CITY OF GOODLETTSVILLE
MUNICIPAL PLANNING COMMISSION
MEETING AGENDA

Monday, June 1, 2026 5:00 PM

ITEM #1 Approval of June 1, 2026 Agenda

ITEM #2 Approval of May 4, 2026 Meeting Minutes

ITEM #3 Public Forum on Planning Related Topics

ITEM #4 Community Development Staff: Requests recommendation to the Goodlettsville City Commission to amend the Zoning Ordinance Sections 14-201(3), 14-208 (1)(b) to define provisions for fence regulations.

ITEM #5 Ironwood Residential Development, Phillips Builders/Development Management Group, LLC: Requests final master plan approval for sixty-six (66) one family detached dwelling unit lots. The properties are referenced as Sumner County Tax Map 140 Parcels 124 and 124.01. Property Owner: William B Ralph JR Trustee (15-24)

ITEM #6 Dean Patel: Requests recommendation to the City Commission to rezone the 4.73-acre properties at 622 Rivergate Pkwy, 611 Wade Circle, 645 Wade Circle, 647 Wade Circle referenced as Davidson County Tax Map/Parcels# 02613004300, 02610001300, 02614000400, and 02614000300 from CSL, Commercial Services Limited to RC2PUD, Regional Center Planned Unit Development Low Intensity Limited Property Owner: Atlas, LLC

ITEM #7 Richards and Southern, Inc./615 Design Group: Request site plan approval for a 4,536 square feet warehouse expansion on 1.59 acres at 114 Lindberg Avenue. The property is referenced as Davidson County Tax Map/Parcel# 01816004400 and is zoned CG, Commercial General and CSL, Commercial Services Limited. Property Owner: Terry Calonge

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.

105 S. Main Street – Goodlettsville, TN 37072 – 615-851-2202

CITY OF GOODLETTSVILLE
MUNICIPAL PLANNING COMMISSION
AGENDA STAFF REPORT

MONDAY JUNE 1, 2026 5:00 PM

ITEM #1 Approval of June 1, 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 May 4, 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 Community Development Staff: Requests recommendation to the Goodlettsville City Commission to amend the Zoning Ordinance Sections 14-201(3), 14-208 (1)(b) to define provisions for fence regulations.

STAFF NOTES:

This item was deferred at the May 4, 2026 Planning Commission meeting.

The City's Board of Zoning and Sign Appeals recently reviewed an administrative appeal regarding the fence section of the Zoning Ordinance. The appeal was based on the ordinance section limiting solid fences over four (4') feet in the front yard of the property and the percentage of open portions of the fence that would be required to not be considered a solid type fence.

A Board of Zoning and Signs Appeals member provided the following Zoning Ordinance amendment suggestion to address the open and solid fence ordinance text.

At the March Planning Commission meeting, staff discussed the proposed ordinance amendments to clarify open fencing and the ordinance amendment researched and prepared by a

Board of Zoning and Sign Appeals member. Additionally, new revisions from the City Attorney have been incorporated since the May Planning Commission meeting to further clarify definitions to open style and solid style fences and front height requirements for residential districts.

Zoning Ordinance Amendments: Fence Regulations

14-201(3) Definitions

Fence. A freestanding structure, or a structure attached to posts, columns, or pilasters, or structures erected to enclose, screen, separate, secure, or mark a boundary on a lot or otherwise constructed on a lot or property. A fence includes gates. A fence does not include vegetation used alone.

Fence, decorative. An open style fence constructed of customary decorative materials and design compatible with surrounding development. Examples include finished wrought iron, aluminum tubing, wood picket, wood or vinyl boards, wood rails, split rail, brick, and stone.

Fence, open style. A fence designed to allow visibility through the fence area. Openness is measured as a percentage of open area compared to the total fence area, excluding posts and columns. Examples include chain link without slats, wrought iron, aluminum tubing designed to simulate wrought iron, split rail, and spaced picket fences. The percentage of openness is equal to a minimum of forty percent (40%) of the open style fence.

Fence, solid style. A fence designed to substantially block visibility through the fence area. Examples include stockade wood privacy fences, vinyl privacy fences, composite privacy fences, masonry privacy walls, and chain link fencing with slats or inserts intended to block views. A two (2) sided fence shall be defined as a solid style fence.

Opacity. The percentage of the fence area that obscures views into the lot when viewed perpendicular to the fence. A fence with 50 percent opacity obscures no more than 50 percent of the view into the land.

Wall. A masonry, stone, brick, concrete, or similar constructed barrier serving the same boundary, screening, or security purposes as a fence.

14-208(1)(b) Fences and Walls

(b) Fences, walls, and hedges. Notwithstanding other provisions of this title, fences, walls, and hedges may be permitted in any required yard, or along the edge of any yard except as prohibited in subsection 14-208(1)(a) above.

In any residential district, no fence of any style or wall shall exceed eight feet (8’) in height and shall not extend past the front of the principal building. Between the front of the principal building and the street right-of-way, no open type fence shall exceed four feet (4’) in height and solid type fence, or wall are limited to four feet (4’) in height.

Between the front of the principal building and the street right-of-way, any fence exceeding four feet (4') ***in height shall be an open-style fence and shall not exceed fifty percent (50%) opacity***.

In commercial or industrial districts, no fence or wall shall exceed fifteen feet (15') in height. Between the front of the principal building and the street right-of-way, no fence or wall shall exceed six feet (6') in height.

For purposes of administration and enforcement, fences shall be classified as open style or solid style in accordance with the definitions set forth in § 14-201(3).

The height of such fences and walls shall be measured from the finished grade to top of the individual sections. Such sections may be measured separately and averaged. When applicable, fences shall be constructed in compliance with the design guidelines. Fences shall be constructed of materials listed below:

- Woven wire chain link - excluding any barb wire type fencing.

- Wrought iron or similar aluminum design.

- Wood, vinyl, steel, aluminum slats, or planking of no more than one inch by six inches in width when hung vertically, horizontally, or diagonally between steel, wood or vinyl posts. Unfinished fence materials and the framing members of all fences shall not be directly visible from the street on which it is located. Placement of the framing members of board fences on the outside face of the fence directly visible from the street may be approved by the planning department if it is determined that it enhances the architectural character of the fence. NOTE: There is no requirement to face framing members of board fences between adjoining properties that are not directly visible from the street.

- Masonry consisting of brick, concrete block, split-face block, dry-stack stones, or stones and mortar.

- Wire fencing that is secondary in nature and located on the interior side of the fence may be allowed in combination with any fence that would otherwise meet the above material requirements.

- Any other combination of materials listed above or other materials which the planning department determines to be equivalent to the above in terms of quality and appearance.

- Property line and agricultural type fencing including woven wire, single wire fence, and barb wire are only permitted in existing non-conforming installations and on properties zoned agricultural or five acres or larger as permitted by the provisions of the zoning ordinance. The planning department may review a property line single wire fence not including barb wire on vacant properties less than five acres to define property lines. Woven wire chain link fences including barb wire at the top of a fence constructed to meet the above material requirements may be approved by the planning department in industrial zoned properties when the installation is not located along a public street.

MOTION OPTIONS:

1. Recommend approval to the City Commission for the amendment of the Zoning Ordinance to include provisions for fence regulations as presented by staff or with ordinance revisions determined by the Planning Commission

2. Recommend denial to the City Commission to not include provisions for fence regulations section in the Zoning Ordinance

3. Defer request to include additional information as determined by the Planning Commission

Staff recommendation to be provided at the meeting

ITEM #5 Ironwood Residential Development, Phillips Builders/Development Management Group, LLC: Requests final master plan approval for sixty-six (66) one family detached dwelling unit lots. The properties are referenced as Sumner County Tax Map 140 Parcels 124 and 124.01. Property Owner: William B Ralph JR Trustee (15-24)

STAFF NOTES:

This item was deferred at the May 4, 2026 Planning Commission meeting.

At the October 6, 2025 meeting, the Planning Commission recommended to the Goodlettsville City Commission to annex and rezone the 45.02-acre properties at 4408 Long Hollow Pike from Sumner County RR, Rural Residential to LDRPUD, Low Density Residential Planned Unit and preliminary master plan approval for sixty-nine (69) one family detached dwelling unit lots. In addition, the Planning Commission recommended to the City Commission to approve the plan of services for the proposed annexation of 45.02 acres at 4408 Long Hollow Pike and a 1,770 feet section of Long Hollow.

At the December 11, 2025 meeting, the City Commission adopted Resolution 25-1294 adopting a plan of service for annexation of 45.02 acres on Long Hollow Pike and Resolution 25-1296, a resolution annexing 1,770 feet of Long Hollow Pike/SR 174 right of way and roadway.

The plan of service defines the extension of City services including police, fire, trash, planning and code services, and park and recreation to the property and the proposed timing. The developer is required to extend utility services (water, sewer, electric) and complete required Long Hollow Pike improvements required per the TDOT, Tennessee Department of Transportation requirements.

The preliminary master plan proposal for 1.53 units per acre was consistent with the Low-Density designation of the prior Comprehensive Land Use Plan within the one to two (2) units per acre range. Since the approval of the preliminary master plan, the City adopted an update the Comprehensive Land Use Plan. The final master plan proposal remains consistent with the Comprehensive Land Use Plan as it lies within the Residential Rural district that aims to preserve areas in Goodlettsville that are used primarily for low-density residential, open space preservation, and in some instances farming. These areas provide a quieter, more spacious alternative to denser development, and are typically found on the city's periphery.

The proposal is zoned LDRPUD, Low Density Residential Planned Unit Development. The adjacent Wynridge Development is zoned LDRPUD, Low Density Residential Planned Unit Development and the Copper Creek Development is zoned both LDRPUD, Low Density

Residential Planned Unit Development and MDRPUD, Medium Density Residential Planned Unit Development.

The preliminary master plan consisted of sixty-nine (69) lots for single-family homes. The final master plan proposes sixty-six (66) lots for single-family homes, three less lots than the prior submittal. Thus, the latest proposal is a slight decrease in dwelling units per acre from 1.53 to 1.49.

Staff received a water service utility commitment letter from the White House Utility District (WHUD) including required water main improvements required by the project developer. The City's Sewer Department has approved sewer capacity availability to the development, and is currently reviewing the proposal regarding main extension and connection requirements to be completed by the project developer.

