and passes to the Owner's successors in title.

2.31.4 Alterations. The Owner of a Lot sharing a Party Wall may not cut openings in the Party Wall or alter or change the Party Wall in any manner that affects the use, condition, or appearance of the Party Wall to the adjoining Lot. The Party Wall will always remain in the same location as when erected unless otherwise approved by the Owner of each Lot sharing the Party Wall and the ACC.

2.31.5 Dispute Resolution. In the event of any dispute arising concerning a Party Wall, or under the provisions of this *Section 2.31* (the "**Dispute**"), the parties shall submit the Dispute to mediation. Should the parties be unable to agree on a mediator within ten (10) days after written request therefore by the Board, the Board shall appoint a mediator. If the Dispute is not resolved by mediation, the Dispute shall be resolved by binding arbitration. Either party may initiate the arbitration. Should the parties be unable to agree on an arbitrator within ten (10) days after written request therefore by the Board, the Board shall appoint an arbitrator. The decision of the arbitrator shall be binding upon the parties and shall be in lieu of any right of legal action that either party may have against the other. In the event an Owner fails to properly and on a timely basis (both standards to be determined by the Board in the Board's sole and absolute discretion) implement the decision of the mediator or arbitrator, as applicable, the Board may implement said mediator's or arbitrator's decision, as applicable. If the Board implements the mediator's or arbitrator's decision on behalf of an Owner, the Owner otherwise responsible therefor will be personally liable to the Association for the cost of obtaining the all costs and expenses incurred by the Association in conjunction therewith. If such Owner fails to pay such costs and expenses upon demand by the Association, such costs and expenses (plus interest from the date of demand until paid at the maximum lawful rate, or if there is no such maximum lawful rate, at the rate of one and one-half percent (1½%) per month) will be assessed against and chargeable to the Owner's Lot(s). Any such amounts assessed and chargeable against a Lot hereunder will be secured by the liens reserved in this Declaration for Assessments and may be collected by any means provided in this Declaration for the collection of Assessments, including, but not limited to, foreclosure of such liens against the Owner's Lot(s).

2.32 Playscapes and Sports Courts. Playscapes and sport courts are permissible at the sole discretion of the ACC. If allowed, these facilities must be properly sited and screened so as

to minimize the visual and audio impact of the facility on adjacent properties. Sport Courts may not be lighted or enclosed with netting. Tennis courts are not permitted.

2.33 Decorations and Lighting. No decorative appurtenances such as sculptures, birdbaths and birdhouses, fountains, or other decorative embellishments shall be placed on the residence or on the front yard or on any other portion of a Lot which is visible from any street, unless such specific items have been approved in writing by the ACC. Customary seasonal decorations for holidays are permitted without approval by the ACC but shall be removed within thirty (30) days of the applicable holiday. Outside lighting fixtures shall be placed so as to illuminate only the yard of the applicable Lot and so as not to affect or reflect into surrounding residences or yards. No mercury vapor, sodium or halogen light shall be installed on any Lot which is visible from any street unless otherwise approved by the ACC.

2.34 Water Quality Facilities, Drainage Facilities and Drainage Ponds. The Property may include, now or in the future, one or more water quality facilities, sedimentation, drainage and detention facilities, or ponds which serve all or a portion of the Property. Access to these facilities and ponds is limited to persons engaged by the Association or its respective agents to periodically maintain such facilities. Each Owner is advised that the water quality facilities, sedimentation, drainage and detention facilities and ponds are an active utility feature integral to the proper operation of the Property and may periodically hold standing water. Each Owner is advised that entry into the water quality facilities, sedimentation, drainage and detention facilities or ponds may result in injury and is a violation of the Rules and Regulations, unless otherwise approved by the Association.

2.35 Model Homes. Declarant or a Homebuilder may construct, or the ACC may approve, a model home constructed on a Lot with exterior finishes, fencing and other components that do not conform to the requirements imposed on other single-family residences within the Property. Declarant's or a Homebuilder's construction, or approval by the ACC, of a model home which differs from the requirements imposed on other single-family residences within the Property shall in no event constitute a waiver of the terms and provisions of the Restrictions.

ARTICLE 3
CONSTRUCTION RESTRICTIONS

3.1 Approval for Construction. Unless prosecuted by Declarant, no Improvements shall hereafter be placed, maintained, erected, or constructed upon any Lot without the prior written approval of the ACC in accordance with *Article 7* of this Declaration.

3.2 Fences; Sidewalks. All fences and walls shall comply with all Applicable Law. Unless otherwise approved by the ACC, no fence, wall or hedge will be erected or maintained on any Lot nearer to the street than the midway point of the side of the residence constructed on the Lot, except for fences erected in conjunction with the model homes or sales offices. The ACC will have the sole discretion to determine the front elevation of the residence for the purpose of this *Section 3.2*. Unless otherwise approved by the ACC, fences shall be either:

(y) four feet (4') in height and constructed of black wrought iron in an open picket style; or (z) six feet (6') in height constructed of white vinyl in a style approved by the ACC. No chain-link, metal, cloth or agricultural fences may be installed or maintained on a Lot, except by Declarant. Each Owner must maintain all fences on such Owner's Lot in good condition, including but not limited to periodically re-staining all fences on such Owner's Lot using stain substantially similar to the stain applied to the fences as originally constructed by Declarant or Homebuilder, as determined by the ACC. Any broken pickets, fallen or leaning panels, columns or Thin-Wall must be repaired or replaced in a manner that matches the fence or wall as originally installed by the Declarant or Homebuilder. If required by the Plat, the Owner of each Lot shall construct, at such Owner's sole cost and expense and prior to occupying any Improvement, a sidewalk on such Owner's Lot, located and designed in conformance with the Plat. Notwithstanding anything to the contrary in this Declaration, including, but not limited to, *Section 2.31* above, fencing and walls (i) separating any Lot from adjoining land that is not subject to this Declaration; or (ii) located on or within a Common Area, shall not be deemed a Party Wall and shall instead be Common Area subject to maintenance by the Association pursuant to *Article 4* below.

3.3 **Drainage**. There shall be no interference with the established drainage patterns over any of the Property, including the Lots, except by Declarant, unless adequate provision is made for proper drainage and such provision is approved in advance by the ACC. Specifically, and not by way of limitation, no Improvement, including landscaping, may be installed which impedes the proper drainage of water between Lots.

3.4 **Construction Activities**. The Restrictions will not be construed or applied so as to unreasonably interfere with or prevent normal construction activities during the construction of Improvements by an Owner (including Declarant or a Homebuilder) upon or within the Property. Specifically, no such construction activities will be deemed to constitute a nuisance or a violation of the Restrictions by reason of noise, dust, presence of vehicles or construction machinery, posting of signs or similar activities, provided that such construction is pursued to completion with reasonable diligence and conforms to usual construction practices in the area. If during the course of construction upon any Lot there is excessive accumulation of debris of any kind which would render the Lot or any portion thereof unsanitary, unsightly, offensive, or detrimental to it or any other portion of the Property, then the ACC may contract for or cause such debris to be removed, and the Owner of the Lot will be liable for all reasonable expenses incurred in connection therewith.

3.5 **Roofing**. The roofs of all buildings shall be approved by the ACC. Roofs of buildings may be constructed with "**Energy Efficient Roofing**" with the advance written approval of the ACC. In addition, roofs of buildings may be constructed with "**Energy Efficient Roofing**" with the advance written approval of the ACC. For the purpose of this *Section 3.5*, "Energy Efficient Roofing" means shingles that are designed primarily to: (a) be wind and hail resistant; (b) provide heating and cooling efficiencies greater than those provided by customary composite shingles; or (c) provide solar generation capabilities. The ACC will not prohibit an Owner from installing Energy Efficient Roofing provided that the Energy Efficient Roofing shingles: (i) resemble the shingles used or otherwise authorized for use within the community;

(ii) are more durable than, and are of equal or superior quality to, the shingles used or otherwise authorized for use within the community; and (iii) match the aesthetics of adjacent property. An Owner who desires to install Energy Efficient Roofing will be required to comply with the architectural review and approval procedures set forth the Restrictions. In conjunction with any such approval process, the Owner should submit information which will enable the ACC to confirm the criteria set forth in this *Section 3.5*. Any other type of roofing material shall be permitted only with the advance written approval of the ACC.

3.6 Swimming Pools. Any swimming pool constructed on a Lot must be enclosed with a fence or other enclosure device completely surrounding the swimming pool which, at a minimum, satisfies all Applicable Law and be approved in advance by the ACC. Nothing in this *Section 3.6* is intended or shall be construed to limit or affect an Owner's obligation to comply with any Applicable Law concerning swimming pool enclosure requirements. Unless otherwise approved in advance by the ACC, above-ground or temporary swimming pools are not permitted on a Lot.

3.7 Compliance with Setbacks. No residence or any other permanent structure or Improvement may be constructed on any Lot nearer to a street than the minimum building setback lines shown on the Plat or as required by Applicable Law, and no building or structure shall be located on any utility easements. The ACC may require additional setbacks in conjunction with the review and approval of proposed Improvements in accordance with *Article 7* of this Declaration.

3.8 Solar Energy Device. Solar Energy Devices may be installed with the advance written approval of the ACC in accordance with the procedures and requirements set forth below:

3.8.1 Application. To obtain ACC approval of a Solar Energy Device, the Owner shall provide the ACC with the following information: (i) the proposed installation location of the Solar Energy Device; and (ii) a description of the Solar Energy Device, including the dimensions, manufacturer, and photograph or other accurate depiction (the "**Solar Application**"). A Solar Application may only be submitted by an Owner unless the Owner's tenant provides written confirmation at the time of submission that the Owner consents to the Solar Application. The Solar Application shall be submitted in accordance with the provisions of *Article 7* of this Declaration.

3.8.2 Approval Process. The ACC will review the Solar Application in accordance with the terms and provisions of *Article 7* of this Declaration. The ACC will approve a Solar Energy Device if the Solar Application complies with *Section 3.8.3* below UNLESS the ACC makes a written determination that placement of the Solar Energy Device, despite compliance with *Section 3.8.3*, will create a condition that substantially interferes with the use and enjoyment of property within the Property by causing unreasonable discomfort or annoyance to persons of ordinary sensibilities. The ACC's right to make a written determination in accordance with the foregoing sentence is negated if all Owners of Lots immediately adjacent to the Owner/applicant provide written approval of the proposed placement. Any proposal to install a Solar Energy

Device on Common Area or property owned or maintained by the Association must be approved in advance and in writing by the Board, and the Board need not adhere to this *Section 3.8.2* when considering any such request.

3.8.3 Approval Conditions. Unless otherwise approved in advance and in writing by the ACC, each Solar Application and each Solar Energy Device to be installed in accordance therewith must comply with the following:

(i) The Solar Energy Device must be located on the roof of the residence located on the Owner's Lot, entirely within a fenced area of the Owner's Lot, or entirely within a fenced patio located on the Owner's Lot. If the Solar Energy Device will be located on the roof of the residence, the ACC may designate the location for placement unless the location proposed by the Owner increases the estimated annual energy production of the Solar Energy Device, as determined by using a publicly available modeling tool provided by the National Renewable Energy Laboratory, by more than ten percent (10%) above the energy production of the Solar Energy Device if installed in the location designated by the ACC. If the Owner desires to contest the alternate location proposed by the ACC, the Owner should submit information to the ACC which demonstrates that the Owner's proposed location meets the foregoing criteria. If the Solar Energy Device will be located in the fenced area of the Owner's Lot or patio, no portion of the Solar Energy Device may extend above the fence line.

(ii) If the Solar Energy Device is mounted on the roof of the principal residence located on the Owner's Lot, then: (A) the Solar Energy Device may not extend higher than or beyond the roofline; (B) the Solar Energy Device must conform to the slope of the roof and the top edge of the Solar Device must be parallel to the roofline; (C) the frame, support brackets, or visible piping or wiring associated with the Solar Energy Device must be silver, bronze or black.

3.9 Garages. All garages shall be maintained for the parking of automobiles and may not be used for storage or other purposes which preclude its use for the parking of automobiles. No garage may be permanently enclosed or otherwise used for habitation.

ARTICLE 4
COPPER VALLEY HOMEOWNERS ASSOCIATION, INC.

4.1 Organization. The Association will be a nonprofit corporation created for the purposes, charged with the duties, and vested with the powers of a Tennessee nonprofit corporation. Neither the Charter nor Bylaws will for any reason be amended or otherwise changed or interpreted so as to be inconsistent with this Declaration.

4.2 Membership.

4.2.1 Mandatory Membership. Any person or entity, upon becoming an Owner, will automatically become a Member of the Association. Membership will be appurtenant to and will run with the ownership of the Lot that qualifies the Owner thereof for membership, and membership may not be severed from the ownership of the Lot, or in any way transferred, pledged, mortgaged or alienated, except together with the title to such Lot. Within thirty (30) days after acquiring legal title to a Lot, if requested by the Board, an Owner must provide the Association with: (1) a copy of the recorded deed by which the Owner has acquired title to the Lot; (2) the Owner's address, email address, phone number, and driver's license number, if any; (3) any Mortgagee's name and address; and (4) the name, phone number, and email address of any Resident other than the Owner.

If you acquire a Lot you automatically become a member of the Association. Membership is Mandatory!

4.2.2 Easement of Enjoyment – Common Area. Every Member will have a right and easement of enjoyment in and to all of the Common Area and an access easement by and through any Common Area, which easements will be appurtenant to and will pass with the title to such Member's Lot, subject to the following restrictions and reservations:

(i) The right of Declarant, or the Declarant's designee, to cause such Improvements and features to be constructed upon the Common Area, as determined from time to time by Declarant, in the Declarant's sole and absolute discretion;

(ii) The right of the Association to suspend the Member's right to use the Common Area for any period during which any Assessment against such Member's Lot remains past due and for any period during which such member is in violation of any provision of this Declaration;

(iii) The right of Declarant, during the Development Period, and the Board thereafter, to dedicate or transfer all or any part of the Common Area to any public agency, authority or utility for any purpose;

(iv) With the advance written approval of Declarant during the Development Period, the right of the Board to grant easements or licenses over and across the Common Area;

(v) With the advance written approval of Declarant during the Development Period, the right of the Board to borrow money for the purpose of improving the Common Area and, in furtherance thereof, mortgage the Common Area;

(vi) The right of Declarant, during the Development Period, and the Board, with the advance written approval of Declarant during the Development

Period, to promulgate Rules and Regulations regarding the use of the Common Area and any Improvements thereon; and

(vii) The right of the Association to contract for services with any third parties on such terms as the Board may determine, except that during the Development Period, all such contracts must be approved in advance and in writing by Declarant.

4.3 Governance. As more specifically described in the Bylaws, the Board will consist of at least three (3) persons elected at the annual meeting of the Association, or at a special meeting called for such purpose. **Notwithstanding the foregoing provision or any provision in this Declaration to the contrary, Declarant will have the sole right to appoint and remove all members of the Board until the 10th anniversary of the date this Declaration is Recorded. Not later than the 10th anniversary of the date this Declaration is Recorded, or sooner as determined by Declarant, the Board shall hold a meeting of Members of the Association for the purpose of electing one-third of the Board (the "Initial Member Election Meeting"), which Board member(s) must be elected by Owners other than the Declarant. Declarant shall continue to have the sole right to appoint and remove two-thirds of the Board from and after the Initial Member Election Meeting until expiration or termination of the Development Period.**

4.4 Voting Rights. The right to cast votes and the number of votes which may be cast for election of members to the Board (except as provided by *Section 4.3*) and on all other matters to be voted on by the Members will be calculated as set forth below.

4.4.1 Owner Votes. The Owner of each Lot will have one (1) vote for each Lot so owned.

4.4.2 Declarant Votes. In addition to the votes to which Declarant is entitled by reason of *Section 4.4.1*, for every one (1) vote outstanding in favor of any other person or entity, Declarant will have four (4) additional votes until the expiration or termination of the Development Period.

4.4.3 Co-Owner Votes. When more than one person or entity owns a portion of the fee simple interest in any Lot, all such persons or entities will be Members. The vote or votes (or fraction thereof) for such Lot will be exercised by the person so designated in writing to the Secretary of the Association by the Owner of such Lot, and in no event will the vote for such Lot exceed the total votes to which such Lot is otherwise entitled under this *Section 4.4*.

4.5 Powers. The Association will have the powers of a Tennessee nonprofit corporation. It will further have the power to do and perform any and all acts that may be necessary or proper, for or incidental to, the exercise of any of the express powers granted to it by Applicable Law or this Declaration. Without in any way limiting the generality of the two preceding sentences, the Board, acting on behalf of the Association, will have the following powers at all times:

4.5.1 Rules and Regulations, Bylaws and Community Manual. To make, establish and promulgate, and in its discretion to amend from time to time, or repeal and re-enact, such rules, regulations, policies, Bylaws and Community Manual, as applicable, which are not in conflict with this Declaration, as it deems proper, covering any and all aspects of the Property or the Common Area (including the operation, maintenance and preservation thereof) or the Association. Any Rules and Regulations, policies, the Bylaws and the Community Manual and any modifications thereto proposed by the Board must be approved in advance and in writing by Declarant until expiration or termination of the Development Period.

4.5.2 Insurance. To obtain and maintain in effect, policies of insurance that, in the opinion of the Board, are reasonably necessary or appropriate to carry out the Association's functions.

4.5.3 Records. To keep books and records of the Association's affairs, and to make such books and records, together with current copies of the Restrictions available for inspection by the Owners, Mortgagees, and insurers or guarantors of any Mortgage upon request during normal business hours.

4.5.4 Assessments. To levy and collect assessments, as provided in *Article 6* below.

4.5.5 Right of Entry and Enforcement. To enter at any time without notice in an emergency (or in the case of a non-emergency, after twenty-four (24) hours written notice), without being liable to any Owner or Resident, upon any Lot and into any Improvement thereon for the purpose of enforcing the Restrictions or for the purpose of maintaining or repairing any area, Improvement or other facility to conform to the Restrictions. The expense incurred by the Association in connection with the entry upon any Lot and the maintenance and repair work conducted thereon or therein will be a personal obligation of the Owner of the Lot so entered, will be deemed an Individual Assessment against such Lot, will be secured by a lien upon such Lot, and will be enforced in the same manner and to the same extent as provided in *Article 6* hereof for Assessments. The Association will have the power and authority from time to time, in its own name and on its own behalf, or in the name of and on behalf of any Owner who consents thereto, to commence and maintain actions and suits to enforce, by mandatory injunction or otherwise, or to restrain and enjoin, any breach or threatened breach of the Restrictions. The Association is also authorized to settle claims, enforce liens and take all such action as it may deem necessary or expedient to enforce the Restrictions; provided, however, that the Board will never be authorized to expend any Association funds for the purpose of bringing suit against Declarant, or its successors or assigns. The Association may not alter or demolish any Improvements on any Lot other than Common Area in enforcing these Restrictions before a judicial order authorizing such action has been obtained by the Association, or before the written consent of the Owner(s) of the affected Lot(s) has been obtained. **EACH SUCH OWNER AND RESIDENT WILL RELEASE AND HOLD HARMLESS THE ASSOCIATION, ITS OFFICERS, DIRECTORS, EMPLOYEES AND AGENTS FROM ANY COST, LOSS, DAMAGE, EXPENSE, LIABILITY, CLAIM OR CAUSE OF ACTION INCURRED OR THAT MAY ARISE BY**

REASON OF THE ASSOCIATION'S ACTS OR ACTIVITIES UNDER THIS *SECTION 4.5.5* (INCLUDING ANY COST, EXPENSE, LIABILITY, CLAIM OR CAUSE OF ACTION ARISING OUT OF THE ASSOCIATION'S NEGLIGENCE IN CONNECTION THEREWITH), EXCEPT FOR SUCH COST, LOSS, DAMAGE, EXPENSE, LIABILITY, CLAIM OR CAUSE OF ACTION ARISING BY REASON OF THE ASSOCIATION'S GROSS NEGLIGENCE OR WILLFUL MISCONDUCT. "GROSS NEGLIGENCE" DOES NOT INCLUDE SIMPLE NEGLIGENCE, CONTRIBUTORY NEGLIGENCE OR SIMILAR NEGLIGENCE SHORT OF ACTUAL GROSS NEGLIGENCE.

IF AN OWNER FAILS TO MAINTAIN ITS LAWN, THE ASSOCIATION HAS THE RIGHT TO ENTER ONTO THE OWNER'S LOT AND MAINTAIN IT FOR THE OWNER AT THE OWNER'S SOLE COST AND EXPENSE

4.5.6 Legal and Accounting Services. To retain and pay for legal and accounting services necessary or proper in the operation of the Association.

4.5.7 Conveyances. To grant and convey to any person or entity the real property and/or other interest, including fee title, leasehold estates, easements, rights-of-way or mortgages, out of, in, on, over, or under any Common Area for the purpose of constructing, erecting, operating or maintaining the following:

(i) Parks, parkways or other recreational facilities or structures;

(ii) Roads, streets, sidewalks, signs, street lights, walks, driveways, trails and paths;

(iii) Lines, cables, wires, conduits, pipelines or other devices for utility purposes;

(iv) Sewers, water systems, storm water drainage systems, sprinkler systems and pipelines; and/or

(v) Any similar Improvements or facilities.

Nothing set forth above, however, will be construed to permit use or occupancy of any Improvement or other facility in a way that would violate applicable use and occupancy restrictions imposed by the Restrictions or by Applicable Law. In addition, until expiration or termination of the Development Period, any grant or conveyance under this *Section 4.5.7* must be approved in advance and in writing by Declarant. In addition, the Association (with the advance written approval of Declarant during the Development Period) and Declarant are expressly authorized and permitted to convey easements over and across Common Area for the benefit of property not otherwise subject to the terms and provisions of this Declaration.

4.5.8 Manager. To retain and pay for the services of a person or firm (the "**Manager**"), which may include Declarant or any affiliate of Declarant, to manage and operate the Association, including its property, to the extent deemed advisable by the Board. Personnel may be employed directly by the Association or may be furnished by the Manager. To the extent permitted by Applicable Law, the Board may delegate any other duties, powers and functions to the Manager. In addition, the Board may adopt transfer fees, resale certificate fees or any other fees associated with the provision of management services to the Association or its Members. **THE MEMBERS HEREBY RELEASE THE ASSOCIATION AND THE MEMBERS OF THE BOARD AND COMMITTEE MEMBERS FROM LIABILITY FOR ANY OMISSION OR IMPROPER EXERCISE BY THE MANAGER OF ANY SUCH DUTY, POWER OR FUNCTION SO DELEGATED.**

4.5.9 Property Services. To pay for water, sewer, garbage removal, street lights, landscaping, gardening and all other utilities, services, repair and maintenance for any portion of the Property, Common Area, private or public recreational facilities, easements, roads, roadways, rights-of-ways, signs, parks, parkways, median strips, sidewalks, paths, trails, ponds, and lakes.

4.5.10 Other Services and Properties. To obtain and pay for any other property, services, permits or other governmental approvals, and to pay any other taxes or assessments that the Association or the Board is required or permitted to secure or to pay for pursuant to Applicable Law or under the terms of the Restrictions or as determined by the Board.

4.5.11 Construction on Common Area. To construct new Improvements or additions to any property owned, leased, or licensed by the Association, including but not limited to the Common Area, subject to the approval of the Board and Declarant until expiration or termination of the Development Period.

4.5.12 Contracts. To enter into Bulk Rate Contracts or other contracts or licenses with Declarant or any third party on such terms and provisions as the Board will determine, to operate and maintain any Common Area, Improvement, or other property, or to provide any service, including but not limited to cable, utility, or telecommunication services, or perform any function on behalf of Declarant, the Board, the Association, or the Members. During the Development Period, all Bulk Rate Contracts must be approved in advance and in writing by Declarant.

4.5.13 Property Ownership. To acquire, own and dispose of all manner of real and personal property, including habitat, whether by grant, lease, easement, gift or otherwise. During the Development Period, all acquisitions and dispositions of the Association hereunder must be approved in advance and in writing by Declarant.

4.5.14 Allocation of Votes. To determine votes when permitted pursuant to *Section 4.4* above.

4.5.15 Authority with Respect to the Restrictions. To do any act, thing or deed that is necessary or desirable, in the judgment of the Board, to implement, administer or enforce any of the Restrictions. Any decision by the Board to delay or defer the exercise of the power and authority granted by this *Section 4.5.15* will not subsequently in any way limit, impair or affect ability of the Board to exercise such power and authority.

4.5.16 Membership Privileges. To establish Rules and Regulations governing and limiting the use of the Common Area and any Improvements thereon. All Rules and Regulations governing and limiting the use of the Common Area and any Improvements thereon must be approved in advance and in writing by Declarant during the Development Period.

4.6 Conveyance of Common Area to the Association. The Association may acquire, hold, and dispose of any interest in tangible and intangible personal property and real property. Declarant, and its assignees, reserves the right, from time to time and at any time, to designate, convey, assign or transfer by written and Recorded instrument property being held by Declarant for the benefit of the Association. Upon the Recording of a designation, the portion of the property identified therein will be considered Common Area for the purpose of this Declaration and the Association shall have an easement over and across the Common Area necessary or required to discharge the Association's obligations under this Declaration, subject to any terms and limitations to such easement set forth in the designation. Declarant and its assignees may also assign, transfer or convey to the Association interests in real or personal property within or for the benefit of the Property, for the Property and the general public, or otherwise, as determined in the sole and absolute discretion of Declarant. All or any real or personal property assigned, transferred and/or conveyed by Declarant to the Association shall be deemed accepted by the Association upon Recordation, and without further action by the Association, and shall be considered Common Area without regard to whether such real or personal property is designated by Declarant as Common Area. If requested by Declarant, the Association will execute a written instrument, in a form requested by Declarant, evidencing acceptance of such real or personal property; provided, however, execution of a written consent by the Association shall in no event be a precondition to acceptance by the Association. The assignment, transfer, and/or conveyance of real or personal property to the Association may be by deed without warranty, may reserve easements in favor of Declarant or a third party designated by Declarant over and across such property, and may include such other provisions, including restrictions on use, determined by Declarant, in the Declarant's sole and absolute discretion. Property assigned, transferred, and/or conveyed to the Association may be improved or unimproved and may consist of fee simple title, easements, leases, licenses, or other real or personal property interests. Upon Declarant's written request, the Association will re-convey to Declarant any unimproved real property that Declarant originally conveyed to the Association for no payment.

4.7 Indemnification. To the fullest extent permitted by Applicable Law but without duplication (and subject to) any rights or benefits arising under the Charter or Bylaws of the Association, the Association will indemnify any person who was, or is, a party, or is threatened to be made a party to any threatened pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative by reason of the fact that such person is, or was, a

director, officer, committee member, employee, servant or agent of the Association against expenses, including attorneys' fees, reasonably incurred by such person in connection with such action, suit or proceeding if it is found and determined by the Board or a court of competent jurisdiction that he or she: (1) acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the best interests of the Association; or (2) with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. The termination of any action, suit or proceeding by settlement, or upon a plea of *nolo contendere* or its equivalent, will not of itself create a presumption that the person did not act in good faith or in a manner which was reasonably believed to be in, or not opposed to, the best interests of the Association or, with respect to any criminal action or proceeding, had reasonable cause to believe that his or her conduct was unlawful.

4.8 Insurance. The Board may purchase and cause to be maintained, at the expense of the Association, insurance on behalf of any person who is acting as a director, officer, committee member, employee, servant or agent of the Association against any liability asserted against or incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the Association would have the power to indemnify such person against such liability or otherwise.

4.9 Bulk Rate Contracts. Without limitation on the generality of the Association powers set out in *Section 4.5* hereinabove (except that during the Development Period, all Bulk Rate Contracts must be approved in advance and in writing by Declarant), the Association will have the power to enter into Bulk Rate Contracts at any time and from time to time. The Association may enter into Bulk Rate Contracts with any service providers chosen by the Board (including Declarant, and/or any entities in which Declarant, or the owners or partners of Declarant are owners or participants, directly or indirectly). The Bulk Rate Contracts may be entered into on such terms and provisions as the Board may determine in its sole and absolute discretion. The Association may, at its option and election, add the charges payable by such Owner under such Bulk Rate Contract to the Assessments (Regular, Special or Individual, as the case may be) against such Owner's Lot. In this regard, it is agreed and understood that, if any Owner fails to pay any charges due by such Owner under the terms of any Bulk Rate Contract, then the Association will be entitled to collect such charges by exercising the same rights and remedies it would be entitled to exercise under this Declaration with respect to the failure by such Owner to pay Assessments, including without limitation the right to foreclose the lien against such Owner's Lot which is reserved under the terms and provisions of this Declaration. In addition, in the event of nonpayment by any Owner of any charges due under any Bulk Rate Contract and after the lapse of at least twelve (12) days since such charges were due, the Association may, upon five (5) days' prior written notice to such Owner (which may run concurrently with such 12 day period), in addition to all other rights and remedies available pursuant to Applicable Law, terminate, in such manner as the Board deems appropriate, any utility service or other service provided at the cost of the Association and not paid for by such Owner (or the Resident of such Owner's Lot) directly to the applicable service or utility provider. Such notice will consist of a separate mailing or hand delivery at least five (5) days prior to a stated date of termination, with the title "termination notice" or similar language prominently

displayed on the notice. The notice will include the office or street address where the Owner (or the Resident of such Owner's Lot) can make arrangements for payment of the bill and for re-connection or re-institution of service. No utility or cable television service will be disconnected on a day, or immediately preceding a day, when personnel are not available for the purpose of collection and reconnecting such services.

4.10 Community Systems. The Association is specifically authorized to provide, or to enter into contracts with other persons or entities to provide Community Systems. Any such contracts may provide for installation, operation, management, maintenance, and upgrades or modifications to the Community Systems as the Board determines appropriate. Each Owner acknowledges that interruptions in cable television and other Community Systems and services will occur from time to time. Declarant and the Association, or any of their respective successors or assigns shall not be liable for, and no Community System or service user shall be entitled to refund, rebate, discount, or offset in applicable fees for, any interruption in Community Systems and services, regardless of whether or not such interruption is caused by reasons within the service provider's control. In addition, until expiration or termination of the Development Period, any contracts entered pursuant to this *Section 4.10* must be approved in advance and in writing by Declarant.

4.11 Protection of Declarant's Interests. Despite any assumption of control of the Board by Owners other than Declarant, until the expiration or termination of the Development Period, the Board is prohibited from taking any action which would discriminate against Declarant, or which would be detrimental to the sale of Lots or any other portion of the Property owned by Declarant. Declarant shall be entitled to determine, in its sole and absolute discretion, whether any such action discriminates or is detrimental to Declarant. The Board will be required to continue the same level and quality of maintenance, operations and services as that provided immediately prior to assumption of control of the Board by Owners other than Declarant until the expiration or termination of the Development Period.

4.12 Administration of Common Area . The administration of the Common Area by the Association shall be in accordance with the provisions of the Restrictions, Applicable Law, and of any other agreements, documents, amendments or supplements to the foregoing which may be duly adopted or subsequently required by any institutional or governmental lender, purchaser, insurer or guarantor of mortgage loans (including, for example, the Federal Home Loan Mortgage Corporation) or by any governmental or quasi-governmental agency having regulatory jurisdiction over the Common Area or by any title insurance company selected by Declarant to insure title to any portion of the Common Area.

4.13 Maintenance Provided by Association. The Association shall not be liable for injury or damage to person or property caused by the elements or by the Owner or Resident of any Lot or any other person or resulting from any utility, rain, snow or ice which may leak or flow from any portion of Common Area or from any pipe, drain, conduit, appliance or equipment which the Association is responsible to maintain hereunder. The Association shall not be liable to any Owner or Resident of any Lot for loss or damage, by theft or otherwise, of any property,

which may be stored in or upon any of the Common Area or any Lot. The Association shall not be liable to any Owner or Resident, for any damage or injury caused in whole or in part by the Association's failure to discharge its responsibilities under this Declaration. No diminution or abatement of Assessments shall be claimed or allowed by reason of any alleged failure of the Association to take some action or perform some function required to be taken or performed by the Association under this Declaration or for inconvenience or discomfort arising from the making of repairs or Improvements which are the responsibility of the Association or from any action taken by the Association to comply with any law ordinance or with any order or directive of any municipal or other governmental authority.

4.14 **Merger**. Merger or consolidation of the Association with another association must be evidenced by an amendment to this Declaration. The amendment must be approved by at least two-thirds of the votes of Members present in person or by proxy at the meeting at which the action to merge or consolidate with another association is submitted for a vote. On merger or consolidation of the Association with another association, the property, rights, and obligations of another association may, by operation of law, be added to the properties, rights, and obligations of the Association as a surviving corporation pursuant to the merger. The surviving or consolidated association may administer the provisions of the Restrictions within the Property, together with the covenants and restrictions established on any other property under its jurisdiction. No merger or consolidation, however, will effect a revocation, change, or addition to the covenants established by this Declaration within the Property.

4.15 **Right of Action by Association**. The Association shall not have the power to institute, defend, intervene in, settle or compromise litigation, arbitration or other proceedings: (i) in the name of or on behalf of any Lot Owner (whether one or more); or (ii) pertaining to a Claim, as defined in *Section 12.1* below, relating to the design or construction of Improvements on a Lot (whether one or more). This *Section 4.15* may not be amended or modified without Declarant's written and acknowledged consent and Members entitled to cast at least one hundred percent (100%) of the total number of votes of the Association, which must be part of the Recorded amendment instrument.

4.16 **Resolution of Board Deadlock**. In the event the Board is deadlocked, meaning a decision of a Majority of the Board cannot be obtained as a result of a disagreement between Board members, the decision will be considered a "Claim" as defined in *Article 12* and, notwithstanding any provision in *Article 12* to the contrary, will be resolved by binding arbitration in accordance with the procedures set forth in *Section 12.8* of this Declaration.

ARTICLE 5
INSURANCE

5.1 **Insurance**. Each Owner will be required to purchase and maintain commercially standard insurance on the Improvements located upon such Owner's Lot. The Association will not be required to maintain insurance on the Improvements constructed upon any Lot. The Association may, however, obtain such insurance as it may deem necessary, including but not

limited to such policies of liability and property damage insurance as the Board, in its discretion, may deem necessary. Insurance premiums for such policies will be a common expense to be included in the Assessments levied by the Association. The acquisition of insurance by the Association will be without prejudice to the right and obligation of any Owner to obtain additional individual insurance. During the Development Period, Declarant reserves the right to satisfy the insurance obligations of the Association with a master insurance program controlled by Declarant.

ARE YOU COVERED?

The Association will not provide insurance which covers an Owner's Lot or any Improvements or personal property located on a Lot.

5.2 Restoration. In the event of any fire or other casualty, unless otherwise approved by the ACC, the Owner will (i) promptly repair, restore and replace any damaged or destroyed structures to their same exterior condition existing prior to the damage or destruction thereof, or (ii) in the case of substantial or total damage or destruction of any Improvement, remove all such damaged Improvements and debris from the Property within thirty (30) days after the occurrence of such damage. Such repair, restoration or replacement will be commenced and completed in a good and workmanlike manner using exterior materials substantially similar to those originally used in the structures damaged or destroyed. To the extent that the Owner fails to commence such repair, restoration, removal, or replacement of substantial or total damage or destruction within one hundred twenty (120) days after the occurrence of such damage or destruction, and thereafter prosecute the same to completion, or if the Owner does not clean up any debris resulting from any damage within thirty (30) days after the occurrence of such damage, the Association may commence, complete or effect such repair, restoration, replacement or clean-up, and such Owner will be personally liable to the Association for the cost of such work; provided, however, that if the Owner is prohibited or delayed by Applicable Law from commencing such repair, restoration, replacement or clean-up, the rights of the Association under this provision will not arise until the expiration of thirty (30) days after such prohibition or delay is removed. If the Owner fails to pay such cost upon demand by the Association, the cost thereof (plus interest from the date of demand until paid at the maximum lawful rate, or if there is no such maximum lawful rate, then at the rate of one and one-half percent (1½%) per month) will be added to the Assessment chargeable to the Owner's Lot. Any such amounts added to the Assessments chargeable against a Lot will be secured by the liens reserved in this Declaration for Assessments and may be collected by any means provided in this Declaration for the collection of Assessments, including, but not limited to, foreclosure of such liens against the Owner's Lot. **EACH SUCH OWNER WILL RELEASE AND HOLD HARMLESS THE ASSOCIATION AND ITS OFFICERS, DIRECTORS, COMMITTEE MEMBERS, EMPLOYEES AND AGENTS FROM ANY COST, LOSS, DAMAGE, EXPENSE, LIABILITY, CLAIM OR CAUSE OF ACTION INCURRED OR THAT MAY ARISE BY REASON OF THE ASSOCIATION'S ACTS OR ACTIVITIES UNDER THIS *SECTION 5.2*, EXCEPT FOR SUCH COST, LOSS, DAMAGE, EXPENSE, LIABILITY, CLAIM OR COST OF ACTION ARISING BY REASON OF THE ASSOCIATION'S GROSS NEGLIGENCE OR WILLFUL MISCONDUCT. "GROSS**

NEGLIGENCE" AS USED HEREIN DOES NOT INCLUDE SIMPLE NEGLIGENCE, CONTRIBUTORY NEGLIGENCE OR SIMILAR NEGLIGENCE SHORT OF ACTUAL GROSS NEGLIGENCE.

5.3 Mechanic's and Materialmen's Lien. Each Owner whose structure is repaired, restored, replaced or cleaned up by the Association pursuant to the rights granted under this *Article 5*, hereby grants to the Association an express mechanic's and materialmen's lien for the reasonable cost of such repair, restoration, or replacement of the damaged or destroyed Improvement to the extent that the cost of such repair, restoration or replacement exceeds any insurance proceeds allocable to such repair, restoration or replacement and delivered to the Association. Upon request by the Board, and before the commencement of any reconstruction, repair, restoration or replacement, such Owner will execute all documents sufficient to effectuate such mechanic's and materialmen's lien in favor of the Association.

ARTICLE 6
COVENANT FOR ASSESSMENTS

6.1 Assessments.

6.1.1 Established by the Board. Assessments established by the Board pursuant to the provisions of this *Article 6* will be levied against each Lot in amounts determined pursuant to *Section 6.7* below. The total amount of Assessments will be determined by the Board pursuant to *Sections 6.3* through *6.6*.

6.1.2 Personal Obligation; Lien. Each Assessment, together with such interest thereon and costs of collection as hereinafter provided, will be the personal obligation of the Owner of the Lot against which the Assessment is levied and will be secured by a lien hereby granted and conveyed by Declarant to the Association against each such Lot and all Improvements thereon (such lien, with respect to any Lot not in existence on the date hereof, will be deemed granted and conveyed at the time that such Lot is created). The Association may enforce payment of such Assessments in accordance with the provisions of this Article.

6.1.3 Declarant Subsidy. Declarant may, but is not obligated to, reduce Assessments which would otherwise be levied against Lots for any fiscal year by the payment of a subsidy to the Association. Any subsidy paid to the Association by Declarant may be treated as a contribution or a loan, in Declarant's sole and absolute discretion. Any subsidy and the characterization thereof will be disclosed as a line item in the annual budget prepared by the Board and attributable to such Assessments. The payment of a subsidy in any given year will not obligate Declarant to continue payment of a subsidy to the Association in future years.

6.2 Maintenance Fund. The Board will establish a maintenance fund into which will be deposited all monies paid to the Association and from which disbursements will be made in performing the functions of the Association under this Declaration. The funds of the Association may be used for any purpose authorized by the Restrictions and Applicable Law.

6.3 **Regular Assessments**. Prior to the beginning of each fiscal year, the Board will prepare a budget for the purpose of determining amounts sufficient to pay the estimated net expenses of the Association (the "**Regular Assessments**") which sets forth: (i) an estimate of the expenses to be incurred by the Association during such year in performing its functions and exercising its powers under the Restrictions, including, but not limited to, the cost of all management, repair and maintenance, the cost of providing street and other lighting, the cost of administering and enforcing the Restrictions; and (ii) an estimate of the amount needed to maintain a reasonable provision for contingencies and an appropriate replacement reserve, and giving due consideration to any expected income and any surplus from the prior year's fund. Regular Assessments sufficient to pay such estimated net expenses will then be levied at the level of Assessments set by the Board in its sole and absolute discretion, and the Board's determination will be final and binding so long as it is made in good faith. If the sums collected prove inadequate for any reason, including nonpayment of any Assessment by any Owner, the Association may at any time, and from time to time, levy further Assessments in the same manner. All such Regular Assessments will be due and payable to the Association annually on or before the first day of the month, or in such other manner as the Board may designate in its sole and absolute discretion.

6.4 **Special Assessments**. In addition to the Regular Assessments provided for above, the Board may levy special assessments (the "**Special Assessments**") whenever in the Board's opinion such Special Assessments are necessary to enable the Board to carry out the functions of the Association under the Restrictions. The amount of any Special Assessments will be at the sole discretion of the Board. In addition to the Special Assessments authorized above, the Association may, in any fiscal year, levy a Special Assessment for the purpose of defraying, in whole or in part, the cost of any construction, reconstruction, repair or replacement of a capital improvement upon the Common Area. Any Special Assessment levied by the Association for the purpose of defraying, in whole or in part, costs of any construction, reconstruction, repair or replacement of capital improvement upon the Common Area will be levied against all Owners based on Assessment Units.

6.5 **Individual Assessments**. In addition to any other Assessments, the Board may levy an individual assessment (the "**Individual Assessment**") against an Owner and the Owner's Lot. Individual Assessments may include, but are not limited to: interest, late charges, and collection costs on delinquent Assessments; reimbursement for costs incurred in bringing an Owner or the Owner's Lot into compliance with this Declaration; fines for violations of the Restrictions; transfer-related fees and resale certificate fees; fees for estoppel letters and project documents; insurance deductibles; reimbursement for damage or waste caused by willful or negligent acts of the Owner, the Owner's guests, invitees or Residents of the Owner's Lot; common expenses that benefit fewer than all of the Lots, which may be assessed according to benefit received; fees or charges levied against the Association on a per-Lot basis; and "pass through" expenses for services to Lots provided through the Association and which are paid by each Lot according to the benefit received.

6.6 Working Capital Assessment. Each Owner of a Lot (other than Declarant) will pay a one-time working capital assessment (the "**Working Capital Assessment**") to the Association in such amount, if any, as may be determined by the Declarant, until expiration or termination of the Development Period, and the Board thereafter. The Working Capital Assessment hereunder will be due and payable to the Association upon the transfer of a Lot (including both transfers from Declarant to the initial Owner, and transfers from one Owner of a Lot to a subsequent Owner of a Lot). Each Working Capital Assessment will be collected from the transferee of a Lot upon conveyance of the Lot from one Owner (including Declarant) to another (expressly including any reconveyance of the Lot upon resale or transfer thereof). Such Working Capital Assessment need not be uniform among all Lots, and the Declarant or the Board is expressly authorized to levy Working Capital Assessments of varying amounts depending on the size, use and general character of the Lots then being made subject to such levy. The Association may use the working capital to discharge operating expenses. The levy of any Working Capital Assessment will be effective only upon the Recordation of a written notice, signed by the Declarant or a duly authorized officer of the Association, setting forth the amount of the Working Capital Assessment.

Notwithstanding the foregoing provision, the following transfers will not be subject to the Working Capital Assessment: (i) foreclosure of a deed of trust lien, tax lien, or the Association's Assessment lien; (ii) transfer to, from, or by the Association; or (iii) voluntary transfer by an Owner to one or more co-Owners, or to the Owner's spouse, child, or parent, including conveyances to trusts. Additionally, the Declarant and an Owner who is a Homebuilder will not be subject to the Working Capital Assessment; however, the Working Capital Assessment will be payable by any Owner who acquires a Lot from the Declarant or a Homebuilder. In the event of any dispute regarding the application of the Working Capital Assessment to a particular Owner, the determination by the Declarant during the Development Period, and the Board thereafter, regarding application of the exemption will be binding and conclusive without regard to any contrary interpretation of this *Section 6.6*. The Working Capital Assessment will be in addition to, not in lieu of, any other Assessments levied in accordance with this *Article 6* and will not be considered an advance payment of such Assessments. The Declarant during the Development Period, and thereafter the Board, will have the power to waive the payment of any Working Capital Assessment attributable to a Lot (or all Lots) by the Recordation of a waiver, which waiver may be temporary or permanent.

6.7 Amount of Assessment.

6.7.1 Assessments to be Levied. The Board shall levy Assessments against each "Assessment Unit" (as defined in *Section 6.7.2* below). Unless otherwise provided in this Declaration, Assessments levied pursuant to *Section 6.3* and *Section 6.4* shall be levied uniformly against each Assessment Unit allocated to a Lot.

6.7.2 Assessment Unit. Each Lot shall constitute one "Assessment Unit" unless otherwise provided in *Sections 6.7.3 and 6.7.4.*

6.7.3 Declarant Exemption. Notwithstanding anything in this Declaration to the contrary, no Assessments shall be levied upon Lots owned by Declarant.

6.7.4 Other Exemptions. Declarant may, in its sole discretion, elect to: (i) exempt any un-platted or unimproved portion of the Property or any Lot from any Assessments levied or charged pursuant to this *Article 6*; (ii) delay the levy of Assessments against any un-platted, unimproved or improved portion of the Property; or (iii) reduce the Assessments levied against any un-platted, unimproved or improved portion of the Property. Declarant or the Board may also exempt any portion of the Property which is dedicated and accepted by public authority from Assessments.

6.8 Late Charges. If any Assessment is not paid by the due date applicable thereto, the Owner responsible for the payment may be required by the Board, at the Board's election at any time and from time to time, to pay a late charge in such amount as the Board may designate, and the late charge (and any reasonable handling costs) will be levied as an Individual Assessment against the Lot owned by such Owner, collectible in the manner as provided for collection of Assessments, including foreclosure of the lien against such Lot; provided, however, such charge will never exceed the maximum charge permitted under Applicable Law.

6.9 Owner's Personal Obligation; Interest. Assessments levied as provided for herein will be the personal and individual debt of the Owner of the Lot against which are levied such Assessments. No Owner may exempt himself or herself from liability for such Assessments. In the event of default in the payment of any such Assessment, the Owner of the Lot will be obligated to pay interest on the amount of the Assessment at the highest rate allowed by applicable usury laws then in effect on the amount of the Assessment from the due date therefor (or if there is no such highest rate, then at the rate of one and one half percent (1½ %) per month), together with all late charges, if any, costs and expenses of collection, including reasonable attorney's fees. Such amounts will be levied as an Individual Assessment against the Lot owned by such Owner.

6.10 Assessment Lien and Foreclosure. The payment of all sums assessed in the manner provided in this Article is, together with late charges as provided in *Section 6.8* and interest as provided in *Section 6.9* hereof and all costs of collection, including attorney's fees as herein provided, secured by the continuing Assessment lien granted to the Association pursuant to *Section 6.1.2* above, and will bind each Lot in the hands of the Owner thereof, and such Owner's heirs, devisees, personal representatives, successors or assigns. The aforesaid lien will be superior to all other liens and charges against such Lot, except only for: (i) tax liens and governmental assessment liens; (ii) all sums secured by a Recorded first mortgage lien or Recorded first deed of trust lien of record, to the extent such lien secures sums borrowed for the acquisition or improvement of the Lot in question, (iii) home equity loans or home equity lines of credit which are secured by a Recorded second mortgage lien or Recorded second deed of trust lien of record; or (iv) as otherwise required by Applicable Law; provided that, in the case of subparagraphs (ii), (iii), and (iv) above, such Mortgage was Recorded before the delinquent Assessment was due. The Association will have the power to subordinate the aforesaid Assessment lien to any other

lien. Such power will be entirely discretionary with the Board, and such subordination shall be signed by an authorized officer, agent or attorney of the Association. The Association may, at its option and without prejudice to the priority or enforceability of the Assessment lien granted hereunder, prepare a written notice of Assessment lien setting forth the amount of the unpaid indebtedness, the name of the Owner of the Lot covered by such lien and a description of the Lot. Such notice may be signed by one of the authorized officers, agents, or attorneys of the Association and will be Recorded. Each Owner, by accepting a deed or ownership interest to a Lot subject to this Declaration, will be deemed conclusively to have granted a power of sale to the Association to secure and enforce the Assessment lien granted hereunder. The Assessment liens and rights to foreclosure thereof will be in addition to and not in substitution of any other rights and remedies the Association may have by law and under this Declaration, including the rights of the Association to institute suit against such Owner personally obligated to pay the Assessment and/or for foreclosure of the aforesaid lien. In any foreclosure proceeding, such Owner will be required to pay the costs, expenses and reasonable attorney's fees incurred. The Association will have the power to bid (in cash or by credit against the amount secured by the lien) on the property at foreclosure or other legal sale and to acquire, hold, lease, mortgage, convey or otherwise deal with the same. Upon the written request of any Mortgagee, the Association will report to said Mortgagee any unpaid Assessments remaining unpaid for longer than sixty (60) days after the same are due. The lien hereunder will not be affected by the sale or transfer of any Lot; except, however, that in the event of foreclosure of any lien superior to the Assessment lien, the lien for any Assessments that were due and payable before the foreclosure sale will be extinguished, provided that past-due Assessments will be paid out of the proceeds of such foreclosure sale only to the extent that funds are available after the satisfaction of the indebtedness secured by the Mortgage. The provisions of the preceding sentence will not, however, relieve any subsequent Owner (including any Mortgagee or other purchaser at a foreclosure sale) from paying Assessments becoming due and payable after the foreclosure sale. Upon payment of all sums secured by a lien of the type described in this *Section 6.10*, the Association will upon the request of the Owner, and at such Owner's cost, execute a release of lien relating to any lien for which written notice has been Recorded as provided above, except in circumstances in which the Association has already foreclosed such lien. Such release will be signed by an authorized officer, agent, or attorney of the Association. In addition to the lien hereby retained, in the event of nonpayment by any Owner of any Assessment and after the lapse of at least twelve (12) days since such payment was due, the Association may, upon five (5) days' prior written notice (which may run concurrently with such twelve (12) day period) to such Owner, in addition to all other rights and remedies available pursuant to Applicable Law, equity or otherwise, terminate, in such manner as the Board deems appropriate, any utility or cable service provided through the Association and not paid for directly by an Owner or Resident to the utility or service provider. Such notice will consist of a separate mailing or hand delivery at least five (5) days prior to a stated date of disconnection, with the title "termination notice" or similar language prominently displayed on the notice. The notice will include the office or street address where the Owner or the Owner's tenant can make arrangements for payment of the bill and for reconnection of service. Utility or cable service will not be disconnected on a day, or immediately preceding a day, when personnel are not available for the purpose of collection and reconnecting such

services. Except as otherwise provided by Applicable Law, the sale or transfer of a Lot will not relieve the Owner of such Lot or such Owner's transferee from liability for any Assessments thereafter becoming due or from the lien associated therewith. If an Owner conveys its Lot and on the date of such conveyance Assessments against the Lot remain unpaid, or said Owner owes other sums or fees under this Declaration to the Association, the Owner will pay such amounts to the Association out of the sales price of the Lot, and such sums will be paid in preference to any other charges against the Lot other than liens superior to the Assessment lien and charges in favor of the State of Tennessee or a political subdivision thereof for taxes on the Lot which are due and unpaid. The Owner conveying such Lot will remain personally liable for all such sums until the same are fully paid, regardless of whether the transferee of the Lot also assumes the obligation to pay such amounts. The Board may adopt an administrative transfer fee to cover the expenses associated with updating the Association's records upon the transfer of a Lot to a third party; provided, however, that no transfer fee will be due upon the transfer of a Lot from Declarant to a third party.

Yes, the Association *can* foreclose on your Lot!

If you fail to pay assessments to the Association, you may lose title to your Lot if the Association forecloses its assessment lien.

6.11 Exempt Property. The following areas will be exempt from the Assessments provided for in this Article:

(i) All area dedicated and accepted by public authority;

(ii) The Common Area; and

(iii) Any portion of the Property owned by Declarant.

6.12 Fines and Damages Assessment.

6.12.1 Board Assessment. The Board may assess fines against an Owner for violations of the Restrictions which have been committed by an Owner, a Resident, or the Owner or Residents guests, agents or invitees pursuant to the *Fine and Enforcement Policy* adopted by the Board. Any fine and/or charge levied in accordance with this *Section 6.12* will be considered an Individual Assessment pursuant to this Declaration. Each day of violation may be considered a separate violation if the violation continues after written notice to the Owner. The Board may assess damage charges against an Owner for pecuniary loss to the Association from property damage or destruction of Common Area or any facilities caused by the Owner, Resident, or their guests, agents, or invitees. The Manager will have authority to send notices to alleged violators, informing them of their violations and asking them to comply with the Rules and Regulations and/or informing them of potential or probable fines or damage assessments. The Board may from time to time adopt a schedule of fines.

6.12.2 Lien Created. The payment of each fine and/or damage charge levied by the Board against the Owner of a Lot is, together with interest as provided in *Section 6.9* hereof and all costs of collection, including attorney's fees as herein provided, secured by the lien granted to the Association pursuant to *Section 6.1.2* of this Declaration. The fine and/or damage charge will be considered an Assessment for the purpose of this Article and will be enforced in accordance with the terms and provisions governing the enforcement of assessments pursuant to this *Article 6*.

ARTICLE 7
ARCHITECTURAL CONTROL COMMITTEE

Declarant has a substantial interest in ensuring that Improvements within the Property maintain and enhance Declarant's reputation as a community developer and do not impair Declarant's ability to market and sell all or any portion of the Property. Until Declarant has delegated its right to appoint and remove all members of the ACC to the Board as provided in *Section 7.2.1* below, the ACC will be acting solely in Declarant's interest and will owe no duty to any other Owner or the Association. Notwithstanding any provision in this Declaration to the contrary, Declarant may appoint a single person to exercise the rights of the ACC. No Improvement constructed or caused to be constructed by Declarant will be subject to the terms and provisions of this *Article 7* and need not be approved in accordance herewith.

7.1 Construction of Improvements. No Improvement may be erected, placed, constructed, painted, altered, modified or remodeled on any Lot, and no Lot may be re-subdivided or consolidated with other Lots or Property, by anyone other than Declarant without the prior written approval of the ACC.

7.2 Architectural Control Committee.

7.2.1 Composition. The ACC will be composed of not more than three (3) persons (who need not be Members or Owners) appointed as provided below, who will review Improvements proposed to be made by any Owner other than Declarant. Declarant will have the right to appoint and remove (with or without cause) all members of the ACC. Declarant may assign its right to appoint all members of the ACC to the Association by Recorded written instrument, and thereafter, the Board will have the right to appoint and remove (with or without cause) all members of the ACC. Any assignment by Declarant of the right to appoint and remove all members of the ACC may be withdrawn until expiration of twenty-four (24) months after the expiration of the Development Period. If Declarant withdraws its assignment of the right to appoint and remove all members of the ACC, then on the date of such withdrawal, Declarant will have the right to appoint and remove (with or without cause) all members of the ACC. Declarant's right to appoint all members of the ACC will automatically be assigned to the Association upon the expiration of twenty-four (24) months after the expiration of the Development Period. Declarant, at its option, may create and assign specific duties and responsibilities to one or more sub-committees consisting of members and/or non-members of the ACC. In the event responsibilities and duties are assigned to a sub-committee, those

responsibilities and duties will no longer be discharged by the ACC unless the sub-committee exercising such duties and responsibilities is dissolved by Declarant. The right to create, dissolve, and appoint members of such sub-committees will reside exclusively with Declarant until such time as Declarant has assigned its right to appoint members of the ACC to the Association. The ACC will have the right to employ consultants and advisors as it deems necessary or appropriate.

7.2.2 Submission and Approval of Plans and Specifications. Construction plans and specifications or, when an Owner desires solely to re-subdivide or consolidate Lots, a proposal for such re-subdivision or consolidation, will be submitted in accordance with the Design Guidelines, if any, or any additional rules adopted by the ACC together with any review fee which is imposed by the ACC in accordance with *Section 7.2.3* to the ACC at the offices of Declarant, at such address as may hereafter be designated in writing from time to time. No re-subdivision or consolidation will be made, nor any Improvement placed or allowed on any Lot, until the plans and specifications and the builder which the Owner intends to use to construct the proposed structure or Improvement have been approved in writing by a Majority of the members of the ACC. The ACC may, in reviewing such plans and specifications consider any information that it deems proper; including, without limitation, any permits, environmental impact statements or percolation tests that may be required by the ACC or any other entity; and harmony of external design and location in relation to surrounding structures, topography, vegetation, and finished grade elevation. The ACC may postpone its review of any plans and specifications submitted for approval pending receipt of any information or material which the ACC, in its sole discretion, may require. Site plans must be approved by the ACC prior to the clearing of any Lot, or the construction of any Improvements. The ACC may refuse to approve plans and specifications for proposed Improvements, or for the re-subdivision or consolidation of any Lot on any grounds that, in the sole and absolute discretion of the ACC, are deemed sufficient, including, but not limited to, purely aesthetic grounds.

7.2.3 Design Guidelines. Declarant shall have the right, but shall have no obligation to adopt Design Guidelines and, during the Development Period, will have the power from time to time, to adopt (unless previously adopted by Declarant), amend, modify, or supplement the Design Guidelines, if any. Upon expiration or termination of the Development Period, the ACC, or any sub-committee thereof created pursuant to *Section 7.2.1*, will have the power from time to time, to adopt (if not previously adopted by Declarant), to amend, modify, or supplement the Design Guidelines, if any; provided, however, that any amendment to the Design Guidelines made by a sub-committee will only apply to the Improvements under the jurisdiction of such sub-committee, and during the Development Period, any such amendment, modification or supplement must be approved in advance and in writing by Declarant. In the event of any conflict between the terms and provisions of the Design Guidelines, if any, and the terms and provisions of this Declaration, the terms and provisions of this Declaration will control. In addition, the ACC will have the power and authority to impose a fee for the review of plans, specifications and other documents and information submitted to it pursuant to the terms of this Declaration. Such charges will be held by the ACC and used to defray the administrative expenses incurred by the ACC in performing its duties hereunder; provided, however, that any excess funds held by the ACC will be distributed to the Association at the end of each calendar

year. The ACC will not be required to review any plans until a complete submittal package, as required by this Declaration and the Design Guidelines, is assembled and submitted to the ACC. The ACC will have the authority to adopt such additional procedural and substantive rules and guidelines (including, without limitation, the imposition of any requirements for certificates of compliance or completion relating to any Improvement and the right to approve in advance any contractor selected for the construction of Improvements), not in conflict with this Declaration, as it may deem necessary or appropriate in connection with the performance of its duties hereunder.

7.2.4 Actions of the Architectural Control Committee. The ACC may, by resolution unanimously adopted in writing, designate one or more of its members, or an agent acting on its behalf, to take any action or perform any duties for and on behalf of the ACC, except the granting of variances. In the absence of such designation, the vote of a Majority of all of the members of the ACC taken at a duly constituted meeting will constitute an act of the ACC.

7.2.5 Failure to Act. In the event that any plans and specifications are submitted to the ACC as provided herein, and the ACC fails either to approve or reject such plans and specifications for a period of sixty (60) days following such submission, rejection of such plans and specifications by the ACC will be presumed. In furtherance, and not in limitation, of the foregoing, any failure of the ACC to act upon a request for a variance will not be deemed a consent to such variance, and the ACC's written approval of all requests for variances will be expressly required.

7.2.6 Variances. The ACC may grant variances from compliance with any of the provisions of the Design Guidelines, if any, or this Declaration, when, in the opinion of the ACC, in its sole and absolute discretion, such variance is justified. All variances must be evidenced in writing and must be signed by at least a Majority of the members of the ACC. Each variance must also be Recorded; provided however, that failure to record a variance will not affect the validity thereof or give rise to any claim or cause of action against the ACC, including Declarant or its designee, the Association, or the Board. If a variance is granted, no violation of the covenants, conditions, or restrictions contained in this Declaration or the Design Guidelines, if any, will be deemed to have occurred with respect to the matter for which the variance was granted. The granting of such variance will not operate to waive or amend any of the terms and provisions of this Declaration or the Design Guidelines, if any, for any purpose except as to the particular property and in the particular instance covered by the variance, and such variance will not be considered to establish a precedent for any future waiver, modification, or amendment of the terms and provisions of this Declaration or the Design Guidelines, if any.

7.2.7 Duration of Approval. The approval of the ACC of any plans and specifications, and any variances granted by the ACC, will be valid for a period of one hundred twenty (120) days only. If construction in accordance with such plans and specifications or variance is not commenced within such one hundred twenty (120) day period and diligently prosecuted to completion within either: (i) one year after issuance of approval of such plans and specifications; or (ii) such other period thereafter as determined by the ACC, in its sole and

absolute discretion, the Owner will be required to resubmit such plans and specifications or request for a variance to the ACC, and the ACC will have the authority to re-evaluate such plans and specifications in accordance with this *Section 7.2.7* and may, in addition, consider any change in circumstances which may have occurred since the time of the original approval.

7.2.8 No Waiver of Future Approvals. The approval of the ACC to any plans or specifications for any work done or proposed in connection with any matter requiring the approval or consent of the ACC will not be deemed to constitute a waiver of any right to withhold approval or consent as to any plans and specifications on any other matter, subsequently or additionally submitted for approval by the same or a different person, nor will such approval or consent be deemed to establish a precedent for future approvals by the ACC.

7.2.9 Non-Liability of Committee Members. NEITHER DECLARANT, THE BOARD, THE ARCHITECTURAL CONTROL COMMITTEE, NOR ANY MEMBER WILL BE LIABLE TO ANY OWNER OR TO ANY OTHER PERSON FOR ANY LOSS, DAMAGE OR INJURY ARISING OUT OF THE PERFORMANCE OF THE ARCHITECTURAL CONTROL COMMITTEE'S DUTIES UNDER THIS DECLARATION. EACH OWNER IS ADVISED TO REVIEW ALL ORDINANCES, REQUIREMENTS, REGULATIONS AND ENCUMBRANCES AFFECTING THE USE AND IMPROVEMENT OF THEIR LOT PRIOR TO SUBMITTING PLANS TO THE ACC FOR APPROVAL. FURTHERMORE, APPROVAL BY THE ACC SHOULD NOT BE CONSTRUED BY THE OWNER THAT ANY IMPROVEMENT COMPLIES WITH THE TERMS AND PROVISIONS OF ANY ORDINANCES, REQUIREMENTS, REGULATIONS OR ENCUMBRANCES WHICH MAY AFFECT THE OWNER'S LOT. CERTAIN ENCUMBRANCES MAY BENEFIT PARTIES WHOSE INTERESTS ARE NOT ADDRESSED BY THE ACC.

ARTICLE 8
MORTGAGE PROVISIONS

The following provisions are for the benefit of holders, insurers and guarantors of first Mortgages on Lots within the Property. The provisions of this *Article 8* apply to this Declaration and the Bylaws of the Association.

8.1 Notice of Action. An institutional holder, insurer, or guarantor of a first Mortgage which provides a written request to the Association (such request to state the name and address of such holder, insurer, or guarantor and the street address of the Lot to which its Mortgage relates (thereby becoming an "**Eligible Mortgage Holder**")), will be entitled to timely written notice of:

(i) Any condemnation loss or any casualty loss which affects a material portion of the Property or which affects any Lot on which there is an eligible Mortgage held, insured, or guaranteed by such Eligible Mortgage Holder; or

(ii) Any delinquency in the payment of assessments or charges owed for a Lot subject to the Mortgage of such Eligible Mortgage Holder, where such delinquency has continued for a period of sixty (60) days, or any other violation of the Restrictions relating to such Lot or the Owner or Resident which is not cured within sixty (60) days; or

(iii) Any lapse, cancellation, or material modification of any insurance policy maintained by the Association.

8.2 Examination of Books. The Association will permit Mortgagees to examine the books and records of the Association during normal business hours.

8.3 Taxes, Assessments and Charges. All taxes, assessments and charges that may become liens prior to first lien mortgages under Applicable Law will relate only to the individual Lots and not to any other portion of the Property.

ARTICLE 9
GENERAL PROVISIONS

9.1 Term. The terms, covenants, conditions, restrictions, easements, charges, and liens set out in this Declaration will run with and bind the Property, and will inure to the benefit of and be enforceable by the Association, and every Owner, including Declarant, and their respective legal representatives, heirs, successors, and assigns, for a term beginning on the date this Declaration is Recorded, and continuing through and including January 1, 2075, after which time this Declaration will be automatically extended for successive periods of ten (10) years unless a change (the word "change" meaning a termination, or change of term or renewal term) is approved in a resolution adopted by Members entitled to cast at least sixty-seven percent (67%) of the total number of votes of the Association, voting in person or by proxy at a meeting duly called for such purpose, written notice of which will be given to all Members at least thirty (30) days in advance and will set forth the purpose of such meeting; provided, however, that such change will be effective only upon the Recording of a certified copy of such resolution. The foregoing sentence shall in no way be interpreted to mean sixty-seven percent (67%) of a quorum as established pursuant to the Bylaws. Notwithstanding any provision in this *Section 9.1* to the contrary, if any provision of this Declaration would be unlawful, void, or voidable by reason of any Applicable Law restricting the period of time that covenants on land may be enforced, such provision will expire twenty-one (21) years after the death of the last survivor of the now living descendants, as of the date that this Declaration is first Recorded, of King Charles III, King of England.

9.2 Eminent Domain. In the event it becomes necessary for any public authority to acquire all or any part of the Common Area for any public purpose during the period this Declaration is in effect, the Board is hereby authorized to negotiate with such public authority for such acquisition and to execute instruments necessary for that purpose. Should acquisitions by eminent domain become necessary, only the Board need be made a party, and in any event the

proceeds received will be held by the Association for the benefit of the Owners. In the event any proceeds attributable to acquisition of Common Area are paid to Owners, such payments will be allocated on the basis of Assessment Units and paid jointly to the Owners and the holders of Mortgages or deeds of trust on the respective Lot.

9.3 Amendment. This Declaration may be amended or terminated by the Recording of an instrument executed and acknowledged by: (i) Declarant acting alone; or (ii) by the president and secretary of the Association setting forth the amendment and certifying that such amendment has been approved by Declarant (until expiration or termination of the Development Period) and Members entitled to cast at least sixty-seven percent (67%) of the total number of votes entitled to be cast by members of the Association. The foregoing sentence shall in no way be interpreted to mean sixty-seven percent (67%) of a quorum as established pursuant to the Bylaws. No amendment will be effective without the written consent of Declarant, its successors or assigns, during the Development Period. Specifically, and not by way of limitation, Declarant may unilaterally amend this Declaration: (a) to bring any provision into compliance with any Applicable Law; (b) to enable any reputable title insurance company to issue title insurance coverage on any Lot; (c) to enable any institutional or governmental lender, purchaser, insurer or guarantor of mortgage loans, including, for example, the Federal Home Loan Mortgage Corporation, to make, purchase, insure or guarantee mortgage loans on Lots; or (d) to comply with any requirements promulgated by a local, state or governmental agency, including, for example, the Department of Housing and Urban Development.

9.4 Enforcement. Except as otherwise provided herein, any Owner of Lot, at such Owner's own expense, Declarant and the Association will have the right to enforce, by a proceeding at law or in equity, the Restrictions. The Association and/or Declarant may initiate, defend or intervene in any action brought to enforce any provision of the Restrictions. Such right of enforcement will include both damages for and injunctive relief against the breach of any provision hereof. Every act or omission whereby any provision of the Restrictions is violated, in whole or in part, is hereby declared to be a nuisance and may be enjoined or abated by any Owner of a Lot (at such Owner's own expense), Declarant or the Association. Any violation of any Applicable Law pertaining to the ownership, occupancy, or use of any portion of the Property is hereby declared to be a violation of this Declaration and subject to all of the enforcement procedures set forth herein. Failure to enforce any right, provision, covenant, or condition set forth in the Restrictions will not constitute a waiver of the right to enforce such right, provision, covenants or condition in the future. Failure of Declarant or the Association to enforce the terms and provisions of the Restrictions shall in no event give rise to any claim or liability against Declarant, the Association, or any of their partners, directors, officers, or agents. EACH OWNER, BY ACCEPTING TITLE TO ALL OR ANY PORTION OF THE PROPERTY, HEREBY RELEASES AND SHALL HOLD HARMLESS EACH OF DECLARANT, THE ASSOCIATION, AND THEIR PARTNERS, DIRECTORS, OFFICERS, OR AGENTS FROM AND AGAINST ANY DAMAGES, CLAIMS, OR LIABILITY ASSOCIATED WITH THE FAILURE OF DECLARANT OR THE ASSOCIATION TO ENFORCE THE TERMS AND PROVISIONS OF THE RESTRICTIONS.

9.5 Declarant Fine Authority. During the Development Period, Declarant may assess fines against an Owner for violations of the Restrictions which have been committed by an Owner, a Resident, or any guests, agents, family members, or invitees of an Owner or Resident. The Declarant uses fines to discourage violations of the Restrictions, and to encourage compliance when a violation occurs - not to punish violators or generate revenue for the Declarant. Although a fine may be an effective and efficient remedy for certain types of violations or violators, it is only one of several methods available to the Declarant for enforcing the Restrictions. The Declarant may from time to time adopt a schedule of fines. If the violation of the Restrictions is ongoing or continuous, the fine may be assessed on a periodic basis (such as daily, monthly, or quarterly). If the violation is not ongoing, but is instead sporadic or periodic, the fine may be levied on a per occurrence basis. An Owner is liable for fines levied by the Declarant for violations of the Restrictions by the Owner, a Resident, or any guests, agents, family members or invitees of the Owner or Resident. Regardless of who commits the violation, the Declarant will direct its communications to the Owner, although the Declarant may send copies of its notices to the Residents.

9.6 Higher Authority. The terms and provisions of this Declaration are subordinate to Applicable Law. Generally, the terms and provisions of this Declaration are enforceable to the extent they do not violate or conflict with Applicable Law.

9.7 Severability. If any provision of this Declaration is held to be invalid by any court of competent jurisdiction, such invalidity will not affect the validity of any other provision of this Declaration, or, to the extent permitted by Applicable Law, the validity of such provision as applied to any other person or entity.

9.8 Conflicts. If there is any conflict between the provisions of this Declaration, the Charter, the Bylaws, or any Rules and Regulations adopted pursuant to the terms of such documents, the provisions of this Declaration, the Charter, the Bylaws, and the Rules and Regulations, in such order, will govern.

9.9 Gender. Whenever the context so requires, all words herein in the male gender will be deemed to include the female or neuter gender, all singular words will include the plural, and all plural words will include the singular.

9.10 Acceptance by Grantees. Each grantee of Declarant of a Lot or other real property interest in the Property, by the acceptance of a deed of conveyance, or each subsequent purchaser, accepts the same subject to all terms, restrictions, conditions, covenants, reservations, easements, liens and charges, and the jurisdiction rights and powers created or reserved by this Declaration or to whom this Declaration is subject, and all rights, benefits and privileges of every character hereby granted, created, reserved or declared. Furthermore, each grantee agrees that no assignee or successor to Declarant hereunder will have any liability for any act or omission of Declarant which occurred prior to the effective date of any such succession or assignment. All impositions and obligations hereby imposed will constitute covenants running with the land within the Property, and will bind any person having at any time any interest or estate in the Property, and

will inure to the benefit of each Owner in like manner as though the provisions of this Declaration were recited and stipulated at length in each and every deed of conveyance.

9.11 Damage and Destruction. The Association shall undertake the following actions subsequent to damage or destruction to all or any part of the Common Area covered by insurance:

9.11.1 Claims. Promptly after damage or destruction by fire or other casualty to all or any part of the Common Area covered by insurance, the Board, or its duly authorized agent, will proceed with the filing and adjustment of all claims arising under such insurance and obtain reliable and detailed estimates of the cost of repair of the damage. Repair, as used in this *Section 9.11.1*, means repairing or restoring the Common Area to substantially the same condition as existed prior to the fire or other casualty.

9.11.2 Repair Obligations. Any damage to or destruction of the Common Area will be repaired unless a Majority of the Board decides within sixty (60) days after the casualty not to repair. If for any reason either the amount of the insurance proceeds to be paid as a result of such damage or destruction, or reliable and detailed estimates of the cost of repair, or both, are not made available to the Association within said period, then the period will be extended until such information will be made available.

9.11.3 Restoration. In the event that it should be determined by the Board that the damage or destruction of the Common Area will not be repaired and no alternative Improvements are authorized, then the affected portion of the Common Area will be restored to its natural state and maintained as an undeveloped portion of the Common Area by the Association in a neat and attractive condition.

9.11.4 Special Assessment for Common Area. If insurance proceeds are paid to restore or repair any damaged or destroyed Common Area, and such proceeds are not sufficient to defray the cost of such repair or restoration, the Board will levy a Special Assessment, as provided in *Article 6*, against all Owners. Additional Assessments may be made in like manner at any time during or following the completion of any repair.

9.11.5 Proceeds Payable to Owners. In the event that any proceeds of insurance policies are paid to Owners as a result of any damage or destruction to any Common Area, such payments will be allocated based on Assessment Units and paid jointly to the Owners and the holders of Mortgages or deeds of trust on their Lots.

9.12 No Partition. Except as may be permitted in this Declaration or amendments thereto, no physical partition of the Common Area or any part thereof will be permitted, nor will any person acquiring any interest in the Property or any part thereof seek any such judicial partition unless the portion of the Property or the Common Area in question has been removed from the provisions of this Declaration pursuant to *Section 11.4* below. This *Section 9.12* will not be construed to prohibit the Board from acquiring and disposing of tangible personal property or from acquiring title to real property that may or may not be subject to this Declaration, nor will

this provision be constructed to prohibit or affect the creation of a condominium regime in accordance with the Tennessee Condominium Act of 2008.

9.13 Notices. Any notice permitted or required to be given to any person by this Declaration will be in writing and may be delivered either personally or by mail, or as otherwise required by Applicable Law. If delivery is made by mail, it will be deemed to have been delivered on the third (3rd) day (other than a Sunday or legal holiday) after a copy of the same has been deposited in the United States mail, postage prepaid, addressed to the person at the address given by such person to the Association for the purpose of service of notices. Such address may be changed from time to time by notice in writing given by such person to the Association.

9.14 View Impairment. Neither Declarant nor the Association guarantee or represent that any view over and across the Lots, or any open space or Common Area within the Property will be preserved without impairment. Neither Declarant, the ACC, nor the Association shall have any obligation to relocate, prune, or thin trees or perform other landscaping. The Association (with respect to any Common Area) will have the right to add trees and other landscaping from time to time, subject to Applicable Law. There shall be no express or implied easements for view purposes or for the passage of light and air.

9.15 Safety and Security. Each Owner and Resident of a Lot, and their respective guests and invitees, shall be responsible for their own personal safety and the security of their property within the Property or the Common Area. The Association may, but shall not be obligated to, maintain or support certain activities within the Property or the Common Area designed to promote or enhance the level of safety or security which each person provides for himself or herself and his or her property. However, neither the Association nor Declarant nor their Directors, employees, or agents shall in any way be considered insurers or guarantors of safety or security within the Property or the Common Area, nor shall either be held liable for any loss or damage by reason of failure to provide adequate security or ineffectiveness of security measures undertaken. No representation or warranty is made that any systems or measures, including security monitoring systems or any gate, mechanism or system for limiting access to the Property or the Common Area, cannot be compromised or circumvented; or that any such system or security measures undertaken will in all cases prevent loss or provide the detection or protection for which the system is designed or intended. Each Owner acknowledges, understands, and shall be responsible for informing any Residents of such Owner's Lot that the Association, its Board, its employees, agents, and committees, and Declarant are not insurers or guarantors of security or safety and that each person within the Property assumes all risks of personal injury and loss or damage to property, including any residences or Improvements constructed upon any Lot and the contents thereof, resulting from acts of third parties.

ARTICLE 10
EASEMENTS

10.1 Right of Ingress and Egress. Declarant, its agents, employees, designees, successors or assigns will have a right of ingress and egress over and the right of access to the

Common Area to the extent necessary to use the Common Area and the right to such other temporary uses of the Common Area as may be required or reasonably desirable (as determined by Declarant in its sole discretion) in connection with the construction and development of the Property. The Property shall be subject to a perpetual non-exclusive easement for the installation and maintenance of, including the right to read, meters, service or repair lines and equipment, and to do everything and anything necessary to properly maintain and furnish the Community Systems and the facilities pertinent and necessary to the same, which easement shall run in favor of Declarant. Declarant shall have the right, but not the obligation, to install and provide the Community Systems and to provide the services available through the Community Systems to any and all Lots within the Property. Neither the Association nor any Owner shall have any interest therein. Any or all of such services may be provided either directly through the Association and paid for as part of the Assessments or paid directly to Declarant, any affiliate of Declarant, or a third party, by the Owner who receives the services. The Community Systems shall be the property of Declarant unless transferred by Declarant, whereupon any proceeds of such transfer shall belong to Declarant. Declarant shall have the right but not the obligation to convey, transfer, sell or assign all or any portion of the Community Systems or all or any portion of the rights, duties or obligations with respect thereto, to the Association or to any person or entity. The rights of Declarant with respect to the Community Systems installed by Declarant and the services provided through such Community Systems are exclusive, and no other person or entity may provide such services through the Community Systems installed by Declarant without the prior written consent of Declarant. In recognition of the fact that interruptions in cable television and other Community Systems services will occur from time to time, no person or entity described above shall in any manner be liable, and no user of any Community System shall be entitled to any refund, rebate, discount or offset in applicable fees, for any interruption in Community Systems services, regardless of whether or not same is caused by reasons within the control of the then-provider of such services.

10.2 Reserved Easements. All dedications, limitations, restrictions, easements, rights-of-way, licenses, leases, encumbrances and reservations shown on any Plat or otherwise Recorded against the Property and all grants and dedications of easements, rights-of-way, restrictions and related rights made by Declarant or any third party prior to the Property becoming subject to this Declaration are incorporated herein by reference and made a part of this Declaration for all purposes as if fully set forth herein, and will be construed as being adopted in each and every contract, deed or conveyance executed or to be executed by or on behalf of Declarant. Declarant reserves the right to relocate, make changes in, and additions to said dedications, limitations, restrictions, easements, rights-of-way, licenses, leases, encumbrances, reservations and other grants for the purpose of developing the Property.

10.3 Improvements, Roadway and Utility Easements. Declarant hereby reserves unto itself and Declarant's agents and employees, a perpetual non-exclusive easement under, over and across the Property, or any areas conveyed or maintained by the Association, including but not limited to any areas reserved or held as Common Area for the installation, operation, maintenance, repair, relocation, removal and/or modification of any Improvements, roadways, walkways, pathways, street lighting, sewer lines, water lines, utility lines, drainage or storm

water lines, and/or other pipelines, conduits, wires, and/or any public utility function on, beneath or above the surface of the ground that serve the Property, any Common Area and any other property owned by Declarant, with the right of access to the same at any time. Declarant will be entitled to unilaterally assign the easements reserved hereunder to any third party who owns, operates or maintains the facilities and Improvements described in this *Section 10.3*. The exercise of the easement reserved herein will not extend to permitting entry into any residence, nor will it unreasonably interfere with the use of any Lot or residence or Improvement constructed thereon. In addition, Declarant may designate all or any portion of the easements or facilities constructed therein as Common Area.

10.4 Subdivision Entry and Fencing Easement. Declarant reserves for itself and the Association, an easement over and across the Property and any Common Area for the installation, operation, maintenance, repair, relocation, removal and/or modification of certain subdivision entry facilities, walls, and/or fencing which serves the Property, the Common Area or any other property owned by Declarant. Declarant will have the right, from time to time, to Record a written notice which identifies the subdivision entry facilities, walls, and/or fencing to which the easement reserved hereunder applies. Declarant may designate all or any portion of the subdivision entry facilities, walls, and/or fencing as Common Area by Recorded written notice. The exercise of the easements reserved hereunder will not extend to permitting entry into any residence, nor will it unreasonably interfere with the use of any Lot or residence or Improvement constructed thereon.

10.5 Landscape and Monument Sign Easement. Declarant hereby reserves for itself and the Association an easement over and across the Property and the Common Area for the installation, operation, maintenance, repair, relocation, removal and/or modification of signs, monument signs and/or landscaping which serve the Property, the Common Area and any other property owned by Declarant. Declarant will have the right, from time to time, to Record a written notice which identifies those portions of the Property, Common Area or property owned by the Declarant to which the easement reserved hereunder applies. Declarant may designate all or any portion of the easement areas reserved hereunder as Common Area. The exercise of the easements reserved hereunder will not extend to permitting entry into any residence, nor will it unreasonably interfere with the use of any Lot or residence or Improvement constructed thereon.

10.6 Easement to Inspect and Right to Correct. For a period of ten (10) years after the expiration of the Development Period, Declarant reserves for itself and for the Declarant's architect, engineer, other design professionals, builder and general contractor the right, but not the duty, to inspect, monitor, test, redesign, correct, and relocate any structure, Improvement, or condition that may exist on any portion of the Property, including the Lots, and a perpetual nonexclusive easement of access throughout the Property to the extent reasonably necessary to exercise this right. The party exercising such rights will promptly repair, at its sole expense, any damage resulting from the exercise of this right. By way of illustration but not limitation, relocation of mechanical or electrical facilities may be warranted by a change of circumstance, imprecise siting of the original facilities, or the desire or necessity to comply more fully with Applicable Law. This *Section 10.6* may not be construed to create a duty for Declarant, the

Association, or any architect, engineer, other design professionals, builder or general contractor, and may not be amended without Declarant's advanced written consent. In support of this reservation, each Owner, by accepting an interest in or title to a Lot, hereby grants to Declarant an easement of access and entry over, across, under, and through the Property, including without limitation, all Common Areas and the Owner's Lot and all Improvements thereon for the purposes contained in this *Section 10.6*.

10.7 Shared Facilities Agreement. Certain property adjacent to or in close proximity to the Property may be developed for commercial and/or other uses (the "**Adjacent Development**"), and may share certain Common Area facilities, including entryways, monument signage, landscaping and/or amenities (the "**Shared Facilitie**s") with the Association. Declarant reserves the right to: (i) grant and convey easements to the owners(s) of the Adjacent Development and/or the property owners' association established for the Adjacent Development (the "**Adjacent Parties**") over and across the Common Area that may be necessary or required to access, utilize and/or maintain the Shared Facilities and Adjacent Development; (ii) require the Association and the Adjacent Parties to share in the expenses associated with the use and maintenance of the Shared Facilities; and (iii) enter into one or more shared facilities and cost sharing agreements, by and on behalf of the Association, to govern the rights and responsibilities of both the Association and the Adjacent Parties with regard to use and maintenance of the Shared Facilities, to allocate costs for the operation, maintenance and reserves for the Shared Facilities between the Association and the Adjacent Parties and to grant easements for access and use of the Shared Facilities. Notwithstanding the foregoing, each Owner acknowledges and agrees that the Adjacent Parties may have access to certain Shared Facilities at no cost to the Adjacent Parties.

ARTICLE 11
DEVELOPMENT RIGHTS

11.1 Development by Declarant. It is contemplated that the Property will be developed pursuant to a plan, which may, from time to time, be amended or modified. Declarant reserves the right, but will not be obligated, to pursue the development, construction and marketing of the Property, the right to direct the size, shape, and composition of the Property, the right to create and/or designate Lots and Common Area and to subdivide all or any portion of the Property, subject to any limitations imposed on portions of the Property by any applicable Plat. Collectively, the rights reserved to Declarant as set forth in this Declaration shall be known as the "Development Rights", and Declarant hereby reserves the right and privilege for itself, and/or its assigns, to exercise the Development Rights, and any other rights reserved on behalf of Declarant as set forth in this Declaration until twenty-four (24) months after the expiration or termination of the Development Period, except the right to appoint and remove Board members and officers of the Association which shall be governed by the provisions set out in *Section 4.3*. These rights may be exercised with respect to any portions of the Property or the Common Area. As each portion of the Property is developed or dedicated, Declarant may designate the use, classification and such additional covenants, conditions and restrictions as Declarant may deem appropriate for such Property.

11.2 **Special Declarant Rights**. Notwithstanding any provision of this Declaration to the contrary, at all times, Declarant will have the right and privilege: (i) to erect and maintain advertising signs (illuminated or non-illuminated), sales flags, other sales devices and banners for the purpose of aiding the sale of Lots in the Property; (ii) to maintain Improvements upon Lots as sales, model, management, business and construction offices; and (iii) to maintain and locate construction trailers and construction tools and equipment within the Property or the Common Area. The construction, placement or maintenance of Improvements by Declarant will not be considered a nuisance, and Declarant hereby reserves the right and privilege for itself to conduct the activities enumerated in this *Section 11.2* until twenty-four (24) months after expiration or termination of the Development Period.

11.3 **Addition of Land**. Declarant may, at any time and from time to time, add additional lands to the Property. Upon the filing of a notice of addition of land, such land will be considered part of the Property for purposes of this Declaration, and such added lands will be considered part of the Property subject to this Declaration and the terms, covenants, conditions, restrictions and obligations set forth in this Declaration, and the rights, privileges, duties and liabilities of the persons subject to this Declaration will be the same with respect to such added land as with respect to the lands originally covered by this Declaration. To add lands to the Property, Declarant will be required only to Record a notice of addition of land containing the following provisions:

(i) A reference to this Declaration, which reference will state the document number or volume and initial page number where this Declaration is Recorded;

(ii) A statement that such land will be considered Property for purposes of this Declaration, and that all of the terms, covenants, conditions, restrictions and obligations of this Declaration will apply to the added land; and

(iii) A legal description of the added land.

11.4 **Withdrawal of Land**. Declarant may, at any time and from time to time, reduce or withdraw land from the Property, and remove and exclude from the burden of this Declaration and the jurisdiction of the Association any portion of the Property. Upon any such withdrawal and removal this Declaration and the covenants conditions, restrictions and obligations set forth herein will no longer apply to the portion of the Property withdrawn. To withdraw lands from the Property hereunder, Declarant will be required only to Record a notice of withdrawal of land containing the following provisions:

(i) A reference to this Declaration, which reference will state the document number or volume and initial page number where this Declaration is recorded;

(ii) A statement that the provisions of this Declaration will no longer apply to the withdrawn land; and

(iii) A legal description of the withdrawn land.

11.5 Notice of Plat Recordation. Declarant may, at any time and from time to time, file a notice of plat recordation (a "**Notice of Plat Recordation**"). A Notice of Plat Recordation is Recorded for the purpose of more clearly identifying specific Lots subject to the terms and provisions of this Declaration after portions of the Property is made subject to a Plat. Unless otherwise provide in the Notice of Plat Recordation, portions of the Property included in the Plat identified in the Notice of Plat Recordation, but not shown as a residential Lot on such Plat, shall be automatically withdrawn from the terms and provisions of this Declaration (without the necessity of complying with the withdrawal provisions set forth in *Section 11.4*). Declarant shall have no obligation to Record a Notice of Plat Recordation and failure to Record a Notice of Plat Recordation shall in no event remove any portion of the Property from the terms and provisions of this Declaration.

11.6 Assignment of Declarant's Rights. Notwithstanding any provision in this Declaration to the contrary, Declarant may, by written instrument, assign, in whole or in part, any of its privileges, exemptions, rights and duties under this Declaration to any person or entity and may permit the participation, in whole, in part, exclusively, or non-exclusively, by any other person or entity in any of its privileges, exemptions, rights and duties hereunder.

ARTICLE 12
DISPUTE RESOLUTION

This Article 12 is intended to encourage the resolution of disputes involving the Property. A dispute regarding the Lots, Common Area, and/or Improvements can create significant financial exposure for the Association and its Members, interfere with the resale and refinancing of Lots, and increase strife and tension among the Owners, the Board and the Association's management. Since disputes may have a direct effect on each Owner's use and enjoyment of their Lot and the Common Area, this Article 12 requires Owner transparency and participation in certain circumstances. Transparency means that the Owners are informed in advance about a dispute, the proposed arrangement between the Association and a law firm or attorney who will represent the Association in the dispute, and that each Owner will have an opportunity to participate in the decision-making process prior to initiating the dispute resolution process.

12.1 Introduction and Definitions. The Association, the Owners, Declarant, all persons subject to this Declaration, and each person not otherwise subject to this Declaration who agrees to submit to this *Article 12* by written instrument delivered to the Claimant, which may include, but is not limited to, a Homebuilder, a general contractor, sub-contractor, design professional, or other person who participated in the design or construction of Lots, Common Area or any Improvement within, serving or forming a part of the Property (individually, a "**Party**" and collectively, the "**Parties**") agree to encourage the amicable resolution of disputes

involving the Property and the Common Area to avoid the emotional and financial costs of litigation and arbitration if at all possible. Accordingly, each Party hereby covenants and agrees that this Article applies to all Claims as hereafter defined. This *Article 12* may only be amended with the prior written approval of Declarant, the Association (acting through a Majority of the Board), and Owners holding one hundred percent (100%) of the votes in the Association. As used in this Article only, the following words, when capitalized, have the following specified meanings:

(i) "**Claim**" means:

(A) Claims relating to the rights and/or duties of Declarant, the Association, or the ACC, under the Restrictions.

(B) Claims relating to the acts or omissions of Declarant, the Association or a Board member or officer of the Association during Declarant's control and administration of the Board, and any claim asserted against the ACC.

(C) Claims relating to the design or construction of the Common Area or any Improvements located within or on the Property.

(ii) "**Claimant**" means any Party having a Claim against any other Party.

(iii) "**Respondent**" means any Party against which a Claim has been asserted by a Claimant.

12.2 Mandatory Procedures. Claimant may not initiate any proceeding before any judge, jury, arbitrator or any judicial or administrative tribunal seeking redress of resolution of its Claim until Claimant has complied with the procedures of this Article. As provided in *Section 12.8* below, a Claim must be resolved by binding arbitration.

12.3 Claim Affecting Common Areas. In accordance with *Section 4.15* of this Declaration, the Association does not have the power or right to institute, defend, intervene in, settle, or compromise litigation, arbitration or other proceedings: (i) in the name of or on behalf of any Lot Owner (whether one or more); or (ii) pertaining to a Claim, as defined in *Section 12.1* above, relating to the design or construction of Improvements on a Lot (whether one or more). Additionally, no Lot Owner shall have the power or right to institute, defend, intervene in, settle or compromise litigation, arbitration or other proceedings relating to the design or construction of the Common Area. Each Lot Owner, by accepting an interest in or to title to a Lot, hereby grants to the Association the exclusive right to institute, defend, intervene in, settle or compromise litigation, arbitration or other proceedings relating to the design or construction of the Common Area. In the event the Association asserts a Claim related to the Common Area, as a precondition to providing the Notice defined in *Section 12.5*, initiating the mandatory dispute

resolution procedures set forth in this *Article 12*, or taking any other action to prosecute a Claim related to the Common Area, the Association must:

12.3.1 Obtain Owner Approval of Engagement.

The requirements related to Owner approval set forth in this Section 12.3.1 are intended to ensure that the Association and the Owners approve and are fully informed of the financial arrangements between the Association and a law firm or attorney engaged by the Association to prosecute a Claim relating to the design or construction of the Common Area. The engagement agreement between the Association and the law firm or attorney may include requirements that the Association pay costs, fees, and expenses to the law firm or attorney which will be paid through Assessments levied against Owners. The financial agreement between the Association and the law firm or attorney may also include obligations related to payment, and the conditions and circumstances when the payment obligations arise, if the relationship between the Association and the law firm or attorney is terminated or if the Association agrees to settle the Claim. In addition, the financial arrangement between the Association and the law firm or attorney may include additional costs, expenses, and interest charges. This financial obligation can be significant. The Board may not engage a law firm or attorney to prosecute a Claim relating to the design or construction of the Common Area or execute a written agreement between the Association and a law firm or attorney for the purpose of prosecuting a Claim relating to the design or construction of Common Area unless the law firm or attorney and the financial arrangements between the Association and the law firm or attorney are approved by the Owners in accordance with this Section 12.3.1.

Unless otherwise approved by Members holding eighty percent (80%) of the votes in the Association, the Association, acting through its Board, shall in no event have the authority to engage a law firm or attorney to prosecute a Claim relating to the design or construction of the Common Area if the agreement between the Association and law firm or attorney includes any provision or requirement that would obligate the Association to pay any costs, expenses, fees, or other charges to the law firm or attorney, including but not limited to, costs, expenses, fees, or other charges payable by the Association: (i) if the Association terminates the engagement with the law firm or attorney or engages another firm or third-party to assist with the Claim; (ii) if the Association agrees to settle the Claim for a cash payment or in exchange for repairs or remediation performed by the Respondent or any other third-party; (iii) if the Association agrees to pay interest on any costs or expenses incurred by the law firm or attorney; and/or (iv) for consultants, expert witnesses, and/or general contractors hired by the law firm or attorney. For avoidance of doubt, it is intended that Members holding eighty percent (80%) of the votes in the Association must approve the law firm and attorney who will prosecute the Claim and the written agreement between the Association and the law firm and/or attorney.

The approval of the Members required under this *Section 12.3.1* must be obtained at a meeting of Members called in accordance with the Bylaws. The notice of Member meeting will be provided pursuant to the Bylaws but the notice must also include: (a) the name of the law firm and attorney; (b) a copy of the proposed written agreement between the Association and the law

firm and/or attorney; (c) a narrative summary of the types of costs, expenses, fees, or other charges that may be required to be paid by the Association; (d) the conditions upon which such types of costs, expenses, fees, or other charges are required to be paid by the Association; (e) an estimate of the costs, expenses, fees, or other charges that may be required to be paid by the Association if the conditions for payment occur, which estimate shall be expressed as a range for each type of cost, expense, fee, or other charge; and (f) a description of the process the law firm and/or attorney will use to evaluate the Claim and whether destructive testing will be required (i.e., the removal of all or portions of the Common Area or Improvements on the Property). If destructive testing will be required or is likely to occur, the notice shall include a description of the destructive testing, likely locations of the destructive testing, whether the Owner's use of their Lots or the Common Area will be affected by such testing, and if the destructive testing occurs the means or method the Association will use to repair the Common Area or Improvements affected by such testing and the estimated costs thereof. The notice required by this paragraph must be prepared and signed by a person other than the law firm or attorney who is a party to the proposed agreement being approved by the Members. In the event Members holding eighty percent (80%) of the votes in the Association approve the law firm and/or attorney who will prosecute the Claim and the written agreement between the Association and the law firm and/or attorney, the Board shall have the authority to engage the law firm and/or attorney and enter into the written agreement approved by the Members.

12.3.2 Provide Notice of the Inspection. As provided in *Section 12.3.3* below, a Common Area Report is required which is a written inspection report issued by the Inspection Company. Before conducting an inspection that is required to be memorialized by the Common Area Report, the Association must have provided at least ten (10) days prior written notice of the date on which the inspection will occur to each Respondent which notice shall identify the Inspection Company preparing the Common Area Report, the specific Common Areas to be inspected, and the date and time the inspection will occur. Each Respondent may attend the inspection, personally or through an agent.

12.3.3 Obtain a Common Area Report.

The requirements related to the Common Area Report set forth in this Section 12.3.3 are intended to provide assurance to the Claimant, Respondent, and the Owners that the substance and conclusions of the Common Area Report and recommendations are not affected by influences that may compromise the professional judgement of the party preparing the Common Area Report, and to avoid circumstances which would create the appearance that the professional judgment of the party preparing the Common Area Report is compromised.

Obtain a written independent third-party report for the Common Area (the "**Common Area Report**") from a professional engineer licensed by the Tennessee Board of Professional Engineers with an office located in Sumner County, Tennessee (the "**Inspection Company**"). The Common Area Report must include: (i) a description with photographs of the Common Area subject to the Claim; (ii) a description of the present physical condition of the Common Area subject to the Claim; (iii) a detailed description of any modifications, maintenance, or repairs to

the Common Area performed by the Association or a third-party, including any Respondent; and (iv) specific and detailed recommendations regarding remediation and/or repair of the Common Area subject to the Claim. For the purpose of subsection (iv) of the previous sentence, the specific and detailed recommendations must also include the specific process, procedure, materials, and/or improvements necessary and required to remediate and/or repair the deficient or defective condition identified in the Common Area Report and the estimated costs necessary to effect such remediation and/or repairs. The estimate of costs required by the previous sentence shall be obtained from third-party contractors with an office located in Sumner County, Tennessee, and each such contractor providing the estimate must hold all necessary or required licenses from the Tennessee Department of Licensing and Regulation or otherwise required by Applicable Law for the work to which the cost estimate relates.

The Common Area Report must be obtained by the Association. The Common Area Report will not satisfy the requirements of this *Section 12.3.3* and is not an "independent" report if: (a) the Inspection Company has an arrangement or other agreement to provide consulting and/or engineering services with the law firm or attorney that presently represents the Association or proposes to represent the Association; (b) the costs and expenses for preparation of the Common Area Report are not required to be paid directly by the Association to the Inspection Company at the time the Common Area Report is finalized and delivered to the Association; or (c) the law firm or attorney that presently represents the Association or proposes to represent the Association has agreed to reimburse (whether unconditional or conditional and based on the satisfaction of requirements set forth in the Association's agreement with the law firm or attorney) the Association for the costs and expenses for preparation of the Common Area Report. For avoidance of doubt, an "independent" report means that the Association has independently contracted with the Inspection Company on an arms-length basis based on customary terms for the preparation of engineering reports and that the Association will directly pay for the report at the time the Common Area Report is finalized and delivered to the Association.

12.3.4 Provide a Copy of Common Area Report to all Respondents and Owners. Upon completion of the Common Area Report, and in any event no later than three (3) days after the Association has been provided a copy of the Common Area Report, the Association will provide a full and complete copy of the Common Area Report to each Respondent and to each Owner. The Association shall maintain a written record of each Respondent and Owner who was provided a copy of the Common Area Report which will include the date the report was provided. The Common Area Report shall be delivered to each Respondent by hand-delivery and to each Owner by mail.

12.3.5 Provide a Right to Cure Defects and/or Deficiencies Noted on Common Area Report. Commencing on the date the Common Area Report has been completed and continuing for a period of ninety (90) days thereafter, each Respondent shall have the right to: (i) inspect any condition identified in the Common Area Report; (ii) contact the Inspection Company for additional information necessary and required to clarify any information in the Common Area Report; and (iii) correct any condition identified in the Common Area Report. As

provided in *Section 10.6* above, Declarant has an easement throughout the Property for itself, and its successors, assigns, architects, engineers, other design professionals, each Homebuilder, other builders, and general contractors that may be utilized during such ninety (90) day period and any additional period needed thereafter to correct a condition identified in the Common Area Report.

12.3.6 Hold Owner Meeting and Obtain Approval. In addition to obtaining approval from Members for the terms of the attorney or law firm engagement agreement, the Association must obtain approval from Members holding eighty percent (80%) of the votes in the Association to provide the Notice described in *Section 12.5*, initiate the mandatory dispute resolution procedures set forth in this *Article 12*, or take any other action to prosecute a Claim, which approval from Members must be obtained at a meeting of Members called in accordance with the Bylaws. The notice of meeting required hereunder will be provided pursuant to the Bylaws but the notice must also include: (i) the nature of the Claim, the relief sought, the anticipated duration of prosecuting the Claim, and the likelihood of success; (ii) a copy of the Common Area Report; (iii) a copy of any engagement letter between the Association and the law firm and/or attorney selected by the Association to assert or provide assistance with the Claim; (iv) a description of the attorney fees, consultant fees, expert witness fees, and court costs, whether incurred by the Association directly or for which the Association may be liable as a result of prosecuting the Claim; (v) a summary of the steps previously taken by the Association to resolve the Claim; (vi) a statement that initiating the lawsuit or arbitration proceeding to resolve the Claim may affect the market value, marketability, or refinancing of a Lot while the Claim is prosecuted; and (vii) a description of the manner in which the Association proposes to fund the cost of prosecuting the Claim. The notice required by this paragraph must be prepared and signed by a person who is not (a) the attorney who represents or will represent the Association in the Claim; (b) a member of the law firm of the attorney who represents or will represent the Association in the Claim; or (c) employed by or otherwise affiliated with the law firm of the attorney who represents or will represent the Association in the Claim. In the event Members approve providing the Notice described in *Section 12.5*, or taking any other action to prosecute a Claim, the Members holding a Majority of the votes in the Association, at a special meeting called in accordance with the Bylaws, may elect to discontinue prosecution or pursuit of the Claim.

12.4 Claim by Lot Owners – Improvements on Lots. Notwithstanding anything contained herein to the contrary, in the event a warranty is provided to a Lot Owner by Declarant or a Homebuilder relating to the design or construction of any Improvements located on a Lot, then this *Article 12* will only apply to the extent that this *Article 12* is more restrictive than such Lot Owner's warranty, as determined in the sole discretion of the party that provided such warranty (either the Declarant or the Homebuilder). If a warranty has not been provided to a Lot Owner relating to the design or construction of any Improvements located on a Lot, then this *Article 12* will apply. Class action proceedings are prohibited, and no Lot Owner shall be entitled to prosecute, participate, initiate, or join any litigation, arbitration or other proceedings as a class member or class representative in any such proceedings under this Declaration. If a Lot Owner brings a Claim, as defined in *Section 12.1*, relating to the design or construction of any Improvements located on a Lot (whether one or more), as a precondition to providing the Notice

defined in *Section 12.5*, initiating the mandatory dispute resolution procedures set forth in this *Article 12*, or taking any other action to prosecute a Claim, the Lot Owner must:

12.4.1 Provide Notice of the Inspection. As provided in *Section 12.4.2* below, an Owner Improvement Report is required which is a written inspection report issued by the Inspection Company. Before conducting an inspection that is required to be memorialized by the Owner Improvement Report, the Owner must have provided at least ten (10) days prior written notice of the date on which the inspection will occur to each Respondent which notice shall identify the Inspection Company preparing the Owner Improvement Report, the Improvements and areas of the Improvements to be inspected, and the date and time the inspection will occur. Each Respondent may attend the inspection, personally or through an agent.

12.4.2 Obtain an Owner Improvement Report.

The requirements related to the Owner Improvement Report set forth in this Section 12.4.2 are intended to provide assurance to the Claimant and Respondent that the substance and conclusions of the Owner Improvement Report and recommendations are not affected by influences that may compromise the professional judgement of the party preparing the Owner Improvement Report, and to avoid circumstances which would create the appearance that the professional judgment of the party preparing the Owner Improvement Report is compromised.

Obtain a written independent third-party report for the Improvements (the "**Owner Improvement Report**") from an Inspection Company. The Owner Improvement Report must include: (i) a description with photographs of the Improvements subject to the Claim; (ii) a description of the present physical condition of the Improvements; (iii) a detailed description of any modifications, maintenance, or repairs to the Improvements performed by the Owner or a third-party, including any Respondent; (iv) specific and detailed recommendations regarding remediation and/or repair of the Improvements. For the purpose of subsection (iv) of the previous sentence, the specific and detailed recommendations must also include the specific process, procedure, materials, and/or improvements necessary and required to remediate and/or repair the deficient or defective condition identified in the Owner Improvement Report and the estimated costs necessary to effect such remediation and/or repairs. The estimate of costs required by the previous sentence shall be obtained from third-party contractors with an office located in Sumner County, Tennessee, and each such contractor providing the estimate must hold all necessary or required licenses from the Tennessee Department of Licensing and Regulation or otherwise required by Applicable Law for the work to which the cost estimate relates.

The Owner Improvement Report must be obtained by the Owner. The Owner Improvement Report will not satisfy the requirements of this *Section 12.4.2* and is not an "independent" report if: (a) the Inspection Company has an arrangement or other agreement to provide consulting and/or engineering services with the law firm or attorney that presently represents the Owner or proposes to represent the Owner; (b) the costs and expenses for preparation of the Owner Improvement Report are not directly paid by the Owner to the Inspection Company no later than the date the Owner Improvement Report is finalized and

delivered to the Owner; or (c) the law firm or attorney that presently represents the Owner or proposes to represent the Owner has agreed to reimburse (whether unconditional or conditional and based on the satisfaction of requirements set forth in the Owner's agreement with the law firm or attorney) the Owner for the costs and expenses for preparation of the Owner Improvement Report. For avoidance of doubt, an "independent" report means that the Owner has independently contracted with the Inspection Company on an arms-length basis based on customary terms for the preparation of engineering reports and that the Owner will directly pay for the report no later than the date the Owner Improvement Report is finalized and delivered to the Owner.

12.4.3 Provide a Copy of Owner Improvement Report to all Respondents. Upon completion of the Owner Improvement Report, and in any event no later than three (3) days after the Owner has been provided a copy of the Owner Improvement Report, the Owner will provide a full and complete copy of the Owner Improvement Report to each Respondent. The Owner shall maintain a written record of each Respondent who was provided a copy of the Owner Improvement Report which will include the date the report was provided. The Owner Improvement Report shall be delivered to each Respondent by hand-delivery and to each Owner by mail.

12.4.4 Right to Cure Defects and/or Deficiencies Noted on Owner Improvement Report. Commencing on the date the Owner Improvement Report has been completed and continuing for a period of ninety (90) days thereafter, each Respondent shall have the right to: (i) inspect any condition identified in the Owner Improvement Report; (ii) contact the Inspection Company for additional information necessary and required to clarify any information in the Owner Improvement Report; and (iii) correct any condition identified in the Owner Improvement Report. As provided in *Section 10.6* above, Declarant has an easement throughout the Property for itself, and its successors, assigns, architects, engineers, other design professionals, each Homebuilder, other builders, and general contractors that may be utilized during such ninety (90) day period and any additional period needed thereafter to correct a condition identified in the Owner Improvement Report.

12.4.5 Claims Pertaining to the Common Area. Pursuant to *Section 12.3* above, an Owner does not have the power or right to institute, defend, intervene in, settle or compromise litigation, arbitration or other proceedings relating to the design or construction of the Common Area. In the event that a court of competent jurisdiction or arbitrator determines that an Owner does have the power or right to institute, defend, intervene in, settle or compromise litigation, arbitration or other proceedings relating to the design or construction of the Common Area, such Owner shall be required, since a Claim affecting the Common Area could affect all Owners, as a precondition to providing the Notice defined in *Section 12.5*, initiating the mandatory dispute resolution procedures set forth in this *Article 12*, or taking any other action to prosecute a Claim, to comply with the requirements imposed by the Association in accordance with *Section 12.3.2* (Provide Notice of Inspection), *Section 12.3.3* (Obtain a Common Area Report), *Section 12.3.4* (Provide a Copy of Common Area Report to all Respondents and Owners), *Section 12.3.5* (Provide

Right to Cure Defects and/or Deficiencies Noted on Common Area Report), *Section 12.3.6* (Owner Meeting and Approval), and *Section 12.5* (Notice).

12.5 **Notice**. Claimant must notify Respondent in writing of the Claim (the "**Notice**"), stating plainly and concisely: (i) the nature of the Claim, including date, time, location, persons involved, and Respondent's role in the Claim; (ii) the basis of the Claim (i.e., the provision of the Restrictions or other authority out of which the Claim arises); (iii) what Claimant wants Respondent to do or not do to resolve the Claim; and (iv) that the Notice is given pursuant to this *Section 12.5*. The one hundred twenty (120) day period for mediation set forth in *Section 12.7* below, is intended to provide the Claimant and Respondent with sufficient time to resolve the Claim in the event resolution is not accomplished during negotiation. If the Claim is not resolved during negotiation, mediation pursuant to *Section 12.7* is required without regard to the monetary amount of the Claim.

If the Claimant is the Association, the Notice will also include: (a) if the Claim relates to the design or construction of the Common Area, a true and correct copy of the Common Area Report and any and all other reports, studies, analyses, and recommendations obtained by the Association related to the Common Area; (b) a copy of any engagement letter between the Association and the law firm and/or attorney selected by the Association to assert or provide assistance with the Claim; (c) if the Claim relates to the design or construction of the Common Area, reasonable and credible evidence confirming that Members holding eighty percent (80%) of the votes in the Association approved the law firm and attorney and the written agreement between the Association and the law firm and/or attorney in accordance with *Section 12.3.1*; (d) a true and correct copy of the special meeting notice provided to Members in accordance with *Section 12.3.6* above; and (e) reasonable and credible evidence confirming that Members holding eighty percent (80%) of the votes in the Association approved providing the Notice. If the Claimant is not the Association and pertains to the Common Areas, the Notice will also include a true and correct copy of the Common Area Report. If the Claimant is not the Association and relates to the design or construction of Improvements on a Lot, the Notice will also include a true and correct copy of the Owner Improvement Report.

12.6 **Negotiation**. Claimant and Respondent will make every reasonable effort to meet in person to resolve the Claim by good faith negotiation. Within sixty (60) days after Respondent's receipt of the Notice, Respondent and Claimant will meet at a mutually acceptable place and time to discuss the Claim. If the Claim involves all or any portion of the Property, then at such meeting or at some other mutually-agreeable time, Respondent and Respondent's representatives will have full access to the Property that is subject to the Claim for the purposes of inspecting the Property.

12.7 **Mediation**. If the parties negotiate, but do not resolve the Claim through negotiation within one-hundred twenty (120) days from the date of the Notice (or within such other period as may be agreed on by the parties), Claimant will have thirty (30) additional days within which to submit the Claim to mediation under the auspices of a mediation center or individual mediator on which the parties mutually agree. The mediator must have at least five

(5) years of experience serving as a mediator and must have technical knowledge or expertise appropriate to the subject matter of the Claim. If Claimant does not submit the Claim to mediation within the 30-day period, Respondent will submit the Claim to mediation in accordance with this *Section 12.7*. If the Parties do not settle the Claim within thirty (30) days after submission to mediation, Respondent or Claimant may initiate arbitration proceedings in accordance with *Section 12.8*.

12.8 Binding Arbitration-Claims. All Claims must be settled by binding arbitration. Claimant or Respondent may, by summary proceedings (e.g., a plea in abatement or motion to stay further proceedings), bring an action in court to compel arbitration of any Claim not referred to arbitration as required by this *Section 12.8*.

12.8.1 Governing Rules. If a Claim has not been resolved after mediation in accordance with *Section 12.7*, the Claim will be resolved by binding arbitration in accordance with the terms of this *Section 12.8* and the American Arbitration Association (the "**AAA**") Construction Industry Arbitration Rules and Mediation Procedures and, if applicable, the rules contained in the AAA Supplementary Procedures for Consumer Related Disputes, as each are supplemented or modified by the AAA (collectively, the Construction Industry Arbitration Rules and Mediation Procedures and AAA Supplementary Procedures for Consumer Related Disputes are referred to herein as the "**AAA Rules**"). In the event of any inconsistency between the AAA Rules and this *Section 12.8*, this *Section 12.8* will control. Judgment upon the award rendered by the arbitrator shall be binding and not subject to appeal, but may be reduced to judgment or enforced in any court having jurisdiction. Notwithstanding any provision to the contrary or any applicable rules for arbitration, any arbitration with respect to Claims arising hereunder shall be conducted by a panel of three (3) arbitrators, to be chosen as follows:

(i) One arbitrator shall be selected by Respondent, in its sole and absolute discretion;

(ii) One arbitrator shall be selected by the Claimant, in its sole and absolute discretion; and

(iii) One arbitrator shall be selected by mutual agreement of the arbitrators having been selected by Respondent and the Claimant, in their sole and absolute discretion.

12.8.2 Exceptions to Arbitration; Preservation of Remedies. No provision of, nor the exercise of any rights under, this *Section 12.8* will limit the right of Claimant or Respondent, and Claimant and the Respondent will have the right during any Claim, to seek, use, and employ ancillary or preliminary remedies, judicial or otherwise, for the purposes of realizing upon, preserving, or protecting upon any property, real or personal, that is involved in a Claim, including, without limitation, rights and remedies relating to: (i) exercising self-help remedies (including set-off rights); or (ii) obtaining provisions or ancillary remedies such as injunctive relief, sequestration, attachment, garnishment, or the appointment of a receiver from a court

having jurisdiction before, during, or after the pendency of any arbitration. The institution and maintenance of an action for judicial relief or pursuit of provisional or ancillary remedies or exercise of self-help remedies shall not constitute a waiver of the right of any party to submit the Claim to arbitration nor render inapplicable the compulsory arbitration provisions hereof.

12.8.3 Statute of Limitations. All statutes of limitation that would otherwise be applicable shall apply to any arbitration proceeding under this *Section 12.8*.

12.8.4 Scope of Award; Modification or Vacation of Award. The arbitrator shall resolve all Claims in accordance with Applicable Law. The arbitrator may grant any remedy or relief that the arbitrator deems just and equitable and within the scope of this *Section 12.8* and subject to *Section 12.9* below; provided, however, attorney's fees and costs may not be awarded by the arbitrator to either Claimant or Respondent. In all arbitration proceedings, the arbitrator shall make specific, written findings of fact and conclusions of law. In all arbitration proceedings the parties shall have the right to seek vacation or modification of any award that is based in whole, or in part, on: (i) factual findings that are not sufficiently supported by a preponderance of the evidence consistent with the standard of review for bench trials pursuant to Tenn.R.App.P.13(d); (ii) conclusions of law that are erroneous; (iii) an error of Applicable Law; or (iv) a cause of action or remedy not expressly provided under Applicable Law. In no event may an arbitrator award speculative, special, exemplary, treble, or punitive damages for any Claim.

12.8.5 Other Matters. To the maximum extent practicable, an arbitration proceeding hereunder shall be concluded within one hundred eighty (180) days of the filing of the Claim for arbitration. Arbitration proceedings hereunder shall be conducted in Sumner County, Tennessee. Unless otherwise provided by this *Section 12.8*, the arbitrator shall be empowered to impose sanctions and to take such other actions as the arbitrator deems necessary to the same extent a judge could pursuant to the Federal Rules of Civil Procedure, the Tennessee Rules of Civil Procedure and Applicable Law. Claimant and Respondent agree to keep all Claims and arbitration proceedings strictly confidential, except for disclosures of information required in the ordinary course of business of the parties or by Applicable Law. In no event shall Claimant or Respondent discuss with the news media or grant any interviews with the news media regarding a Claim or issue any press release regarding any Claim without the written consent of the other parties to the Claim.

12.9 Allocation of Costs. Notwithstanding any provision in this Declaration to the contrary, each party bears all of its own costs incurred prior to and during the proceedings described in the Notice, Negotiation, Mediation, and Arbitration sections above, including its attorney's fees. Respondent and Claimant will equally divide all expenses and fees charged by the mediator and arbitrator.

12.10 General Provisions. A release or discharge of Respondent from liability to Claimant on account of the Claim does not release Respondent from liability to persons who are not party to Claimant's Claim.

12.11 Period of Limitation.

12.11.1 For Actions by an Owner or Resident. The exclusive period of limitation for any of the Parties to bring any Claim, shall be the earliest of: (i) for Claims alleging construction defect or defective design, two (2) years and one (1) day from the date that the Owner or Resident discovered or reasonably should have discovered evidence of the Claim; (ii) for Claims other than those alleging construction defect or defective design, four (4) years and one (1) day from the date that the Owner or Resident discovered or reasonably should have discovered evidence of the Claim; or (iii) the applicable statute of limitations for such Claim. In the event that a court of competent jurisdiction determines that an Owner does have the power or right to institute, defend, intervene in, settle or compromise litigation, arbitration or other proceedings relating to the design or construction of the Common Area, the exclusive period of limitation for a Claim of construction defect or defective design of the Common Areas, shall be the earliest of: (a) two (2) years and one (1) day from the date that the Owner or the Association discovered or reasonably should have discovered evidence of the Claim; or (b) the applicable statute of limitations for such Claim. In no event shall this *Section 12.11.1* be interpreted to extend any period of limitations.

12.11.2 For Actions by the Association. The exclusive period of limitation for the Association to bring any Claim, including, but not limited to, a Claim of construction defect or defective design of the Common Areas, shall be the earliest of: (i) for Claims alleging construction defect or defective design, two (2) years and one (1) day from the date that the Association or its manager, board members, officers or agents discovered or reasonably should have discovered evidence of the Claim; (ii) for Claims other than those alleging construction defect or defective design of the Common Areas, four (4) years and one (1) day from the date that the Association or its manager, board members, officers or agents discovered or reasonably should have discovered evidence of the Claim; or (iii) the applicable statute of limitations for such Claim. In no event shall this *Section 12.11.2* be interpreted to extend any period of limitations.

12.12 Funding the Resolution of Claims. The Association must levy a Special Assessment to fund the estimated costs to resolve a Claim pursuant to this *Article 12*. The Association may not use its annual operating income or reserve funds to fund the costs to resolve a Claim unless the Association has previously established and funded a dispute resolution fund.

[*SIGNATURE PAGES FOLLOW*]

EXECUTED to be effective on the date this instrument is Recorded.

DECLARANT:

CLQ DEVELOPMENT, LLC,
a Tennessee limited liability company

By: _____

Printed Name: _____

Title: _____

STATE OF _____ §
§
COUNTY OF _____ §

Before me, the undersigned authority, a Notary Public in and for the State and County aforesaid, personally appeared _____ with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who, upon oath, acknowledged him/herself to be the _____ ("Officer") of **CLQ Development, LLC**, a Tennessee limited liability company (the "Entity"), and that he/she, as such Officer, being duly authorized to do so, executed the foregoing document for the purposes contained therein, by signing his/her name as such Officer acting on behalf of the Entity.

Witness my hand and official seal the _____ day of _____, 20_____.

(SEAL)

_____
Notary Public Signature

My Commission Expires: _____

EXHIBIT "A"

PROPERTY DESCRIPTION

[to be inserted]

ALLEN FARMS SUBDIVISION

ALLEN FARMS INVESTMENTS, LLC.

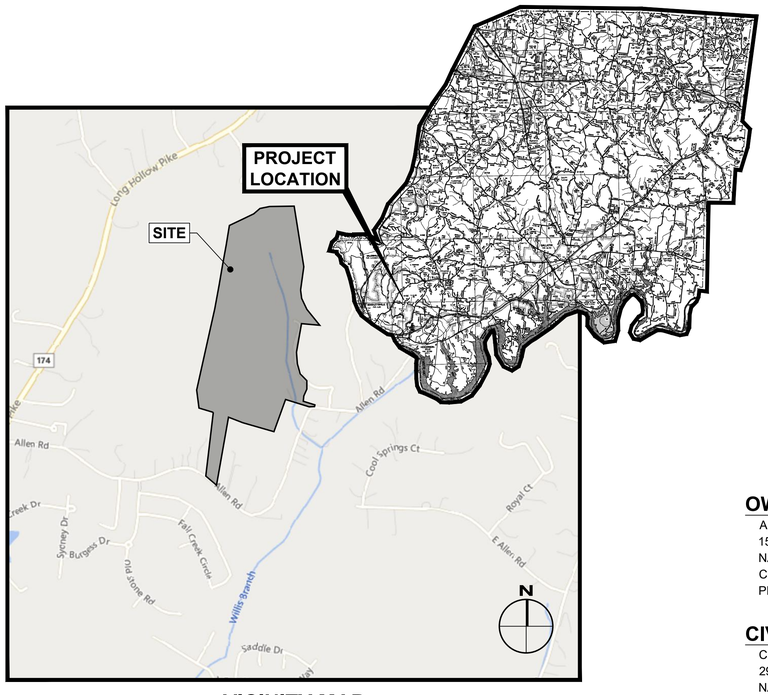
ALLEN ROAD

GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

SITE DATA TABLE	
OWNER INFORMATION	ALLEN FARMS INVESTMENT, LLC. 1014 CALEBS WALK GOODLETTSVILLE, TENNESSEE 37072 PHONE: (615) 406-9955
PARCEL ID	139 09800 000
CURRENT ZONING:	R-25
PARCEL ACREAGE:	5.44± ACRES
PARCEL ID	143 03300 000
CURRENT ZONING:	LDRPUD
PARCEL ACREAGE:	27.50± ACRES
PARCEL ID	139 06100 000
CURRENT ZONING:	LDRPUD
PARCEL ACREAGE:	38.88± ACRES
PARCEL ID	139 06201 000
CURRENT ZONING:	LDRPUD
PARCEL ACREAGE:	19.73± ACRES
TOTAL ACREAGE IN DEVELOPMENT:	91.55± ACRES
TOTAL COMMUNITY OPEN SPACE	35.82± ACRES (1,560,413.91± SQ. FT.)
AREA OF R.O.W.	5.08± ACRES (221,469.76± SQ. FT.)
LENGTH OF ROADWAY	6,329.19± L.F. (99,311.36± SQ. FT.)
LENGTH OF SIDEWALK	12,456.45± L.F. (43,206.64± SQ. FT.)

FEMA NOTE

- US FEMA FIRM COMMUNITY PANEL NUMBER: 47165C0381H, EFFECTIVE DATE 2/26/2021; FLOOD ZONE X.



VICINITY MAP

1"=1000'

PERMITTING & UTILITY CONTACTS

BUILDING DEPARTMENT
GOODLETTSVILLE CODES AND BUILDING SAFETY
105 S.MAIN STREET
GOODLETTSVILLE, TN 37072
615-851-2200
MIKE BAUER
mbauer@goodlettsville.gov

SEWER
WHITE HOUSE UTILITY DISTRICT
3303 HIGHWAY 31W
WHITE HOUSE, TN 37188
615-672-4110
PAT HARRELL, PE
whudengineering@whud.org

NATURAL GAS
PIEDMONT NATURAL GAS
83 CENTURY BLVD.
NASHVILLE, TN 37214
615-872-2332
BOBBY WORTHINGTON

STORMWATER
STORMWATER DEPARTMENT
215 CARTWRIGHT STREET
GOODLETTSVILLE, TN 37072
615-851-3469
MICHAEL WALROND
mwalrond@goodlettsville.gov

PLANNING & ZONING
PLANNING & DEVELOPMENT SERVICES
318 N. MAIN STREET
GOODLETTSVILLE, TN 37072
615-851-2202
SEAN PFALZER
SPFALZER@goodlettsville.gov

ROADWAY
PUBLIC WORKS
215 CARTWRIGHT STREET
GOODLETTSVILLE, TN 37072
615-851-2200
JEFF McCORMICK
jmccormick@goodlettsville.gov

WATER
WHITE HOUSE UTILITY DISTRICT
3303 HIGHWAY 31W
WHITE HOUSE, TN 37188
615-672-4110
PAT HARRELL, PE
whudengineering@whud.org

FIRE CHIEF
GOODLETTSVILLE FIRE DEPARTMENT
105 LONG HOLLOW PIKE
GOODLETTSVILLE, TN 37072
615-851-3478
KENNETH REEVES
kreeves@goodlettsville.gov

TELECOMMUNICATIONS
AT&T
116 S. CANNON AVE.
MURFREESBORO, TN 37129
615-8482082
KENNETH LEE KORNEGAY
kk4096@att.com

ELECTRIC
NASHVILLE ELECTRIC SERVICE
1214 CHURCH STREET
NASHVILLE, TN 37246
(615) 747-3412
SPENCER BROWN

PREPARED BY

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

PHONE: (615) 331-1441
FAX: (615) 331-1050

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

OWNER / DEVELOPER

ALLEN FARMS INVESTMENTS, LLC.
1516 HAMPTON STREET
NASHVILLE, TENNESSEE 37207
CONTACT: DEAN PATEL, MANAGER
PHONE: 615-406-9955

CIVIL ENGINEER

COLLIER ENGINEERING CO., INC.
2949 NOLENSVILLE PIKE
NASHVILLE, TN 37211
CONTACT: DON COLLINS, PE, CPESC
PHONE: 615-331-1441
EMAIL: DON.COLLINS@COLLIERENGINEERING.COM

LANDSCAPE ARCHITECT

COLLIER ENGINEERING CO., INC.
2949 NOLENSVILLE PIKE
NASHVILLE, TN 37211
CONTACT: NICK TUTTLE, PLA, PMP
PHONE: 615-331-1441
EMAIL: NICK.TUTTLE@COLLIERENGINEERING.COM

LIGHTING

SESCO LIGHTING
636 GRASSMERE PARK, SUITE 105
NASHVILLE, TN 37211
CONTACT: GRETCHEN MAST
PHONE: 615-383-2030
EMAIL: GMAST@SESCOLIGHTING.COM

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

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

COLLIER ENGINEERING CO., INC.

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2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

PHONE: (615) 331-1441
FAX: (615) 331-1050

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
No. 125500
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

COVER SHEET

SHEET NO. C0.00

FILENAME: J:\PRIVATE CLIENTS\2025-24 - ALLEN FARMS SUBDIVISION\CAD\DESIGN\2025-24_COVER_GENERAL SHEETS.DWG

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C0.02	GENERAL NOTES
C0.03	WHUD WATER & SEWER NOTES
C0.04	LEGEND & SYMBOLOGY
C1.00	EXISTING CONDITIONS & DEMOLITION PLAN
C1.10	TREE REMOVAL AND PROTECTION OVERALL PLAN
C1.11	TREE SURVEY TABLE
C1.12	TREE REMOVAL & PROTECTION PLAN
C1.13	TREE REMOVAL & PROTECTION PLAN
C1.14	TREE REMOVAL & PROTECTION PLAN
C1.15	TREE REMOVAL & PROTECTION PLAN
C1.16	TREE REMOVAL & PROTECTION DETAILS
C2.00	OVERALL SITE LAYOUT & KEY MAP
C2.01	SITE LAYOUT
C2.02	SITE LAYOUT
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C2.04	SITE LAYOUT
C2.05	PARCEL DATA TABLES
C2.06	INTERSECTION SIGHT DISTANCE DESIGN
C2.10	MAILBOX KIOSK PLAN
C2.11	MAILBOX KIOSK CANOPY DETAILS
C3.00	OVERALL SITE GRADING & DRAINAGE PLAN
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C6.20	SANITARY SEWER PLAN & PROFILE (OFF-SITE)
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C6.40	UTILITY DETAILS

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C6.42	UTILITY DETAILS - WATER
C6.43	UTILITY DETAILS - WATER
L0.00	LANDSCAPE NOTES
L0.10	OVERALL LANDSCAPE SCHEDULE
L0.11	BIORETENTION 1 & 2 LANDSCAPE SCHEDULE
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L2.10	WALL DETAILS - MAIN ENTRANCE GATE & SIGNAGE
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L2.12	WALL & COLUMN SECTION DETAILS

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COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055

PHONE: (615) 331-1441
FAX: (615) 331-1050

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 125340
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

SHEET INDEX

SHEET NO. C0.01

FILENAME: Z:\PRIVATE CIVIL\7125000.00 - ALLEN FARMS SUBDIVISION\7.06 DESIGN\7.06.01 CIVIL SITE\1-CAD\DESIGN\DWG\25_C000_GENERAL SHEETS.DWG

GENERAL NOTES AND SPECIFICATIONS

1. SURVEY DATA PROVIDED BY OWNER & TENNESSEE STATE LIDAR, VERIFIED BY COLLIER ENGINEERING ON 02/13/26.
2. THE FOLLOWING NOTES ARE APPLICABLE TO ALL CIVIL DOCUMENTS.
3. THE CONTRACTOR SHALL USE MATERIALS AND EMPLOY CONSTRUCTION METHODS IN ORDER TO COMPLY WITH THE DRAWINGS AND SPECIFICATIONS. WHERE A CONFLICT OCCURS, THE STRICTEST DESIGN SHALL GOVERN. ENGINEER'S REVIEW OF SHOP DRAWINGS, PRODUCT DATA, ETC., DOES NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL INFORM THE OWNER AND ENGINEER IN WRITING OF ANY SPECIFIC DEVIATIONS AND OBTAIN OWNER'S AND ENGINEER'S WRITTEN APPROVAL OF THE SPECIFIC DEVIATION.
4. THE CONTRACTOR SHALL CONFORM TO ALL LOCAL CODES AND OBTAIN ALL PERMITS AND BONDS IF REQUIRED, PRIOR TO BEGINNING WORK.
5. ALL RADII SHALL BE 3' MIN. UNLESS OTHERWISE NOTED. DIMENSIONS ARE TO THE FACE OF CURBS, EDGE OF CONCRETE, OR TO FACE OF BUILDING, UNLESS OTHERWISE NOTED.
6. CURBS SHALL BE PARALLEL TO THE CENTERLINE OF DRIVES. THE CURB SHALL BE PLACED ONLY AFTER HAVING ALL BREAK POINTS (PC & PT OF CURVES) LOCATED AT THE FACE OF CURB OR AT A CONSISTENT OFFSET BY A LAND SURVEYOR.
7. SITE LAYOUT IS BASED ON THE CONTROL POINTS AS NOTED.
8. DO NOT SCALE DRAWINGS AS THEY ARE REPRODUCTION AND SUBJECT TO DISTORTION.
9. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE STARTING ANY WORK. DAMAGES TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE REPAIRED ACCORDING TO LOCAL STANDARDS AND SPECIFICATIONS AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.
10. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFICATIONS AND LIAISON WITH UTILITY COMPANIES IN THE PROCESS OF LOCATING, RELOCATION, AND TIE-IN TO PUBLIC UTILITIES. ALSO, CONTRACTOR IS RESPONSIBLE FOR NOTIFYING ALL INSPECTORS A MINIMUM 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITIES. VERIFY WITH GOVERNING AGENCY.
11. 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.
12. CONCRETE WALKS AND PADS SHALL HAVE A LIGHT BROOM FINISH. ALL CONCRETE SHALL BE CLASS "A" (3,000 P.S.I.), UNLESS OTHERWISE NOTED. PREFORMED RECYCLED RUBBER EXPANSION JOINTS (1/2") ARE TO BE USED AT ALL LOCATIONS, WITH A MAXIMUM SPACING OF 30' O.C. TRANSVERSE JOINT MARKINGS SHALL BE MADE TO FORM BLOCKS AS NEARLY SQUARE AS POSSIBLE.
13. ALL DAMAGE TO EXISTING ASPHALT PAVEMENT TO REMAIN, WHICH RESULTS FROM NEW CONSTRUCTION, SHALL BE REPLACED WITH LIKE MATERIALS AT CONTRACTOR'S EXPENSE.
14. CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN THE USE OF EQUIPMENT IN, AND AROUND, OVERHEAD ELECTRICAL WIRES AND SERVICES. IF AT ANY TIME IN THE PURSUIT OF THIS WORK, THE CONTRACTOR MUST WORK IN CLOSE PROXIMITY OF THE ABOVE NOTED WIRES, THE ELECTRICAL COMPANY SHALL BE CONTACTED PRIOR TO SUCH WORK AND THE PROPER SAFETY MEASURES TAKEN.
15. IN EASEMENTS AND RIGHTS-OF-WAY, CONTRACTOR SHALL PROTECT AND RESTORE SAID PROPERTY TO A CONDITION SIMILAR, OR EQUAL, TO THAT EXISTING AT THE COMMENCEMENT OF CONSTRUCTION EXCEPT AS NOTED.
16. THESE PLANS, PREPARED BY COLLIER ENGINEERING CO. INC., DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF COLLIER ENGINEERING CO. INC.'S REGISTERED PROFESSIONAL HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW, OR HEREAFTER, BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND / OR LOCAL REGULATIONS.
17. ALL ACCESSIBLE RAMPS AND WALKS SHALL CONFORM TO THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN OR LOCAL BUILDING CODE STANDARDS, WHICHEVER IS MORE RESTRICTIVE.
18. ON-SITE PAVING SHALL BE CONSTRUCTED IN ACCORDANCE WITH PLANS AND THE GEOTECHNICAL ENGINEERING REPORT. ALL PAVING WORK WITHIN PUBLIC RIGHT-OF-WAYS MUST MEET THE MATERIALS, EQUIPMENT, CONSTRUCTION, AND TESTING REQUIREMENTS OF THE GOVERNING MUNICIPALITY'S STANDARDS & SPECIFICATIONS.
19. THE CONTRACTOR SHALL PROTECT ALL MONUMENTS, IRON PINS, AND PROPERTY CORNERS DURING CONSTRUCTION. IF ANY CORNER MARKER IS DISTURBED, THEY MUST BE RESET BY A REGISTERED LAND SURVEYOR.
20. UNLESS NOTED, SUBMIT SHOP DRAWINGS OF ALL FABRICATED MATERIALS FOR REVIEW. DESIGN DRAWINGS SHALL NOT BE REPRODUCED FOR USE AS SHOP DRAWINGS.
21. ALL REQUIRED TESTING REPORTS SHALL BE MADE AVAILABLE AT THE JOB SITE.
22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING AND MAINTAINING AS-BUILT INFORMATION WHICH SHALL BE RECORDED AS CONSTRUCTION PROGRESSES, OR AT THE COMPLETION OF APPROPRIATE CONSTRUCTION INTERVALS, AND SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT DRAWINGS TO THE OWNER FOR THE PURPOSE OF CERTIFICATION TO JURISDICTIONAL AGENCIES AS REQUIRED. ALL AS-BUILT DATA SHALL BE COLLECTED BY A STATE OF TENNESSEE PROFESSIONAL LAND SURVEYOR WHOSE SERVICES ARE ENGAGED AND PAID FOR BY THE CONTRACTOR.
23. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES, A COPY OF THE CURRENT CONSTRUCTION DOCUMENTS INCLUDING PLANS, SPECIFICATIONS, SPECIAL CONDITIONS, AND COPIES OF ANY REQUIRED PERMITS.
24. ALL PAVING, CONSTRUCTION, MATERIALS, AND WORKMANSHIP WITHIN THE STATE OF TENNESSEE RIGHT-OF-WAY (ROW) SHALL BE IN ACCORDANCE WITH TENNESSEE DEPARTMENT OF TRANSPORTATION (TDOT) SPECIFICATIONS AND STANDARDS (LATEST EDITION).
25. ALL PAVING, CONSTRUCTION, MATERIALS, AND WORKMANSHIP WITHIN METRO NASHVILLE RIGHT-OF-WAY (ROW) SHALL BE IN ACCORDANCE WITH NASHVILLE DEPARTMENT OF TRANSPORTATION (NDOT) SPECIFICATIONS AND STANDARDS (LATEST EDITION).
26. ANY WELLS DISCOVERED ON SITE THAT WILL HAVE NO USE MUST BE PLUGGED BY A LICENSED WELL DRILLING CONTRACTOR IN A MANNER APPROVED BY ALL JURISDICTIONAL AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY WELL ABANDONMENT PERMITS REQUIRED.
27. ANY WELL DISCOVERED DURING EARTH MOVING OR EXCAVATION SHALL BE REPORTED TO THE APPROPRIATE JURISDICTIONAL AGENCIES WITHIN 24 HOURS AFTER DISCOVERY IS MADE.
28. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS.
29. ALL ACCESSIBLE PARKING SPACES ARE TO RECEIVE AN ACCESSIBLE SIGN AND ACCESSIBLE SYMBOL PAINTED ON THE PAVEMENT. STALLS ADJACENT TO 8' WIDE STRIPED AISLES ARE TO RECEIVE A "VAN ACCESSIBLE" SIGN IN ADDITION TO THE ABOVE.
30. ALL SIDEWALKS, EXISTING AND PROPOSED, ARE TO BE CONSTRUCTED/AND OR LEFT IN A CONDITION THAT MEETS OR EXCEEDS THE GOVERNING MUNICIPALITY'S STANDARDS.
31. THE ENGINEER AS REPRESENTATIVE OF THE OWNER, SHALL NOT GUARANTEE THE WORK OF ANY CONTRACTOR OR SUB-CONTRACTOR, SHALL HAVE NO AUTHORITY TO STOP WORK, SHALL NOT HAVE CHARGE OF THE WORK, SHALL NOT BE RESPONSIBLE FOR SAFETY IN, ON, OR ABOUT THE JOB SITE, OR HAVE ANY CONTROL OF THE SAFETY OR ADEQUACY OF ANY EQUIPMENT, BUILDING COMPONENT, SCAFFOLDING, SUPPORTS, FORMS OR OTHER WORK AIDS.
32. CONTRACTOR SHALL VERIFY THAT ACTUAL SITE CONDITIONS ARE CONSISTENT WITH THE EXISTING CONDITIONS AS DEPICTED ON THE CONSTRUCTION PLANS. DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER PRIOR TO BIDDING AND PRIOR TO STARTING CONSTRUCTION. SUBMITTAL OF BID SHALL INDICATE THAT THE CONTRACTOR ACCEPTS THE ACTUAL SITE CONDITIONS AS MATCHING THE EXISTING CONDITIONS DEPICTED ON THE CONSTRUCTION PLANS.
33. INSTALL SAFETY FENCING AS NECESSARY FOR SECURITY, SAFETY, AND TRAFFIC PURPOSES.

GRADING NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO EXISTING VEGETATION DESIGNATED TO REMAIN DURING CONSTRUCTION. THE COST TO REPLACE OR RESTORE VEGETATION SHALL BE THE CONTRACTOR'S RESPONSIBILITY. NO TREES ARE TO BE REMOVED AND / OR VEGETATION DISTURBED EXCEPT AS APPROVED BY THE OWNER'S REPRESENTATIVE. SEE DEMOLITION AND LANDSCAPE PLANS FOR TREES AND VEGETATION TO REMAIN.
2. STRIP ALL TOPSOIL AND OTHER DELETERIOUS MATERIALS AS PER SOIL CONSULTANT'S GEOTECH REPORT TO ACCOMPLISH GRADING AS INDICATED ON THE PLANS. STOCKPILE TOPSOIL IN AREA(S) DESIGNATED BY THE OWNER.
3. PROOF-ROOL EXPOSED SUBGRADES UNDER THE SUPERVISION OF THE ENGINEER TO DETECT ANY LOOSE OR SOFT AREAS. ANY YIELDING MATERIAL WILL BE SCARIFIED AND RE-COMPACTED UNDER THE BASE COST OF THE PROJECT.
4. FILL MATERIAL SHALL MEET THE FOLLOWING REQUIREMENTS:
   MINIMUM DRY DENSITY = 95 PCF
   LIQUID LIMIT LESS THAN 45
   PLASTICITY LIMIT LESS THAN 30
   UPPER 12" OF FILL: PARTICLE SIZE 9"Ø MAXIMUM
   FILL BELOW UPPER 12": PARTICLE SIZE 12"Ø MAXIMUM
   PROVIDE THE OWNER WITH TEST RESULTS OF OFF-SITE BORROW MATERIAL FOR APPROVAL PRIOR TO BRINGING SUCH MATERIAL ON-SITE.
5. COHESIVE FILL SHALL BE PLACED IN LOOSE LIFTS OF 6" TO 8" AND COMPACTED WITH VIBRATORY SHEEPS FOOT ROLLER. CLAY FILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM STANDARD PROCTOR DRY DENSITY IN ACCORDANCE WITH ASTM D698. GRANULAR FILL SHALL BE PLACED IN LOOSE LIFTS OF 8" TO 10" AND COMPACTED / CONSOLIDATED TO 98% MAXIMUM STANDARD PROCTOR DRY DENSITY IN ACCORDANCE WITH ASTM D1557.
6. COMPACT ALL FILL TO A MINIMUM OF 95% OF THE MAXIMUM STANDARD PROCTOR (ASTM D698) DRY DENSITY. COMPACT THE UPPER 12" OF FILL IN NON-LANDSCAPED AREAS TO A MINIMUM OF 100% OF THE MAXIMUM STANDARD PROCTOR DRY DENSITY. THE MOISTURE CONTENT OF COHESIVE SOIL SHALL BE WITHIN ±2% OF THE OPTIMUM MOISTURE. THE MOISTURE CONTENT OF GRANULAR SOIL SHALL BE BETWEEN ±3% OF THE OPTIMUM MOISTURE.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS. SUBGRADE SOFTENED BY PERCHED WATER IN FOUNDATIONS AND PAVEMENT AREAS MUST BE UNDERCUT AND COMPACTED WITH SUITABLE FILL MATERIAL AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
8. IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEY SHALL HAVE MADE AT THEIR EXPENSE A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR AND SUBMIT IT TO THE OWNER AND ENGINEER FOR REVIEW.
9. FILL ALL PLANTERS / ISLANDS TO TOP OF CONCRETE CURB WITH TOPSOIL UNLESS OTHERWISE DIRECTED. TOPSOIL TO BE CLEAN AND FREE OF DEBRIS GREATER THAN 1" IN DIAMETER.
10. IN NO CASE SHALL SLOPE HEIGHT, SLOPE INCLINATION, OR EXCAVATION DEPTH, INCLUDING TRENCH CONSTRUCTION, EXCEED THOSE SPECIFIED IN LOCAL, STATE, AND FEDERAL REGULATIONS, SPECIFICALLY THE CURRENT OSHA HEALTH AND SAFETY STANDARDS FOR EXCAVATIONS (29 CRF PART 1926) SHALL BE FOLLOWED
11. THE GEOTECHNICAL REPORT, PREPARED BY OTHERS, IS INCORPORATED BY REFERENCE AND MADE A PART OF THE CONTRACT DOCUMENTS. IT IS INTENDED THAT THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT BE FOLLOWED. IN THE EVENT OF CONFLICT BETWEEN THE DRAWINGS AND THE GEOTECHNICAL REPORT, MAKE NO ASSUMPTIONS. THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR CLARIFICATION.
12. ALL PIPES UNDER EXISTING PAVED AREAS SHALL BE BACKFILLED WITH GRANULAR BACKFILL AND COMPACTED AS OUTLINED ABOVE (SEE NOTE 5) PRIOR TO RESTORING PAVEMENT.
13. MINIMUM SLOPE ON ASPHALT OR CONCRETE PAVING SHALL BE 1.0% AND A MINIMUM 0.5% SLOPE ON CURBS. THE MAXIMUM SLOPE IN ACCESSIBLE PARKING OR OTHER ADA DESIGNATED AREAS SHALL BE 2.0%. THIS INCLUDES THE INTERSECTIONS OF ALL PEDESTRIAN PATHS.
14. ALL GRADED AREAS, INCLUDING SLOPES, ARE TO BE MULCHED AND SEEDED AS SOON AS POSSIBLE AFTER GRADING IS COMPLETED, WITHIN A MAXIMUM OF 14 DAYS.
15. ALL NEW STRUCTURES AND EXISTING STRUCTURES SHALL HAVE SEDIMENT REMOVED PRIOR TO ACCEPTANCE.
16. ALL LAWN / LANDSCAPE AREAS DISTURBED BY GRADING OPERATIONS SHALL RECEIVE 8 INCHES OF TOPSOIL. CONTRACTOR TO MAINTAIN DISTURBED AREAS UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED. SEE LANDSCAPE PLAN FOR OTHER SOIL REQUIREMENTS AND DEFINITIONS.
17. ALL SLOPES 3:1, OR STEEPER, SHALL BE STABILIZED WITH EROSION CONTROL MATTING INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. ALL EPSC MATTING SHALL BE BIODEGRADABLE JUTE MATTING UNLESS NOTED OTHERWISE. CONTRACTOR TO MAINTAIN DISTURBED AREAS UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
18. THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S. PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES. SEE EROSION PROTECTION AND SEDIMENT CONTROL (EPSC) PLANS FOR ADDITIONAL INFORMATION.
19. EXISTING AND PROPOSED GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT.
20. THIS GRADING AND DRAINAGE PLAN IS NOT A DETERMINATION, OR GUARANTEE, OF THE SUITABILITY OF SURFACE CONDITIONS FOR THE WORK INDICATED. DETERMINATION OF THE SUBSURFACE CONDITIONS FOR THE WORK INDICATED IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
21. CONSTRUCT EROSION CONTROL AS SHOWN ON DRAWINGS PRIOR TO BEGINNING GRADING OPERATIONS.
22. THE CONTRACTOR SHALL PROVIDE THE NECESSARY PROTECTION, IN ACCORDANCE WITH THE SPECIFICATIONS, FOR TREES TO REMAIN. DO NOT OPERATE OR STORE HEAVY EQUIPMENT, NOR HANDLE OR STORE MATERIALS, WITHIN THE DRIPLINES OF TREES TO REMAIN.
23. CONTOUR LINES AND SPOT ELEVATIONS ARE THE RESULT OF A DETAILED ENGINEERING GRADING DESIGN AND REFLECT A PLANNED INTENT WITH REGARD TO DRAINAGE AND MOVEMENT OF STORM WATER. SHOULD THE CONTRACTOR HAVE ANY QUESTION OF THE INTENT OR ANY PROBLEMS WITH CONTINUITY OF GRADES, THE ENGINEER SHOULD BE CONTACTED IMMEDIATELY PRIOR TO BEGINNING WORK.
24. CONTRACTOR SHALL VERIFY EXISTING ELEVATIONS PRIOR TO BEGINNING WORK. BEGINNING CONSTRUCTION SIGNIFIES THAT THE CONTRACTOR ACCEPTS THE SITE AS IS.
25. NO GRADING OPERATIONS SHALL BEGIN UNTIL A CONTRACTOR HAS OBTAINED A PERMIT FROM THE AUTHORITY HAVING JURISDICTION.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

1. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
2. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE CONSTRUCTION GENERAL PERMIT.
3. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES. CONTRACTOR SHALL CONSTRUCT TEMPORARY BERM ON DOWN STREAM SIDES IN COMPLIANCE WITH SPECIFICATION.
4. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
5. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
6. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
7. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
8. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED SHALL BE INITIATED AS SOON AS PRACTICABLE.
9. ALL DENUDED AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE, MUST BE STABILIZED TEMPORARILY WITH THE USE OF FAST-GERMINATING ANNUAL GRASS / GRAIN VARIETIES, STRAW / HAY MULCH, WOOD CELLULOSE FIBERS, TACKIFIERS, NETTING, OR BLANKETS AS SHOWN ON SITE MAP.
10. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY STABILIZED AS SHOWN ON THE PLANS. THESE AREAS SHALL BE SEEDED, SODDED, AND / OR VEGETATED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.
11. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. ONLY USE INGRESS / EGRESS LOCATIONS AS PROVIDED.
12. ANY MATERIALS, MUD AND/OR CONSTRUCTION DEBRIS THAT MAY BE TRANSPORTED TO ROADWAYS, STORM DRAINS OR PARKING AREAS SHALL BE REMOVED AND CLEANED UP IMMEDIATELY.
13. CONTRACTORS AND SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
14. ON SITE & OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
15. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
16. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION AND SEDIMENT CONTROL MEASURES (SILT FENCES, ETC.) TO PREVENT EROSION AND POLLUTANT DISCHARGE.
17. SEE SITE PLAN FOR PERMANENT AND TEMPORARY SIGNAGE.
18. GENERAL CONTRACTOR IS TO DESIGNATE / IDENTIFY AREAS ON THE SITE MAPS, INSIDE OF THE LIMITS OF DISTURBANCE, FOR WASTE DISPOSAL AND DELIVERY AND MATERIAL STORAGE.
19. CONTRACTOR TO LIMIT DISTURBANCE OF SITE IN STRICT ACCORDANCE WITH EROSION CONTROL SEQUENCING SHOWN ON THIS PLAN. NO UNNECESSARY OR IMPROPERLY SEQUENCED CLEARING AND / OR GRADING SHALL BE PERMITTED.
20. REPLACE SILT BARRIERS WHEN CONDITIONS WARRANT AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
21. CONTRACTOR IS RESPONSIBLE FOR PROPER STORAGE OF ALL FLUIDS. ANY SPILLS ARE TO BE IMMEDIATELY REMEDIATED.
22. TRAPPED SEDIMENT TO BE REMOVED AT OR BEFORE 50% DESIGN CAPACITY.
23. INSPECTIONS TO BE PERFORMED TWICE WEEKLY AND AT LEAST 72 HOURS APART.

DEMOLITION NOTES

1. REMOVE EXISTING PAVED AREAS INCLUDING DRIVEWAYS, SIDEWALKS, PARKING AREAS, SERVICE AREAS, EQUIPMENT PADS, AND ALL MISCELLANEOUS PAVING AS SHOW ON PLAN.
2. ALL DEBRIS RESULTING FROM DEMOLITION SHALL BE REMOVED FROM THE SITE AND DISPOSED AT AN APPROVED LANDFILL BY THE CONTRACTOR. BACKFILL ALL TRENCHES AND EXCAVATIONS RESULTING FROM DEMOLITION PER ENGINEERING BACKFILL REQUIREMENTS.
3. PROTECT ALL EXISTING TREES TO REMAIN AND PROTECT ALL ITEMS TO BE TURNED OVER TO THE OWNER DURING ALL OPERATIONS OF DEMOLITION. TAKE ALL NECESSARY PRECAUTIONS AND PROTECTIVE MEASURES TO ANY EXISTING ITEMS TO BE TURNED OVER TO THE OWNER. SCHEDULED PROTECTED ITEMS WHICH ARE DAMAGED DURING DEMOLITION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
4. ONLY ITEMS SPECIFICALLY NOTED TO BE DEMOLISHED SHALL BE REMOVED FROM THE SITE. ALL DEMOLISHED MATERIALS BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED. CONTRACTOR IS TO DISPOSE OF DEMOLISHED MATERIAL OFF OF THE OWNER'S PROPERTY AT NO ADDITIONAL COST.
5. CONTRACTOR SHALL APPLY, SECURE, AND PAY ALL REQUIRED PERMITS AND INSPECTIONS AND SHALL PAY ALL APPLICABLE SALES TAXES.
6. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AND UTILITY DEPARTMENTS PROVIDING SERVICE TO THE SITE AND SHALL COORDINATE ALL WORK.
7. ANY SIDEWALK OR CURB DAMAGE IS TO BE REPLACED AT CONTRACTOR'S EXPENSE.
8. ON SITE BURIAL OF DEBRIS IS PROHIBITED.
9. NO TRUCKS OR VEHICLES SHALL LEAVE THE SITE WITH MUDDY TIRES OR WITH ANY SUBSTANCE WHICH WILL DAMAGE OR STAIN ADJACENT PROPERTIES OR THE PUBLIC RIGHT-OF-WAY.
10. EROSION CONTROL DEVICES ARE TO BE INSTALLED AND FULLY OPERATIONAL PRIOR TO ANY DEMOLITION.
11. SITE DUST CONTROL DURING DEMOLITION WILL BE IN ACCORDANCE WITH ALL LOCAL CODES AND REGULATIONS.
12. ENGINEER HAS NOT INSPECTED THE SITE FOR THE PRESENCE OF HAZARDOUS MATERIALS, INCLUDING, BUT NOT LIMITED TO, ASBESTOS, LEAD PAINT, UNDERGROUND TANKS, ETC. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PRE-CONSTRUCTION INSPECTIONS (AS REQUIRED) FOR HAZARDOUS MATERIALS BY A QUALIFIED FIRM. CONTRACTOR SHALL BE RESPONSIBLE FOR SOLICITING QUALIFIED PERSONNEL FOR PROPER REMOVAL AND DISPOSAL OF ANY HAZARDOUS MATERIALS ENCOUNTERED DURING DEMOLITION PER ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS.
13. DEMOLITION SHALL BE IN ACCORDANCE WITH ALL LOCAL CODES AND ORDINANCES, BUT NOT LIMITED TO, NOISE ORDINANCES.
14. FINISH SURFACE TO BE REMOVED OR DEMOLISHED SHALL BE CUT ALONG LINES OF JOINTS WHICH WILL PERMIT A NEAT SURFACE WHEN RESTORED.
15. IF REQUIRED AS PART OF THIS PROJECT, THE CONTRACTOR SHALL REMOVE AND / OR PLUG EXISTING UTILITIES SUCH AS SANITARY SEWER, WATER, GAS, ELECTRIC, AND TELEPHONE AS SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING EACH UTILITY COMPANY TO COORDINATE REMOVAL OF ALL UTILITIES AND FOR DETERMINING HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES PRIOR TO COMMENCING WORK.
16. IF REQUIRED AS PART OF THIS PROJECT, THE CONTRACTOR SHALL CUT AND PLUG, OR ARRANGE FOR THE APPROPRIATE UTILITY COMPANY TO CUT AND PLUG, ALL SERVICE PIPING AT THE STREET LINE OR MAIN, AS REQUIRED, OR AS OTHERWISE NOTED. ALL SERVICE MAY NOT BE SHOWN ON THIS PLAN, THE CONTRACTOR SHALL INVESTIGATE THE SITE PRIOR TO BIDDING TO DETERMINE THE EXTENT OF SERVICE PIPING TO BE REMOVED, CUT, OR PLUGGED.
17. DO NOT INTERRUPT EXISTING UTILITIES SERVICING FACILITIES OCCUPIED AND USED BY THE OWNER OR OTHERS DURING OCCUPIED HOURS EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE OWNER AND THE LOCAL MUNICIPALITIES. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.
18. NOTIFY PROJECT MANAGER AND CIVIL ENGINEER OF ADDITIONAL UTILITIES OR OTHER ITEMS THAT MAY BE FOUND DURING CONSTRUCTION WHICH ARE NOT LOCATED ON THESE PLANS.
19. ALL ENVIRONMENTAL ABATEMENT TO BE PERFORMED BY OTHERS. CONTRACTOR TO COORDINATE WITH ENVIRONMENTAL CONSULTANT.

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
No. 125340
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

GENERAL NOTES

SHEET NO. C0.02

FILENAME: Z:\PROJECTS\2025\2025-36 - ALLEN FARMS SUBDIVISION\2-SUBDIVISION\SITE\C-GEOTECH\2025-36 GEN NOTES.DWG

GENERAL SEWER 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 WORK.

2. THE LOCATIONS AND DEPTHS 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 WHETHER SHOWN ON PLANS OR NOT, 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 FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING AND STRUCTURES.

4. THE CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING UTILITIES AT ALL TIMES DURING CONSTRUCTION.

5. ALL RESIDENTIAL GRAVITY FED SEWER SERVICE LATERALS SHALL BE EXTENDED TO THE PROPERTY LINE AND CAPPED AND SEALED.

6. 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.

7. ON ALL MANHOLES TO BE ABANDONED, THE RINGS AND COVERS 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.

8. 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.

9. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE WHITE HOUSE UTILITY DISTRICT.

10. AFTER CONSTRUCTION IS COMPLETE, TESTING WILL BE DONE BY TV CAMERA BY THE CONTRACTOR AND OBSERVED BY THE INSPECTOR, AS THE 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.

BLASTING

11. WHEN ALLOWABLE, BLASTING SHALL BE PERFORMED IN ACCORDANCE WITH THE APPROPRIATE CRITERIA ESTABLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION OR APPLICABLE LOCAL CODES.

12. WHEN BLASTING IS ALLOWED, BLASTING FOR SEWER LINE EXCAVATION MUST BE DONE IN SUCH A MANNER AS TO MINIMIZE THE FRACTURING OF ROCK BEYOND THE REQUIRED EXCAVATION. THE CONTRACTOR SHALL CONSIDER THE ELEVATION OF THE EXISTING SEWER MAIN IN RELATION TO THE BLASTING CHARGE AND THE RELATIVE DIRECTION OF EXISTING AND PROPOSED TRENCHES. BLASTING WITHIN SUCH AREAS SHALL BE ACCOMPLISHED ONLY BY QUALIFIED BLASTING CONTRACTORS WHO HOLD BLASTING LICENSES FROM A QUALIFIED AGENCY. ANY DAMAGE TO EXISTING SANITARY SEWERS RESULTING FROM BLASTING SHALL BE REPAIRED AND RETESTED BY THE CONTRACTOR AT HIS OWN EXPENSE.

SUPPLEMENTARY

13. UNLESS OTHERWISE NOTED ON THE PLANS, ALL SEWER PIPE SHALL CONFORM TO THE FOLLOWING CHART:

	DEPTH OF MAIN	PIPE MATERIAL
1	0 TO 18'	SDR 26
2	18' TO 24'	401 COATED DI

14. **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**

GENERAL WATER 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 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 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 WHETHER SHOWN ON PLANS OR NOT, 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 FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING AND STRUCTURES.

4. NO METER BOXES TO BE SET IN DRIVEWAYS. ANY METER BOX 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. MECHANICAL JOINT RESTRAINTS ARE 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 FITTINGS.

9. RESTRAINED JOINT PIPE WILL BE DEVELOPED WITH FIELD INSTALLED LOCKING GASKETS.

10. ALL DEAD END LINES WILL RECEIVE A MINIMUM OF 60 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 THE AREA ON TOP OF AND AROUND THE 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. IN NO CASE ARE VALVES TO BE LOCATED WITHIN PAVED AREAS.

17. ADEQUATE SPACE SHALL BE PROVIDED FOR THE INSTALLATION AND MAINTENANCE OF METER VAULTS, BACKFLOW PREVENTION ASSEMBLIES, AND WATER MAINS.

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.

BLASTING

20. WHEN ALLOWABLE, BLASTING SHALL BE PERFORMED IN ACCORDANCE WITH THE APPROPRIATE CRITERIA ESTABLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION OR APPLICABLE LOCAL CODES.

21. WHEN BLASTING IS ALLOWED, BLASTING FOR SEWER LINE EXCAVATION MUST BE DONE IN SUCH A MANNER AS TO 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 CHARGE AND THE RELATIVE DIRECTION OF EXISTING AND PROPOSED TRENCHES. BLASTING WITHIN SUCH AREAS SHALL BE ACCOMPLISHED ONLY BY QUALIFIED BLASTING CONTRACTORS WHO HOLD BLASTING LICENSES FROM A QUALIFIED AGENCY. ANY DAMAGE TO EXISTING WATER MAINS RESULTING FROM BLASTING SHALL BE REPAIRED AND RETESTED BY THE CONTRACTOR AT HIS OWN EXPENSE.

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**

REVISIONS

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SAVE DATE: 8/3/2026, PLOT DATE: 8/3/2026

COLLIER ENGINEERING CO., INC.

DICKSON OFFICE
7140 COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

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GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 125340
STATE OF TENNESSEE
29/03/2026

DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

WHUD WATER & SEWER NOTES

SHEET NO. C0.03

FILENAME: Z:\PROJECTS\LEN\1000\26-XX - ALLEN FARMS SUBDIVISION\26.0000_SITE\4-CAD\DESIGN\2600.00_COVER_GENERAL SHEETS.DWG

CIVIL-SITE LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
BUILDING SETBACK		
EASEMENT		
ROADWAY CENTERLINE		
OPEN SPACE		
ASPHALT PAVEMENT		
CONCRETE PAVEMENT		
GRAVEL DRIVE		
CONTOUR (MAJOR)	500	500
CONTOUR (MINOR)	501	501
BUILDING		
FENCE	X X X X	X X X
CONCRETE SIDEWALK		
DITCH CENTERLINE		
OVERHEAD ELECTRIC	OHP OHP OHP	OHE OHE
UNDERGROUND ELECTRIC	UGP UGP UGP	UGE UGE
NATURAL GAS	GAS GAS GAS	G G
SANITARY SEWER	SS SS SS SS	SS SS
FORCEMAIN	FM FM FM FM	FM FM
WATER	W W W W	W W
STORM SEWER	ST ST ST ST	ST ST
DEMOLITION (STRUCTURE, FEATURE)		
DEMOLITION (PIPING)		
CONTROL POINT		
MONUMENT		
IRON PIN		
BENCHMARK		
BOLLARD		
SIGN		
MAILBOX	MB	MB

	EXISTING	PROPOSED
LIGHT POLE		
UTILITY POLE		
ANCHOR (GUY WIRE)		
COMMUNICATION MANHOLE	T	C
ELECTRIC MANHOLE	E	E
ELECTRIC METER	E	EM
COMMUNICATION BOX	TE	C
ELECTRIC BOX		E
GAS VALVE		
GAS METER	G	GM
SANITARY MANHOLE	SS	SS
SEWER CLEANOUT	CO	
SANITARY SEWER VALVE	S	
AIR RELEASE VALVE		
FIRE HYDRANT		
WATER VALVE		
WATER METER		M
POST INDICATOR VALVE	PIV	
BACKFLOW PREVENTER	BFP	
CATCH BASIN		
AREA DRAIN (YARD DRAIN)		Y Y
DRAINAGE MANHOLE	S	ST
HEADWALL		
TREE (CONIFEROUS)		SEE LANDSCAPE SHEETS
TREE (DECIDUOUS)		SEE LANDSCAPE SHEETS
BUSH		SEE LANDSCAPE SHEETS

EROSION PROTECTION & SEDIMENT CONTROL LEGEND

	ABBREVIATION	LINETYPE/SYMBOL
LIMITS OF DISTURBANCE	LOD	
SILT FENCE	SF	SF SF
SILT FENCE W/ BACKING	SFB	SFB SFB
FILTER SOCK	FS	FS FS
TREE PROTECTION	TP	
INLET PROTECTION	IP	
OUTLET PROTECTION	OP	
ROCK CHECK DAM	CD	
EROSION EEL / WATTLE	EEL	
CONSTRUCTION ENTRANCE/EXIT	CE	
CONCRETE WASHOUT	CW	
EROSION CONTROL MATTING	MAT	
TEMPORARY SEEDING	TS	
PERMANENT SEEDING	PS	

ABBREVIATIONS

ARV	AIR RELEASE VALVE	I.E.	INVERT
BC	BOTTOM OF CURB	IR	IRON ROD
BW	BOTTOM OF WALL	LP	LOW POINT
C	CATCH BASIN	M	METER
CM	CONCRETE MONUMENT	MH	MANHOLE
COM	COMMUNICATION	OHE	OVERHEAD ELECTRIC
D	DRAINAGE MANHOLE	PK	PK NAIL
E	ELECTRIC	SS	SANITARY SEWER
EM	ELECTRICAL METER	ST	STORM SEWER
FFE	FINISH FLOOR ELEVATION	TC	TOP OF CURB
FM	FORCEMAIN	TW	TOP OF WALL
G	NATURAL GAS	UGE	UNDERGROUND ELECTRIC
GM	NATURAL GAS METER	W	WATER
HP	HIGH POINT	Y	YARD DRAIN

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122500
STATE OF TENNESSEE
Nathan Couch
09/03/2026

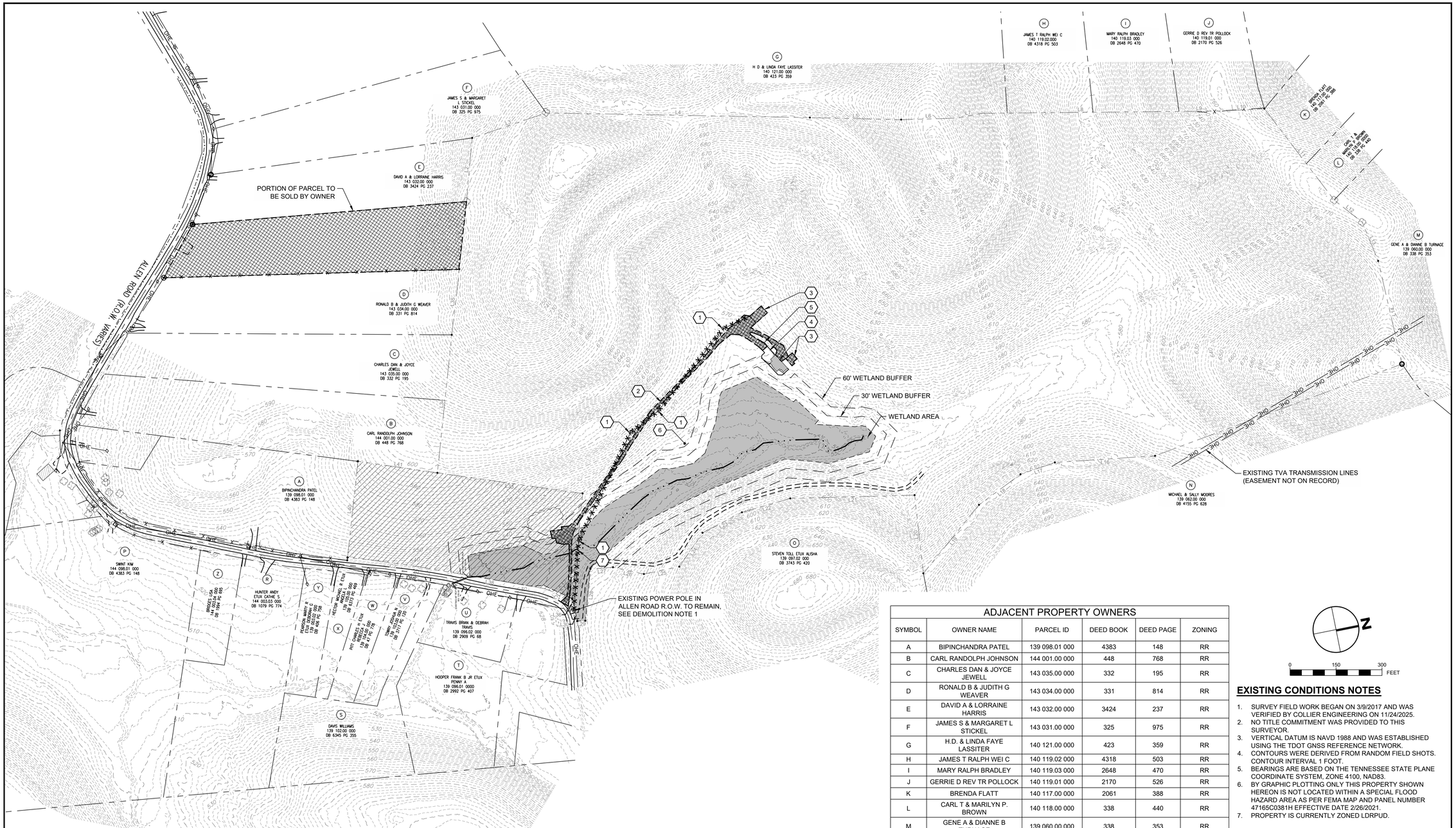
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

LEGEND & SYMBOLOGY

SHEET NO. C0.04

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

FILENAME: Z:\PRIVATE CLIENTS\2008-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN\2008-25_C000_GENERAL SHEETS.DWG



ADJACENT PROPERTY OWNERS					
SYMBOL	OWNER NAME	PARCEL ID	DEED BOOK	DEED PAGE	ZONING
A	BIPINCHANDRA PATEL	139 098.01 000	4383	148	RR
B	CARL RANDOLPH JOHNSON	144 001.00 000	448	768	RR
C	CHARLES DAN & JOYCE JEWELL	143 035.00 000	332	195	RR
D	RONALD B & JUDITH G WEAVER	143 034.00 000	331	814	RR
E	DAVID A & LORRAINE HARRIS	143 032.00 000	3424	237	RR
F	JAMES S & MARGARET L STICKEL	143 031.00 000	325	975	RR
G	H.D. & LINDA FAYE LASSITER	140 121.00 000	423	359	RR
H	JAMES T RALPH WEI C	140 119.02 000	4318	503	RR
I	MARY RALPH BRADLEY	140 119.03 000	2648	470	RR
J	GERRIE D REV TR POLLOCK	140 119.01 000	2170	526	RR
K	BRENDA FLATT	140 117.00 000	2061	388	RR
L	CARL T & MARILYN P. BROWN	140 118.00 000	338	440	RR
M	GENE A & DIANNE B TURNAGE	139 060.00 000	338	353	RR
N	MICHAEL & SALLY MOORES	139 062.00 000	4155	628	RR
O	STEVEN TOLL ETUX ALISHA	139 097.02 000	3743	420	RR
P	KIMBERLY FAYE SWINT	144 125.00 000	4402	193	RR
		144 003.00 000	3267	114	RR
Q	COOPER CREEK SUBDIVISION II, HOA	143 037.00 000	5975	790	RR
R	ANDY HUNTER ETUX CATHIE S	144 003.03 000	1079	774	RR
S	WILLIAM DAVIS	139 102.00 000	6345	355	RR
T	FRANK B HOOPER DR. ETUX PENNY A	139 096.01 000	2992	407	RR
U	BRAIN & DEBRAH TRAVIS	139 096.02 000	2909	67	RR
V	JOSHUA N. TOWRY	139 103.00 000	3717	120	RR
W	CHARLES PITT ETUX REBECCA	139 104.00 000	47	778	RR
X	MICHAEL R & ANGELA L HECTOR	139 105.00 000	6373	469	RR
Y	MARTY R PEARSON ETUX DEBORAH G	144 003.02 000	406	758	RR
Z	LISA BRIDGES	144 003.04 000	1994	695	RR

EXISTING CONDITIONS NOTES

1. SURVEY FIELD WORK BEGAN ON 3/9/2017 AND WAS VERIFIED BY COLLIER ENGINEERING ON 11/24/2025.
2. NO TITLE COMMITMENT WAS PROVIDED TO THIS SURVEYOR.
3. VERTICAL DATUM IS NAVD 1988 AND WAS ESTABLISHED USING THE TDOT GNSS REFERENCE NETWORK.
4. CONTOURS WERE DERIVED FROM RANDOM FIELD SHOTS. CONTOUR INTERVAL 1 FOOT.
5. BEARINGS ARE BASED ON THE TENNESSEE STATE PLANE COORDINATE SYSTEM, ZONE 4100, NAD83.
6. BY GRAPHIC PLOTTING ONLY THIS PROPERTY SHOWN HEREON IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA AS PER FEMA MAP AND PANEL NUMBER 47165C0381H EFFECTIVE DATE 2/26/2021.
7. PROPERTY IS CURRENTLY ZONED LDRPUD.

LEGEND

R-25 ZONING

DEMOLITION NOTES

1. EXISTING POWER POLES, OVERHEAD ELECTRIC LINES, AND ALL OTHER APPURTENANCES SHALL BE REMOVED TO LIMITS SHOWN. CONTRACTOR TO COORDINATE WITH ELECTRICAL, TELEPHONE, & OTHER SERVICES PROVIDERS PRIOR TO DEMOLITION.
2. EXISTING GRAVEL DRIVEWAY TO BE DEMOLISHED.
3. EXISTING STRUCTURE TO BE DEMOLISHED. ANY WATER & SANITARY SEWER SERVICES TO BE CUT & CAPPED.
4. EXISTING CONCRETE DRIVEWAY TO BE DEMOLISHED.
5. EXISTING RETAINING WALL TO BE DEMOLISHED.
6. EXISTING WATER SERVICE LINE TO BE CUT & CAPPED. ABANDON IN PLACE.
7. EXISTING CULVERT & CONCRETE HEADWALL TO REMAIN IN PLACE UNTIL CONSTRUCTION OF BOX CULVERT.