Staff anticipates TDOT to maintain the Long Hollow Pike turn lane improvements requirements previously discussed with the latest proposal of sixty-six (66) lots.

The revised project design does not include a roadway connection to the N. Maple Ridge Lane public road right of way. The roadway connection is not shown on the revised project proposal due to the comments the developer received about concerns with the roadway connection. The City's adopted Fire Code requires a second point of access for the proposed number of lots. City staff requests for emergency services reasons that a gated connection limited access drive with a minimum twelve (12') feet width be installed within a dedicated twenty (20') feet access easement.

The final master plan proposes twenty-nine (29) percent of the subdivision as open space, significantly higher than the required ten (10) percent dedicated to open space. Open space includes amenity area with a pavilion and playground.

The final master plan meets setback requirements, and exceeds rear setback requirements for lots that abut the Wynridge subdivision and the west side of the property.

The final master plan meets parking requirements, with four spaces per unit and thirteen (13) visitor parking spaces provided at the mail kiosk and pavilion and playground.

At the May 4, 2026 Planning Commission meeting, staff raised outstanding issues that still need to be addressed, including the following:

- Environment, Stream, and Erosion Control: Additional information is needed regarding stream buffers, temporary construction access, any temporary stream crossings, and protective measures before installation of the proposed box culvert or bridge structures, the erosion control plans need additional measures for steep slopes, stabilization methods, and erosion control blankets.
- Drainage and Stormwater: Need to provide details on large drainage structures over the streams, need additional detail on the grading of lots, including building pads and diversion swales where drainage flows onto lots from higher elevations, need additional detail on how off site water will be addressed for Lots 35, 49, and 50, need to provide

detention outlet details, easements, pond grading, riprap/outlet protection, pavement spread calculations, outfall locations, and water-quality unit placement.

- Utilities Issues: Multiple sewer mains exceed the maximum grade of 10%, need details for the sewage pump station, sanitary sewer force main, utility easements, sewer profiles, and existing sewer connection detail.

The City's engineer consultant is currently reviewing the resubmitted final master plans to determine if those issues have been addressed to satisfy the City's requirements. Any remaining major items will be presented at the meeting and will be included as an agenda item motion stipulation.

STAFF STIPULATIONS:

1. Complete City's Engineer Consultant plan review comments prior to any project land disturbance permit issuance

2. Obtain TDEC approvals for necessary permits

3. Obtain TDOT approval for the proposed turn lane improvements at Long Hollow Pike

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 the meeting

ITEM #6 Dean Patel: Requests recommendation to the City Commission to rezone the 4.73-acre properties at 622 Rivergate Pkwy, 611 Wade Circle, 645 Wade Circle, 647 Wade Circle referenced as Davidson County Tax Map/Parcels# 02613004300, 02610001300, 02614000400, and 02614000300 from CSL, Commercial Services Limited to RC2PUD, Regional Center Planned Unit Development Low Intensity Limited Property Owner: Atlas, LLC

STAFF NOTES:

The request is to rezone the 4.73-acre properties from CSL, Commercial Services Limited to RC2PUD, Regional Center Planned Unit Development Low Intensity to permit proposed

redevelopment of the property as a mixed-use development consisting of hotel, retail, and office uses. The included preliminary plan in the meeting packet is intended to conceptually show the site layout.

Adjacent Property Zoning Districts (Existing Uses)

- CSL, Commercial Services Limited (Hotel, Motel, Restaurant, Residential Homes)
- GOPUD, General Office Planned Unit Development (Office)

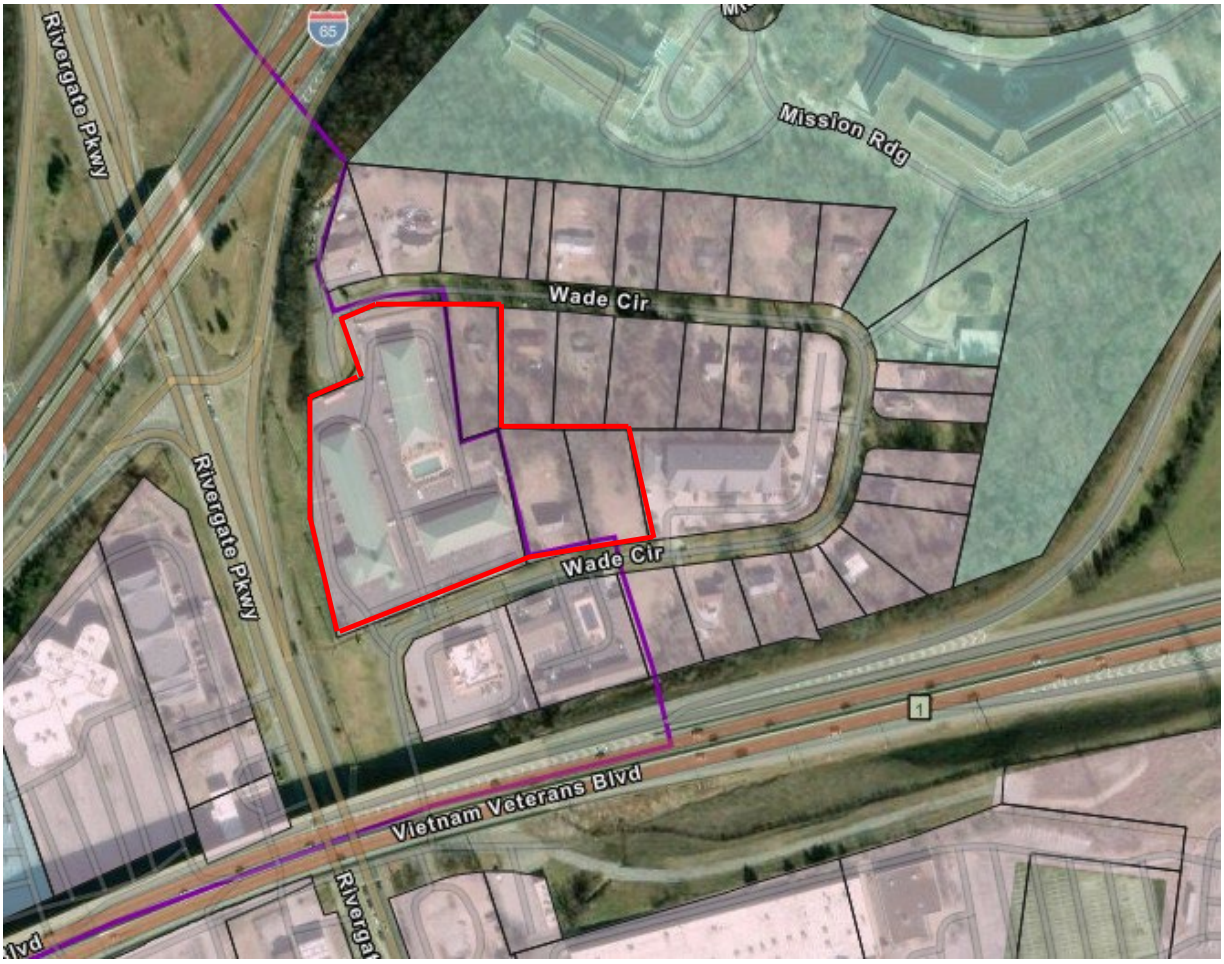
Comprehensive Land Use Plan Designation: Regional Center Planned Unit Development Low Intensity and located in close proximity to Commercial Business Center plan designation (Dollar General Headquarters) and Regional Center Planned Unit Development High Intensity plan designation (Rivergate).

Surrounding Zoning Districts

- Purple - CSL, Commercial Services Limited
- Green - GOPUD, General Office Planned Unit Development

The proposed rezoning from CSL, Commercial Services Limited to RC2PUD, Regional Center Planned Unit Development Low Intensity is consistent with the City's Comprehensive Plan Update that envisions the Rivergate area as a Regional Center that aims to serve a mix of uses, including commercial, retail, and office uses. While 622 Rivergate Pkwy lies within the Interchange Overlay, the proposed planned unit development district regulations for RC2PUD would set the permitted uses for the property. The RC2PUD, Regional Center Planned Unit Development Low Intensity supports building heights up to seven stories, consistent with the preliminary concepts for the site.

Goodlettsville Zoning Map Section



Existing and Proposed Zoning

PERMANENT RESIDENTIAL	Existing Zoning CSL	Proposed Zoning RC2
Dwelling, attached	N	P
Dwelling, one-family detached	N	N
Dwelling, two-family detached	N	N
Dwelling, semi-detached	N	N
Dwelling, multi-family	N	P
Dwelling, mobile home	N	N
Bed & Breakfast Homestay	N	N
Mobile Home Park	N	N
SEMI PERMANENT RESIDENTIAL	N	N
COMMUNITY FACILITY ACTIVITIES		
Administrative	P	P
Community Assembly	P	P
Community Education	C	P
Cultural and Recreation Services	P	P
Essential Services	C	N
Extensive Impact	N	N
Health Care	P	P
Institutional Care	N	N
Intermediate Impact	C	C
Personal & Group Care	C	P
Religious Facilities	P	P
COMMERCIAL ACTIVITIES		
Adult Oriented Establishment *******	N	N
Animal Care & Veternarian Services	P	P
Automotive Parking	P	P
Automotive Repair and Cleaning	N	N
Automotive Servicing	N	N
Building Materials and Farm Equipment	N	N
Consumer Repair Services	C	C
Construction Sales & Services	N	N
Convenience Commercial	P	P
Entertainment & Amusement Services	C	P
Financial, Consultive, & Adminstrative	P	P
Food & Beverage Services	P	P
Food Service Drive-in & Drive-thru	P	P
General Business & Communication Service	P	P
General Personal Services	P	P
General Retail Trade	P	P
Group Assembly	N	P
Medical Services	P	P
Scrap Operations	N	N
Transient Habitation: Hotel	P	P
Transient Habitation: Motel	P	N
Transient Habitation: Extended Stay Hotel/Motel	C	P
Transient Habitation: Short Term Rental Property	P	P
Transient Habitation: SRO	N	N
Transport & Warehousing	N	N
Undertaking Services	P	N
Vehicular, Craft & Related Equipment Sales	N	N
Wholesale Sales	N	N
Tourist Oriented Limited Manufacturing*****	C	C
MANUFACTURING ACTIVITIES		
Limited	N	N
Intermediate	N	N
High Technology Manufacturing, Assembly, Processing	N	N
Extensive	N	N
AGRICULTURAL, RESOURCE PRODUCTION & EXTRACTIVE ACTIVITIES		
Agricultural Services	N	N
Crop & Animal Raising	N	N
Mining & Quarrying	N	N
Plant & Forest Nurseries	N	N
Confined Animal Feeding Operations	N	N

MOTION OPTIONS:

1. Recommend to the Goodlettsville City Commission approval of the RC2PUD, Regional Center Planned Unit Development Low Intensity zoning district based on the Planning Commission's determination during the meeting that the proposal is in compliance with the City's Comprehensive Plan

2. Recommend to the Goodlettsville City Commission denial of the RC2PUD, Regional Center Planned Unit Development Low Intensity zoning designation based on the Planning Commission's determination during the meeting that the proposal is not in compliance with the City's Comprehensive Plan.

3. Defer the request to include additional information as determined by the Planning Commission

Staff recommendation to be provided at meeting

ITEM# 7 **Richards and Southern, Inc./615 Design Group:** Request site plan approval for a 4,536 square feet warehouse expansion on 1.59 acres at 114 Lindberg Avenue. The property is referenced as Davidson County Tax Map/Parcel# 01816004400 and is zoned CG, Commercial General and CSL, Commercial Services Limited. Property Owner: Terry Calonge

STAFF NOTES:

The request is for site plan approval for a warehouse expansion at 114 Lindberg Avenue. The proposal is to expand the existing warehouse from 14,925 square feet to 19,461 square feet and provide associated parking, stormwater infrastructure, and landscaping improvements.

The City is aware of ongoing drainage issue in the vicinity of the Bass and Lindberg intersection, east of N. Main Street in Goodlettsville. The proposal replaces some existing concrete parking with a paver system to help improve stormwater performance and reduce runoff impacts from the proposed expansion.

STAFF STIPULATION:

1. The exterior of the existing warehouse is predominately metal siding and the proposed minor addition aims to maintain a consistent exterior. Thus, the proposal requires a design variance from the design standards of minimum of seventy-five (75%) percent of exterior building materials be brick or stone.

MOTION OPTIONS:

1. Approve the site plan that meets the City's Zoning Ordinance and Design Guidelines with the listed staff stipulation including any additional items determined by the Planning Commission

2. Deny the site plan based on the Planning Commission's determination during the meeting that the site plan does not meet the City's Zoning Ordinance and Design Guidelines and define the items needed to revise the plan to meet the City's Zoning Ordinance and Design Guideline site plan requirements

3. Defer request to include additional information as determined by the Planning Commission

Staff recommendation to be provided at meeting

OFFICIAL MINUTES OF THE MEETING

GOODLETTSVILLE PLANNING AND ZONING COMMISSION

May 4, 2026 Goodlettsville City Hall

5:00 p.m. Massie Chambers-Auditorium

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

Absent: Billy Barnfield

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

Trew called the meeting to order and Wheeler offered prayer.

Item #1 Approval of Agenda: Commissioner Gilmore made a motion to approve the agenda, Mayor Tinnin seconded the motion. The motion passed.

Item #2 Approval of April 6, 2026 Meeting Minutes: Wheeler made a motion to approve the minutes of the April 6, 2026 meeting, Commissioner Gilmore seconded the motion. The motion passed.

Item #3 Trew opened the Public Forum on Planning Related Topics.

Connie Childress – 127 N Maple Ridge Lane
Connie Childress stated her home is directly beside and to the back of the proposed Ironwood Development. Childress has concerns about the proposed emergency gate at the end of N Maple Ridge Lane cul-de-sac and asking for clear information on the access point. Childress has concerns for the trees they want to remove because those trees provide many benefits for clean air, water runoff, natural habitat, and wildlife. Childress asked please just communicate with us and let us know our concerns are heard.

James Childress – 127 N Maple Ridge Lane
James Childress discussed the access road at the end of the cul-de-sac. Childress stated they have been told several times it's required, and then not required, then just an emergency route. Childress does not want heavy truck traffic and construction traffic coming down the road using the intersection cul-de-sac because they have no access to the proposed Ironwood Development. Childress stated the large oak trees they plan to remove could fall on his house and if at all possible, preserve some of those trees. Childress asked that they take the citizens comments regarding the Ironwood Development into consideration.

Sarah Childress – 127 N Maple Ridge Lane
Sarah Childress stated construction of the proposed Ironwood Development will have an irreversible impact on the neighborhood therefore requesting from the Planning Commission and builders to be transparent about the plans and for the Planning Commission to take up their concerns and advocate for them with the builders. Childress asks the builders to keep them informed and act as a company that's

rooted in this community. Childress request ecological preservation because she is concerned about the environmental impact this project will have. Childress, suggest they have an environmental impact assessment done by someone from the TN Wildlife Resource Agency to comply with the regulations and guidelines meant to protect wildlife. Childress asked that they do their due diligence to avoid destruction of their wildlife. Childress is concerned by the clear cutting of trees indicated on the plans because trees serve a number of ecological roles such as providing habitat, producing oxygen, filtering watering and air, preventing erosion, and retaining rainfall to decrease runoff. So, in consideration of their privacy and to make the new neighborhood attractive to home buyers, she would urge the company to leave as many trees in place as possible.

Andy Thorpe – 131 N Wynridge Way
Andy Thorpe stated there's a lot of deficiencies in the proposed plans for 4408 Long Hollow Pike and should not be submitted for final approval. Thorpe stated he voiced his displeasure with our poor leadership around zoning before rural residential that wasn't done right. Thorpe stated that Allen Farms is not being developed right now because mistakes were made in getting that set up and feels we are doing the same thing with the Ironwood development. Thorpe stated the plans are calling for steep slopes of 11% slope and 8% slope. Thorpe stated the truth is if it's not in the plans, it's not enforceable. Thorpe stated that the stormwater design says 5-year design TDEC says 25 years why are we doing that? Don't we care about storm water? Don't we care about our community? Thorpe stated the ponds are not sized right and the grades are being forced through.

Cory Spano – 117 N Maple Ridge Lane
In an email Cory Spano stated that there are multiple issues with the proposed plans including slopes of the roadways. Spano stated there should be no lots and a large buffering zone along the border with N Maple Ridge Lane. Currently there is no mention of a large dense landscape buffer. The current design also has the front of the homes facing Long Hollow. The existing vegetation border along the creek and Long Hollow Pike should be kept and the lots should have their backyards facing the creek with thick vegetation buffer for sound and privacy for themselves and the Wynridge neighborhood. These homes should be required to have 100% brick as Wynridge is 100% brick. I believe the right thing to do here is to ensure the community, who is directly and most negatively affected by this receives some very significant and material mitigation of these legitimate concerns as we are losing our privacy, peace, and quality of life in our own backyards.

Trew asked for additional comments and no additional comments were received.
Mayor Tinnin made a motion to close the public forum, seconded by Parnell. The motion passed.

The Public Forum was closed.

AGENDA

Item #4 Dry Creek LLC, Cedar Side at Dry Creek Section Two (2): Requests performance bond one-year extension.

Item Representative: Sean Pfalzer, Staff

Staff Discussion:
-The current $190,000 performance bond expires June 3, 2026.

-The project developer has requested a one-year bond extension.
-The requested bond amount is based on the estimated cost of remaining improvements and Public Works identified items based on construction damage to the roadway asphalt binder layer, curbs, and sidewalks.
-The project phase includes sixty-two (62) attached townhouse type units.
-The property phase unit completion is at one hundred (100) percent.
-The remaining project items include final street paving and striping, sidewalks, finish grading and bio retention storm water quality feature construction maintenance and finish work, and sewer line final testing.
-Motion Option-Approval of the requested one-year bond extension at $190,000. (Staff Recommendation)
-Motion Option-Approval of one-year bond extension including an additional two (2%) inflation to the existing bond amount at $193,800.
-Motion Option-Approval of one-year bond extension at amount determined by Planning Commission based on information provided during meeting.
-Motion Option-Denial of one-year bond extension to direct staff to notify property owner to complete the remaining items prior to bond expiration data or request payment on bond to prioritize and complete the remaining project improvements.

Planning Commission Discussion:
-Trew asked why we would not recommend an additional 2% inflation to the existing bond amount?
-Pfalzer responded they didn't ask for a reduction, so we think this amount will cover the remaining items.

Motion: Motion by Mayor Tinnin to approve the request, seconded by Parnell. The motion passed unanimously.

Item #5 Community Development Staff: Requests recommendation to the Goodlettsville City Commission to amend the Zoning Ordinance Sections 14-201(3), 14-208 (1)(b) to define provisions for fence regulations.

Item Representative: Sean Pfalzer, Staff

Staff Discussion:
-The City's Board of Zoning and Sign Appeals recently reviewed an administrative appeal regarding the fence section of the Zoning Ordinance.
-The appeal was based on the ordinance section limiting solid fences over four (4') feet in the front yard of the property and the percentage of open portions of the fence that would be required to not be considered a solid type fence.
-A Board of Zoning and Signs Appeals member provided a Zoning Ordinance amendment suggestion to address the open and solid fence ordinance text.
-At the March Planning Commission meeting, staff discussed the proposed ordinance amendments to clarify open fencing and the ordinance amendment researched and prepared by a Board of Zoning and Sign Appeals member.
-The goal of this amendment is to clarify definitions and administration of open-style and solid-style fences.
-The main change in this ordinance would be the language about the height of the fence in any residential district in the front yard.

-Staff presented Zoning Ordinance Amendments Sections: Fence Regulations 14-201(3) Definitions and 14-208(1)(b) Fences and Walls.
-Motion Option-Recommend approval to the City Commission for the amendment of the Zoning Ordinance to include provisions for fence regulations as presented by staff or with ordinance revisions determined by the Planning Commission. (Staff Recommendation)
-Motion Option-Recommend denial to the City Commission to not include provisions for fence regulations section in the Zoning Ordinance.
-Motion Option-Defer request to include additional information as determined by the Planning Commission.