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2349 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
DICKSON OFFICE
7746 COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH REGISTERED ENGINEER AGRICULTURE COMMERCE No. 122540 STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

EXISTING CONDITIONS & DEMOLITION PLAN

SHEET NO. C1.00

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

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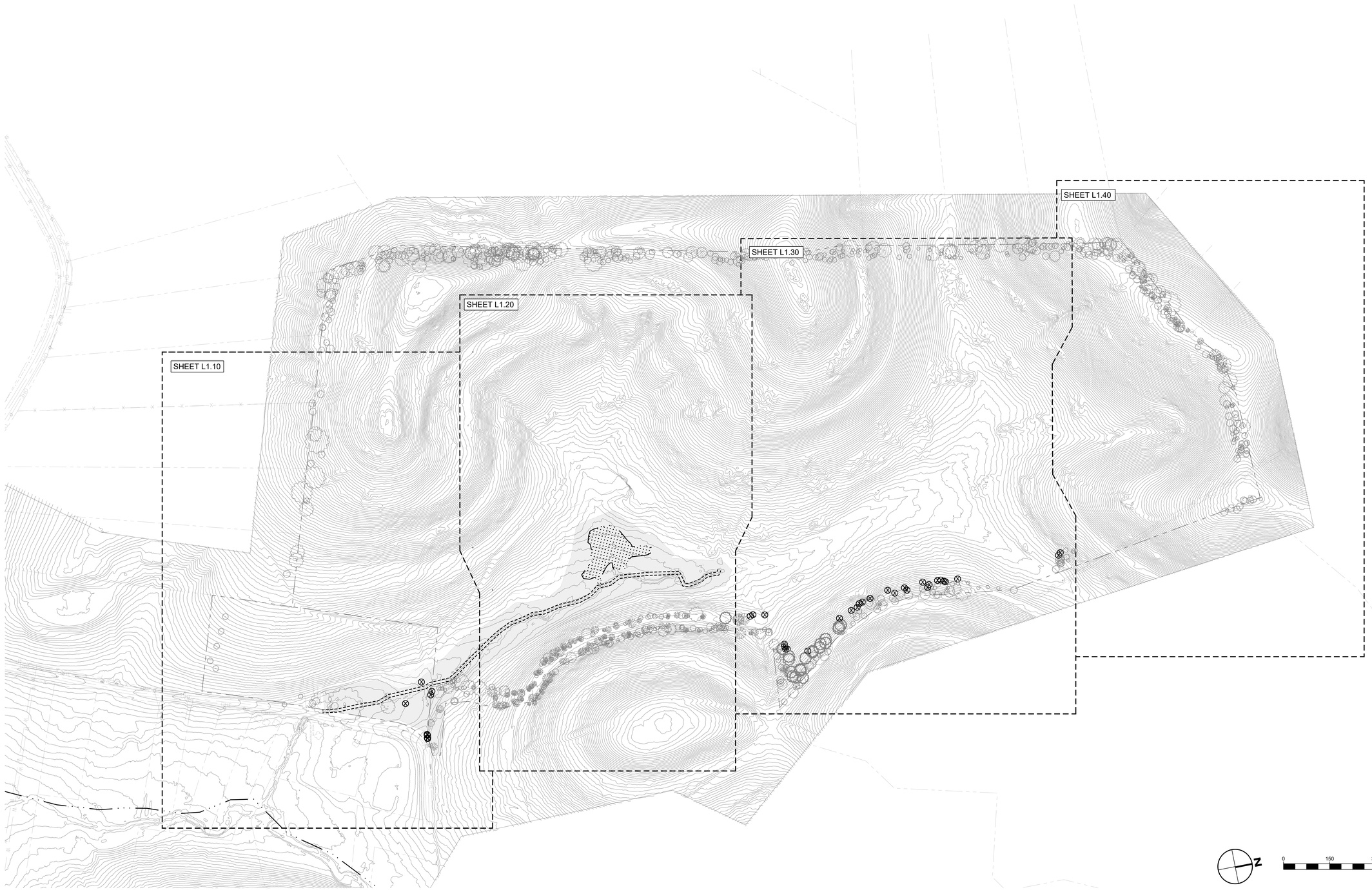

REVISIONS

NO	DATE	BY	DESCRIPTION

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
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DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NICHOLAS TUTTLE
REGISTERED
AGRICULTURE
TENNESSEE NO.
LANDSCAPE ARCHITECT
08/10/2026

DATE: 07/23/2026

DESIGNED BY: MH, GH
SUPERVISED BY: NT, DO
CHECKED BY: NT

TREE REMOVAL AND PROTECTION OVERALL PLAN

SHEET NO. C1.10

FILENAME: Z:\PRIVATE CLIENTS\3608-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN\3608-25_L1.00_TREE DEMO PLAN.DWG

SAVE DATE: 9/2/2026, PLOT DATE: 9/3/2026

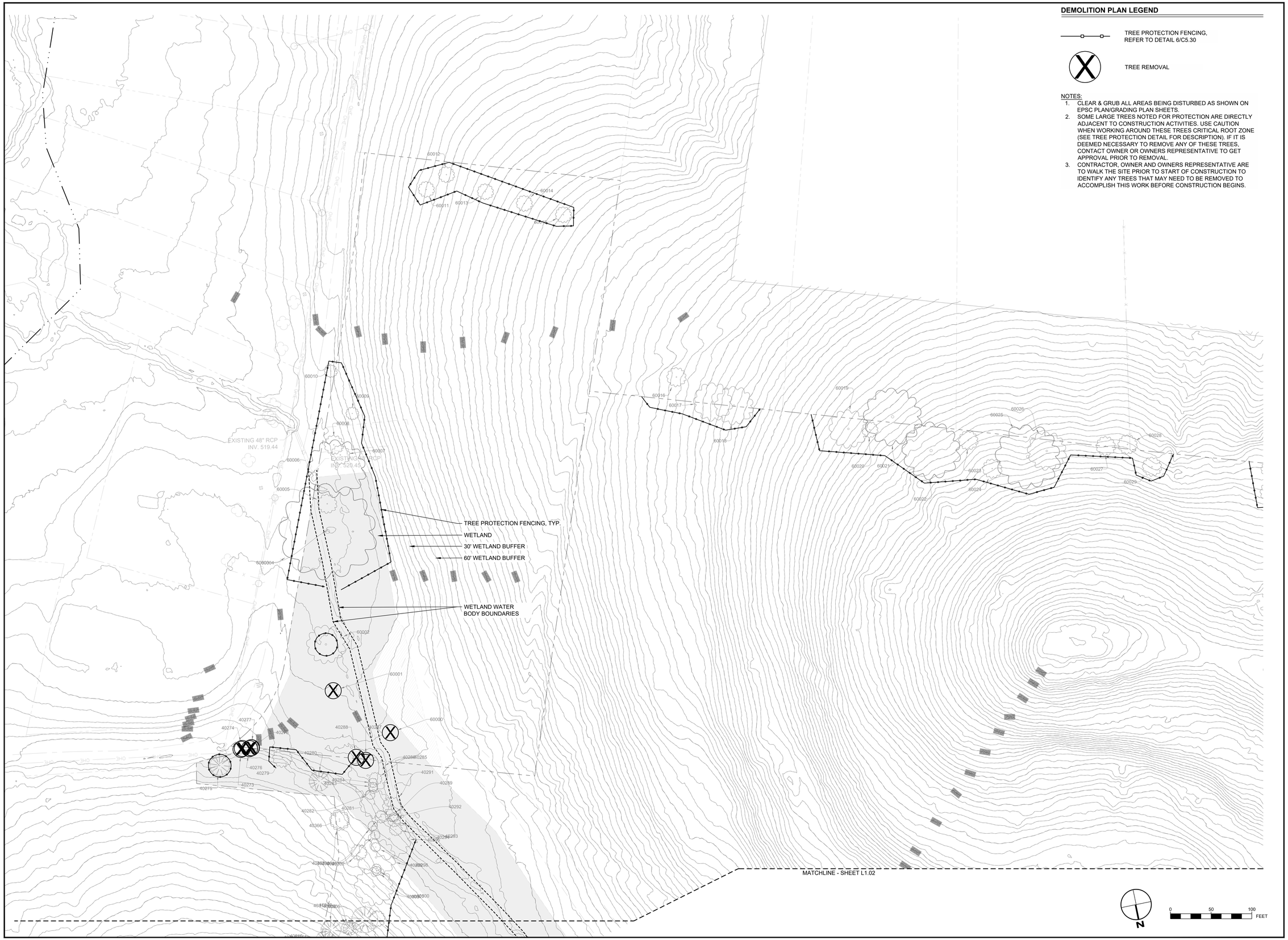
TREE SURVEY TABLE

TREE NO.	NORTHING	EASTING	ELEVATION	SIZE/CALIPER	SPECIES
40273	1773629.16	734100.1579	539.0011	TRC12	CEDAR
40274	1773627.428	734099.3717	539.7424	TRD12	WALNUT
40275	1773659.044	734114.3739	545.2936	TRC12	CEDAR
40276	1773618.83	734101.3587	538.379	TRD8	CEDAR
40277	1773616.522	734100.8223	538.3671	TRD8	HACKBERRY
40278	1773616.11	734100.7288	538.3547	TRC14	CEDAR
40279	1773581.449	734120.5304	540.5671	TRD12	SYCAMORE
40280	1773543.998	734157.9248	539.8958	TRC12	CEDAR
40281	1773482.214	734198.872	532.8473	TRD18	SYCAMORE
40282	1773484.865	734186.7644	532.6251	TRD6	HACK
40283	1773479.485	734177.9011	532.6366	TRD6	ELM
40284	1773478.583	734173.1518	532.6227	TRD6	ELM
40285	1773474.161	734168.713	531.2299	TRD6	HACK
40286	1773483.05	734162.8443	532.589	TRC24	SYCAMORE
40287	1773481.822	734144.2202	532.6395	TRD12	ELM
40288	1773492.319	734138.237	531.9914	TRD12	HACKBERRY
40289	1773494.201	734126.7746	532.7117	TRD8	ELM
40290	1773476.804	734215.9891	530.3453	TRD8	ELM
40291	1773467.318	734208.2385	531.114	TRD12	HACKBERRY
40292	1773462.152	734219.9372	533.4124	TRD6	ASH
40293	1773462.51	734223.6441	527.1524	TRD8	ASH
40294	1773462.544	734234.7235	534.3369	TRD8	ASH
40295	1773472.501	734244.6266	537.8467	TRD26	POPLAR
40296	1773489.501	734224.8973	537.5578	TRD6	HACKBERRY
40297	1773488.62	734236.4645	538.3194	TRD6	HACKBERRY
40298	1773491.011	734251.2938	539.63	TRD6	
40299	1773493.239	734263.6173	542.2896	TRD24	SYCAMORE
40300	1773495.489	734277.2881	543.2946	TRD6	HACKBERRY
40301	1773495.963	734280.1502	542.4331	TRD6	HACKBERRY
40302	1773512.69	734253.1252	544.3003	TRD10	SYCAMORE
40303	1773512.931	734298.2575	546.2127	TRD24	OAK
40304	1773506.83	734337.8976	554.1564	TRD10	ELM
40305	1773522.064	734336.0603	555.7596	TRC16	CEDAR
40306	1773542.363	734343.1898	560.9979	TRD8	CEDAR
40307	1773544.594	734341.7728	561.2512	TRD8	HACK
40308	1773524.324	734354.261	559.1131	TRD12	ASH
40309	1773527.931	734375.1114	563.9406	TRD18	OAK
40310	1773530.248	734385.0114	586.1361	TRD8	ELM
40311	1773542.383	734381.216	567.543	TRC8	CEDAR
40312	1773541.001	734384.0468	567.5122	TRD6	HACKBERRY
40313	1773565.663	734340.2906	564.1344	TRC12	CEDAR
40314	1773574.793	734351.625	567.2135	TRC12	LOCUST
40315	1773572.779	734361.8332	567.1992	TRD12	LOCUST
40316	1773573.723	734368.9581	570.5307	TRC10	CEDAR
40317	1773574.859	734374.322	571.478	TRD8	OAK
40318	1773566.462	734398.8764	574.698	TRC8	CEDAR
40319	1773574.312	734405.9723	576.9668	TRC12	CEDAR
40320	1773564.338	734420.6074	579.6689	TRC10	CEDAR
40321	1773566.241	734426.2733	581.9119	TRC6	CEDAR
40322	1773564.993	734427.9107	578.3543	TRD12	CEDAR
40323	1773539.189	734430.3535	577.5559	TRC6	CEDAR
40324	1773541.888	734438.273	574.5733	TRC8	CEDAR
40325	1773542.241	734404.3224	572.7042	TRC8	CEDAR
40326	1773542.619	734454.5234	582.7485	TRC6	CEDAR
40327	1773534.677	734455.0764	581.5836	TRC8	CEDAR
40328	1773567.548	734459.6653	585.7928	TRC12	CEDAR
40329	1773564.867	734468.3477	587.6398	TRC6	CEDAR
40330	1773585.275	734463.5855	590.9307	TRC8	CEDAR
40331	1773575.16	734467.1886	589.7237	TRC8	CEDAR
40332	1773570.091	734480.6101	590.9176	TRC8	CEDAR
40333	1773561.102	734477.866	588.2935	TRC6	CEDAR
40334	1773545.807	734486.3477	587.7114	TRC6	CEDAR
40335	1773555.224	734494.1105	588.9264	TRC8	CEDAR
40336	1773531.046	734463.2644	583.126	TRC8	CEDAR
40337	1773530.427	734466.0521	582.9497	TRC8	CEDAR
40338	1773529.249	734475.452	583.9731	TRC8	CEDAR
40339	1773539.458	734503.7204	585.7332	TRC10	CEDAR
40340	1773533.29	734511.9187	587.885	TRC10	CEDAR
40341	1773531.113	734516.2634	589.7721	TRD6	ELM
40342	1773523.402	734527.5516	589.6127	TRC8	CEDAR
40343	1773516.689	734521.1392	587.4814	TRC16	CEDAR
40344	1773507.583	734533.6789	586.7099	TRD8	ELM
40345	1773504.612	734538.9556	587.2083	TRC10	CEDAR
40346	1773499.626	734551.4572	588.3	TRD10	ASH
40347	1773501.136	734487.1892	582.4058	TRD6	CEDAR
40348	1773495.983	734492.369	582.7063	TRD6	CEDAR
40349	1773491.799	734488.259	580.5087	TRC8	CEDAR
40350	1773489.306	734501.1941	582.0598	TRC10	CEDAR
40351	1773488.861	734496.7529	581.7002	TRC6	CEDAR
40352	1773467.553	734508.1471	577.6823	TRD6	ELM
40353	1773464.839	734520.0876	578.4549	TRC8	CEDAR
40354	1773457.512	734528.2137	577.0466	TRC8	CEDAR
40355	1773458.907	734536.7936	580.8346	TRC12	CEDAR
40356	1773446.736	734532.5492	575.7159	TRD12	ELM
40357	1773457.431	734520.4947	575.7891	TRD12	CEDAR
40358	1773457.527	734545.6728	581.4101	TRC8	CEDAR
40359	1773450.793	734555.7184	580.9778	TRC12	CEDAR
40360	1773437.752	734554.934	576.1215	TRC10	CEDAR
40361	1773446.762	734565.3524	581.5909	TRC8	CEDAR
40362	1773430.042	734571.6157	578.8437	TRC8	CEDAR
40363	1773443.091	734578.9748	581.6763	TRC12	CEDAR
40364	1773471.651	734580.332	584.4376	TRC10	CEDAR
40365	1773474.345	734592.0827	586.1774	TRD10	ELM
40366	1773527.91	734208.4994	542.1629	TRD12	OAK
40367	1773528.066	734210.8797	542.6214	TRD12	HACK
40368	1773464.924	734609.8111	583.8299	TRD18	OAK
40369	1773431.984	734595.2892	581.1855	TRC8	CEDAR
40370	1773426.645	734593.4086	579.9311	TRD8	ELM
40371	1773422.778	734593.1243	579.436	TRC10	CEDAR
40372	1773428.476	734613.7088	581.1646	TRC6	ASH
40373	1773425.617	734610.854	580.7592	TRC8	CEDAR
40374	1773414.047	734618.5351	579.2198	TRC8	CEDAR
40375	1773415.124	734631.6894	579.0552	TRC8	ELM
40376	1773409.558	734647.7698	579.8173	TRC8	CEDAR
40377	1773413.065	734653.3739	580.2418	TRC8	CEDAR
40378	1773406.051	734644.1349	585.192	TRC10	CEDAR
40379	1773403.047	734649.3124	585.1068	TRC12	CEDAR
40380	1773447.893	734657.9093	585.2319	TRC6	ELM
40381	1773446.568	734665.818	584.8984	TRD6	ELM
40382	1773448.042	734668.2917	585.1723	TRC8	CEDAR
40383	1773437.021	734672.6592	587.6398	TRD12	CHERRY
40384	1773433.438	734674.0278	582.9635	TRC6	CEDAR
40385	1773438.149	734684.8743	584.9717	TRD6	ASH
40386	1773447.636	734691.3613	586.9608	TRC12	CEDAR
40387	1773451.167	734687.6167	587.1344	TRD18	ELM
40388	1773431.099	734706.338	584.4409	TRC12	CEDAR
40389	1773441.118	734722.2665	588.0089	TRC8	CEDAR
40390	1773441.011	734733.5725	586.5982	TRC8	CEDAR

40391	1773445.561	734738.1364	588.4397	TRD12	ELM
40392	1773444.195	734742.6622	589.4611	TRD12	ELM
40393	1773425.182	734718.0444	582.662	TRC8	CEDAR
40394	1773420.132	734729.6385	582.0138	TRC8	ASH
40395	1773422.304	734732.2082	582.0349	TRC8	CEDAR
40396	1773432.863	734749.344	584.6073	TRC6	HACKBERRY
40397	1773426.296	734753.0138	583.1913	TRD10	CEDAR
40398	1773440.588	734768.9052	582.2818	TRD6	ELM
40399	1773436.502	734781.4976	585.6317	TRD10	ELM
40400	1773427.385	734792.2006	584.1706	TRC8	CEDAR
40401	1773431.276	734805.8275	582.6995	TRD8	ASH
40402	1773427.582	734807.594	583.4592	TRC8	CEDAR
40403	1773427.312	734810.2227	583.4197	TRD10	ELM
40404	1773419.86	734817.4976	585.6317	TRD10	ASH
40405	1773423.335	734809.4151	585.3273	TRC6	CEDAR
40406	1773433.565	734830.0748	586.9992	TRD8	HICKORY
40407	1773434.412	734838.6435	587.3225	TRD8	ASH
40408	1773430.674	734843.6342	586.8106	TRD16	OAK
40410	1773398.433	734874.7975	579.2382	TRD18	CEDAR
40411	1773404.238	734894.1095	580.5402	TRD8	MAPLE
40412	1773392.012	734704.4281	577.8415	TRC12	CEDAR
40413	1773398.963	734732.9318	578.1604	TRC6	CEDAR
40414	1773399.525	734746.4272	578.3817	TRC10	CEDAR
40415	1773394.11	734773.5329	604.3348	TRC10	CEDAR
40416	1773396.524	734773.9891	600.3971	TRD6	ELM
40417	1773392.214	734804.1372	573.975	TRD8	ASH
40418	1773389.963	734813.2456	574.8001	TRD8	ELM
40419	1773388.722	734818.4755	575.3695	TRD8	ASH
40420	1773395.029	734826.0582	578.0258	TRC14	CEDAR
40421	1773392.072	734850.795	578.9412	TRC8	CEDAR
40422	1773393.932	734857.1866	575.4954	TRD8	ELM
40423	1773426.293	734864.0137	585.8644	TRC12	ELM
40424	1773425.575	734869.6168	586.4037	TRD18	POPLAR
40425	1773430.372	734876.4822	583.1178	TRC8	CEDAR
40426	1773419.836	734888.4365	585.0252	TRD6	CHERRY
40427	1773432.036	734898.1588	588.2027	TRD12	CHERRY
40428	1773428.223	734905.6892	587.3497	TRD6	HACK
40429	1773436.203	734904.4559	587.9904	TRD6	OAK
40430	1773423.984	734919.1682	588.3117	TRC10	CEDAR
40431	1773439.888	734920.9479	590.6107	TRD18	ELM
40432	1773437.12	734936.5693	589.2656	TRD12	ELM
40433	1773425.842	734939.4645	585.1981	TRC8	CEDAR
40434	1773439.548	734946.5404	589.3098	TRD18	ELM
40435	1773436.993	734969.9746	588.807	TRD10	CEDAR
40436	1773441.708	734980.9418	587.516	TRD6	CHERRY
40437	1773439.425	734983.5944	586.1086	TRD8	CHERRY
40438	1773396.02	734981.2727	577.5838	TRD8	OAK
40439	1773393.23	734988.8558	576.899	TRD10	MAPLE
40440	1773385.291	734901.7807	576.958	TRD6	ASH
40441	1773388.6	734903.2886	577.8014	TRD6	ELM
40442	1773393.526	734923.5868	579.1779	TRD8	ASH
40443	1773391.892	734937.9142	579.5745	TRD8	CEDAR
40444	1773399.738	734944.2743	580.7554	TRC6	CEDAR
40445	1773393.613	734947.3167	579.4811	TRC6	CHERRY
40446	1773398.588	734974.9334	579.9934	TRC10	CEDAR
40447	1773401.953	734988.9467	579.9448	TRC10	ELM
40448	1773405.886	735000.2263	580.5136	TRD12	ELM
40449	1773409.418	735002.6781	581.0924	TRD6	HACK
40450	1773406.458	735006.5051	580.6724	TRC8	CEDAR
40451	1773452.364	734992.025	589.8161	TRC8	CEDAR
40452	1773472.582	734997.594	589.6093	TRC8	HICKORY
40453	1773450.895	735017.1814	587.2177	TRD10	HICKORY
40454	1773468.778	735030.2565	588.5246	TRD6	HACK
40455	1773462.552	735034.0149	588.5249	TRD6	HACK
40456	1773460.463	735038.9711	587.7424	TRD8	ASH
40457	1773467.821	735054.1571	592.0626	TRD8	ELM
40458	1773470.945	735075.2713	586.7812	TRD8	HACK
40459	1773467.516	735085.6169	584.4594	TRD12	OAK
40460	1773481.815	735080.8794	583.4111	TRD6	ELM
40461	1773456.651	735072.7926	583.4597	TRD12	ASH
40462	1773421.225	735056.2544	580.2185	TRC8	CEDAR
40463	1773419.86	735055.0137	580.5243	TRC6	CEDAR
40464	1773407.96	735036.1302	579.6816	TRC24	OAK
40465	1773460.463	735100.2403	580.405	TRC12	CEDAR
40466	1773469.341	735102.21	582.6547	TRD12	OAK
40467	1773464.497	735104.0324	581.8997	TRD8	ASH
40468	1773467.303	735117.235	581.157	TRD6	CEDAR
40469	1773463.709	735116.8753	580.1635	TRD8	OAK
40470	1773471.325	735116.9155	581.7608	TRD8	
40471	1773470.561	735123.8373	579.7565	TRD6	CEDAR
40472	1773479.175	735118.755	582.8462	TRD8	ELM
40473	1773467.01	735185.0968	580.6122	TRC18	CEDAR
40474	1773504.48	735196.5283	577.8321	TRC6	CEDAR
40475	1773504.026	735211.4504	575.1091	TRC12	CEDAR
40476	1773512.506	735228.8327	574.118	TRD18	ELM
40477	1773500.947	735244.1435	573.6395	TRD8	ELM
40478	1773508.736	735256.2069	574.0957	TRD8	HACK
40479	1773513.11	735256.782	575.6396	TRD12	WALNUT
40480	1773555.45	735264.7477	583.0448	TRD18	POPLAR
40481	1773579.306	735265.9615	586.9802	TRD6	ELM
40482	1773571.623	735277.0166	587.7178	TRD12	WALNUT
40483	1773579.485	735278.175	588.4614	TRD6	ELM
40484	1773594.431	735266.513	590.8351	TRD12	POPLAR
40485	1773597.095	735280.6324	595.2538	TRD6	HACK
40486	1773608.533	735297.8384	595.1481	TRD8	POPLAR
40487	1773617.959	735290.8999	599.2152	TRD10	MAPLE
40488	1773631.725	735272.2264	601.6497	TRD10	ELM
40489	1773634.587	735283.6081	604.1853	TRD6	MAPLE
40490	1773641.859	735275.3357	606.011	TRC8	CEDAR
40491	1773642.461	735287.1549	610.7555	TRC10	CEDAR
40492	1773658.252	735282.5106	612.5033	TRD6	MAPLE
40493	1773656.127	735288.3055	613.2189	TRD12	OAK
40494	1773672.216	735281.8505	614.4302	TRD12	ASH
40495	1773686.908	735284.2611	617.7107	TRD18	ELM
40496	1773682.552	735299.7906	617.7252	TRD12	CHERRY
40497	1773682.552	735299.7906	617.7252	TRD6	ELM
40498	1773744.761	735282.2341	630.7435	TRD10	WALNUT
40499	1773721.915	735294.3149	631.7176	TRD12	HICKORY
40500	1773703.002	735308.5781	629.4436	TRD12	OAK
40501	1773701.806	735318.2272	630.1006	TRD12	WALNUT
40502	1773692.556	735310.1347	627.4536	TRD12	ELM
40503	1773693.124	735670.9353	770.9611	TRD10	HACKBERRY
40504	1773697.962	735346.4758	624.7723	TRD12	OAK
40505	1773646.004	735362.1505	624.9272	TRD16	ELM
40506	1773640.252	735369.8672	624.1704	TRD18	OAK
40507	1773625.743	735385.3442	623.3002	TRD10	HICKORY
40508	1773614.21	735383.0251	620.3288	TRD10	HICKORY
40509	1773619.573	735400.737	623.4212	TRD6	ELM
40510	1773624.814	735416.9877	627.8773	TRD10	HICKORY
40511	1773611.871	735430.8896	625.6152	TRD12	WALNUT
40512	1773606.632	735438.2802	625.644	TRD6	ELM
40513	1773557.635	735488.5202	624.8646	TRD12	HICKORY
40514	1773539.985	735530.0304	626.9435	TRD8	ELM
40515	1773520.993	735545.0231	622.987	TRD12	ELM
40516	1773510.98	735535.2601	618.1838	TRD10	HICKORY
40517	1773503.173	735557.3219	618.7995	TRD10	HICKORY

40518	1773507.89	735557.7887	619.4755	TRD6	ELM
40519	1773522.68	735570.2237	626.5329	TRD10	OAK
40520	1773510.685	735616.5883	628.9687	TRD12	CHERRY
40521	1773500.024	735633.9603	627.9313	TRD18	MAPLE
40522	1773496.231	735628.0856	624.6535	TRC8	CEDAR
40523	1773479.441	735635.1958	619.7519	TRD12	HICKORY
40524	1773466.895	735678.1322	628.8929	TRD12	POPLAR
40525	1773466.469	735673.4544	623.5915	TRD12	MAPLE
40526	1773476.057	735702.0331	620.6583	TRD12	MAPLE
40527	1773469.216	735723.4776	619.3819	TRD12	MAPLE
40528	1773466.19	735725.9732	624.148	TRD14	MAPLE
40529	1773474.629	735734.7189	618.4542	TRD12	HICKORY
40530	1773463.989	735779.5759	626.1387	TRD18	BIRCH
40531	1773474.5382	735791.1913	617.2341	TRD12	HICKORY
40532	1773475.22	735798.032	617.3476	TRD12	HACK
40533	1773480.053	735814.4724	616.8022	TRD6	ELM
40534	1773462.633	735804.1972	621.2196	TRD10	CHERRY
40535	1773503.624	735813.8235	625.495	TRD12	ASH
40536	1773503.86	735818.8405	625.4742	TRD12	HACKBERRY
40537	1773503.702	735836.4851	622.4091	TRD6	ELM
40538	1773501.475	735858.1484	619.6337	TRD18	HICKORY
40539	1773496.226	735851.9811	616.9544	TRD6	ELM
40540	1773493.884	735855.4298	613.9934	TRD6	HACK
40541	1773483.743	735874.1184	613.4335	TRD6	HACKBERRY
40542	1773478.356	735871.9158	608.8184	TRD6	HACK
40545	1773481.41	735890.1418	608.2982	TRD6	ELM
40546	1773505.332	735898.9659	613.2683	TRD32	POPLAR
40547	1773507.981	735952.4953	608.893	TRD6	ELM
40548	1773511.587	735982.4653	605.5083	TRD6	POPLAR
40549	1773522.597	736013.5165	601.3705	TRD6	POPLAR
40550	1773456.739	736029.2411	594.6357	TRD12	ELM
40551	1773449.831	736236.3845	597.7358	TRD12	HICKORY
40552	1773468.439	736235.3347	594.5447	TRC12	HACK
40553	1773472.218	736235.5167	592.5448	TRC12	OAK
40554	1773476.443	736243.5042	590.8805	TRD14	HACK
40555	1773482.275	736229.1928	590.5176	TRC8	HACK
40556	1773494.29	736215.8238	768.9911	TRD10	WALNUT
40557	1773478.472	736981.5302	767.0265	TRD10	HICKORY
40617	1773467.541	736074.9393	765.8319	TRC24	ASH
40618	1773469.508	736665.9455	763.2236	TRD18	ASH
40619	1773473.19	736667.0688	766.7533	TRD6	HICKORY
40620	1773665.283	736677.4561	765.2082	TRC8	CEDAR
40621	1773654.39	736697.3467	763.4385	TRC8	ELM
40622	1773641.316	736697.5283	761.1056	TRD12	ELM
40623	1773527.409	736570.8838	759.2335	TRC8	CEDAR
40624	1773528.707	736559.222	761.0368	TRC12	HACK
40625	1773513.23	736648.0006	757.7736	TRC12	ELM
40626	1773496.966	736646.8731	756.5301	TRD8	CEDAR
40627	1773589.999	736639.1202	754.3521	TRC12	ELM
40628	1773560.246	736638.9899	750.7152	TRD8	WALNUT
40629	1773551.765	736628.5039	750.22	TRD8	ELM
40630	1773548.773	736626.321	749.1107	TRD16	HICKORY
40631	1773544.724	736622.3177	748.7936	TRD8	CEDAR
40632	1773533.107	736616.6553	748.0466	TRD8	OAK
40633	1773546.415	736606.8027	752.3696	TRC12	HACK
40634	1773518.262	736594.2189	753.1101	TRD18	OAK
40635	1773521.169	736578.7956	754.3537	TRD10	ELM
40636	1773511.88	736560.237	757.4506	TRD8	CEDAR
40637	1773525.872	736563.3252	756.4148	TRD8	HACK
40638	1773538.077	736581.0958	755.6399	TRD8	ELM
40639	1773515.205	736556.7359	757.157	TRD8	
40640	1773518.059	736551.4679	757.4815	TRD12	HEAVEN
40641	1773515.788	736544.572	757.8662	TRD12	OAK
40642	1773528.051	736538.6656	757.1769	TRD12	OAK
40643	1773519.181	736522.2552	756.011	TRD12	ELM
40644	1773507.06	736514.4258	757.2943	TRD18	ELM
40645	1773509.371	736496.1195	754.4025	TRD18	ELM
40646	1773496.928	736495.8161	755.5983	TRD8	HACK

40647	1773492.872	736493.9413	756.2697	TRD10	ELM
40648	1773474.534	736501.4748	759.495	TRD12	HICKORY
40649	1773479.483	736473.8383	755.7137	TRD6	ELM
40650	1773479.728	736458.4516	751.2972	TRD12	ELM
40651	1773481.327	736444.2271	746.8789	TRD8	OAK
40652	1773486.341	736438.2762	742.8335	TRD8	OAK
40653	1773500.582	736412.4428	732.3545	TRD18	OAK
40654	1773494.822	736393.6136	721.0842	TRD12	WALNUT
40655	1773463.882	736376.2743	724.2462	TRD8	OAK
40656	1773472.047	736351.4099	717.8775	TRD14	HICKORY
40657	1773472.413	736343.2814	714.2055	TRD8	MAPLE
40658	1773463.633	736343.2338	708.8645	TRD18	ELM
40659	1773475.645	736324.7425	701.8545	TRD18	MAPLE
40660	1773463.414	736306.4806	696.8139	TRD12	ELM
40661	1773460.247	736294.1343	693.7313	TRD12	HACK
40662	1773462.418	736290.5725	692.789	TRD18	OAK
40663	1773463.446	736288.6916	687.2813	TRD6	HACKBERRY
40664	1773467.62	736262.2795	669.9273	TRD6	WALNUT
40665	1773460.312	736261.5737	669.5632	TRD6	ELM
40666	1773429.443	736256.3347	655.3154	TRD10	MAPLE
40667	1773456.553	736196.9642	649.3654	TRD8	WALNUT
40668	1773441.453	736185.4195	645.9781	TRD24	POPLAR
40669	1773429.584	736150.5961	635.5395	TRD8	SYCAMORE
40670	1773443.446	736288.6916	687.2813	TRD6	HACKBERRY
40671	1773440.177	736267.2196	669.5632	TRD6	SYCAMORE
40672	1773423.523	736079.3761	614.5341	TRD6	SYCAMORE
40673	1773439.337	736055.4499	614.6278	TRD6	SYCAMORE
40674	1773419.979	736050.2201	616.9663	TRD6	HEAVEN
40675	1773399.777	736016.4308	624.9645	TRD6	SYCAMORE
40676	1773397.749	735982.5825	639.7089	TRD6	ELM
40677	1773372.178	735945.8231	652.5069	TRD12	HEAVEN
40678	1773383.521	735944.7122	654.7710	TRD12	ELM
40679	1773387.764	735930.6861	656.0564	TRD6	ELM
40680	1773377.059	735917.0481	658.7674	TRD6	ELM
40681	1773377.325	735845.4022	689.9075	TRD6	MAPLE
40682	1773357.449	735838.4479	691.9624	TRD24	OAK
40683	1773351.166	735825.0177	699.9266	TRD12	ELM
40684	1773361.34	735815.1071	703.6171	TRD6	POPLAR
40685	1773361.331	735810.9475	707.3602	TRD6	POPLAR
40686	1773354.025	735795.2789	711.6299	TRD6	POPLAR
40687	1773350.307	735787.8036	714.1399	TRD6	POPLAR
40688	1773370.87	735788.6356	714.0691	TRD6	SYCAMORE
40689	1773390.203	735772.9232	716.4099	TRD6	POPLAR
40690	1773364.897	735768.0098	719.3802	TRD6	MAPLE
40691	1773343.052	735764.46	720.1003	TRD28	OAK
40692	1773343.055	735743.1036	731.6979	TRD6	POPLAR
40693	1773332.487	735732.1188	734.1161	TRD12	ELM
40694	1773342.893	735709.2282	745.4723	TRD10	CHERRY
40695	1773351.794	735712.9902	747.9842	TRD10	ELM
40696	1773341.719	735705.1292	749.2894	TRD8	ELM
40697	1773340.179	735680.0896	762.2297	TRD6	MAPLE
40698	1773347.719	735664.7489	768.5068	TRD12	HICKORY
40699	1773350.771	735654.5216	771.4029	TRD12	ELM
40700	1773346.024	735648.9734	774.2558	TRD10	MAPLE
40701	1773343.397	735629.5803	780.4493	TRD10	HICKORY
40702	1773329.168	735630.9885	778.7136	TRD8	ELM
40703	1773322.228	735622.9198	781.1647	TRD12	OAK
40704	1773322.968	735609.6771	784.4777	TRD12	WALNUT
40705	1773322.211	735595.3387	788.7477	TRD12	ELM
40706	1773310.578	735405.4083	689.1066	TRD12	ELM
40707	1773319.304	734102.4006	695.3393	TRD8	ELM
40708	1773298.502	734094.103	694.9339	TRD8	CHERRY
40709	1773298.738	734134.9457	698.644	TRD12	ELM
40710	1773298.718	734150.4494	698.2443	TRD8	ELM
40711	1773277.634	734159.4494	695.0462	TRD12	HICKORY
40712	1773277.462	734207.3028	702.6189	TRD8	HACK
40713	1773264.026	734273.9377	709.4337	TRD8	HACK
40714	1773264.109	734284.7134	711.284	TRD8	MAPLE
40715	1773227.53	735074.2067	791.1393	TRD8	ASH
40716	1773251.319	735072.4821	783.014	TRD8	HEAVEN
40717	1773234.365	735065.7944	791.1908	TRD8	ASH
40718	1773212.98	735063.8033	791.1665	TRD10	HICKORY
40719	1773209.417	735048.8151	790.3279	TRD10	HICKORY
40720	1773214.478	735031.1941	788.8943	TRD8	HICKORY
40721	1773



DEMOLITION PLAN LEGEND

TREE PROTECTION FENCING, REFER TO DETAIL 6/C5.30

TREE REMOVAL

NOTES:

1. CLEAR & GRUB ALL AREAS BEING DISTURBED AS SHOWN ON EPSC PLAN/GRADING PLAN SHEETS.
2. SOME LARGE TREES NOTED FOR PROTECTION ARE DIRECTLY ADJACENT TO CONSTRUCTION ACTIVITIES. USE CAUTION WHEN WORKING AROUND THESE TREES CRITICAL ROOT ZONE (SEE TREE PROTECTION DETAIL FOR DESCRIPTION). IF IT IS DEEMED NECESSARY TO REMOVE ANY OF THESE TREES, CONTACT OWNER OR OWNERS REPRESENTATIVE TO GET APPROVAL PRIOR TO REMOVAL.
3. CONTRACTOR, OWNER AND OWNERS REPRESENTATIVE ARE TO WALK THE SITE PRIOR TO START OF CONSTRUCTION TO IDENTIFY ANY TREES THAT MAY NEED TO BE REMOVED TO ACCOMPLISH THIS WORK BEFORE CONSTRUCTION BEGINS.

REVISIONS

NO	DATE	BY	DESCRIPTION

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NICHOLAS TUTTLE REGISTERED AGRICULTURE ENGINEER TENNESSEE NO. 08/10/2026 LANDSCAPE ARCHITECT

DATE: 07/23/2026

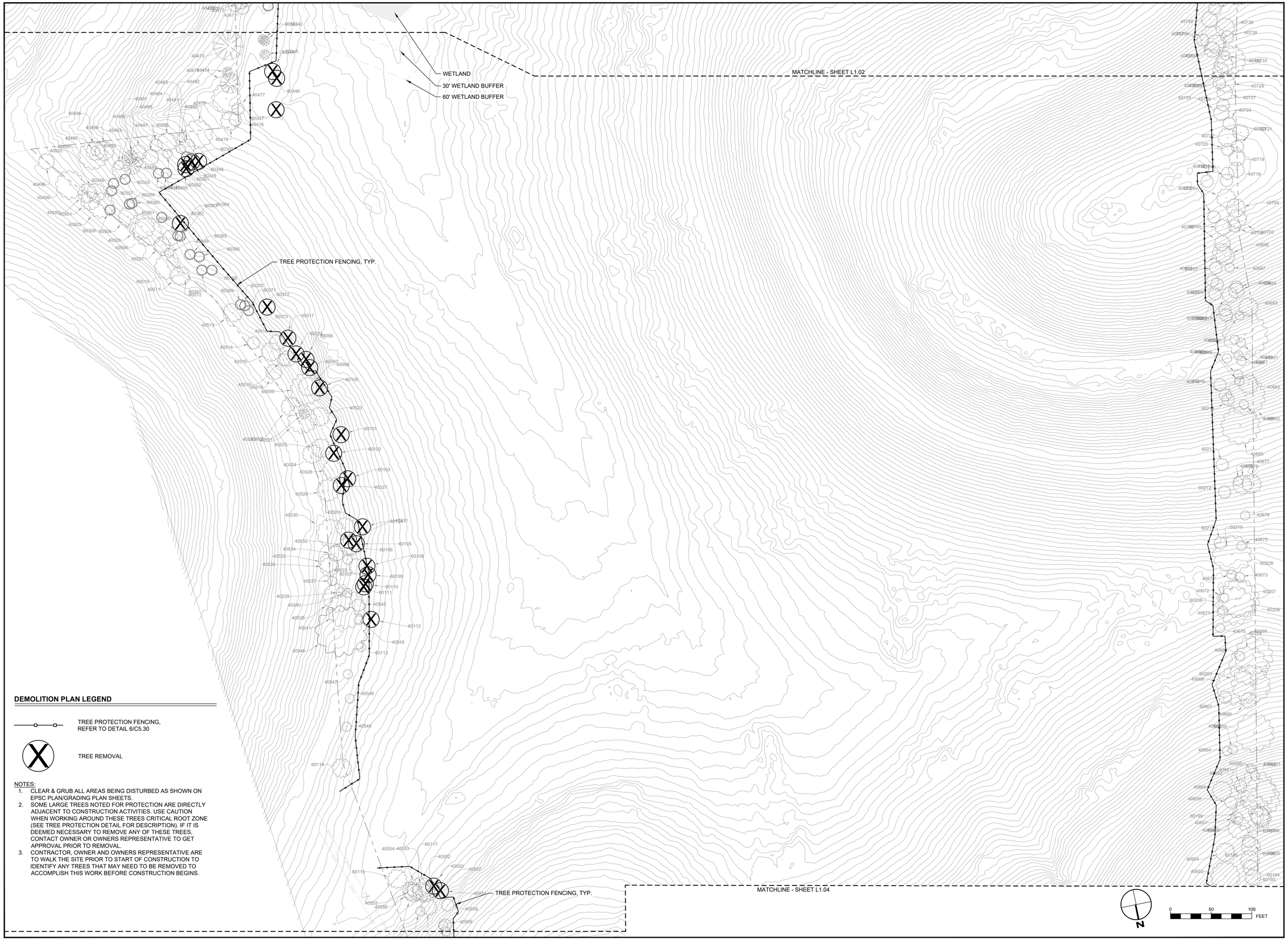
DESIGNED BY: MH, GH
SUPERVISED BY: NT, DO
CHECKED BY: NT

TREE REMOVAL & PROTECTION PLAN

SHEET NO. C1.12

SAVE DATE: 9/2/2026, PLOT DATE: 9/3/2026

FILENAME: Z:\PRIVATE CLIENTS\3009-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN\3009-25_L1.00_TREE DEMO PLAN.DWG



DEMOLITION PLAN LEGEND

TREE PROTECTION FENCING, REFER TO DETAIL 6/C5.30

TREE REMOVAL

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REVISIONS

NO	DATE	BY	DESCRIPTION

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

PHONE: (615) 331-1441
FAX: (615) 331-1050

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NICHOLAS TUTTLE
REGISTERED
No. 339
PROFESSIONAL
LANDSCAPE ARCHITECT
TENNESSEE, U.S.A.
08/07/2026

DATE: 07/23/2026

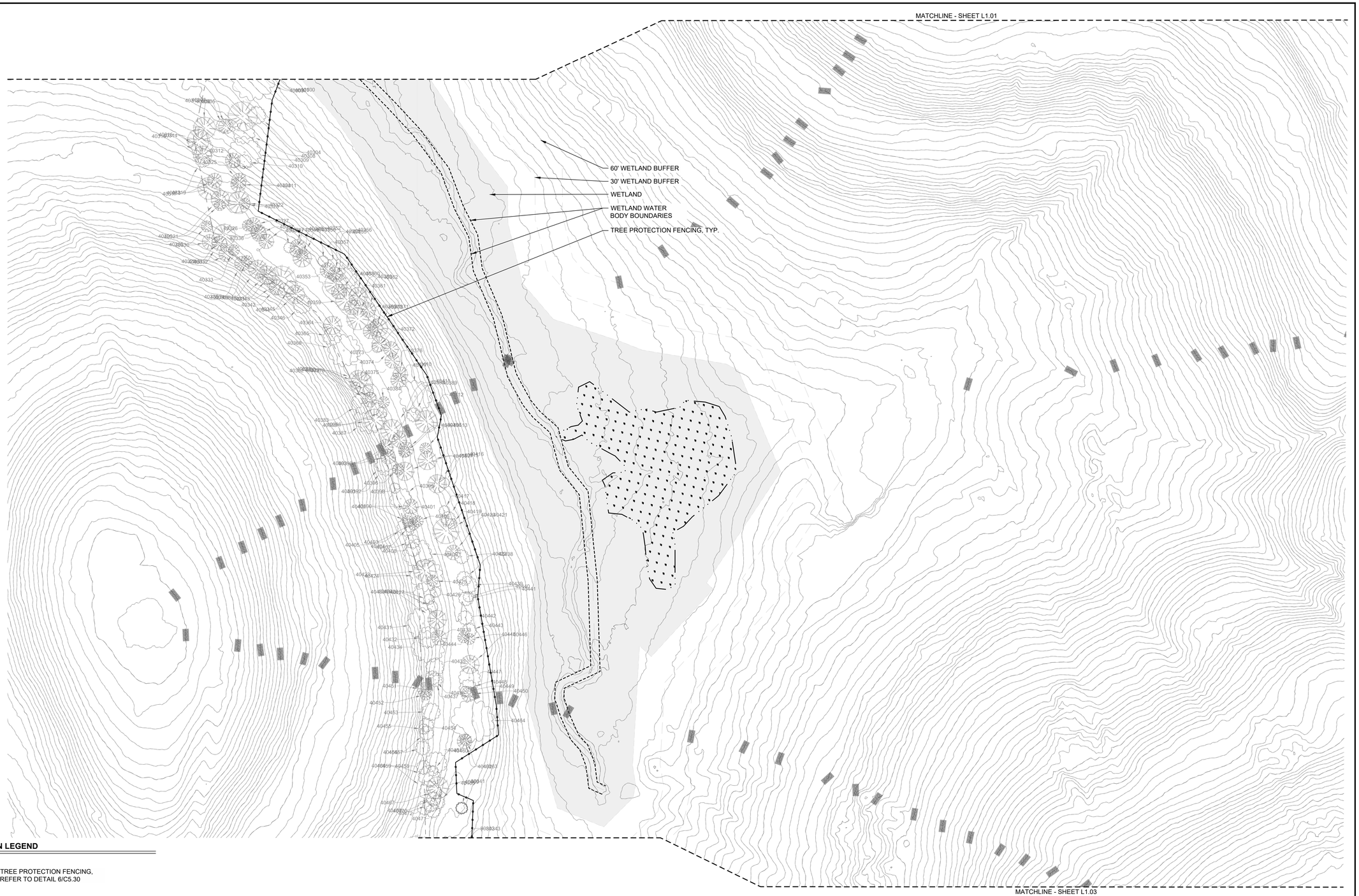
DESIGNED BY: MH, GH
SUPERVISED BY: NT, DO
CHECKED BY: NT

TREE REMOVAL & PROTECTION PLAN

SHEET NO. C1.13

SAVE DATE: 8/2/2026, PLOT DATE: 8/3/2026

FILENAME: Z:\PRIVATE CLIENTS\2025\25-28 - ALLEN FARM SUBDIVISION\CAD\CE\25-28 ALLEN FARMS SUBDIVISION-PLAN SET-CADCE\25-28 ALLEN FARMS SUBDIVISION-PLAN SET-C1.13_TREE REMOVAL PLAN.DWG



DEMOLITION PLAN LEGEND

TREE PROTECTION FENCING, REFER TO DETAIL 6/C5.30

TREE REMOVAL

NOTES:

1. CLEAR & GRUB ALL AREAS BEING DISTURBED AS SHOWN ON EPSC PLAN/GRADING PLAN SHEETS.
2. SOME LARGE TREES NOTED FOR PROTECTION ARE DIRECTLY ADJACENT TO CONSTRUCTION ACTIVITIES. USE CAUTION WHEN WORKING AROUND THESE TREES CRITICAL ROOT ZONE (SEE TREE PROTECTION DETAIL FOR DESCRIPTION). IF IT IS DEEMED NECESSARY TO REMOVE ANY OF THESE TREES, CONTACT OWNER OR OWNERS REPRESENTATIVE TO GET APPROVAL PRIOR TO REMOVAL.
3. CONTRACTOR, OWNER AND OWNERS REPRESENTATIVE ARE TO WALK THE SITE PRIOR TO START OF CONSTRUCTION TO IDENTIFY ANY TREES THAT MAY NEED TO BE REMOVED TO ACCOMPLISH THIS WORK BEFORE CONSTRUCTION BEGINS.

N

0 50 100 FEET

REVISIONS

NO	DATE	BY	DESCRIPTION

SAVE DATE: 8/2/2026, PLOT DATE: 8/2/2026

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2349 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055

PHONE: (615) 331-1441
FAX: (615) 331-1050

CONSTRUCTION DOCUMENTS FOR

NICHOLAS TUTTLE REGISTERED LANDSCAPE ARCHITECT TENNESSEE 08/07/2026

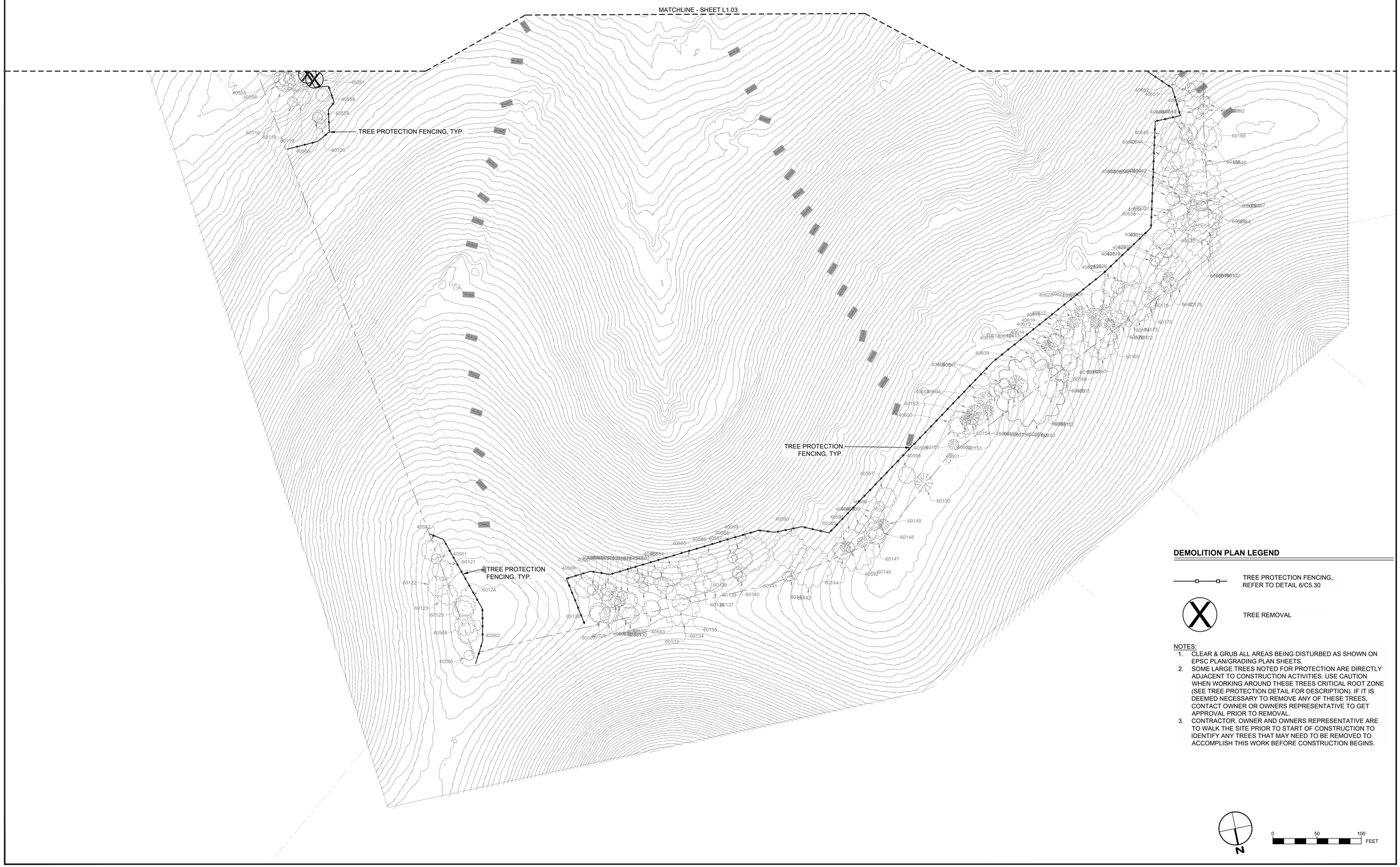
DATE: 07/23/2026

DESIGNED BY: MH, GH
SUPERVISED BY: NT, DO
CHECKED BY: NT

TREE REMOVAL & PROTECTION PLAN

SHEET NO. L1.20

FILENAME: Z:\PRIVATE CLIENTS\8049-24 - ALLEN FARM SUBDIVISION\8-SUBDIVISION\8-2_L1.00_TREE REMOVAL.DWG



DEMOLITION PLAN LEGEND

TREE PROTECTION FENCING, REFER TO DETAIL 6/C5.30

TREE REMOVAL

NOTES:

1. CLEAR & GRUB ALL AREAS BEING DISTURBED AS SHOWN ON EPSC PLAN/GRADING PLAN SHEETS.
2. SOME LARGE TREES NOTED FOR PROTECTION ARE DIRECTLY ADJACENT TO CONSTRUCTION ACTIVITIES. USE CAUTION WHEN WORKING AROUND THESE TREES CRITICAL ROOT ZONE (SEE TREE PROTECTION DETAIL FOR DESCRIPTION). IF IT IS DEEMED NECESSARY TO REMOVE ANY OF THESE TREES, CONTACT OWNER OR OWNERS REPRESENTATIVE TO GET APPROVAL PRIOR TO REMOVAL.
3. CONTRACTOR, OWNER AND OWNERS REPRESENTATIVE ARE TO WALK THE SITE PRIOR TO START OF CONSTRUCTION TO IDENTIFY ANY TREES THAT MAY NEED TO BE REMOVED TO ACCOMPLISH THIS WORK BEFORE CONSTRUCTION BEGINS.

REVISIONS

NO	DATE	BY	DESCRIPTION

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NICHOLAS TUTTLE
REGISTERED
AGRICULTURE
TENNESSEE
LANDSCAPE ARCHITECT
08/10/2026

DATE: 07/23/2026

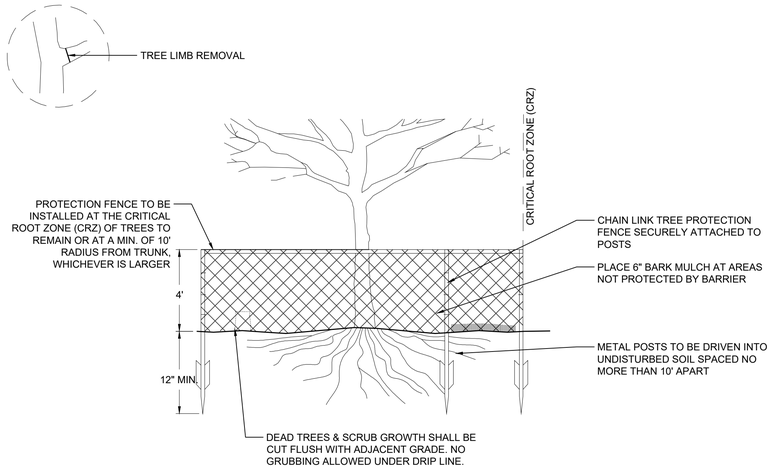
DESIGNED BY: MH, GH
SUPERVISED BY: NT, DO
CHECKED BY: NT

TREE REMOVAL & PROTECTION PLAN

SHEET NO. C1.15

FILENAME: Z:\PRIVATE CLIENTS\3008-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN2\3008-25_L1.00_TREE DEMO PLAN.DWG

SAVE DATE: 9/2/2026, PLOT DATE: 9/3/2026



1 TREE PROTECTION FENCE

NTS

TREE PROTECTION ZONE

1. TREE PROTECTION BARRIERS ARE TO BE CONSTRUCTED BEFORE THE START OF ALL CONSTRUCTION ACTIVITIES AND ARE TO REMAIN INTACT UNTIL FINAL COMPLETION AND URBAN FORESTER APPROVAL OF THE PROJECT CONSTRUCTION. ALL HOLES CREATED BY POST INSTALLATION ARE TO BE FILLED UPON REMOVAL OF THE BARRIER.
2. TREE PROTECTION BARRIERS ARE TO BE INSTALLED AT THE CRITICAL ROOT ZONE OF THE TREE TO REMAIN.
   - 2.1. CRITICAL ROOT ZONE (CRZ): THE AREA OF SOIL AROUND A TREE WHERE THE MINIMUM AREA OF ROOTS CONSIDERED CRITICAL TO THE STRUCTURAL STABILITY AND HEALTH OF THE TREE ARE LOCATED. THE CRZ IS TO BE DETERMINED BY MEASURING ONE FOOT FROM TRUNK PER EACH INCH OF TREE DIAMETER AT BREAST HEIGHT, WITH A MINIMUM OF TEN FEET.
   - 2.2. STRUCTURAL ROOT ZONE (SRZ): THE AREA OF SOIL AROUND A TREE WHERE THE MINIMUM AREA OF ROOTS REQUIRED TO MAINTAIN THE STRUCTURAL STABILITY OF THE TREE ARE LOCATED. THE SRZ IS TO BE DETERMINED BY MEASURING ONE-HALF FOOT FROM TRUNK PER EACH INCH OF TREE DIAMETER AT BREAST HEIGH, WITH A MINIMUM OF SIX FEET.
3. CONTRACTOR IS TO PROVIDE TREE PROTECTION SIGNAGE INSTALLED ON THE TREE PROTECTION FENCING AT A RATE OF AT LEAST ONE SIGN PER 150 LINEAR FEET OF CONTINUOUS TREE PROTECTION FENCING. THE SIGN MUST BE MADE OF A RECYCLABLE MATERIAL, BE A MINIMUM SIZE OF 2'X2' AND SHALL CONTAIN THE FOLLOWING LANGUAGE IN ENGLISH AND SPANISH: "TREE PROTECTION ZONE: KEEP OUT / ZONA DE LA PROTECCION DEL ARBOL: NO SE PERMITE ENTRAR."
4. NO GRUBBING IS PERMITTED IN THE PROTECTED ROOT ZONE UNLESS APPROVED IN WRITING BY OWNER OR OWNER'S REPRESENTATIVE.
5. ANY RETAINED TREE WHICH IS DAMAGED DURING CONSTRUCTION, OR WITH DAMAGE OCCURRING AS A RESULT OF CONSTRUCTION, SHALL BE REPLACED AS PROVIDED IN SECTION 17.28.065. TREES PLANTED TO REPLACE DAMAGED OR REMOVED PROTECTED TREES SHALL NOT BE COUNTED TOWARD THE SITE TDU.
6. PROTECT ALL TREES WITHIN 30' OF LIMIT OF GRADING, SEE GRADING PLANS. FOR ADDITIONAL TREE PROTECTION REQUIREMENTS, SEE METRO CODE 17.28.065.

ROOT PROTECTION

7. EXCAVATING OR TRENCHING SHALL NOT BE PERMITTED WITHIN THE TREE PROTECTION ZONE. UTILITIES SHALL BE LOCATED AWAY FROM THE TREE PROTECTION ZONE. IF TREES ARE DAMAGED OR DESTROYED DURING EXCAVATION OR TRENCHING, THE DAMAGED OR DESTROYED TREES SHALL BE REPLACED IN ACCORDANCE WITH SECTION 17.28.065. PLACING OF UTILITIES THROUGH THE USE OF TUNNELLING MAY BE PERMITTED WITH APPROVAL FROM PLANNING OR CODES STAFF, AS APPLICABLE. APPLICABLE STAFF MAY PROPOSE RULES AND REGULATIONS GOVERNING AND/OR LIMITING UTILITIES IN THE TREE PROTECTION ZONE.
8. DEVELOPMENT PROHIBITED WITHIN THE TREE PROTECTION ZONE. ALL DEVELOPMENT ACTIVITIES SHALL BE PROHIBITED WITHIN THE TREE PROTECTION ZONE PROVIDED FOR ANY PROTECTED TREES, INCLUDING ANY CONSTRUCTION OF BUILDINGS, STRUCTURES, PAVING SURFACES, AND STORM-WATER RETENTION/DETENTION PONDS. ALL TEMPORARY CONSTRUCTION ACTIVITIES SHALL ALSO BE PROHIBITED WITHIN TREE PROTECTION AREAS, INCLUDING ALL DIGGING, CONCRETE WASHING, STORAGE OF CONSTRUCTION MATERIAL, AND PARKING OF CONSTRUCTION VEHICLES.

GRADING IN PROTECTION ZONE

9. NO SOIL DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS, TRAFFIC OR BURIAL PITS ARE ALLOWED IN THE TREE PROTECTION ZONE UNLESS OTHERWISE SPECIFICALLY APPROVED IN WRITING BY OWNER OR LANDSCAPE ARCHITECT.
10. IF GRADING MUST OCCUR WITHIN THE PROTECTION ZONE, USE OF HAND OR SMALL EQUIPMENT CAN BE PERMITTED UPON ACCEPTANCE BY OWNER OR LANDSCAPE ARCHITECT, AND GRADE IS TO BE ALTERED NO MORE THAN 2 INCHES. NO SOIL DISTURBANCE IS ALLOWED ON THE ROOT FLARE UNDER ANY CIRCUMSTANCES.

EXISTING TREE CARE

5. PRUNING OF BRANCHES OR ROOTS OR REMOVAL OF DEAD LIMBS ON A TREE(S) LOCATED WITH THE TREE PROTECTION ZONE SHALL BBE PERMITTED. AN ISA CERTIFIED ARBORIST SHALL BE REQUIRED TO SUPERVISE ALL OPERATIONS RELATED TOWARD TREE CARE. ALL TREE CARE ACTIVITIES SHALL BE DONE WITHOUT THE USE OF HEAVY MACHINERY OR VEHICLES WITHIN THE TREE PROTECTION ZONE. PRIOR TO TREE CARE ACTIVITIES STATED IN THIS NOTE, PLANNING OR CODES STAFF SHALL BE INFORMED IN WRITING.
6. TREES ARE TO BE FERTILIZED BY THE DRILL HOLE OR DEEP ROOT LIQUID INJECTION METHOD PER NAA STANDARDS.
7. TREES WITHIN THE PROTECTION BARRIERS MUST BE ADEQUATELY CARED FOR THROUGHOUT THE CONSTRUCTION DURATION (I.E. TREES MUST BE WATERED SUFFICIENTLY, ESPECIALLY IF THE TREE'S ROOT SYSTEM HAS BEEN DISTURBED BY EXCAVATION).
8. HEAVY ACCUMULATION OF DUST FROM CONSTRUCTION ACTIVITY MAY OCCUR ON THE SURFACE OF TREE FOLIAGE. TO CONTROL DUST ACCUMULATION, TREE FOLIAGE MAY BE HOSED DOWN UPON THE REQUEST OF THE OWNER OR OWNER'S REPRESENTATIVE.

REVISIONS

NO	DATE	BY	DESCRIPTION

SAVE DATE: 9/2/2025, PLOT DATE: 9/2/2025

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NICHOLAS TUTTLE
REGISTERED
LANDSCAPE ARCHITECT
TENNESSEE NO. 371
08/07/2026

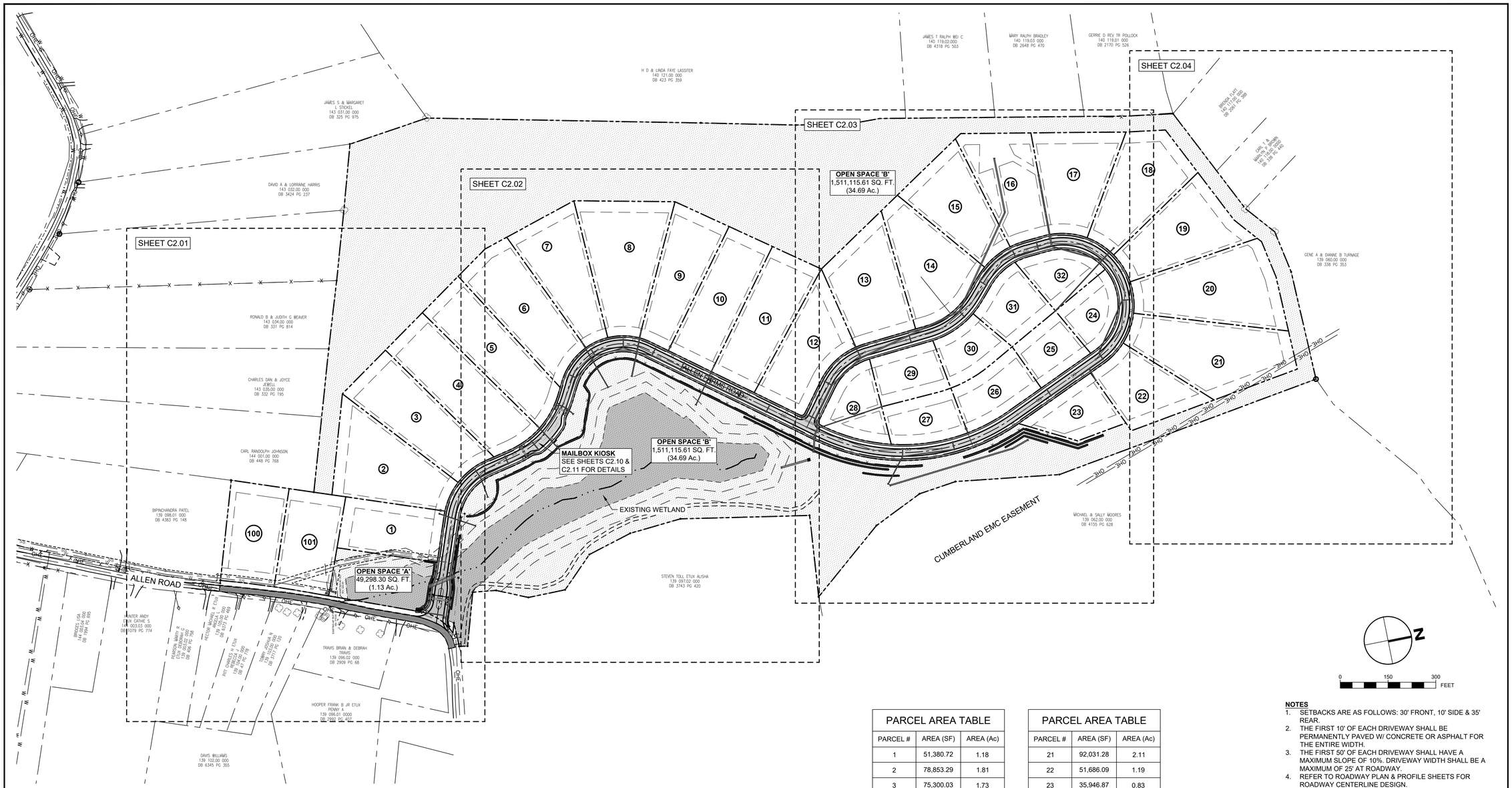
DATE: 07/23/2026

DESIGNED BY:	MH, GH
SUPERVISED BY:	NT, DO
CHECKED BY:	NT

TREE REMOVAL & PROTECTION DETAILS

SHEET NO. C1.16

FILENAME: Z:\PRIVATE CLIENTS\2025-34 - ALLEN FARMS SUBDIVISION\2025-34.SDA\2-CIVIL_SITE\1-CAD\DESIGN\250825_L1.00_TREE DEMO PLAN.DWG



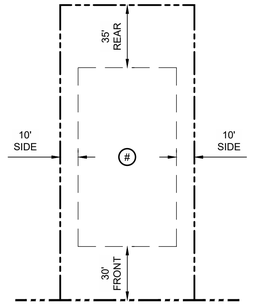
PARCEL AREA TABLE		
PARCEL #	AREA (SF)	AREA (Ac)
1	51,380.72	1.18
2	78,853.29	1.81
3	75,300.03	1.73
4	83,222.16	1.91
5	73,974.55	1.70
6	75,841.19	1.74
7	67,044.61	1.54
8	88,900.25	2.04
9	62,109.68	1.43
10	65,350.88	1.50
11	70,083.04	1.61
12	65,257.14	1.50
13	70,594.60	1.62
14	69,771.08	1.60
15	63,536.14	1.46
16	64,145.38	1.47
17	67,364.72	1.55
18	71,376.86	1.64
19	69,311.57	1.59
20	91,238.25	2.09

PARCEL AREA TABLE		
PARCEL #	AREA (SF)	AREA (Ac)
21	92,031.28	2.11
22	51,686.09	1.19
23	35,946.87	0.83
24	29,079.06	0.67
25	30,309.09	0.70
26	38,323.20	0.88
27	33,339.63	0.77
28	35,785.96	0.82
29	34,141.90	0.78
30	30,340.91	0.70
31	35,811.47	0.82
32	30,082.86	0.69
100	55,358.93	1.27
101	55,369.11	1.27

OPEN SPACE AREA TABLE		
OPEN SPACE	AREA (SF)	AREA (Ac)
A	49,298.30	1.13
B	1,511,115.61	34.69

NOTES
1. SETBACKS ARE AS FOLLOWS: 30' FRONT, 10' SIDE & 35' REAR.
2. THE FIRST 10' OF EACH DRIVEWAY SHALL BE PERMANENTLY PAVED W/ CONCRETE OR ASPHALT FOR THE ENTIRE WIDTH.
3. THE FIRST 50' OF EACH DRIVEWAY SHALL HAVE A MAXIMUM SLOPE OF 10%. DRIVEWAY WIDTH SHALL BE A MAXIMUM OF 25' AT ROADWAY.
4. REFER TO ROADWAY PLAN & PROFILE SHEETS FOR ROADWAY CENTERLINE DESIGN.

FEMA NOTE
- US FEMA FIRM COMMUNITY PANEL NUMBER: 47165C0381H, EFFECTIVE DATE 2/26/2021; FLOOD ZONE AE.



TYPICAL LOT LAYOUT
NTS

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
SUMNER
No. 122500
STATE OF TENNESSEE
09/03/2026

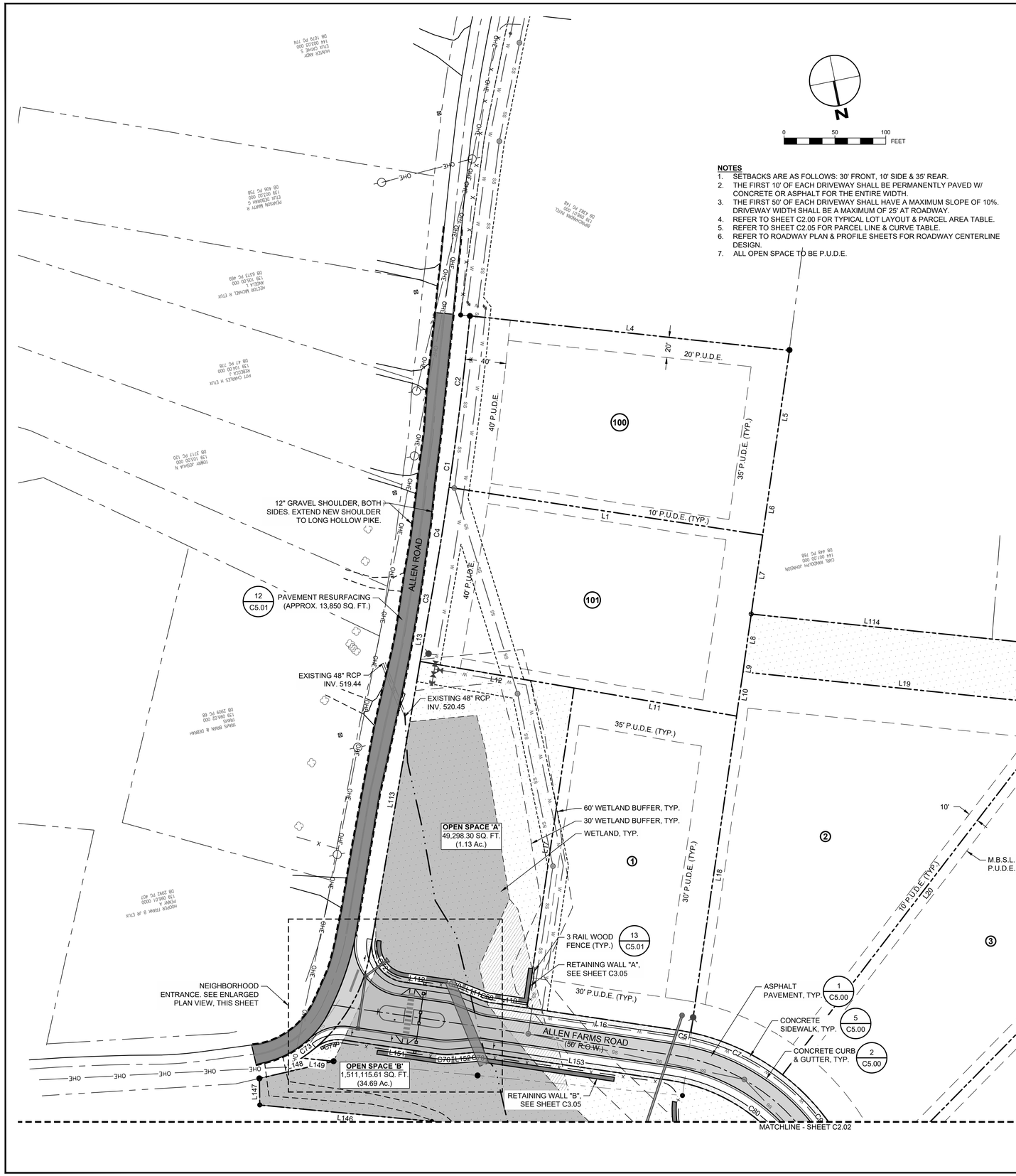
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

OVERALL SITE LAYOUT & KEY MAP

SHEET NO. C2.00

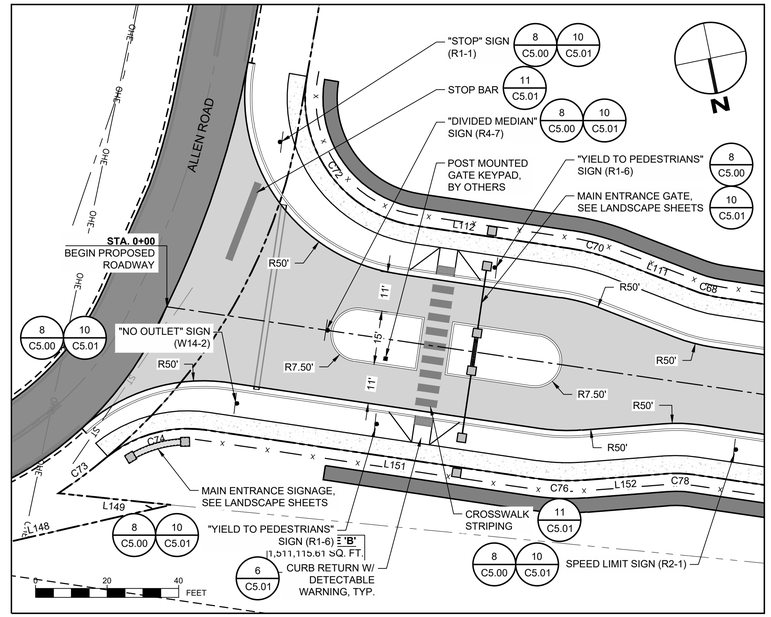
SAVE DATE: 9/2/2026, PLOT DATE: 9/3/2026

FILENAME: Z:\PRIVATE CLIENTS\2026\26-24 - ALLEN FARM SUBDIVISION\CIVIL\SHEETS\C2.00 - 26-24 - ALLEN FARMS SUBDIVISION.DWG, 9/3/2026 11:42:00 AM, CJ, 26-24 - ALLEN FARMS SUBDIVISION-25_11X17_PLAN.DWG



NOTES

1. SETBACKS ARE AS FOLLOWS: 30' FRONT, 10' SIDE & 35' REAR.
2. THE FIRST 10' OF EACH DRIVEWAY SHALL BE PERMANENTLY PAVED W/ CONCRETE OR ASPHALT FOR THE ENTIRE WIDTH.
3. THE FIRST 50' OF EACH DRIVEWAY SHALL HAVE A MAXIMUM SLOPE OF 10%. DRIVEWAY WIDTH SHALL BE A MAXIMUM OF 25' AT ROADWAY.
4. REFER TO SHEET C2.00 FOR TYPICAL LOT LAYOUT & PARCEL AREA TABLE.
5. REFER TO SHEET C2.05 FOR PARCEL LINE & CURVE TABLE.
6. REFER TO ROADWAY PLAN & PROFILE SHEETS FOR ROADWAY CENTERLINE DESIGN.
7. ALL OPEN SPACE TO BE P.U.D.E.



ENLARGED PLAN VIEW

SCALE: 1" = 20'

PAVEMENT LEGEND

- ROADWAY RESURFACING, SEE DETAIL 12 ON C5.01
- ASPHALT PAVEMENT INSTALLATION, SEE DETAIL 1 ON C5.00

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122500
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

SITE LAYOUT

SHEET NO. C2.01

SAVE DATE: 9/2/2026, PLOT DATE: 9/3/2026

MATCHLINE - SHEET C2.01

RETAINING WALL "C", SEE SHEET C3.05

MAILBOX KIOSK. SEE ENLARGED PLAN VIEW, THIS SHEET

M.B.S.L. & P.U.D.E., TYP.

ASPHALT PAVEMENT, TYP. (1 / C5.00)

18" GUTTER, TYP.
6" CONC. CURB, TYP.
7' GRASS STRIP, TYP.
5' CONC. SIDEWALK, TYP.

60' WETLAND BUFFER, TYP.
30' WETLAND BUFFER, TYP.
WETLAND, TYP.

(13 / C5.01) 3 RAIL WOOD FENCE (TYP.)

OPEN SPACE 'B'
1,511,115.61 SQ. FT.
(34.69 Ac.)

RETAINING WALL "D", SEE SHEET C3.05

(8 / C5.00) (10 / C5.01) "STOP" SIGN (R1-1)

(7 / C5.00) CURB RETURN W/ DETECTABLE WARNING, TYP.

STA. 17+86 = STA. 47+54
ROADWAY INTERSECTION

ALLEN FARMS ROAD
(50' R.O.W.)

CONCRETE SIDEWALK, TYP. (5 / C5.00)

CONCRETE CURB & GUTTER, TYP. (2 / C5.00)

30' P.U.D.E. (TYP.)

10' P.U.D.E. (TYP.)

35' P.U.D.E. (TYP.)

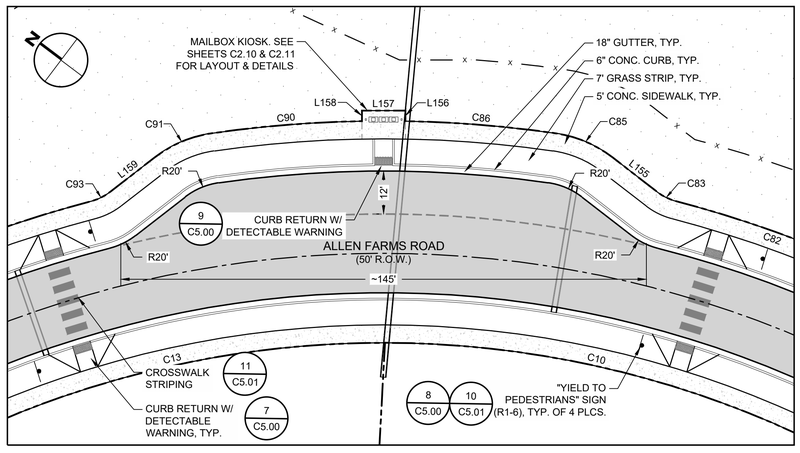
⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

MATCHLINE - SHEET C2.03

N

0 50 100 FEET

NOTES
1. SETBACKS ARE AS FOLLOWS: 30' FRONT, 10' SIDE & 35' REAR.
2. THE FIRST 10' OF EACH DRIVEWAY SHALL BE PERMANENTLY PAVED W/ CONCRETE OR ASPHALT FOR THE ENTIRE WIDTH.
3. THE FIRST 50' OF EACH DRIVEWAY SHALL HAVE A MAXIMUM SLOPE OF 10%. DRIVEWAY WIDTH SHALL BE A MAXIMUM OF 25' AT ROADWAY.
4. REFER TO SHEET C2.00 FOR TYPICAL LOT LAYOUT & PARCEL AREA TABLE.
5. REFER TO SHEET C2.05 FOR PARCEL LINE & CURVE TABLE.
6. REFER TO ROADWAY PLAN & PROFILE SHEETS FOR ROADWAY CENTERLINE DESIGN.
7. ALL OPEN SPACE TO BE P.U.D.E.



ENLARGED PLAN VIEW
SCALE: 1" = 20'

REVISIONS			
NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
7746 COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
No. 125500
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

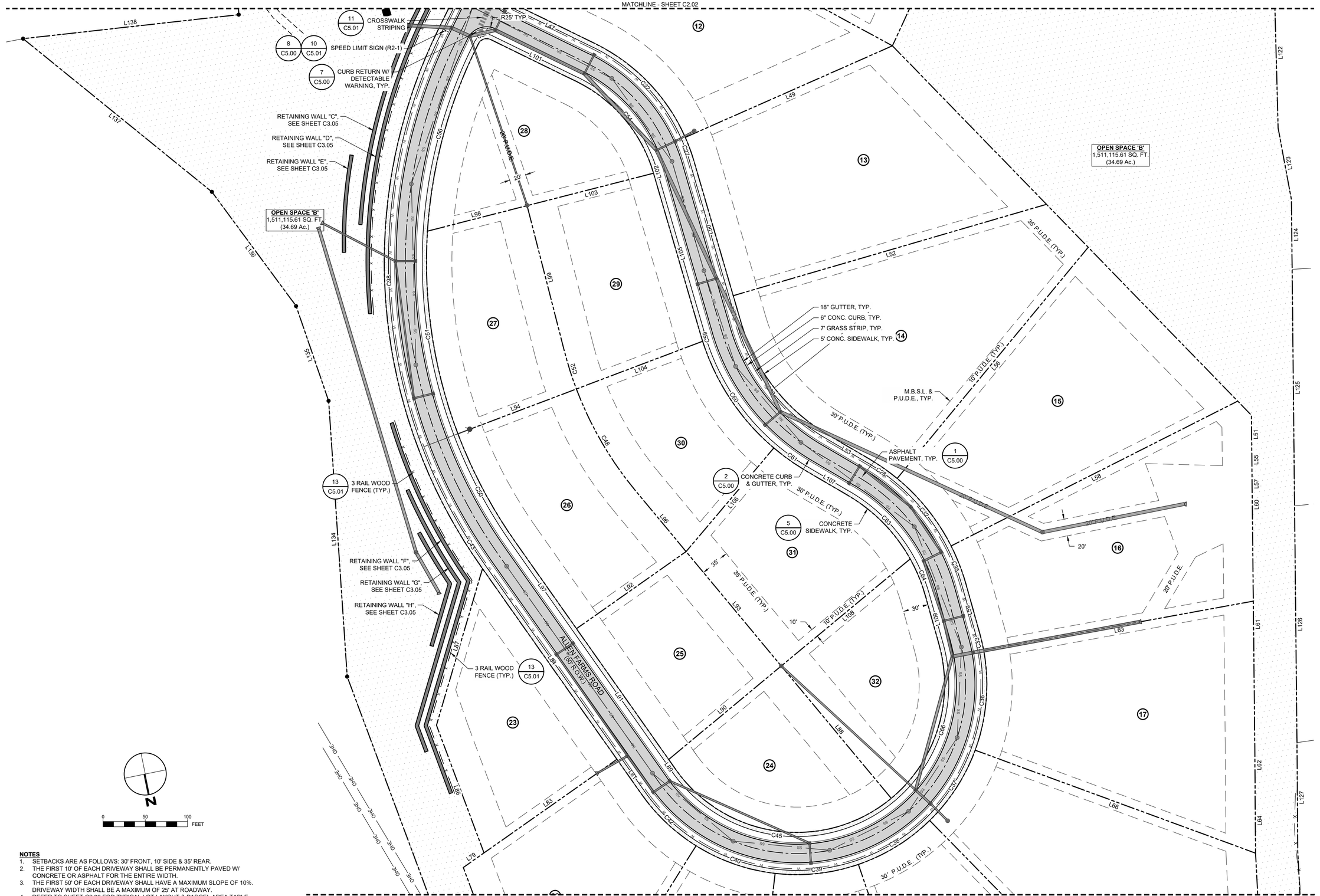
SITE LAYOUT

SHEET NO. C2.02

SAVE DATE: 9/2/2026, PLOT DATE: 9/2/2026

FILENAME: Z:\PROJECTS\2025\2025-24 ALLEN FARMS SUBDIVISION\4.DESIGN\CIVIL SITE\1-CAD\DGN\2025-24 SD_CVSD_SITE PLAN.DWG

MATCHLINE - SHEET C2.02



MATCHLINE - SHEET C2.04

N

0 50 100 FEET

NOTES

1. SETBACKS ARE AS FOLLOWS: 30' FRONT, 10' SIDE & 35' REAR.
2. THE FIRST 10' OF EACH DRIVEWAY SHALL BE PERMANENTLY PAVED W/ CONCRETE OR ASPHALT FOR THE ENTIRE WIDTH.
3. THE FIRST 50' OF EACH DRIVEWAY SHALL HAVE A MAXIMUM SLOPE OF 10%. DRIVEWAY WIDTH SHALL BE A MAXIMUM OF 25' AT ROADWAY.
4. REFER TO SHEET C2.00 FOR TYPICAL LOT LAYOUT & PARCEL AREA TABLE.
5. REFER TO SHEET C2.05 FOR PARCEL LINE & CURVE TABLE.
6. REFER TO ROADWAY PLAN & PROFILE SHEETS FOR ROADWAY CENTERLINE DESIGN.
7. ALL OPEN SPACE TO BE P.U.D.E.

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

SAVE DATE: 9/2/2026, PLOT DATE: 9/2/2026

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

PHONE: (615) 331-1441
FAX: (615) 331-1050

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
No. 122500
STATE OF TENNESSEE
09/03/2026

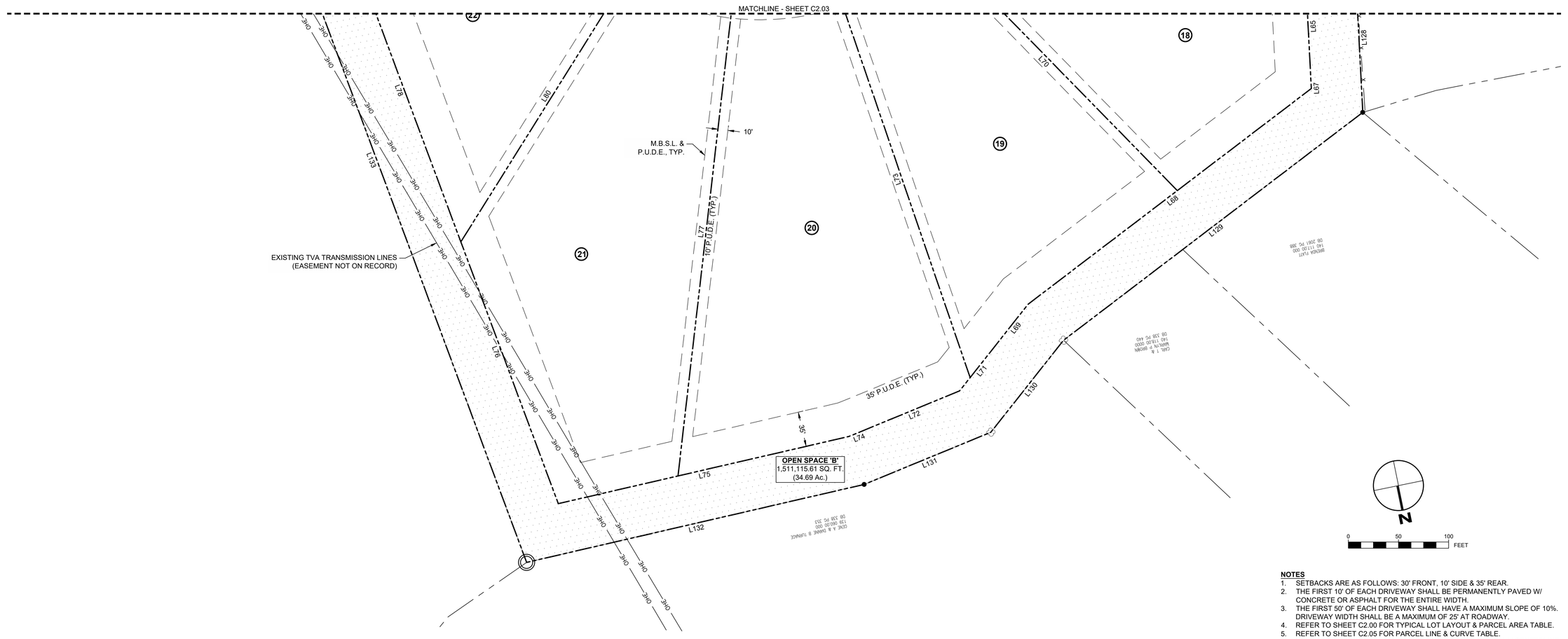
DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

SITE LAYOUT

SHEET NO. C2.03

FILENAME: Z:\PRIVATE CLIENTS\SWA-24 - ALLEN FARM SUBDIVISION\CAD\ESD\SWA-25_C2D_SITE PLAN.DWG



NOTES

1. SETBACKS ARE AS FOLLOWS: 30' FRONT, 10' SIDE & 35' REAR.
2. THE FIRST 10' OF EACH DRIVEWAY SHALL BE PERMANENTLY PAVED W/ CONCRETE OR ASPHALT FOR THE ENTIRE WIDTH.
3. THE FIRST 50' OF EACH DRIVEWAY SHALL HAVE A MAXIMUM SLOPE OF 10%. DRIVEWAY WIDTH SHALL BE A MAXIMUM OF 25' AT ROADWAY.
4. REFER TO SHEET C2.00 FOR TYPICAL LOT LAYOUT & PARCEL AREA TABLE.
5. REFER TO SHEET C2.05 FOR PARCEL LINE & CURVE TABLE.
6. REFER TO ROADWAY PLAN & PROFILE SHEETS FOR ROADWAY CENTERLINE DESIGN.
7. ALL OPEN SPACE TO BE P.U.D.E.

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122500
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

SITE LAYOUT

SHEET NO. C2.04

SAVE DATE: 9/2/2026, PLOT DATE: 9/3/2026

FILENAME: Z:\PRIVATE CLIENTS\3608-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN\3608-25_C200_SITE PLAN.DWG

PARCEL LINE & CURVE TABLE

LINE/CURVE #	LENGTH	DIRECTION/DELTA	RADIUS
C1	39.03	000.6174	3622.495
C2	130.93	002.0709	3622.495
C3	39.17	000.6196	3622.495
C4	92.02	001.4555	3622.495
C5	14.23	003.6240	225.000
C7	100.00	025.4648	225.000
C9	112.76	028.7151	225.000
C10	118.32	024.6512	275.000
C13	119.06	024.8062	275.000
C14	131.31	037.6182	200.000
C16	75.90	021.7449	200.000
C17	100.00	028.6479	200.000
C19	39.56	011.3342	200.000
C22	157.42	040.0868	225.000
C24	17.28	090.0000	11.000
C27	29.80	007.5888	225.000
C28	39.90	009.1449	250.000
C30	170.12	043.3201	225.000
C32	103.08	023.6236	250.000
C33	20.52	005.2266	225.000
C35	48.89	011.2044	250.000
C36	120.00	030.5577	225.000
C37	100.00	025.4648	225.000
C38	100.00	025.4648	225.000
C39	100.00	025.4648	225.000
C40	100.00	025.4648	225.000
C42	89.56	022.8051	225.000
C43	667.84	061.2231	625.000
C45	288.80	094.5549	175.000
C48	140.93	018.9994	425.000
C50	144.96	014.4445	575.000
C51	244.59	024.3718	575.000
C52	47.08	006.3475	425.000
C54	145.62	047.6755	175.000
C56	231.59	023.0772	575.000
C57	17.15	089.3296	11.000
C59	6.68	001.3916	275.000
C60	153.98	032.0805	275.000
C61	47.27	009.8480	275.000
C63	106.24	030.4344	200.000
C64	47.26	013.5385	200.000
C66	201.26	065.8937	175.000
C68	8.38	012.8079	37.500
C70	13.97	012.8079	62.500
C72	57.44	091.4247	36.000
C73	17.23	006.3193	156.230
C74	29.31	046.6464	36.007
C76	13.97	012.8079	62.500
C78	8.38	012.8079	37.500
C80	176.55	057.8039	175.000
C82	57.55	010.1453	325.000
C83	6.06	023.1498	15.000
C85	17.53	029.5354	34.000
C86	42.13	007.1633	336.969
C90	42.13	007.1633	336.969
C91	17.53	029.5354	34.000
C93	6.06	023.1498	15.000
C94	57.55	010.1453	325.000
C96	260.08	099.3451	150.000
C98	667.84	061.2231	625.000

PARCEL LINE & CURVE TABLE

LINE/CURVE #	LENGTH	DIRECTION/DELTA	RADIUS
L1	311.912	S69° 46' 51.60"E	
L4	316.104	N72° 14' 45.01"W	
L5	131.008	N19° 49' 30.32"E	
L6	52.463	N19° 49' 35.75"E	
L7	78.545	N19° 49' 35.75"E	
L8	50.037	N19° 41' 32.00"E	
L9	7.389	N19° 46' 29.68"E	
L10	43.898	N19° 46' 29.68"E	
L11	162.210	S68° 38' 21.60"E	
L12	153.475	S68° 38' 21.60"E	
L13	42.405	S21° 21' 38.40"W	
L16	148.822	S70° 03' 50.50"E	
L17	318.001	S19° 56' 09.50"W	
L18	314.419	N19° 46' 29.68"E	
L19	318.902	N72° 30' 18.83"W	
L20	457.540	N49° 01' 29.17"E	
L21	27.165	S12° 15' 36.53"E	
L22	192.495	N33° 52' 33.56"W	
L23	478.138	N56° 07' 26.44"E	
L24	52.850	S12° 15' 36.53"E	
L25	165.000	N33° 52' 33.56"W	
L26	516.560	N56° 07' 26.44"E	
L27	25.532	S61° 43' 03.16"E	
L28	160.200	N33° 52' 33.56"W	
L29	473.785	N58° 59' 51.40"E	
L30	20.758	S61° 43' 03.16"E	
L31	120.151	N33° 52' 33.56"W	
L32	77.661	N16° 57' 37.54"W	
L33	426.850	N65° 54' 02.19"E	
L34	239.988	N16° 57' 37.54"W	
L35	442.762	N87° 38' 43.80"E	
L36	317.827	N12° 07' 23.13"E	
L37	441.883	S63° 42' 23.79"E	
L38	60.436	S37° 37' 39.16"W	
L39	186.640	N36° 14' 46.19"E	
L40	433.864	S52° 22' 20.84"E	
L41	150.000	S37° 37' 39.16"W	
L42	150.044	N36° 14' 46.19"E	
L43	437.481	S52° 22' 20.84"E	
L44	150.000	S37° 37' 39.16"W	
L45	169.045	N36° 14' 46.19"E	
L46	441.965	S49° 54' 32.61"E	
L47	112.972	S52° 22' 20.84"E	
L48	160.316	S37° 37' 39.16"W	
L49	268.184	N77° 42' 51.53"E	
L50	166.226	S04° 41' 48.90"E	
L51	107.921	N10° 59' 07.53"E	
L52	386.326	N85° 18' 11.10"E	
L53	57.422	S48° 01' 01.40"E	
L54	35.006	S04° 41' 48.90"E	
L55	107.921	N10° 59' 07.53"E	
L56	355.205	N51° 07' 40.18"E	
L57	107.921	N10° 59' 07.53"E	
L58	380.217	N74° 45' 05.31"E	
L59	60.587	S04° 02' 38.86"E	
L60	107.921	N10° 59' 07.53"E	
L61	168.051	N10° 59' 07.53"E	
L62	130.576	N11° 08' 37.26"E	
L63	324.511	S88° 49' 03.07"E	
L64	130.576	N11° 08' 37.26"E	

PARCEL LINE & CURVE TABLE

LINE/CURVE #	LENGTH	DIRECTION/DELTA	RADIUS
L65	123.827	N08° 36' 55.62"E	
L66	353.680	S58° 15' 35.17"E	
L67	123.827	N08° 36' 55.62"E	
L68	187.037	N64° 15' 30.20"E	
L69	93.212	N49° 52' 48.52"E	
L70	369.997	S32° 47' 41.93"E	
L71	93.212	N49° 52' 48.52"E	
L72	119.346	N79° 10' 53.72"E	
L73	421.746	S07° 19' 48.68"E	
L74	119.346	N79° 10' 53.72"E	
L75	174.837	N88° 33' 12.99"E	
L76	278.500	S08° 50' 15.50"E	
L77	489.695	S18° 08' 04.57"W	
L78	277.484	S08° 50' 15.50"E	
L79	29.989	S66° 24' 16.07"W	
L80	337.144	S43° 35' 57.82"W	
L81	50.445	N23° 35' 43.93"W	
L83	192.526	S66° 24' 16.07"W	
L84	276.375	N23° 35' 43.93"W	
L86	161.389	S08° 50' 15.50"E	
L87	193.394	S27° 56' 04.41"W	
L88	203.834	N28° 09' 01.53"W	
L89	14.984	S23° 35' 43.93"E	
L90	173.257	S61° 50' 58.47"W	
L91	189.493	S23° 35' 43.93"E	
L92	158.710	S66° 24' 16.07"W	
L93	176.291	N28° 09' 01.53"W	
L94	150.000	S80° 50' 56.21"W	
L96	92.778	N28° 09' 01.53"W	
L97	126.236	S23° 35' 43.93"E	
L98	121.782	S87° 11' 47.21"W	
L99	177.916	N02° 48' 12.79"W	
L101	112.933	N52° 22' 20.84"W	
L102	0.561	N04° 41' 48.90"W	
L103	154.527	N87° 11' 47.21"E	
L104	159.833	N80° 50' 56.21"E	
L105	200.670	N04° 41' 48.90"W	
L106	160.788	N51° 49' 51.37"E	
L107	57.422	N48° 01' 01.40"W	
L108	198.533	N61° 50' 58.47"E	
L109	60.587	N04° 02' 38.86"W	
L110	36.757	S70° 03' 50.50"E	
L111	22.608	S57° 15' 22.14"E	
L112	43.368	S70° 03' 50.50"E	
L113	277.508	S21° 21' 38.40"W	
L114	238.092	N72° 30' 18.83"W	
L115	214.944	N72° 30' 18.83"W	
L116	215.451	N71° 49' 12.14"W	
L117	222.378	N72° 32' 16.20"W	
L118	208.190	N73° 10' 46.19"W	
L119	254.833	N07° 09' 12.94"W	
L120	860.720	N12° 35' 41.69"E	
L121	297.651	N12° 50' 09.29"E	
L122	178.285	N10° 01' 57.01"E	
L123	86.216	N01° 02' 51.87"E	
L124	82.593	N10° 59' 07.53"E	
L125	280.248	N10° 59' 07.53"E	
L126	280.391	N10° 59' 07.53"E	
L127	129.935	N11° 08' 37.26"E	
L128	149.110	N08° 36' 55.62"E	

PARCEL LINE & CURVE TABLE

LINE/CURVE #	LENGTH	DIRECTION/DELTA	RADIUS
L129	375.015	N64° 15' 30.20"E	
L130	116.924	N49° 52' 48.52"E	
L131	136.516	N79° 10' 53.72"E	
L132	345.332	N88° 33' 12.99"E	
L133	859.678	S08° 50' 15.50"E	
L134	327.420	S07° 43' 25.71"W	
L135	118.737	S07° 20' 29.03"E	
L136	168.116	S24° 48' 38.20"E	
L137	287.961	S39° 21' 20.75"E	
L138	256.873	N84° 47' 21.96"W	
L139	405.912	S10° 03' 37.30"W	
L140	163.977	S04° 30' 25.44"E	
L141	144.622	S15° 52' 24.21"E	
L142	134.277	S43° 57' 04.23"E	
L143	117.832	S00° 13' 03.07"E	
L144	103.375	S23° 59' 07.74"W	
L145	74.141	S07° 00' 03.59"W	
L146	169.937	S73° 00' 17.41"E	
L147	26.207	S10° 39' 06.31"W	
L148	74.920	S88° 38' 30.35"W	
L149	31.589	S72° 34' 04.27"E	
L151	92.770	N70° 03' 50.50"W	
L152	22.608	N82° 52' 18.85"W	
L153	185.578	N70° 03' 50.50"W	
L154	80.015	N12° 15' 36.53"W	
L155	15.705	N00° 44' 39.58"E	
L156	2.941	N53° 00' 40.15"E	
L157	12.167	N36° 59' 19.85"W	
L158	2.941	S53° 00' 40.15"W	
L159	15.705	N74° 43' 19.27"W	
L160	46.290	N61° 43' 03.16"W	
L161	599.352	N37° 37' 39.16"E	

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

COLLIER ENGINEERING CO., INC.

DICKSON OFFICE
7746 COLLEGE STREET
DICKSON, TENNESSEE 37055

PHONE: (615) 331-1441
FAX: (615) 331-1050

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122540
STATE OF TENNESSEE
09/03/2026

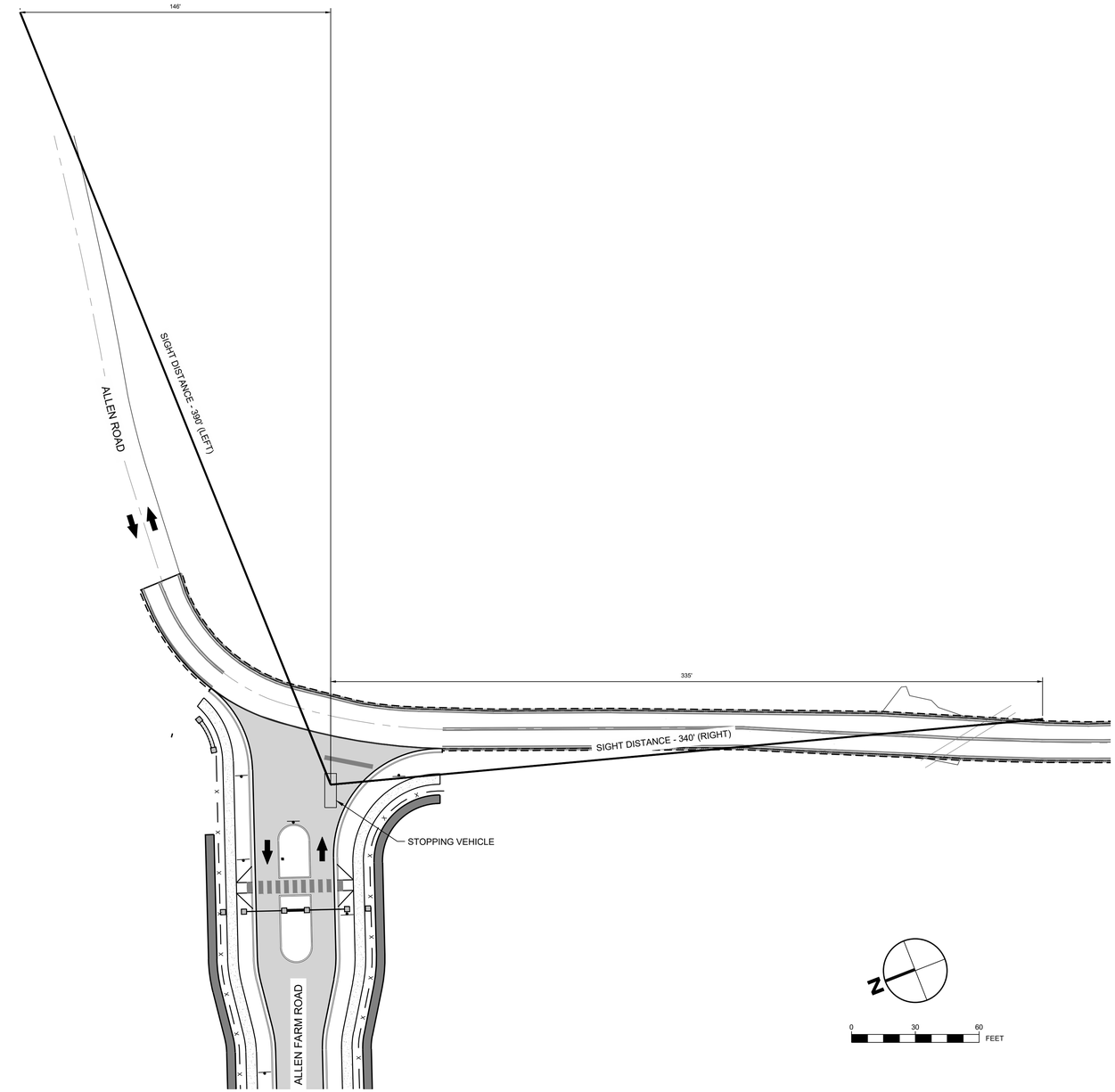
DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

PARCEL DATA TABLES

SHEET NO. C2.05

FILENAME: Z:\PRIVATE CLIENTS\2025-34 - ALLEN FARM SUBDIVISION\CAD\SHEETS\2025-34 SHEET PARCEL DATA TABLES.DWG



INTERSECTION SIGHT DISTANCE PLAN

1:30

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

PHONE: (615) 331-1441
FAX: (615) 331-1050

DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122500
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026

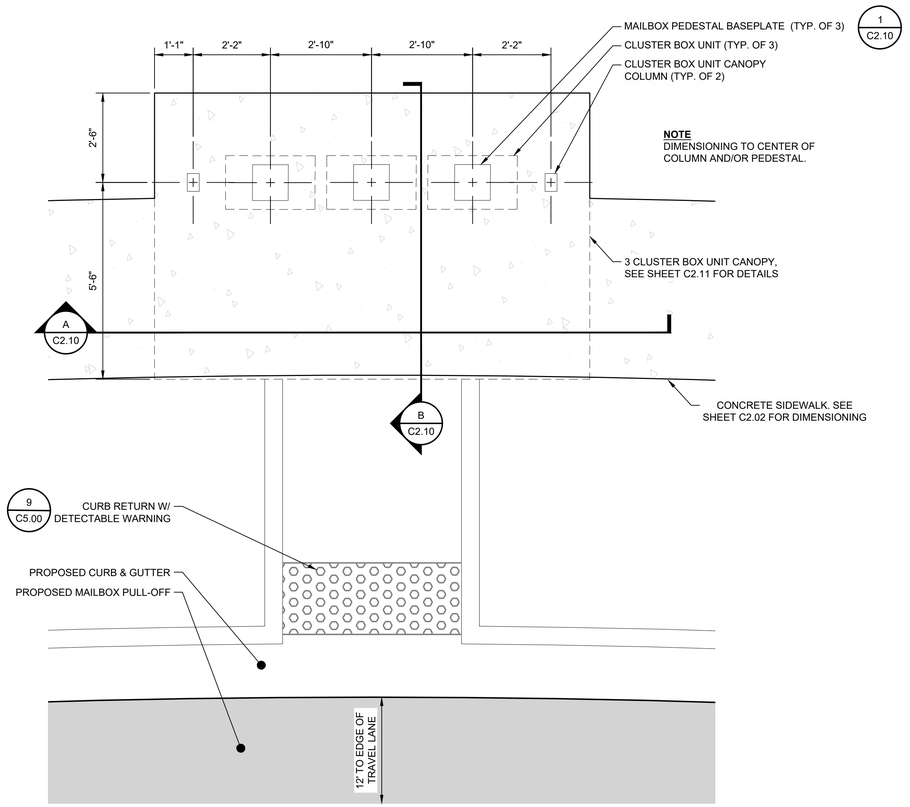
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

INTERSECTION SIGHT DISTANCE DESIGN

SHEET NO. C2.06

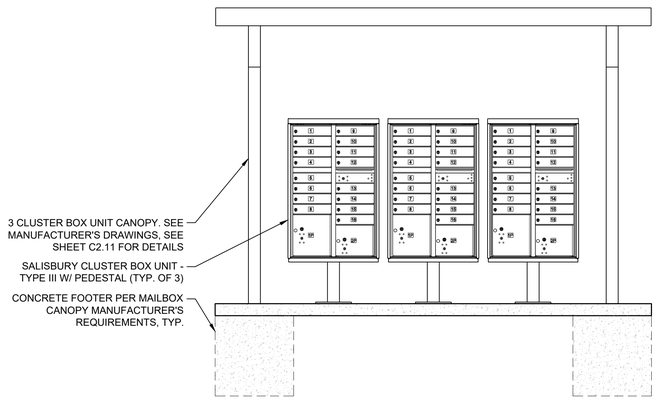
FILENAME: Z:\PRIVATE CLIENTS\3008-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN\3008-25_C206_INTERSECTION SIGHT DISTANCE.DWG

SAVE DATE: 8/6/2026, PLOT DATE: 9/3/2026



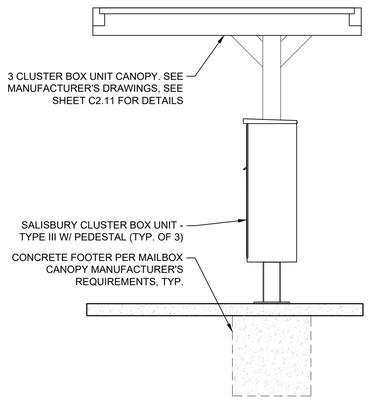
ENLARGED PLAN - MAILBOX KIOSK #1 C2.01

SCALE: 1" = 2'-0"



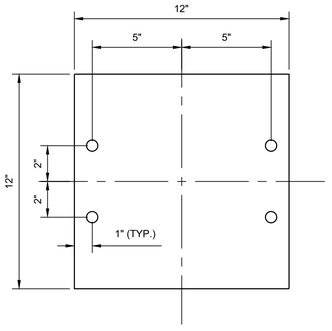
A SECTION - MAILBOX KIOSK #1

NTS



B SECTION - MAILBOX KIOSK #1

NTS



1 DETAIL - PEDESTAL BASE PLATE

NTS

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

PHONE: (615) 331-1441
FAX: (615) 331-1050

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
No. 122500
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

MAILBOX KIOSK PLAN

SHEET NO. C2.10

SAVE DATE: 8/23/2026, PLOT DATE: 9/3/2026

FILENAME: Z:\PRIVATE CLIENTS\3006-24 - ALLEN FARMS SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CAD\DESIGN\C2.10_MAILBOX KIOSK PLAN.DWG

Mitchell METALS
1761 McCoba Drive, Suite A, Smyrna, GA 30080
Phone: (770) 431-7300 Fax: (770) 431-7305

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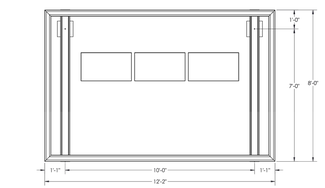
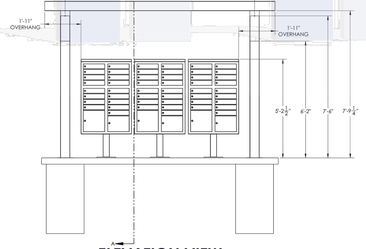
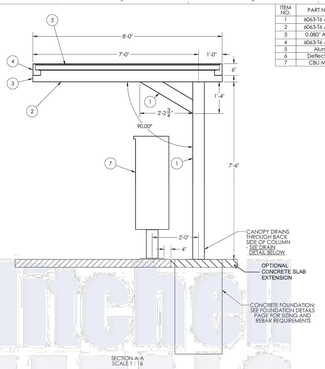


TOP VIEW - NO DECKING FRAMING AND GUTTER LAYOUT

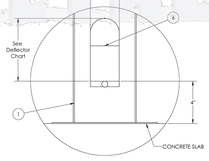


ELEVATION VIEW



SECTION A-A
SCALE 1 : 16

SECTION VIEW



COLUMN DRAIN HOLE DETAIL
SCALE 1 : 3

Deflector Plate Cutout Height	Column Size
4"	4"x6"
6"	6"x6"
8"	6"x8"

ITEM NO.	PART NUMBER	DESCRIPTION
1	6063-T6 Aluminum	Column (see page 3 for size)
2	6063-T6 Aluminum	Beam (see page 3 for size)
3	0.080" Aluminum	Welded End Cap
4	6063-T6 Aluminum	4X6 GUTTER
5	Aluminum	3 x 12 x 0.032 Roll Formed Flat Pan
6	Deflector Plate	Deflector Plate
7	CBU Mailbox	

STYLE: **3 CLUSTER BOX UNIT (CBU) CANOPY**

Mitchell METALS
1761 McCoba Drive, Suite A, Smyrna, GA 30080
Phone: (770) 431-7300 Fax: (770) 431-7305

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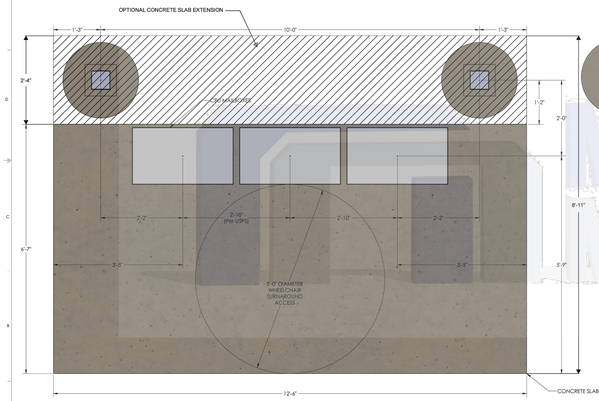
View before Footing and Blockout Installation

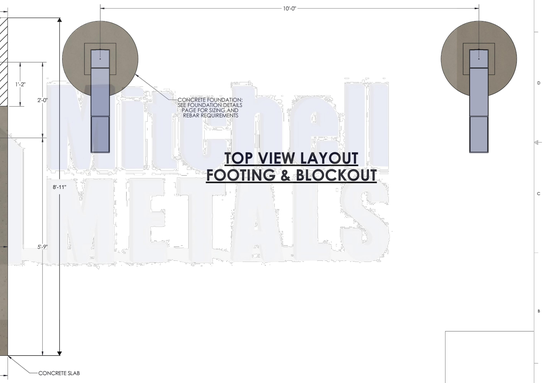
Ver antes de instalar la zapata de concreto

GENERAL NOTES:

- Max column height to be 9'-0". Canopy designed at 7'-6" to bottom of beam above finished concrete slab.
- See Foundation Details Page for concrete foundation design based on project location design criteria.
- Minimum footing size is based on 1500 PSF soil condition.
- Adhere to all local building codes, including layout, foundation design and depth (i.e. frost line depth)
- Canopy designs comply with USPS Developers and Builders Guide.
- Any canopy lighting required is provided by others and may require additional canopy framing to support.
- Reference 2010 ADA Standards for Accessible Design for concrete pad design.
- Reference Mitchell Metals CBU Canopy Cover Specifications - Section 105500 - Postal Specialties.
- DESIGN CRITERIA: IBC 2018, ASCE 7-16, ADM 2015, Exposure Category = B, Risk Category = II, Live Load = 20 psf
  - **Wind = 115mph (max), Ground Snow Load = 30psf (max) - 6"x6"x0.150" Columns, 6"x6"x0.130" Beams**
  - **Wind = 140mph (max), Ground Snow Load = 5psf (max) - 6"x6"x0.130" Beams**
  - **Wind = 170mph (max), Ground Snow Load = 5psf (max) - 6"x8"x0.188" Columns, 6"x6"x0.130" Beams.**



TOP VIEW COLUMN/MAILBOX/CONCRETE LAYOUT

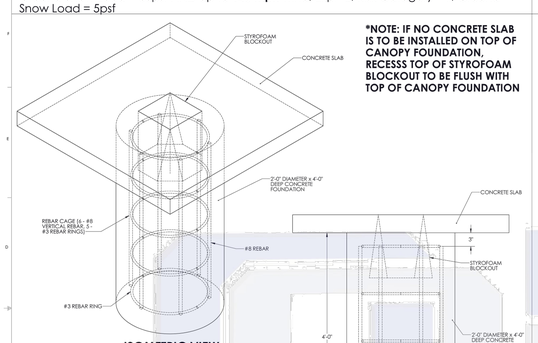


TOP VIEW LAYOUT FOOTING & BLOCKOUT

STYLE: **3 CLUSTER BOX UNIT (CBU) CANOPY**

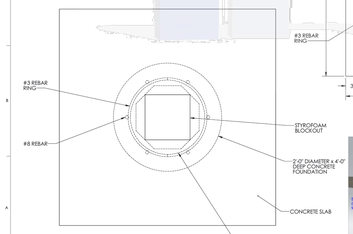
Cantilever CBU Canopy Foundation Design (Up to **115 mph** wind, Exp.=B, Risk Category = II, Ground Snow Load = 30psf AND Up to **140 mph** wind, Exp.=B, Risk Category = II, Ground Snow Load = 5psf

***NOTE: IF NO CONCRETE SLAB IS TO BE INSTALLED ON TOP OF CANOPY FOUNDATION, RECESSS TOP OF STYROFOAM BLOCKOUT TO BE FLUSH WITH TOP OF CANOPY FOUNDATION**

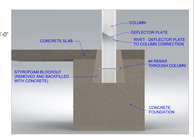


ISOMETRIC VIEW

SIDE VIEW

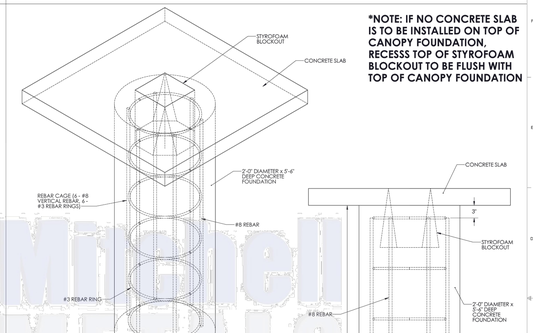


TOP VIEW



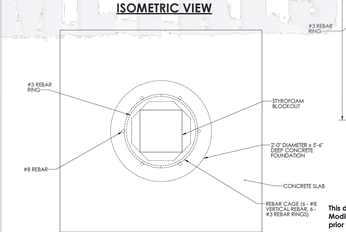
***NOTE: IF NO CONCRETE SLAB IS TO BE INSTALLED ON TOP OF CANOPY FOUNDATION, RECESSS TOP OF STYROFOAM BLOCKOUT TO BE FLUSH WITH TOP OF CANOPY FOUNDATION**

Cantilever CBU Canopy Foundation Design (Up to**170 mph** wind, Exp.=B, Risk Category = II, Ground Snow Load = =0psf



ISOMETRIC VIEW

SIDE VIEW



TOP VIEW

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CBU CANOPY FOUNDATION DESIGNS

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
7146 COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
09/03/2026
No. 122530
STATE OF TENNESSEE

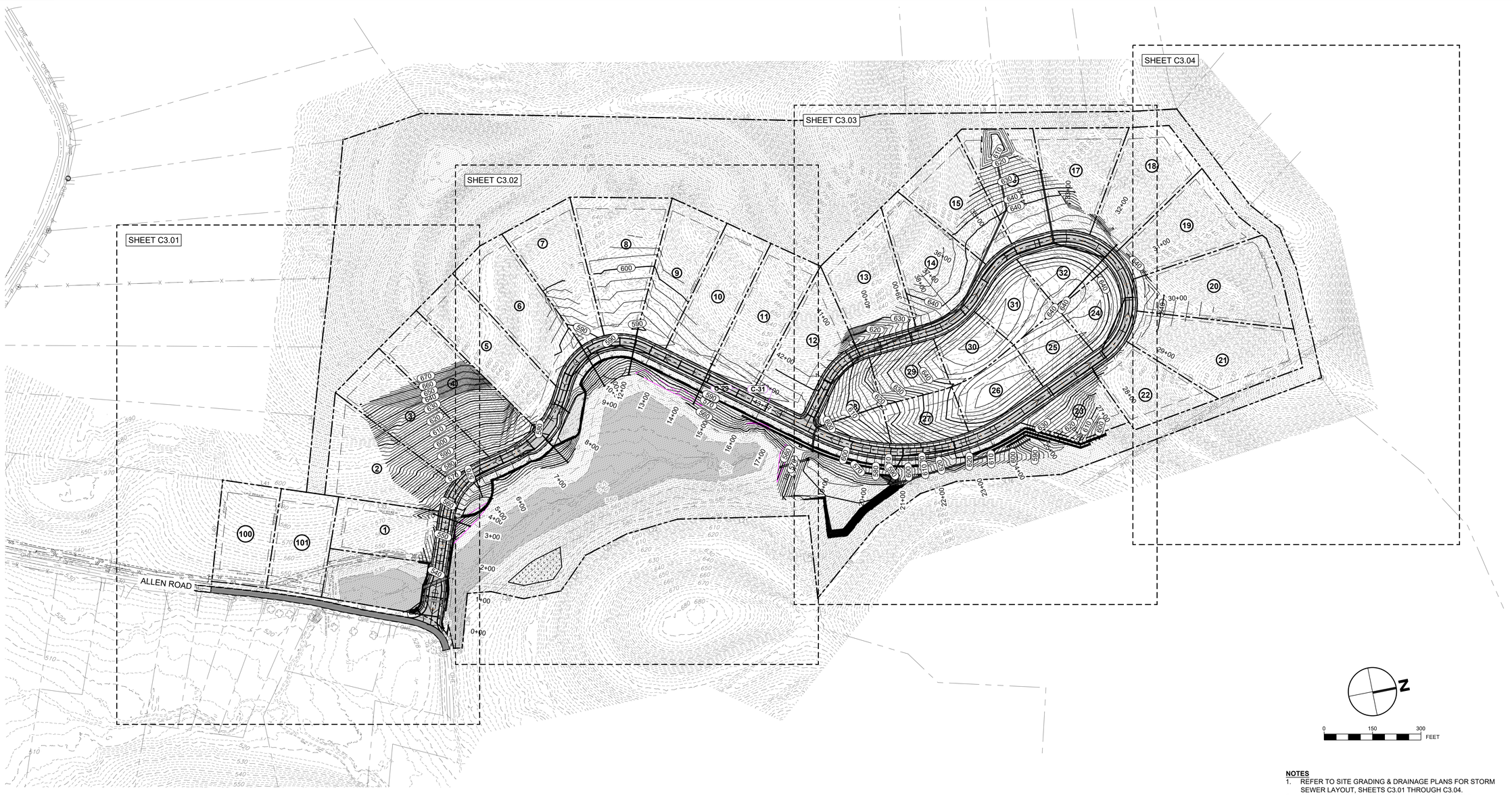
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

MAILBOX KIOSK CANOPY DETAILS

SHEET NO. C2.11

SAVE DATE: 8/25/2026, PLOT DATE: 9/3/2026

FILENAME: Z:\PRIVATE CLIENTS\2025\25-2500-39 - ALLEN FARMS SUBDIVISION\CIVIL\25-2500-39 PLAT SITE PLAN\CADD\DESIGN\250039_C2.11_MAILBOX KIOSK PLAN.DWG



NOTES

1. REFER TO SITE GRADING & DRAINAGE PLANS FOR STORM SEWER LAYOUT, SHEETS C3.01 THROUGH C3.04.
2. REFER TO SHEET C3.12 FOR STORM SEWER PIPE & STRUCTURE TABLES.
3. REFER TO RETAINING WALL LAYOUT PLAN, SHEET C3.05, FOR RETAINING WALL LAYOUT & ELEVATIONS.
4. NO FINIHSED PARCEL SHALL ALLOW DISCHARGE DRAINAGE TO AN ADJACENT LOT. ALL DISCHARGE DRAINAGE TO BE CONVEYED VIA DRAINAGE EASEMENT TO RIGHT-OF-WAY OR DRAINAGE STRUCTURES.
5. PARCELS 2, 3, 4, 12, 13, 18, 19, 22, & 23 WILL REQUIRE ENGINEERED GRADING & STABILIZATION PLANS.

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122500
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

OVERALL SITE GRADING & DRAINAGE PLAN

SHEET NO. C3.00

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

FILENAME: Z:\PRIVATE CLIENTS\3008-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN\2-3008-25_C3.00_GRADING & DRAINAGE.DWG



GRADING NOTES

1. REFER TO EROSION PROTECTION & SEDIMENT CONTROL PLANS FOR SLOPE STABILIZATION MEASURES.
2. PRE-SPLIT ROCK FACE. CONDITION TO BE VERIFIED BY ON-SITE GEOTECHNICAL INSPECTION DURING CONSTRUCTION.
3. RETAINING WALL MATERIALS SHALL BE APPROVED BY CITY OF GOODLETTSVILLE. SEE SHEET C3.00 FOR DETAIL.
4. NO FINIHSED PARCEL SHALL ALLOW DISCHARGE DRAINAGE TO AN ADJACENT LOT. ALL DISCHARGE DRAINAGE TO BE CONVEYED VIA DRAINAGE EASEMENT TO RIGHT-OF-WAY OR DRAINAGE STRUCTURES.
5. PARCELS 2, 3, 4, 12, 13, 18, 19, 22, & 23 WILL REQUIRE ENGINEERED GRADING & STABILIZATION PLANS.

ENLARGED PLAN VIEW

SCALE: 1" = 20'

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

PHONE: (615) 331-1441
FAX: (615) 331-1050

DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122500
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

SITE GRADING & DRAINAGE PLAN

SHEET NO. C3.01

FILENAME: Z:\PRIVATE CLIENTS\3008-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN\2-SHEETS\C3.00_GRADING & DRAINAGE.DWG

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

MATCHLINE - SHEET C3.01

BIORETENTION POND 1H

RETAINING WALL "C", SEE SHEET C3.05

WETLAND BUFFER MITIGATION
10,000 SF (APPROX.) DEDICATED FOR WETLAND MITIGATION

PROPOSED GRADING, SEE NOTE 1 (TYP.)

MAILBOX KIOSK. SEE ENLARGED PLAN VIEW, THIS SHEET

BIORETENTION POND 1E

60' WETLAND BUFFER, TYP.

30' WETLAND BUFFER, TYP.

WETLAND, TYP.

PROPOSED SANITARY SEWER, TYP.

30' P.U.D.E. (TYP.)

10' P.U.D.E. (TYP.)

35' P.U.D.E. (TYP.)

DRAINAGE SWALE, SEE NOTE 6, THIS SHEET.

RETAINING WALL "D", SEE SHEET C3.05

PROPOSED PRE-SPLIT ROCK FACE, SEE NOTE 2 (TYP.)

25' EMERGENCY SPILLWAY

DETENTION POND 1C
100 YR ELEV.= 567.11

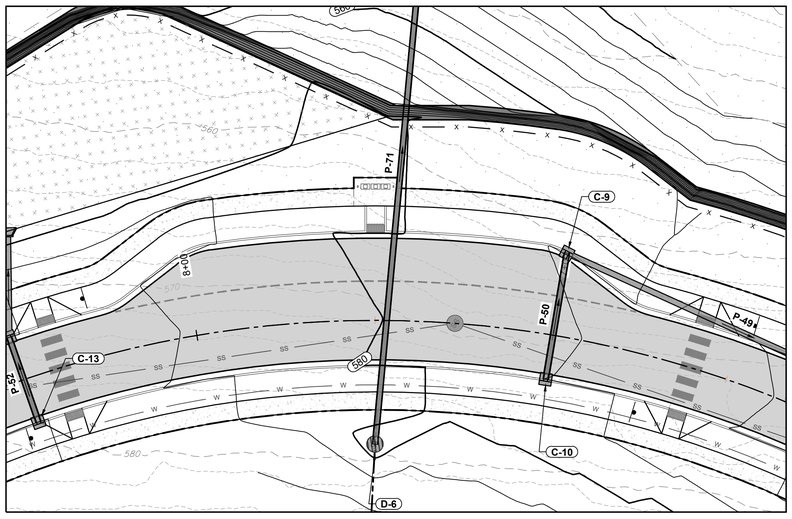
MATCHLINE - SHEET C3.03

N

0 50 100 FEET

GRADING NOTES

1. REFER TO EROSION PROTECTION & SEDIMENT CONTROL PLANS FOR SLOPE STABILIZATION MEASURES.
2. PRE-SPLIT ROCK FACE. CONDITION TO BE VERIFIED BY ON-SITE GEOTECHNICAL INSPECTION DURING CONSTRUCTION.
3. RETAINING WALL MATERIALS SHALL BE APPROVED BY CITY OF GOODLETTSVILLE. SEE SHEET C3.00 FOR DETAIL.
4. NO FINIHSED PARCEL SHALL ALLOW DISCHARGE DRAINAGE TO AN ADJACENT LOT. ALL DISCHARGE DRAINAGE TO BE CONVEYED VIA DRAINAGE EASEMENT TO RIGHT-OF-WAY OR DRAINAGE STRUCTURES.
5. PARCELS 2, 3, 4, 12, 13, 18, 19, 22, & 23 WILL REQUIRE ENGINEERED GRADING & STABILIZATION PLANS.
6. PARCELS W/ DRAINAGE SWALE ALONG FRONTAGE SHALL HAVE A 15" (MIN.) DRIVEWAY CULVERT.



ENLARGED PLAN VIEW
SCALE: 1" = 20'

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
7746 COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122540
STATE OF TENNESSEE
08/03/2026

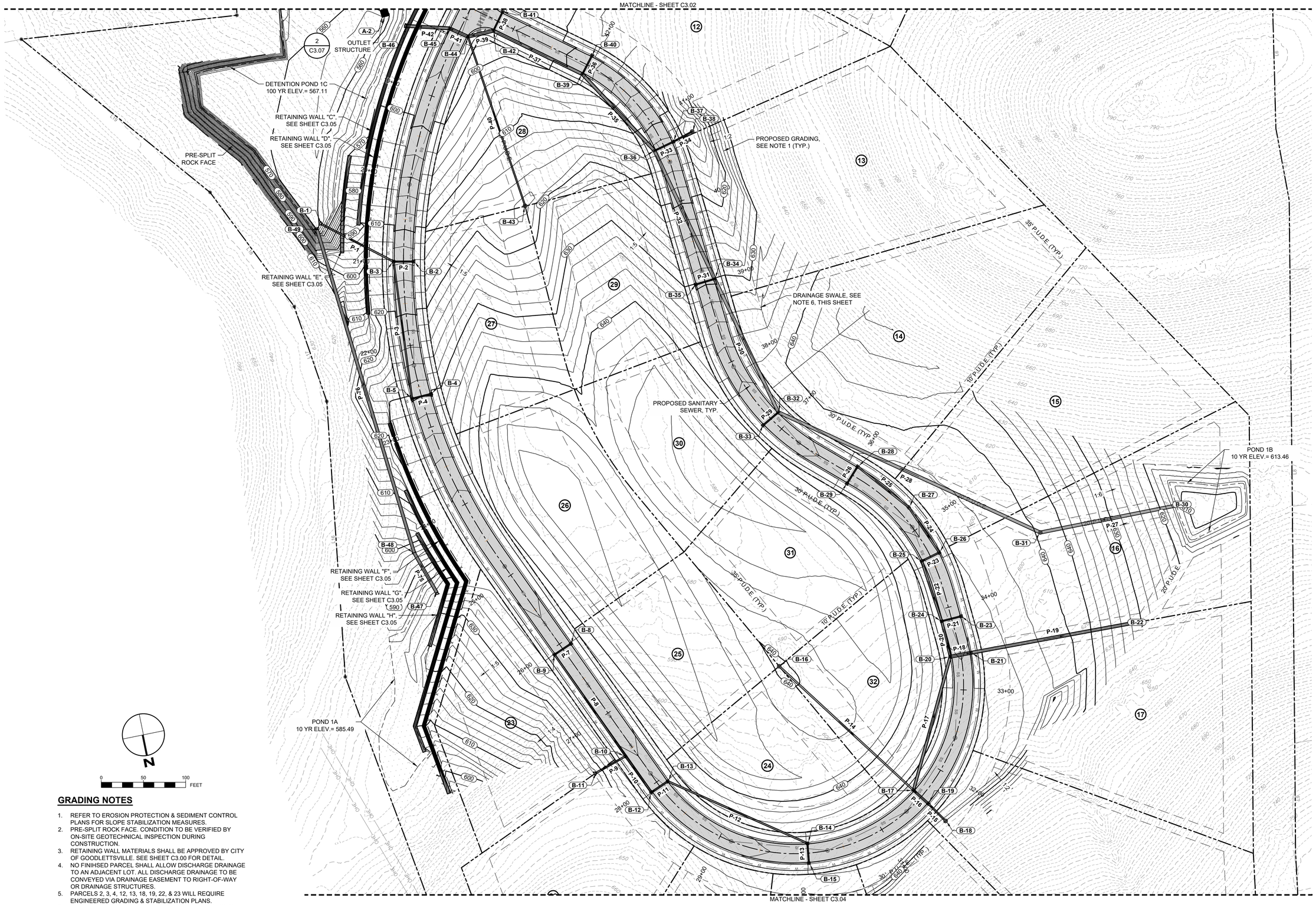
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

SITE GRADING & DRAINAGE PLAN

SHEET NO. C3.02

SAVE DATE: 8/3/2026, PLOT DATE: 8/3/2026

E:\DWG_Z:\PRIVATE CLIENTS\2025\25-XX - ALLEN FARM SUBDIVISION\25-XX\SHEETS\25-XX_SITE1-C-GRADING&DRAINAGE.DWG



GRADING NOTES

1. REFER TO EROSION PROTECTION & SEDIMENT CONTROL PLANS FOR SLOPE STABILIZATION MEASURES.
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4. NO FINIHSED PARCEL SHALL ALLOW DISCHARGE DRAINAGE TO AN ADJACENT LOT. ALL DISCHARGE DRAINAGE TO BE CONVEYED VIA DRAINAGE EASEMENT TO RIGHT-OF-WAY OR DRAINAGE STRUCTURES.
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6. PARCELS W/ DRAINAGE SWALE ALONG FRONTAGE SHALL HAVE A 15" (MIN.) DRIVEWAY CULVERT.

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122500
STATE OF TENNESSEE
Nathan Couch
09/03/2026

DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

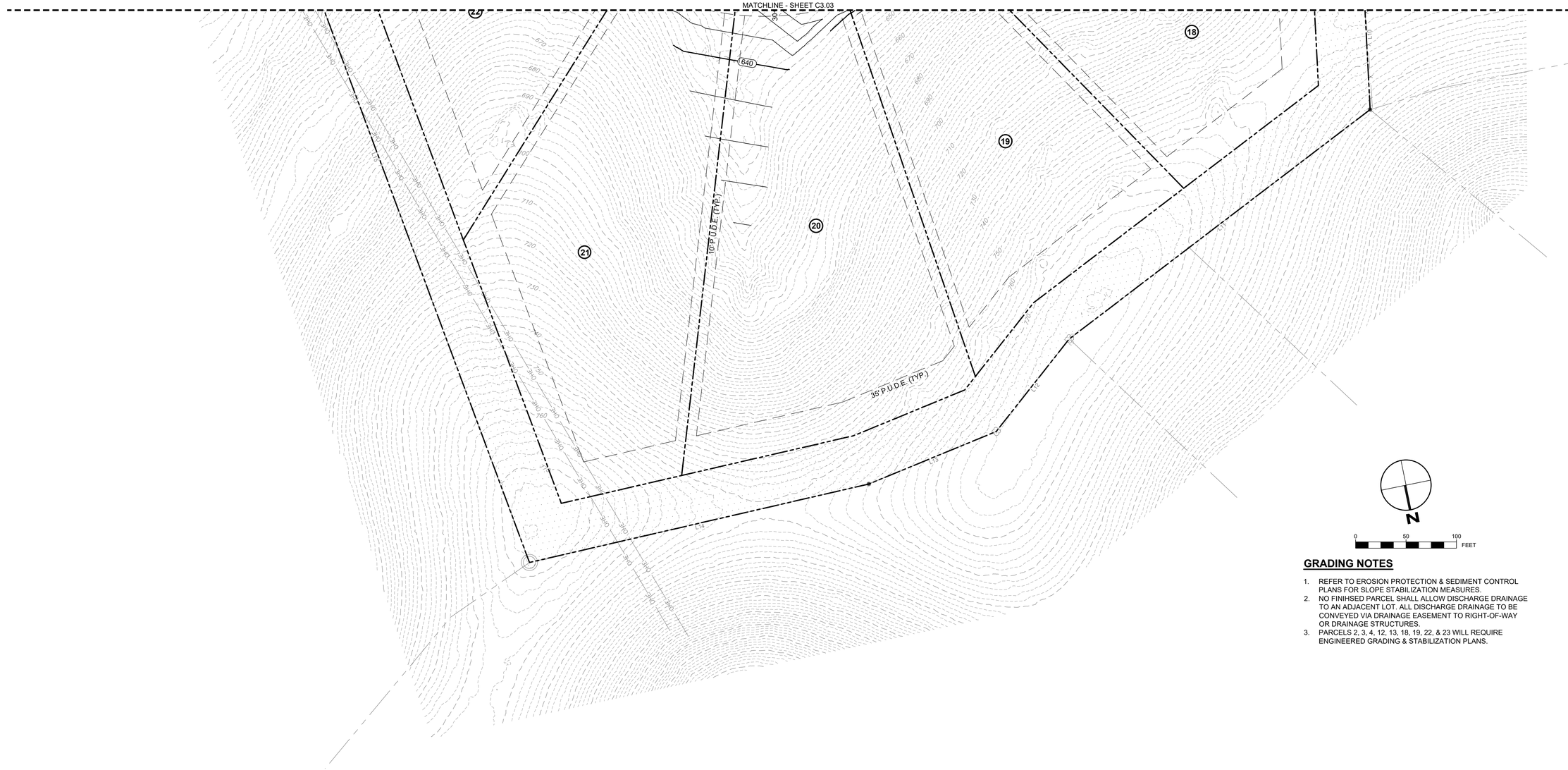
SITE GRADING & DRAINAGE PLAN

SHEET NO. C3.03

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

FILENAME: Z:\PRIVATE CLIENTS\3608-24 - ALLEN FARMS SUBDIVISION\3-DESIGN\2-CIVIL SITE\14-CAD\DWG\3608-25_C3.03_GRADING & DRAINAGE.DWG

MATCHLINE - SHEET C3.03



GRADING NOTES

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REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055

PHONE: (615) 331-1441
FAX: (615) 331-1050

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION

ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
No. 125500
STATE OF TENNESSEE
09/03/2026

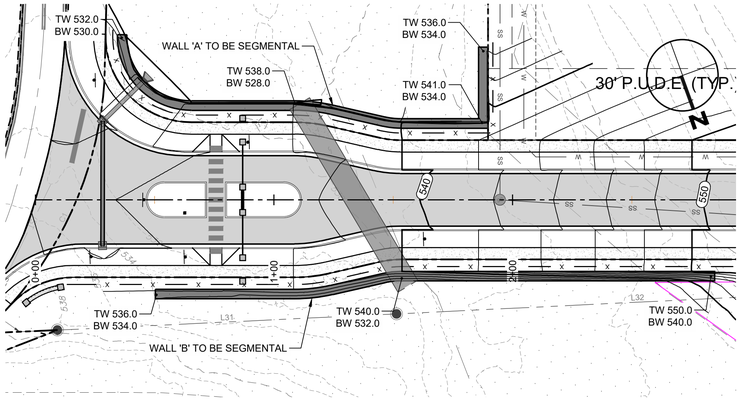
DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

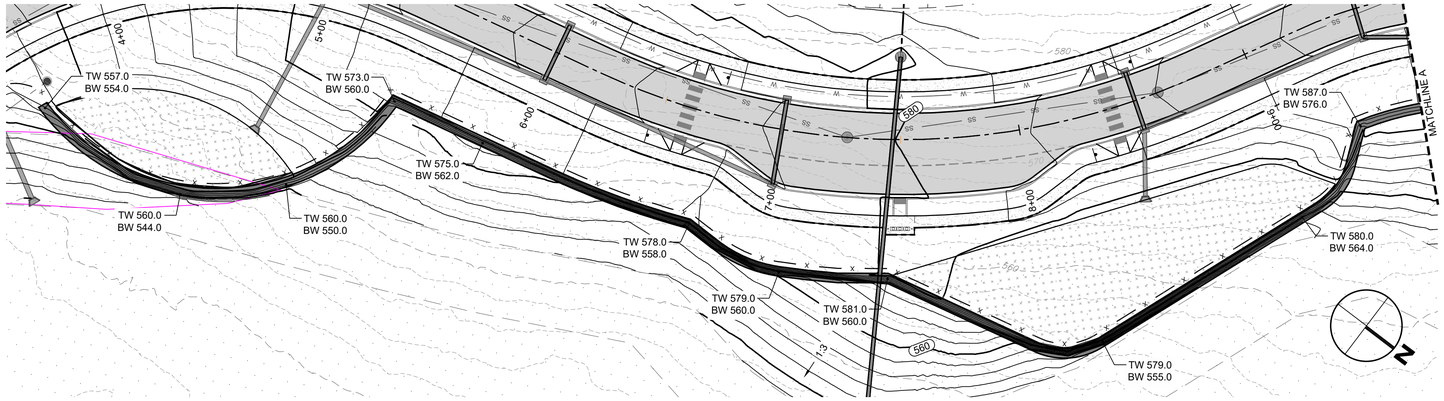
SITE GRADING & DRAINAGE PLAN

SHEET NO. C3.04

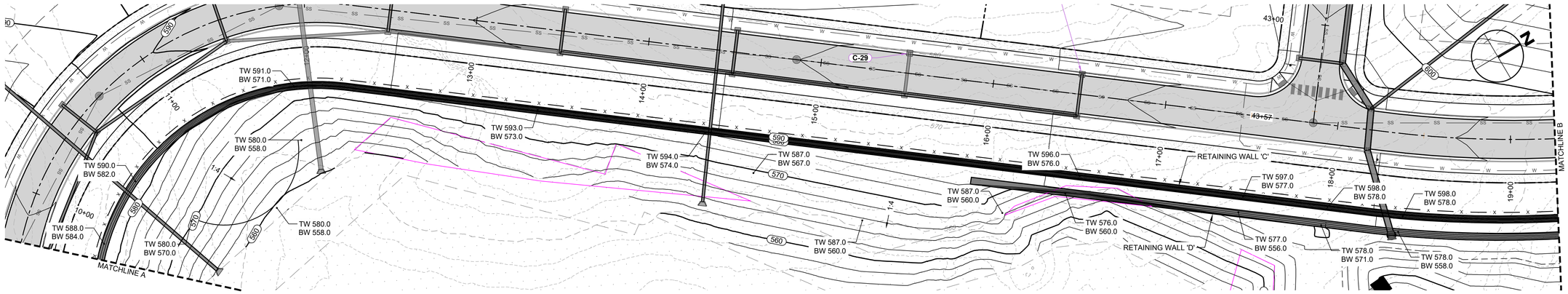
FILENAME: Z:\PRIVATE CLIENTS\2025-29 - ALLEN FARM SUBDIVISION\1.0 SHOP DWG_SET\1.4-CIVIL\DESIGN\2025-29_C3.04_GRADING & DRAINAGE.DWG



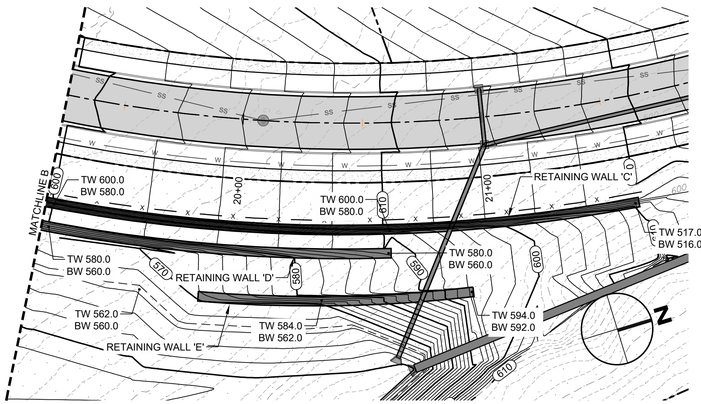
RETAINING WALLS A & B
1:30



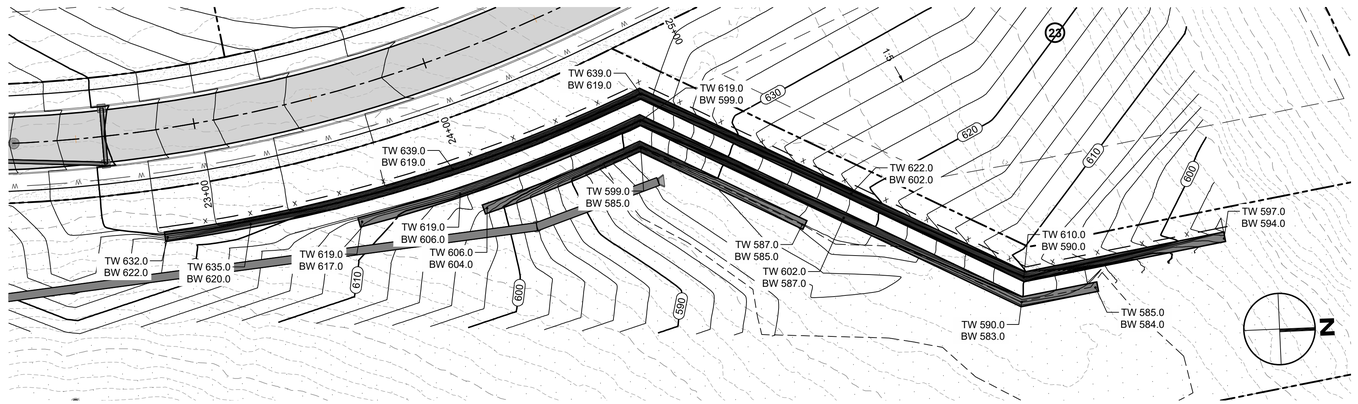
RETAINING WALL C
1:30



RETAINING WALLS C & D
1:30



RETAINING WALLS C, D, & E
1:30



RETAINING WALLS F, G, & H
1:30

RETAINING NOTES

1. REFER TO SHEET C3.06 FOR RETAINING WALL DETAILS.

0 30 60 FEET

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

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ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122500
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

RETAINING WALL LAYOUT PLAN

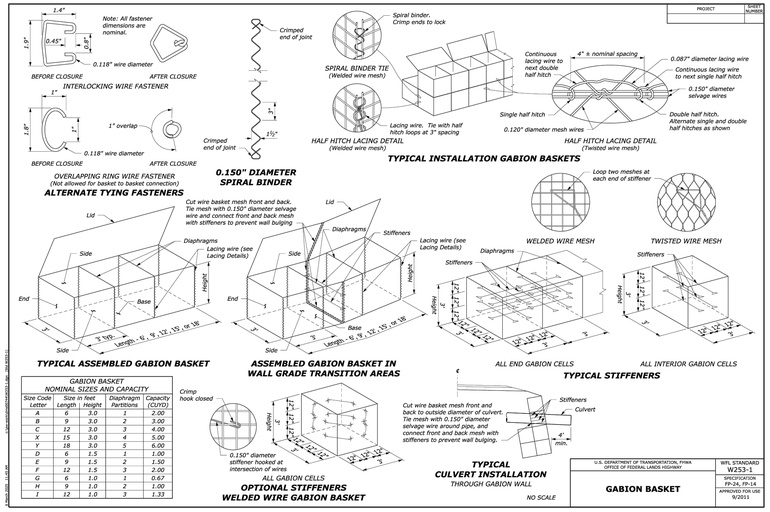
SHEET NO. C3.05

FILENAME: Z:\PRIVATE CLIENTS\3008-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN\2-3008-25_C3.00_GRADING & DRAINAGE.DWG

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

RETAINING WALL NOTES

1. DETAILS SHOWN HEREON ARE ONLY REPRESENTATIVE. WALL DESIGN TO BE PERFORMED BY OTHERS.

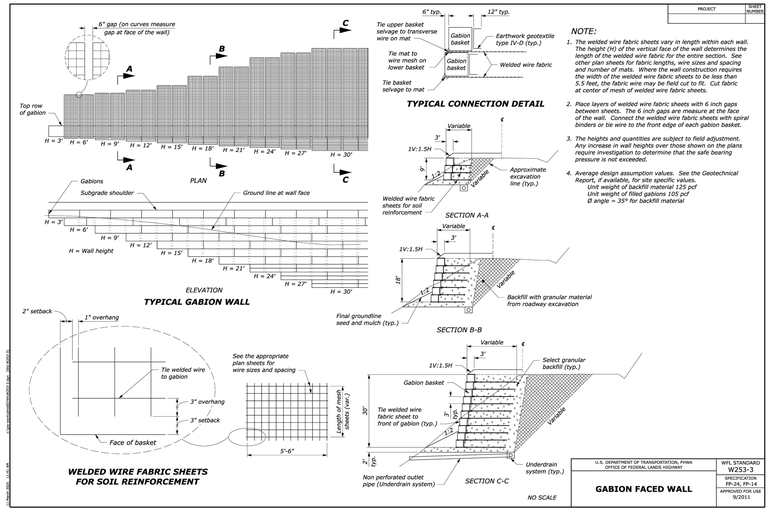


GABION BASKET NOMINAL SIZES AND CAPACITY				
Size Code Letter	Size in feet Length	Height	Diaphragm Partitions	Capacity (CUYD)
A	6	3.0	1	2.00
B	9	3.0	2	3.00
C	12	3.0	3	4.00
X	15	3.0	4	5.00
Y	18	3.0	5	6.00
D	6	1.5	1	1.00
E	9	1.5	2	1.50
F	12	1.5	3	2.00
G	6	1.0	1	0.67
H	9	1.0	2	1.00
I	12	1.0	3	1.33

U.S. DEPARTMENT OF TRANSPORTATION, FHWA OFFICE OF FEDERAL LANDS HIGHWAY

GABION BASKET

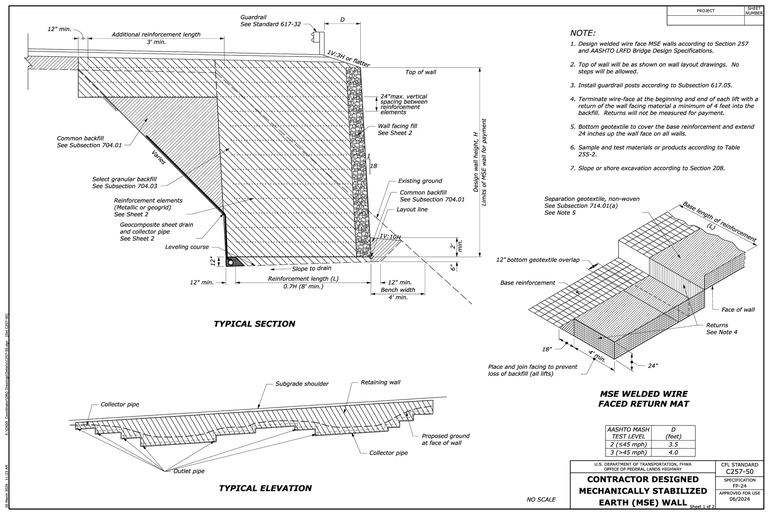
WFL STANDARD W253-1
SPECIFICATION FP-24, FP-14
APPROVED FOR USE 9/2011



U.S. DEPARTMENT OF TRANSPORTATION, FHWA OFFICE OF FEDERAL LANDS HIGHWAY

GABION FACED WALL

WFL STANDARD W253-3
SPECIFICATION FP-24, FP-14
APPROVED FOR USE 9/2011



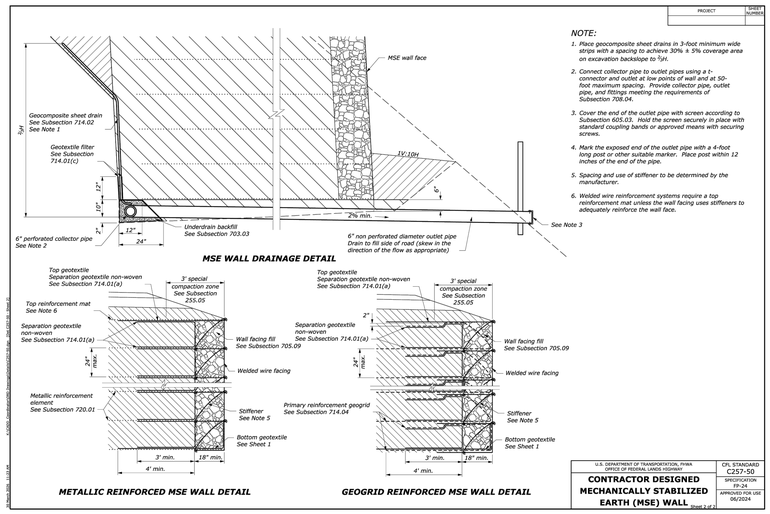
AASHTO MASH TEST LEVEL	D (feet)
2 (≤45 mph)	3.5
3 (>45 mph)	4.0

U.S. DEPARTMENT OF TRANSPORTATION, FHWA OFFICE OF FEDERAL LANDS HIGHWAY

CONTRACTOR DESIGNED MECHANICALLY STABILIZED EARTH (MSE) WALL

CFL STANDARD C257-50
SPECIFICATION FP-24
APPROVED FOR USE 06/2024

NO SCALE — Sheet 1 of 2



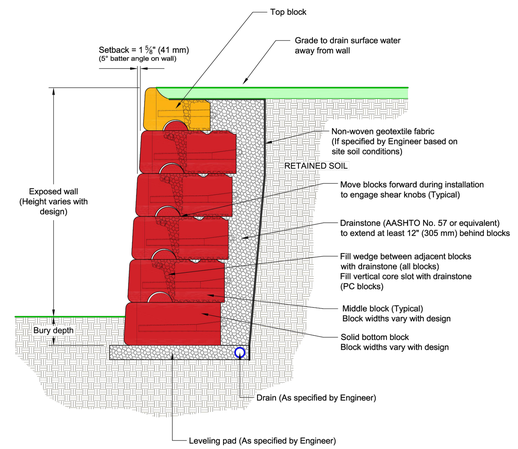
U.S. DEPARTMENT OF TRANSPORTATION, FHWA OFFICE OF FEDERAL LANDS HIGHWAY

CONTRACTOR DESIGNED MECHANICALLY STABILIZED EARTH (MSE) WALL

CFL STANDARD C257-50
SPECIFICATION FP-24
APPROVED FOR USE 06/2024

Sheet 1 of 2

Typical Gravity Wall Section



This drawing is for reference only. Determination of the suitability and/or manner of use of any details contained in this document is the sole responsibility of the design engineer of record. Final project designs, including all construction details, shall be prepared by a licensed professional engineer using the actual conditions of the proposed site.

DRAWN BY:	JRJ	TITLE: Typical Gravity Wall Detail	REDI-ROCK 05481 US 31 SOUTH, CHARLEVOIX, MI 49720 (866) 222-8400 ext 3010 • engineering@redi-rock.com www.redi-rock.com
APPROVED BY:	JRJ		
DATE:	17MAR2016		
SHEET:	1 of 1	FILE: 1 Typical Gravity Wall Detail 031716.dwg	

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
7146 COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH REGISTERED ENGINEER AGRICULTURE COMMERCE No. 122540 STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

RETAINING WALL DETAILS

SHEET NO. C3.06

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

E:\DWG_Z-PRIVATE CLIENTS\2026\26-05-25 - ALLEN FARM SUBDIVISION\26-05-25_C3.06_GRADING & DRAINAGE.DWG

STD-1124113_1BARREL_SLABB'.DGN

1 @ 8 x 3 REINFORCED CONCRETE SLAB BRIDGE

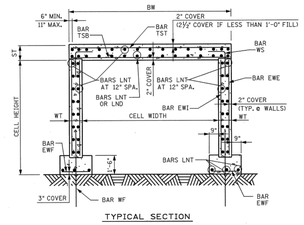
Fill Height ft.	Dimensions ST in.	Dimensions WT in.	Dimensions BW ft.	Bars TST Size	Bars TST No.	Bars TST Spacing in.	Bars TST Length ft.	Bars TSB Size	Bars TSB No.	Bars TSB Spacing in.	Bars TSB Length ft.	Bars EWE Size	Bars EWE No.	Bars EWE Spacing in.	Bars EWE Length ft.	Bars EWI Size	Bars EWI No.	Bars EWI Spacing in.	Bars EWI Length ft.	Bars LNT No.	Bars LND No.	Bars WS No.	Bars WF No.	Bars EWF Length ft.	Concrete CY/LF	Reinf. Steel LB/LF
No Fill	9.5	8	9.33	4	1	12	8.83	6	2	6	8.83	4	2	12	1.50	5	2	12	1.50	19	16	2	2	1.67	0.59	126
3	11	8	9.33	4	1	12	8.83	7	2	6	8.83	4	2	12	1.50	5	2	12	1.50	19	16	2	2	1.67	0.63	137
5	9	8	9.33	4	1	12	8.83	7	2	6	8.83	4	2	12	1.50	5	2	12	1.50	28	0	2	2	1.67	0.57	127
10	9	8	9.33	4	1	12	8.83	8	2	6	8.83	4	2	12	1.50	5	2	12	1.50	28	0	2	2	1.67	0.57	138
20	10	8	9.33	4	1	12	8.83	7	2	6	8.83	4	2	12	1.50	5	2	12	1.50	28	0	2	2	1.67	0.60	127
30	14	8	9.33	4	1	12	8.83	7	2	6	8.83	4	2	12	1.50	5	2	12	1.50	28	0	2	2	1.67	0.72	127
40	18	8	9.33	4	1	12	8.83	7	2	6	8.83	4	2	12	1.50	5	2	12	1.50	28	0	2	2	1.67	0.83	127
50	21	8	9.33	4	1	12	8.83	7	2	6	8.83	4	2	12	1.50	5	2	12	1.50	28	0	2	2	1.67	0.92	127
60	24	8	9.33	4	1	12	8.83	7	2	6	8.83	4	2	12	1.50	5	2	12	1.50	28	0	2	2	1.67	1.01	127

1 @ 8 x 4 REINFORCED CONCRETE SLAB BRIDGE

Fill Height ft.	Dimensions ST in.	Dimensions WT in.	Dimensions BW ft.	Bars TST Size	Bars TST No.	Bars TST Spacing in.	Bars TST Length ft.	Bars TSB Size	Bars TSB No.	Bars TSB Spacing in.	Bars TSB Length ft.	Bars EWE Size	Bars EWE No.	Bars EWE Spacing in.	Bars EWE Length ft.	Bars EWI Size	Bars EWI No.	Bars EWI Spacing in.	Bars EWI Length ft.	Bars LNT No.	Bars LND No.	Bars WS No.	Bars WF No.	Bars EWF Length ft.	Concrete CY/LF	Reinf. Steel LB/LF
No Fill	9.5	8	9.33	4	1	12	8.83	6	2	6	8.83	4	2	12	2.50	5	2	12	2.50	23	16	2	2	1.67	0.64	134
3	11	8	9.33	4	1	12	8.83	7	2	6	8.83	4	2	12	2.50	5	2	12	2.50	23	16	2	2	1.67	0.68	144
5	9	8	9.33	4	1	12	8.83	7	2	6	8.83	4	2	12	2.50	5	2	12	2.50	32	0	2	2	1.67	0.62	133
10	9	8	9.33	4	1	12	8.83	8	2	6	8.83	4	2	12	2.50	5	2	12	2.50	32	0	2	2	1.67	0.62	144
20	10	8	9.33	4	1	12	8.83	7	2	6	8.83	4	2	12	2.50	5	2	12	2.50	32	0	2	2	1.67	0.65	133
30	14	8	9.33	4	1	12	8.83	7	2	6	8.83	4	2	12	2.50	5	2	12	2.50	32	0	2	2	1.67	0.77	133
40	18	8	9.33	4	1	12	8.83	7	2	6	8.83	4	2	12	2.50	5	2	12	2.50	32	0	2	2	1.67	0.88	133
50	21	8	9.33	4	1	12	8.83	7	2	6	8.83	4	2	12	2.50	5	2	12	2.50	32	0	2	2	1.67	0.97	133
60	24	8	9.33	4	1	12	8.83	7	2	6	8.83	4	2	12	2.50	5	2	12	2.50	32	0	2	2	1.67	1.06	133

1 @ 8 x 5 REINFORCED CONCRETE SLAB BRIDGE

Fill Height ft.	Dimensions ST in.	Dimensions WT in.	Dimensions BW ft.	Bars TST Size	Bars TST No.	Bars TST Spacing in.	Bars TST Length ft.	Bars TSB Size	Bars TSB No.	Bars TSB Spacing in.	Bars TSB Length ft.	Bars EWE Size	Bars EWE No.	Bars EWE Spacing in.	Bars EWE Length ft.	Bars EWI Size	Bars EWI No.	Bars EWI Spacing in.	Bars EWI Length ft.	Bars LNT No.	Bars LND No.	Bars WS No.	Bars WF No.	Bars EWF Length ft.	Concrete CY/LF	Reinf. Steel LB/LF
No Fill	9.5	8	9.33	4	1	12	8.83	6	2	6	8.83	4	2	12	3.50	5	2	12	3.50	27	16	2	2	1.67	0.69	140
3	11	8	9.33	4	1	12	8.83	7	2	6	8.83	4	2	12	3.50	5	2	12	3.50	27	16	2	2	1.67	0.73	150
5	9	8	9.33	4	1	12	8.83	7	2	6	8.83	4	2	12	3.50	5	2	12	3.50	36	0	2	2	1.67	0.67	139
10	9	8	9.33	4	1	12	8.83	8	2	6	8.83	4	2	12	3.50	5	2	12	3.50	36	0	2	2	1.67	0.67	150
20	10	8	9.33	4	1	12	8.83	7	2	6	8.83	4	2	12	3.50	5	2	12	3.50	36	0	2	2	1.67	0.70	139
30	14	8	9.33	4	1	12	8.83	7	2	6	8.83	4	2	12	3.50	5	2	12	3.50	36	0	2	2	1.67	0.82	139
40	18	8	9.33	4	1	12	8.83	7	2	6	8.83	4	2	12	3.50	5	2	12	3.50	36	0	2	2	1.67	0.93	139
50	21	8	9.33	4	1	12	8.83	7	2	6	8.83	4	2	12	3.50	5	2	12	3.50	36	0	2	2	1.67	1.02	139
60	24	8	9.33	4	1	12	8.83	7	2	6	8.83	4	2	12	3.50	5	2	12	3.50	36	0	2	2	1.67	1.10	139



TYPICAL SECTION

Note: Maximum fill height shown in the table is measured from the bottom of the top slab. To obtain the total fill height from the flow line, add the height of the box.
Note: When height of fill above the top slab is less than 1 foot, the top mat of reinforcing in the top slab shall be constructed with 2-1/2 inches of concrete cover.

The following bar information applies to all fill cases in the tables above:
Bars LNT Size = 4 Spacing = 12 in.
Bars LND Size = 5 Spacing = 6 in.
Bars WS Size = 8 Length = 5.00 ft. Spacing = 12 in.
Bars WF Size = 8 Length = 6.00 ft. Spacing = 12 in.
Bars EWF Size = 4 No. = 2 Spacing = 12 in.

NOTE: FOR DESCRIPTIONS OF BOX DIMENSIONS AND REINFORCING BAR DESIGNATIONS SEE STANDARD DRAWING NO. STD-17-5.

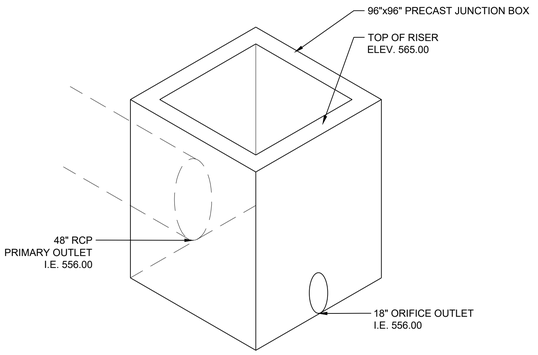
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
STANDARD REINFORCED CONCRETE SLAB BRIDGE
INTERIOR SECTION
SPANS: 1 BARREL AT 8'-0"
CLEAR HEIGHTS 3'-0" THRU 5'-0"
0' THRU 60' FILL
2010

CORRECT Edward P. Wasserman
ENGINEER OF STRUCTURES

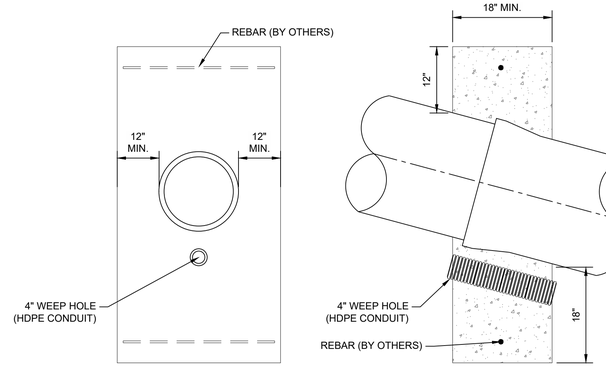
STD-17-112

DESIGNED BY	BLL/BLP	DATE	12-09
DRAWN BY	KEVIN MARTINEZ	DATE	1-10
SUPERVISED BY	EPK/BLC	DATE	12-09
CHECKED BY	BLL/BLP	DATE	2-10

1 BOX CULVERT
NOT TO SCALE



2 POND 1C OUTLET STRUCTURE
NOT TO SCALE



ELEVATION PROFILE

NOTES:

1. ANCHORS SHALL BE PLACED EVERY JOINT.
2. VELOCITY REDUCTION METHODS SHALL BE TAKEN WHEN SLOPE CREATES VELOCITY GREATER THAN 20 FPS.

3 PIPE ANCHOR
NOT TO SCALE

CONST. NO.

PROJECT NO.	YEAR	SHEET NO.
	2010	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

SAVE DATE: 8/3/2026, PLOT DATE: 8/3/2026

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2349 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

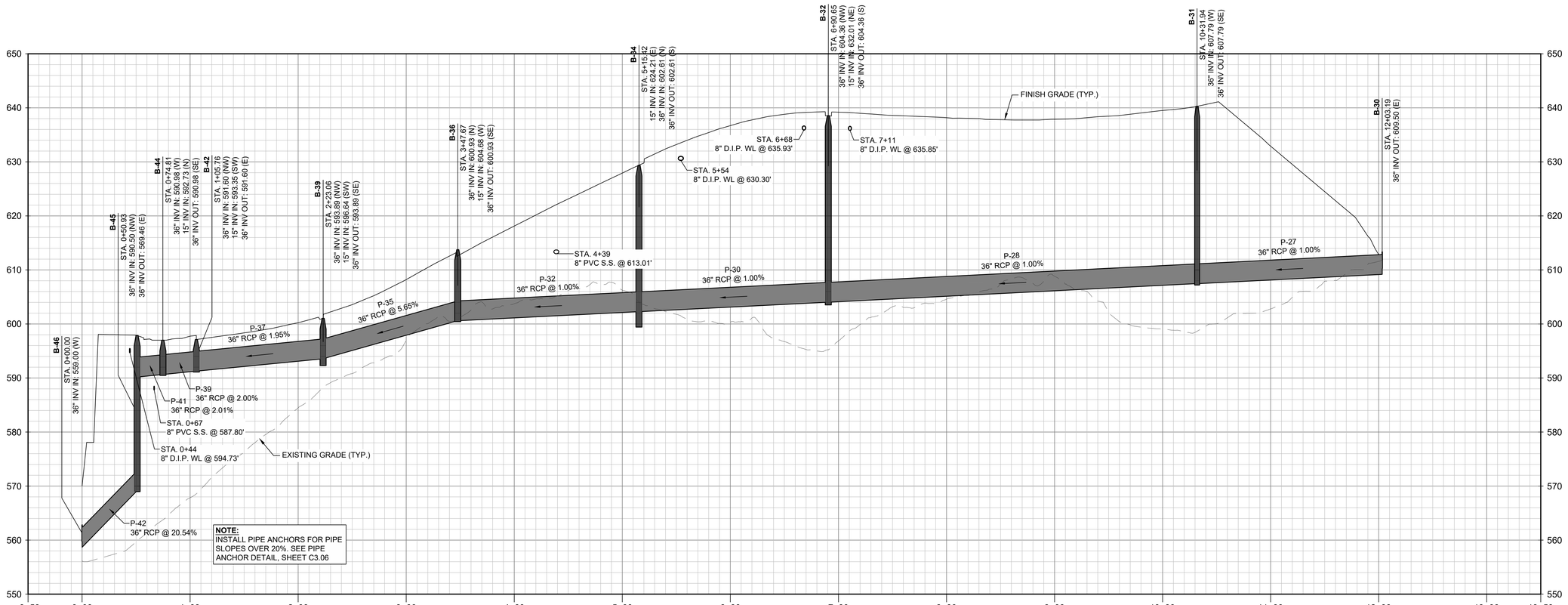
NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
No. 125500
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

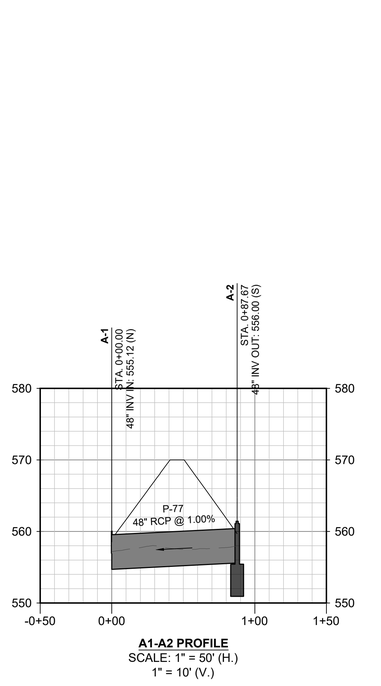
GRADING & DRAINAGE DETAILS

SHEET NO. C3.07

FILENAME: J:\PRIVATE CLIENTS\2025-24 - ALLEN FARMS SUBDIVISION\CAD\DESIGN\DWG\25_C3D_GRADING & DRAINAGE.DWG



B46-B30 PROFILE
SCALE: 1" = 50' (H.)
1" = 10' (V.)



A1-A2 PROFILE
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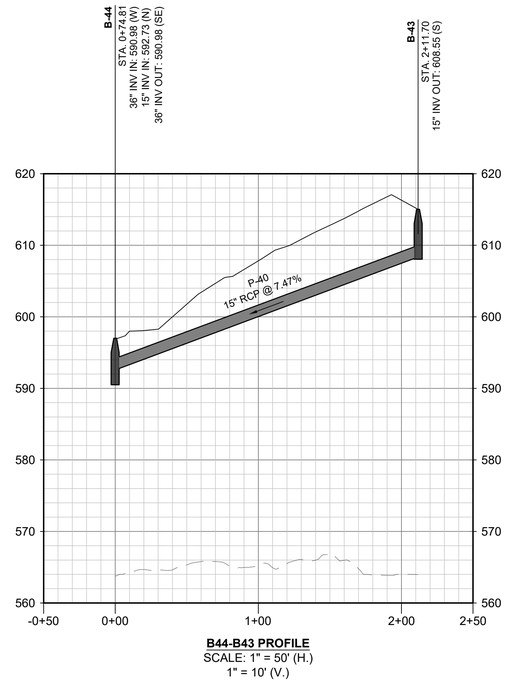
1" = 10' (V.)



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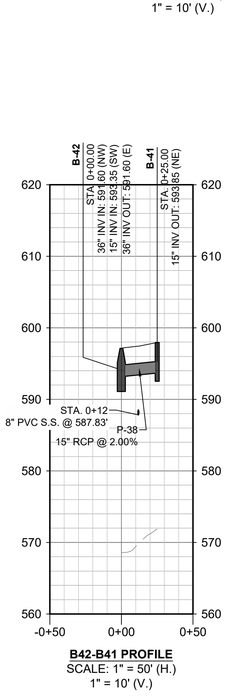

B42-B41 PROFILE
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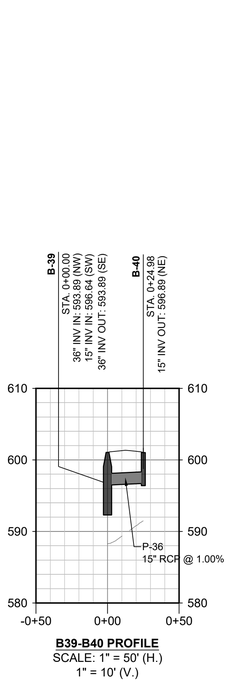
1" = 10' (V.)



B39-B40 PROFILE
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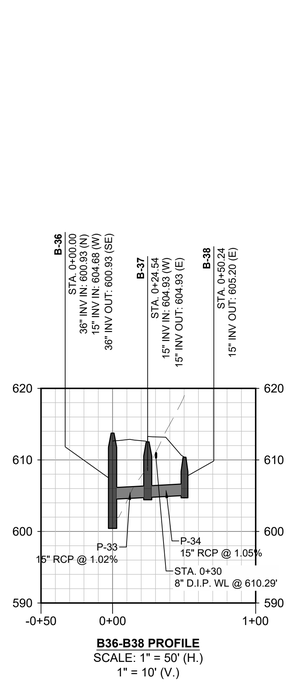
1" = 10' (V.)



B36-B38 PROFILE
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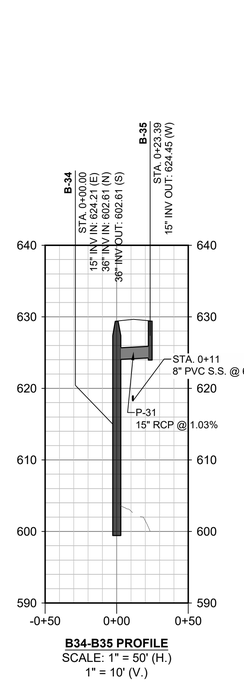

B34-B35 PROFILE
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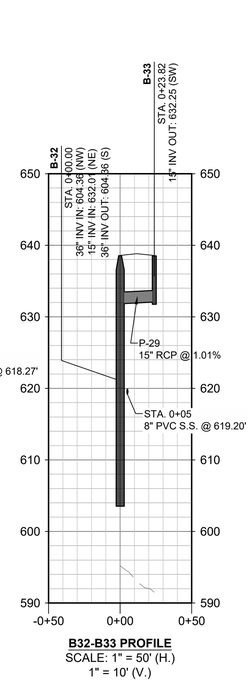


B32-B33 PROFILE
SCALE: 1" = 50' (H.)
1" = 10' (V.)

REVISIONS			
NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2449 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
DICKSON OFFICE
7746 COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
No. 122500
STATE OF TENNESSEE
09/03/2026

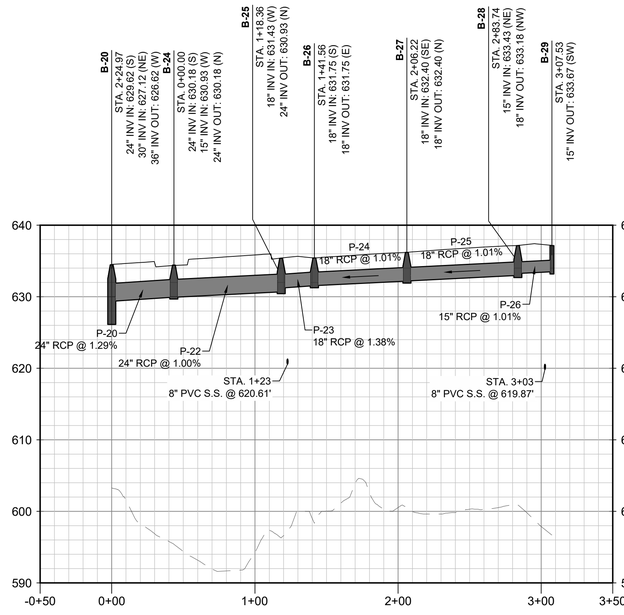
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

STORM SEWER PROFILES

SHEET NO. C3.08

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

FILENAME: Z:\PROJECTS_CLIENTS\2025-24 - ALLEN FARMS SUBDIVISION\CAD_SITE\1-CIVIL\SHEETS\2025-24_C3D_STORM PLAN & PROFILE.DWG



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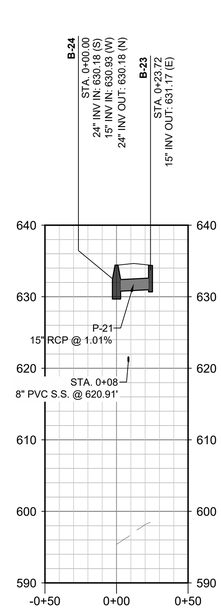

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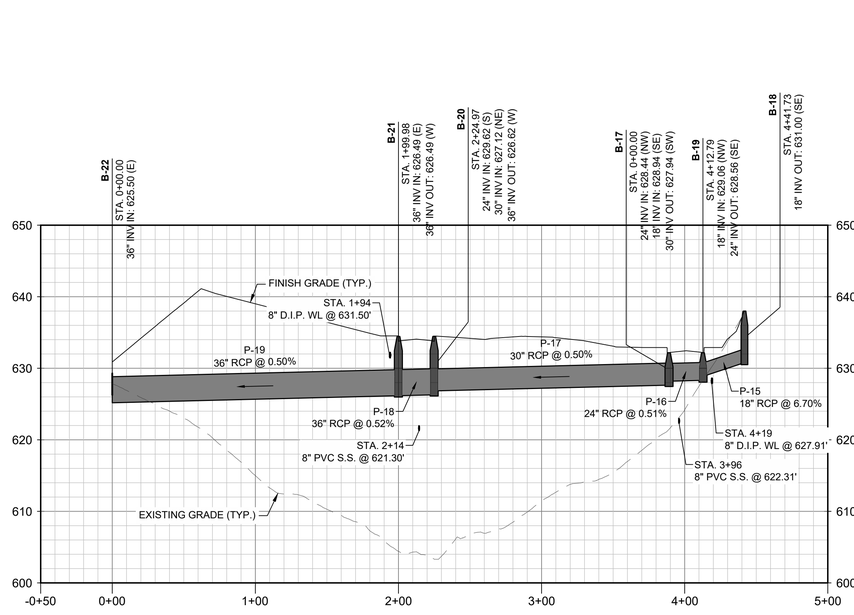

B22-B18 PROFILE
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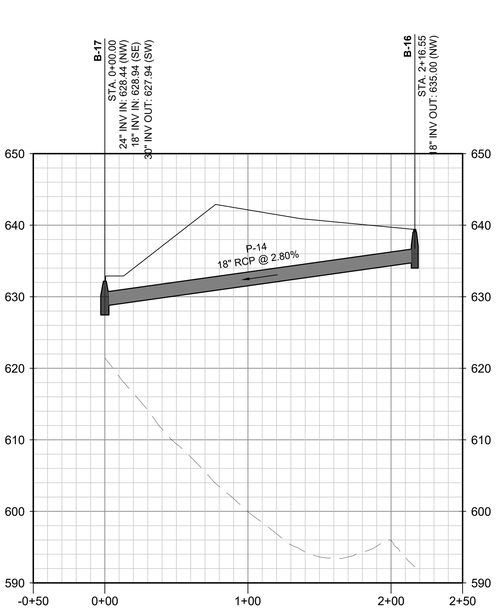

B17-B16 PROFILE
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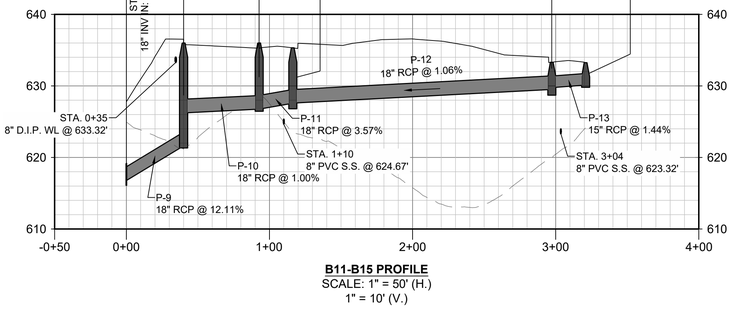
1" = 10' (V.)



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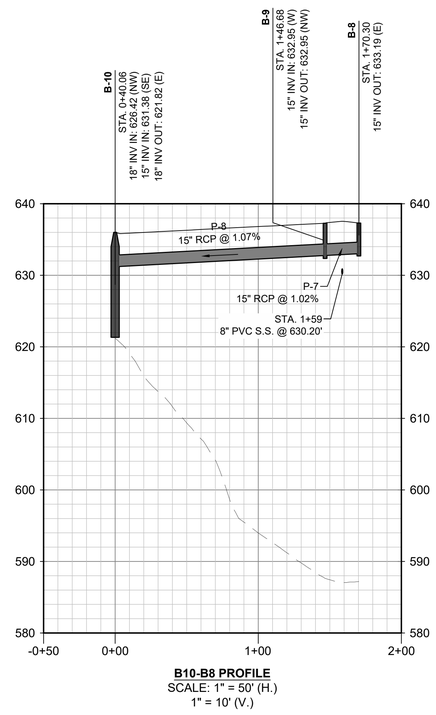

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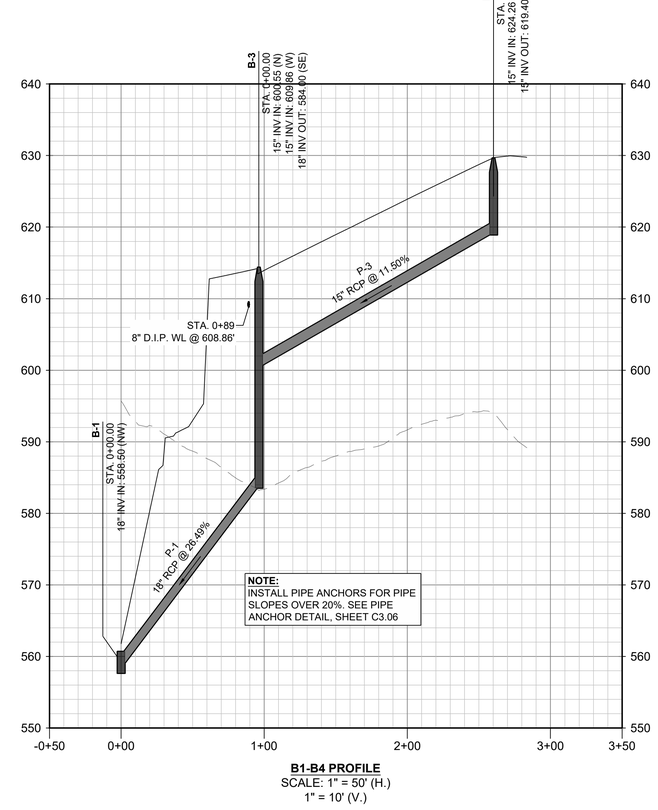


B1-B4 PROFILE
SCALE: 1" = 50' (H.)
1" = 10' (V.)

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
No. 122500
STATE OF TENNESSEE
09/03/2026

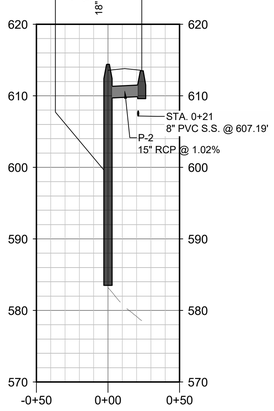
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

STORM SEWER PROFILES

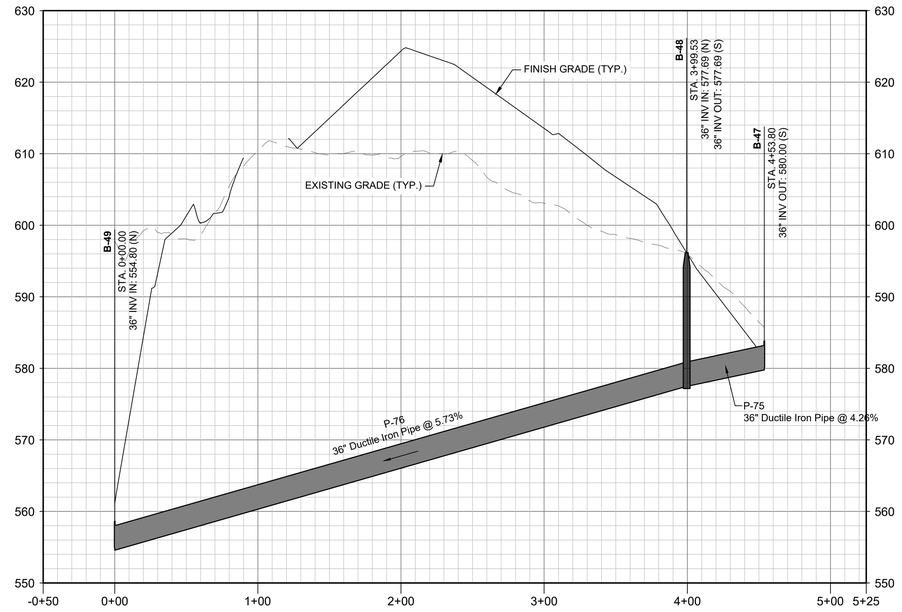
SHEET NO. C3.09

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

FILENAME: Z:\PROJECTS\2025\2025-26 - ALLEN FARMS SUBDIVISION-26.25\CAD\CIVIL SITE\C4-CADD\DESIGN\2025-25_C3D_STORM PLAN & PROFILE.DWG



B3-B2 PROFILE
SCALE: 1" = 50' (H.)
1" = 10' (V.)



B49-B47 PROFILE
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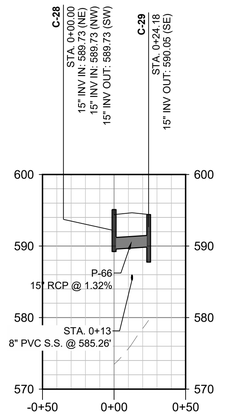
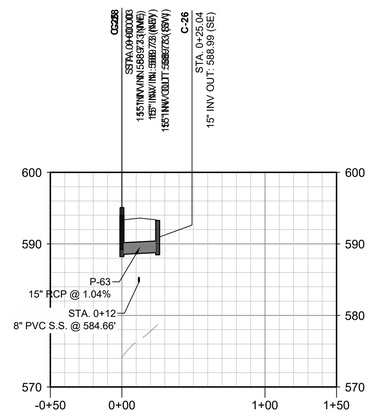
1" = 10' (V.)



C28-C29 PROFILE
SCALE: 1" = 50' (H.)
1" = 10' (V.)



C25-C26 PROFILE
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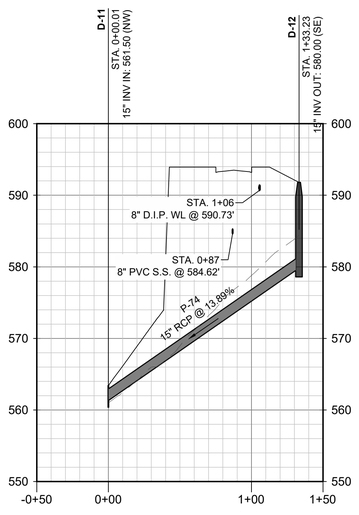
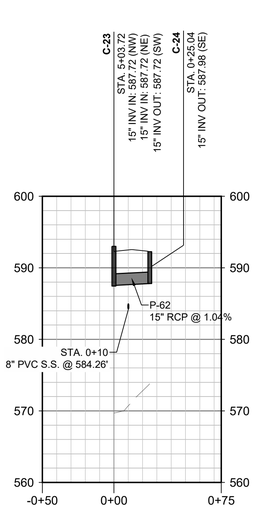
1" = 10' (V.)



D11-D12 PROFILE
SCALE: 1" = 50' (H.)
1" = 10' (V.)



C23-C24 PROFILE
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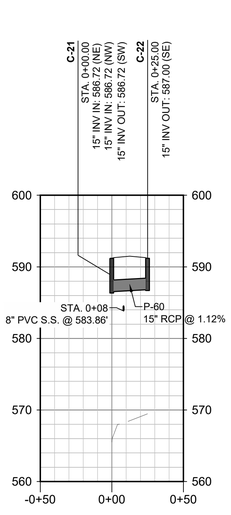
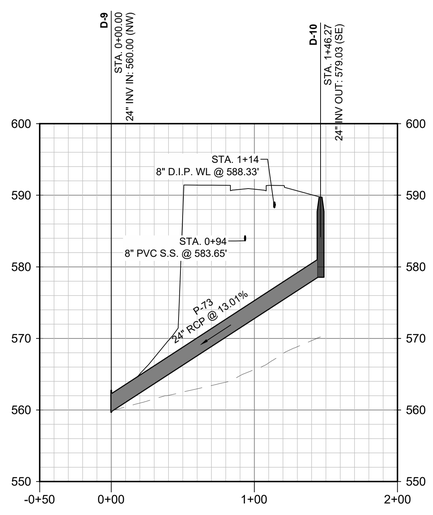
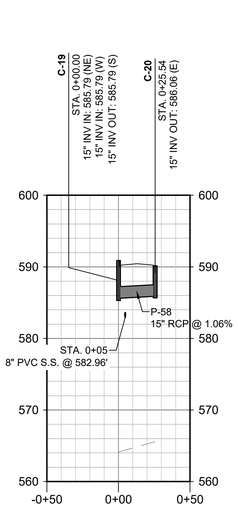
1" = 10' (V.)



C21-C22 PROFILE
SCALE: 1" = 50' (H.)
1" = 10' (V.)



D9-D10 PROFILE
SCALE: 1" = 50' (H.)
1" = 10' (V.)



C19-C20 PROFILE
SCALE: 1" = 50' (H.)
1" = 10' (V.)

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

PHONE: (615) 331-1441
FAX: (615) 331-1050

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
No. 122500
STATE OF TENNESSEE
08/03/2026

DATE: 08/10/2026

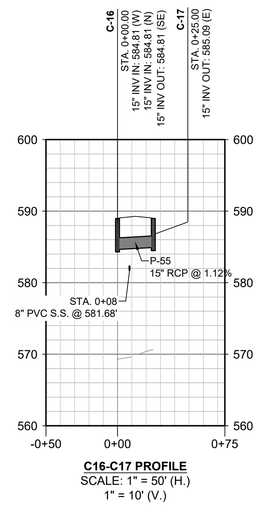
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

STORM SEWER PROFILES

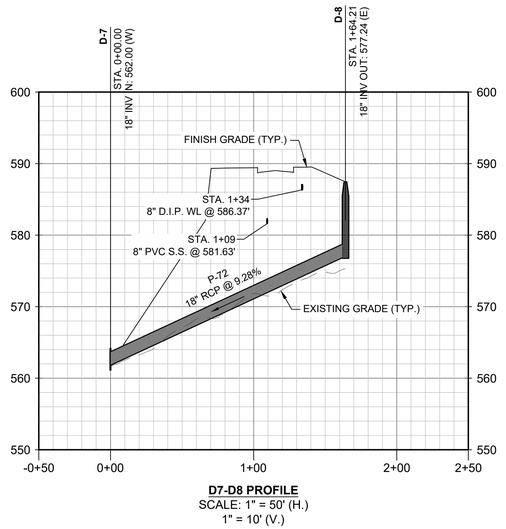
SHEET NO. C3.10

SAVE DATE: 8/3/2026, PLOT DATE: 8/3/2026

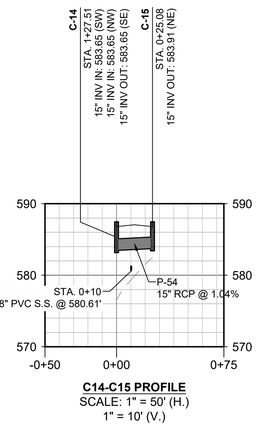
FILENAME: Z:\PRIVATE CLIENTS\2025\25-24 - ALLEN FARM SUBDIVISION\CAD\SHEETS\25_C300_STORM PLAN & PROFILE.DWG



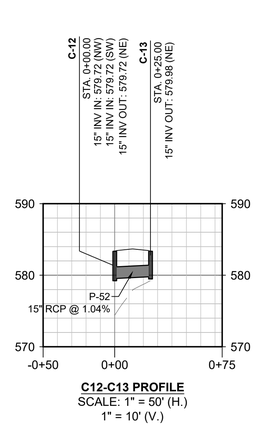
C16-C17 PROFILE
SCALE: 1" = 50' (H.)
1" = 10' (V.)



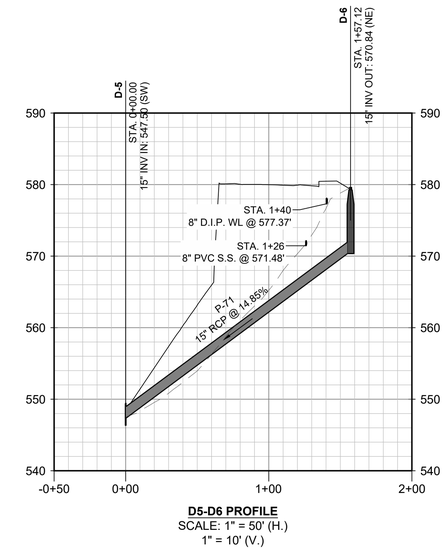
D7-D8 PROFILE
SCALE: 1" = 50' (H.)
1" = 10' (V.)



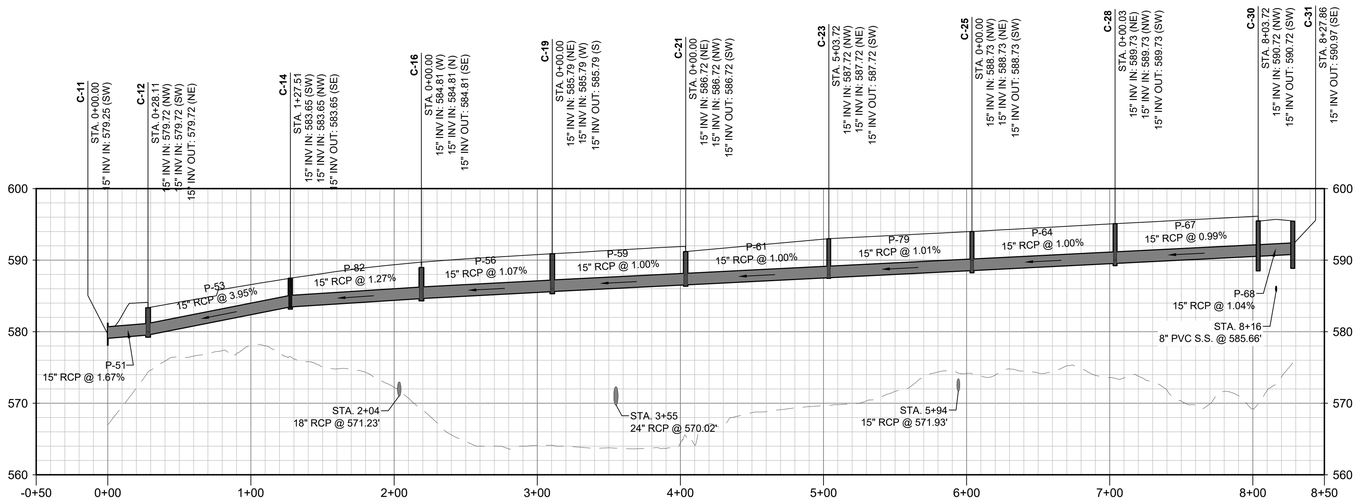
C14-C15 PROFILE
SCALE: 1" = 50' (H.)
1" = 10' (V.)



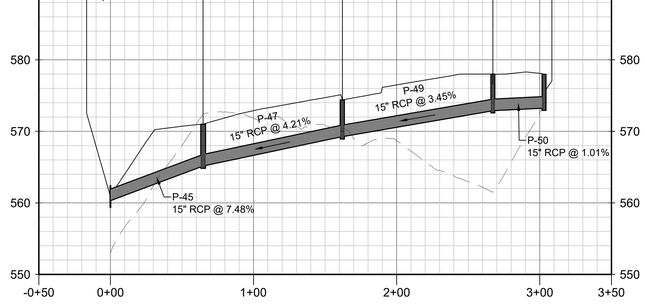
C12-C13 PROFILE
SCALE: 1" = 50' (H.)
1" = 10' (V.)



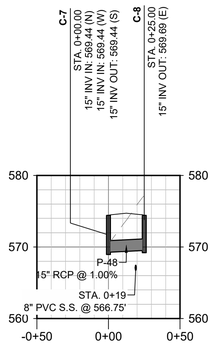
D5-D6 PROFILE
SCALE: 1" = 50' (H.)
1" = 10' (V.)



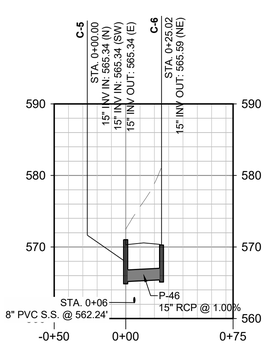
C11-C31 PROFILE
SCALE: 1" = 50' (H.)
1" = 10' (V.)



C4-C10 PROFILE
SCALE: 1" = 50' (H.)
1" = 10' (V.)



C7-C8 PROFILE
SCALE: 1" = 50' (H.)
1" = 10' (V.)



C5-C6 PROFILE
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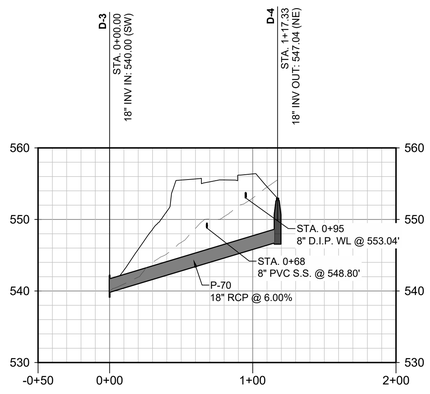
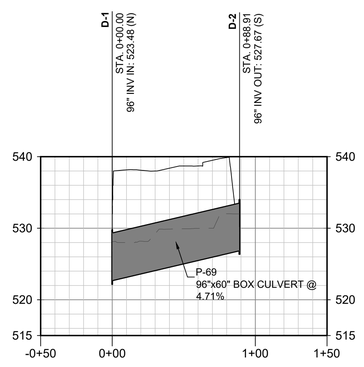
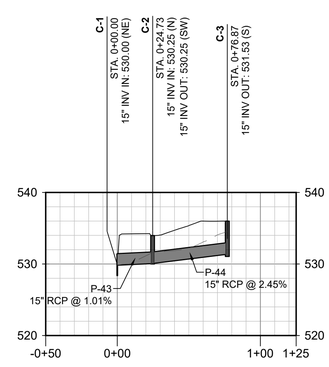
1" = 10' (V.)



D3-D4 PROFILE
SCALE: 1" = 50' (H.)
1" = 10' (V.)



D1-D2 PROFILE
SCALE: 1" = 50' (H.)
1" = 10' (V.)



C1-C3 PROFILE
SCALE: 1" = 50' (H.)
1" = 10' (V.)

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

C COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
DICKSON OFFICE
7146 COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
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CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

STORM SEWER PROFILES

SHEET NO. C3.11

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

FILENAME: Z:\PROJECTS_CE\NTS\2025\25-24 - ALLEN FARM SUBDIVISION\CAD\SHEETS\25-24_C3D_STORM PLAN & PROFILE.DWG

PIPE DATA TABLE

PIPE NAME	PIPE DIA.	LENGTH (LF)	SLOPE	STRUCTURE (UPSTREAM)	STRUCTURE (DOWNSTREAM)	INVERT (UPSTREAM)	INVERT (DOWNSTREAM)
P-1	18	96.25	26.49%	B-3	B-1	584.00	558.50
P-2	15	23.55	1.02%	B-2	B-3	610.10	609.86
P-3	15	163.93	11.50%	B-5	B-3	619.40	600.55
P-4	15	23.33	1.03%	B-4	B-5	624.50	624.26
P-7	15	23.62	1.02%	B-8	B-9	633.19	632.95
P-8	15	146.68	1.07%	B-9	B-10	632.95	631.38
P-9	18	40.06	12.11%	B-10	B-11	621.82	616.97
P-10	18	52.77	1.00%	B-12	B-10	626.95	626.42
P-11	18	23.51	3.57%	B-13	B-12	627.79	626.95
P-12	18	180.99	1.06%	B-14	B-13	629.70	627.79
P-13	15	23.59	1.44%	B-15	B-14	630.29	629.95
P-14	18	216.55	2.80%	B-16	B-17	635.00	628.94
P-15	18	28.94	6.70%	B-18	B-19	631.00	629.06
P-16	24	23.75	0.51%	B-19	B-17	628.56	628.44
P-17	30	164.07	0.50%	B-17	B-20	627.94	627.12
P-18	36	24.99	0.52%	B-20	B-21	626.62	626.49
P-19	36	199.98	0.50%	B-21	B-22	626.49	625.50
P-20	24	43.40	1.29%	B-24	B-20	630.18	629.62
P-21	15	23.72	1.01%	B-23	B-24	631.17	630.93
P-22	24	74.96	1.00%	B-25	B-24	630.93	630.18
P-23	18	23.21	1.38%	B-26	B-25	631.75	631.43
P-24	18	64.65	1.01%	B-27	B-26	632.40	631.75
P-25	18	77.53	1.01%	B-28	B-27	633.18	632.40
P-26	15	23.79	1.01%	B-29	B-28	633.67	633.43
P-27	36	171.25	1.00%	B-30	B-31	609.50	607.79
P-28	36	341.29	1.00%	B-31	B-32	607.79	604.36
P-29	15	23.82	1.01%	B-33	B-32	632.25	632.01
P-30	36	175.23	1.00%	B-32	B-34	604.36	602.61
P-31	15	23.39	1.03%	B-35	B-34	624.45	624.21
P-32	36	167.74	1.00%	B-34	B-36	602.61	600.93
P-33	15	24.54	1.02%	B-37	B-36	604.93	604.68
P-34	15	25.70	1.05%	B-38	B-37	605.20	604.93
P-35	36	124.65	5.65%	B-36	B-39	600.93	593.89
P-36	15	24.98	1.00%	B-40	B-39	596.89	596.64
P-37	36	117.30	1.95%	B-39	B-42	593.89	591.60
P-38	15	25.00	2.00%	B-41	B-42	593.85	593.35
P-39	36	30.95	2.00%	B-42	B-44	591.60	590.98
P-40	15	211.70	7.47%	B-43	B-44	608.55	592.73
P-41	36	23.88	2.01%	B-44	B-45	590.98	590.50
P-42	36	50.93	20.54%	B-45	B-46	569.46	559.00
P-43	15	24.73	1.01%	C-2	C-1	530.25	530.00
P-44	15	52.14	2.45%	C-3	C-2	531.53	530.25
P-45	15	64.73	7.48%	C-5	C-4	565.34	560.50
P-46	15	25.02	1.00%	C-6	C-5	565.59	565.34
P-47	15	97.29	4.21%	C-7	C-5	569.44	565.34
P-48	15	25.00	1.00%	C-8	C-7	569.69	569.44
P-49	15	105.17	3.45%	C-9	C-7	573.07	569.44
P-50	15	35.75	1.01%	C-10	C-9	573.43	573.07
P-51	15	28.11	1.67%	C-12	C-11	579.72	579.25
P-52	15	25.00	1.04%	C-13	C-12	579.98	579.72

PIPE DATA TABLE

PIPE NAME	PIPE DIA.	LENGTH (LF)	SLOPE	STRUCTURE (UPSTREAM)	STRUCTURE (DOWNSTREAM)	INVERT (UPSTREAM)	INVERT (DOWNSTREAM)
P-53	15	99.40	3.95%	C-14	C-12	583.65	579.72
P-54	15	25.08	1.04%	C-15	C-14	583.91	583.65
P-55	15	25.00	1.12%	C-17	C-16	585.09	584.81
P-56	15	91.45	1.07%	C-19	C-16	585.79	584.81
P-58	15	25.54	1.06%	C-20	C-19	586.06	585.79
P-59	15	93.17	1.00%	C-21	C-19	586.72	585.79
P-60	15	25.00	1.12%	C-22	C-21	587.00	586.72
P-61	15	100.00	1.00%	C-23	C-21	587.72	586.72
P-62	15	25.04	1.04%	C-24	C-23	587.98	587.72
P-63	15	25.04	1.04%	C-26	C-25	588.99	588.73
P-64	15	100.01	1.00%	C-28	C-25	589.73	588.73
P-66	15	24.18	1.32%	C-29	C-28	590.05	589.73
P-67	15	100.00	0.99%	C-30	C-28	590.72	589.73
P-68	15	24.14	1.04%	C-31	C-30	590.97	590.72
P-69	96	88.91	4.71%	D-2	D-1	527.67	523.48
P-70	18	117.33	6.00%	D-4	D-3	547.04	540.00
P-71	15	157.12	14.85%	D-6	D-5	570.84	547.50
P-72	18	164.21	9.28%	D-8	D-7	577.24	562.00
P-73	24	146.27	13.01%	D-10	D-9	579.03	560.00
P-74	15	133.22	13.89%	D-12	D-11	580.00	561.50
P-75	36	54.27	4.26%	B-47	B-48	580.00	577.69
P-76	36	399.53	5.73%	B-48	B-49	577.69	554.80
P-77	48	87.67	1.00%	A-2	A-1	556.00	555.12
P-79	15	99.99	1.01%	C-25	C-23	588.73	587.72
P-82	15	91.59	1.27%	C-16	C-14	584.81	583.65

STRUCTURE DATA TABLE

STRUCTURE	RIM	INVERT (IN)	INVERT (OUT)	NORTHING	EASTING
D-1	529.82	523.48 (N)		734049.73	1773487.08
C-1	531.44	530.00 (NE)		734018.27	1773544.72
C-2	533.96	530.25 (N)	530.25	734028.52	1773567.22
D-2	534.00		527.67	734137.10	1773470.60
C-3	535.98		531.53	734077.50	1773585.11
D-3	542.21	540.00 (SW)		734230.55	1773328.52
D-5	549.44	547.50 (SW)		734567.61	1773194.97
D-4	552.97		547.04	734128.77	1773270.15
B-49	558.64	554.80 (N)		735534.51	1773466.03
A-1	560.04	555.12 (N)		735211.43	1773342.89
B-1	560.71	558.50 (NW)		735529.00	1773459.52
A-2	561.42		556.00	735298.83	1773336.07
C-4	562.44	560.50 (W)		734287.67	1773247.38
D-9	562.75	560.00 (NW)		734807.74	1772966.22
B-46	562.83	559.00 (W)		735319.08	1773313.61
D-11	563.44	561.50 (NW)		734987.44	1773094.42
D-7	564.21	562.00 (W)		734726.65	1772985.63
C-6	570.26		565.59	734267.54	1773160.53
C-5	571.01	565.34 (N) 565.34 (SW)	565.34	734277.59	1773183.44
C-7	574.41	569.44 (N) 569.44 (W)	569.44	734371.77	1773159.04
C-8	574.41		569.69	734366.70	1773134.56
C-10	577.99		573.43	734457.93	1773104.43
C-9	578.01	573.07 (SW)	573.07	734474.42	1773136.15
D-6	579.59		570.84	734485.10	1773061.25
C-11	581.19	579.25 (SW)		734601.97	1773045.77
C-12	583.35	579.72 (NW) 579.72 (SW)	579.72	734584.74	1773023.55
C-13	583.35		579.98	734563.98	1773009.62
B-47	583.83		580.00	735984.05	1773413.44
D-8	587.45		577.24	734674.41	1772829.95
C-14	587.48	583.65 (SW) 583.65 (NW)	583.65	734634.55	1772937.53
C-15	587.48		583.91	734614.33	1772922.69
C-16	588.97	584.81 (W) 584.81 (N)	584.81	734707.33	1772881.93
C-17	588.97		585.09	734698.37	1772858.59
D-10	589.74		579.03	734865.29	1772831.74
C-20	590.14		586.06	734803.72	1772850.08
C-19	590.89	585.79 (NE) 585.79 (W)	585.79	734798.52	1772875.08
C-21	591.19	586.72 (NE) 586.72 (NW)	586.72	734881.35	1772917.75
C-22	591.19		587.00	734896.61	1772897.95
D-12	591.81		580.00	735066.85	1772987.45
C-24	592.24		587.98	734975.81	1772959.00
C-23	592.99	587.72 (NW) 587.72 (NE)	587.72	734960.52	1772978.83
C-26	593.29		588.99	735055.01	1773020.05
C-25	594.00	588.73 (NW) 588.73 (NE)	588.73	735039.71	1773039.88
C-29	594.39		590.05	735133.68	1773081.78
C-28	595.09	589.73 (NE) 589.73 (NW)	589.73	735118.92	1773100.94
C-31	595.45		590.97	735212.97	1773142.95
C-30	595.49	590.72 (NW)	590.72	735198.12	1773161.99
B-48	596.17	577.69 (N)	577.69	735932.43	1773430.17
B-44	597.00	590.98 (W) 592.73 (N)	590.98	735346.08	1773245.02
B-42	597.11	591.60 (NW) 593.35 (SW)	591.60	735345.20	1773214.08

STRUCTURE DATA TABLE

STRUCTURE	RIM	INVERT (IN)	INVERT (OUT)	NORTHING	EASTING
B-45	597.87	590.50 (NW)	569.46	735332.09	1773264.38
B-41	597.93		593.85	735325.40	1773198.81
B-40	601.03		596.89	735397.41	1773105.49
B-39	601.03	593.89 (NW) 596.64 (SW)	593.89	735416.83	1773121.20
B-38	610.36		605.20	735509.52	1773007.28
B-37	612.51	604.93 (W)	604.93	735516.97	1773031.88
B-30	613.34		609.50	736058.79	1772527.63
B-2	613.51		610.10	735594.19	1773361.67
B-36	613.75	600.93 (N) 604.68 (W)	600.93	735522.89	1773055.69
B-3	614.40	600.55 (N) 609.86 (W)	584.00	735589.64	1773384.78
B-43	615.03		608.55	735556.16	1773218.88
B-11	619.18	616.97 (W)		736231.44	1773271.39
B-22	629.33	625.50 (E)		736185.02	1772607.90
B-34	629.37	624.21 (E) 602.61 (N)	602.61	735685.99	1773016.48
B-35	629.39		624.45	735688.03	1773039.79
B-5	629.69	624.26 (W)	619.40	735753.19	1773396.01
B-4	629.73		624.50	735752.22	1773372.69
B-17	632.18	628.44 (NW) 628.94 (SE)	627.94	736326.99	1772907.19
B-19	632.18	629.06 (NW)	628.56	736346.16	1772893.17
B-15	633.25		630.29	736386.82	1773045.91
B-14	633.30	629.95 (N)	629.70	736363.42	1773042.88
B-23	634.38		631.17	736136.28	1772810.59
B-24	634.43	630.18 (S) 630.93 (W)	630.18	736137.36	1772834.28
B-21	634.45	626.49 (E)	626.49	736181.04	1772807.84
B-20	634.47	629.62 (S) 627.12 (NE)	626.62	736180.73	1772832.83
B-13	635.33	627.79 (NW)	627.79	736258.24	1773190.16
B-25	635.38	631.43 (W)	630.93	736062.94	1772843.26
B-26	635.43	631.75 (S)	631.75	736057.12	1772820.80
B-12	636.00	626.95 (W)	626.95	736267.19	1773211.90
B-10	636.00	626.42 (NW) 631.38 (SE)	621.82	736218.96	1773233.32
B-27	636.19	632.40 (SE)	632.40	735997.36	1772845.49
B-28	637.14	633.43 (NE)	633.18	735937.82	1772895.14
B-29	637.14		633.67	735955.13	1772911.45
B-9	637.27	632.95 (W)	632.95	736084.33	1773291.54
B-8	637.29		633.19	736075.33	1773269.71
B-18	638.00		631.00	736370.29	1772877.19
B-33	638.52		632.25	735867.48	1772994.99
B-32	638.55	604.36 (NW) 632.01 (NE)	604.36	735856.01	1772974.12
B-16	639.40		635.00	736151.12	1773033.55
B-31	640.25	607.79 (W)	607.79	736057.81	1772698.87

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

COLLIER ENGINEERING CO., INC.