Planning Commission Discussion:
-Trew confirmed you can have a chain link fence going around the perimeter of your property, front, back and sides, in the rear can be solid up to eight feet (8') in height.
-Commissioner Gilmore asked for clarity for people wanting to extend their fence to the front yard in residential neighborhoods.
-Pfalzer responded the language in this reads: In any residential district, no fence or wall shall exceed eight feet (8') in height and shall not extend past the front of the principal building. Between the front of the principal building and the street right-of-way, no open type fence shall exceed six feet (6') in height and solid type fence, or wall are limited to four feet (4') in height. Between the front of the principal building and the street right-of-way, any fence exceeding four feet (4') *in height shall be an open-style fence and shall not exceed fifty percent (50%) opacity*.
-Attorney Freeman stated that there's some definitions that need to be clarified.
-Attorney Freeman stated we need to be cautious with regard to being able to put up a six foot (6') fence between the front façade all the way to the street and along the street right-of-way.
-Attorney Freeman stated we need to address the issue of actual percentage of openness rather than saying it's based on an area composed.
-Attorney Freeman stated we need to address when somebody wants to do a double-sided fence, will that be considered an open fence on that style?
-Mayor Tinnin commented that there needs to be some more work on this so we probably need to defer for a month.
-Attorney Freeman suggested some more work for definitional modifications and refinement with what this board suggests and come back with any of their questions answered in regards to the final draft.
-Trew commented he agrees with the six-foot (6') height in the front sounds extreme.
-Parnell commented he is opposed to a six-foot (6') in the front yard for aesthetic purposes.

Motion: Motion by Mayor Tinnin to defer the request, seconded by Wheeler. The motion passed unanimously.

Item #6 Ironwood Residential Development, Phillips Builders/Development Management Group, LLC: Requests final master plan approval for sixty-six (66) one family detached dwelling unit lots. The properties are referenced as Sumner County Tax Map 140 Parcels 124 and 124.01. Property Owner: William B Ralph JR Trustee (15-24)

Item Representative: David Abby, Development Management Group and Jason Phillips, Phillips Builders

Staff Discussion:

-At the October 6, 2025 meeting, the Planning Commission denied recommendation to the City Commission to annex and rezone the 45.02-acre properties at 4408 Long Hollow Pk.
-At the November 2025 meeting, the City Commission approved on first reading resolutions to approve the plan of services for the proposed annexation of 45.02 acres at 4408 Long Hollow Pk. and a 1,770 feet section of Long Hollow Pk.
-At the December 2025 meeting, the City Commission adopted resolutions to approve the plan of services for the proposed annexation of 45.02 acres at 4408 Long Hollow Pk and a 1,770 feet section of Long Hollow Pk. right of way and roadway.
-The final master plan proposes sixty-six (66) lots for single-family homes.
-The proposal is zoned LDRPUD, Low Density Residential Planned Unit Development.
-The dwelling units per acre of 1.49, within LDRPUD, Low Density Residential Planned Unit Development up to 1.7 units per acre.
-The final master plan meets setback requirements, and exceeds rear setback requirements for lots that abut the Wynridge subdivision and the west side of the property.
-Primary access is from Long Hollow Pk/SR 174 with a proposed turn lane.
-The project design provides gated limited-access emergency drive that connects to Wynridge.
-The project design provides 29% open space, exceeding the 10% requirement.
-The plan identifies tree preservation/removal, street-yard plantings along Long Hollow Pk. and Type 1 buffer plantings using existing trees and supplemental shrubs.
-Outstanding Road Design Issues: Multiple roads exceed the maximum grade of 10%, need to clarify street section, ROW radii, stop signs/bars, sidewalk ramps, vertical curves, and coordination with TDOT on Long Hollow Pk. improvements.
-Outstanding Environment, Stream, and Erosion Control Issues: Additional information is needed regarding stream buffers, temporary construction access, any temporary stream crossings, and protective measures before installation of the proposed box culvert or bridge structures, the erosion control plans need additional measures for steep slopes, stabilization methods, and erosion control blankets.
-Outstanding Drainage and Stormwater Issues: Need to provide details on large drainage structures over the streams, need additional detail on the grading of lots, including building pads and diversion swales where drainage flows onto lots from higher elevations, need additional detail on how off site water will be addressed for Lots 35, 49, and 50, need to provide detention outlet details, easements, pond grading, riprap/outlet protection, pavement spread calculations, outfall locations, and water-quality unit placement.
-Outstanding Utilities Issues: Multiple sewer mains exceed the maximum grade of 10%, need details for the sewage pump station, sanitary sewer force main, utility easements, sewer profiles, and existing sewer connection detail.
-Motion Option-Approve the final master plan with the defined staff stipulations.
-Motion Option-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.
-Motion Option-Defer the request for the applicant to provide additional requested information as determined by the Planning Commission during the meeting discussion. (Staff Recommendation)

Planning Commission Discussion:
-Abby stated they have resubmitted and a lot of the easements are on the resubmittal, notations about the structures for storm drainage going over the streams, will make modifications to some of the sewer grades and the pump station design is currently with the vendor.

-Abby discussed roadway issues and road "F" being a steeper slope based on location.
-Abby stated that they have engineering comments that they have to finish up and get reviewed and approved as final before any permits or anything being issued.
-Trew stated he wanted to address some of the citizens comments and one thing he heard is that they want to be informed on what's going on.
-Trew asked if the access road is required by the Fire Marshal and is there no other place to put a second Entrance and during construction will they be using the access road in Wynridge to get to the construction site.
-Abby responded access road is required by the Fire Marshal and is supposed to be an emergency access only and generally it'll be only for fire and will not have construction traffic going through Wynridge.
-Phillips responded no it won't be used for construction traffic and won't be built until the last phase of the development gets complete and they can put the gate up as soon as the road gets connected.
-Trew asked if they were going to have at least 2 if not 3 trees per lot and do they plan to salvage any of the current trees.
-Abby responded yes to at least 2 trees per lot and they are working through to salvage some and even the ones that are currently being shown as removed anywhere they can salvage.
-Trew asked if they have the expertise to remove the trees without damage to adjacent property homes.
-Abby responded yes crews are able to accomplish that.
-Coats asked if there was a way to alleviate the Road "F" grade 13%, by lowering the grade on the driveways on the lot instead of on the road?
-Abby responded they will have to look into because it's based on location.
-Wheeler asked what was sent in today that is not part of the packet that they have in front of them tonight?
-Abby responded should be notations that talk about culverts, easements and street lighting.
-Attorney Freeman asked what specific easements would be involved?
-Abby responded they have added storm drainage easements, and sewer easements.
-Commissioner Gilmore commented that he understands the concerns the neighbors have for the access road and understands why we have to have it and wants to know is that something that would be on a list for the police department to go through and ensure the gate is locked and no access through that point.
-City Manager Ellis responded that will not be an issue and his intent would be for no other one to have a key to that lock and will be like a knox box lock.
-City Manager Ellis stated that it would be controlled totally by the City of Goodlettsville and can be checked daily.
-Commissioner Gilmore commented they have not had an opportunity to review changes brought in today and Road "F" grade is 13% but standard is 10% so we need to get to 10% or make changes to meet that standard and our standards are set for a reason.
-Commissioner Gilmore stated the discussion is open but will make a motion to defer for the applicant to provide additional information.

Motion: Motion by Commissioner Gilmore to defer the request for applicant to provide additional information.
-Parnell commented that they often approve plans with defined staff stipulations and that is one of the options here but recommended them to defer why in this case?
-Pfalzer responded that looking at the plans they lost three (3) lots since the preliminary master plan and general concern was in addressing some of the outstanding issues that the number of lots may not

be the same based on that.
-Pfalzer stated presenting the board with a proposal that is accurate is the goal.
-Parnell stated we are saying yes or no to the layout, and you're concerned that some of these comments may change the layout.
-Pfalzer responded yes.
-Parnell asked Abby to meet the staff stipulations do you think that will change the layout?
-Abby responded likely no, and if it does, it would be minor because the way the lots are set up he can't imagine it's going to take away any lots on those two (2) streets.
-Parnell discussed setting the road at 10% and the grading falls where it falls and if you have to have walls you will have walls.
-Phillips responded he did not think the plans are going to significantly change and if anything they would have to lose a lot.
-Parnell stated that a motion was made to defer, and he does not agree with that and thinks they should approve with defined staff stipulations and let them go back to the drawing table and fix it and if they lose a lot or two than they lose a lot or two or add walls.
-Trew stated we have a motion to defer; we had comments from Mr. Parnell that he did not agree with deferring, so we are looking for a second, and if we do not have a second, we will go to another motion.
-Mayor Tinnin discussed the motion made by Commissioner Gilmore and the information they received late this afternoon.
-Mayor Tinnin commented on a citizen's comment regarding City Manager Ellis about the project going forward, stating City Manager Ellis was more comfortable with deferring the project because of additional information they needed to review.
-Mayor Tinnin commented on the road access will be only an emergency gate with a knox box lock that only the fire department will have a key to the gate and will not be an access road.
-Mayor Tinnin stated that he did not see any major problems with the project and hope they keep moving forward but out of respect for the Planning Department will second Commissioner Gilmore's motion.

Motion: Motion by Commissioner Gilmore to defer the request for applicant to provide additional information, seconded by Mayor Tinnin. The motion passed five (5) yes votes and one (1) Parnell no vote.

DISCUSSION ITEM:

-Copper Valley Subdivision:
Sean Pfalzer advised that Copper Valley development located on Moncrief Ave. have a minor request to eliminate the pedestrian crossing as part of the development and maintain the pedestrian connections without the pedestrian bridge. They have proposed the removal of the pedestrian bridge and adding pickleball courts. Staff supports approval of this processing as an administrative adjustment.

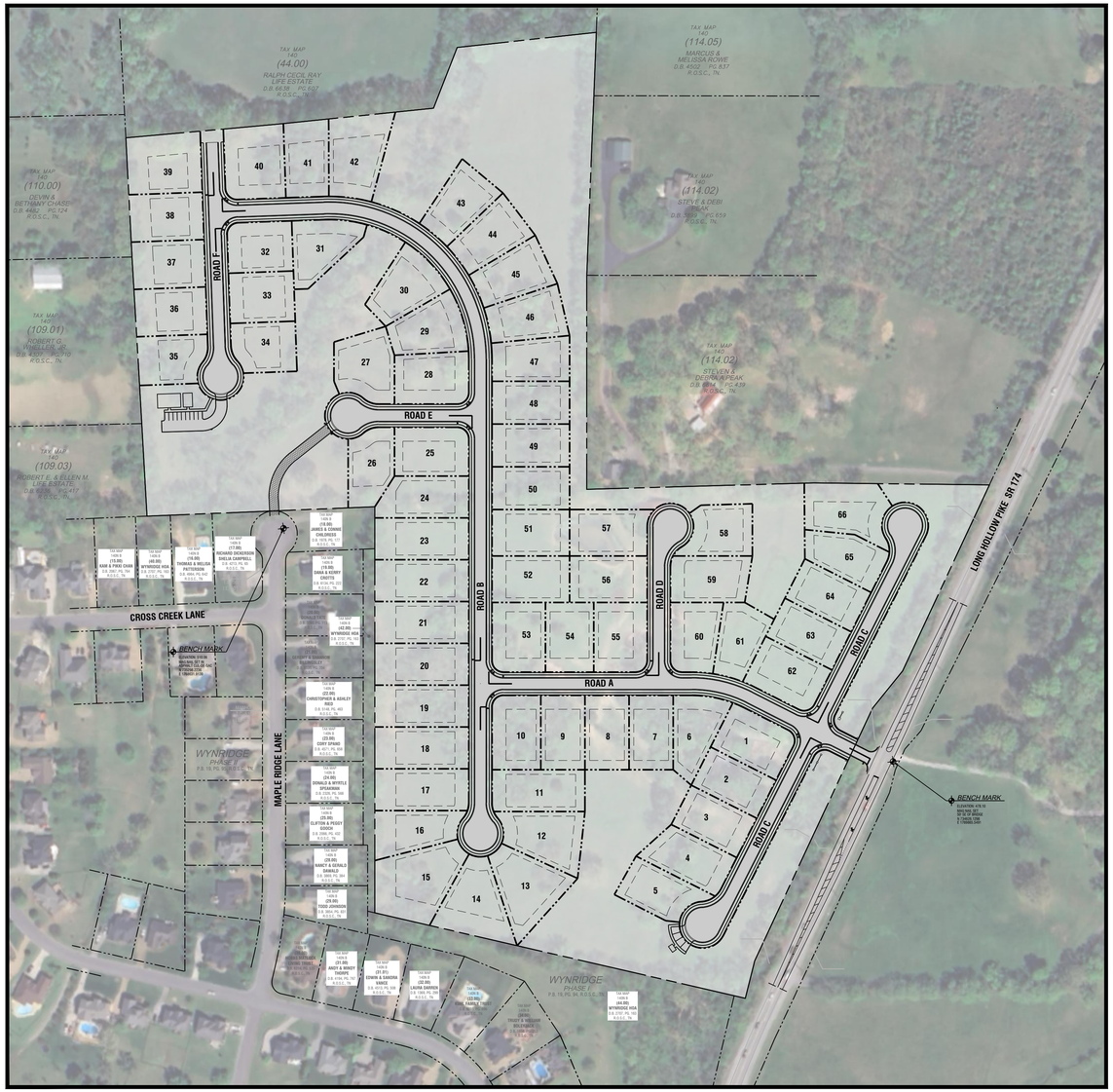
With no further business, the meeting was adjourned at 6:13 pm.

_____ _____

Scott Trew, Chairman Sharon Reed, Planning Assistant

FINAL MASTER DEVELOPMENT PLAN
FOR
IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

SITE DATA	
JURISDICTION:	CITY OF GOODLETTSVILLE
ZONING CLASSIFICATION:	LDRPUD - LOW DENSITY RESIDENTIAL PLANNED UNIT DEVELOPMENT
ADJACENT ZONING:	WEST - R-40 LOW DENSITY RESIDENTIAL WEST / SOUTH - LDRPUD LOW DENSITY RESIDENTIAL NORTH - SUMNER COUNTY RR RURAL RESIDENTIAL
PROPOSED USE:	SINGLE FAMILY RESIDENTIAL SUBDIVISION
PROJECT AREA:	44.31± ACRES or 1,930,190 SF±
LOT COUNT:	66 LOTS
ALLOWED DENSITY:	LDRPUD - 0.0 TO 1.7 UNITS PER ACRE
PROPOSED DENSITY:	1.49 UNITS PER ACRE
MIN. LOT SIZE:	15,000 SF
OPEN SPACE:	MINIMUM - 10%; PROVIDED - 29±% (12.9± ACRES)
MIN. YARD REQUIREMENTS:	
FRONT:	30'
SIDE:	10'
REAR:	20' (LOTS 14-26 and 35-42 HAVE A 45' REAR BUILDING SETBACK)
MIN. LOT WIDTH AT BUILDING SETBACK	VARIES - SEE PROTO TYPICAL LOT LAYOUT
PARKING REQUIREMENTS:	
SINGLE AND TWO-FAMILY:	4 SPACES PER UNIT WITH 3 OR MORE BEDROOMS
VISITOR PARKING:	REQUIRED: 1 PARKING SPACE PER 5 RESIDENTIAL UNITS REQUIRED - 66/5 =13 SPACES; PROVIDED 13 SPACES



JURISDICTION CONTACT

PLANNING DEPARTMENT
CITY OF GOODLETTSVILLE
318 NORTH MAIN STREET
GOODLETTSVILLE, TN 37072
615-851-2202

WASTEWATER SERVICES
CITY OF GOODLETTSVILLE
215 CARTWRIGHT STREET
GOODLETTSVILLE, TN 37072
615-851-3470

ELECTRIC
NASHVILLE ELECTRIC SERVICE
1214 CHURCH STREET
NASHVILLE, TN 37246
615-736-6900

WATER
WHITE HOUSE UTILITY DISTRICT
3303 HWY 31W
WHITE HOUSE, TN 37188
615-672-4110

NATURAL GAS
PIEDMONT NATURAL GAS
83 CENTURY BLVD
NASHVILLE, TN 37214
615-872-2310

OWNER
WILLIAM B. RALPH, JR. TRUSTEE
122 POSTWOOD PLACE
NASHVILLE, TN 37205

DEVELOPER
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
CONTACT: JASON PHILLIPS
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ENGINEER/APPLICANT
DEVELOPMENT MANAGEMENT GROUP, LLC
4209 GALLATIN PIKE
NASHVILLE, TENNESSEE 37216
CONTACT: DAVID ABBEY
(615) 227-5863

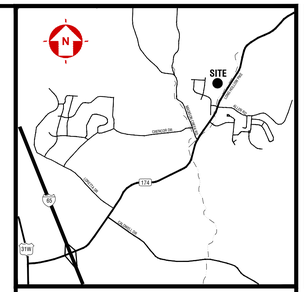
811 Know what's **below.** **Call** before you dig.

SITE BENCHMARKS:

BM 1
MAG NAIL SET 50' SE OF BRIDGE
ELEVATION: 478.10

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION: 466.98

BM3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06



VICINITY MAP

FLOOD NOTE:
BY GRAPHIC PLOTTING ONLY, PROJECT PARCEL IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AND IS SHOWN IN THE AREA ZONE 'X' ON FEMA FIRM MAP NUMBER 47165C0381H ON THE FLOOD INSURANCE RATE MAPS FOR CITY OF GOODLETTSVILLE, TN, WITH AN EFFECTIVE DATE OF 2/26/2017.

DISTURBED AREA:
TOTAL DISTURBED AREA = 34.0 ACRES±

SURVEY NOTE:
BASE INFORMATION WAS TAKEN FROM A BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY PRPARED BY BRACKMAN LAND SURVEYING DATED JANUARY 24, 2026, AND LIDAR INFORMATION. DEVELOPMENT MANAGEMENT GROUP, LLC SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY AND/OR COMPLETENESS OF THAT INFORMATION SHOWN HEREON OR ANY ERRORS OR OMISSIONS RESULTING FROM SUCH.

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TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
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DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

DAVID S. ABBEY
REGISTERED
LICENSED
LANDSCAPE
ARCHITECT
STATE OF TENNESSEE
5/22/26

REVISIONS		
NO.	DATE	DESCRIPTION

DATE:	05/22/26
DMG Project No:	25184

COVER SHEET
C0.0

ISSUED FOR: ☐ CHECKSET ▩ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION — AS NOTED

Z:\PROJECT DATABASE\2025\25184 – Philips Builders – Residential Development – 4408 Long Hollow Pike – Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C0.0 – Cov.dwg–Layout1 May 26, 2026 – 7:17am GaryEmerson

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

SITE BENCHMARKS:

BM 1
MAG NAIL SET 50' SE OF BRIDGE
ELEVATION: 478.10

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION: 466.98

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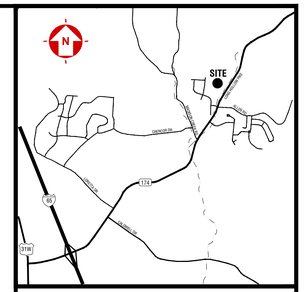

VICINITY MAP

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DEMOLITION NOTES:

CONTRACTOR TO USE EXTREME CARE NOT TO DAMAGE ANY ON-SITE OR OFF-SITE UTILITIES THAT ARE TO REMAIN AND/OR BE REUSED.

ANY CONCRETE CURB, CONCRETE PAVEMENT, ASPHALT PAVEMENT, GUARDRAILS, UTILITIES, STREET SIGNS, ETC. THAT ARE TO REMAIN THAT ARE DAMAGED DURING SITE IMPROVEMENTS SHALL BE REPLACED TO PRE CONSTRUCTION SPECIFICATIONS.

CONTRACTOR TO COORDINATE WITH CITY OF NORTH MYRTLE BEACH AND SCDOT FOR ALL WORK DONE IN THE RIGHT-OF-WAY.

ANY EXISTING UTILITY METERS ARE TO BE REMOVED. ALL EXISTING UTILITIES ARE TO BE CAPPED AT PROPERTY LINE.