DICKSON OFFICE
7146 COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
09/03/2026
No. 125500
STATE OF TENNESSEE

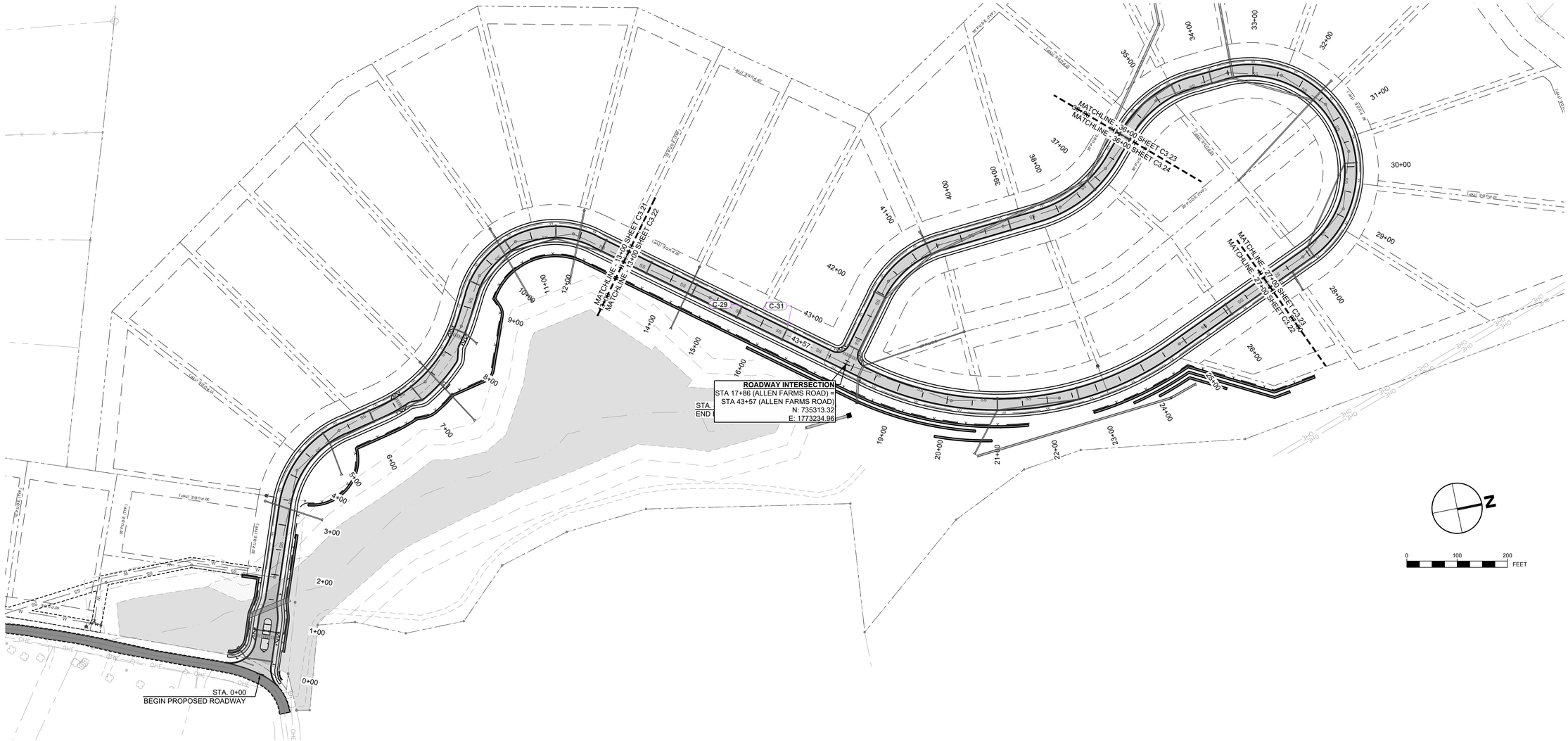
DATE: 08/10/2026

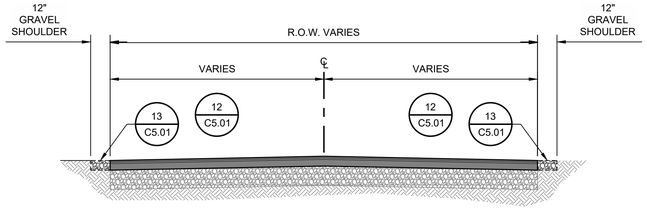
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

STORM SEWER PIPE & STRUCTURE TABLES

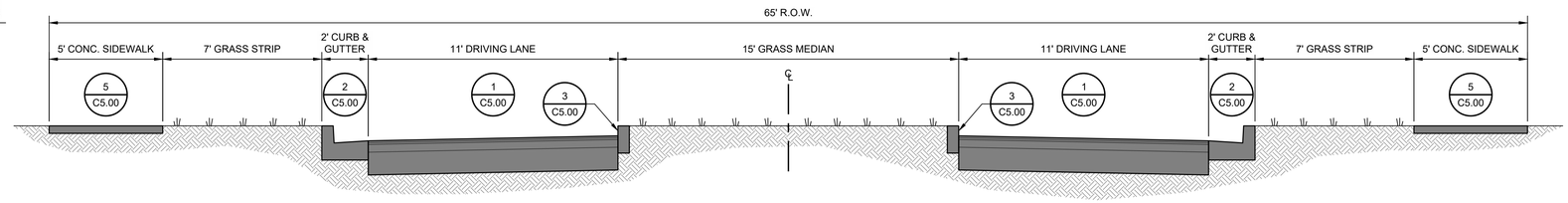
SHEET NO. C3.12

FILENAME: Z:\PRIVATE CLIENTS\2025-24 ALLEN FARMS\DESIGN\CIVIL\SUBDIVISION_SITE\CAD\DESIGN\2025-25_C3D_STORM PLAN & PROFILE.DWG

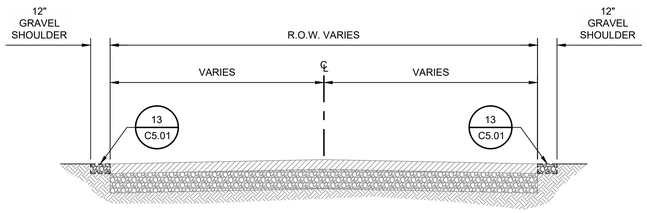




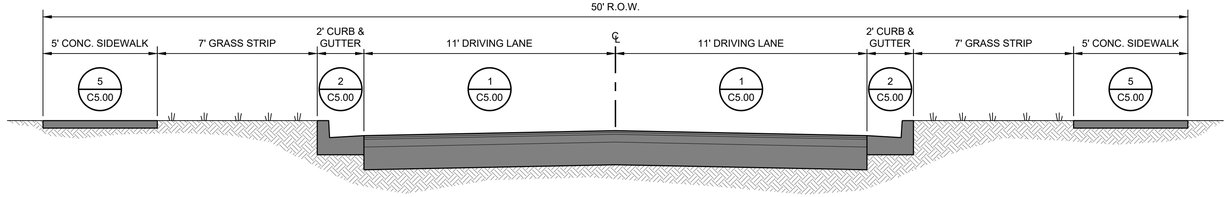
TYPICAL ROADWAY SECTION
ALLEN ROAD (W/ RESURFACING)
NOT TO SCALE



ROADWAY SECTION @ ENTRANCE 0+47 TO 1+12
NOT TO SCALE



TYPICAL ROADWAY SECTION
ALLEN ROAD (NO RESURFACING)
NOT TO SCALE



TYPICAL ROADWAY SECTION 1+53 TO 43+57
NOT TO SCALE

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR
ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122500
STATE OF TENNESSEE
09/03/2026

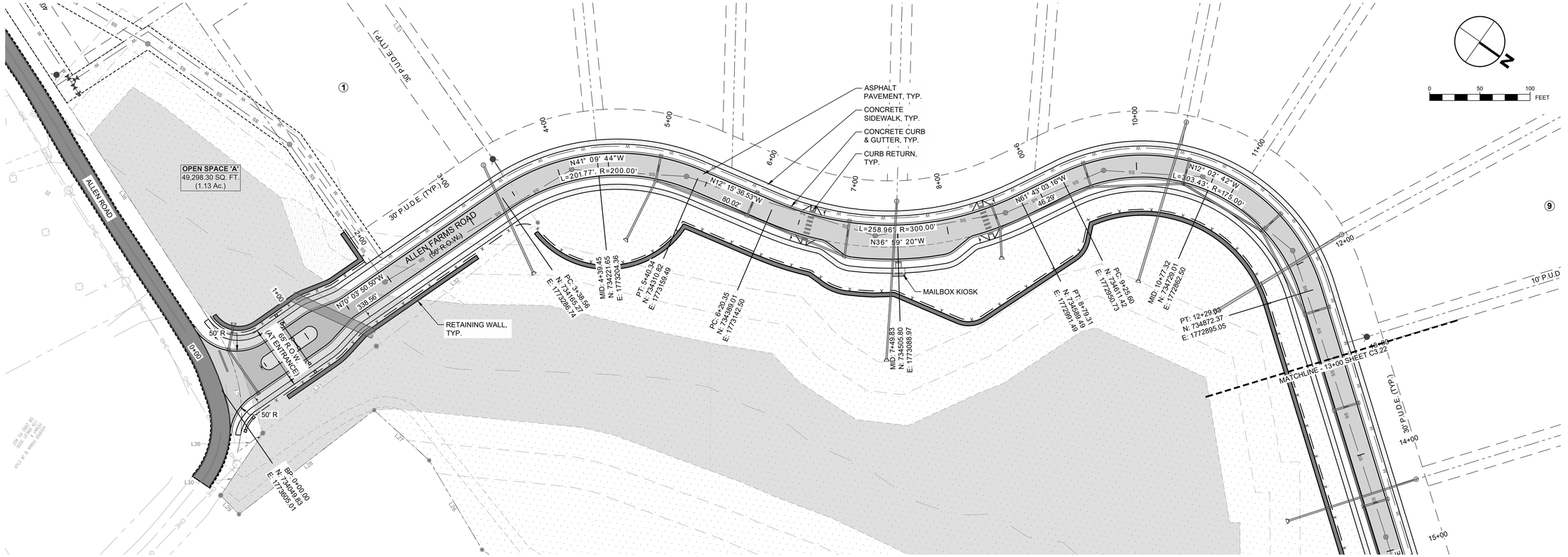
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

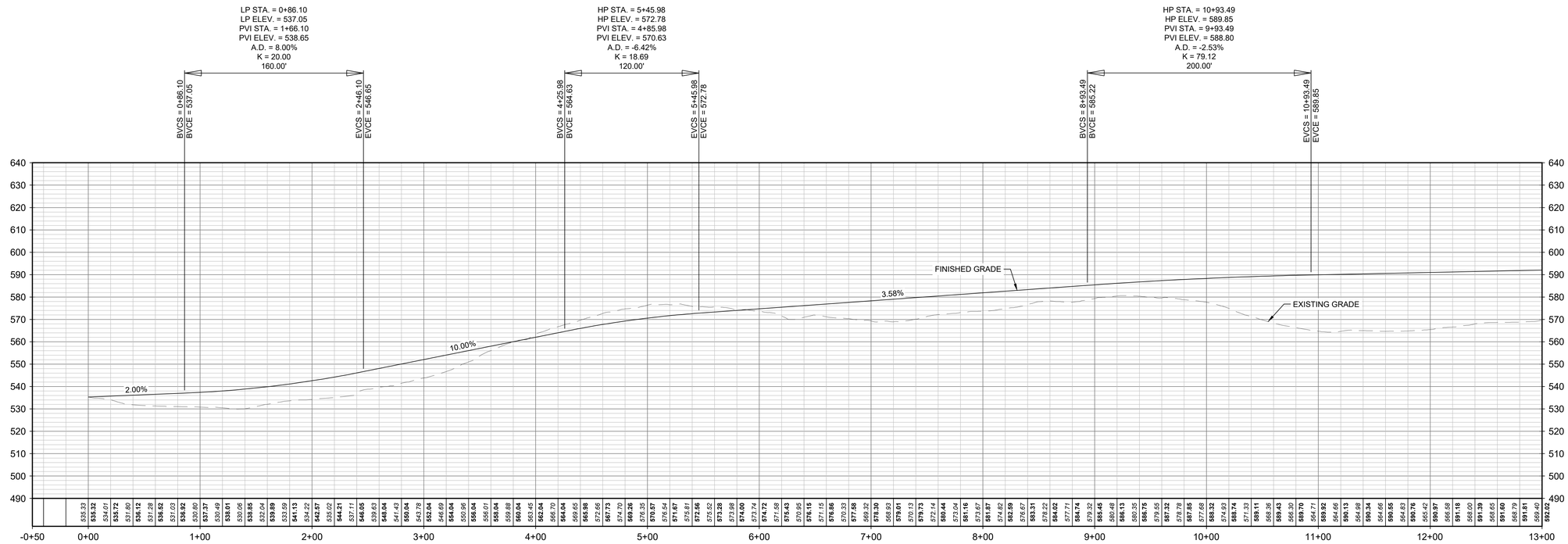
OVERALL
ROADWAY LAYOUT

SHEET NO. C3.20

SAVE DATE: 8/26/2026, PLOT DATE: 9/3/2026

FILENAME: Z:\PRIVATE CLIENTS\3008-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN\2-DWG\C3.20_ROAD PLAN & PROFILE.DWG





ROADWAY CL PROFILE
SCALE: 1" = 50" (H.)
1" = 25" (V.)

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122500
STATE OF TENNESSEE
09/03/2026

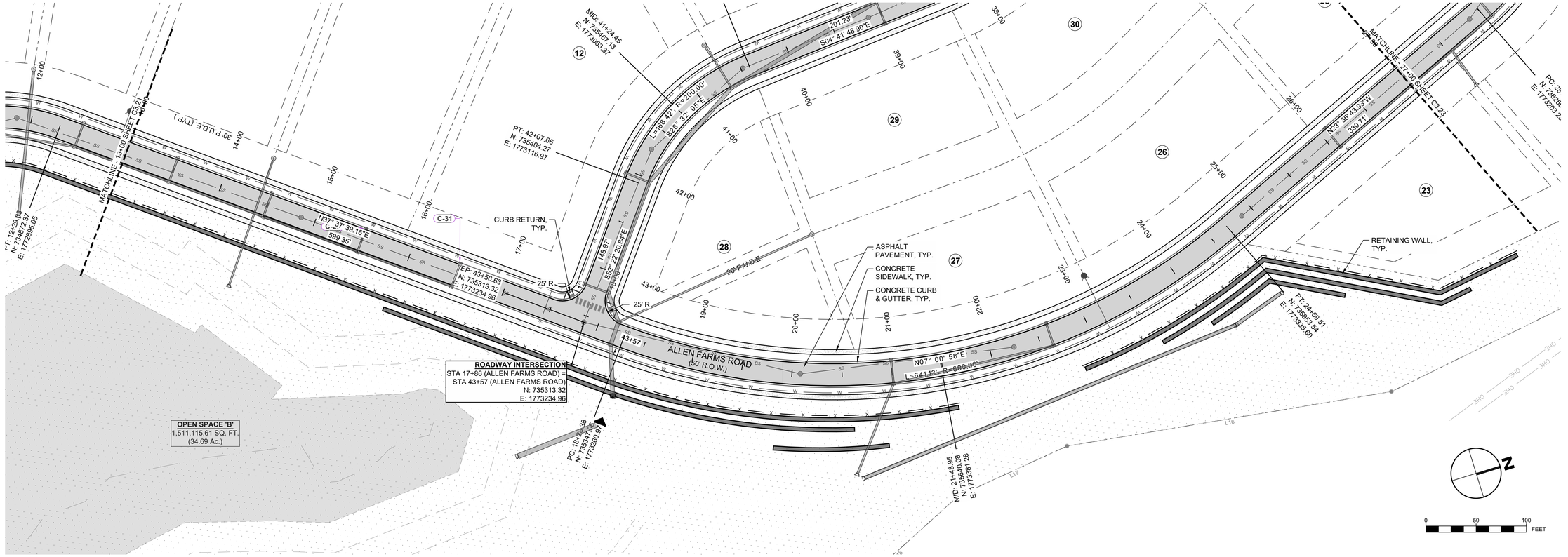
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

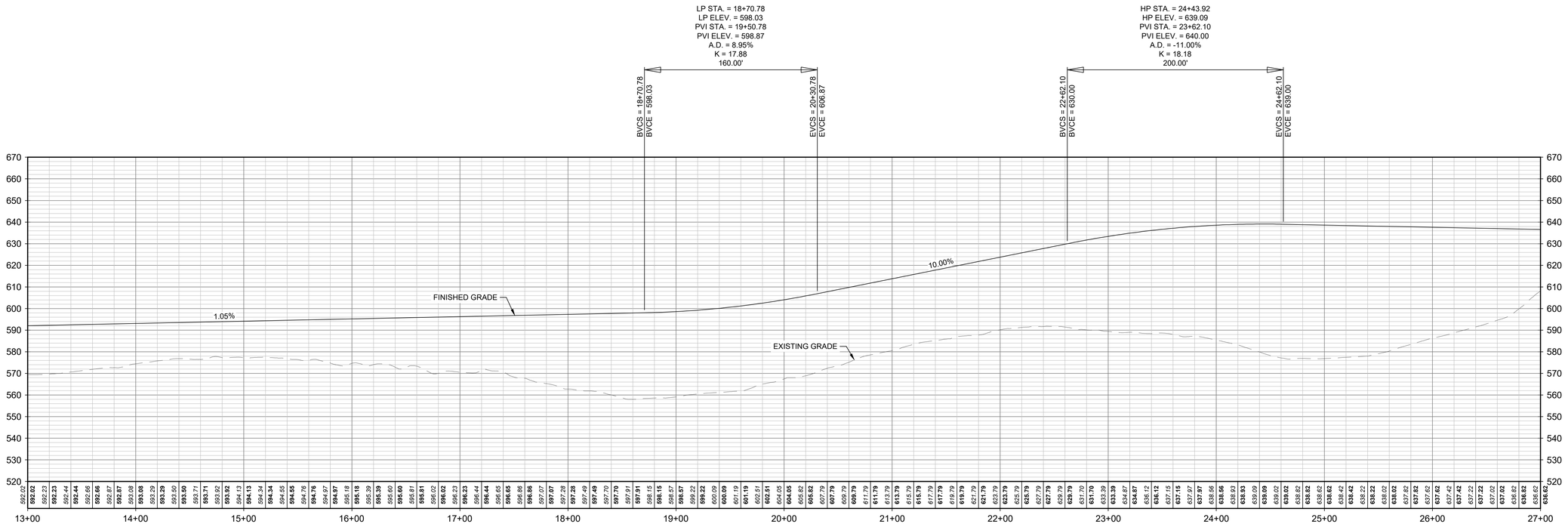
ROADWAY PLAN & PROFILE

SHEET NO. C3.21

SAVE DATE: 8/26/2026, PLOT DATE: 9/3/2026

FILENAME: Z:\PRIVATE CLIENTS\3609-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN\3609-25_C3D0_ROAD PLAN & PROFILE.DWG





ROADWAY CL PROFILE
SCALE: 1" = 50" (H.)
1" = 25" (V.)

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

REVISIONS

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
No. 122540
STATE OF TENNESSEE
9/10/2026

DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

ROADWAY PLAN & PROFILE

SHEET NO. C3.22

SAVE DATE: 8/25/2026, PLOT DATE: 8/25/2026

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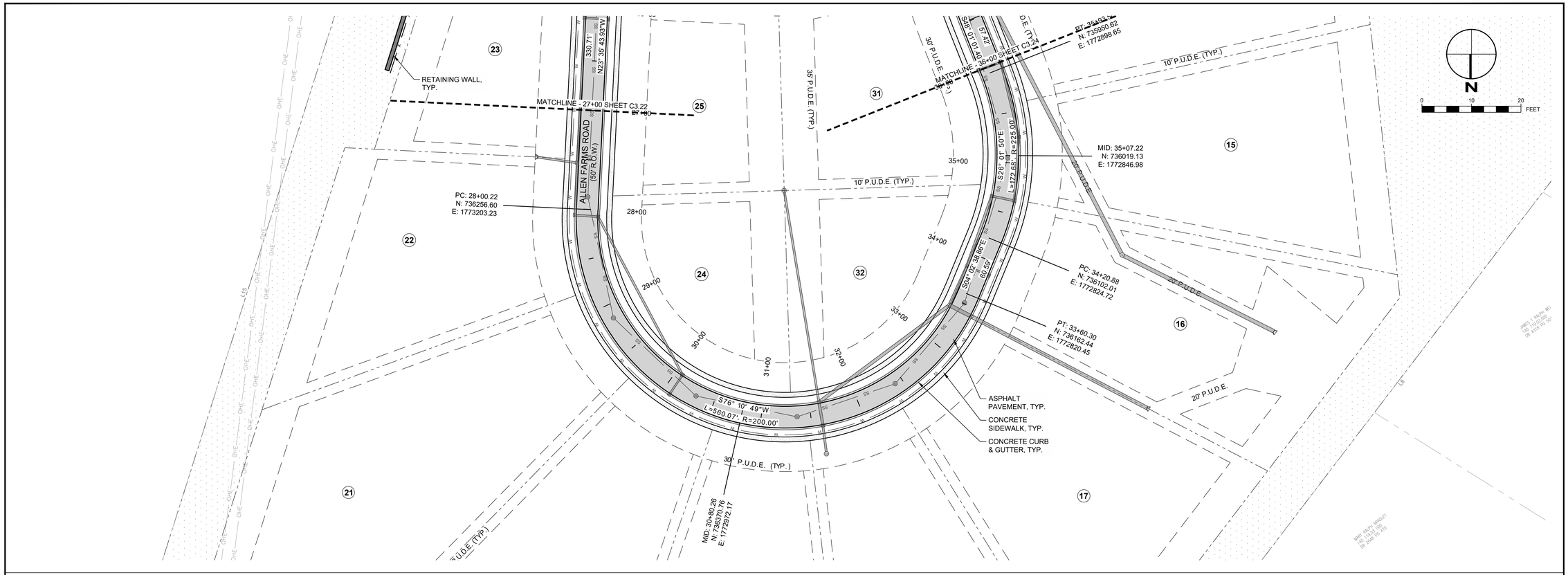
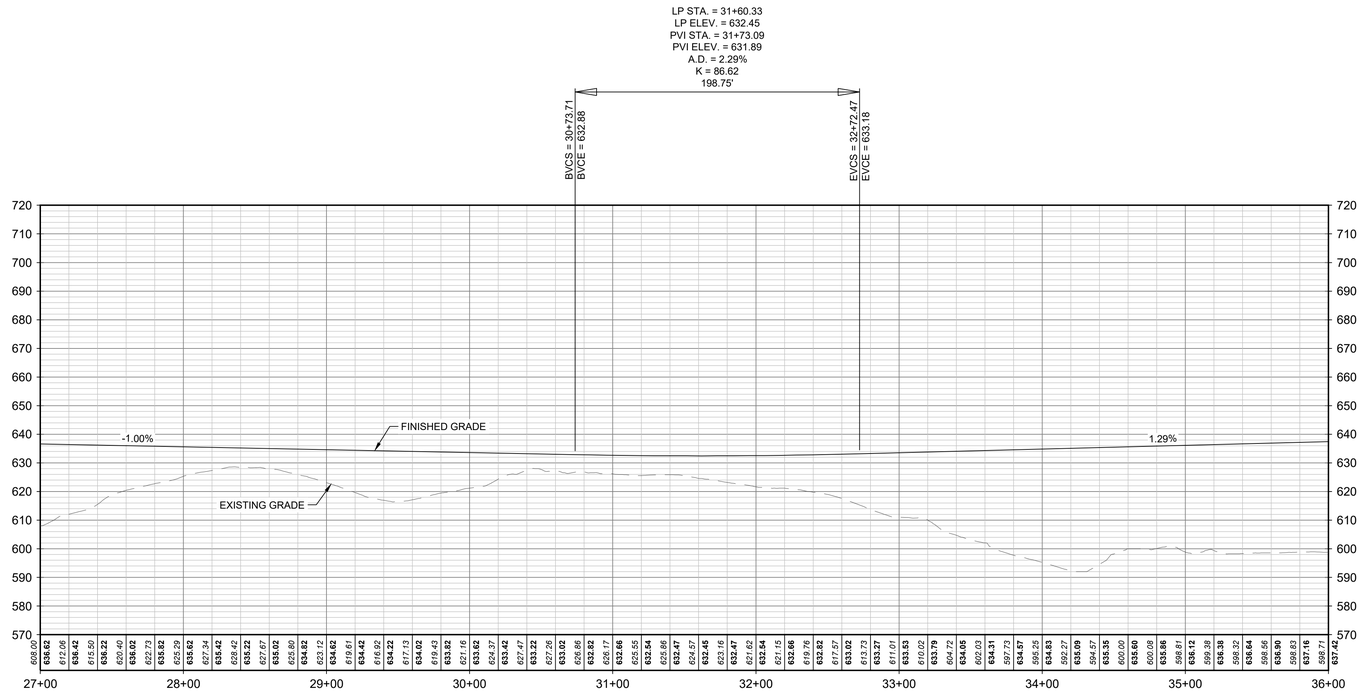




ROADWAY CL PROFILE
SCALE: 1" = 50" (H.)
1" = 25" (V.)

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

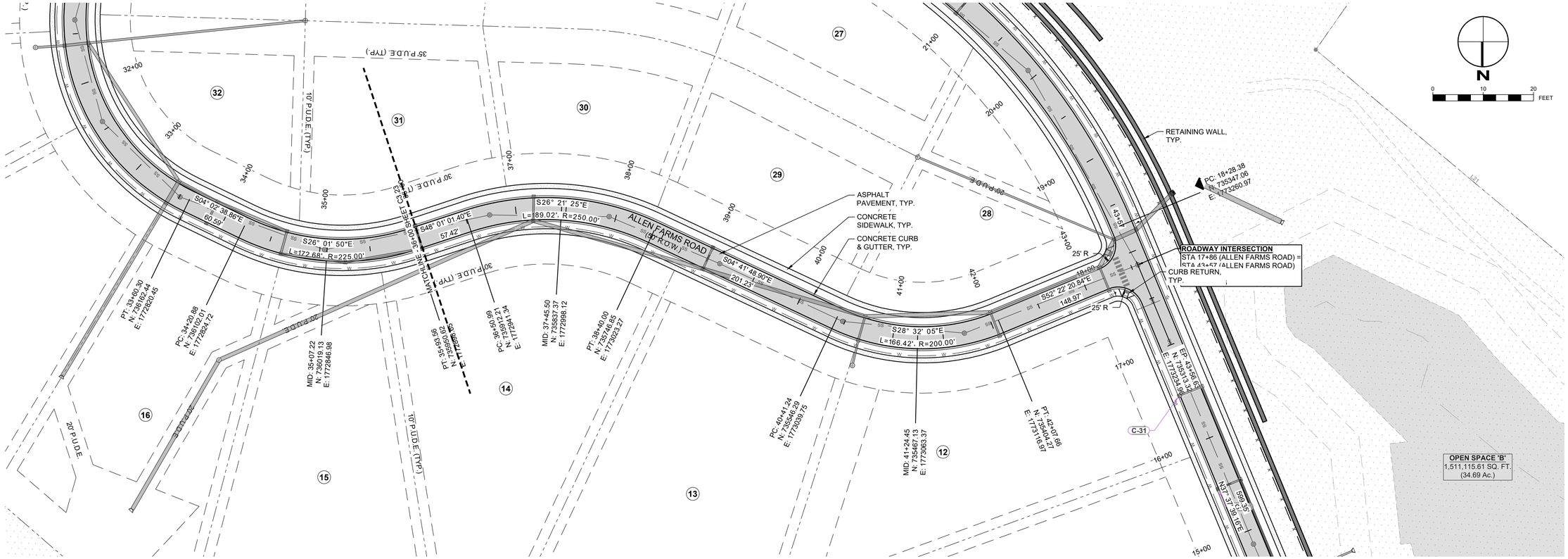
ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

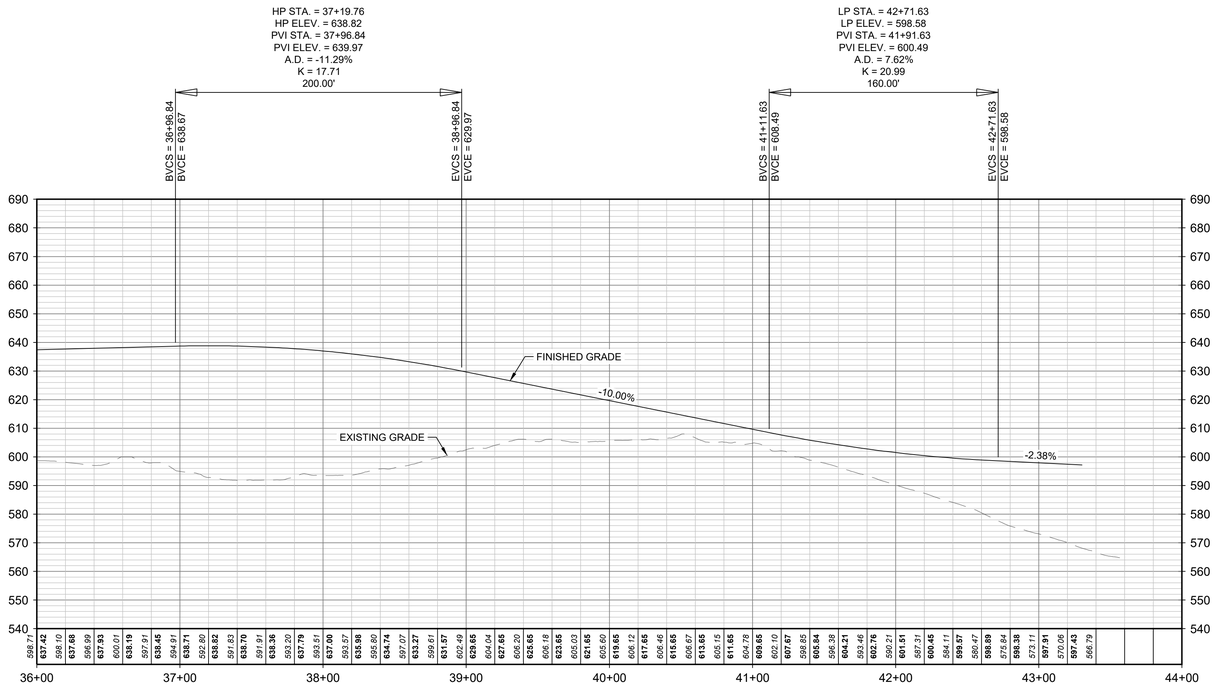
NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122500
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

ROADWAY PLAN & PROFILE

SHEET NO. C3.23





ROADWAY CL PROFILE
SCALE: 1" = 50" (H.)
1" = 25" (V.)

REVISIONS

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1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

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ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122500
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

ROADWAY PLAN & PROFILE

SHEET NO. C3.24

SAVE DATE: 8/26/2026, PLOT DATE: 9/3/2026

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REVISIONS

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COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

PHONE: (615) 331-1441
FAX: (615) 331-1050

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122500
STATE OF TENNESSEE

Nathan Couch
09/03/2026

DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

CROSS SECTION LAYOUT

SHEET NO. C3.30

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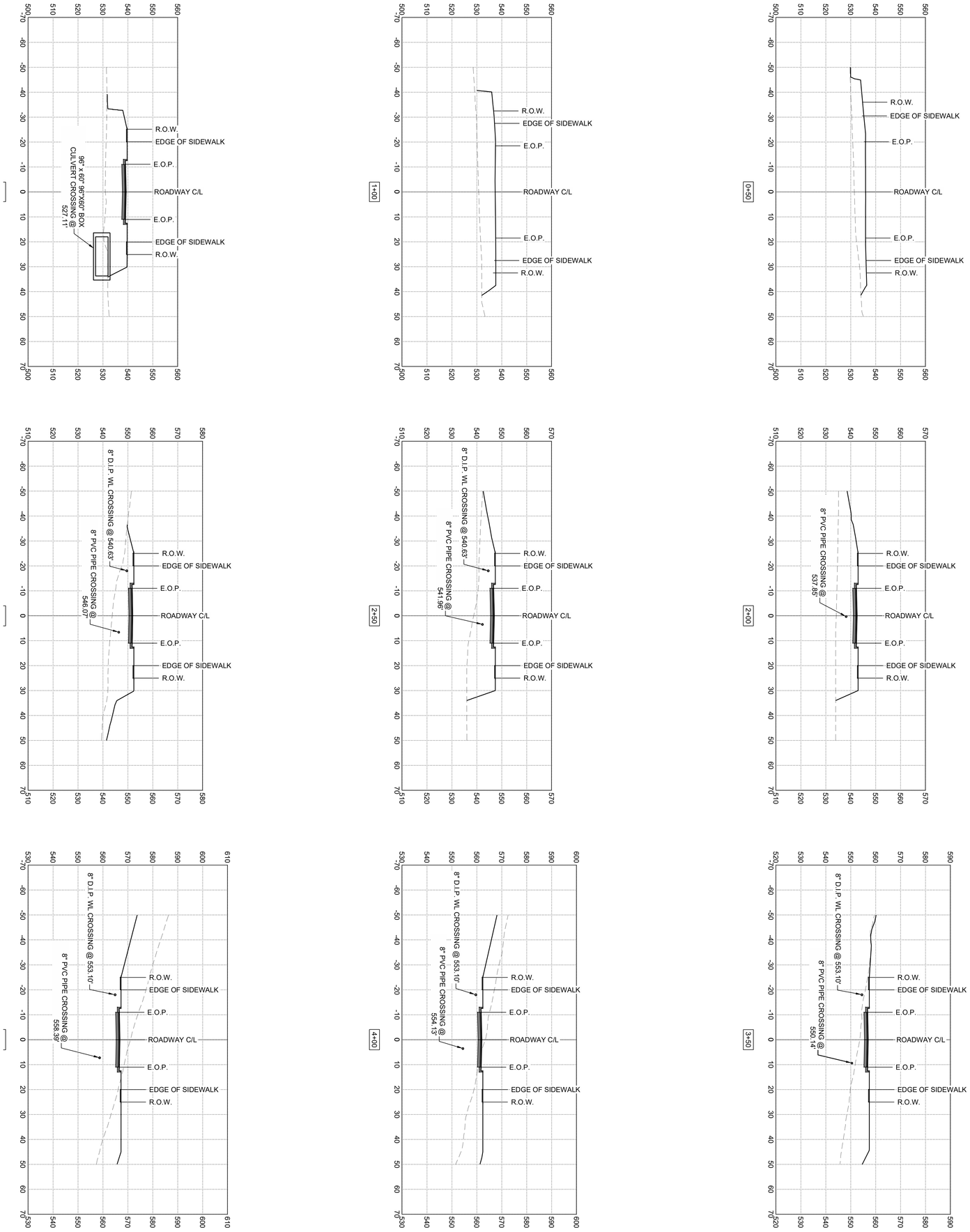

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

PHONE: (615) 331-1441
FAX: (615) 331-1050

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

REVISIONS

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1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

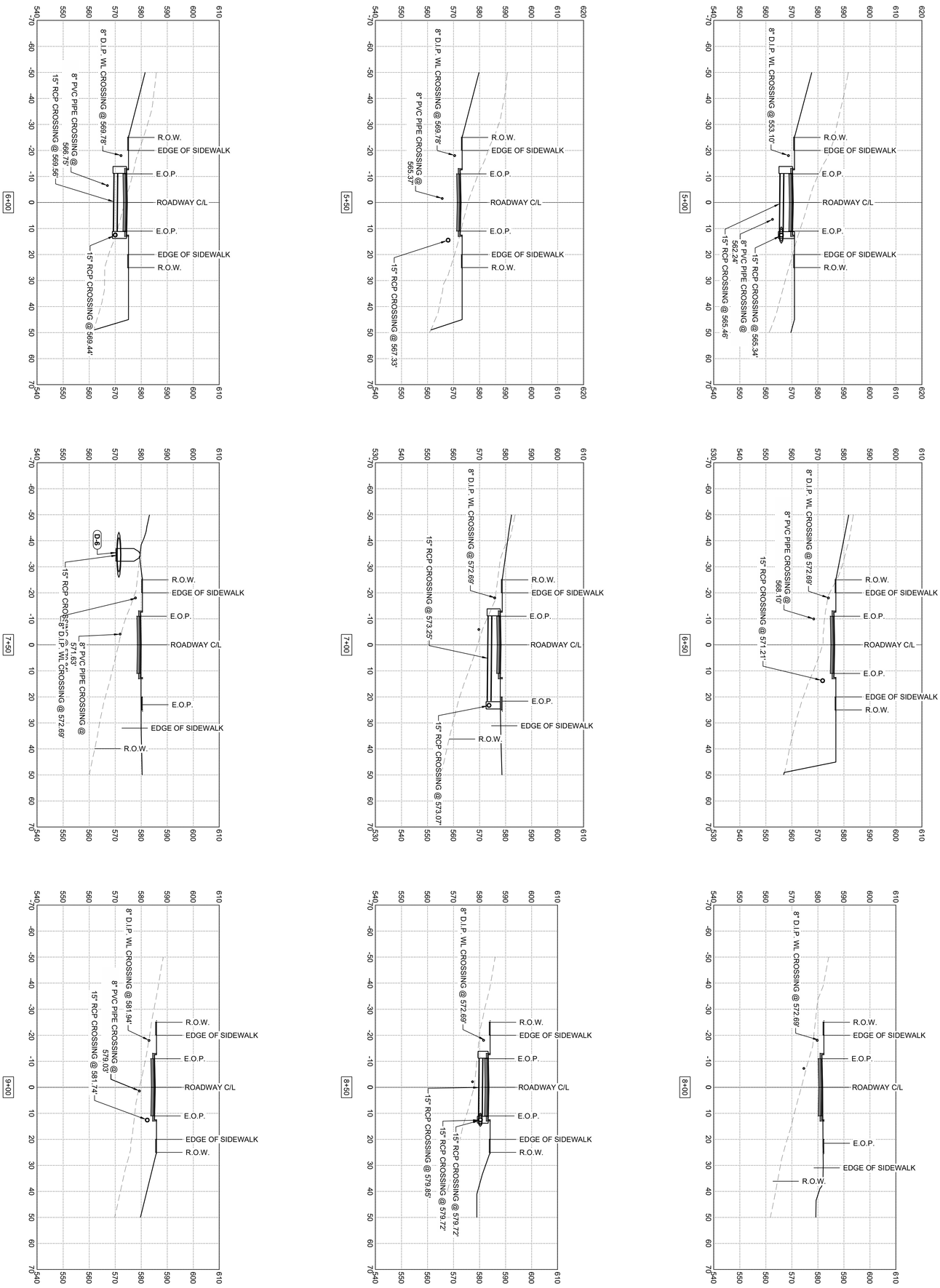
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

ROADWAY CROSS SECTIONS

SHEET NO. C3.31

FILENAME: Z:\PRIVATE CLIENTS\3608-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN\3608-25_C330_ROAD SECTIONS.DWG

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026



CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

PHONE: (615) 331-1441
FAX: (615) 331-1050

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

REVISIONS

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DATE: 08/10/2026
DESIGNED BY: CJ/MM
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CHECKED BY: NAC

ROADWAY CROSS SECTIONS

SHEET NO. C3.32

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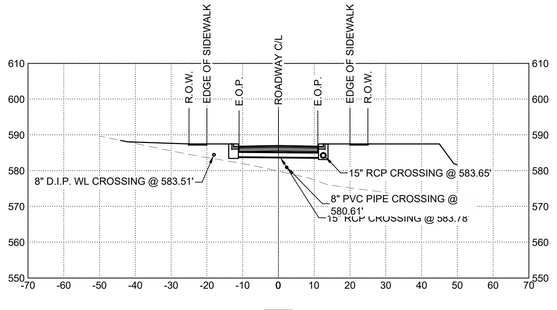
SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026



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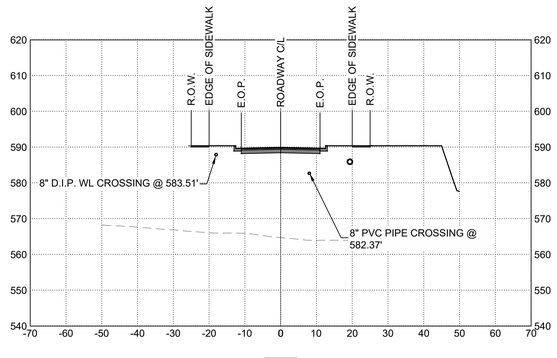

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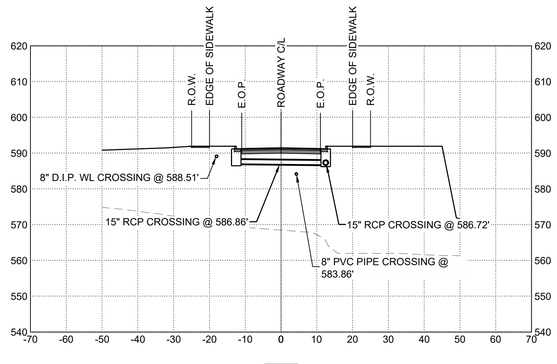

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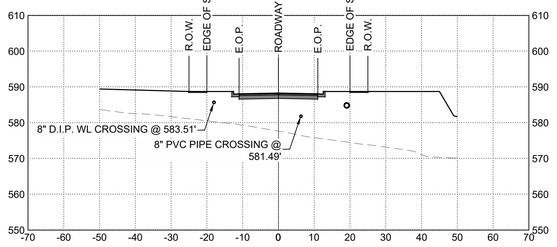

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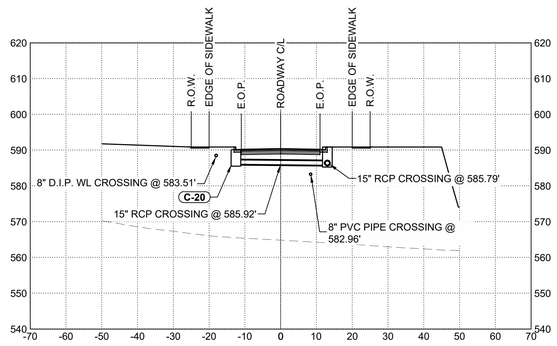

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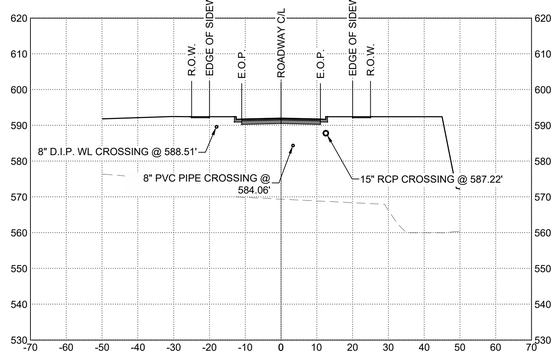

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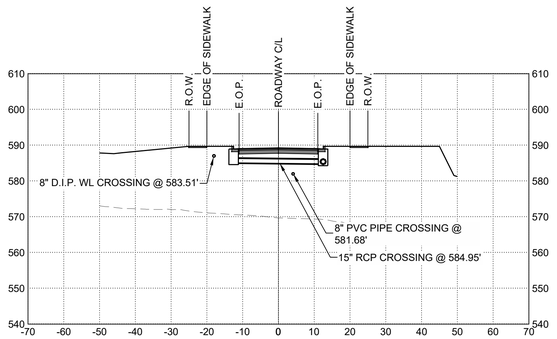

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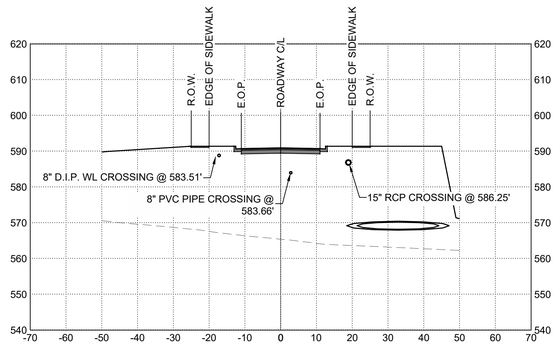

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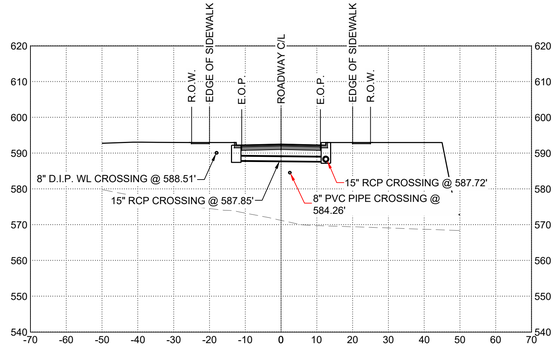


13+50

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

SAVE DATE: 8/3/2026, PLOT DATE: 8/3/2026

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

PHONE: (615) 331-1441
FAX: (615) 331-1050

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122560
STATE OF TENNESSEE
08/03/2026

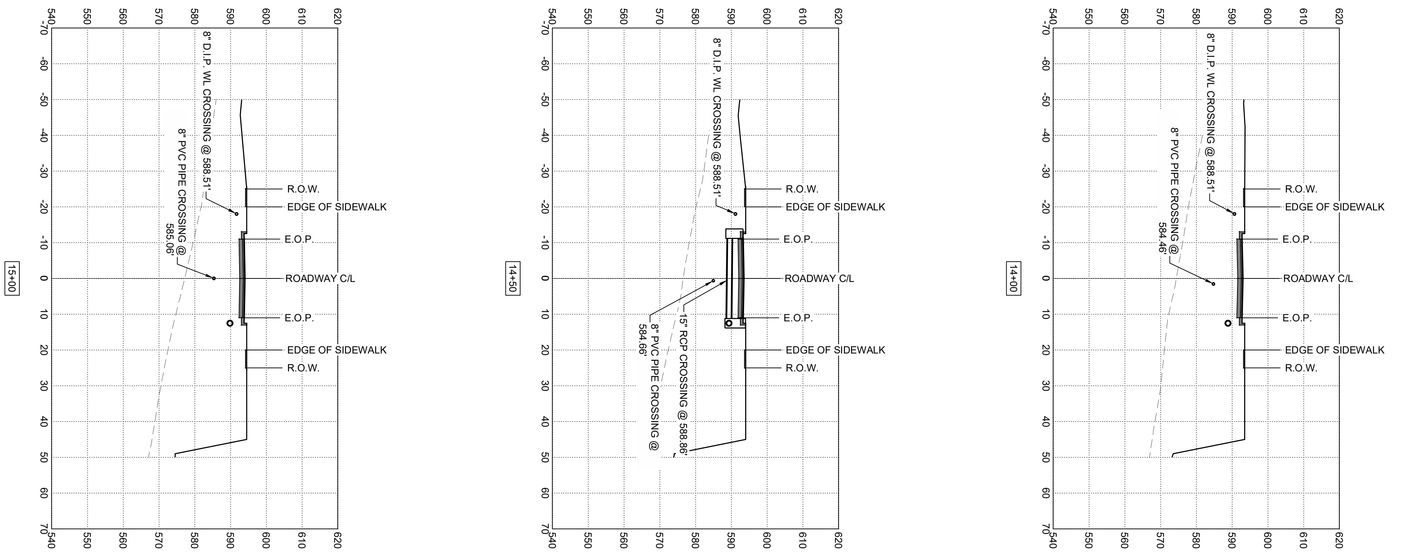
DATE: 08/10/2026

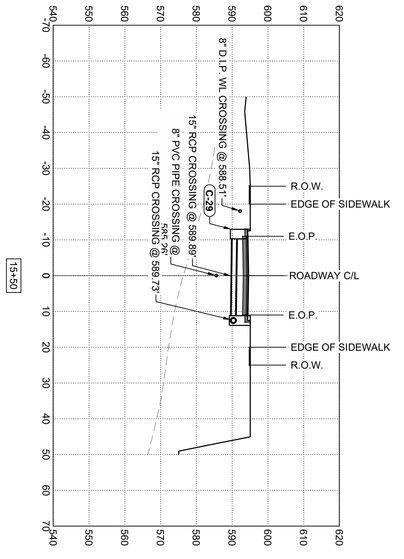
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

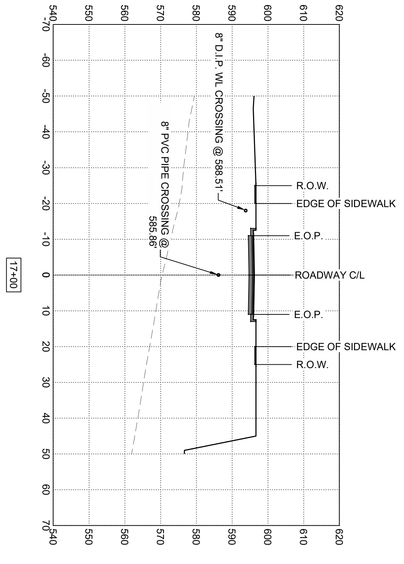
ROADWAY CROSS SECTIONS

SHEET NO. C3.33

FILENAME: Z:\PRIVATE CLIENTS\2025-24 - ALLEN FARMS SUBDIVISION\4.0 SUBDIVISION\4.1 CIVIL SITE\4.1.2 ROADS\SHEETS\2025-24_C3.33_ROAD SECTIONS.DWG







CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

PHONE: (615) 331-1441
FAX: (615) 331-1050

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

DATE: 08/10/2026

NATHAN ANDREW GOOD — REGISTERED ENGINEER — STATE OF TENNESSEE

09/03/2026

SHEET NO. C3.34

ROADWAY CROSS SECTIONS

FILENAME: Z:\PRIVATE CLIENTS\3608-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CAD\DESIGN\23608-25_C330_ROAD SECTIONS.DWG

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

18+50

20+00

21+50

19+00

20+50

22+00

19+50

21+00

22+50

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

PHONE: (615) 331-1441
FAX: (615) 331-1050

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 125540
STATE OF TENNESSEE
08/10/2026

DATE: 08/10/2026

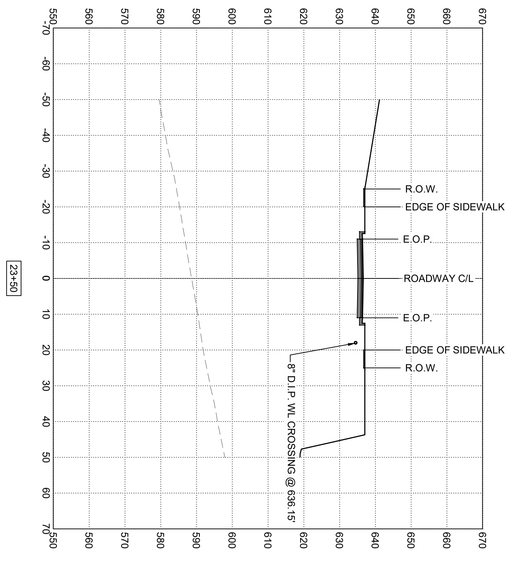
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

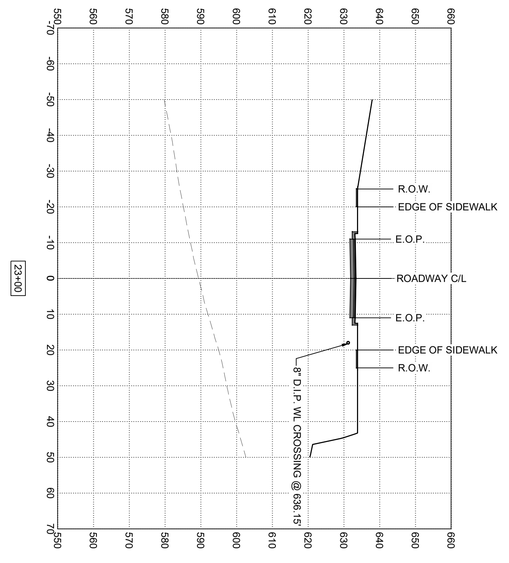
ROADWAY CROSS SECTIONS

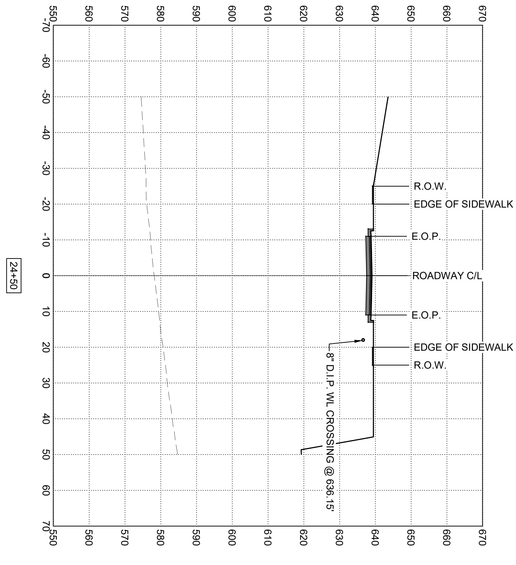
SHEET NO. C3.35

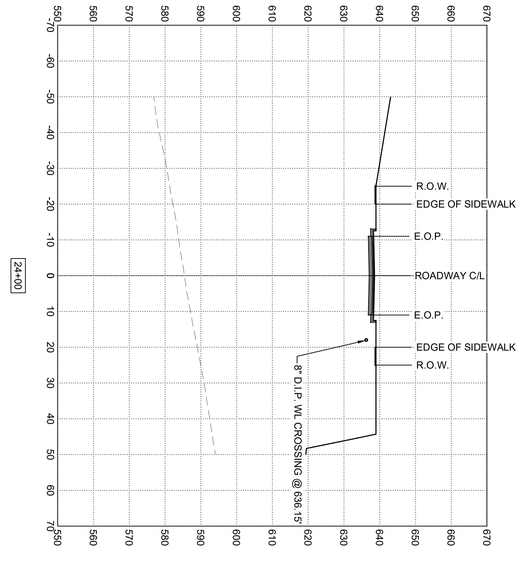
SAVE DATE: 8/3/2026, PLOT DATE: 8/3/2026

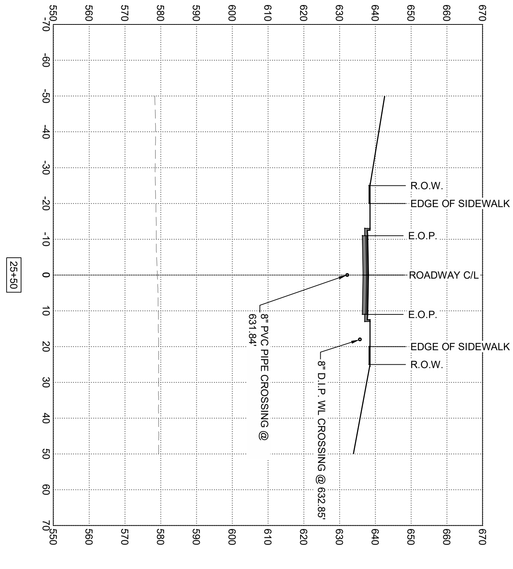
FILENAME: Z:\PROJECTS\LEN\7300\8.2_ALLEN FARMS SUBDIVISION\7300SD-SITE-CIVIL\SITE\CADD\SHEETS\7300SD_C3D_ROAD SECTIONS.DWG

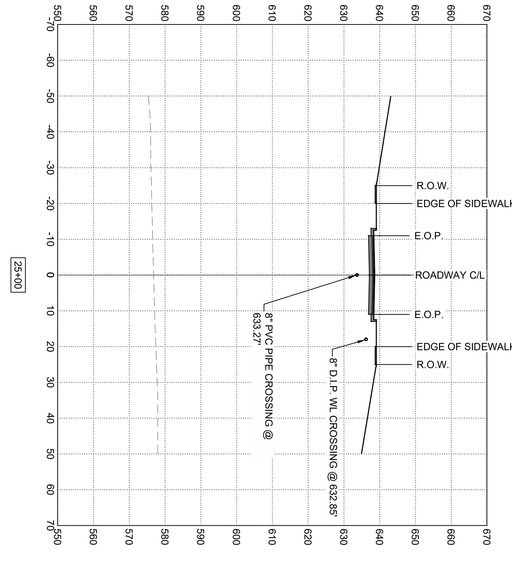












CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

ROADWAY CROSS SECTIONS

SHEET NO. C3.36

DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

NATHAN ANDREW GOUGH — REGISTERED ENGINEER — STATE OF TENNESSEE
09/03/2026

FILENAME: Z:\PRIVATE CLIENTS\3608-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN\3608-25_C330_ROAD SECTIONS.DWG
SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

26+00

27+00

28+00

26+50

27+50

28+50

REVISIONS

NO	DATE	BY	DESCRIPTION
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SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

PHONE: (615) 331-1441
FAX: (615) 331-1050

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
No. 122540
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

ROADWAY CROSS SECTIONS

SHEET NO. C3.37

FILENAME: Z:\PRIVATE CLIENTS\2025-24 - ALLEN FARM SUBDIVISION\CAD\DESIGN\DWGS\25-24 ALLEN FARM SUBDIVISION_C3.37_ROAD SECTIONS.DWG

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

PHONE: (615) 331-1441
FAX: (615) 331-1050

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 125340
STATE OF TENNESSEE
08/10/2026

DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

ROADWAY CROSS SECTIONS

SHEET NO. C3.38

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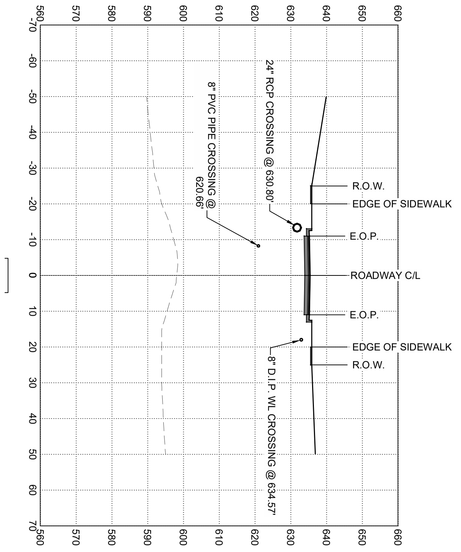
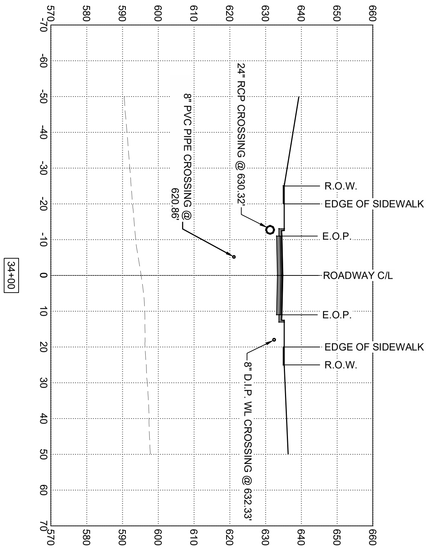
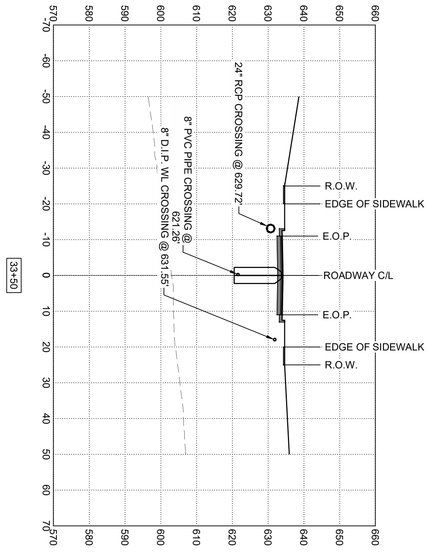
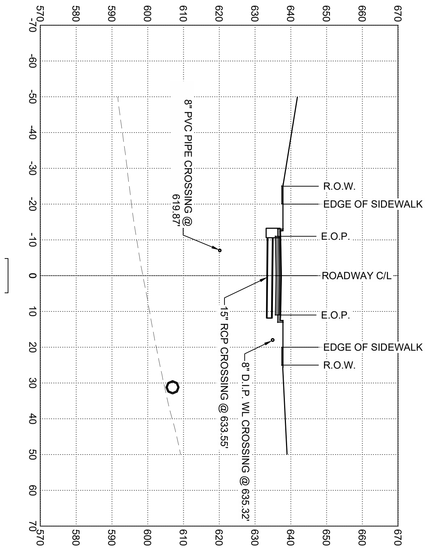
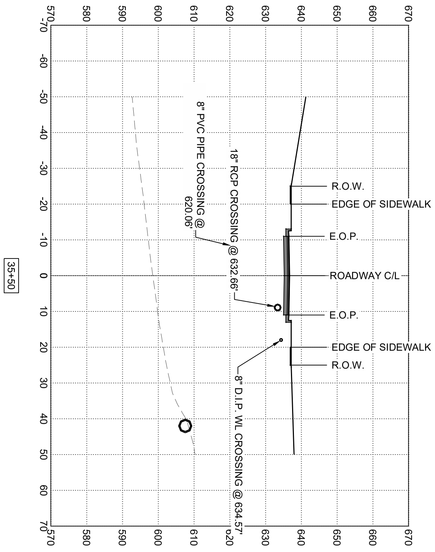
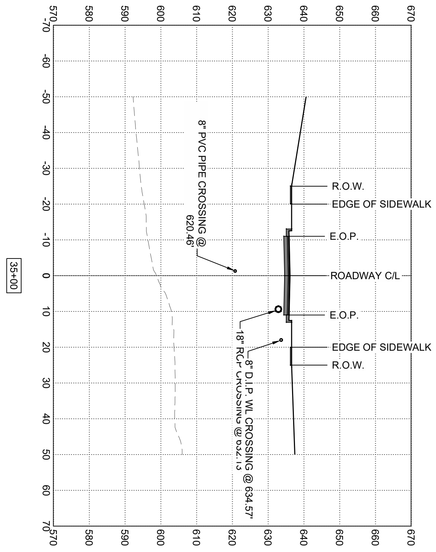


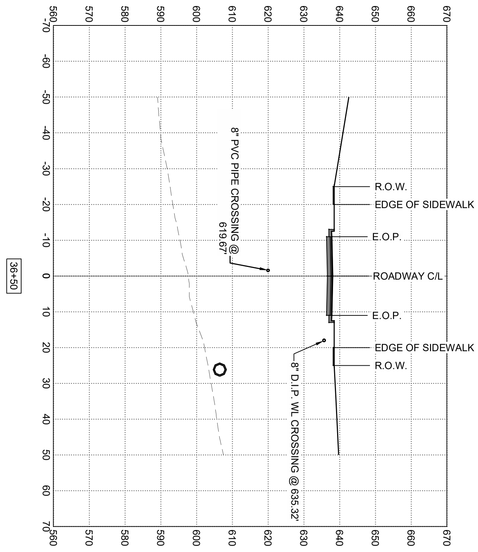












CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

PHONE: (615) 331-1441
FAX: (615) 331-1050

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

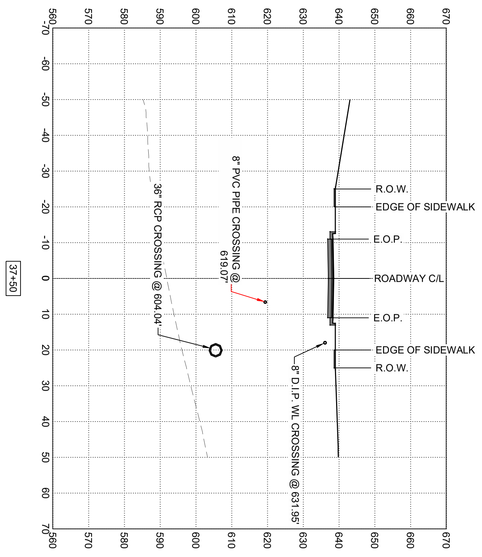
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

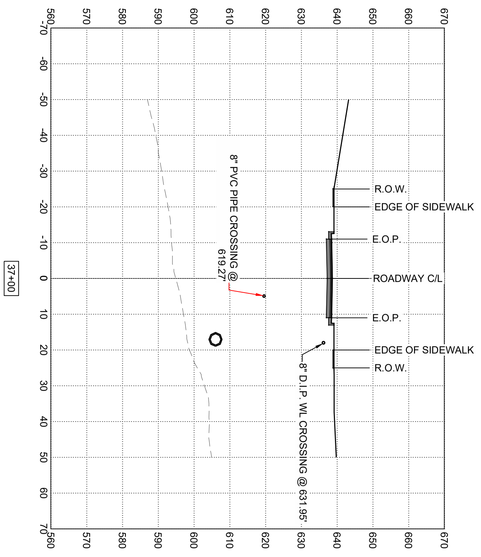
ROADWAY CROSS SECTIONS

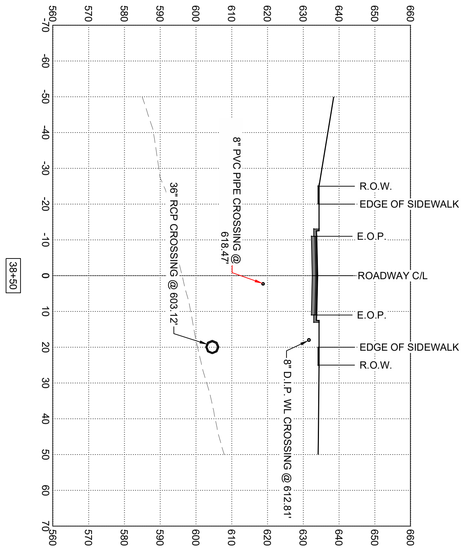
SHEET NO. C3.39

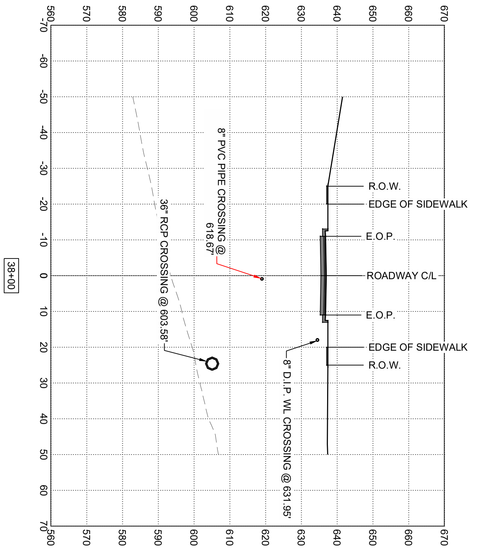
FILENAME: Z:\PRIVATE CLIENTS\3608-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN2\3608-25_C330_ROAD SECTIONS.DWG

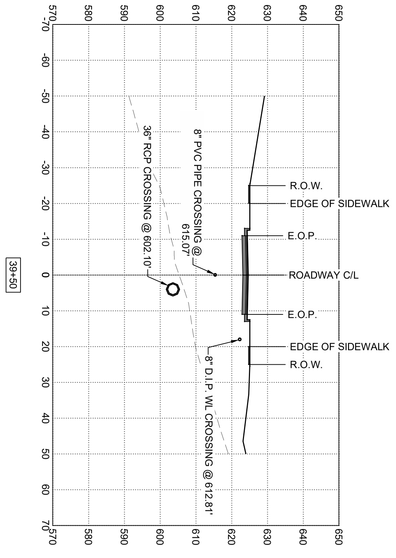
SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

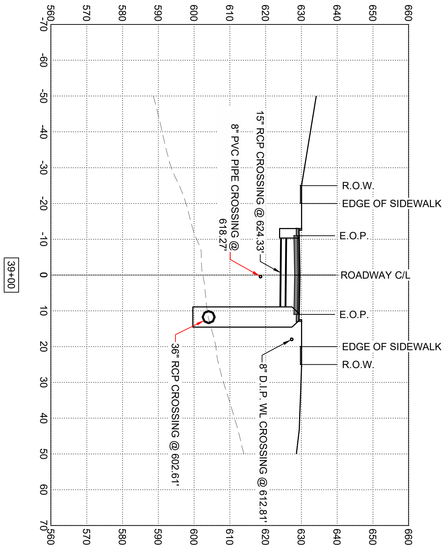












SHEET NO. C3.40

ROADWAY CROSS SECTIONS

DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

NATHAN ANDREW GOUGH — REGISTERED ENGINEER — STATE OF TENNESSEE
09/03/2026

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

PHONE: (615) 331-1441
FAX: (615) 331-1050

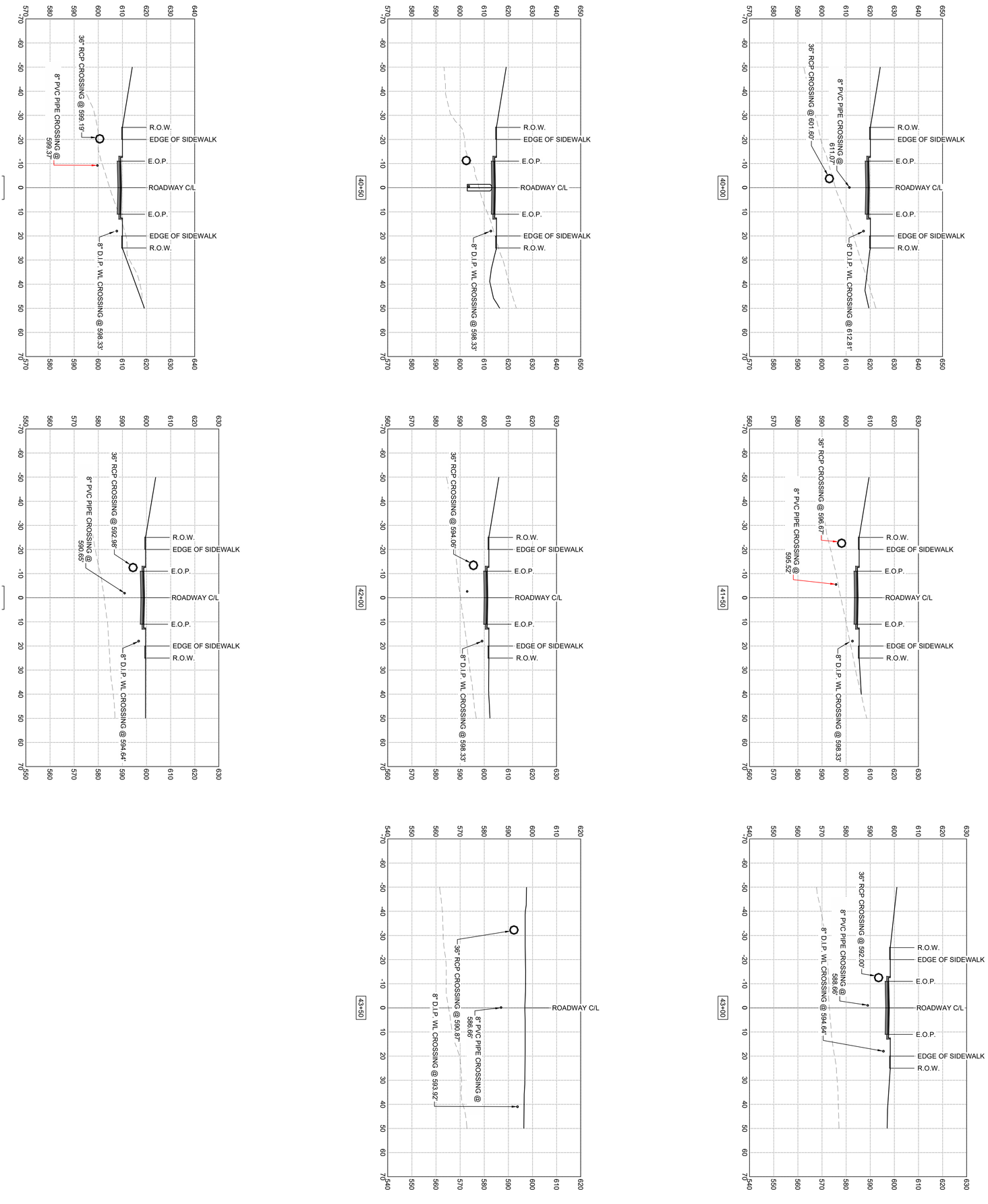
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

FILENAME: Z:\PRIVATE CLIENTS\3608-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN\23608-25_C330_ROAD SECTIONS.DWG

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026



CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

PHONE: (615) 331-1441
FAX: (615) 331-1050

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

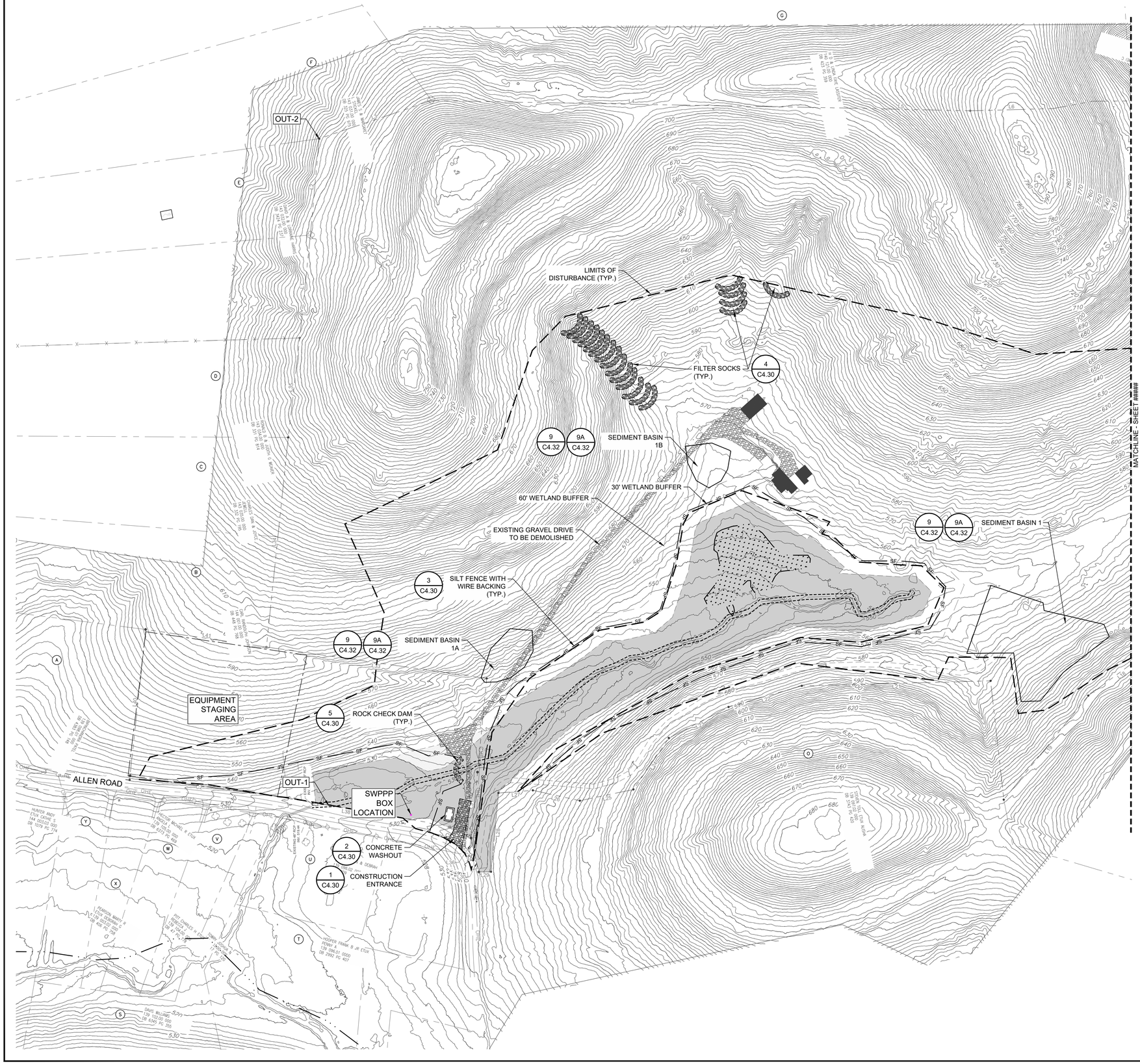
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

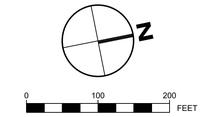
ROADWAY CROSS SECTIONS

SHEET NO. C3.41

FILENAME: Z:\PRIVATE CLIENTS\3608-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN2\3608-25_C330_ROAD SECTIONS.DWG

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026





FEMA NOTE

- US FEMA FIRM COMMUNITY PANEL NUMBER: 47165C0381H, EFFECTIVE DATE 2/26/2021; FLOOD ZONE AE.

EPSC DATA TABLE & NOTES

TOTAL SITE AREA	3,987,918 SQ. FT. (91.55 AC)
TOTAL DISTURBED AREA	1,894,556 SQ. FT. (43.49 AC)
IMPERVIOUS AREA - ADDITIONAL	195,218 SQ. FT. (4.48 AC)
PERVIOUS AREA @ COMPLETION	3,792,700 SQ. FT. (87.07 AC)

THE PROJECT ASSOCIATED WITH THESE SUBMITTED PLANS DISTURBS GREATER THAN ONE (1) ACRE, THE TOTAL DISTURBED AREA IS: 39.8 ACRES. TDEC GENERAL PERMIT HAS BEEN ISSUED REFERENCE NOC PERMIT #TNRXXXXX.

THIS SITE DISCHARGES INTO WATERS IDENTIFIED BY TDEC AS:

- ☑ IMPAIRED FOR SILTATION
- ☐ IMPAIRED FOR HABITAT ALTERATION
- ☑ EXCEPTIONAL

CIRCLE ONE DEVELOPER PROJECT ENGINEER

SIGNATURE DATE 08/10/2026

INITIAL (PHASE I) EPSC SEQUENCE:

1. INSTALL STABILIZED CONSTRUCTION EXIT. THIS SHALL BE THE FIRST CONSTRUCTION ACTIVITY OF THE PROJECT.
2. INSTALL FILTER SOCK AS SHOWN.
3. INSTALL SEDIMENT BASINS.
4. ALL INSTALLED EPSC MEASURES ARE TO BE APPROVED BY CITY OF GOODLETTSVILLE PRIOR TO START OF GRADING.
5. SEE SHEET C0.01 FOR ADDITIONAL EPSC NOTES AND REQUIREMENTS.

OUTFALL TABLE

OUTFALL ID	DRAINAGE AREA	NORTHING	EASTING
OUT-1	145.4 AC	36.34730	-86.662192
OUT-2	5.22 AC	36.348147	-86.6669583
OUT-3	0.49 AC	36.355169	-86.66558
OUT-4	0.12 AC	36.355925	-86.662814

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122500
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026

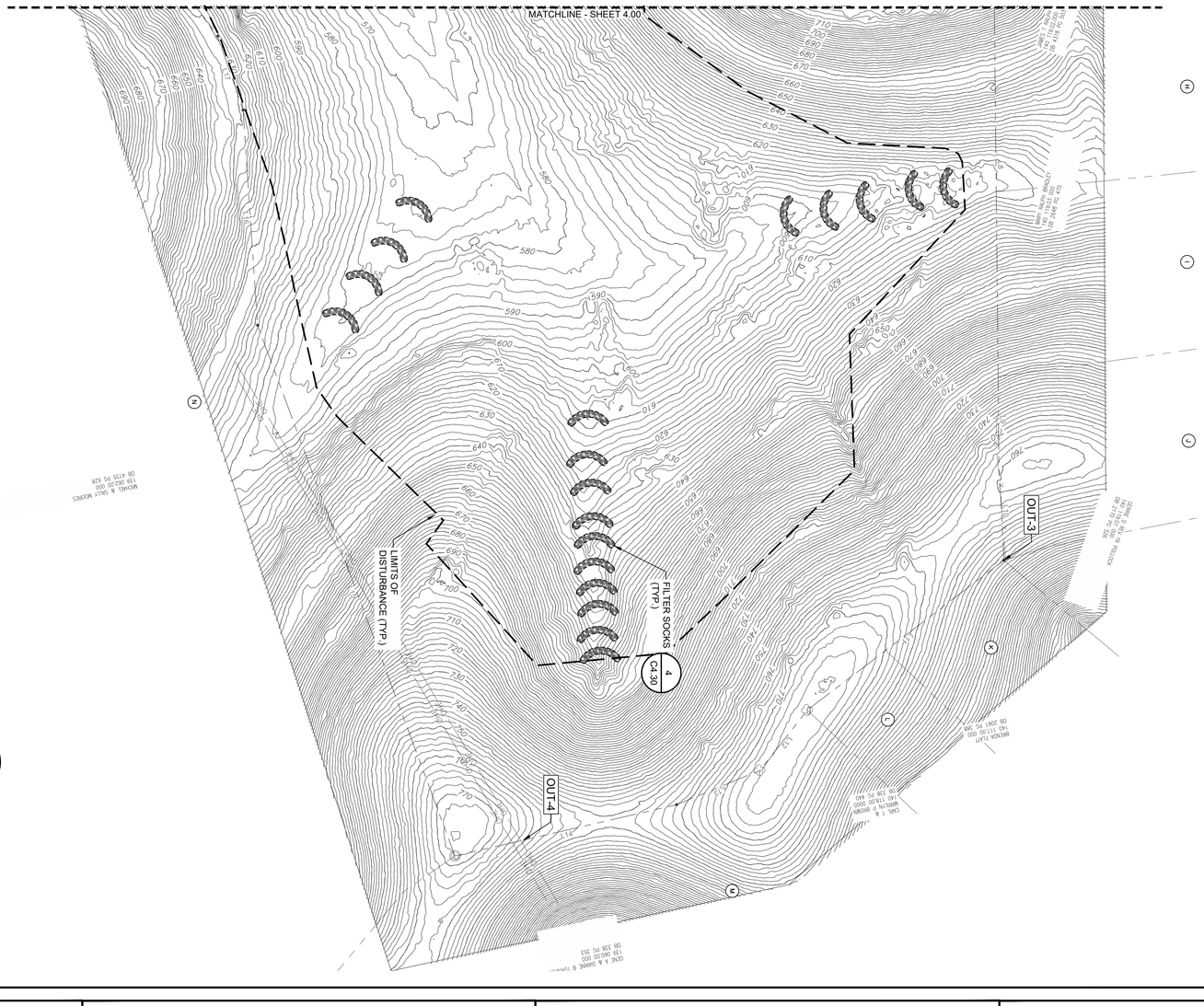
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

INITIAL EPSC PLAN

SHEET NO. C4.00

FILENAME: Z:\PRIVATE CLIENTS\3008-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN\3008-25_C4.00_ESPC INITIAL PLAN.DWG

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026



CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

PHONE: (615) 331-1441
FAX: (615) 331-1050

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

INITIAL EPSC PLAN

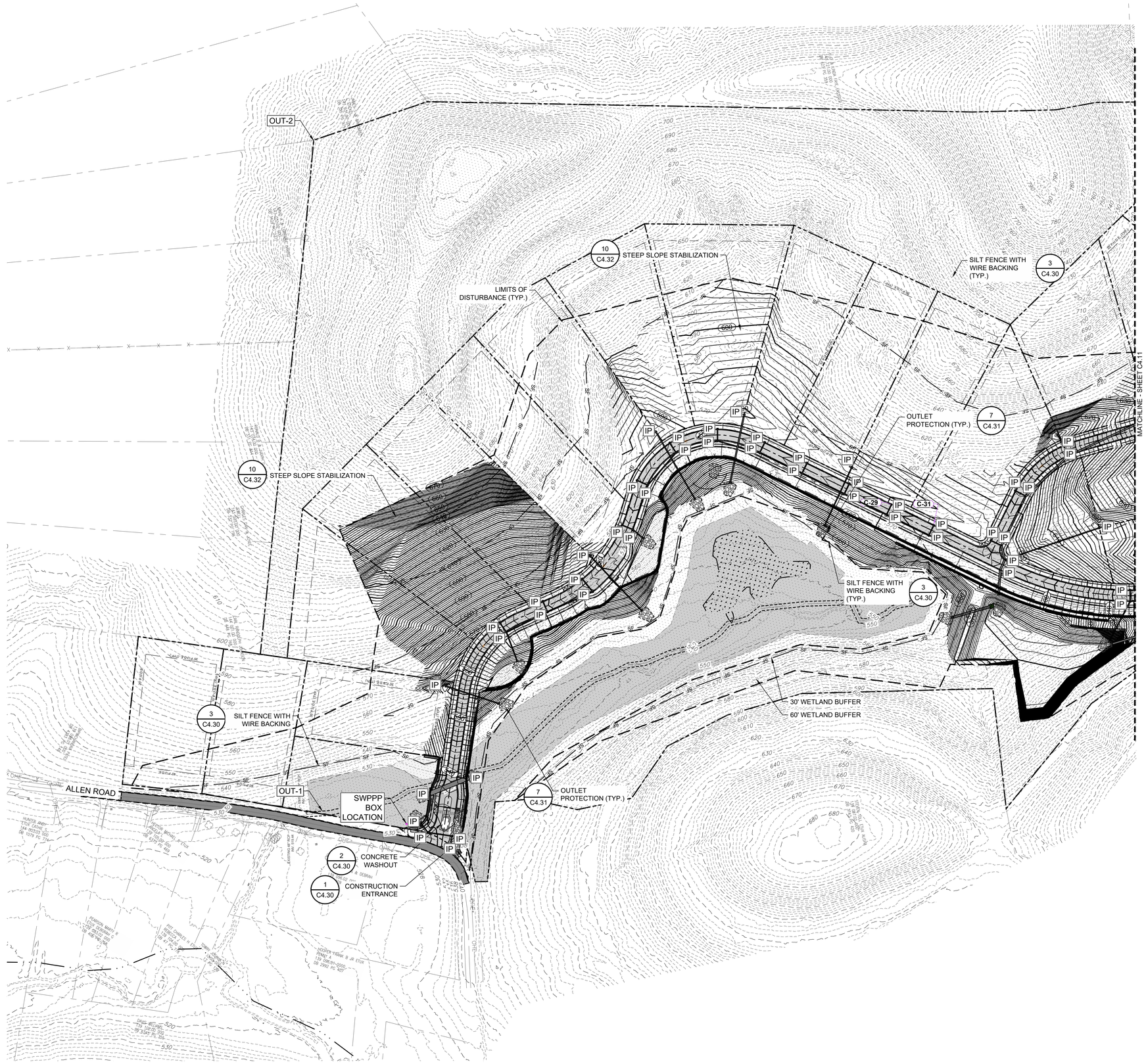
SHEET NO. C4.01

DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

NATHAN ANDREW GOUGH — REGISTERED ENGINEER — STATE OF TENNESSEE — 129033 — 08/10/2026

FILENAME: Z:\PRIVATE CLIENTS\3608-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN\3608-25_C400_ESPC INITIAL PLAN.DWG

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026



0 100 200 FEET

FEMA NOTE

- US FEMA FIRM COMMUNITY PANEL NUMBER: 47165C0381H, EFFECTIVE DATE 2/26/2021; FLOOD ZONE AE.

LEGEND

IP INLET PROTECTION (TYP.) SEE SHEET C4.31 (DETAIL 6)

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

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NASHVILLE, TENNESSEE 37211

DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055

PHONE: (615) 331-1441
FAX: (615) 331-1050

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ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122500
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026

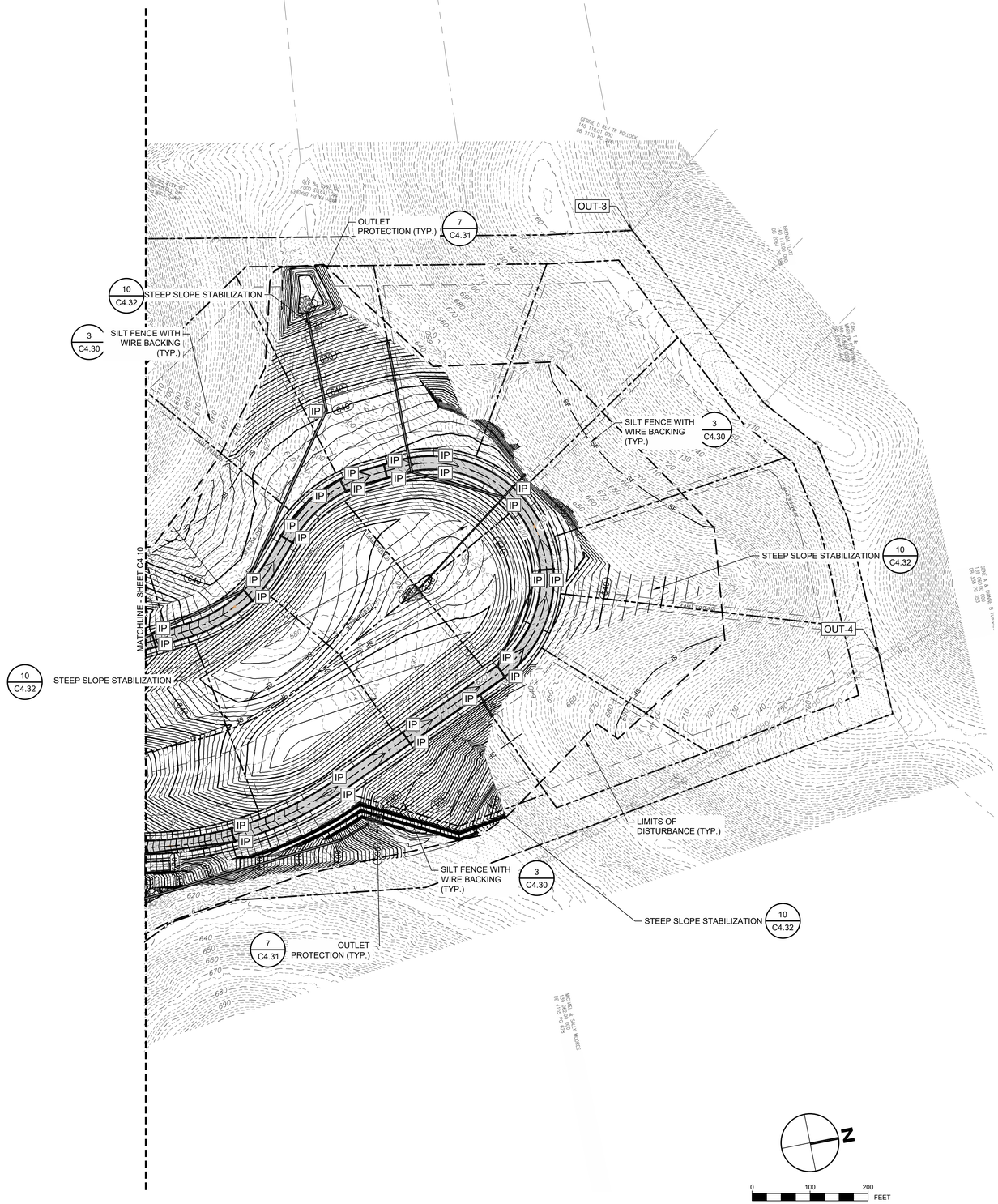
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

INTERMEDIATE EPSC PLAN

SHEET NO. C4.10

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

T:\LAND_PROJ\CE\ENGR\SHEETS\ALLEN FARMS SUBDIVISION\CE-SHEETS-ALLEN FARMS SUBDIVISION.DGN, C4.10, DEPLOYMENT PLAN.DWG



FEMA NOTE

- US FEMA FIRM COMMUNITY PANEL NUMBER: 47165C0381H, EFFECTIVE DATE 2/26/2021; FLOOD ZONE AE.

REVISIONS			
NO	DATE	BY	DESCRIPTION
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NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

PHONE: (615) 331-1441
FAX: (615) 331-1050

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ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
No. 122500
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

INTERMEDIATE EPSC PLAN

SHEET NO. C4.11

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

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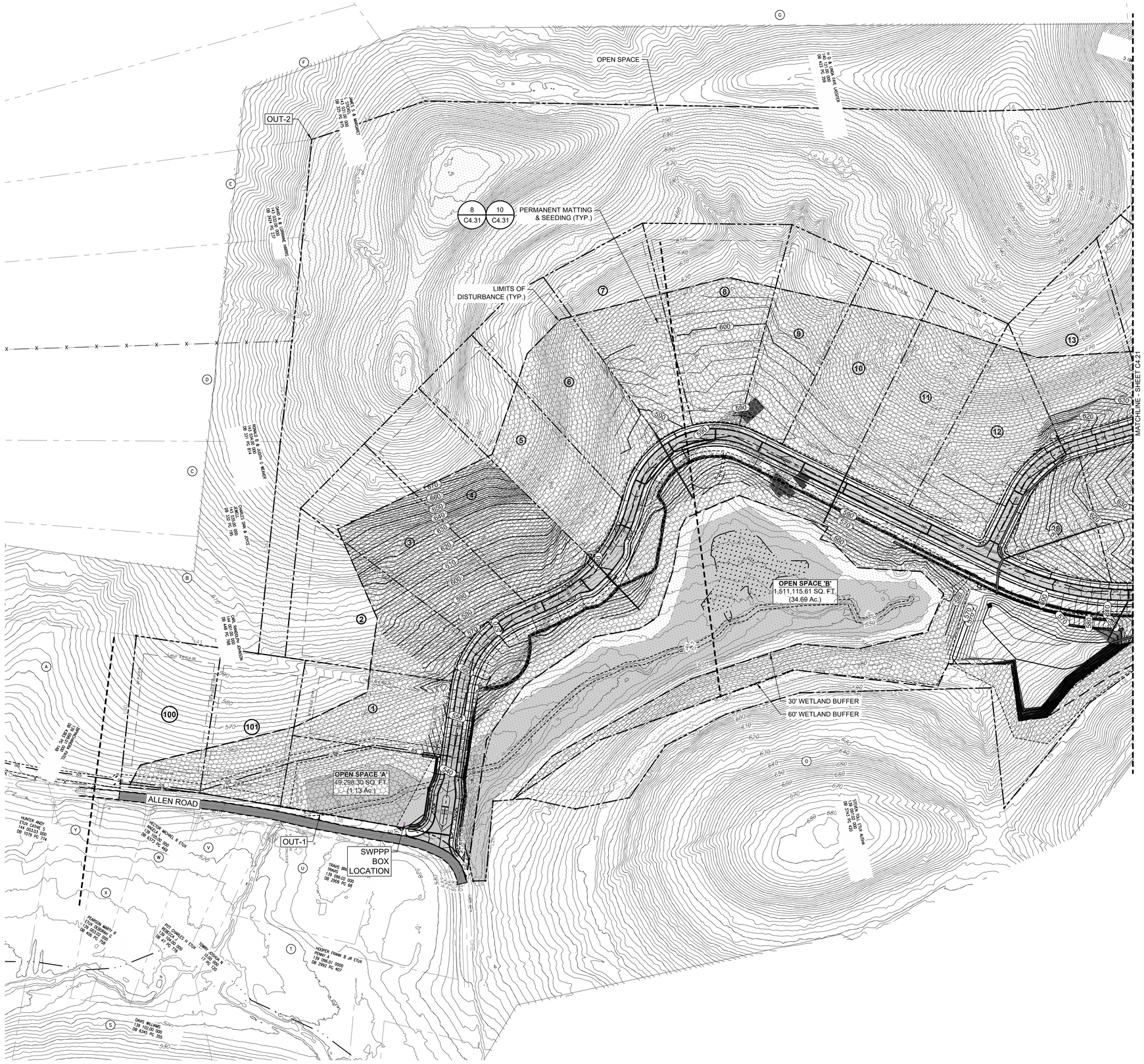

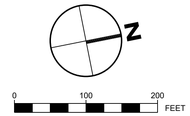

FEMA NOTE

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REVISIONS

NO	DATE	BY	DESCRIPTION
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NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

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ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122500
STATE OF TENNESSEE
Nathan Couch
09/03/2026

DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

FINAL EPSC PLAN

SHEET NO. C4.20

FILENAME: Z:\PRIVATE CLIENTS\3008-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN\3008-25_C4.20_ESPC FINAL PLAN.DWG

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

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NO	DATE	BY	DESCRIPTION
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NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055

PHONE: (615) 331-1441
FAX: (615) 331-1050

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ALLEN FARMS SUBDIVISION

ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122540
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

FINAL EPSC PLAN

SHEET NO. C4.21

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

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ACTIVITY: Stabilized Construction Exit | TCP – 03

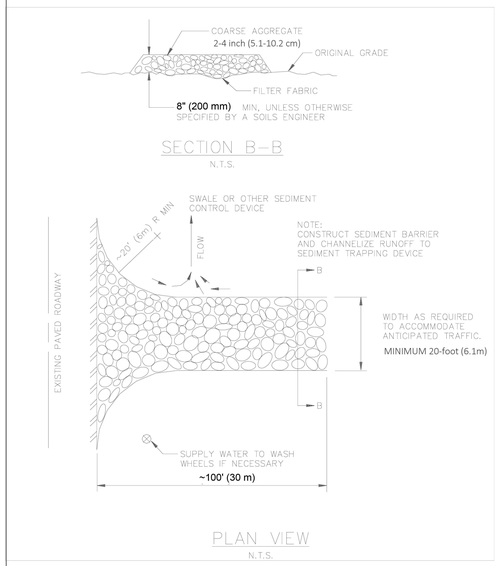
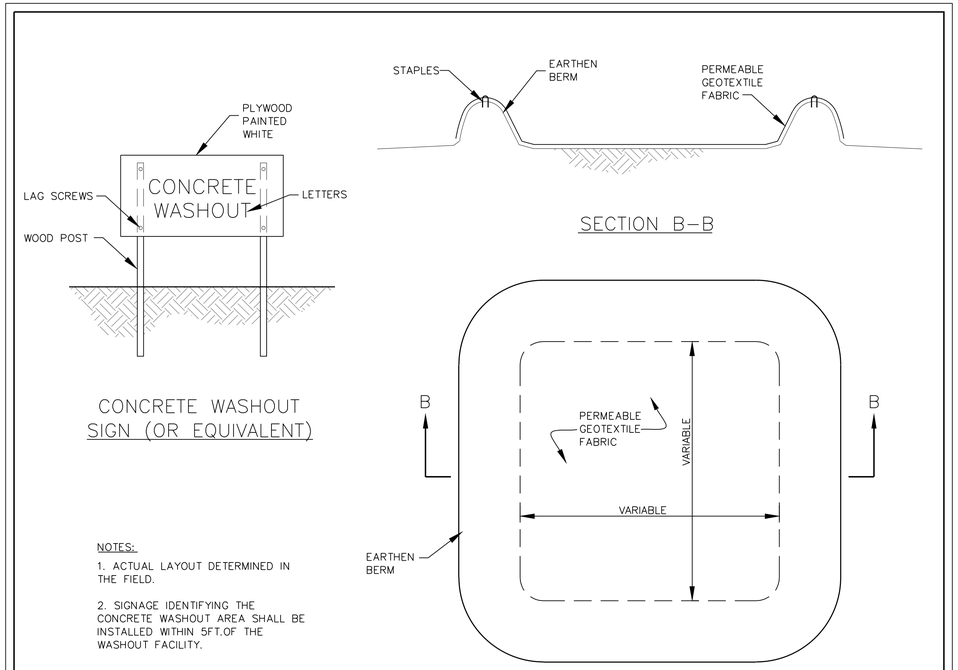


Figure TCP-03-1
Stabilized Construction Exit

Volume 4:
Stormwater Best Management Practices –
Temp. Construction Site Management Practices TCP-03-5 2021

1 CONSTRUCTION ENTRANCE TCP-03-1
NOT TO SCALE



2 CONCRETE WASHOUT
NOT TO SCALE

ACTIVITY: Weighted Sediment Tube | TCP – 14

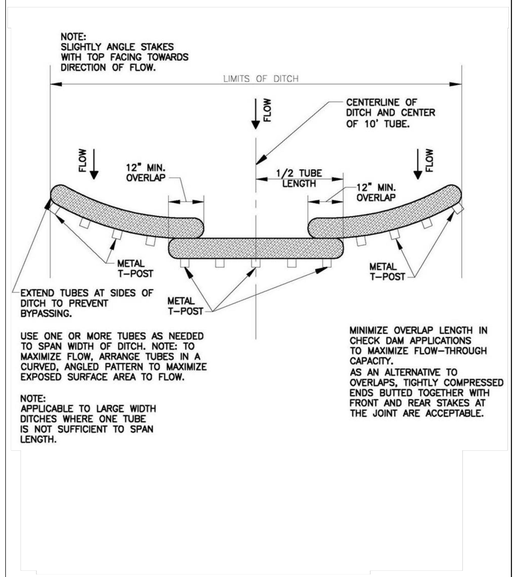
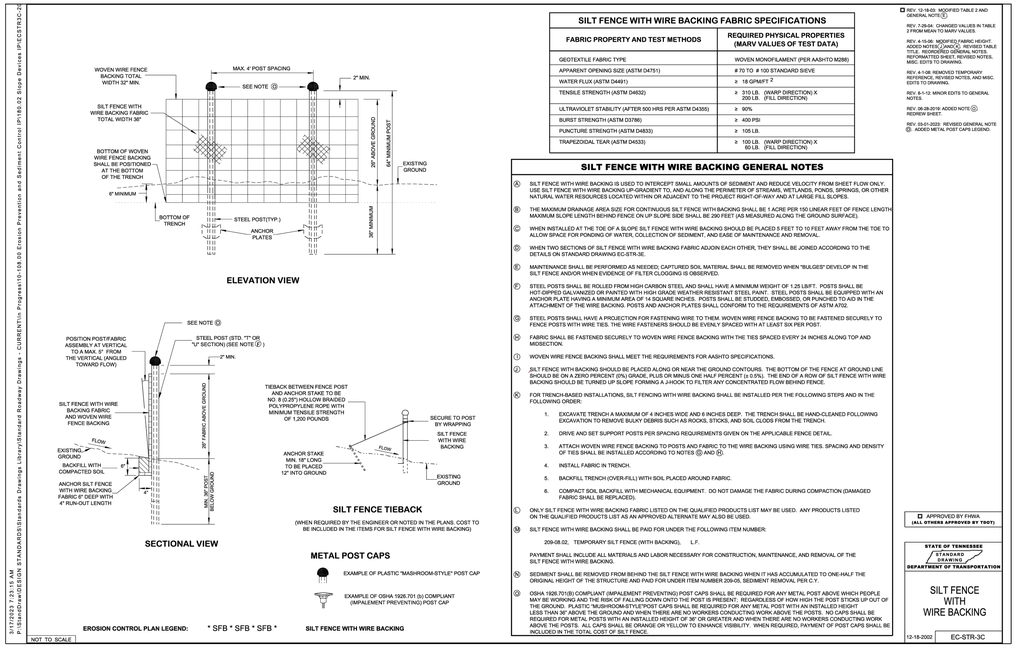


Figure TCP-14-2
Check Dam Arrangement for Larger Width Ditches for Sediment Tubes

Volume 4:
Stormwater Best Management Practices –
Temp. Construction Management Practices TCP-14-7 2021

4 SEDIMENT TUBES (FILTER SOCKS) TCP-14-2
NOT TO SCALE



SILT FENCE WITH WIRE BACKING FABRIC SPECIFICATIONS	
FABRIC PROPERTY AND TEST METHODS	**REQUIRED PHYSICAL PROPERTIES (MARV VALUES OF TEST DATA)**
GEOTEXTILE FABRIC TYPE	WOVEN MONOFILAMENT (PER AASHTO M288)
APPARENT OPENING SIZE (ASTM D4751)	# 70 TO # 100 STANDARD SIEVE
WATER FLUX (ASTM D4491)	≥ 18 GPM/FT ^{2}
TENSILE STRENGTH (ASTM D4632)	≥ 310 LB. (WARP DIRECTION) X 200 LB. (FILL DIRECTION)
ULTRAVIOLET STABILITY (AFTER 500 HRS PER ASTM D4355)	≥ 90%
BURST STRENGTH (ASTM D3786)	≥ 400 PSI
PUNCTURE STRENGTH (ASTM D4833)	≥ 105 LB.
TRAPEZOIDAL TEAR (ASTM D4533)	≥ 100 LB. (WARP DIRECTION) X 60 LB. (FILL DIRECTION)

SILT FENCE WITH WIRE BACKING GENERAL NOTES

Ⓐ SILT FENCE WITH WIRE BACKING IS USED TO INTERCEPT SMALL AMOUNTS OF SEDIMENT AND REDUCE VELOCITY FROM SHEET FLOW ONLY. USE SILT FENCE WITH WIRE BACKING UP-GRADIENT TO, AND ALONG THE PERIMETER OF STREAMS, WETLANDS, PONDS, SPRINGS, OR OTHER NATURAL WATER RESOURCES LOCATED WITHIN OR ADJACENT TO THE PROJECT RIGHT-OF-WAY AND AT LARGE FILL SLOPES.

Ⓑ THE MAXIMUM DRAINAGE AREA SIZE FOR CONTINUOUS SILT FENCE WITH BACKING SHALL BE 1 ACRE PER 100 LINEAR FEET OF FENCE LENGTH. MAXIMUM SLOPE LENGTH BEHIND FENCE ON UP SLOPE SIDE SHALL BE 290 FEET (AS MEASURED ALONG THE GROUND SURFACE).

Ⓒ WHEN INSTALLED AT THE TOE OF A SLOPE SILT FENCE WITH WIRE BACKING SHOULD BE PLACED 5 FEET TO 10 FEET AWAY FROM THE TOE TO ALLOW SPACE FOR PONDING OF WATER, COLLECTION OF SEDIMENT, AND EASE OF MAINTENANCE AND REMOVAL.

Ⓓ WHEN TWO SECTIONS OF SILT FENCE WITH WIRE BACKING FABRIC ADJOIN EACH OTHER, THEY SHALL BE JOINED ACCORDING TO THE DETAILS ON STANDARD DRAWING EC-STR-3E.

Ⓔ MAINTENANCE SHALL BE PERFORMED AS NEEDED; CAPTURED SOIL MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE AND/OR WHEN EVIDENCE OF FILTER CLOGGING IS OBSERVED.

Ⓕ STEEL POSTS SHALL BE ROLLED FROM HIGH CARBON STEEL AND SHALL HAVE A MINIMUM WEIGHT OF 1.25 LB/FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH GRADE WEATHER RESISTANT STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH AN ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED TO AID IN THE ATTACHMENT OF THE WIRE BACKING. POSTS AND ANCHOR PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A702.

Ⓖ STEEL POSTS SHALL HAVE A PROJECTION FOR FASTENING WIRE TO THEM. WOVEN WIRE FENCE BACKING TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. THE WIRE FASTENERS SHOULD BE EVENLY SPACED WITH AT LEAST SIX PER POST.

Ⓗ FABRIC SHALL BE FASTENED SECURELY TO WOVEN WIRE FENCE BACKING WITH THE TIES SPACED EVERY 24 INCHES ALONG TOP AND MIDSECTION.

Ⓘ WOVEN WIRE FENCE BACKING SHALL MEET THE REQUIREMENTS FOR AASHTO SPECIFICATIONS.

Ⓙ SILT FENCE WITH BACKING SHOULD BE PLACED ALONG OR NEAR THE GROUND CONTOURS. THE BOTTOM OF THE FENCE AT GROUND LINE SHOULD BE ON A ZERO PERCENT (0%) GRADE, PLUS OR MINUS ONE HALF PERCENT (± 0.5%). THE END OF A ROW OF SILT FENCE WITH WIRE BACKING SHOULD BE TURNED UP SLOPE FORMING A J-HOOK TO FILTER ANY CONCENTRATED FLOW BEHIND FENCE.

Ⓚ FOR TRENCH-BASED INSTALLATIONS, SILT FENCING WITH WIRE BACKING SHALL BE INSTALLED PER THE FOLLOWING STEPS AND IN THE FOLLOWING ORDER:

1. EXCAVATE TRENCH A MAXIMUM OF 4 INCHES WIDE AND 6 INCHES DEEP. THE TRENCH SHALL BE HAND-CLEANED FOLLOWING EXCAVATION TO REMOVE BULKY DEBRIS SUCH AS ROCKS, STICKS, AND SOIL CLODS FROM THE TRENCH.
2. DRIVE AND SET SUPPORT POSTS PER SPACING REQUIREMENTS GIVEN ON THE APPLICABLE FENCE DETAIL.
3. ATTACH WOVEN WIRE FENCE BACKING TO POSTS AND FABRIC TO THE WIRE BACKING USING WIRE TIES. SPACING AND DENSITY OF TIES SHALL BE INSTALLED ACCORDING TO NOTES Ⓖ AND Ⓗ.
4. INSTALL FABRIC IN TRENCH.
5. BACKFILL TRENCH (OVER-FILL) WITH SOIL PLACED AROUND FABRIC.
6. COMPACT SOIL BACKFILL WITH MECHANICAL EQUIPMENT. DO NOT DAMAGE THE FABRIC DURING COMPACTION (DAMAGED FABRIC SHALL BE REPLACED).

Ⓛ ONLY SILT FENCE WITH WIRE BACKING FABRIC LISTED ON THE QUALIFIED PRODUCTS LIST MAY BE USED. ANY PRODUCTS LISTED ON THE QUALIFIED PRODUCTS LIST AS AN APPROVED ALTERNATE MAY ALSO BE USED.

Ⓜ SILT FENCE WITH WIRE BACKING SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBER:

209-08.02, TEMPORARY SILT FENCE (WITH BACKING), L.F.

PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF THE SILT FENCE WITH WIRE BACKING.

Ⓝ SEDIMENT SHALL BE REMOVED FROM BEHIND THE SILT FENCE WITH WIRE BACKING WHEN IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE STRUCTURE AND PAID FOR UNDER ITEM NUMBER 209-05, SEDIMENT REMOVAL PER C.Y.

Ⓞ OSHA 1926.701(B) COMPLIANT (IMPALEMENT PREVENTING) POST CAPS SHALL BE REQUIRED FOR ANY METAL POST ABOVE WHICH PEOPLE MAY BE WORKING AND THE RISK OF FALLING DOWN ONTO THE POST IS PRESENT, REGARDLESS OF HOW HIGH THE POST STICKS UP OUT OF THE GROUND. PLASTIC "MUSHROOM-STYLE"POST CAPS SHALL BE REQUIRED FOR ANY METAL POST WITH AN INSTALLED HEIGHT LESS THAN 30" ABOVE THE GROUND AND WHEN THERE ARE NO WORKERS CONDUCTING WORK ABOVE THE POSTS. NO CAPS SHALL BE REQUIRED FOR METAL POSTS WITH AN INSTALLED HEIGHT OF 30" OR GREATER AND WHEN THERE ARE NO WORKERS CONDUCTING WORK ABOVE THE POSTS. CAPS SHALL BE ORANGE OR YELLOW TO ENHANCE VISIBILITY. WHEN REQUIRED, PAYMENT OF POST CAPS SHALL BE INCLUDED IN THE TOTAL COST OF SILT FENCE.

REV. 12-18-00: MODIFIED TABLE 2 AND GENERAL NOTE Ⓚ.
REV. 7-28-04: CHANGED VALUES IN TABLE 2 FROM MEAN TO MARV VALUES.
REV. 4-15-05: MODIFIED FABRIC HEIGHT. ADDED NOTE Ⓞ AND Ⓟ. REVISED TABLE 2 AND GENERAL NOTE Ⓚ. REVISED REFORMATTED SHEET, REVISED NOTES, MISC. EDITS TO DRAWING.
REV. 4-1-08: REMOVED TEMPORARY REFERENCE, REVISED NOTES, AND MISC. EDITS TO DRAWING.
REV. 8-1-12: MINOR EDITS TO GENERAL NOTES.
REV. 06-28-2019: ADDED NOTE Ⓠ REDREW SHEET.
REV. 03-01-2023: REVISED GENERAL NOTE Ⓟ. ADDED METAL POST CAPS LEGEND.

APPROVED BY FHWA (ALL OTHERS APPROVED BY TDOT)

STATE OF TENNESSEE STANDARD DRAWING DEPARTMENT OF TRANSPORTATION

SILT FENCE WITH WIRE BACKING

12-18-2002 EC-STR-3C

3 SILT FENCE WITH WIRE BACKING TCP-13-1
NOT TO SCALE

ACTIVITY: Check Dams | TCP – 12

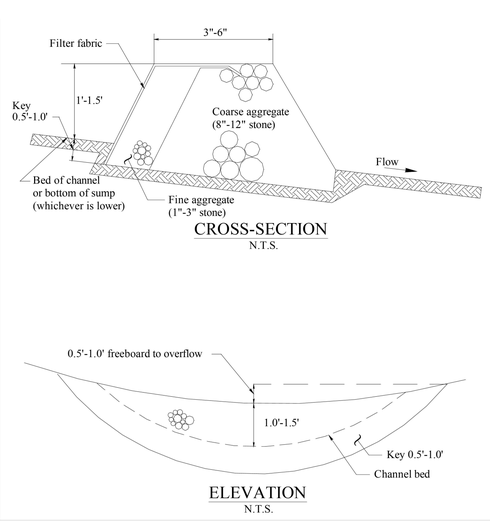


Figure TCP-12-1
Stone Check Dam Construction

Volume 4:
Stormwater Best Management Practices –
Temp. Construction Management Practices TCP-12-5 2021

ACTIVITY: Check Dams | TCP – 12

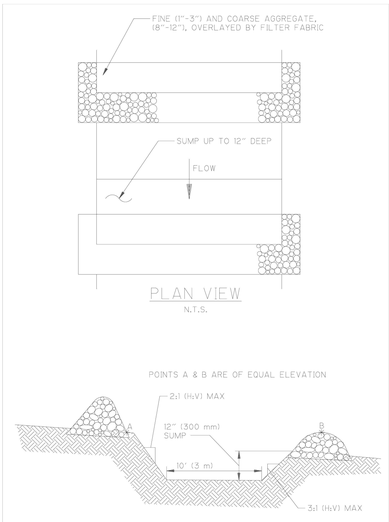


Figure TCP-12-2
Stone Check Dam Spacing

Volume 4:
Stormwater Best Management Practices –
Temp. Construction Management Practices TCP-12-6 2021

5 STONE CHECK DAMS TCP-12-2
NOT TO SCALE

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

SAVE DATE: 8/3/2026, PLOT DATE: 8/3/2026

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DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PYKE
NASHVILLE, TENNESSEE 37211

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ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH REGISTERED ENGINEER AGRICULTURE COMMERCE No. 129500 STATE OF TENNESSEE
08/10/2026

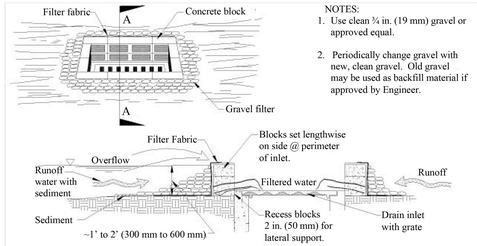
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

EPSC DETAILS

SHEET NO. C4.30

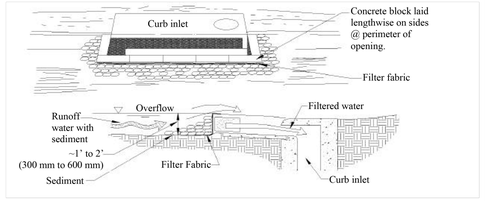
FILENAME: Z:\PRIVATE CLIENTS\2025-37 - ALLEN FARM SUBDIVISION\CAD\EPSC\2025-37 ALLEN FARM SUBDIVISION-EPSC DETAILS.DWG, 8/3/2026 7:29:15 AM, EASTMAN, JOSHUA

ACTIVITY: Temporary Inlet Protection — TCP – 24



NOTES:
1. Use clean ¾ in. (19 mm) gravel or approved equal.
2. Periodically change gravel with new, clean gravel. Old gravel may be used as backfill material if approved by Engineer.

WITHOUT CURB

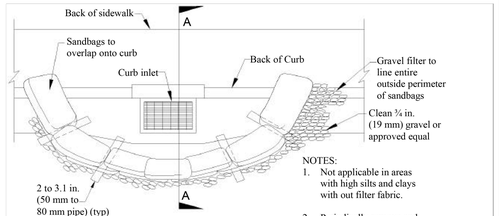


WITH CURB

Figure TCP-24-2
Block and Gravel Catch Basin Filter

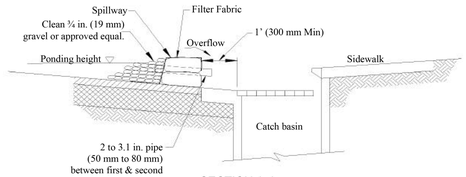
6 INLET PROTECTION TCP-24-2 & TCP-24-3 NOT TO SCALE

ACTIVITY: Temporary Inlet Protection — TCP – 24



PLAN

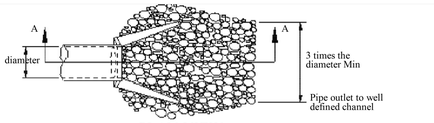
NOTES:
1. Not applicable in areas with high silts and clays with out filter fabric.
2. Periodically remove and replace gravel. Old gravel may be used as backfill material if approved by Engineer.



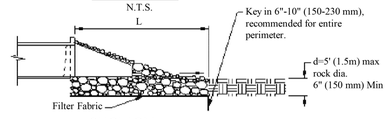
SECTION A-A

Figure TCP-24-3
Sand Bag Barrier

ACTIVITY: Temporary Outlet Protection — TCP – 25



PLAN VIEW



SECTION A-A
N.T.S.

Adapted from: Virginia Erosion & Sediment Control Handbook, 1992

Pipe Diameter in (mm)	Discharge $ft^3/s(m^3/s)$	Apron Length, L ft (m)	Rip-Rap D_{50} Diameter Min in (mm)
12 (300)	4.9 (0.14)	10 (3)	4 (100)
	9.89 (0.28)	13 (4)	6 (150)
18 (450)	9.89 (0.28)	10 (3)	6 (150)
	20.13 (0.57)	16 (5)	8 (200)
	30.01 (0.85)	23 (7)	12 (300)
	39.90 (1.13)	26 (8)	16 (400)
24 (600)	30.01 (0.85)	16 (5)	8 (200)
	39.90 (1.13)	26 (8)	8 (200)
	50.14 (1.42)	26 (8)	12 (300)
	60.03 (1.70)	30 (9)	16 (400)
For larger or higher flows, consult a registered civil engineer			

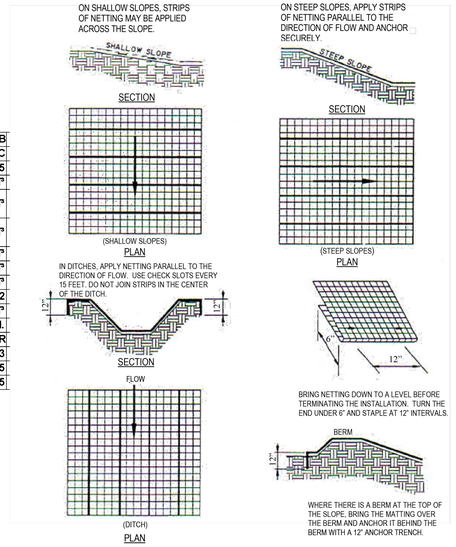
Source: USDA-SCS

Figure TCP-25-1
Outlet Protection Sizing

7 OUTLET PROTECTION TCP-25-1 NOT TO SCALE

DESIGN ITEM	BASIN 1A	BASIN 1B
DISTURBED DRAINAGE AREA	0.761 AC	0.761 AC
BASIN BOTTOM EL.	580	609.5
SEDIMENT STORAGE REQUIRED	2,753 FT³	2,755 FT³
CONSTRUCTION RUNOFF VOLUME	4,382 FT³	4,382 FT³
PRECONSTRUCTION RUNOFF VOLUME	1,920 FT³	1,920 FT³
LIVE STORAGE REQUIRED	2,462 FT³	2,462 FT³
TOTAL STORAGE REQUIRED	5,215 FT³	5,217 FT³
TOTAL STORAGE PROVIDED	7,799 FT³	5,377 FT³
TOP OF STORAGE EL.	584	612
FOREBAY VOLUME REQUIRED	493 FT³	493 FT³
SKIMMER ORIFICE	5/8 IN.	5/8 IN.
DRAWDOWN TIME	48–72 HR	48–72 HR
EMERGENCY SPILLWAY EL.	585	613
DESIGN HIGH WATER EL.	585.5	613.5
TOP OF BERM EL.	586.5	614.5

ACTIVITY: Nets and Mats — TCP – 09

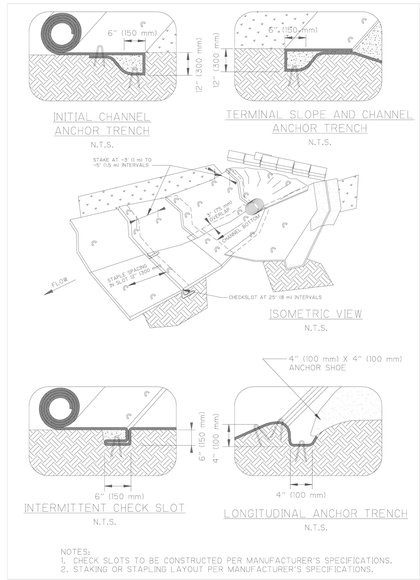


ORIENTATION OF NETTING AND MATTING

Figure TCP-09-2
Mat Anchoring and Layout

8 EROSION CONTROL MATTING TCP-09-2 NOT TO SCALE

ACTIVITY: Geotextiles — TCP – 10

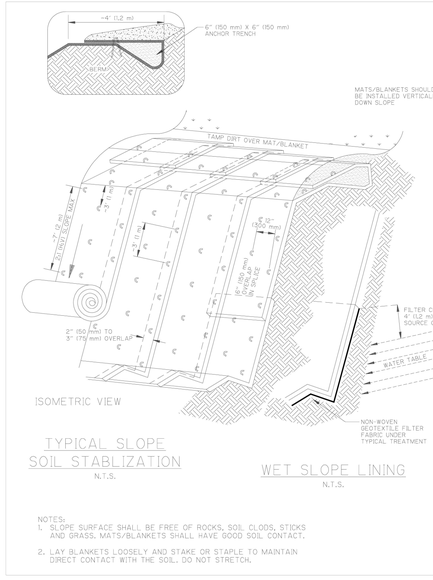


NOTES:
1. CHECK SLOTS TO BE CONSTRUCTED PER MANUFACTURER'S SPECIFICATIONS.
2. STAKING OR STAPLING LAYOUT PER MANUFACTURER'S SPECIFICATIONS.

Figure TCP-10-1
Anchoring Geotextiles in Channels

9 CHANNEL STABILIZATION TCP-10-1 NOT TO SCALE

ACTIVITY: Geotextiles — TCP – 10



NOTES:
1. SLOPE SURFACE SHALL BE FREE OF ROCKS, SOIL CLODS, STICKS AND GRASS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.

Figure TCP-10-2
Anchoring Geotextiles on Embankments

10 EMBANKMENT STABILIZATION TCP-10-2 NOT TO SCALE

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH — REGISTERED ENGINEER — AGRICULTURE COMMERCE — No. 122540 — STATE OF TENNESSEE
09/03/2026

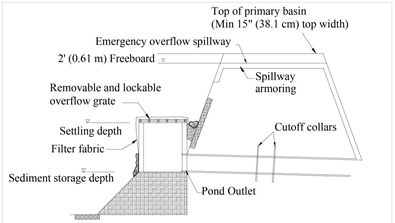
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

EPSC DETAILS

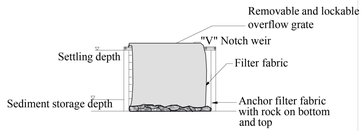
SHEET NO. C4.31

SAVE DATE: 8/3/2026, PLOT DATE: 8/3/2026

FILENAME: Z:\PRIVATE CLIENTS\2025-24 - ALLEN FARM SUBDIVISION\DESIGN\CAD\C4_SHT\C4-CADD\DESIGN\2025-25_C4SD_DETAILS.DWG

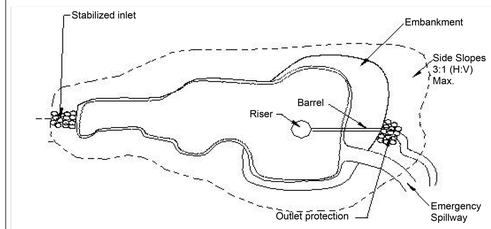


SECTION OUTLET STRUCTURE
NTS

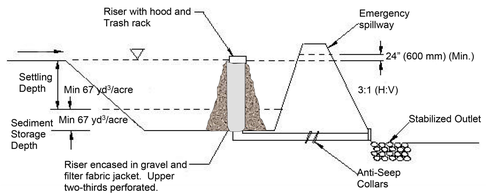


PROFILE OUTLET STRUCTURE
NTS

Figure TCP-18-1
Sediment Basin – "V" Notch Weir Outlet Structure

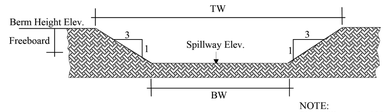


TOP VIEW



NOTE:
This outlet provides partial draining of pool. For temporary sediment basins, rock encasement around the riser may not be necessary, however, filter fabric must then be fastened around the riser using either staples or other manufactured fasteners.

Figure TCP-18-2
Sediment Basin – Riser Pipe Outlet Structure A



NOTE:
Size spillway for 100-year, 24-hour storm.

EMERGENCY SPILLWAY

Figure TCP-18-3
Emergency Spillway

9 SEDIMENT BASIN

NOT TO SCALE

DESIGN ITEM	BASIN 1A	BASIN 1B	BASIN 1
DISTURBED DRAINAGE AREA	0.761 AC	0.761 AC	15.092 AC
BASIN BOTTOM EL.	580	609.5	556
SEDIMENT STORAGE REQUIRED	2,753 FT³	2,755 FT³	54,602 FT³
CONSTRUCTION RUNOFF VOLUME	4,382 FT³	4,382 FT³	90,111 FT³
PRECONSTRUCTION RUNOFF VOLUME	1,920 FT³	1,920 FT³	66,045 FT³
LIVE STORAGE REQUIRED	2,462 FT³	2,462 FT³	24,066 FT³
TOTAL STORAGE REQUIRED	5,215 FT³	5,217 FT³	78,668 FT³
TOTAL STORAGE PROVIDED	7,799 FT³	5,377 FT³	94,691 FT³
TOP OF STORAGE EL.	584	612	562
FOREBAY VOLUME REQUIRED	493 FT³	493 FT³	4,814 FT³
SKIMMER ORIFICE	5/8 IN.	5/8 IN.	2 IN.
DRAWDOWN TIME	48–72 HR	48–72 HR	48–72 HR
EMERGENCY SPILLWAY EL.	585	613	563
DESIGN HIGH WATER EL.	585.5	613.5	563.5
TOP OF BERM EL.	586.5	614.5	564.5

9A SEDIMENT BASIN DESIGN TABLE

ERO-GUARD

Material and Specification Sheet
EG-2 S/C
(Double Net 70% Straw/30% Coconut RECP)

Description: EG-2 S/C starts with 70% straw and 30% coconut fiber that is distributed evenly between 1 black heavy weight UV stabilized net on the top and 1 medium weight green net on the bottom. These nets are then stitched using polypropylene yarn creating one of the highest quality blankets available on the market. The rolls are then tightly shrink wrapped and packaged to handle adverse conditions until they are installed.

EG-2 S/C has been engineered as a extended term erosion control blanket. Its functional longevity is approximately 24 months (which depends on environmental conditions such as light, wind, water and soil conditions). EG-2 S/C meets or exceeds FHWA FP-03 type 3B erosion control blanket standards.

Compostion:

Matrix	Netting	Thread
70% Straw/30%c Coconut Fiber	Heavy UV Stabilized/Green Poly	Heavy UV Stabilized
.50 lbs/SqYd	.5" x .5"	1.5 inch traverse stitching

Roll Sizes:

Width	Length	Sq Yd
8'	112.5'	100
8'	562.5'	500
16'	112.5'	200
16'	562.5'	1000

Index Verified Values:

Test Property	Test Method	Value
Mass/Unit Area	ASTM 6475	9.78 oz/yd2
Thickness	ASTM 6525	320 mils
Tensile Strength-MD	ASTM 6818	22 lbs/in
Elongation-MD	ASTM 6818	21.3 %
Tensile Strength-TD	ASTM 6818	9.8 lbs/in
Elongation- TD	ASTM 6818	30%
Light Penetration	ASTM 6567	6.8%
Water Absorption	ASTM 1117	490%

*Index values are average values at the time of manufacture and are characteristic of the product. For more information, please contact your nearest Ero-Guard distributor.

DISTRIBUTED LOCALLY BY:
JEN-HILL
INFRASTRUCTURE SOLUTIONS DELIVERED
615-824-1200 | info@jenhill.com

10 SLOPE STABILIZATION SPECIFICATION

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR
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ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE & ENVIRONMENT
No. 125540
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

ESPC DETAILS

SHEET NO. C4.32

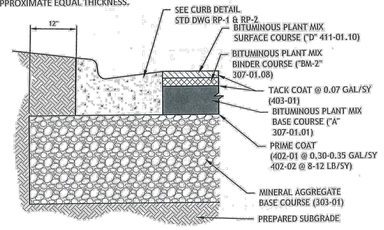
SAVE DATE: 8/3/2026, PLOT DATE: 8/3/2026

FILENAME: Z:\PRIVATE CLIENTS\2025-26 - ALLEN FARM SUBDIVISION\DESIGN\ESPC\ALLEN FARMS SUBDIVISION_ESPC_SHT-C4.32-SLOPE STABILIZATION SPECIFICATION.DWG

COMBINATION ASPHALT CONCRETE AND AGGREGATE BASE (MINIMUM REQUIRED THICKNESS)

CLASSIFICATION	MINERAL AGGREGATE BASE COURSE	ASPHALT PAVEMENT			TOTAL THICKNESS
		BASE/BINDER		SURFACE COURSE	
		"A"	"B"-M2	"D"	
RESIDENTIAL COLLECTORS, & LOCAL STREETS	8"	-	3"	1.5"	12.5"
NON-RESIDENTIAL COLLECTORS & MINOR ARTERIALS	8"	3"	2.5"	1.5"	15"
MAJOR ARTERIALS & INDUSTRIAL	10"	4"	2.5"	1.5"	18"

1. THE CITY ENGINEER MAY REQUIRE PERFORMANCE GRADE ASPHALT BASED ON PROJECTED TRAFFIC LOADINGS. ADDITIONAL THICKNESS OR A DETAILED PAVEMENT DESIGN BASED ON A GEOTECHNICAL ANALYSIS MAY ALSO BE REQUIRED.
2. COMPACTED SUBGRADE SHALL BE INSPECTED AND ACCEPTED BY THE CITY PRIOR TO PLACEMENT OF ANY AGGREGATE OR PAVEMENT LAYERS.
3. IF THE REQUIRED COMPACTED DEPTH OF THE MINERAL AGGREGATE BASE COURSE EXCEEDS SIX (6) INCHES, THE BASE SHALL BE CONSTRUCTED IN TWO OR MORE LAYERS OF APPROXIMATE EQUAL THICKNESS.



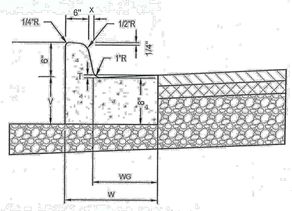
N.T.S.

DATE: 10.27.16	TYPICAL PAVEMENT THICKNESS
REVISIONS	STD. DWG. RD-2

1 TYPICAL PAVEMENT RD-2 — NOT TO SCALE

TYPE	TOTAL WIDTH W (in)	WIDTH OF GUTTER WG (in)	CURB OFFSET X (in)	VERTICAL DROP T (in)	VERTICAL DEPTH V (in)
*6 - 24	24	18	1	1.5	8.5
6 - 30	30	23.5	0.5	2	6.47

*6-24 CURB TO BE USED ON MINOR RESIDENTIAL STREETS ONLY



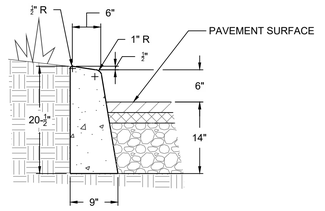
GENERAL NOTES
1. 6-24 CURB & GUTTER TO BE USED WITH JOHN BOUCHARD & SON 3080
2. 6-30 CURB & GUTTER TO BE USED WITH JOHN BOUCHARD & SON 5123
3. FOR SPECIFICATIONS SEE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION, SECTION 700 - CEMENT CONCRETE CURB, GUTTER AND COMBINED CURB AND GUTTER.
4. CONCRETE EXPANSION JOINT MATERIAL IS TO BE 3/4" PREMOLDED FIBER IN ACCORDANCE WITH SECTION 905 - JOINT MATERIALS OF THE TDOT STANDARD SPECIFICATIONS.
5. CONTRACTION JOINTS ARE TO BE SPACED AT 10 FEET. THE SPACING OF 10 FEET MAY BE REDUCED FOR CLOSURES, BE NOT LESS THAN 8 FEET.
6. EXPANSION JOINTS ARE TO BE PLACED AS FOLLOWS; AT TANGENT JOINTS OF CIRCULAR CURBS, BETWEEN CURBS AND ABUTTING RIGID OBJECTS, AT OTHER PLACES WHERE STRESSES MAY DEVELOP, SO AS TO LINE UP WITH PAVEMENT JOINTS WHERE THE ADJACENT PAVEMENT IS CONCRETE, MAXIMUM SPACING IS TO BE 100 FEET.
7. CLASS "A" CONCRETE, MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI WITH SYNTHETIC MICROFIBER REINFORCEMENT.

N.T.S.

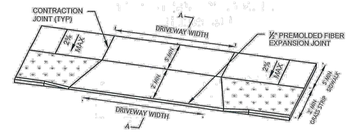
DATE: 10.27.16	STANDARD 6" NON MOUNTABLE CURBS & GUTTERS
REVISIONS	STD. DWG. RP-1

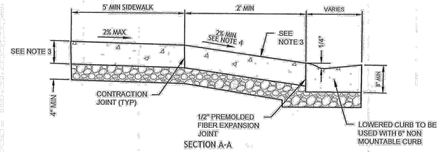
2 STANDARD 6" NON MOUNTABLE CURBS & GUTTERS RP-1 — NOT TO SCALE

NOTES:
1. EXPANSION JOINTS TO BE SPACED A MAXIMUM OF 100 FEET APART OR AS DIRECTED BY THE ENGINEER.
2. EXPANSION JOINTS WILL ALSO BE REQUIRED AT TANGENT POINTS, RAMPS, AND INLETS.
3. CONTRACTION JOINTS ARE TO BE CUT INTO CURB EVERY 10 FEET TO A DEPTH OF D/4, WHERE D EQUALS THE THICKNESS OF THE SECTION. THE SPACING OF 10 FEET MAY BE REDUCED AT CLOSURES BUT NO SECTION OF CURB SHALL BE LESS THAN 10 FEET.
4. COST OF CONTRACTION JOINTS TO BE INCLUDED IN THE IN THE UNIT BID PRICE FOR CONCRETE CURB.



3 6" POST CURB — NOT TO SCALE



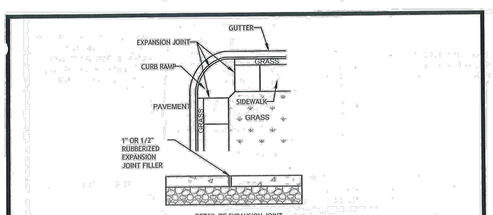


GENERAL NOTES
1. 5' MINIMUM SIDEWALK WITH A MAXIMUM CROSS SLOPE OF 2% THROUGH DRIVEWAYS
2. 4" MINIMUM BASE STONE REQUIRED UNDER ALL DRIVEWAYS.
3. RESIDENTIAL DRIVEWAYS SHALL BE A MINIMUM 6" OF CLASS "A" CONCRETE WITH SYNTHETIC FIBER REINFORCEMENT.
   COMMERCIAL DRIVEWAYS SHALL BE A MINIMUM 8" OF CLASS "A" CONCRETE WITH SYNTHETIC FIBER REINFORCEMENT.
4. DRIVEWAY RAMP GRADE VARIES, 8.33% MAXIMUM APRON GRADE FOR RESIDENTIAL DRIVEWAYS. 8.0% MAXIMUM APRON GRADE FOR COMMERCIAL DRIVEWAYS.
5. CLASS "A" CONCRETE, MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI WITH SYNTHETIC MICROFIBER REINFORCEMENT.

N.T.S.

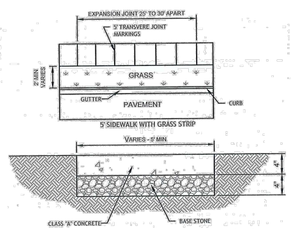
DATE: 10.27.16	STANDARD CONCRETE DRIVEWAYS (WITH GRASS STRIP)
REVISIONS	STD. DWG. RP-3

4 STANDARD CONCRETE DRIVEWAYS (WITH GRASS STRIP) RP-3 — NOT TO SCALE



DETAIL OF EXPANSION JOINT

GENERAL NOTES
1. ONE-INCH JOINTS TO BE PLACED WHERE THE SIDEWALK IS IN CONTACT WITH CIRCULAR CURB, BUILDINGS AND RETAINING WALLS. HALF-INCH JOINTS TO BE USED IN OTHER LOCATIONS.
2. ONE LONGITUDINAL JOINT MARKING REQUIRED ON SIDEWALK GREATER THAN 5' IN WIDTH.

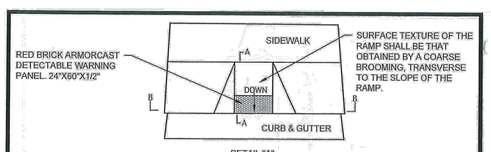


GENERAL NOTES
1. CLASS "A" CONCRETE, MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI WITH SYNTHETIC MICROFIBER REINFORCEMENT.
2. ROOT BARRIERS REQUIRED ON BOTH SIDES OF GRASS STRIP AROUND TREES.

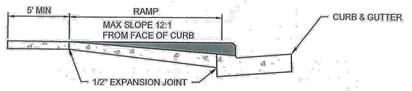
N.T.S.

DATE: 10.27.16	TYPICAL 5' CONCRETE SIDEWALK
REVISIONS	STD. DWG. RP-4

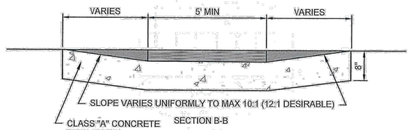
5 TYPICAL 5' CONCRETE SIDEWALK RP-4 — NOT TO SCALE



DETAIL "A"



SECTION A-A

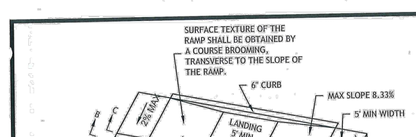


GENERAL NOTES
1. A VARIATION OF THE RAMP MAY BE USED IN CERTAIN CIRCUMSTANCES BUT MUST COMPLY WITH ACCESSIBILITY CODE REQUIREMENTS.
2. DESIREABLE SLOPE TO BE USED UNLESS OTHERWISE DIRECTED BY THE CITY OF GOODLETSVILLE.
3. MINIMUM LANDING AT TOP OF RAMP IS 5'
4. RAMPS SHALL BE PROVIDED AT ALL STREET INTERSECTIONS, WALK LOCATIONS AND MID-BLOCK LOCATIONS
5. RAMPS SHALL BE 6" CLASS "A" CONCRETE WITH SYNTHETIC MICROFIBER REINFORCEMENT.
6. 4" BASE STONE REQUIRED UNDER ALL RAMPS

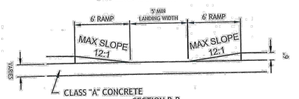
N.T.S.

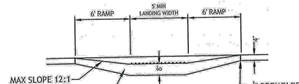
DATE: 10.27.16	PERPENDICULAR CURB RAMP DETAIL
REVISIONS	STD. DWG. RP-5

6 PERPENDICULAR CURB RAMP DETAIL RP-5 — NOT TO SCALE



PARALLEL CURB RAMP DETAIL



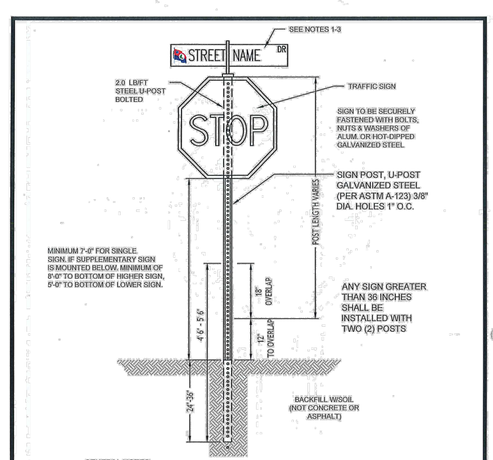


GENERAL NOTES
1. A VARIATION OF THE RAMP MAY BE USED IN CERTAIN CIRCUMSTANCES BUT MUST COMPLY WITH ACCESSIBILITY CODE REQUIREMENTS AND BE APPROVED BY THE CITY.
2. DESIREABLE SLOPE TO BE USED UNLESS OTHERWISE DIRECTED BY THE CITY OF GOODLETSVILLE.
3. MINIMUM LANDING AT TOP OF RAMP IS 5'
4. RAMPS SHALL BE PROVIDED AT ALL STREET INTERSECTIONS, WALK LOCATIONS AND MID-BLOCK LOCATIONS
5. RAMPS SHALL BE 6" CLASS "A" CONCRETE WITH SYNTHETIC MICROFIBER REINFORCEMENT.
6. 4" BASE STONE REQUIRED UNDER ALL RAMPS

N.T.S.

DATE: 10.27.16	PARALLEL CURB RAMP DETAIL (ALTERATIONS ONLY)
REVISIONS	STD. DWG. RP-6

7 PARALLEL CURB RAMP DETAIL RP-6 — NOT TO SCALE



GENERAL NOTES
1. ALL PROPOSED SIGNAGE TO MATCH CURRENT CITY OF GOODLETTSVILLE VERSION OF STREET SIGNS
2. OVERHEAD TRAFFIC SIGNALS WITH ROAD NAME SIGNS :
   12." TALL ALUMINUM WITH 6" WHITE REFLECTIVE LETTERS. THE BLUE BACKGROUND IS 3M ELECTROCUT FILM BLUE 1175C
3. ROAD NAME SIGNS: THE BLUE BACKGROUND IS OROCAL 6510-088 GENTIAN BLUE
   35 MPH OR HIGHER REQUIRES 9" BLANK WITH 5.75" WHITE REFLECTIVE LETTERS LESS THAN 35 MPH REQUIRES 6" BLANK WITH 3.75" WHITE REFLECTIVE LETTERS

N.T.S.

DATE: 10.27.16	TYPICAL STREET SIGN
REVISIONS	STD. DWG. SD-3

8 TYPICAL STREET SIGN SD-3 — NOT TO SCALE

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PYKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH — REGISTERED ENGINEER — CIVIL — No. 122540 — STATE OF TENNESSEE
09/03/2026

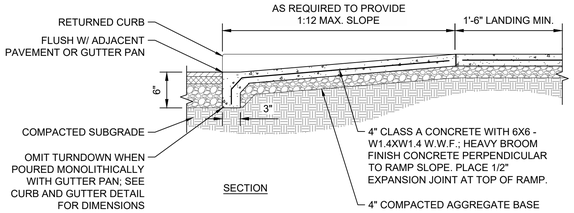
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

SITE DETAILS

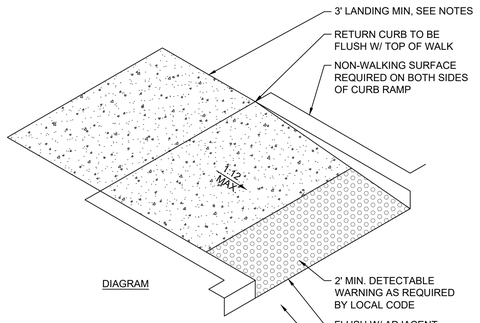
SHEET NO. C5.00

SAVE DATE: 9/2/2026, PLOT DATE: 9/3/2026

FILENAME: Z:\PRIVATE CLIENTS\2025-25-ALLEN FARM SUBDIVISION\CAD\SHEETS\C5.00_SITE DETAILS.DWG



SECTION



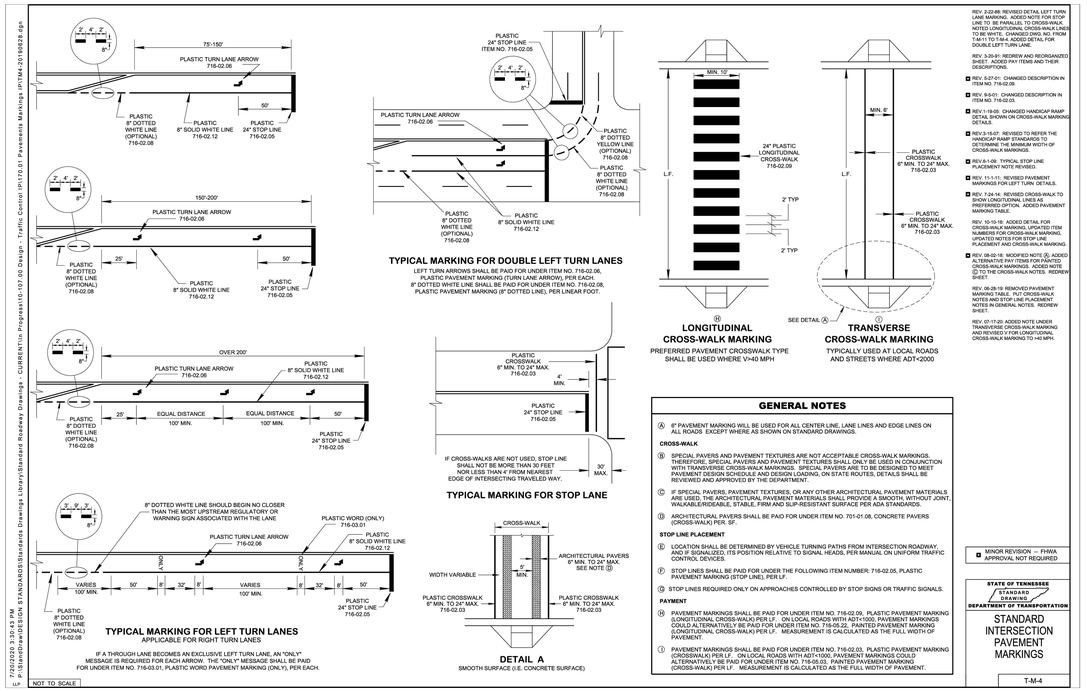
DIAGRAM

NOTES:

1. RAMP CROSS SLOPE SHALL NOT EXCEED 1:48; RUNNING SLOPE SHALL NOT EXCEED 1:12.
2. LANDINGS SHALL BE LEVEL (LESS THAN 2% SLOPE IS ALL DIRECTIONS) AND PROVIDED AT THE TOP OF ALL CURB RAMPS.
3. LANDING CLEAR WIDTH SHALL BE AT LEAST AS WIDE AS THE WIDEST RAMP RUN LEADING TO THE LANDING.
4. LANDING CLEAR LENGTH SHALL BE 36" LONG MINIMUM.

9 CURB RETURN

NOT TO SCALE



GENERAL NOTES

Ⓐ 6" PAVEMENT MARKING WILL BE USED FOR ALL CENTER LINE, LANE LINES AND EDGE LINES ON ALL ROADS EXCEPT WHERE AS SHOWN ON STANDARD DRAWINGS.

CROSS-WALK

Ⓑ SPECIAL PAVERS AND PAVEMENT TEXTURES ARE NOT ACCEPTABLE CROSS-WALK MARKINGS. SPECIAL PAVERS AND PAVEMENT TEXTURES SHALL ONLY BE USED IN CONJUNCTION WITH TRANSVERSE CROSS-WALK MARKINGS. SPECIAL PAVERS ARE TO BE DESIGNED TO MEET PAVEMENT DESIGN SCHEDULE AND DESIGN LOADING. ON STATE ROUTES, DETAILS SHALL BE REVIEWED AND APPROVED BY THE DEPARTMENT.

Ⓒ IF SPECIAL PAVERS, PAVEMENT TEXTURES, OR ANY OTHER ARCHITECTURAL PAVEMENT MATERIALS ARE USED, THE ARCHITECTURAL PAVEMENT MATERIALS SHALL PROVIDE A SMOOTH, WITHOUT JOINT, WALKABLE/CREADABLE, STABLE, FIRM AND SLIP-RESISTANT SURFACE PER ADA STANDARDS.

Ⓓ ARCHITECTURAL PAVERS SHALL BE PAID FOR UNDER ITEM NO. 701-01.08, CONCRETE PAVERS (CROSS-WALK) PER. SF.

STOP LINE PLACEMENT

Ⓔ LOCATION SHALL BE DETERMINED BY VEHICLE TURNING PATHS FROM INTERSECTION ROADWAY, AND IF SIGNALIZED, ITS POSITION RELATIVE TO SIGNAL HEADS, PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

Ⓕ STOP LINES SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBER: 716-02.05, PLASTIC PAVEMENT MARKING (STOP LINE), PER LF.

Ⓖ STOP LINES REQUIRED ONLY ON APPROACHES CONTROLLED BY STOP SIGNS OR TRAFFIC SIGNALS.

PAYMENT

Ⓗ PAVEMENT MARKINGS SHALL BE PAID FOR UNDER ITEM NO. 716-02.09, PLASTIC PAVEMENT MARKING (LONGITUDINAL CROSS-WALK) PER LF. ON LOCAL ROADS WITH ADT<1000, PAVEMENT MARKINGS COULD ALTERNATIVELY BE PAID FOR UNDER ITEM NO. 716-05.22, PAINTED PAVEMENT MARKING (LONGITUDINAL CROSS-WALK) PER LF. MEASUREMENT IS CALCULATED AS THE FULL WIDTH OF PAVEMENT.

Ⓘ PAVEMENT MARKINGS SHALL BE PAID FOR UNDER ITEM NO. 716-02.03, PLASTIC PAVEMENT MARKING (CROSSWALK) PER LF. ON LOCAL ROADS WITH ADT<1000, PAVEMENT MARKINGS COULD ALTERNATIVELY BE PAID FOR UNDER ITEM NO. 716-05.03, PAINTED PAVEMENT MARKING (CROSS-WALK) PER LF. MEASUREMENT IS CALCULATED AS THE FULL WIDTH OF PAVEMENT.

REV. 2-22-88: REVISED DETAIL LEFT TURN LANE MARKING. ADDED NOTE FOR STOP LINE TO BE PARALLEL TO CROSS-WALK. ADDED NOTE FOR CROSS-WALK LINES TO BE WHITE. CHANGED DETAIL TO FROM T-M-11 TO T-M-4. ADDED DETAIL FOR DOUBLE LEFT TURN LANE.

REV. 3-20-91: REDREW AND REORGANIZED SHEET. ADDED PAY ITEMS AND THEIR DESCRIPTIONS.

■ REV. 8-27-01: CHANGED DESCRIPTION IN ITEM NO. 716-02.06.

■ REV. 8-5-01: CHANGED DESCRIPTION IN ITEM NO. 716-02.05.

■ REV.1-19-06: CHANGED HANDICAP RAMP DETAIL SHOWN ON CROSS-WALK MARKING DETAILS.

■ REV.3-13-07: REVISED TO REFER THE CONTRACTOR TO PLAN SHEETS TO DETERMINE THE MINIMUM WIDTH OF CROSS-WALK MARKINGS.

■ REV.8-1-08: TYPICAL STOP LINE PLACEMENT NOTE REVISED.

■ REV. 11-1-11: REVISED PAVEMENT MARKINGS FOR LEFT TURN DETAILS.

■ REV. 7-24-14: REVISED CROSS-WALK TO SHOW LONGITUDINAL LINES AS PREFERRED OPTION. ADDED PAVEMENT MARKING TABLE.

REV. 10-10-16: ADDED DETAIL FOR CROSS-WALK MARKING, UPDATED ITEM NUMBERS FOR CROSS-WALK MARKING, UPDATED NOTES FOR STOP LINE PLACEMENT AND CROSS-WALK MARKING.

■ REV. 08-02-18: MODIFIED NOTE Ⓓ, ADDED ALTERNATIVE PAY ITEMS FOR PAINTED CROSS-WALK MARKINGS. ADDED NOTE Ⓘ TO THE CROSS-WALK NOTES. REDREW SHEET.

REV. 06-28-19: REMOVED PAVEMENT MARKING TABLE. ADDED CROSS-WALK NOTES AND STOP LINE PLACEMENT NOTES IN GENERAL NOTES. REDREW SHEET.

REV. 07-17-20: ADDED NOTE UNDER TRANSVERSE CROSS-WALK MARKING AND REVISED V FOR LONGITUDINAL CROSS-WALK MARKING TO >40 MPH.

■ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED

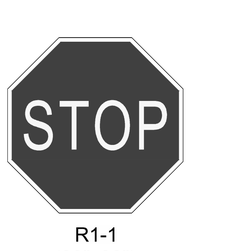
STATE OF TENNESSEE
STANDARD DRAWING
DEPARTMENT OF TRANSPORTATION

STANDARD
INTERSECTION
PAVEMENT
MARKINGS

T-M-4

11 STANDARD INTERSECTION PAVEMENT MARKINGS T-M-4

NOT TO SCALE



R1-1
(30"x30")



W14-2
(24"x24")



R1-6A
(12"x36")



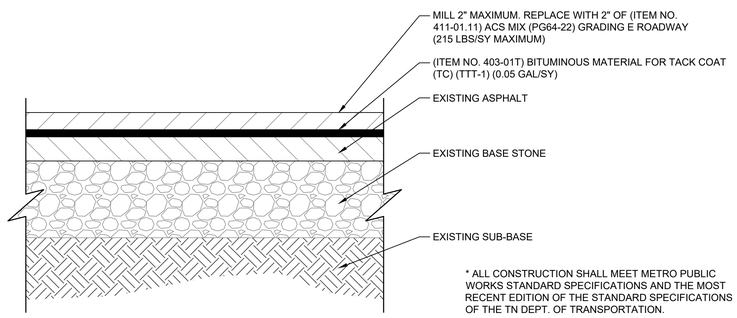
R2-1
(18"x24")



R4-7
(18"x24")

10 TRAFFIC SIGNAGE

NOT TO SCALE



* ALL CONSTRUCTION SHALL MEET METRO PUBLIC WORKS STANDARD SPECIFICATIONS AND THE MOST RECENT EDITION OF THE STANDARD SPECIFICATIONS OF THE TN DEPT. OF TRANSPORTATION.

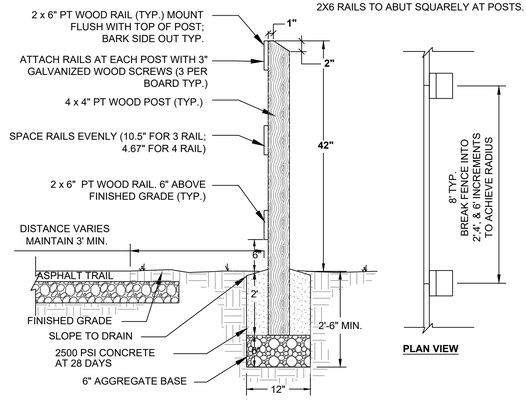
12 ASPHALT RESURFACE SECTION

NOT TO SCALE

NOTE:
CONTRACTOR TO REFER TO PLAN SHEETS FOR SIZE AND LOCATION OF ALL GUARDRAIL FENCING.

CONTRACTOR USE 8' POSTS FOR ESTIMATING FENCING ABOVE 42" HT. SIDE SLOPES MAY REQUIRE 3'-4' BURIAL IN SOME AREAS

2X6 RAILS TO ABUT SQUARELY AT POSTS.



13 3 RAIL WOOD FENCE

NOT TO SCALE

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
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NASHVILLE OFFICE
249 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

REVISIONS

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CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE & COMMERCE
No. 122540
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

SITE DETAILS

SHEET NO. C5.01

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026
FILENAME: Z:\PRIVATE CLIENTS\2025\25-28 - ALLEN FARM SUBDIVISION\CAD\DESIGN\25-28_C05_SITE DETAILS.DWG



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COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

PHONE: (615) 331-1441
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CONSTRUCTION DOCUMENTS FOR

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ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
09/03/2026
No. 122500
STATE OF TENNESSEE

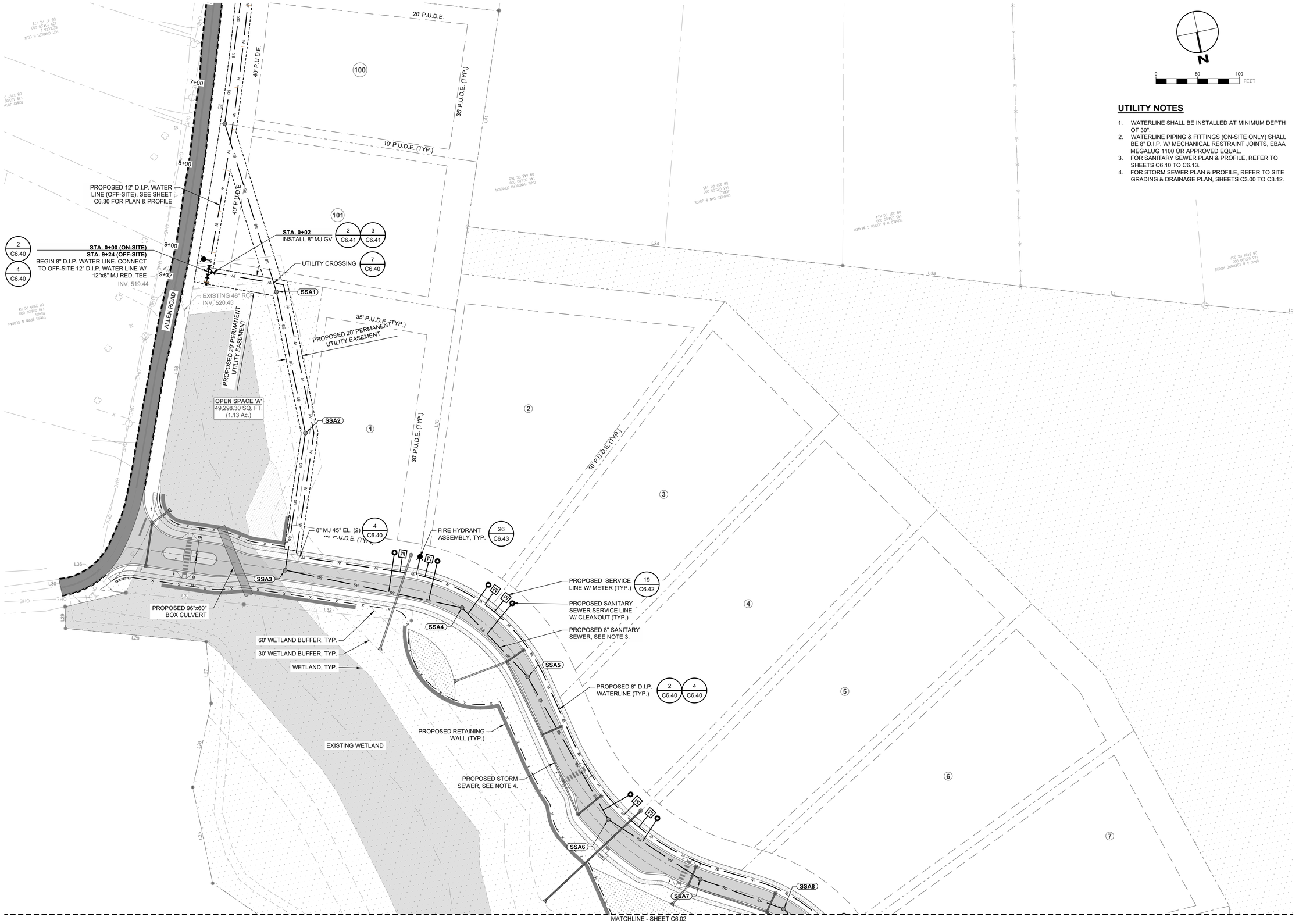
DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

OVERALL SITE UTILITY PLAN

SHEET NO. C6.00

FILENAME: Z:\PRIVATE CLIENTS\308-24 - ALLEN FARMS SUBDIVISION\CAD\SITE\C-CADD\SEDIMENT\308-24_SITE UTILITY PLAN.DWG



UTILITY NOTES

1. WATERLINE SHALL BE INSTALLED AT MINIMUM DEPTH OF 30".
2. WATERLINE PIPING & FITTINGS (ON-SITE ONLY) SHALL BE 8" D.I.P. W/ MECHANICAL RESTRAINT JOINTS, EBAA MEGALUG 1100 OR APPROVED EQUAL.
3. FOR SANITARY SEWER PLAN & PROFILE, REFER TO SHEETS C6.10 TO C6.13.
4. FOR STORM SEWER PLAN & PROFILE, REFER TO SITE GRADING & DRAINAGE PLAN, SHEETS C3.00 TO C3.12.

REVISIONS

NO	DATE	BY	DESCRIPTION
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COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

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ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122500
STATE OF TENNESSEE
09/03/2026

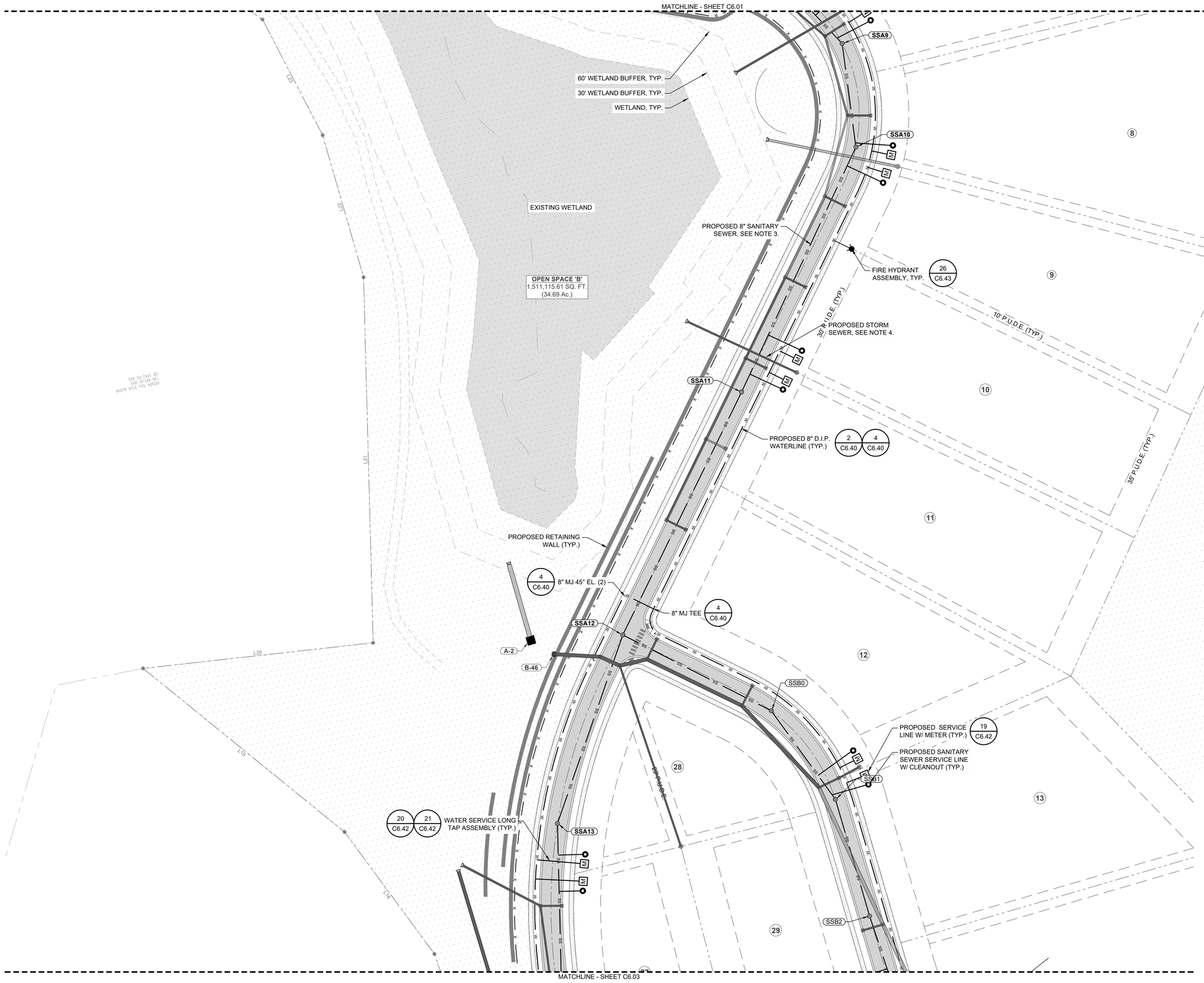
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

SITE UTILITY PLAN

SHEET NO. C6.01

SAVE DATE: 9/2/2026, PLOT DATE: 9/3/2026

FILENAME: Z:\PRIVATE CLIENTS\3008-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN\3008-25_C6.00_SITE UTILITY PLAN.DWG



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REVISIONS

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2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

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ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122500
STATE OF TENNESSEE
Nathan Couch
09/03/2026

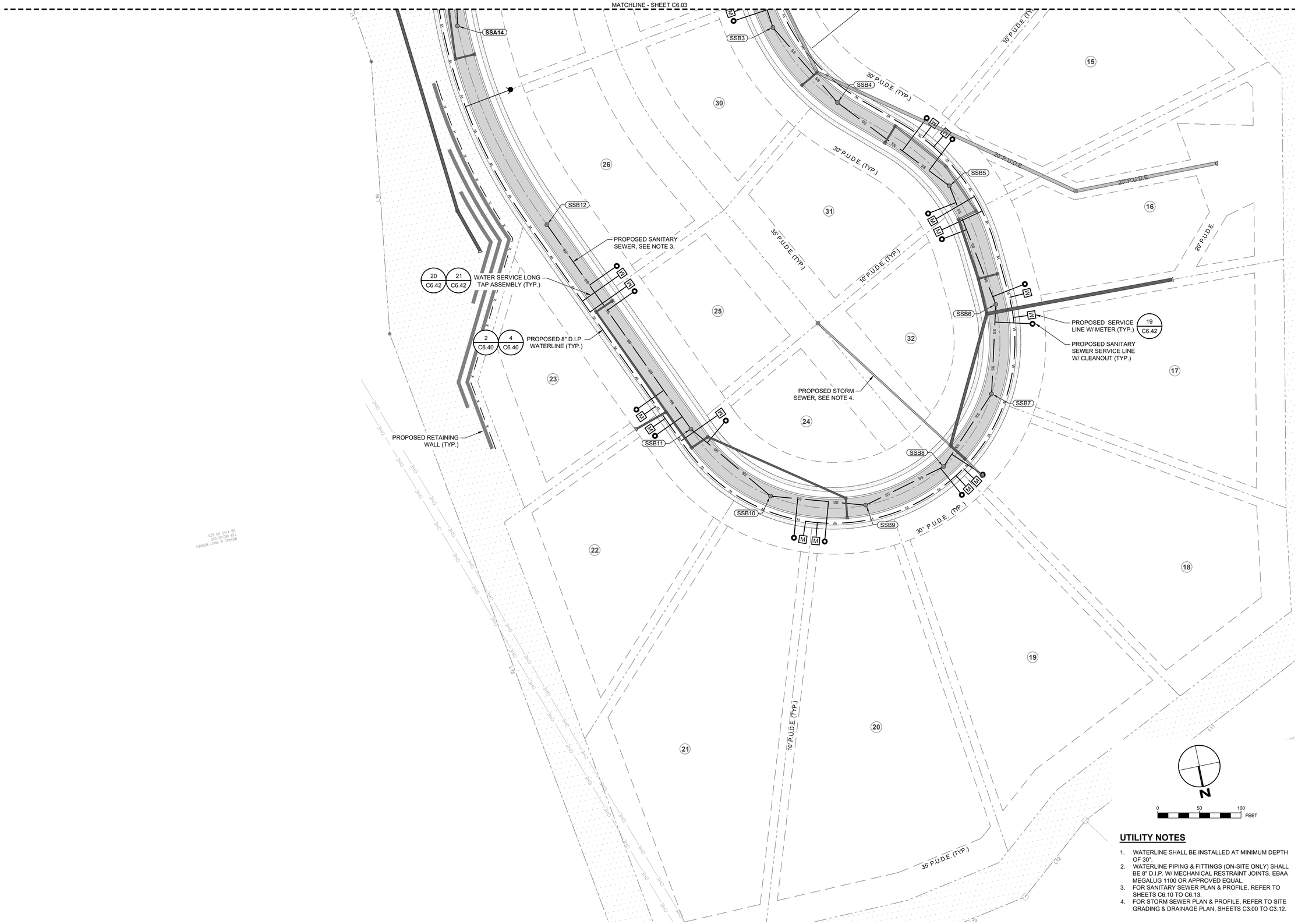
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

SITE UTILITY PLAN

SHEET NO. C6.02

FILENAME: Z:\PRIVATE CLIENTS\3008-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN\3008-25_C6.00_SITE UTILITY PLAN.DWG

SAVE DATE: 9/2/2026, PLOT DATE: 9/3/2026



UTILITY NOTES

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2. WATERLINE PIPING & FITTINGS (ON-SITE ONLY) SHALL BE 8" D.I.P. W/ MECHANICAL RESTRAINT JOINTS, EBAA MEGALUG 1100 OR APPROVED EQUAL.
3. FOR SANITARY SEWER PLAN & PROFILE, REFER TO SHEETS C6.10 TO C6.13.
4. FOR STORM SEWER PLAN & PROFILE, REFER TO SITE GRADING & DRAINAGE PLAN, SHEETS C3.00 TO C3.12.

REVISIONS

NO	DATE	BY	DESCRIPTION
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COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

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GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122500
STATE OF TENNESSEE
09/03/2026

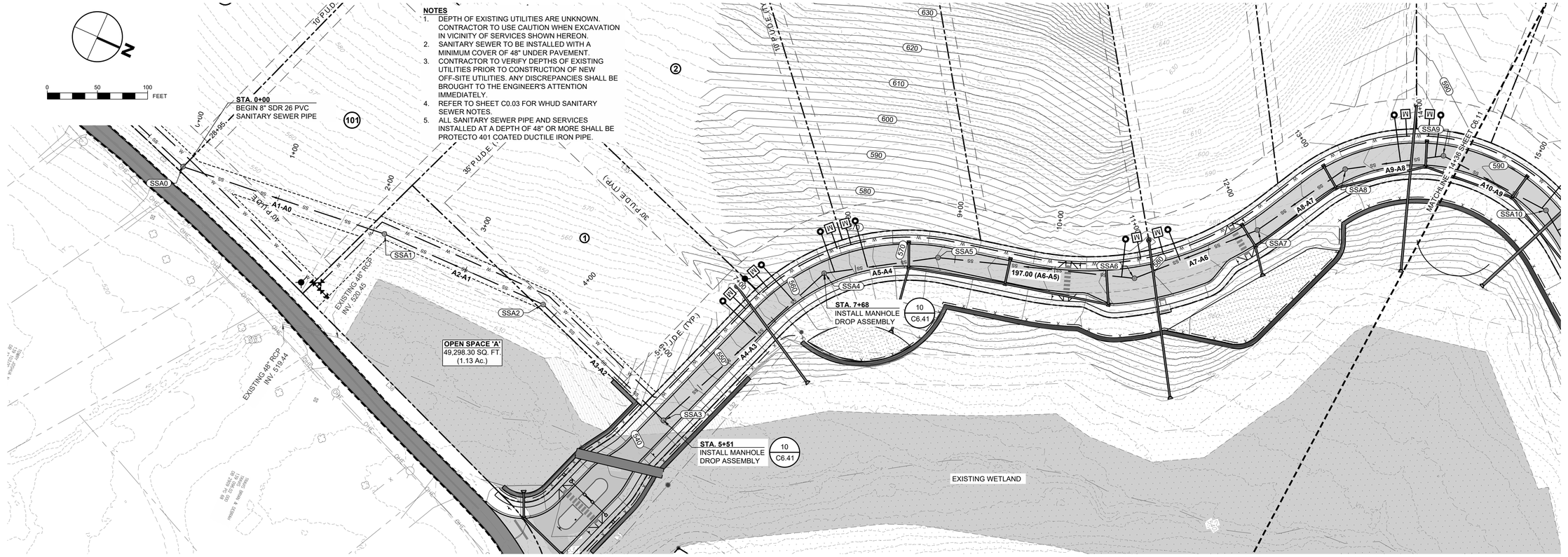
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

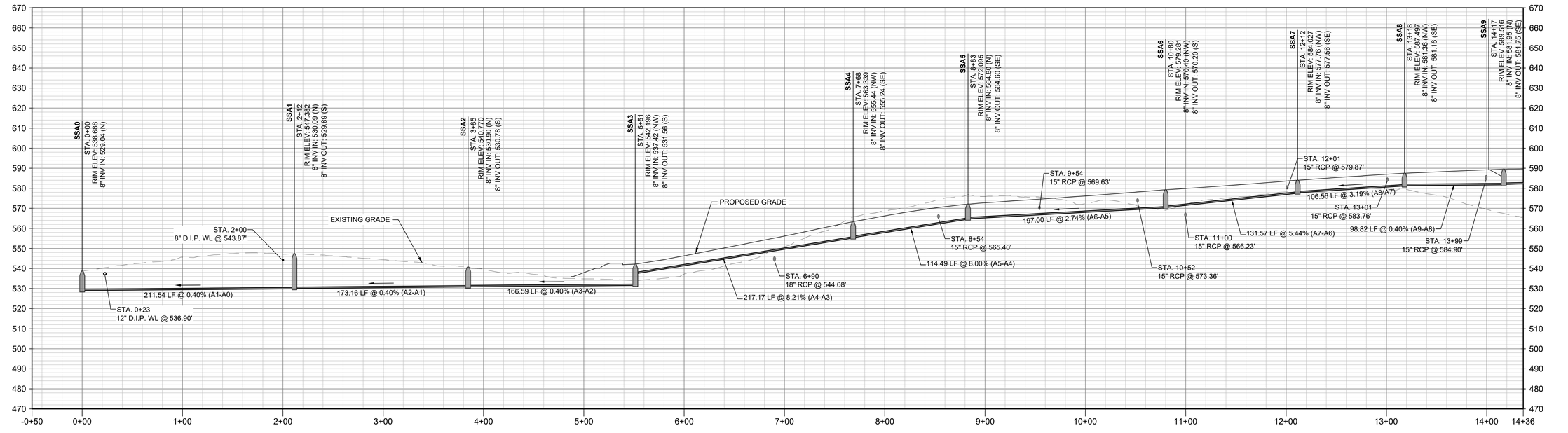
SITE UTILITY PLAN

SHEET NO. C6.03

FILENAME: Z:\PRIVATE CLIENTS\3005-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN2\3005-25_C6.00_SITE UTILITY PLAN.DWG

SAVE DATE: 9/2/2026, PLOT DATE: 9/3/2026





PROPOSED SANITARY SEWER 'A' PROFILE
SCALE: 1" = 50' (H.)
1" = 25' (V.)

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
No. 122540
STATE OF TENNESSEE
09/03/2026

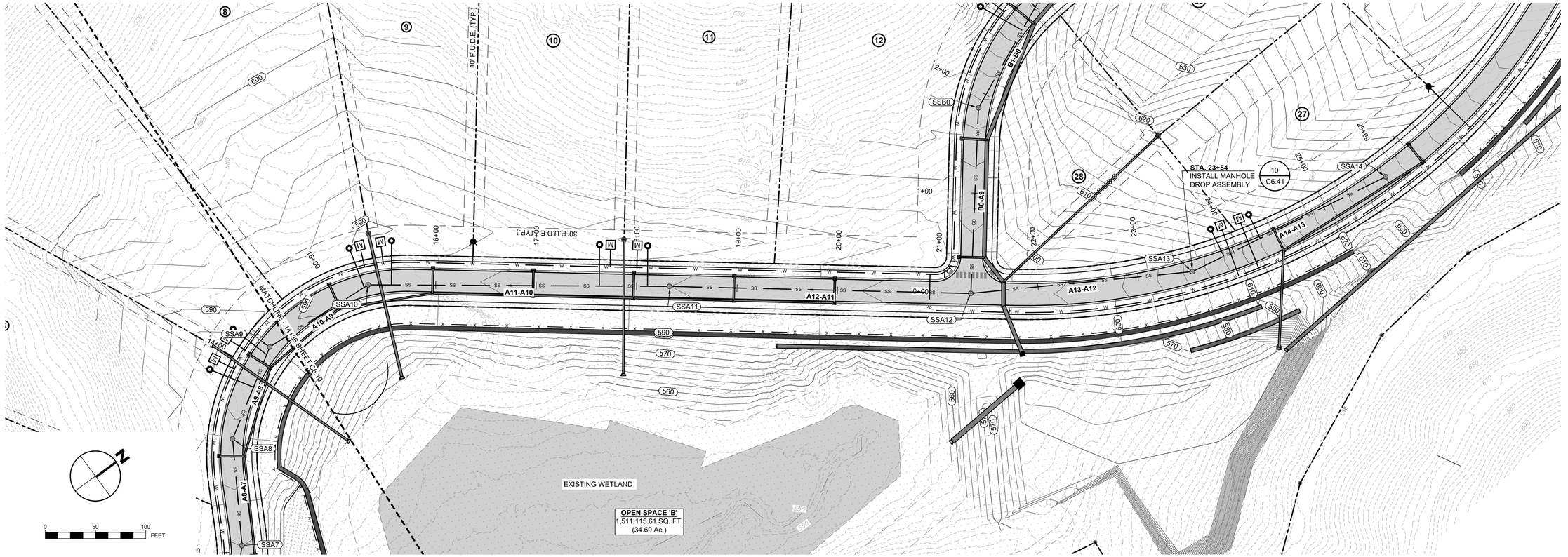
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

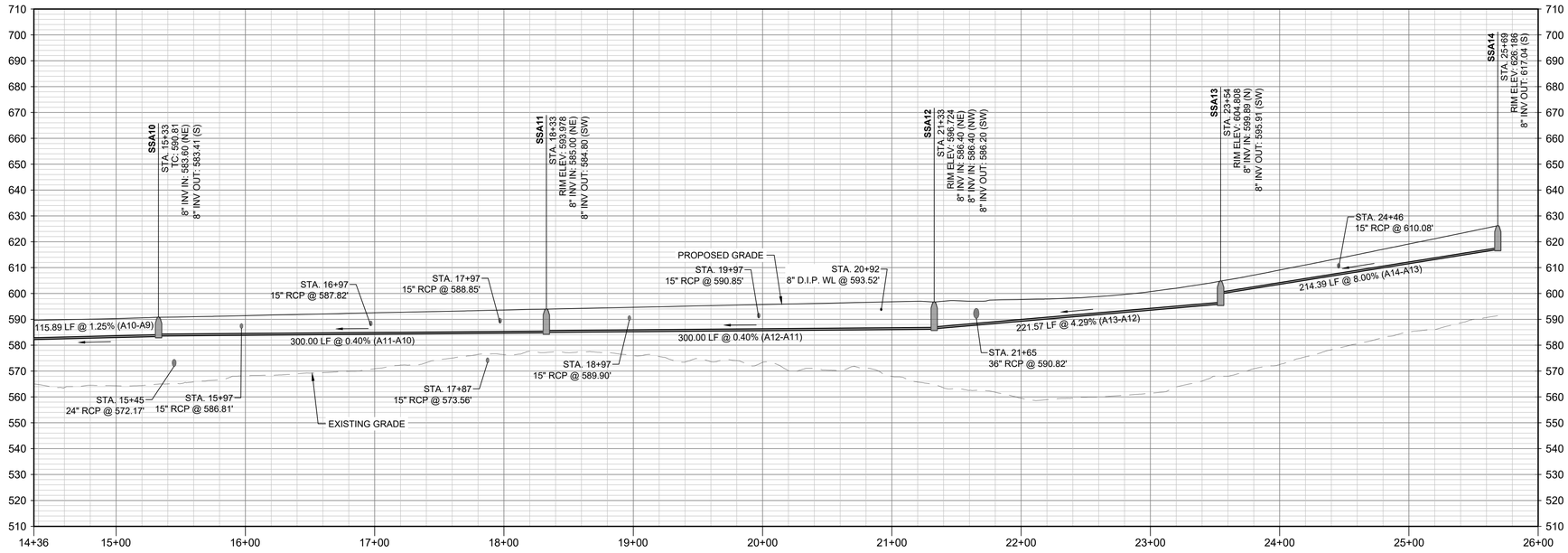
SANITARY SEWER A PLAN & PROFILE

SHEET NO. C6.10

SAVE DATE: 8/3/2026, PLOT DATE: 8/3/2026

FILENAME: Z:\PRIVATE CLIENTS\2026-34 - ALLEN FARM SUBDIVISION\26-34-SSA.DWG, 8/3/2026 7:41:11 AM, JPEG-LAYOUT





PROPOSED SANITARY SEWER 'A' PROFILE
SCALE: 1" = 50' (H.)
1" = 25' (V.)

NOTES

1. DEPTH OF EXISTING UTILITIES ARE UNKNOWN. CONTRACTOR TO USE CAUTION WHEN EXCAVATION IN VICINITY OF SERVICES SHOWN HEREON.
2. SANITARY SEWER TO BE INSTALLED WITH A MINIMUM COVER OF 48" UNDER PAVEMENT.
3. CONTRACTOR TO VERIFY DEPTHS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION OF NEW OFF-SITE UTILITIES. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
4. REFER TO SHEET C0.03 FOR WHUD SANITARY SEWER NOTES.
5. ALL SANITARY SEWER PIPE AND SERVICES INSTALLED AT A DEPTH OF 48" OR MORE SHALL BE PROTECTO 401 COATED DUCTILE IRON PIPE.