DEMOLITION NOTES BY SYMBOL

CODE	DESCRIPTION	DETAIL
D1	REMOVE EXISTING RESIDENCE AND ALL SUPPORTING STRUCTURES	
D2	REMOVE EXISTING SHEDS AND BARNS AND ALL SUPPORTING STRUCTURES	
D3	REMOVE EXISTING FENCING AND GATES	
D4	REMOVE EXISTING BRIDGE/CONCRETE BOX	
D5	REMOVE EXISTING OVERHEAD ELECTRICAL SERVICE AND APPURTENANCES SERVING EXISTING RESIDENCE, TERMINATE SERVICE PER UTILITY PROVIDER SPECIFICATIONS	
D6	REMOVE EXISTING UTILITY SERVICES SERVING EXISTING RESIDENCE AND SHEDS/BARN, TERMINATE SERVICES PER UTILITY PROVIDER SPECIFICATIONS	
D7	REMOVE EXISTING STORM DRAINAGE PIPE	
D8	REMOVE EXISTING GRAVE DRIVE	
D9	REMOVE EXISTING TREE; SEE LANDSCAPE PLAN FOR ADDITIONAL INFORMATION	

TREE REMOVAL:

REFER TO SHEET L0.0 FOR TREE PRESERVATION AND REMOVAL PLAN

NOTE:

REFER TO SHEET C1.0 FOR GENERAL NOTES

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ▨ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 50 100 200 300

SCALE 1" = 100'

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DAVID S. ARGO
REGISTERED ENGINEER
AGRICULTURE
STATE OF TENNESSEE
26

REVISIONS

NO.	DESCRIPTION	DATE

DATE:	05/22/26
DMG Project No:	25184

EXISTING CONDITIONS

C0.1

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C0.1 Ex Cond.dwg–Layout1 May 26, 2026 – 7:24am GaryEmerson

SITE IMPROVEMENT NOTES:

1. THE SITE LAYOUT IS BASED ON DIMENSIONS AS NOTED.

2. THE CONTRACTOR SHALL CHECK ALL EXISTING CONDITIONS, (i.e. INVERTS, UTILITY ROUTINGS, UTILITY CROSSINGS, AND DIMENSIONS) IN THE FIELD PRIOR TO COMMENCEMENT OF UTILITY WORK. REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE.

3. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.

4. THE CONTRACTOR SHALL CONFORM TO ALL LOCAL CODES AND RECEIVE APPROVAL WHERE NECESSARY BEFORE CONSTRUCTION.

5. EXISTING PAVEMENT OF PUBLIC ROADWAYS SHALL BE PATCHED OR AS OTHERWISE DIRECTED IN ACCORDANCE WITH LOCAL AGENCY STANDARDS WHEREVER UTILITY INSTALLATION REQUIRES REMOVAL OF THE EXISTING PAVEMENT.

6. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. SLIGHT FIELD ADJUSTMENT OF FINAL GRADES MAY BE NECESSARY. WHERE IT BECOMES NECESSARY TO REMOVE EXISTING PAVEMENT, IT SHALL BE ACCOMPLISHED WITH A SAW CUT TO ACHIEVE A SMOOTH TRANSITION.

7. DIMENSIONS ARE TO EDGE OF PAVEMENT, FACE OF CURB AND/OR EXTERIOR FACE OF BUILDING UNLESS OTHERWISE NOTED.

8. CONCRETE FOR CURBS AND SIDEWALKS SHALL BE 3,500 PSI CONCRETE.

9. ANY WORK UNACCEPTABLE TO THE OWNER'S REPRESENTATIVE OR TO THE LOCAL GOVERNING AUTHORITY SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.

10. ADA ACCESSIBLE RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1:12.

11. THE CONTRACTOR SHALL PAVE IN THE DIRECTION OF TRAFFIC.

12. THE CONTRACTOR SHALL NOT BE REQUIRED TO ADJUST GRADES OF INTERSECTING STREETS, ALLEYS, ENTRANCES AND PRIVATE DRIVES AS DIRECTED BY THE ENGINEER.

13. ALL ROADWAY AND SIDEWALK CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF LOCAL GOVERNING AGENCY.

14. ALL CONSTRUCTION MATERIALS AND INSTALLATION SHALL CONFORM TO LOCAL GOVERNING AGENCY REGULATIONS AND SPECIFICATIONS.

15. ALL PAVEMENT MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE LOCAL GOVERNING AGENCY AND STATE DOT STANDARDS AND SPECIFICATIONS.

16. ALL CURBING WILL BE REQUIRED TO ADJUST TO THE GRADES OF INTERSECTING STREETS, ALLEYS, PUBLIC ENTRANCES, AND PRIVATE DRIVES AS DIRECTED BY THE ENGINEER.

17. THE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING THE SITE UNTIL THE WORK IS ACCEPTED IN TOTAL BY THE OWNER.

18. ANY DEFICIENCIES WITHIN THE SITE PRIOR TO TOTAL ACCEPTANCE BY THE OWNER MUST BE REPLACED IN KIND PER STANDARD DRAWINGS.

19. 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 REGISTERED LAND SURVEYOR.

20. THE PROPOSED BUILDING SHALL BE LAID OUT PER THE DIMENSIONS PROVIDED AND THE ARCHITECTURAL PLANS. DIMENSIONS SHOWN TO THE PROPOSED BUILDING ARE CALCULATED TO THE FACE OF THE EXTERIOR WALL. REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS.

CITY OF GOODLETTSVILLE GRADING AND EROSION CONTROL NOTES:

AN EROSION PREVENTION SILTATION CONTROL PLAN (EP&SC) AND LAND DISTURBANCE PERMIT SHALL BE IN PLACE PRIOR TO ANY GRADING, CLEARING AND/OR ANY OTHER CONSTRUCTION ACTIVITY. EROSION CONTROL DEVICES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD; GENERALLY CONSIDERED TO BE THROUGH THE COMPLETION OF RESTORATION. A COPY OF THE EP&SC PLAN ALONG WITH AN INSPECTION CHECKLIST AND STORMWATER PERMIT MUST BE AT THE PROJECT SITE AT ALL TIMES. THE INSPECTION CHECKLIST SHALL HAVE A RECORD OF DATES EP&SC DEVICES ARE INSPECTED AND ANY CORRECTION ACTION TAKEN OR MAJOR OBSERVATIONS. BMPS MUST BE INSPECTED BY A QUALIFIED PERSON AS NOTED BY THE CITY WHO HAS TAKEN AN APPROVED EROSION AND SEDIMENTATION COURSE (MIN. TDEC LEVEL 1).

ALL EP&SC DEVICES ARE TO REMAIN IN PLACE UNTIL THE SITE HAS BEEN STABILIZED AND A GOOD STAND OF GRASS HAS BEEN ESTABLISHED.

EROSION PREVENTION AND SEDIMENT CONTROLS MUST BE INSPECTED BEFORE A RAIN EVENT, WEEKLY, AND 24 HOURS AFTER A 0.25 INCH RAIN EVENT AND DOCUMENTED IN THE INSPECTION SITE CHECKLIST.

SILT FENCE OR OTHER SEDIMENT BARRIERS ARE TO BE INSTALLED PROPERLY ALONG TOPOGRAPHICAL CONTOURS DOWN SLOPE OF THE AREA TO BE DISTURBED PRIOR TO ANY GRADING, CLEARING AND/OR ANY OTHER CONSTRUCTION ACTIVITY.

EXCAVATED TOPSOIL TO BE REUSED MUST BE STOCKPILED AND ENCIRCLED WITH SILT FENCING.

THIS SITE SHALL CONTAIN A TEMPORARY STONE CONSTRUCTION ENTRANCE THAT CONFORMS TO THE CITY OF GOODLETTSVILLE'S STORMWATER ORDINANCE AND BEST MANAGEMENT PRACTICE MANUAL WITHIN 24 HOURS OF GRADING COMMENCEMENT OR THE LAND DISTURBANCE PERMIT WILL BE REVOKED. THE STONE SHALL BE 2 -3 INCH IN DIAMETER AND SHALL BE KEPT CLEAN BY ADDING STONE AS NEEDED. IT SHALL BE AT LEAST 6 INCHES DEEP UNDERLAIN WITH FILTER FABRIC AND 20 FEET WIDE.

APPROVED INLET PROTECTIONS FOR NEARBY STORM SEWER CURB AND DROP INLETS MUST BE INSTALLED WITHIN 24 HOURS OF GRADING COMMENCEMENT.

VEGETATIVE BUFFERS OR OTHER PROTECTION MUST BE PROVIDED ALONG STREAMS, RIVERS, AND PONDS TO AVOID EROSION OF BANKS.

STABILIZATION MEASURES MUST BE PERFORMED WITHIN SEVEN (7) DAYS IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, AND WITHIN FIFTEEN (15) DAYS AFTER FINAL GRADING.

ALL TREES DESIGNATED TO REMAIN, MUST BE PROTECTED. HEAVY EQUIPMENT SHOULD NOT BE OPERATED OR STORED, NOR MATERIALS HANDLED OR STORED, WITHIN THE DRIP LINE OF TREES.

SEDIMENT MUST BE REMOVED FROM SEDIMENT BARRIERS, PONDS AND OTHER SEDIMENT CONTROLS WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 33%.

SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN THE STREET OR DRAINAGE STRUCTURES MUST IMMEDIATELY BE PHYSICALLY REMOVED.

BUILDING AND WASTE MATERIALS, AND NON-STORM WATER DISCHARGES, SUCH AS CONCRETE, PAINT WASH WATER, OR MACHINERY LEAKAGE OR SPILLAGE MUST BE MANAGED TO PREVENT THEM FROM ENTERING THE STORM WATER SYSTEM, GROUND WATER OR NEARBY WATER BODY.

THE PROJECT IS SUBJECT TO INSPECTION BY THE CITY OF GOODLETTSVILLE AT ANY TIME AND ITEMS FOUND DEFICIENT SHALL BE IMMEDIATELY CORRECTED. THE CITY MAY STOP CONSTRUCTION ON PROPERTIES, OR ADMINISTER OTHER ENFORCEMENT ACTIONS AS DEFINED BY GOODLETTSVILLE'S *STORMWATER MANAGEMENT ORDINANCE* INCLUDING CIVIL PENALTIES OF $50 TO $5,000 PER DAY OF VIOLATION.

SITE DEMOLITION NOTES

1. THE CONTRACTOR SHALL CONFORM TO LOCAL CODES, OBTAIN ALL PERMITS AND GIVE ALL NOTICES REQUIRED FOR EXECUTION OF THE WORK.

2. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL CHARTED AND UNCHARTED UTILITIES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN, REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.

3. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL VERIFY THE LIMITS OF DEMOLITION WITH THE OWNER'S REPRESENTATIVE.

4. SAW CUT TO PROVIDE A CLEAN EDGE IN AREAS WHERE EXISTING PAVEMENT, WALKS, OR CURBS ARE TO BE REMOVED. THE EXTENT OF PAVEMENT DEMOLITION SHALL BE COORDINATED WITH THE LIMIT OF NEW IMPROVEMENTS ON THE PROPOSED SITE IMPROVEMENT PLANS.

5. THE CONTRACTOR SHALL COORDINATE PHASING OF THE DEMOLITION WITH THE OWNER'S REPRESENTATIVE AND LOCAL GOVERNING AGENCY PRIOR TO BEGINNING WORK. DISRUPTION OF EXISTING UTILITY SERVICES AND TRAFFIC PATTERNS SHALL BE MINIMIZED TO THE EXTENT POSSIBLE AND INITIATED ONLY AFTER APPROVAL BY THE LOCAL GOVERNING AGENCY AND THE UTILITY COMPANIES.

6. CAVITIES LEFT BY STRUCTURE REMOVAL SHALL BE SUITABLY BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS AND SPECIFICATIONS.

7. THE CONTRACTOR SHALL USE WATER SPRINKLING AND/OR OTHER SUITABLE METHODS AS NEEDED TO CONTROL DUST CAUSED BY THE DEMOLITION WORK.

8. THE CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION AND REMOVAL NECESSARY TO ACCOMPLISH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

9. THE CONTRACTOR SHALL PRESERVE AND PROTECT SURVEY CONTROL POINTS AND SHALL BE RESPONSIBLE FOR REPLACEMENT OF ANY DISTURBED CONTROL POINTS AT NO COST TO THE OWNER. ANY REPLACEMENT OF DISTURBED CONTROL POINTS TO BE PERFORMED BY A REGISTERED LAND SURVEYOR.

10. SITE LIGHTING DEMOLITION AND LAYOUT SHALL BE COORDINATED WITH THE ELECTRICAL DRAWINGS.

11. RELOCATION OF EXISTING PLANT MATERIALS SHALL BE COORDINATED WITH THE OWNER AND RELOCATED TO A DESIGNATED AREA ON SITE.

12. EXISTING SHRUBS TO BE PRESERVED ARE TO BE BARRICADED BEFORE BEGINNING CONSTRUCTION.

13. NO UTILITY OR STORM SEWER LINES SHALL BE DEMOLISHED UNTIL THE NEW LINES HAVE BEEN INSTALLED, INSPECTED, AND ARE PLACED INTO OPERATION.

14. THE CONTRACTOR SHALL INCORPORATE INTO HIS WORK ANY ISOLATION VALVES OR TEMPORARY PLUGS REQUIRED TO CONSTRUCT NEW UTILITY LINES WHILE DEMOLISHING EXISTING UTILITY LINES.

CITY OF GOODLETTSVILLE STORMWATER ORDINANCE:

1. CONTRACTOR SHALL ALSO REFER TO SECTION 18 CHAPTER 3 FOR ANY ADDITIONAL REQUIREMENTS AS SET FORTH WITHIN THE CITY OF GOODLETTSVILLE ORDINANCE AS IT RELATES TO STORMWATER MANAGEMENT. ANY ITEMS THAT ARE MORE RESTRICTIVE WITHIN THE CITY ORDINANCE THAN THE TDEC MANUAL SHALL BE FOLLOWED.

CITY OF GOODLETTSVILLE WASTEWATER DEPARTMENT NOTES:

1. ALL LABOR, MATERIALS, SUPPLIES, AND EQUIPMENT REQUIRED TO COMPLETE THE SANITARY SEWER WORKS OF THIS PROJECT SHALL BE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS OF THE CITY OF GOODLETTSVILLE WASTEWATER DEPARTMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE CITY OF GOODLETTSVILLE TO VERIFY THE REQUIRED MINIMUM STANDARDS OF CONSTRUCTION.

SITE GRADING & EROSION CONTROL NOTES:

1. CONTRACTOR SHALL CONFORM TO ALL APPLICABLE CODES AND OBTAIN APPROVAL AS NECESSARY BEFORE BEGINNING CONSTRUCTION.

2. CONSTRUCT SILT BARRIERS BEFORE BEGINNING GRADING OPERATIONS.

3. REMOVE SEDIMENT FROM ALL DRAINAGE STRUCTURES BEFORE ACCEPTANCE BY LOCAL GOVERNING AGENCY, OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

4. CLEAN SILT BARRIERS WHEN THEY ARE APPROXIMATELY 50% FILLED WITH SEDIMENT OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. SILT BARRIERS SHALL BE REPLACED AS EFFECTIVENESS IS SIGNIFICANTLY REDUCED, OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

5. REMOVE THE TEMPORARY EROSION AND WATER POLLUTION CONTROL DEVICES ONLY AFTER A SOLID STAND OF GRASS HAS BEEN ESTABLISHED ON GRADED AREAS AND WHEN IN THE OPINION OF THE OWNER'S REPRESENTATIVE, THEY ARE NO LONGER NEEDED.

6. PROVIDE TEMPORARY CONSTRUCTION ACCESS(ES) AT THE POINT(S) WHERE CONSTRUCTION VEHICLES EXIT THE CONSTRUCTION AREA. MAINTAIN PUBLIC ROADWAYS FREE OF TRACKED DEBRIS.

7. THE CONTRACTOR SHALL CHECK ALL EXISTING GRADES AND DIMENSIONS IN THE FIELD PRIOR TO BEGINNING WORK AND REPORT ANY DISCREPANCIES TO THE ENGINEER.

8. THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT PROVISIONS OF THE MANUAL OF ACCIDENT PREVENTION AND CONSTRUCTION ISSUED BY AGC OF AMERICA, INC. AND THE SAFETY AND HEALTH REGULATIONS OF CONSTRUCTION ISSUED BY THE U.S. DEPARTMENT OF LABOR.

9. PROPOSED CONTOUR LINES AND SPOT ELEVATIONS ARE THE RESULT OF AN ENGINEERED GRADING DESIGN AND REFLECT A PLANNED INTENT WITH REGARD TO DRAINAGE AND MOVEMENT OF MATERIALS. SHOULD THE CONTRACTOR HAVE ANY QUESTION OF THE INTENT OR ANY PROBLEM WITH THE CONTINUITY OF GRADES, THE ENGINEER SHALL BE CONTACTED IMMEDIATELY.

10. ALL PIPES UNDER EXISTING PAVED AREAS SHALL BE BACKFILLED TO THE TOP OF SUBGRADE WITH CRUSHED STONE.

11. THIS GRADING & DRAINAGE PLAN IS NOT A DETERMINATION OR GUARANTEE OF THE SUITABILITY OF THE SUBSURFACE CONDITIONS FOR THE WORK INDICATED. A GEOTECHNICAL ENGINEER MAY BE REQUIRED TO REVIEW THE SUITABILITY AS NEEDED. DETERMINATION OF THE SUBSURFACE CONDITION FOR THE WORK INDICATED IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

12. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO COMPACT FILL SUFFICIENTLY AROUND AND OVER ALL PIPES, STRUCTURES, VALVE STEMS, ETC., INSIDE THE PROPOSED PAVED AREAS TO AVOID SETTLEMENT. ANY SETTLEMENT DURING THE WARRANTY PERIOD SHALL BE RESTORED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

13. 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.

14. POSITIVE DRAINAGE SHALL BE ESTABLISHED AS THE FIRST ORDER OF WORK AND SHALL BE MAINTAINED AT ALL TIMES DURING AND AFTER CONSTRUCTION. SOIL SOFTENED BY PERCHED WATER IN FOUNDATION AND PAVEMENT AREAS MUST BE UNDERCUT AND REPLACED WITH SUITABLE FILL MATERIALS APPROVED BY THE GEOTECHNICAL ENGINEER. IF GROUNDWATER INFILTRATION IS ENCOUNTERED, THE WATER SHALL BE REMOVED USING GRAVITY DRAINAGE OR PUMPING.

15. ALL FILL MATERIAL SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT. THIS MATERIAL SHALL BE PLACED IN LIFTS DIRECTED BY A GEOTECHNICAL ENGINEER AND COMPACTED TO REQUIREMENTS NOTED IN THE GEOTECHNICAL REPORT. ALL GRADING AND FILLING WORK SHALL BE ACCOMPLISHED AS DIRECTED BY A GEOTECHNICAL ENGINEER.

16. SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES IS TO BE PLACED AT A SITE APPROVED BY THE ENGINEER. IT SHALL BE TREATED IN A MANNER SO THAT THE AREA AROUND THE DISPOSAL SITE WILL NOT BE CONTAMINATED OR DAMAGED BY THE SEDIMENT IN THE RUN-OFF. COST FOR THIS TREATMENT IS TO BE INCLUDED IN PRICE BID FOR EARTHWORK. THE CONTRACTOR SHALL OBTAIN THE DISPOSAL SITE AS PART OF THIS WORK.

17. ANY SITE USED FOR DISPOSAL AND/OR STOCKPILE OF ANY MATERIAL SHALL BE PROPERLY PERMITTED FOR SUCH ACTIVITY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEE THAT ALL REQUIRED PERMITS ARE SECURED FOR EACH PROPERTY UTILIZED. A COPY OF THE APPROVED PERMIT MUST BE PROVIDED TO THE INSPECTOR PRIOR TO COMMENCEMENT OF WORK ON ANY PROPERTY. FAILURE TO DO SO MAY RESULT IN THE CONTRACTOR REMOVING ANY ILLEGALLY PLACED MATERIAL AT HIS OWN EXPENSE.

18. CONTRACTOR SHALL PROVIDE MINIMUM 6" TOPSOIL IN LAWN AREAS. CONTRACTOR SHALL PROVIDE MINIMUM 8" SOIL MIXTURE WITHIN LANDSCAPE BEDS AND ADDITIONAL DEPTH FOR SHRUBS AND TREES PER PLANTING DETAILS.