REVISIONS

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2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
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CONSTRUCTION DOCUMENTS FOR

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GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122500
STATE OF TENNESSEE
09/03/2026

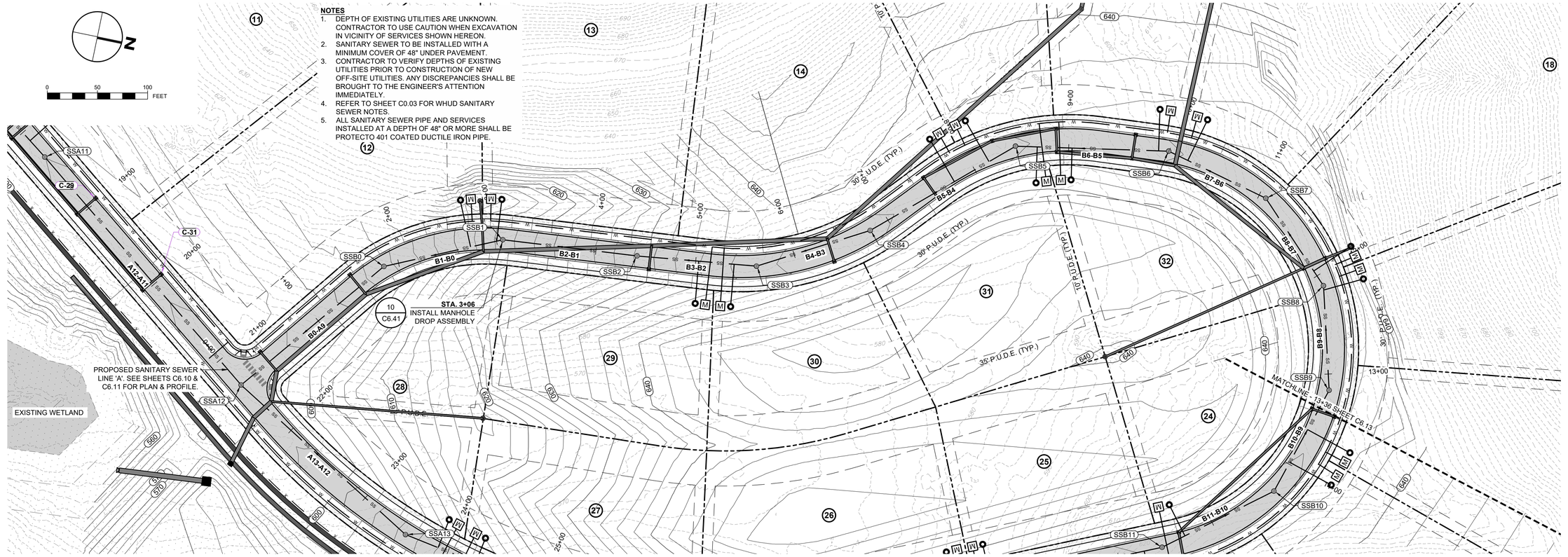
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

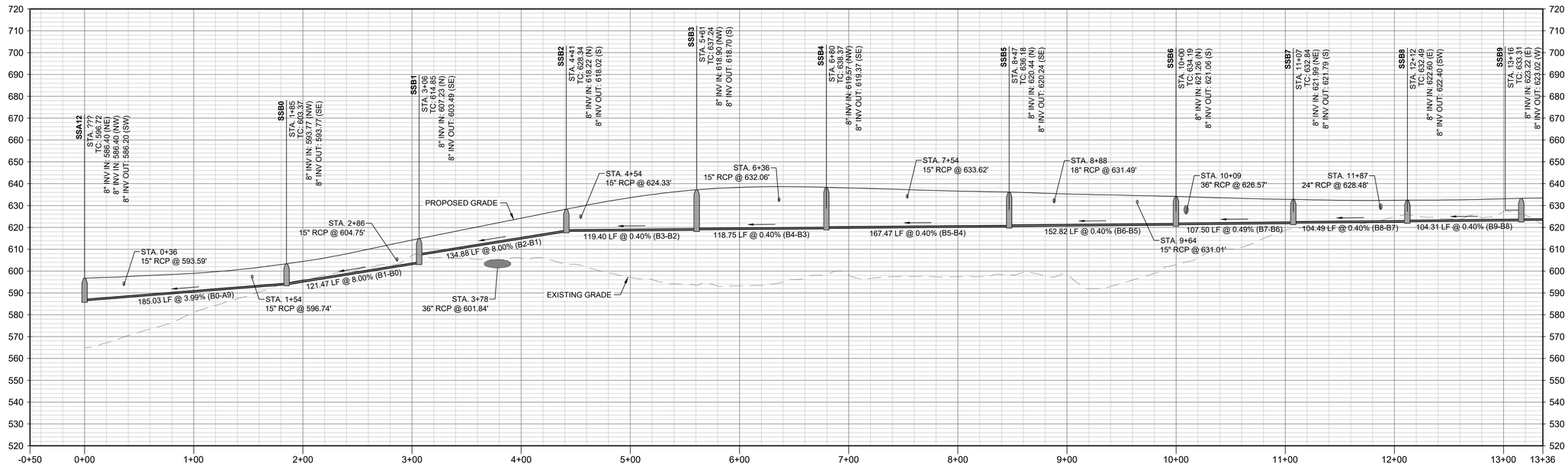
SANITARY SEWER
A PLAN & PROFILE

SHEET NO. C6.11

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

FILENAME: Z:\PRIVATE CLIENTS\3008-24 - ALLEN FARM SUBDIVISION\3008-25_C6.10_SS-A PLAN-PROFILE.DWG





PROPOSED SANITARY SEWER 'B' PROFILE
SCALE: 1" = 50' (H.)
1" = 25' (V.)

REVISIONS			
NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
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CONSTRUCTION DOCUMENTS FOR

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ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122540
STATE OF TENNESSEE
Nathan Couch
09/03/2026

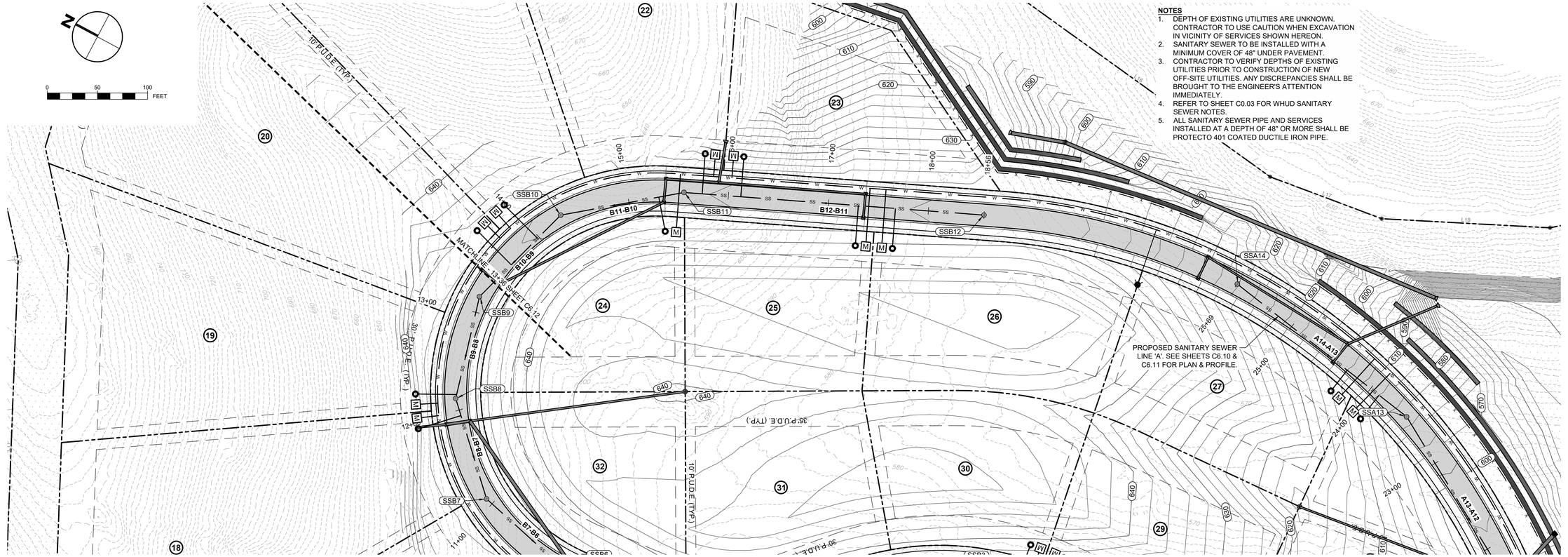
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

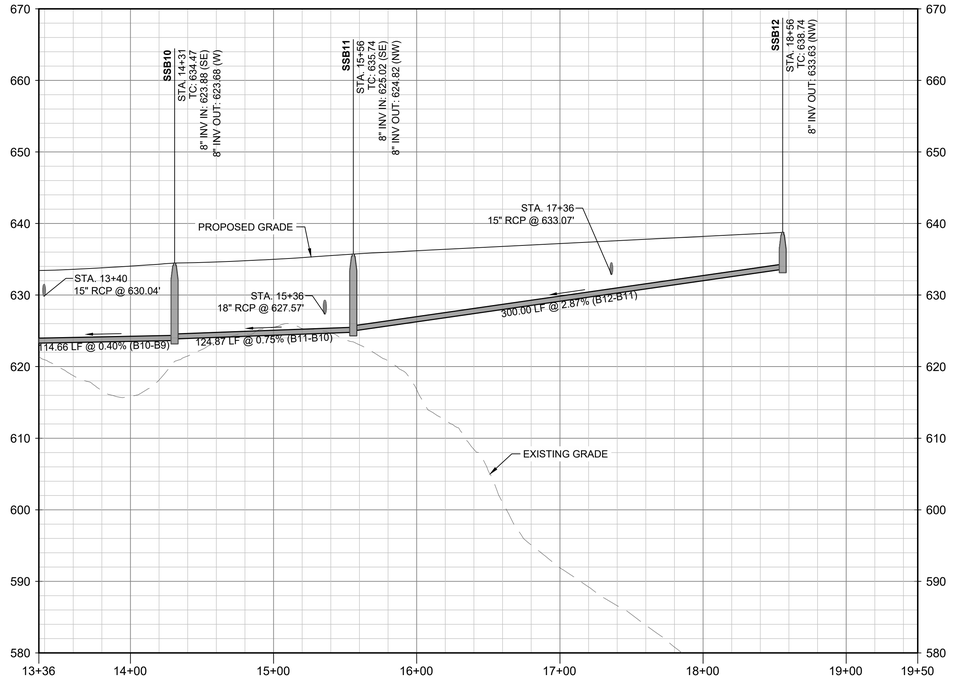
SANITARY SEWER B PLAN & PROFILE

SHEET NO. C6.12

SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

FILENAME: Z:\PRIVATE CLIENTS\2025-34 - ALLEN FARM SUBDIVISION\CAD\DESIGN\2025-34 ALLEN FARMS SUBDIVISION_SHT10_SS-B PLAN-PROFILE.DWG





PROPOSED SANITARY SEWER 'B' PROFILE
SCALE: 1" = 50" (H.)
1" = 10" (V.)

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2449 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122540
STATE OF TENNESSEE
09/03/2026

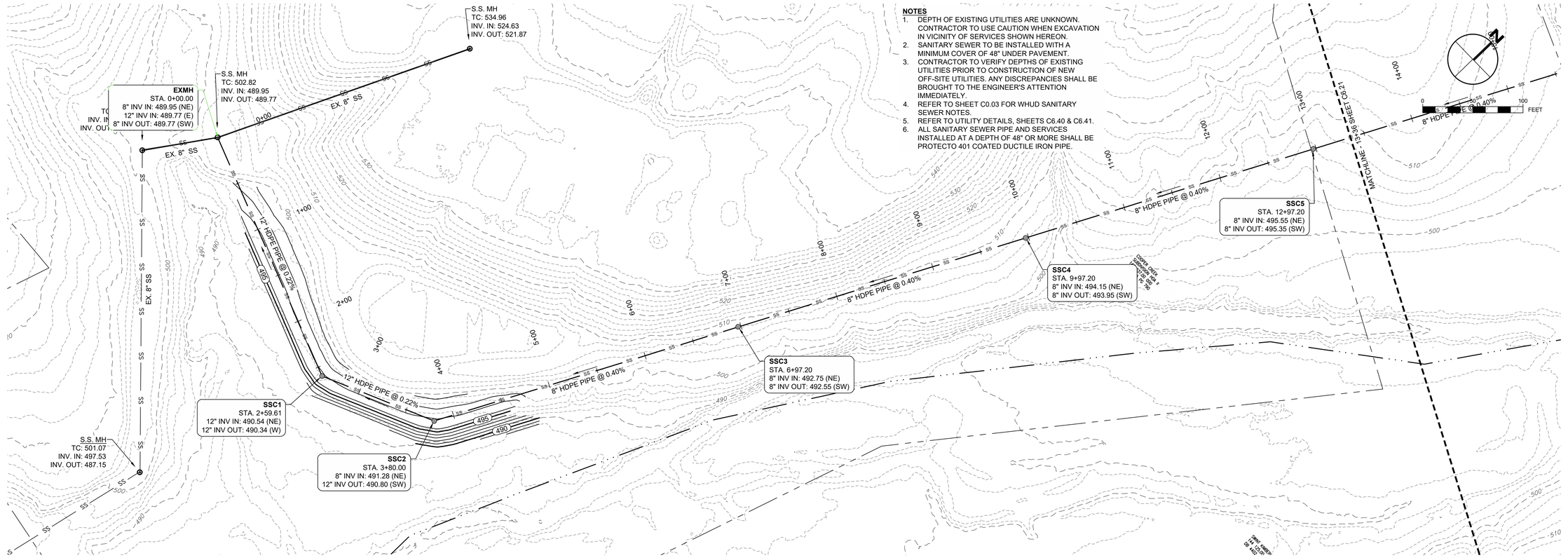
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

SANITARY SEWER B PLAN & PROFILE

SHEET NO. C6.13

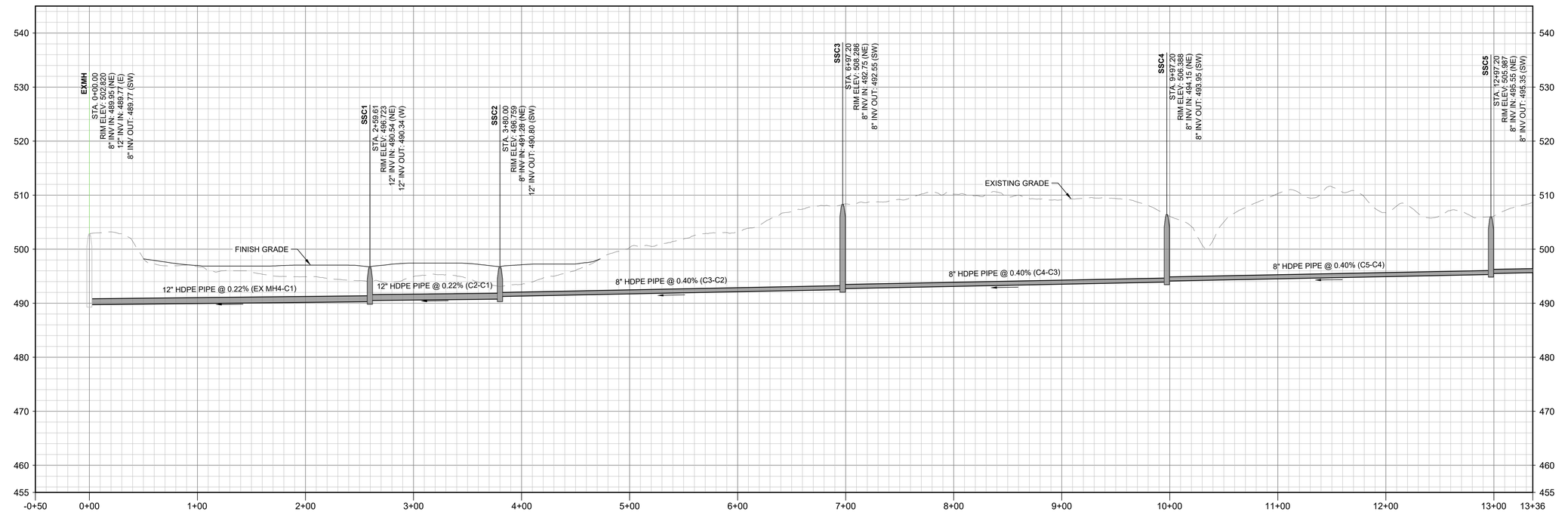
SAVE DATE: 9/3/2026, PLOT DATE: 9/3/2026

FILENAME: Z:\PRIVATE CLIENTS\2025-24 - ALLEN FARMS SUBDIVISION\CAD\DESIGN\DWG\25-SS01.DWG, 25-SS01-CADDESIGNDWG, 9/3/2026 8:31:11 AM, EPSON L8180 Series, 25-B PLAN-PROFILE.DWG



NOTES

1. DEPTH OF EXISTING UTILITIES ARE UNKNOWN. CONTRACTOR TO USE CAUTION WHEN EXCAVATION IN VICINITY OF SERVICES SHOWN HEREON.
2. SANITARY SEWER TO BE INSTALLED WITH A MINIMUM COVER OF 48" UNDER PAVEMENT.
3. CONTRACTOR TO VERIFY DEPTHS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION OF NEW OFF-SITE UTILITIES. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
4. REFER TO SHEET C0.03 FOR WHUD SANITARY SEWER NOTES.
5. REFER TO UTILITY DETAILS, SHEETS C6.40 & C6.41.
6. ALL SANITARY SEWER PIPE AND SERVICES INSTALLED AT A DEPTH OF 48" OR MORE SHALL BE PROTECTO 401 COATED DUCTILE IRON PIPE.



PROPOSED SANITARY SEWER (OFF-SITE) PROFILE
SCALE: 1" = 50" (H.)
1" = 10" (V.)

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

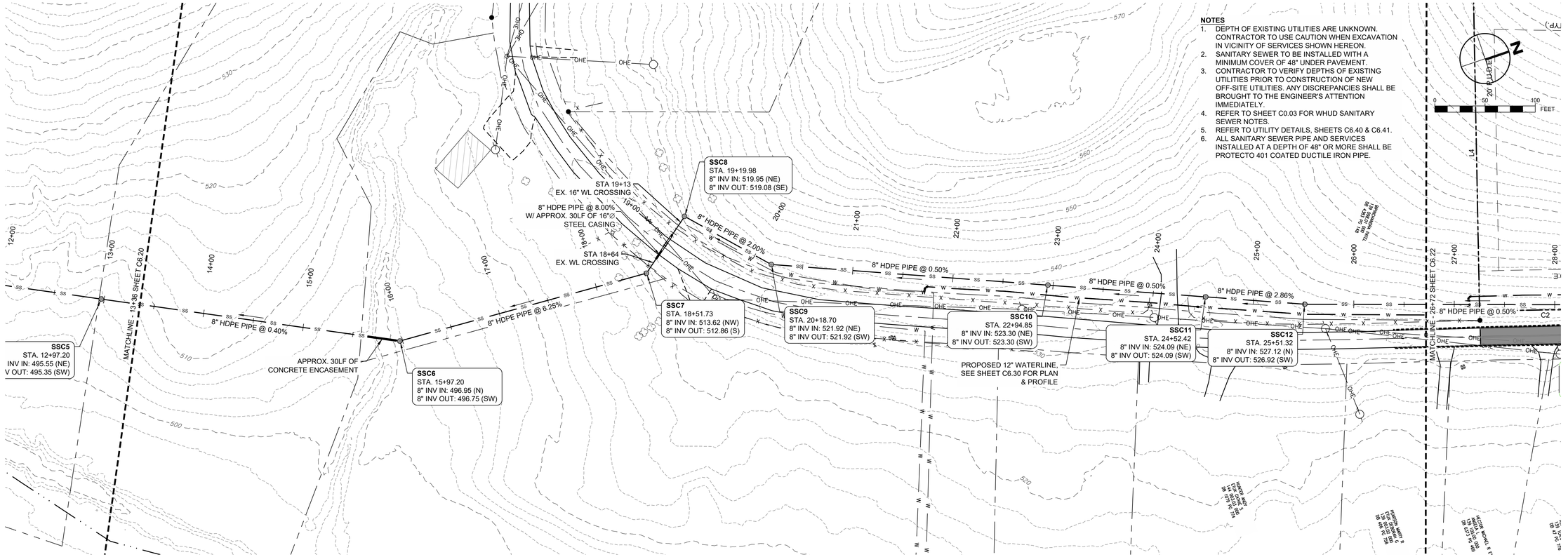
NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122540
STATE OF TENNESSEE
09/03/2026

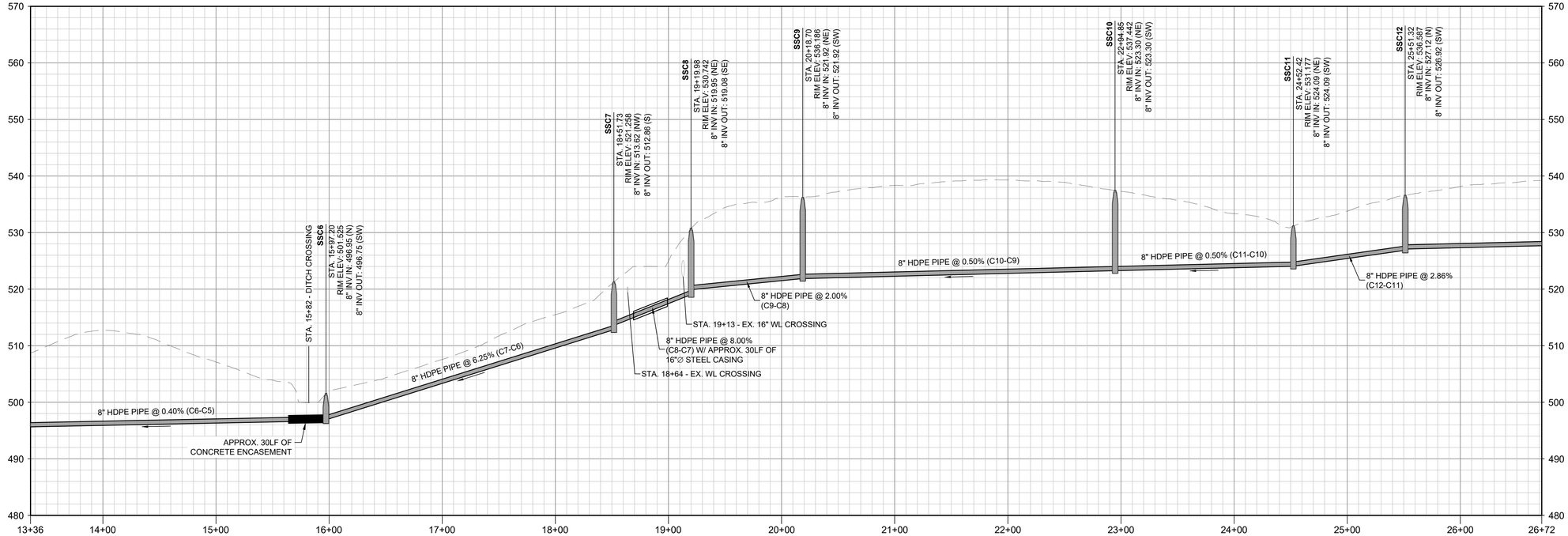
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

SANITARY SEWER PLAN & PROFILE (OFF-SITE)

SHEET NO. C6.20

FILENAME: Z:\PRIVATE CLIENTS\2025-24 - ALLEN FARM SUBDIVISION\CAD\DESIGN\2025024_SHT14-CADDESIGNADD0003_GADD_SS-OFFSITE PLAN-PROFILE.DWG
SAVE DATE: 8/27/2026, PLOT DATE: 8/28/2026





PROPOSED SANITARY SEWER (OFF-SITE) PROFILE
SCALE: 1" = 50" (H.)
1" = 10" (V.)

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

SAVE DATE: 8/27/2026, PLOT DATE: 8/28/2026

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
7146 COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

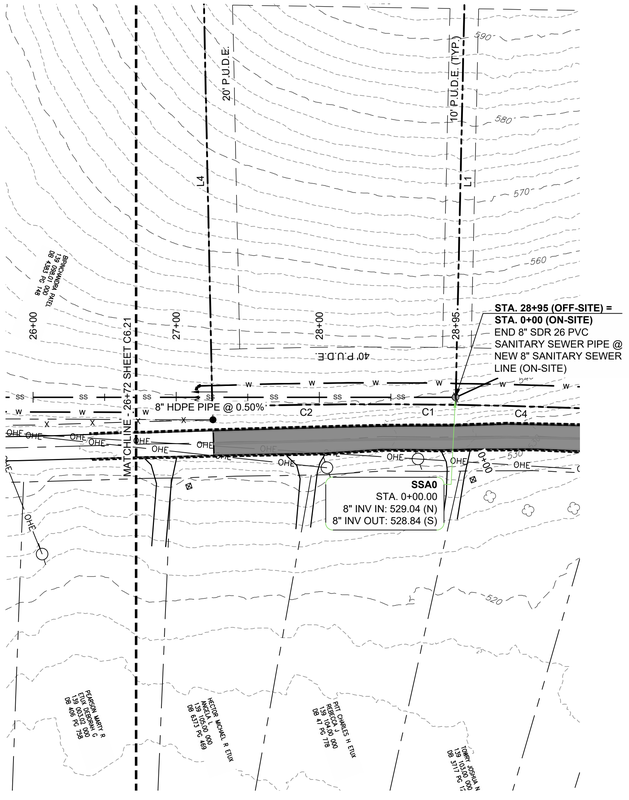
NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122540
STATE OF TENNESSEE
Nathan Couch
09/03/2026

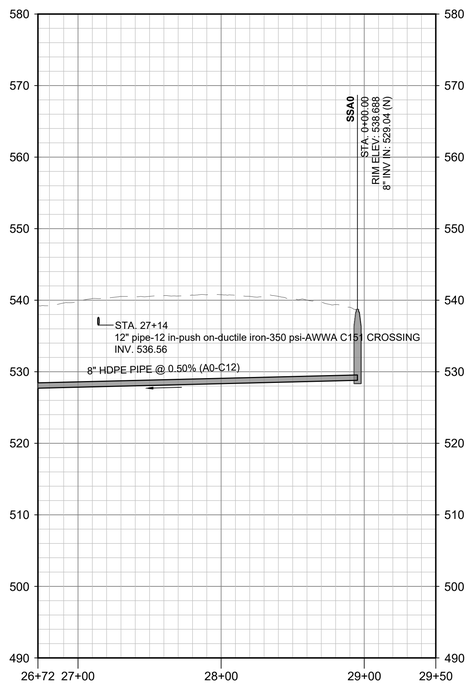
DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

SANITARY SEWER PLAN & PROFILE (OFF-SITE)

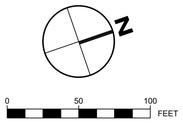
SHEET NO. C6.21

FILENAME: Z:\PRIVATE CLIENTS\2025-24 - ALLEN FARM SUBDIVISION\CIVIL\SHEETS\C6.21 - SANITARY SEWER PLAN & PROFILE (OFF-SITE).DWG





PROPOSED SANITARY SEWER (OFF-SITE) PROFILE
SCALE: 1" = 50" (H.)
1" = 10" (V.)



NOTES

1. DEPTH OF EXISTING UTILITIES ARE UNKNOWN. CONTRACTOR TO USE CAUTION WHEN EXCAVATION IN VICINITY OF SERVICES SHOWN HEREON.
2. SANITARY SEWER TO BE INSTALLED WITH A MINIMUM COVER OF 48" UNDER PAVEMENT.
3. CONTRACTOR TO VERIFY DEPTHS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION OF NEW OFF-SITE UTILITIES. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
4. REFER TO SHEET C0.03 FOR WHUD SANITARY SEWER NOTES.
5. REFER TO UTILITY DETAILS, SHEETS C6.40 & C6.41.
6. ALL SANITARY SEWER PIPE AND SERVICES INSTALLED AT A DEPTH OF 48" OR MORE SHALL BE PROTECTO 401 COATED DUCTILE IRON PIPE.

STRUCTURE DATA TABLE

STRUCTURE	STATION	RIM	INVERT (IN)	INVERT (OUT)	NORTHING	EASTING
EXMH	???	502.82	489.95 (NE) 489.77 (E)	489.77	731341.82	1772114.00
SSC1	2+60	496.72	490.54 (NE)	490.34	731251.20	1772357.28
SSC2	3+80	496.76	491.28 (NE)	490.80	731300.43	1772467.14
SSC3	6+97	508.29	492.75 (NE)	492.55	731583.38	1772610.50
SSC4	9+97	506.39	494.15 (NE)	493.95	731851.00	1772746.09
SSC5	12+97	505.99	495.55 (NE)	495.35	732118.61	1772881.67
SSC6	15+97	501.52	496.95 (N)	496.75	732386.22	1773017.25
SSC7	18+52	521.26	513.62 (NW)	512.86	732640.29	1773032.71
SSC8	19+20	530.74	519.95 (NE)	519.08	732694.62	1772991.41
SSC9	20+19	536.19	521.92 (NE)	521.92	732760.81	1773064.65
SSC10	22+95	537.44	523.30 (NE)	523.30	733014.75	1773173.12
SSC11	24+52	531.18	524.09 (NE)	524.09	733159.64	1773234.98
SSC12	25+51	536.59	527.12 (N)	526.92	733250.60	1773273.81

PIPE DATA TABLE

PIPE NAME	PIPE DIA.	LENGTH (LF)	SLOPE	STRUCTURE (UPSTREAM)	STRUCTURE (DOWNSTREAM)	INVERT (UPSTREAM)	INVERT (DOWNSTREAM)
A0-C12	8	343.94	0.50%		SSC12	528.84	527.12
C2-C1	12	120.39	0.22%	SSC1	SSC2	490.54	490.80
C3-C2	8	317.20	0.40%	SSC3	SSC2	492.55	491.28
C4-C3	8	300.00	0.40%	SSC4	SSC3	493.95	492.75
C5-C4	8	300.00	0.40%	SSC5	SSC4	495.35	494.15
C6-C5	8	300.00	0.40%	SSC6	SSC5	496.75	495.55
C7-C6	8	254.53	6.25%	SSC7	SSC6	512.86	496.95
C8-C7	8	68.25	8.00%	SSC8	SSC7	519.08	513.62
C9-C8	8	98.72	2.00%	SSC9	SSC8	521.92	519.95
C10-C9	8	276.13	0.50%	SSC10	SSC9	523.30	521.92
C11-C10	8	157.55	0.50%	SSC11	SSC10	524.09	523.30
C12-C11	8	98.90	2.86%	SSC12	SSC11	526.92	524.09
EX-3	8	76.18	0.72%	EXMH		489.77	489.22
EX-4	8	266.44	11.98%		EXMH	521.87	489.95
EX MH4-C1	12	259.61	0.22%	EXMH	SSC1	489.77	490.34

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

SAVE DATE: 8/31/2026, PLOT DATE: 9/3/2026

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
7146 COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
No. 125500
STATE OF TENNESSEE
09/03/2026

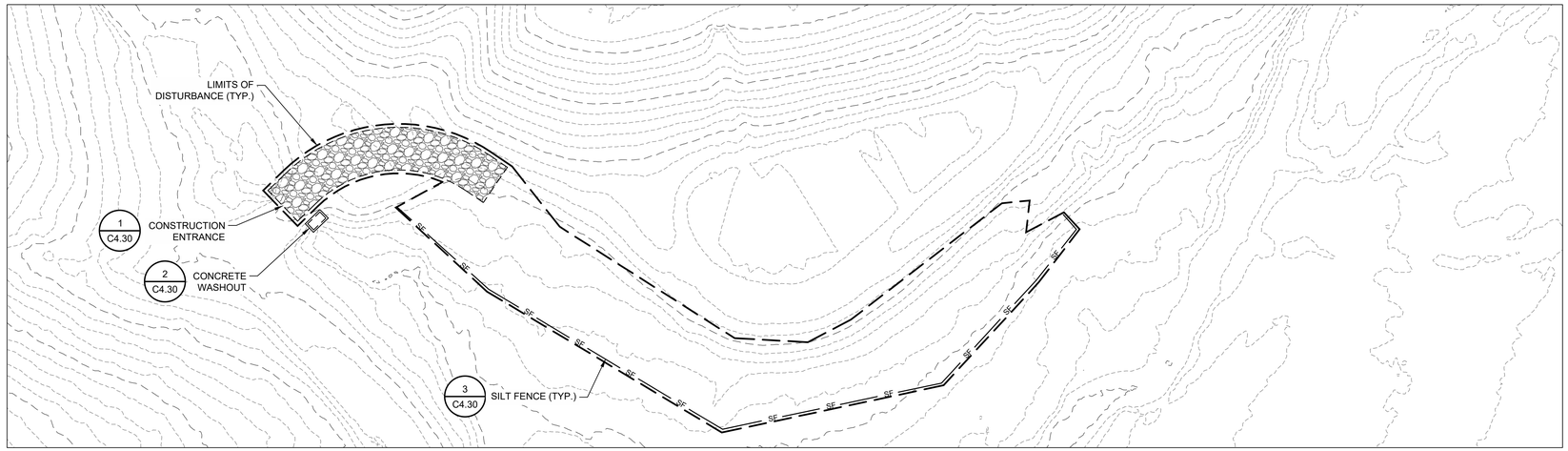
DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

SANITARY SEWER PLAN & PROFILE (OFF-SITE)

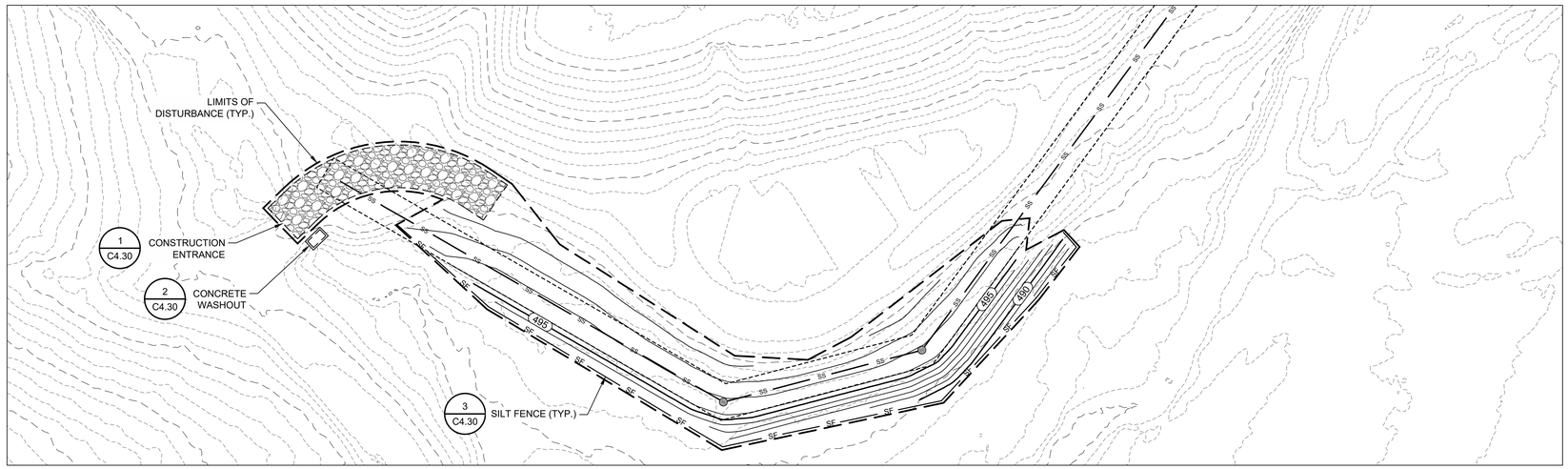
SHEET NO. C6.22

FILENAME: Z:\PRIVATE CLIENTS\2024-24 - ALLEN FARM SUBDIVISION\4 CE SHEETS\C6.22 - SSA PLAN PROFILE OFF-SITE.DWG



INITIAL EPSC PLAN

1:40



INTERMEDIATE EPSC PLAN

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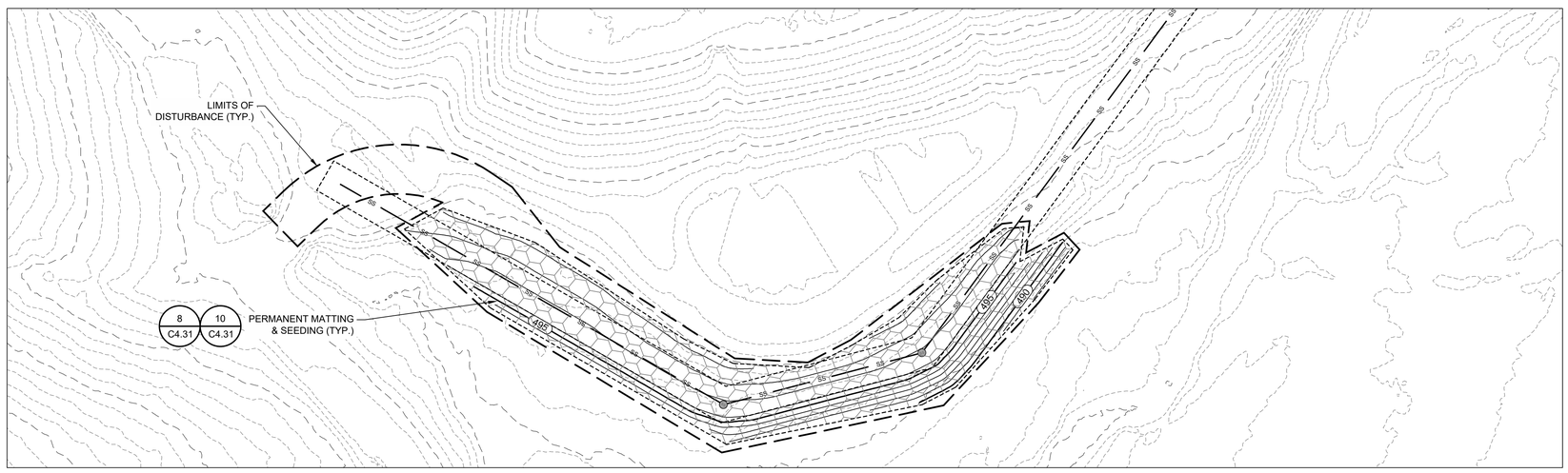
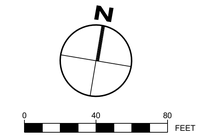


FINAL EPSC PLAN

1:40



FEMA NOTE

- US FEMA FIRM COMMUNITY PANEL NUMBER: 47165C0381H, EFFECTIVE DATE 2/26/2021; FLOOD ZONE AE.

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

PHONE: (615) 331-1441
FAX: (615) 331-1050

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH
REGISTERED ENGINEER
AGRICULTURE
No. 125340
COMMISSIONED
STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

EPSC PLAN (OFFSITE)

SHEET NO. C6.25

SAVE DATE: 8/7/2026, PLOT DATE: 8/3/2026

FILENAME: Z:\PRIVATE CLIENTS\005-24 - ALLEN FARMS SUBDIVISION-TASKS\01 - SITE\4-CAD\DESIGN\005-24-01_C3D_EPSC PLAN_OFFSITE.DWG

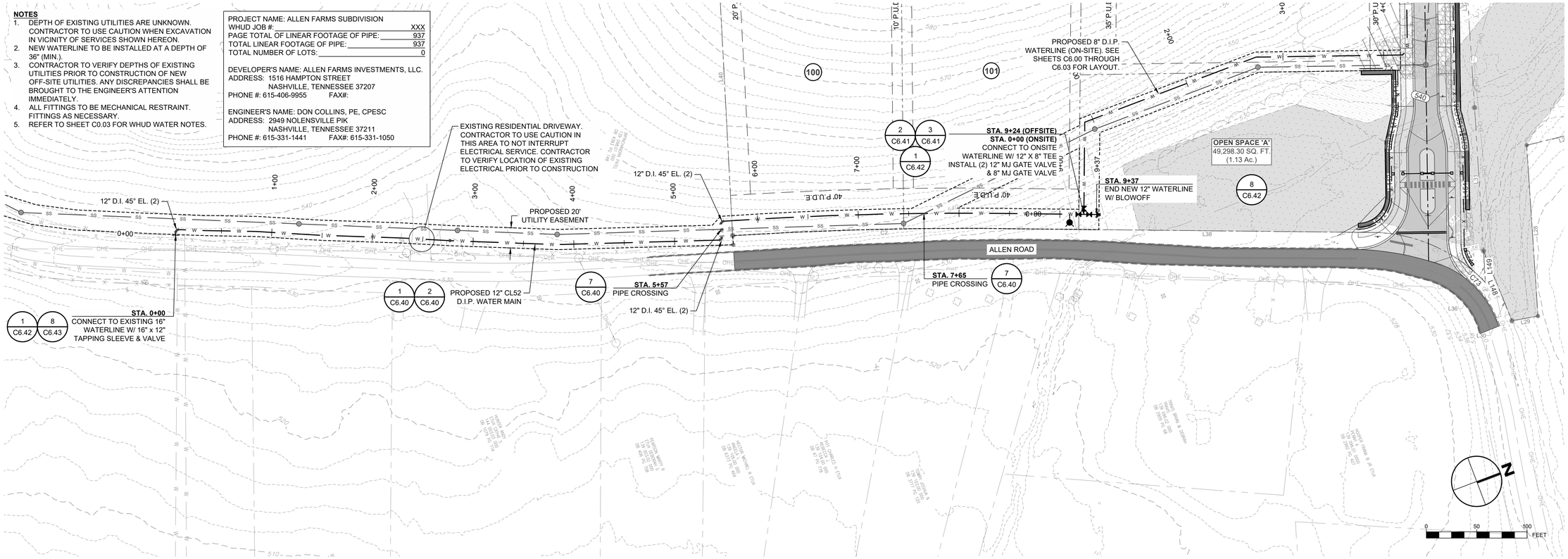
NOTES

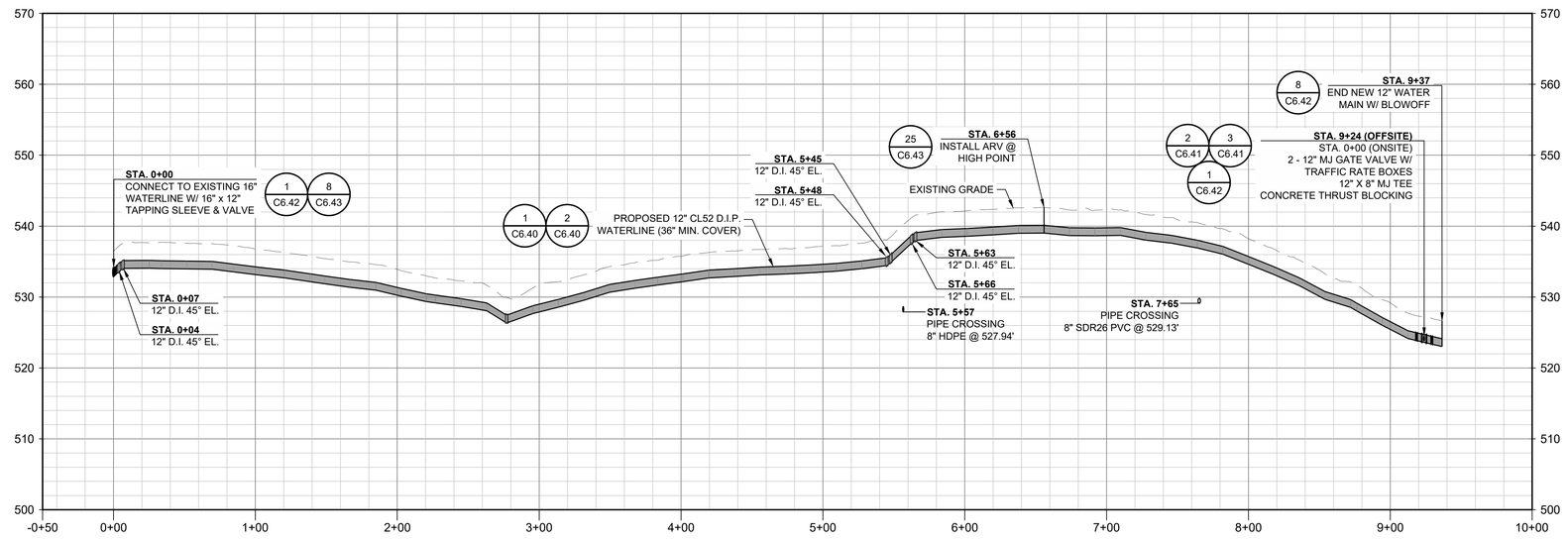
1. DEPTH OF EXISTING UTILITIES ARE UNKNOWN. CONTRACTOR TO USE CAUTION WHEN EXCAVATION IN VICINITY OF SERVICES SHOWN HEREON.
2. NEW WATERLINE TO BE INSTALLED AT A DEPTH OF 36" (MIN.).
3. CONTRACTOR TO VERIFY DEPTHS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION OF NEW OFF-SITE UTILITIES. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
4. ALL FITTINGS TO BE MECHANICAL RESTRAINT. FITTINGS AS NECESSARY.
5. REFER TO SHEET C0.03 FOR WHUD WATER NOTES.

PROJECT NAME: ALLEN FARMS SUBDIVISION
WHUD JOB #: XXX
PAGE TOTAL OF LINEAR FOOTAGE OF PIPE: 937
TOTAL LINEAR FOOTAGE OF PIPE: 937
TOTAL NUMBER OF LOTS: 0

DEVELOPER'S NAME: ALLEN FARMS INVESTMENTS, LLC.
ADDRESS: 1516 HAMPTON STREET
NASHVILLE, TENNESSEE 37207
PHONE #: 615-406-9955 FAX#:

ENGINEER'S NAME: DON COLLINS, PE, CPESC
ADDRESS: 2949 NOLENSVILLE PIK
NASHVILLE, TENNESSEE 37211
PHONE #: 615-331-1441 FAX#: 615-331-1050





PROPOSED 12IN WATERLINE (OFFSITE) PROFILE
SCALE: 1" = 50" (H.)
1" = 10" (V.)

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
PHONE: (615) 331-1441
FAX: (615) 331-1050
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

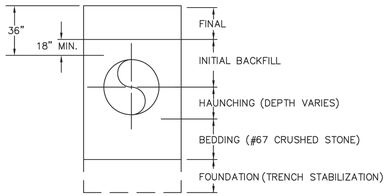
CONSTRUCTION DOCUMENTS FOR
ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH REGISTERED ENGINEER CIVIL CONSULTANT No. 122500 STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

WATERLINE PLAN & PROFILE (OFF-SITE)

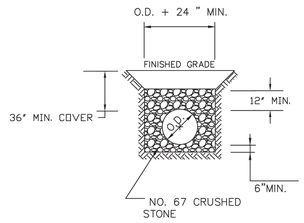
SHEET NO. C6.30



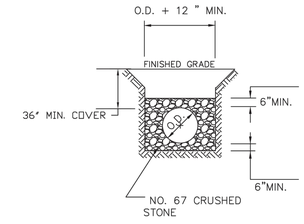
NOTE: SEE SPECIFICATIONS AND PIPE BEDDING AND HAUNCHING DETAILS FOR DIMENSIONS AND MATERIALS

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : MAY 2003 SCALE : N.T.S.
	TRENCH TERMINOLOGY DETAIL	STD-G-05

1 TRENCH TERMINOLOGY STD-G-05 NOT TO SCALE



ROCK TRENCH



EARTH TRENCH

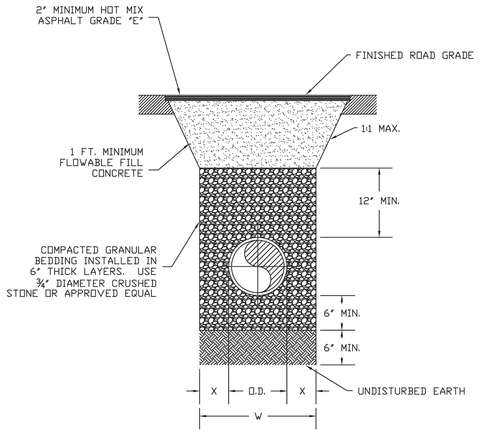
White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : FEB 2012 SCALE : N.T.S.
	PIPE BEDDING & HAUNCHING DETAILS FORCE MAINS	STD-G-13

2 PIPE BEDDING & HAUNCHING - FORCE MAINS STD-G-13 NOT TO SCALE

TABLE #1

PIPE SIZE	X **
LESS THAN 12"	12"
12" - 30"	15"
30" - 42"	18"
42" AND LARGER	

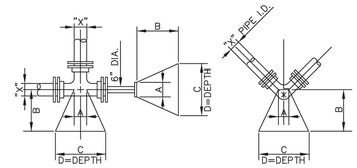
** TRENCH WIDTH (w) SHALL BE 3'0" MAX.



NOTES:
1. WIDTH OF TRENCH (W) = O.D. + 2X WHERE 'X' IS THE DISTANCE FROM OUTSIDE PIPE TO THE EDGE OF TRENCH
2. SEE APPROVED W.H.U.D. MATERIALS LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : JUNE 2016 SCALE : N.T.S.
	PAVEMENT REPLACEMENT; ASPHALT REPLACEMENT DETAIL	STD-G-03

3 ASPHALT PAVEMENT REPLACEMENT STD-G-03 NOT TO SCALE



100 PSI TEST PRESSURE (SANITARY SEWER FORCE MAIN)
200 PSI TEST PRESSURE (WATER MAIN)
2000 PSF SOIL BEARING

BLOCKING DIMENSIONS

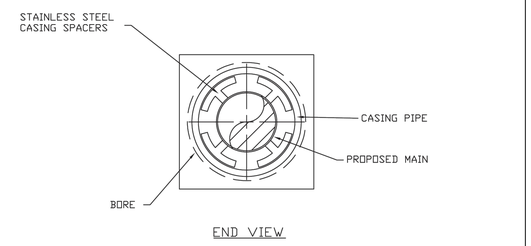
		X*	A	B	C	D
DEAD END & TEES		10"	1'-0"	2'-6"	4'-0"	2'-6"
		8"	0'-10"	2'-3"	3'-3"	2'-0"
		6"	0'-8"	1'-6"	2'-6"	1'-6"
BENDS	90°	10"	1'-0"	3'-6"	5'-0"	2'-9"
		8"	0'-10"	2'-9"	4'-0"	2'-3"
		6"	0'-8"	2'-0"	3'-0"	1'-9"
	45°	10"	1'-0"	1'-9"	3'-0"	2'-6"
		8"	0'-10"	1'-6"	2'-6"	2'-0"
		6"	0'-8"	1'-3"	2'-0"	1'-6"
	22½°	10"	1'-0"	1'-4"	2'-6"	1'-6"
		8"	0'-10"	1'-0"	2'-0"	1'-3"
		6"	0'-8"	0'-9"	1'-6"	1'-0"
	11¼°	10"	1'-0"	0'-6"	1'-6"	1'-3"
		8"	0'-10"	0'-6"	1'-4"	1'-0"
		6"	0'-8"	0'-6"	1'-0"	0'-9"

X* = DIAMETER OF PIPE TO BE BLOCKED

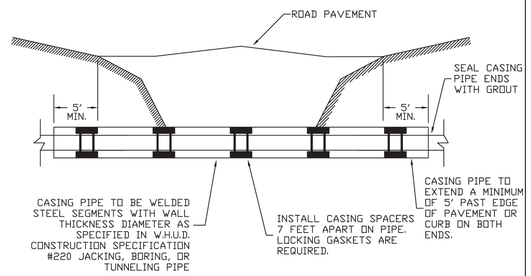
NOTES:
1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI.
2. SEE APPROVED WHUD MATERIALS LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : AUG 2008 SCALE : N.T.S.
	TYPICAL BLOCKING DETAIL	STD-G-09

4 TYPICAL BLOCKING STD-G-09 NOT TO SCALE



END VIEW

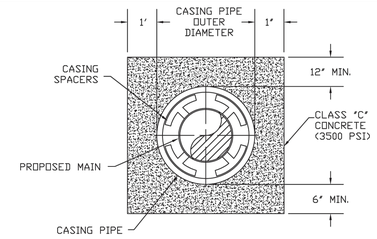


PROFILE VIEW

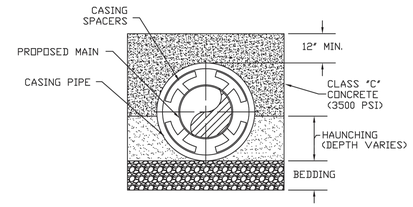
NOTES:
1. SEE APPROVED W.H.U.D. MATERIALS LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : AUG 2008 SCALE : N.T.S.
	CASING PIPE FOR ROAD CROSSING DETAIL	STD-G-07

5 CASING PIPE FOR ROAD CROSSING STD-G-07 NOT TO SCALE



CONCRETE ENCASEMENT

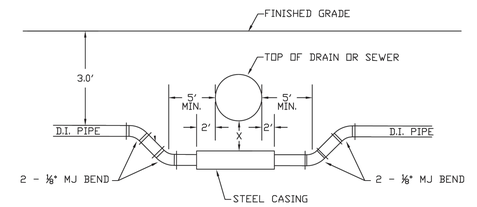


CONCRETE CAP

NOTES:
1. BAG CONCRETE IS NOT TO BE USED.
2. BEDDING AND HAUNCHING MATERIALS ARE DEPENDENT ON AREA SOIL CONDITIONS. MATERIAL WILL BE DETERMINED AT THE JOB SITE BY W.H.U.D. INSPECTOR.
3. SEE APPROVED W.H.U.D. MATERIALS LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : AUG 2008 SCALE : N.T.S.
	CONCRETE ENCASEMENT AND CONCRETE CAP DETAIL	STD-G-08

6 CONCRETE ENCASEMENT & CONCRETE CAP STD-G-08 NOT TO SCALE



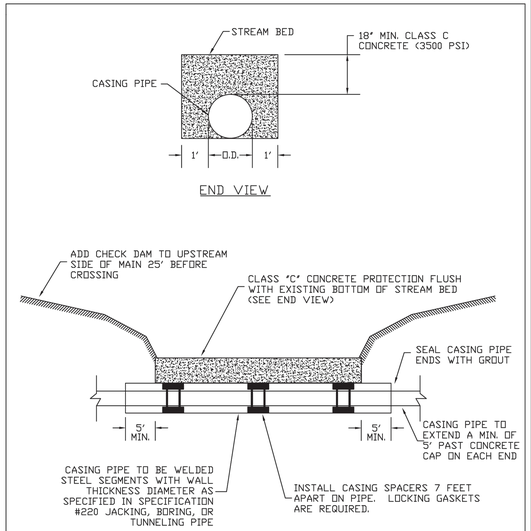
SIDE VIEW
(THIS DETAIL IS VERTICAL ONLY, NOT HORIZONTAL)

WATER CROSSING	
PIPE SIZE	MIN. CASING SIZE
6"	12"
8"	16"
12"	20"
16"	24"
24"	36"
30"	42"

NOTES:
1. THE MINIMUM CASING LENGTH SHALL BE TEN LINEAR FEET (10 L.F.).
2. THE MINIMUM SEPARATION DISTANCE BETWEEN THE WATER MAIN AND THE STORM DRAIN/SANITARY SEWER (X') SHALL BE EIGHTEEN INCHES (18").
3. CONTRACTOR SHALL MAINTAIN A MINIMYM FOUR FEET (4') SEPARATION DISTANCE BETWEEN ALL FITTINGS.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	STORM DRAIN OR SANITARY SEWER MAIN & WATER MAIN CROSSING DETAIL	STD-W-20

7 UTILITY CROSSING STD-W-20 NOT TO SCALE



END VIEW

PROFILE VIEW

NOTES:
1. BAG CONCRETE IS NOT TO BE USED.
2. SEE APPROVED W.H.U.D. MATERIAL LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : AUG 2008 SCALE : N.T.S.
	CASING PIPE AND CONCRETE CAP FOR STREAMS OR LARGE DRAINAGE CHANNEL CROSSING DETAIL	STD-G-06

8 CASING PIPE & CONCRETE CAP FOR STREAMS OR LARGE DRAINAGE CHANNEL CROSSING STD-G-06 NOT TO SCALE

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

SAVE DATE: 7/22/2026, PLOT DATE: 8/3/2026

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

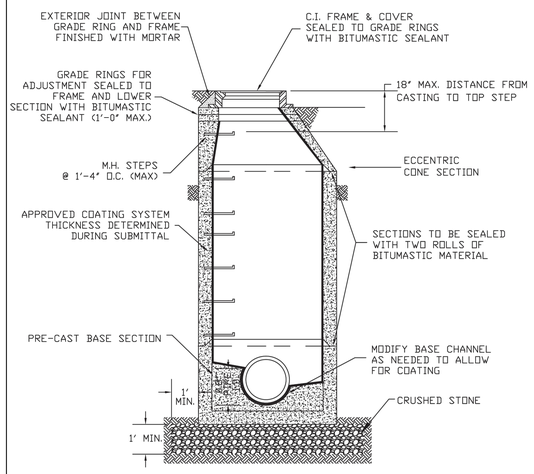
NATHAN ANDREW COUCH REGISTERED ENGINEER No. 125340 STATE OF TENNESSEE
Nathan Couch
09/03/2026

DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

UTILITY DETAILS

SHEET NO. C6.40

FILENAME: Z:\PRIVATE CLIENTS\2025-AL ALLEN FARM SUBDIVISION\CAD\DESIGN\ALLEN FARMS SITE\1-CADD\DESIGN\CIVIL\ALLEN FARMS_SITE1-CADD(DESIGN)CIVIL_CAD_UTILITY DETAILS.DWG

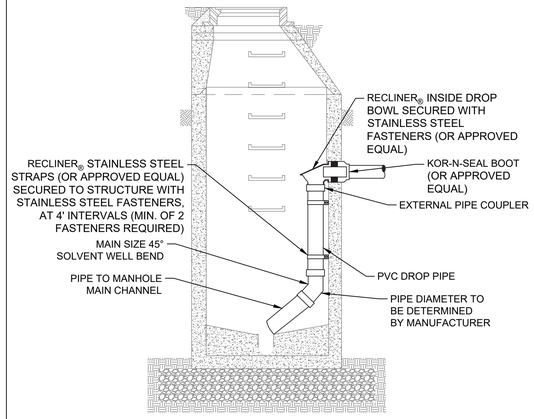


STANDARD MANHOLE

NOTES:
1. FRAME AND COVER MUST BE TRAFFIC RATED.
2. FOR WATERTIGHT INSTALLATIONS USE APPROVED WATER TIGHT INSERTS.
3. CRUSHED STONE MAY BE ¾", #5, #57, OR #67 STONE UPON APPROVAL BY W.H.U.D..
4. SEE STD-WW-03 FOR CHIMNEY SEAL INSTALLATION.
5. SEE APPROVED W.H.U.D. MATERIALS LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : AUG 2008 SCALE : N.T.S.
	PRE-CAST CONCRETE MANHOLE DETAIL	STD-WW-01

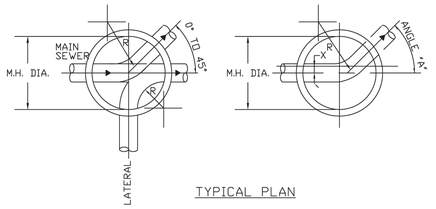
9 PRE-CAST CONCRETE MANHOLE — STD-WW-01 — NOT TO SCALE



NOTES:

1. SEE APPROVED W.H.U.D. MATERIALS LIST.
2. IF DROP IS LESS THAN 3', A CONCRETE SLIDE IS REQUIRED.

10 MANHOLE DROP ASSEMBLY — NOT TO SCALE



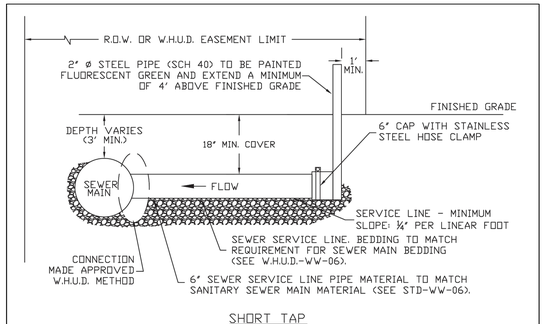
TYPICAL PLAN

STANDARD MANHOLE SCHEDULE OF GOVERNING DIMENSIONS		
PIPE SIZE	ANGLE "A"	M.H. DIA.
8" TO 12"	0° TO 90°	4'-0"

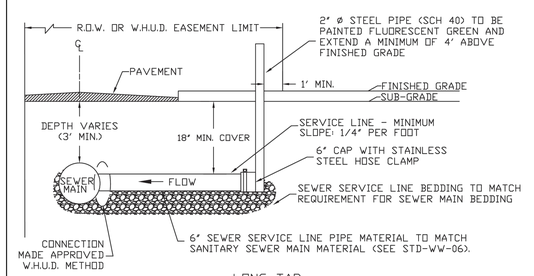
NOTES:
1. MINIMUM ℄ RADIUS (R) OF M.H. INVERT = 1.5 X PIPE DIAMETER.
2. MAXIMUM ANGLE "A" IS 90°.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : AUG 2008 SCALE : N.T.S.
	STANDARD MANHOLE INVERT DETAIL	STD-WW-03

11 STANDARD MANHOLE INVERT — STD-WW-03 — NOT TO SCALE



SHORT TAP

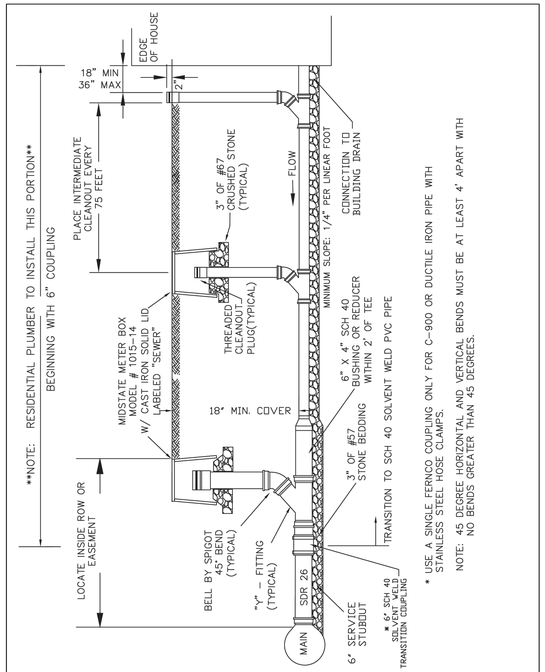


LONG TAP

NOTES:
1. SEE APPROVED W.H.U.D. MATERIALS LIST.
2. BACKFILL AS PER CITY/COUNTY CODES.

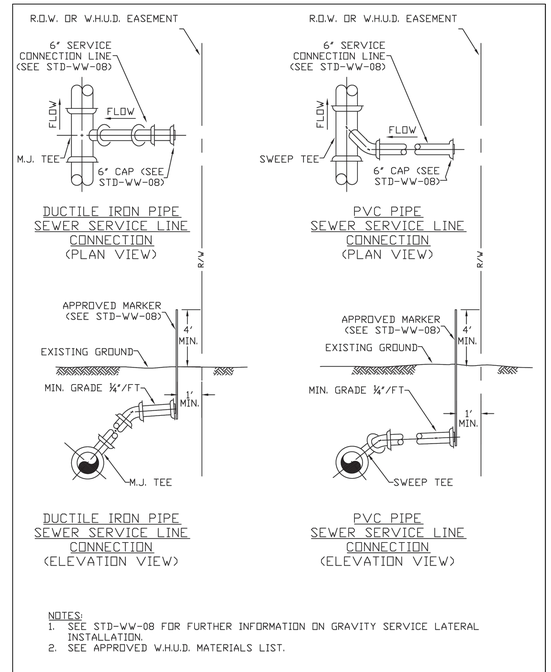
White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : AUG 2008 SCALE : N.T.S.
	NEW CONSTRUCTION: GRAVITY SERVICE LATERAL STUB-OUT DETAIL	STD-WW-08

12 NEW CONSTRUCTION GRAVITY SERVICE LATERAL STUB-OUT — STD-WW-08 — NOT TO SCALE



White House Utility District WATER & WASTEWATER	WHITE HOUSE UTILITY DISTRICT	DATE : FEB 2012 SCALE : N.T.S.
	GRAVITY SEWER SERVICE BUILDING PLUMBING CONNECTION DETAIL	STD-WW-09

13 GRAVITY SEWER SERVICE BUILDING PLUMBING CONNECTION — STD-WW-09 — NOT TO SCALE



NOTES:
1. SEE STD-WW-08 FOR FURTHER INFORMATION ON GRAVITY SERVICE LATERAL INSTALLATION.
2. SEE APPROVED W.H.U.D. MATERIALS LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : AUG 2008 SCALE : N.T.S.
	GRAVITY SEWER MAIN LATERAL SERVICE STUB-OUT SCHEMATIC DETAIL	STD-WW-07

14 GRAVITY SEWER MAIN LATERAL SERVICE STUB-OUT SCHEMATIC — STD-WW-07 — NOT TO SCALE

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

SAVE DATE: 7/22/2026, PLOT DATE: 8/3/2026

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
7146 COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

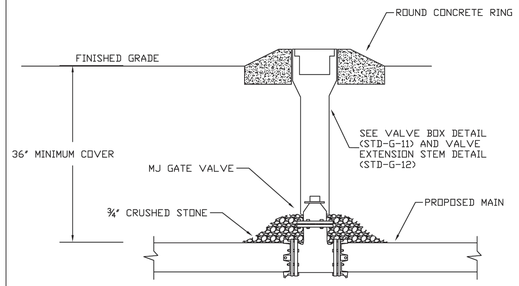
NATHAN ANDREW COUCH — REGISTERED ENGINEER — AGRICULTURE & COMMERCE — No. 125340 — STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

UTILITY DETAILS - SANITARY SEWER

SHEET NO. C6.41

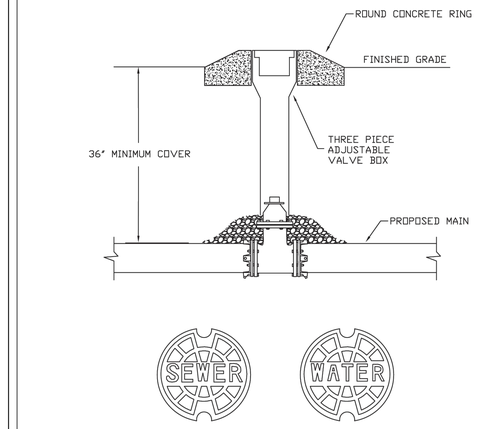
RELEASE: 2-PRIVATE CLIENTS\2025-24 - ALLEN FARM SUBDIVISION\CAD\SHEETS\ALLEN FARMS_SITE PLAN\DETAILS\ALLEN FARMS_UTILITY DETAILS.DWG



NOTES:
1. VALVE STEM AND BOX EXTENSION TO COMPLY WITH CURRENT W.H.U.D. CONSTRUCTION SPECIFICATIONS.
2. IF MAIN IS DUCTILE IRON PIPE, INSTALL MECHANICAL JOINT RESTRAINTS AS PER MANUFACTURER'S SPECIFICATIONS.
3. SEE APPROVED W.H.U.D. MATERIAL LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : AUG 2008 SCALE : N.T.S.
	GATE VALVE INSTALLATION DETAIL	STD-G-10

15 VALVE INSTALLATION — STD-G-10 — NOT TO SCALE

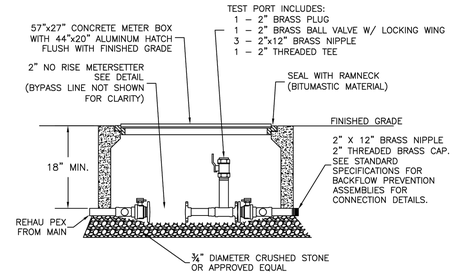


ROUND CAST-IRON, VALVE BOX LID SHALL BE LABELED WITH APPROPRIATE CALLOUT, "SEWER" OR "WATER"

NOTES:
1. EXTENSION STEMS ARE REQUIRED IF BURY DEPTH FROM VALVE OPERATING NUT TO FINISHED GRADE IS GREATER THAN 48" (SEE STD-G-12).
2. SEE APPROVED W.H.U.D. MATERIALS LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : AUG 2008 SCALE : N.T.S.
	VALVE BOX DETAIL	STD-G-11

16 VALVE BOX — STD-G-11 — NOT TO SCALE

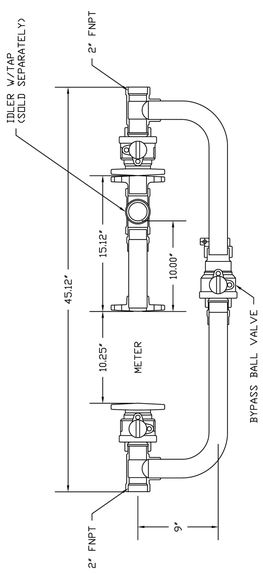


NOTE: CONTRACTOR TO PROVIDE WHUD APPROVED METER AND TELEMETRY

NOTES:
1. CONCRETE VAULT IS TO BE 4500 PSI @ 28 DAYS.
2. CONCRETE VAULT IS TO BE REINFORCED WITH #3 BARS.
3. ENTIRE VAULT AREA IS TO HAVE A MINIMUM BEDDING OF 3" DEEP ¾" DIA. CRUSHED STONE OR APPROVED EQUAL.
4. SEE APPROVED W.H.U.D. MATERIAL LIST.

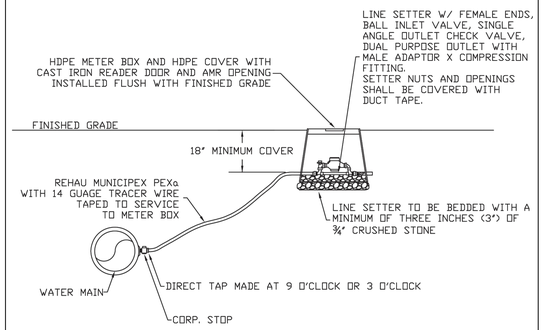
White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : JAN 2015 SCALE : N.T.S.
	2" WHUD APPROVED METER	STD-W-04

17 2" WHUD APPROVED METER — STD-W-04 — NOT TO SCALE



White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : JAN 2015 SCALE : N.T.S.
	NO RISE 2" METERSETTER	STD-W-04B

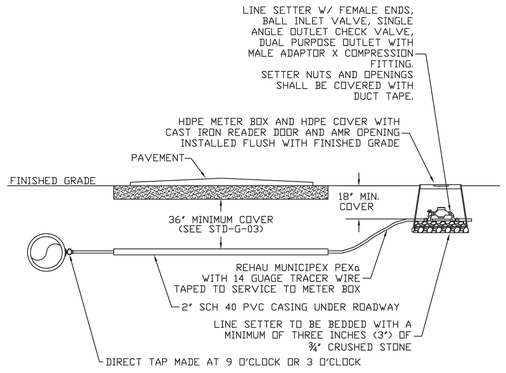
18 NO RISE 2" METERSETTER — STD-W-04B — NOT TO SCALE



NOTES:
1. ¾" AND 1" METERS FURNISHED BY W.H.U.D.
2. SEE STD-W-03 AND STD-W-04 FOR ¾" WATER SERVICE ARRANGEMENTS.
3. SEE APPROVED W.H.U.D. MATERIAL LIST.

White House Utility District WATER & WASTEWATER	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	3/4" AND 1" SHORT TAP ASSEMBLY DETAIL	STD-W-01P

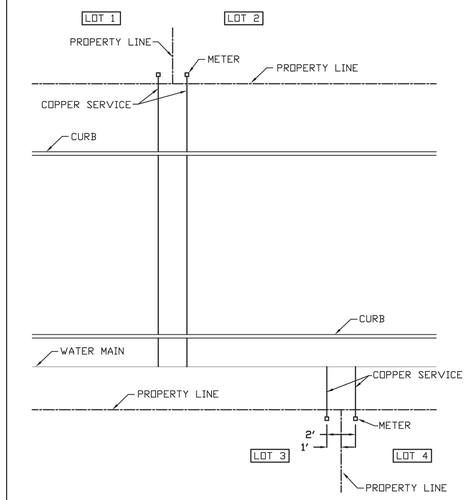
19 3/4" AND 1" SHORT TAP ASSEMBLY — STD-W-01P — NOT TO SCALE



NOTES:
1. ¾" AND 1" METERS FURNISHED BY W.H.U.D.
2. SEE STD-W-03 AND STD-W-04 FOR ¾" WATER SERVICE ARRANGEMENTS.
3. SEE APPROVED W.H.U.D. MATERIAL LIST.

White House Utility District WATER & WASTEWATER	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	3/4" AND 1" LONG TAP ASSEMBLY DETAIL	STD-W-02P

20 3/4" AND 1" LONG TAP ASSEMBLY — STD-W-02P — NOT TO SCALE

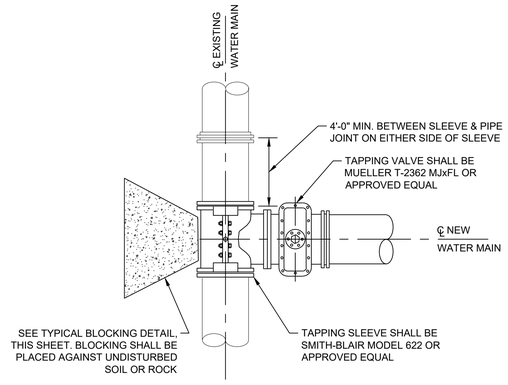


DUAL SERVICE LINE AND METER

NOTES:
1. SEE APPROVED W.H.U.D. MATERIALS LIST..

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	TYPICAL ¾" WATER SERVICE ARRANGEMENT	STD-W-03

21 TYPICAL 3/4" WATER SERVICE ARRANGEMENT — STD-W-03 — NOT TO SCALE



PLAN

22 TAPPING SLEEVE AND VALVE — NOT TO SCALE

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
7146 COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2349 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

SAVE DATE: 7/22/2026, PLOT DATE: 8/3/2026

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH — REGISTERED ENGINEER — CIVIL — No. 125340 — STATE OF TENNESSEE
08/03/2026

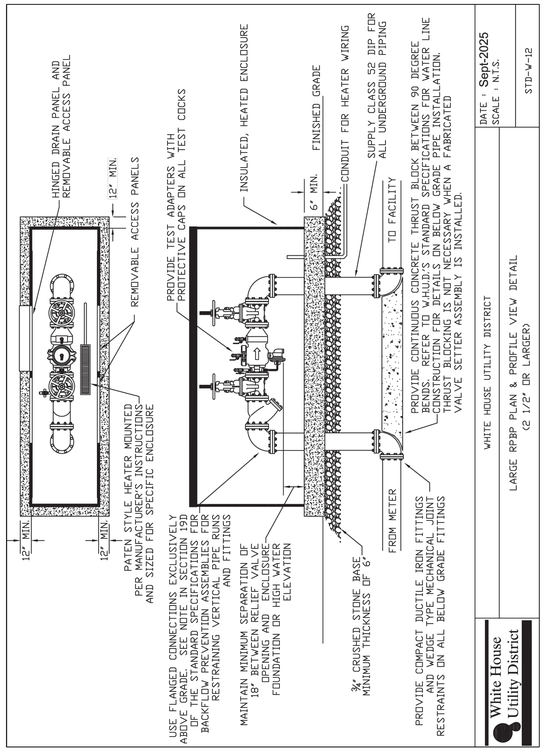
DATE: 08/10/2026

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

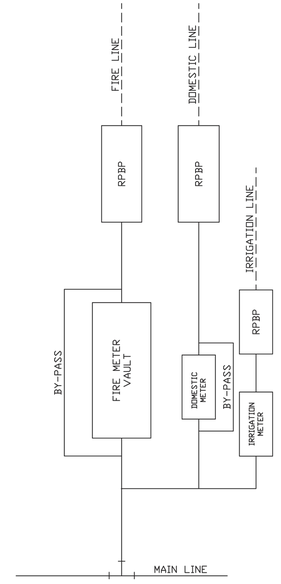
UTILITY DETAILS - WATER

SHEET NO. C6.42

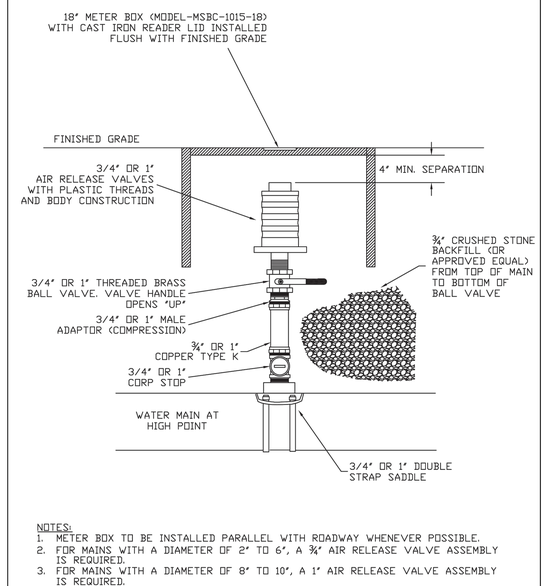
FILENAME: Z:\PRIVATE CLIENTS\2025-26 - ALLEN FARMS SUBDIVISION\CAD\DESIGN\DWGS\25_SITE1-CADDESIGNDWGS_CIVIL UTILITY DETAILS.DWG



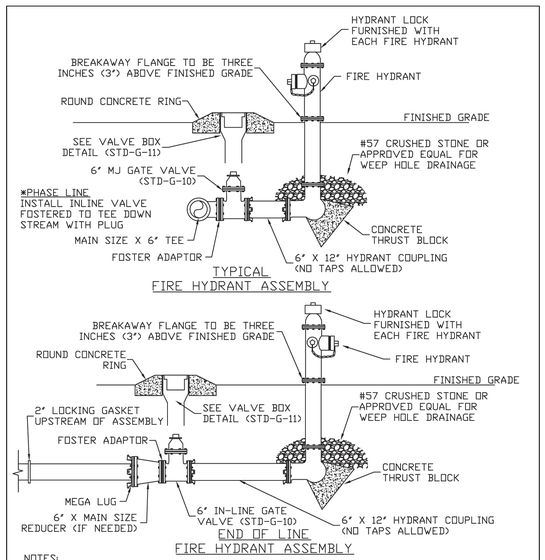
23 LARGE R.P.B.P. PLAN & PROFILE VIEW STD-W-12
NOT TO SCALE



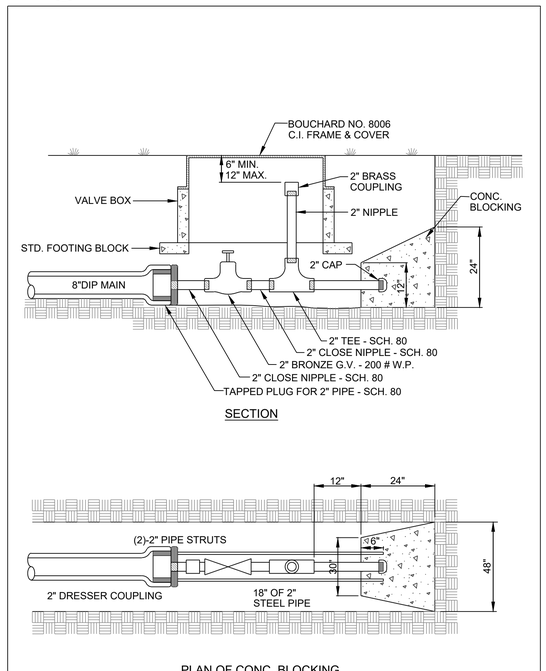
24 SCHEMATIC R.P.B.P. ASSEMBLY LAYOUT FOR TYPICAL LARGE METER INSTALLATION STD-W-08
NOT TO SCALE



25 3/4" AND 1" AIR RELEASE VALVE ASSEMBLY STD-W-15
NOT TO SCALE



26 FIRE HYDRANT ASSEMBLY STD-W-18
NOT TO SCALE



27 2" BLOW-OFF
NOT TO SCALE

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
DICKSON OFFICE
7146 COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NATHAN ANDREW COUCH REGISTERED ENGINEER AGRICULTURE COMMERCE No. 125340 STATE OF TENNESSEE
09/03/2026

DATE: 08/10/2026
DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: NAC

UTILITY DETAILS - WATER

SHEET NO. C6.43

SAVE DATE: 7/22/2026, PLOT DATE: 9/3/2026

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LANDSCAPE AND PLANTING NOTES

1. CONTRACTOR IS TO CONFIRM THE LOCATION OF UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK. CONTRACTOR RESPONSIBLE FOR ANY DAMAGE TO UTILITIES. EACH CONTRACTOR IS RESPONSIBLE FOR CONTACTING TENNESSEE ONE CALL SERVICE (1.800.351.1111) A MINIMUM OF 72 HOURS PRIOR TO ANY EXCAVATION.
2. IF ANY DISCREPANCIES ARE FOUND IN THE PLANS OR ON SITE, MAKE THIS INFORMATION KNOWN TO THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF ANY WORK.
3. CONTRACTOR IS TO NOTIFY OWNER OR OWNER'S REPRESENTATIVE OF ANY FIELD CHANGES. FIELD CHANGES MUST BE APPROVED IN WRITING BY OWNER OR OWNER'S REPRESENTATIVE PRIOR TO COMMENCING RELATED WORK.
4. PLANTING BEDS AND PLANT LOCATIONS ARE TO BE STAKED BY THE LANDSCAPE CONTRACTOR. THE LANDSCAPE CONTRACTOR IS TO NOTIFY THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION OF THE PLANTS.
5. GROUPS OF SHRUBS ARE TO BE PLACED IN A CONTINUOUS MULCH BED WITH SMOOTH CONTINUOUS LINES. ALL MULCHED BED EDGES ARE TO BE CURVILINEAR IN SHAPE FOLLOWING THE CONTOUR OF THE PLANT MASS. TREES LOCATED WITHIN 4' OF SHRUB BEDS ARE TO SHARE THE SAME MULCH BED.
6. ALL PLANT MATERIAL IS TO BE NURSERY GROWN AND TO COMPLY WITH AMERICAN STANDARD FOR NURSERY STOCK(ANSI Z60. 1-2004) OR LATEST EDITION. PLANTS NOT IN COMPLIANCE WILL BE REJECTED AND REPLACED WITH PLANTS THAT MEET THE STANDARDS AT NO ADDITIONAL COST TO THE OWNER.
7. IMMEDIATELY FOLLOWING PLANTING, AND PRIOR TO PLACING MULCH, PRE EMERGENT HERBICIDE IS TO BE APPLIED TO PLANTING BEDS AND AROUND BASES OF TREES IN STRICT ACCORDANCE WITH CHEMICAL MANUFACTURER'S PRINTED INSTRUCTIONS.
8. ALL PLANT BEDS ARE TO RECEIVE 2" MIN. SHREDDED HARDWOOD MULCH. FREE FROM DELETERIOUS MATERIALS AND SUITABLE AS A TOP DRESSING OF TREES AND SHRUBS. PROVIDE 5'Ø 2" MIN. - 3" MAX. DEPTH MULCH RING AT ALL TREES THAT ARE NOT PLACED WITHIN A LARGER PLANT BED.
9. FOR ALL PLANTING BEDS THAT DO NOT SPECIFY A SPECIFIC SOIL MIX: CONTRACTOR IS TO PROVIDE SOIL SAMPLES TO SOIL TESTING LAB TO IDENTIFY RECOMMENDED SOIL MIXTURE AND AMENDMENTS FOR THE SITE. SEE SOIL TESTING NOTES SECTION ON THIS SHEET.
10. REMOVE SURPLUS SOIL AND WASTE MATERIAL, INCLUDING EXCESS SUBSOIL, UNSUITABLE SOIL, TRASH/DEBRIS, AND LEGALLY DISPOSE OF IT OFF OWNER'S PROPERTY UNLESS OTHERWISE NOTED.
11. LANDSCAPE CONTRACTOR IS TO VERIFY PLANT QUANTITIES SHOWN ON PLAN AND IN PLANT LIST. IF DISCREPANCIES OCCUR, LANDSCAPE CONTRACTOR IS TO CONTACT LANDSCAPE ARCHITECT IMMEDIATELY. QUANTITIES SHOWN ON PLAN TAKE PRECEDENCE.
12. QUANTITIES INDICATED ON THE PLANT SCHEDULE MAY VARY FROM THE QUANTITIES ACTUALLY REQUIRED TO DEFINE THE SPACE SHOWN. THE CONTRACTOR WILL BE RESPONSIBLE TO PROVIDE THEIR OWN QUANTITY CALCULATIONS AND ENSURE THE REQUIRED QUANTITY OF PLANTS MEETS THE REQUIRED SPACING AND OTHER SPECIFICATIONS RELATED TO THAT PARTICULAR MATERIAL.
13. CONTRACTOR GUARANTEES, UPON SUBMITTING A PROPOSAL FOR THIS WORK, THAT 100% OF ALL PLANT MATERIALS HAVE BEEN LOCATED AND CAN BE PURCHASED AND INSTALLED. NOTIFY LANDSCAPE ARCHITECT FOR A PRE-INSTALLATION INSPECTION OF ALL PLANT MATERIAL FOR COMPLIANCE.
14. TREES ARE TO HAVE HEALTHY, SYMMETRICAL FORM AND BE WELL BRANCHED WITH AN EVEN DISTRIBUTION; BE DENSELY FOLIATED AND/OR BUDDED; HAVE A STRONG, STRAIGHT, DISTINCT LEADER WHERE IT IS THE CHARACTERISTIC OF THE SPECIES; FOR MULTI-TRUNK, MAIN LEADERS ARE TO BE STRONG AND EVENLY DISTRIBUTED WITH CONSISTENT CALIPER SIZING. LANDSCAPE ARCHITECT IS TO BE THE FINAL JUDGE OF ACCEPTABILITY OF PLANT FORM TO MEET DESIGN INTENT.
15. MULTI-TRUNK PLANT MATERIALS ARE TO BE ONE PLANT GROWN FROM SINGLE SEEDLING. NO CLUMP MULTI-PLANT STOCK WILL BE ACCEPTED. MULTI-TRUNK TREES ARE TO HAVE AT LEAST ONE TRUNK WITH A MIN. SIZE MEASUREMENT EQUAL TO THE SPECIFIED CALIPER SIZE NOTED IN THE SCHEDULE. MULTI-TRUNK TREES ARE TO HAVE MAIN LEADERS THAT ARE OF CONSISTENT AND BALANCED SIZE.
16. ALL LANDSCAPE MATERIAL IS TO BE APPROVED BY THE LANDSCAPE ARCHITECT BEFORE INSTALLATION. MATERIALS MAY BE VIEWED AT LANDSCAPE CONTRACTOR'S HOLDING SITE OR AT THE PROJECT SITE. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO NOTIFY THE LANDSCAPE ARCHITECT OF THE AVAILABILITY OF THE MATERIALS TO BE INSPECTED. ALL MATERIALS ARE TO BE AVAILABLE FOR INSPECTION PRIOR TO NOTIFYING THE LANDSCAPE ARCHITECT.
17. ALL MATERIALS INSPECTED ON THE SITE AND FOUND TO BE UNACCEPTABLE ARE TO BE REMOVED FROM THE SITE ON THE DAY OF INSPECTION. UNACCEPTABLE PLANT MATERIAL IS TO BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
18. ALL PLANT MATERIAL IS TO BE SUPPLIED BY APPROPRIATE SOURCES, AS NOTED BELOW, TO PREVENT UNDUE STRESS OR PROLONGED ACCLIMATIZATION WHICH WOULD INHIBIT PLANT GROWTH.
19. ALL TREES ARE TO BE HEALTHY, OF THE HIGHEST GRADE AND PURCHASED FROM THE FOLLOWING SELECTED VENDORS ONLY. IF TREES ARE NOT AVAILABLE AT THE INDICATED NURSERIES, CONTRACTOR IS TO SUBMIT ALTERNATIVE NURSERIES FOR REVIEW BY LANDSCAPE ARCHITECT. ALL TREES MUST MEET ALL SPECIFICATIONS REQUIRED IN THESE PLANS.
    19.1. SELECT TREES: CRAWFORD, GA - (706) 743-5124
    19.2. BOLD SPRINGS NURSERY: HAWKINSVILLE, GA - (478) 783-4975
    19.3. SHADY GROVE PLANTATION & NURSERY: ORANGEBURG, SC - (803) 534-5683
    19.4. MOON VALLEY NURSERY: FRANKLIN, TN - (615) 236-8806
    19.5. WATKINS NURSERY, LLC: MIDLOTHIAN, VA - (804) 379-8733
    19.6. HUNTER TREES NURSERY, LLC: BIRMINGHAM, AL - (866) 348-6837
    19.7. HAWKERSMITH NURSERY: TULLAHOMA, TN - (931) 455-5436
    19.8. SOUTHEASTERN GROWERS, INC: WATKINSVILLE, GA - (706) 310-1151
    19.9. PLANTATION TREE CO: SELMA, AL - (334) 875-9176
20. SPRAY EVERGREEN TREES AND SHRUBS WITH AN ANTI-DESICCANT PER MANUFACTURER'S RECOMMENDATIONS PRIOR TO START OF FREEZING CONDITIONS. CONTRACTOR TO REQUEST APPROVAL FROM OWNER OR OWNER'S REPRESENTATIVE FOR USE OF ANTI-DESICCANT PRIOR TO APPLICATION.
21. DO NOT PRUNE ANY PLANT MATERIAL UNTIL IT HAS BEEN INSPECTED AND ACCEPTED BY THE OWNER OR OWNER'S REPRESENTATIVE. PRUNING IS TO BE ACCOMPLISHED IN ACCORDANCE WITH NAA (NATIONAL ARBORIST ASSOCIATION) STANDARDS IN A MANNER THAT PRESERVES THE NATURAL CHARACTER OF THE CROWN.
22. ALL SOIL AND IRRIGATION (IF APPLICABLE) WORK TO BE COMPLETED AND ACCEPTED PRIOR TO THE INSTALLATION OF ANY PLANTS.
23. DURING PLANTING, KEEP ADJACENT PAVING AND CONSTRUCTION CLEAN AND WORK AREA IN AN ORDERLY CONDITION.
24. PROTECT PLANTS FROM DAMAGE DUE TO LANDSCAPE OPERATIONS, OPERATIONS BY OTHER CONTRACTORS AND TRADES, AND OTHERS. MAINTAIN PROTECTION DURING INSTALLATION AND MAINTENANCE PERIODS. TREAT, REPAIR, OR REPLACE DAMAGED PLANTINGS AT CONTRACTOR'S EXPENSE.
25. STAKE/GUY ALL TREES AS PER PLANTING DETAIL UNLESS OTHERWISE DIRECTED.
26. SEED AND STRAW ALL DISTURBED AREAS UNLESS OTHERWISE NOTED. USE BIODEGRADABLE NETTING, NO PLASTIC NETTING. SUBMIT PRODUCT CUT SHEET FOR PRODUCTS AND SEED TYPE TO BE USED FOR OWNER AND OWNER'S REPRESENTATIVE REVIEW. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING COVERAGE OF 90% OR GREATER ON ALL DISTURBED AREAS NOT COVERED BY PLANTING SHOWN ON LANDSCAPE PLANS.
27. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PLANTING AREAS AND LAWN THROUGH THE WARRANTY PERIOD AS NOTED IN THE WARRANTY SECTION BELOW.
28. CONTRACTOR IS TO PROVIDE ROOT BARRIER FOR ALL CANOPY TREES LOCATED 6' OR LESS FROM ADJACENT SIDEWALK. PLACE ROOT BARRIER ONLY ON SIDEWALK SIDE OF TREE AND PLACE 5' IN EACH DIRECTION FROM THE TRUNK OF THE TREE.
29. CONTRACTOR TO NOTIFY OWNER'S REPRESENTATIVE WHEN WORK IS COMPLETED FOR FINAL ACCEPTANCE. CONTRACTOR IS TO BE RESPONSIBLE FOR WATERING AND PLANT'S HEALTH THROUGH THE WARRANTY PERIOD (AS NOTED IN THE WARRANTY SECTION BELOW).

WARRANTY

1. WARRANTIES FOR PLANT MATERIAL WILL BE SUBMITTED ON THE INSTALLER'S STANDARD FORM AGREEING TO REPAIR OR REPLACE PLANTINGS AND ACCESSORIES THAT FAIL IN MATERIALS, WORKMANSHIP OR GROWTH WITHIN A ONE YEAR PERIOD.
    1.1. FAILURE INCLUDES DEATH AND UNSATISFACTORY GROWTH AND STRUCTURAL FAILURE INCLUDING PLANTINGS FALLING OR BLOWING OVER.
    1.2. REPLACE PLANTS THAT ARE MORE THAN 25 PERCENT DEAD OR UNHEALTHY AT END OF WARRANTY PERIOD.
    1.3. PROVIDE EXTENDED WARRANTY FOR REPLACED PLANT MATERIALS EQUAL TO ORIGINAL WARRANTY PERIOD.
2. THE PLANT WARRANTY PERIOD BEGINS AT THE DATE OF WRITTEN NOTIFICATION OF SUBSTANTIAL COMPLETION FROM THE OWNER'S REPRESENTATIVE. THE DATE OF SUBSTANTIAL COMPLETION FOR PLANTING MAY BE DIFFERENT THAN THE DATE OF SUBSTANTIAL COMPLETION FOR THE OTHER SECTIONS OF THE PROJECT.
3. SEE PLANT MAINTENANCE REQUIREMENTS IN "PLANT MAINTENANCE DURING THE WARRANTY PERIOD" SECTION BELOW.

PLANT MAINTENANCE DURING THE WARRANTY PERIOD

1. DURING THE WARRANTY PERIOD, PROVIDE ALL MAINTENANCE FOR ALL PLANTINGS TO KEEP THE PLANTS IN A HEALTHY STATE AND THE PLANTING AREAS CLEAN AND NEAT.
2. GENERAL REQUIREMENTS:
    2.1. ALL WORK IS TO BE UNDERTAKEN BY TRAINED PLANTING CREWS UNDER THE SUPERVISION OF A FOREMAN WITH A MINIMUM OF 5 YEARS EXPERIENCE SUPERVISING COMMERCIAL PLANTING CREWS.
    2.2. ALL CHEMICALS AND FERTILIZER APPLICATIONS ARE TO BE MADE BY LICENSED APPLICATORS FOR THE TYPE OF CHEMICALS TO BE USED. ALL WORK AND CHEMICAL USE IS TO COMPLY WITH ALL APPLICABLE LOCAL, PROVINCIAL, AND FEDERAL REQUIREMENTS.
    2.3. ASSURE THAT HOSES, WATERING EQUIPMENT, AND OTHER MAINTENANCE EQUIPMENT DOES NOT BLOCK PATHS OR BE PLACED IN A MANNER THAT MAY CAUSE TRIPPING HAZARDS. USE STANDARD SAFETY WARNING BARRIERS AND OTHER PROCEDURES TO MAINTAIN THE SITE IN A SAFE MANNER FOR VISITORS AT ALL TIMES.
    2.4. ALL WORKERS ARE TO WEAR REQUIRED SAFETY EQUIPMENT AND APPAREL APPROPRIATE FOR THE TASKS BEING UNDERTAKEN.
    2.5. THE CONTRACTOR MAY NOT STORE MAINTENANCE EQUIPMENT AT THE SITE AT TIMES WHEN THEY ARE NOT IN USE UNLESS AUTHORIZED IN WRITING BY THE OWNER'S REPRESENTATIVE.
    2.6. MAINTENANCE VEHICLES MAY NOT PARK ON THE SITE INCLUDING WALKS AND LAWN AREA AT ANY TIME WITHOUT THE OWNER'S REPRESENTATIVE'S WRITTEN PERMISSION.
    2.7. MAINTAIN A DETAILED LOG OF ALL MAINTENANCE ACTIVITIES INCLUDING TASK TYPES, DATE OF TASK, TYPES AND QUANTITIES OF MATERIALS AND PRODUCTS USED, WATERING TIMES AND AMOUNTS, AND NUMBER OF EACH CREW. PERIODICALLY REVIEW THE LOGS WITH THE OWNER'S REPRESENTATIVE, AND SUBMIT A COPY OF THE LOGS AT THE END OF EACH YEAR OF THE MAINTENANCE AGREEMENT.
3. PROVIDE THE FOLLOWING MAINTENANCE TASKS
    3.1. WATERING: PROVIDE ALL WATER REQUIRED TO KEEP SOIL WITHIN AND AROUND THE ROOT BALLS AT OPTIMUM MOISTURE CONTENT FOR PLANT GROWTH.
        3.1.1. MAINTAIN ALL WATERING SYSTEMS AND EQUIPMENT AND KEEP THEM OPERATIONAL.
        3.1.2. MONITOR SOIL MOISTURE TO PROVIDE SUFFICIENT WATER. CHECK SOIL MOISTURE AND ROOT BALL MOISTURE WITH A SOIL MOISTURE METER ON A REGULAR BASIS AND RECORD MOISTURE READINGS. DO NOT OVER WATER.
        3.1.3. FOR SEEDED LAWN, IN FIRST WEEK AFTER SEEDING WATER AS NEEDED TO KEEP SEED BED MOIST AT ALL TIMES TO A DEPTH OF 4 IN. IN FOLLOWING WEEKS, WATER AS NEEDED TO MAINTAIN ADEQUATE MOISTURE IN THE UPPER 4 IN. OF SOIL TO PROMOTE SEED GERMINATION. REFER TO SEED SUPPLIER FOR WATERING RECOMMENDATIONS.
        3.1.4. FOR SODDED LAWN, IN FIRST WEEK AFTER INSTALLATION PROVIDE ALL WATERING NEEDED FOR ADEQUATE ROOTING OF SOD. SOIL ON SOD PAD IS TO BE KEPT MOIST AT ALL TIMES TO DEPTH OF 4 IN. WATERING IS TO BE DONE DURING THE HEAT OF THE DAY TO PREVENT WILTING. IN FOLLOWING WEEKS, WATER AS NEEDED TO MAINTAIN ADEQUATE MOISTURE IN THE UPPER 4 IN. OF SOIL TO PROMOTE DEEP ROOT GROWTH. REFER TO SOD SUPPLIER FOR WATERING RECOMMENDATIONS.
    3.2. SOIL NUTRIENT LEVELS: TAKE A MINIMUM OF 4 SOIL SAMPLES FROM AROUND THE SITE IN THE SPRING AND FALL AND HAVE THEM TESTED BY AN ACCREDITED AGRICULTURAL SOIL TESTING LAB FOR CHEMICAL COMPOSITION OF PLANT REQUIRED NUTRIENTS, pH, SALT AND % ORGANIC MATTER. TEST RESULTS ARE TO INCLUDE LABORATORY RECOMMENDATIONS FOR NUTRIENT APPLICATIONS. APPLY FERTILIZERS AT RATES RECOMMENDED BY THE SOIL TEST.
        3.2.1. MAKE ANY OTHER SOIL TEST AND/OR PLANT TISSUE TEST THAT MAY BE INDICATED BY PLANT CONDITIONS THAT MAY NOT BE RELATED TO SOIL NUTRIENT LEVELS SUCH AS, BUT NOT LIMITED TO, SOIL CONTAMINATED BY OTHER CHEMICALS OR LACK OF CHEMICAL UPTAKE BY THE PLANT. ADDITIONAL TEST TO BE APPROVED BY OWNER PRIOR TO SOURCING TEST.
    3.3. PLANT PRUNING: REMOVE CROSS OVER BRANCHING, SHORTEN OR REMOVE DEVELOPING CO-DOMINANT LEADERS, DEAD WOOD AND WINTER-DAMAGED BRANCHES. UNLESS DIRECTED BY OWNERS REPRESENTATIVE, DO NOT SHEAR PLANTS OR MAKE HEADING CUTS.
    3.4. MOWING:FIRST MOWING IS TO OCCUR WHEN AVERAGE HEIGHT OF GRASS REACHES 2-1/2 IN. WITH MOWER SET TO CUT AT A HEIGHT OF 1-1/2 IN. SUBSEQUENT MOWINGS SHALL BE MADE AT NOT OVER TWO WEEK INTERVALS, WITH A HEIGHT OF CUT SET AT 1-1/2 IN. GRASSES ARE TO BE MAINTAINED BETWEEN A HEIGHT OF 1-1/2 IN. AND 2-1/2 IN. ALL CLIPPINGS ARE TO BE REMOVED. ANY SCATTERED BARE SPOTS ARE NOT TO EXCEED 15 SQ. IN. AT ANY TIME DURING WARRANTY PERIOD. ALL MOWING PRACTICES ARE TO BE APPROVED BY OWNER'S TURF MAINTENANCE TEAM PRIOR TO CONDUCTING ANY MOWING OPERATIONS.
        3.4.1. FOR SEEDED LAWN, NOT MORE THAN 30% OF THE GRASS LEAF IS TO BE REMOVED DURING THE WARRANTY PERIOD MOWINGS.
        3.4.2. FOR SODDED LAWN, MOWING IS NOT TO BE ATTEMPTED UNTIL THE SOD IS FIRMLY ROOTED AND SECURELY IN PLACE.
    3.5. RESTORE PLANTS: RESET ANY PLANTS THAT HAVE SETTLED OR ARE LEANING AS SOON AS THE CONDITION IS NOTICED. REPAIR AND REPLACE ANY TREE STAKES THAT HAVE FALLEN OR ARE LEANING. TIGHTEN AND REPAIR ALL GUYS WHEN LOOSE CONDITION IS NOTICED. REPAIR AND REPLACE ALL TREE WRAP MATERIAL AS NECESSARY.
    3.6. WEED CONTROL: KEEP ALL BEDS FREE OF WEEDS. HAND-REMOVE ALL WEEDS AND ANY PLANTS THAT DO NOT APPEAR ON THE PLANTING PLAN. CHEMICAL WEED CONTROL IS PERMITTED ONLY WITH THE APPROVAL OF THE OWNER'S REPRESENTATIVE. THE THRESHOLD FOR APPLYING INSECTICIDES AND HERBICIDES IS TO FOLLOW ESTABLISHED INTEGRATED PEST MANAGEMENT (IPM) PROCEDURES AND STANDARDS. SCHEDULE WEEDING AS NEEDED BUT NOT LESS THAN 12 TIMES PER YEAR.
    3.7. TRASH REMOVAL: REMOVE ALL TRASH AND DEBRIS FROM ALL PLANTING BEDS AND MAINTAIN THE BEDS IN A NEAT AND TIDY APPEARANCE. THE NUMBER OF TRASH AND DEBRIS REMOVAL VISITS ARE TO BE NO LESS THAN 12 TIMES PER YEAR AND MAY COINCIDE WITH OTHER MAINTENANCE VISITS.
    3.8. PLANT PEST CONTROL: MAINTAIN DISEASE, INSECTS AND OTHER PESTS AT MANAGEABLE LEVELS. MANAGEABLE LEVELS ARE TO BE DEFINED AS DAMAGE TO PLANTS THAT MAY BE NOTICEABLE TO A PROFESSIONAL BUT NOT TO THE AVERAGE PERSON. USE LEAST INVASIVE METHODS TO CONTROL PLANT DISEASE AND INSECT OUTBREAKS.
        3.8.1. THE OWNER'S REPRESENTATIVE MUST APPROVE IN ADVANCE THE USE OF ALL CHEMICAL PESTICIDE APPLICATIONS. THE THRESHOLD FOR APPLYING INSECTICIDES AND HERBICIDES IS TO FOLLOW ESTABLISHED INTEGRATED PEST MANAGEMENT (IPM) PROCEDURES AND STANDARDS.
    3.9. PLANT REPLACEMENT: REPLACE ALL PLANTS THAT ARE DEFECTIVE AS DEFINED IN THE WARRANTY PROVISIONS, AS SOON AS THE PLANT DECLINE IS OBVIOUS AND IN SUITABLE WEATHER AND SEASON FOR FOR PLANTING. PLANTS THAT BECOME DEFECTIVE DURING THE MAINTENANCE PERIOD ARE TO BE COVERED AND REPLACED UNDER WARRANTY PROVISIONS.
    3.10. MULCH: REFRESH MULCH ONCE A YEAR TO MAINTAIN COMPLETE COVERAGE, BUT DO NOT OVER MULCH. AT NO TIME IS THE OVERALL MULCH THICKNESS TO BE GREATER THAN 4 INCHES. DO NOT APPLY MULCH WITHIN 6 INCHES OF THE TRUNKS OR STEMS OF ANY PLANTS. MULCH IS TO BE NO MORE THAN ONE INCH ON TOP OF THE ROOT BALL SURFACE. REPLACEMENT MULCH IS TO MEET THE STANDARDS OF THE ORIGINAL APPROVED MULCH. MULCH AREAS ARE TO BE KEPT REASONABLY FREE OF WEEDS & GRASSES NOT SHOWN IN THE PLANTING PLAN.
    3.11. BED EDGING: CHECK AND MAINTAIN EDGES BETWEEN MULCH AND LAWN AREAS IN SMOOTH NEAT LINES AS ORIGINALLY SHOWN ON THE DRAWINGS
    3.12. LEAF, FRUIT, AND OTHER PLANT DEBRIS REMOVAL: REMOVE FALL LEAF, SPENT FLOWERS, FRUIT AND PLANT PART ACCUMULATIONS FROM BEDS AND PAVED SURFACES. MAINTAIN ALL SURFACE WATER DRAINS FREE OF DEBRIS. DEBRIS REMOVAL IS TO BE UNDERTAKEN AT EACH VISIT TO WEED OR PICK UP TRASH IN BEDS.

PLANTING SOIL AND PLANTING SOIL MIX INSTALLATION

1. PRIOR TO INSTALLING ANY PLANTING SOIL FROM STOCKPILES OR PLANTING SOIL MIXES BLENDED OFF SITE, THE OWNER'S REPRESENTATIVE IS TO APPROVE THE CONDITION OF THE SUBGRADE AND THE PREVIOUSLY INSTALLED SUBGRADE PREPARATION AND THE INSTALLATION OF SUBGRADE DRAINAGE.
2. ALL THE EQUIPMENT UTILIZED TO INSTALL OR GRADE PLANTING SOILS IS TO BE WIDE TRACK OR BALLOON TIRE MACHINES RATED WITH A GROUND PRESSURE OF 4 PSI OR LESS. ALL GRADING AND SOIL DELIVERY EQUIPMENT IS TO HAVE BUCKETS EQUIPPED WITH 6-INCH-LONG TEETH TO SCARIFY ANY SOIL THAT BECOMES COMPACTED.
3. IN AREAS OF SOIL INSTALLATION ABOVE EXISTING SUBSOIL, SCARIFY THE SUBGRADE MATERIAL PRIOR TO INSTALLING PLANTING SOIL.
    3.1. SCARIFY THE SUBSOIL OF THE SUBGRADE TO A DEPTH OF 3-6 INCHES WITH THE TEETH OF THE BACK HOE OR LOADER BUCKET, TILLER OR ANOTHER SUITABLE DEVICE.
    3.2. IMMEDIATELY INSTALL THE PLANTING SOIL. PROTECT THE LOOSENED AREA FROM TRAFFIC. DO NOT ALLOW THE LOOSENED SUBGRADE TO BECOME COMPACTED UNLESS OTHERWISE DIRECTED.
    3.3. IN THE EVENT THAT THE LOOSENED AREA BECOMES OVERLY COMPACTED, LOOSEN THE AREA AGAIN PRIOR TO INSTALLING THE PLANTING SOIL.
4. INSTALL THE PLANTING SOIL IN 8 TO 10 INCH LIFTS TO THE REQUIRED DEPTHS. APPLY COMPACTING FORCES TO EACH LIFT AS REQUIRED TO ATTAIN THE REQUIRED COMPACTION. SCARIFY EACH LIFT PRIOR TO ADDING MORE PLANTING SOIL BY DRAGGING THE TEETH OF A LOADER BUCKET OR BACKHOE ACROSS THE SOIL SURFACE TO ROUGHEN THE SURFACE. INSTALL PLANTING BED FINISHED GRADES 1"-2" HIGHER THAN THE GRADES ON THE GRADING PLANS TO ANTICIPATE SETTLEMENT OVER THE FIRST YEAR. AT THE END OF THE PLANTING WARRANTY PERIOD, IF GRADES HAVE SETTLED >2", CREATE PUDDLES, OR INHIBIT PROPER DRAINAGE, RESET GRADES TO FINAL GRADES SHOWN ON GRADING PLAN.

IMPORTED TOP SOIL (LOAM)

1. DEFINITION:
    FERTILE, FRIABLE, LOAMY TOPSOIL FREE FROM SUBSOIL, REFUSE, ROOTS, HEAVY OR STIFF CLAY, STONES LARGER THAN 1 INCH, NOXIOUS SEEDS, STICKS, BRUSH, LITTER, OR ANY SUBSTANCES DELETERIOUS OF PLANT GROWTH. THE ABOVE OBJECTS ARE TO BE CONTROLLED AT THE SOURCE SELECTION AND NOT BY SCREENING OF SOIL. TOPSOIL IS TO BE SUITABLE FOR THE GERMINATION OF SEEDS AND THE SUPPORT OF VEGETATIVE GROWTH. IMPORTED TOPSOIL IS NOT TO CONTAIN WEED SEEDS IN QUANTITIES THAT CAUSE NOTICEABLE WEED INFESTATIONS IN THE FINAL PLANTING BEDS. IMPORTED TOPSOIL IS TO MEET THE FOLLOWING PHYSICAL AND CHEMICAL CRITERIA:
    1.1. SOIL TEXTURE: USDA LOAM, SANDY CLAY LOAM, OR SANDY LOAM WITH CLAY CONTENT BETWEEN 15 AND 25% AND A COMBINED CLAY SILT CONTENT OF NO MORE THAN 55%.
    1.2. pH VALUE IS TO BE BETWEEN 5.5 TO 7.0
    1.3. PERCENT ORGANIC MATTER (OM): 2.0-5.0%, BY DRY WEIGHT
    1.4. SOLUBLE SALT LEVEL: LESS THAN 2MMHO/CM
    1.5. SOIL CHEMISTRY SUITABLE FOR GROWING THE PLANTS SPECIFIED.
2. IMPORTED TOPSOIL IS TO BE HARVESTED SOIL FROM FIELDS OR DEVELOPMENT SITES. THE ORGANIC CONTENT AND PARTICLE SIZES DISTRIBUTION ARE TO BE THE RESULT OF NATURAL SOIL FORMATION.
3. MANUFACTURED SOILS WHERE COARSE SANDS, COMPOSTED ORGANIC MATERIALS OR CHEMICAL ADDITIVES HAVE BEEN ADDED TO THE SOIL TO MEET THE REQUIREMENTS OF THIS SPECIFICATION ARE NOT ACCEPTABLE.
4. IMPORTED TOPSOIL FOR PLANTING SOILS CANNOT HAVE BEEN SCREENED AND ARE TO RETAIN SOIL PEDS OR CLODS LARGER THEN 2 INCHES IN DIAMETER THROUGHOUT THE STOCKPILE AFTER HARVESTING.
5. STOCKPILED EXISTING TOPSOIL FROM THE TOP 6" AT THE SITE MEETING THE ABOVE CRITERIA MAY BE ACCEPTABLE.
6. ALL SOIL MIXES ARE TO BE EVENLY MIXED WITH REQUIRED AMENDMENTS AS DEFINED IN THESE NOTES AND SOIL TESTING RECOMMENDATIONS.

COARSE SAND

1. CLEAN, WASHED, SAND, FREE OF TOXIC MATERIALS
2. COARSE CONCRETE SAND, ASTM C-33 FINE AGGREGATE, WITH A FINES MODULUS INDEX OF 2.8 AND 3.2
3. COARSE SANDS ARE TO BE CLEAN, SHARP, NATURAL COARSE SANDS FREE OF LIMESTONE, SHALE, AND SLATE PARTICLES. MANUFACTURED COARSE SAND IS NOT PERMITTED.
4. pH IS TO BE BETWEEN 5.5 AND 7.0
5. PROVIDE COARSE SAND WITH THE FOLLOWING PARTICLE SIZE DISTRIBUTION:

SIEVE	PERCENT PASSING
⅜ INCH (9.5 MM)	100
NO 4 (4.75 MM)	95-100
NO 8 (2.36 MM)	80-100
NO 16 (1.18 MM)	50-85
NO 30 (0.60 MM)	25-60
NO 50 (0.30 MM)	10-30
NO 100 (0.15 MM)	2-10
NO 200 (0.75 MM)	2-5

6. PROVIDE MANUFACTURER'S LITERATURE AND MATERIAL CERTIFICATION THAT THE PRODUCT MEETS THE REQUIREMENTS.

COMPOST

1. DEFINITION: BLENDED AND GROUND LEAF, WOOD, AND OTHER PLANT BASED MATERIAL, COMPOSTED FOR A MINIMUM OF 9 MONTHS AND AT TEMPERATURES SUFFICIENT TO BREAK DOWN ALL WOODY FIBERS, SEEDS, AND LEAF STRUCTURES, FREE OF TOXIC MATERIAL AT LEVELS THAT ARE HARMFUL TO PLANTS OR HUMANS. SOURCE MATERIAL IS TO BE YARD WASTE TRIMMINGS BLENDED WITH OTHER PLANT OR MANURE BASED MATERIAL DESIGNED TO PRODUCE COMPOST HIGH IN FUNGAL MATERIAL.
2. COMPOST IS TO BE COMMERCIALLY PREPARED COMPOST AND MEET US COMPOST COUNCIL STA/TMECC CRITERIA OR EQUAL FOR CLASS 1 OR 2 STABLE, MATURE PRODUCT, OR AS MODIFIED IN THIS SECTION FOR "COMPOST AS A LANDSCAPE BACKFILL MIX COMPONENT"
3. COMPOST IS TO COMPLY WITH THE FOLLOWING PARAMETERS:
    3.1. pH: 5.5-8.0
    3.2. SOIL SALT (ELECTRICAL CONDUCTIVITY): MAXIMUM 5 dS/m (MMHOS/CM)
    3.3. MOISTURE CONTENT %, WET WEIGHT BASIS 30-60
    3.4. PARTICLE SIZE, DRY WEIGHT BASIS: 98% PASS THROUGH ¾ INCH SCREEN OR SMEAR
    3.5. STABILITY CARBON DIOXIDE EVOLUTION RATE: MG CO_2-C/G OM/DAY < 2
    3.6. SOLVITA MATURITY TEST: > 6
    3.7. PHYSICAL CONTAMINANTS (INERTS), % DRY WEIGHT BASIS: <1%
    3.8. CHEMICAL CONTAMINANTS, MG/KG (PPM): MEET OR EXCEED US EPA CLASS A STANDARD, 40CFR § 503.13, TABLES 1 AND 3 LEVELS
    3.9. BIOLOGICAL CONTAMINANTS SELECT PATHOGENS FECAL COLIFORM BACTERIA, OR SALMONELLA, MEET OR EXCEED US EPA CLASS A STANDARD, 40CFR § 503.32(A) LEVEL REQUIREMENTS.
4. PROVIDE MANUFACTURE'S LITERATURE AND MATERIAL CERTIFICATION THAT THE PRODUCT MEETS THE REQUIREMENTS

SOIL COMPACTION - GENERAL REQUIREMENTS

1. EXCEPT WHEN MORE STRINGENT REQUIREMENTS ARE DEFINED IN THIS SPECIFICATION, THE FOLLOWING PARAMETERS DEFINE THE GENERAL DESCRIPTION OF THE THRESHOLD POINTS OF SOIL COMPACTION IN EXISTING, MODIFIED, OR INSTALLED SOILS AND SUBSOILS.
2. THE FOLLOWING ARE THRESHOLD LEVELS OF COMPACTION AS DETERMINED BY EACH METHOD.
    2.1. ACCEPTABLE COMPACTION: GOOD ROOTING ANTICIPATED, BUT INCREASING SETTLEMENT EXPECTED AS COMPACTION IS REDUCED AND/OR IN SOIL WITH A HIGH ORGANIC MATTER CONTENT.
    2.2. STANDARD PROCTOR METHOD: 75-85% (SOIL BELOW 75% IS UNSTABLE AND WILL SETTLE EXCESSIVELY)
    2.3. PENETRATION RESISTANCE METHOD: ABOUT 75-250 PSI (BELOW 75 PSI SOIL BECOMES INCREASINGLY UNSTABLE AND WILL SETTLE EXCESSIVELY)
3. ROOT LIMITING COMPACTION: ROOT GROWTH IS LIMITED WITH FEWER, SHORTER AND SLOWER GROWING ROOTS. (UNACCEPTABLE IN PLANTING AREAS)
    3.1. STANDARD PROCTOR METHOD: ABOVE APPROXIMATELY 85%
    3.2. PENETRATION RESISTANCE METHOD: ABOUT 300 PSI
4. EXCESSIVE COMPACTION: ROOTS NOT LIKELY TO GROW BUT CAN PENETRATE SOIL WHEN SOIL IS ABOVE FIELD CAPACITY. (UNACCEPTABLE IN PLANTING AREAS)
    4.1. STANDARD PROCTOR METHOD: ABOVE 90%
    4.2. PENETRATION RESISTANCE METHOD: APPROXIMATELY 400 PSI

OVER COMPACTION REDUCTION

1. ANY SOIL THAT BECOMES COMPACTED TO A DENSITY GREATER THAN THE SPECIFIED DENSITY IS TO BE DUG UP AND REINSTALLED. THIS REQUIREMENT INCLUDES COMPACTION CAUSED BY OTHER SUBCONTRACTORS AFTER THE PLANTING SOIL IS INSTALLED AND APPROVED.
2. SURFACE ROTO TILLING IS NOT TO BE CONSIDERED ADEQUATE TO REDUCE OVER COMPACTION AT LEVELS 6 INCHES OR GREATER BELOW FINISHED GRADE.

SOIL TESTING

1. SAMPLES: PROVIDE A TWO-GALLON SAMPLE FROM EACH PLANTING SOIL SOURCE WITH SOIL TESTING RESULTS. THE SAMPLES ARE TO BE A MIXTURE OF THE RANDOM SAMPLES TAKEN AROUND THE SOURCE STOCKPILE OR FIELD. PROVIDE A MINIMUM OF 3 TESTS FROM SAMPLES OBTAINED THROU

OVERALL LANDSCAPE PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	CONTAINER	HEIGHT (ANSI)	REMARKS
BUFFER TREES							
	NY	3	NYSSA SYLVATICA 'CHERRY PIE' / WHITE CHAPEL™ TUPELO	3" CAL.	B&B	14` - 16`	SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED
	PF	4	PINUS STROBUS 'FASTIGIATA' / COLUMNAR WHITE PINE	2" CAL.	B&B	10'-12'	SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED
CANOPY TREES							
	AG	64	ACER RUBRUM 'PNI 0268' / OCTOBER GLORY® RED MAPLE	3" CAL.	B&B	14'-16'	SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED
	AW	30	ACER TRUNCATUM `WF-AT1` / MAIN STREET® SHANTUNG MAPLE	3" CAL.	B&B	14` - 16`	SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED
	GG	23	GINKGO BILOBA 'GOLDEN GLOBE' / GOLDEN GLOBE MAIDENHAIR TREE	3" CAL.	B&B	14'-16'	SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED
	QA	10	QUERCUS ALBA / WHITE OAK	3" CAL.	B&B	14` - 16`	SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED
	QS	31	QUERCUS SHUMARDII / SHUMARD OAK	3" CAL.	B&B	14` - 16`	SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED
	TM	4	TAXODIUM DISTICHUM 'MICKELSON' / SHAWNEE BRAVE™ BALD CYPRESS	3" CAL.	B&B	14` - 16`	SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED
	TT	33	TILIA TOMENTOSA 'STERLING' / STERLING SILVER LINDEN	3" CAL.	B&B	14` - 16`	SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED
FLOWERING TREES							
	CC	10	CERCIS CANADENSIS 'APPALACHIAN RED' / APPALACHIAN RED EASTERN REDBUD	3" CAL.	B&B	8` - 10`	SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED
	SD	9	CORNUS FLORIDA 'APPALACHIAN SPRING' / APPALACHIAN SPRING DOGWOOD	3" CAL.	B&B	8' - 12'	SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	HEIGHT	SPREAD	SPACING	SPACING	REMARKS
SHRUBS								
	DV	23	DISTYLIUM X 'VINTAGE JADE' / FIRST EDITIONS® VINTAGE JADE DISTYLIUM	18"	24"	48" o.c.	48" o.c.	FULL, WELL-ROOTED, MATCHED
	HQ	41	HYDRANGEA QUERCIFOLIA / OAKLEAF HYDRANGEA	42"	42"	72" o.c.	72" o.c.	FULL, WELL-ROOTED, MATCHED
	IG	57	ILEX GLABRA / INKBERRY HOLLY	5'	5'	72" o.c.	72" o.c.	FULL, WELL-ROOTED, MATCHED
	IV	96	ITEA VIRGINICA 'SPRICH' / LITTLE HENRY SWEETSPIRE	18"	18"	48" o.c.	48" o.c.	FULL, WELL-ROOTED, MATCHED
	JX	106	JUNIPERUS X 'GREY OWL' / GREY OWL JUNIPER	24"	36"	60" o.c.	60" o.c.	FULL TO GROUND, WELL-ROOTED, MATCHED
	ON	36	OPHIOPOGON JAPONICUS `NANUS` / DWARF MONDO GRASS	12"	12"	24" o.c.	24" o.c.	FULL, WELL-ROOTED, MATCHED
	PN	33	PANICUM VIRGATUM 'NORTHWIND' / NORTHWIND SWITCH GRASS	24"	24"	36" o.c.	36" o.c.	FULL, WELL-ROOTED, MATCHED
	TC	86	THUJA OCCIDENTALIS 'CONGABE' / FIRE CHIEF™ ARBORVITAE	18"	18"	36" o.c.	36" o.c.	FULL, WELL-ROOTED, MATCHED
BUFFER PLANTS								
	ML	6	MUHLENBERGIA CAPILLARIS 'LENCA' / REGAL MIST® PINK MUHLY GRASS	30"	24"	36" o.c.	36" o.c.	FULL, WELL-ROOTED, MATCHED
	PH	10	PHYSOCARPUS OPULIFOLIUS 'SEWARD' / SUMMER WINE® NINEBARK	36"	36"	60" o.c.	60" o.c.	FULL, WELL-ROOTED, MATCHED
	PS	9	PRUNUS LAUROCERASUS `SCHIPKAENSIS` / SCHIPKA CHERRY LAUREL	36"	36"	72" o.c.	72" o.c.	FULL, WELL-ROOTED, MATCHED
	TD	6	TAXUS X MEDIA 'DENSIFORMIS' / DENSE ANGLO-JAPANESE YEW	24"	24"	48" o.c.	48" o.c.	FULL, WELL ROOTED, MATCHED

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	HEIGHT	SPREAD		SPACING	REMARKS
GROUND COVERS								
	EP	65	ECHINACEA X 'PURPLE EMPEROR' / PURPLE EMPEROR CONEFLOWER	12"	12"	18" o.c.	18" o.c.	DENSE, WELL-ROOTED, MATCHED, PLANT ON TRIANGULAR GRID
	JB	110	JUNIPERUS HORIZONTALIS `BAR HARBOR` / BAR HARBOR CREEPING JUNIPER	6"	24"	18" o.c.	18" o.c.	DENSE, WELL-ROOTED, MATCHED, PLANT ON TRIANGULAR GRID
	LB	774	LIRIOPE MUSCARI 'BIG BLUE' / BIG BLUE LILYTURF	12"	12"	12" o.c.	12" o.c.	MATCHED, DENSE, WELL ROOTED, PLANT ON TRIANGULAR GRID
USED								
	RP	133	RUDBECKIA TRILOBA 'PRAIRIE GLOW' / PRAIRIE GLOW BROWNEYED SUSAN	12"	12"	24" o.c.	24" o.c.	DENSE, WELL ROOTED, MATCHED, PLANT ON TRIANGULAR GRID

REVISIONS

NO	DATE	BY	DESCRIPTION

SAVE DATE: 8/2/2026, PLOT DATE: 8/2/2026

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
7146 COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NICHOLAS TUTTLE REGISTERED LANDSCAPE ARCHITECT TENNESSEE NO. 328 08/10/2026

DATE: 07/23/2026

DESIGNED BY: MH, GH
SUPERVISED BY: NT, DO
CHECKED BY: NT

OVERALL LANDSCAPE SCHEDULE

SHEET NO. L0.10

FILENAME: Z:\PRIVATE CLIENTS\2025\25-025-ALLEN FARM SUBDIVISION\DESIGN\CIVIL SITE\1-CAD\DESIGN\25025-L100_LANDSCAPE PLAN.DWG

PLANT SCHEDULE - BIORETENTION AREA #1

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	CONTAINER	HEIGHT (ANSI)	REMARKS
CANOPY TREES							
	QA	3	QUERCUS ALBA / WHITE OAK	3" CAL.	B&B	14` - 16`	SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED
FLOWERING TREES							
	CC	1	CERCIS CANADENSIS 'APPALACHIAN RED' / APPALACHIAN RED EASTERN REDBUD	3" CAL.	B&B	8` - 10`	SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	HEIGHT	SPREAD	SPACING	REMARKS
SHRUBS							
	HQ	3	HYDRANGEA QUERCIFOLIA / OAKLEAF HYDRANGEA	42"	42"	72" o.c.	FULL, WELL-ROOTED, MATCHED
	IG	1	ILEX GLABRA / INKBERRY HOLLY	5'	5'	72" o.c.	FULL, WELL-ROOTED, MATCHED
	IV	25	ITEA VIRGINICA 'SPRICH' / LITTLE HENRY SWEETSPIRE	18"	18"	48" o.c.	FULL, WELL-ROOTED, MATCHED
	JX	5	JUNIPERUS X 'GREY OWL' / GREY OWL JUNIPER	24"	36"	60" o.c.	FULL TO GROUND, WELL-ROOTED, MATCHED

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	HEIGHT	SPREAD		REMARKS
GROUND COVERS							
	LB	145	LIRIOPE MUSCARI 'BIG BLUE' / BIG BLUE LILYTURF	12"	12"	12" o.c.	MATCHED, DENSE, WELL ROOTED, PLANT ON TRIANGULAR GRID

PLANT SCHEDULE - BIORETENTION AREA #2

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	CONTAINER	HEIGHT (ANSI)	REMARKS
CANOPY TREES							
	QA	4	QUERCUS ALBA / WHITE OAK	3" CAL.	B&B	14` - 16`	SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED
	TM	4	TAXODIUM DISTICHUM 'MICKELSON' / SHAWNEE BRAVE™ BALD CYPRESS	3" CAL.	B&B	14` - 16`	SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED
FLOWERING TREES							
	CC	4	CERCIS CANADENSIS 'APPALACHIAN RED' / APPALACHIAN RED EASTERN REDBUD	3" CAL.	B&B	8` - 10`	SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED
	SD	3	CORNUS FLORIDA 'APPALACHIAN SPRING' / APPALACHIAN SPRING DOGWOOD	3" CAL.	B&B	8' - 12'	SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	HEIGHT	SPREAD	SPACING	REMARKS
SHRUBS							
	HQ	32	HYDRANGEA QUERCIFOLIA / OAKLEAF HYDRANGEA	42"	42"	72" o.c.	FULL, WELL-ROOTED, MATCHED
	IG	40	ILEX GLABRA / INKBERRY HOLLY	5'	5'	72" o.c.	FULL, WELL-ROOTED, MATCHED
	IV	64	ITEA VIRGINICA 'SPRICH' / LITTLE HENRY SWEETSPIRE	18"	18"	48" o.c.	FULL, WELL-ROOTED, MATCHED
	JX	52	JUNIPERUS X 'GREY OWL' / GREY OWL JUNIPER	24"	36"	60" o.c.	FULL TO GROUND, WELL-ROOTED, MATCHED
	TC	14	THUJA OCCIDENTALIS 'CONGABE' / FIRE CHIEF™ ARBORVITAE	18"	18"	36" o.c.	FULL, WELL-ROOTED, MATCHED

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	HEIGHT	SPREAD	SPACING	REMARKS
GROUND COVERS							
	LB	351	LIRIOPE MUSCARI 'BIG BLUE' / BIG BLUE LILYTURF	12"	12"	12" o.c.	MATCHED, DENSE, WELL ROOTED, PLANT ON TRIANGULAR GRID
USED							
	RP	85	RUDBECKIA TRILOBA 'PRAIRIE GLOW' / PRAIRIE GLOW BROWNEYED SUSAN	12"	12"	24" o.c.	DENSE, WELL ROOTED, MATCHED, PLANT ON TRIANGULAR GRID

REVISIONS

NO	DATE	BY	DESCRIPTION

SAVE DATE: 8/2/2026, PLOT DATE: 8/3/2026

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NICHOLAS TUTTLE
REGISTERED
LANDSCAPE ARCHITECT
TENNESSEE NO. 328
08/07/2026

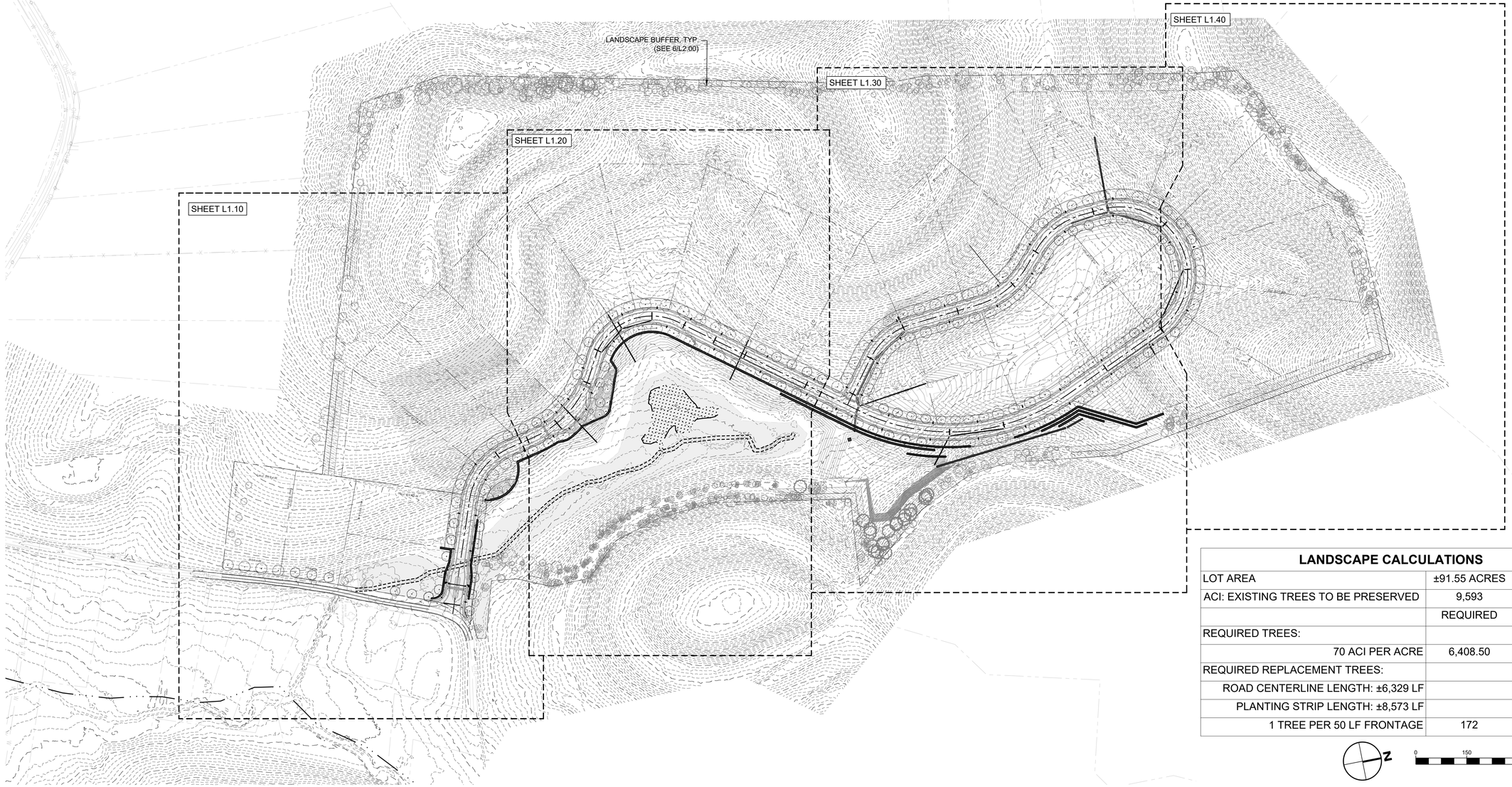
DATE: 07/23/2026

DESIGNED BY: MH, GH
SUPERVISED BY: NT, DO
CHECKED BY: NT

BIORETENTION 1 & 2 LANDSCAPE SCHEDULE

SHEET NO. L0.11

FILENAME: Z:\PRIVATE CLIENTS\2025\25-ALLEN FARM SUBDIVISION\CAD\CONSTRUCTION\25-ALLEN FARMS SUBDIVISION-CONSTRUCTION-L100_LANDSCAPE PLAN.DWG



LANDSCAPE CALCULATIONS		
LOT AREA	±91.55 ACRES	
ACI: EXISTING TREES TO BE PRESERVED	9,593	
	REQUIRED	PROVIDED
REQUIRED TREES:		
70 ACI PER ACRE	6,408.50	11137.00
REQUIRED REPLACEMENT TREES:		
ROAD CENTERLINE LENGTH: ±6,329 LF		
PLANTING STRIP LENGTH: ±8,573 LF		
1 TREE PER 50 LF FRONTAGE	172	181

N

0 150 300 FEET

REVISIONS

NO	DATE	BY	DESCRIPTION

SAVE DATE: 8/1/2026, PLOT DATE: 8/1/2026

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

PHONE: (615) 331-1441
FAX: (615) 331-1050

DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NICHOLAS TUTTLE
REGISTERED
AGRICULTURE
TENNESSEE, USA
LANDSCAPE ARCHITECT
08/01/2026

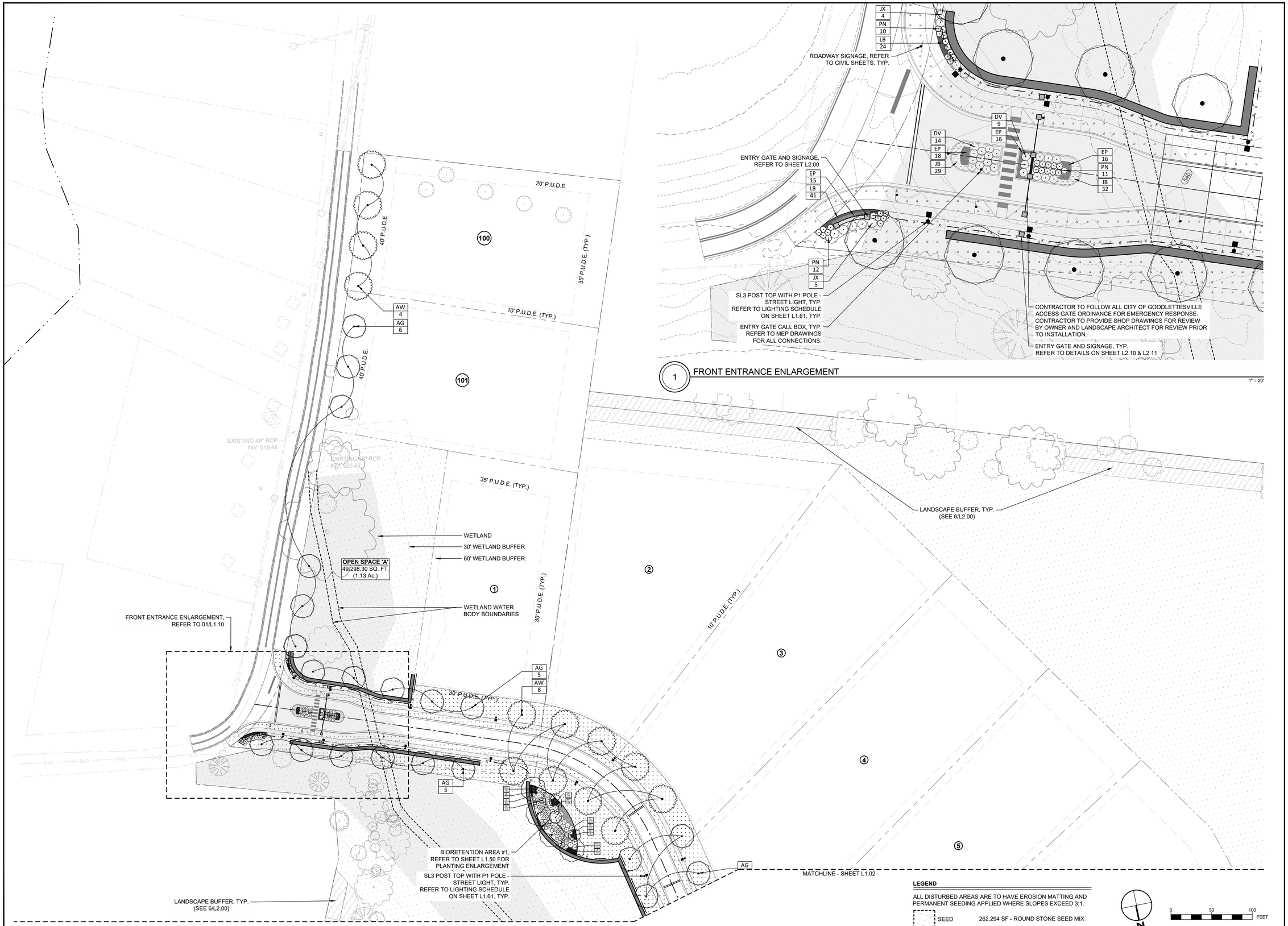
DATE: 07/23/2026

DESIGNED BY: MH, GH
SUPERVISED BY: NT, DO
CHECKED BY: NT

OVERALL LANDSCAPE PLAN

SHEET NO. L1.00

FILENAME: Z:\PRIVATE CLIENTS\2025-24 - ALLEN FARMS SUBDIVISION\CAD\DESIGN\DWGS\25_L100_LANDSCAPE PLAN.DWG



REVISIONS

NO	DATE	BY	DESCRIPTION

SAVE DATE: 8/2/2026, PLOT DATE: 8/2/2026

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2449 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055

PHONE: (615) 331-1441
FAX: (615) 331-1050

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NICHOLAS TUTTLE
REGISTERED
No. 3717
PROFESSIONAL
LANDSCAPE ARCHITECT
TENNESSEE, U.S.A.

08/10/2026

DATE:	07/23/2026
DESIGNED BY:	MH, GH
SUPERVISED BY:	NT, DO
CHECKED BY:	NT

LANDSCAPE PLAN

SHEET NO. L1.10

FILENAME: Z:\PRIVATE CLIENTS\8000-8499 ALLEN FARMS SUBDIVISION\8300\CIVIL\8311.4 CAD\DESIGN\8300-8311.4 L1.10 LANDSCAPE PLAN.DWG



1 MAILBOX KIOSK ENLARGEMENT

1" = 20'

LEGEND

ALL DISTURBED AREAS ARE TO HAVE EROSION MATTING AND PERMANENT SEEDING APPLIED WHERE SLOPES EXCEED 3:1.

SEED 262,294 SF - ROUND STONE SEED MIX

N

0 50 100 FEET

REVISIONS

NO	DATE	BY	DESCRIPTION

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

PHONE: (615) 331-1441
FAX: (615) 331-1050

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

NICHOLAS TUTTLE REGISTERED AGRICULTURE ENGINEER TENNESSEE NO. 08/10/2026 LANDSCAPE ARCHITECT

DATE: 07/23/2026

DESIGNED BY: MH, GH
SUPERVISED BY: NT, DO
CHECKED BY: NT

LANDSCAPE PLAN

SHEET NO. L1.20

SAVE DATE: 9/2/2026, PLOT DATE: 9/3/2026

FILENAME: Z:\PRIVATE CLIENTS\3008-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN\2\3008-25_L1.00_LANDSCAPE PLAN.DWG



REVISIONS

NO	DATE	BY	DESCRIPTION

SAVE DATE: 8/1/2025, PLOT DATE: 8/1/2025

C3 COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

PHONE: (615) 331-1441
FAX: (615) 331-1050

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION

ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NICHOLAS TUTTLE
REGISTERED
XVI
AGRICULTURE
TENNESSEE
LANDSCAPE ARCHITECT
07/10/2026

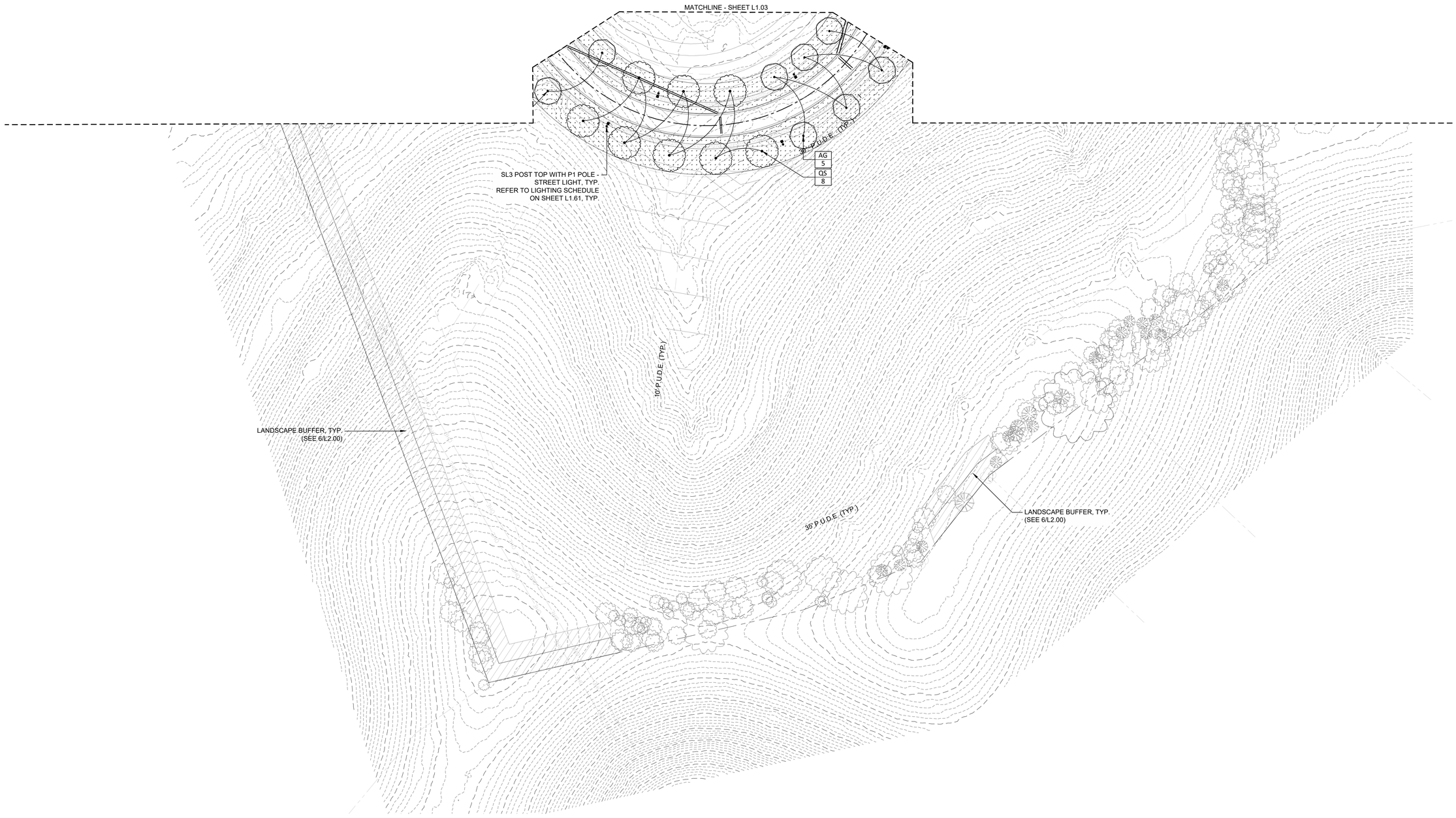
DATE: 07/23/2026

DESIGNED BY: MH, GH
SUPERVISED BY: NT, DO
CHECKED BY: NT

LANDSCAPE PLAN

SHEET NO. L1.30

FILENAME: Z:\PRIVATE CLIENTS\008-24 - ALLEN FARMS SUBDIVISION\CAD\L3\008-24 - SITE PLAN-DESIGN-2025-7-1 L1.00_LANDSCAPE PLAN.DWG



LEGEND

ALL DISTURBED AREAS ARE TO HAVE EROSION MATTING AND PERMANENT SEEDING APPLIED WHERE SLOPES EXCEED 3:1.

SEED 262,294 SF - ROUND STONE SEED MIX

N

0 50 100 FEET

REVISIONS

NO	DATE	BY	DESCRIPTION

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

PHONE: (615) 331-1441
FAX: (615) 331-1050

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NICHOLAS TUTTLE
REGISTERED
AGRICULTURE
TENNESSEE
LANDSCAPE ARCHITECT
08/10/2026

DATE: 07/23/2026

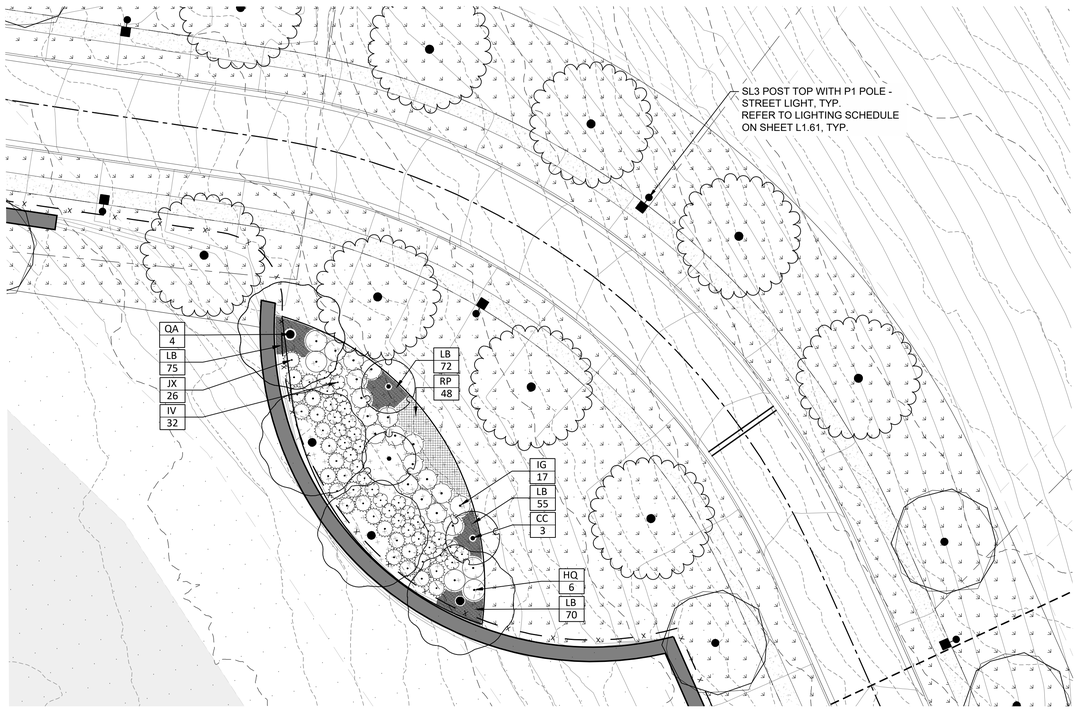
DESIGNED BY: MH, GH
SUPERVISED BY: NT, DO
CHECKED BY: NT

LANDSCAPE PLAN

SHEET NO. L1.40

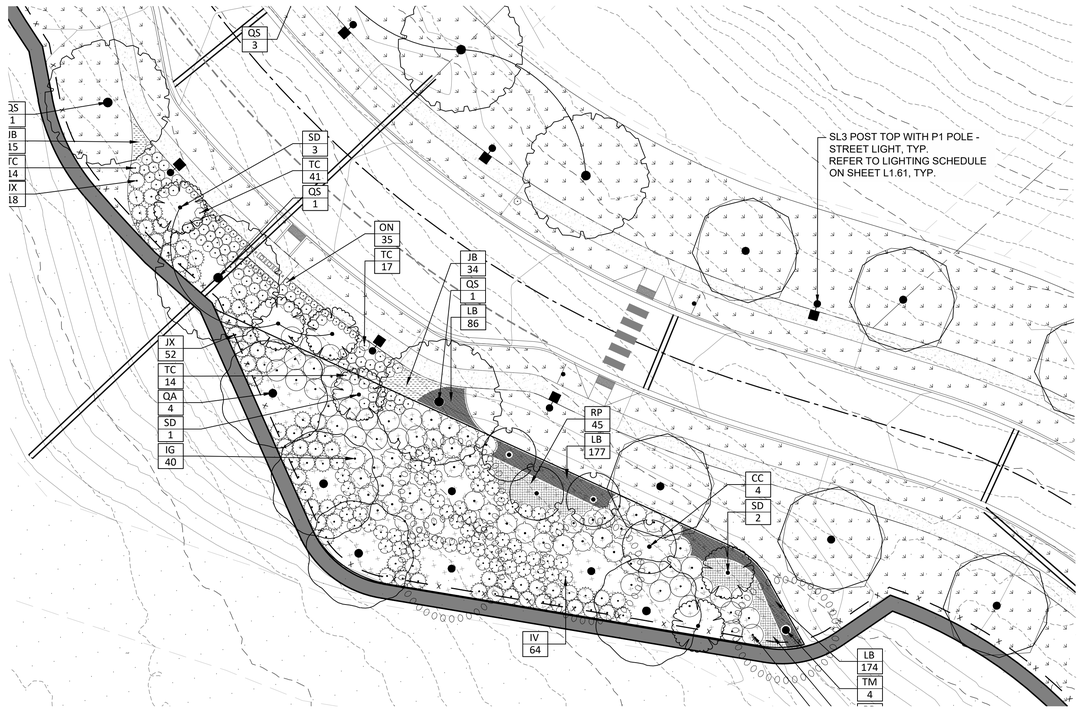
SAVE DATE: 9/2/2026, PLOT DATE: 9/3/2026

FILENAME: Z:\PRIVATE CLIENTS\3008-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\4-CADD\DESIGN\3008-25_L1.00_LANDSCAPE PLAN.DWG



1 BIORETENION AREA #1 ENLARGEMENT

1" = 20'



2 BIORETENION AREA #2 ENLARGEMENT

1" = 20'

LEGEND

ALL DISTURBED AREAS ARE TO HAVE EROSION MATTING AND PERMANENT SEEDING APPLIED WHERE SLOPES EXCEED 3:1.

SEED 262,294 SF - ROUND STONE SEED MIX

N

0 20 40 FEET

REVISIONS

NO	DATE	BY	DESCRIPTION

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

PHONE: (615) 331-1441
FAX: (615) 331-1050

DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NICHOLAS TUTTLE REGISTERED LANDSCAPE ARCHITECT TENNESSEE NO. 101 08/10/2026

DATE: 07/23/2026

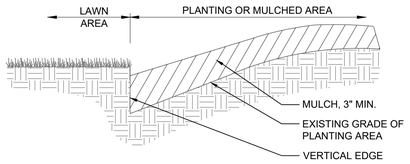
DESIGNED BY: MH, GH
SUPERVISED BY: NT, DO
CHECKED BY: NT

BIORETENTION AREA PLANTING ENLARGEMENTS

SHEET NO. L1.50

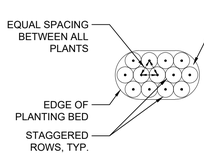
FILENAME: Z:\PRIVATE CLIENTS\3065-24_ALLEN FARM SUBDIVISION\3065-DESIGN\2-CIVIL_SITE\4-CADDESIGN\3065-25_L1.00_LANDSCAPE PLAN.DWG

SAVE DATE: 9/2/2026, PLOT DATE: 9/2/2026

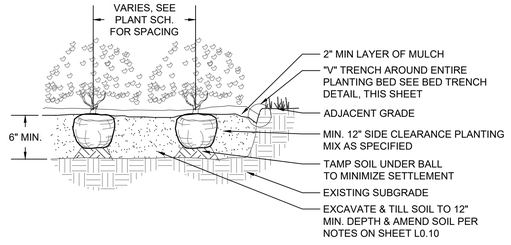


1 BED TRENCH

NTS



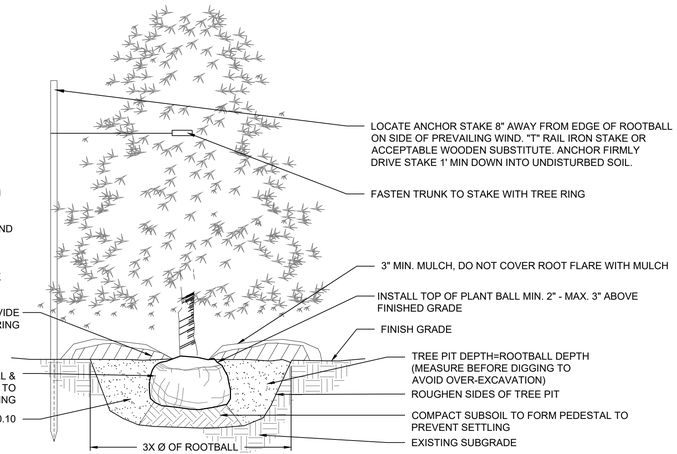
NOTES:
1. INSTALL TOP OF PLANT BALL 2" ABOVE ADJACENT GRADE.
2. TAMP PLANTING MIX FIRMLY AS PIT IS FILLED AROUND EACH PLANT BALL.
3. SOAK EACH PLANT BALL AND PIT IMMEDIATELY AFTER INSTALLATION.



2 GROUNDCOVER PLANTING

NTS

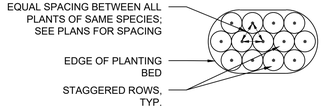
NOTES:
1. INSTALL TOP OF PLANT BALL MIN 2" - MAX 3" ABOVE EXISTING GRADE.
2. SOAK PLANT BALL AND PIT IMMEDIATELY AFTER INSTALLATION. PLACE 3" OF SEASONED MULCH OR PINE NEEDLES AROUND BASE OF TREE, 3' DIAMETER MINIMUM.
3. ESTABLISH MULCH RING AROUND TREES INSTALLED IN TURF. LAYOUT CIRCULAR MULCH RING BY MEASURING 3' OFF TRUNK AT DBH, IN ALL DIRECTIONS. CONSTRUCT EDGE OF MULCH RING IN ORDER TO AID MAINTENANCE OF TURF EDGE.
4. ALL TREES ARE TO BE NURSERY GROWN, BURLAP AND BALL (B&B). MINIMUM TREE SIZE IS PER SCHEDULE (MEASURED 6" ABOVE ROOT BALL).
5. REMOVE ALL TREATED OR PLASTIC-COATED BURLAP, STRAPPING, WIRE OR NYLON TWINE FROM ROOT BALL. AFTER SETTING IN HOLE, CUT AWAY TOP AND SIDES OF WIRE BASKET, IF ANY.
6. SET TREE IN VERTICAL POSITION PRIOR TO BACKFILL.
8. IF TREES ARE PLANTED 6' OR LESS FROM CURBS, ROADS, OR SIDEWALK, PROVIDE ROOT BARRIER SET ALONG PAVED EDGE AT LEAST 5' FROM TRUNK OF TREE. INSTALL BARRIER PER MANUFACTURER RECOMMENDATION.



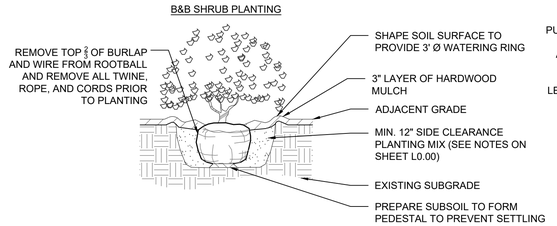
3 SHRUB PLANTING

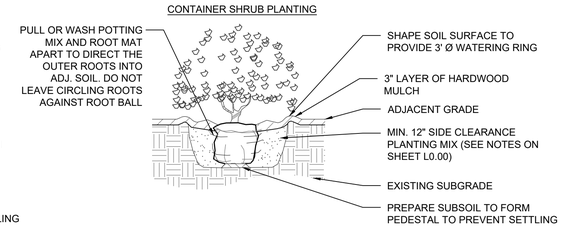
NTS

NOTES:
1. INSTALL TOP OF PLANT BALL 2" ABOVE ADJACENT GRADE.
2. TAMP PLANTING MIX FIRMLY AS PIT IS FILLED AROUND EACH PLANT BALL.
3. SOAK EACH PLANT BALL AND PIT IMMEDIATELY AFTER INSTALLATION.
4. ROUGHEN SIDES OF PLANTING PIT.



SHRUB PLANTING PLAN VIEW

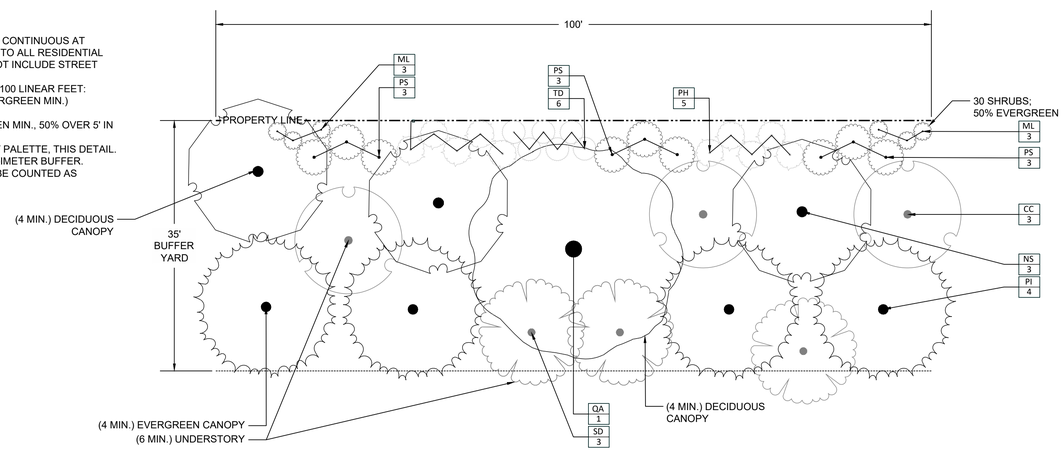




4 EVERGREEN TREE PLANTING

NTS

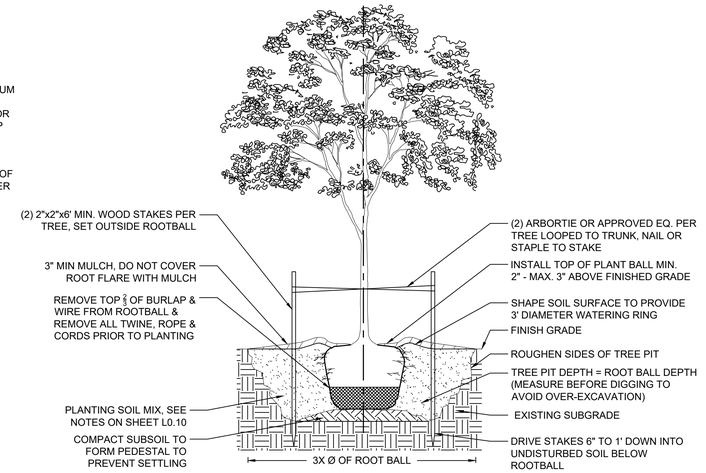
NOTES:
1. 35' BUFFER YARD SHALL BE CONTINUOUS AT PROPERTY LINE ADJACENT TO ALL RESIDENTIAL PROPERTIES AND SHALL NOT INCLUDE STREET FRONTAGE PERIMETERS.
2. PLANT AS FOLLOWING PER 100 LINEAR FEET:
   8 CANOPY TREES (50% EVERGREEN MIN.)
   6 UNDERSTORY TREES
   30 SHRUBS (50% EVERGREEN MIN., 50% OVER 5' IN HEIGHT MIN.)
3. SEE RECOMMENDED PLANT PALETTE, THIS DETAIL.
4. ±9,650 LINEAR FEET OF PERIMETER BUFFER.
5. EXISTING VEGETATION TO BE COUNTED AS BUFFER PLANTING.



5 TREE PLANTING

NTS

NOTES:
1. ESTABLISH MULCH RING AROUND TREES INSTALLED IN TURF. LAYOUT CIRCULAR MULCH RING BY MEASURING 3' OFF TRUNK AT DBH, IN ALL DIRECTIONS. CONSTRUCT EDGE OF MULCH RING IN ORDER TO AID MAINTENANCE OF TURF EDGE.
2. ALL TREES ARE TO BE NURSERY GROWN, BURLAP AND BALL (B&B). MINIMUM TREE SIZE IS PER SCHEDULE (MEASURED 6" ABOVE ROOT BALL).
3. REMOVE ALL TREATED OR PLASTIC-COATED BURLAP, STRAPPING, WIRE OR NYLON TWINE FROM ROOT BALL. AFTER SETTING IN HOLE, CUT AWAY TOP AND SIDES OF WIRE BASKET, IF ANY.
4. INSTALL TOP OF PLANT BALL MIN 2" - MAX 3" ABOVE EXISTING GRADE.
5. SET TREE IN VERTICAL POSITION PRIOR TO BACKFILL.
6. SOAK PLANT BALL AND PIT IMMEDIATELY AFTER INSTALLATION. PLACE 3" OF SEASONED MULCH OR PINE NEEDLES AROUND BASE OF TREE, 3' DIAMETER MINIMUM.
7. GUY WIRES ARE NOT PERMITTED IN STREET RIGHT-OF-WAY.
8. IF TREES ARE PLANTED 6' OR LESS FROM CURBS, ROADS, OR SIDEWALK, PROVIDE ROOT BARRIER SET ALONG PAVED EDGE AT LEAST 3.5' FROM TRUNK OF TREE. INSTALL BARRIER PER MANUFACTURER RECOMMENDATION.



6 EXAMPLE LAYOUT: 35' BUFFER YARD

NTS

PLANT SCHEDULE 35' BUFFER YARD PLANTING EXAMPLE LAYOUT

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	CONTAINER	HEIGHT (ANSI)	REMARKS
BUFFER TREES							
	NS	3	NYSSA SYLVATICA / TUPELO	3" CAL.	B&B	14` - 16`	SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED
	PI	4	PINUS STROBUS / WHITE PINE	2" CAL.	B&B	10'-12'	EVERGREEN SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED
CANOPY TREES							
	QA	1	QUERCUS ALBA / WHITE OAK	3" CAL.	B&B	14` - 16`	SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED
FLOWERING TREES							
	CC	3	CERCIS CANADENSIS 'APPALACHIAN RED' / APPALACHIAN RED EASTERN REDBUD	3" CAL.	B&B	8` - 10`	SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED
	SD	3	CORNUS FLORIDA 'APPALACHIAN SPRING' / APPALACHIAN SPRING DOGWOOD	3" CAL.	B&B	8` - 12`	SINGLE, STRAIGHT CENTRAL LEADER, FULL CROWN, MATCHED

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	HEIGHT	SPREAD	SPACING	SPACING	REMARKS
BUFFER PLANTS								
	ML	6	MUHLENBERGIA CAPILLARIS 'LENCA' / REGAL MIST® PINK MUHLY GRASS	30"	24"	3' O.C.	36" o.c.	FULL, WELL ROOTED, MATCHED
	PH	10	PHYSOCARPUS OPULIFOLIUS 'SEWARD' / SUMMER WINE® NINEBARK	36"	36"	5' O.C.	60" o.c.	FULL, WELL ROOTED, MATCHED
	PS	9	PRUNUS LAUROCERASUS `SCHIPKAENSIS` / SCHIPKA CHERRY LAUREL	36"	36"	6' O.C.	72" o.c.	EVERGREEN FULL, WELL ROOTED, MATCHED
	TD	6	TAXUS X MEDIA 'DENSIFORMIS' / DENSE ANGLO-JAPANESE YEW	24"	24"	4' O.C.	48" o.c.	EVERGREEN FULL, WELL ROOTED, MATCHED

REVISIONS

NO	DATE	BY	DESCRIPTION

SAVE DATE: 8/2/2026, PLOT DATE: 8/3/2026

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
714C COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NICHOLAS TUTTLE REGISTERED LANDSCAPE ARCHITECT TENNESSEE
08/07/2026

DATE: 07/23/2026
DESIGNED BY: MH, GH
SUPERVISED BY: NT, DO
CHECKED BY: NT

LANDSCAPE DETAILS

SHEET NO. L1.60

FILENAME: Z:\PRIVATE CLIENTS\2024-24 - ALLEN FARM DEVELOPMENT\CAD\LDP\LANDSCAPE\L1.60 - LANDSCAPE DETAILS.DWG

ALLEN FARMS GOODLETTSVILLE FIXTURE SCHEDULE

Spec Sheet	Type	Description	Manufacturer	PART NO.	Voltage	CCT	DIMMING TYPE	NOTES
https://www.genlyte.com/api/assets/v1/file/Signify/content/2cfb0a6b83d64a159056ada5010e8a71/Hadco_Independence_LED_Post_Top_Gen3__VX151_VX152____Choice_Sheet.pdf	SL3	NES APPROVED SINGLE LUMINAIRE POST TOP WITH 16' MOUNTING HEIGHT	HADCO	VX151-48-G3-XX-C-3W-N-730-A	UNIV	30k	0-10V	
https://unitedlightingstandards.com/wp-content/uploads/2026/03/DWM-ULS_PG_Round_Straight_Steel_Pole_R6.pdf	P1	4" PAINTED STEEL ROUND POLE WITH T3 TENON ADAPTER	ULS	RSP-16-4-11-T3		NA	NA	CONTRACTOR TO VERIFY FINAL POLE HEIGHT BASED UPON ENGINEERED POLE BASE
https://s3.us-central-1.wasabisys.com/luminiiwpmediafolder/wp-media-folder-luminii/wp-content/uploads/documents_2025/Kurba-Large-V-H-Static-White-Spec.pdf	L1	***10'-10"*** LENGTH .63" SQUARE IP68 FIELD BENDABLE KURBA HORIZONTAL BEND LINEAR FIXTURE AT ALLEN FARMS SIGN	LUMINII	KBL-W-VB-***130***-38HO-24K-R80-SF-MC-KBL-BSSP-3D-SM-34-SS-BK-NPF-IMB-PS120-ELV-IG-2X96-24	UNV	24K	0-10V	POWER FEED LIGHT FROM RIGHT BACK WHEN FACING SIGN, CONTRACTOR TO LOCATE REMOTE DRIVERS ON SHOP DWGS AND INCLUDE NEMA EXTERIOR RATED ENCLOSURE TO HOUSE DRIVERS
	L2	***18"*** LENGTH .63" SQUARE IP68 FIELD BENDABLE KURBA HORIZONTAL BEND LINEAR FIXTURE AT LOGO SIGN	LUMINII	KBL-W-VB-***48***-38HO-24K-R80-SF-MC-KBL-BSSP-3D-SM-34-SS-BK-NPF-IMB-PS120-ELV-IG-2X96-24				

NOTE: The lighting fixtures shown in the fixture schedule are the "basis of design." Other fixtures may be acceptable alternates as long as they are equal in all aspects to the basis of design for performance, quality, and appearance. The landscape architect will have the final decision in accepting the alternates during the shop drawing review. Where deemed "not equal" in the first submittal review, the basis of design shall be provided. Contractor to provide photometrics on any proposed alternates to verify code compliance with the City of Goodlettsville

REVISIONS

NO	DATE	BY	DESCRIPTION

SAVE DATE: 3/2/2026, PLOT DATE: 3/2/2026

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NICHOLAS TUTTLE
REGISTERED
LANDSCAPE ARCHITECT
TENNESSEE NO. 371
07/07/2026

DATE: 07/23/2026

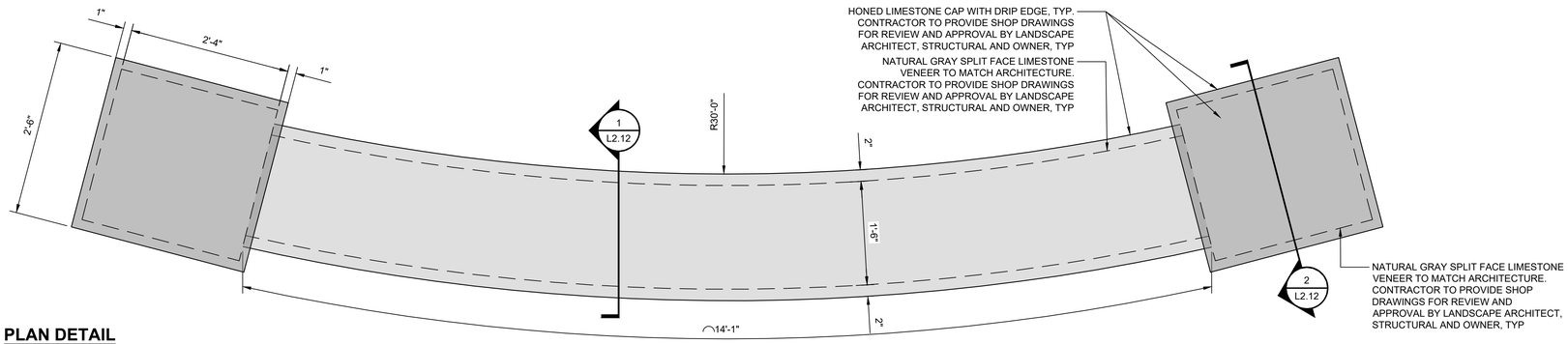
DESIGNED BY:	MH, GH
SUPERVISED BY:	NT, DO
CHECKED BY:	NT

LIGHTING SCHEDULE

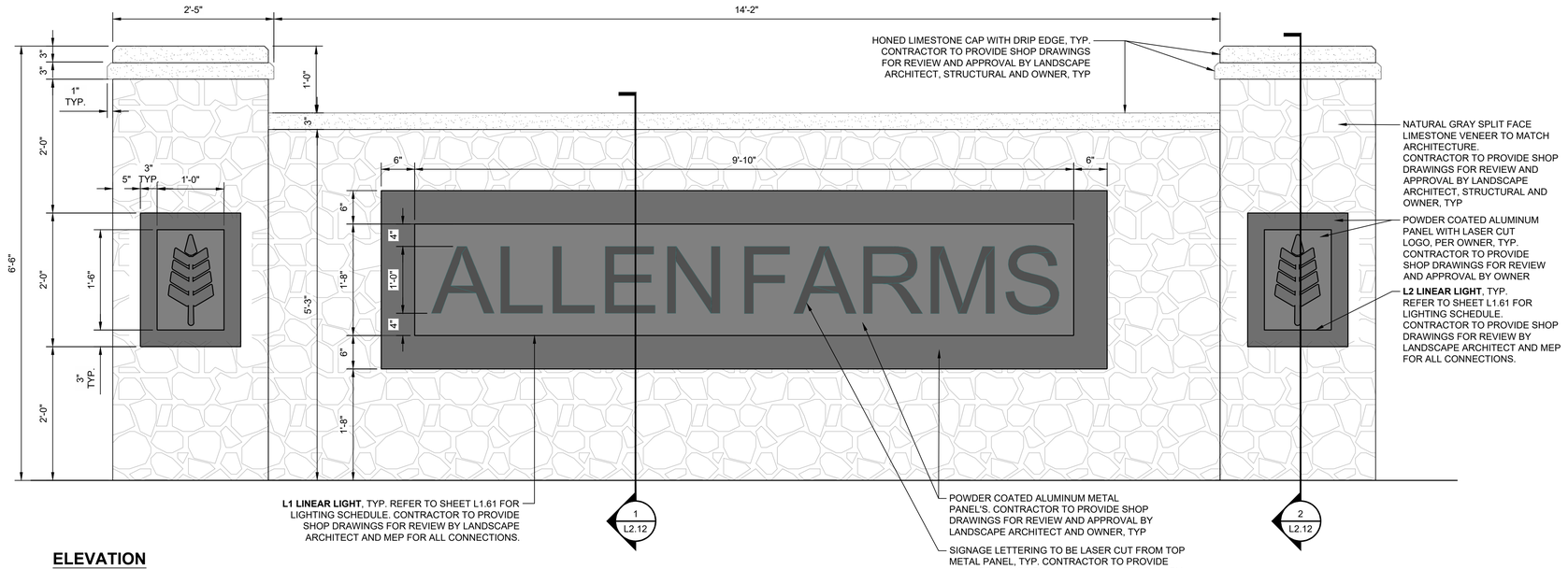
SHEET NO. L1.61

FILENAME: Z:\PRIVATE CLIENTS\000-99 - ALLEN FARMS SUBDIVISION\26-58.000\CIVIL_SITE\CADD\DESIGN\260723_L100_LANDSCAPE PLAN.DWG

NOTE:
1. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT, STRUCTURAL AND OWNER, TYP.
2. STRUCTURAL ENGINEER TO PROVIDE REINFORCING AND FOOTING SHOP DRAWINGS FOR REVIEW BY LANDSCAPE ARCHITECT AND CIVIL ENGINEER.
3. CONTRACTOR TO PROVIDE MOCK UPS OF ALL WALLS AND SIGNAGE PRIOR TO CONSTRCUTOR FOR REVIEW BY LANDSCAPE ARCHITECT AND OWNER.



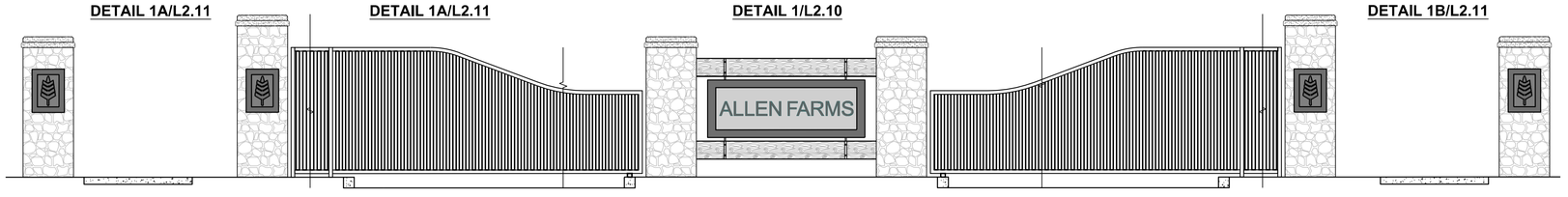
PLAN DETAIL



ELEVATION

01 MAIN ENTRANCE SIGNAGE

1:1



02 MAIN ENTRANCE GATE & SIGNAGE OVERALL - KEY ELEVATION

NTS

REVISIONS

NO	DATE	BY	DESCRIPTION

SAVE DATE: 8/2/2026, PLOT DATE: 8/3/2026

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2349 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NICHOLAS TUTTLE
REGISTERED
XVI
LANDSCAPE ARCHITECT
TENNESSEE
08/04/2026

DATE: 07/23/2026

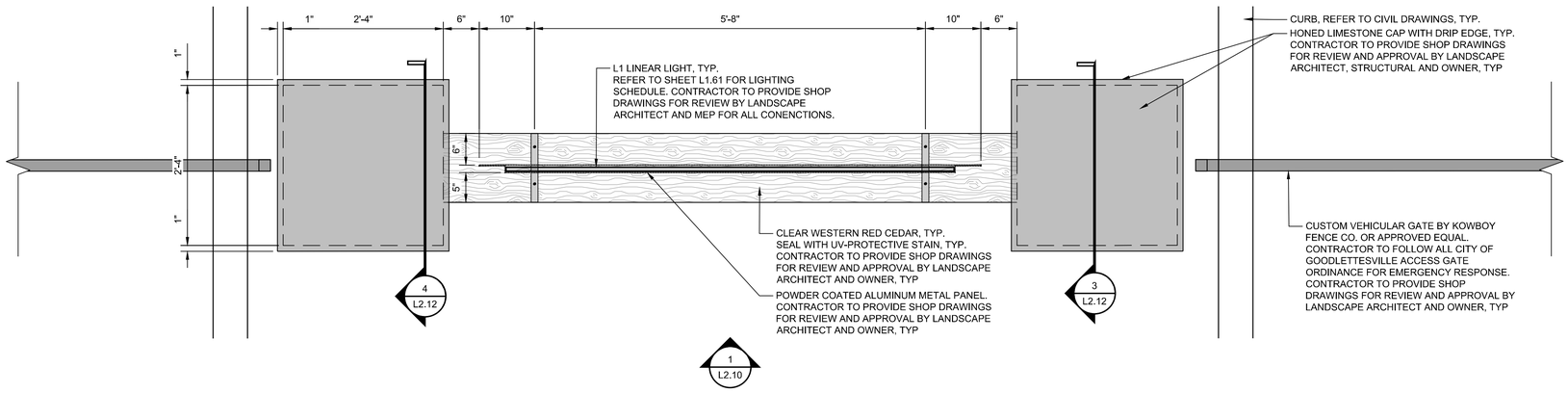
DESIGNED BY:	MH, GH
SUPERVISED BY:	NT, DO
CHECKED BY:	NT

WALL DETAILS - MAIN ENTRANCE SIGNAGE

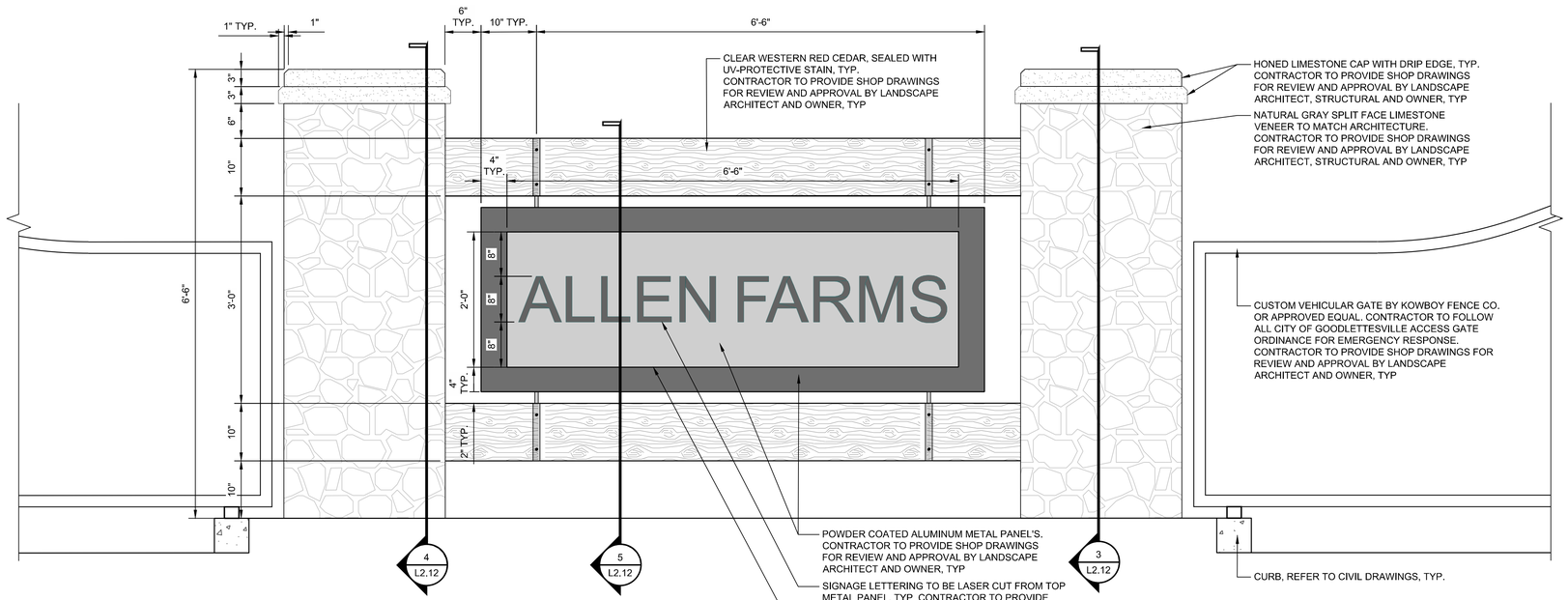
SHEET NO. L2.00

FILENAME: Z:\PRIVATE CLIENTS\3008-24 - ALLEN FARMS\3-BIDDING\3008-24-SDP02.DWG

NOTE:
1. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT, STRUCTURAL AND OWNER, TYP.
2. STRUCTURAL ENGINEER TO PROVIDE REINFORCING AND FOOTING SHOP DRAWINGS FOR REVIEW BY LANDSCAPE ARCHITECT AND CIVIL ENGINEER.
3. CONTRACTOR TO PROVIDE MOCK UPS OF ALL WALLS AND SIGNAGE PRIOR TO CONSTRCUTOR FOR REVIEW BY LANDSCAPE ARCHITECT AND OWNER.



PLAN DETAIL



ELEVATION

01 MAIN ENTRANCE CENTRAL COLUMNS & SIGNAGE - ELEVATION 1:1

REVISIONS

NO	DATE	BY	DESCRIPTION

SAVE DATE: 8/2/2026, PLOT DATE: 8/3/2026

COLLIER ENGINEERING CO., INC.
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211
DICKSON OFFICE
7146 COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

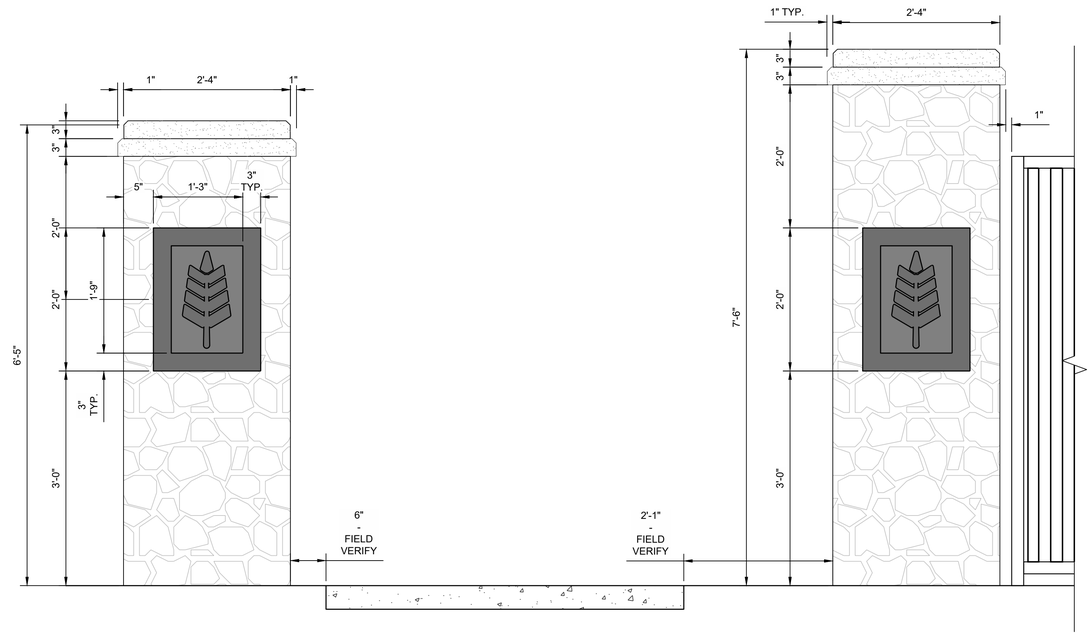
NICHOLAS TUTTLE REGISTERED LANDSCAPE ARCHITECT TENNESSEE
08/10/2026

DATE: 07/23/2026
DESIGNED BY: MH, GH
SUPERVISED BY: NT, DO
CHECKED BY: NT

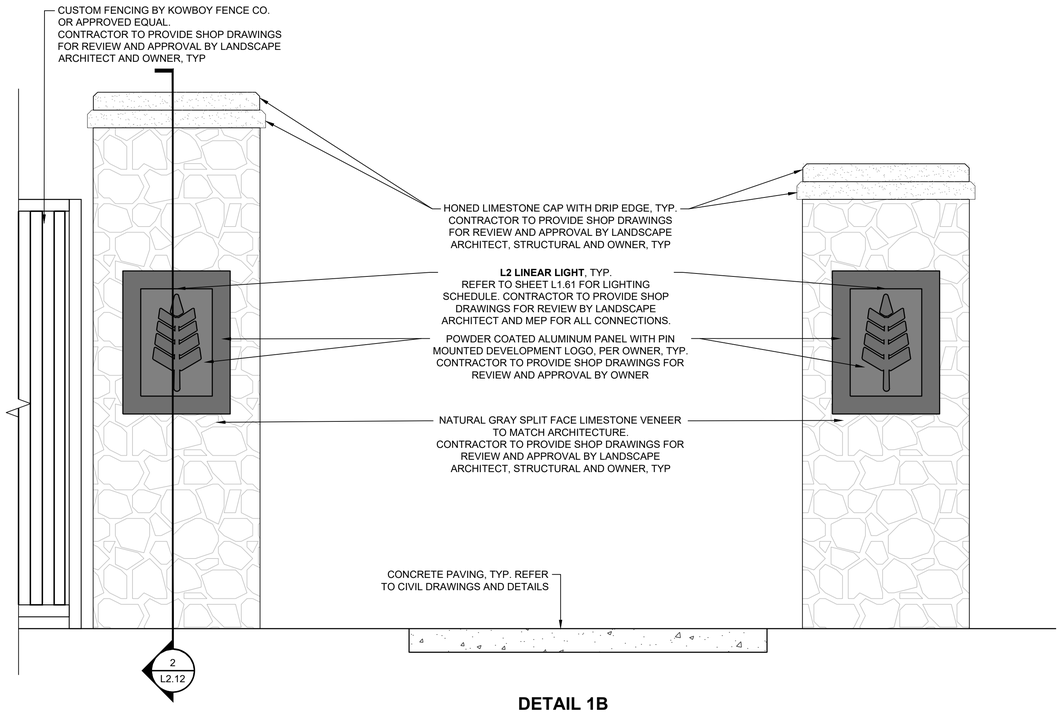
WALL DETAILS - MAIN ENTRANCE GATE & SIGNAGE

SHEET NO. L2.10

FILENAME: Z:\PRIVATE CLIENTS\2025-24 - ALLEN FARM SUBDIVISION\CAD\DESIGN\2025-25_L3XD_LANDSCAPE DETAILS.DWG



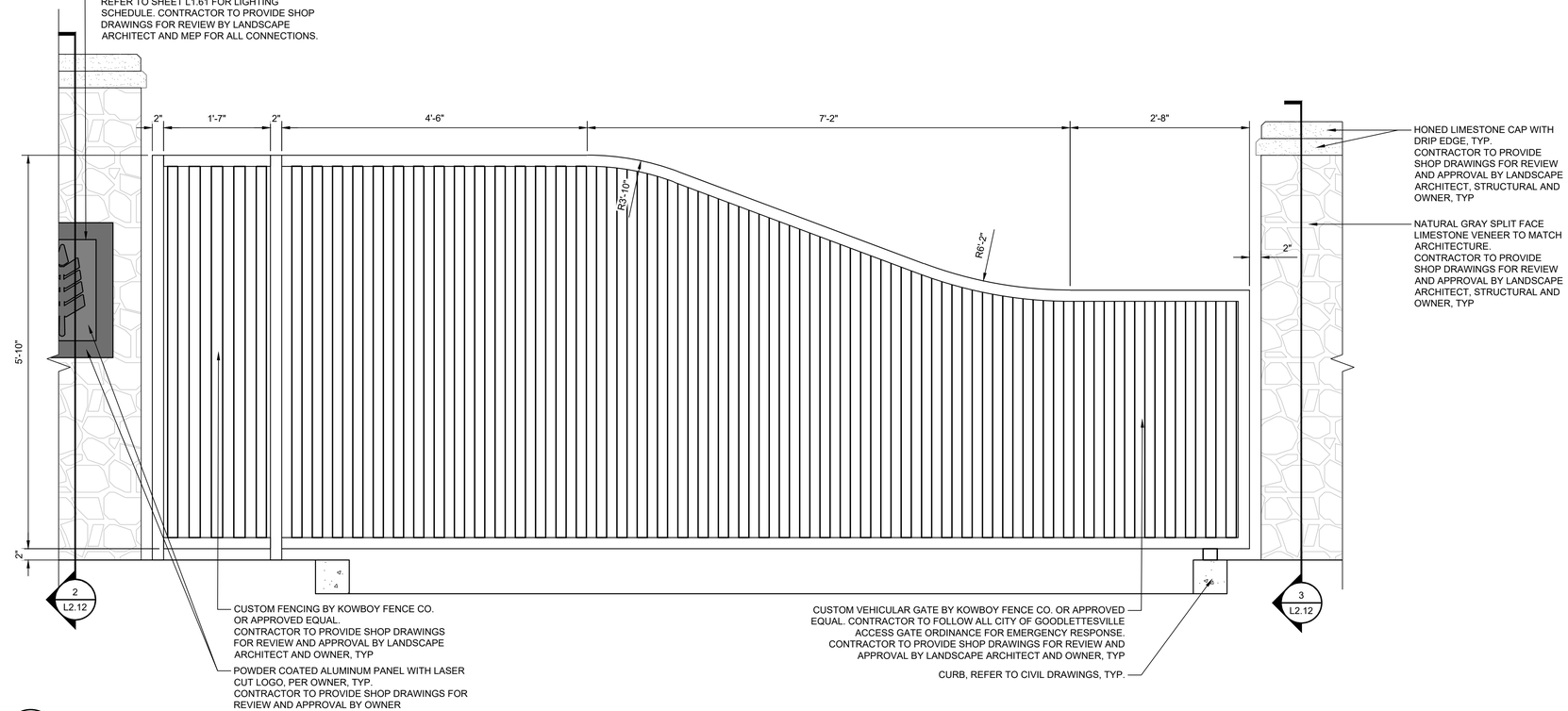
DETAIL 1A



DETAIL 1B

01 MAIN ENTRANCE GATE COLUMN - ELEVATION

1:1



02 MAIN ENTRANCE VEHICULAR GATE - ELEVATION

1:1

NOTE:

1. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT, STRUCTURAL AND OWNER, TYP.
2. STRUCTURAL ENGINEER TO PROVIDE REINFORCING AND FOOTING SHOP DRAWINGS FOR REVIEW BY LANDSCAPE ARCHITECT AND CIVIL ENGINEER.
3. CONTRACTOR TO PROVIDE MOCK UPS OF ALL WALLS AND SIGNAGE PRIOR TO CONSTRCUTOR FOR REVIEW BY LANDSCAPE ARCHITECT AND OWNER.

REVISIONS

NO	DATE	BY	DESCRIPTION

SAVE DATE: 8/2/2026, PLOT DATE: 8/3/2026

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NICHOLAS TUTTLE REGISTERED LANDSCAPE ARCHITECT TENNESSEE NO. 328 (PRO)
08/10/2026

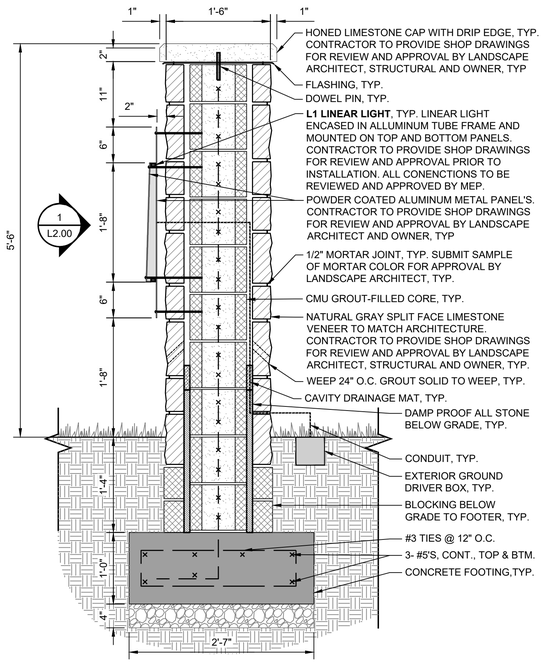
DATE:	07/23/2026
DESIGNED BY:	MH, GH
SUPERVISED BY:	NT, DO
CHECKED BY:	NT

WALL DETAILS - MAIN ENTRANCE GATE & SIGNAGE

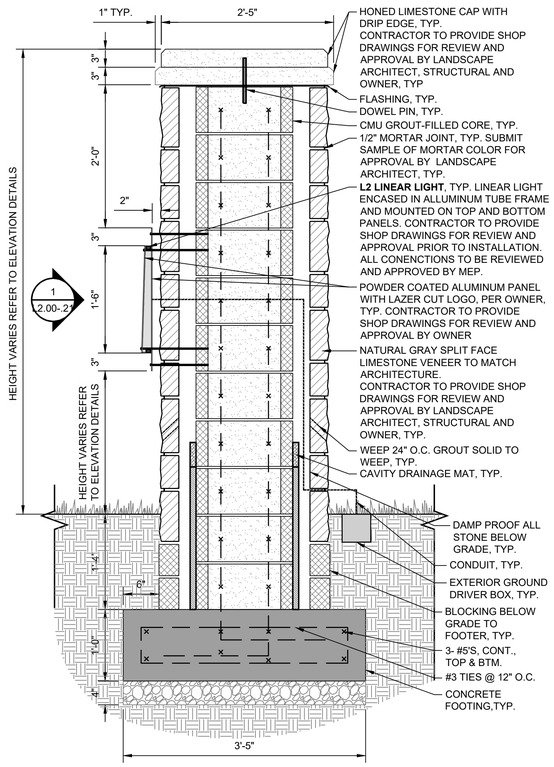
SHEET NO. L2.11

FILENAME: Z:\PRIVATE CLIENTS\2026\26-A_ALLEN FARM SUBDIVISION\26-A SHEETS\CAD\DESIGN\26-A-25_L2.00_LANDSCAPE DETAILS.DWG

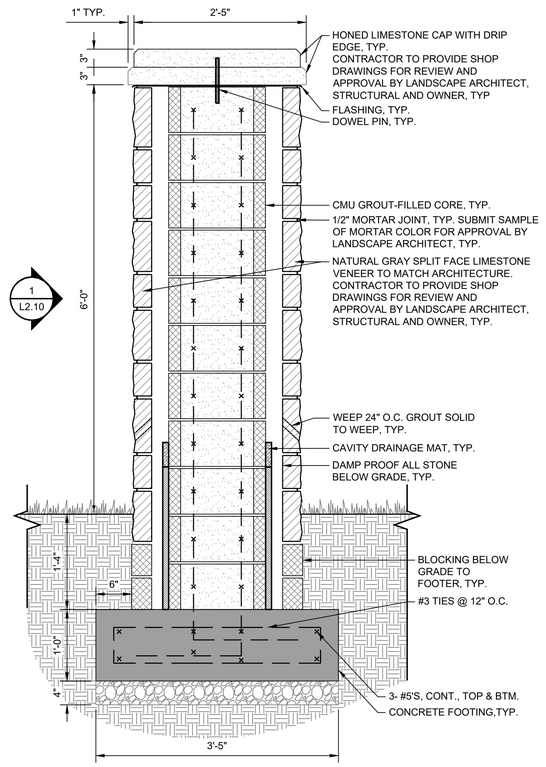
NOTE:
1. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT, STRUCTURAL AND OWNER, TYP.
2. STRUCTURAL ENGINEER TO PROVIDE REINFORCING AND FOOTING SHOP DRAWINGS FOR REVIEW BY LANDSCAPE ARCHITECT AND CIVIL ENGINEER.
3. CONTRACTOR TO PROVIDE MOCK UPS OF ALL WALLS AND SIGNAGE PRIOR TO CONSTRCUTOR FOR REVIEW BY LANDSCAPE ARCHITECT AND OWNER.



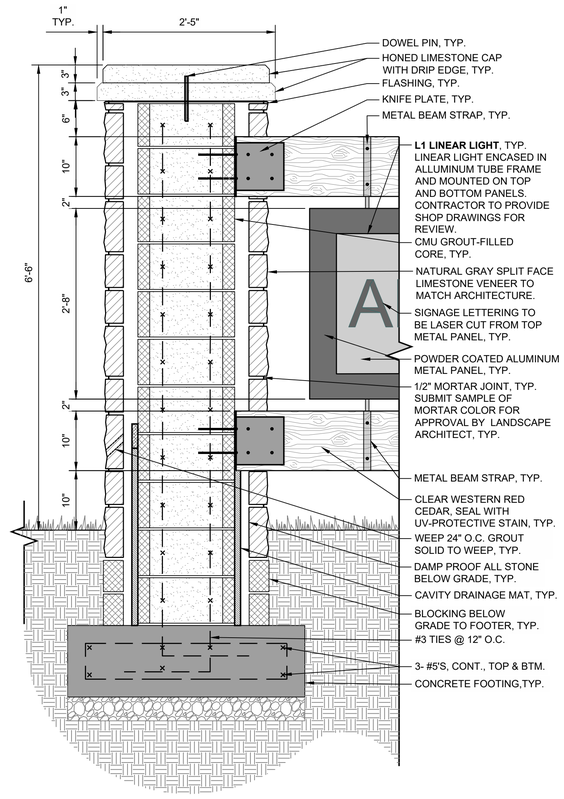
01 MAIN ENTRANCE SIGNAGE - SECTION 1:1



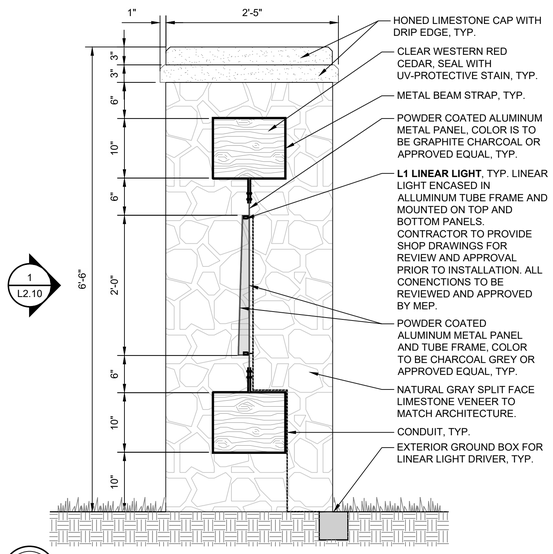
02 MAIN ENTRANCE COLUMN - SECTION 1:1



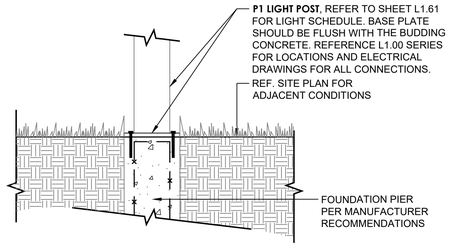
03 MAIN ENTRANCE GATE COLUMN - SECTION 1:1



04 MAIN ENTRANCE GATE SIGNAGE COLUMN - SECTION 1:1



05 MAIN ENTRANCE GATE SIGNAGE - SECTION 1:1



06 TYPICAL SITE LIGHTING BASE - SECTION 1:1

REVISIONS

NO	DATE	BY	DESCRIPTION

SAVE DATE: 3/2/2026, PLOT DATE: 3/2/2026

COLLIER ENGINEERING CO., INC.
DICKSON OFFICE
7146 COLLEGE STREET
DICKSON, TENNESSEE 37055
PHONE: (615) 331-1441
FAX: (615) 331-1050
NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION
ALLEN FARMS INVESTMENTS, LLC.
ALLEN ROAD
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

NICHOLAS TUTTLE
REGISTERED
LANDSCAPE ARCHITECT
TENNESSEE NO.
08/10/2026

DATE:	07/23/2026
DESIGNED BY:	MH, GH
SUPERVISED BY:	NT, DO
CHECKED BY:	NT

WALL & COLUMN SECTION DETAILS

SHEET NO. L2.12

FILENAME: Z:\PRIVATE CLIENTS\2025-26 - ALLEN FARMS SUBDIVISION\3-SD\DWG\CIVIL_TECH\DESIGN\2025-03_1.00_LANDSCAPE SET ALL3.DWG

ALLEN FARMS



FRONT ELEVATION 3/16" = 1'-0"



RIGHT ELEVATION 3/16" = 1'-0"



BACK ELEVATION 3/16" = 1'-0"



LEFT ELEVATION 3/16" = 1'-0"

26-05

CW ARCHITECTS

ALLEN FARMS



FRONT ELEVATION 3/16" = 1'-0"



RIGHT ELEVATION 3/16" = 1'-0"



BACK ELEVATION 3/16" = 1'-0"



LEFT ELEVATION 3/16" = 1'-0"

26-05

CW ARCHITECTS

HYDRAULIC REPORT
COLLIER PROJECT NO. 3608-24

SEPTEMBER 3, 2026

ALLEN FARMS SUBDIVISION
Allen Road
Goodlettsville, TN 37072

Allen Farms Investment, LLC



Nathan A. Couch, P.E.
Project Engineer
Tennessee No. 122500

COLLIER ENGINEERING CO., INC.
CONSULTING • DESIGN • CONSTRUCTION

2949 Nolensville Pike
Nashville, TN 37211
615.331.1441
www.collierengineering.com

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PROJECT NARRATIVE.....1

SITE DESCRIPTION.....2

EXISTING CONDITIONS.....2
PROPOSED CONDITIONS.....2

HYDROLOGY AND WATER QUALITY.....3

Appendix 1 Existing Conditions
Appendix 2 Proposed Conditions
Appendix 3 Engineering Calculations

PROJECT NARRATIVE

This development proposes subdividing existing parcels totaling 87.06 acres into a residential subdivision with 32 lots, open space, and 4,357 feet of new public street.

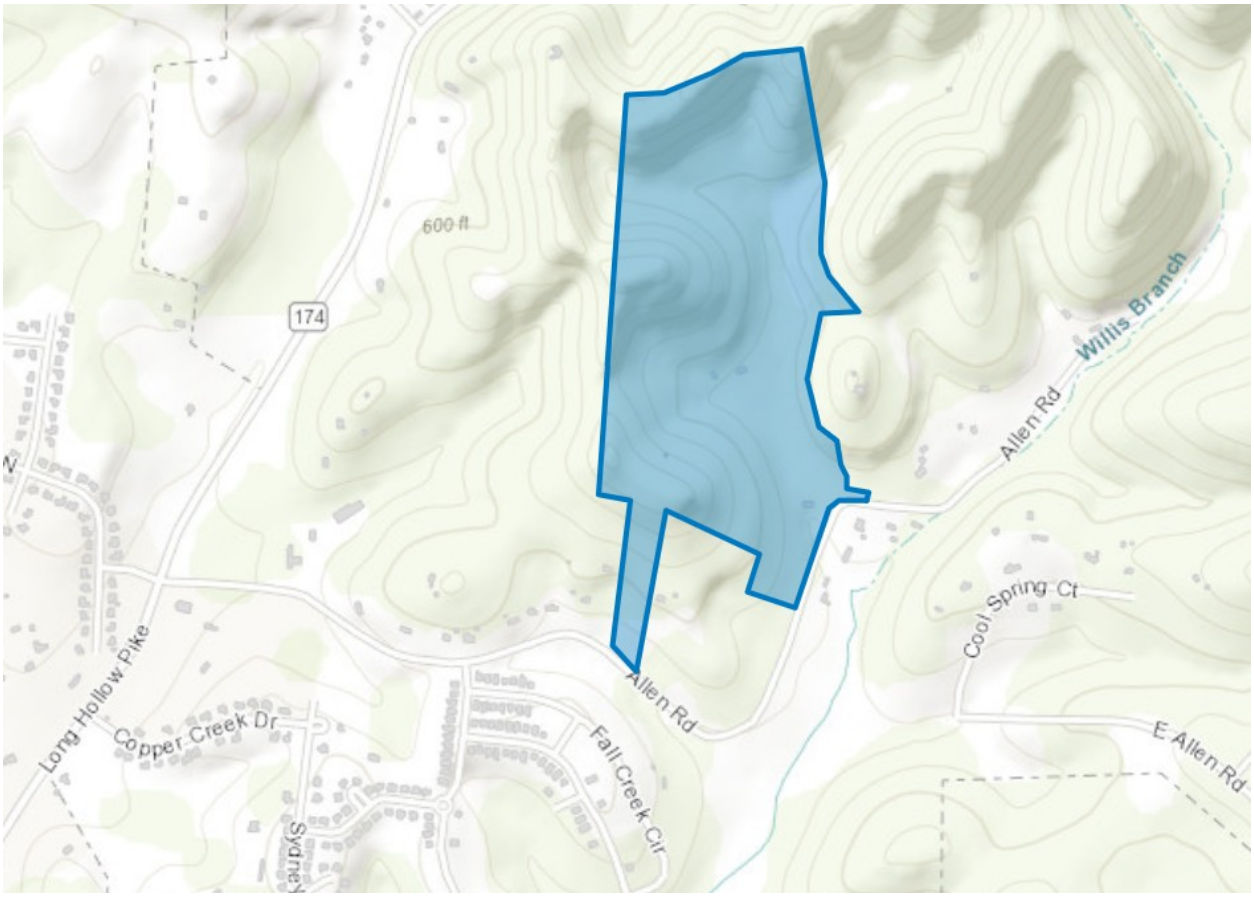


Figure 1: Vicinity Map

SITE DESCRIPTION

Existing Conditions

The proposed development is situated on Allen Road in the City of Goodlettsville, Sumner County, Tennessee. The existing parcels total 87.06 acres. One of the existing parcels has an existing home that will not remain in the new subdivision. The site is characterized as a hardwood forest and pasture with a central valley. The site is bounded by ridges along the southwest, west and north property lines and a low wetland area along the east and south property lines with steep grades between. Elevations range from 797 at the top of one of the ridges to 520 at Outfall #1. Grades range from 1-5% areas to 40% slopes.

The site drains generally from the north of the property down to a low area on site determined to be a wetland. The wetland area then flows off the property at Outfall #1, across Allen Road, to Willis Branch, a tributary to Madison Creek. The stormwater flowing from this site has significant areas offsite to the northeast and northwest contributing to the total leaving the site at Outfall #1. The entirety of Madison Creek, including Willis Branch, has a water quality assessment of not supporting due to sedimentation, siltation and alteration of stream sides or littoral vegetative covers.

Stormwater leaves this site at 4 different outfalls. Refer to the Pre-Development Drainage Map in Appendix 1 for further detail. The NRCS Soil Report shows Hydrologic Soil Ratings of B and C over the entire site and contributing drainage areas. Refer to Soil Map in Appendix 1.

Proposed Conditions

The proposed improvements will build a new public street with building lots for 32 new home sites. The street will start at the southeast side of the property at Allen Road and will follow the west side of the wetland to loop back onto itself. The new public street section will be asphalt with two 12’ wide drive lanes and curb and gutter and sidewalks on each side. The entrance to the subdivision will be divided with an island. The new home sites will relate to the new roadway and, due to the steep slopes, many are expected to have the opportunity for basements. The east side of the roadway will have retaining walls between the roadway and the wetland due to fill.

Stormwater is intercepted on site in various culverts and curb inlets where it is routed to various discharge points. The hydraulic calculations showing the 10yr and 100 year hydraulic grade line profiles are located in Appendix 3, Engineering Calculations.

Please see Appendix 2, Proposed Conditions and Appendix 3, Engineering Calculations for further information.

HYDROLOGY

The City of Goodlettsville requires post-developed runoff to be equal or less than pre-developed runoff for the 2, 5, 10, 25, 50 and 100 year. 24 hour storm events. This project increases impervious area with the public street and proposed home sites. These impervious areas increase runoff potential and require some detention. All of the new impervious surfaces in this development drain to Outfall #1. The drainage area to Outfall #1 is divided into subareas and some subareas are routed to a detention pond listed in the calculations as Pond 1C. Pond 1C provides the bulk of the stormwater attenuation by intercepting subareas 1A, 1B and 1C.
See Appendix 3 Engineering Calculations for hydrographs.

STORMWATER RUNOFF OUTFALL #1		
	PEAK FLOW (CFS)	
STORM EVENT	EXISTING	PROPOSED
2 YR	77.57	54.60
5 YR	156.76	100.32
10 YR	214.85	132.92
25 YR	293.58	196.29
50 YR	354.51	255.86
100 YR	416.13	310.76

STORMWATER RUNOFF OUTFALL #2		
	PEAK FLOW (CFS)	
STORM EVENT	EXISTING	PROPOSED
2 YR	4.98	4.98
5 YR	10.15	10.15
10 YR	13.95	13.95
25 YR	19.09	19.09
50 YR	23.14	23.14
100 YR	27.27	27.27

STORMWATER RUNOFF OUTFALL #3		
	PEAK FLOW (CFS)	
STORM EVENT	EXISTING	PROPOSED
2 YR	0.59	0.59
5 YR	1.16	1.16
10 YR	1.57	1.57
25 YR	2.13	2.13
50 YR	2.56	2.56
100 YR	2.99	2.99

STORMWATER RUNOFF OUTFALL #4		
	PEAK FLOW (CFS)	
STORM EVENT	EXISTING	PROPOSED
2 YR	0.15	0.15
5 YR	0.28	0.28
10 YR	0.39	0.39
25 YR	0.52	0.52
50 YR	0.63	0.63
100 YR	0.73	0.73

WATER QUALITY

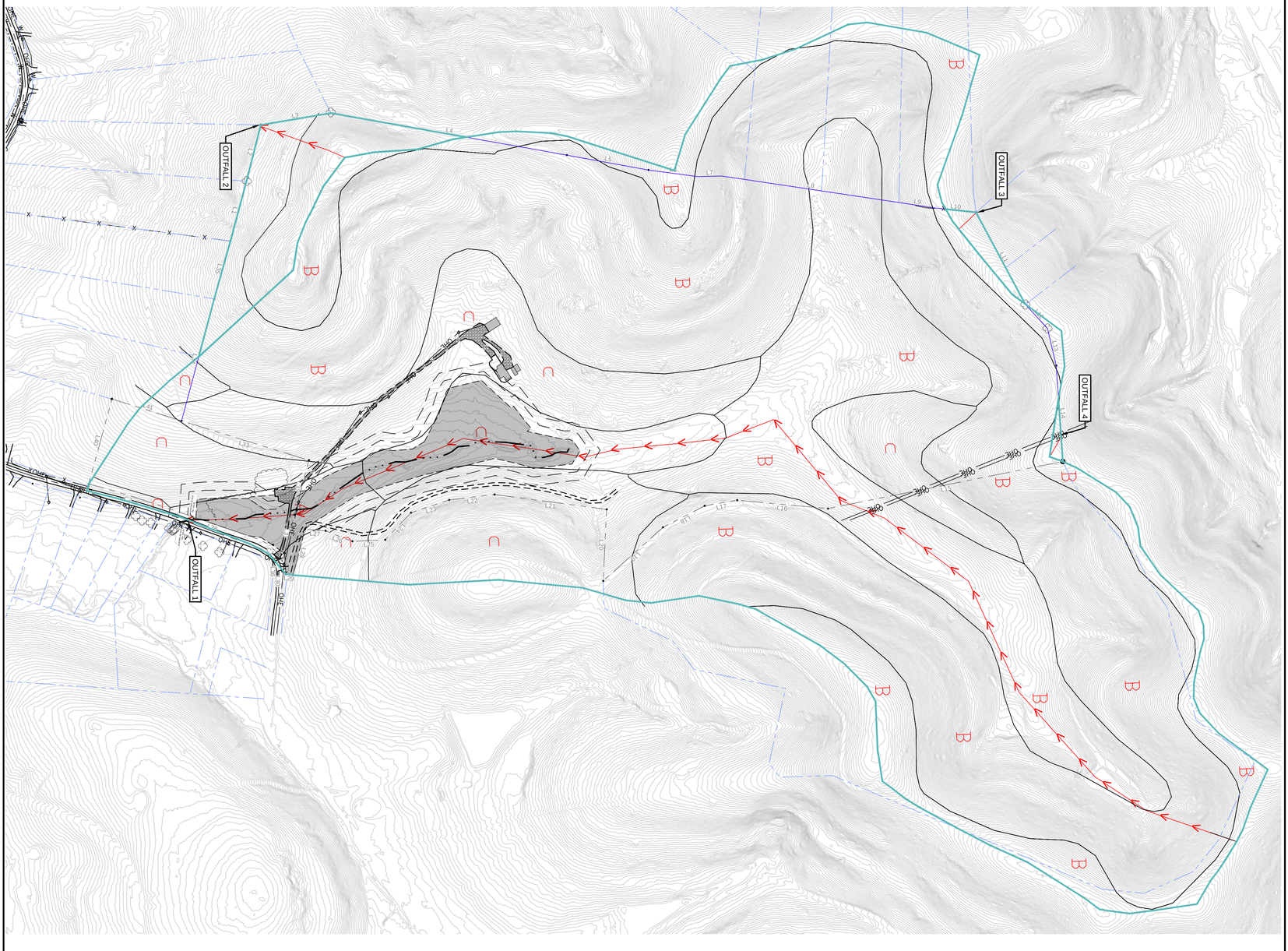
Water Quality for this site was designed using the Tennessee Permanent Stormwater and Design Guidance Manual and the TNRRAT program. This site achieves the Primary Design Level of runoff reduction as described in section 3.4-Site Design Targets. The TNRRAT calculations are shown in Appendix 3 Engineering Calculations.
The measures used to provide water quality treatment for this project are Infiltration areas, vegetated swales, dry detention and bioretention. The first 1 inch of stormwater runoff is either infiltrated or filtered by these measures.

Water Quality Performance Summary

TSS Pollutant Removal Site Total			
Drainage Area	**Area (SF)**	**TSS Removal**	**Weighted Factor**
1A	2,180,000	95.6%	30.16
1B	1,270,000	100.0%	18.38
1C	1,230,000	80.2%	14.27
1D	2,130,000	77.4%	23.85
1E	79,100	100%	1.14
1H	22,100	100%	0.32
		TOTAL SITE TSS REMOVAL	**88.12%**

Summary data was taken from the TNRRAT calculations as shown in Appendix 3 Engineering Calculations.

APPENDIX 1
EXISTING CONDITIONS



0 150 300 FEET

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CONSTRUCTION DOCUMENTS FOR

ALLEN FARMS SUBDIVISION

ALLEN ROAD
GOODLETTSVILLE, TENNESSEE 37072

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

PHONE: (615) 331-1441
FAX: (615) 331-1050

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

SHEET NO. EXH1.0

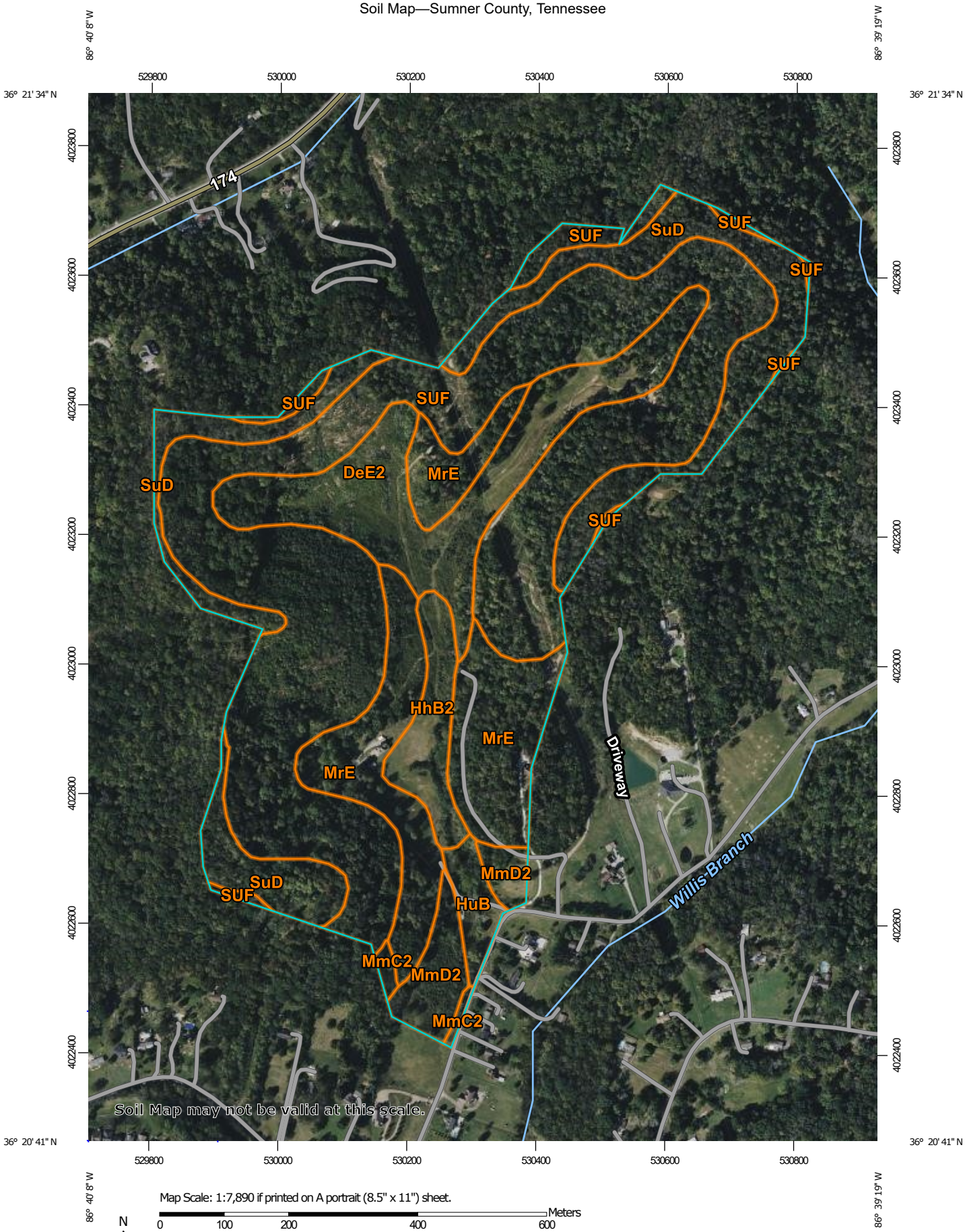
PRE DRAINAGE MAP

DESIGNED BY: CJ/MM
SUPERVISED BY: JK
CHECKED BY: DC

DATE: 08/10/2026

FILENAME: Z:\PRIVATE CLIENTS\3608-24 - ALLEN FARM SUBDIVISION\3-DESIGN\2-CIVIL_SITE\6-HYDRA\3608-24_PRE DRAINAGE MAP.DWG

SAVE DATE: 8/9/2026, PLOT DATE: 9/3/2026


86° 40' 8" W
86° 39' 19" W
529800
530000
530200
530400
530600
530800
36° 21' 34" N
36° 20' 41" N
4023800
4023600
4023400
4023200
4023000
4022800
4022600
4022400
174
SUF
SuD
DeE2
MrE
HhB2
MmD2
HuB
MmC2
Driveway
Willis Branch
Soil Map may not be valid at this scale.
Map Scale: 1:7,890 if printed on A portrait (8.5" x 11") sheet.
N
Meters
0 100 200 400 600
Feet
0 350 700 1400 2100
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 1:20,000.

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: Sumner County, Tennessee
Survey Area Data: Version 18, Aug 29, 2025

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

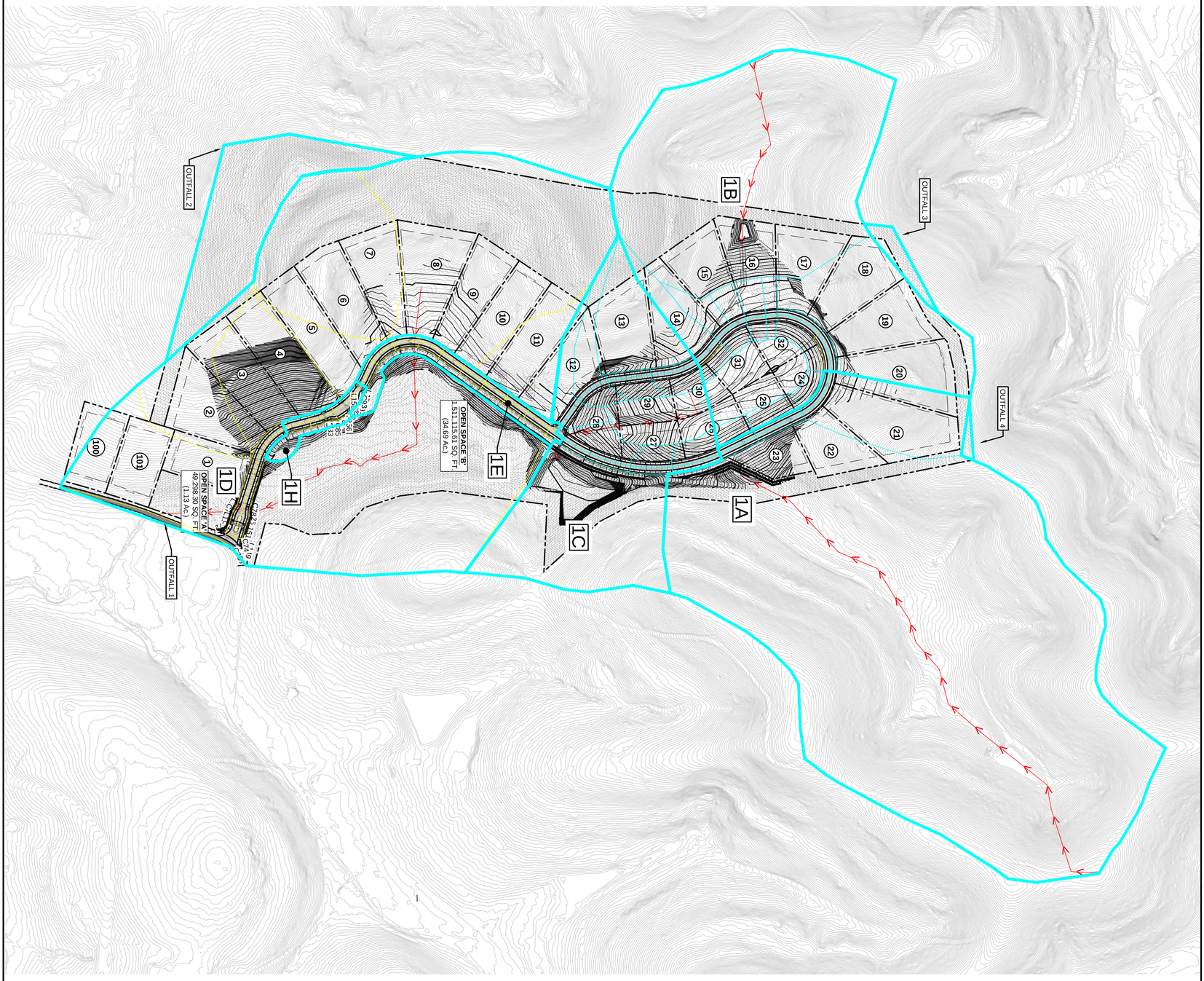
Date(s) aerial images were photographed: Oct 5, 2024—Dec 6, 2024

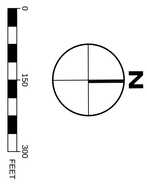
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DeE2	Dellrose gravelly silt loam, 20 to 45 percent slopes, eroded	21.5	13.5%
HhB2	Harpeth silt loam, 2 to 5 percent slopes, eroded	5.8	3.6%
HuB	Humphreys gravelly silt loam, 2 to 5 percent slopes	2.7	1.7%
MmC2	Mimosa silt loam, 5 to 12 percent slopes, eroded	0.8	0.5%
MmD2	Mimosa silt loam, 12 to 20 percent slopes, eroded	5.4	3.4%
MrE	Mimosa-Rock outcrop complex, 20 to 40 percent slopes	25.6	16.0%
SuD	Sulphura channery silt loam, 10 to 25 percent slopes	24.3	15.2%
SUF	Sulphura channery silt loam, 25 to 55 percent slopes	74.0	46.3%
Totals for Area of Interest		**159.9**	**100.0%**

APPENDIX 2
PROPOSED CONDITIONS





SHEET NO. PROPH1.0	POST DRAINAGE MAP	DATE: 08/10/2026 DESIGNED BY: CJ/MM SUPERVISED BY: JK CHECKED BY: DC	

CONSTRUCTION DOCUMENTS FOR

##########################
####
##########
##############################

COLLIER ENGINEERING CO., INC.

NASHVILLE OFFICE
2949 NOLENSVILLE PIKE
NASHVILLE, TENNESSEE 37211

PHONE: (615) 331-1441
FAX: (615) 331-1050

DICKSON OFFICE
714c COLLEGE STREET
DICKSON, TENNESSEE 37055

REVISIONS

NO	DATE	BY	DESCRIPTION
1	9/3/2026	CAJ	REVISED PER CITY COMMENTS

APPENDIX 3
ENGINEERING CALCULATIONS

TN Runoff Reduction Assessment Tool (RRAT)

Site Name:
Assigned Site Number:
Design submitter:

NOTES:

Access: R2_TN_RRAT_Basic
Version #: 2.5.6.1

Design File Name: tn-rrat-runs\Area 1A

Design Results:
Design OK?: GREEN
Pollutant removal OK?: GREEN Portion action vol captured: 92.2 % Portion pollutant removed: 95.6 %
Volume red. OK?: GREEN Net volume red. depth: 1.65 in.

Inputs:
Location: Nashville Total surface area: 2180000 ft2 Imp:active ratio (X:1): 0.675

General Design Conditions:

Design element #	*Discharges to design element #*	*Area, ft2*	*Special conditions*	*Soil*	*Base SCM / management*	*Design element description*
1	2	10000	none	silt loam	impervious\impervious	Home Sites
2	8	32350	none	silt loam	06. infiltration areas\turf, good	Downslope Lawn Areas
3	4	7500	none	silt loam	impervious\impervious	Home Sites
4	6	36330	none	silt loam	06. infiltration areas\turf, good	Downslope Lawn Area
5	6	43130	none	silt loam	impervious\impervious	Road Pavement and Sidewalks
6	8	12000	none	silt loam	03. vegetated swale\vegetated swale	Swale @ B-11 Outlet
7	8	2034000	none	silt loam	05. managed vegetated areas\forest, fair	Offsite Forest

8	0	9183	none	silt loam	03. vegetated swale\vegetated swale	Pond @ 1A Outfall

Specific Element Design Values:

Design element #	*Base SCM / management*	*Surface removal eff, %*	*Drain disch rem eff, %*	*Drain invert depth, in.*	*Drain disch element #*	*Storage vol, gal*	*Withdrawal rate, gal*	*Layer #*	*Layer material*	*Layer design depth, in.*
1	tn-rrat-scms\impervious\impervious	0					0	1	(none)	0
2	tn-rrat-scms\06. infiltration areas\turf, good	25.0					0	1	(none)	0
3	tn-rrat-scms\impervious\impervious	0					0	1	(none)	0
4	tn-rrat-scms\06. infiltration areas\turf, good	25.0					0	1	(none)	0
5	tn-rrat-scms\impervious\impervious	0					0	1	(none)	0
6	tn-rrat-scms\03. vegetated swale\vegetated swale	25.0					0	1	(none)	0
7	tn-rrat-scms\05. managed vegetated areas\forest, fair	0					0	1	(none)	0
8	tn-rrat-scms\03. vegetated swale\vegetated swale	25.0					0	1	(none)	0

TN Runoff Reduction Assessment Tool (RRAT)

Site Name:
Assigned Site Number:
Design submitter:

NOTES:

Access: R2_TN_RRAT_Basic
Version #: 2.5.6.1

Design File Name: tn-rrat-runs\Area 1B

Design Results:
Design OK?: GREEN
Pollutant removal OK?: GREEN
Volume red. OK?: GREEN
Portion action vol captured: 100 %
Net volume red. depth: 1.65 in.
Portion pollutant removed: 100 %

Inputs:
Location: Nashville
Total surface area: 1270000 ft2
Imp:active ratio (X:1): 0.361

General Design Conditions:

Design element #	*Discharges to design element #*	*Area, ft2*	*Special conditions*	*Soil*	*Base SCM / management*	*Design element description*
1	2	15000	none	silt loam	impervious\impervious	Home Sites
2	10	74500	none	silt loam	06. infiltration areas\turf, good	Downslope Lawn Areas
3	4	5000	none	silt loam	impervious\impervious	Home Site Lot 17
4	10	21500	none	silt loam	06. infiltration areas\turf, good	Downslope Lawn Area
5	7	5000	none	silt loam	impervious\impervious	Home Sites Lots 15&16
6	7	25000	none	silt loam	impervious\impervious	Home Sites inside Loop
7	8	70000	none	silt loam	06. infiltration areas\turf, good	Downslope Lawn Area Inside Loop
8	10	12800	none	silt loam	03. vegetated swale\vegetated swale	Swale in Loop Area
9	10	22600	none	silt loam	impervious\impervious	Road Pavement and Sidewalks
10	12	8000	none	silt loam	03. vegetated swale\vegetated swale	Swale @ B-22 Outlet
11	12	994200	none	silt loam	05. managed vegetated areas\forest, fair	Offsite Forest
12	0	14290	none	silt loam	03. vegetated swale\vegetated swale	Pond @ 1B

Specific Element Design Values:

Design element #	*Base SCM / management*	*Surface removal eff, %*	*Drain disch rem eff, %*	*Drain invert depth, in.*	*Drain disch element #*	*Storage vol, gal*	*Withdrawal rate, gal*	*Layer #*	*Layer material*	*Layer design depth, in.*
1	tn-rrat-scms\impervious\impervious	0					0	1	(none)	0
2	tn-rrat-scms\06. infiltration areas\turf, good	25.0					0	1	(none)	0
3	tn-rrat-scms\impervious\impervious	0					0	1	(none)	0
4	tn-rrat-scms\06. infiltration areas\turf, good	25.0					0	1	(none)	0
5	tn-rrat-scms\impervious\impervious	0					0	1	(none)	0
6	tn-rrat-scms\impervious\impervious	0					0	1	(none)	0
7	tn-rrat-scms\06. infiltration areas\turf, good	25.0					0	1	(none)	0
8	tn-rrat-scms\03. vegetated swale\vegetated swale	25.0					0	1	(none)	0
9	tn-rrat-scms\impervious\impervious	0					0	1	(none)	0
10	tn-rrat-scms\03. vegetated swale\vegetated swale	25.0					0	1	(none)	0
11	tn-rrat-scms\05. managed vegetated areas\forest, fair	0					0	1	(none)	0
12	tn-rrat-scms\03. vegetated swale\vegetated swale	25.0					0	1	(none)	0

TN Runoff Reduction Assessment Tool (RRAT)

Site Name:
Assigned Site Number:
Design submitter:

NOTES:

Access: R2_TN_RRAT_Basic
Version #: 2.5.6.1

Design File Name: tn-rrat-runs\Area 1C

Design Results:
Design OK?: YELLOW
Pollutant removal OK?: YELLOW Portion action vol captured: 67.0 % Portion pollutant removed: 80.2 %
Volume red. OK?: GREEN Net volume red. depth: 1.60 in.

Inputs:
Location: Nashville Total surface area: 1230000 ft2 Imp:active ratio (X:1): 0.471

General Design Conditions:

Design element #	*Discharges to design element #*	*Area, ft2*	*Special conditions*	*Soil*	*Base SCM / management*	*Design element description*
1	2	10000	none	silt loam	impervious\impervious	Home Sites
2	9	58000	none	silt loam	06. infiltration areas\turf, good	Downslope Lawn Areas
3	9	6500	none	silt loam	03. vegetated swale\vegetated swale	Swale Across lot fronts
4	5	20000	none	silt loam	impervious\impervious	Home Sites Inside Loop
5	7	54300	none	silt loam	06. infiltration areas\turf, good	Downslope Lawn Area Inside Loop
6	7	11500	none	silt loam	03. vegetated swale\vegetated swale	Swale in Loop Area
7	9	40960	none	silt loam	impervious\impervious	Road Pavement and Sidewalks
8	9	994200	none	silt loam	05. managed vegetated areas\forest, fair	Offsite Forest
9	0	38500	none	silt loam	01. dry detention\basin dry	Pond @ 1C

Specific Element Design Values:

Design element #	*Base SCM / management*	*Surface removal eff, %*	*Drain disch rem eff, %*	*Drain invert depth, in.*	*Drain disch element #*	*Storage vol, gal*	*Withdrawal rate, gal*	*Layer #*	*Layer material*	*Layer design depth, in.*
1	tn-rrat-scms\impervious\impervious	0					0	1	(none)	0
2	tn-rrat-scms\06. infiltration areas\turf, good	25.0					0	1	(none)	0
3	tn-rrat-scms\03. vegetated swale\vegetated swale	25.0					0	1	(none)	0
4	tn-rrat-scms\impervious\impervious	0					0	1	(none)	0
5	tn-rrat-scms\06. infiltration areas\turf, good	25.0					0	1	(none)	0
6	tn-rrat-scms\03. vegetated swale\vegetated swale	25.0					0	1	(none)	0
7	tn-rrat-scms\impervious\impervious	0					0	1	(none)	0
8	tn-rrat-scms\05. managed vegetated areas\forest, fair	0					0	1	(none)	0
9	tn-rrat-scms\01. dry detention\basin dry	40.0					0	1	(none)	0

TN Runoff Reduction Assessment Tool (RRAT)

Site Name:
Assigned Site Number:
Design submitter:

NOTES:

Access: R2_TN_RRAT_Basic
Version #: 2.5.6.1

Design File Name: tn-rrat-runs\Area 1D

Design Results:
Design OK?: RED
Pollutant removal OK?: RED Portion action vol captured: 77.4 % Portion pollutant removed: 77.4 %
Volume red. OK?: GREEN Net volume red. depth: 1.64 in.

Inputs:
Location: Nashville Total surface area: 2130000 ft2 Imp:active ratio (X:1): 0.244

General Design Conditions:

Design element #	*Discharges to design element #*	*Area, ft2*	*Special conditions*	*Soil*	*Base SCM / management*	*Design element description*
1	2	32500	none	silt loam	impervious\impervious	Home Sites
2	3	164300	none	silt loam	06. infiltration areas\turf, good	Downslope Lawn Areas
3	0	33000	none	silt loam	03. vegetated swale\vegetated swale	Swale Across lot fronts
4	5	15000	none	silt loam	impervious\impervious	Home Sites
5	0	75000	none	silt loam	06. infiltration areas\turf, good	Downslope Lawn Area
6	7	10000	none	silt loam	impervious\impervious	Home Sites
7	0	35600	none	silt loam	06. infiltration areas\turf, good	Downslope Lawn Areas
8	0	17500	none	silt loam	impervious\impervious	Road Pavement and Sidewalks
9	0	1750000	none	silt loam	05. managed vegetated areas\forest, fair	Forest and Existing Wetland

Specific Element Design Values:

Design element #	*Base SCM / management*	*Surface removal eff, %*	*Drain disch rem eff, %*	*Drain invert depth, in.*	*Drain disch element #*	*Storage vol, gal*	*Withdrawal rate, gal*	*Layer #*	*Layer material*	*Layer design depth, in.*
1	tn-rrat-scms\impervious\impervious	0					0	1	(none)	0
2	tn-rrat-scms\06. infiltration areas\turf, good	25.0					0	1	(none)	0
3	tn-rrat-scms\03. vegetated swale\vegetated swale	25.0					0	1	(none)	0
4	tn-rrat-scms\impervious\impervious	0					0	1	(none)	0
5	tn-rrat-scms\06. infiltration areas\turf, good	25.0					0	1	(none)	0
6	tn-rrat-scms\impervious\impervious	0					0	1	(none)	0
7	tn-rrat-scms\06. infiltration areas\turf, good	25.0					0	1	(none)	0
8	tn-rrat-scms\impervious\impervious	0					0	1	(none)	0
9	tn-rrat-scms\05. managed vegetated areas\forest, fair	0					0	1	(none)	0

TN Runoff Reduction Assessment Tool (RRAT)

Site Name:
Assigned Site Number:
Design submitter:

NOTES:

Access: R2_TN_RRAT_Basic
Version #: 2.5.6.1

Design File Name: tn-rrat-runs\Area 1E Revised

Design Results:
Design OK?: GREEN
Pollutant removal OK?: GREEN Portion action vol captured: 100.0 % Portion pollutant removed: 100 %
Volume red. OK?: GREEN Net volume red. depth: 1.65 in.

Inputs:
Location: Nashville Total surface area: 79100 ft2 Imp:active ratio (X:1): 5.07

General Design Conditions:

Design element #	*Discharges to design element #*	*Area, ft2*	*Special conditions*	*Soil*	*Base SCM / management*	*Design element description*
1	3	30400	none	silt loam	impervious\impervious	Impervious to 1E
2	3	42660	none	silt loam	05. managed vegetated areas\turf, good	Turf to 1E
3	0	6000	none	silt loam	04. bioretention\bioretention	Bioretention 1E

Specific Element Design Values:

Design element #	*Base SCM / management*	*Surface removal eff, %*	*Drain disch rem eff, %*	*Drain invert depth, in.*	*Drain disch element #*	*Storage vol, gal*	*Withdrawal rate, gal*	*Layer #*	*Layer material*	*Layer design depth, in.*
1	tn-rrat-scms\impervious\impervious	0					0	1	(none)	0
2	tn-rrat-scms\05. managed vegetated areas\turf, good	0					0	1	(none)	0
3	tn-rrat-scms\04. bioretention\bioretention	10.0					0	1	(none)	6.00
					0			2	tn-rrat-materials\Mulch	3.00
					0			3	tn-rrat-materials\Media, soil-based, loamy sand	12.0

TN Runoff Reduction Assessment Tool (RRAT)

Site Name:
Assigned Site Number:
Design submitter:

NOTES:

Access: R2_TN_RRAT_Basic
Version #: 2.5.6.1

Design File Name: tn-rrat-runs\Area 1H

Design Results:
Design OK?: GREEN
Pollutant removal OK?: GREEN Portion action vol captured: 100 % Portion pollutant removed: 100 %
Volume red. OK?: GREEN Net volume red. depth: 1.65 in.

Inputs:
Location: Nashville Total surface area: 22100 ft2 Imp:active ratio (X:1): 1.31

General Design Conditions:

Design element #	*Discharges to design element #*	*Area, ft2*	*Special conditions*	*Soil*	*Base SCM / management*	*Design element description*
1	3	6400	none	silt loam	impervious\impervious	Impervious to 1E
2	3	10830	none	silt loam	05. managed vegetated areas\turf, good	Turf to 1E
3	0	4880	none	silt loam	04. bioretention\bioretention	Bioretention 1E

Specific Element Design Values:

Design element #	*Base SCM / management*	*Surface removal eff, %*	*Drain disch rem eff, %*	*Drain invert depth, in.*	*Drain disch element #*	*Storage vol, gal*	*Withdrawal rate, gal*	*Layer #*	*Layer material*	*Layer design depth, in.*
1	tn-rrat-scms\impervious\impervious	0					0	1	(none)	0
2	tn-rrat-scms\05. managed vegetated areas\turf, good	0					0	1	(none)	0
3	tn-rrat-scms\04. bioretention\bioretention	10.0					0	1	(none)	6.00
					0			2	tn-rrat-materials\Mulch	3.00
					0			3	tn-rrat-materials\Media, soil-based, loamy sand	12.0

Hydrograph Return Period Recap

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	------	-------	77.57	-------	156.76	214.85	293.58	354.51	416.13	Existing to Outfall 1
2	SCS Runoff	------	-------	4.978	-------	10.15	13.95	19.09	23.14	27.27	Existing to Outfall 2
3	SCS Runoff	------	-------	0.591	-------	1.159	1.573	2.130	2.559	2.995	Existing to Outfall 3
4	SCS Runoff	------	-------	0.145	-------	0.284	0.385	0.522	0.627	0.733	Existing to Outfall 4
5	Combine	1, 2, 3, 4	-------	78.83	-------	159.02	217.83	297.50	359.15	421.61	Total Existing
7	SCS Runoff	------	-------	27.70	-------	58.98	82.20	113.88	138.52	163.53	Proposed 1A
8	Reservoir	7	-------	27.09	-------	54.50	67.96	82.25	91.15	99.20	Through Pond 1A
9	SCS Runoff	------	-------	17.57	-------	38.33	53.81	74.98	91.49	108.44	Proposed 1B
10	Reservoir	9	-------	17.01	-------	35.09	52.94	66.63	76.43	84.29	Through Pond 1B
11	SCS Runoff	------	-------	10.01	-------	21.09	29.29	40.46	49.16	58.09	Remainder to Pond 1C
12	Combine	8, 10, 11	-------	52.66	-------	107.13	141.81	178.63	203.12	224.50	Total to Pond 1C
13	Reservoir	12	-------	17.56	-------	24.15	88.55	145.51	169.68	179.83	Through Pond 1C
14	SCS Runoff	------	-------	38.83	-------	78.44	107.47	147.25	178.33	209.81	Proposed 1D
15	SCS Runoff	------	-------	3.734	-------	6.184	7.890	10.12	11.79	13.46	Proposed 1E
16	SCS Runoff	------	-------	0.885	-------	1.503	1.941	2.517	2.953	3.387	Proposed 1H
17	Combine	13, 14, 15, 16	-------	54.60	-------	100.32	132.92	196.29	255.86	310.76	Total Proposed to Outfall 1
20	SCS Runoff	------	-------	4.978	-------	10.15	13.95	19.09	23.14	27.27	Proposed to Outfall 2
21	SCS Runoff	------	-------	0.591	-------	1.159	1.573	2.130	2.559	2.995	Proposed to Outfall 3
22	SCS Runoff	------	-------	0.145	-------	0.284	0.385	0.522	0.627	0.733	Proposed to Outfall 4
23	Combine	17, 20, 21, 22	-------	58.92	-------	109.71	146.35	199.92	261.28	321.36	Total Proposed

Hydrograph Summary Report

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

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	77.57	2	738	442,376	------	------	------	Existing to Outfall 1
2	SCS Runoff	4.978	2	722	14,485	------	------	------	Existing to Outfall 2
3	SCS Runoff	0.591	2	718	1,236	------	------	------	Existing to Outfall 3
4	SCS Runoff	0.145	2	718	303	------	------	------	Existing to Outfall 4
5	Combine	78.83	2	738	458,401	1, 2, 3, 4	------	------	Total Existing
7	SCS Runoff	27.70	2	732	134,976	------	------	------	Proposed 1A
8	Reservoir	27.09	2	736	134,975	7	582.15	1,476	Through Pond 1A
9	SCS Runoff	17.57	2	728	74,756	------	------	------	Proposed 1B
10	Reservoir	17.01	2	732	74,755	9	611.12	3,168	Through Pond 1B
11	SCS Runoff	10.01	2	728	41,331	------	------	------	Remainder to Pond 1C
12	Combine	52.66	2	732	251,061	8, 10, 11	------	------	Total to Pond 1C
13	Reservoir	17.56	2	760	251,059	12	561.73	58,995	Through Pond 1C
14	SCS Runoff	38.83	2	726	139,079	------	------	------	Proposed 1D
15	SCS Runoff	3.734	2	722	9,799	------	------	------	Proposed 1E
16	SCS Runoff	0.885	2	722	2,338	------	------	------	Proposed 1H
17	Combine	54.60	2	726	402,198	13, 14, 15, 16	------	------	Total Proposed to Outfall 1
20	SCS Runoff	4.978	2	722	14,485	------	------	------	Proposed to Outfall 2
21	SCS Runoff	0.591	2	718	1,236	------	------	------	Proposed to Outfall 3
22	SCS Runoff	0.145	2	718	303	------	------	------	Proposed to Outfall 4
23	Combine	58.92	2	726	418,222	17, 20, 21, 22	------	------	Total Proposed

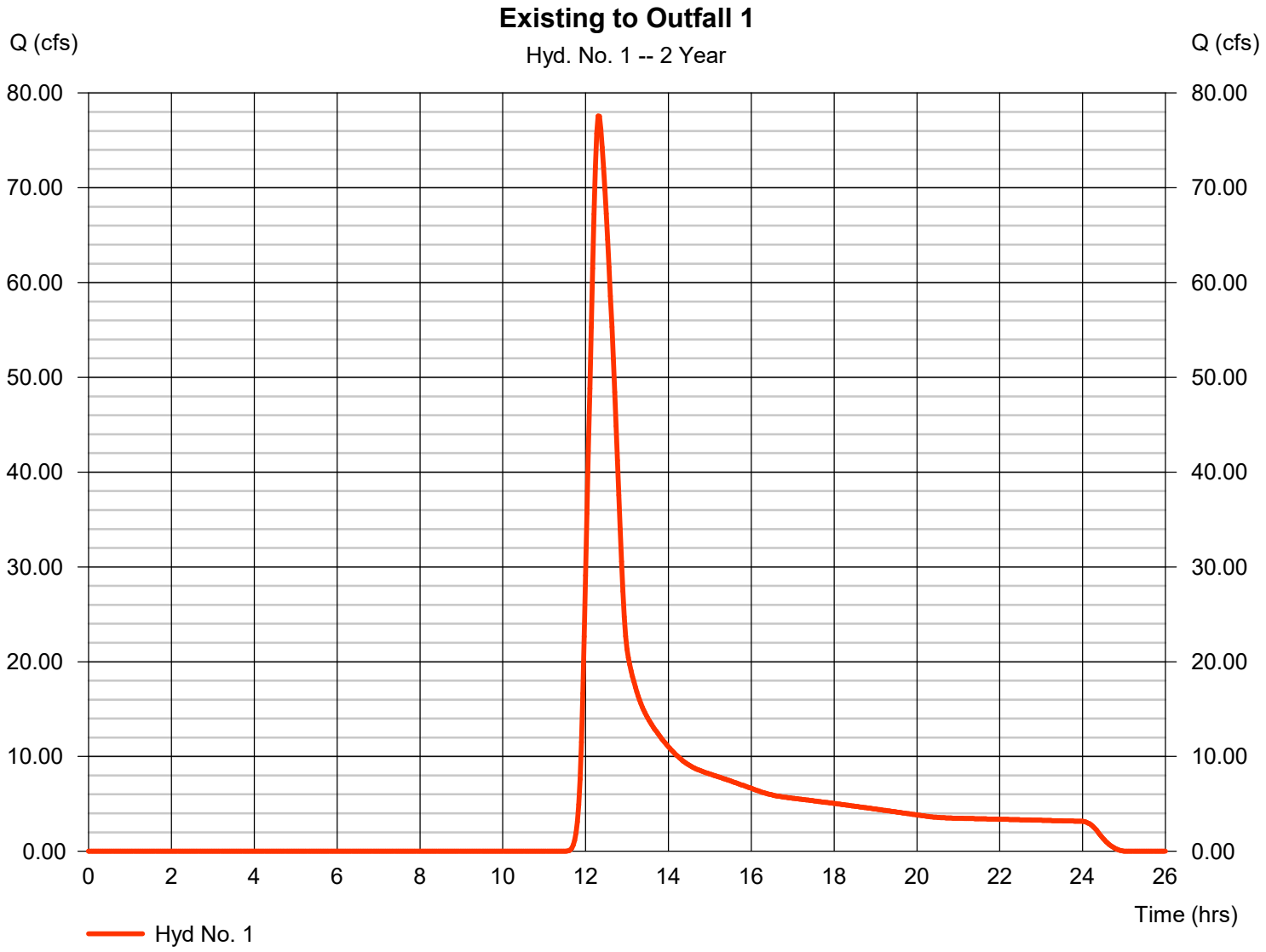
Hydrograph Report

Hyd. No. 1

Existing to Outfall 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	77.57 cfs
Storm frequency	=	2 yrs	Time to peak	=	12.30 hrs
Time interval	=	2 min	Hyd. volume	=	442,376 cuft
Drainage area	=	145.400 ac	Curve number	=	68*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	39.00 min
Total precip.	=	3.39 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.780 x 45) + (110.600 x 66) + (32.020 x 77)] / 145.400



TR55 Tc Worksheet

Hyd. No. 1

Existing to Outfall 1

Description	A		B		C		Totals
Sheet Flow							
Manning's n-value	= 0.400		0.011		0.011		
Flow length (ft)	= 35.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.56		0.00		0.00		
Land slope (%)	= 10.00		0.00		0.00		
Travel Time (min)	**= 4.62**	**+**	**0.00**	**+**	**0.00**	**=**	**4.62**
Shallow Concentrated Flow							
Flow length (ft)	= 300.00		0.00		0.00		
Watercourse slope (%)	= 32.00		0.00		0.00		
Surface description	= Unpaved		Paved		Paved		
Average velocity (ft/s)	=9.13		0.00		0.00		
Travel Time (min)	**= 0.55**	**+**	**0.00**	**+**	**0.00**	**=**	**0.55**
Channel Flow							
X sectional flow area (sqft)	= 1.50		1.50		0.00		
Wetted perimeter (ft)	= 6.00		6.00		0.00		
Channel slope (%)	= 4.50		2.20		0.00		
Manning's n-value	= 0.050		0.050		0.015		
Velocity (ft/s)	=2.50						
			1.75				
					0.00		
Flow length (ft)	({0})1980.0		2160.0		0.0		
Travel Time (min)	**= 13.22**	**+**	**20.62**	**+**	**0.00**	**=**	**33.83**

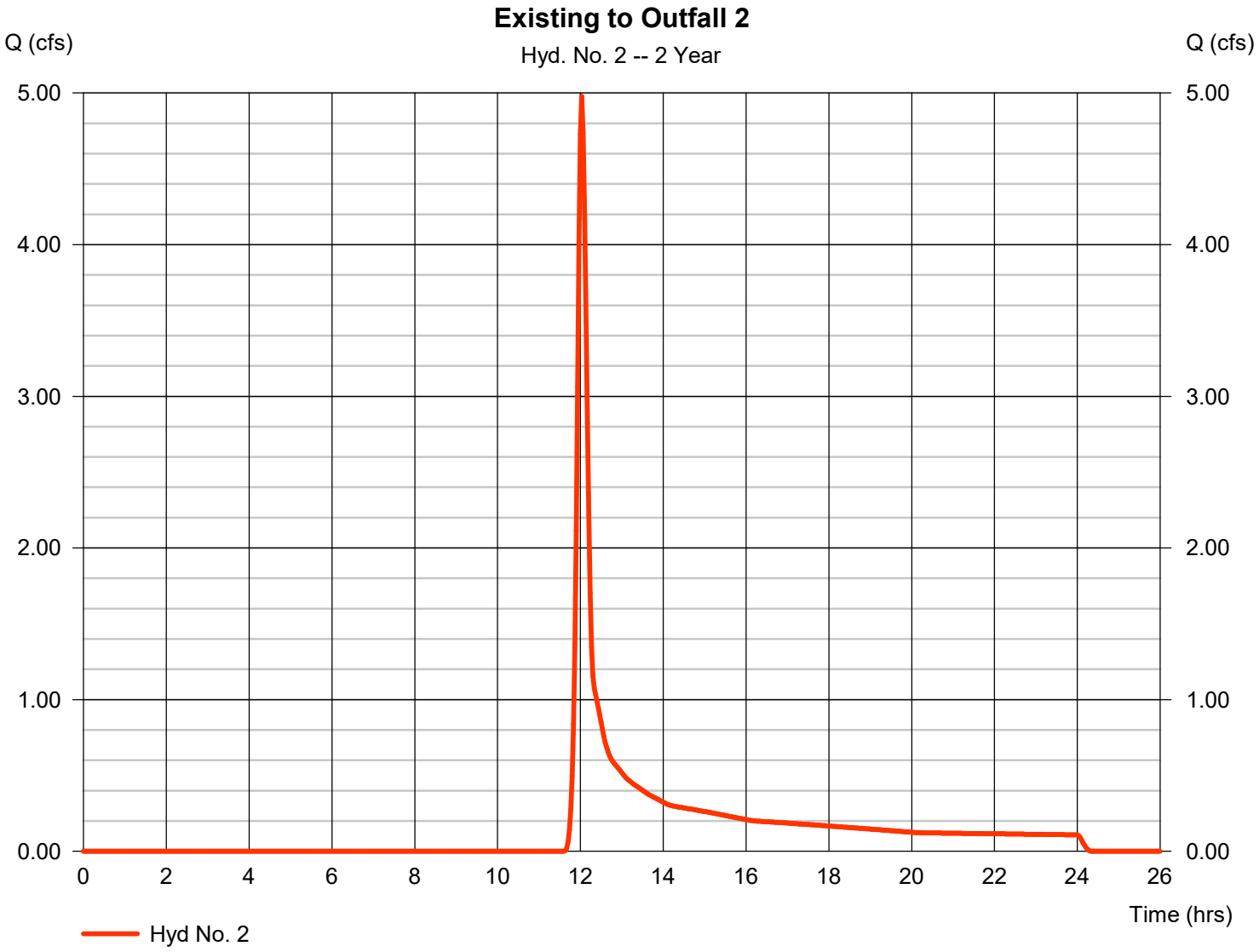
Total Travel Time, Tc ..... 39.00 min

Hydrograph Report

Hyd. No. 2

Existing to Outfall 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	4.978 cfs
Storm frequency	=	2 yrs	Time to peak	=	12.03 hrs
Time interval	=	2 min	Hyd. volume	=	14,485 cuft
Drainage area	=	5.220 ac	Curve number	=	66
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	10.10 min
Total precip.	=	3.39 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



TR55 Tc Worksheet

Hyd. No. 2

Existing to Outfall 2

Description	A		B		C		Totals
Sheet Flow							
Manning's n-value	= 0.400		0.011		0.011		
Flow length (ft)	= 60.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.39		0.00		0.00		
Land slope (%)	= 5.00		0.00		0.00		
Travel Time (min)	**= 9.61**	**+**	**0.00**	**+**	**0.00**	**=**	**9.61**
Shallow Concentrated Flow							
Flow length (ft)	= 255.00		0.00		0.00		
Watercourse slope (%)	= 31.40		0.00		0.00		
Surface description	= Unpaved		Paved		Paved		
Average velocity (ft/s)	=9.04		0.00		0.00		
Travel Time (min)	**= 0.47**	**+**	**0.00**	**+**	**0.00**	**=**	**0.47**
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 ..... 10.10 min

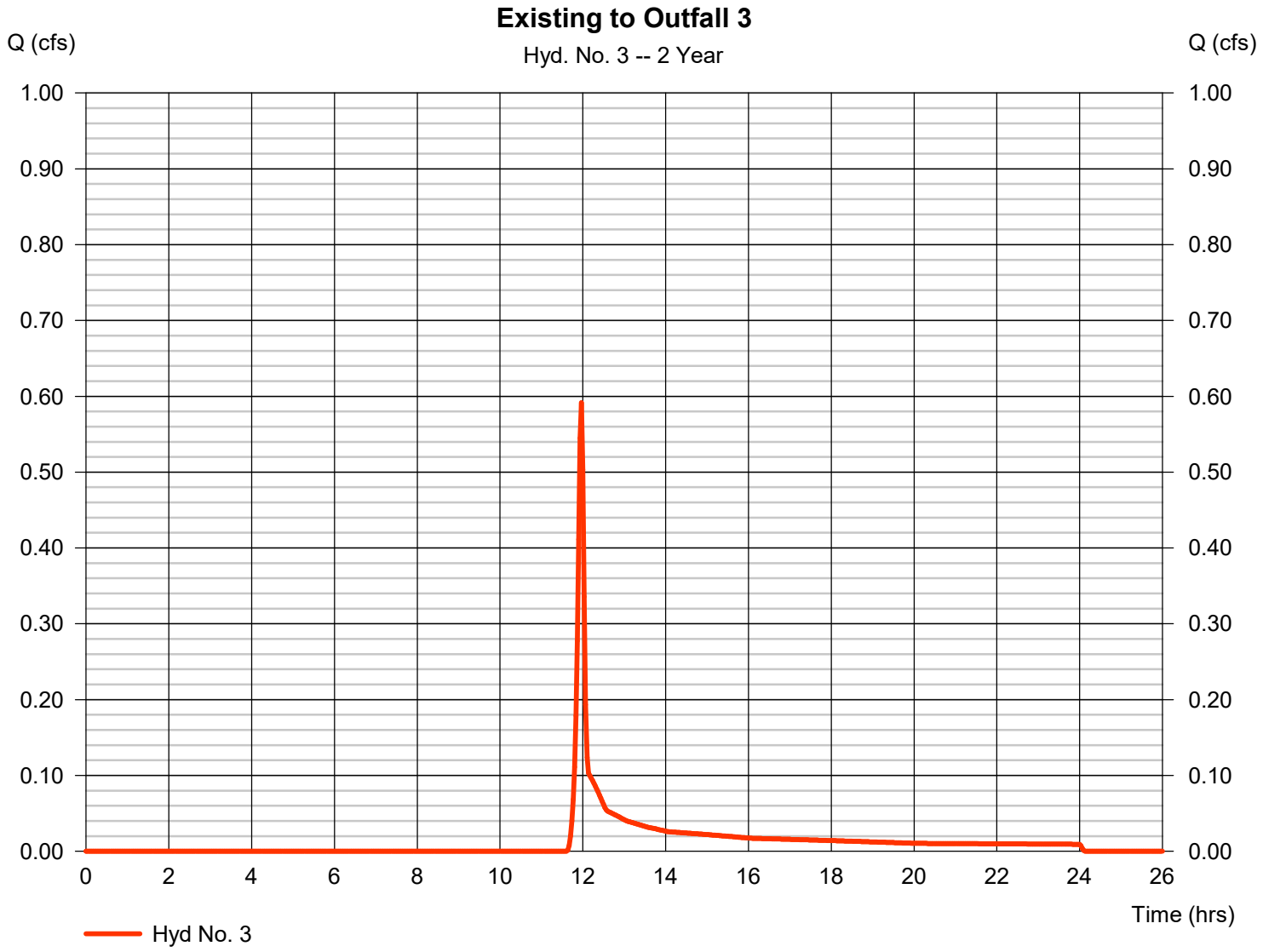
Hydrograph Report

Hyd. No. 3

Existing to Outfall 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.591 cfs
Storm frequency	=	2 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	1,236 cuft
Drainage area	=	0.490 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.39 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.490 x 66)] / 0.490

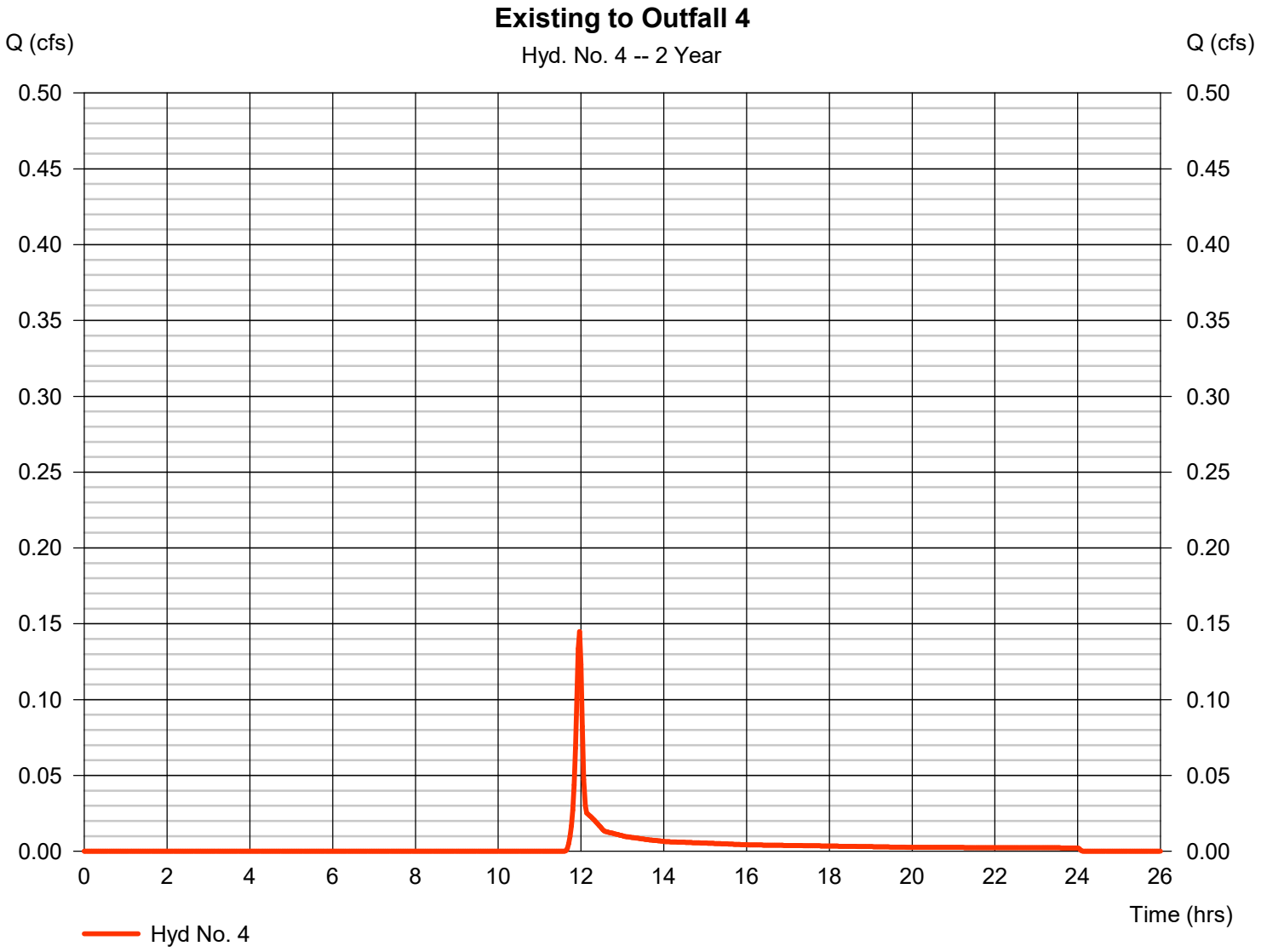


Hydrograph Report

Hyd. No. 4

Existing to Outfall 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.145 cfs
Storm frequency	=	2 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	303 cuft
Drainage area	=	0.120 ac	Curve number	=	66
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.39 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

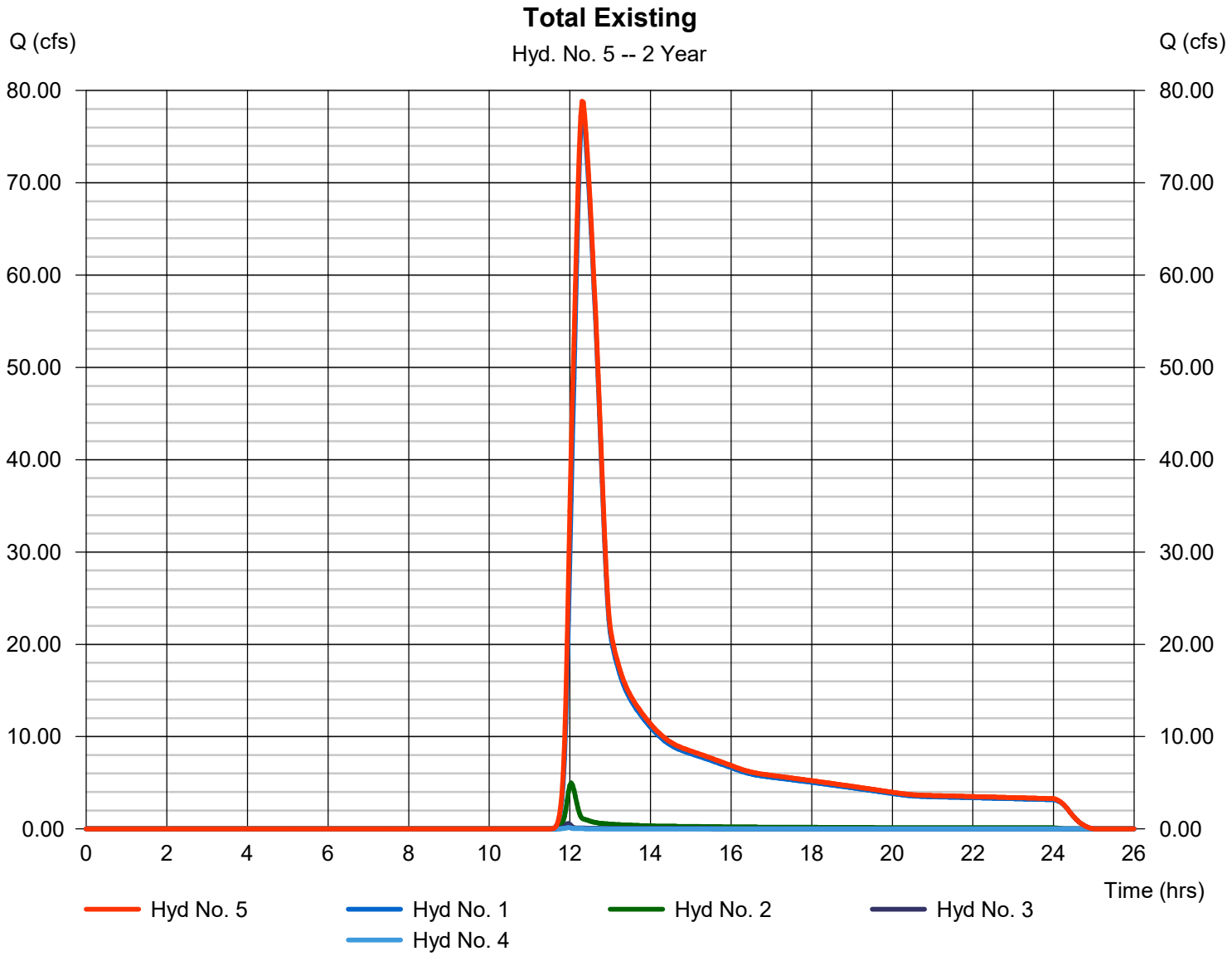


Hydrograph Report

Hyd. No. 5

Total Existing

Hydrograph type	= Combine	Peak discharge	= 78.83 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.30 hrs
Time interval	= 2 min	Hyd. volume	= 458,401 cuft
Inflow hyds.	= 1, 2, 3, 4	Contrib. drain. area	= 151.230 ac



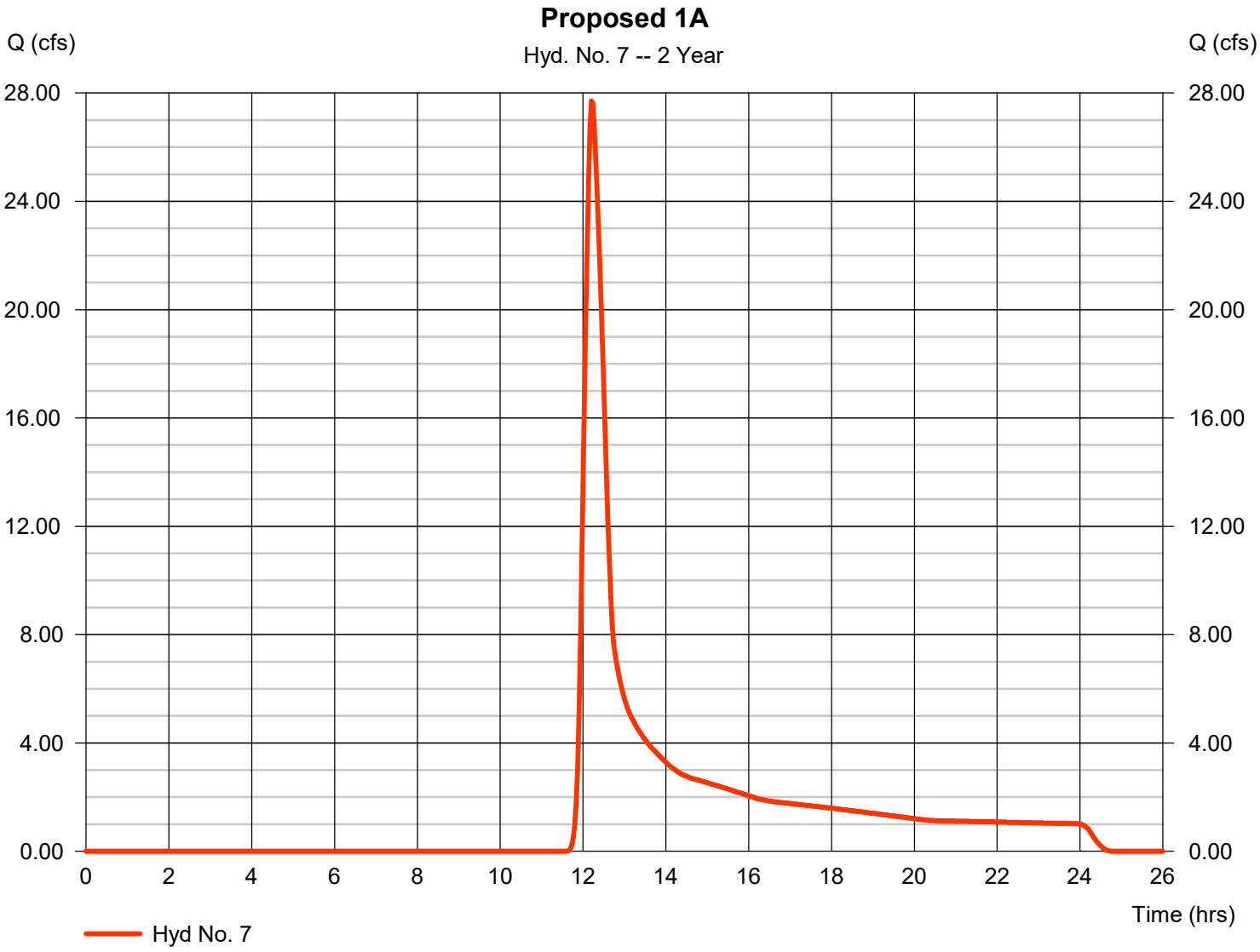
Hydrograph Report

Hyd. No. 7

Proposed 1A

Hydrograph type	=	SCS Runoff	Peak discharge	=	27.70 cfs
Storm frequency	=	2 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	134,976 cuft
Drainage area	=	50.160 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	29.70 min
Total precip.	=	3.39 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(7.960 x 65) + (42.200 x 66)] / 50.160



TR55 Tc Worksheet

Hyd. No. 7

Proposed 1A

Description	A		B		C		Totals
Sheet Flow							
Manning's n-value	= 0.240		0.011		0.011		
Flow length (ft)	= 100.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.39		0.00		0.00		
Land slope (%)	= 3.00		0.00		0.00		
Travel Time (min)	**= 11.79**	**+**	**0.00**	**+**	**0.00**	**=**	**11.79**
Shallow Concentrated Flow							
Flow length (ft)	= 350.00		0.00		0.00		
Watercourse slope (%)	= 35.00		0.00		0.00		
Surface description	= Unpaved		Paved		Paved		
Average velocity (ft/s)	=9.55		0.00		0.00		
Travel Time (min)	**= 0.61**	**+**	**0.00**	**+**	**0.00**	**=**	**0.61**
Channel Flow							
X sectional flow area (sqft)	= 1.50		0.00		0.00		
Wetted perimeter (ft)	= 6.00		0.00		0.00		
Channel slope (%)	= 2.00		0.00		0.00		
Manning's n-value	= 0.050		0.015		0.015		
Velocity (ft/s)	=1.66						
			0.00				
					0.00		
Flow length (ft)	({0})1730.0		0.0		0.0		
Travel Time (min)	**= 17.32**	**+**	**0.00**	**+**	**0.00**	**=**	**17.32**

Total Travel Time, Tc ..... 29.70 min

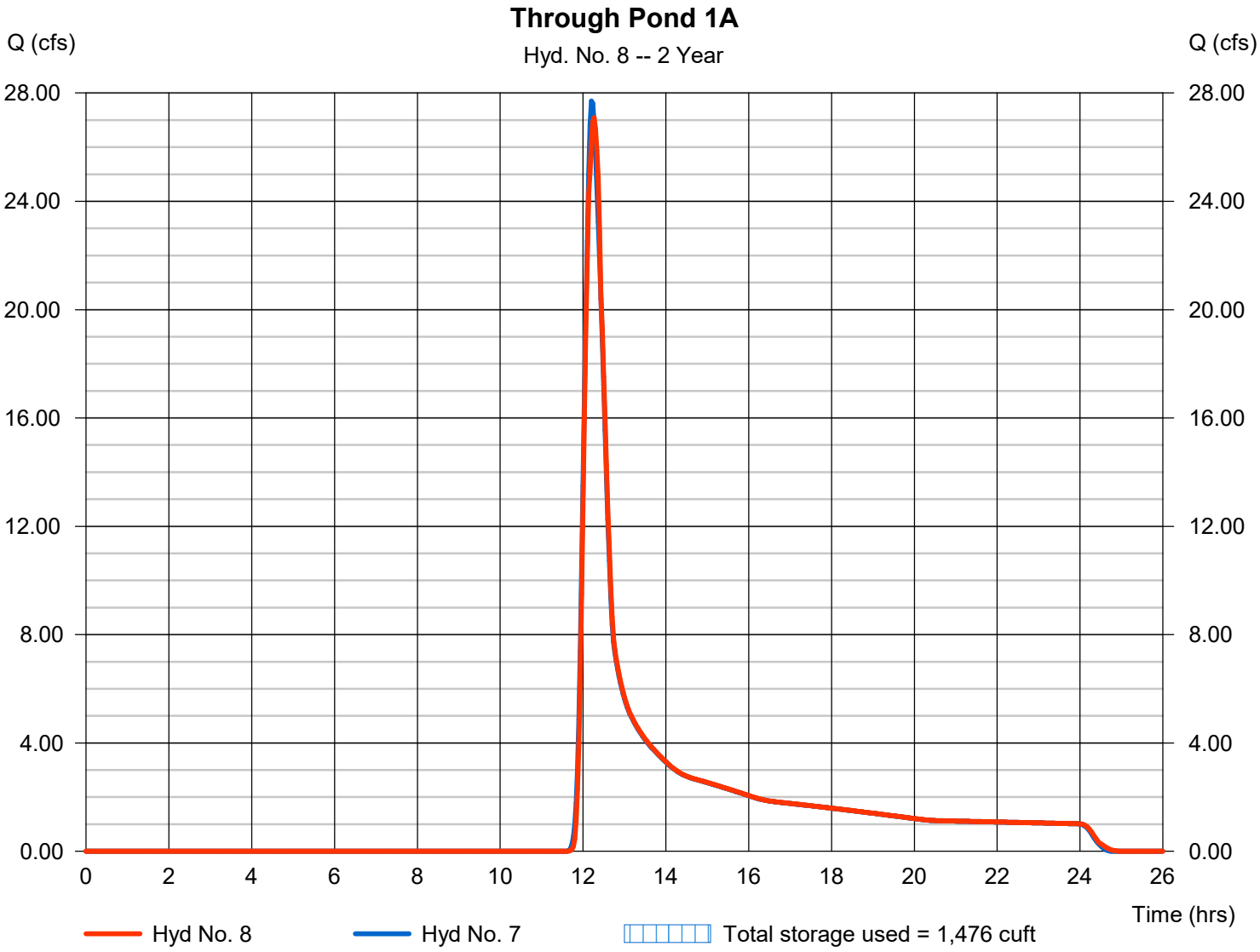
Hydrograph Report

Hyd. No. 8

Through Pond 1A

Hydrograph type	=	Reservoir	Peak discharge	=	27.09 cfs
Storm frequency	=	2 yrs	Time to peak	=	12.27 hrs
Time interval	=	2 min	Hyd. volume	=	134,975 cuft
Inflow hyd. No.	=	7 - Proposed 1A	Max. Elevation	=	582.15 ft
Reservoir name	=	Pond 1A	Max. Storage	=	1,476 cuft

Storage Indication method used.



Pond Report

Pond No. 3 - Pond 1A

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 580.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	580.00	00	0	0
2.00	582.00	1,445	963	963
4.00	584.00	5,892	6,836	7,799
6.00	586.00	11,976	17,510	25,309
8.00	588.00	18,335	30,083	55,393
10.00	590.00	24,078	42,279	97,671

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 36.00	0.00	0.00	0.00
Span (in)	= 36.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 580.00	0.00	0.00	0.00
Length (ft)	= 54.00	0.00	0.00	0.00
Slope (%)	= 4.20	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

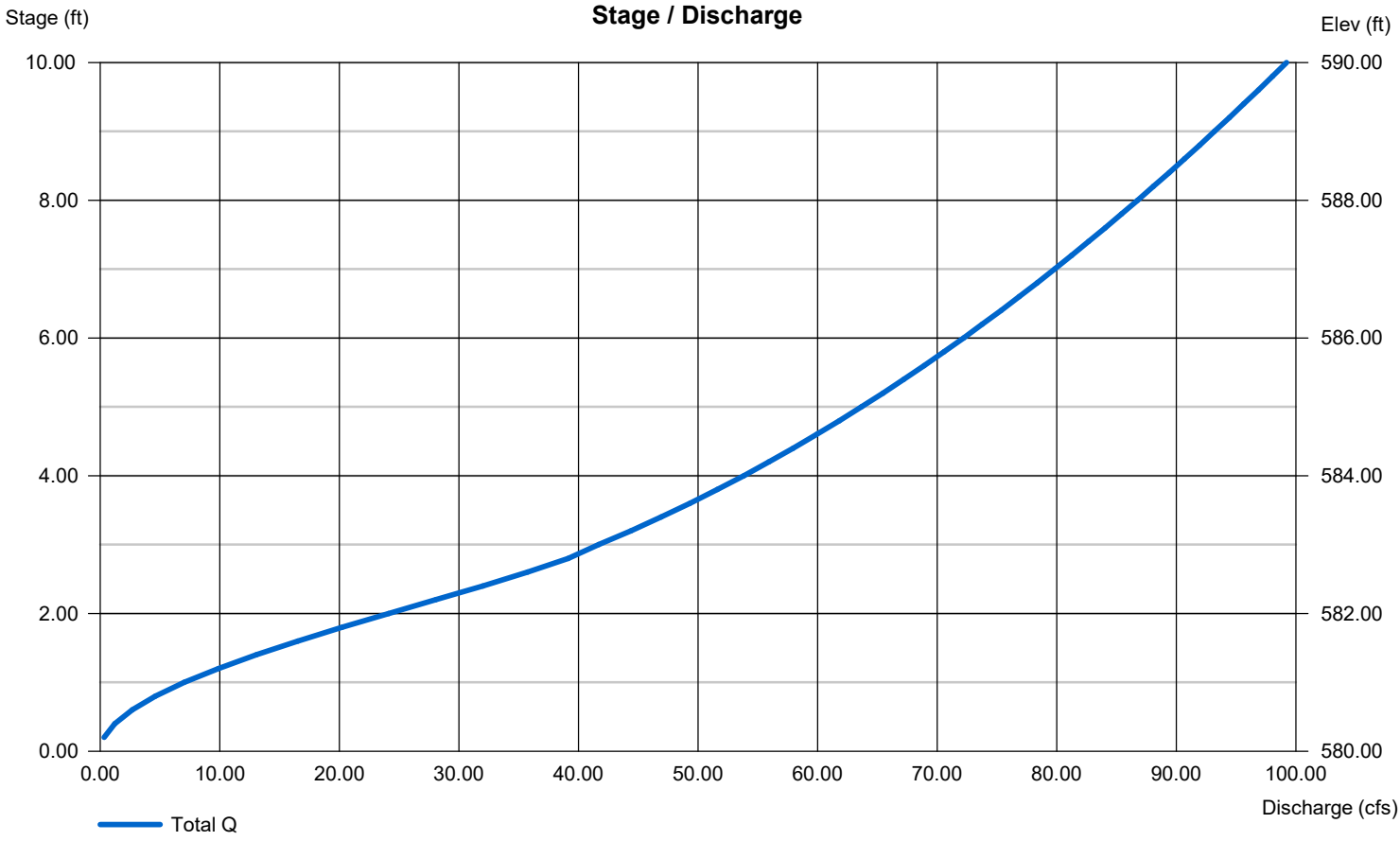
Weir Structures

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

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

TW Elev. (ft) = 0.00

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



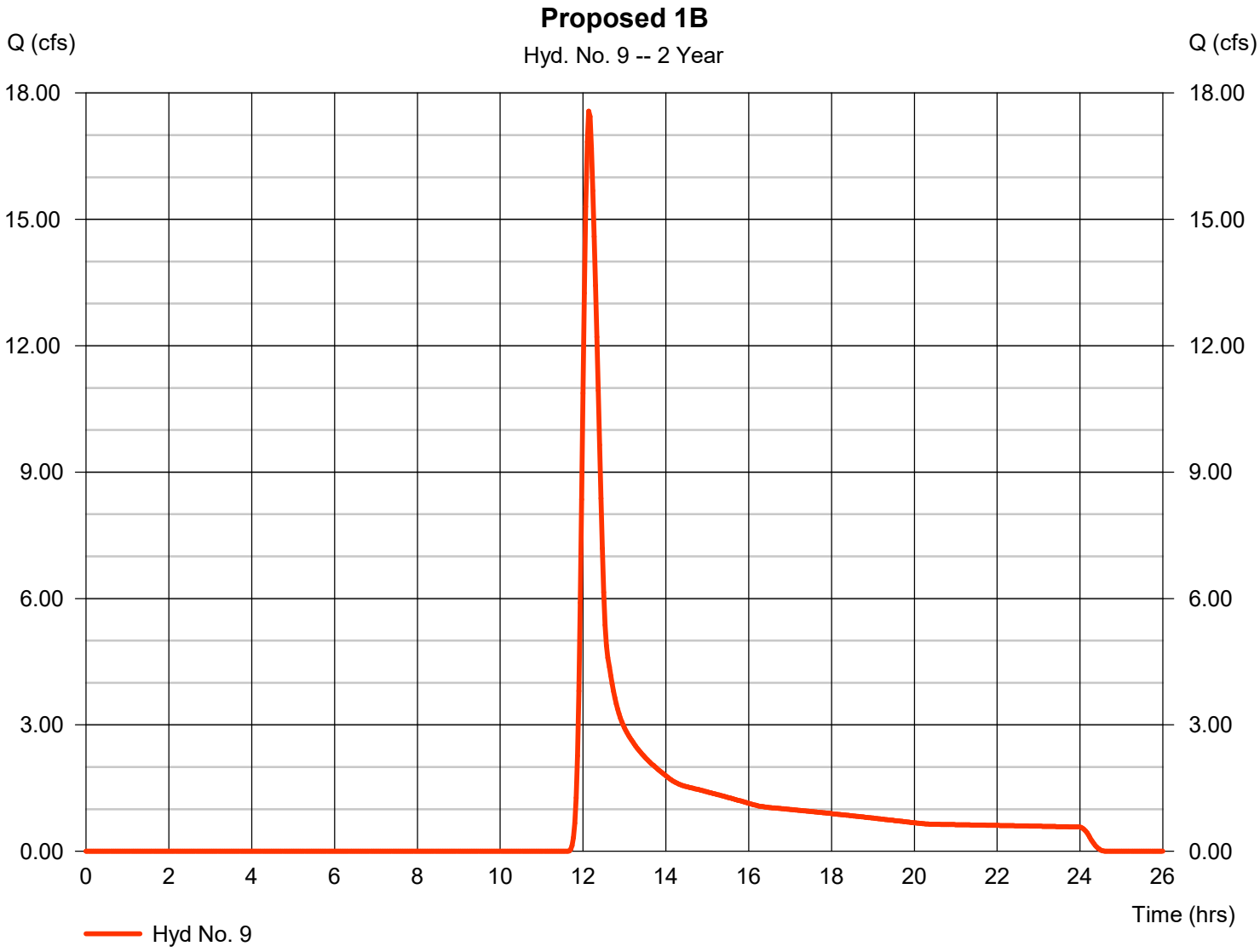
Hydrograph Report

Hyd. No. 9

Proposed 1B

Hydrograph type	=	SCS Runoff	Peak discharge	=	17.57 cfs
Storm frequency	=	2 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	74,756 cuft
Drainage area	=	29.110 ac	Curve number	=	65*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	20.50 min
Total precip.	=	3.39 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(11.520 x 66) + (17.590 x 65)] / 29.110



TR55 Tc Worksheet

Hyd. No. 9

Proposed 1B

Description	A		B		C		Totals
Sheet Flow							
Manning's n-value	= 0.240		0.011		0.011		
Flow length (ft)	= 100.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.39		0.00		0.00		
Land slope (%)	= 1.00		0.00		0.00		
Travel Time (min)	**= 18.29**	**+**	**0.00**	**+**	**0.00**	**=**	**18.29**
Shallow Concentrated Flow							
Flow length (ft)	= 317.00		0.00		0.00		
Watercourse slope (%)	= 35.00		0.00		0.00		
Surface description	= Unpaved		Paved		Paved		
Average velocity (ft/s)	=9.55		0.00		0.00		
Travel Time (min)	**= 0.55**	**+**	**0.00**	**+**	**0.00**	**=**	**0.55**
Channel Flow							
X sectional flow area (sqft)	= 1.50		0.00		0.00		
Wetted perimeter (ft)	= 6.00		0.00		0.00		
Channel slope (%)	= 8.00		0.00		0.00		
Manning's n-value	= 0.015		0.015		0.015		
Velocity (ft/s)	=11.10						
			0.00				
					0.00		
Flow length (ft)	({0})1075.0		0.0		0.0		
Travel Time (min)	**= 1.61**	**+**	**0.00**	**+**	**0.00**	**=**	**1.61**

Total Travel Time, Tc ..... 20.50 min

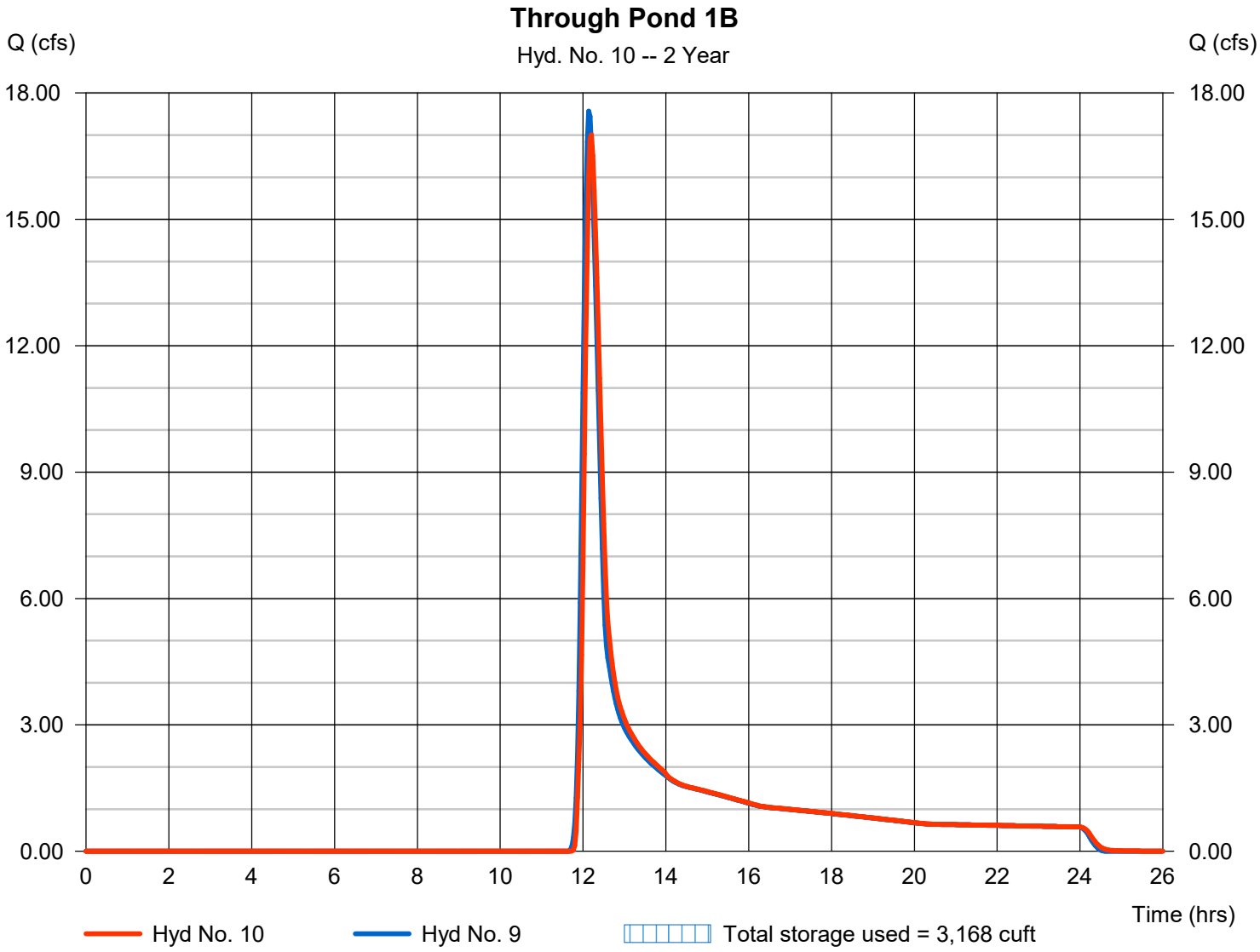
Hydrograph Report

Hyd. No. 10

Through Pond 1B

Hydrograph type	=	Reservoir	Peak discharge	=	17.01 cfs
Storm frequency	=	2 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	74,755 cuft
Inflow hyd. No.	=	9 - Proposed 1B	Max. Elevation	=	611.12 ft
Reservoir name	=	Pond 1B	Max. Storage	=	3,168 cuft

Storage Indication method used.



Pond Report

Pond No. 2 - Pond 1B

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 609.50 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	609.50	00	0	0
0.50	610.00	1,987	331	331
2.50	611.00	3,101	5,046	5,377
4.50	614.00	4,897	7,929	13,307
6.50	616.00	7,493	12,297	25,604
8.50	618.00	10,837	18,226	43,829
10.50	620.00	16,000	26,667	70,497

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 36.00	0.00	0.00	0.00
Span (in)	= 36.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 609.50	0.00	0.00	0.00
Length (ft)	= 171.00	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	No	No	No

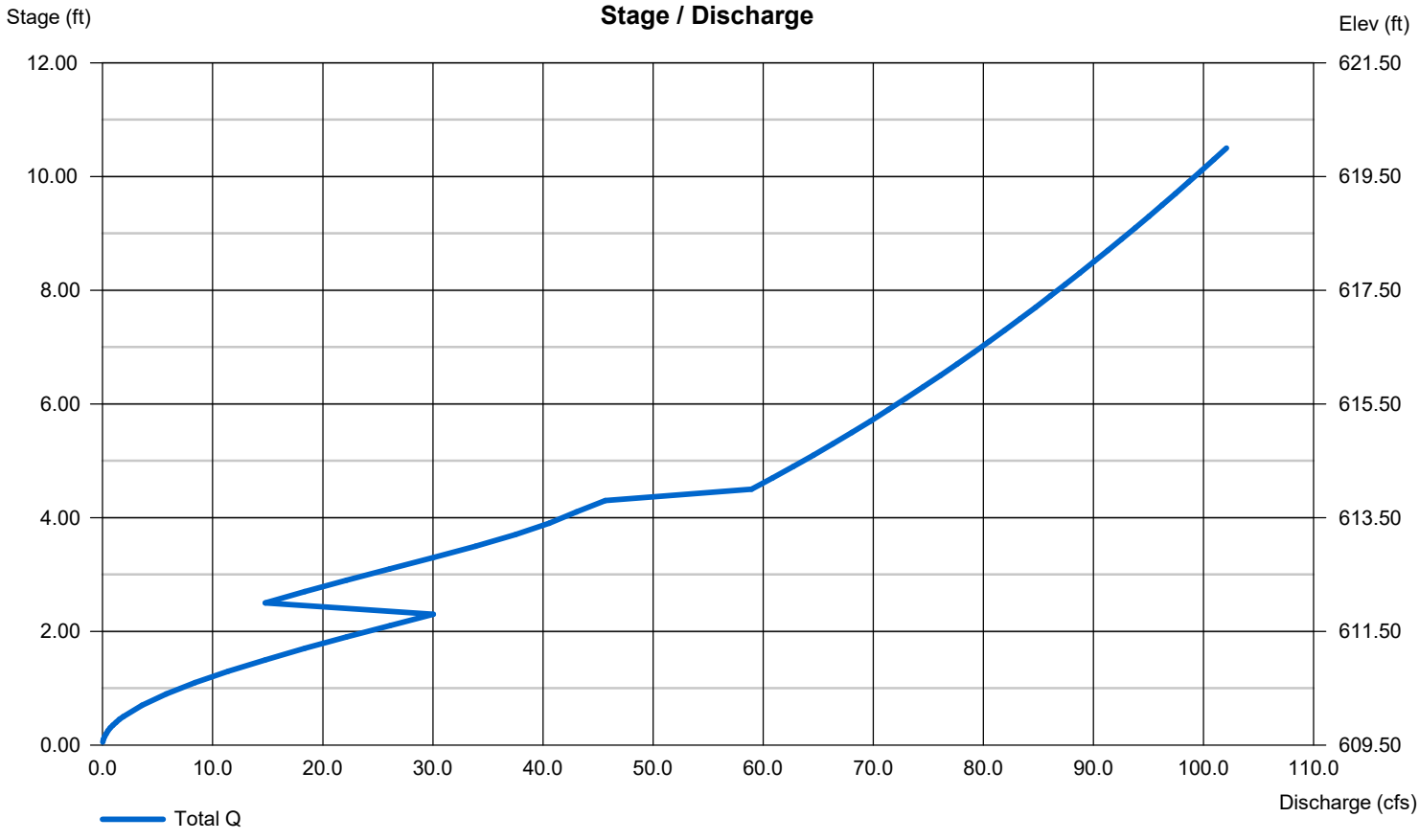
Weir Structures

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

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

TW Elev. (ft) = 0.00

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



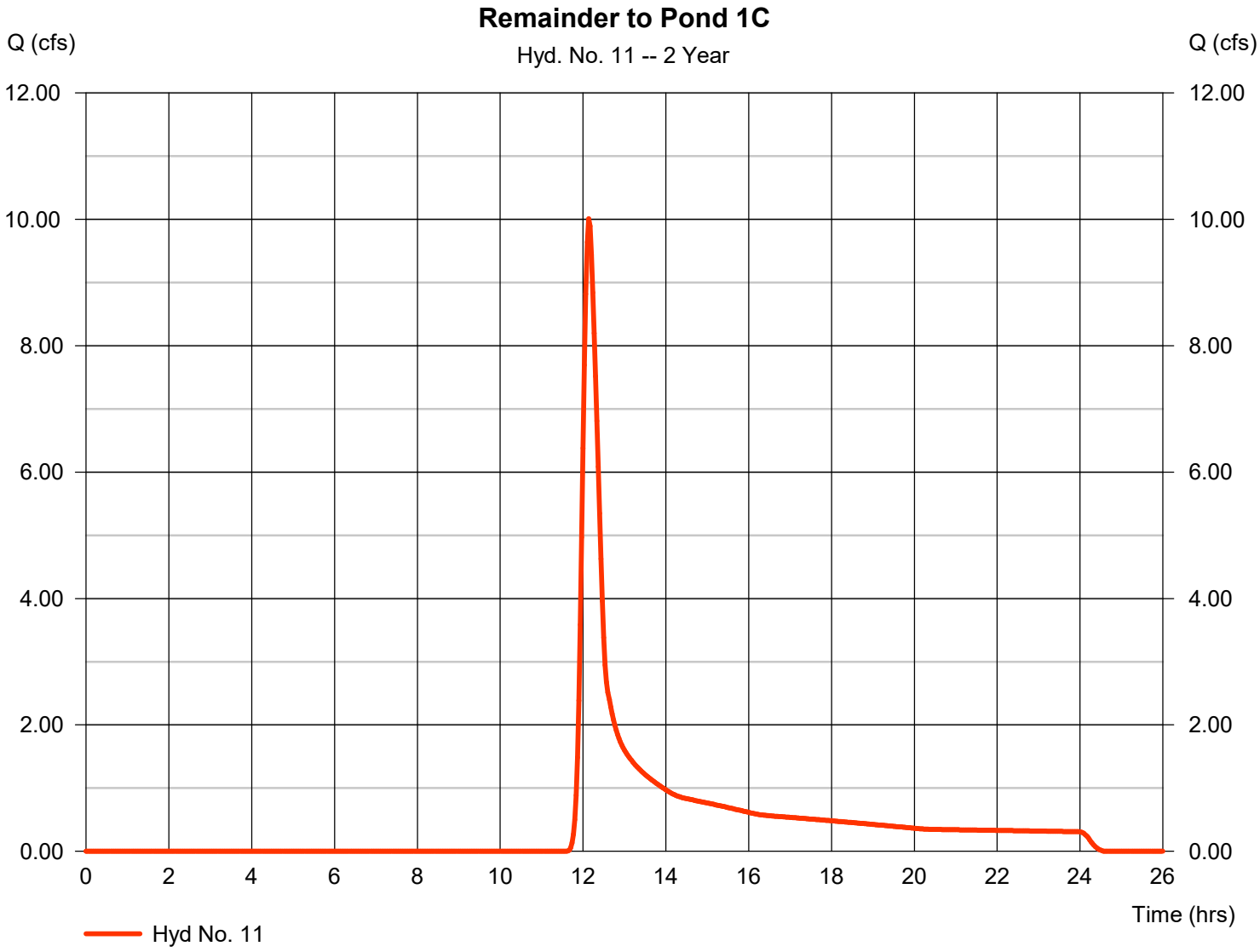
Hydrograph Report

Hyd. No. 11

Remainder to Pond 1C

Hydrograph type	=	SCS Runoff	Peak discharge	=	10.01 cfs
Storm frequency	=	2 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	41,331 cuft
Drainage area	=	15.090 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	20.30 min
Total precip.	=	3.39 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(9.060 x 66) + (6.030 x 65)] / 15.090



TR55 Tc Worksheet

Hyd. No. 11

Remainder to Pond 1C

Description	A		B		C		Totals
Sheet Flow							
Manning's n-value	= 0.240		0.011		0.011		
Flow length (ft)	= 100.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.39		0.00		0.00		
Land slope (%)	= 1.00		0.00		0.00		
Travel Time (min)	**= 18.29**	**+**	**0.00**	**+**	**0.00**	**=**	**18.29**
Shallow Concentrated Flow							
Flow length (ft)	= 0.00		0.00		0.00		
Watercourse slope (%)	= 0.00		0.00		0.00		
Surface description	= Paved		Paved		Paved		
Average velocity (ft/s)	=0.00		0.00		0.00		
Travel Time (min)	**= 0.00**	**+**	**0.00**	**+**	**0.00**	**=**	**0.00**
Channel Flow							
X sectional flow area (sqft)	= 3.00		2.00		0.00		
Wetted perimeter (ft)	= 6.00		2.00		0.00		
Channel slope (%)	= 2.00		1.00		0.00		
Manning's n-value	= 0.040		0.015		0.015		
Velocity (ft/s)	=3.31						
			9.93				
					0.00		
Flow length (ft)	({0})305.0		310.0		0.0		
Travel Time (min)	**= 1.54**	**+**	**0.52**	**+**	**0.00**	**=**	**2.06**

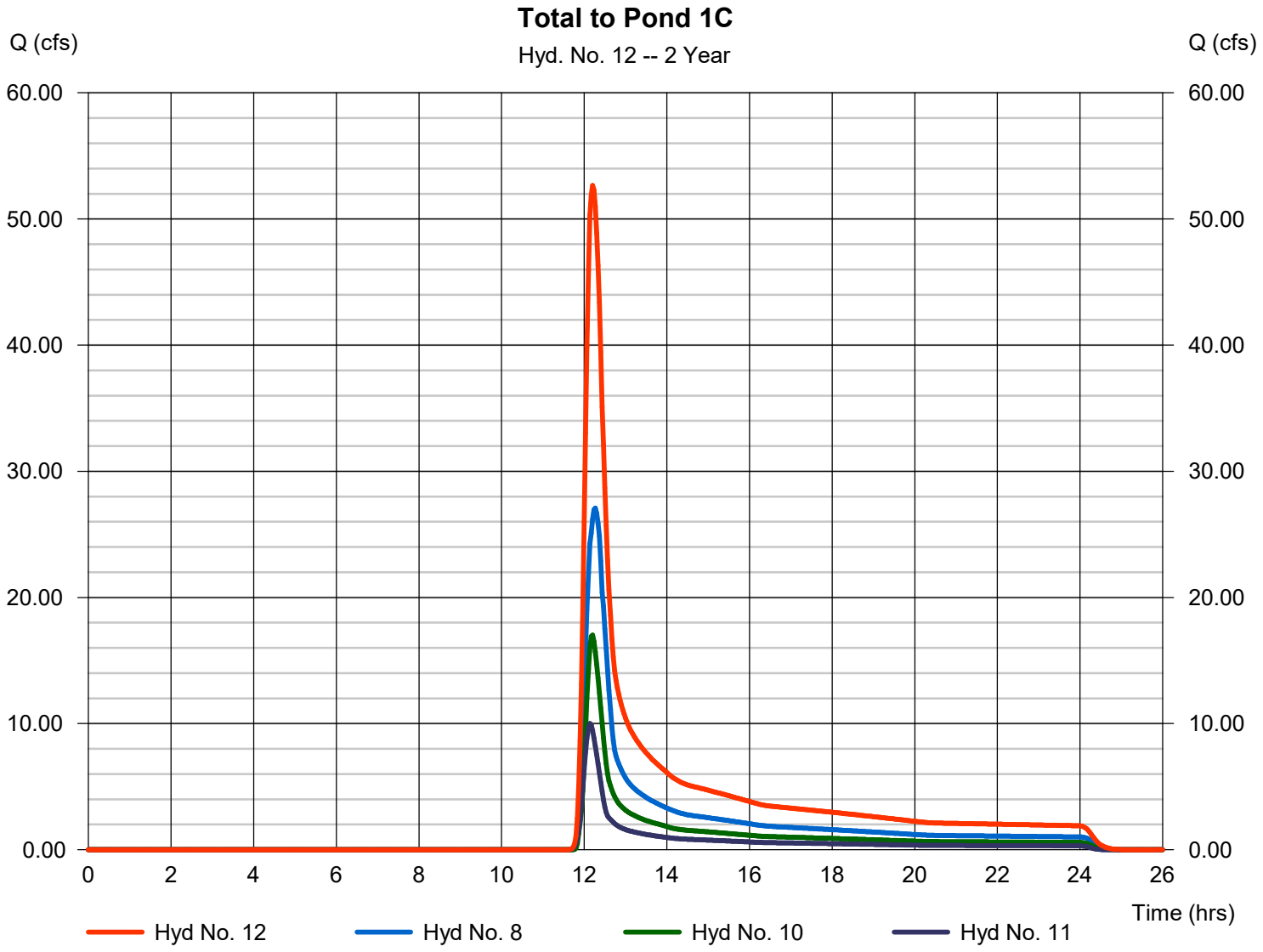
Total Travel Time, Tc ..... 20.30 min

Hydrograph Report

Hyd. No. 12

Total to Pond 1C

Hydrograph type	= Combine	Peak discharge	= 52.66 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.20 hrs
Time interval	= 2 min	Hyd. volume	= 251,061 cuft
Inflow hyds.	= 8, 10, 11	Contrib. drain. area	= 15.090 ac



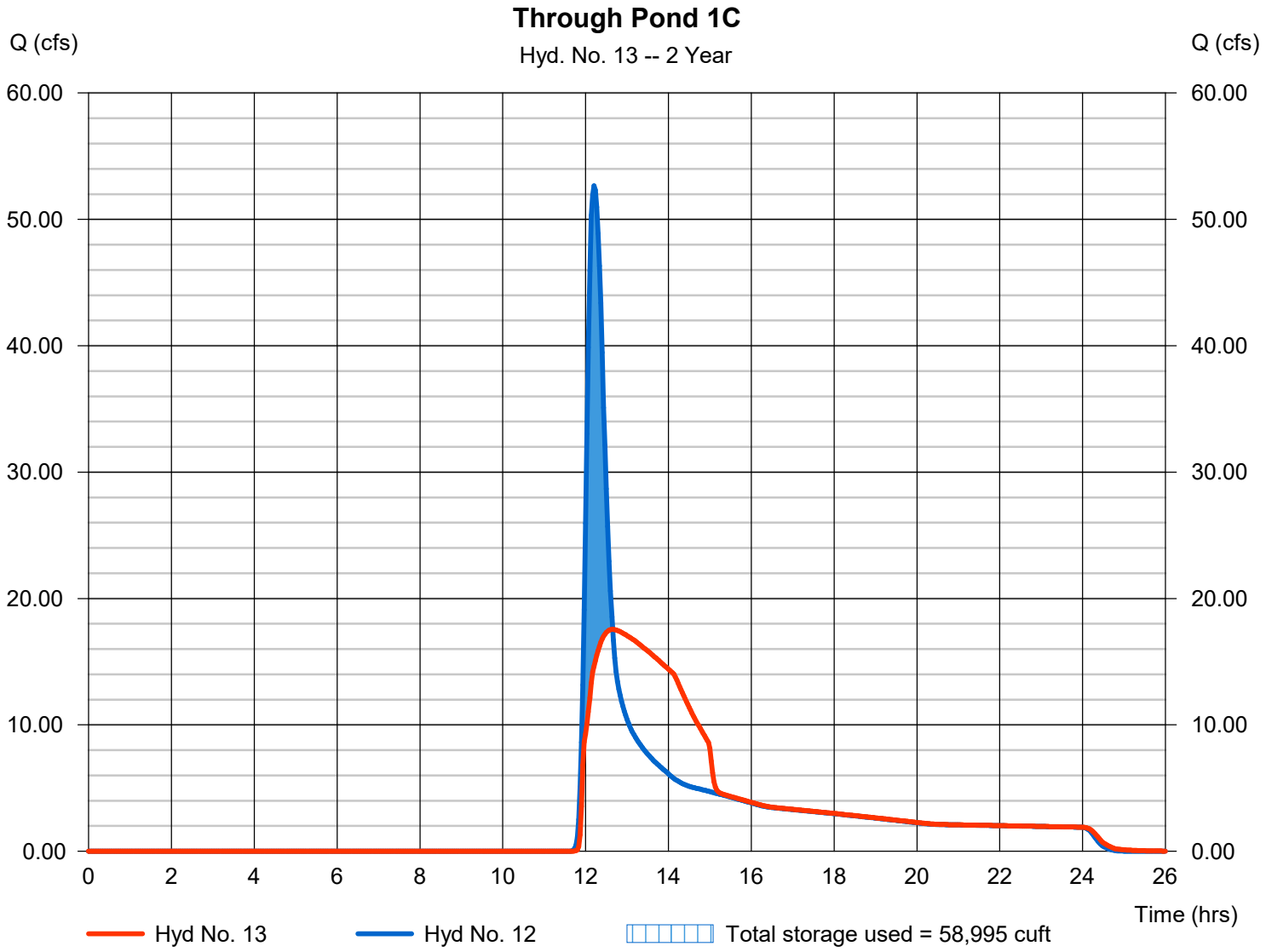
Hydrograph Report

Hyd. No. 13

Through Pond 1C

Hydrograph type	=	Reservoir	Peak discharge	=	17.56 cfs
Storm frequency	=	2 yrs	Time to peak	=	12.67 hrs
Time interval	=	2 min	Hyd. volume	=	251,059 cuft
Inflow hyd. No.	=	12 - Total to Pond 1C	Max. Elevation	=	561.73 ft
Reservoir name	=	Pond 1C	Max. Storage	=	58,995 cuft

Storage Indication method used.



Pond No. 1 - Pond 1C

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 556.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	556.00	00	0	0
2.00	558.00	3,711	2,474	2,474
4.00	560.00	15,720	18,044	20,518
6.00	562.00	29,515	44,512	65,030
8.00	564.00	32,804	62,284	127,314
10.00	566.00	36,100	68,871	196,185
12.00	568.00	39,477	75,544	271,729
14.00	570.00	42,600	82,049	353,778
15.00	571.00	44,238	43,412	397,190

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 48.00	18.00	0.00	0.00
Span (in)	= 48.00	18.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 556.00	556.00	0.00	0.00
Length (ft)	= 92.00	0.50	0.00	0.00
Slope (%)	= 1.00	0.50	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

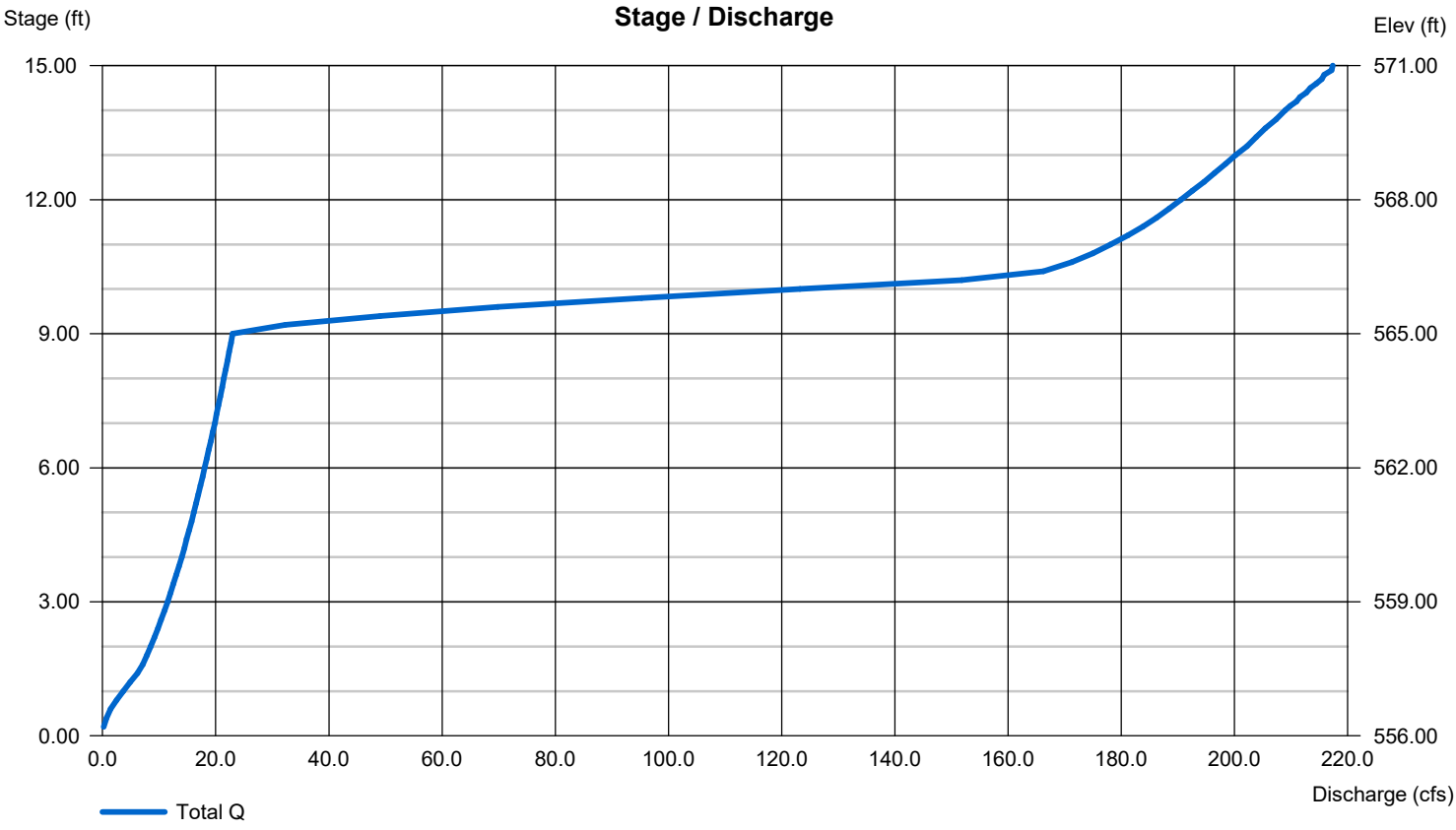
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 32.00	25.00	0.00	0.00
Crest El. (ft)	= 565.00	567.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= 1	Ciplti	---	---
Multi-Stage	= Yes	Yes	No	No

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

TW Elev. (ft) = 0.00

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



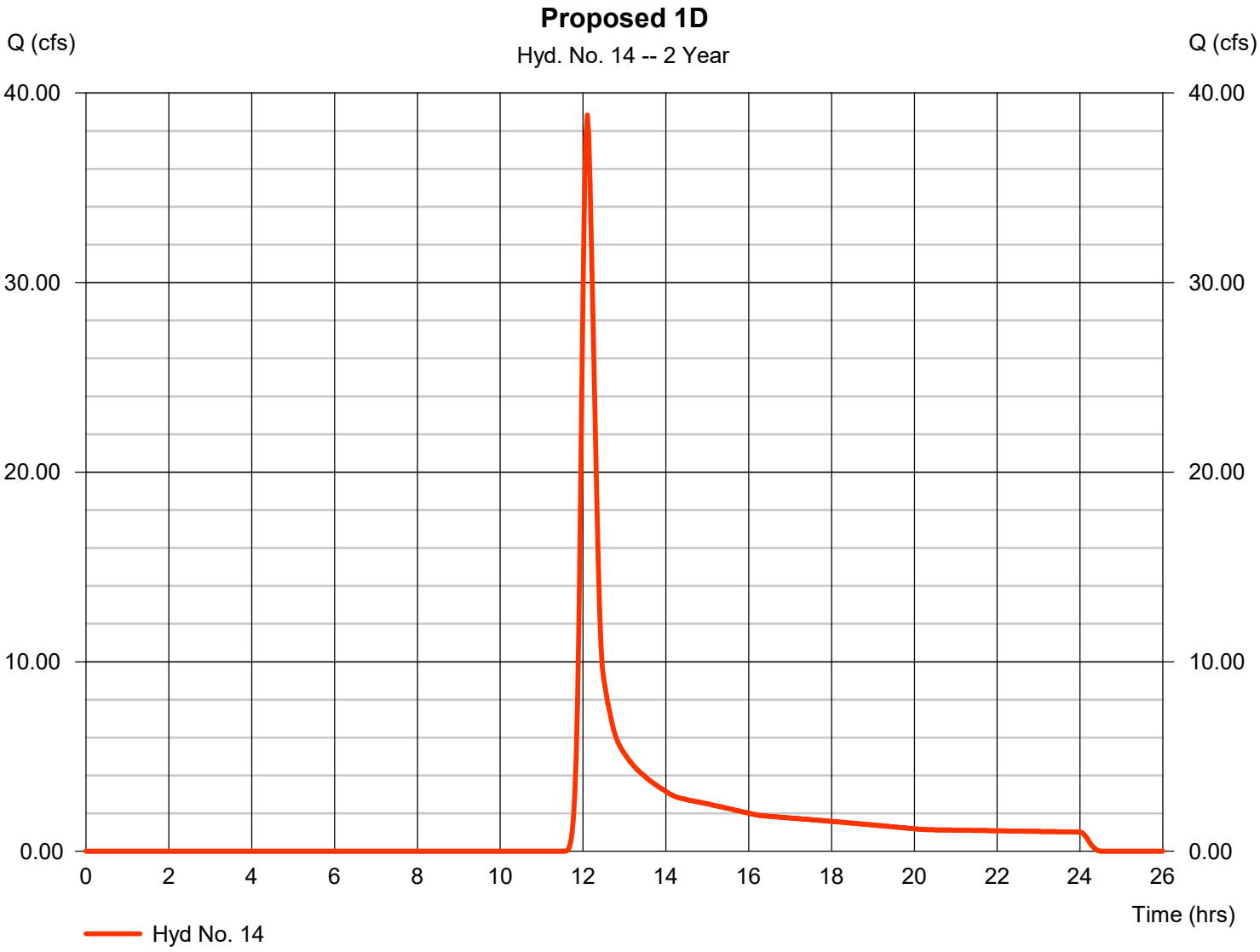
Hydrograph Report

Hyd. No. 14

Proposed 1D

Hydrograph type	=	SCS Runoff	Peak discharge	=	38.83 cfs
Storm frequency	=	2 yrs	Time to peak	=	12.10 hrs
Time interval	=	2 min	Hyd. volume	=	139,079 cuft
Drainage area	=	48.560 ac	Curve number	=	67*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	17.60 min
Total precip.	=	3.39 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.720 x 98) + (21.900 x 66) + (24.940 x 65)] / 48.560



TR55 Tc Worksheet

Hyd. No. 14

Proposed 1D

Description	A		B		C		Totals
Sheet Flow							
Manning's n-value	= 0.240		0.011		0.011		
Flow length (ft)	= 100.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.39		0.00		0.00		
Land slope (%)	= 2.00		0.00		0.00		
Travel Time (min)	**= 13.86**	**+**	**0.00**	**+**	**0.00**	**=**	**13.86**
Shallow Concentrated Flow							
Flow length (ft)	= 0.00		0.00		0.00		
Watercourse slope (%)	= 0.00		0.00		0.00		
Surface description	= Unpaved		Paved		Paved		
Average velocity (ft/s)	=0.00		0.00		0.00		
Travel Time (min)	**= 0.00**	**+**	**0.00**	**+**	**0.00**	**=**	**0.00**
Channel Flow							
X sectional flow area (sqft)	= 60.00		0.00		0.00		
Wetted perimeter (ft)	= 30.00		0.00		0.00		
Channel slope (%)	= 1.70		0.00		0.00		
Manning's n-value	= 0.050		0.015		0.015		
Velocity (ft/s)	=6.18						
			0.00				
					0.00		
Flow length (ft)	({0})1390.0		0.0		0.0		
Travel Time (min)	**= 3.75**	**+**	**0.00**	**+**	**0.00**	**=**	**3.75**

Total Travel Time, Tc ..... 17.60 min

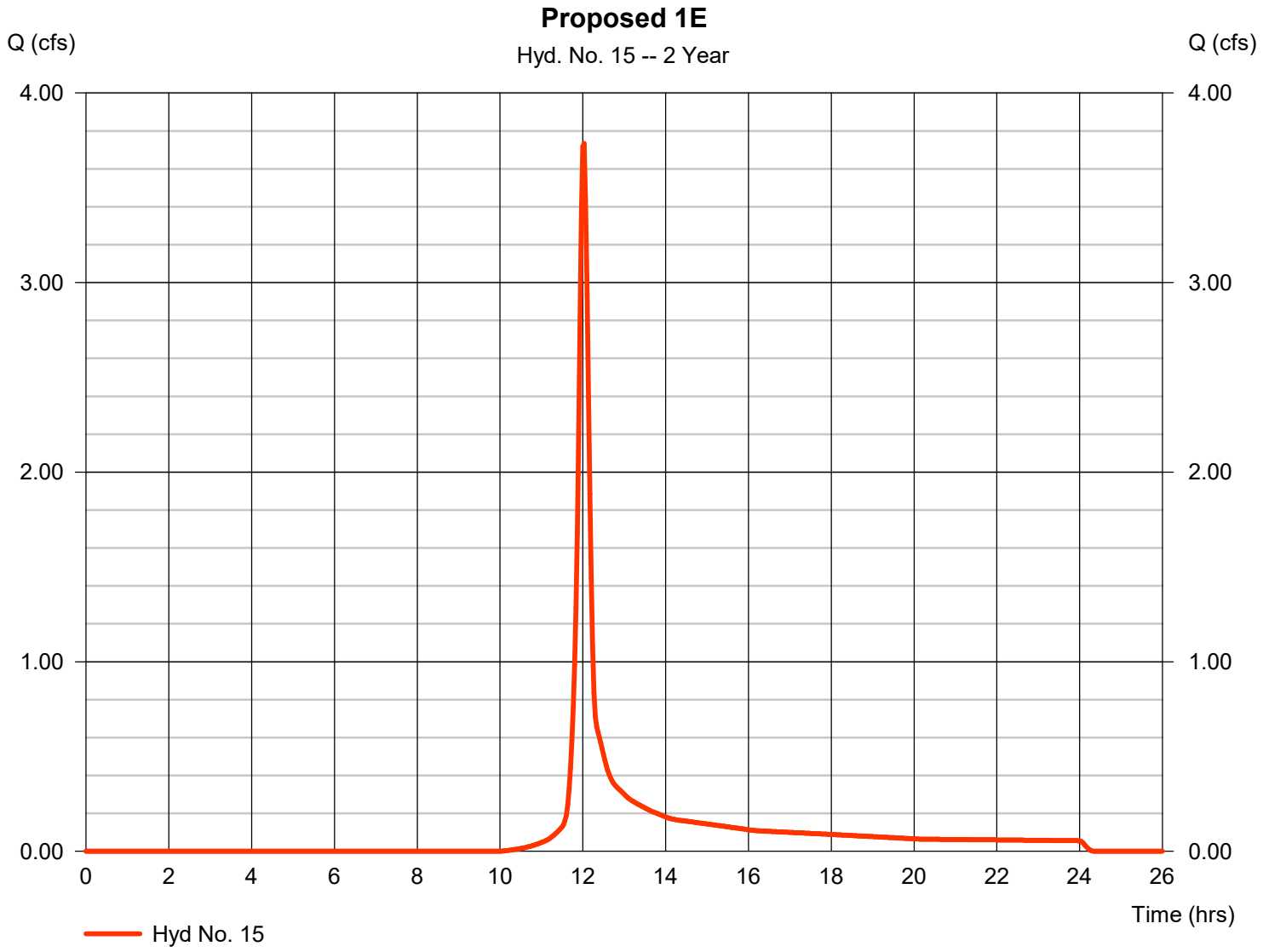
Hydrograph Report

Hyd. No. 15

Proposed 1E

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.734 cfs
Storm frequency	=	2 yrs	Time to peak	=	12.03 hrs
Time interval	=	2 min	Hyd. volume	=	9,799 cuft
Drainage area	=	1.940 ac	Curve number	=	77*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	3.39 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.700 x 98) + (1.240 x 65)] / 1.940



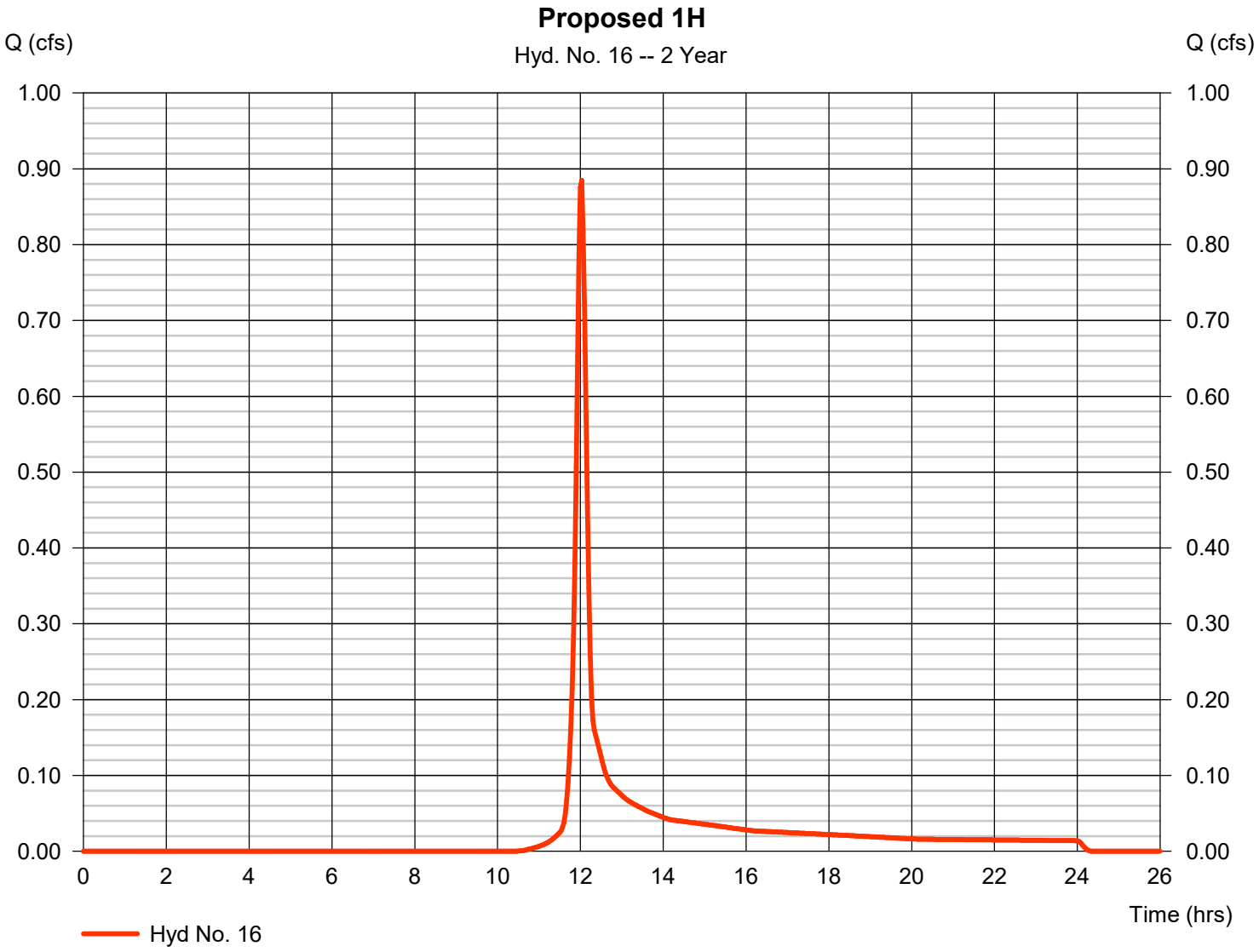
Hydrograph Report

Hyd. No. 16

Proposed 1H

Hydrograph type	= SCS Runoff	Peak discharge	= 0.885 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.03 hrs
Time interval	= 2 min	Hyd. volume	= 2,338 cuft
Drainage area	= 0.510 ac	Curve number	= 75*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 3.39 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.150 x 98) + (0.360 x 65)] / 0.510

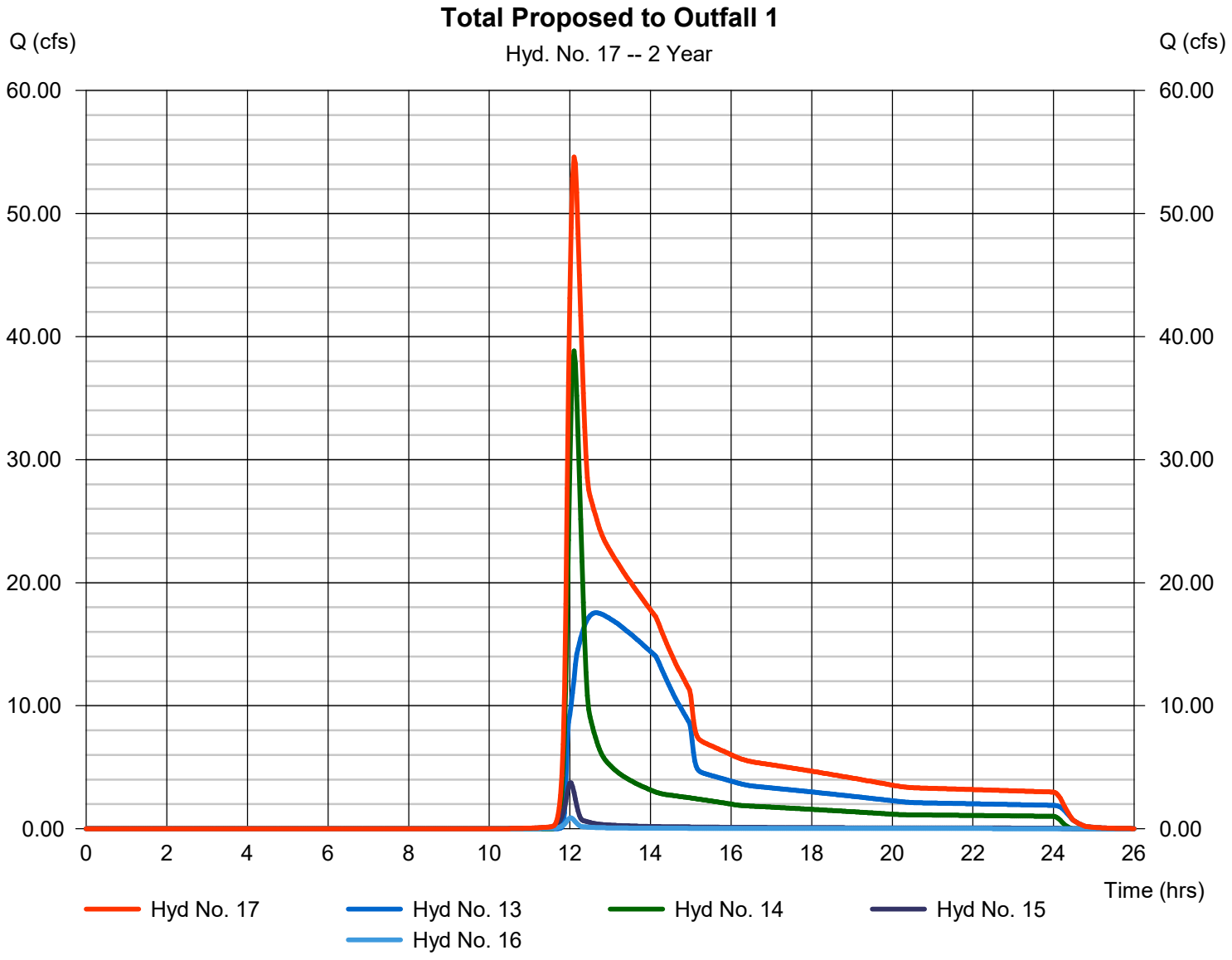


Hydrograph Report

Hyd. No. 17

Total Proposed to Outfall 1

Hydrograph type	= Combine	Peak discharge	= 54.60 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 402,198 cuft
Inflow hyds.	= 13, 14, 15, 16	Contrib. drain. area	= 51.010 ac

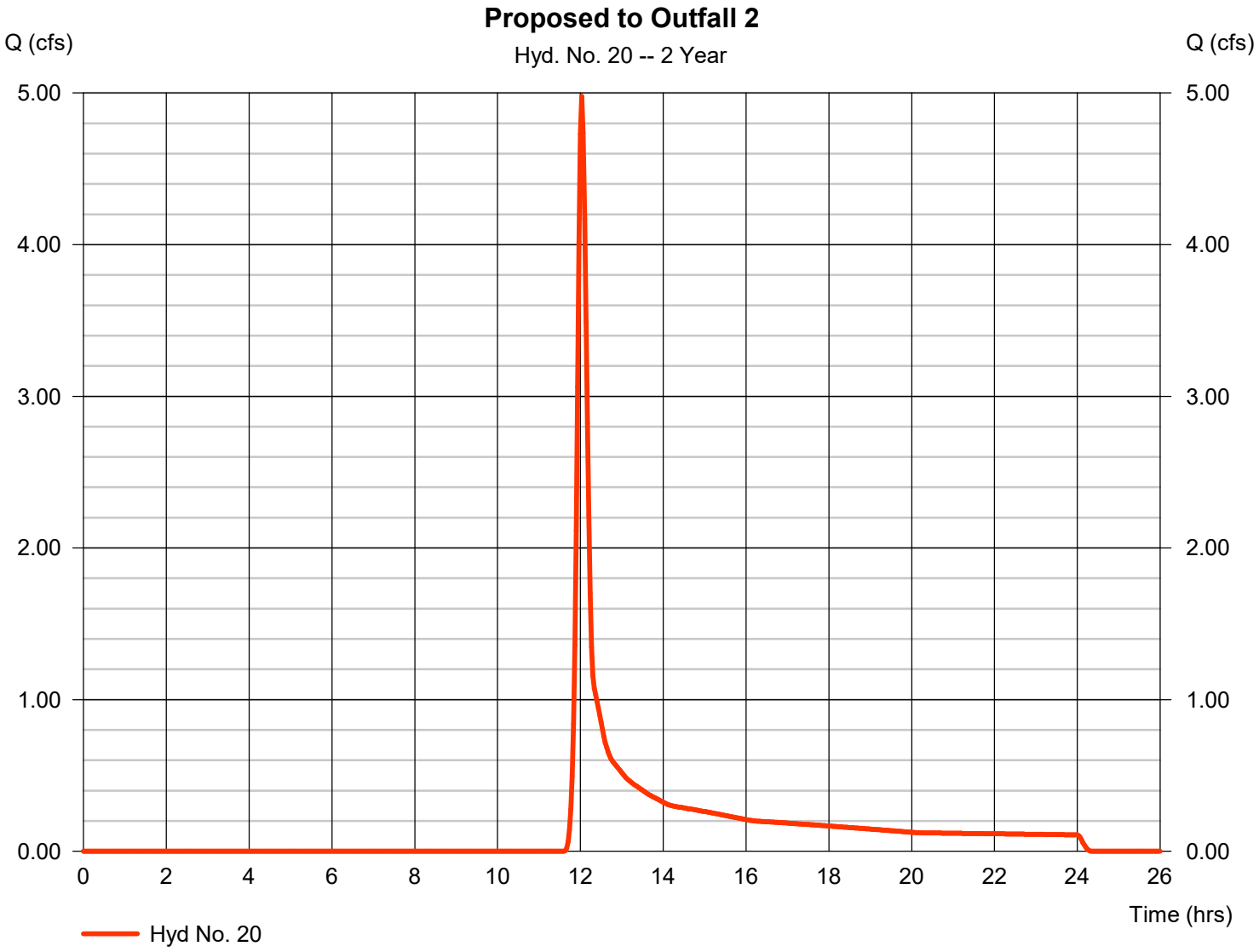


Hydrograph Report

Hyd. No. 20

Proposed to Outfall 2

Hydrograph type	= SCS Runoff	Peak discharge	= 4.978 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.03 hrs
Time interval	= 2 min	Hyd. volume	= 14,485 cuft
Drainage area	= 5.220 ac	Curve number	= 66
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 10.10 min
Total precip.	= 3.39 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



TR55 Tc Worksheet

Hyd. No. 20

Proposed to Outfall 2

Description	A		B		C		Totals
Sheet Flow							
Manning's n-value	= 0.400		0.011		0.011		
Flow length (ft)	= 60.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.39		0.00		0.00		
Land slope (%)	= 5.00		0.00		0.00		
Travel Time (min)	**= 9.61**	**+**	**0.00**	**+**	**0.00**	**=**	**9.61**
Shallow Concentrated Flow							
Flow length (ft)	= 255.00		0.00		0.00		
Watercourse slope (%)	= 31.40		0.00		0.00		
Surface description	= Unpaved		Paved		Paved		
Average velocity (ft/s)	=9.04		0.00		0.00		
Travel Time (min)	**= 0.47**	**+**	**0.00**	**+**	**0.00**	**=**	**0.47**
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 ..... 10.10 min

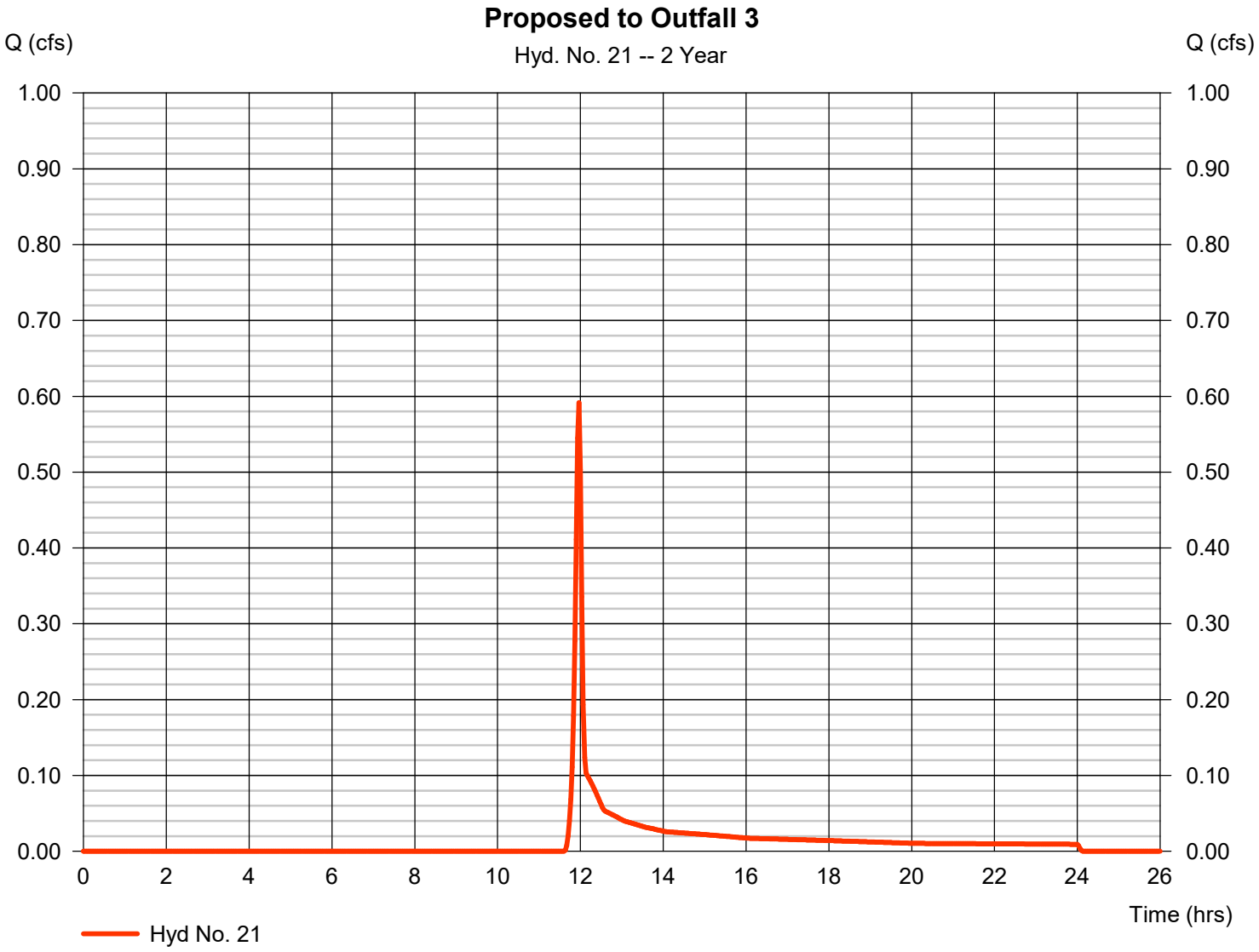
Hydrograph Report

Hyd. No. 21

Proposed to Outfall 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.591 cfs
Storm frequency	=	2 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	1,236 cuft
Drainage area	=	0.490 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.39 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.490 x 66)] / 0.490

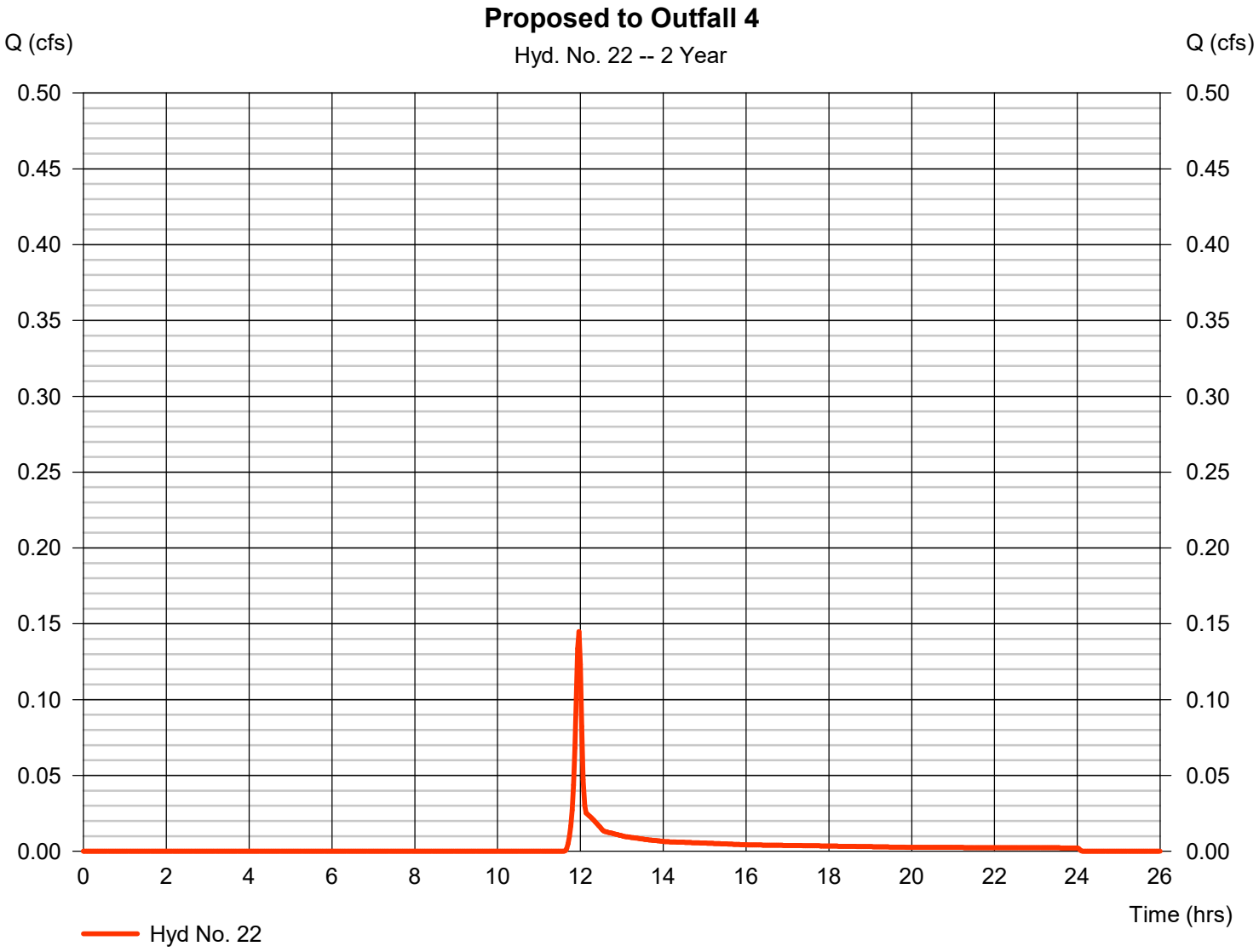


Hydrograph Report

Hyd. No. 22

Proposed to Outfall 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.145 cfs
Storm frequency	=	2 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	303 cuft
Drainage area	=	0.120 ac	Curve number	=	66
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.39 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

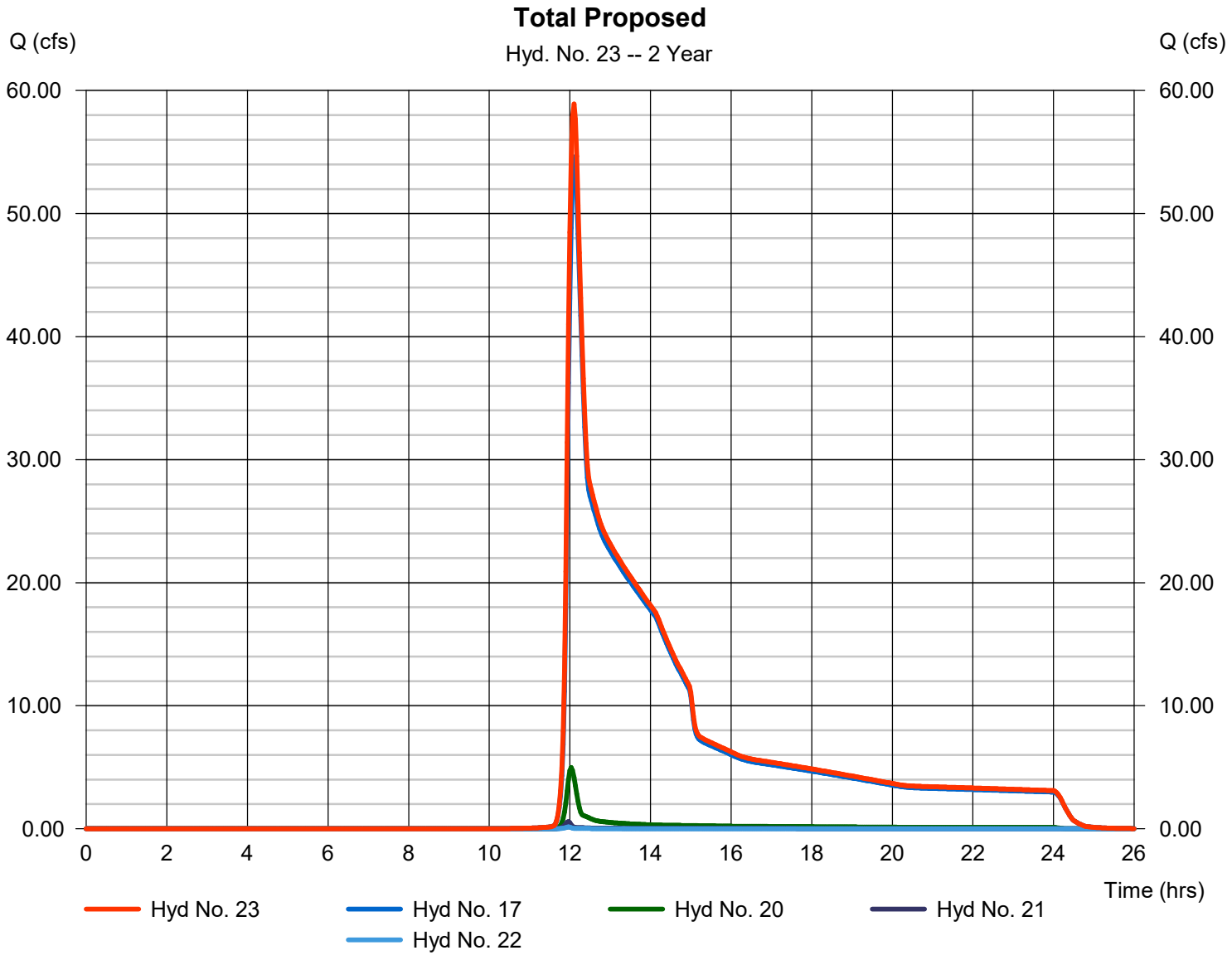


Hydrograph Report

Hyd. No. 23

Total Proposed

Hydrograph type	= Combine	Peak discharge	= 58.92 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 418,222 cuft
Inflow hyds.	= 17, 20, 21, 22	Contrib. drain. area	= 5.830 ac



Hydrograph Summary Report

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

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	156.76	2	738	808,828	------	------	------	Existing to Outfall 1
2	SCS Runoff	10.15	2	722	27,287	------	------	------	Existing to Outfall 2
3	SCS Runoff	1.159	2	718	2,329	------	------	------	Existing to Outfall 3
4	SCS Runoff	0.284	2	718	570	------	------	------	Existing to Outfall 4
5	Combine	159.02	2	738	839,014	1, 2, 3, 4	------	------	Total Existing
7	SCS Runoff	58.98	2	732	254,260	------	------	------	Proposed 1A
8	Reservoir	54.50	2	736	254,260	7	584.07	8,375	Through Pond 1A
9	SCS Runoff	38.33	2	728	143,089	------	------	------	Proposed 1B
10	Reservoir	35.09	2	732	143,087	9	612.07	9,604	Through Pond 1B
11	SCS Runoff	21.09	2	728	77,857	------	------	------	Remainder to Pond 1C
12	Combine	107.13	2	732	475,204	8, 10, 11	------	------	Total to Pond 1C
13	Reservoir	24.15	2	766	475,203	12	565.03	162,624	Through Pond 1C
14	SCS Runoff	78.44	2	726	258,023	------	------	------	Proposed 1D
15	SCS Runoff	6.184	2	720	16,054	------	------	------	Proposed 1E
16	SCS Runoff	1.503	2	720	3,915	------	------	------	Proposed 1H
17	Combine	100.32	2	726	753,093	13, 14, 15, 16	------	------	Total Proposed to Outfall 1
20	SCS Runoff	10.15	2	722	27,287	------	------	------	Proposed to Outfall 2
21	SCS Runoff	1.159	2	718	2,329	------	------	------	Proposed to Outfall 3
22	SCS Runoff	0.284	2	718	570	------	------	------	Proposed to Outfall 4
23	Combine	109.71	2	724	783,278	17, 20, 21, 22	------	------	Total Proposed

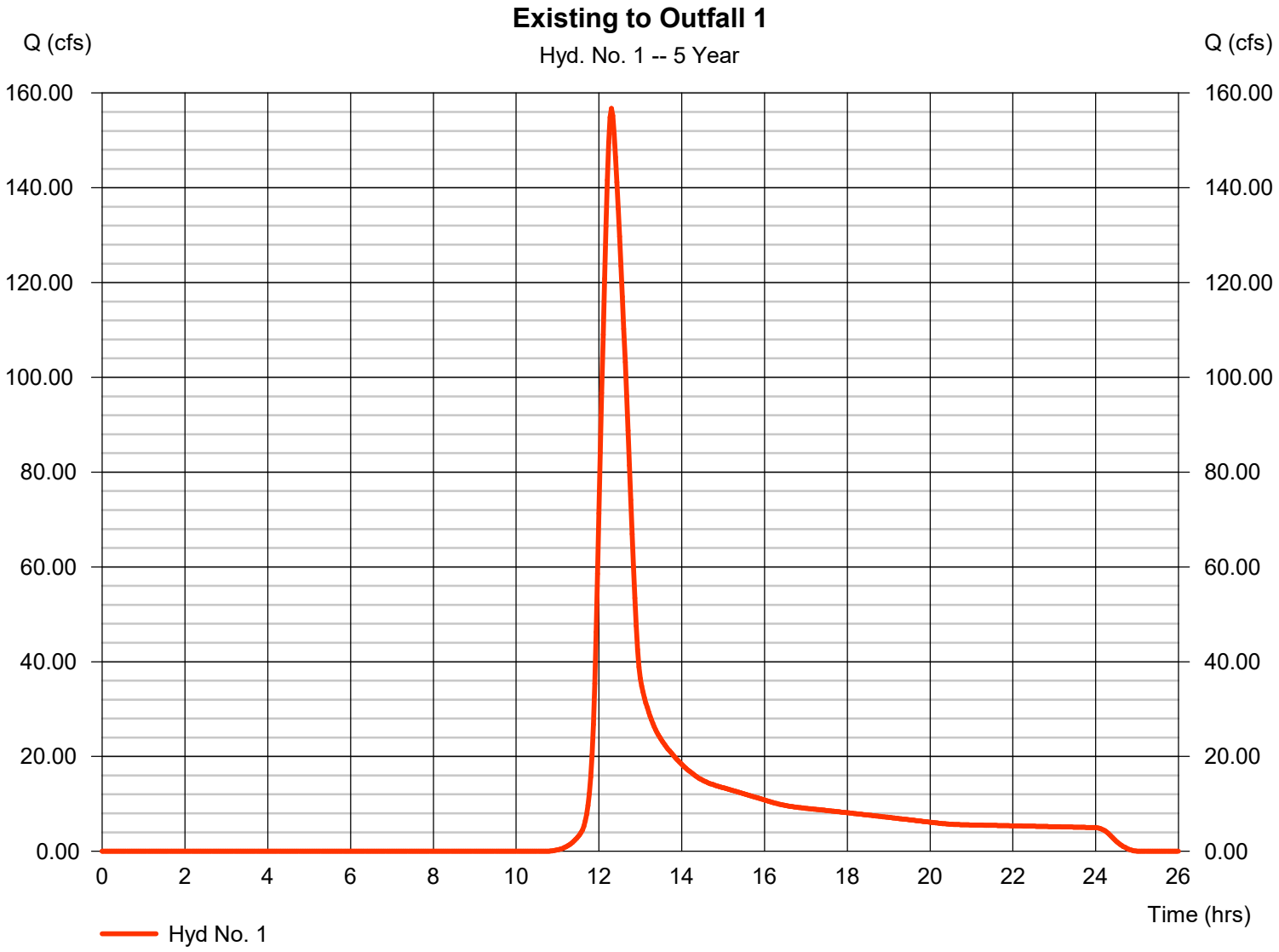
Hydrograph Report

Hyd. No. 1

Existing to Outfall 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	156.76 cfs
Storm frequency	=	5 yrs	Time to peak	=	12.30 hrs
Time interval	=	2 min	Hyd. volume	=	808,828 cuft
Drainage area	=	145.400 ac	Curve number	=	68*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	39.00 min
Total precip.	=	4.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.780 x 45) + (110.600 x 66) + (32.020 x 77)] / 145.400

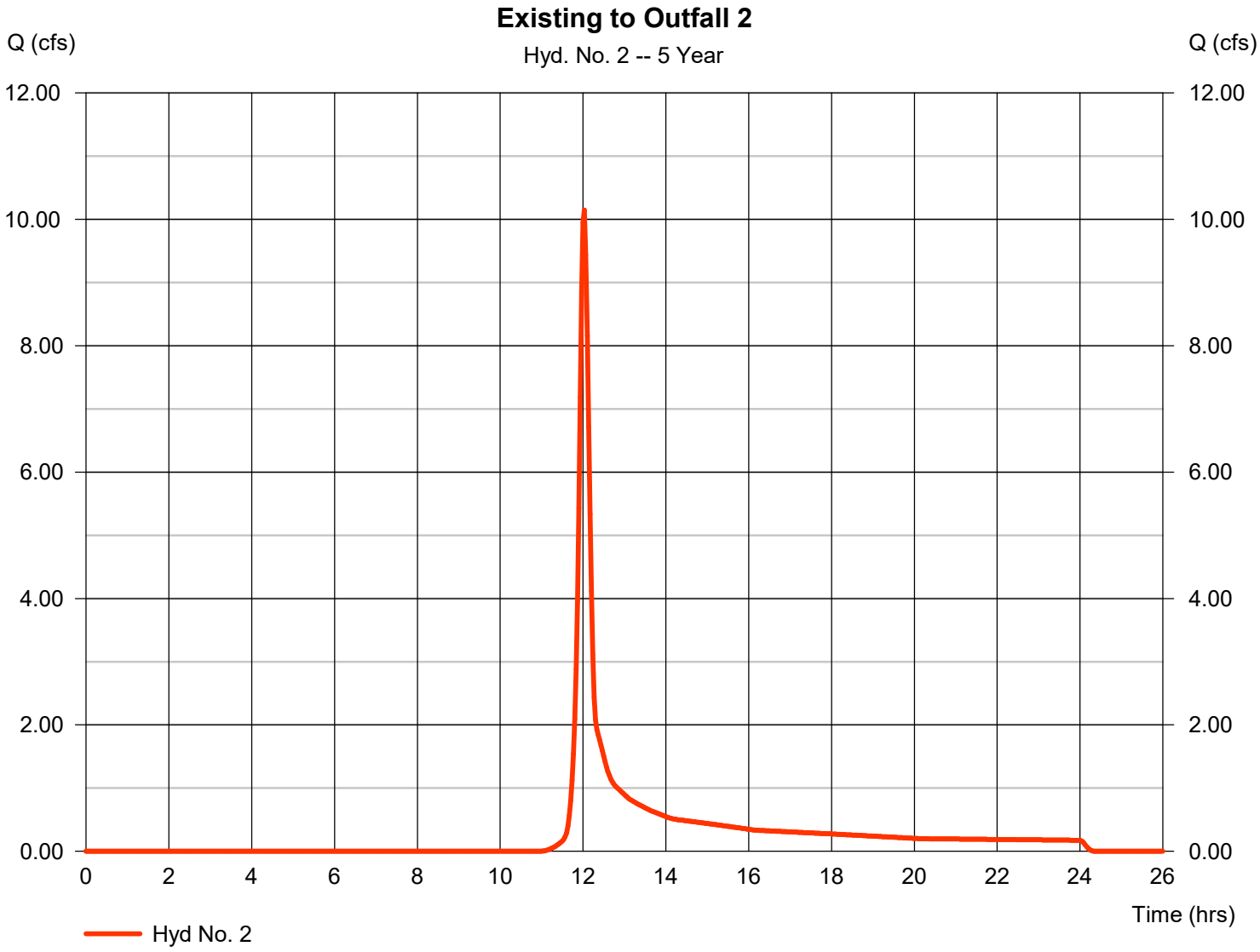


Hydrograph Report

Hyd. No. 2

Existing to Outfall 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	10.15 cfs
Storm frequency	=	5 yrs	Time to peak	=	12.03 hrs
Time interval	=	2 min	Hyd. volume	=	27,287 cuft
Drainage area	=	5.220 ac	Curve number	=	66
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	10.10 min
Total precip.	=	4.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



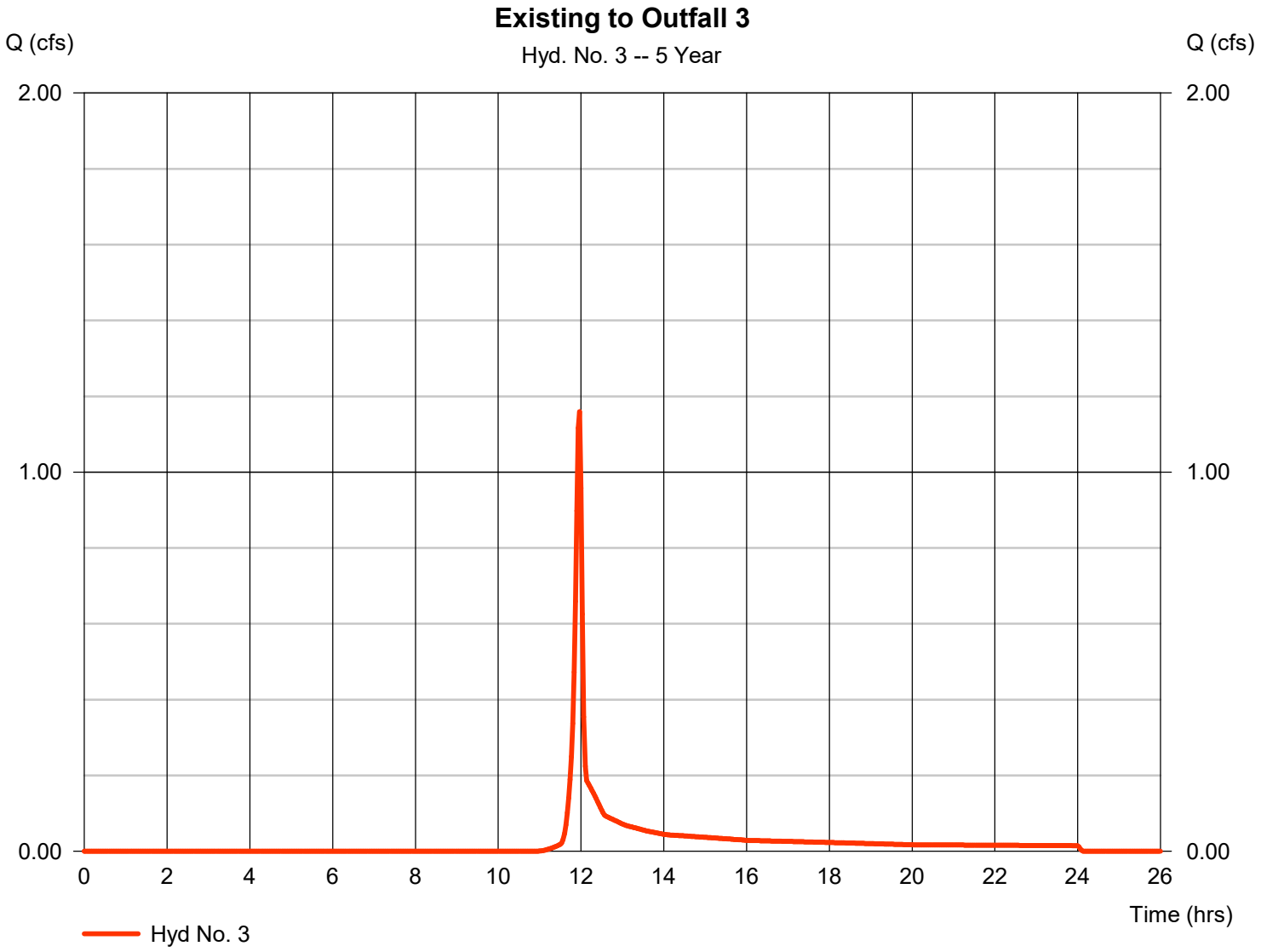
Hydrograph Report

Hyd. No. 3

Existing to Outfall 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.159 cfs
Storm frequency	=	5 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	2,329 cuft
Drainage area	=	0.490 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.490 x 66)] / 0.490

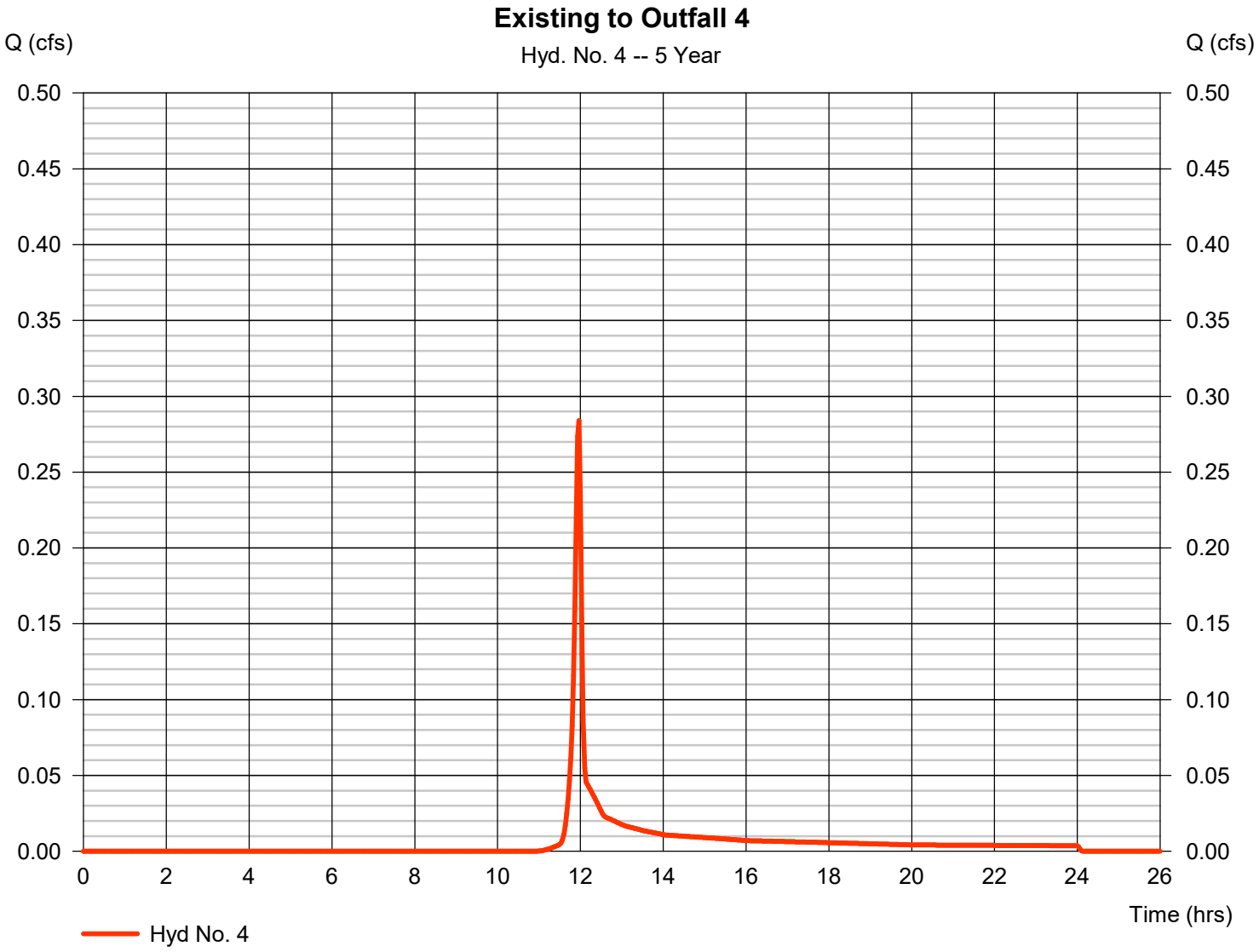


Hydrograph Report

Hyd. No. 4

Existing to Outfall 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.284 cfs
Storm frequency	=	5 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	570 cuft
Drainage area	=	0.120 ac	Curve number	=	66
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

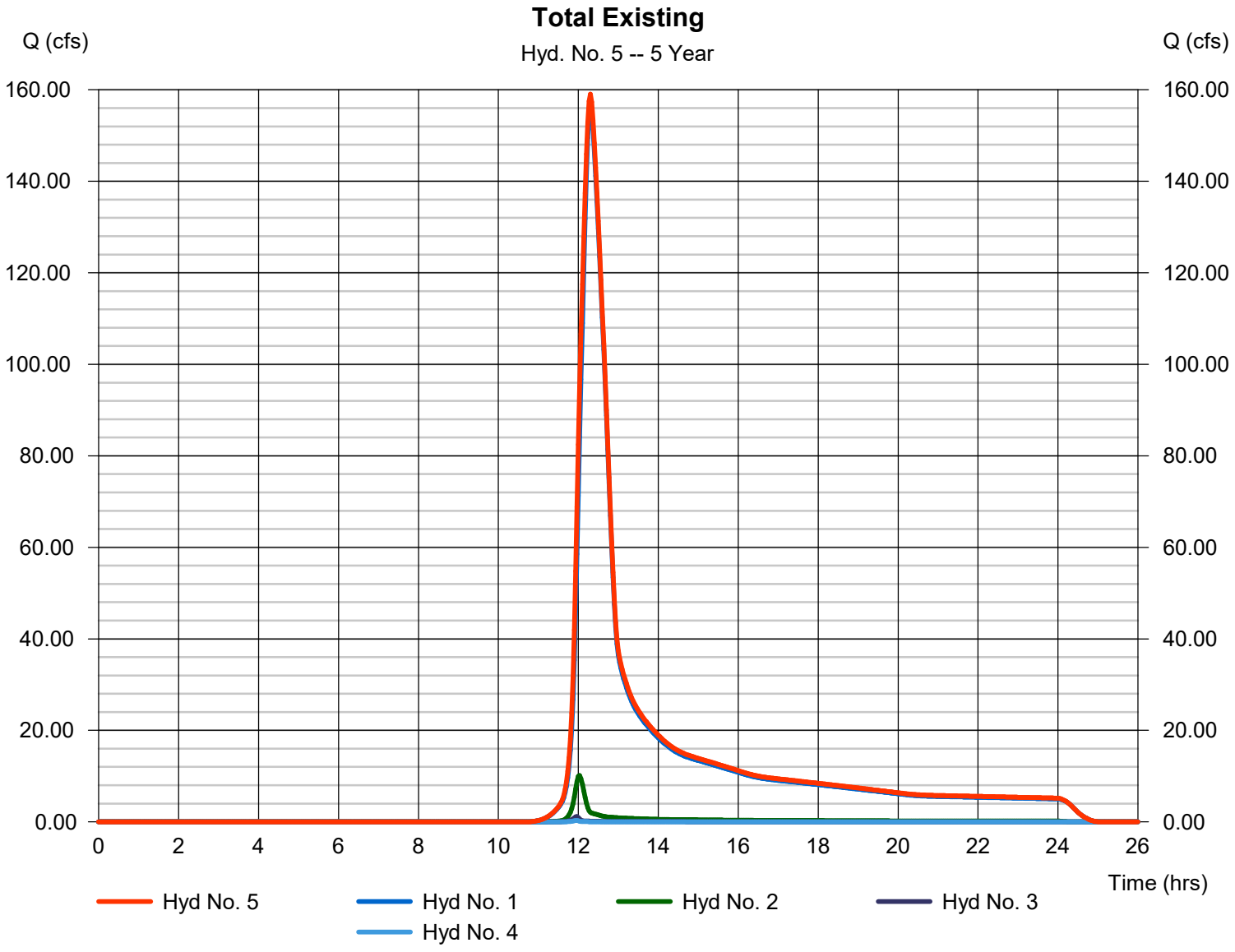


Hydrograph Report

Hyd. No. 5

Total Existing

Hydrograph type	= Combine	Peak discharge	= 159.02 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.30 hrs
Time interval	= 2 min	Hyd. volume	= 839,014 cuft
Inflow hyds.	= 1, 2, 3, 4	Contrib. drain. area	= 151.230 ac



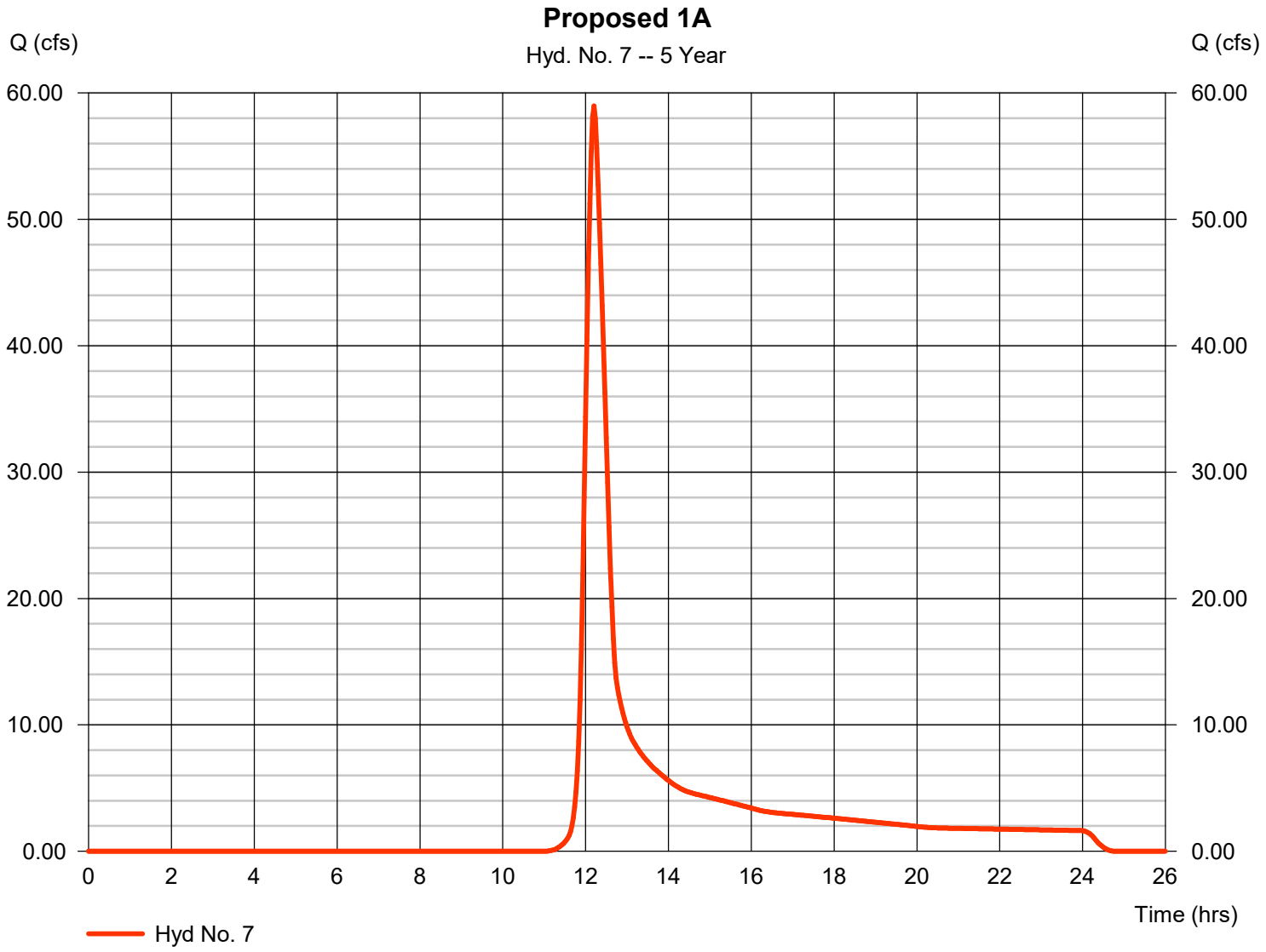
Hydrograph Report

Hyd. No. 7

Proposed 1A

Hydrograph type	=	SCS Runoff	Peak discharge	=	58.98 cfs
Storm frequency	=	5 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	254,260 cuft
Drainage area	=	50.160 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	29.70 min
Total precip.	=	4.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(7.960 x 65) + (42.200 x 66)] / 50.160



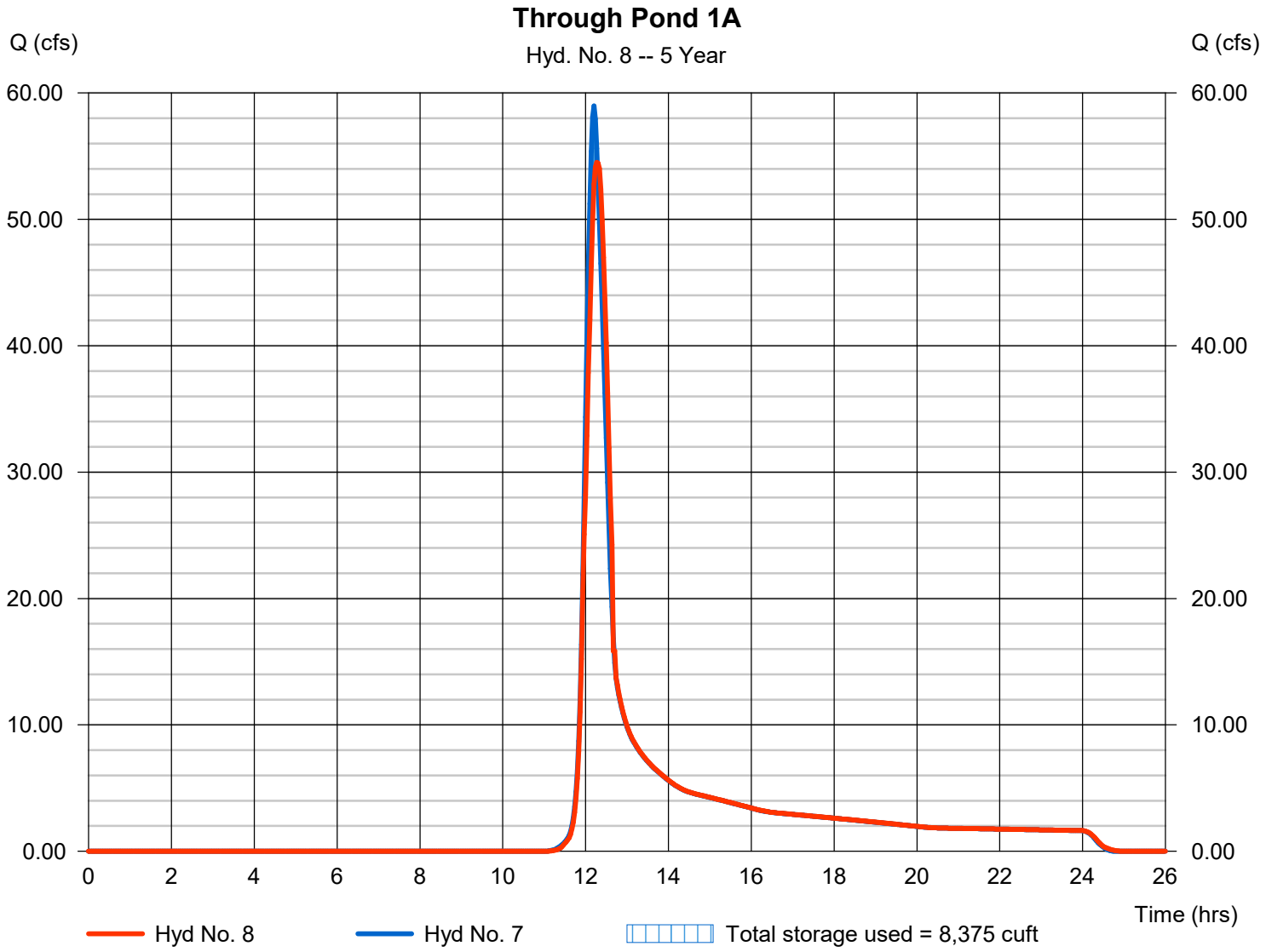
Hydrograph Report

Hyd. No. 8

Through Pond 1A

Hydrograph type	=	Reservoir	Peak discharge	=	54.50 cfs
Storm frequency	=	5 yrs	Time to peak	=	12.27 hrs
Time interval	=	2 min	Hyd. volume	=	254,260 cuft
Inflow hyd. No.	=	7 - Proposed 1A	Max. Elevation	=	584.07 ft
Reservoir name	=	Pond 1A	Max. Storage	=	8,375 cuft

Storage Indication method used.



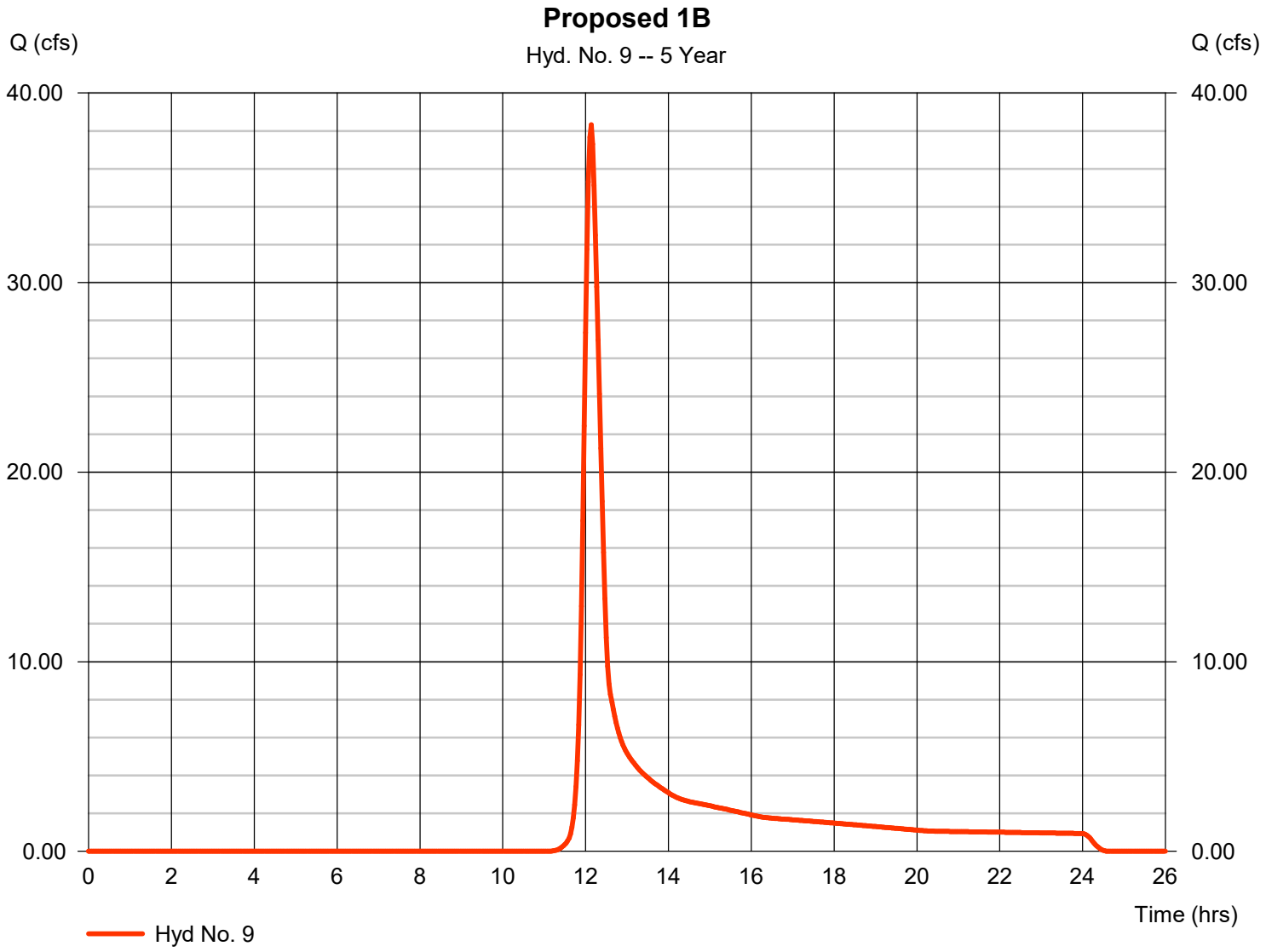
Hydrograph Report

Hyd. No. 9

Proposed 1B

Hydrograph type	=	SCS Runoff	Peak discharge	=	38.33 cfs
Storm frequency	=	5 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	143,089 cuft
Drainage area	=	29.110 ac	Curve number	=	65*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	20.50 min
Total precip.	=	4.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(11.520 x 66) + (17.590 x 65)] / 29.110



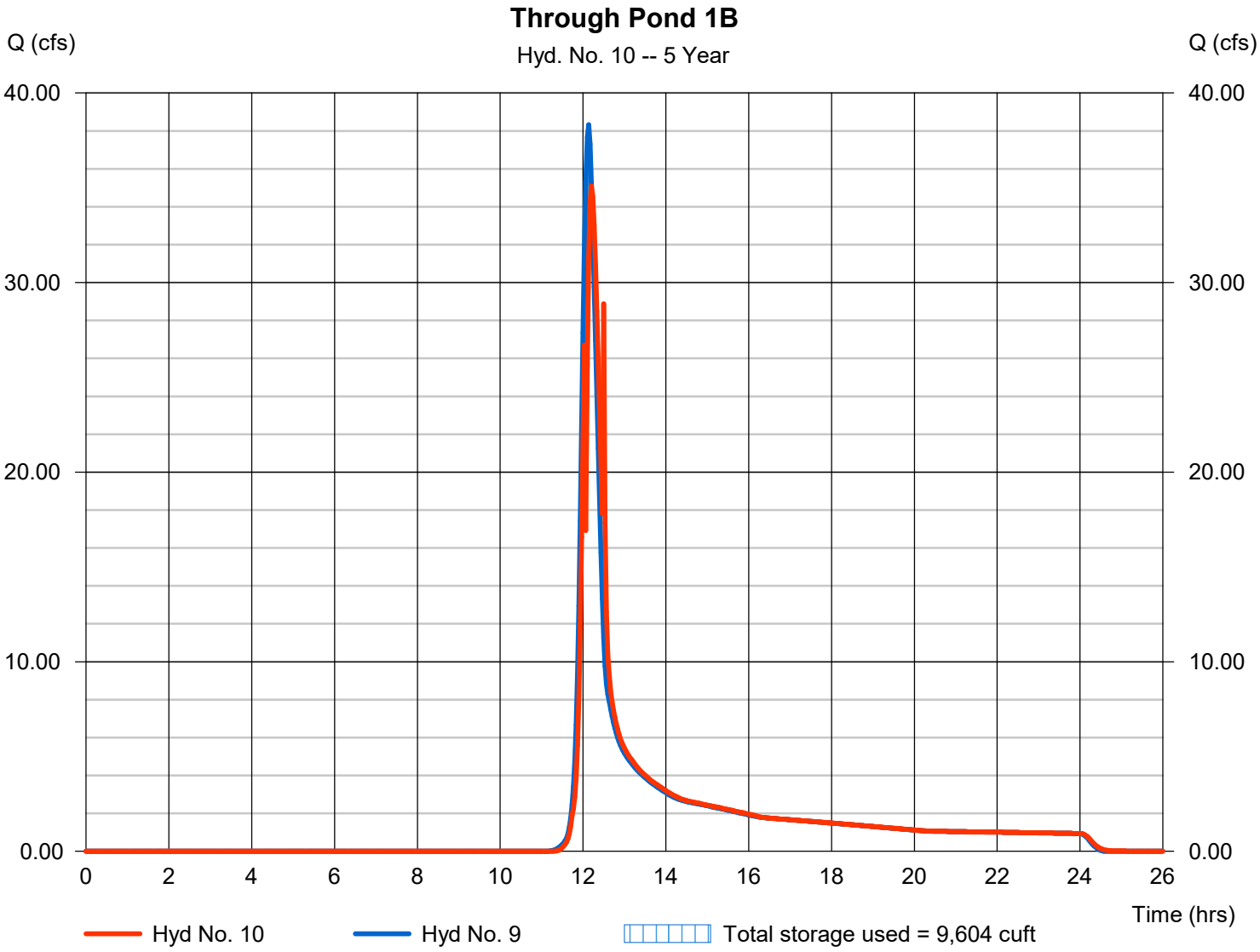
Hydrograph Report

Hyd. No. 10

Through Pond 1B

Hydrograph type	=	Reservoir	Peak discharge	=	35.09 cfs
Storm frequency	=	5 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	143,087 cuft
Inflow hyd. No.	=	9 - Proposed 1B	Max. Elevation	=	612.07 ft
Reservoir name	=	Pond 1B	Max. Storage	=	9,604 cuft

Storage Indication method used.



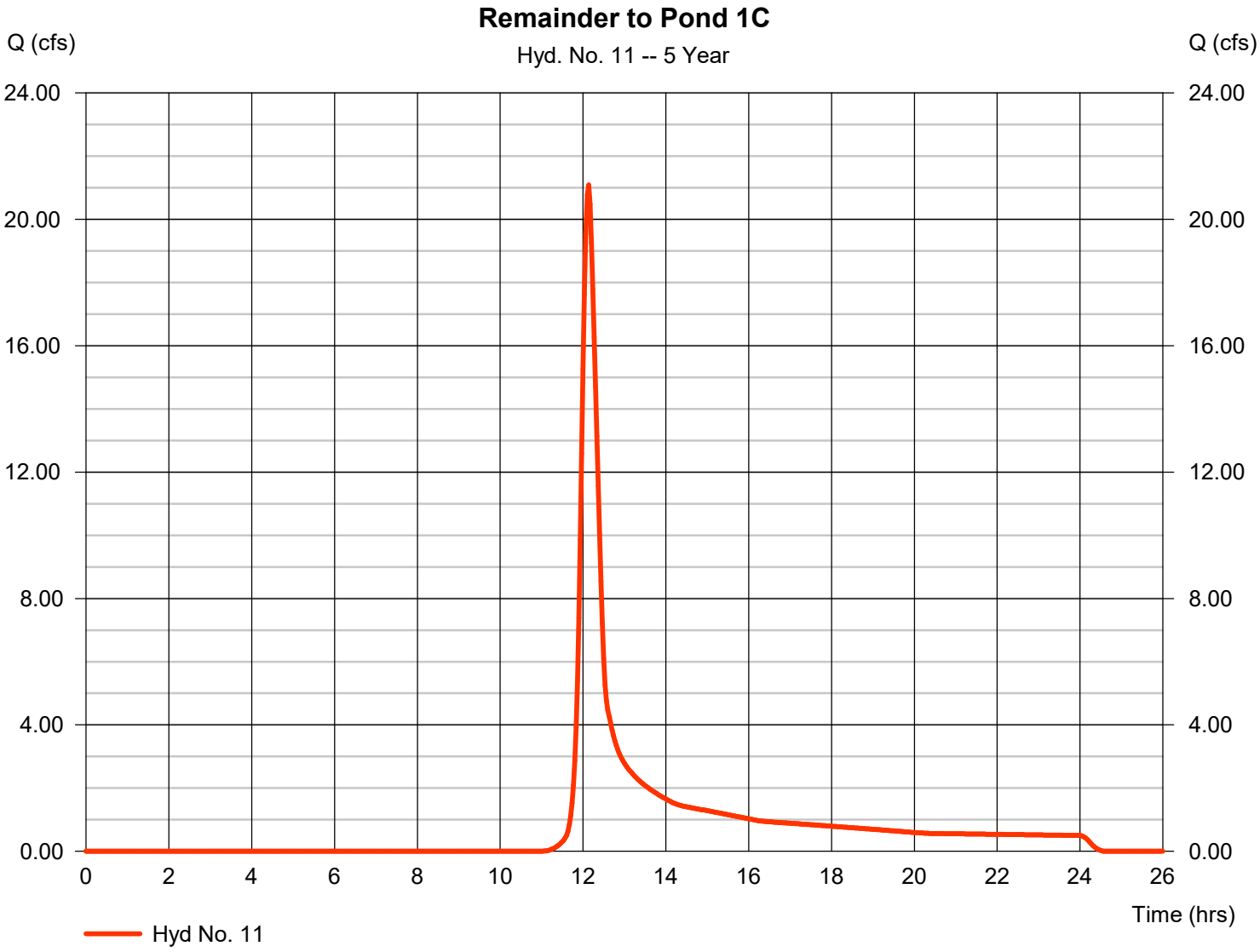
Hydrograph Report

Hyd. No. 11

Remainder to Pond 1C

Hydrograph type	=	SCS Runoff	Peak discharge	=	21.09 cfs
Storm frequency	=	5 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	77,857 cuft
Drainage area	=	15.090 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	20.30 min
Total precip.	=	4.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(9.060 x 66) + (6.030 x 65)] / 15.090

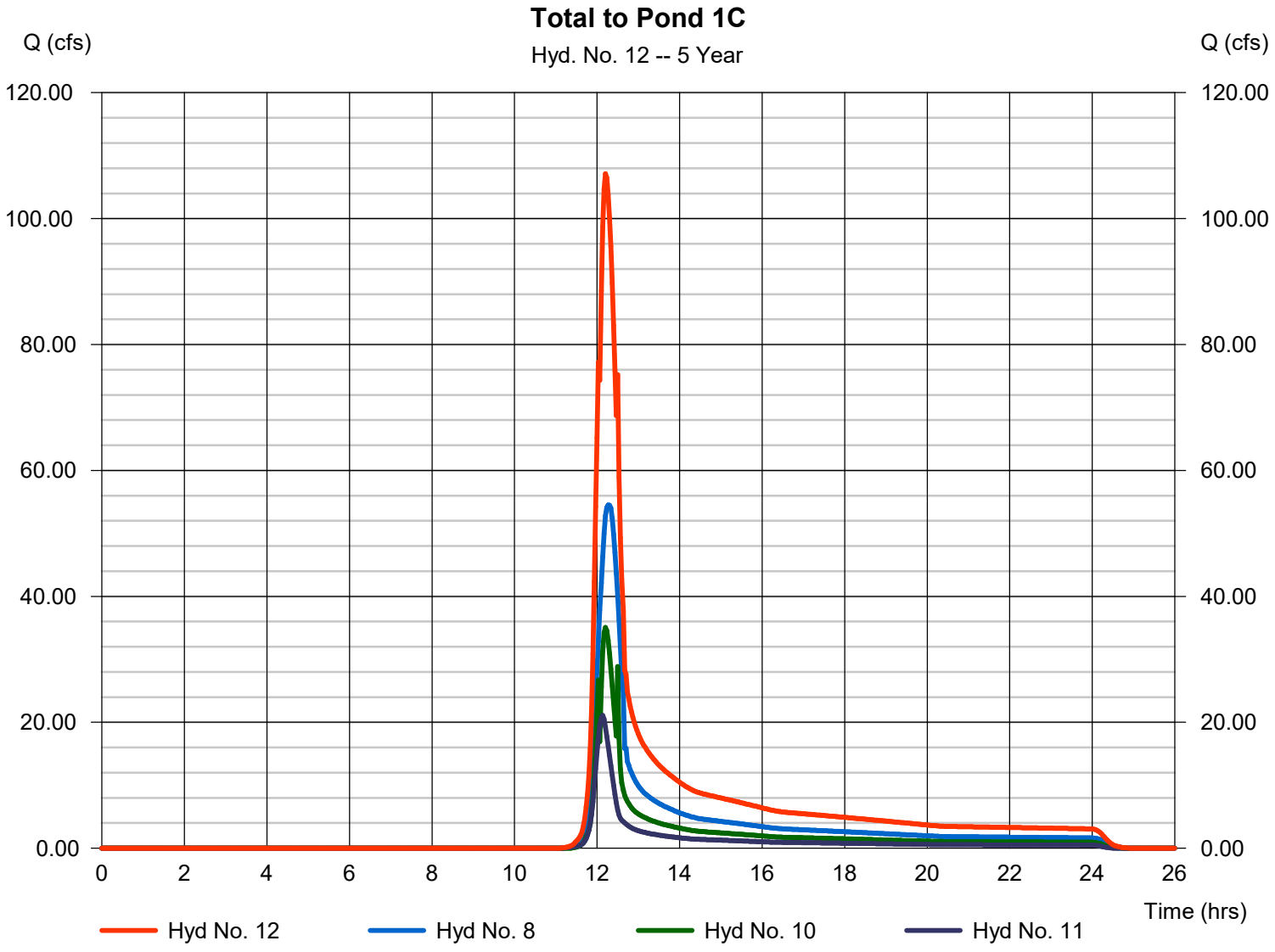


Hydrograph Report

Hyd. No. 12

Total to Pond 1C

Hydrograph type	= Combine	Peak discharge	= 107.13 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.20 hrs
Time interval	= 2 min	Hyd. volume	= 475,204 cuft
Inflow hyds.	= 8, 10, 11	Contrib. drain. area	= 15.090 ac



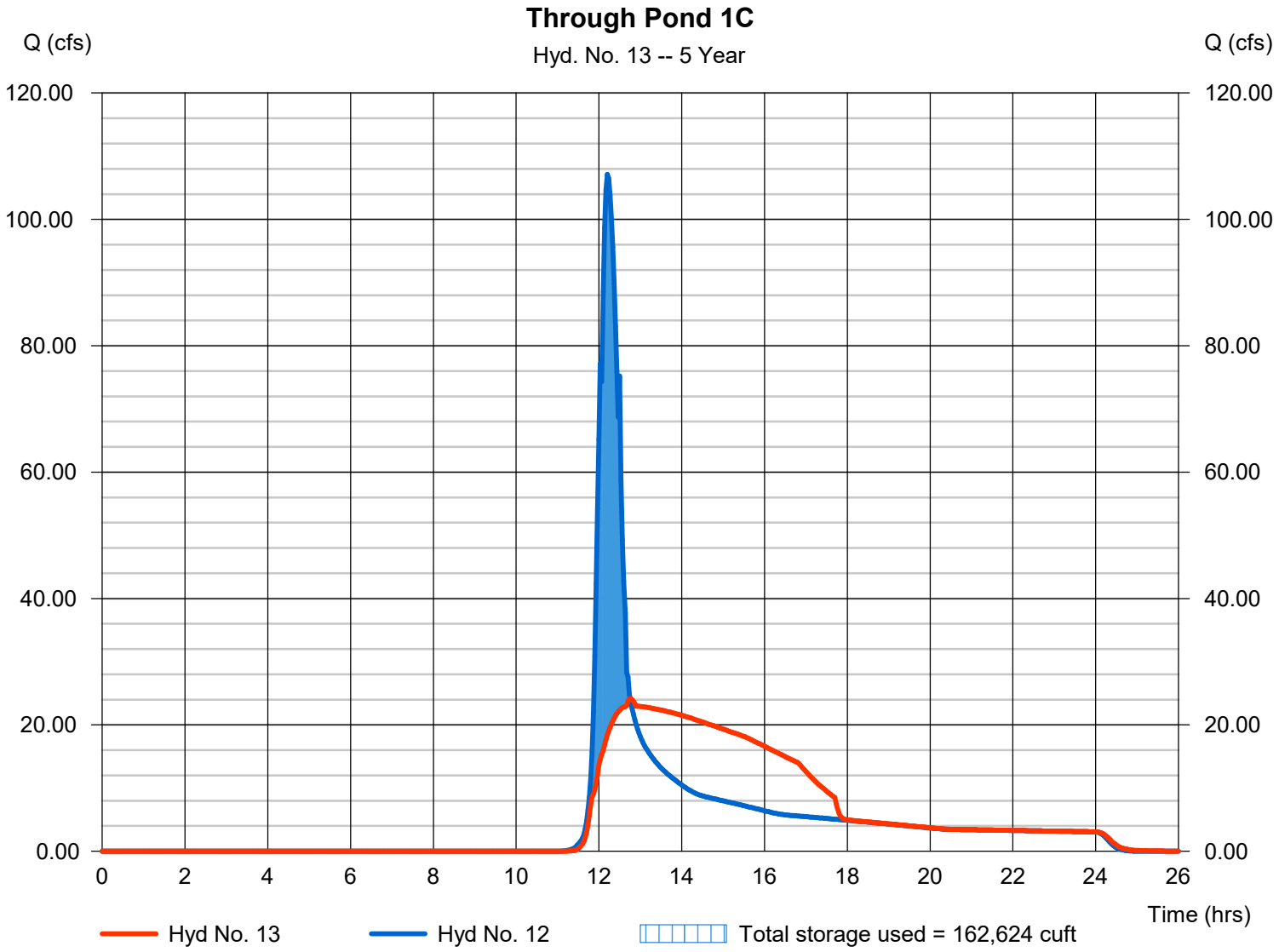
Hydrograph Report

Hyd. No. 13

Through Pond 1C

Hydrograph type	=	Reservoir	Peak discharge	=	24.15 cfs
Storm frequency	=	5 yrs	Time to peak	=	12.77 hrs
Time interval	=	2 min	Hyd. volume	=	475,203 cuft
Inflow hyd. No.	=	12 - Total to Pond 1C	Max. Elevation	=	565.03 ft
Reservoir name	=	Pond 1C	Max. Storage	=	162,624 cuft

Storage Indication method used.



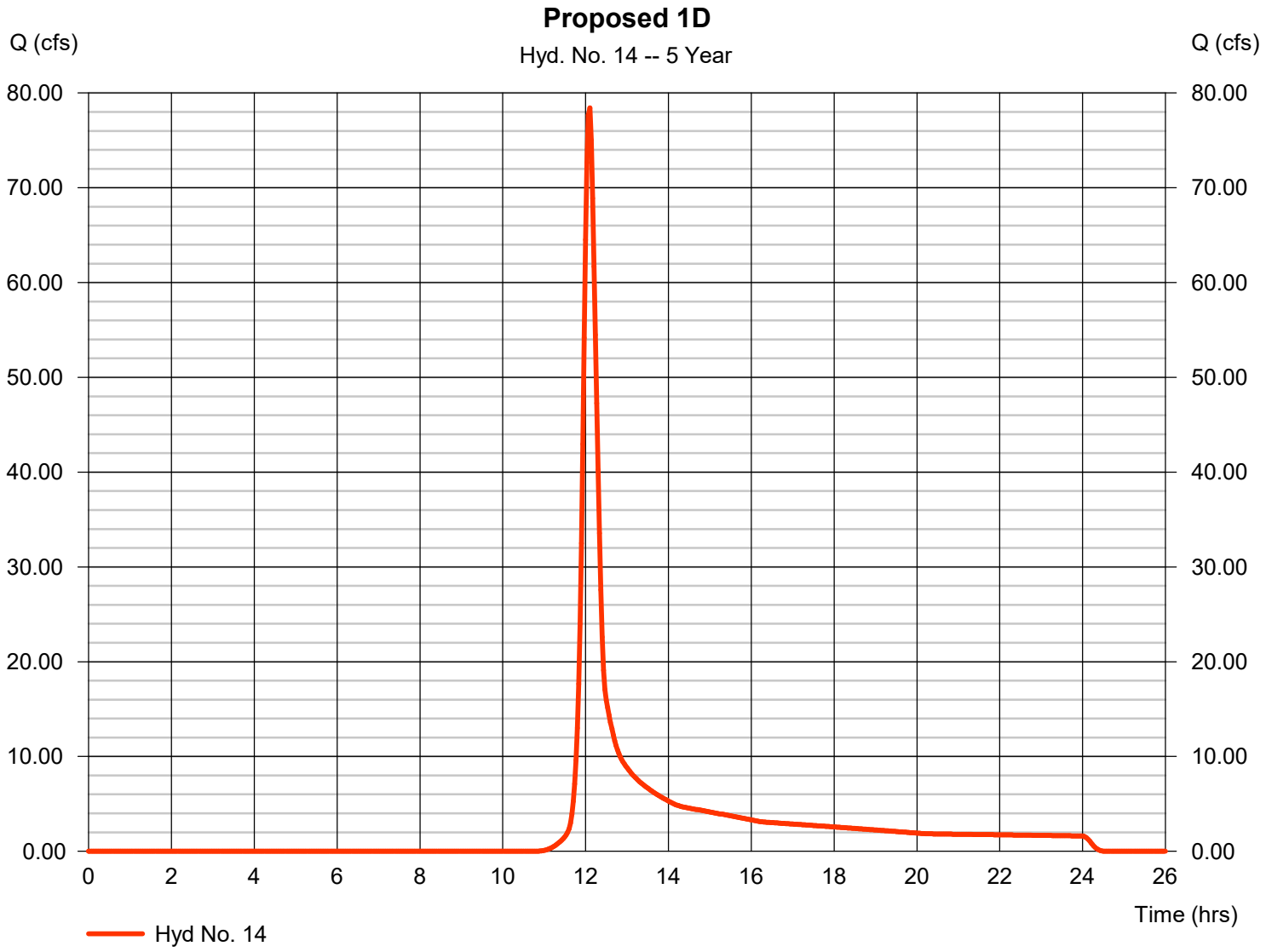
Hydrograph Report

Hyd. No. 14

Proposed 1D

Hydrograph type	=	SCS Runoff	Peak discharge	=	78.44 cfs
Storm frequency	=	5 yrs	Time to peak	=	12.10 hrs
Time interval	=	2 min	Hyd. volume	=	258,023 cuft
Drainage area	=	48.560 ac	Curve number	=	67*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	17.60 min
Total precip.	=	4.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.720 x 98) + (21.900 x 66) + (24.940 x 65)] / 48.560



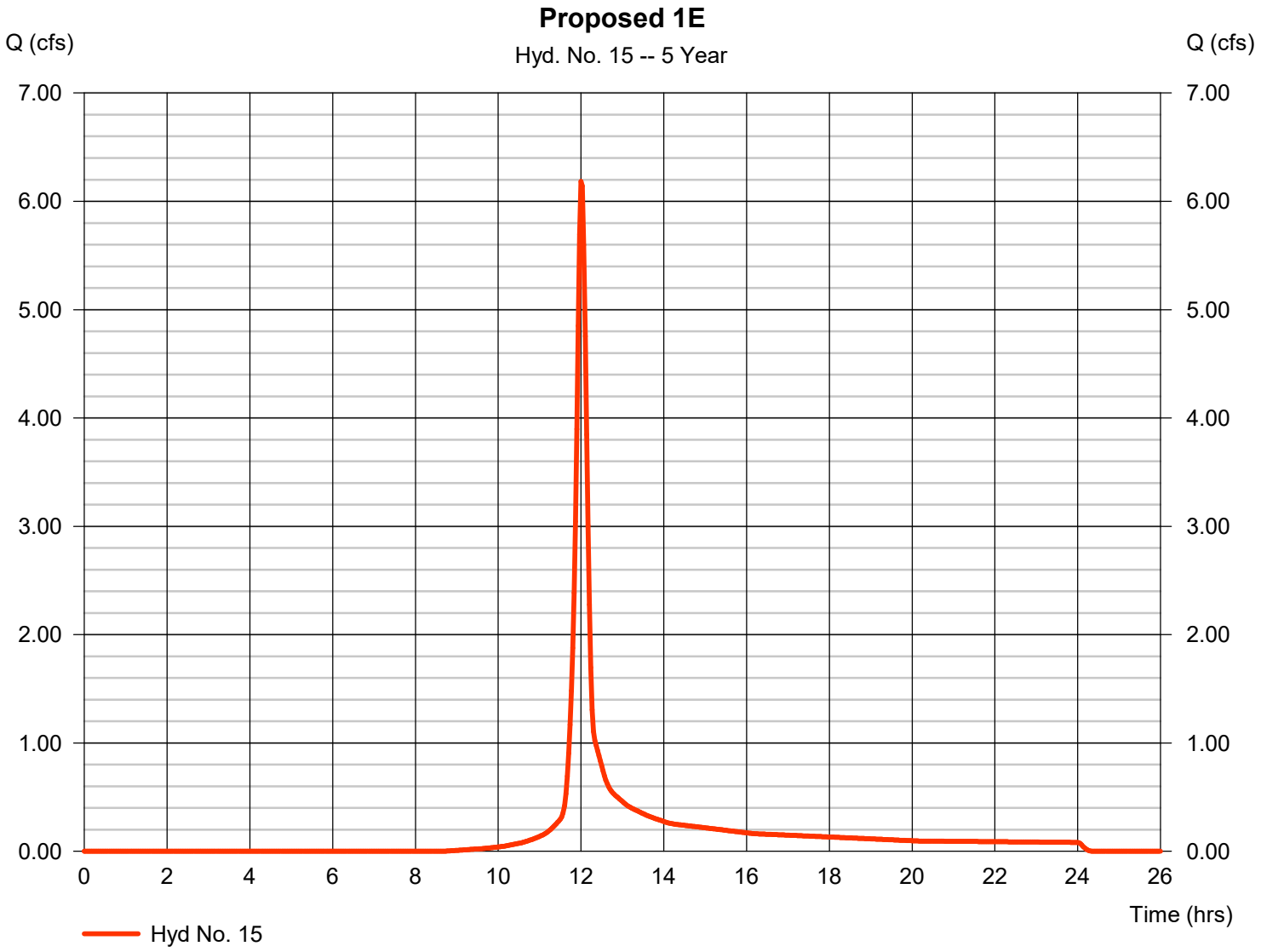
Hydrograph Report

Hyd. No. 15

Proposed 1E

Hydrograph type	=	SCS Runoff	Peak discharge	=	6.184 cfs
Storm frequency	=	5 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	16,054 cuft
Drainage area	=	1.940 ac	Curve number	=	77*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	4.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.700 x 98) + (1.240 x 65)] / 1.940



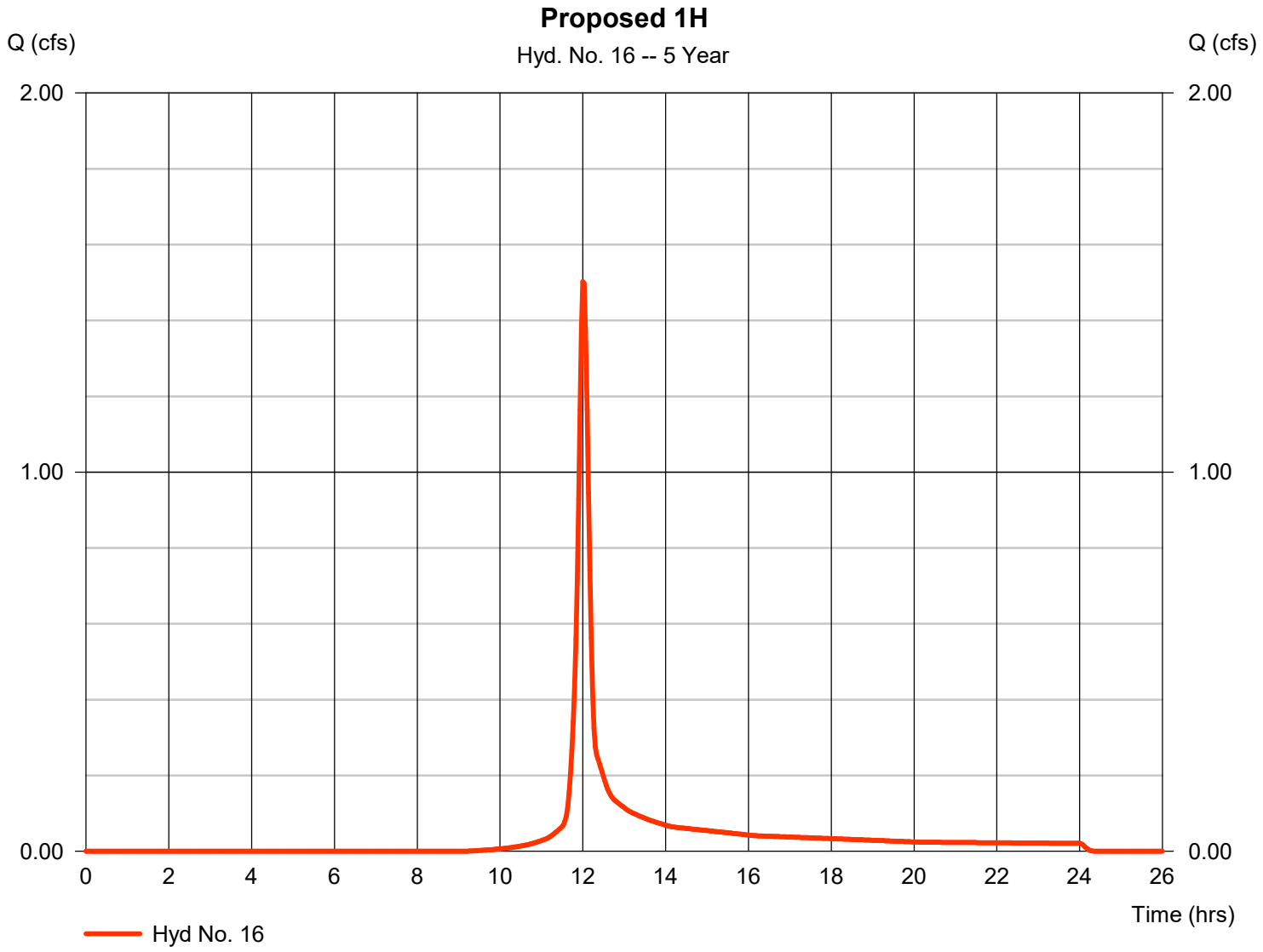
Hydrograph Report

Hyd. No. 16

Proposed 1H

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.503 cfs
Storm frequency	=	5 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	3,915 cuft
Drainage area	=	0.510 ac	Curve number	=	75*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	4.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.150 x 98) + (0.360 x 65)] / 0.510

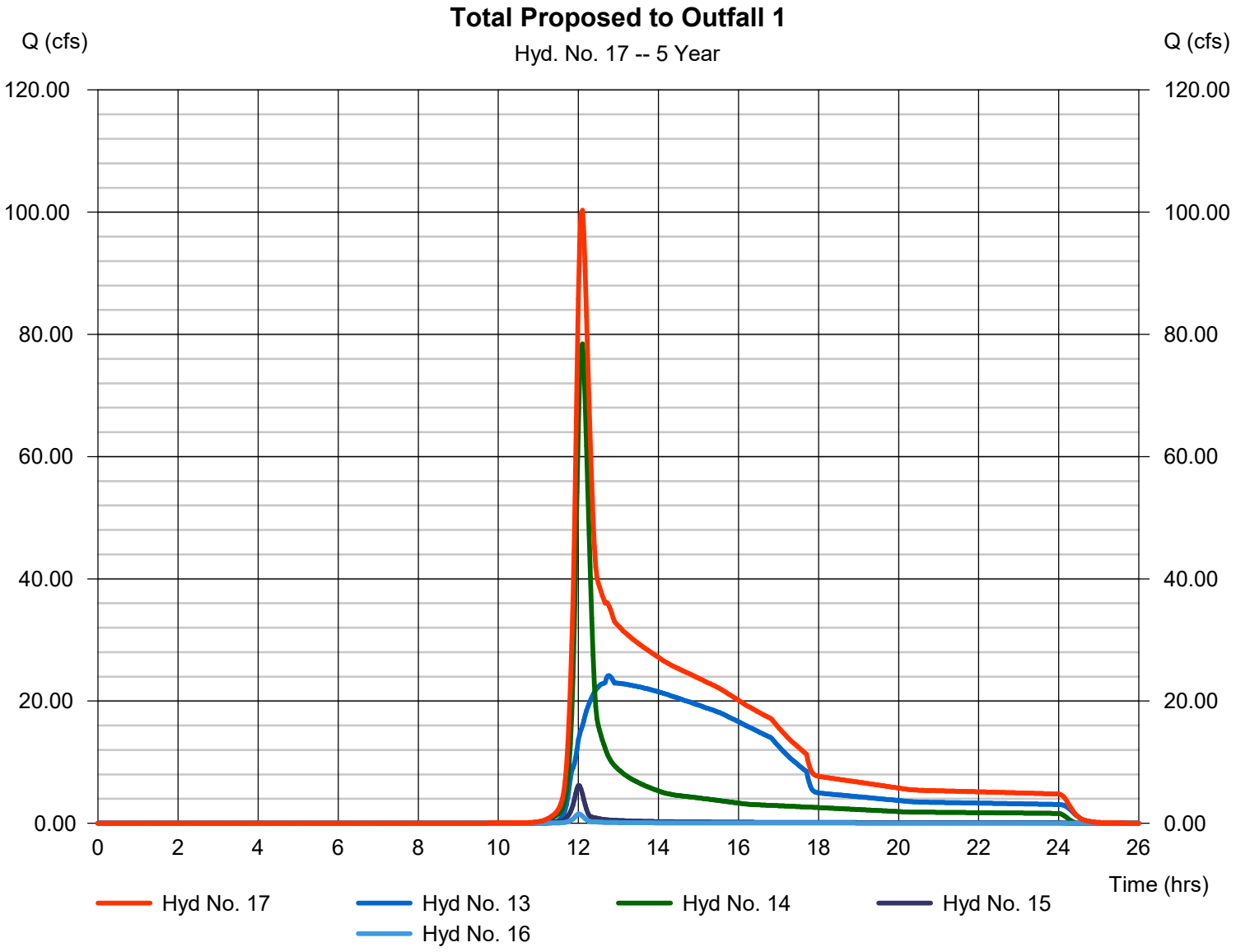


Hydrograph Report

Hyd. No. 17

Total Proposed to Outfall 1

Hydrograph type	= Combine	Peak discharge	= 100.32 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 753,093 cuft
Inflow hyds.	= 13, 14, 15, 16	Contrib. drain. area	= 51.010 ac

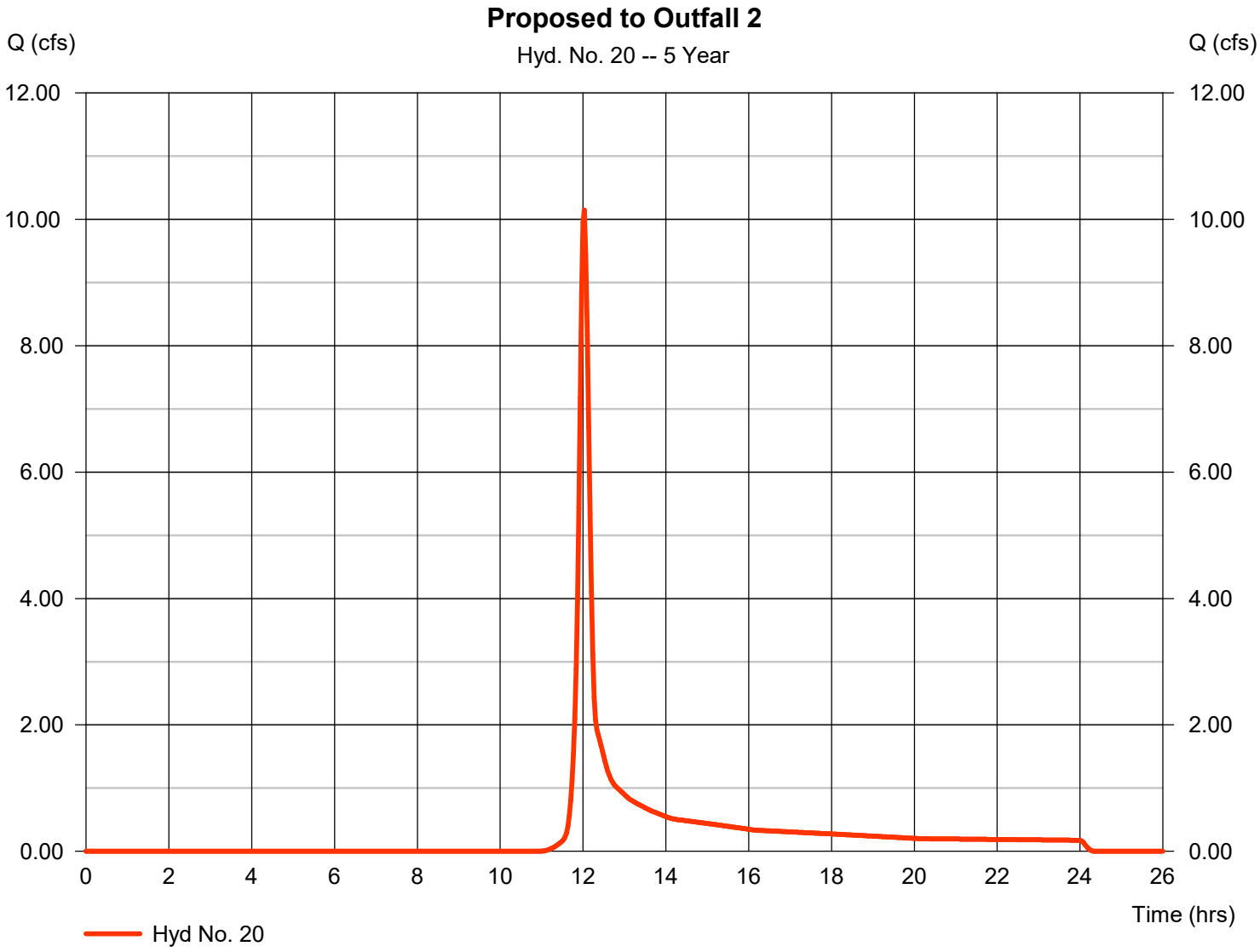


Hydrograph Report

Hyd. No. 20

Proposed to Outfall 2

Hydrograph type	= SCS Runoff	Peak discharge	= 10.15 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.03 hrs
Time interval	= 2 min	Hyd. volume	= 27,287 cuft
Drainage area	= 5.220 ac	Curve number	= 66
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 10.10 min
Total precip.	= 4.50 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



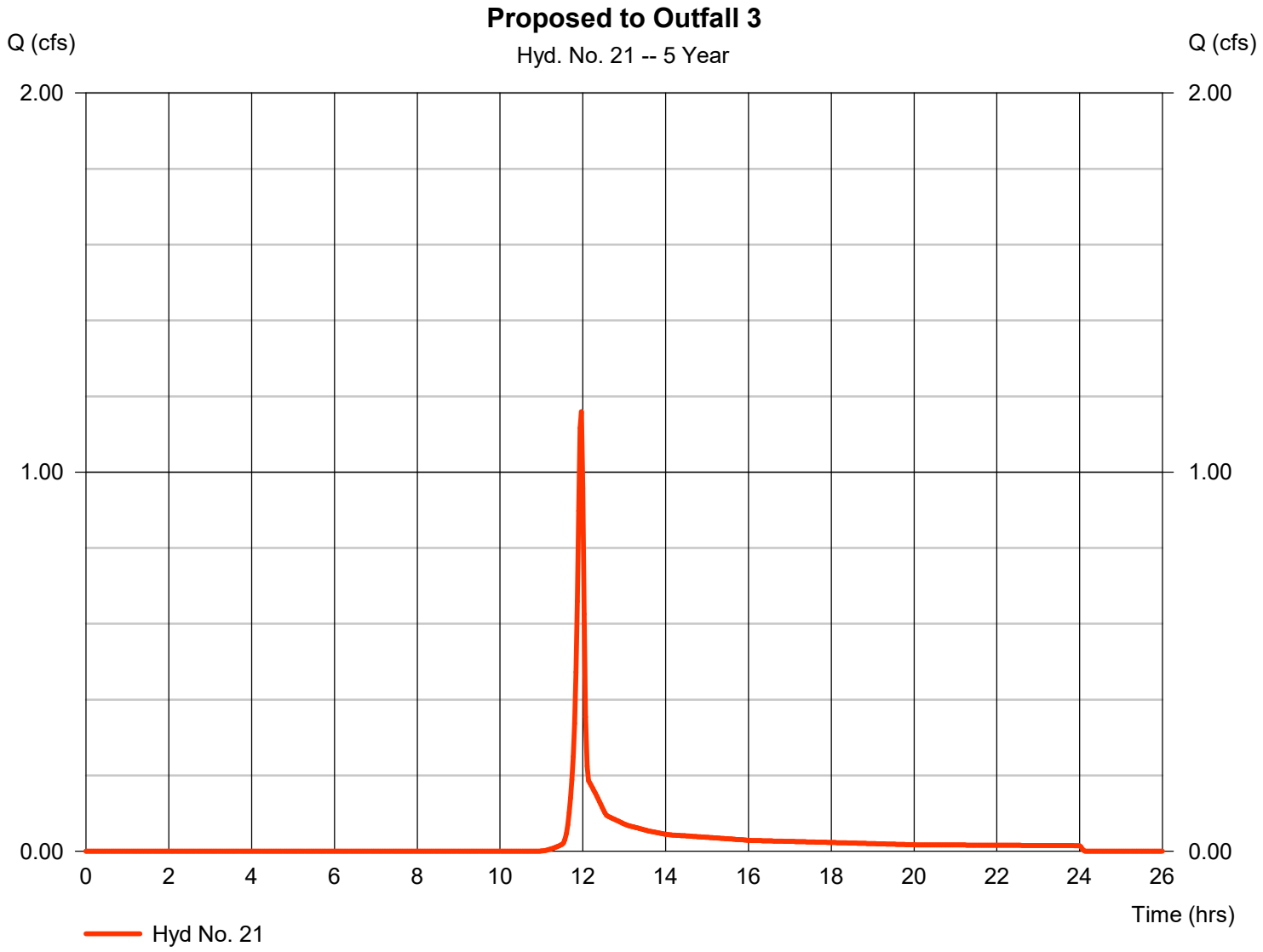
Hydrograph Report

Hyd. No. 21

Proposed to Outfall 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.159 cfs
Storm frequency	=	5 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	2,329 cuft
Drainage area	=	0.490 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.490 x 66)] / 0.490

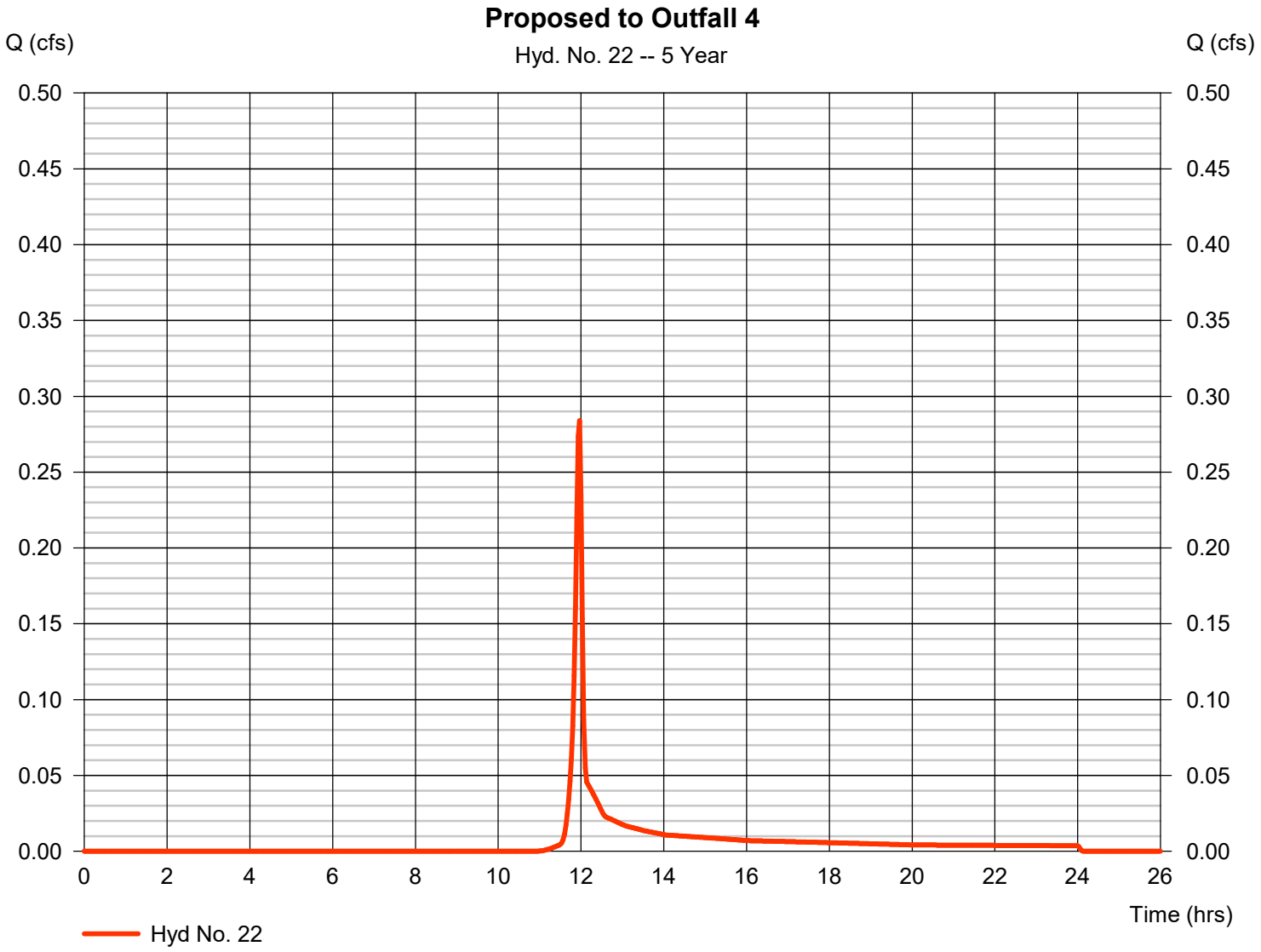


Hydrograph Report

Hyd. No. 22

Proposed to Outfall 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.284 cfs
Storm frequency	=	5 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	570 cuft
Drainage area	=	0.120 ac	Curve number	=	66
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

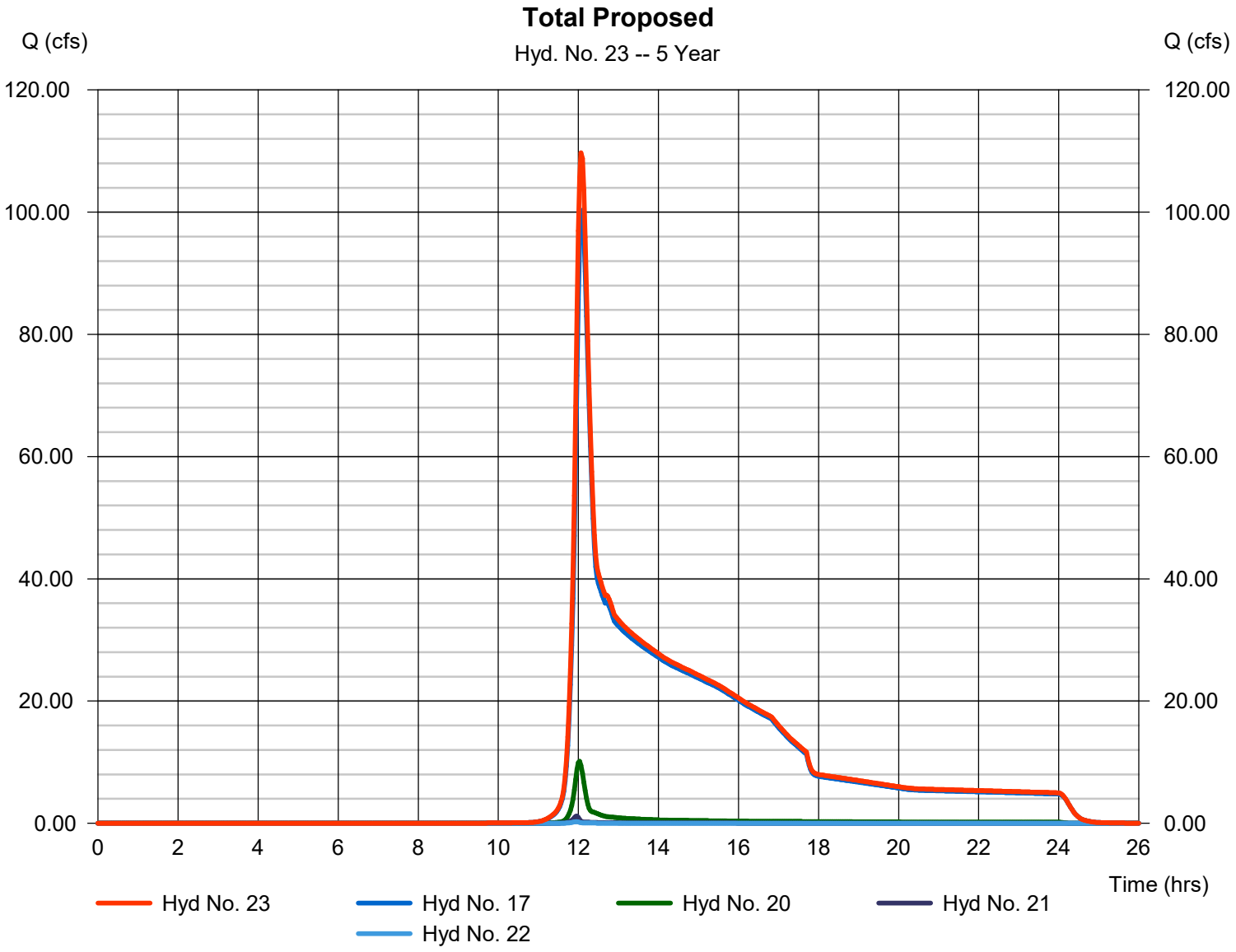


Hydrograph Report

Hyd. No. 23

Total Proposed

Hydrograph type	=	Combine	Peak discharge	=	109.71 cfs
Storm frequency	=	5 yrs	Time to peak	=	12.07 hrs
Time interval	=	2 min	Hyd. volume	=	783,278 cuft
Inflow hyds.	=	17, 20, 21, 22	Contrib. drain. area	=	5.830 ac



Hydrograph Summary Report

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

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	214.85	2	738	1,079,345	------	------	------	Existing to Outfall 1
2	SCS Runoff	13.95	2	722	36,856	------	------	------	Existing to Outfall 2
3	SCS Runoff	1.573	2	718	3,145	------	------	------	Existing to Outfall 3
4	SCS Runoff	0.385	2	718	770	------	------	------	Existing to Outfall 4
5	Combine	217.83	2	738	1,120,117	1, 2, 3, 4	------	------	Total Existing
7	SCS Runoff	82.20	2	732	343,426	------	------	------	Proposed 1A
8	Reservoir	67.96	2	740	343,425	7	585.49	20,830	Through Pond 1A
9	SCS Runoff	53.81	2	728	194,506	------	------	------	Proposed 1B
10	Reservoir	52.94	2	730	194,504	9	613.46	12,948	Through Pond 1B
11	SCS Runoff	29.29	2	728	105,160	------	------	------	Remainder to Pond 1C
12	Combine	141.81	2	730	643,089	8, 10, 11	------	------	Total to Pond 1C
13	Reservoir	88.55	2	750	643,088	12	565.75	187,483	Through Pond 1C
14	SCS Runoff	107.47	2	726	346,371	------	------	------	Proposed 1D
15	SCS Runoff	7.890	2	720	20,454	------	------	------	Proposed 1E
16	SCS Runoff	1.941	2	720	5,035	------	------	------	Proposed 1H
17	Combine	132.92	2	726	1,014,831	13, 14, 15, 16	------	------	Total Proposed to Outfall 1
20	SCS Runoff	13.95	2	722	36,856	------	------	------	Proposed to Outfall 2
21	SCS Runoff	1.573	2	718	3,145	------	------	------	Proposed to Outfall 3
22	SCS Runoff	0.385	2	718	770	------	------	------	Proposed to Outfall 4
23	Combine	146.35	2	724	1,055,603	17, 20, 21, 22	------	------	Total Proposed

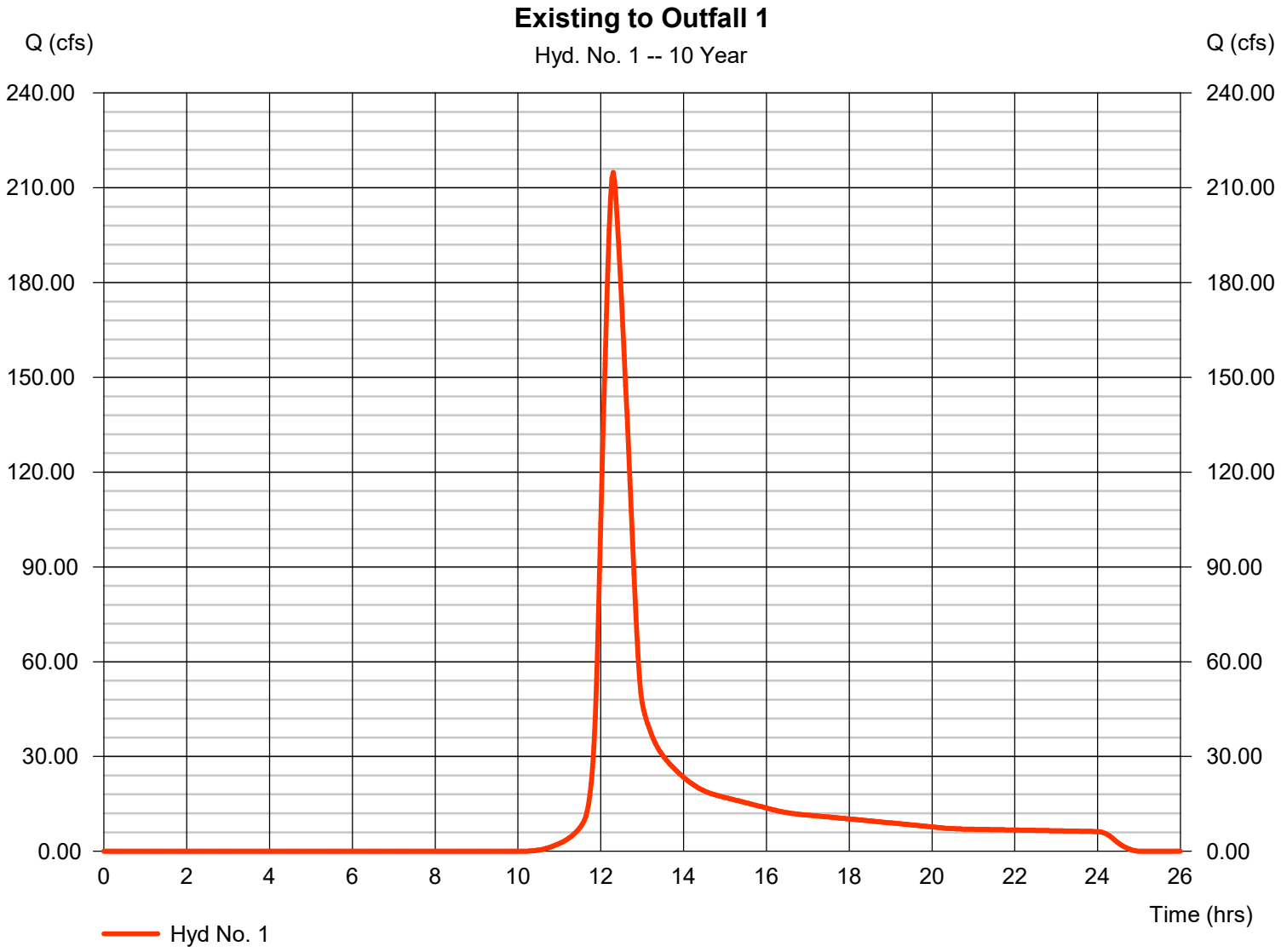
Hydrograph Report

Hyd. No. 1

Existing to Outfall 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	214.85 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.30 hrs
Time interval	=	2 min	Hyd. volume	=	1,079,345 cuft
Drainage area	=	145.400 ac	Curve number	=	68*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	39.00 min
Total precip.	=	5.23 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.780 x 45) + (110.600 x 66) + (32.020 x 77)] / 145.400

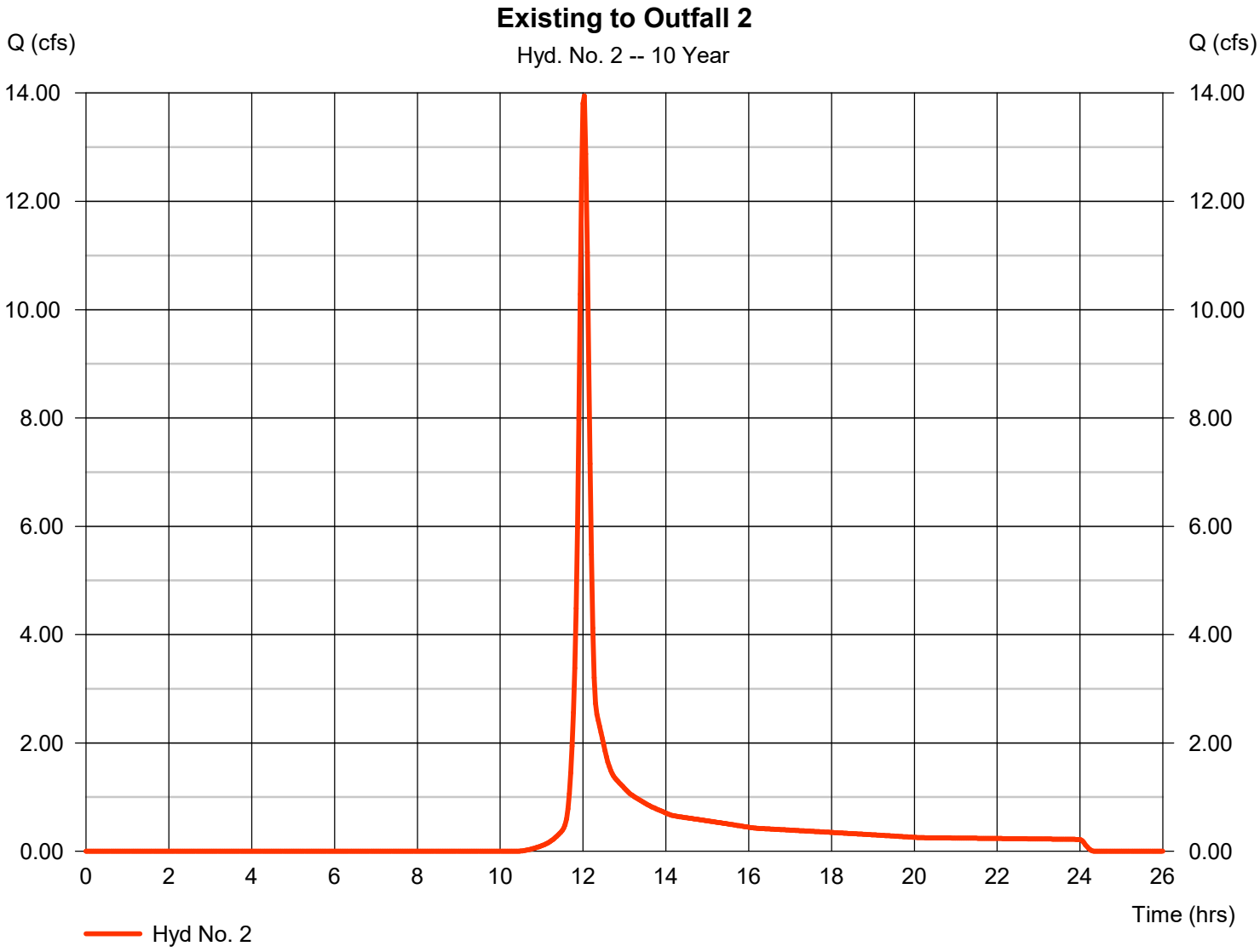


Hydrograph Report

Hyd. No. 2

Existing to Outfall 2

Hydrograph type	= SCS Runoff	Peak discharge	= 13.95 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.03 hrs
Time interval	= 2 min	Hyd. volume	= 36,856 cuft
Drainage area	= 5.220 ac	Curve number	= 66
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 10.10 min
Total precip.	= 5.23 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



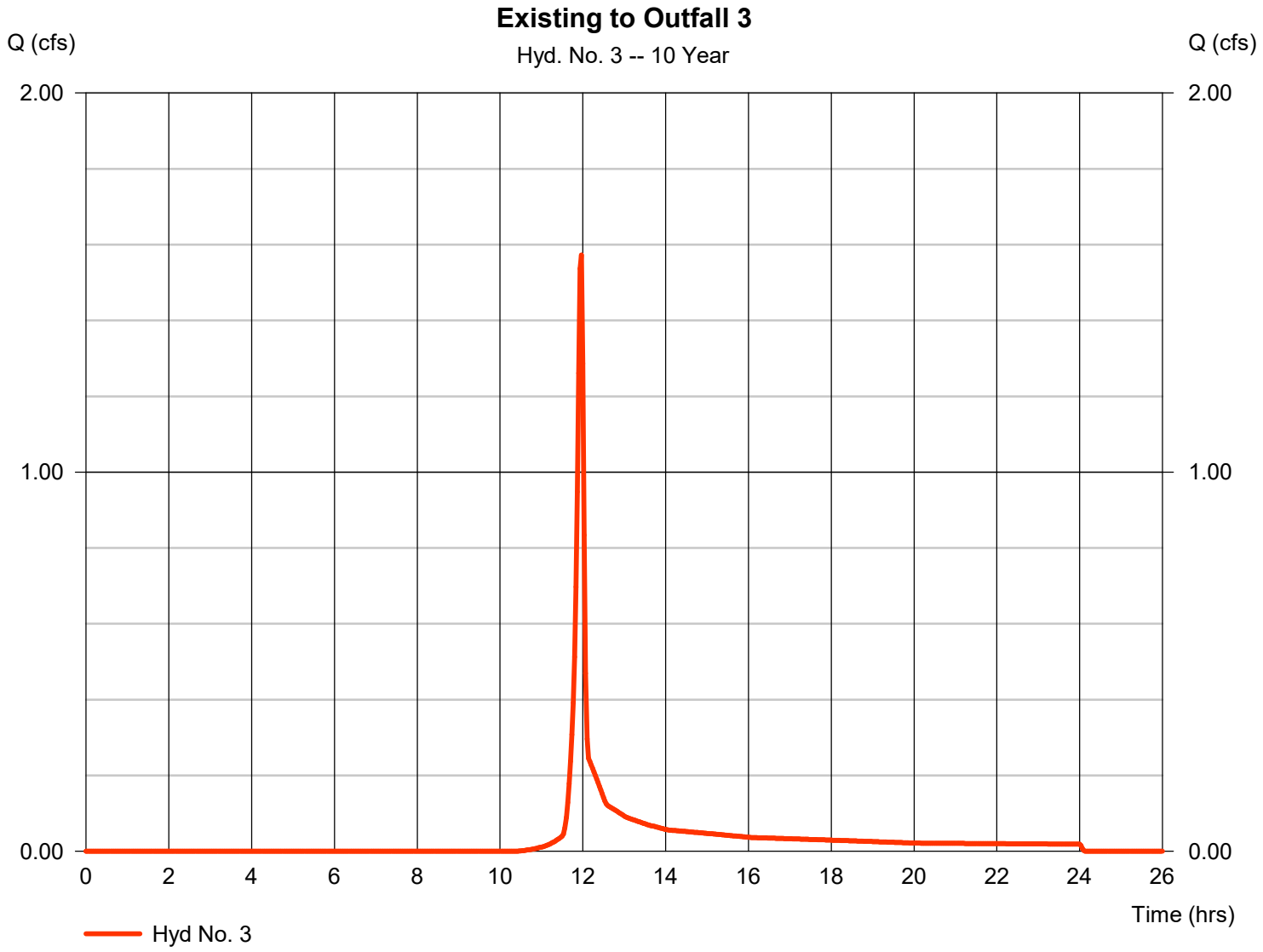
Hydrograph Report

Hyd. No. 3

Existing to Outfall 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.573 cfs
Storm frequency	=	10 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	3,145 cuft
Drainage area	=	0.490 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.23 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.490 x 66)] / 0.490

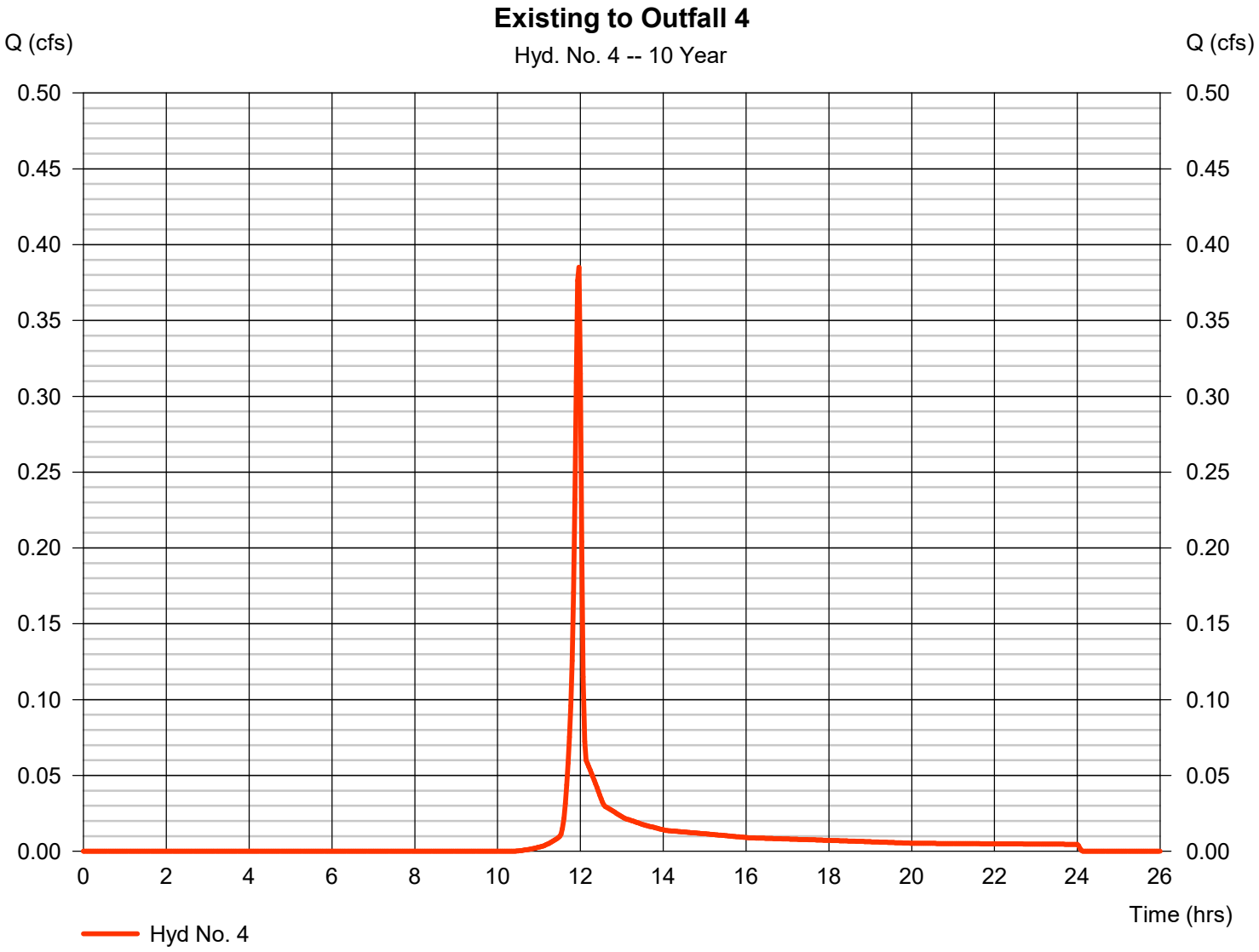


Hydrograph Report

Hyd. No. 4

Existing to Outfall 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.385 cfs
Storm frequency	=	10 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	770 cuft
Drainage area	=	0.120 ac	Curve number	=	66
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.23 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

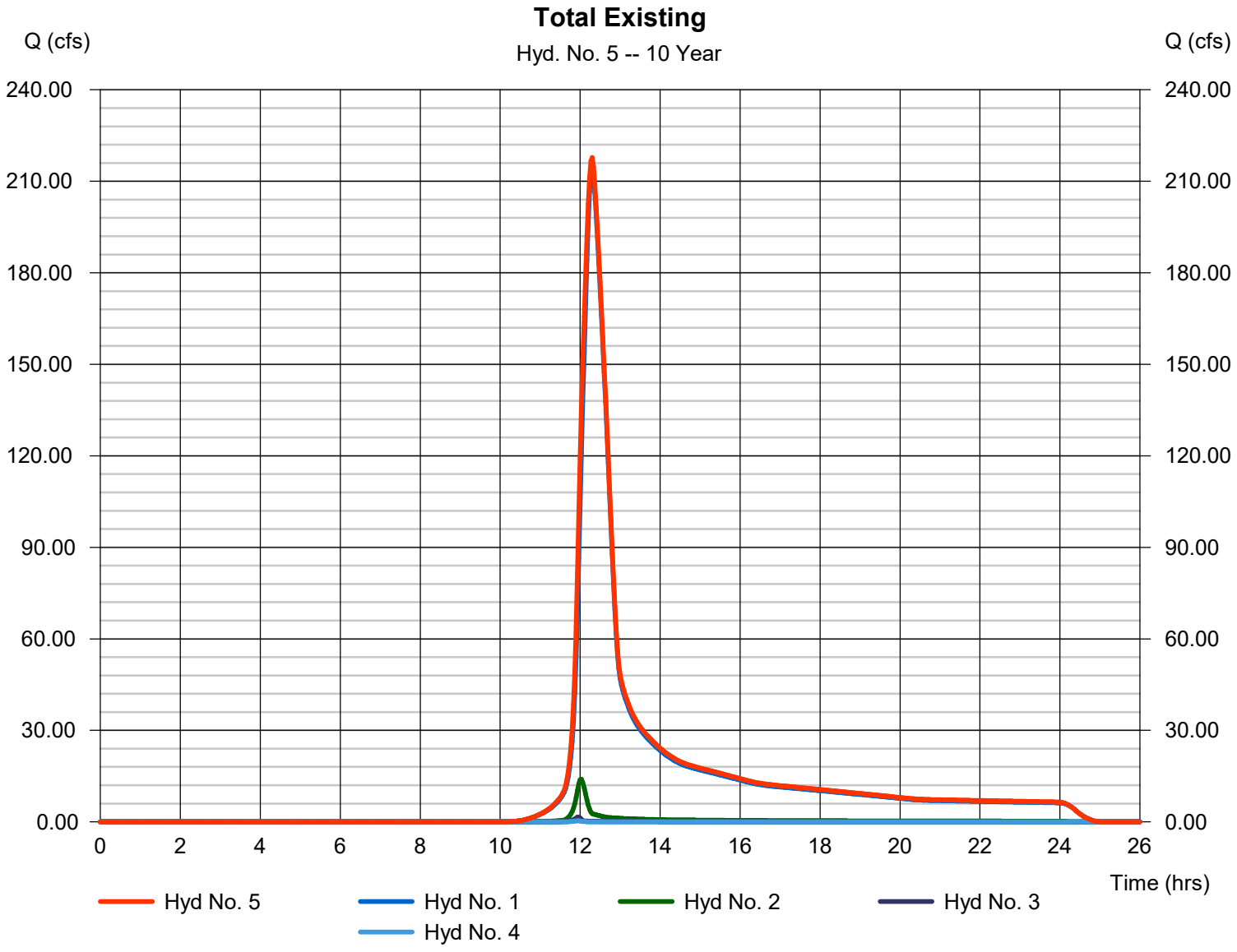


Hydrograph Report

Hyd. No. 5

Total Existing

Hydrograph type	= Combine	Peak discharge	= 217.83 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.30 hrs
Time interval	= 2 min	Hyd. volume	= 1,120,117 cuft
Inflow hyds.	= 1, 2, 3, 4	Contrib. drain. area	= 151.230 ac



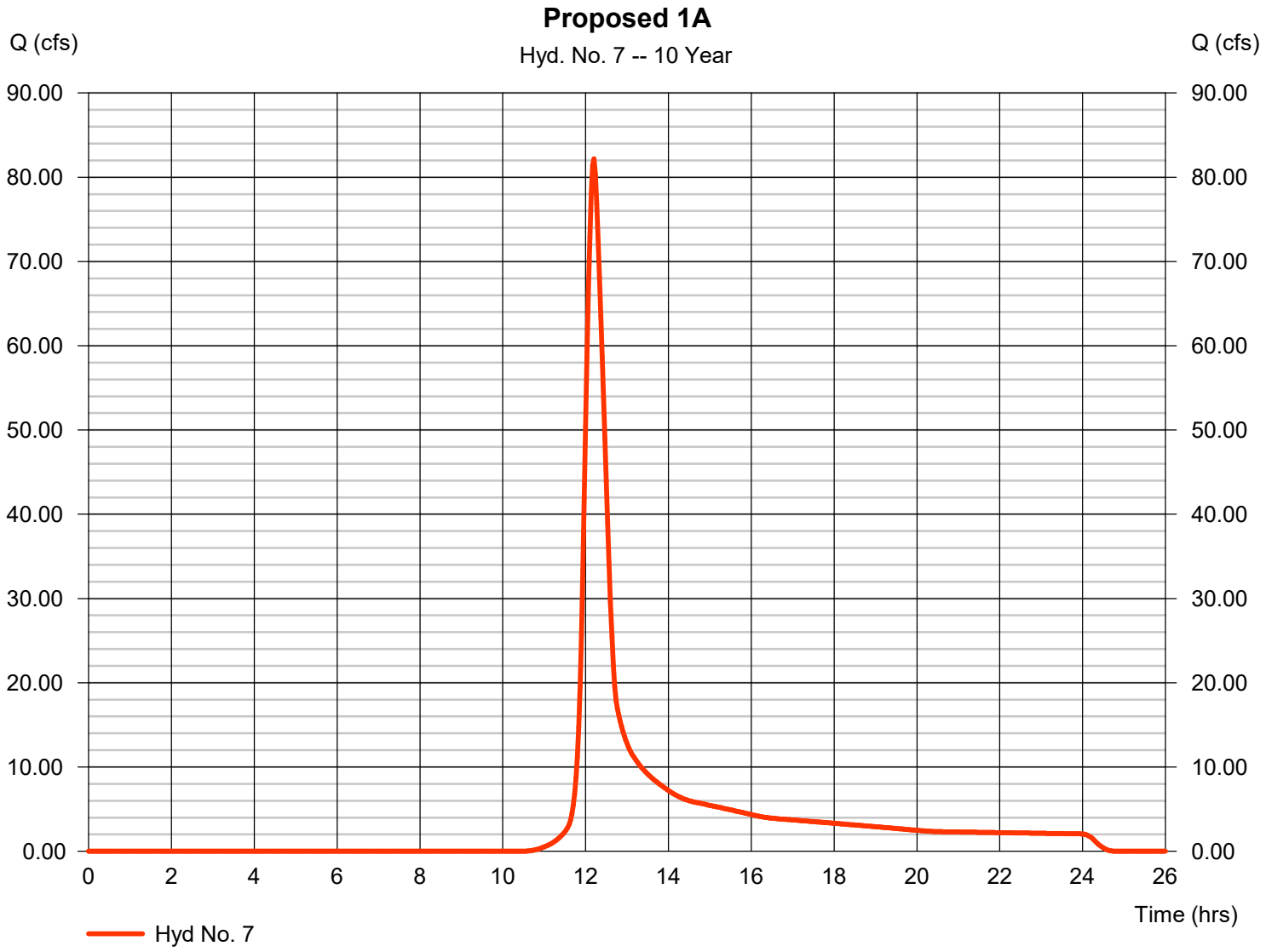
Hydrograph Report

Hyd. No. 7

Proposed 1A

Hydrograph type	=	SCS Runoff	Peak discharge	=	82.20 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	343,426 cuft
Drainage area	=	50.160 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	29.70 min
Total precip.	=	5.23 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(7.960 x 65) + (42.200 x 66)] / 50.160



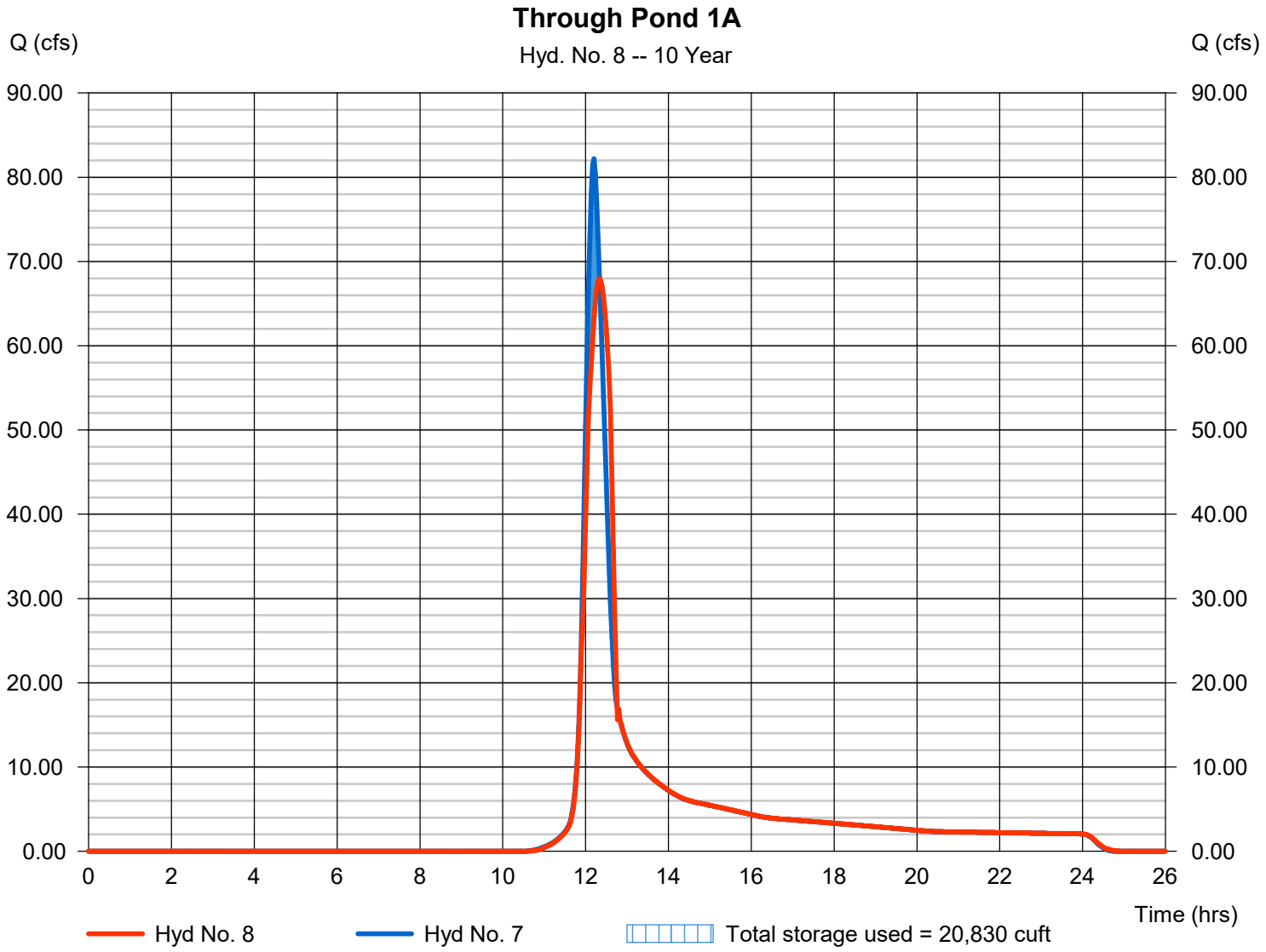
Hydrograph Report

Hyd. No. 8

Through Pond 1A

Hydrograph type	=	Reservoir	Peak discharge	=	67.96 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.33 hrs
Time interval	=	2 min	Hyd. volume	=	343,425 cuft
Inflow hyd. No.	=	7 - Proposed 1A	Max. Elevation	=	585.49 ft
Reservoir name	=	Pond 1A	Max. Storage	=	20,830 cuft

Storage Indication method used.



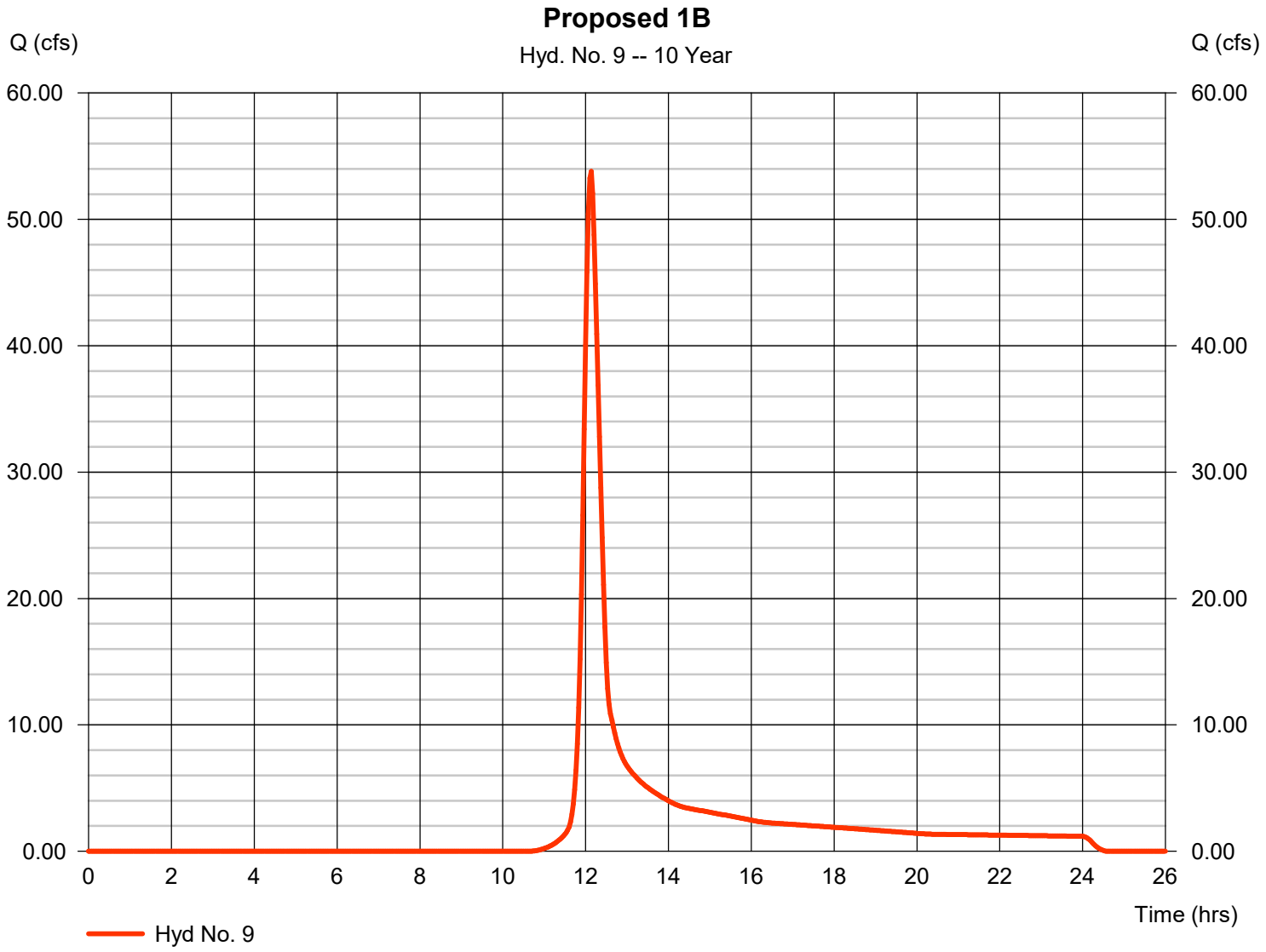
Hydrograph Report

Hyd. No. 9

Proposed 1B

Hydrograph type	=	SCS Runoff	Peak discharge	=	53.81 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	194,506 cuft
Drainage area	=	29.110 ac	Curve number	=	65*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	20.50 min
Total precip.	=	5.23 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(11.520 x 66) + (17.590 x 65)] / 29.110



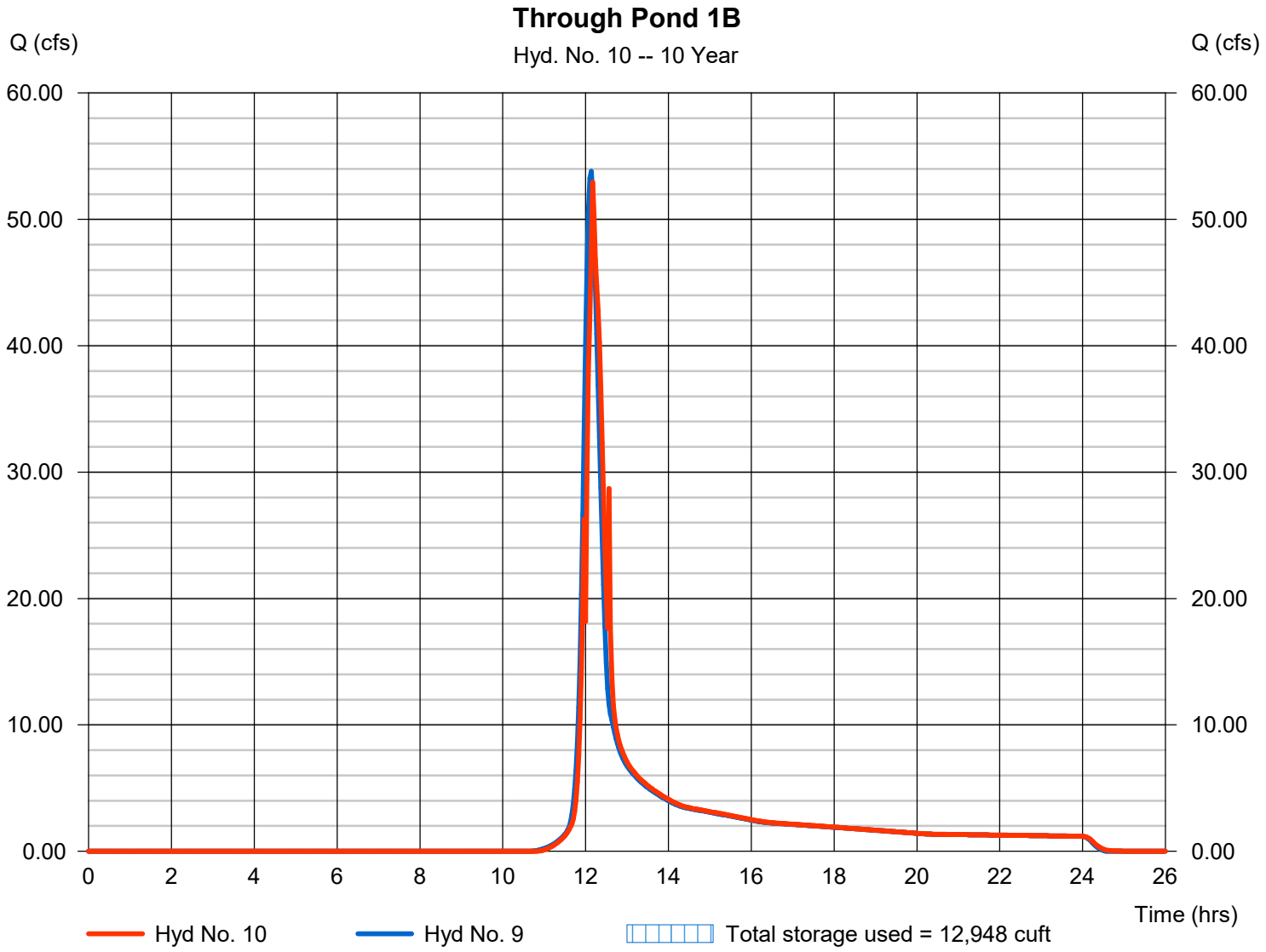
Hydrograph Report

Hyd. No. 10

Through Pond 1B

Hydrograph type	=	Reservoir	Peak discharge	=	52.94 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.17 hrs
Time interval	=	2 min	Hyd. volume	=	194,504 cuft
Inflow hyd. No.	=	9 - Proposed 1B	Max. Elevation	=	613.46 ft
Reservoir name	=	Pond 1B	Max. Storage	=	12,948 cuft

Storage Indication method used.



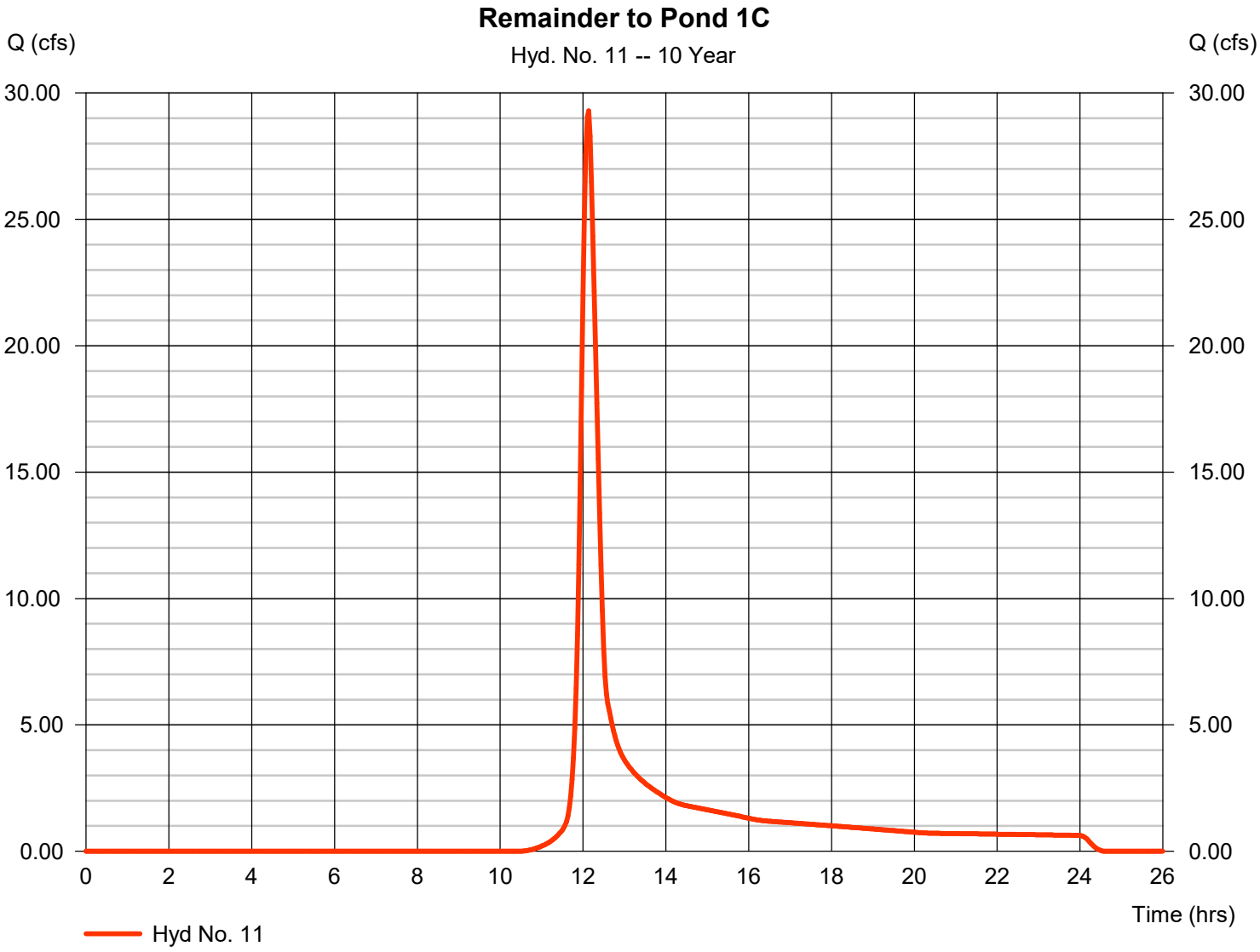
Hydrograph Report

Hyd. No. 11

Remainder to Pond 1C

Hydrograph type	=	SCS Runoff	Peak discharge	=	29.29 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	105,160 cuft
Drainage area	=	15.090 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	20.30 min
Total precip.	=	5.23 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(9.060 x 66) + (6.030 x 65)] / 15.090

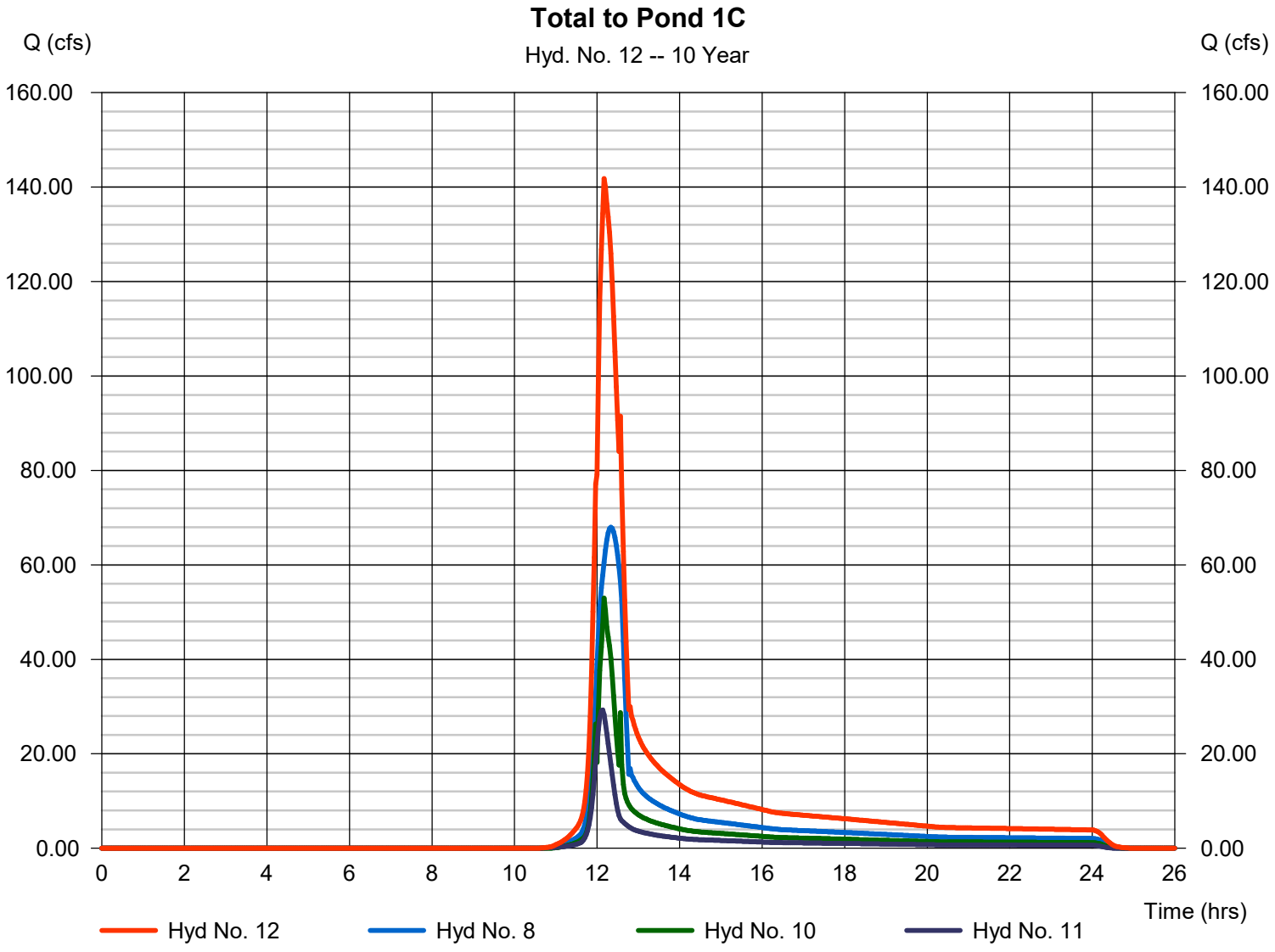


Hydrograph Report

Hyd. No. 12

Total to Pond 1C

Hydrograph type	= Combine	Peak discharge	= 141.81 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.17 hrs
Time interval	= 2 min	Hyd. volume	= 643,089 cuft
Inflow hyds.	= 8, 10, 11	Contrib. drain. area	= 15.090 ac



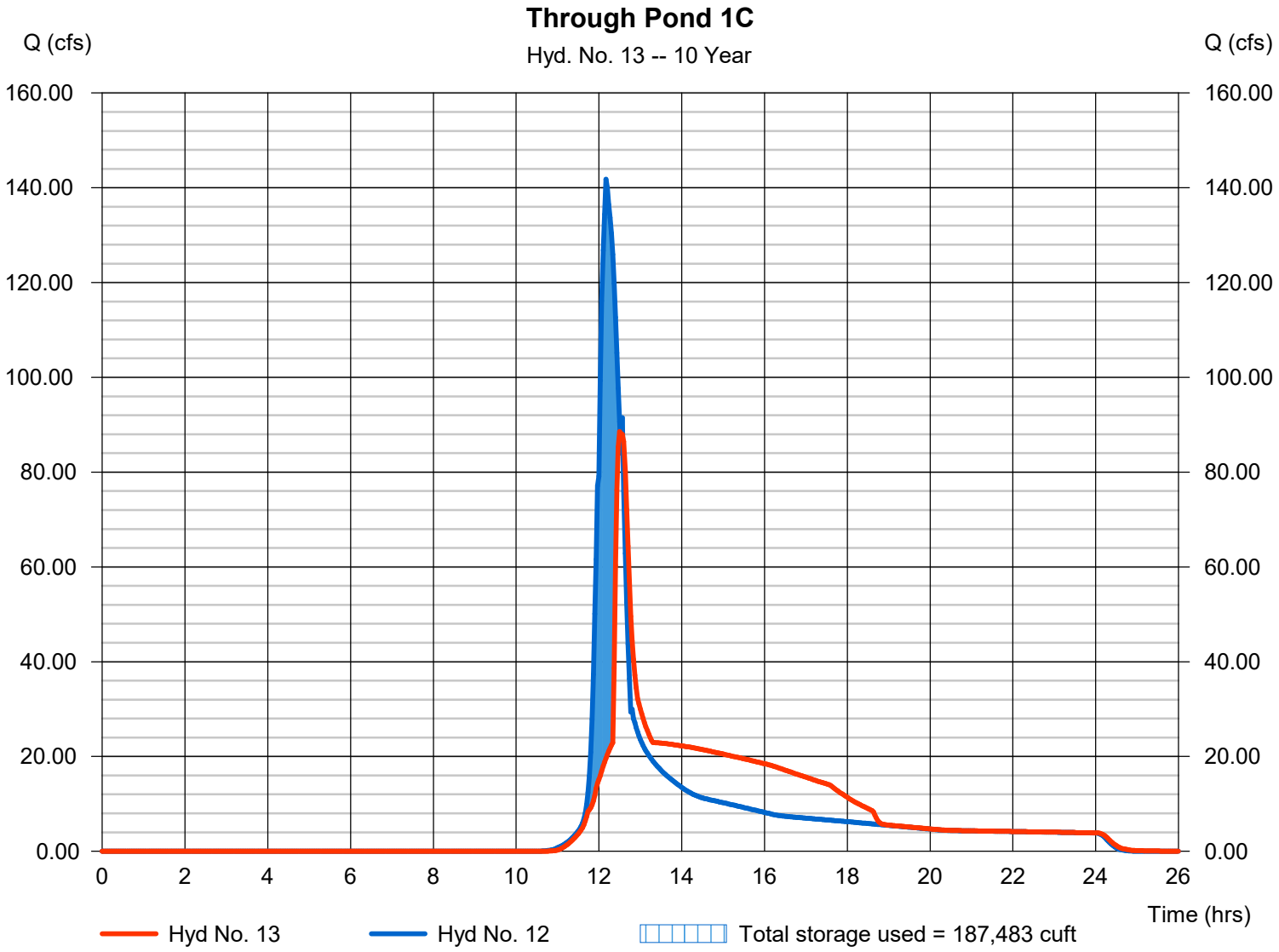
Hydrograph Report

Hyd. No. 13

Through Pond 1C

Hydrograph type	=	Reservoir	Peak discharge	=	88.55 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.50 hrs
Time interval	=	2 min	Hyd. volume	=	643,088 cuft
Inflow hyd. No.	=	12 - Total to Pond 1C	Max. Elevation	=	565.75 ft
Reservoir name	=	Pond 1C	Max. Storage	=	187,483 cuft

Storage Indication method used.



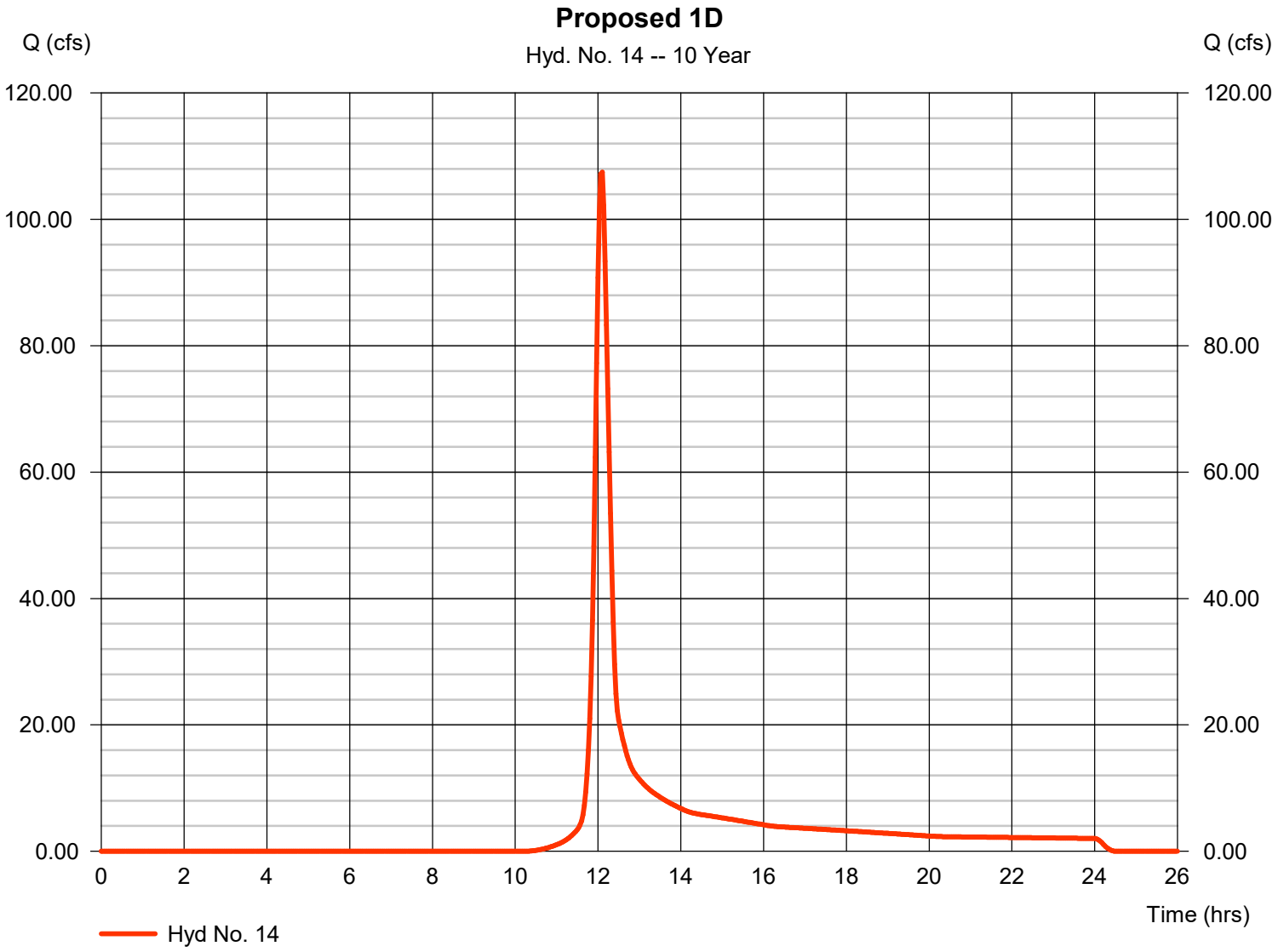
Hydrograph Report

Hyd. No. 14

Proposed 1D

Hydrograph type	=	SCS Runoff	Peak discharge	=	107.47 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.10 hrs
Time interval	=	2 min	Hyd. volume	=	346,371 cuft
Drainage area	=	48.560 ac	Curve number	=	67*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	17.60 min
Total precip.	=	5.23 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.720 x 98) + (21.900 x 66) + (24.940 x 65)] / 48.560



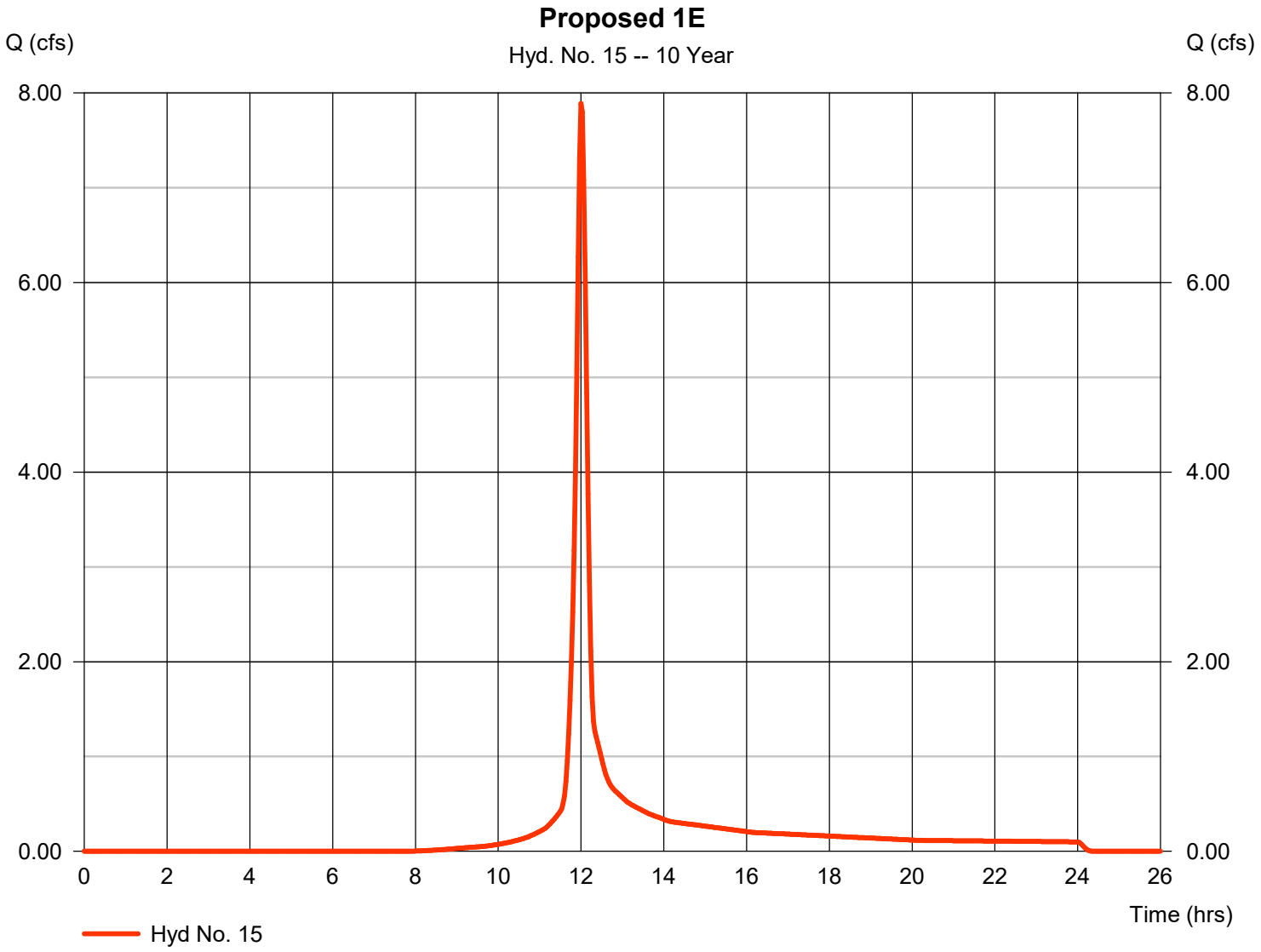
Hydrograph Report

Hyd. No. 15

Proposed 1E

Hydrograph type	=	SCS Runoff	Peak discharge	=	7.890 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	20,454 cuft
Drainage area	=	1.940 ac	Curve number	=	77*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	5.23 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.700 x 98) + (1.240 x 65)] / 1.940



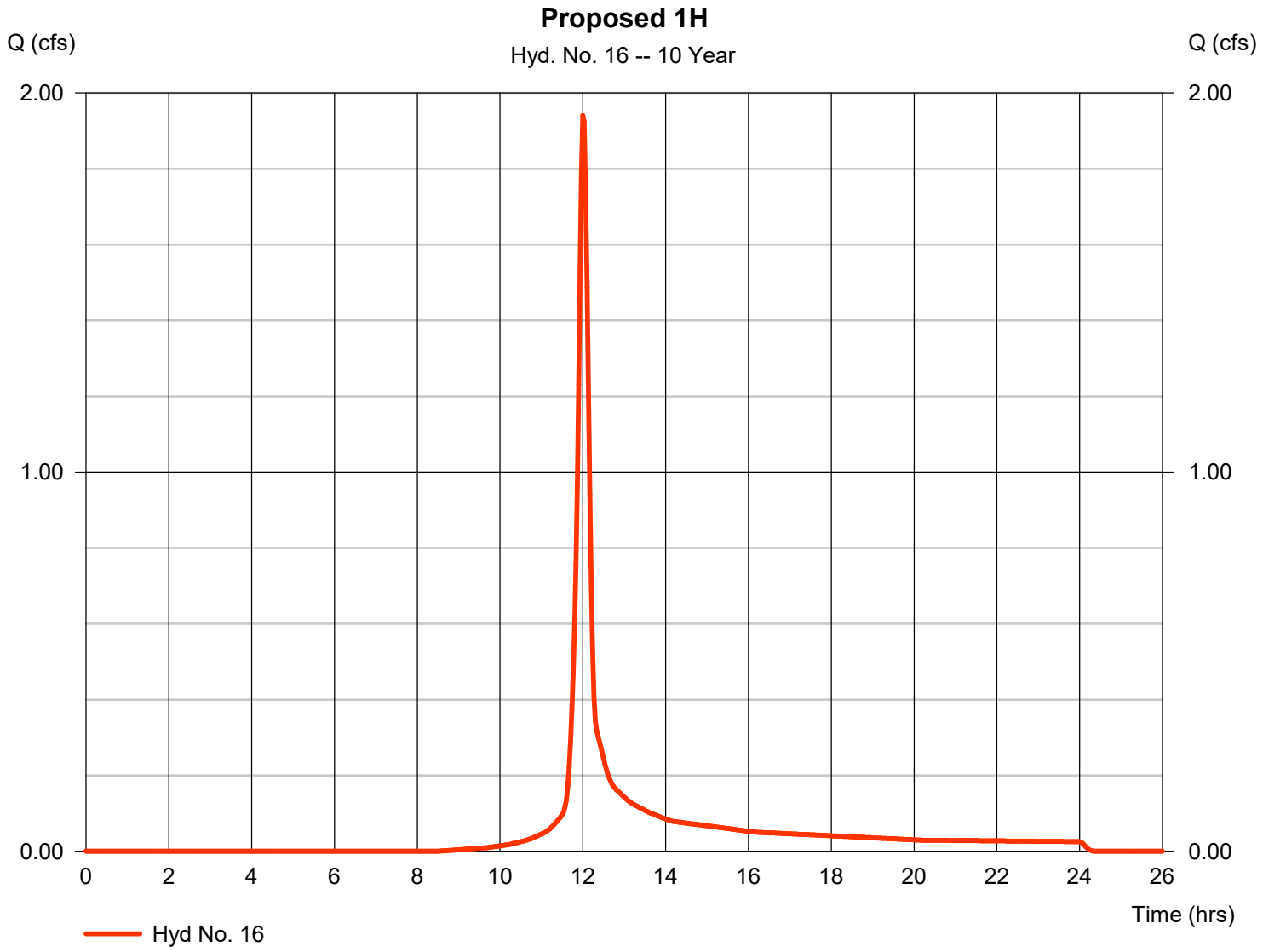
Hydrograph Report

Hyd. No. 16

Proposed 1H

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.941 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	5,035 cuft
Drainage area	=	0.510 ac	Curve number	=	75*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	5.23 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.150 x 98) + (0.360 x 65)] / 0.510

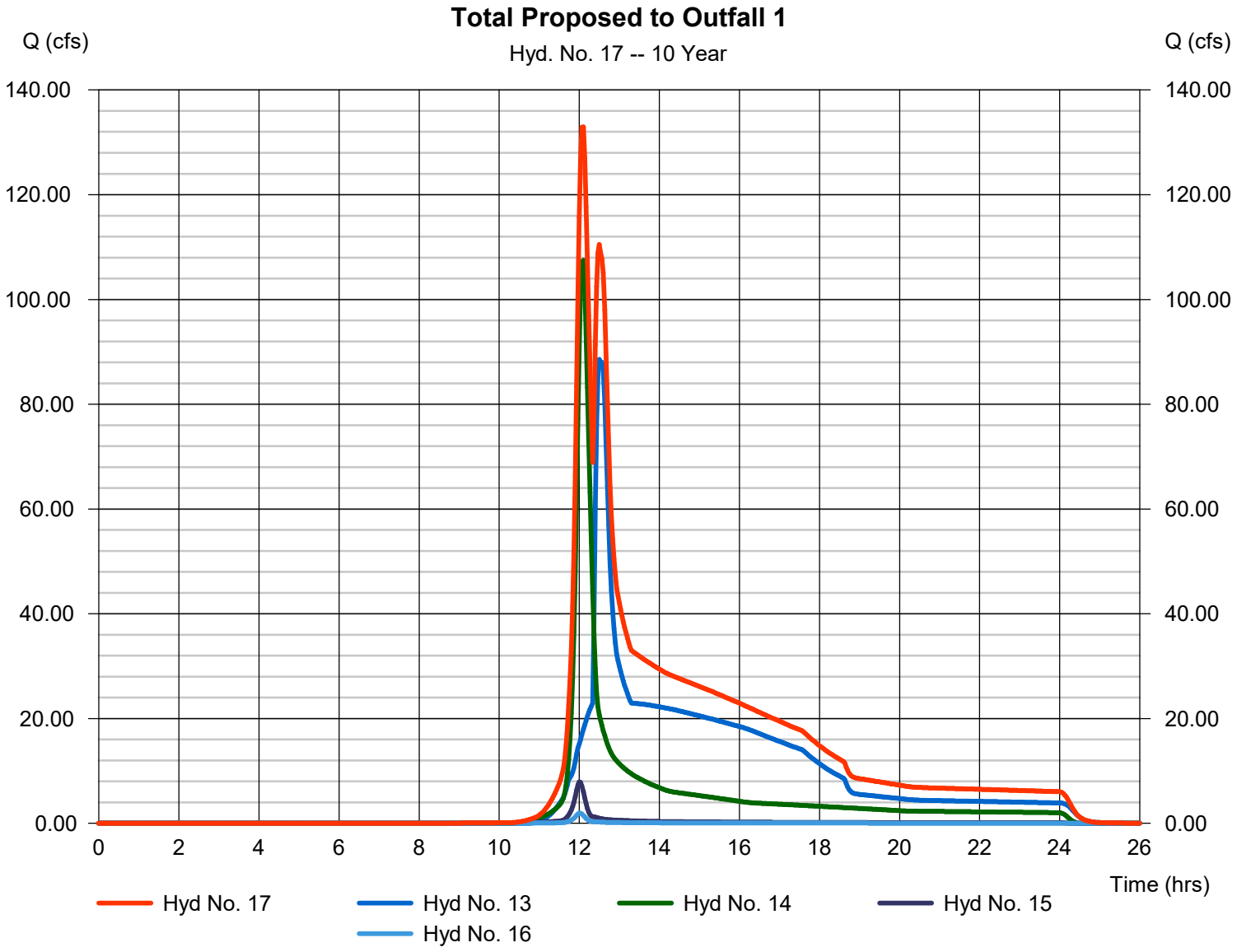


Hydrograph Report

Hyd. No. 17

Total Proposed to Outfall 1

Hydrograph type	= Combine	Peak discharge	= 132.92 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 1,014,831 cuft
Inflow hyds.	= 13, 14, 15, 16	Contrib. drain. area	= 51.010 ac

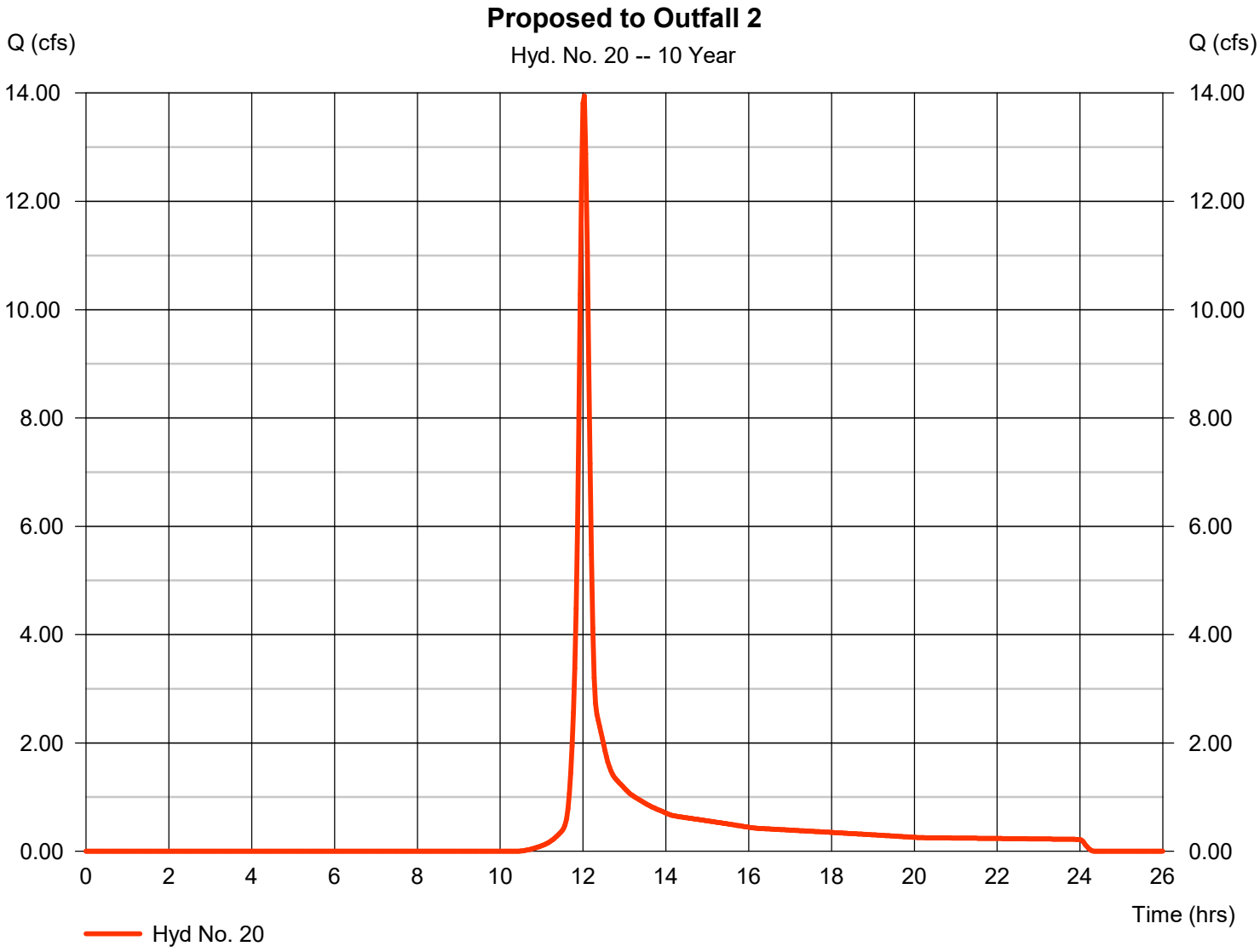


Hydrograph Report

Hyd. No. 20

Proposed to Outfall 2

Hydrograph type	= SCS Runoff	Peak discharge	= 13.95 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.03 hrs
Time interval	= 2 min	Hyd. volume	= 36,856 cuft
Drainage area	= 5.220 ac	Curve number	= 66
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 10.10 min
Total precip.	= 5.23 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



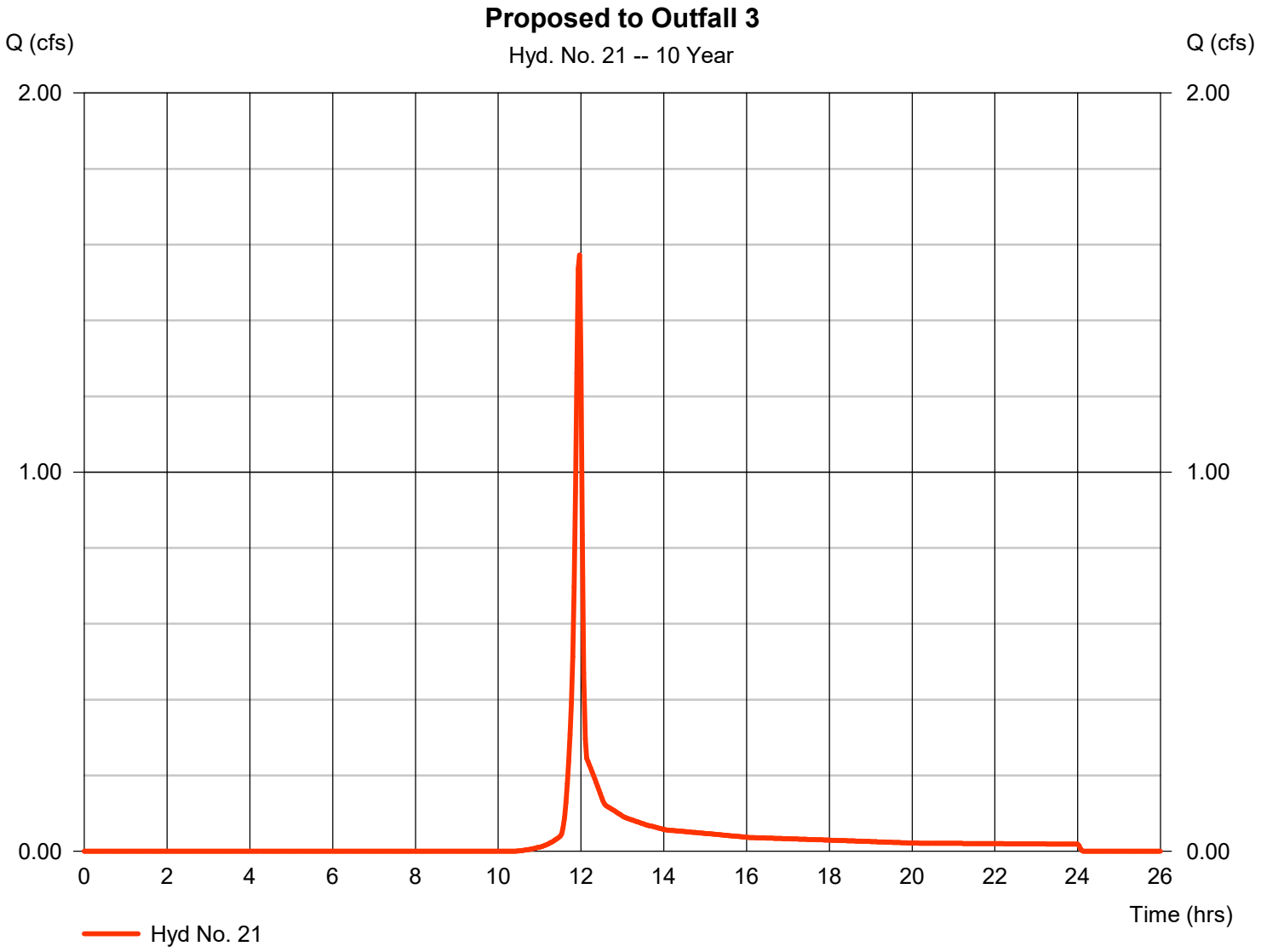
Hydrograph Report

Hyd. No. 21

Proposed to Outfall 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.573 cfs
Storm frequency	=	10 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	3,145 cuft
Drainage area	=	0.490 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.23 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.490 x 66)] / 0.490

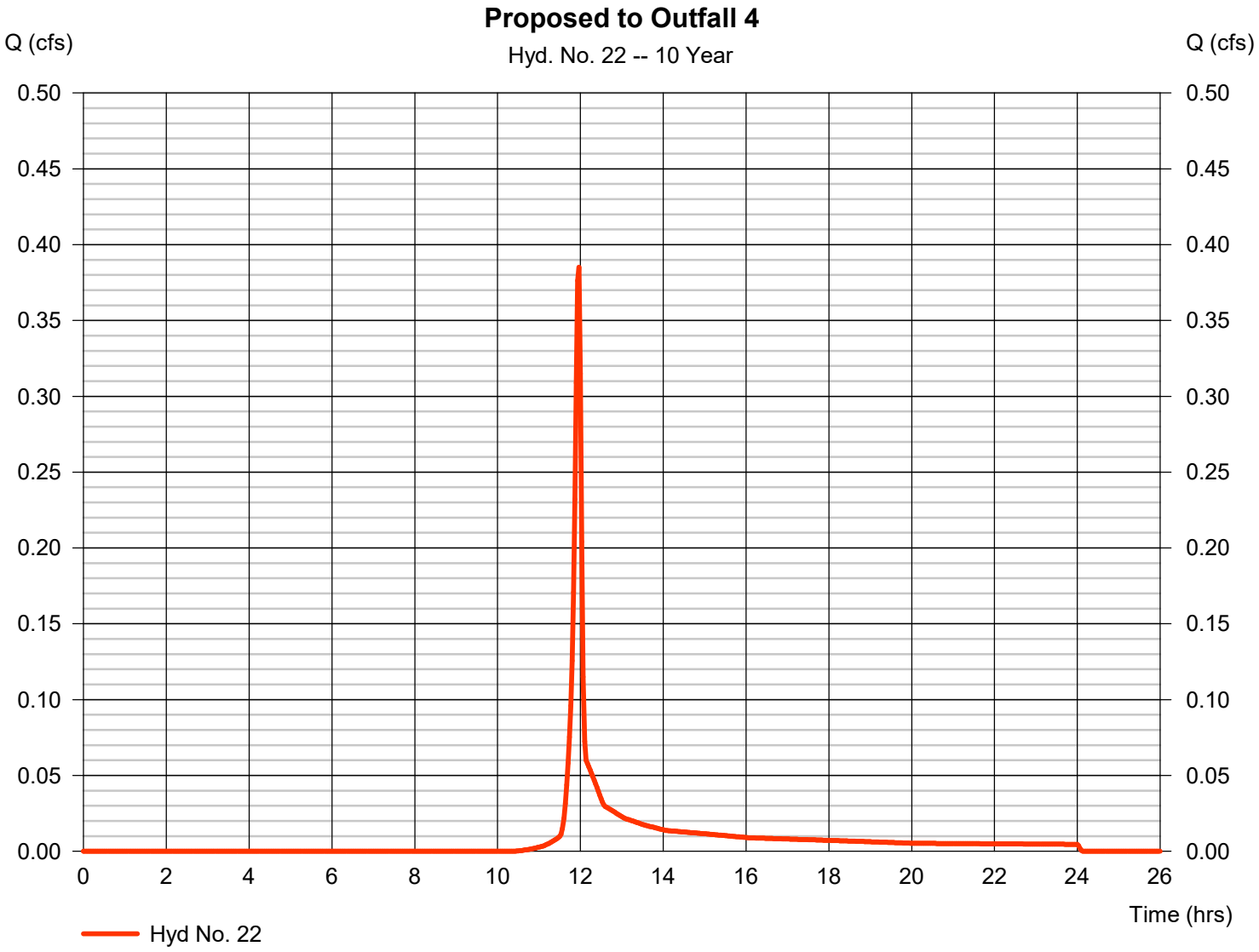


Hydrograph Report

Hyd. No. 22

Proposed to Outfall 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.385 cfs
Storm frequency	=	10 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	770 cuft
Drainage area	=	0.120 ac	Curve number	=	66
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.23 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

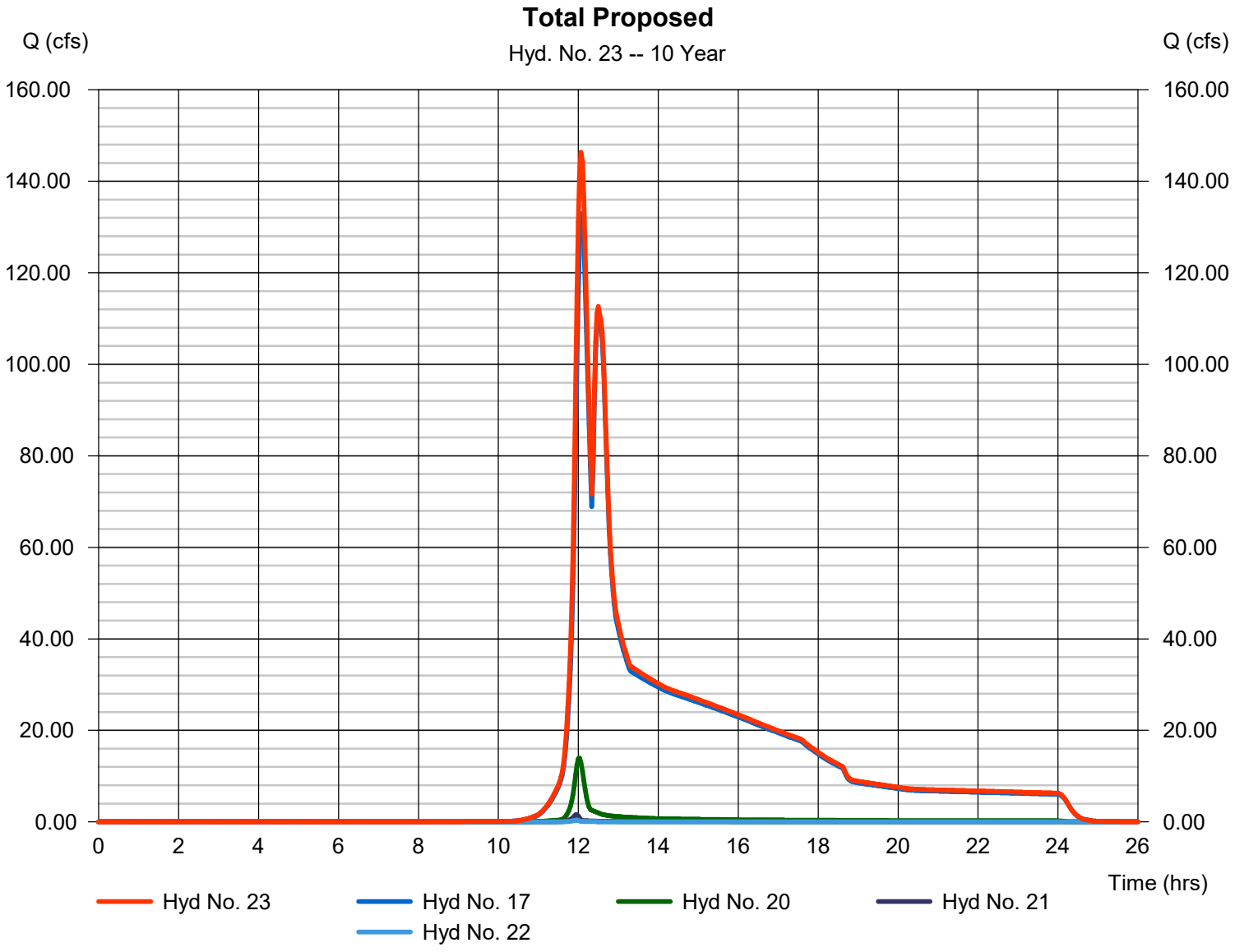


Hydrograph Report

Hyd. No. 23

Total Proposed

Hydrograph type	=	Combine	Peak discharge	=	146.35 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.07 hrs
Time interval	=	2 min	Hyd. volume	=	1,055,603 cuft
Inflow hyds.	=	17, 20, 21, 22	Contrib. drain. area	=	5.830 ac



Hydrograph Summary Report

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

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	293.58	2	738	1,448,432	------	------	------	Existing to Outfall 1
2	SCS Runoff	19.09	2	722	50,013	------	------	------	Existing to Outfall 2
3	SCS Runoff	2.130	2	718	4,268	------	------	------	Existing to Outfall 3
4	SCS Runoff	0.522	2	718	1,045	------	------	------	Existing to Outfall 4
5	Combine	297.50	2	738	1,503,758	1, 2, 3, 4	------	------	Total Existing
7	SCS Runoff	113.88	2	732	466,019	------	------	------	Proposed 1A
8	Reservoir	82.25	2	744	466,019	7	587.34	45,501	Through Pond 1A
9	SCS Runoff	74.98	2	728	265,484	------	------	------	Proposed 1B
10	Reservoir	66.63	2	732	265,482	9	614.83	18,434	Through Pond 1B
11	SCS Runoff	40.46	2	728	142,699	------	------	------	Remainder to Pond 1C
12	Combine	178.63	2	732	874,201	8, 10, 11	------	------	Total to Pond 1C
13	Reservoir	145.51	2	744	874,198	12	566.16	202,073	Through Pond 1C
14	SCS Runoff	147.25	2	724	467,368	------	------	------	Proposed 1D
15	SCS Runoff	10.12	2	720	26,283	------	------	------	Proposed 1E
16	SCS Runoff	2.517	2	720	6,527	------	------	------	Proposed 1H
17	Combine	196.29	2	740	1,374,245	13, 14, 15, 16	------	------	Total Proposed to Outfall 1
20	SCS Runoff	19.09	2	722	50,013	------	------	------	Proposed to Outfall 2
21	SCS Runoff	2.130	2	718	4,268	------	------	------	Proposed to Outfall 3
22	SCS Runoff	0.522	2	718	1,045	------	------	------	Proposed to Outfall 4
23	Combine	199.92	2	740	1,429,571	17, 20, 21, 22	------	------	Total Proposed

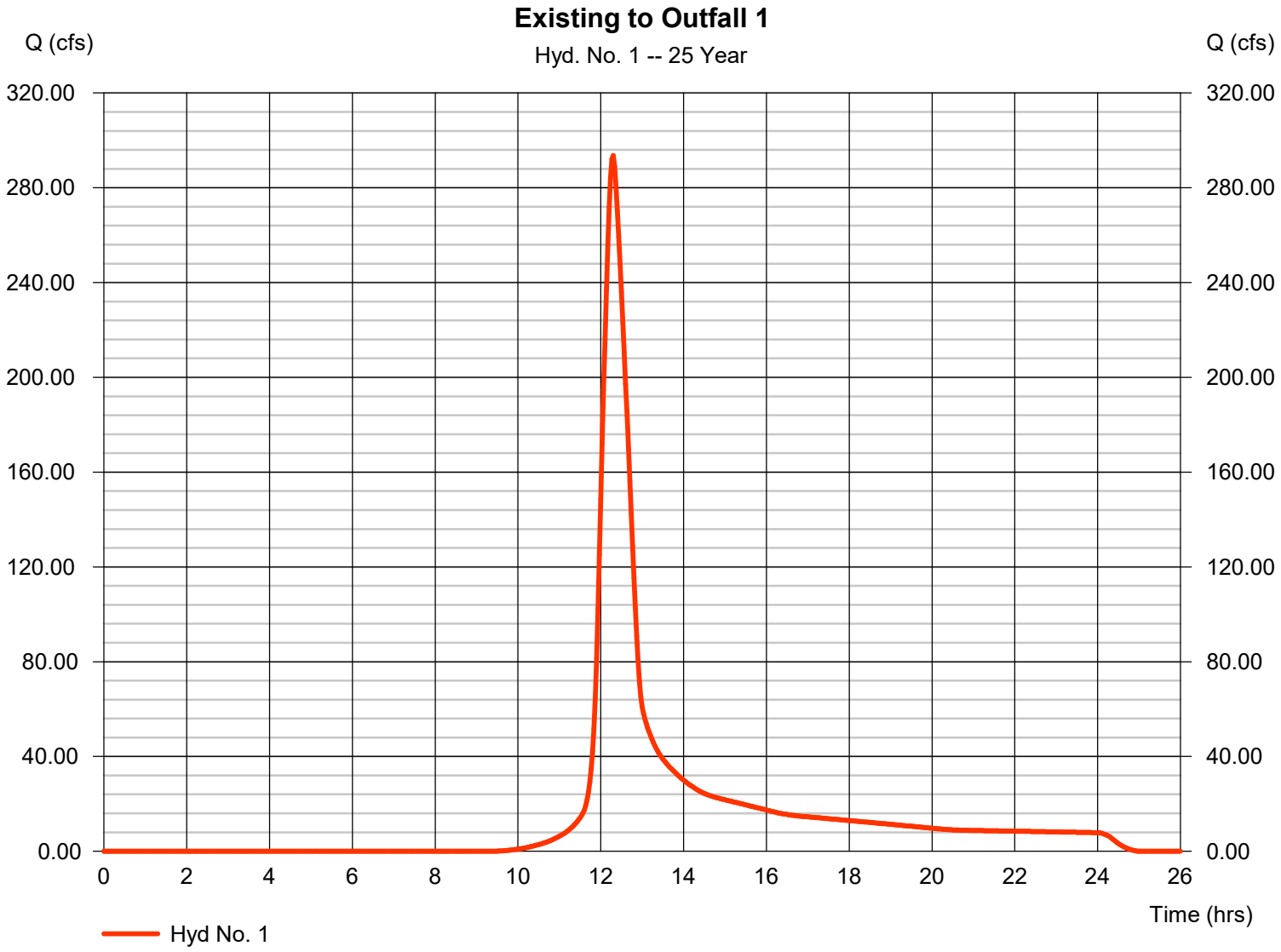
Hydrograph Report

Hyd. No. 1

Existing to Outfall 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	293.58 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.30 hrs
Time interval	=	2 min	Hyd. volume	=	1,448,432 cuft
Drainage area	=	145.400 ac	Curve number	=	68*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	39.00 min
Total precip.	=	6.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.780 x 45) + (110.600 x 66) + (32.020 x 77)] / 145.400

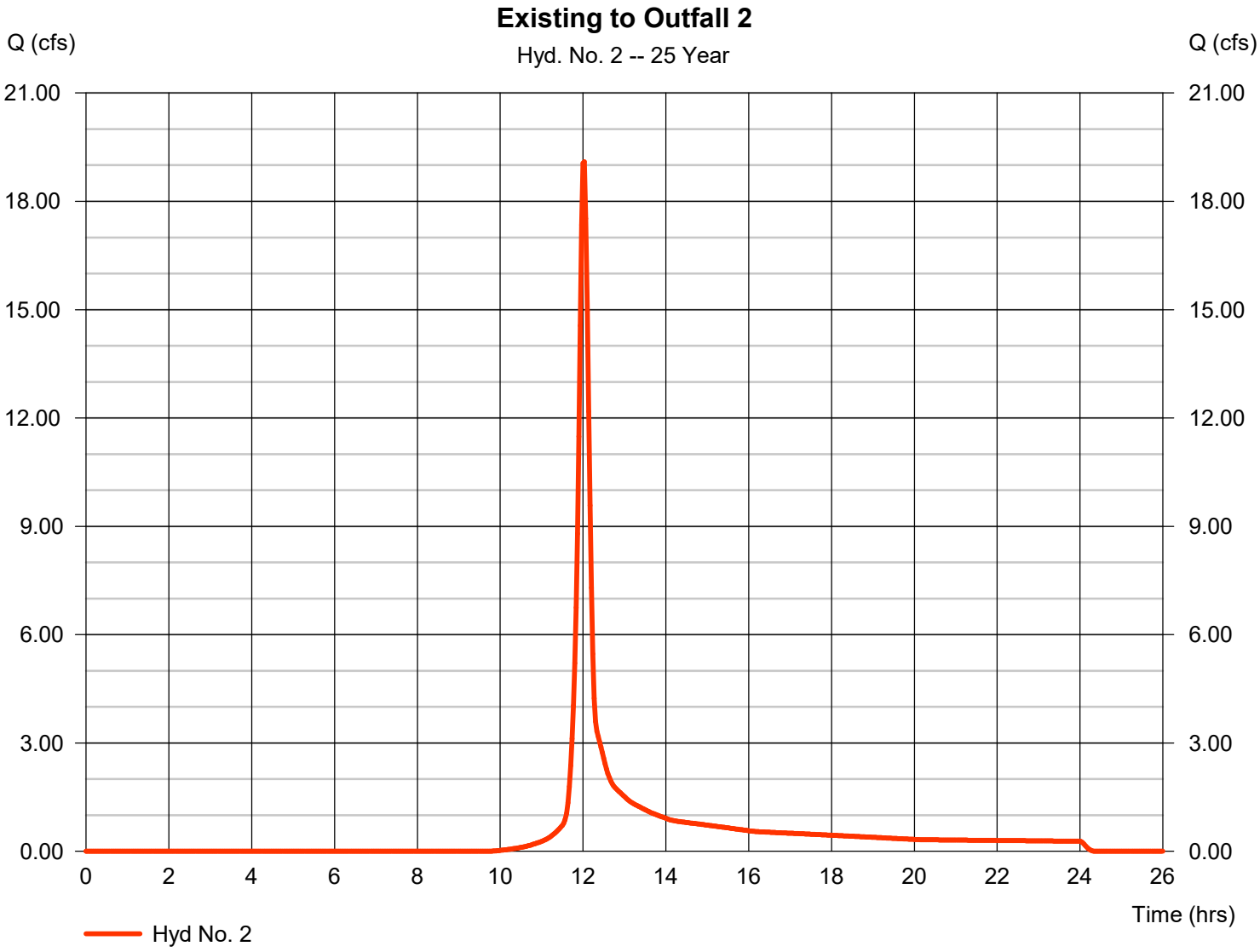


Hydrograph Report

Hyd. No. 2

Existing to Outfall 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	19.09 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.03 hrs
Time interval	=	2 min	Hyd. volume	=	50,013 cuft
Drainage area	=	5.220 ac	Curve number	=	66
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	10.10 min
Total precip.	=	6.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



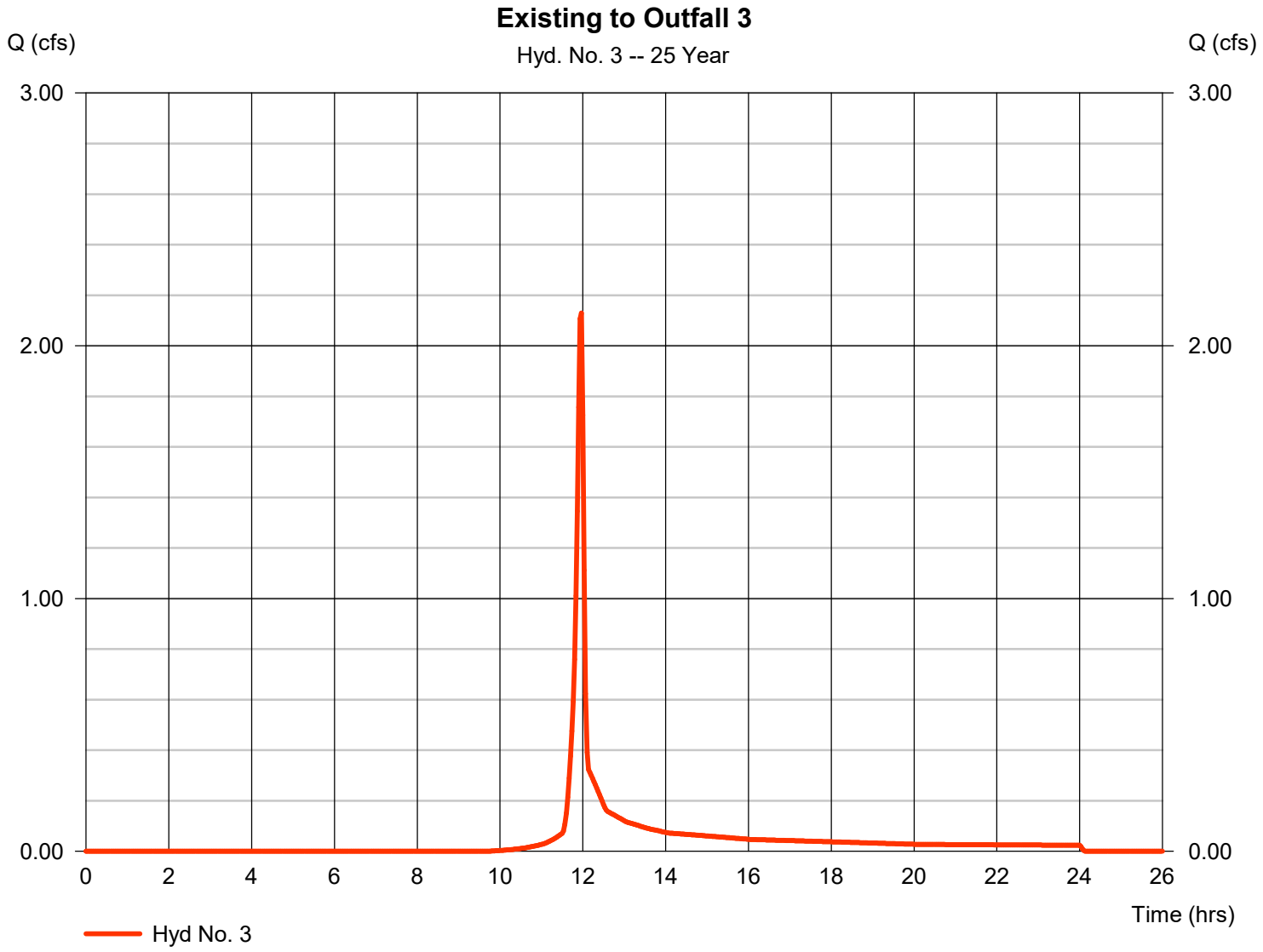
Hydrograph Report

Hyd. No. 3

Existing to Outfall 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.130 cfs
Storm frequency	=	25 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	4,268 cuft
Drainage area	=	0.490 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.490 x 66)] / 0.490

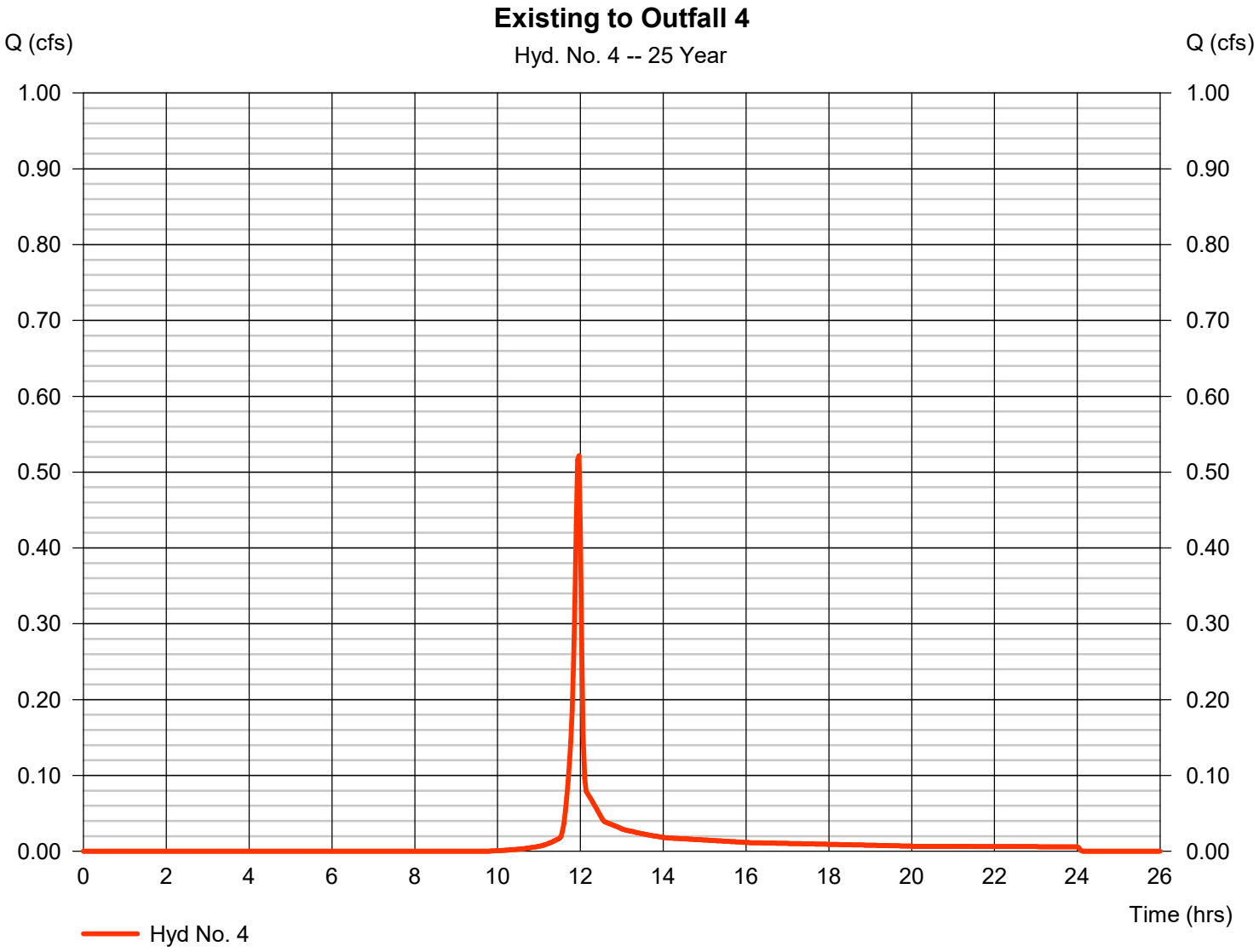


Hydrograph Report

Hyd. No. 4

Existing to Outfall 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.522 cfs
Storm frequency	=	25 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	1,045 cuft
Drainage area	=	0.120 ac	Curve number	=	66
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

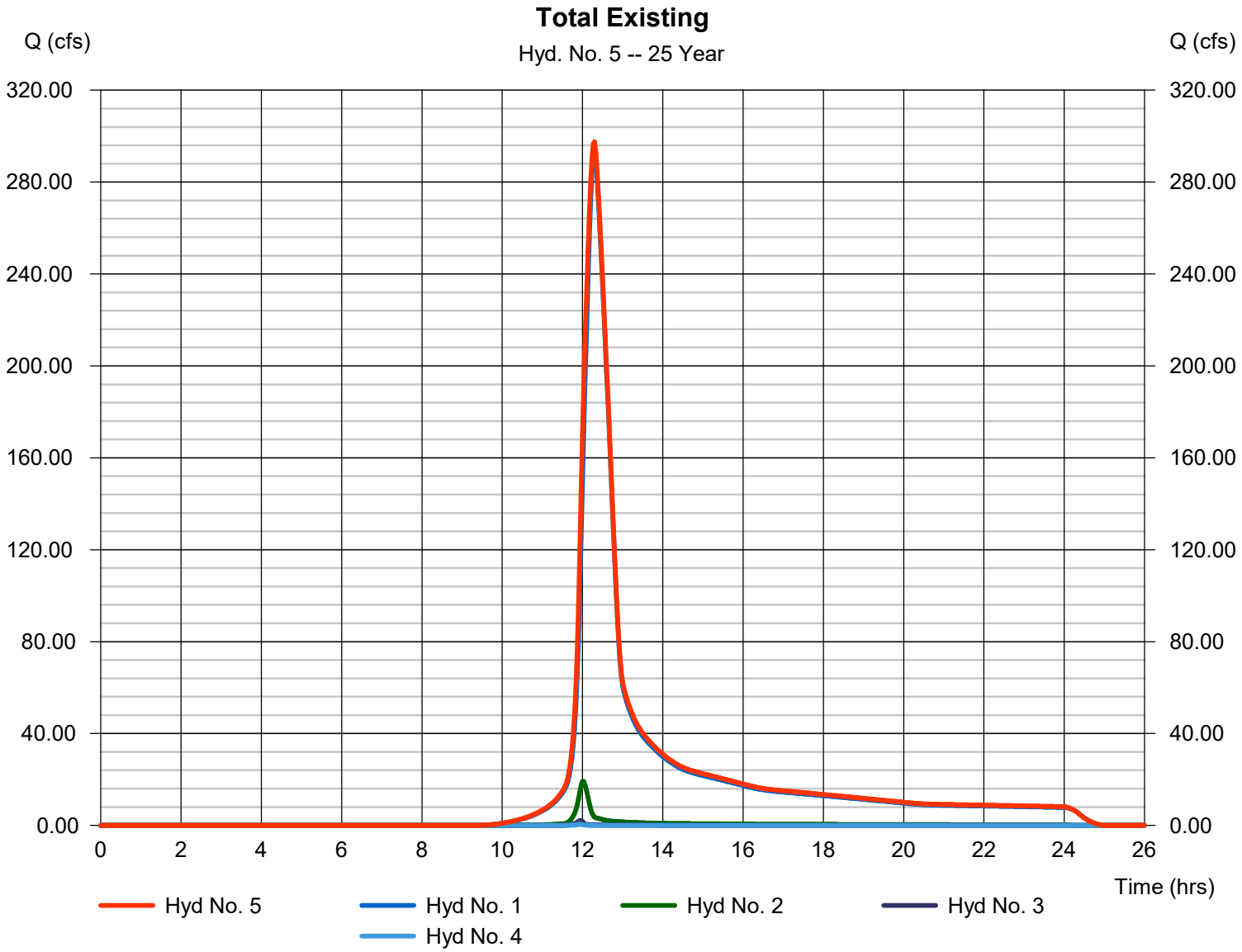


Hydrograph Report

Hyd. No. 5

Total Existing

Hydrograph type	=	Combine	Peak discharge	=	297.50 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.30 hrs
Time interval	=	2 min	Hyd. volume	=	1,503,758 cuft
Inflow hyds.	=	1, 2, 3, 4	Contrib. drain. area	=	151.230 ac



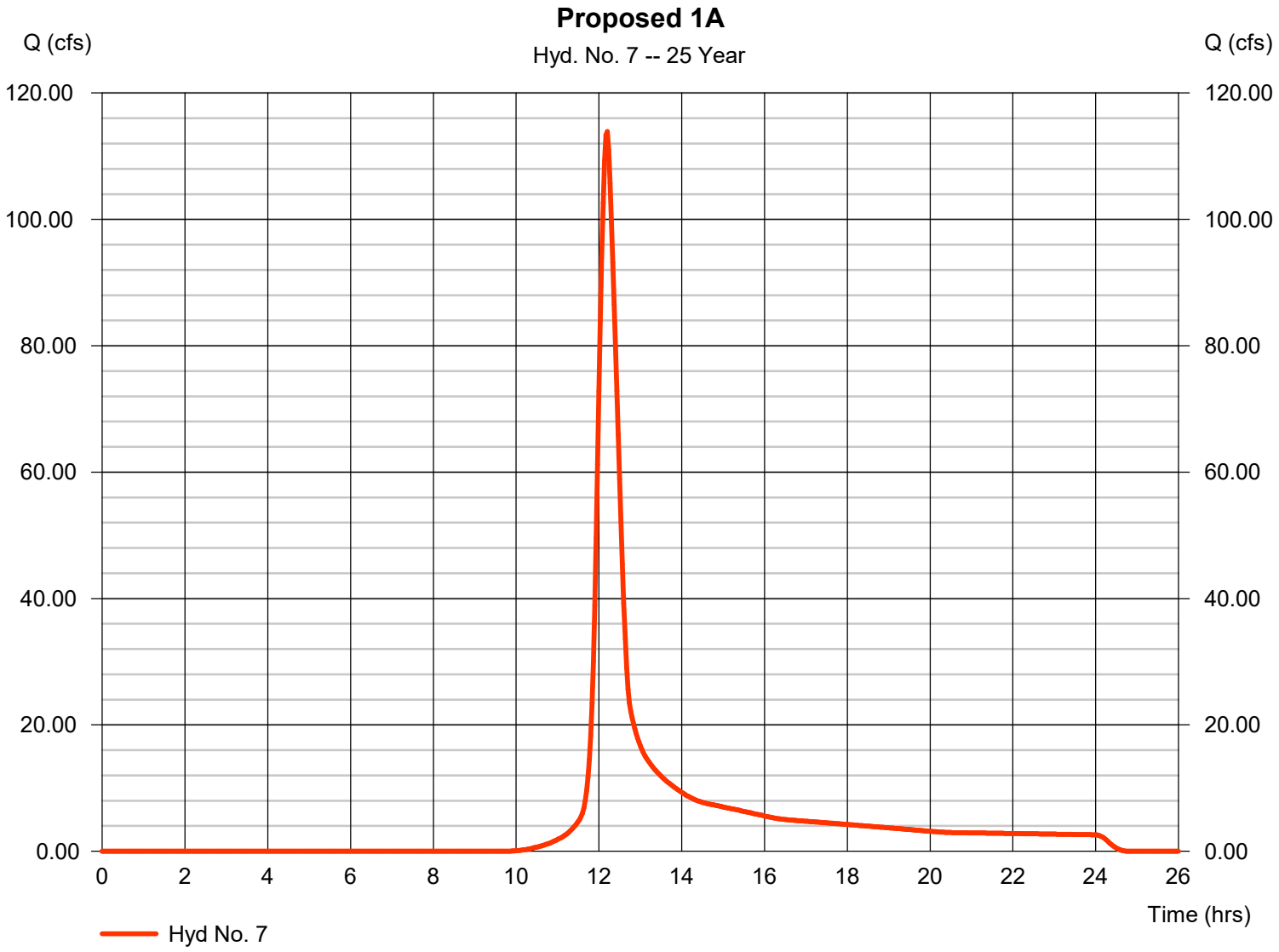
Hydrograph Report

Hyd. No. 7

Proposed 1A

Hydrograph type	=	SCS Runoff	Peak discharge	=	113.88 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	466,019 cuft
Drainage area	=	50.160 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	29.70 min
Total precip.	=	6.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(7.960 x 65) + (42.200 x 66)] / 50.160



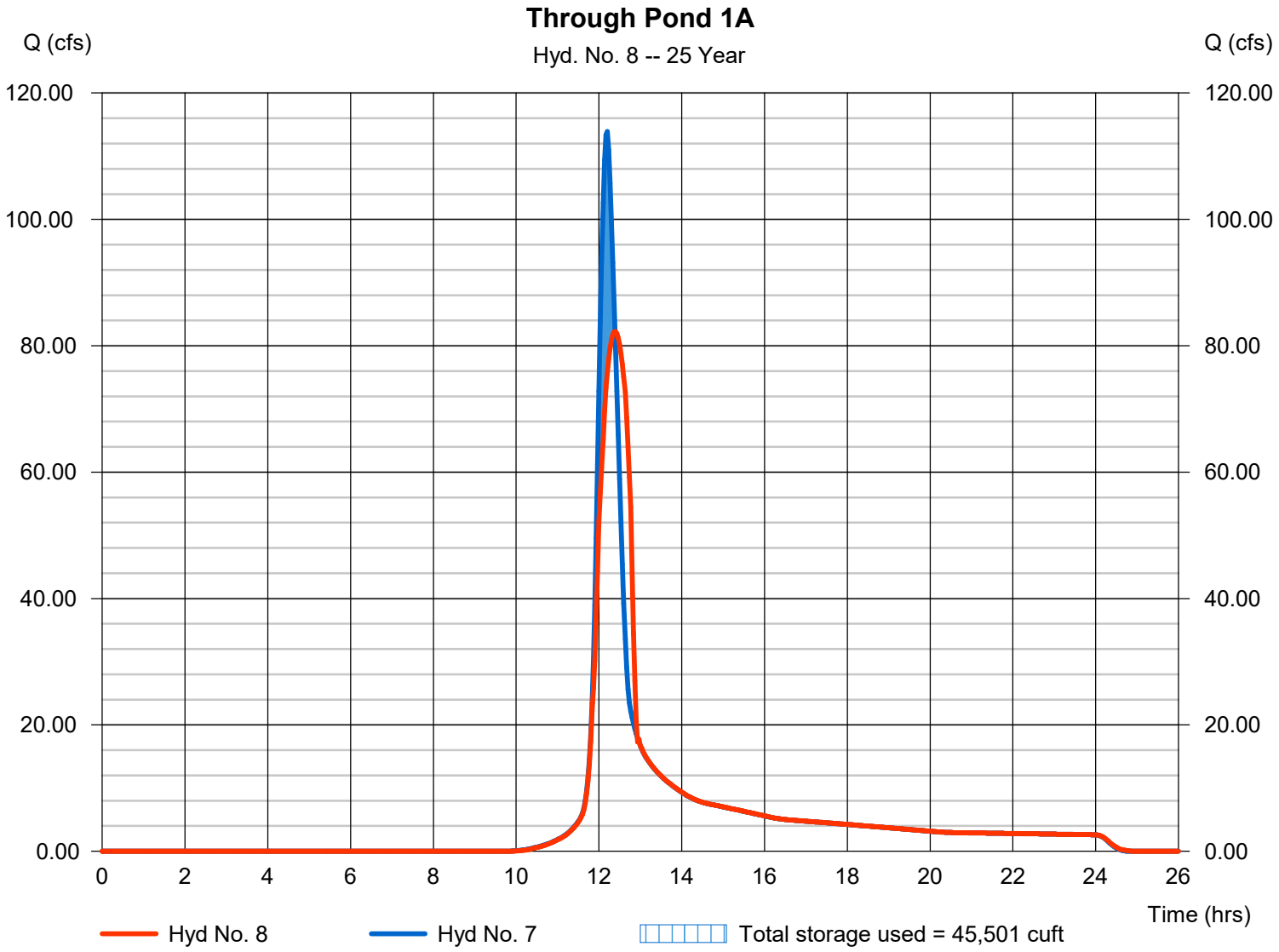
Hydrograph Report

Hyd. No. 8

Through Pond 1A

Hydrograph type	=	Reservoir	Peak discharge	=	82.25 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.40 hrs
Time interval	=	2 min	Hyd. volume	=	466,019 cuft
Inflow hyd. No.	=	7 - Proposed 1A	Max. Elevation	=	587.34 ft
Reservoir name	=	Pond 1A	Max. Storage	=	45,501 cuft

Storage Indication method used.



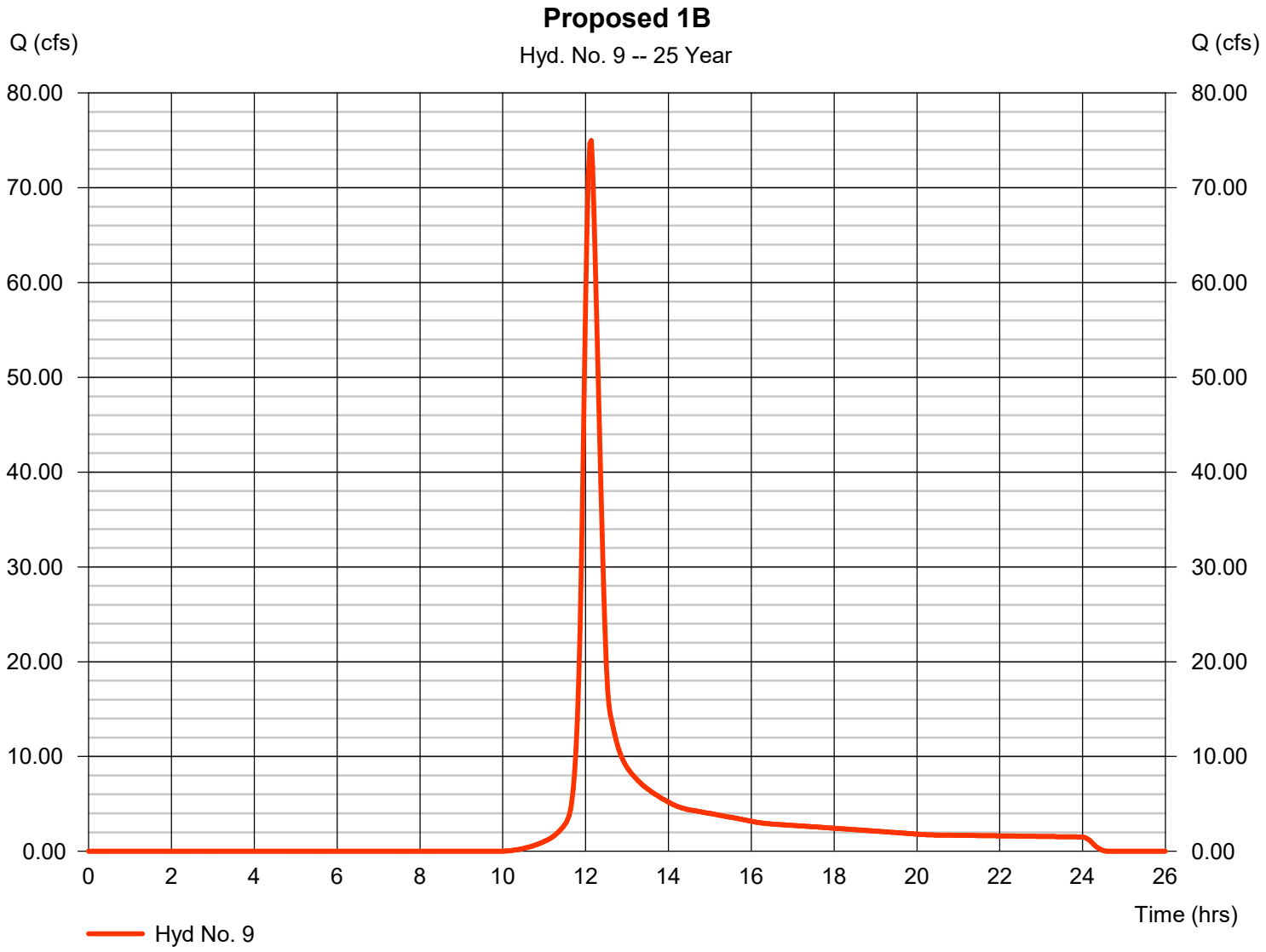
Hydrograph Report

Hyd. No. 9

Proposed 1B

Hydrograph type	=	SCS Runoff	Peak discharge	=	74.98 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	265,484 cuft
Drainage area	=	29.110 ac	Curve number	=	65*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	20.50 min
Total precip.	=	6.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(11.520 x 66) + (17.590 x 65)] / 29.110



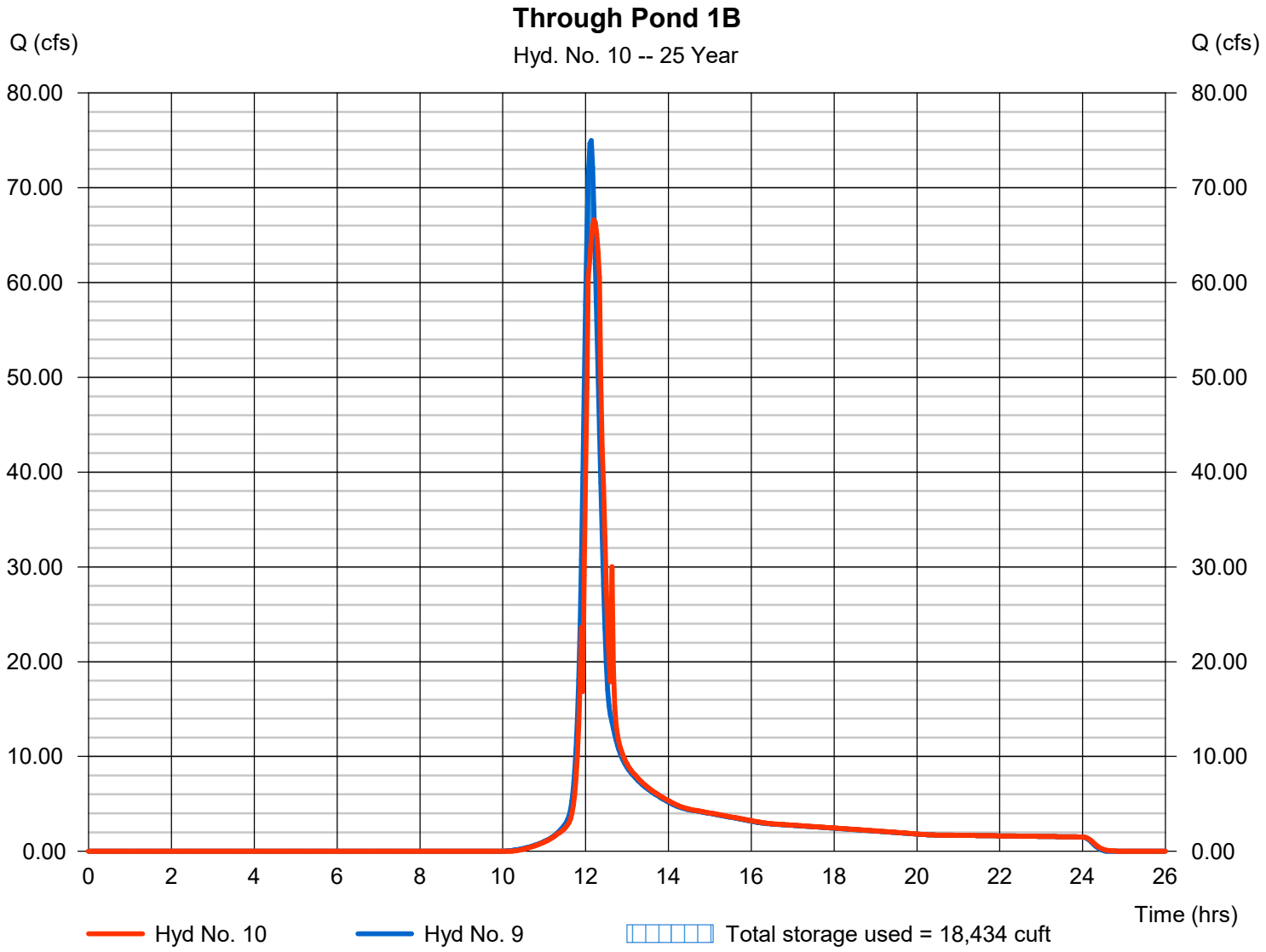
Hydrograph Report

Hyd. No. 10

Through Pond 1B

Hydrograph type	=	Reservoir	Peak discharge	=	66.63 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	265,482 cuft
Inflow hyd. No.	=	9 - Proposed 1B	Max. Elevation	=	614.83 ft
Reservoir name	=	Pond 1B	Max. Storage	=	18,434 cuft

Storage Indication method used.



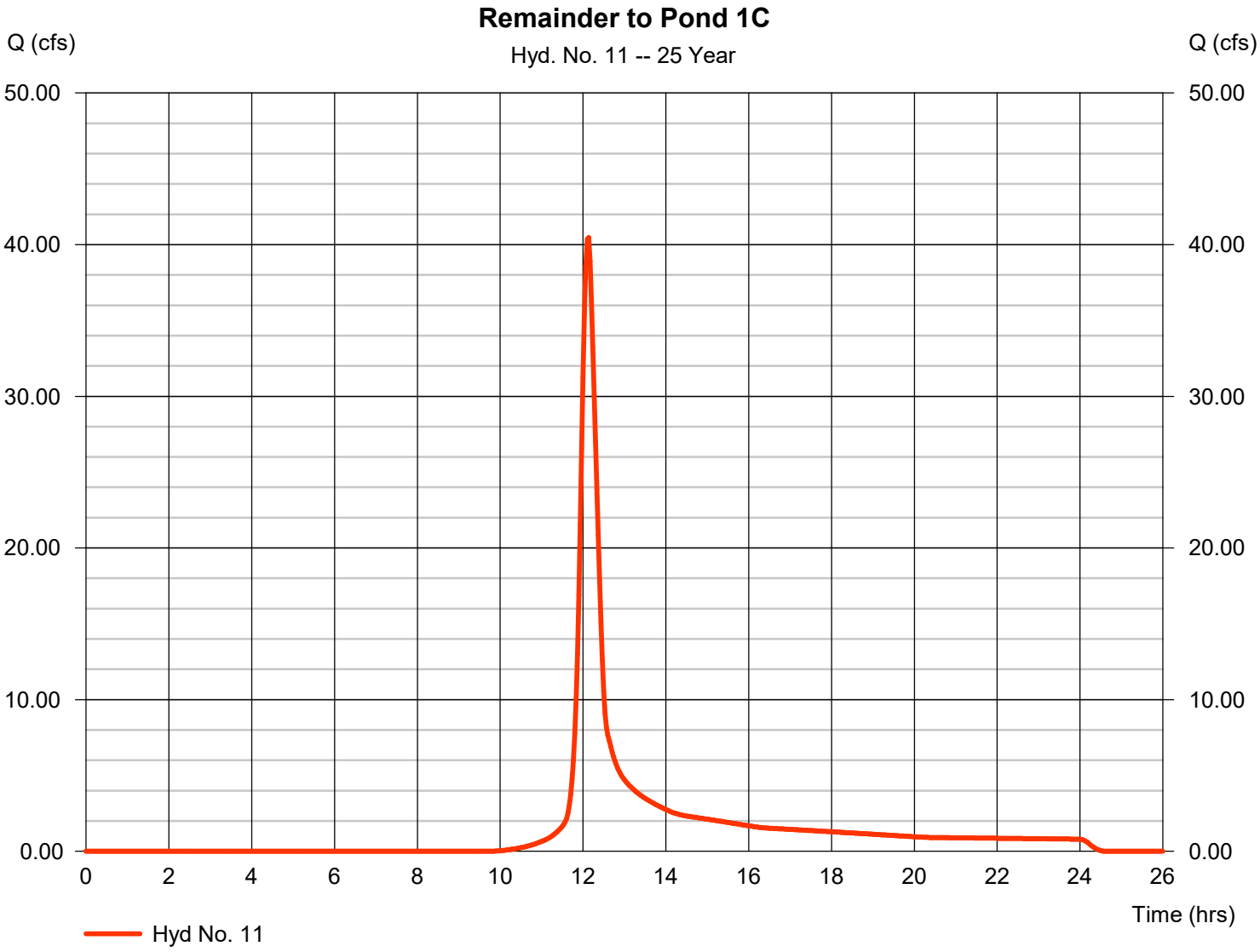
Hydrograph Report

Hyd. No. 11

Remainder to Pond 1C

Hydrograph type	=	SCS Runoff	Peak discharge	=	40.46 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	142,699 cuft
Drainage area	=	15.090 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	20.30 min
Total precip.	=	6.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(9.060 x 66) + (6.030 x 65)] / 15.090

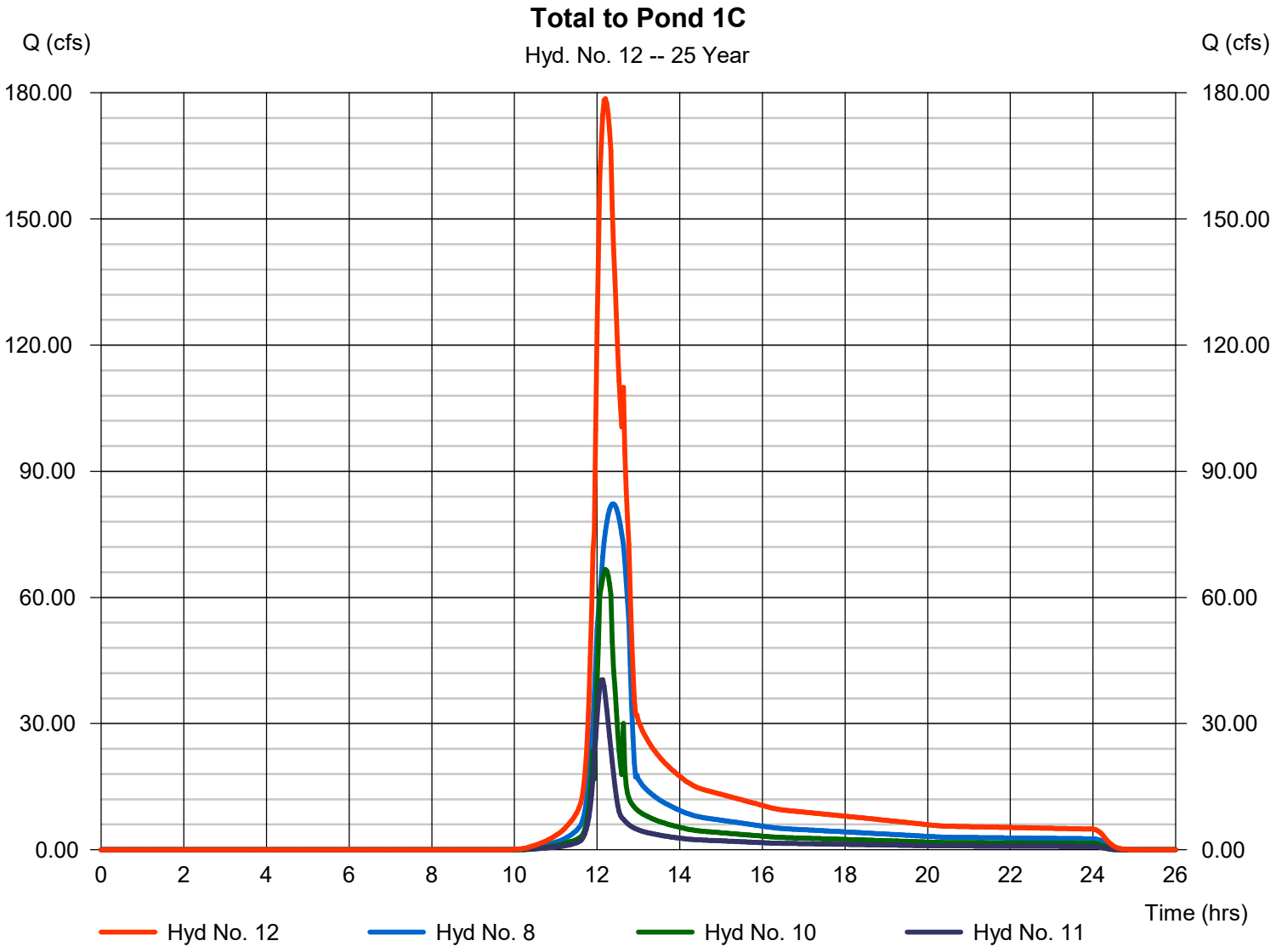


Hydrograph Report

Hyd. No. 12

Total to Pond 1C

Hydrograph type	= Combine	Peak discharge	= 178.63 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.20 hrs
Time interval	= 2 min	Hyd. volume	= 874,201 cuft
Inflow hyds.	= 8, 10, 11	Contrib. drain. area	= 15.090 ac



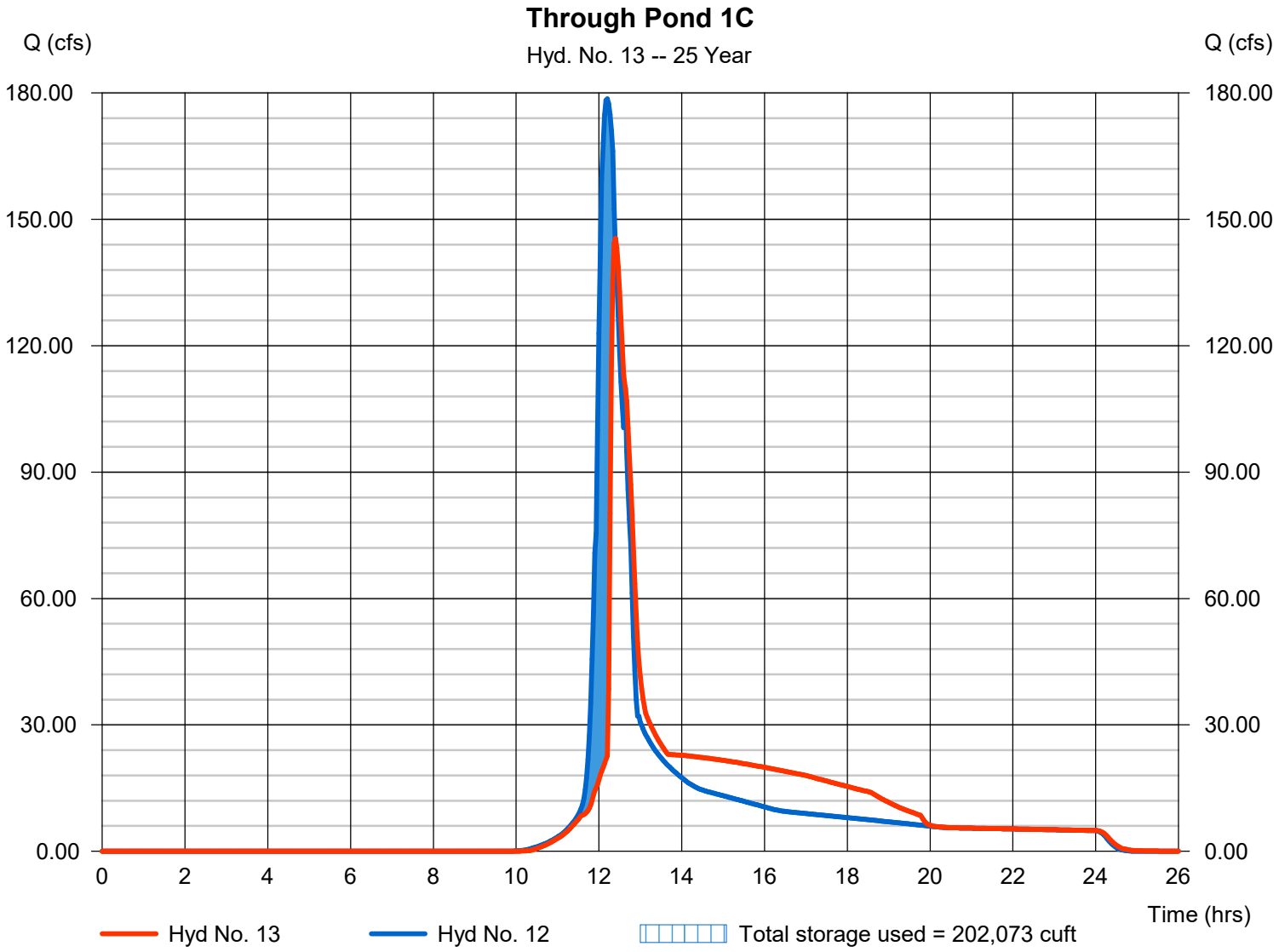
Hydrograph Report

Hyd. No. 13

Through Pond 1C

Hydrograph type	=	Reservoir	Peak discharge	=	145.51 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.40 hrs
Time interval	=	2 min	Hyd. volume	=	874,198 cuft
Inflow hyd. No.	=	12 - Total to Pond 1C	Max. Elevation	=	566.16 ft
Reservoir name	=	Pond 1C	Max. Storage	=	202,073 cuft

Storage Indication method used.



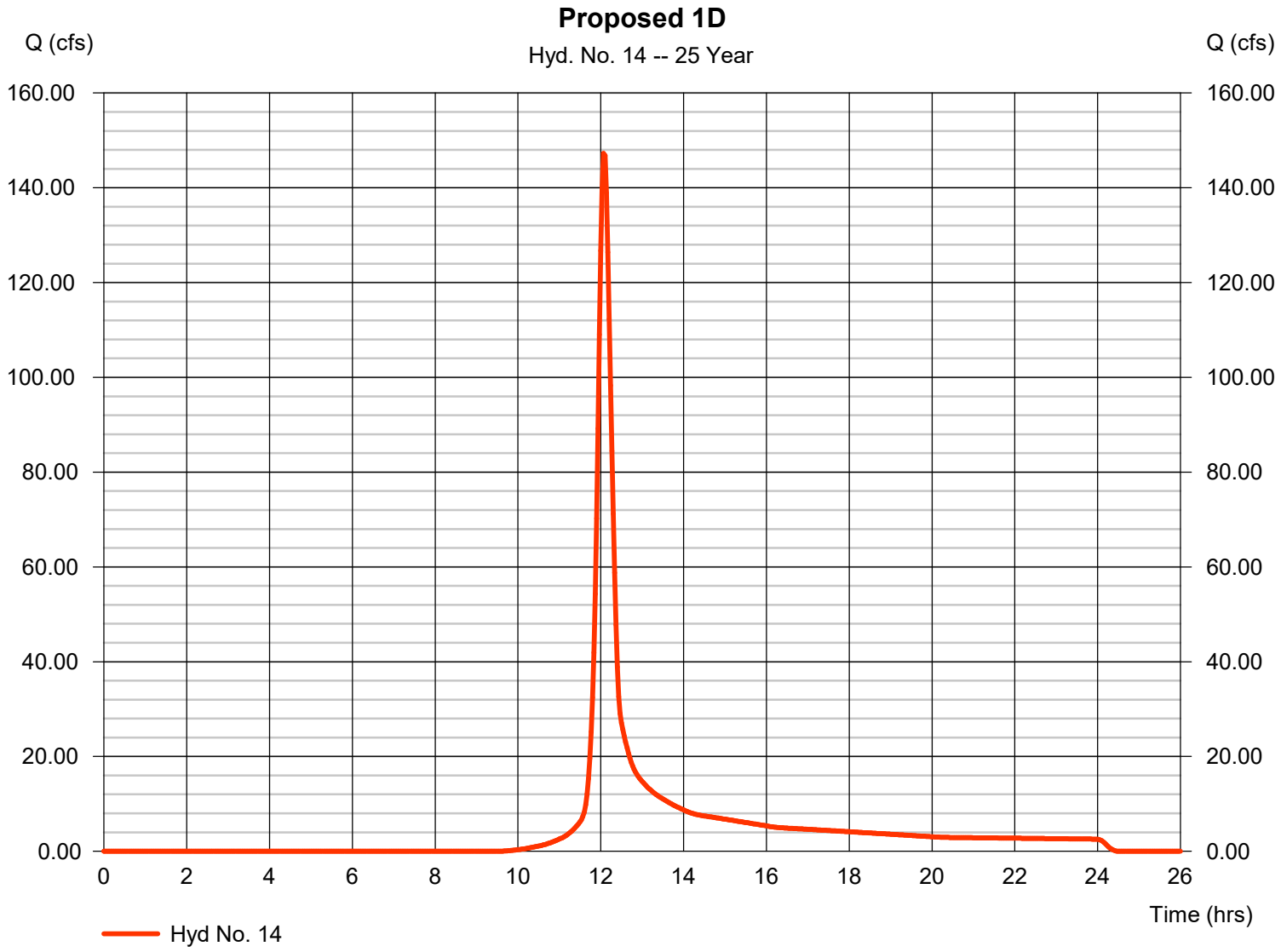
Hydrograph Report

Hyd. No. 14

Proposed 1D

Hydrograph type	= SCS Runoff	Peak discharge	= 147.25 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.07 hrs
Time interval	= 2 min	Hyd. volume	= 467,368 cuft
Drainage area	= 48.560 ac	Curve number	= 67*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 17.60 min
Total precip.	= 6.16 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.720 x 98) + (21.900 x 66) + (24.940 x 65)] / 48.560



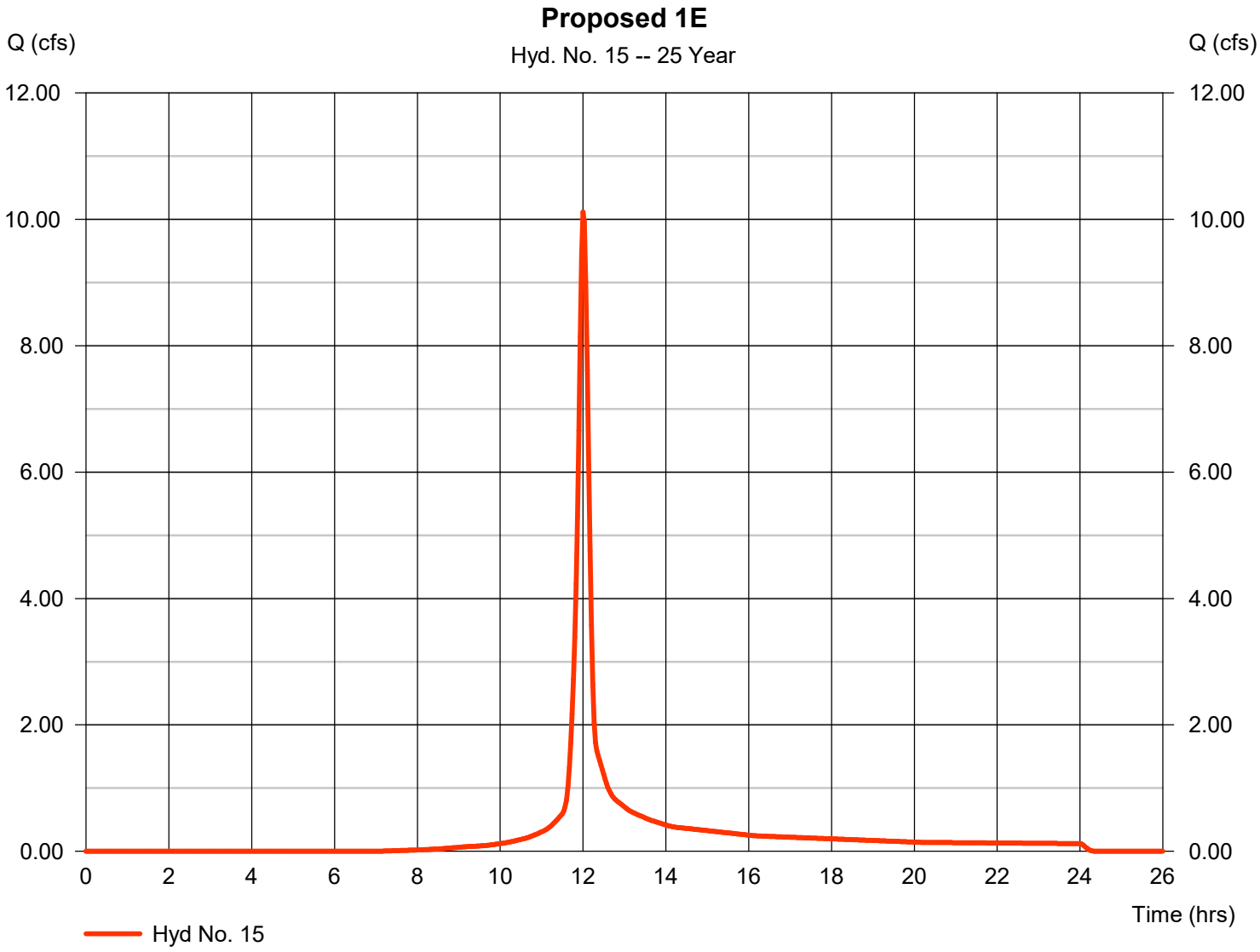
Hydrograph Report

Hyd. No. 15

Proposed 1E

Hydrograph type	=	SCS Runoff	Peak discharge	=	10.12 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	26,283 cuft
Drainage area	=	1.940 ac	Curve number	=	77*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	6.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.700 x 98) + (1.240 x 65)] / 1.940



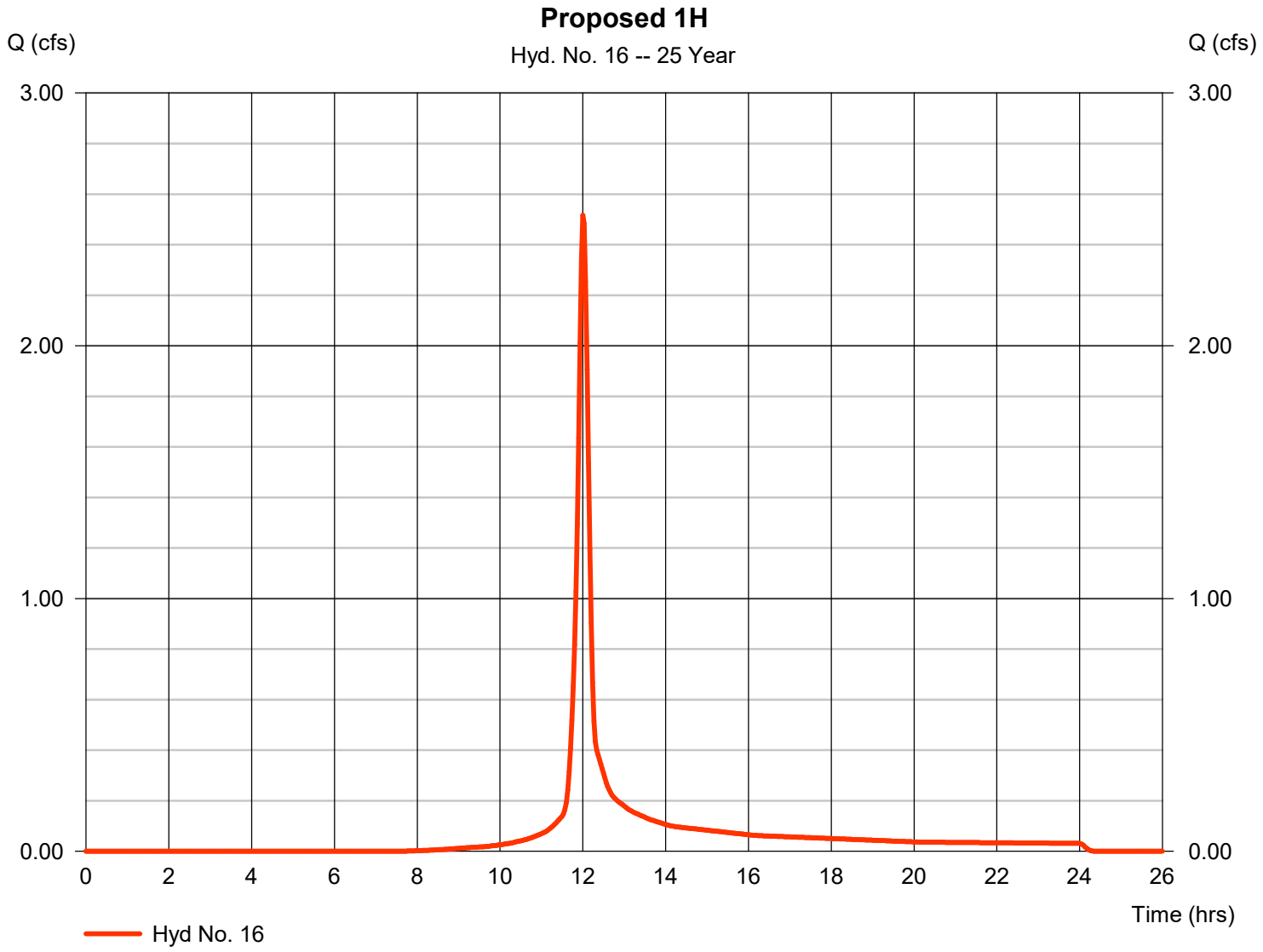
Hydrograph Report

Hyd. No. 16

Proposed 1H

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.517 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	6,527 cuft
Drainage area	=	0.510 ac	Curve number	=	75*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	6.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.150 x 98) + (0.360 x 65)] / 0.510

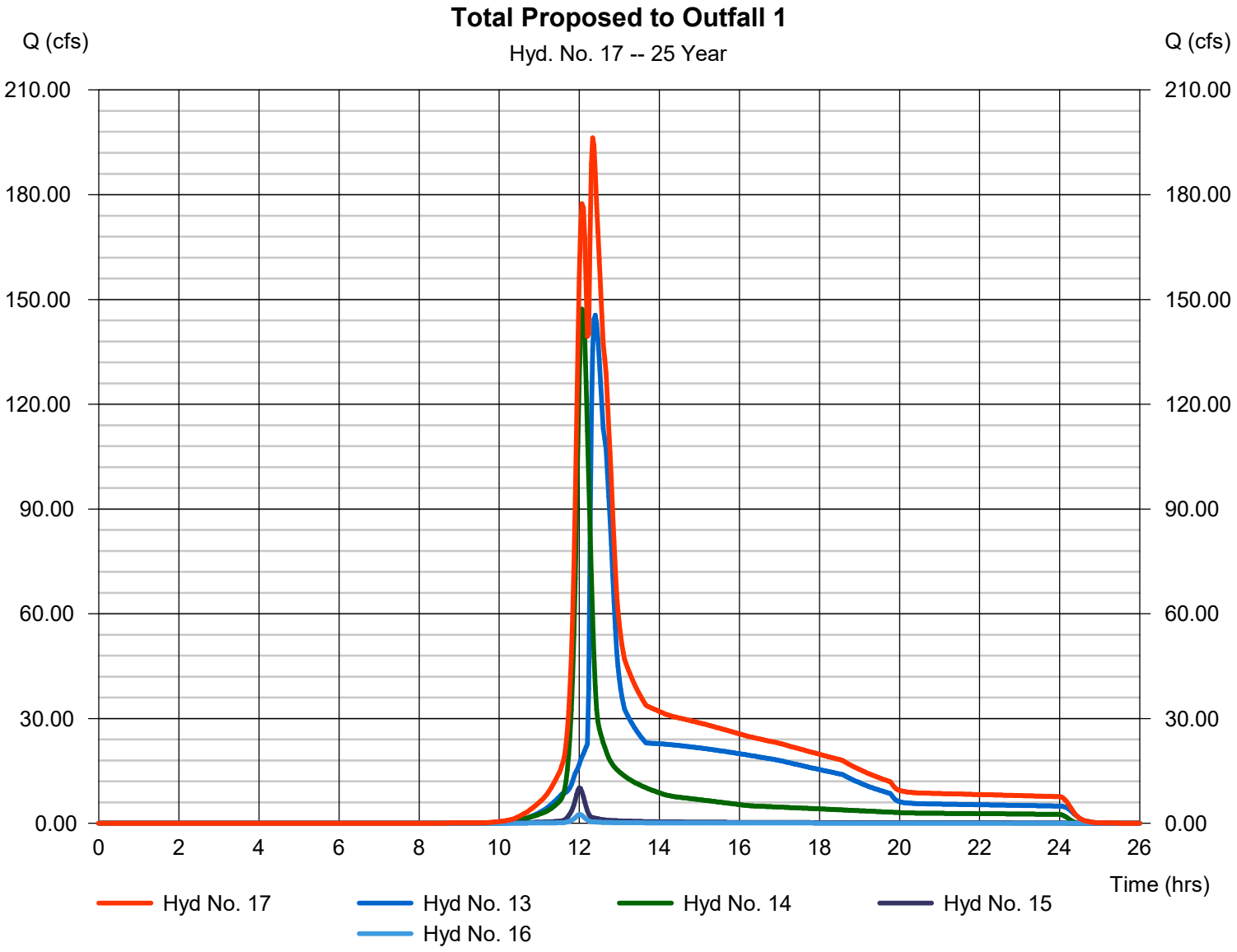


Hydrograph Report

Hyd. No. 17

Total Proposed to Outfall 1

Hydrograph type	=	Combine	Peak discharge	=	196.29 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.33 hrs
Time interval	=	2 min	Hyd. volume	=	1,374,245 cuft
Inflow hyds.	=	13, 14, 15, 16	Contrib. drain. area	=	51.010 ac

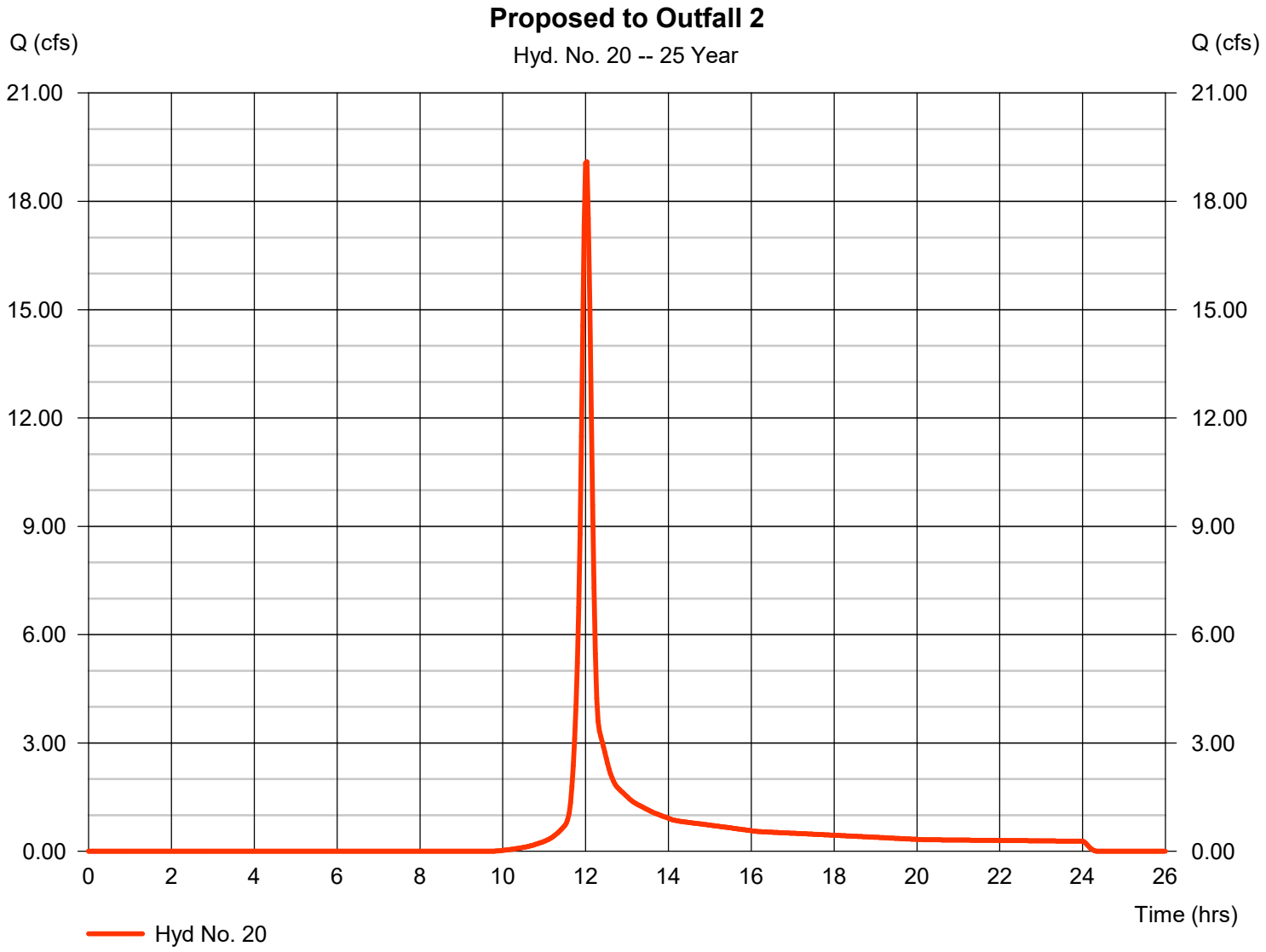


Hydrograph Report

Hyd. No. 20

Proposed to Outfall 2

Hydrograph type	= SCS Runoff	Peak discharge	= 19.09 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.03 hrs
Time interval	= 2 min	Hyd. volume	= 50,013 cuft
Drainage area	= 5.220 ac	Curve number	= 66
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 10.10 min
Total precip.	= 6.16 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



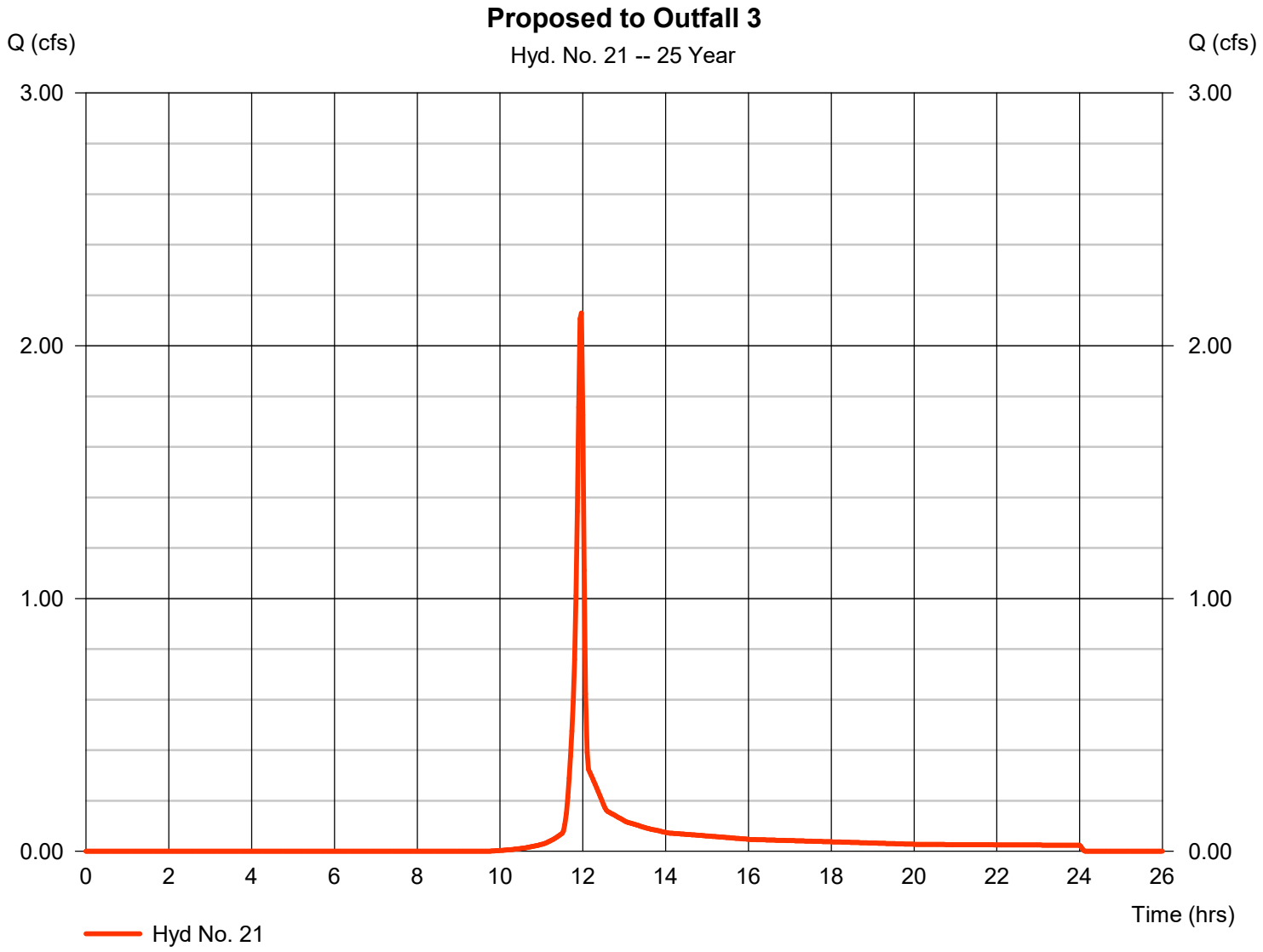
Hydrograph Report

Hyd. No. 21

Proposed to Outfall 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.130 cfs
Storm frequency	=	25 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	4,268 cuft
Drainage area	=	0.490 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.490 x 66)] / 0.490

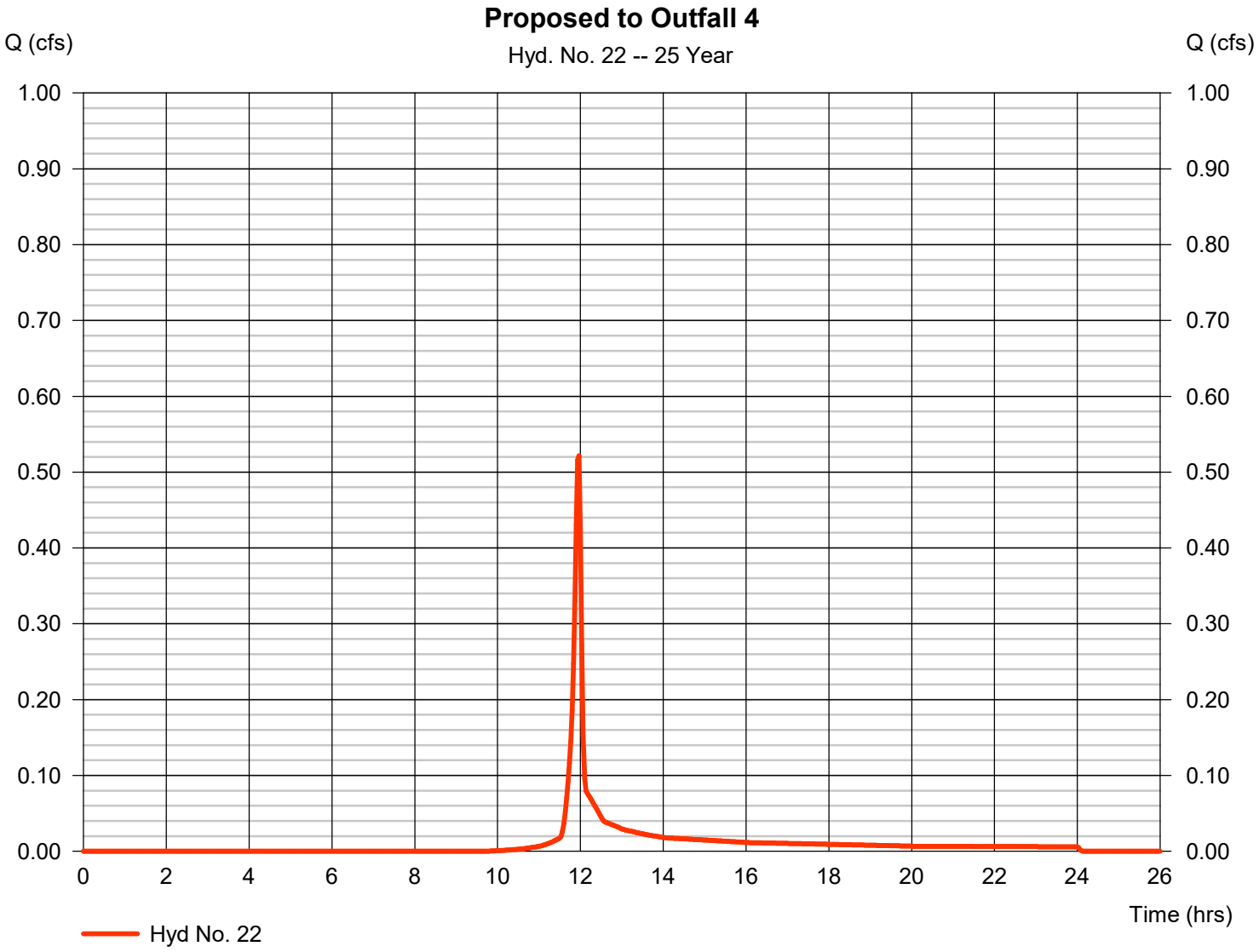


Hydrograph Report

Hyd. No. 22

Proposed to Outfall 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.522 cfs
Storm frequency	=	25 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	1,045 cuft
Drainage area	=	0.120 ac	Curve number	=	66
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

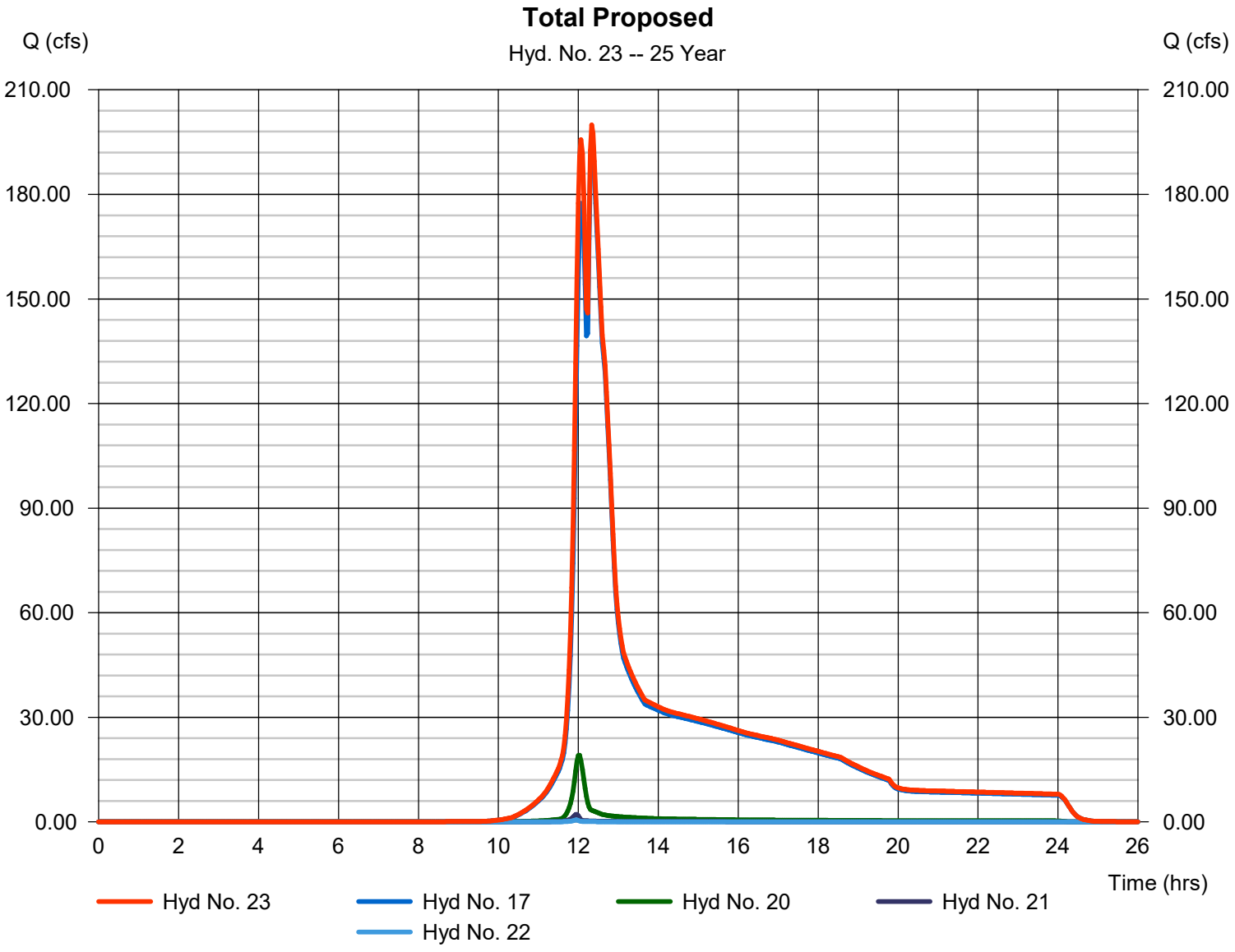


Hydrograph Report

Hyd. No. 23

Total Proposed

Hydrograph type	=	Combine	Peak discharge	=	199.92 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.33 hrs
Time interval	=	2 min	Hyd. volume	=	1,429,571 cuft
Inflow hyds.	=	17, 20, 21, 22	Contrib. drain. area	=	5.830 ac



Hydrograph Summary Report

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

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	354.51	2	738	1,736,062	------	------	------	Existing to Outfall 1
2	SCS Runoff	23.14	2	720	60,324	------	------	------	Existing to Outfall 2
3	SCS Runoff	2.559	2	718	5,148	------	------	------	Existing to Outfall 3
4	SCS Runoff	0.627	2	718	1,261	------	------	------	Existing to Outfall 4
5	Combine	359.15	2	738	1,802,792	1, 2, 3, 4	------	------	Total Existing
7	SCS Runoff	138.52	2	732	562,096	------	------	------	Proposed 1A
8	Reservoir	91.15	2	746	562,096	7	588.67	69,636	Through Pond 1A
9	SCS Runoff	91.49	2	728	321,274	------	------	------	Proposed 1B
10	Reservoir	76.43	2	734	321,273	9	616.04	26,010	Through Pond 1B
11	SCS Runoff	49.16	2	726	172,119	------	------	------	Remainder to Pond 1C
12	Combine	203.12	2	732	1,055,486	8, 10, 11	------	------	Total to Pond 1C
13	Reservoir	169.68	2	746	1,055,485	12	566.54	216,499	Through Pond 1C
14	SCS Runoff	178.33	2	724	561,923	------	------	------	Proposed 1D
15	SCS Runoff	11.79	2	720	30,728	------	------	------	Proposed 1E
16	SCS Runoff	2.953	2	720	7,670	------	------	------	Proposed 1H
17	Combine	255.86	2	736	1,655,666	13, 14, 15, 16	------	------	Total Proposed to Outfall 1
20	SCS Runoff	23.14	2	720	60,324	------	------	------	Proposed to Outfall 2
21	SCS Runoff	2.559	2	718	5,148	------	------	------	Proposed to Outfall 3
22	SCS Runoff	0.627	2	718	1,261	------	------	------	Proposed to Outfall 4
23	Combine	261.28	2	736	1,722,397	17, 20, 21, 22	------	------	Total Proposed

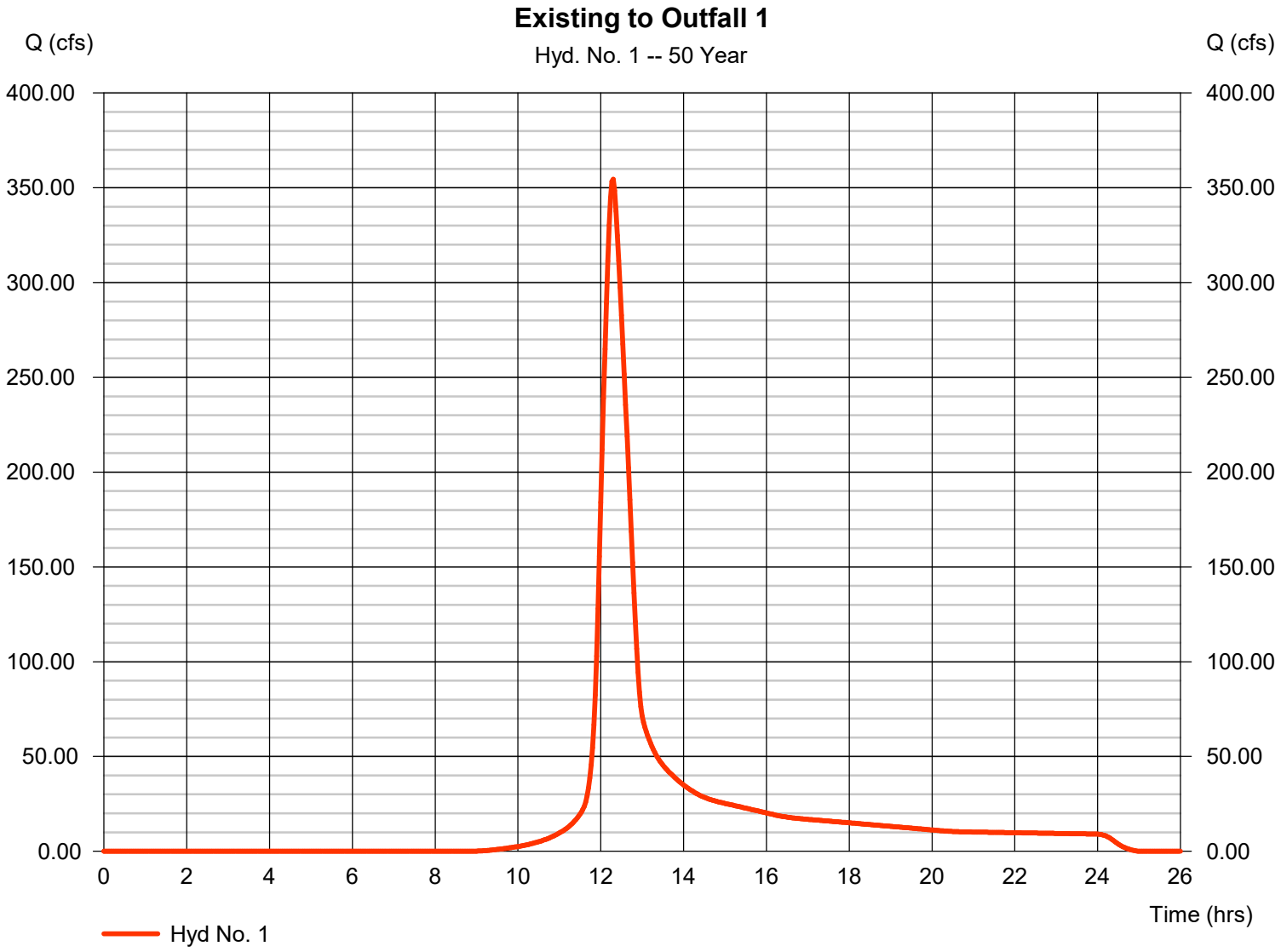
Hydrograph Report

Hyd. No. 1

Existing to Outfall 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	354.51 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.30 hrs
Time interval	=	2 min	Hyd. volume	=	1,736,062 cuft
Drainage area	=	145.400 ac	Curve number	=	68*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	39.00 min
Total precip.	=	6.85 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.780 x 45) + (110.600 x 66) + (32.020 x 77)] / 145.400

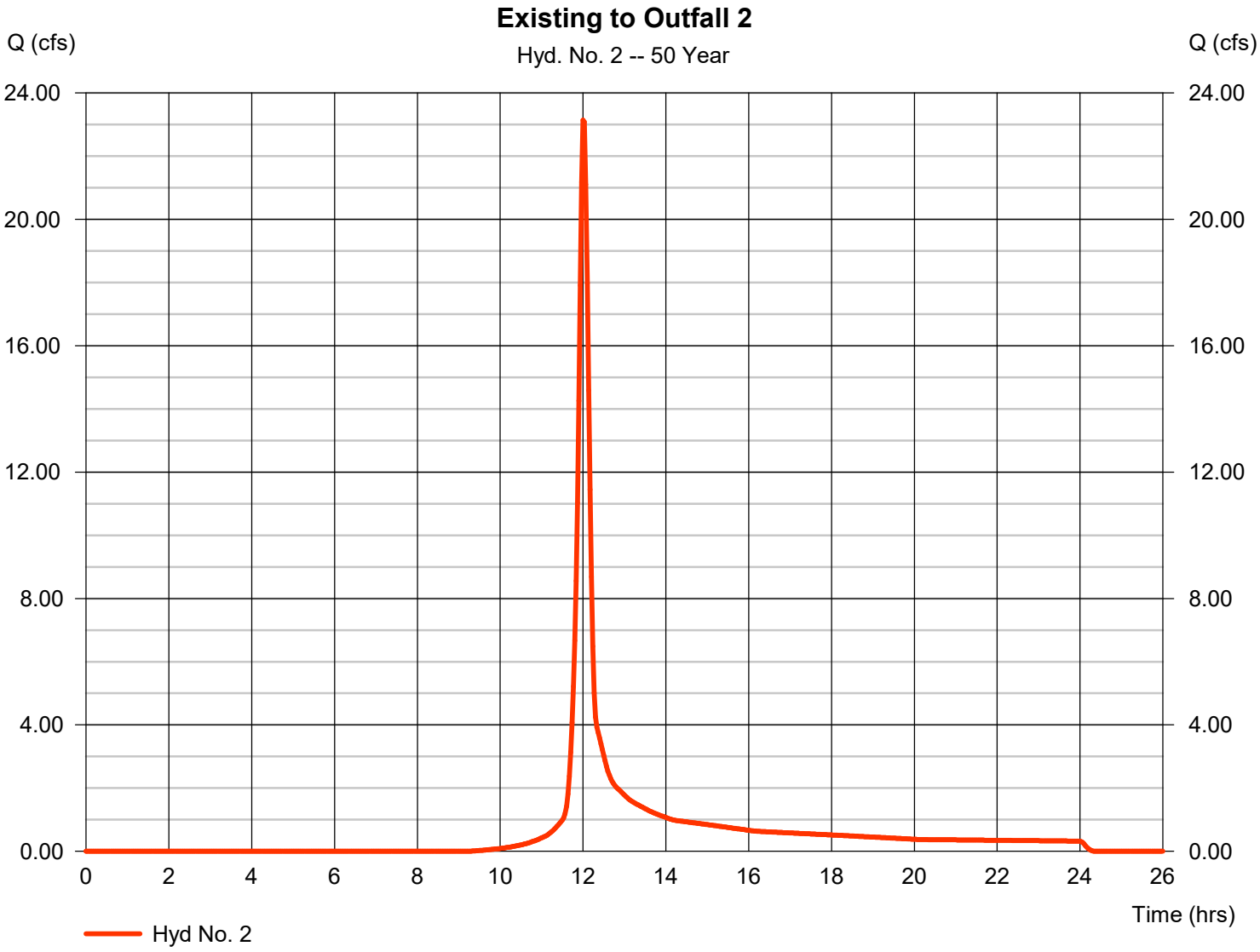


Hydrograph Report

Hyd. No. 2

Existing to Outfall 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	23.14 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	60,324 cuft
Drainage area	=	5.220 ac	Curve number	=	66
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	10.10 min
Total precip.	=	6.85 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



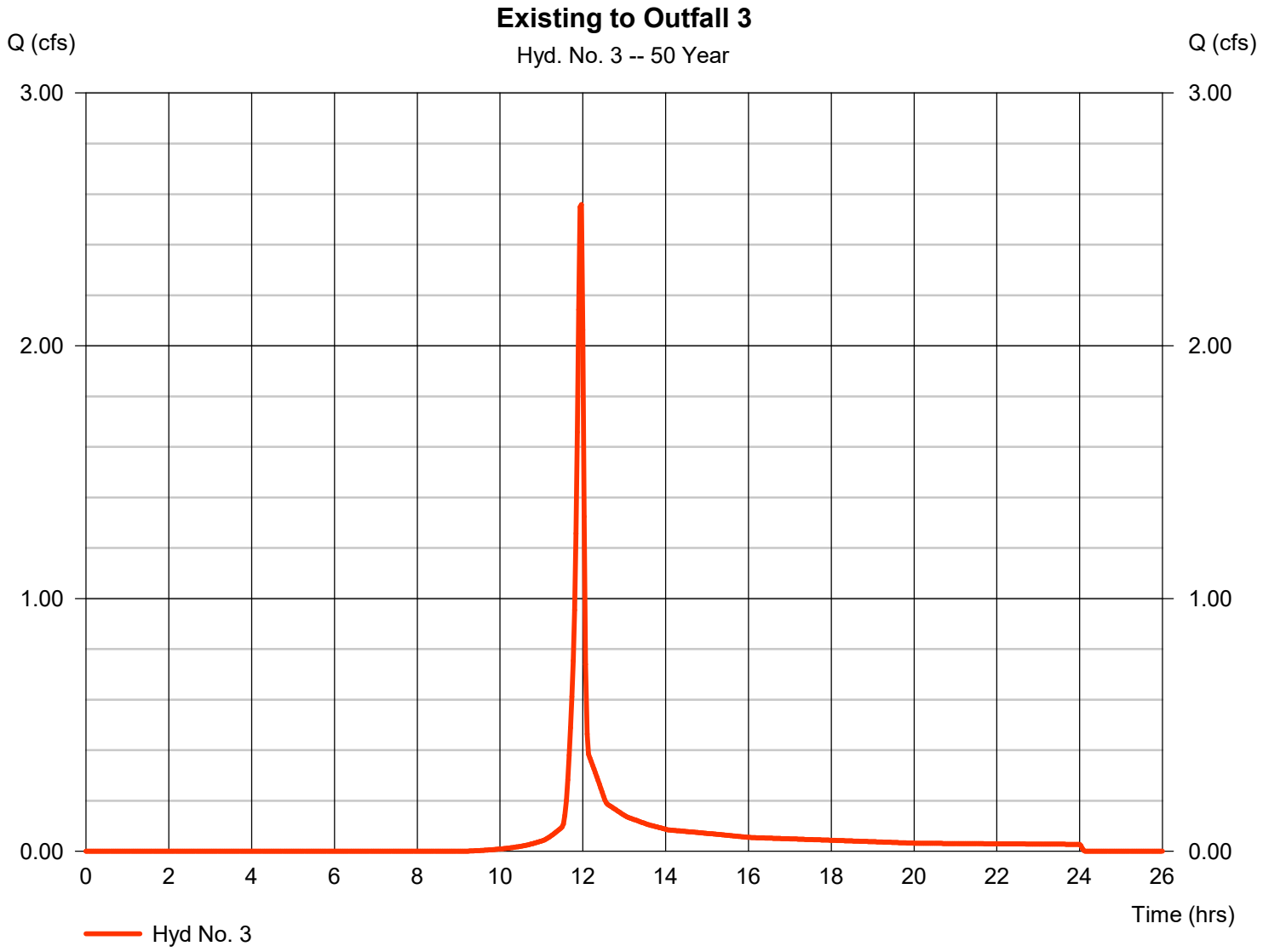
Hydrograph Report

Hyd. No. 3

Existing to Outfall 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.559 cfs
Storm frequency	=	50 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	5,148 cuft
Drainage area	=	0.490 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.85 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.490 x 66)] / 0.490

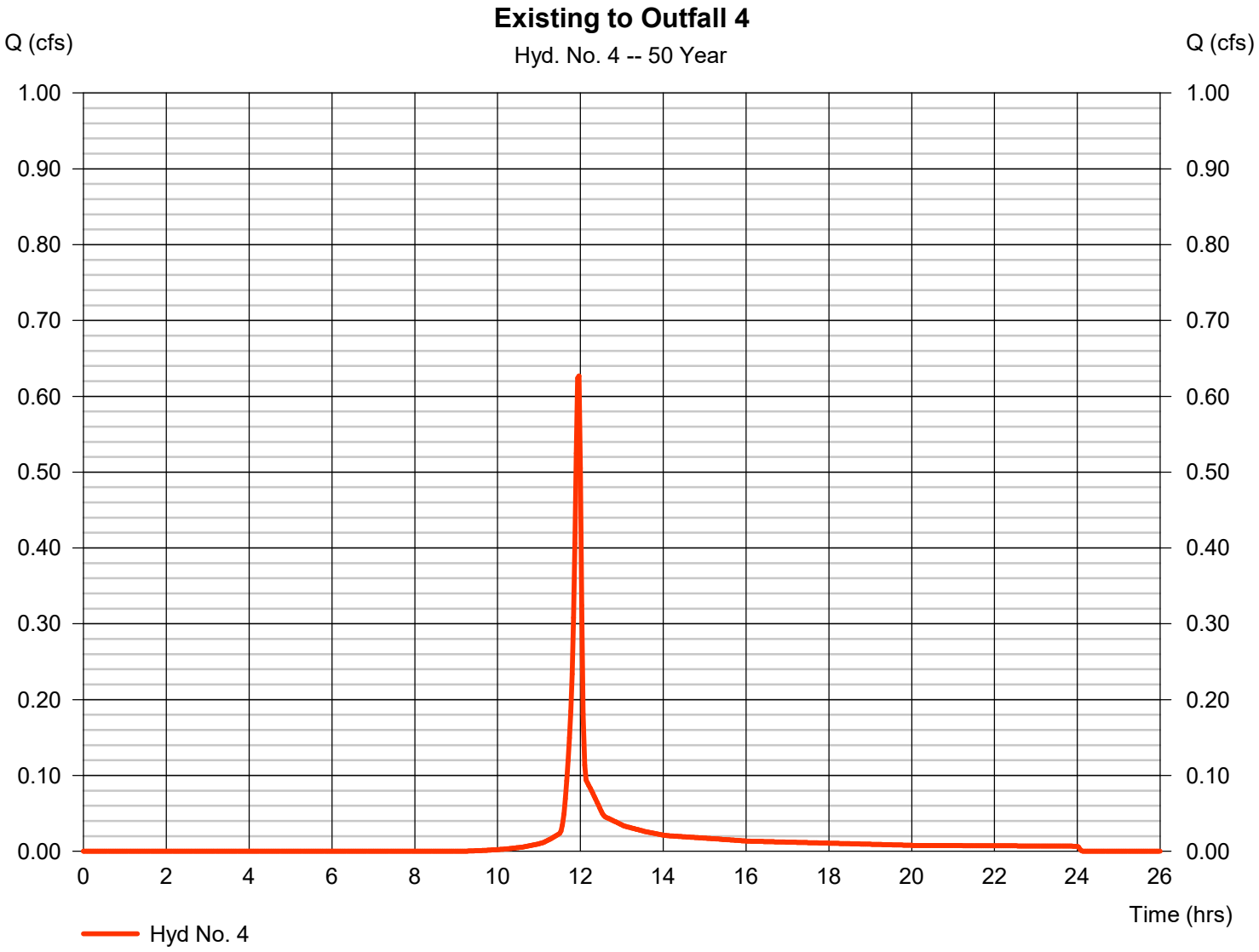


Hydrograph Report

Hyd. No. 4

Existing to Outfall 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.627 cfs
Storm frequency	=	50 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	1,261 cuft
Drainage area	=	0.120 ac	Curve number	=	66
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.85 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

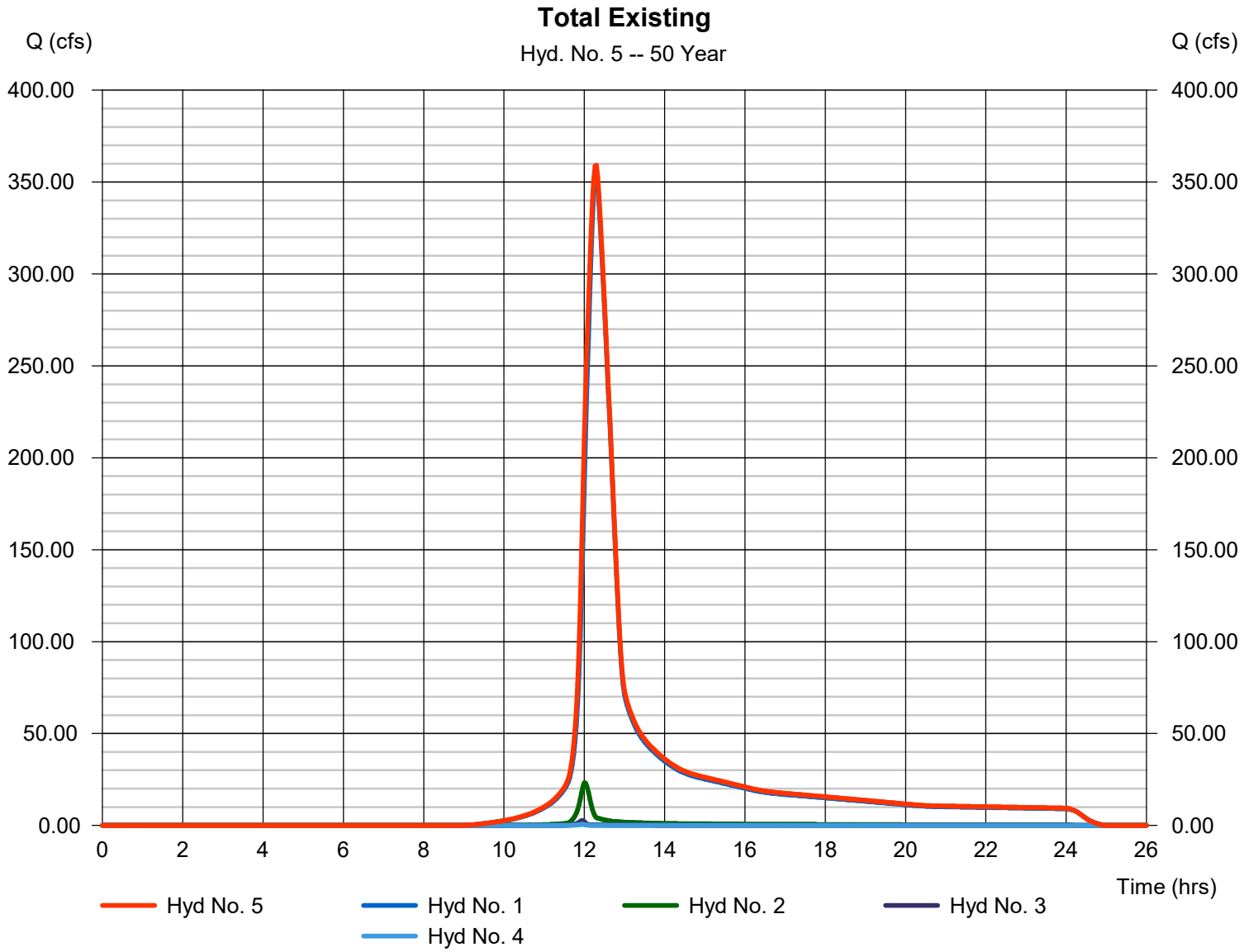


Hydrograph Report

Hyd. No. 5

Total Existing

Hydrograph type	=	Combine	Peak discharge	=	359.15 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.30 hrs
Time interval	=	2 min	Hyd. volume	=	1,802,792 cuft
Inflow hyds.	=	1, 2, 3, 4	Contrib. drain. area	=	151.230 ac



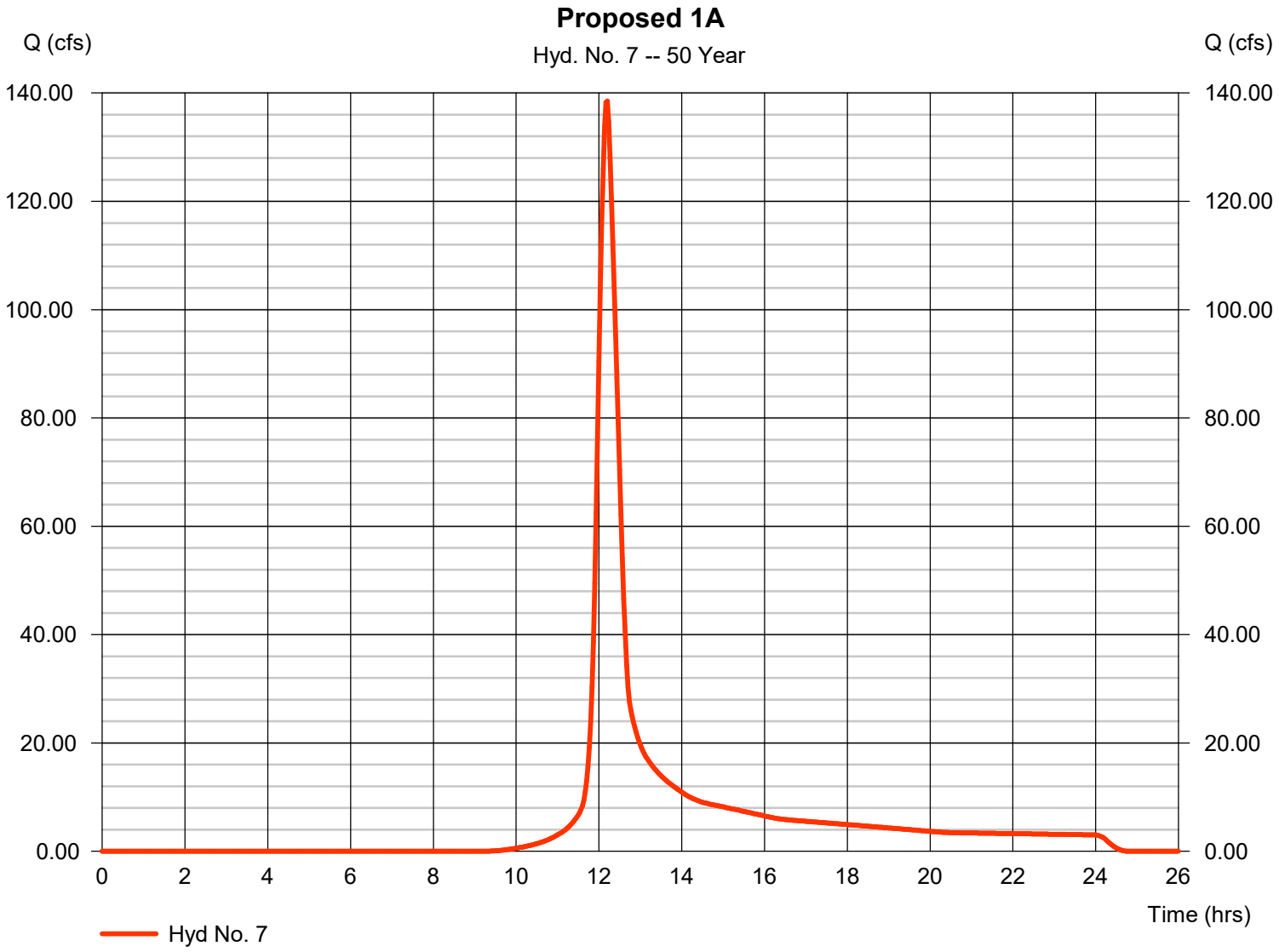
Hydrograph Report

Hyd. No. 7

Proposed 1A

Hydrograph type	=	SCS Runoff	Peak discharge	=	138.52 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	562,096 cuft
Drainage area	=	50.160 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	29.70 min
Total precip.	=	6.85 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(7.960 x 65) + (42.200 x 66)] / 50.160



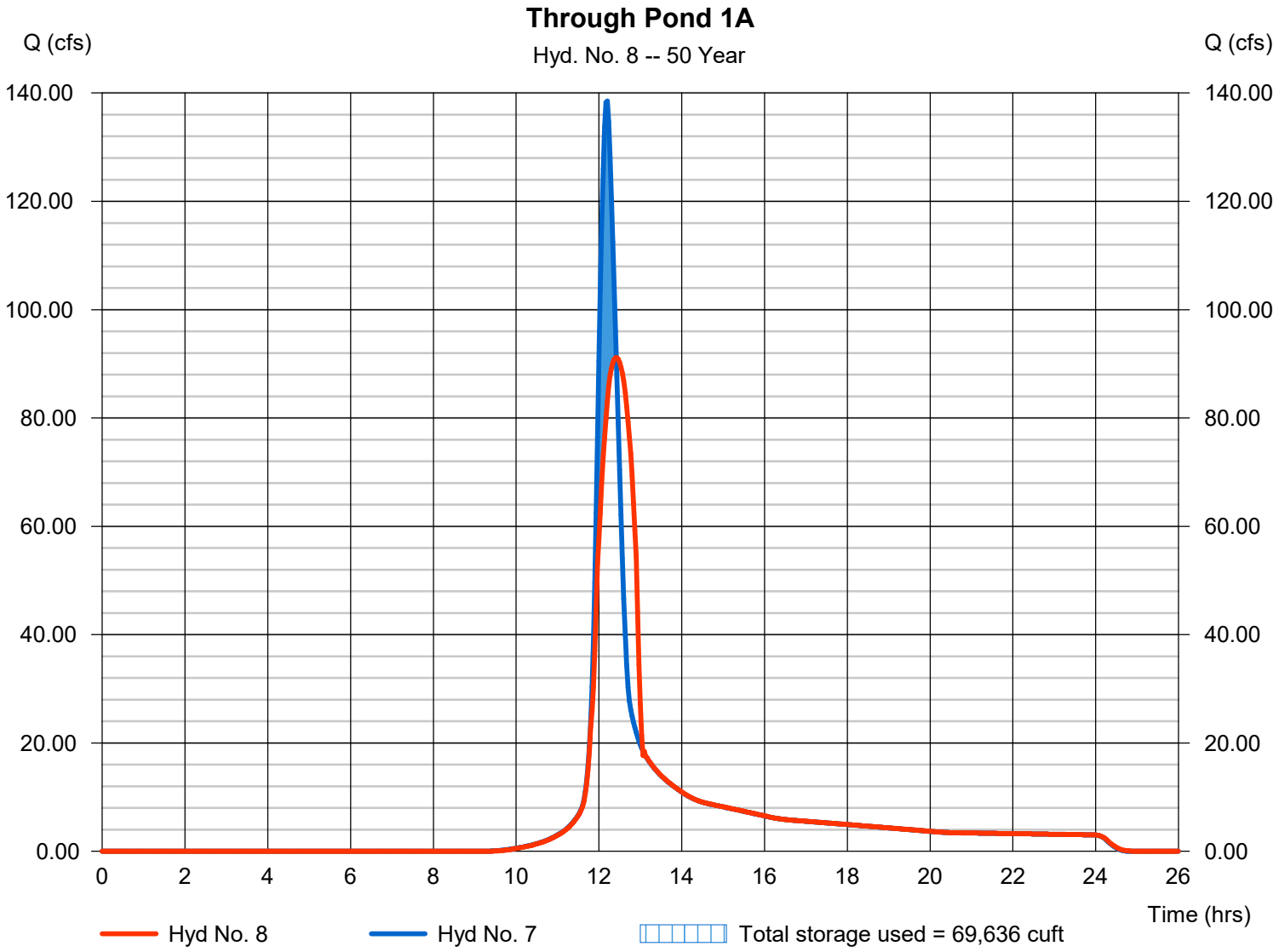
Hydrograph Report

Hyd. No. 8

Through Pond 1A

Hydrograph type	=	Reservoir	Peak discharge	=	91.15 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.43 hrs
Time interval	=	2 min	Hyd. volume	=	562,096 cuft
Inflow hyd. No.	=	7 - Proposed 1A	Max. Elevation	=	588.67 ft
Reservoir name	=	Pond 1A	Max. Storage	=	69,636 cuft

Storage Indication method used.



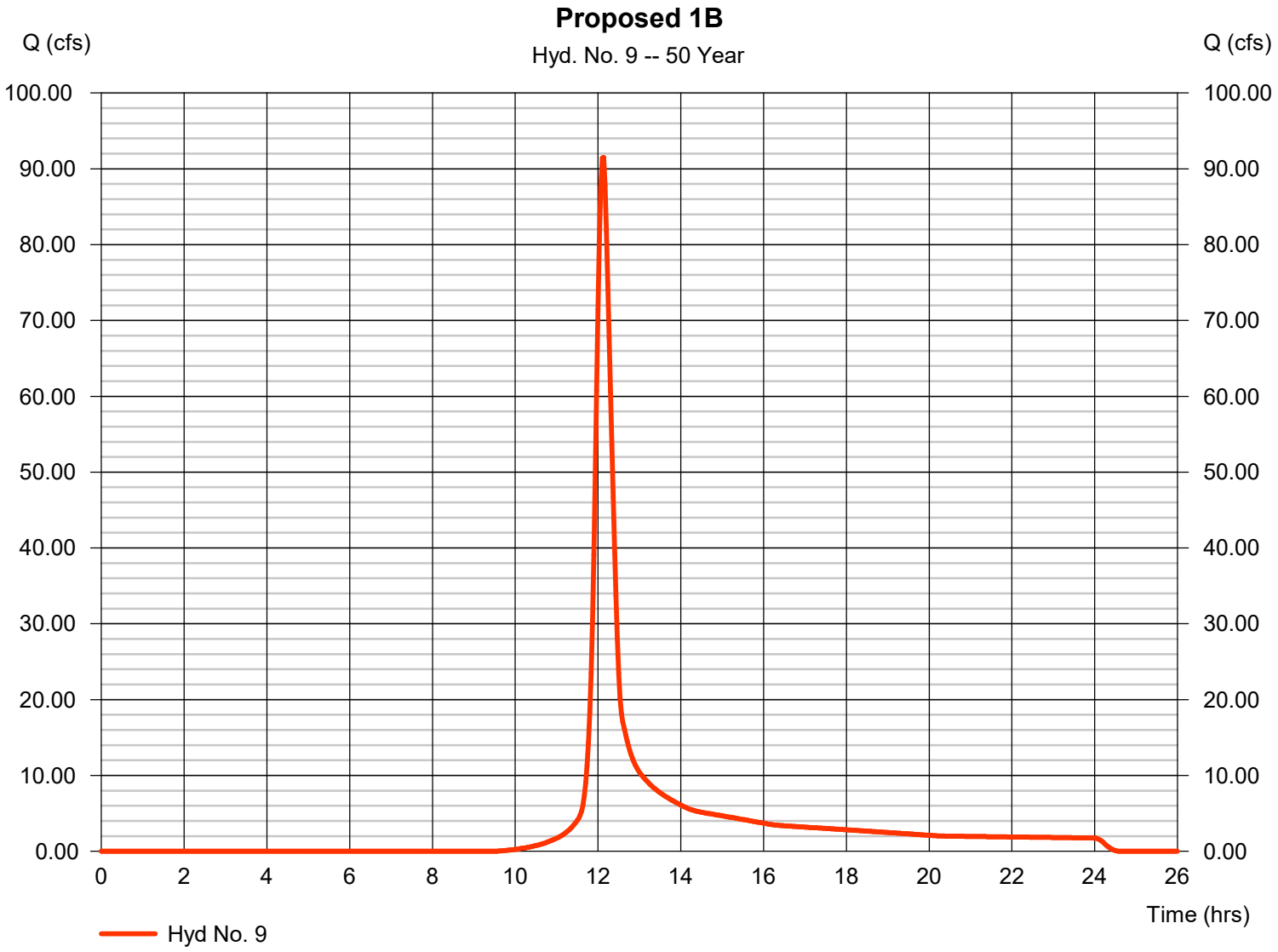
Hydrograph Report

Hyd. No. 9

Proposed 1B

Hydrograph type	=	SCS Runoff	Peak discharge	=	91.49 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	321,274 cuft
Drainage area	=	29.110 ac	Curve number	=	65*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	20.50 min
Total precip.	=	6.85 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(11.520 x 66) + (17.590 x 65)] / 29.110



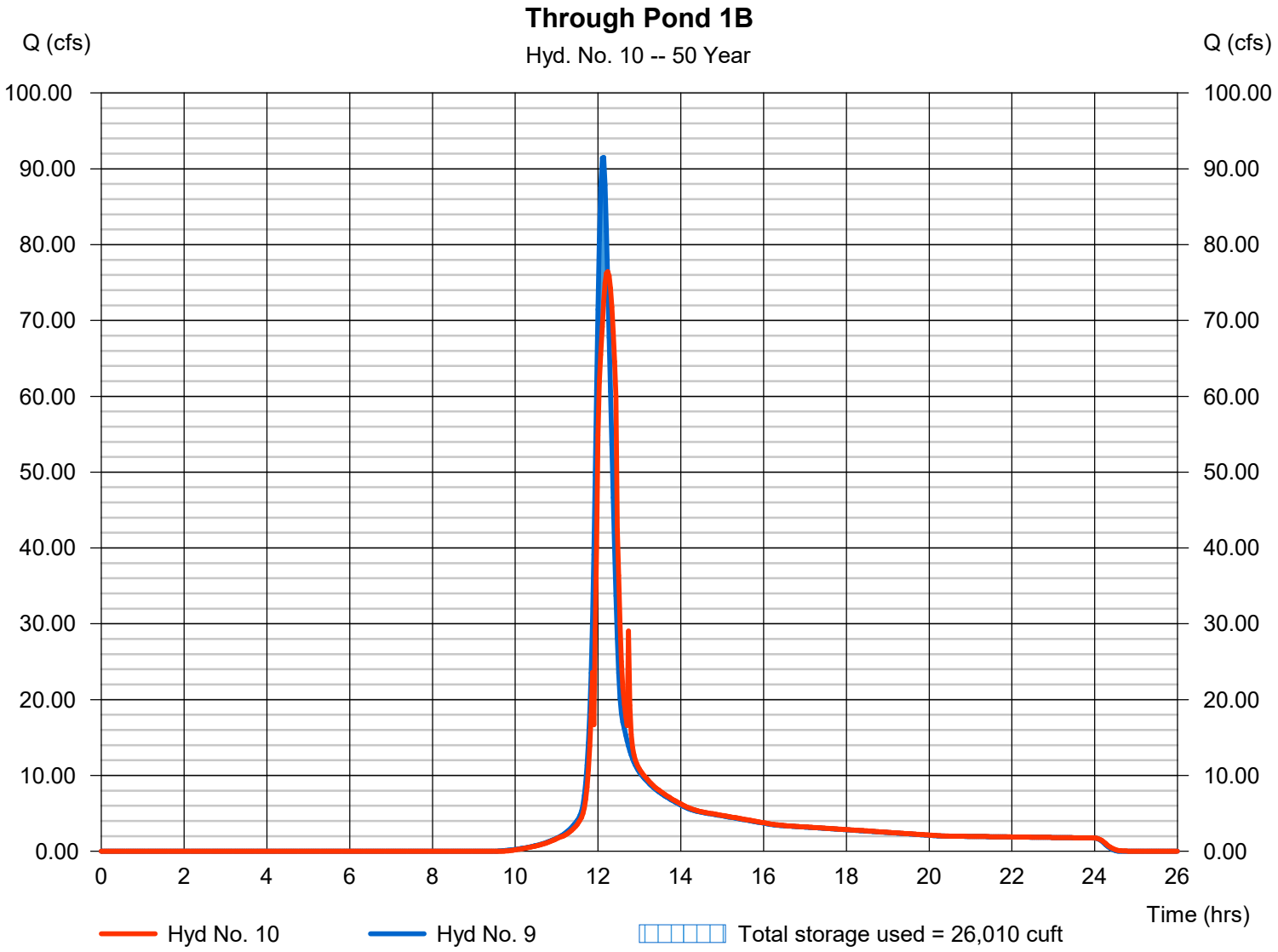
Hydrograph Report

Hyd. No. 10

Through Pond 1B

Hydrograph type	=	Reservoir	Peak discharge	=	76.43 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.23 hrs
Time interval	=	2 min	Hyd. volume	=	321,273 cuft
Inflow hyd. No.	=	9 - Proposed 1B	Max. Elevation	=	616.04 ft
Reservoir name	=	Pond 1B	Max. Storage	=	26,010 cuft

Storage Indication method used.



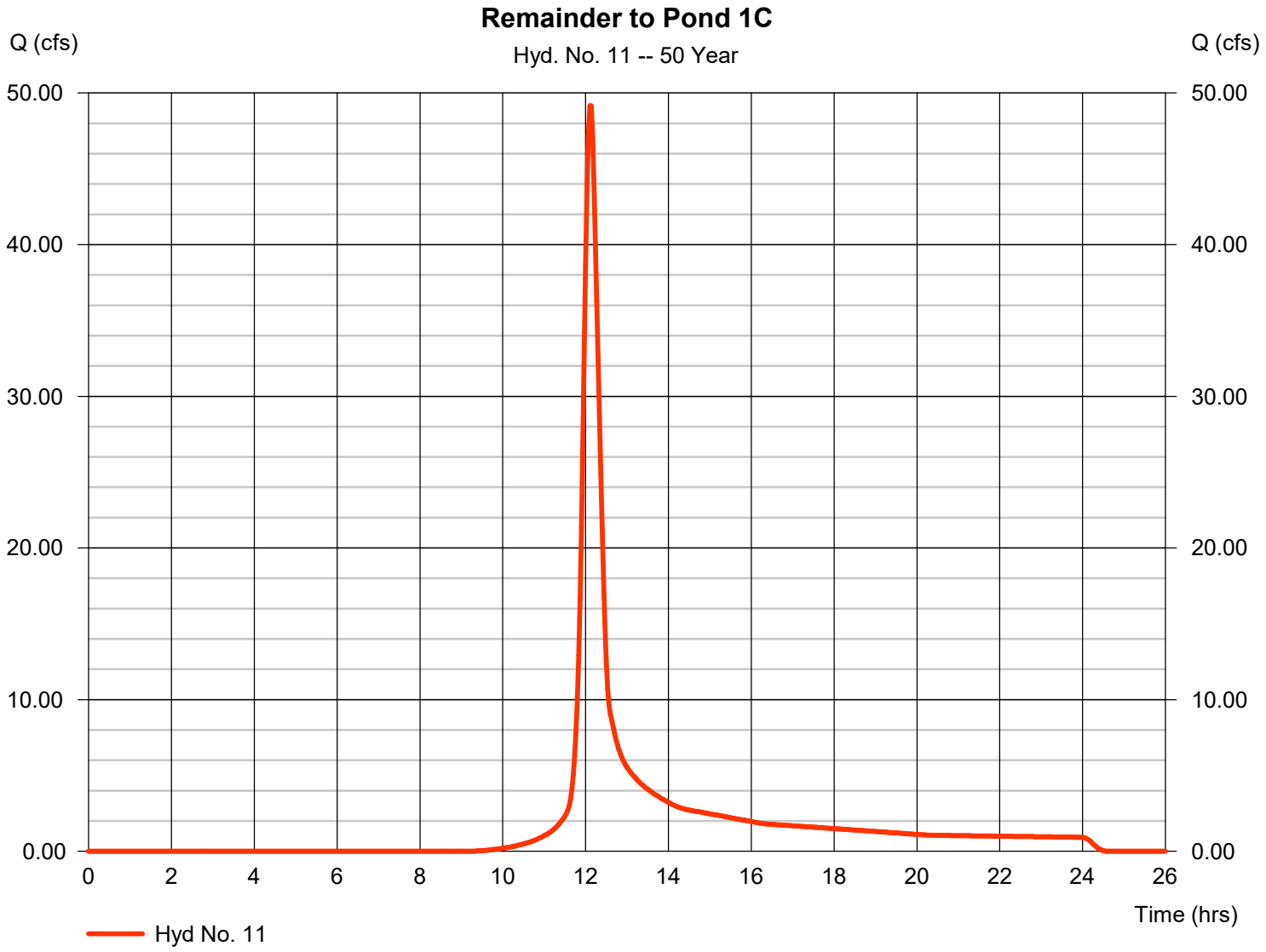
Hydrograph Report

Hyd. No. 11

Remainder to Pond 1C

Hydrograph type	=	SCS Runoff	Peak discharge	=	49.16 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.10 hrs
Time interval	=	2 min	Hyd. volume	=	172,119 cuft
Drainage area	=	15.090 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	20.30 min
Total precip.	=	6.85 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(9.060 x 66) + (6.030 x 65)] / 15.090

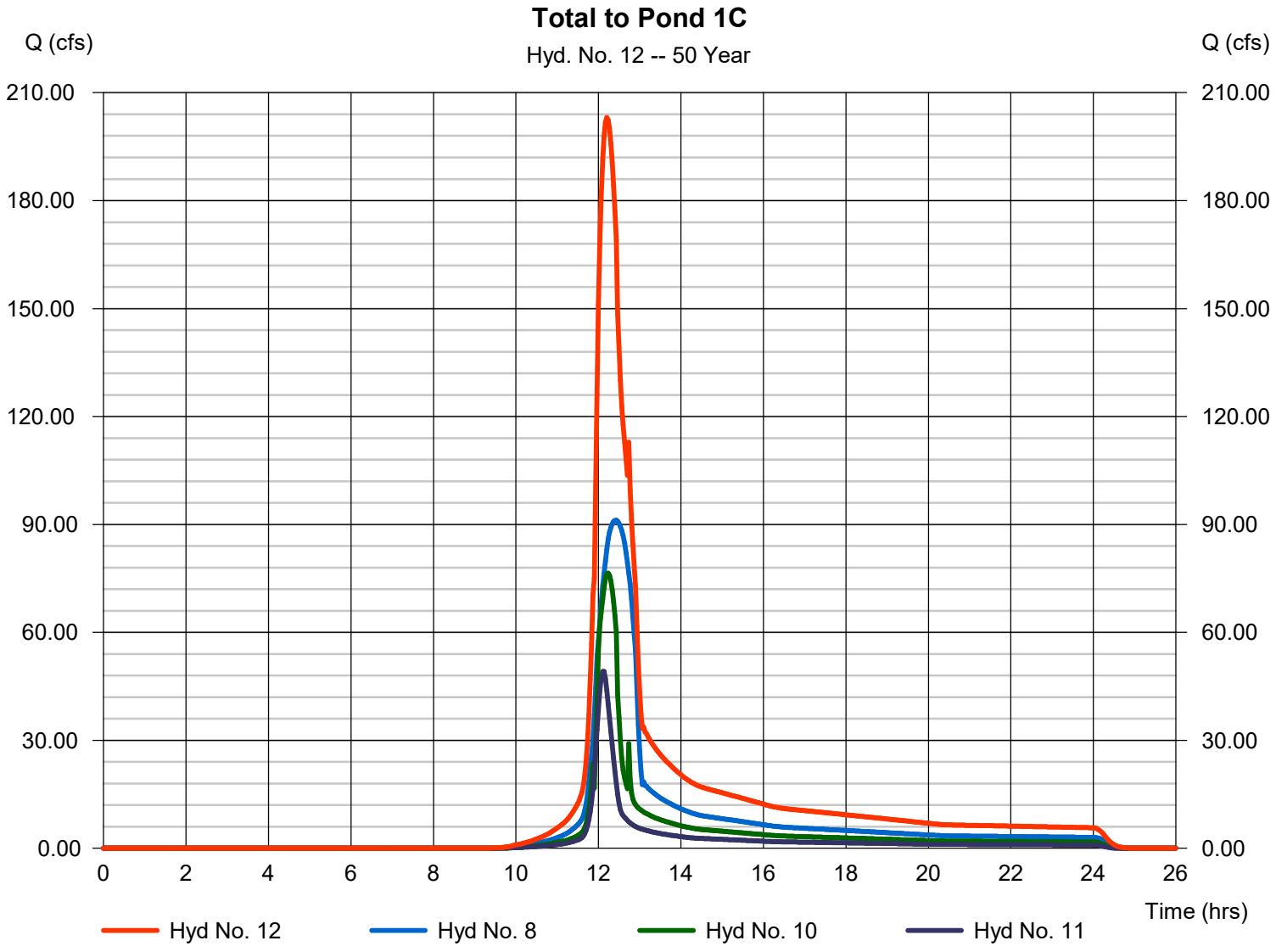


Hydrograph Report

Hyd. No. 12

Total to Pond 1C

Hydrograph type	=	Combine	Peak discharge	=	203.12 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	1,055,486 cuft
Inflow hyds.	=	8, 10, 11	Contrib. drain. area	=	15.090 ac



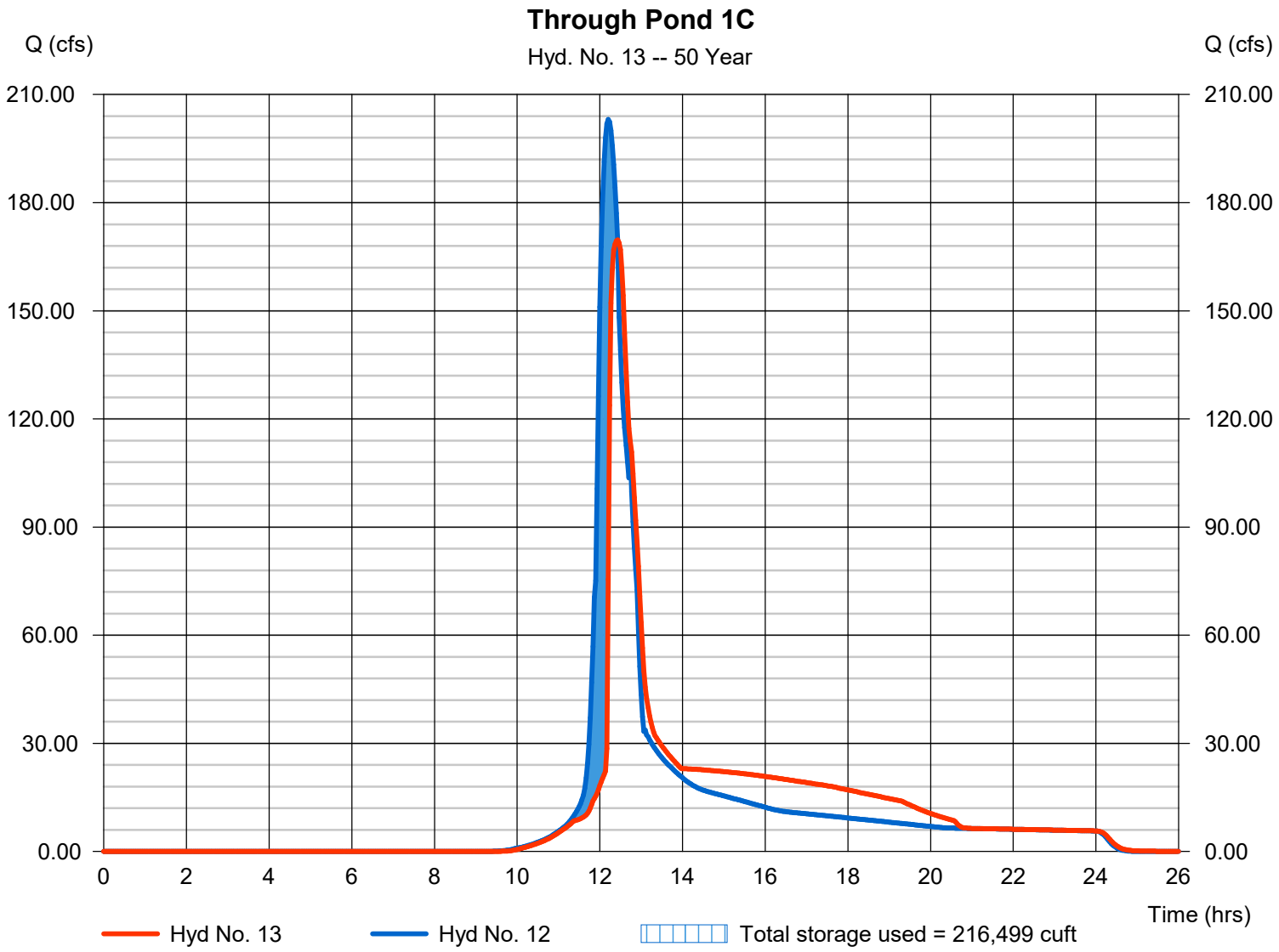
Hydrograph Report

Hyd. No. 13

Through Pond 1C

Hydrograph type	=	Reservoir	Peak discharge	=	169.68 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.43 hrs
Time interval	=	2 min	Hyd. volume	=	1,055,485 cuft
Inflow hyd. No.	=	12 - Total to Pond 1C	Max. Elevation	=	566.54 ft
Reservoir name	=	Pond 1C	Max. Storage	=	216,499 cuft

Storage Indication method used.



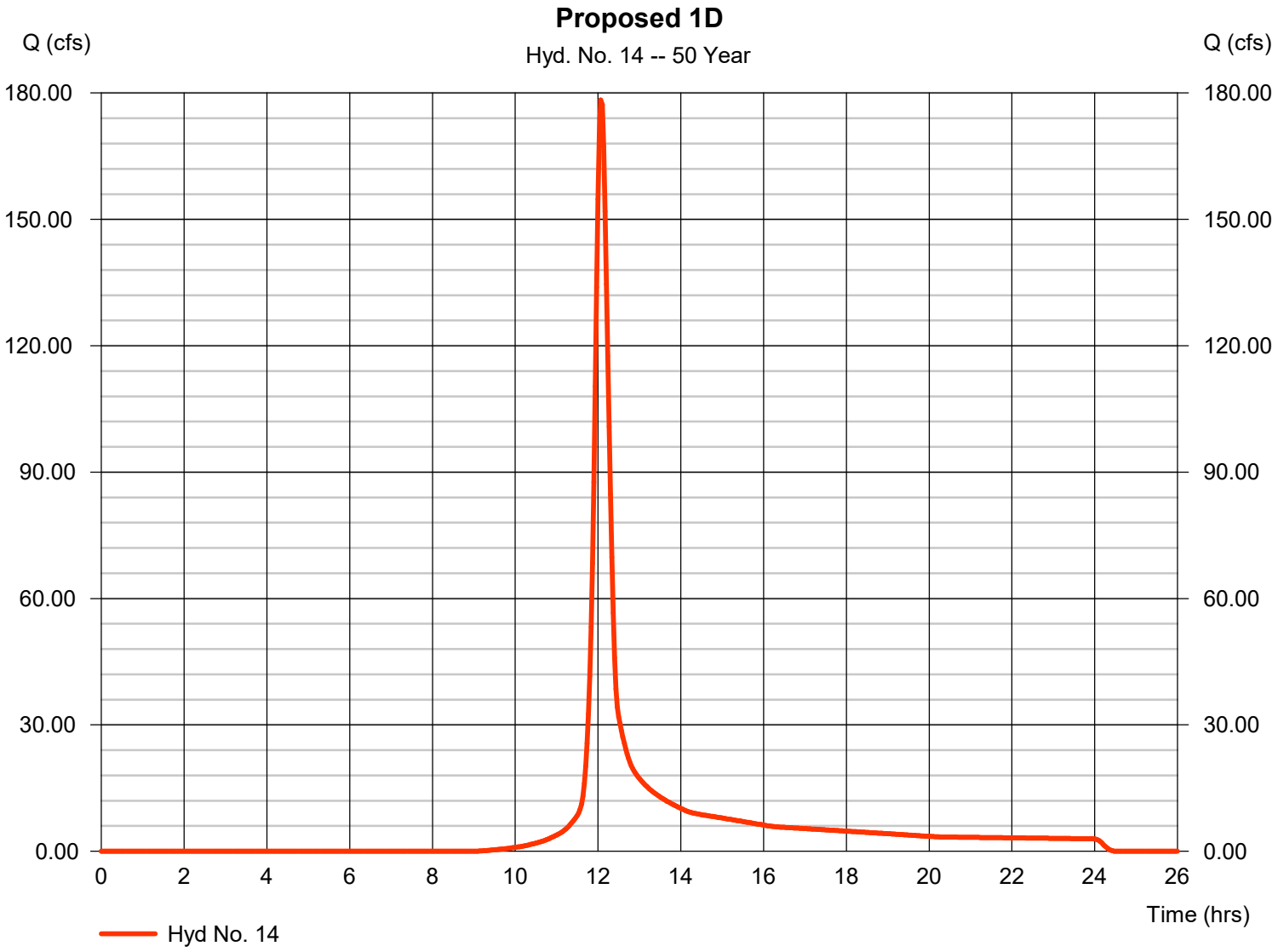
Hydrograph Report

Hyd. No. 14

Proposed 1D

Hydrograph type	=	SCS Runoff	Peak discharge	=	178.33 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.07 hrs
Time interval	=	2 min	Hyd. volume	=	561,923 cuft
Drainage area	=	48.560 ac	Curve number	=	67*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	17.60 min
Total precip.	=	6.85 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.720 x 98) + (21.900 x 66) + (24.940 x 65)] / 48.560



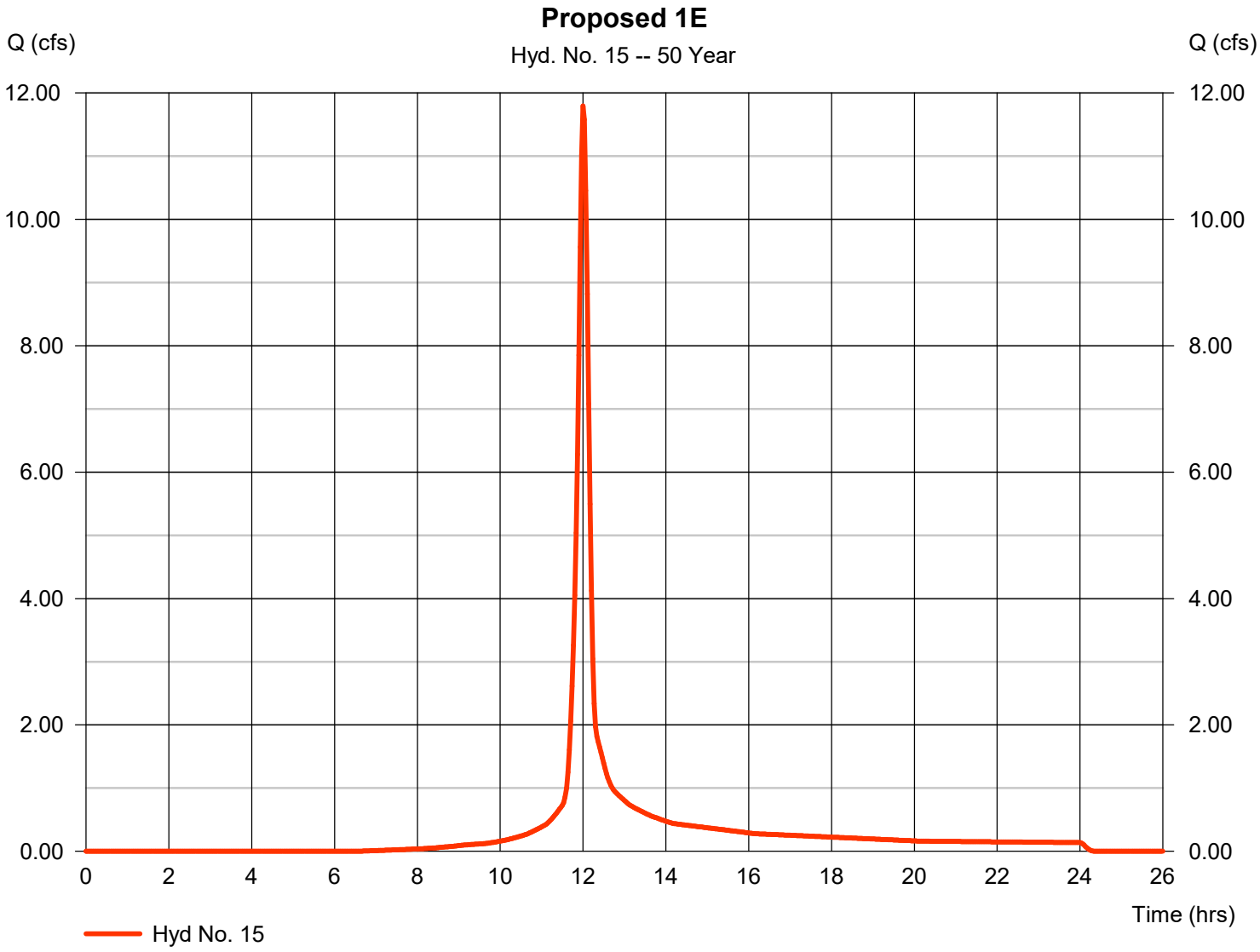
Hydrograph Report

Hyd. No. 15

Proposed 1E

Hydrograph type	=	SCS Runoff	Peak discharge	=	11.79 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	30,728 cuft
Drainage area	=	1.940 ac	Curve number	=	77*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	6.85 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.700 x 98) + (1.240 x 65)] / 1.940



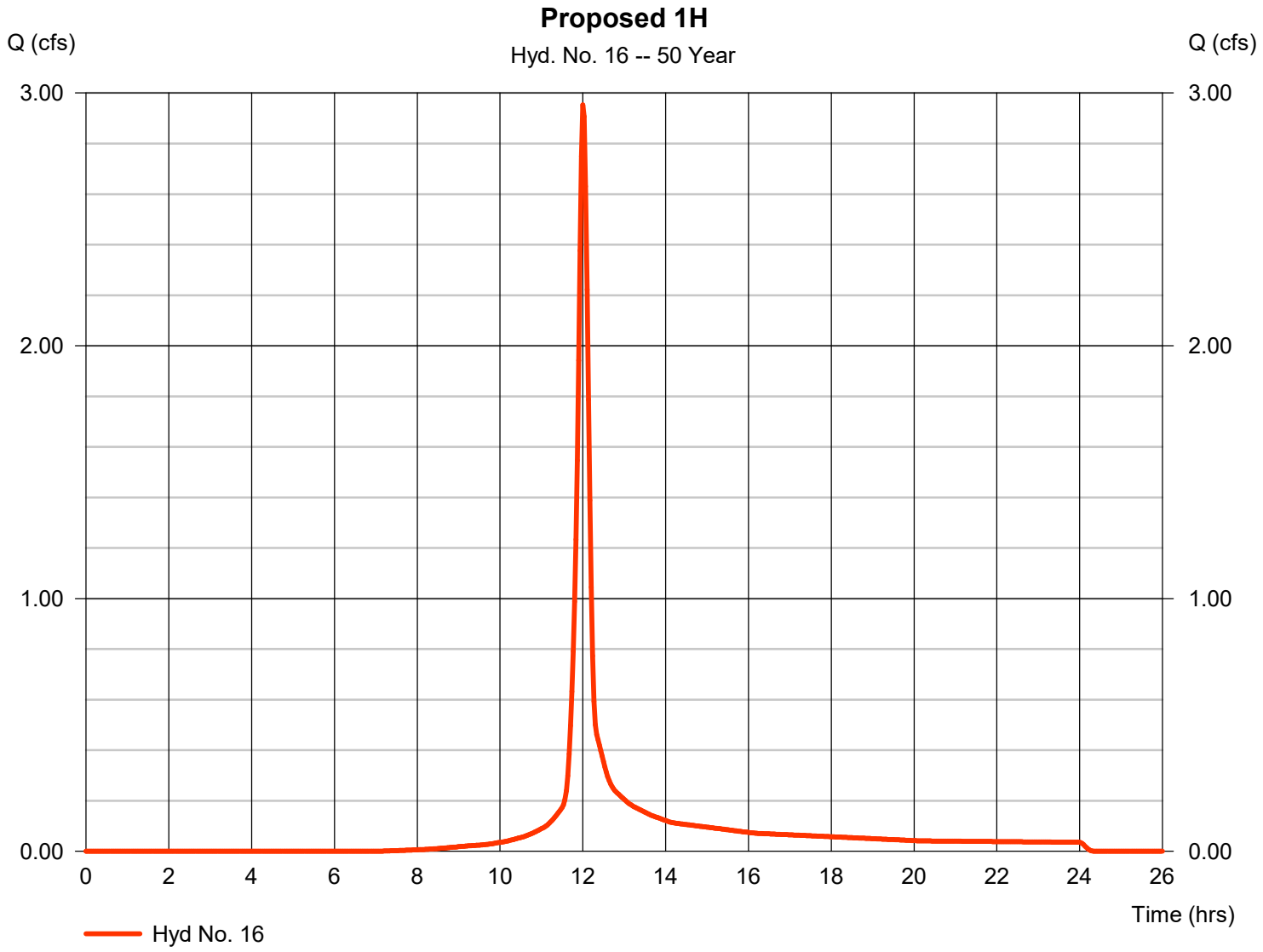
Hydrograph Report

Hyd. No. 16

Proposed 1H

Hydrograph type	= SCS Runoff	Peak discharge	= 2.953 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 7,670 cuft
Drainage area	= 0.510 ac	Curve number	= 75*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.85 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.150 x 98) + (0.360 x 65)] / 0.510

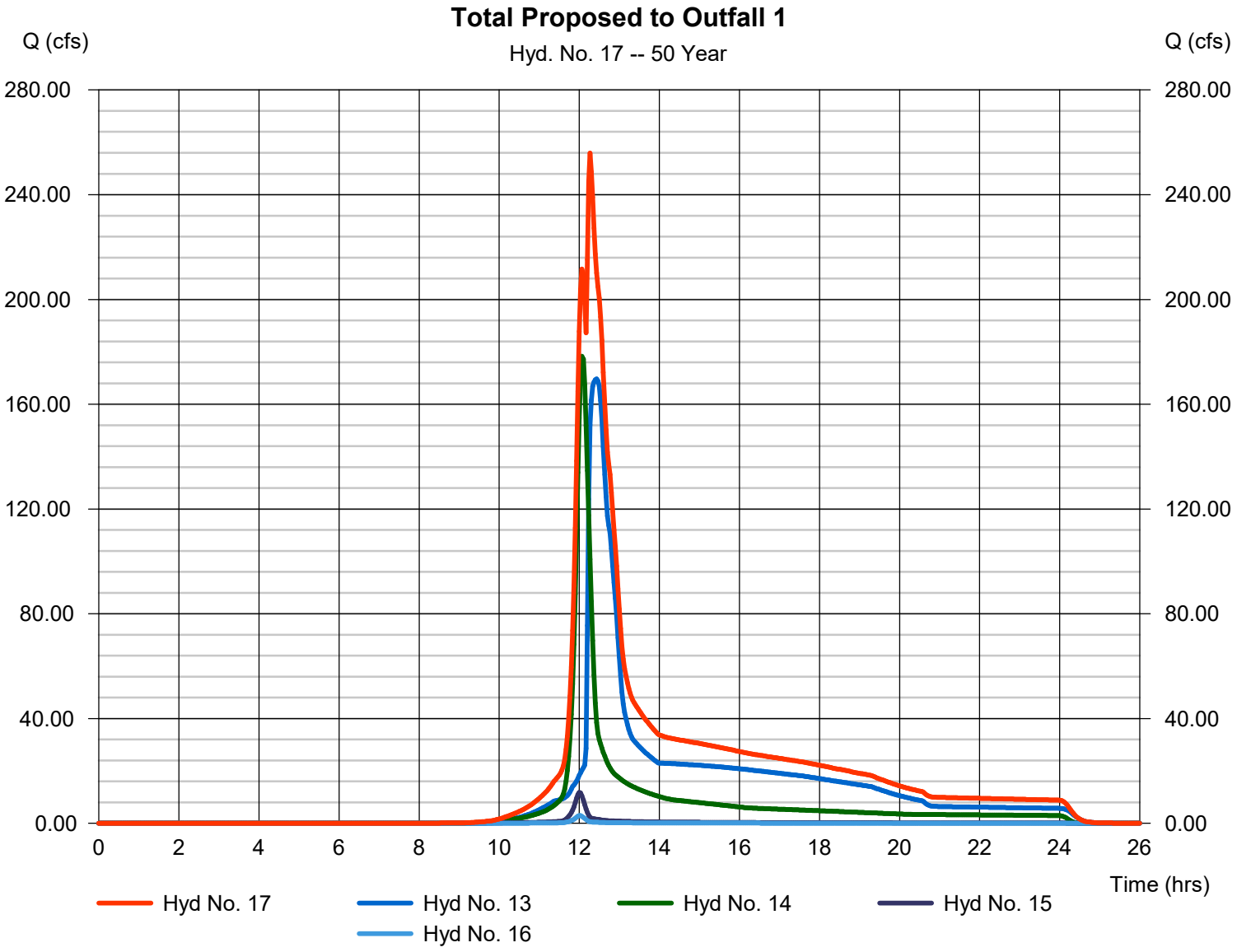


Hydrograph Report

Hyd. No. 17

Total Proposed to Outfall 1

Hydrograph type	= Combine	Peak discharge	= 255.86 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.27 hrs
Time interval	= 2 min	Hyd. volume	= 1,655,666 cuft
Inflow hyds.	= 13, 14, 15, 16	Contrib. drain. area	= 51.010 ac

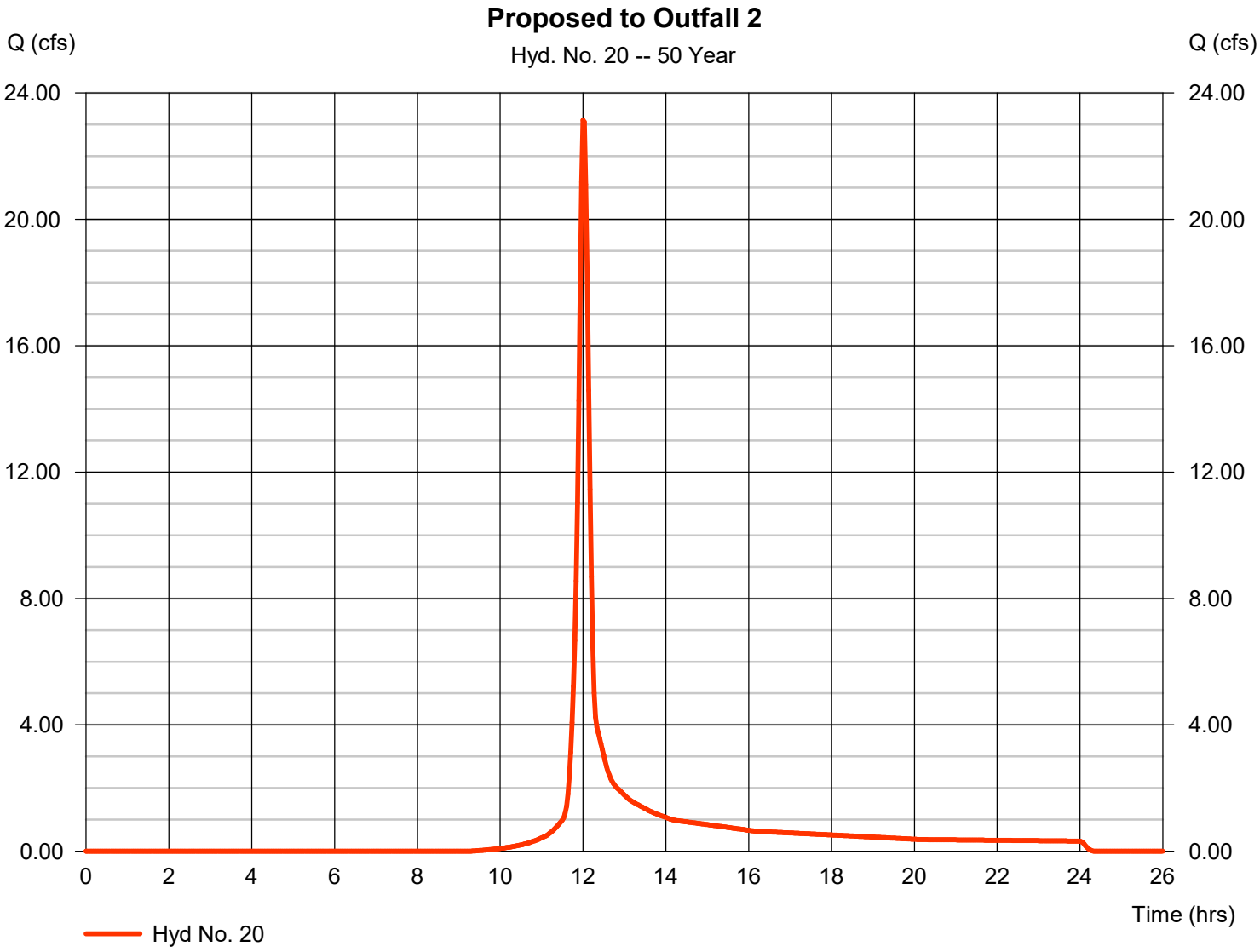


Hydrograph Report

Hyd. No. 20

Proposed to Outfall 2

Hydrograph type	= SCS Runoff	Peak discharge	= 23.14 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 60,324 cuft
Drainage area	= 5.220 ac	Curve number	= 66
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 10.10 min
Total precip.	= 6.85 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



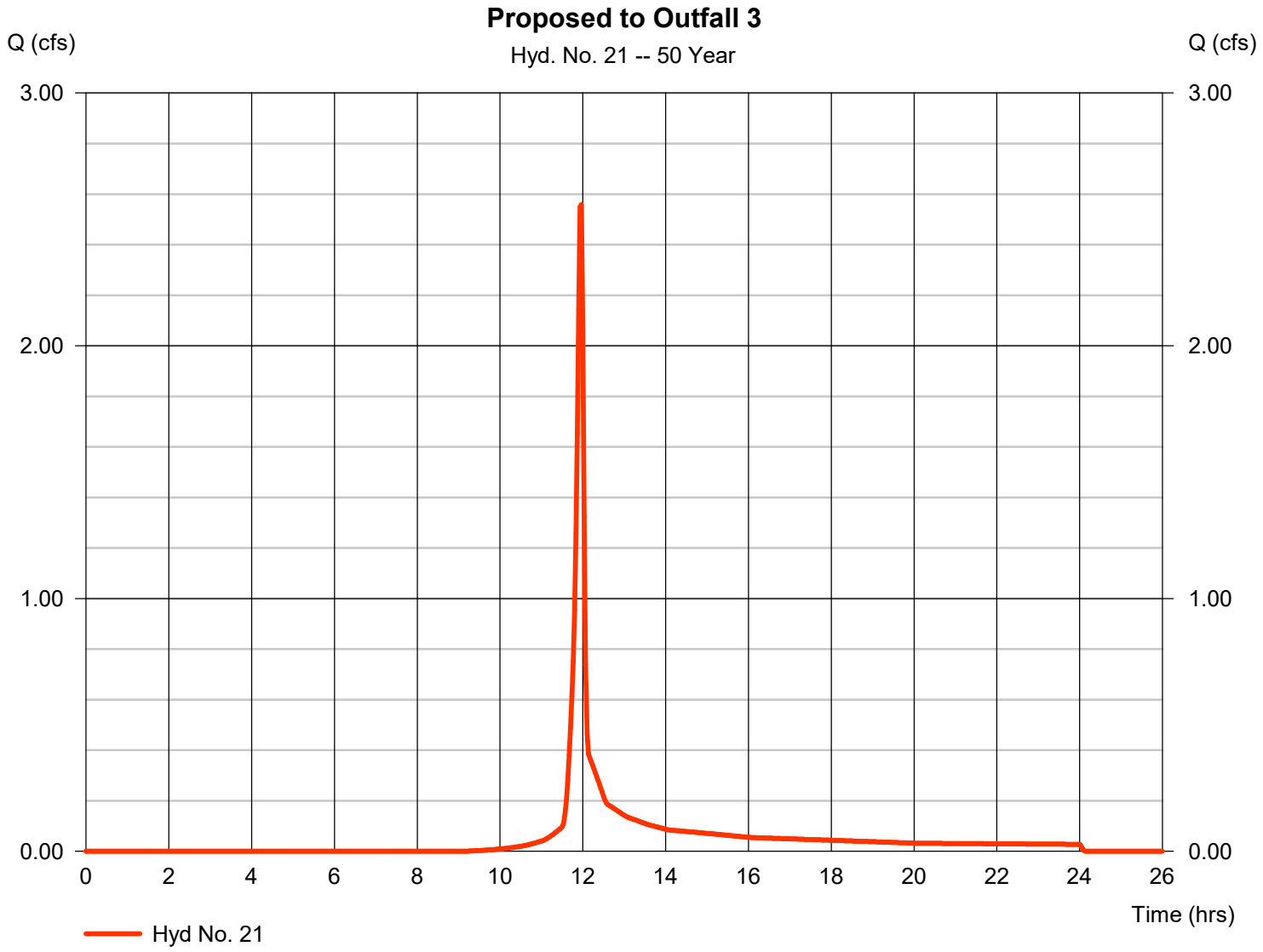
Hydrograph Report

Hyd. No. 21

Proposed to Outfall 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.559 cfs
Storm frequency	=	50 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	5,148 cuft
Drainage area	=	0.490 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.85 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.490 x 66)] / 0.490

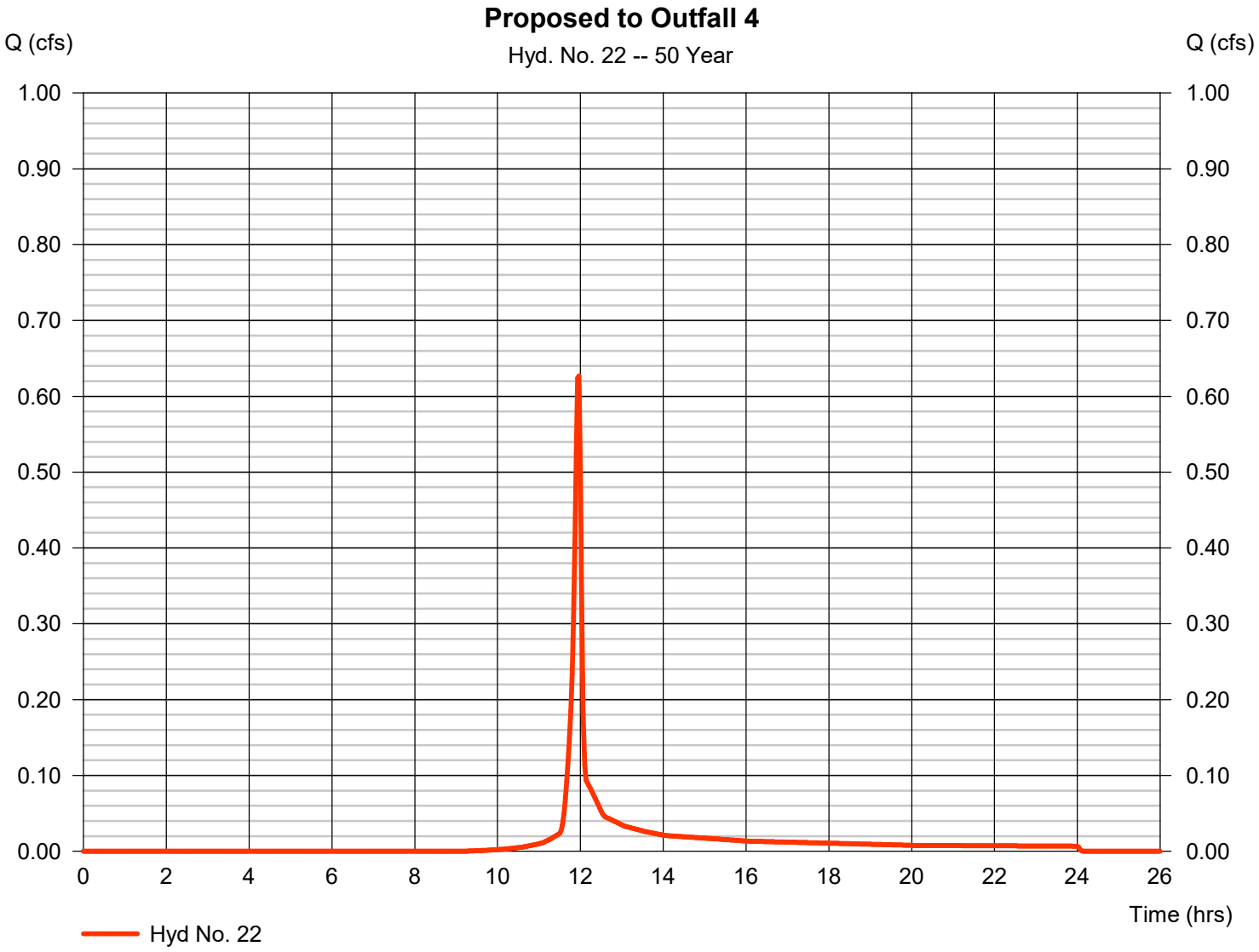


Hydrograph Report

Hyd. No. 22

Proposed to Outfall 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.627 cfs
Storm frequency	=	50 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	1,261 cuft
Drainage area	=	0.120 ac	Curve number	=	66
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.85 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

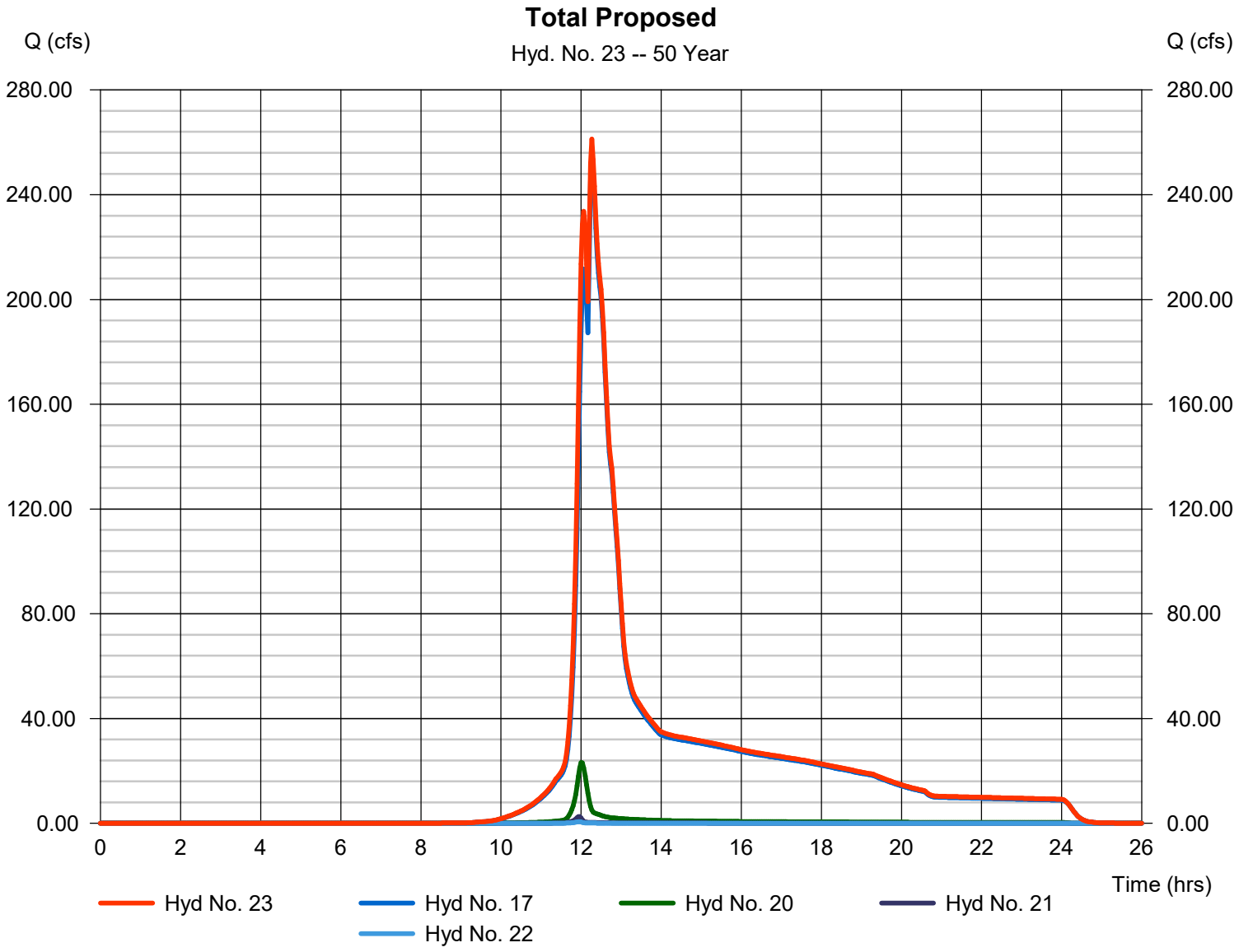


Hydrograph Report

Hyd. No. 23

Total Proposed

Hydrograph type	=	Combine	Peak discharge	=	261.28 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.27 hrs
Time interval	=	2 min	Hyd. volume	=	1,722,397 cuft
Inflow hyds.	=	17, 20, 21, 22	Contrib. drain. area	=	5.830 ac



Hydrograph Summary Report

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

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	416.13	2	738	2,028,672	------	------	------	Existing to Outfall 1
2	SCS Runoff	27.27	2	720	70,853	------	------	------	Existing to Outfall 2
3	SCS Runoff	2.995	2	716	6,046	------	------	------	Existing to Outfall 3
4	SCS Runoff	0.733	2	716	1,481	------	------	------	Existing to Outfall 4
5	Combine	421.61	2	736	2,107,050	1, 2, 3, 4	------	------	Total Existing
7	SCS Runoff	163.53	2	732	660,206	------	------	------	Proposed 1A
8	Reservoir	99.20	2	746	660,205	7	590.00	97,609	Through Pond 1A
9	SCS Runoff	108.44	2	726	378,357	------	------	------	Proposed 1B
10	Reservoir	84.29	2	734	378,356	9	617.14	35,953	Through Pond 1B
11	SCS Runoff	58.09	2	726	202,161	------	------	------	Remainder to Pond 1C
12	Combine	224.50	2	732	1,240,722	8, 10, 11	------	------	Total to Pond 1C
13	Reservoir	179.83	2	748	1,240,721	12	567.11	238,203	Through Pond 1C
14	SCS Runoff	209.81	2	724	658,294	------	------	------	Proposed 1D
15	SCS Runoff	13.46	2	720	35,186	------	------	------	Proposed 1E
16	SCS Runoff	3.387	2	720	8,820	------	------	------	Proposed 1H
17	Combine	310.76	2	732	1,942,870	13, 14, 15, 16	------	------	Total Proposed to Outfall 1
20	SCS Runoff	27.27	2	720	70,853	------	------	------	Proposed to Outfall 2
21	SCS Runoff	2.995	2	716	6,046	------	------	------	Proposed to Outfall 3
22	SCS Runoff	0.733	2	716	1,481	------	------	------	Proposed to Outfall 4
23	Combine	321.36	2	732	2,021,250	17, 20, 21, 22	------	------	Total Proposed

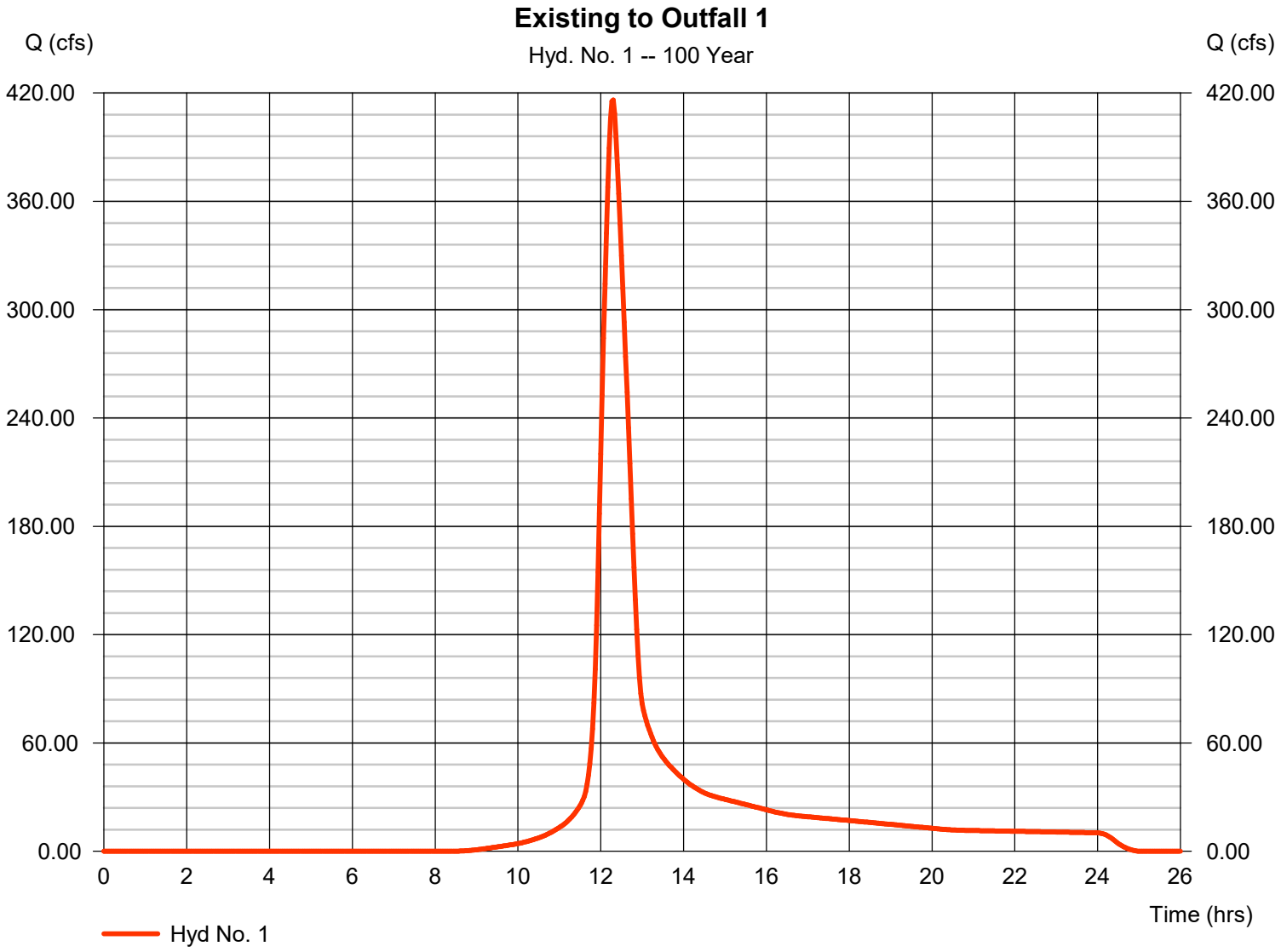
Hydrograph Report

Hyd. No. 1

Existing to Outfall 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	416.13 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.30 hrs
Time interval	=	2 min	Hyd. volume	=	2,028,672 cuft
Drainage area	=	145.400 ac	Curve number	=	68*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	39.00 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.780 x 45) + (110.600 x 66) + (32.020 x 77)] / 145.400

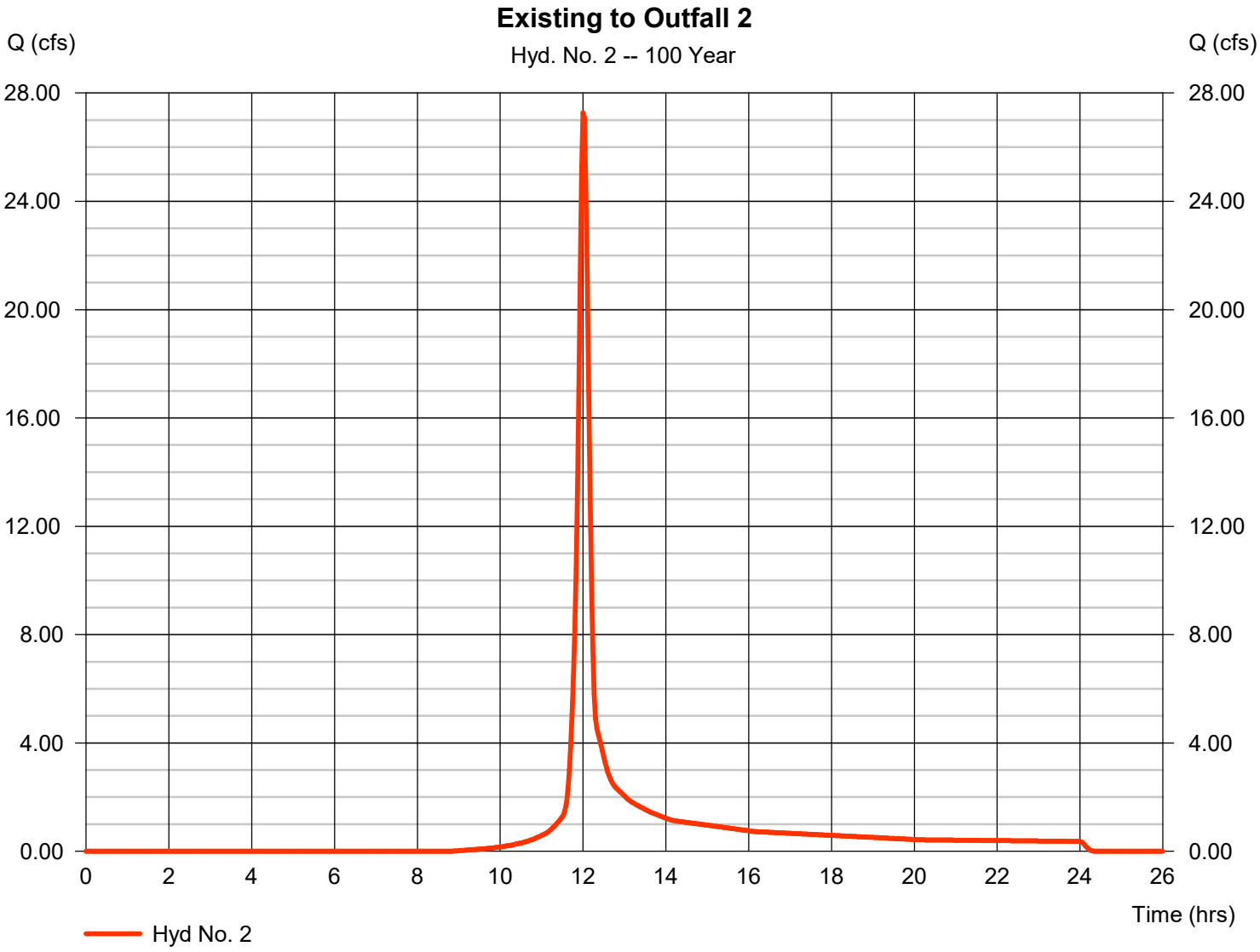


Hydrograph Report

Hyd. No. 2

Existing to Outfall 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	27.27 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	70,853 cuft
Drainage area	=	5.220 ac	Curve number	=	66
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	10.10 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



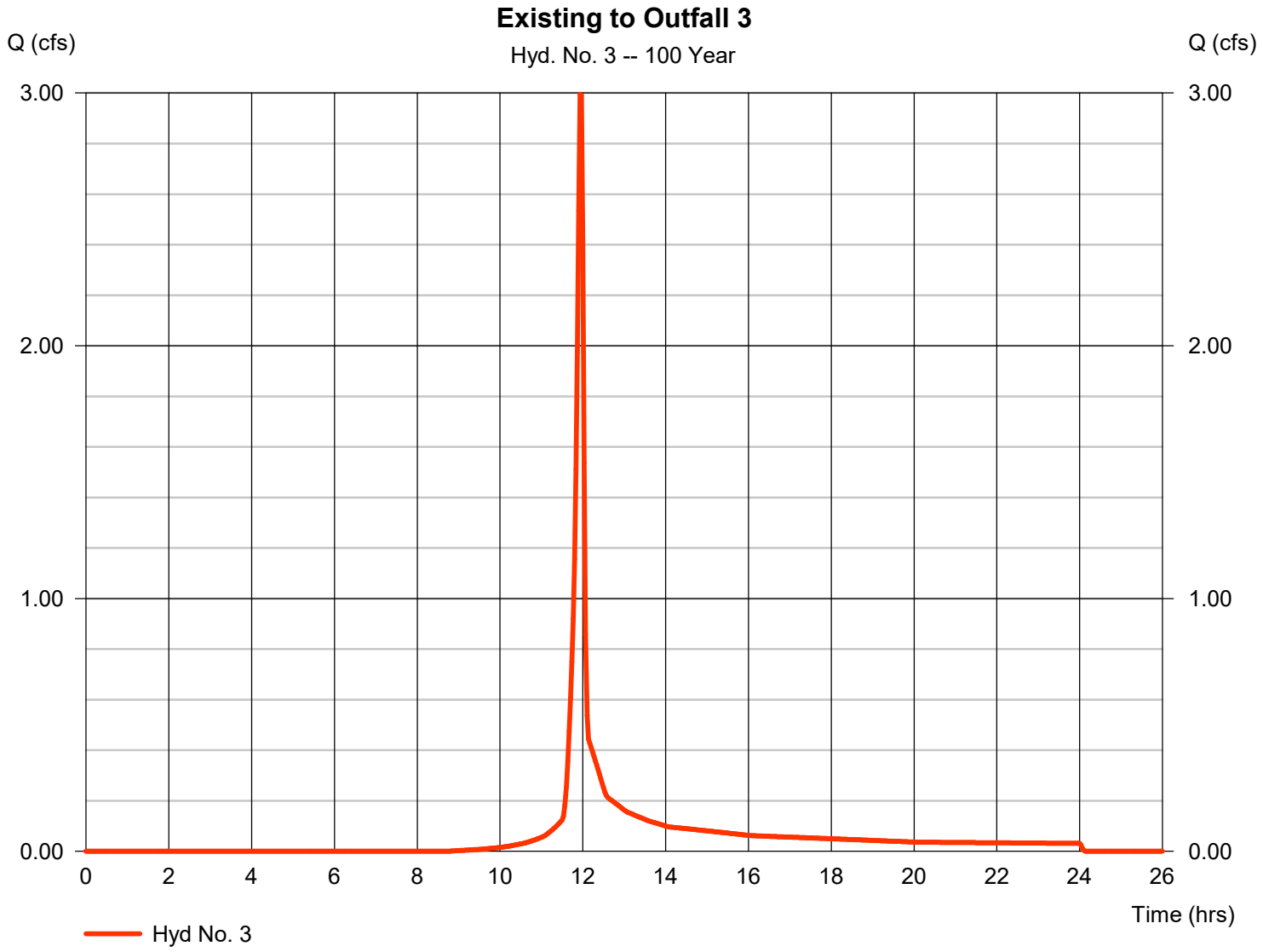
Hydrograph Report

Hyd. No. 3

Existing to Outfall 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.995 cfs
Storm frequency	=	100 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	6,046 cuft
Drainage area	=	0.490 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.490 x 66)] / 0.490

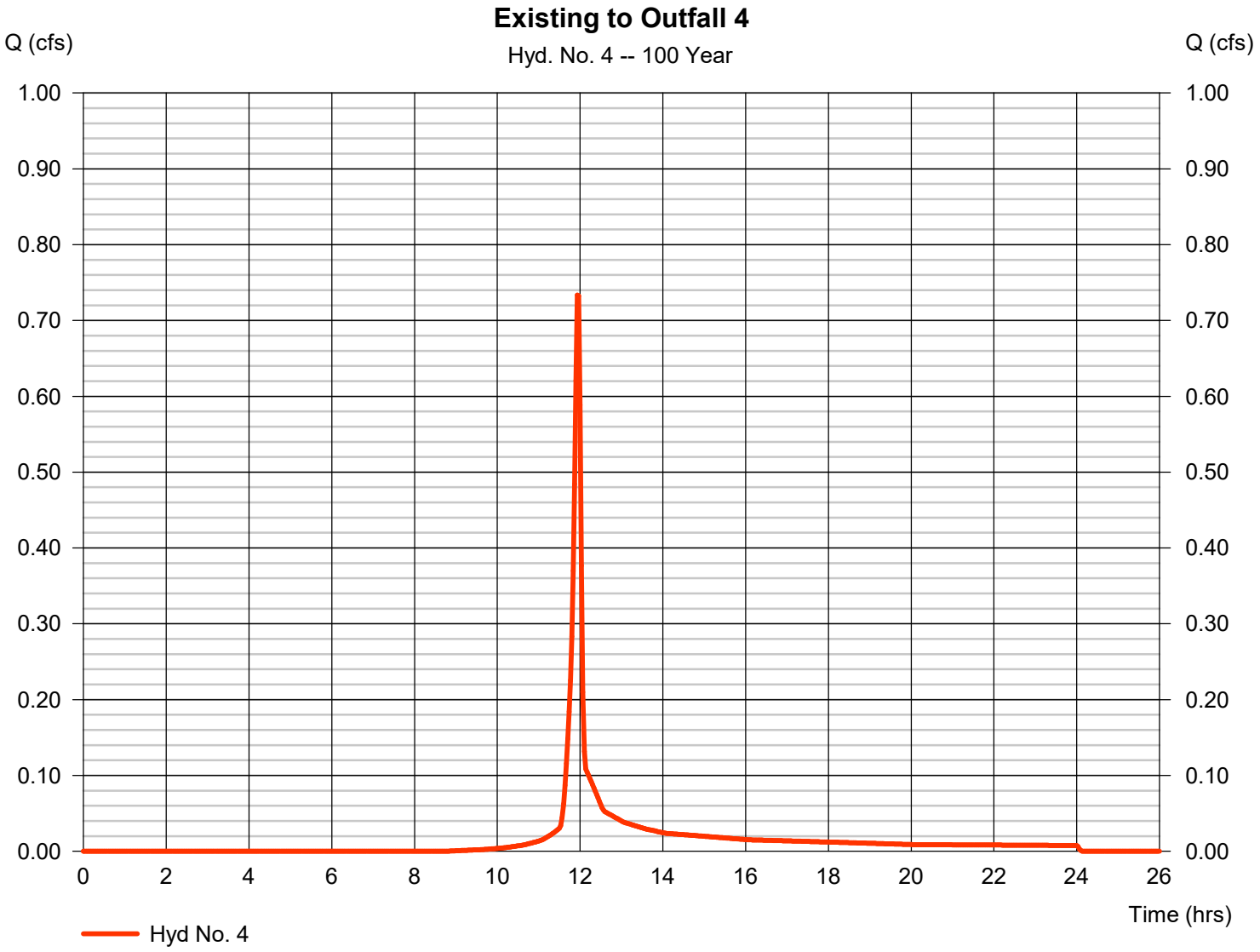


Hydrograph Report

Hyd. No. 4

Existing to Outfall 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.733 cfs
Storm frequency	=	100 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	1,481 cuft
Drainage area	=	0.120 ac	Curve number	=	66
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

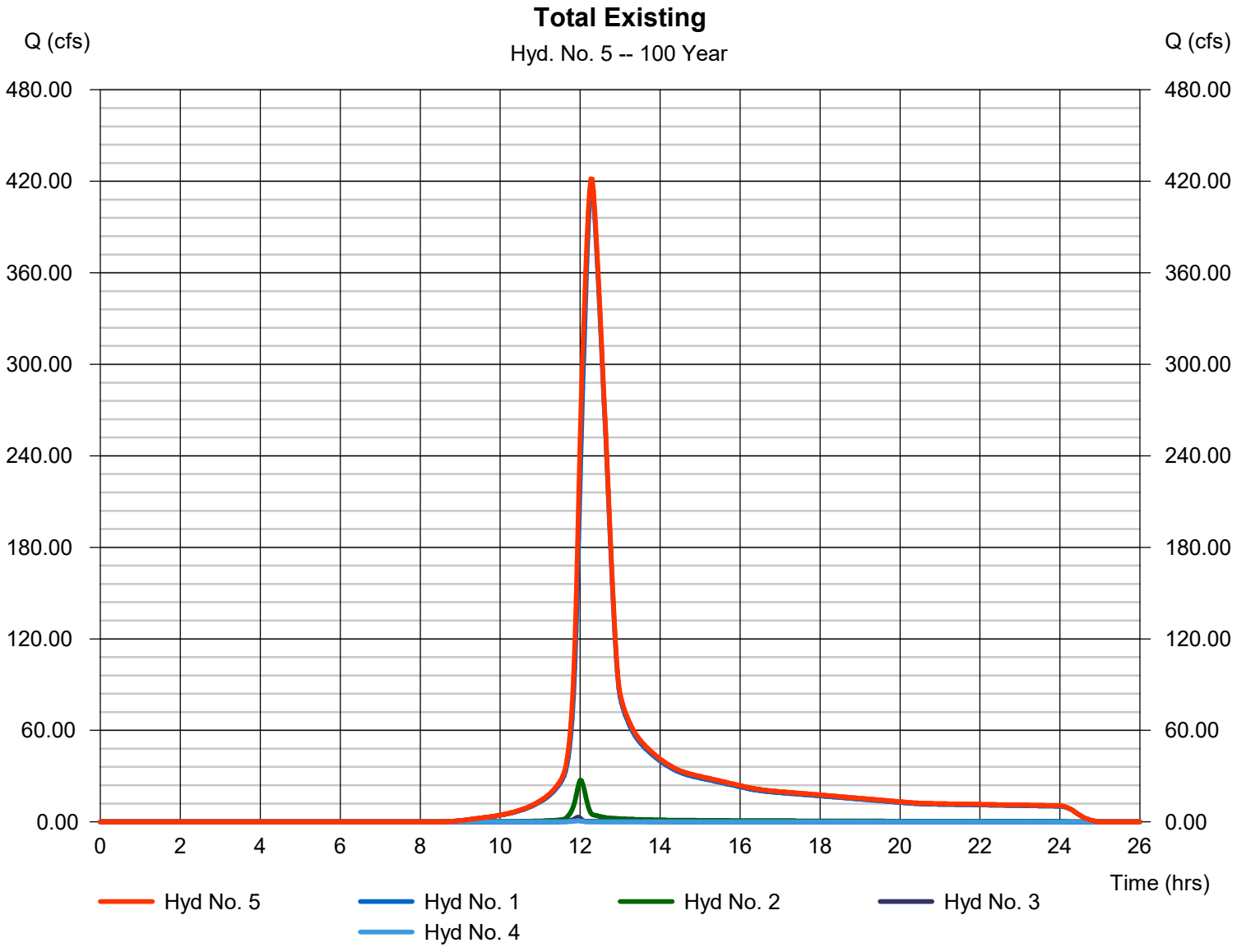


Hydrograph Report

Hyd. No. 5

Total Existing

Hydrograph type	= Combine	Peak discharge	= 421.61 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.27 hrs
Time interval	= 2 min	Hyd. volume	= 2,107,050 cuft
Inflow hyds.	= 1, 2, 3, 4	Contrib. drain. area	= 151.230 ac



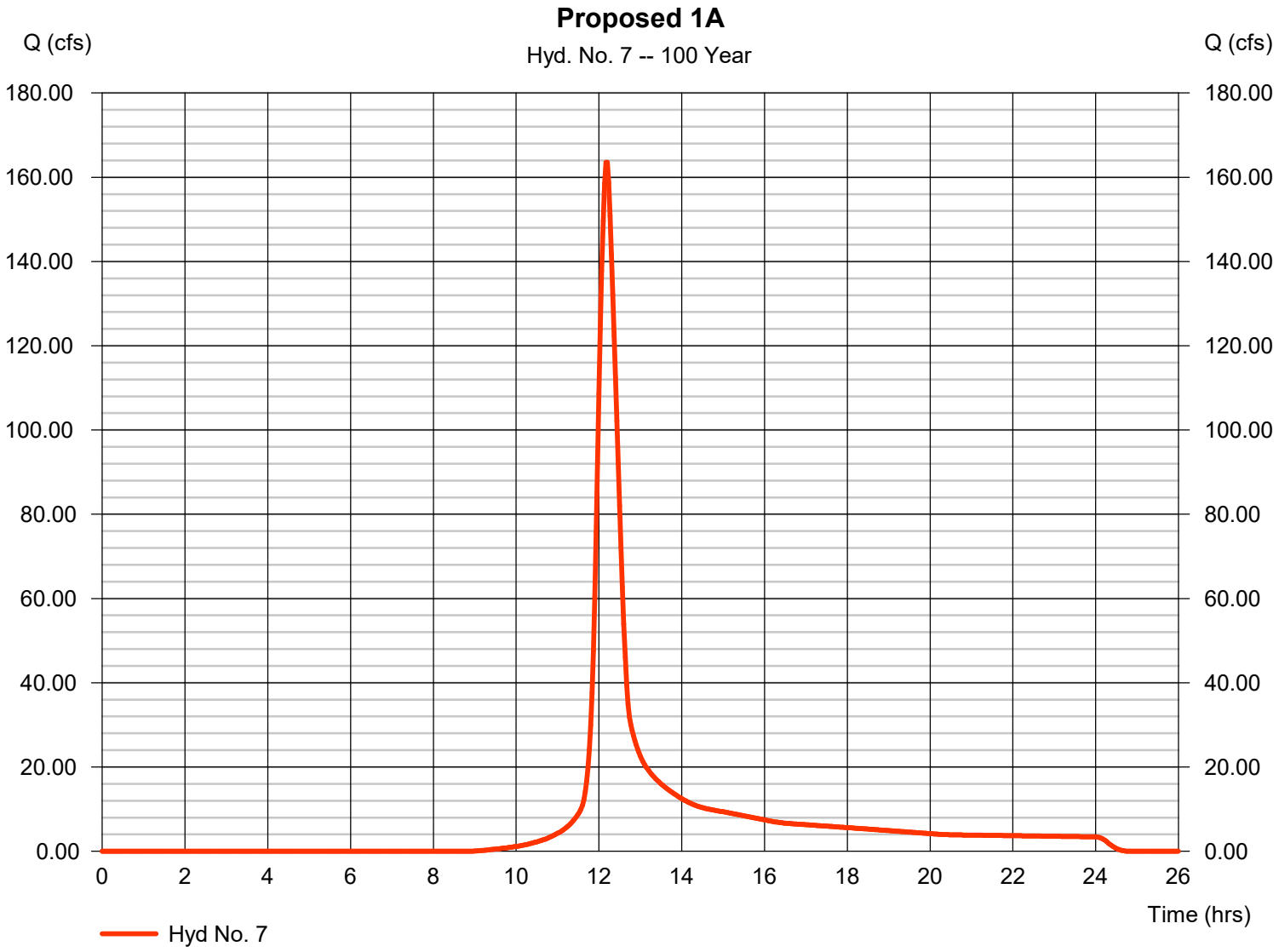
Hydrograph Report

Hyd. No. 7

Proposed 1A

Hydrograph type	=	SCS Runoff	Peak discharge	=	163.53 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	660,206 cuft
Drainage area	=	50.160 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	29.70 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(7.960 x 65) + (42.200 x 66)] / 50.160



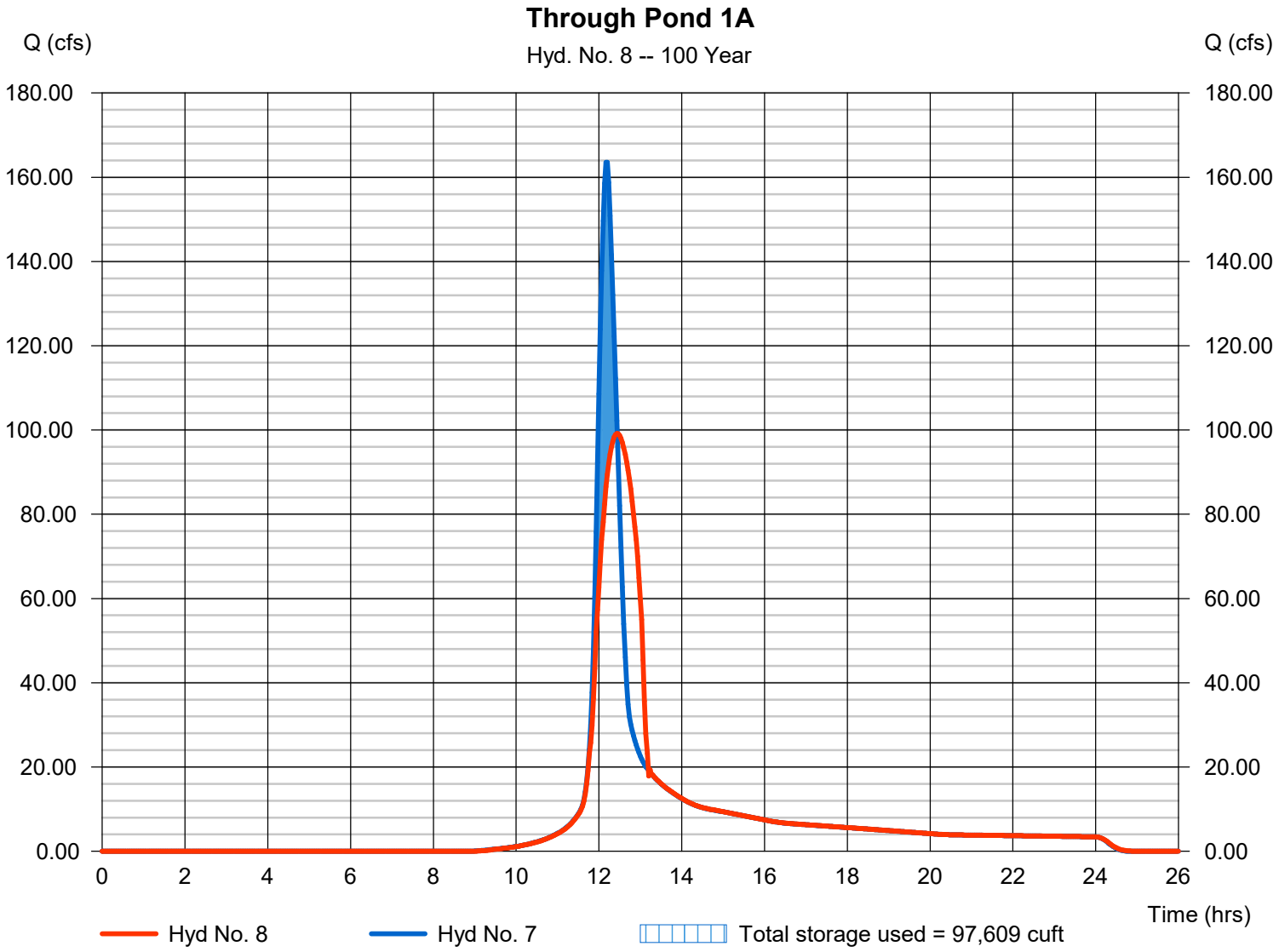
Hydrograph Report

Hyd. No. 8

Through Pond 1A

Hydrograph type	=	Reservoir	Peak discharge	=	99.20 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.43 hrs
Time interval	=	2 min	Hyd. volume	=	660,205 cuft
Inflow hyd. No.	=	7 - Proposed 1A	Max. Elevation	=	590.00 ft
Reservoir name	=	Pond 1A	Max. Storage	=	97,609 cuft

Storage Indication method used.



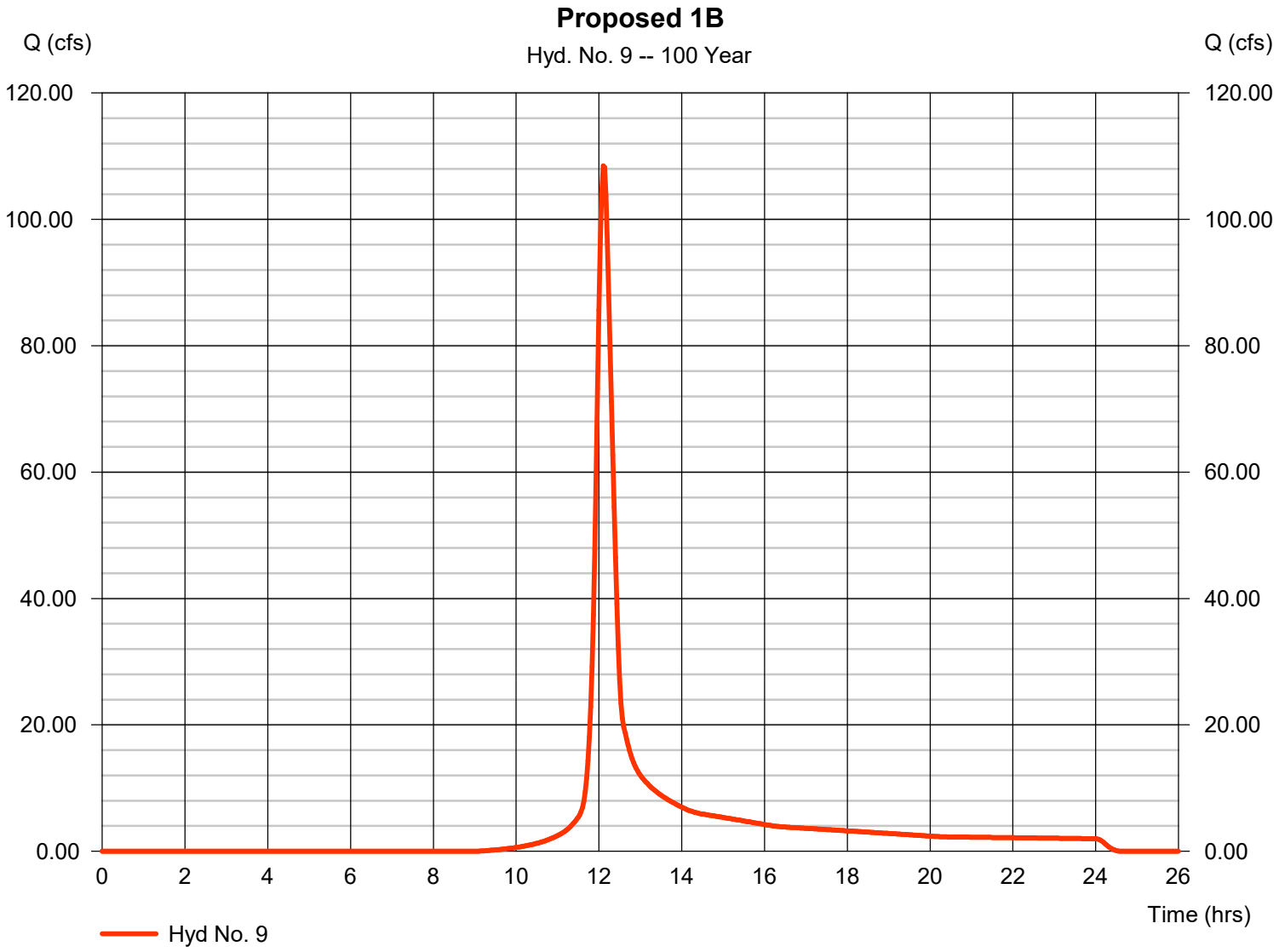
Hydrograph Report

Hyd. No. 9

Proposed 1B

Hydrograph type	=	SCS Runoff	Peak discharge	=	108.44 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.10 hrs
Time interval	=	2 min	Hyd. volume	=	378,357 cuft
Drainage area	=	29.110 ac	Curve number	=	65*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	20.50 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(11.520 x 66) + (17.590 x 65)] / 29.110



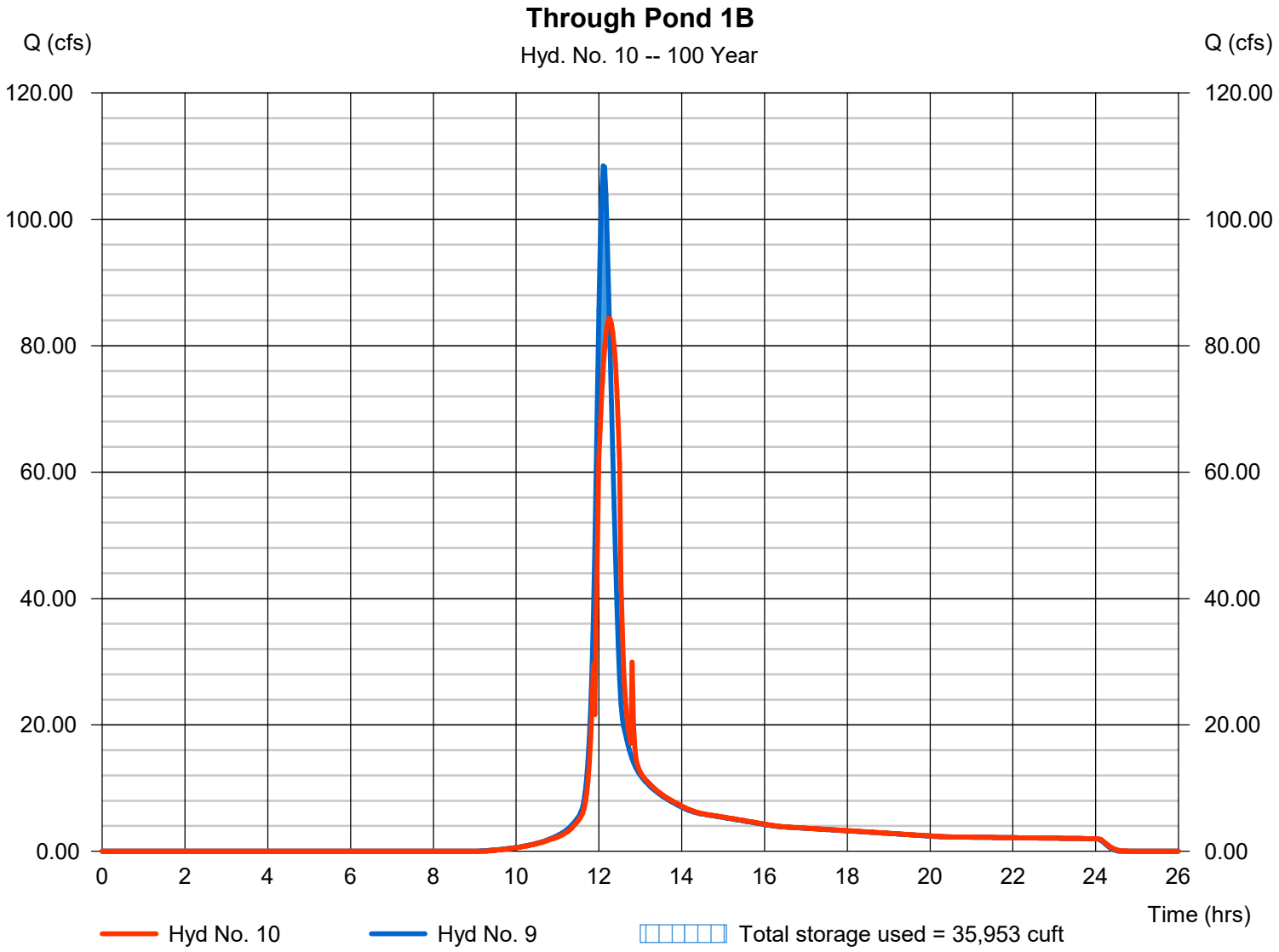
Hydrograph Report

Hyd. No. 10

Through Pond 1B

Hydrograph type	=	Reservoir	Peak discharge	=	84.29 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.23 hrs
Time interval	=	2 min	Hyd. volume	=	378,356 cuft
Inflow hyd. No.	=	9 - Proposed 1B	Max. Elevation	=	617.14 ft
Reservoir name	=	Pond 1B	Max. Storage	=	35,953 cuft

Storage Indication method used.



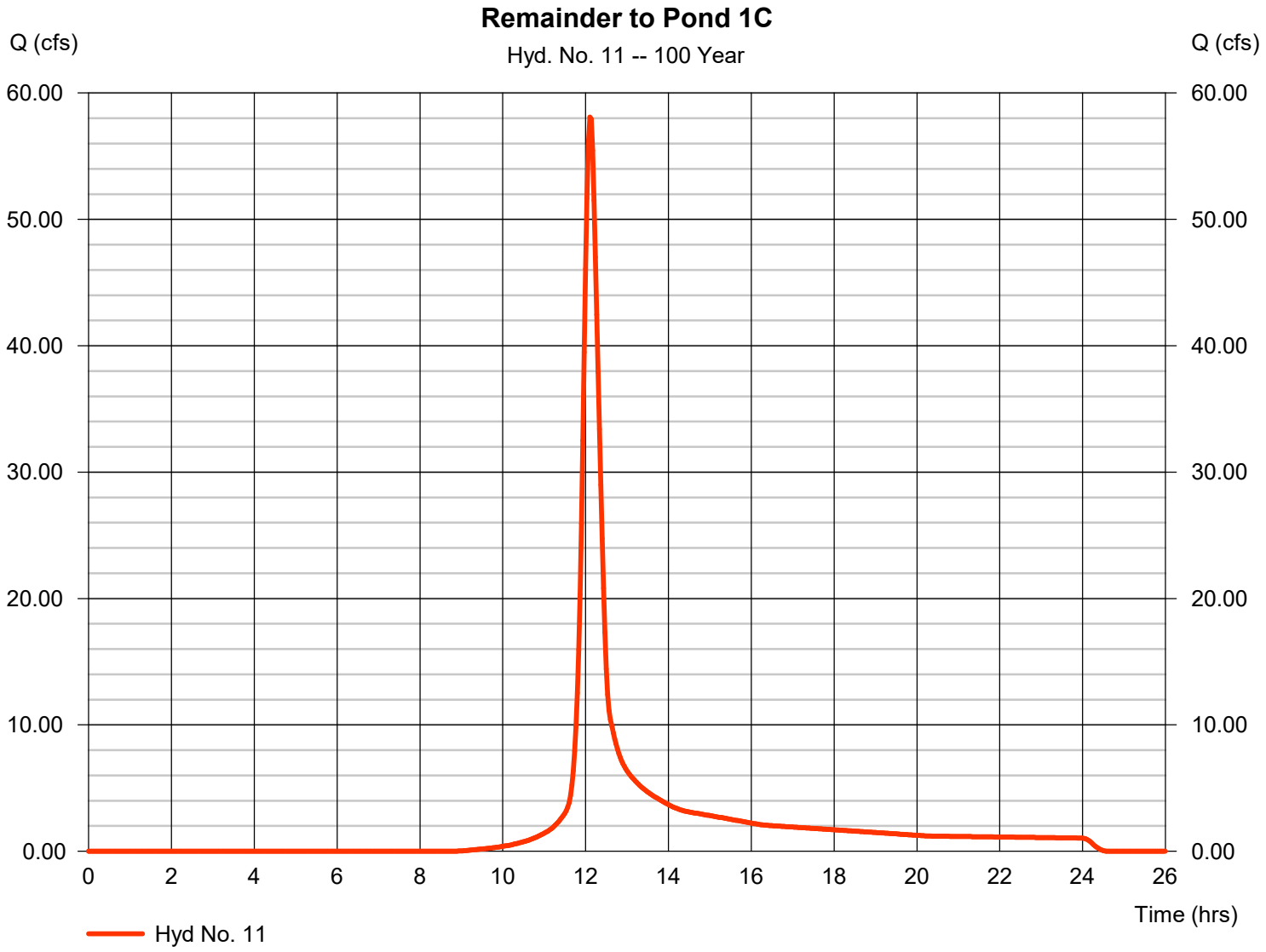
Hydrograph Report

Hyd. No. 11

Remainder to Pond 1C

Hydrograph type	=	SCS Runoff	Peak discharge	=	58.09 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.10 hrs
Time interval	=	2 min	Hyd. volume	=	202,161 cuft
Drainage area	=	15.090 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	20.30 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(9.060 x 66) + (6.030 x 65)] / 15.090

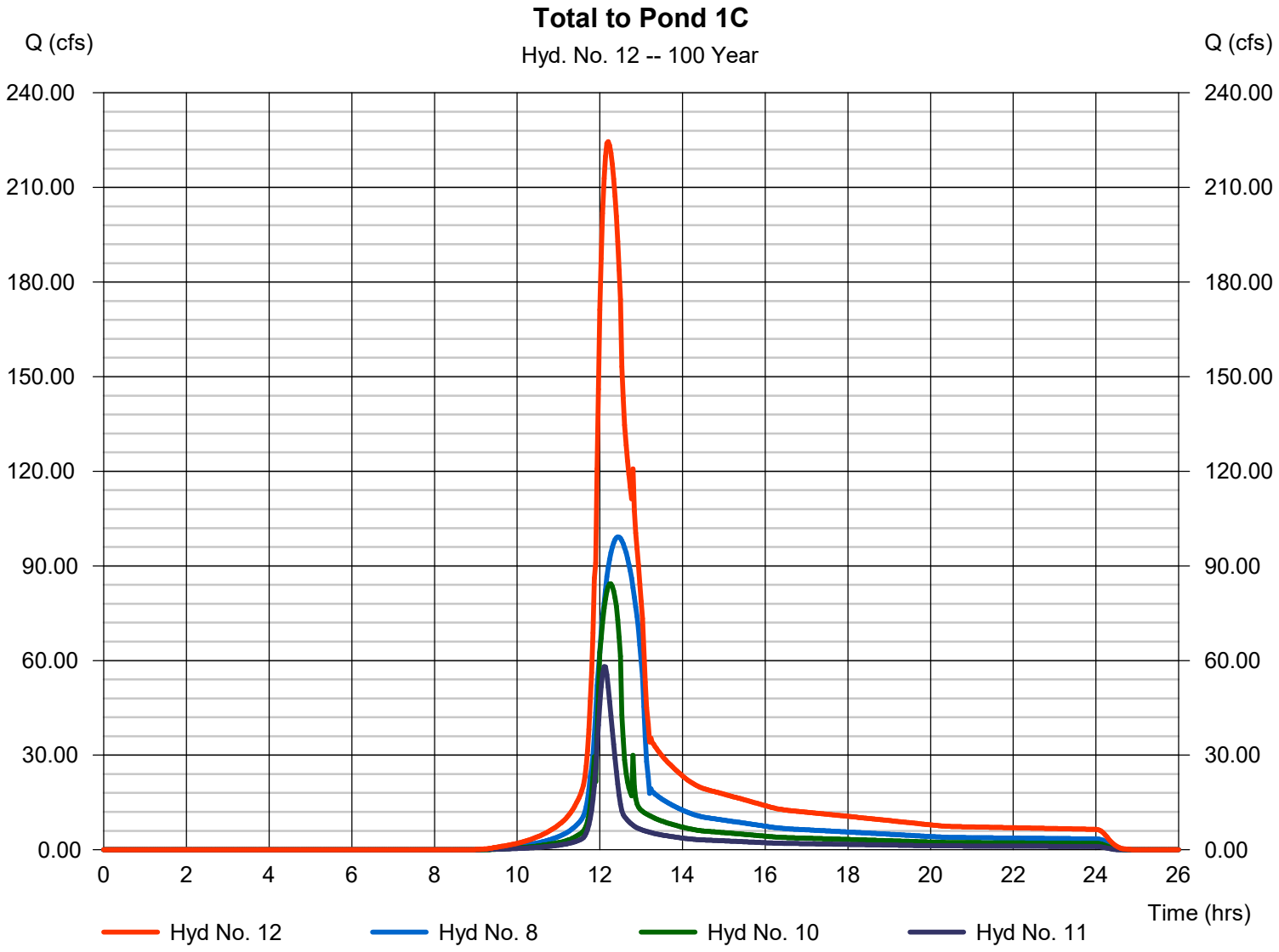


Hydrograph Report

Hyd. No. 12

Total to Pond 1C

Hydrograph type	= Combine	Peak discharge	= 224.50 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.20 hrs
Time interval	= 2 min	Hyd. volume	= 1,240,722 cuft
Inflow hyds.	= 8, 10, 11	Contrib. drain. area	= 15.090 ac



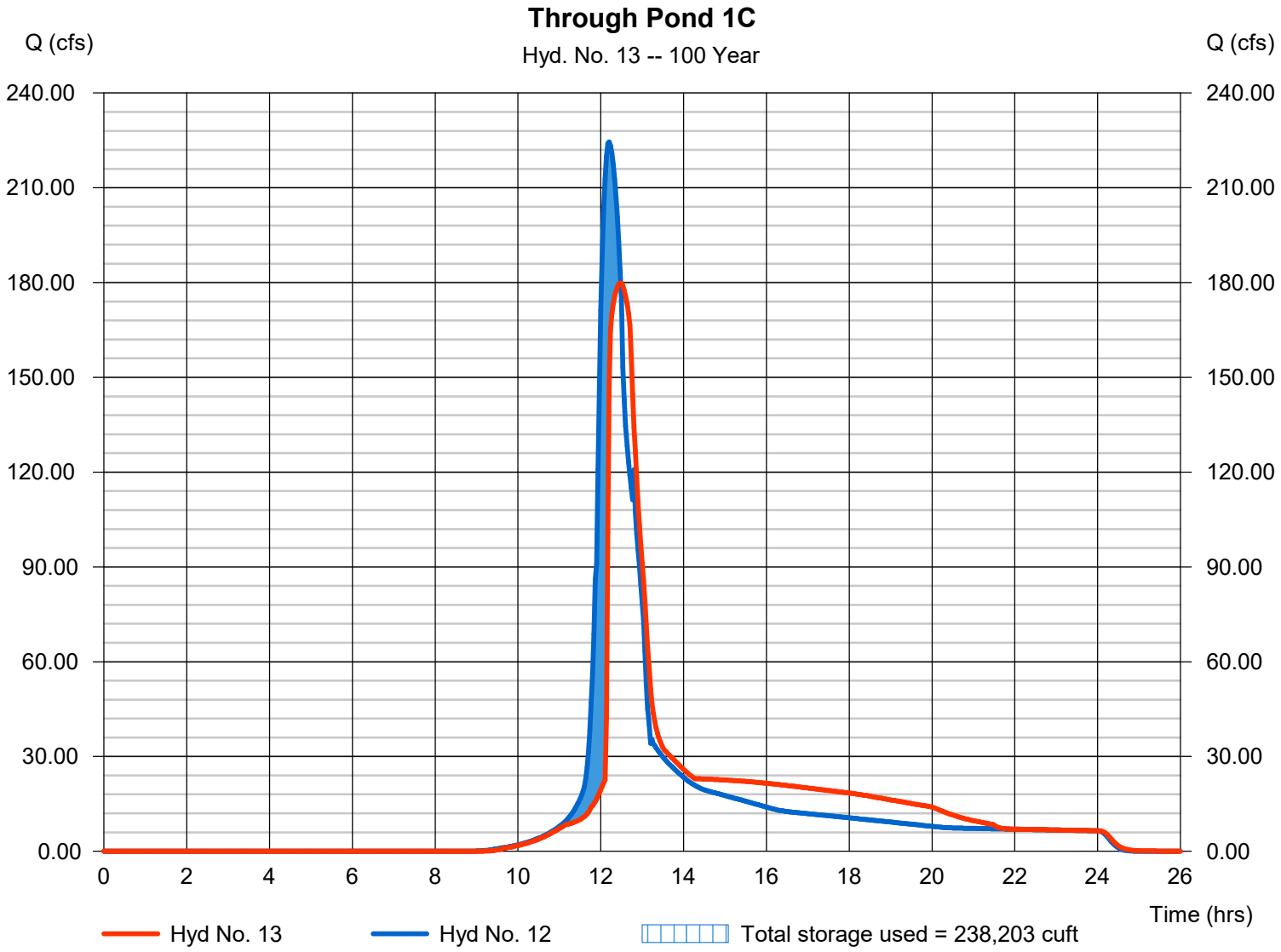
Hydrograph Report

Hyd. No. 13

Through Pond 1C

Hydrograph type	=	Reservoir	Peak discharge	=	179.83 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.47 hrs
Time interval	=	2 min	Hyd. volume	=	1,240,721 cuft
Inflow hyd. No.	=	12 - Total to Pond 1C	Max. Elevation	=	567.11 ft
Reservoir name	=	Pond 1C	Max. Storage	=	238,203 cuft

Storage Indication method used.



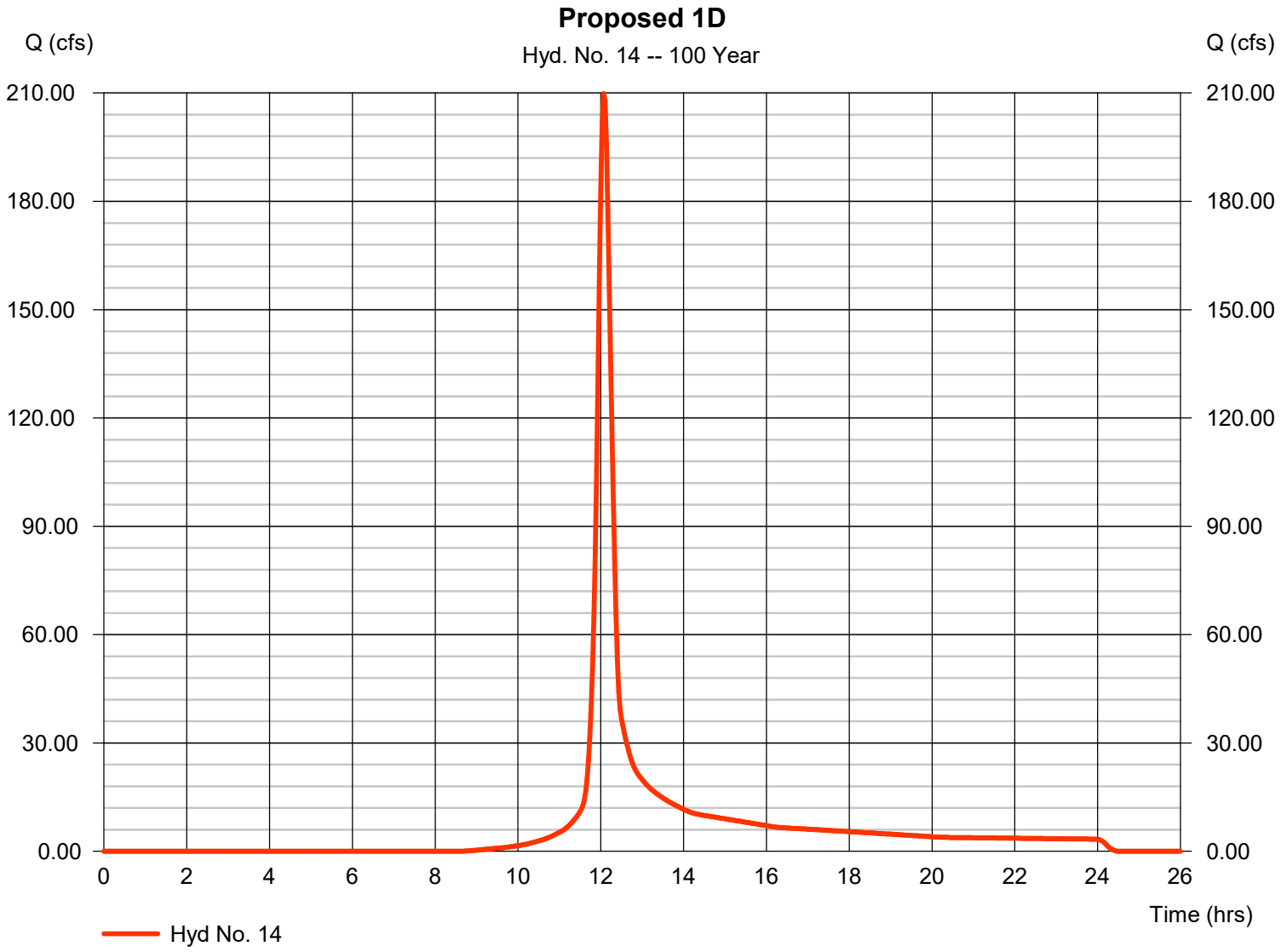
Hydrograph Report

Hyd. No. 14

Proposed 1D

Hydrograph type	=	SCS Runoff	Peak discharge	=	209.81 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.07 hrs
Time interval	=	2 min	Hyd. volume	=	658,294 cuft
Drainage area	=	48.560 ac	Curve number	=	67*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	17.60 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.720 x 98) + (21.900 x 66) + (24.940 x 65)] / 48.560



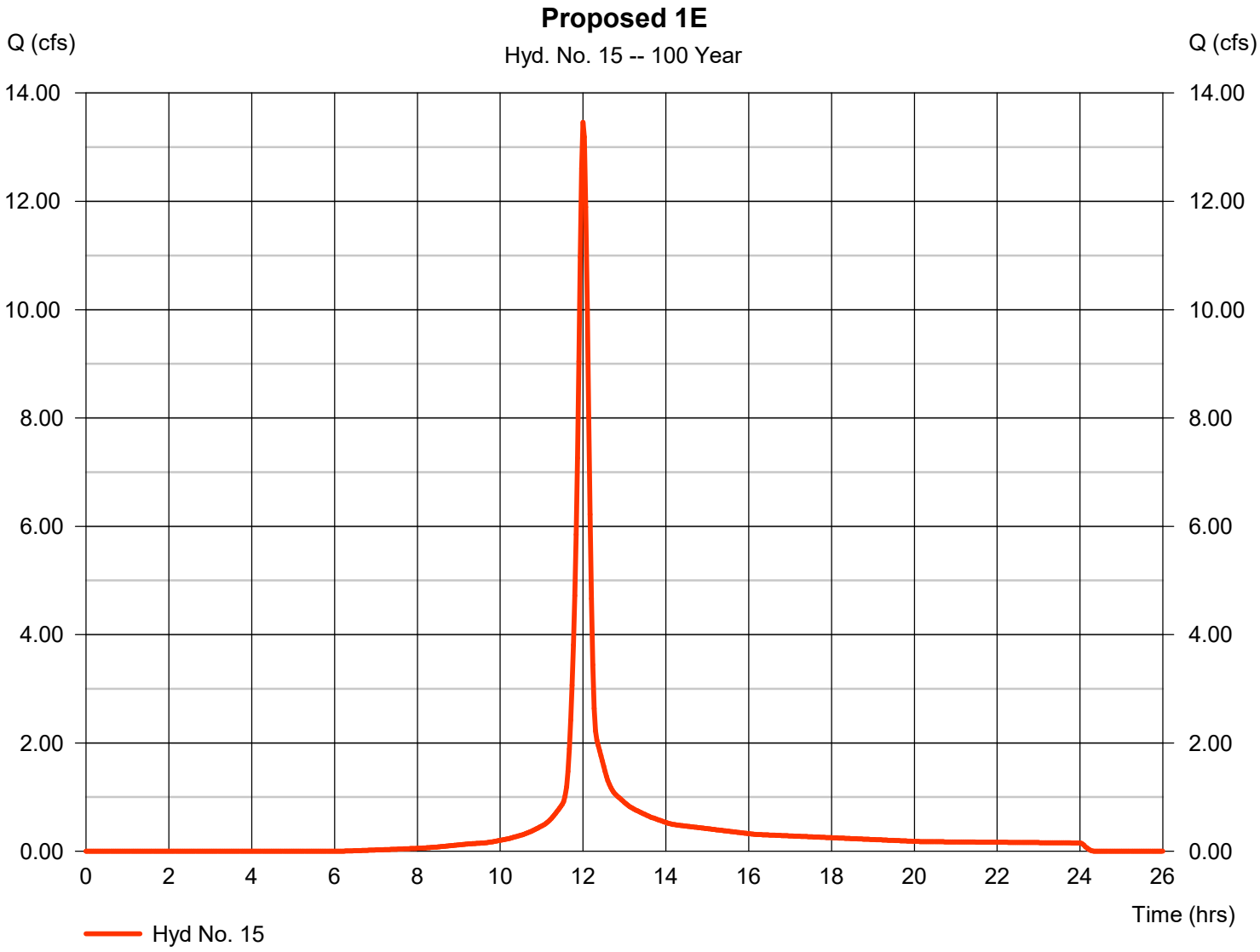
Hydrograph Report

Hyd. No. 15

Proposed 1E

Hydrograph type	=	SCS Runoff	Peak discharge	=	13.46 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	35,186 cuft
Drainage area	=	1.940 ac	Curve number	=	77*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.700 x 98) + (1.240 x 65)] / 1.940



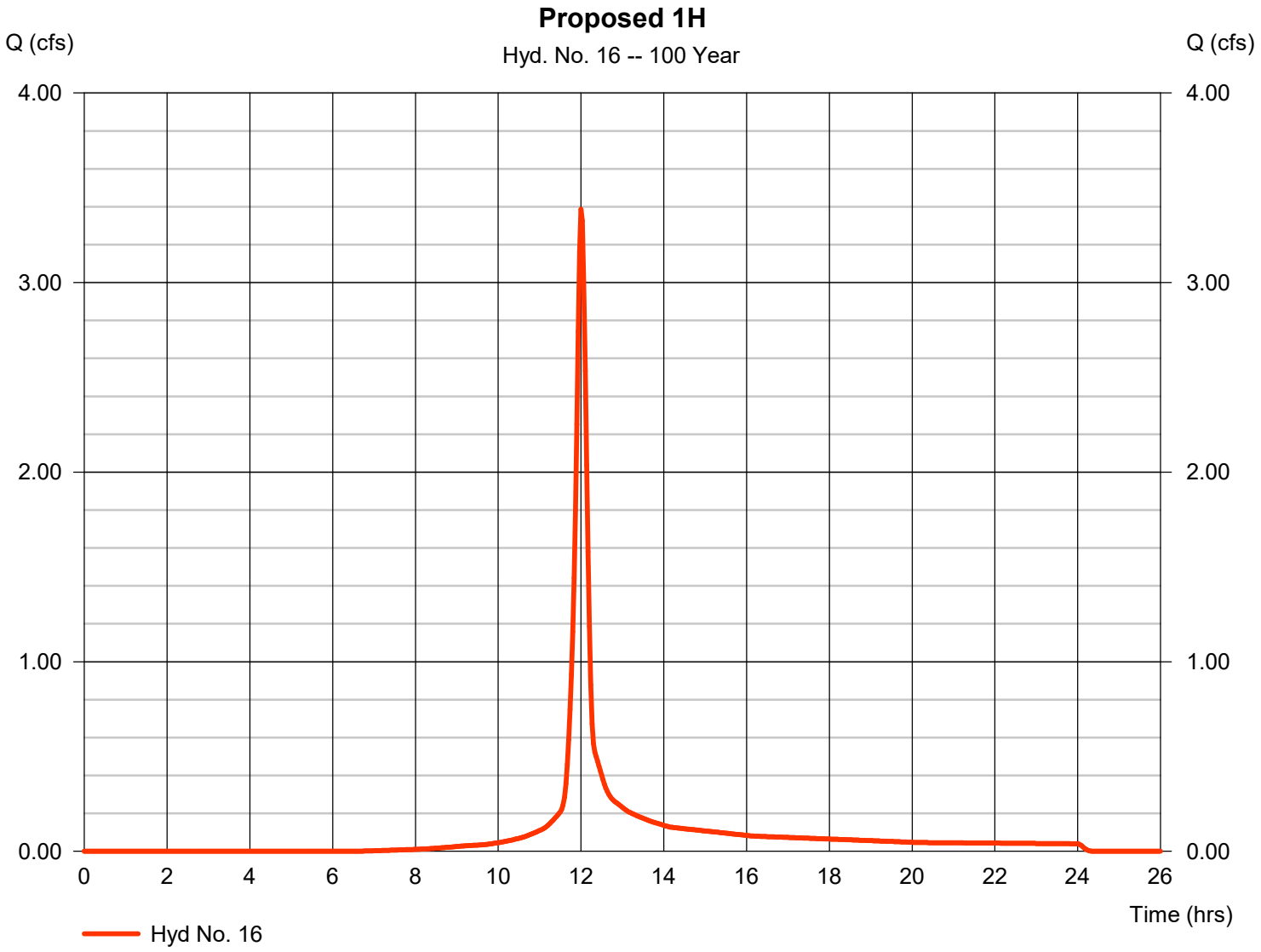
Hydrograph Report

Hyd. No. 16

Proposed 1H

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.387 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	8,820 cuft
Drainage area	=	0.510 ac	Curve number	=	75*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.150 x 98) + (0.360 x 65)] / 0.510

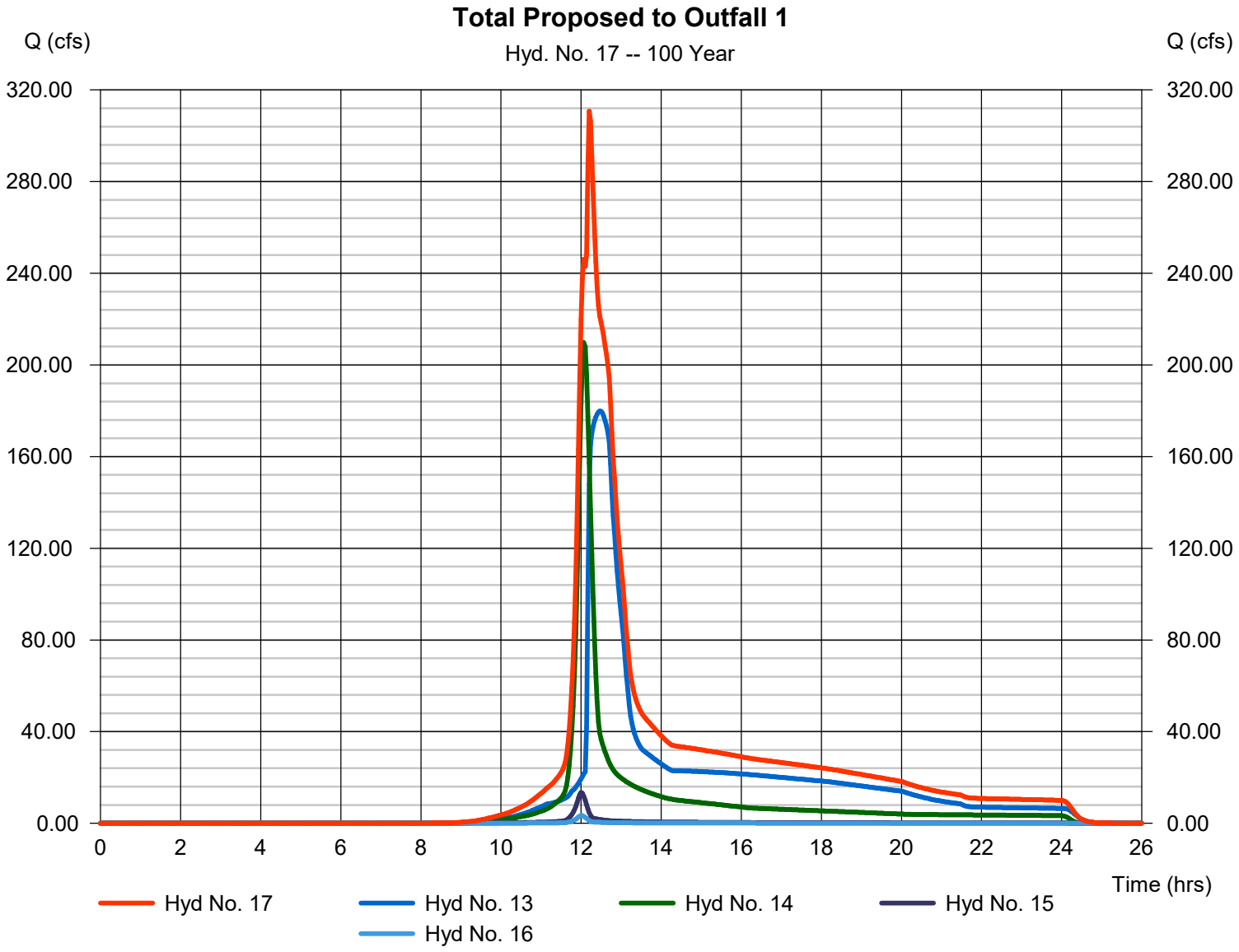


Hydrograph Report

Hyd. No. 17

Total Proposed to Outfall 1

Hydrograph type	= Combine	Peak discharge	= 310.76 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.20 hrs
Time interval	= 2 min	Hyd. volume	= 1,942,870 cuft
Inflow hyds.	= 13, 14, 15, 16	Contrib. drain. area	= 51.010 ac

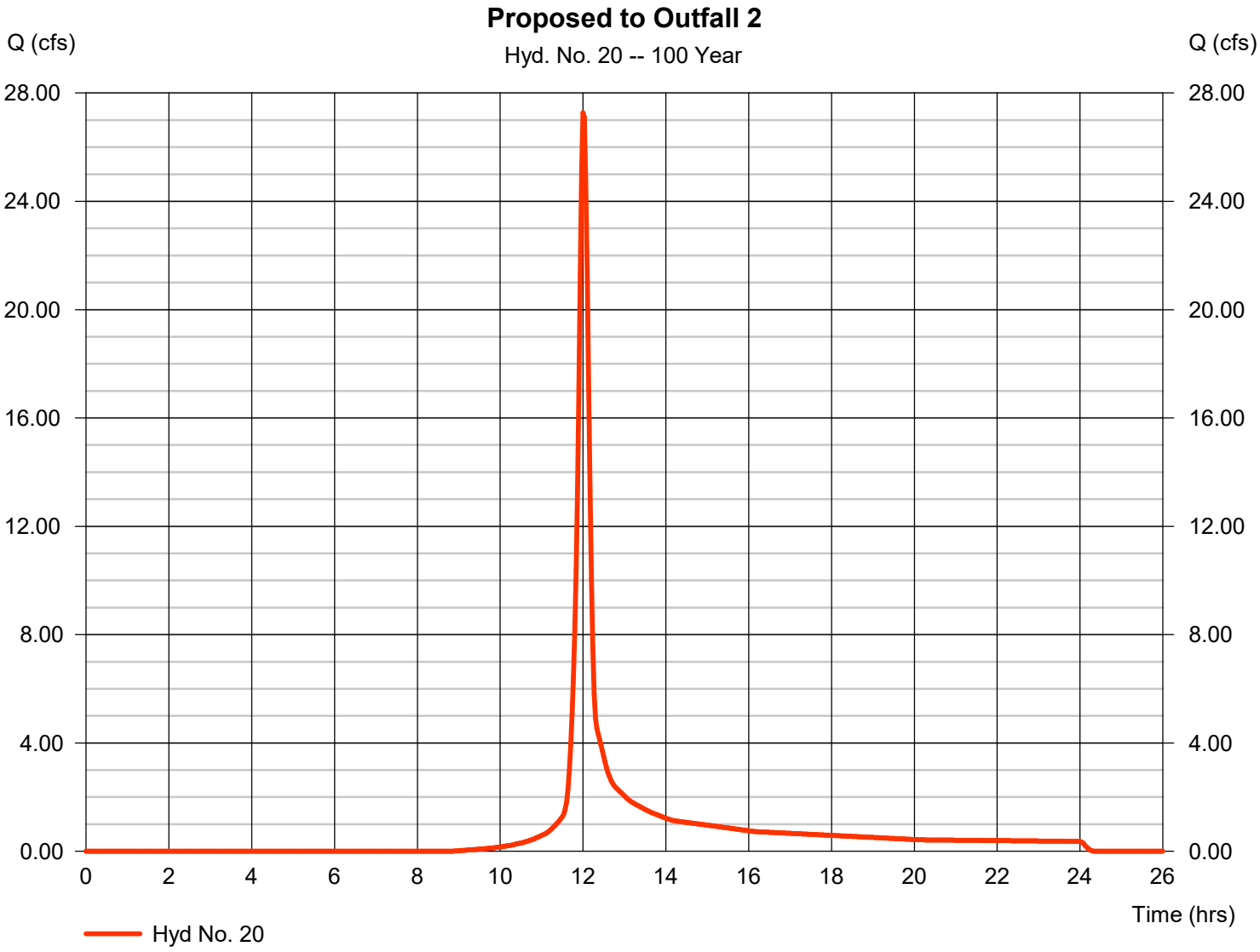


Hydrograph Report

Hyd. No. 20

Proposed to Outfall 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	27.27 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	70,853 cuft
Drainage area	=	5.220 ac	Curve number	=	66
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	10.10 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



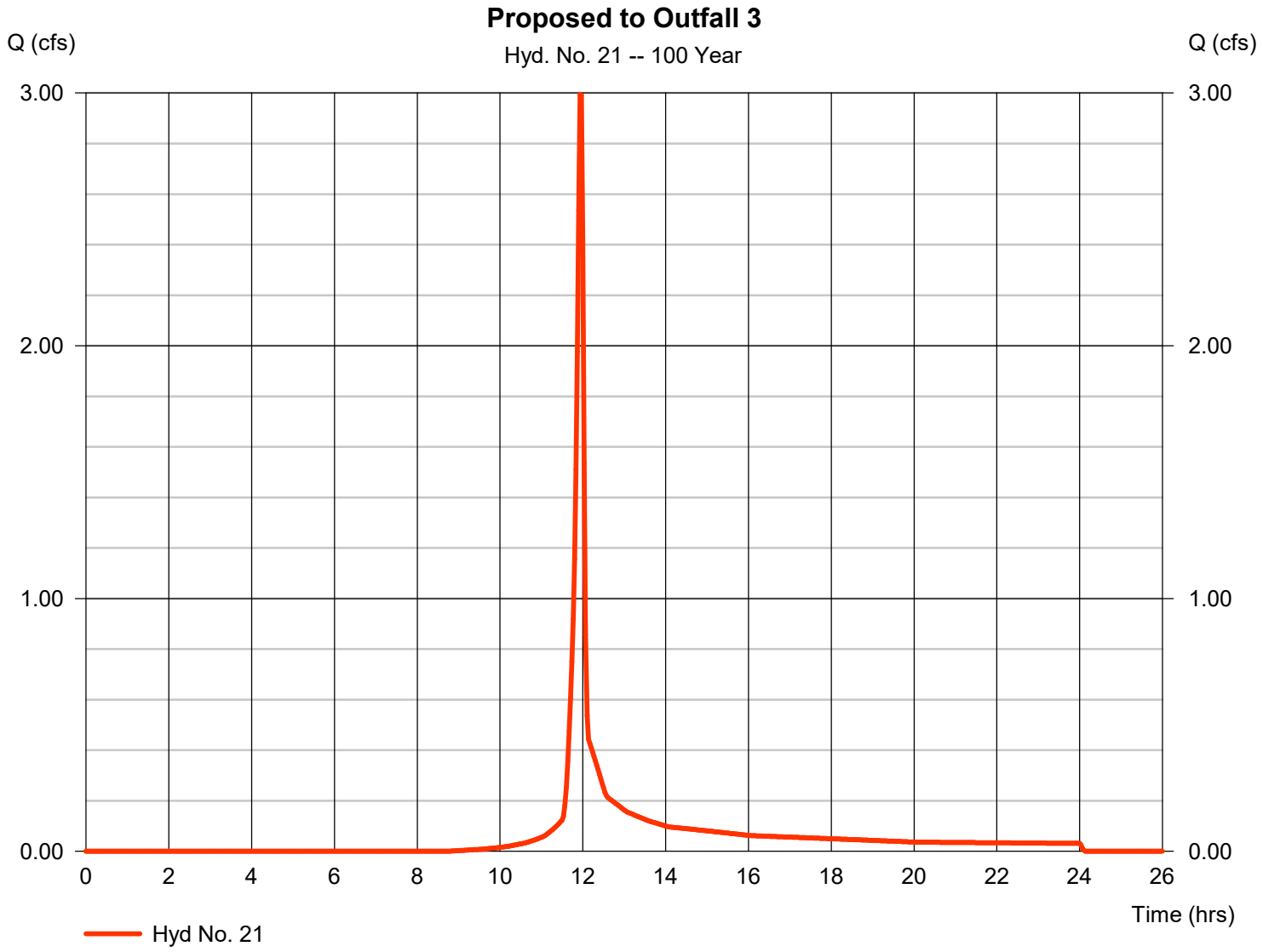
Hydrograph Report

Hyd. No. 21

Proposed to Outfall 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.995 cfs
Storm frequency	=	100 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	6,046 cuft
Drainage area	=	0.490 ac	Curve number	=	66*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.490 x 66)] / 0.490

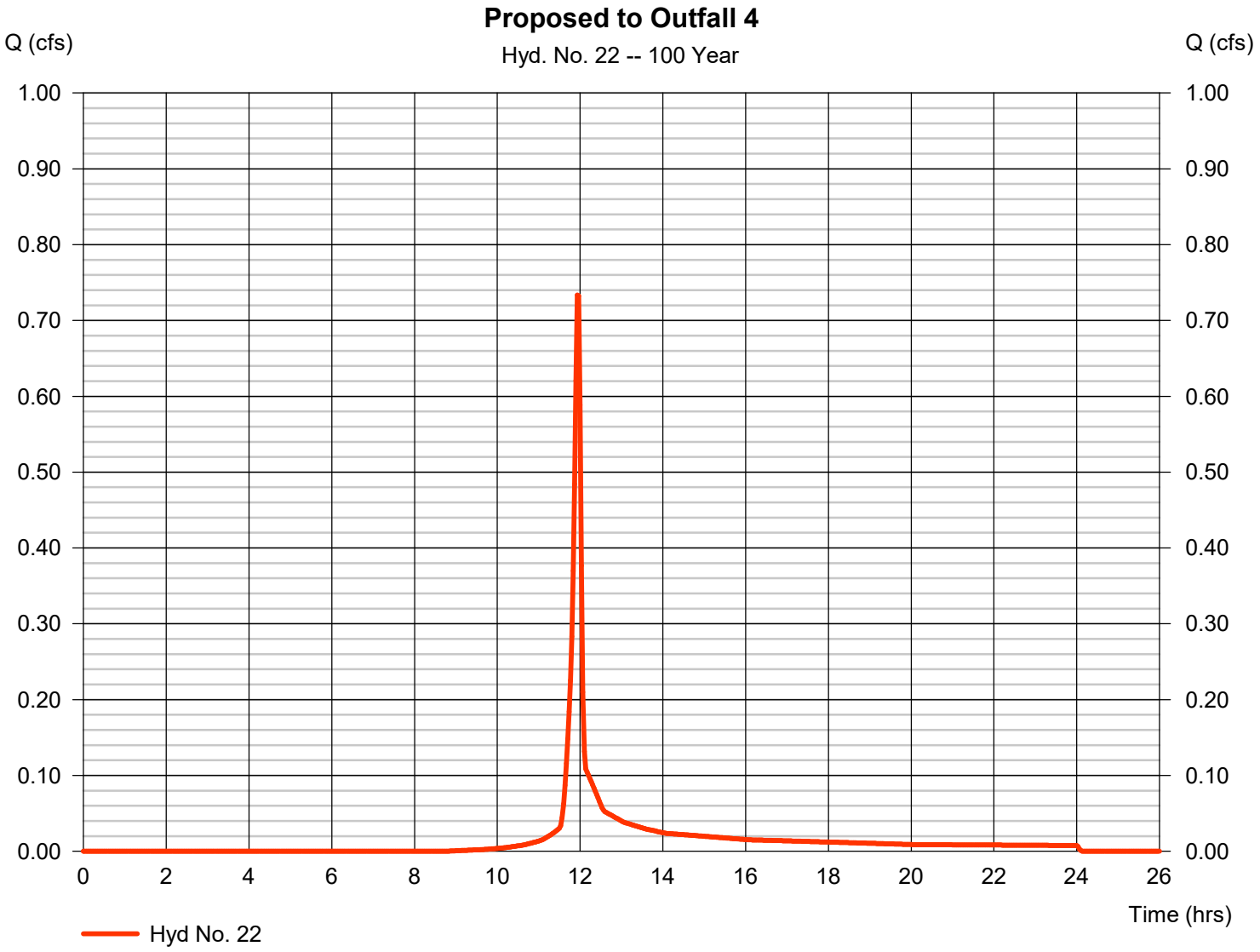


Hydrograph Report

Hyd. No. 22

Proposed to Outfall 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.733 cfs
Storm frequency	=	100 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	1,481 cuft
Drainage area	=	0.120 ac	Curve number	=	66
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

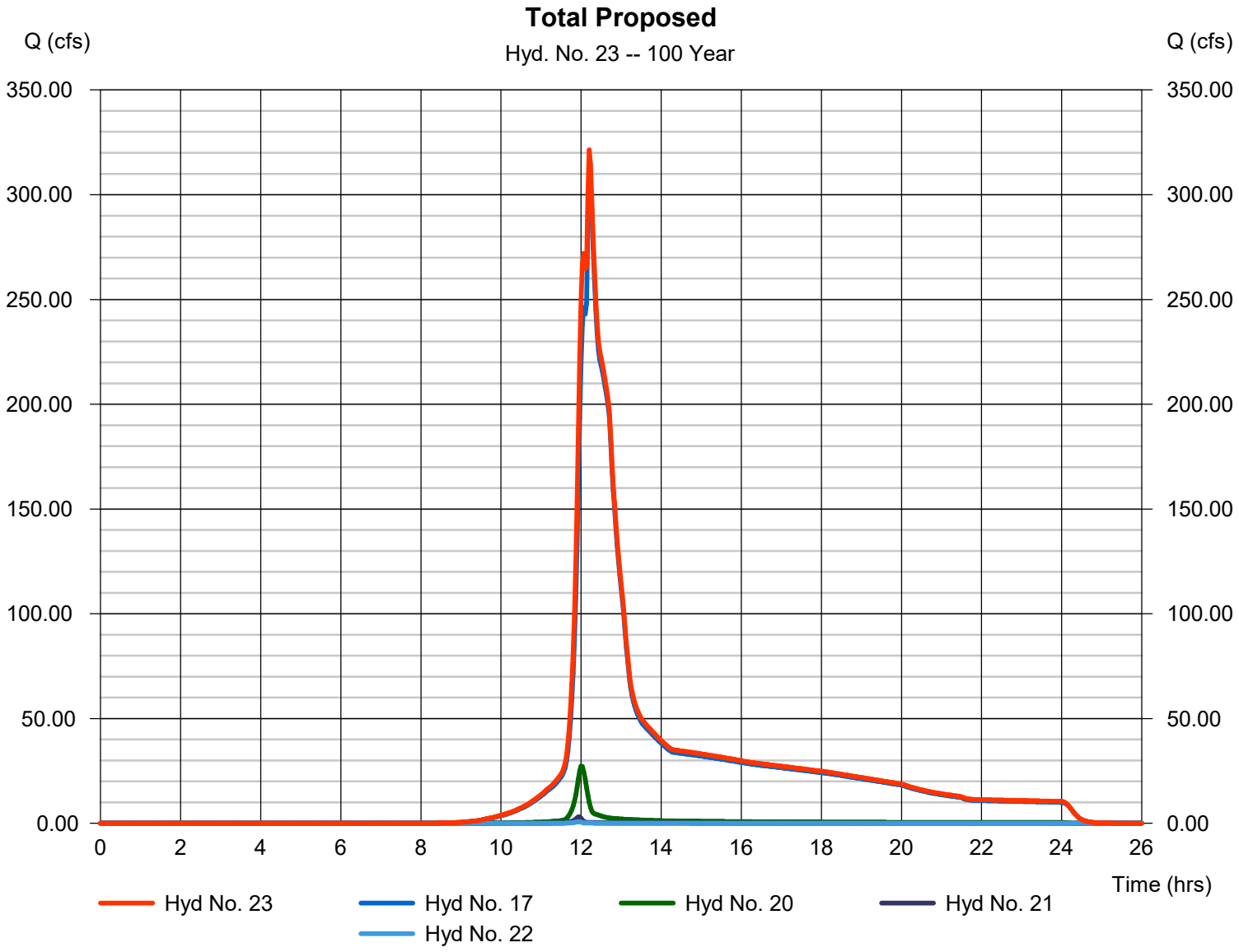


Hydrograph Report

Hyd. No. 23

Total Proposed

Hydrograph type	= Combine	Peak discharge	= 321.36 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.20 hrs
Time interval	= 2 min	Hyd. volume	= 2,021,250 cuft
Inflow hyds.	= 17, 20, 21, 22	Contrib. drain. area	= 5.830 ac



Hydraflow Rainfall Report

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	0.0000	0.0000	0.0000	--------
2	21.3913	5.8000	0.6332	--------
3	0.0000	0.0000	0.0000	--------
5	48.6847	10.2000	0.7544	--------
10	66.7072	12.5000	0.7892	--------
25	65.3872	11.5000	0.7499	--------
50	79.9547	12.2000	0.7718	--------
100	170.7963	18.2000	0.9117	--------

File name: nashville.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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	4.74	3.73	3.13	2.73	2.44	2.22	2.04	1.90	1.78	1.68	1.59	1.51
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	6.25	5.04	4.27	3.72	3.32	3.00	2.75	2.54	2.36	2.21	2.08	1.97
10	6.97	5.72	4.88	4.28	3.82	3.46	3.17	2.93	2.73	2.55	2.40	2.27
25	7.99	6.55	5.60	4.92	4.40	4.00	3.67	3.40	3.17	2.98	2.81	2.66
50	8.90	7.31	6.25	5.48	4.90	4.45	4.08	3.78	3.52	3.30	3.11	2.94
100	9.72	8.13	7.01	6.17	5.51	4.99	4.56	4.20	3.90	3.64	3.41	3.21

Tc = time in minutes. Values may exceed 60.

ER ENGINEERING STANDARDS\1-Design Resources\Stormwater Analysis Programs\IDF and PCP Files\nashville.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	0.00	3.39	0.00	4.50	5.23	6.16	6.85	7.53
SCS 6-Hr	0.00	2.31	0.00	3.30	3.96	4.79	5.41	6.02
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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Culvert Report

Box Culvert

Invert Elev Dn (ft)	=	528.40
Pipe Length (ft)	=	93.00
Slope (%)	=	5.05
Invert Elev Up (ft)	=	533.10
Rise (in)	=	60.0
Shape	=	Box
Span (in)	=	96.0
No. Barrels	=	1
n-Value	=	0.024
Culvert Type	=	Skewed Headwall, Chamfered or Beveled Inlet Edges
Culvert Entrance	=	3/4-in chamfers, 45D skewed headwall
Coeff. K,M,c,Y,k	=	0.545, 0.667, 0.04505, 0.73, 0.2

Embankment

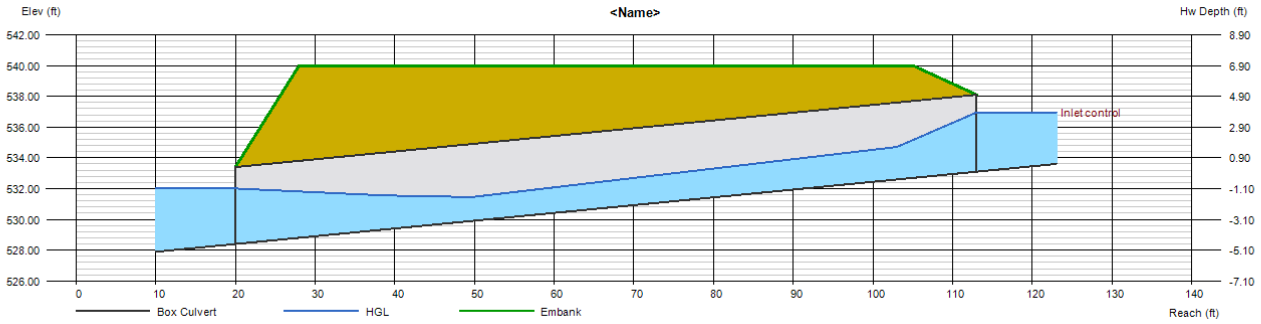
Top Elevation (ft)	=	540.00
Top Width (ft)	=	77.00
Crest Width (ft)	=	100.00

Calculations

Qmin (cfs)	=	150.00
Qmax (cfs)	=	300.00
Tailwater Elev (ft)	=	(dc+D)/2

Highlighted

Qtotal (cfs)	=	150.00
Qpipe (cfs)	=	150.00
Qovertop (cfs)	=	0.00
Veloc Dn (ft/s)	=	5.20
Veloc Up (ft/s)	=	8.46
HGL Dn (ft)	=	532.01
HGL Up (ft)	=	535.32
Hw Elev (ft)	=	536.95
Hw/D (ft)	=	0.77
Flow Regime	=	Inlet Control



Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	96.245	-140.951	Curb	0.00	0.10	0.90	5.0	558.50	26.49	584.00	18	Cir	0.013	1.77	614.40	P-1
2	1	163.934	54.878	Curb	0.00	0.11	0.90	5.0	600.55	11.50	619.40	15	Cir	0.013	1.50	629.69	P-3
3	2	23.335	-96.292	Curb	0.00	0.36	0.90	5.0	624.26	1.03	624.50	15	Cir	0.013	1.00	629.73	P-4
4	1	23.548	-27.901	Curb	0.00	0.29	0.90	5.0	609.86	1.02	610.10	15	Cir	0.013	1.00	613.51	P-2
5	End	40.061	161.849	Curb	0.00	0.08	0.90	5.0	616.97	12.11	621.82	18	Cir	0.013	2.24	636.00	P-9
6	5	146.684	-95.234	Curb	0.00	0.09	0.90	5.0	631.38	1.07	632.95	15	Cir	0.013	1.50	637.27	P-8
7	6	23.619	90.979	Curb	0.00	0.32	0.90	5.0	632.95	1.02	633.19	15	Cir	0.013	1.00	637.29	P-7
8	5	52.775	84.198	Curb	0.00	0.03	0.90	5.0	626.42	1.00	626.95	18	Cir	0.013	1.50	636.00	P-10
9	8	23.513	-88.443	Curb	0.00	0.41	0.90	5.0	626.95	3.57	627.79	18	Cir	0.013	1.31	635.33	P-11
10	9	180.985	57.930	Curb	0.00	0.32	0.90	5.0	627.79	1.06	629.70	18	Cir	0.013	1.35	633.30	P-12
11	10	23.594	61.861	Curb	0.00	3.23	0.30	10.0	629.95	1.44	630.29	15	Cir	0.013	1.00	633.25	P-13
12	End	55.000	-165.337	Curb	0.00	0.16	0.90	5.0	559.00	19.02	569.46	36	Cir	0.013	0.62	597.87	P-42
13	12	23.884	21.194	Curb	0.00	0.68	0.90	5.0	590.50	2.01	590.98	36	Cir	0.013	1.16	597.00	P-41
14	13	30.953	-37.501	Curb	0.00	0.28	0.90	5.0	590.98	2.00	591.60	36	Cir	0.013	1.21	597.11	P-39
15	14	117.298	39.285	Curb	0.00	0.24	0.90	5.0	591.60	1.95	593.89	36	Cir	0.013	1.50	601.70	P-37
16	15	124.655	20.657	Curb	0.00	0.31	0.90	5.0	593.89	5.65	600.93	36	Cir	0.013	1.44	613.49	P-35
17	16	167.745	18.186	Curb	0.00	0.10	0.90	5.0	600.93	1.00	602.61	36	Cir	0.013	1.50	629.37	P-32
18	17	175.228	-0.476	Curb	0.00	0.83	0.90	5.0	602.61	1.00	604.36	36	Cir	0.013	1.55	638.55	P-30
19	18	23.817	75.213	Curb	0.00	0.27	0.90	5.0	632.01	1.01	632.25	15	Cir	0.013	1.00	638.52	P-29
20	17	23.393	98.514	Curb	0.00	0.37	0.90	5.0	624.21	1.03	624.45	15	Cir	0.013	1.00	629.39	P-31
21	18	341.295	-39.760	MH	0.01	0.00	0.00	0.0	604.36	1.00	607.79	36	Cir	0.013	0.64	640.25	P-28
22	21	171.247	-35.920	Hdwl	45.20	0.00	0.00	0.0	607.79	1.00	609.50	36	Cir	0.013	1.00	613.34	P-27
23	16	24.538	-72.251	Curb	0.00	0.10	0.90	5.0	604.68	1.02	604.93	15	Cir	0.013	0.50	611.93	P-33

Project File: Network B.stm | Number of lines: 42 | Date: 9/3/2026

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
24	23	25.701	-2.891	MH	0.00	2.34	0.30	10.0	604.93	1.05	605.20	15	Cir	0.013	1.00	610.36	P-34
25	15	24.977	-88.691	Curb	0.00	0.81	0.90	5.0	596.64	1.00	596.89	15	Cir	0.013	1.00	601.70	P-36
26	14	25.000	-50.728	Curb	0.00	0.61	0.90	5.0	593.35	2.00	593.85	15	Cir	0.013	1.00	597.93	P-38
27	13	211.697	47.051	Curb	0.00	1.51	0.30	10.0	592.73	7.47	608.55	15	Cir	0.013	1.00	615.03	P-40
28	End	200.000	0.000	Curb	0.00	0.17	0.90	5.0	625.50	0.49	626.49	36	Cir	0.013	0.50	634.45	P-19
29	28	24.991	-0.547	Curb	0.00	0.55	0.90	5.0	626.49	0.52	626.62	36	Cir	0.013	2.06	633.84	P-18
30	29	43.396	87.369	Curb	0.00	0.14	0.90	5.0	629.62	1.29	630.18	24	Cir	0.013	1.83	634.39	P-20
31	30	23.720	89.322	Curb	0.00	0.32	0.90	5.0	630.93	1.01	631.17	15	Cir	0.013	1.00	634.38	P-21
32	30	74.960	-4.958	Curb	0.00	0.23	0.90	5.0	630.18	1.00	630.93	24	Cir	0.013	1.49	635.45	P-22
33	32	23.206	82.353	Curb	0.00	0.28	0.90	5.0	631.43	1.38	631.75	18	Cir	0.013	1.50	635.45	P-23
34	33	64.653	-97.923	Curb	0.00	0.47	0.90	5.0	631.75	1.01	632.40	18	Cir	0.013	0.52	636.25	P-24
35	34	77.526	-17.375	Curb	0.00	0.83	0.90	5.0	632.40	1.01	633.18	18	Cir	0.013	1.50	637.14	P-25
36	35	23.787	-96.871	Curb	0.00	0.27	0.90	5.0	633.43	1.01	633.67	15	Cir	0.013	1.00	637.14	P-26
37	29	164.075	-63.759	Curb	0.00	0.55	0.90	5.0	627.12	0.50	627.94	30	Cir	0.013	1.50	632.18	P-17
38	37	23.748	-63.121	Curb	0.00	0.20	0.90	5.0	628.44	0.51	628.56	24	Cir	0.013	0.50	632.18	P-16
39	38	29.151	-0.461	MH	0.00	5.79	0.30	10.0	629.06	6.66	631.00	18	Cir	0.013	1.00	638.00	P-15
40	37	216.553	117.352	MH	0.00	1.90	0.30	10.0	628.94	2.80	635.00	18	Cir	0.013	1.00	639.40	P-14
41	End	400.000	-94.589	MH	0.01	0.00	0.00	0.0	554.80	5.72	577.69	36	Cir	0.013	0.15	610.00	P-76
42	41	55.000	0.243	MH	67.96	0.00	0.00	0.0	577.69	4.20	580.00	36	Cir	0.013	1.00	584.83	P-75

Project File: Network B.stm | Number of lines: 42 | Date: 9/3/2026

Structure Report

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
1	B-3	Curb-	614.40	Cir	5.00	5.00	18	Cir	584.00	15 15	Cir Cir	600.55 609.86
2	B-5	Curb-	629.69	Cir	2.00	2.00	15	Cir	619.40	15	Cir	624.26
3	B-4	Curb-	629.73	Cir	2.00	2.00	15	Cir	624.50			
4	B-2	Curb-	613.51	Cir	2.00	2.00	15	Cir	610.10			
5	B-10	Curb-	636.00	Cir	2.00	2.00	18	Cir	621.82	15 18	Cir Cir	631.38 626.42
6	B-9	Curb-	637.27	Cir	2.00	2.00	15	Cir	632.95	15	Cir	632.95
7	B-8	Curb-	637.29	Cir	2.00	2.00	15	Cir	633.19			
8	B-12	Curb-	636.00	Cir	2.00	2.00	18	Cir	626.95	18	Cir	626.95
9	B-13	Curb-	635.33	Cir	2.00	2.00	18	Cir	627.79	18	Cir	627.79
10	B-14	Curb-	633.30	Cir	2.00	2.00	18	Cir	629.70	15	Cir	629.95
11	B-15	Curb-	633.25	Cir	2.00	2.00	15	Cir	630.29			
12	B-45	Curb-	597.87	Cir	5.00	5.00	36	Cir	569.46	36	Cir	590.50
13	B-44	Curb-	597.00	Cir	5.00	5.00	36	Cir	590.98	36 15	Cir Cir	590.98 592.73
14	B-42	Curb-	597.11	Cir	5.00	5.00	36	Cir	591.60	36 15	Cir Cir	591.60 593.35
15	B-39	Curb-	601.70	Cir	5.00	5.00	36	Cir	593.89	36 15	Cir Cir	593.89 596.64
16	B-36	Curb-	613.49	Cir	5.00	5.00	36	Cir	600.93	36 15	Cir Cir	600.93 604.68
17	B-34	Curb-	629.37	Cir	5.00	5.00	36	Cir	602.61	36 15	Cir Cir	602.61 624.21
18	B-32	Curb-	638.55	Cir	5.00	5.00	36	Cir	604.36	15 36	Cir Cir	632.01 604.36
19	B-33	Curb-	638.52	Cir	2.00	2.00	15	Cir	632.25			

Project File: Network B.stm | Number of Structures: 42 | Run Date: 9/3/2026

Structure Report

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
20	B-35	Curb-	629.39	Cir	2.00	2.00	15	Cir	624.45			
21	B-31	Manhole	640.25	Cir	4.00	4.00	36	Cir	607.79	36	Cir	607.79
22	B-30	OpenHeadwall	613.34	n/a	n/a	n/a	36	Cir	609.50			
23	B-37	Curb-	611.93	Cir	2.00	2.00	15	Cir	604.93	15	Cir	604.93
24	B-38	Manhole	610.36	Cir	4.00	4.00	15	Cir	605.20			
25	B-40	Curb-	601.70	Cir	2.00	2.00	15	Cir	596.89			
26	B-41	Curb-	597.93	Cir	2.00	2.00	15	Cir	593.85			
27	B-43	Curb-	615.03	Cir	5.00	5.00	15	Cir	608.55			
28	B-21	Curb-	634.45	Cir	2.00	2.00	36	Cir	626.49	36	Cir	626.49
29	B-20	Curb-	633.84	Cir	2.00	2.00	36	Cir	626.62	24 30	Cir Cir	629.62 627.12
30	B-24	Curb-	634.39	Cir	4.00	4.00	24	Cir	630.18	15 24	Cir Cir	630.93 630.18
31	B-23	Curb-	634.38	Cir	2.00	2.00	15	Cir	631.17			
32	B-25	Curb-	635.45	Cir	5.00	5.00	24	Cir	630.93	18	Cir	631.43
33	B-26	Curb-	635.45	Cir	5.00	5.00	18	Cir	631.75	18	Cir	631.75
34	B-27	Curb-	636.25	Cir	5.00	5.00	18	Cir	632.40	18	Cir	632.40
35	B-28	Curb-	637.14	Cir	5.00	5.00	18	Cir	633.18	15	Cir	633.43
36	B-29	Curb-	637.14	Cir	2.00	2.00	15	Cir	633.67			
37	B-17	Curb-	632.18	Cir	3.00	3.00	30	Cir	627.94	24 18	Cir Cir	628.44 628.94
38	B-19	Curb-	632.18	Cir	2.00	2.00	24	Cir	628.56	18	Cir	629.06
39	B-18	Manhole	638.00	Cir	4.00	4.00	18	Cir	631.00			
40	B-16	Manhole	639.40	Cir	4.00	4.00	18	Cir	635.00			

Project File: Network B.stm | Number of Structures: 42 | Run Date: 9/3/2026

Structure Report

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
41	B-48	Manhole	610.00	Cir	4.00	4.00	36	Cir	577.69	36	Cir	577.69
42	B-47	Manhole	584.83	Cir	0.00	0.00	36	Cir	580.00			

Project File: Network B.stm | Number of Structures: 42 | Run Date: 9/3/2026

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
1	P-1	5.32	18	Cir	96.245	558.50	584.00	26.495	558.82	584.89	n/a	584.89	End	Curb-
2	P-3	3.04	15	Cir	163.934	600.55	619.40	11.499	600.86	620.10	0.43	620.10	1	Curb-
3	P-4	2.35	15	Cir	23.335	624.26	624.50	1.028	624.78	625.11	0.24	625.11	2	Curb-
4	P-2	1.89	15	Cir	23.548	609.86	610.10	1.019	610.32	610.65	n/a	610.65	1	Curb-
5	P-9	12.25	18	Cir	40.061	616.97	621.82	12.107	617.57	623.14	n/a	623.14	End	Curb-
6	P-8	2.65	15	Cir	146.684	631.38	632.95	1.070	631.93	633.60	0.39	633.60	5	Curb-
7	P-7	2.08	15	Cir	23.619	632.95	633.19	1.016	633.60	633.77	n/a	633.77 j	6	Curb-
8	P-10	9.72	18	Cir	52.775	626.42	626.95	1.004	627.56	628.15	n/a	628.15	5	Curb-
9	P-11	9.58	18	Cir	23.513	626.95	627.79	3.572	628.15	628.98	n/a	628.98 j	8	Curb-
10	P-12	7.57	18	Cir	180.985	627.79	629.70	1.055	628.98	630.77	n/a	630.77 j	9	Curb-
11	P-13	5.85	15	Cir	23.594	629.95	630.29	1.441	630.77	631.27	n/a	631.27	10	Curb-
12	P-42	76.44	36	Cir	55.000	559.00	569.46	19.018	560.05	572.19	n/a	572.19	End	Curb-
13	P-41	75.64	36	Cir	23.884	590.50	590.98	2.010	592.53	593.70	n/a	593.70	12	Curb-
14	P-39	70.21	36	Cir	30.953	590.98	591.60	2.003	593.70	594.26	2.11	594.26	13	Curb-
15	P-37	65.61	36	Cir	117.298	591.60	593.89	1.952	594.26	596.48	n/a	596.48	14	Curb-
16	P-35	60.11	36	Cir	124.655	593.89	600.93	5.648	596.48	603.43	2.04	603.43	15	Curb-
17	P-32	55.17	36	Cir	167.745	600.93	602.61	1.002	603.43	605.02	1.92	605.02	16	Curb-
18	P-30	52.30	36	Cir	175.228	602.61	604.36	0.999	605.02	606.71	1.87	606.71	17	Curb-
19	P-29	1.76	15	Cir	23.817	632.01	632.25	1.008	632.45	632.78	0.20	632.78	18	Curb-
20	P-31	2.41	15	Cir	23.393	624.21	624.45	1.026	624.74	625.07	n/a	625.07	17	Curb-
21	P-28	45.21	36	Cir	341.295	604.36	607.79	1.005	606.71	609.98	n/a	609.98 j	18	Manhole
22	P-27	45.20	36	Cir	171.247	607.79	609.50	0.999	609.98	611.69	1.04	611.69	21	OpenHeadwall
23	P-33	4.77	15	Cir	24.538	604.68	604.93	1.019	605.47	605.81	0.20	605.81	16	Curb-
24	P-34	4.24	15	Cir	25.701	604.93	605.20	1.051	605.81	606.03	n/a	606.03 j	23	Manhole

Project File: Network B.stm | Number of lines: 42 | Run Date: 9/3/2026

NOTES: Return period = 10 Yrs. ; j - Line contains hyd. jump.

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
25	P-36	5.28	15	Cir	24.977	596.64	596.89	1.001	597.50	597.82	0.45	597.82	15	Curb-
26	P-38	3.97	15	Cir	25.000	593.35	593.85	2.000	594.26	594.66	n/a	594.66 j	14	Curb-
27	P-40	2.74	15	Cir	211.697	592.73	608.55	7.473	593.70	609.21	n/a	609.21 j	13	Curb-
28	P-19	32.87	36	Cir	200.000	625.50	626.49	0.495	627.35	628.35	n/a	628.35	End	Curb-
29	P-18	32.10	36	Cir	24.991	626.49	626.62	0.520	628.35	628.46	n/a	628.46 j	28	Curb-
30	P-20	15.82	24	Cir	43.396	629.62	630.18	1.290	630.75	631.61	n/a	631.61	29	Curb-
31	P-21	2.08	15	Cir	23.720	630.93	631.17	1.012	631.61	631.75	n/a	631.75 j	30	Curb-
32	P-22	13.10	24	Cir	74.960	630.18	630.93	1.001	631.61	632.23	n/a	632.23 j	30	Curb-
33	P-23	11.68	18	Cir	23.206	631.43	631.75	1.379	632.59	633.05	n/a	633.05	32	Curb-
34	P-24	9.99	18	Cir	64.653	631.75	632.40	1.005	633.05	633.62	n/a	633.62 j	33	Curb-
35	P-25	7.09	18	Cir	77.526	632.40	633.18	1.006	633.62	634.21	n/a	634.21 j	34	Curb-
36	P-26	1.76	15	Cir	23.787	633.43	633.67	1.009	634.21	634.20	n/a	634.20 j	35	Curb-
37	P-17	17.00	30	Cir	164.075	627.12	627.94	0.500	628.50	629.33	n/a	629.33	29	Curb-
38	P-16	11.55	24	Cir	23.748	628.44	628.56	0.505	629.69	629.81	0.24	630.05	37	Curb-
39	P-15	10.49	18	Cir	29.151	629.06	631.00	6.655	630.05	632.24	n/a	632.24	38	Manhole
40	P-14	3.44	18	Cir	216.553	628.94	635.00	2.798	629.39	635.71	n/a	635.71	37	Manhole
41	P-76	67.97	36	Cir	400.000	554.80	577.69	5.722	556.17	580.32	0.25	580.32	End	Manhole
42	P-75	67.96	36	Cir	55.000	577.69	580.00	4.200	580.32	582.63	1.67	582.63	41	Manhole

Project File: Network B.stm | Number of lines: 42 | Run Date: 9/3/2026

NOTES: Return period = 10 Yrs. ; j - Line contains hyd. jump.

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	28.000	142.815	Comb	0.00	0.06	0.90	5.0	579.25	1.68	579.72	15	Cir	0.012	1.41	583.35	P-51
2	1	99.000	68.480	Comb	0.00	0.05	0.90	5.0	579.72	3.97	583.65	15	Cir	0.012	1.50	586.75	P-53
3	2	92.000	20.714	Comb	0.00	0.06	0.90	5.0	583.65	1.26	584.81	15	Cir	0.012	1.44	588.97	P-82
4	3	91.000	34.504	Comb	0.00	0.05	0.90	5.0	584.81	1.08	585.79	15	Cir	0.012	1.47	590.14	P-56
5	4	93.000	30.920	Comb	0.00	0.06	0.90	5.0	585.79	1.00	586.72	15	Cir	0.012	1.49	591.19	P-59
6	5	100.000	9.444	Comb	0.00	0.06	0.90	5.0	586.72	1.00	587.72	15	Cir	0.012	1.50	592.24	P-61
7	6	100.000	1.155	Comb	0.00	0.06	0.90	5.0	587.72	1.01	588.73	15	Cir	0.012	1.50	593.29	P-79
8	7	100.000	0.069	Comb	0.00	0.06	0.90	5.0	588.73	1.00	589.73	15	Cir	0.012	1.50	594.39	P-64
9	8	100.000	-1.317	Comb	0.00	0.10	0.90	5.0	589.73	0.99	590.72	15	Cir	0.012	1.50	595.45	P-67
10	9	24.000	-88.323	Comb	0.00	0.09	0.90	5.0	590.72	1.04	590.97	15	Cir	0.012	1.00	595.45	P-68
11	7	24.000	-91.052	Comb	0.00	0.06	0.90	5.0	588.73	1.08	588.99	15	Cir	0.012	1.00	593.29	P-63
12	6	24.000	-88.217	Comb	0.00	0.06	0.90	5.0	587.72	1.08	587.98	15	Cir	0.012	1.00	592.24	P-62
13	5	24.000	-83.312	Comb	0.00	0.06	0.90	5.0	586.72	1.17	587.00	15	Cir	0.012	1.00	591.19	P-60
14	4	24.000	-77.461	Comb	0.00	0.06	0.90	5.0	585.79	1.13	586.06	15	Cir	0.012	1.00	590.14	P-58
15	3	24.000	-72.081	Comb	0.00	0.06	0.90	5.0	584.81	1.17	585.09	15	Cir	0.012	1.00	588.97	P-55
16	2	24.000	-85.708	Comb	0.00	0.06	0.90	5.0	583.65	1.08	583.91	15	Cir	0.012	1.00	586.75	P-54
17	1	24.000	-19.511	Comb	0.00	0.06	0.90	5.0	579.72	1.08	579.98	15	Cir	0.012	1.00	583.35	P-52
18	8	24.000	-96.314	Comb	0.00	0.06	0.90	5.0	589.73	1.33	590.05	15	Cir	0.012	1.00	594.39	P-66

Project File: Network C D part 1.stm | Number of lines: 18 | Date: 9/3/2026

Structure Report

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
1	C-12	Combination	583.35	Cir	4.00	4.00	15	Cir	579.72	15 15	Cir Cir	579.72 579.72
2	C-14	Combination	586.75	Cir	4.00	4.00	15	Cir	583.65	15 15	Cir Cir	583.65 583.65
3	C-16	Combination	588.97	Cir	4.00	4.00	15	Cir	584.81	15 15	Cir Cir	584.81 584.81
4	C-19	Combination	590.14	Cir	4.00	4.00	15	Cir	585.79	15 15	Cir Cir	585.79 585.79
5	C-21	Combination	591.19	Cir	4.00	4.00	15	Cir	586.72	15 15	Cir Cir	586.72 586.72
6	C-23	Combination	592.24	Cir	4.00	4.00	15	Cir	587.72	15 15	Cir Cir	587.72 587.72
7	C-25	Combination	593.29	Cir	4.00	4.00	15	Cir	588.73	15 15	Cir Cir	588.73 588.73
8	C-28	Combination	594.39	Cir	4.00	4.00	15	Cir	589.73	15 15	Cir Cir	589.73 589.73
9	C-30	Combination	595.45	Cir	4.00	4.00	15	Cir	590.72	15	Cir	590.72
10	C-31	Combination	595.45	Cir	4.00	4.00	15	Cir	590.97			
11	C-26	Combination	593.29	Cir	4.00	4.00	15	Cir	588.99			
12	C-24	Combination	592.24	Cir	4.00	4.00	15	Cir	587.98			
13	C-22	Combination	591.19	Cir	4.00	4.00	15	Cir	587.00			
14	C-20	Combination	590.14	Cir	4.00	4.00	15	Cir	586.06			
15	C-17	Combination	588.97	Cir	4.00	4.00	15	Cir	585.09			
16	C-15	Combination	586.75	Cir	4.00	4.00	15	Cir	583.91			
17	C-13	Combination	583.35	Cir	4.00	4.00	15	Cir	579.98			
18	C-29	Combination	594.39	Cir	4.00	4.00	15	Cir	590.05			

Project File: Network C D part 1.stm | Number of Structures: 18 | Run Date: 9/3/2026

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
1	P-51	5.86	15	Cir	28.000	579.25	579.72	1.678	579.98	580.70	0.71	580.70	End	Combination
2	P-53	5.29	15	Cir	99.000	579.72	583.65	3.970	580.70	584.58	n/a	584.58 j	1	Combination
3	P-82	4.77	15	Cir	92.000	583.65	584.81	1.261	584.58	585.69	n/a	585.69 j	2	Combination
4	P-56	4.19	15	Cir	91.000	584.81	585.79	1.077	585.69	586.62	n/a	586.62 j	3	Combination
5	P-59	3.65	15	Cir	93.000	585.79	586.72	1.000	586.62	587.49	n/a	587.49 j	4	Combination
6	P-61	3.06	15	Cir	100.000	586.72	587.72	1.000	587.49	588.42	n/a	588.42 j	5	Combination
7	P-79	2.46	15	Cir	100.000	587.72	588.73	1.010	588.42	589.36	n/a	589.36 j	6	Combination
8	P-64	1.84	15	Cir	100.000	588.73	589.73	1.000	589.36	590.27	n/a	590.27 j	7	Combination
9	P-67	1.20	15	Cir	100.000	589.73	590.72	0.990	590.27	591.15	n/a	591.15 j	8	Combination
10	P-68	0.59	15	Cir	24.000	590.72	590.97	1.042	591.15	591.27	n/a	591.27 j	9	Combination
11	P-63	0.39	15	Cir	24.000	588.73	588.99	1.083	589.36	589.23	0.08	589.23	7	Combination
12	P-62	0.39	15	Cir	24.000	587.72	587.98	1.083	588.42	588.22	0.08	588.22	6	Combination
13	P-60	0.39	15	Cir	24.000	586.72	587.00	1.167	587.49	587.24	0.08	587.24	5	Combination
14	P-58	0.39	15	Cir	24.000	585.79	586.06	1.125	586.62	586.30	0.08	586.30	4	Combination
15	P-55	0.39	15	Cir	24.000	584.81	585.09	1.167	585.69	585.33	0.08	585.33	3	Combination
16	P-54	0.39	15	Cir	24.000	583.65	583.91	1.083	584.58	584.15	0.08	584.15	2	Combination
17	P-52	0.39	15	Cir	24.000	579.72	579.98	1.083	580.70	580.22	0.08	580.22	1	Combination
18	P-66	0.39	15	Cir	24.000	589.73	590.05	1.333	590.27	590.29	n/a	590.29 j	8	Combination

Project File: Network C D part 1.stm | Number of lines: 18 | Run Date: 9/3/2026

NOTES: Return period = 10 Yrs. ; j - Line contains hyd. jump.

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	64.734	171.041	Curb	0.00	0.06	0.90	5.0	560.50	7.48	565.34	15	Cir	0.013	1.52	570.26	P-45
2	1	97.291	84.436	Curb	0.00	0.06	0.90	5.0	565.34	4.21	569.44	15	Cir	0.013	1.50	574.41	P-47
3	2	105.171	1.952	Curb	0.00	0.12	0.90	5.0	569.44	3.45	573.07	15	Cir	0.013	1.50	578.01	P-49
4	3	35.755	-104.901	Curb	0.00	0.08	0.90	5.0	573.07	1.01	573.43	15	Cir	0.013	1.00	577.99	P-50
5	2	25.001	-87.183	Curb	0.00	0.06	0.90	5.0	569.44	1.00	569.69	15	Cir	0.013	1.00	574.41	P-48
6	1	25.017	-14.730	Curb	0.00	0.06	0.90	5.0	565.34	1.00	565.59	15	Cir	0.013	1.00	570.26	P-46
7	End	164.214	161.451	MH	0.00	6.40	0.30	10.0	562.00	9.28	577.24	18	Cir	0.013	1.00	587.45	P-72
8	End	146.274	-156.833	MH	0.00	12.31	0.30	10.0	560.00	13.01	579.03	24	Cir	0.013	1.00	589.74	P-73
9	End	133.220	-143.412	MH	0.00	1.95	0.30	10.0	561.50	13.89	580.00	15	Cir	0.013	1.00	591.81	P-74
10	End	157.122	148.326	MH	0.00	1.29	0.30	10.0	547.50	14.85	570.84	15	Cir	0.013	1.00	579.59	P-71
11	End	117.334	119.831	MH	0.00	6.42	0.30	10.0	540.00	6.00	547.04	18	Cir	0.013	1.00	552.97	P-70
12	End	24.727	-24.494	Curb	0.00	0.30	0.90	5.0	530.00	1.01	530.25	15	Cir	0.013	1.13	533.96	P-43
13	12	52.144	-45.444	Curb	0.00	0.28	0.90	5.0	530.25	2.46	531.53	15	Cir	0.013	1.00	535.98	P-44

Project File: Network_C_D Part 2.stm | Number of lines: 13 | Date: 9/3/2026

Structure Report

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
1	C-5	Curb-	570.26	Cir	2.00	2.00	15	Cir	565.34	15 15	Cir Cir	565.34 565.34
2	C-7	Curb-	574.41	Cir	2.00	2.00	15	Cir	569.44	15 15	Cir Cir	569.44 569.44
3	C-9	Curb-	578.01	Cir	2.00	2.00	15	Cir	573.07	15	Cir	573.07
4	C-10	Curb-	577.99	Cir	2.00	2.00	15	Cir	573.43			
5	C-8	Curb-	574.41	Cir	2.00	2.00	15	Cir	569.69			
6	C-6	Curb-	570.26	Cir	2.00	2.00	15	Cir	565.59			
7	D-8	Manhole	587.45	Cir	4.00	4.00	18	Cir	577.24			
8	D-10	Manhole	589.74	Cir	4.00	4.00	24	Cir	579.03			
9	D-12	Manhole	591.81	Cir	4.00	4.00	15	Cir	580.00			
10	D-6	Manhole	579.59	Cir	4.00	4.00	15	Cir	570.84			
11	D-4	Manhole	552.97	Cir	4.00	4.00	18	Cir	547.04			
12	C-2	Curb-	533.96	Cir	2.00	2.00	15	Cir	530.25	15	Cir	530.25
13	C-3	Curb-	535.98	Cir	2.00	2.00	15	Cir	531.53			

Project File: Network_C_D Part 2.stm | Number of Structures: 13 | Run Date: 9/3/2026

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
1	P-45	2.46	15	Cir	64.734	560.50	565.34	7.477	560.82	565.97	0.38	565.97	End	Curb-
2	P-47	1.85	15	Cir	97.291	565.34	569.44	4.214	565.97	569.98	n/a	569.98 j	1	Curb-
3	P-49	1.25	15	Cir	105.171	569.44	573.07	3.451	569.98	573.51	n/a	573.51 j	2	Curb-
4	P-50	0.54	15	Cir	35.755	573.07	573.43	1.006	573.51	573.72	n/a	573.72 j	3	Curb-
5	P-48	0.36	15	Cir	25.001	569.44	569.69	0.997	569.98	569.92	0.08	569.92	2	Curb-
6	P-46	0.38	15	Cir	25.017	565.34	565.59	0.998	565.97	565.83	n/a	565.83	1	Curb-
7	P-72	11.60	18	Cir	164.214	562.00	577.24	9.281	562.62	578.54	0.79	578.54	End	Manhole
8	P-73	22.31	24	Cir	146.274	560.00	579.03	13.010	560.85	580.71	n/a	580.71	End	Manhole
9	P-74	3.53	15	Cir	133.220	561.50	580.00	13.887	561.82	580.76	n/a	580.76	End	Manhole
10	P-71	2.34	15	Cir	157.122	547.50	570.84	14.855	547.76	571.45	n/a	571.45	End	Manhole
11	P-70	11.64	18	Cir	117.334	540.00	547.04	6.000	540.71	548.34	n/a	548.34	End	Manhole
12	P-43	3.69	15	Cir	24.727	530.00	530.25	1.010	530.67	531.02	0.37	531.02	End	Curb-
13	P-44	1.84	15	Cir	52.144	530.25	531.53	2.455	531.02	532.07	n/a	532.07 j	12	Curb-

Project File: Network_C_D Part 2.stm | Number of lines: 13 | Run Date: 9/3/2026

NOTES: Return period = 10 Yrs. ; j - Line contains hyd. jump.

August 19, 2025

Allen Farms, GP
Mr. Dean Patel, Managing Member
1516 Hampton Street
Nashville, TN 37207

Re: Report of Geotechnical exploration
Proposed Allen Farms Development, Goodlettsville, TN

Dear Mr. Patel:

Collier Engineering Company, Inc. (Collier) has completed the requested additional services for the above referenced project, and herewith submits the findings and our conclusions. Our services were performed in general accordance with our approved October 14, 2024, proposal/contract with you and in response to your verbal request for consulting and engineering assistance. The purpose of this task is to review available geological, soils, and topographic information for the site, conduct limited subsurface exploration across the site, and publish this deliverable.

Executive Summary

Site development will present notable challenges. Test pits revealed relatively thick soil and overburden deposits, in places exceeding 10 feet. The presence of colluvium—a soil type prone to instability—was confirmed. This material is of particular importance due to its unpredictable nature and must be explicitly considered in both design and construction.

Several proposed cuts are expected to transition from soil to rock. Such transitions, particularly in large cuts, should be carefully studied and incorporated into the final design of permanent slopes. Most on-site soils are generally suitable for use as engineered fill; however, mixed rock/soil or oversized boulders should only be incorporated into the lower zones of deep fills under strict engineering oversight and testing.

Project Information/Site Conditions

The property is planned for development as a single-family residential subdivision of approximately 66 lots, including related utilities, roads, and amenities. A preliminary grading plan, dated August 19th, was used to guide exploration locations and evaluate general subsurface conditions.

The site encompasses approximately 92 acres of terrain varying from steeply inclined ridges to gently rolling ground, located on Allen Road in Goodlettsville, Tennessee. Elevation relief across the property is approximately 250 feet, ranging from Elev. 539 at the entrance to nearly Elev.

800 along the western ridge. The site can be described as a north–south oriented valley bounded by high ridges.

Based on aerial imagery and a 2018 study, much of the northern and southwestern portions were clear-cut for logging between 2015 and 2018. These areas now exhibit secondary growth consisting of saplings, underbrush, and scrub vegetation. Large trees remain in undisturbed areas, with scattered brush piles and windrows left from the prior harvest.

A multi-story house and detached outbuilding occupy the approximate center of the property, accessed via a gravel drive from Allen Road. The surrounding few acres consist of maintained lawn and pasture. Utilities are present along the drive and near the residence.

Terrain gradients approach 50 percent along ridge flanks, with gentler slopes along valley spines and ridge tops. Ground cover consists of grasses and weeds in cleared areas, with typical forest litter in wooded areas. Rock outcrops include large limestone projections and shale/siltstone ledges.

Exploration/Subsurface Conditions

Test Pits

Thirteen test pits were excavated with a Caterpillar 300-series track-mounted excavator. Locations are shown on Exhibit 1 and were recorded using a GPS-enabled mapping application. Pits were selected to target specific soil conditions based on mapped geology.

Excavations encountered residual and colluvial soils with varying proportions of silt, sand, and limestone fragments to cobble size. Termination depths ranged from 4 to 12 feet below grade. No groundwater, seepage, or surface springs were observed at the time of exploration.

According to the 1981 Geologic Map of the Goodlettsville Quadrangle (USGS), three lithologic units underlie the site:

- **Sequatchie Formation (Ordovician; Elev. < 580)** – Limestone over siltstone and shale.
- **Wayne Group (Ordovician; Elev. 580–640)** – Interbedded limestone and shale; includes Lego, Waldron, Laurel, Osgood, and Brassfield formations (presence variable).
- **Fort Payne & Chattanooga Formations (Mississippian; Elev. > 640)** – Siltstone with interbedded shale; Chattanooga Shale at base, typically 20–30 feet thick.

Soil Survey data (USDA/NRCS) identifies dominant soils as Harpeth silt loam, Mimosa silt loam, Mimosa–Rock outcrop, Sulphura channery silt loam, and Dellrose gravelly silt loam (colluvium).

Track Drill exploration

To further evaluate areas of planned large cuts and retaining structures, eleven track drill borings were advanced to depths ranging from approximately 12 to 70 feet. Subsurface

materials encountered included soil, limestone bedrock, shale, and siltstone. Individual cross-sections are provided in the Appendix.

- **TD-1 through TD-3 (Northeast corner)**: Drilled to 70 feet, these borings encountered soil underlain by limestone bedrock.
- **TD-4 through TD-6 (Central/eastern portion)**: Encountered soil overlying limestone and Chattanooga Shale to depths of approximately 45 feet.
- **TD-7 and TD-8 (Northern/central border in proposed cut area)**: Encountered soil underlain by siltstone, shale, and limestone to depths of 28 and 45 feet, respectively.
- **TD-9 through TD-11 (Proposed western entrance road)**: Encountered soil over siltstone at TD-9 and TD-11, while TD-10 encountered soil over limestone. Exploration depths ranged from 28 to 31 feet.

Opinions/Conclusions

The site is considered generally suitable for the proposed development. However, the geology and terrain present multiple challenges that will require above-standard design and construction measures. Associated costs and risks are expected to exceed those of sites with flatter terrain and more uniform geology.
The following subsections outline key geotechnical issues anticipated at the property. These considerations should serve as a preliminary guide for design, mass grading, and construction.

Colluvium

Colluvium is a by-product of slope processes including mass wasting, sliding, creep, and erosion. These soils are highly variable, often loose, and may include granular or clayey components. Colluvium presents increased risks of slope instability, excessive settlement, and unpredictable performance under new loads or altered drainage.
Exploration revealed both granular and clayey colluvial deposits. Granular colluvium is especially susceptible to sliding and should be removed or reworked as engineered fill prior to placement of new fill. Clayey colluvium generally exhibits greater shear strength but is still considered unreliable due to its depositional nature.

General Design Recommendations for Colluvium

- Cut slopes in colluvium should not exceed inclinations of 4H:1V. Slopes steeper than this must be evaluated during construction to confirm stability.
- Vertical cuts in colluvium should be limited to 10 feet in height.
- Granular horizons require removal, reworking, or structural retention (e.g., geostructural systems).

- Retaining structures should assume conservative parameters: negligible cohesion and an internal friction angle (ϕ) of approximately 14°.
- New fill overlapping colluvial deposits must be supported on reworked engineered fill or competent residual soil/bedrock.
- Site drainage measures such as French drains, curtain drains, diversion ditches, or blanket drains should be implemented to maintain dry conditions.
- Subsurface drains should be installed where seepage, springs, or groundwater are encountered.
- Retaining walls should utilize top-down methods (pile and lagging) rather than crib walls, and below-grade walls must be designed as retaining structures.

Additional exploration is strongly recommended to better define the horizontal and vertical extent of colluvial deposits, as mapped limits are only approximate.

Excavated Slopes

Large cuts will expose both soil and bedrock, requiring tailored slope geometries and stabilization methods depending on material type:

- **Limestone Bedrock**: Slightly weathered limestone may be presplit to near-vertical (12V:1H or flatter). Highly weathered limestone may require slope geometries of 1H:1V with localized dental treatment. Severely weathered or jointed limestone may require retaining structures or rock bolt–anchored mesh systems.
- **Siltstone and Shale**: These units are prone to rapid weathering and degradation. Permanent slopes should not exceed 2H:1V. Retaining structures or protective facings are recommended to prevent spalling and surface deterioration.
- **Residual Clay**: Stable residual clays may be cut to 2.5H:1V, provided drainage, erosion protection, and maintenance are implemented.

Transitions between differing materials will require benches, terraces, and drainage features. In some cases, hybrid stabilization systems may be necessary. Final slope designs must also balance technical stability with long-term aesthetics and maintenance considerations.

Differing Foundation Subgrades

Mass grading across the property is expected to create transitions between bedrock and soil subgrades at certain lots or infrastructure areas. These transitions may result in **nonuniform bearing conditions** and increase the potential for **differential settlement** between adjacent foundations or portions of strip footings.

Mitigation Measures

- Establish uniform bearing conditions by removing protruding rock to provide a minimal soil cushion beneath foundations, or by replacing soil with low-compressibility engineered fill (e.g., dense-graded stone).

- Incorporate additional flexural reinforcement in footing design to reduce risks associated with nonuniform settlement.
- Evaluate subgrades on a case-by-case basis during construction, with adjustments made in consultation with the geotechnical engineer.

Engineered Fill

Based on exploration, most on-site soils are considered suitable for reuse as engineered fill, provided that placement follows proper construction protocols.

Acceptable Materials

- **Select Soil Fill**: Low-plasticity clay with minimal rock content and particle sizes less than 4 inches.
- **Limestone Rock Fill**: Blasted or excavated limestone processed to a uniform gradation. Rock fill should be placed in level lifts and compacted with heavy tracked equipment (e.g., D-8 dozer).

Marginal Materials

- **Shale and Siltstone**: These rocks break easily into platy fragments. They should be compacted in thin lifts with a sheepsfoot roller and watered to assist densification.
- **Mixed Rock/Soil (Rubble)**: Generally unsuitable for building pads. Rubble may be used for roadways and non-structural fills, and in the lower reaches of deep fills under strict engineering control.

Placement Considerations

- Fill should be compacted in horizontal lifts with uniform thickness.
- Bench existing slopes to create stable tie-ins between new fill and natural ground.
- Stabilize subgrades prior to fill placement to improve both short-term constructability and long-term performance.

Stability of Slopes

The long-term stability of cut and fill slopes should be evaluated during construction on a case-by-case basis. Additional exploration, laboratory testing, and slope stability analyses are recommended to confirm final slope configurations.

- **Local Stability**: Refers to the immediate stability of a specific slope section or retaining wall. This should be analyzed for each significant cut or fill.
- **Global Stability**: Considers overall slope performance, including uphill and downhill portions beyond the immediate construction area. Retaining walls or structural reinforcements will be required where global stability factors are low.

Some locations will require engineered retaining structures to achieve permanent stability. Localized stability concerns (e.g., pools, structures, or roadway embankments) must also be evaluated within the broader slope system.

General

Excavation of detached limestone slabs, highly weathered bedrock, siltstone, and shale can generally be accomplished using heavy excavation equipment. More competent limestone may require controlled blasting, hoe-ramming, or hydraulic splitting to render usable fill material.

Construction Recommendations

- Schedule grading and earthwork during dry weather to reduce the risk of undercutting, slope failures, and construction delays.
- Plan material handling and phasing carefully to account for the variety of fill materials (soil, limestone, shale, rubble).
- Compact fills in horizontal lifts, ensure proper drainage, and bench existing slopes to provide stable interfaces.
- Anticipate groundwater at the base of Chattanooga Shale; localized seepage or springs may require subsurface drainage measures.
- Shallow foundations designed for allowable bearing pressures of 2,000 to 3,000 psf are expected to perform satisfactorily if subgrades are prepared as recommended.
- Deep foundations, tied-back retaining walls, or ground improvement techniques may be required in areas of complex grading or heavy loading.

Although no sinkholes were observed on the site, the carbonate bedrock introduces a low but present risk of karst development. Any sinkholes discovered during construction must be reported immediately to the geotechnical engineer for evaluation and remediation design.

Closure

The conclusions and recommendations presented herein are based on conditions encountered in test pits and track drill explorations, supplemented by published geologic and soils data. Subsurface conditions may vary across the site and should be verified during construction.

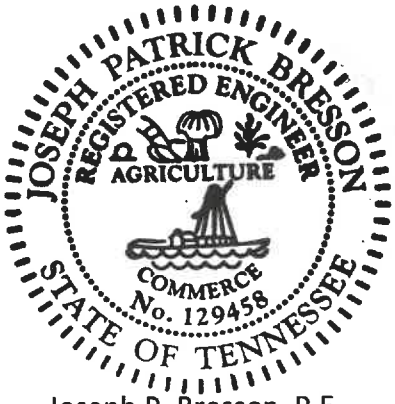
This report is intended exclusively for the use of our client and applies solely to the Allen Farms project as described. If project scope, design, or layout is revised, Collier Engineering must be consulted to review and, if necessary, update these recommendations.

Our scope of services did not include cultural resource evaluations, environmental testing, or biological assessments. If the owner has concerns regarding potential environmental impacts or hazardous materials, additional studies should be commissioned under separate contract.

We appreciate the opportunity to be of service and remain available to assist with further design-phase consultation and construction oversight.

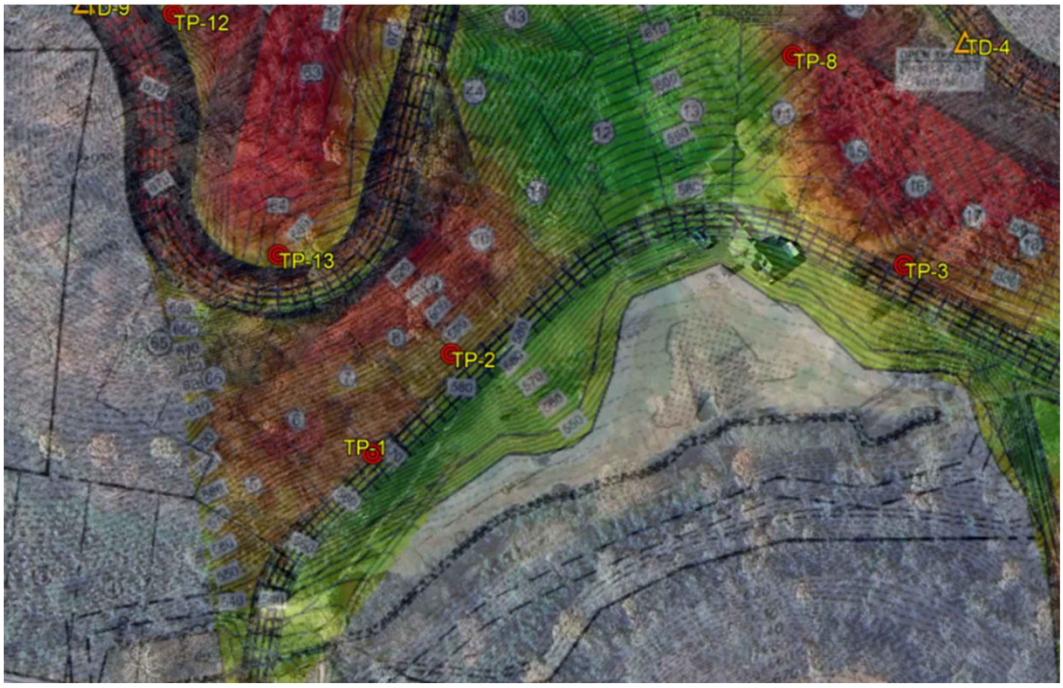
We appreciate the opportunity to be of service to you. If you have any questions concerning this correspondence, or if we may be of further service to you in any way, please do not hesitate to contact us.

Sincerely,
Collier Engineering Company, Inc.



Joseph P. Bresson, P.E.
Geotechnical Engineer

Attachments:	Exhibit 1	Test Pit and Track Drill Logs and Plat Excerpt (9 sheets)
	Exhibit 2	Geological Quadrangle Excerpt
	Exhibit 3	Aerial Image with Mapped Soils



TP 1

-1’ Topsoil/organics/roots

RESIDUUM: Lean clay (CL), silt, sand, brown & light brown, stiff

-3’

RESIDUUM: Lean clay (CL), silt, sand, and chert cobbles brown & light brown, stiff

-7’

Refusal at 7 feet
Dry on completion

TP 2

-1’ Topsoil/organics/roots

RESIDUUM: Lean clay (CL), brown, chert cobbles start at 4 feet, Bedrock pinnacle at 3.5 feet

Termination at 8 feet
Dry on completion

TP 3

-1’ Topsoil/organics/roots

RESIDUUM: Fat clay (CH), silt, sand, brown, stiff

-4’

Refusal at 4 feet
Dry on completion

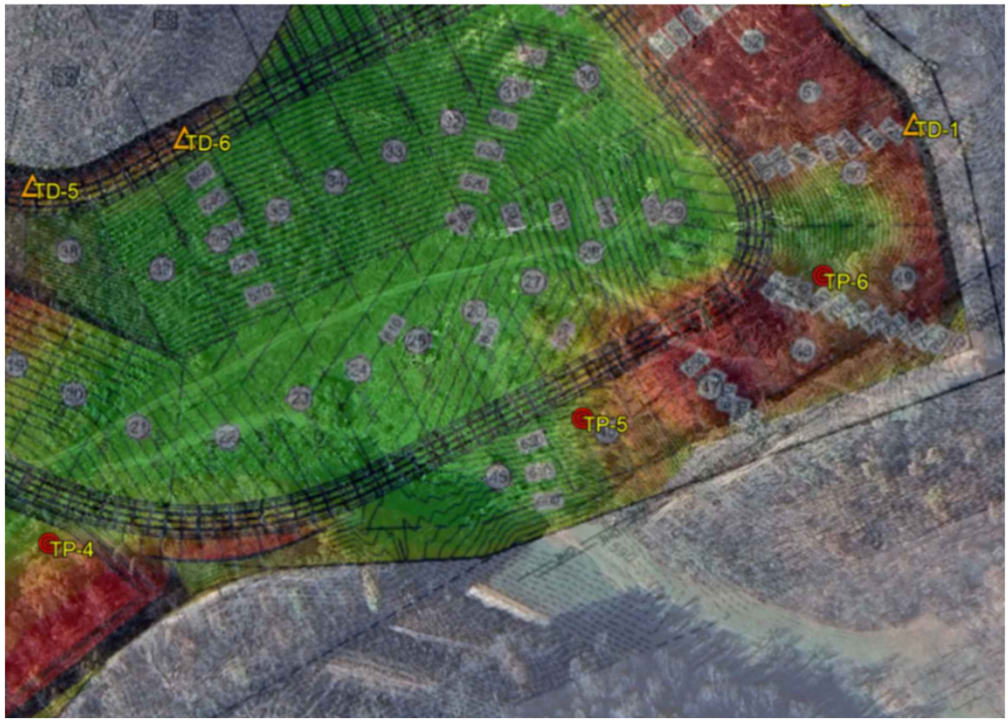
Notes:

1. Test pit locations are approximate.
2. Test pit elevations are not available and are omitted from these logs.

Legend

~ Approximate depth of perceived stratum change

Project Mgr.: SV	Project No.: 3608-24-01	COLLIER ENGINEERING CO., INC. CONSULTING • DESIGN • CONSTRUCTION	**TEST PIT LOGS AND PLAT EXCERPT**	Exh.
Drawn by: JPB	Scale: NTS	2949 Nolensville Pike Nashville, Tennessee 37211	Limited Geotechnical Exploration Proposed Allen Farms Goodlettsville, TN	1
Reviewed by: JPB	File Name: Exh. 1	PH. (615) 333-6444 FAX. (615) 331-1050		
Approved by:	Date: 28May2025			



TP 4

-1’ Topsoil/organics/roots

RESIDUUM: Lean clay (CL), with silt, chert and limestone cobbles at depth, brown, soft to firm

Termination at 8 feet
Dry on completion

TP 5

-1’ Topsoil/organics/roots

RESIDUUM: Lean clay (CL), silt, sand, limestone slab and cobbles, light brown, stiff

-4’

Refusal at 4 feet
Dry on completion

TP 6

-1’ Topsoil/organics/roots

COLLUVIUM: Lean clay (CL), with sand, brown firm

-3’

COLLUVIUM: Lean clay (CL), with sand, cemented, tan, very stiff

Termination at 8 feet
Dry on completion

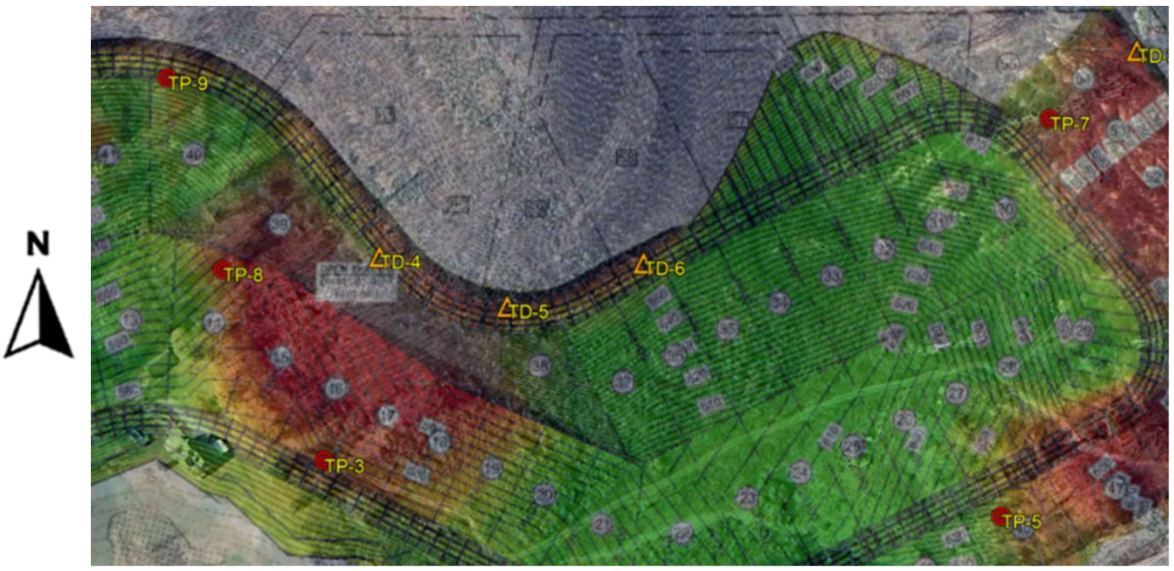
Notes:

1. Test pit locations are approximate.
2. Test pit elevations are not available and are omitted from these logs.

Legend

Approximate depth of perceived stratum change

Project Mgr. SV	Project No. 3608-24-01	COLLIER ENGINEERING CO., INC. CONSULTING • DESIGN • CONSTRUCTION	TEST PIT LOGS AND PLAT EXCERPT	Exh.
Drawn by: JPB	Scale: NTS	2949 Nolensville Pike Nashville, Tennessee 37211	Limited Geotechnical Exploration Proposed Allen Farms Goodlettsville, TN	1
Reviewed by: JPB	File Name: Exh. 1	PH. (615) 333-6444 FAX. (615) 331-1050		
Approved by:	Date: 9July2025			



TP 7

-8”
Topsoil/organics/roots

COLLUVIUM: Lean clay (CL), with sand, brown firm

-4’

COLLUVIUM: Lean clay (CL), with sand, cemented, tan, very stiff

Termination at 10 feet
Dry on completion

TP 8

-8”
Topsoil/organics/roots

COLLUVIUM: Lean clay (CL), with silt, brown firm

-3’

COLLUVIUM: Lean clay (CL), with sand, tan, very stiff

-6’

COLLUVIUM: Lean clay (CL), with sand, limestone cobbles, tan, very stiff

-9’

Weathered Bedrock

Refusal at 10 feet
Dry on completion

TP 9

-8”
Topsoil/organics/roots

COLLUVIUM: Lean clay (CL), with sand, brown firm

COLLUVIUM: Lean clay (CL), with sand, with limestone cobbles, tan, very stiff

Termination at 10 feet
Dry on completion

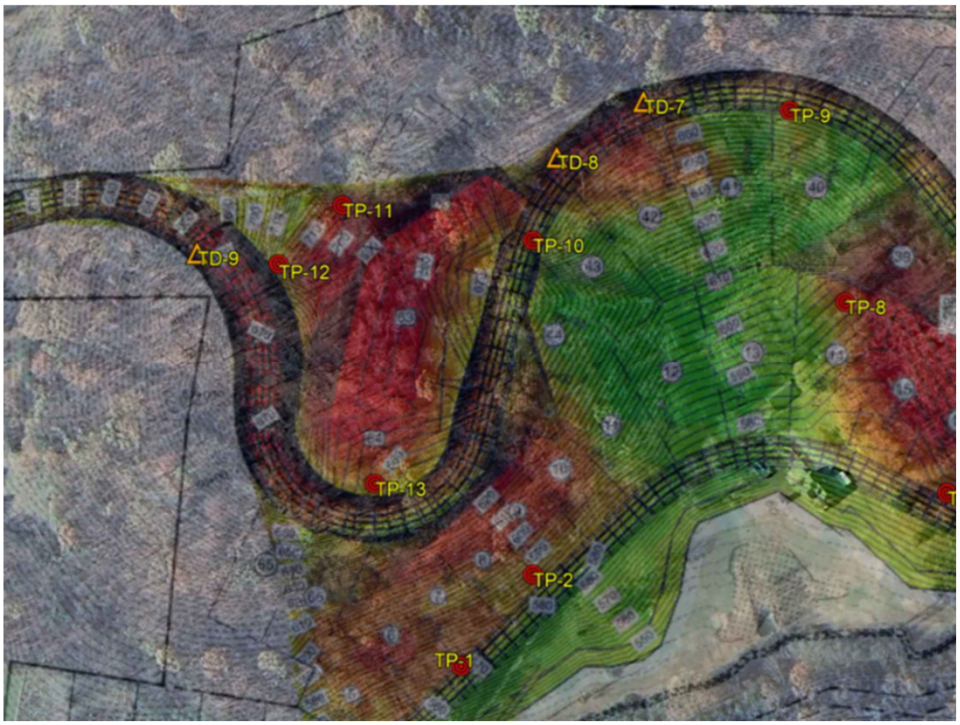
Legend

Approximate depth of perceived stratum change

Notes:

1. Test pit locations are approximate.
2. Test pit elevations are not available and are omitted from these logs.

Project Mgr.: SV	Project No.: 3608-24-01	COLLIER ENGINEERING CO., INC. CONSULTING • DESIGN • CONSTRUCTION	**TEST PIT LOGS AND PLAT EXCERPT**	Exh.
Drawn by: JPB	Scale: NTS	2949 Nolensville Pike Nashville, Tennessee 37211	Limited Geotechnical Exploration Proposed Allen Farms Goodlettsville, TN	1
Reviewed by: JPB	File Name: Exh. 1	PH. (615) 333-6444 FAX. (615) 331-1050		
Approved by:	Date: 9July2025			



TP 10

-1’ Topsoil/organics/roots

COLLUVIUM: Lean clay (CL), sand, orange brown stiff

-5’

RESIDUUM: Fat clay (CL), silt and sand, gray, firm

-8’

Chattanooga Shale

-12’

Refusal at 12 feet
Dry on completion

TP 11

-1’ Topsoil/organics/roots

RESIDUUM: Lean clay (CL), sand, orange brown stiff

-5’

RESIDUUM: Fat clay (CL), silt and sand, tan, stiff

-8’

Chattanooga Shale

-10’

Refusal at 10 feet
Dry on completion

TP 12

-8” Topsoil/organics/roots

RESIDUUM: Lean clay (CL), silt, sand, bedrock cobbles

-2.5’

-5’

Chattanooga Shale

Refusal at 7 feet
Dry on completion

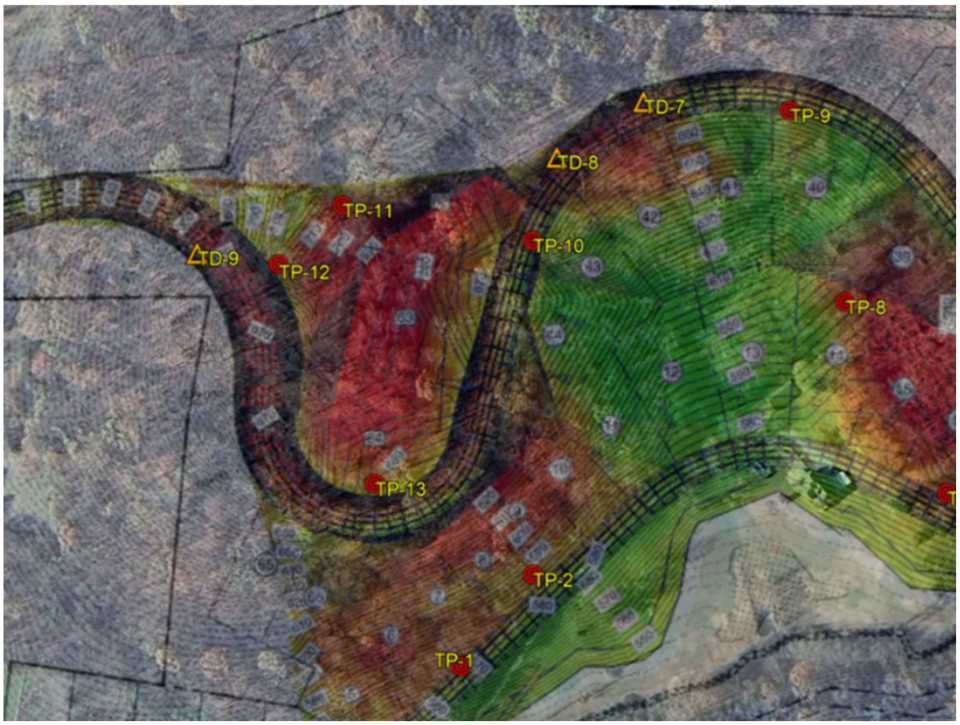
Legend

Approximate depth of perceived stratum change

Notes:

1. Test pit locations are approximate.
2. Test pit elevations are not available and are omitted from these logs.

Project Mgr. SV	Project No. 3608-24-01	COLLIER ENGINEERING CO., INC. CONSULTING • DESIGN • CONSTRUCTION	**TEST PIT LOGS AND PLAT EXCERPT**	Exh.
Drawn by: JPB	Scale: NTS	2949 Nolensville Pike Nashville, Tennessee 37211	Limited Geotechnical Exploration	
Reviewed by: JPB	File Name: Exh. 1	PH. (615) 333-6444 FAX. (615) 331-1050	Proposed Allen Farms	1
Approved by:	Date: 9July2025		Goodlettsville, TN	



TP 13

-1’ Topsoil/organics/roots

COLLUVIUM: Lean clay (CL), sand, orange brown, stiff

-5’

COLLUVIUM: Fat clay (CL), silt, sand, limestone cobbles tan, stiff

-8’

Refusal at 8 feet
Dry on completion

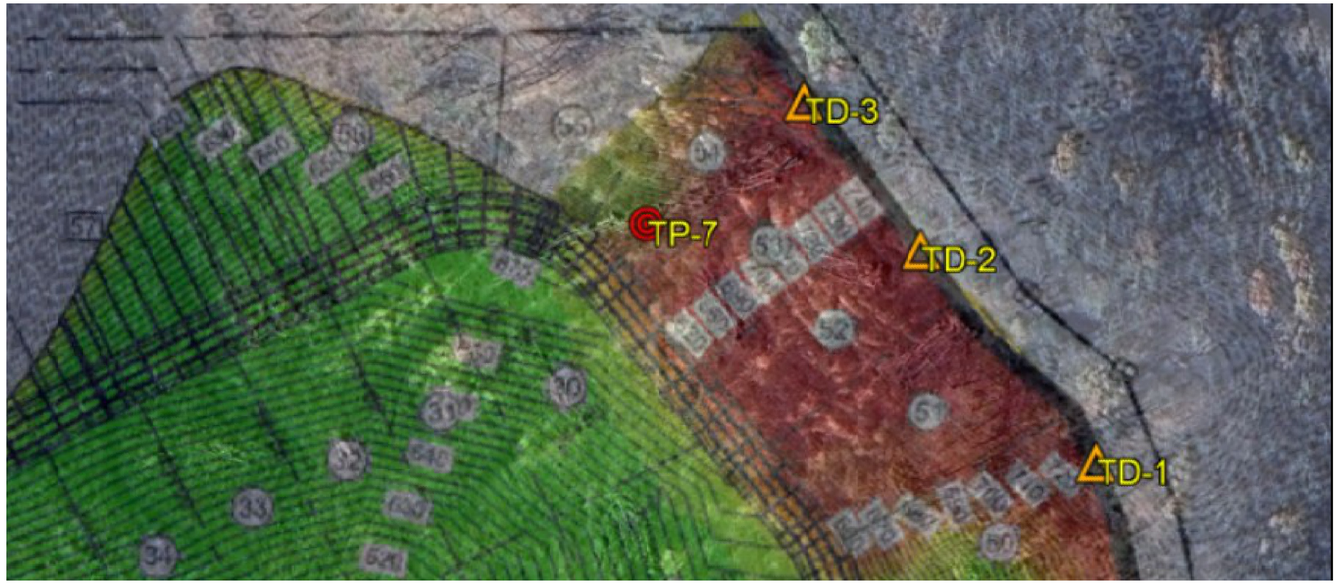
Legend

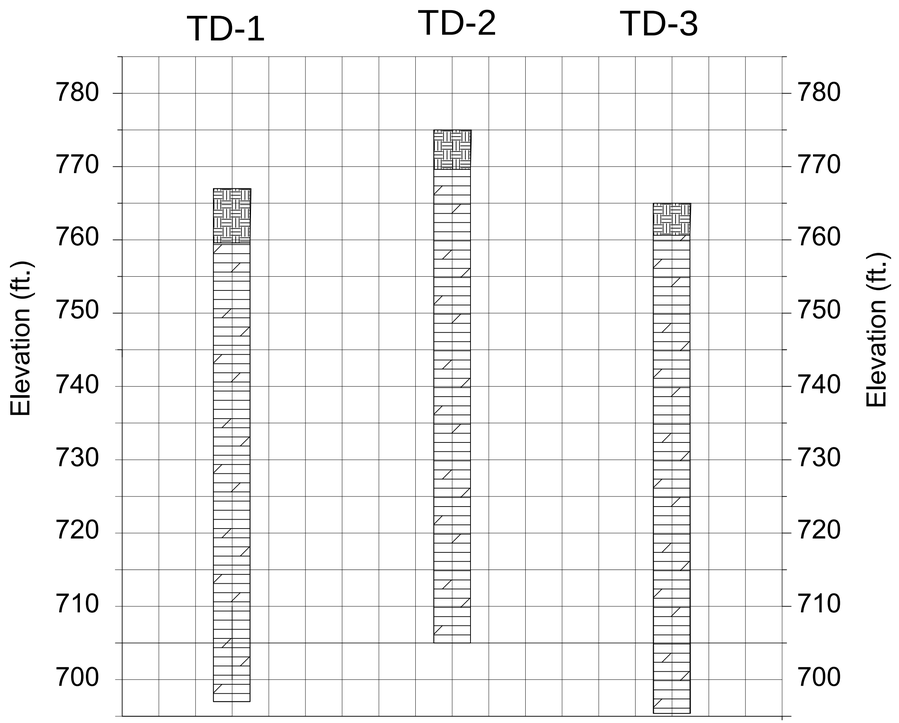
Approximate depth of perceived stratum change

Notes:

1. Test pit locations are approximate.
2. Test pit elevations are not available and are omitted from these logs.

Project Mgr.: SV	Project No.: 3608-24-01	COLLIER ENGINEERING CO., INC. CONSULTING • DESIGN • CONSTRUCTION	**TEST PIT LOGS AND PLAT EXCERPT**	Exh.
Drawn by: JPB	Scale: NTS	2949 Nolensville Pike Nashville, Tennessee 37211	Limited Geotechnical Exploration	1
Reviewed by: JPB	File Name: Exh. 1	PH. (615) 333-6444 FAX. (615) 331-1050	Proposed Allen Farms	
Approved by:	Date: 9July2025		Goodlettsville, TN	





Notes:

TD-1 - encountered 3 to 6 inches of soft material at 763', 758' and 728'. A 2 foot soft rock layer from 705 to 703 feet

TD-2 - encountered a 3 inch soft layer at 770 feet. a 1.5 foot soft layer at 751 feet. Soft rock from 712 to 711 feet.

TD-3 - encountered a 3 inch soft layer at 755 feet. a 1.5 foot soft layer at 741 feet. 6 inch soft layer at 717 and 703 feet.

soil

Limestone

Chattanooga Shale

Silt Stone

COLLIER ENGINEERING CO., INC.
CONSULTING ● DESIGN ● CONSTRUCTION
2949 NOLENSVILLE PIKE, NASHVILLE TN., 37211
PHONE: (615) 331-1441 FAX: (615) 331-1050

Fence Diagram

Allen Farms Fence Diagrams
Goodletsville, Tennessee

DRAWN BY:	REVIEWED BY:
JPB	JPB
DESIGNED BY:	APPROVED BY:
JPB	JPB

SCALE: AS SHOWN

DATE: August 19, 2025

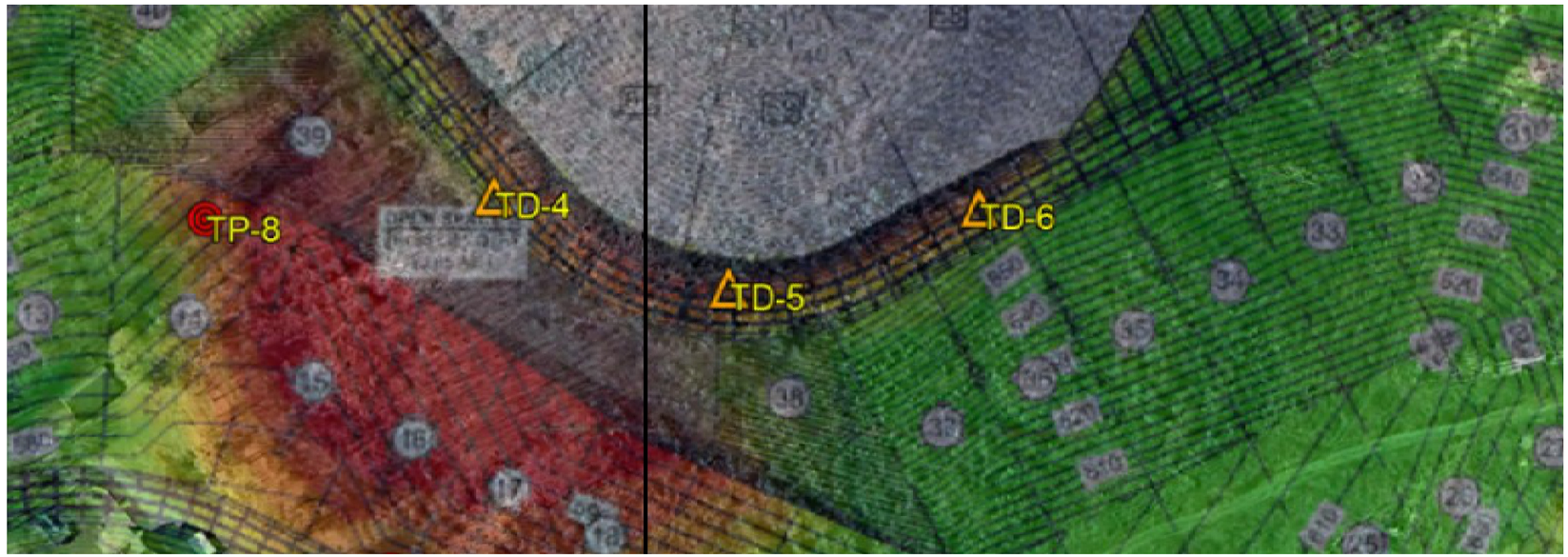
Revisions

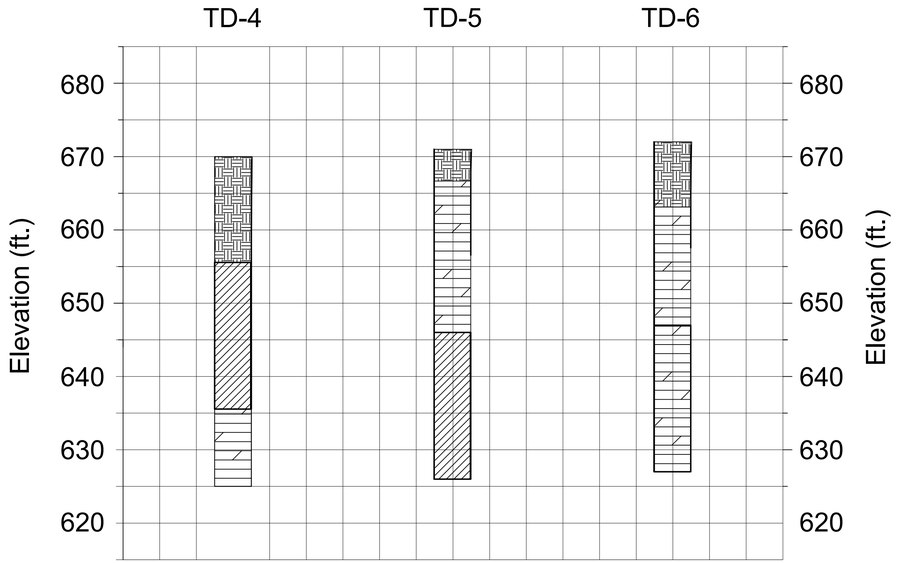
No.	Date	Description	By:
1			
2			
3			
4			
5			
6			

DRAWING: TD-1.0

PROJECT NUMBER: 3608-24-01

N





Notes:

TD-5 - encountered soft material from 646 to 644.5

soil

Limestone

Chattanooga Shale

Silt Stone

COLLIER ENGINEERING CO., INC.
CONSULTING ● DESIGN ● CONSTRUCTION
2949 NOLENSVILLE PIKE, NASHVILLE TN., 37211
PHONE: (615) 331-1441 FAX: (615) 331-1050

Retaining Wall Construction Details

Allen Farms Fence Diagrams
Goodletsville, Tennessee

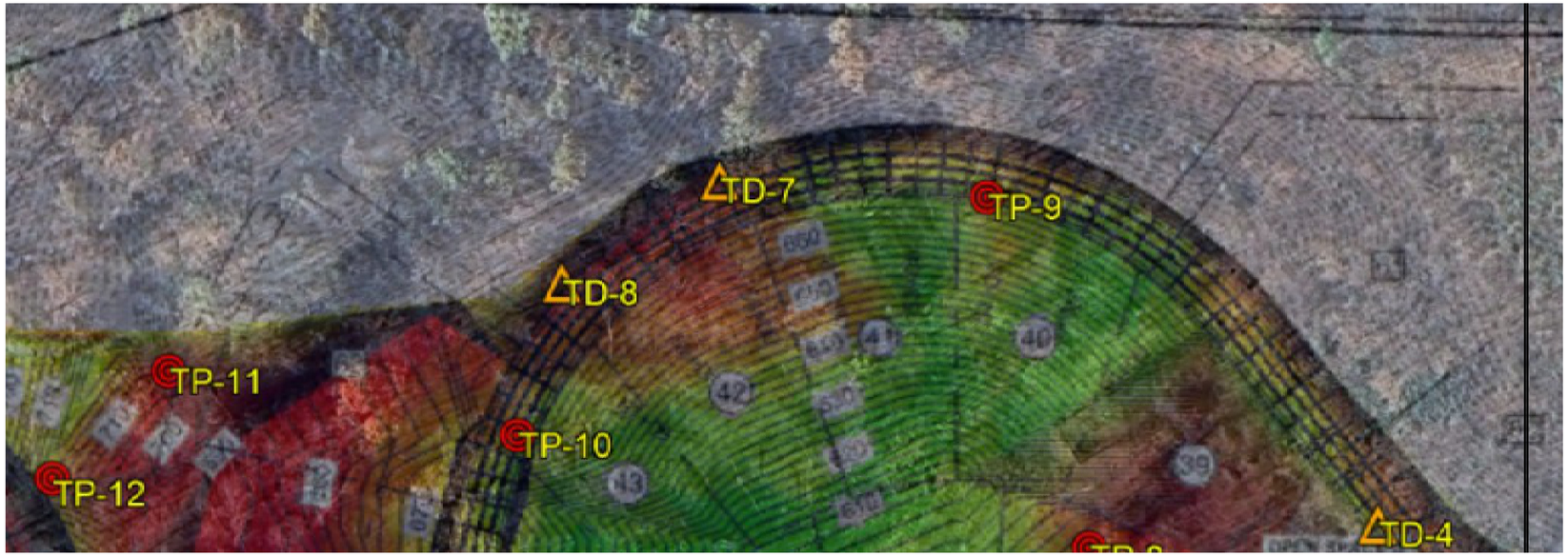
DRAWN BY: JPB
REVIEWED BY: JPB
DESIGNED BY: JPB
APPROVED BY: JPB
SCALE: AS SHOWN
DATE: August 19, 2025

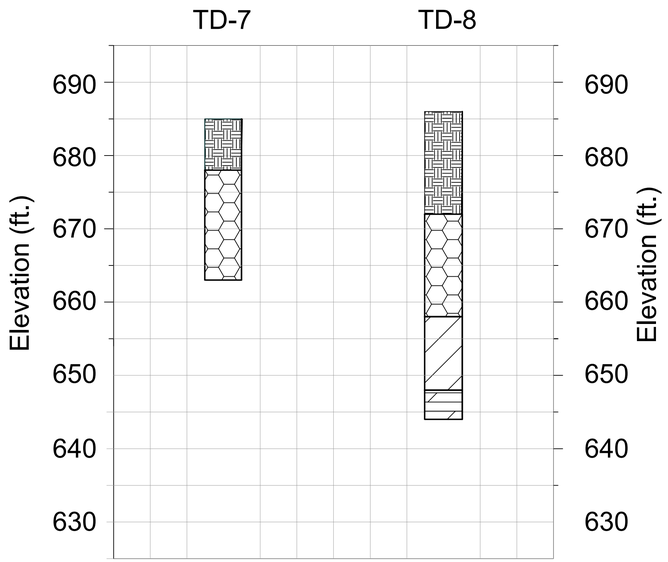
Revisions

No.	Date	Description	By:
1			
2			
3			
4			
5			
6			

DRAWING:
TD-2.0

PROJECT NUMBER:
3608-24-01





Notes:

TD-8 - encountered soft material from 648 to 647

soil

Limestone

Chattanooga Shale

Silt Stone

COLLIER ENGINEERING CO., INC.
CONSULTING ● DESIGN ● CONSTRUCTION
2949 NOLENSVILLE PIKE, NASHVILLE TN., 37211
PHONE: (615) 331-1441 FAX: (615) 331-1050

Retaining Wall Construction Details

Allen Farms Fence Diagrams
Goodletsville, Tennessee

DRAWN BY:	REVIEWED BY:
JPB	JPB
DESIGNED BY:	APPROVED BY:
JPB	JPB

SCALE: AS SHOWN

DATE: August 19, 2025

Revisions

No.	Date	Description	By:
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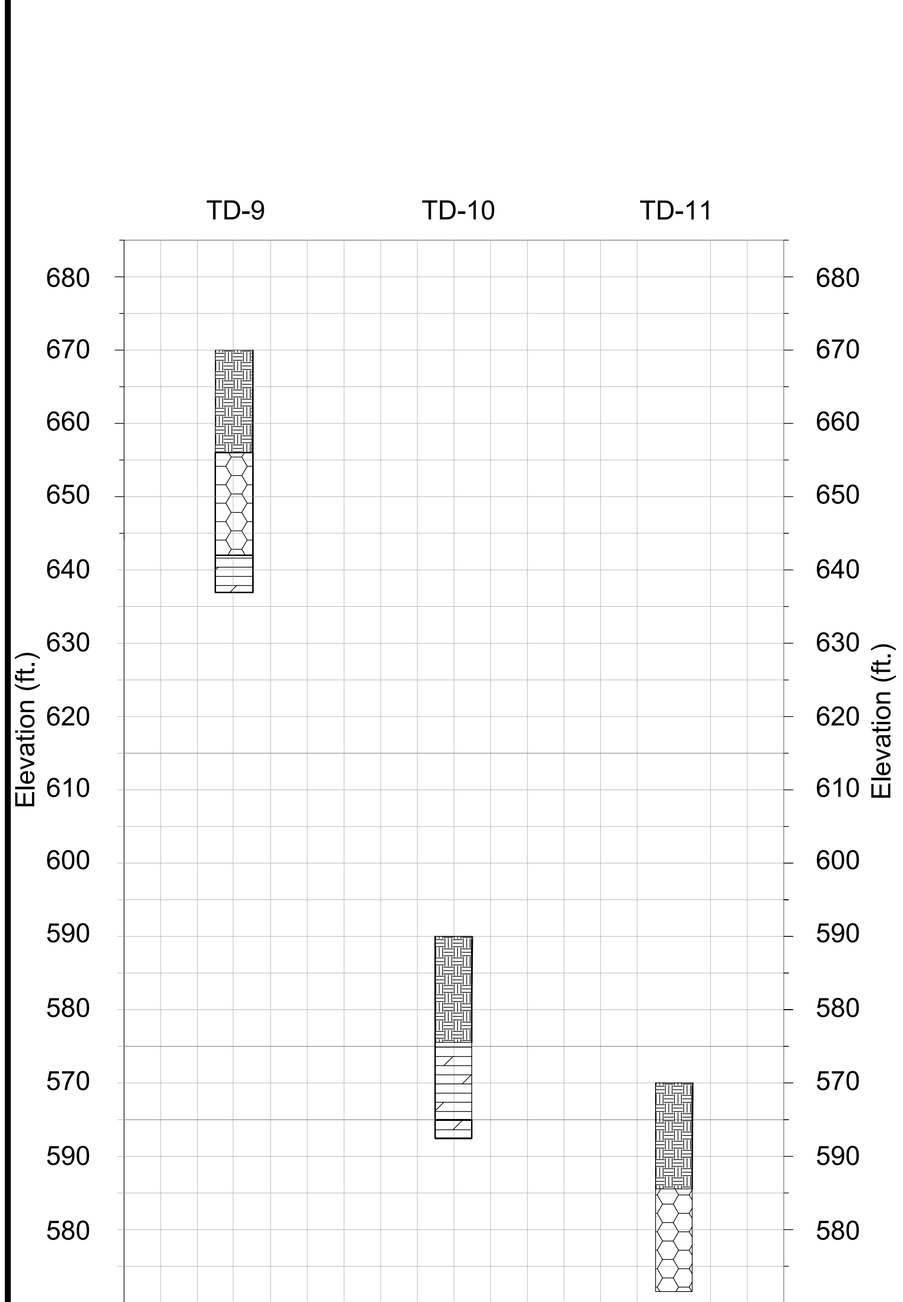
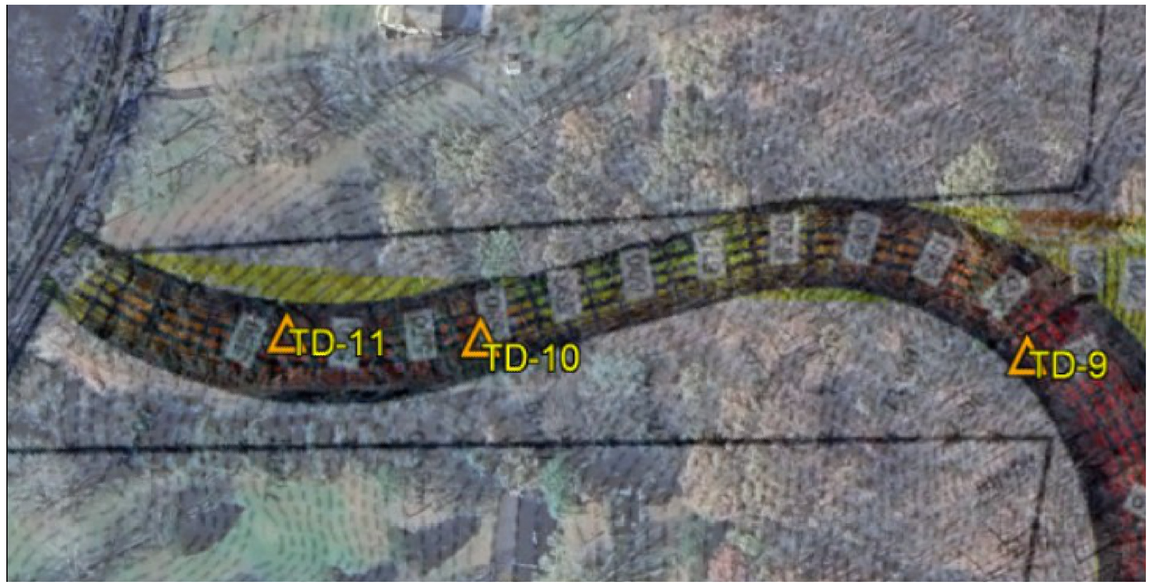
6			

DRAWING: TD-2.0

PROJECT NUMBER: 3608-24-01





soil

Limestone

Chattanooga Shale

Silt Stone

COLLIER ENGINEERING CO., INC.
CONSULTING ● DESIGN ● CONSTRUCTION
2949 NOLENSVILLE PIKE, NASHVILLE TN., 37211
PHONE: (615) 331-1441 FAX: (615) 331-1050

Retaining Wall Construction Details

Allen Farms Fence Diagrams
Goodletsville, Tennessee

DRAWN BY:	REVIEWED BY:
JPB	JPB
DESIGNED BY:	APPROVED BY:
JPB	JPB

SCALE: AS SHOWN

DATE: August 19, 2025

Revisions

No.	Date	Description	By:
1			
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3			
4			
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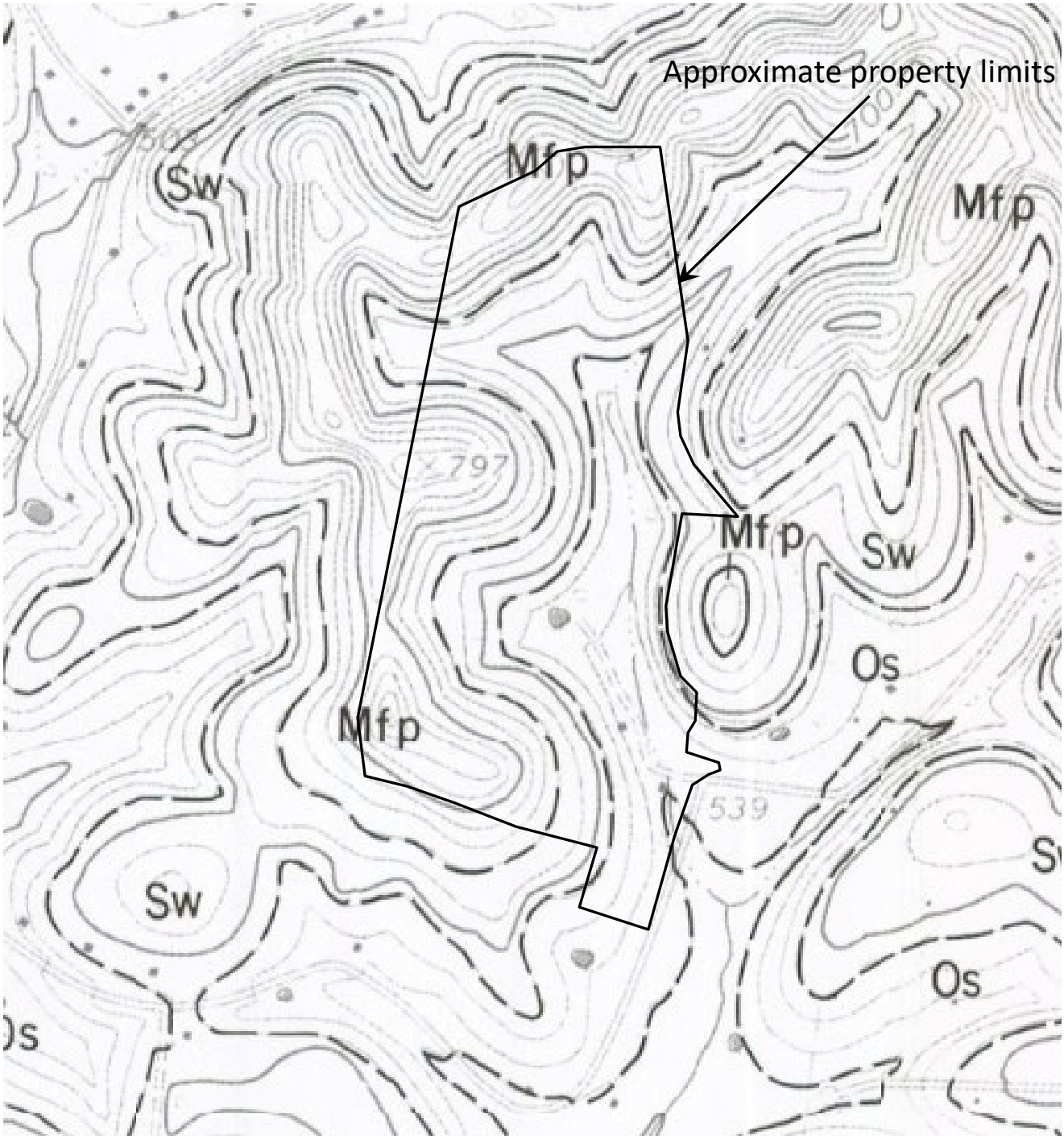
6			

DRAWING:

TD-4.0

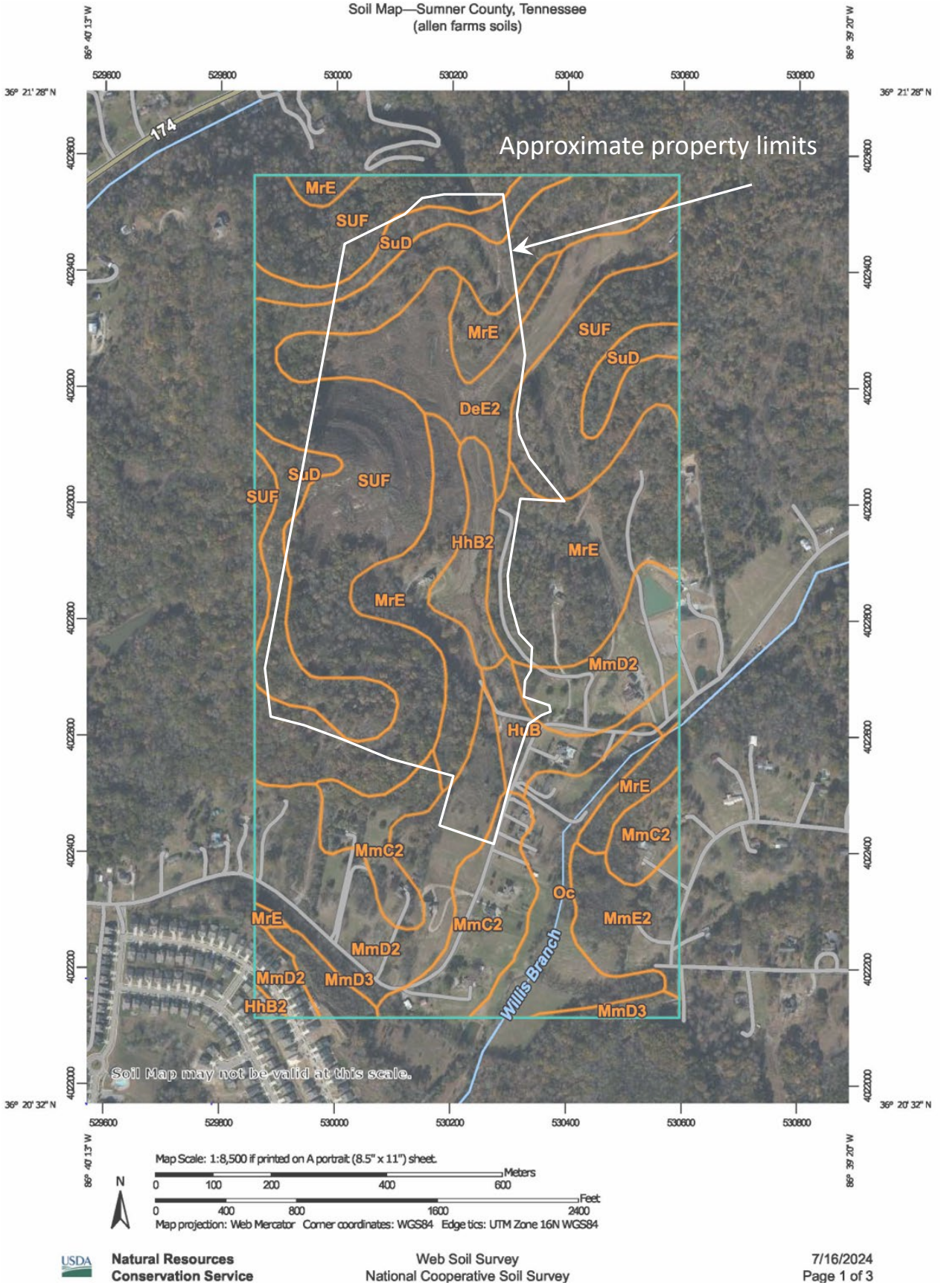
PROJECT NUMBER: 3608-24-01



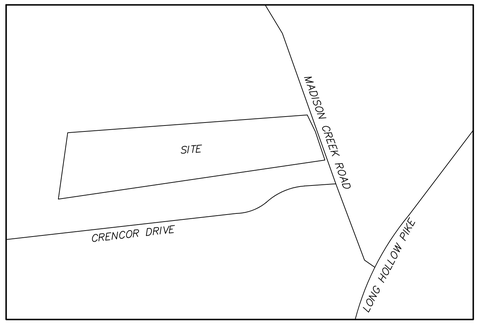
Obtained from USGS *Geologic Map of the Goodlettsville Quadrangle, TN 1981*, Division of Geology as maintained by the USGS National Geologic Map Database

N

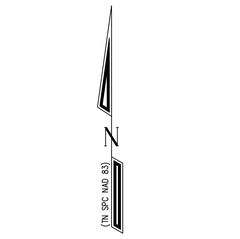
Project Mgr.	Project No. 3608-24-03	COLLIER ENGINEERING CO., INC. CONSULTING • DESIGN • CONSTRUCTION 2949 Nolensville Pike Nashville, Tennessee 37211 PH. (615) 333-6444 FAX. (615) 331-1050	**GEOLOGICAL QUADRANGLE EXCERPT** Limited Geotechnical Exploration Proposed Allen Farms Development Goodlettsville, TN	Exh. 2
Drawn by: JSV	Scale: NTS			
Reviewed by:	File Name: Exh. 2			
Approved by:	Date: 12July2024			



Project Mgr.	Project No. 3608-24-03	COLLIER ENGINEERING CO., INC. CONSULTING • DESIGN • CONSTRUCTION	**AERIAL IMAGE WITH MAPPED SOILS**
Drawn by: JSV	Scale: NTS		Limited Geotechnical Exploration Proposed Allen Farms Development Goodlettsville, TN
Reviewed by:	File Name: Exh. 2	2949 Nolensville Pike Nashville, Tennessee 37211	Exh. 3
Approved by:	Date: 12July2024	PH. (615) 333-6444 FAX. (615) 331-1050	



VICINITY MAP
N.T.S.



ZONING
SUBJECT PROPERTY CURRENTLY ZONED R-40 (LOW DENSITY RESIDENTIAL)
MINIMUM YARD SETBACKS
FRONT-50'
SIDE-20'
REAR-40'
MINIMUM LOT WIDTH AT FRONT SETBACK-125'

CERTIFICATE OF ACCURACY
I (we) hereby certify that this is a true and accurate survey of the property shown hereon to the accuracy required by the Goodlettsville Planning Commission and that the monuments have been placed as required by those regulations. This is a category I Land Survey and the ratio of precision of the unadjusted survey is equal to or greater than 1:10,000.

JAMES CUMMINGS
REGISTERED LAND SURVEYOR
KVI
AGRICULTURE
COMMERCE
TENNESSEE NO. 2351
08-5-26

CERTIFICATE OF OWNERSHIP AND DEDICATION
I (we) hereby certify that I am (we are) the owner(s) of the property shown and described hereon as evidenced in Book Number_____, page _____, County Registers Office, and that I (we) hereby adopt this plan of subdivision with my (our) free consent, establish the minimum building restriction lines and that offers of irrevocable dedication for all public streets, utilities, and other facilities have been filed.

_____, 20___ _____

CERTIFICATE OF APPROVAL OF WATER SYSTEM
I hereby certify that the water system(s) outlined or indicated on the final subdivision plat entitled _____ has/have been installed in accordance with current local and state government requirements, or a sufficient bond or other surety has been filed to guarantee said installation.

_____, 20___ _____
Date Name, Title and Agency or Authorized Approving Agent

CERTIFICATE OF APPROVAL OF WATER SYSTEM
I hereby certify that the water system(s) outlined or indicated on the final subdivision plat entitled _____ has/have been installed in accordance with current local and state government requirements, or a sufficient bond or other surety has been filed to guarantee said installation.

_____, 20___ _____
Date Name, Title and Agency or Authorized Approving Agent

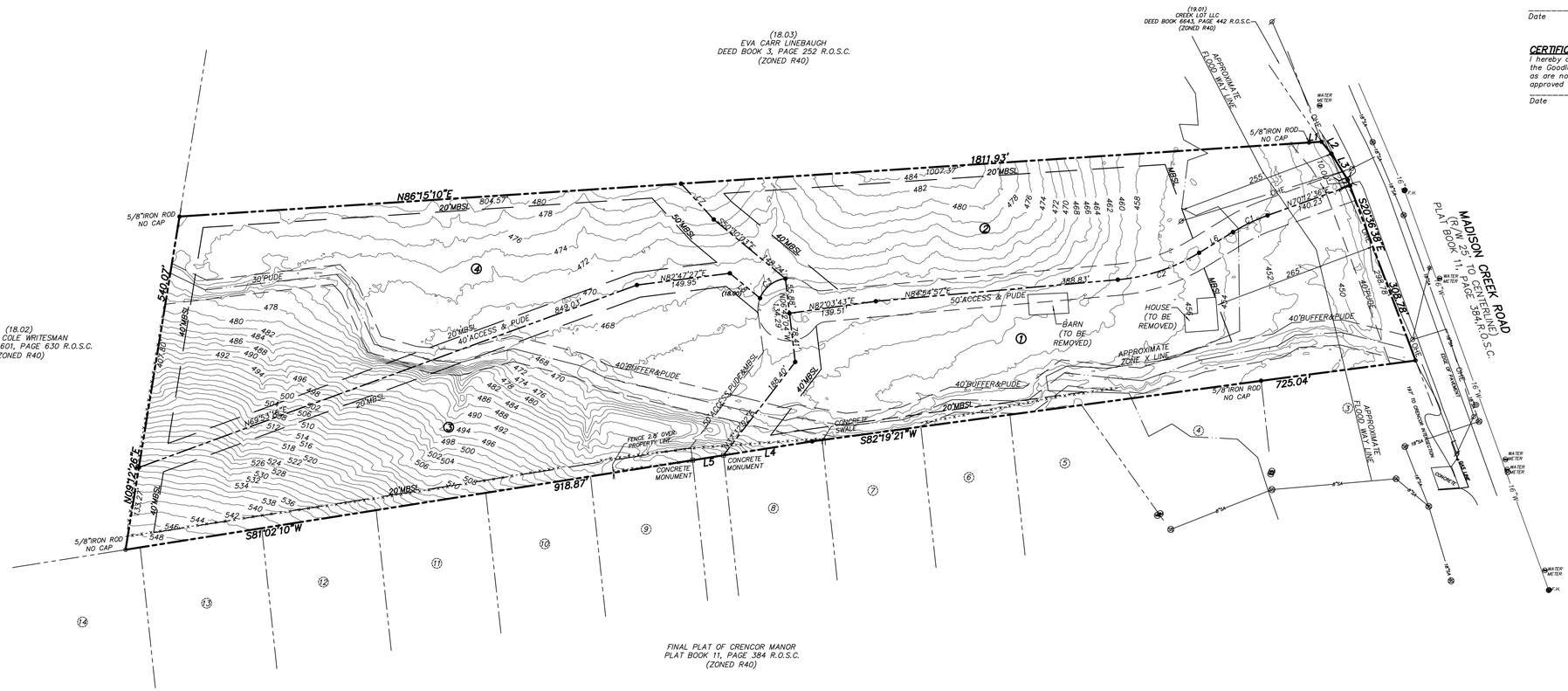
CERTIFICATE OF APPROVAL OF SEWER SYSTEMS
I hereby certify that the sewer systems outlined or indicated on the final subdivision plat entitled _____ have been installed in accordance with current local and state government requirements or a sufficient bond or cash has been filed which will guarantee said installation.

_____, 20___ _____
Date Name, Title and Agency or Authorized Approving Agent

CERTIFICATE OF APPROVAL FOR RECORDING
I hereby certify that the subdivision plat shown hereon has been found to comply with the Goodlettsville Subdivision Regulations, with the exception of such variances, if any, as are noted in the minutes of the planning commission, and that it has been approved for recording in the Office of the County Register.

_____, 20___ _____
Date Secretary, Planning Commission

UTILITY NOTE:
THIS SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. 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 SHOWN 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. IN TENNESSEE IT IS A REQUIREMENT, PER "THE UNDERGROUND UTILITY DAMAGE PREVENTION ACT", THAT ANYONE WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNERS, NO LESS THAN (3) THREE OR MORE THAN (10) WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. TENNESSEE ONE CALL 1-615-355-1987 OR 1-800-351-1111.



LOT 1: 217,866 SQUARE FEET± OR 5.00 ACRES±
LOT 2: 173,314 SQUARE FEET± OR 4.00 ACRES±
LOT 3: 232,307 SQUARE FEET± OR 5.33 ACRES±
LOT 4: 231,765 SQUARE FEET± OR 5.33 ACRES±

TOTAL: 856,296 SQUARE FEET± OR 19.66 ACRES±

LINE	BEARING	DISTANCE
L1	N 86°29'45" E	20.02'
L2	S 39°24'44" E	25.05'
L3	S 31°58'47" E	49.17'
L4	S 81°03'53" W	143.78'
L5	S 81°00'00" W	50.16'
L6	S58°29'11"W	63.61'
L7	S42°22'15"E	77.56'
L8	S50°30'03"E	62.59'

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	300.00'	61.39'	61.28'	S64°20'54"W	11°43'25"
C2	300.00'	138.38'	137.16'	S71°42'04"W	26°25'46"
C3	50.00'	53.87'	51.30'	S52°26'02"W	61°43'48"

DEED REFERENCE
TO: FRIENDS OF WELCH, LLC
FROM: KIMBERLY K. CARR
RECORD: DEED BOOK 6908, PAGE 572, R.O.S.C.

PROPERTY MAP REFERENCE
SUBJECT SITE MAY BE IDENTIFIED AS ALL OF PARCEL 18.00 ON SUMNER COUNTY TAX MAP 143.

OWNER/DEVELOPMENT
FRIENDS OF WELCH LLC
1043 MADISON CREEK ROAD
GOODLETTSVILLE, TN 37072

NOTES:
1. THE PURPOSE OF THIS PLAT IS TO CREATE FOUR LOTS.
2. THIS SURVEY WAS DONE WITHOUT THE BENEFIT OF A TITLE COMMITMENT.
3. FOR BOUNDARY ASPECTS OF THIS SURVEY, RTK GPS POSITIONAL DATA WAS OBSERVED ON/BETWEEN THE DATE(S) OF 7-7-2026, UTILIZING A TOPCON HIPER HR DUAL FREQUENCY RECEIVER. THE BEARINGS SHOWN WERE DERIVED USING THE TDOT GNSS REFERENCE NETWORK AND REFERENCED TO NAD 83 (2011), TENNESSEE ZONE 4100. ALL DISTANCES ARE IN U.S. SURVEY FEET. POSITIONAL ACCURACY: 0.07'. GEOID: G2018Au7. COMBINED SCALE FACTOR: NONE.
4. BY GRAPHIC PLOTTING ONLY, PART OF THE SUBJECT PROPERTY IS WITHIN A SPECIAL FLOOD HAZARD AREA PER FEMA/FIRM 47165C0381H, DATED 2-26-21.
5. CONTOURS SHOWN HEREON, WERE TAKEN FROM TENNESSEE LIDAR MAP, NOT FIELD RUN.

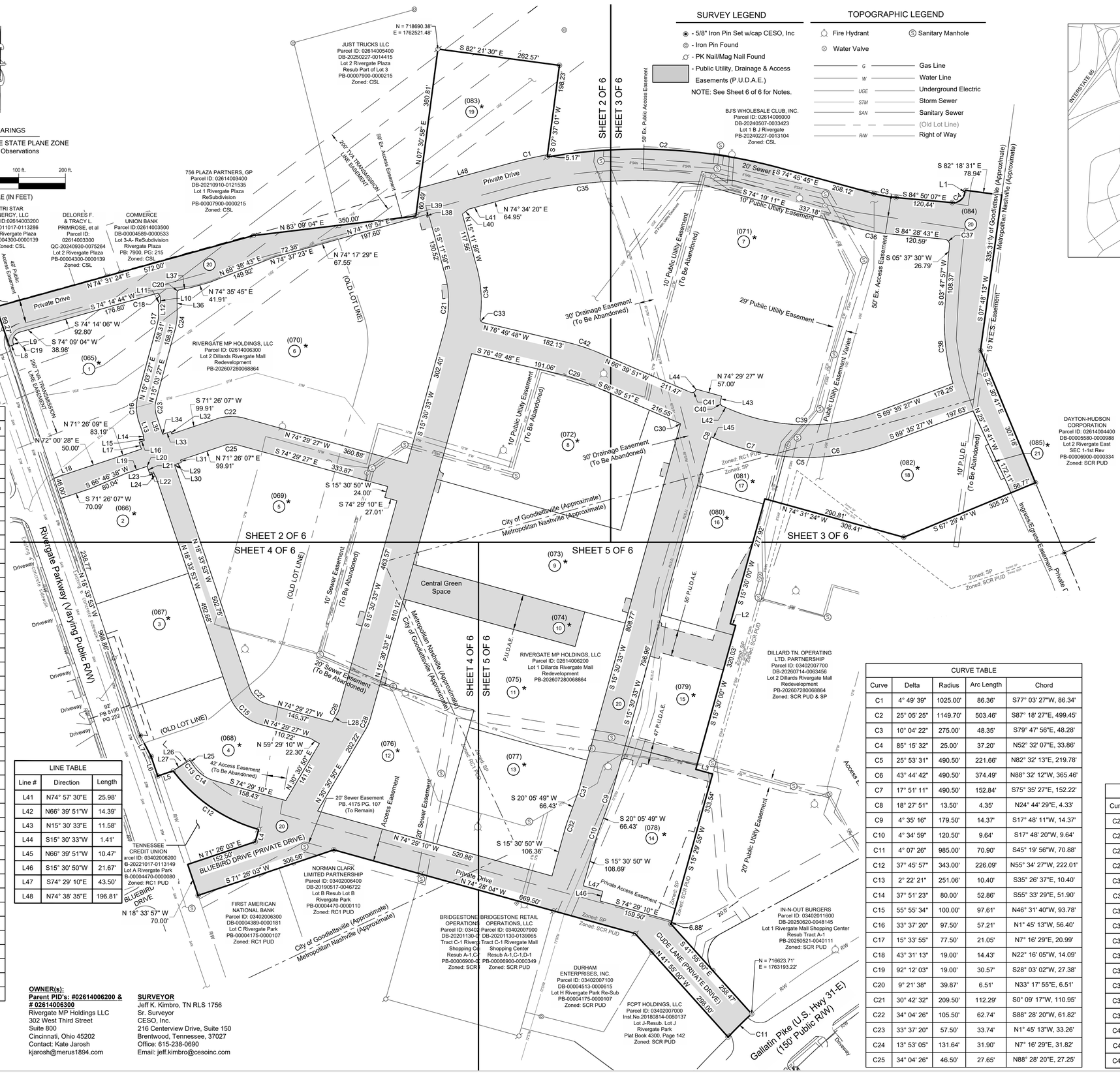
LEGEND

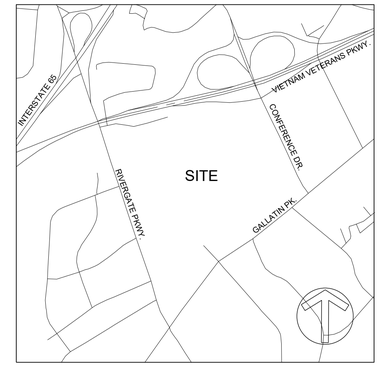
(00) PARCEL NUMBER	- x - x - FENCE LINE		CONCRETE MONUMENT (OLD)
(6) LOT NUMBER	PROPERTY LINE		
POWER POLE	SA SEWER LINE		CLEAN OUT
WATER METER	OHE OVERHEAD ELECTRIC		
FIRE HYDRANT	I.R.(O) IRON ROD (OLD)		IRRIGATION CONTROL VALVE
WATER VALVE	I.R.(N) IRON ROD (NEW)		
SAN. MANHOLE			

CCPC
RLS 2351
CRAWFORD & CUMMINGS, P.C.
8161 HWY 100, SUITE 163
NASHVILLE, TN. 37221
ccpcls.com
(615) 292-2661
ALAN@CCSURVEYORS.NET

PRELIMINARY PLAT
FRIENDS OF WELCH, LLC
PROPERTY
1043 MADISON CREEK ROAD,
6TH CIVIL DISTRICT,
CITY OF GOODLETTSVILLE
SUMNER COUNTY, TENNESSEE

DATE: 8-5-26 CCPC JOB NO. 26-047
REVISED: 8-26-26





VICINITY MAP
(N.T.S.)

LINE TABLE		
Line #	Direction	Length
L1	N10° 28' 17"E	6.05'
L2	S74° 30' 00"E	12.14'
L3	S74° 30' 00"E	37.44'
L4	N15° 40' 00"E	27.44'
L5	S71° 26' 07"W	34.88'
L6	N18° 33' 53"W	44.29'
L7	N27° 38' 53"W	50.60'
L8	S71° 57' 01"W	9.73'
L9	S18° 02' 59"E	2.99'
L10	N00° 30' 28"W	7.00'
L11	N44° 29' 32"E	6.36'
L12	N00° 30' 28"W	20.85'
L13	N18° 33' 53"W	30.86'
L14	N01° 51' 56"W	5.22'
L15	N18° 33' 53"W	5.88'
L16	N71° 26' 07"E	12.00'
L17	N18° 33' 54"W	15.50'
L18	N71° 26' 07"E	40.00'
L19	S71° 26' 07"W	47.43'
L20	N66° 03' 15"W	0.74'
L21	N18° 33' 53"W	15.00'
L22	S71° 26' 07"W	9.00'
L23	N18° 33' 53"W	5.88'
L24	N35° 15' 50"W	5.22'
L25	S32° 43' 47"E	7.33'
L26	N57° 16' 13"E	14.38'
L27	N57° 35' 13"E	28.04'
L28	S30° 30' 50"W	22.31'
L29	N23° 56' 45"E	0.74'
L30	N71° 26' 07"E	15.00'
L31	N18° 33' 53"W	5.50'
L32	N18° 33' 53"W	5.50'
L33	S71° 22' 08"W	18.00'
L34	N60° 58' 34"W	0.74'
L35	N18° 33' 53"W	41.21'
L36	N00° 30' 28"W	46.58'
L37	N79° 36' 13"E	25.68'
L38	S14° 59' 04"E	5.97'
L39	N75° 00' 56"E	4.71'
L40	N52° 18' 01"E	17.34'
L41	N74° 57' 30"E	25.98'
L42	N66° 39' 51"W	14.39'
L43	N15° 30' 33"E	11.58'
L44	S15° 30' 33"W	1.41'
L45	N66° 39' 51"W	10.47'
L46	S15° 30' 50"W	21.67'
L47	S74° 29' 10"E	43.50'
L48	N74° 38' 35"E	196.81'

CURVE TABLE				
Curve	Delta	Radius	Arc Length	Chord
C1	4° 49' 39"	1025.00'	86.36'	S77° 03' 27"W, 86.34'
C2	25° 05' 25"	1149.70'	503.46'	S87° 18' 27"E, 499.45'
C3	10° 04' 22"	275.00'	48.35'	S79° 47' 56"E, 48.28'
C4	85° 15' 32"	25.00'	37.20'	N52° 32' 07"E, 33.86'
C5	25° 53' 31"	490.50'	221.66'	N82° 32' 13"E, 219.78'
C6	43° 44' 42"	490.50'	374.49'	N88° 32' 12"W, 365.46'
C7	17° 51' 11"	490.50'	152.84'	S75° 35' 27"E, 152.22'
C8	18° 27' 51"	13.50'	4.35'	N24° 44' 29"E, 4.33'
C9	4° 35' 16"	179.50'	14.37'	S17° 48' 11"W, 14.37'
C10	4° 34' 59"	120.50'	9.64'	S17° 48' 20"W, 9.64'
C11	4° 07' 26"	985.00'	70.90'	S45° 19' 56"W, 70.88'
C12	37° 45' 57"	343.00'	226.09'	N55° 34' 27"W, 222.01'
C13	2° 22' 21"	251.06'	10.40'	S35° 26' 37"E, 10.40'
C14	37° 51' 23"	80.00'	52.86'	S55° 33' 29"E, 51.90'
C15	55° 55' 34"	100.00'	97.61'	N46° 31' 40"W, 93.78'
C16	33° 37' 20"	97.50'	57.21'	N1° 45' 13"W, 56.40'
C17	15° 33' 55"	77.50'	21.05'	N7° 16' 29"E, 20.99'
C18	43° 31' 13"	19.00'	14.43'	N22° 16' 05"W, 14.09'
C19	92° 12' 03"	19.00'	30.57'	S28° 03' 02"W, 27.38'
C20	9° 21' 38"	39.87'	6.51'	N33° 17' 55"E, 6.51'
C21	30° 42' 32"	209.50'	112.29'	S0° 09' 17"W, 110.95'
C22	34° 04' 26"	105.50'	62.74'	S88° 28' 20"W, 61.82'
C23	33° 37' 20"	57.50'	33.74'	N1° 45' 13"W, 33.26'
C24	13° 53' 05"	131.64'	31.90'	N7° 16' 29"E, 31.82'
C25	34° 04' 26"	46.50'	27.65'	N88° 28' 20"E, 27.25'

CURVE TABLE				
Curve	Delta	Radius	Arc Length	Chord
C26	15° 00' 17"	34.50'	9.03'	S23° 00' 42"W, 9.01'
C27	55° 55' 34"	54.50'	53.20'	N46° 31' 40"W, 51.11'
C28	15° 00' 17"	104.50'	27.37'	N23° 00' 42"E, 27.29'
C29	10° 09' 56"	359.50'	63.78'	S71° 44' 49"E, 63.70'
C30	82° 10' 24"	2.50'	3.59'	S25° 34' 39"E, 3.29'
C31	4° 35' 16"	109.50'	8.77'	S17° 48' 11"W, 8.77'
C32	4° 34' 59"	190.50'	15.24'	S17° 48' 20"W, 15.23'
C33	84° 21' 59"	8.50'	12.52'	N34° 38' 48"W, 11.42'
C34	22° 44' 11"	279.50'	110.91'	N3° 49' 54"W, 110.19'
C35	23° 23' 26"	1029.50'	420.29'	N86° 16' 03"E, 417.37'
C36	10° 03' 11"	407.33'	71.47'	S79° 20' 46"E, 71.38'
C37	90° 06' 13"	11.50'	18.08'	S39° 25' 36"E, 16.28'
C38	19° 49' 01"	471.99'	163.25'	S6° 06' 34"E, 162.43'
C39	43° 44' 42"	420.50'	321.05'	N88° 32' 12"W, 313.31'
C40	82° 10' 24"	8.50'	12.19'	N25° 34' 39"W, 11.17'
C41	97° 49' 36"	8.50'	14.51'	S64° 25' 21"W, 12.81'
C42	10° 09' 56"	429.50'	76.20'	N71° 44' 49"W, 76.10'

Lot Table

Lot #	Acres±	Square Feet±	New Parcel No.
1	1.890	82,330	065
2	1.153	50,211	066
3	1.116	48,618	067
4	1.315	57,290	068
5	4.087	178,008	069
6	5.218	227,300	070
7	8.989	391,568	071
8	2.609	113,650	072
9	2.437	106,145	073
10	0.674	29,376	074
11	2.437	106,151	075
12	1.562	68,062	076
13	1.539	67,052	077
14	1.511	65,800	078
15	1.058	46,097	079
16	0.978	42,602	080
17	0.391	17,027	081
18	1.801	78,434	082
19	1.483	64,313	083
20	14.374	626,412	084
21	0.015	640	085
Total	56.637	2,467,086	

OWNER(s):
Parent PID's: #02614006200 & # 02614006300
Rivergate MP Holdings LLC
302 West Third Street
Suite 800
Cincinnati, Ohio 45202
Contact: Kate Jarosh
kjarosh@merus1894.com

SURVEYOR
Jeff K. Kimbro, TN RLS 1756
Sr. Surveyor
CESO, Inc.
216 Centerview Drive, Suite 150
Brentwood, Tennessee, 37027
Office: 615-238-0690
Email: jeff.kimbro@cesoinc.com

CESO
WWW.CESOINC.COM
216 Centerview Dr., Suite 150
Brentwood, TN 37027
Phone: 615.928.5120 Fax: 888.208.4826

JEFFREY K. KIMBRO
REGISTERED LAND SURVEYOR
TENNESSEE No. 1756
09/01/2026

FINAL PLAT
Metro Case No. 2026S-156-001

FIRST REVISION - RIVERGATE MALL REDEVELOPMENT

1000 Rivergate Parkway
Goodlettsville, Davidson County, Tennessee

Revisions / Submissions

ID	Description	Date
1	Preliminary for Review.	07/31/2026
2	Preliminary to Goodlettsville.	08/06/2026
3	Initial Submittal.	08/10/2026
4	Addressed Comments.	09/01/2026

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Project Number:	766283
Scale:	1" = 100'
Drawn By:	JTM/CDV
Checked By:	jkK
Date:	September 1, 2026
Issue:	Resubmittal

Drawing Title:
Final Plat

1 of 6

BASIS OF BEARINGS

NAD 83 (2011), TENNESSEE STATE PLANE ZONE
Derived from GPS Observations

50 ft. 0 50 ft. 100 ft.

GRAPHIC SCALE (IN FEET)

SURVEY LEGEND

- ◉ - 5/8" Iron Pin Set w/cap CESO, Inc
- ◎ - Iron Pin Found
- ☼ - PK Nail/Mag Nail Found
- ▭ - Public Utility, Drainage & Access Easements (P.U.D.A.E.)

NOTE: See Sheet 6 of 6 for Notes.

LINE TABLE		
Line #	Direction	Length
EL9	N84° 05' 09"E	12.46'
EL10	S05° 54' 51"E	30.00'
EL11	S84° 05' 09"W	12.46'
EL12	N75° 00' 56"E	22.51'
EL13	S14° 59' 04"E	29.31'
EL14	N74° 29' 27"W	2.00'
EL15	N15° 30' 33"E	43.00'
EL16	S74° 29' 27"E	2.00'
L8	S71° 57' 01"W	9.73'
L9	S18° 02' 59"E	2.99'
L10	N00° 30' 28"W	7.00'
L11	N44° 29' 32"E	6.36'
L12	N00° 30' 28"W	20.85'
L13	N18° 33' 53"W	30.86'
L14	N01° 51' 56"W	5.22'
L15	N18° 33' 53"W	5.88'
L16	N71° 26' 07"E	12.00'
L17	N18° 33' 54"W	15.50'
L18	N71° 26' 07"E	64.66'
L19	S71° 26' 07"W	47.43'
L20	N66° 03' 15"W	0.74'
L21	N18° 33' 53"W	15.00'
L22	S71° 26' 07"W	9.00'
L23	N18° 33' 53"W	5.88'
L24	N35° 15' 50"W	5.22'

LINE TABLE		
Line #	Direction	Length
L29	S23° 56' 45"W	0.74'
L30	S71° 26' 07"W	15.00'
L31	S18° 33' 53"E	5.50'
L32	N18° 33' 53"W	5.50'
L33	S71° 22' 08"W	18.00'
L34	N60° 58' 34"W	0.74'
L35	N18° 33' 53"W	41.21'
L36	N00° 30' 28"W	46.58'
L37	N79° 36' 13"E	25.68'
L38	S14° 59' 04"E	5.97'
L39	N75° 00' 56"E	4.71'
L40	N52° 18' 01"E	17.34'
L41	N74° 57' 30"E	25.98'
L48	N74° 38' 35"E	196.81'

CURVE TABLE				
Curve	Delta	Radius	Arc Length	Chord
C1	4° 49' 39"	1025.00'	86.36'	S77° 03' 27"W, 86.34'
C16	33° 37' 20"	97.50'	57.21'	N1° 45' 13"W, 56.40'
C17	15° 33' 55"	77.50'	21.05'	N7° 16' 29"E, 20.99'
C18	43° 31' 13"	19.00'	14.43'	N22° 16' 05"W, 14.09'
C19	92° 12' 03"	19.00'	30.57'	S28° 03' 02"W, 27.38'
C20	9° 21' 38"	39.87'	6.51'	N33° 17' 55"E, 6.51'
C21	30° 42' 32"	209.50'	112.29'	S0° 09' 17"W, 110.95'
C22	34° 04' 26"	105.50'	62.74'	S88° 28' 20"W, 61.82'
C23	33° 37' 20"	57.50'	33.74'	N1° 45' 13"W, 33.26'
C24	13° 53' 05"	131.64'	31.90'	N7° 16' 29"E, 31.82'
C25	34° 04' 26"	46.50'	27.65'	N88° 28' 20"E, 27.25'
C29	10° 09' 56"	359.50'	63.78'	S71° 44' 49"E, 63.70'
C33	84° 21' 59"	8.50'	12.52'	N34° 38' 48"W, 11.42'
C34	22° 44' 11"	279.50'	110.91'	N3° 49' 54"W, 110.19'
C35	23° 23' 26"	1029.50'	420.29'	N86° 16' 03"E, 417.37'
C42	10° 09' 56"	429.50'	76.20'	N71° 44' 49"W, 76.10'
EC1	89° 59' 17"	8.50'	13.35'	N29° 29' 48"W, 12.02'
EC2	20° 18' 01"	24.50'	8.68'	S84° 38' 27"E, 8.64'

JUST TRUCKS LLC
Parcel ID: 02614005400
DB-20250227-0014415
Lot 2 Rivergate Plaza
Resub Part of Lot 3
PB-00007900-0000215
Zoned: CSL

756 PLAZA PARTNERS, GP
Parcel ID: 02614003400
DB-20210910-0121535
Lot 1 Rivergate Plaza
ReSubdivision
PB-00007900-0000215
Zoned: CSL

COMMERCE UNION BANK
Parcel ID:02614003500
DB-00004589-0000533
Lot 3-A- ReSubdivision
Rivergate Plaza
PB: 7900, PG: 215
Zoned: CSL

DELORES F. & TRACY L. PRIMROSE, et al
Parcel ID: 02614003300
QC-20240930-0075264
Lot 2 Rivergate Plaza
PB-00004300-0000139
Zoned: CSL

TRI STAR ENERGY, LLC
Parcel ID:02614003200
DB-20011017-0113286
Lot 1 Rivergate Plaza
PB-00004300-0000139
Zoned: CSL

RIVERGATE MP HOLDINGS, LLC
Parcel ID: 02614006300
Lot 2 Dillards Rivergate Mall
Redevelopment
PB-20260728006886

Rivergate Parkway (Varying Public R/W)

50' Ex. Access Easement

30' Drainage Easement (To Be Abandoned)

10' Public Utility Easement (To Be Abandoned)

(OLD LOT LINE)

City of Goodlettsville (Approximate)
Metropolitan Nashville (Approximate)

(065) 1 (066) 2 (069) 5 (070) 6 (072) 8 (083) 19

MATCHLINE - SHEET 3

MATCHLINE - SHEET 4

MATCHLINE - SHEET 5

CESO
WWW.CESOINC.COM
216 Centerview Dr., Suite 150
Brentwood, TN 37027
Phone: 615.928.5120 Fax: 888.208.4826

JEFFREY K. KIMBRO
REGISTERED LAND SURVEYOR
TENNESSEE No. 1756
09/01/2026

FINAL PLAT
Metro Case No. 2026S-156-001

FIRST REVISION - RIVERGATE MALL REDEVELOPMENT

1000 Rivergate Parkway
Goodlettsville, Davidson County, Tennessee

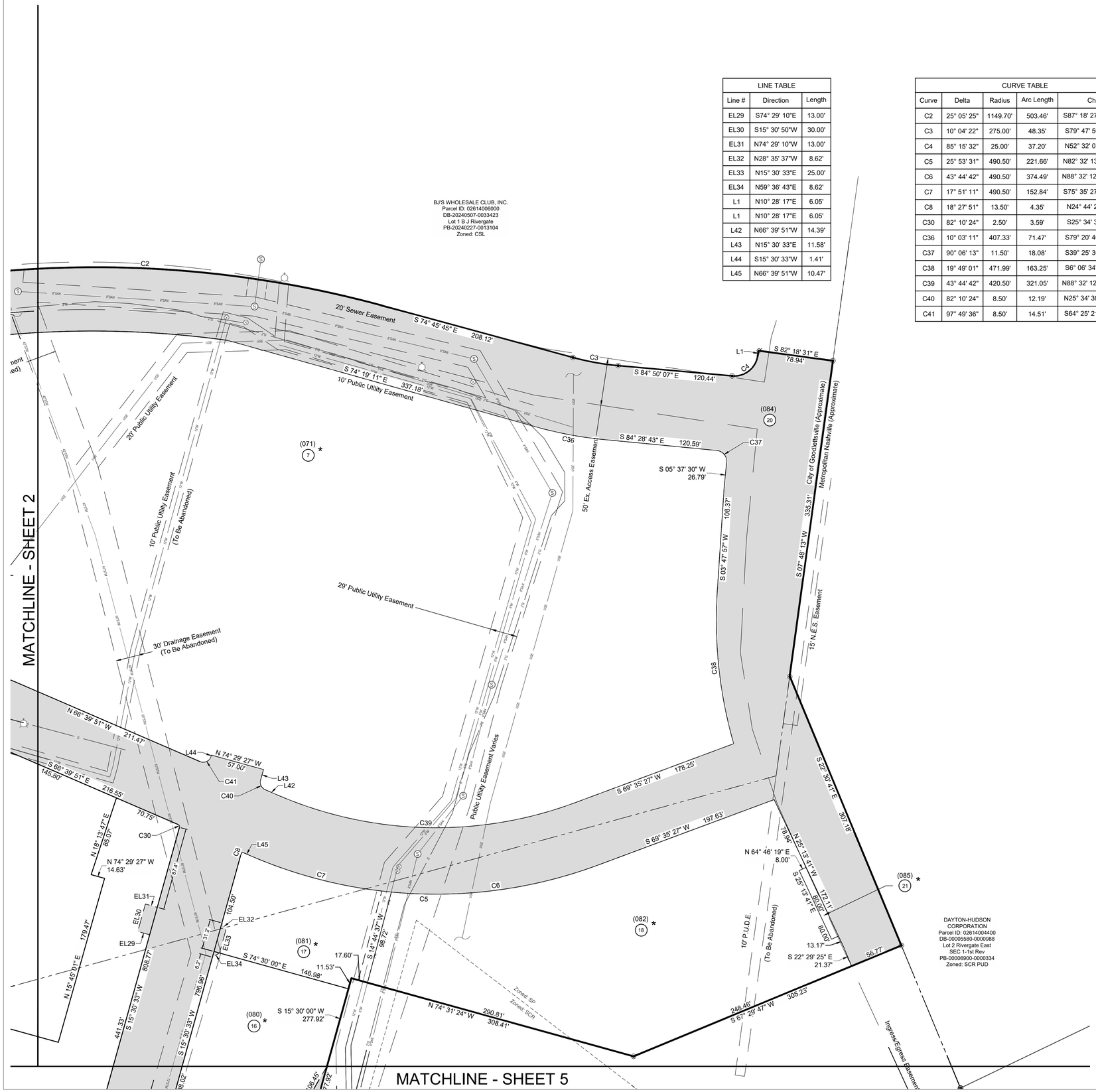
Revisions / Submissions

ID	Description	Date
1	Preliminary for Review.	07/31/2026
2	Preliminary to Goodlettsville.	08/06/2026
3	Initial Submittal.	08/10/2026
4	Addressed Comments.	09/01/2026

Project Number:	766283
Scale:	1" = 50'
Drawn By:	JTM/CDV
Checked By:	jkK
Date:	September 1, 2026
Issue:	Resubmittal

Drawing Title:
Final Plat

2 of 6



LINE TABLE		
Line #	Direction	Length
EL29	S74° 29' 10"E	13.00'
EL30	S15° 30' 50"W	30.00'
EL31	N74° 29' 10"W	13.00'
EL32	N28° 35' 37"W	8.62'
EL33	N15° 30' 33"E	25.00'
EL34	N59° 36' 43"E	8.62'
L1	N10° 28' 17"E	6.05'
L1	N10° 28' 17"E	6.05'
L42	N66° 39' 51"W	14.39'
L43	N15° 30' 33"E	11.58'
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BASIS OF BEARINGS

NAD 83 (2011), TENNESSEE STATE PLANE ZONE
Derived from GPS Observations

50 ft. 0 50 ft. 100 ft.

GRAPHIC SCALE (IN FEET)

SURVEY LEGEND

- ◉ - 5/8" Iron Pin Set w/cap CESO, Inc
- ◎ - Iron Pin Found
- ⌭ - PK Nail/Mag Nail Found
- ▭ - Public Utility, Drainage & Access Easements (P.U.D.A.E.)

NOTE: See Sheet 6 of 6 for Notes.

CESO
WWW.CESOINC.COM
216 Centerview Dr., Suite 150
Brentwood, TN 37027
Phone: 615.928.5120 Fax: 888.208.4826

JEFFREY K. KIMBRO
REGISTERED LAND SURVEYOR
TENNESSEE No. 1756
09/01/2026

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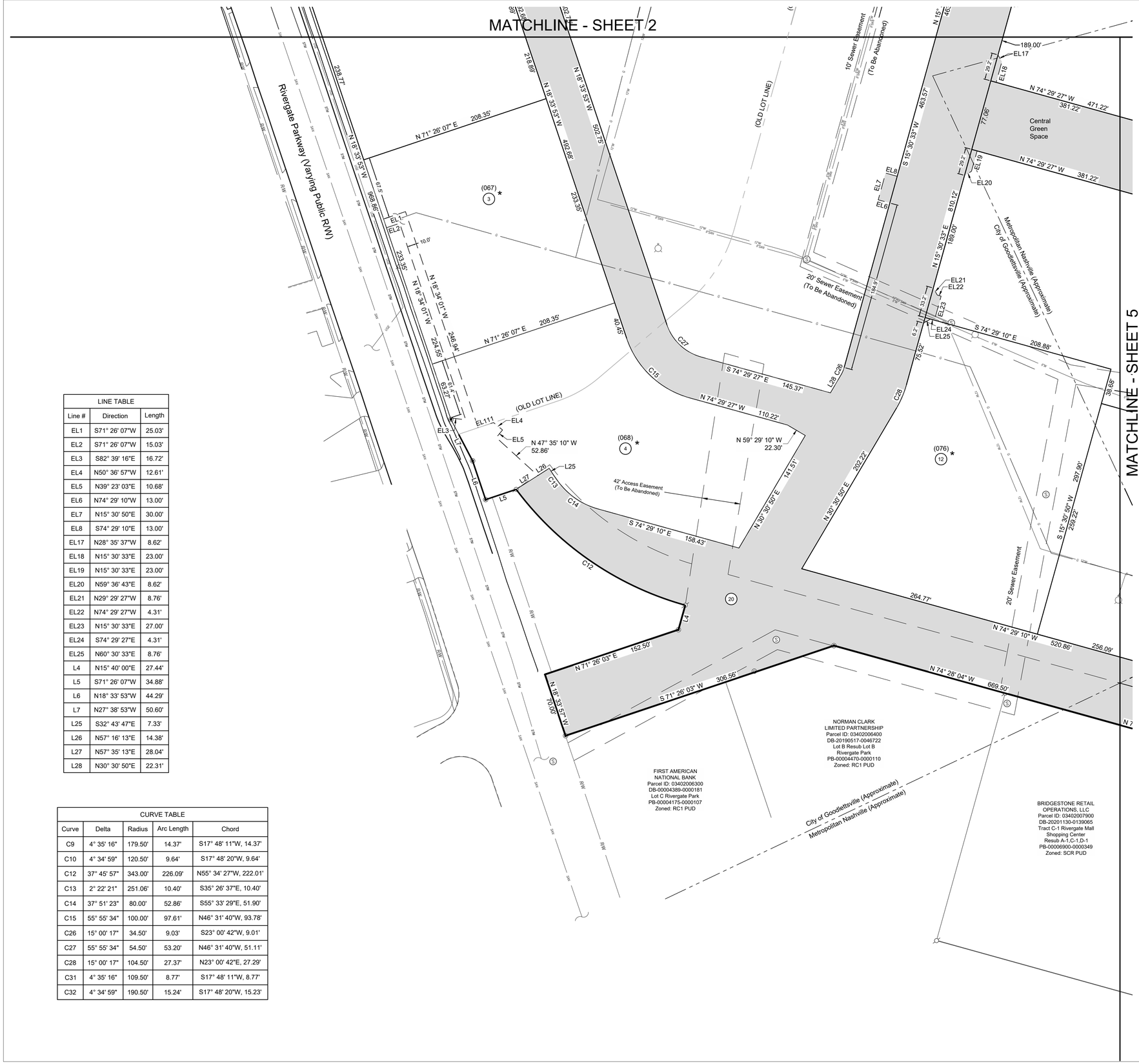
3 of 6



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Line #	Direction	Length
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EL3	S82° 39' 16"E	16.72'
EL4	N50° 36' 57"W	12.61'
EL5	N39° 23' 03"E	10.68'
EL6	N74° 29' 10"W	13.00'
EL7	N15° 30' 50"E	30.00'
EL8	S74° 29' 10"E	13.00'
EL17	N28° 35' 37"W	8.62'
EL18	N15° 30' 33"E	23.00'
EL19	N15° 30' 33"E	23.00'
EL20	N59° 36' 43"E	8.62'
EL21	N29° 29' 27"W	8.76'
EL22	N74° 29' 27"W	4.31'
EL23	N15° 30' 33"E	27.00'
EL24	S74° 29' 27"E	4.31'
EL25	N60° 30' 33"E	8.76'
L4	N15° 40' 00"E	27.44'
L5	S71° 26' 07"W	34.88'
L6	N18° 33' 53"W	44.29'
L7	N27° 38' 53"W	50.60'
L25	S32° 43' 47"E	7.33'
L26	N57° 16' 13"E	14.38'
L27	N57° 35' 13"E	28.04'
L28	N30° 30' 50"E	22.31'

CURVE TABLE				
Curve	Delta	Radius	Arc Length	Chord
C9	4° 35' 16"	179.50'	14.37'	S17° 48' 11"W, 14.37'
C10	4° 34' 59"	120.50'	9.64'	S17° 48' 20"W, 9.64'
C12	37° 45' 57"	343.00'	226.09'	N55° 34' 27"W, 222.01'
C13	2° 22' 21"	251.06'	10.40'	S35° 26' 37"E, 10.40'
C14	37° 51' 23"	80.00'	52.86'	S55° 33' 29"E, 51.90'
C15	55° 55' 34"	100.00'	97.61'	N46° 31' 40"W, 93.78'
C26	15° 00' 17"	34.50'	9.03'	S23° 00' 42"W, 9.01'
C27	55° 55' 34"	54.50'	53.20'	N46° 31' 40"W, 51.11'
C28	15° 00' 17"	104.50'	27.37'	N23° 00' 42"E, 27.29'
C31	4° 35' 16"	109.50'	8.77'	S17° 48' 11"W, 8.77'
C32	4° 34' 59"	190.50'	15.24'	S17° 48' 20"W, 15.23'

BASIS OF BEARINGS

NAD 83 (2011), TENNESSEE STATE PLANE ZONE
Derived from GPS Observations

50 ft. 0 50 ft. 100 ft.

GRAPHIC SCALE (IN FEET)

SURVEY LEGEND

- ◉ - 5/8" Iron Pin Set w/cap CESO, Inc
- ◎ - Iron Pin Found
- ⌀ - PK Nail/Mag Nail Found
- Public Utility, Drainage & Access Easements (P.U.D.A.E.)

NOTE: See Sheet 6 of 6 for Notes.

CESO
WWW.CESOINC.COM
216 Centerview Dr., Suite 150
Brentwood, TN 37027
Phone: 615.928.5120 Fax: 888.208.4826

JEFFREY K. KIMBRO
REGISTERED LAND SURVEYOR
TENNESSEE No. 1755
09/01/2026

FINAL PLAT
Metro Case No. 2026S-156-001

FIRST REVISION - RIVERGATE MALL REDEVELOPMENT

1000 Rivergate Parkway
Goodlettsville, Davidson County, Tennessee

Revisions / Submissions

ID	Description	Date
1	Preliminary for Review.	07/31/2026
2	Preliminary to Goodlettsville.	08/06/2026
3	Initial Submittal.	08/10/2026
4	Addressed Comments.	09/01/2026

Project Number:	766283
Scale:	1" = 50'
Drawn By:	JTM/CDV
Checked By:	jkK
Date:	September 1, 2026
Issue:	Resubmittal

Drawing Title:
Final Plat

4 of 6

MATCHLINE - SHEET 2

MATCHLINE - SHEET 3

MATCHLINE - SHEET 4

CURVE TABLE				
Curve	Delta	Radius	Arc Length	Chord
C11	4° 07' 26"	985.00'	70.90'	S45° 19' 56"W, 70.88'
EC3	89° 58' 45"	9.50'	14.92'	N60° 29' 56"E, 13.43'

LINE TABLE		
Line #	Direction	Length
EL26	S74° 29' 10"E	13.00'
EL27	S15° 30' 50"W	30.00'
EL28	N74° 29' 10"W	13.00'
EL35	N28° 35' 37"W	8.62'
EL36	N15° 30' 33"E	4.50'
EL37	N14° 42' 55"E	13.55'
EL38	S74° 29' 27"E	20.19'
EL39	N74° 29' 27"W	8.49'
EL40	S15° 32' 38"W	21.04'
EL41	S74° 29' 27"E	15.27'
EL42	S15° 30' 50"W	9.04'
EL43	S74° 29' 10"E	20.00'
EL44	N15° 30' 50"E	9.05'
EL45	N74° 18' 05"W	11.89'
L2	S74° 30' 00"E	12.14'
L3	S74° 30' 00"E	37.44'
L46	S15° 30' 50"W	21.67'
L47	S74° 29' 10"E	43.50'

DILLARD TN. OPERATING LTD. PARTNERSHIP
Parcel ID: 03402007700
DB-20260714-0063456
Lot 2 Dillards Rivergate Mall Redevelopment
PB-20260728006864
Zoned: SCR PUD & SP

IN-N-OUT BURGERS
Parcel ID: 03402011600
DB-20250620-0048145
Lot 1 Rivergate Mall Shopping Center Resub Tract A-1
PB-20250521-0040111
Zoned: SCR PUD

BRIDGESTONE RETAIL OPERATIONS, LLC
Parcel ID: 03402007900
DB-20201130-0139065
Tract C-1 Rivergate Mall Shopping Center Resub A-1,C-1,D-1
PB-00006900-0000349
Zoned: SCR PUD

DURHAM ENTERPRISES, INC.
Parcel ID: 03402007100
DB-00004513-0000615
Lot H Rivergate Park Re-Sub
PB-00004175-0000107
Zoned: SCR PUD

FCPT HOLDINGS, LLC
Parcel ID: 03402007000
Inst.No.20180814-0080137
Lot J-Resub. Lot J Rivergate Park
Plat Book 4300, Page 142
Zoned: SCR PUD

Gallatin Pike (U.S. Hwy 31-E)
(150' Public R/W)

Private Access Easement

BASIS OF BEARINGS
NAD 83 (2011), TENNESSEE STATE PLANE ZONE
Derived from GPS Observations

50 ft. 0 50 ft. 100 ft.
GRAPHIC SCALE (IN FEET)

SURVEY LEGEND
- ◉ - 5/8" Iron Pin Set w/cap CESO, Inc
- ◎ - Iron Pin Found
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- ▭ - Public Utility, Drainage & Access Easements (P.U.D.A.E.)

NOTE: See Sheet 6 of 6 for Notes.

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JEFFREY K. KIMBRO
REGISTERED LAND SURVEYOR
TENNESSEE No. 17756
09/01/2026

FINAL PLAT
Metro Case No. 2026S-156-001

FIRST REVISION - RIVERGATE MALL REDEVELOPMENT

1000 Rivergate Parkway
Goodlettsville, Davidson County, Tennessee

Revisions / Submissions

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Drawing Title:
Final Plat

5 of 6

UTILITY DISCLAIMER

The utilities shown hereon have been located from field survey information and/or existing drawings. The surveyor makes no guarantee that the utilities located hereon comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the utilities located are in the exact location indicated although he does certify that they are located as accurately as possible from information available.

In Tennessee, it is a requirement, per "The Underground Utility Damage Prevention Act", that anyone who engages in excavation must notify all known underground utility owners, no less than three (3) or more than (10) working days prior to the date of their intent to excavate and also to avoid any possible hazard or conflict. Tennessee One Call 811.

Owner's Certificate

I/We hereby certify that I am (we are) the owner(s) of the property shown and described hereon as evidenced in Instrument No. 20260213 -0011828, Instrument No. 20260213-0011818, Instrument No. 20260213-0011830 and Instrument No. 20260714-0063457 Register's Office for Davidson County, Tennessee, and that I (we) hereby adopt this plan of subdivision with my (our) free consent, and that this plat constitutes offers of irrevocable dedication for all public roads, utilities, and other facilities shown hereon as required by the Subdivision Regulations of the Planning Commission of Metropolitan Nashville, Davidson County, Tennessee.

Name:_____
By: Justin Hartung Date

_____
Title:

Rivergate MP Holdings LLC
302 W. Third Street, Suite 300
Cincinnati, OH 45202

(Rivergate MP Holdings LLC - Parcel ID #02614006200)
(Rivergate MP Holdings LLC - Parcel ID #02614006300)

Consent to File Plat

We, the undersigned, as holder of that certain Deed of Trust on the land shown hereon do hereby consent to this plat for the purposes of dedication, consolidation and subdivision as shown hereon and acknowledge that our interests are subject to the dedication of the easements as shown hereon as per dedication.

Lender:_____

_____
By:

_____
Name:

_____
Title:

_____
Date:

Certificate of Approval of Water Systems

I hereby certify that the water system(s) outlined or indicated on the final subdivision plat entitled: "FIRST REVISION - RIVERGATE MALL REDEVELOPMENT" has/have been installed in accordance with the current local and state government requirements, or a sufficient bond or other surety has been filed to guarantee said installation.

_____
Jim Wade, General Manager Date
Madison Suburban Utility District

Certificate of Approval of Sewer Systems

I hereby certify that the sewer system(s) outlined or indicated on the final subdivision plat entitled: "FIRST REVISION - RIVERGATE MALL REDEVELOPMENT" have been installed in accordance with the current local and state government requirements, or a sufficient bond or other surety has been filed to guarantee said installation.

_____
Sewer Superintendent Date
Goodlettsville Public Works

Commissions Approval

I hereby certify that the subdivision plat shown hereon has been found to comply with the Goodlettsville Subdivision Regulations, with the exception of such variances, if any, as are noted in the minutes of the planning commission, and that it has been approved for recording in the Office of the County Register.
(Portions located in City of Goodlettsville)

_____
Sean Pfalzer, Interim Director Date
Goodlettsville Planning Commission

Commissions Approval

Approved by the Metropolitan Planning Commission of Nashville and Davidson County, Tennessee.
(Portions located in Metropolitan Nashville).

_____
Secretary Date
Metropolitan Planning Commission

Surveyor's Certificate

I/We hereby certify that to the best of my (our) knowledge and belief the hereon shown subdivision plat represents a Category I Survey having an unadjusted Ration of Precision greater than 1:10,000 and is true and correct. Approved Monuments have been/will be placed as indicated. All side lot lines are at right angles or radial to a street unless otherwise noted.

_____ 09/01/2026
Jeff K. Kimbro, PLS, CFS Date
Tennessee License No. 1756
Sr. Surveyor
CESO, Inc.
jeff.kimbro@cesoinc.com

SURVEYOR NOTES:

1. THE PURPOSE OF THIS PLAT IS TO CREATE TWENTY-ONE (21) LOTS AND DEDICATE PUBLIC UTILITY, DRAINAGE & ACCESS EASEMENTS.
2. THIS SURVEY MEETS THE REQUIREMENTS OF AN URBAN LAND SURVEY (CATEGORY 1) WITH A RATIO OF PRECISION OF THE UNADJUSTED SURVEY GREATER THAN 1:10,000 AS PER STANDARDS OF PRACTICE ADOPTED BY THE BOARD OF EXAMINERS FOR LAND SURVEYORS, STATE OF TENNESSEE.
3. PROPERTY IS ZONED RC-1 PUD, REGIONAL CENTER PLANNED UNIT DEVELOPMENT, HIGH INTENSITY WITHIN THE JURISDICTION OF THE CITY OF GOODLETTSVILLE, TENNESSEE. PROPERTY IS ZONED SP (SPECIFIC PLAN CASE No. 2025SP-017-001 PER METRO ORDINANCE BL2025-805), SCR AND WITHIN A PUD (CASE No. 38-79P-005, BL2022-1316) WITHIN THE JURISDICTION OF METROPOLITAN NASHVILLE, TENNESSEE.
4. PARCEL IS LOCATED WITHIN ZONE "X" (AREA OF MINIMAL FLOOD HAZARD) AS INDICATED BY THE FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 47037C0137K, EFFECTIVE DATE: 6/20/2024 PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA).
5. ANY EXCAVATION, GRADING, FILL, OR ANY OTHER DISTURBANCE OF THE EXISTING GROUND ELEVATION MUST BE DONE IN ACCORDANCE WITH STORM WATER DRAINAGE ORDINANCE No. 78-840 AND BE APPROVED BY THE METROPOLITAN DEPARTMENT OF PUBLIC WORKS WITHIN METRO'S JURISDICTION.
6. SIZE DRIVEWAY CULVERTS PER THE DESIGN CRITERIA SET FORTH BY THE METRO STORMWATER MANUAL. (MINIMUM DRIVEWAY CULVERT IN METRO R.O.W. IS 15" RCP).
7. METRO WATER SERVICES SHALL BE PROVIDED SUFFICIENT AND UNENCUMBERED INGRESS AND EGRESS AT ALL TIMES IN ORDER TO MAINTAIN, REPAIR, REPLACE, AND INSPECT ANY STORMWATER FACILITIES WITHIN METRO'S JURISDICTION.
8. SETBACKS PER APPROVED GOODLETTSVILLE MASTER PLAN AND METRO ORDINANCE BL2025-805.
9. LANDSCAPING AND TREE DENSITY REQUIREMENTS PER APPROVED GOODLETTSVILLE MASTER PLAN AND METRO ORDINANCE BL2025-805.
10. LOTS INDICATED THUS " * " ARE NON-BUILDABLE UNTIL THE FINAL SP OR FINAL SITE PLAN APPROVAL IS OBTAINED. LOTS WHOLLY IN GOODLETTSVILLE ARE SUBJECT TO FINAL SITE PLAN APPROVED BY GOODLETTSVILLE ONLY. LOTS WHOLLY IN METRO ARE SUBJECT TO FINAL SP APPROVED BY METRO ONLY. LOTS LYING IN BOTH JURISDICTIONS ARE SUBJECT TO APPROVAL BY GOODLETTSVILLE AND METRO.
11. LOTS SHOWN HEREON ARE TO BE SERVED BY MADISON SUBURBAN UTILITY DISTRICT FOR WATER AND THE CITY OF GOODLETTSVILLE FOR SANITARY SEWER.
12. THE REQUIRED FIRE FLOW SHALL BE DETERMINED BY THE METROPOLITAN FIRE MARSHAL'S OFFICE, PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.
13. ALL UTILITIES SHALL BE PLACED UNDERGROUND AS REQUIRED BY SECTION 17.28.103 OF THE METRO ZONING CODE.
14. LANDSCAPING PER METRO ZONING CODE.
15. LOTS INDICATED THUS * ARE NON BUILDABLE UNTIL THE FINAL SP SITE PLAN AND OTHER REQUIRED APPROVALS ARE OBTAINED AND THE LOTS ARE REPLATTED.
16. NO EXISTING WATER QUALITY/DETENTION INFRASTRUCTURE AND NO NEW PROPOSED INFRASTRUCTURE BEING MAINTAINED WITH THIS APPLICATION/PLAT. FUTURE PLANS/PLATS WILL ESTABLISH THE NECESSARY STORMWATER MAINTENANCE AGREEMENT(S).
17. COUNCIL MEMBER: JENNIFER FRENSLEY WEBB (TENTH COUNCIL DISTRICT).
18. ALL PROPOSED EASEMENTS SHOWN ARE PUBLIC UTILITY, DRAINAGE & ACCESS EASEMENTS (P.U.D.A.E.) UNLESS NOTED OTHERWISE.
19. THIS IS A CATEGORY IV SURVEY AND WAS DONE IN COMPLIANCE WITH THE TENNESSEE STANDARDS OF PRACTICE, RULE 082-03-.11 AS ADOPTED BY THE TENNESSEE BOARD OF EXAMINERS FOR LAND SURVEYORS. RTK GPS POSITIONAL DATA WAS OBSERVED 05/2025 UTILIZING A MULTI-FREQUENCY RECEIVER. THE GRID COORDINATES ARE EXPRESSED IN THE TENNESSEE STATE PLANE COORDINATE SYSTEM, ZONE 5301, FIPSZONE 4100 (NAD 83), DERIVED USING A VRS NETWORK OF CORS STATIONS REFERENCED TO NAD83 (2011)(EPOCH 2010), GEOID12B. POSITIONAL ACCURACY OF THE GPS VECTORS DOES NOT EXCEED: HORIZONTAL = 0.02'; VERTICAL = 0.05'.
20. PARCEL NUMBERS SHOWN THUS " (064) " REFER TO DAVIDSON COUNTY PROPERTY MAP 026-14.
21. FORMER (PARENT) PARCEL NUMBERS:
    MAP 26-14 PARCEL 062
    MAP 26-14 PARCEL 063
22. THE RECORDING OF THIS PLAT VOIDS, VACATES, AND SUPERSEDES LOT 1 ON THE PLAT ENTITLED: DILLARDS RIVERGATE MALL REDEVELOPMENT, AS OF RECORD IN INSTRUMENT No. 20260728-0068864 IN THE REGISTER'S OFFICE OF DAVIDSON COUNTY, TENNESSEE, AND LOT 2 ON THE PLAT ENTITLED: RIVERGATE MALL REDEVELOPMENT, AS OR RECORD IN INSTRUMENT No. 20260417-0031646 IN THE REGISTER'S OFFICE OF DAVIDSON COUNTY, TENNESSEE.

CESO
WWW.CESOINC.COM
216 Centerview Dr., Suite 150
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JEFFREY K. KIMBRO
REGISTERED LAND SURVEYOR
TENNESSEE No. 1756
09/01/2026

FINAL PLAT
Metro Case No. 2026S-156-001

FIRST REVISION - RIVERGATE MALL REDEVELOPMENT

1000 Rivergate Parkway
Goodlettsville, Davidson County, Tennessee

Revisions / Submissions

ID	Description	Date
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Project Number:	766283
Scale:	N/A
Drawn By:	JTM/CDV
Checked By:	jkK
Date:	September 1, 2026
Issue:	Resubmittal

Drawing Title:
Final Plat

6 of 6

DEVELOPMENT SUMMARY DATA

- COUNCIL DISTRICT 10, COUNCIL MEMBER: ZACH YOUNG
- OWNERS OF RECORD: EUBANK, DAVID H. & DEBORA D.
  5110 DRAKES BRANCH ROAD
  NASHVILLE, TENNESSEE 37218
- ZONED R10
- THE CLASSIFICATION OF THIS SUBDIVISION IS A PARTITION.
- PLAN/PLAT PREPARATION DATE: 6/27/22
- SHEET 1 OF 1

NOTES

1) THE PURPOSE OF THE PLAT IS TO PARTITION THIS LOT INTO 5 LOTS.

2) THIS SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. 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 BEFORE ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. IN TENNESSEE, IT IS A REQUIREMENT, PER "THE UNDERGROUND UTILITY DAMAGE PREVENTION ACT", THAT ANYONE WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNERS, NO LESS THAT THREE (3) NOR MORE THAN TEN (10) WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. TENNESSEE ONE CALL 1-800-351-1111.

3) THE LOCATION AND/OR EXISTENCE OF UTILITY SERVICE LINES TO THE PROPERTY SURVEYED ARE UNKNOWN AND ARE NOT SHOWN.

4) UPON REVIEWING FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP, 47037C0129J, DATED FEBRUARY 25, 2022. IT HAS BEEN DETERMINED THE LIMITS OF THE DETAIL STUDY DO NOT REACH THE SUBJECT PROPERTY (FLOOD ZONE "X").

5) THE SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE, OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.

6) ALL DISTANCES WERE MEASURED WITH E.D.M. EQUIPMENT AND HAVE BEEN ADJUSTED FOR TEMPERATURE.

7) THE SURVEYOR'S LIABILITY FOR THIS DOCUMENT SHALL BE LIMITED TO THE ORIGINAL PURCHASER AND DOES NOT EXTEND TO ANY UNNAMED PERSON OR ENTITIES WITHOUT AN EXPRESSED RE-CERTIFICATION BY THE SURVEYOR WHOSE SIGNATURE APPEARS UPON THIS SURVEY.

8) BASIS OF BEARING TAKEN FROM GLOBALLY POSITIONED SATELLITE MONUMENTS AND TRANSLATED TO THE TENNESSEE STATE PLANE COORDINATE SYSTEM NAD83 AS ESTABLISHED FOR THIS SURVEY.

9) PARCEL NUMBERS SHOWN THUS (00) REFER TO COUNTY TAX MAP 81-16.

10) FIVE (5') SIDEWALK TO BE INSTALLED PER CITY OF OF GOODLETTSVILLE REQUIREMENTS ALONG NEW BRICK CHURCH PIKE FRONTAGE AND WITHIN PUBLIC RIGHT-OF-WAY WITH THE CONSTRUCTION OF LOTS 1-3.

11) INDIVIDUAL ON-SITE STORM WATER FACILITIES REQUIRED ON ALL LOTS BASED ON ENGINEERING DESIGN APPROVED BY THE CITY OF GOODLETTSVILLE.

12) MINIMUM 1,000 SF ONE FAMILY DETACHED DWELLING REQUIRED WITH AN ATTACHED ONE CARE GARAGE WITH THE ONE CAR GARAGE MINIMUM DIMENSION OF NINE (9') FEET x TWELVE (12') FEET

13) ONE FAMILY DETACHED DWELLINGS WITH THREE (3)+ BEDROOMS TO INCLUDE FOUR (4) OFF-STREET PARKING SPACES WITH MINIMUM DIMENSION NINE (9') FEET X EIGHTEEN (18') FEET. THE DEDICATED PARKING SPACES ON LOTS 1-3 TO BE BEHIND SIDEWALK.

14) DRIVEWAY PERMIT REQUIRED BY CITY OF GOODLETTSVILLE PUBLIC WORKS DEPARTMENT – MINIMUM DRIVEWAY CULVERT DIMENSION OF FIFTEEN (15")INCH AND SECTION OF DRIVEWAY WITHIN THE PUBLIC RIGHT OF WAY WITH A MINIMUM LENGTH OF TEN (10') FEET TO BE PAVED/CONCRETED.

PROPERTY OWNER INFORMATION

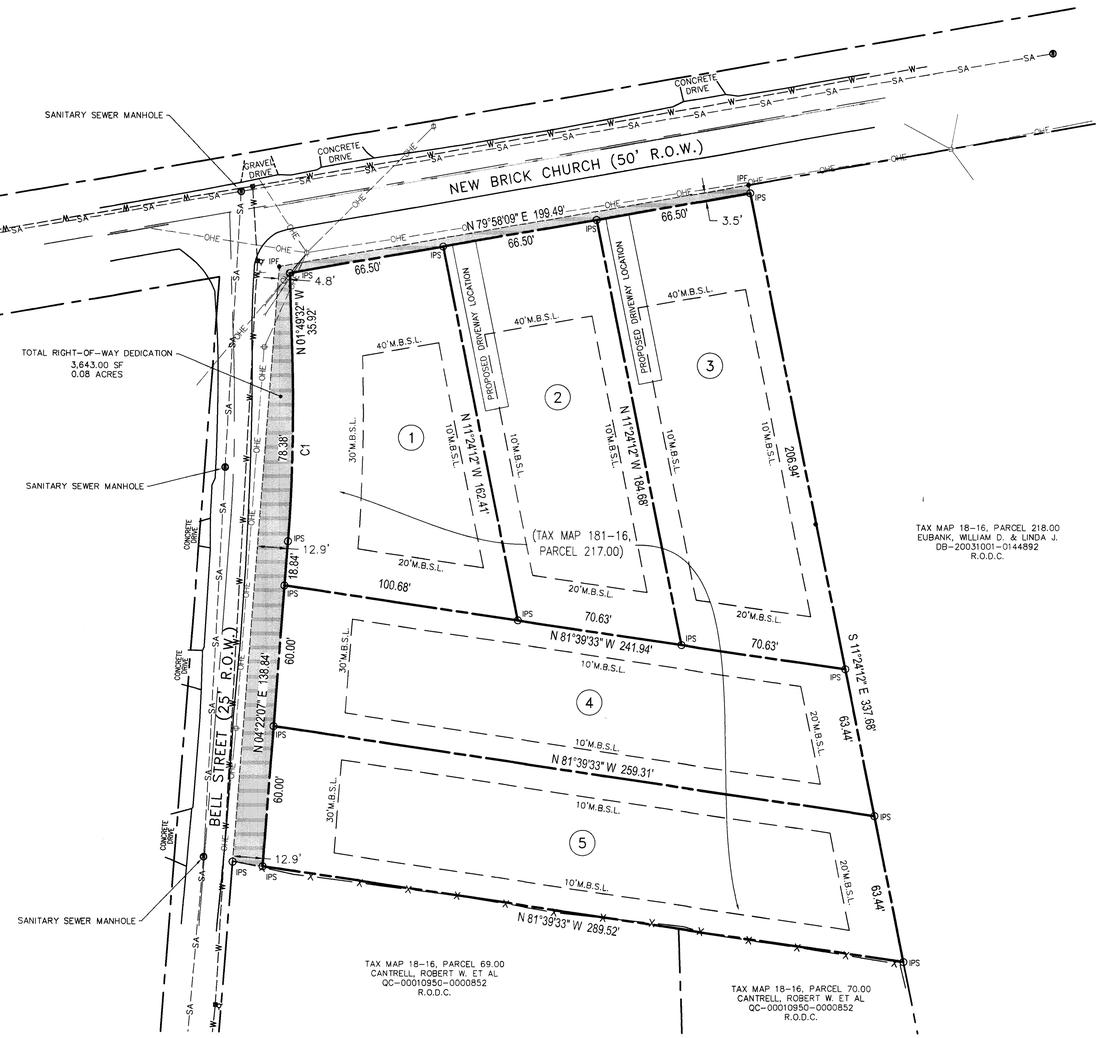
MORRIS, TERRY (217.00)
0 NEW BRICK CHURCH PIKE
GOODLETTSVILLE, TN 37072
TAX MAP 181-16, PARCEL 217.00
QC-20230605-0042446, R.O.D.C.

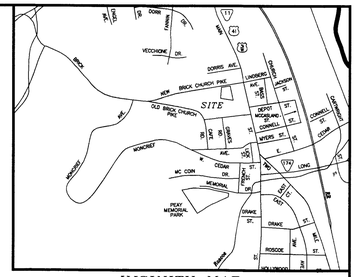
CURVE TABLE

CURVE	DELTA	RADIUS	LENGTH	CHD BEARING	CHORD
C1	6°11'39"	725.00'	78.38'	N 01°16'18" E	78.34'

AREA TABLE

LOT	SQUARE FOOTAGE	ACRES
1	11,830.70	0.27
2	11,536.48	0.26
3	13,016.72	0.30
4	15,037.57	0.35
5	15,999.98	0.37





VICINITY MAP
NOT TO SCALE

GRAPHIC SCALE
30 0 15 30 60
1"=60'

TOTAL AREA

71,064.46 SQ. FT.
OR 1.63 ACRES

LEGEND:

- POWER POLE
- GUY WIRE
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEAN OUT
- SIGN
- MAILBOX
- WATER METER
- WATER VALVE
- FIRE HYDRANT
- IPF IRON PIN FOUND
- IPS IRON PIN SET
- CONCRETE
- WALL
- PROPERTY ADJOINER
- RIGHT OF WAY LINE
- PROPERTY LINE
- EDGE OF CONCRETE
- EDGE OF GRAVEL
- W WATER LINE
- SA SANITARY SEWER LINE
- G GAS LINE
- OHE OVERHEAD ELECTRIC
- X FENCE LINE
- EASEMENT LINE
- MINIMUM SET BACK LINE

CERTIFICATE OF OWNERSHIP AND DEDICATION

I (WE) HEREBY CERTIFY THAT I AM (WE ARE) THE OWNER(S) OF THE PROPERTY SHOWN AND DESCRIBED HEREON AS EVIDENCED IN QC-20230605-0042446, DAVIDSON COUNTY REGISTERS OFFICE, AND THAT I (WE) HEREBY ADOPT THIS PLAN OF SUBDIVISION WITH MY (OUR) FREE CONSENT, ESTABLISH THE MINIMUM BUILDING RESTRICTION LINES AND THAT OFFERS OF IRREVOCABLE DEDICATION FOR ALL PUBLIC STREETS, UTILITIES, AND OTHER FACILITIES HAVE BEEN FILED.

OWNER NAME(PRINTED): Terry Morris
DATE: 6-28-2023
OWNER SIGNATURE

CERTIFICATE OF ACCURACY

I (WE) HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE SURVEY OF THE PROPERTY SHOWN HEREON TO THE ACCURACY REQUIRED BY THE GOODLETTSVILLE PLANNING COMMISSION AND THAT THE MONUMENTS HAVE BEEN PLACED AS REQUIRED BY THOSE REGULATIONS.

NAME: _____ DATE: 6/21/23
TIMOTHY MARK DONLON TENN. REGISTERED SURVEYOR NO. 2297

PREPARED BY:
DONLON LAND SURVEYING, LLC
TIMOTHY MARK DONLON

153B BELLE FOREST CIRCLE
NASHVILLE, TN 37221
TEL. (615) 673-9116, FAX (615) 673-9117
EricaB@donlonlandsurveying.com
http://www.DonlonLandSurveying.com/

TIMOTHY MARK DONLON — REGISTERED LAND SURVEYOR — AGRICULTURE — COMMERCE — TENNESSEE No. 2297

CERTIFICATE OF APPROVAL OF WATER SYSTEMS

I HEREBY CERTIFY THAT THE WATER SYSTEM(S) OUTLINED OR INDICATED ON THE FINAL SUBDIVISION PLAT ENTITLED _____ HAS/HAVE BEEN INSTALLED IN ACCORDANCE WITH CURRENT LOCAL AND STATE GOVERNMENT REQUIREMENTS OR A LETTER OF CREDIT OR OTHER APPROVED SURETY HAS BEEN FILED TO GUARANTEE SAID INSTALLATION.

N/a

07 / 12 / 2023 Cynthia H. Ellis, MSW
DATE: AUTHORIZED SIGNATURE/TITLE
LOC AMOUNT: n/a AGENCY

CERTIFICATE OF APPROVAL FOR SEWER SYSTEMS

I HEREBY CERTIFY THAT THE SEWER SYSTEMS OUTLINED OR INDICATED ON THE FINAL SUBDIVISION PLAT ENTITLED _____ HAVE BEEN INSTALLED IN ACCORDANCE WITH CURRENT LOCAL AND STATE GOVERNMENT REQUIREMENTS OR A LETTER OF CREDIT OR OTHER APPROVED SURETY HAS BEEN FILED WHICH WILL GUARANTEE SAID INSTALLATION.

07 / 12 / 2023 Steven W. Dirig
DATE: AUTHORIZED SIGNATURE/TITLE & AGENCY

CERTIFICATE OF APPROVAL FOR RECORDING

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE GOODLETTSVILLE SUBDIVISION REGULATIONS, WITH THE EXCEPTION OF SUCH VARIANCES, IF ANY, AS ARE NOTED IN THE MINUTES OF THE PLANNING COMMISSION, AND THAT IT HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE COUNTY REGISTER.

7 / 12 / 2023 R. Adam McCann
DATE: SECRETARY, PLANNING COMMISSION
VOID UNLESS RECORDED BY _____

Karen Johnson Davidson County
Batch# 1025900 PLAT-LG
07/13/2023 02:11:36 PM 1 pg
Fees: $15.00 Taxes: $0.00
20230713-0053836

EUBANK
5 LOT SUBDIVISION

COUNCILMAN DISTRICT 10
DAVIDSON COUNTY, GOODLETTSVILLE, TENNESSEE

PREPARED FOR:
ADAM SCULLY
0 NEW BRICK CHURCH PIKE
NASHVILLE, TN 37072
DATED: NOVEMBER 22, 2022

221107 EUBANK

NEW BRICK CHURCH PIKE

BELL STREET

N

PROPOSED 20'
SETBACK

20'

C1

N 79°58'09" E 199.49'

66.50'

66.50'

66.50'

N 01°49'32" W
35.92'

N 11°24'12" W 162.41'

N 11°24'12" W 184.68'

206.94'

PROPOSED HOUSE
(exact size may vary)

18.84'

100.68'

70.63'

70.63'

N 81°39'33" W 241.94'

S 11°24'12" E 337.68'

60.00'

N 04°22'07" E 138.84'

63.44'

N 81°39'33" W 259.31'

60.00'

63.44'

N 81°39'33" W 289.52'

Sketch Plan

EUBANK SUBDIVISION

Goodlettsville, TN

1"=40'

August 21, 2026

26-028

NASHVILLE DESIGN BUILDERS GROUP

DRIVEN BY EXPERTS. DEFINED BY EXCELLENCE.

EUBANK 5-LOT SUBDIVISION INFILL HOUSING CONCEPT

Bell Street & New Brick Church Pike · Goodlettsville, Tennessee · Council District 10

PREPARED FOR
Sean Pfalzer, Interim Community Development Services Director

PRESENTED BY
Nashville Design Builders Group with Nashville Housing Solutions

DATE
August 21, 2026

PURPOSE
Concept review & plat-note amendment discussion

THE OPPORTUNITY

Goodlettsville is preparing to welcome one of the largest private investments in its history at Rivergate. The people who will build that investment, staff it, and serve it every day need somewhere in Goodlettsville to live — close to the work, inside the community, paying into it rather than commuting out of it.

This concept places well-built, owner-occupied homes on land that is already zoned for them, on two streets that already have City water, sewer and frontage. No rezoning. No new infrastructure burden. No displacement of a single legacy resident.

WHAT WE ARE ASKING FOR

> **We are not requesting a rezoning. These lots are already zoned R-10, which contemplates two-family dwellings. The constraint is the development notes recorded on the Eubank 5-Lot Subdivision plat — which limit each lot to a single one-family detached dwelling. We are asking the City to consider amending those recorded plat notes so the land can be used the way its zoning already allows.**

The zoning decision has already been made. What remains is a set of plat conditions carried over from a partition drawn several years ago, before this corridor's housing need looked the way it looks today.

PRECEDENT WITHIN GOODLETTSVILLE

We understand the City has previously approved a four-unit building on a two-unit lot in support of Habitat for Humanity. We read that as evidence of something we respect: that Goodlettsville is willing to look past a line on a page when the community benefit is clear and the quality of the housing is real. We are asking to be measured by that same standard.

WHAT WE COMMIT TO — REGARDLESS OF OUTCOME

- Five-foot sidewalk poured along the full frontage of both New Brick Church Pike and Bell Street
- An attached one-car garage on every unit, consistent with the recorded plat standard
- Driveways entering directly from the street and crossing the sidewalk, permitted through Public Works
- All dedicated off-street parking held behind the sidewalk
- Homes on New Brick Church Pike oriented to front the Pike; homes on Bell Street oriented to front Bell
- Individual on-site stormwater facilities on each lot, per City-approved engineering
- Full architectural detailing: board-and-batten elevations, standing-seam accent roofs, exterior lighting and landscape on every unit
- For-sale, owner-occupied product — not investor rental stock

WHY THIS BUILDER

Nashville Design Builders Group is a Tennessee Unlimited Residential & Commercial Contractor and a GO-DBE Certified Minority Business Enterprise, with licensed electrical and plumbing contractors in-house, OSHA 30-trained leadership, and ISO 9001 & 45001 certification in progress. Our affiliated nonprofit, **Nashville Housing Solutions**, carries a 2030 commitment of 500+ attainable housing units delivered with zero displacement of legacy residents. We are a small, local builder — and that is precisely the point. A City that can say yes to a $400 million investor and yes to a neighborhood builder in the same season is a City that is growing on its own terms.

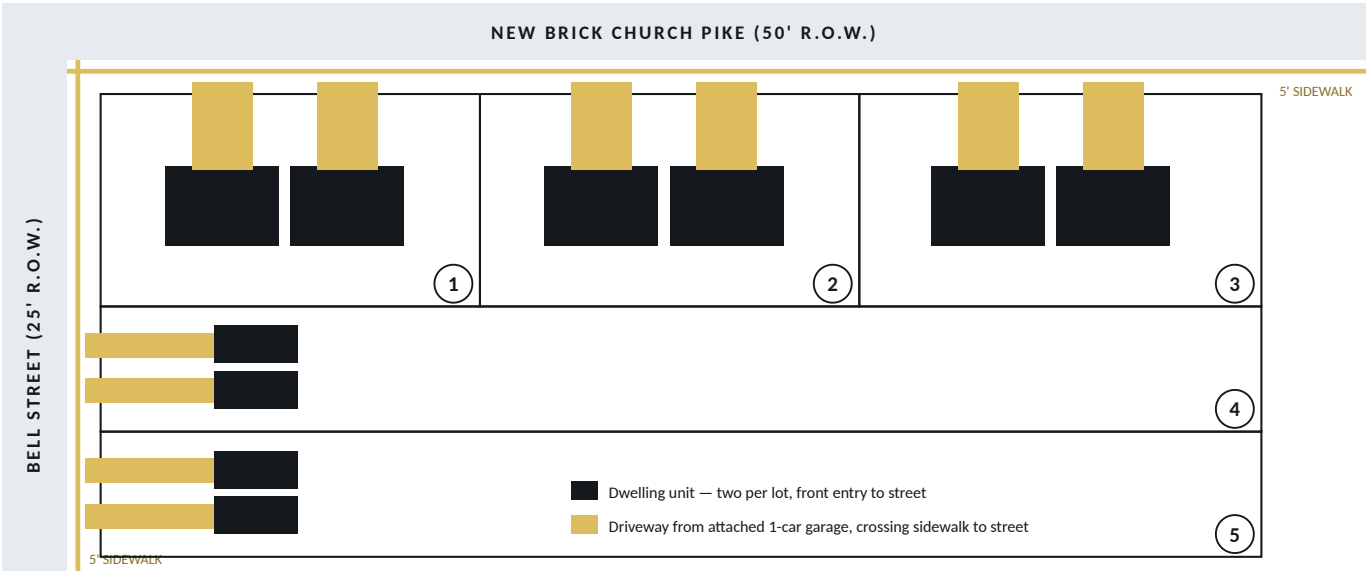
CONCEPT ILLUSTRATION & SITE ORIENTATION

Two attached units per lot · one-car garage each · street-facing entry



Illustrative concept rendering prepared for planning and discussion purposes only. Not a construction document. Final elevations, grading, and site conditions subject to survey, engineering, and City approval.

STREET ORIENTATION & ACCESS



Schematic diagram — not to scale and not a survey. Lot geometry per recorded plat, Eubank 5-Lot Subdivision, Davidson County.

HOW THE STREETS ARE TREATED

NEW BRICK CHURCH PIKE — LOTS 1, 2 & 3

Homes are turned to face the Pike. Each unit takes a front-loaded attached garage with its driveway entering directly off the street and crossing a new five-foot sidewalk. No shared or rear alley access is proposed, and no vehicle backs into the travel lane from a blind

BELL STREET — LOTS 4 & 5

Homes face Bell Street on the same principle, with driveways exiting west onto Bell across a new sidewalk poured along the frontage. The result on both streets is a continuous, walkable edge where none exists today — delivered at the developer's cost.

RECORDED PLAT CONDITIONS & OUR POSITION

Eubank 5-Lot Subdivision · Davidson County, Goodlettsville, Tennessee

The table below sets out the development conditions carried on the recorded plat today, and where Nashville Design Builders Group stands on each. We accept nearly all of them as written. Our request concerns one.

CONDITION ON THE RECORDED PLAT	OUR POSITION
One-family detached dwelling required on each lot	This is the single condition we are asking the City to reconsider. It is a plat note, not a zoning designation.
Attached one-car garage required, minimum 9' × 12'	Accepted and reflected in the concept. Every unit is shown with a front-loaded attached garage.
Five-foot sidewalk along New Brick Church Pike frontage	Accepted, and we are volunteering to extend the same standard to the Bell Street frontage.
Off-street parking to be held behind the sidewalk on Lots 1–3	Accepted and reflected in the driveway layout above.
Individual on-site stormwater facilities on every lot	Accepted, per engineering design approved by the City.
Front setbacks of 40' on Lots 1–3 and 30' on Lots 4–5, with 10' side yards	We ask that setbacks be reviewed alongside the density note so the two conditions are considered together rather than in sequence.
Driveway permit and paved apron within the public right-of-way	Accepted, permitted through the Goodlettsville Public Works Department.

THE ASK, IN ONE SENTENCE

> **That the City of Goodlettsville consider amending the development notes recorded on the Eubank 5-Lot Subdivision plat, so that land already zoned R-10 can deliver the attainable, well-built, owner-occupied housing this corridor needs — without rezoning, without variance to the underlying district, and without displacing anyone.**

NEXT STEPS WE ARE PREPARED TO TAKE

- Confirm with City staff whether these conditions are amendable through the Planning Commission as recorded plat notes, or whether any portion sits in private deed covenants outside the City's authority
- Submit a formal plat amendment application on the schedule City staff recommends
- Provide stamped architectural elevations and a site plan prepared to the City's submission standard
- Provide engineered stormwater design for each lot prior to any construction permit
- Meet with adjacent property owners and Council District 10 representation at the City's request

Respectfully submitted,

NASHVILLE DESIGN BUILDERS GROUP

Driven by Experts. Defined by Excellence.

In partnership with **Nashville Housing Solutions**, a Tennessee nonprofit corporation.

GO-DBE Certified MBE · TN Unlimited Residential & Commercial Contractor · Licensed electrical and plumbing in-house.