19. STRIP TOPSOIL FROM ALL CUT & FILL AREAS AND STOCKPILE UPON COMPLETION OF GENERAL GRADING OVER ALL DISTURBED AREAS, TO A MINIMUM DEPTH OF 6". CONTRACTOR SHALL FURNISH & INSTALL ADDITIONAL TOPSOIL IF INSUFFICIENT QUANTITIES EXIST ONSITE.

20. ALL DRAINAGE CONSTRUCTION MATERIALS AND INSTALLATION SHALL CONFIRM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE LOCAL GOVERNING AGENCY.

21. MULCH & SOD ALL DISTURBED AREAS NO LATER THEN 14 DAYS AFTER FINAL GRADING IS COMPLETED. UNLESS OTHERWISE NOTED HEREON, THE CONTRACTOR SHALL TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.

22. THE CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.

23. ALL CUT/FILL SLOPES SHALL BE 3 HORIZONTAL AND 1 VERTICAL OR FLATTER UNLESS NOTED OTHERWISE HEREON.

24. ALL EARTHWORK, INCLUDING THE EXCAVATED SUBGRADE AND EACH LAYER OF FILL SPECIFIED WITHIN THE GEOTECHNICAL REPORT SHALL BE MONITORED AND APPROVED BY A QUALIFIED GEOTECHNICAL ENGINEER, OR HIS REPRESENTATIVE. ALL FILL MATERIALS SHALL BE APPROVED BY T HE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT. ALL MATERIALS SHALL BE PLACED IN LIFTS AS DIRECTED BY THE GEOTECHNICAL ENGINEER AND COMPACTED TO 95% STANDARD PROCTOR. ALL GRADING AND FILLING WORK SHALL BE ACCOMPLISHED AS DIRECTED BY A GEOTECHNICAL ENGINEER. THE GENERAL CONTRACTOR WILL BE PROVIDED WITH A COPY OF THE GEOTECHNICAL REPORT DURING THE BIDDING PROCESS AND PRIOR TO ANY CONSTRUCTION.

25. IF ANY SPRINGS OR UNDERGROUND STREAMS ARE ENCOUNTERED OR EXPOSED DURING CONSTRUCTION, PERMANENT FRENCH DRAINS MAY BE REQUIRED. THE DRAINS SHALL BE SPECIFIED AND LOCATED DURING CONSTRUCTION AS REQUIRED BY THE CONDITIONS WHICH ARE ENCOUNTERED AND SHALL ALSO REQUIRE APPROVAL FROM THE ENGINEER.

26. DO NOT DISTURB VEGETATION OR REMOVE TREES EXCEPT WHEN NECESSARY FOR GRADING PURPOSES.

27. FILL SLOPES 3:1 AND GREATER SHALL BE PLACED AND COMPACTED 5' BEYOND PROPOSED LIMITS AND THEN EXCAVATED BACK TO THE PROPOSED LOCATION.

28. STOCKPILED TOPSOIL OR FILL MATERIAL IS TO BE TREATED SO THE SEDIMENT RUN-OFF WILL NOT CONTAMINATE SURROUNDING AREAS OR ENTER NEARBY STREAMS.

29. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO WASTE EXCESS EARTH MATERIAL OFFSITE AT NO ADDITIONAL COST TO THE OWNER. IT SHALL ALSO BE THE CONTRACTOR'S RESPONSIBILITY TO IMPORT SUITABLE MATERIALS (AT NO ADDITIONAL COST TO THE OWNER) FOR EARTHWORK OPERATIONS IF SUFFICIENT AMOUNTS OF EARTH MATERIALS ARE NOT AVAILABLE ONSITE.

SITE UTILITY NOTES:

1. THE SANITARY SEWER SHALL BE SCH. 40 PVC UNLESS NOTED OTHERWISE. CONTRACTOR SHALL MARK THE LOCATION OF ALL NEW PVC LINES WITH #8 WIRE (16 GAUGE).

2. PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED AROUND UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS.

3. PROVIDE A MINIMUM 36" OF COVER OVER ALL WATER LINES.

4. THE CONTRACTOR SHALL MAINTAIN 10 FEET HORIZONTAL SEPERATION BETWEEN SANITARY SEWER LINES AND WATER LINES. WHERE THIS CRITERIA CANNOT BE MET, THE CONTRACTOR SHALL MAINTAIN 18" VERTICAL SEPARATION BETWEEN WATER AND SEWER LINES.

5. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL CHARTED AND UNCHARTED UTILITIES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE GOVERNING UTILITY COMPANY.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SEQUENCING OF CONSTRUCTION FOR ALL UTILITY LINES SO THAT WATER LINES DO NOT CONFLICT WITH SANITARY SEWERS, SANITARY SEWER SERVICES, STORM SEWERS, OR ANY OTHER UTILITY OR STRUCTURE, EXISTING OR PROPOSED.

7. THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.

8. BEFORE CONNECTIONS ARE MADE INTO EXISTING UTILITIES, THE NEW LINES ARE TO BE FLUSHED AND TESTED BY THE CONTRACTOR IN ACCORDANCE WITH APPROPRIATE GOVERNING UTILITY PROVIDER SPECIFICATIONS.

9. ALL TRENCHES CUT IN EXISTING ROADS OR DRIVES SHALL UTILIZE A CLEAN SAW CUT AND SHALL BE BACKFILLED (100%) TO FINAL SUBGRADE WITH #57 STONE.

10. REPAIR ALL DAMAGE TO EXISTING FEATURES (i.e. DRIVES, ROADS, YARDS, LANDSCAPING, ETC...,) TO PRE-CONSTRUCTION CONDITION.

11. THE CONTRACTOR SHALL PROVIDE ALL HORIZONTAL AND VERTICAL BENDS TO ATTAIN THE ALIGNMENT INDICATED ON THE PLANS. PROVIDE VERTICAL BENDS WHERE NECESSARY TO ALLOW WATER LINES TO PASS UNDER OR OVER OTHER UTILITY LINES. (ALL BENDS AND BRACES NEEDED MAY NOT BE ACTUALLY SHOWN). PROVIDE BRACING AND/OR RODDING AT ALL BENDS AND TEES AS REQUIRED BY APPROPRIATE GOVERNING UTILITY PROVIDER SPECIFICATIONS.

12. REDUCED PRESSURE BACKFLOW PREVENTER (RPBP) OR DUAL CHECK WILL BE REQUIRED ON ALL TESTS AND FILL LINES (JUMPER) NEEDED FOR WATER MAIN CONSTRUCTION AND MUST BE APPROVED BY APPROPRIATE GOVERNING UTILITY PROVIDER.

13. COORDINATE THE EXACT LOCATION OF ALL UTILITIES ENTERING THE BUILDING WITH THE PLUMBING PLANS.

14. THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT PROVISIONS OF THE MANUAL OF ACCIDENT PREVENTION AND CONSTRUCTION ISSUED BY AGC OF AMERICA.

15. THE CONTRACTOR SHALL VERIFY REQUIRED PIPE LENGTHS, EXISTING PIPE MATERIAL AND SIZES AS SHOWN ON PLANS.

16. REPAIR EXISTING SITE FEATURES THAT ARE DAMAGED BY CONSTRUCTION ACTIVITIES TO A LIKE NEW CONDITION AT NO ADDITIONAL COST TO THE OWNER.

17. THE PROPOSED ELECTRIC, GAS, AND TELEPHONE LINE CONSTRUCTION AND INSTALLATION SHALL BE COORDINATED WITH THE APPROPRIATE GOVERNING UTILITY AGENCY BY THE CONTRACTOR.

18. WHERE DRAINAGE OR UTILITY LINES OCCUR IN FILL AREAS, THE FILL MATERIAL IS TO BE PLACED AND COMPACTED TO (95%) OF MAXIMUM DRY DENSITY ACCORDING TO ASTM (D-698) PRIOR TO INSTALLATION OF DRAINAGE OR UTILITY LINES. FILL IS TO BE INSPECTED BY A PROFESSIONAL GEOTECHNICAL ENGINEER TESTING FIRM EMPLOYED BY THE OWNER. RESULTS OF THE TEST SHALL BE FURNISHED TO THE OWNER'S REPRESENTATIVE. CONTRACTOR TO PAY FOR ALL TESTING.

19. THE CONTRACTOR SHALL ADJUST THE ALIGNMENT OF THE WATER LINES (HORIZONTALLY AND/OR VERTICALLY) TO ALLOW THE REQUIRED BRACING AT BENDS AND TEES.

20. THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFE GUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER.

21. CONTRACTORS FOR PUBLIC WATER AND SEWER WORK MUST BE APPROVED BY THE LOCAL UTILITY AGENCY.

22. ALL WATER LINES AND APPURTENANCES SHALL BE OF MATERIALS AND CONSTRUCTION THAT CONFORM TO LOCAL UTILITY AGENCY SPECIFICATIONS.

23. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT HORIZONTAL AND VERTICAL LOCATION OF EXISTING MANHOLES OR SANITARY SEWER LINES AT THE POINT OF CONNECTION PRIOR TO THE COMMENCEMENT OF ORDERING OF MATERIALS, CONSTRUCTION OR REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.

24. CONTRACTOR TO REFER TO ELECTRICAL PLANS FOR LOCATION OF ANY ELECTRICAL SERVICE TO THE BUILDING.

25. MAIN LINE WATER & SEWER TAPS WILL BE COORDINATED WITH APPROPRIATE GOVERNING UTILITY PROVIDER.

UTILITY NOTES AND OWNERS

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 reguard 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 soley responsible for contacting the utility location service prior to commencing construction.

SEWER
GOODLETTSVILLE WASTEWATER
215 CARTWRIGHT STREET
GOODLETTSVILLE, TN 37072
(615) 851-3470

WATER
WHITE HOUSE UTILITY DISTRICT
PO BOX 608
WHITE HOUSE, TN 37188
(615) 672-4110 EXT. 257

GAS
PIEDMONT NATURAL GAS
541 SPENCE LANE
NASHVILLE, TN 37210
(615) 872-2349

ELECTRIC
NASHVILLE ELECTRIC SERVICE
1214 CHURCH STREET
NASHVILLE, TN 37246
(615) 747-3289

ISSUED FOR: ☐ CHECKSET ▒ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

DAVID S. ABERY
REGISTERED AGENT
ACTIVE
LICENSED
PROFESSIONAL
ENGINEER
STATE OF TENNESSEE
56

REVISIONS

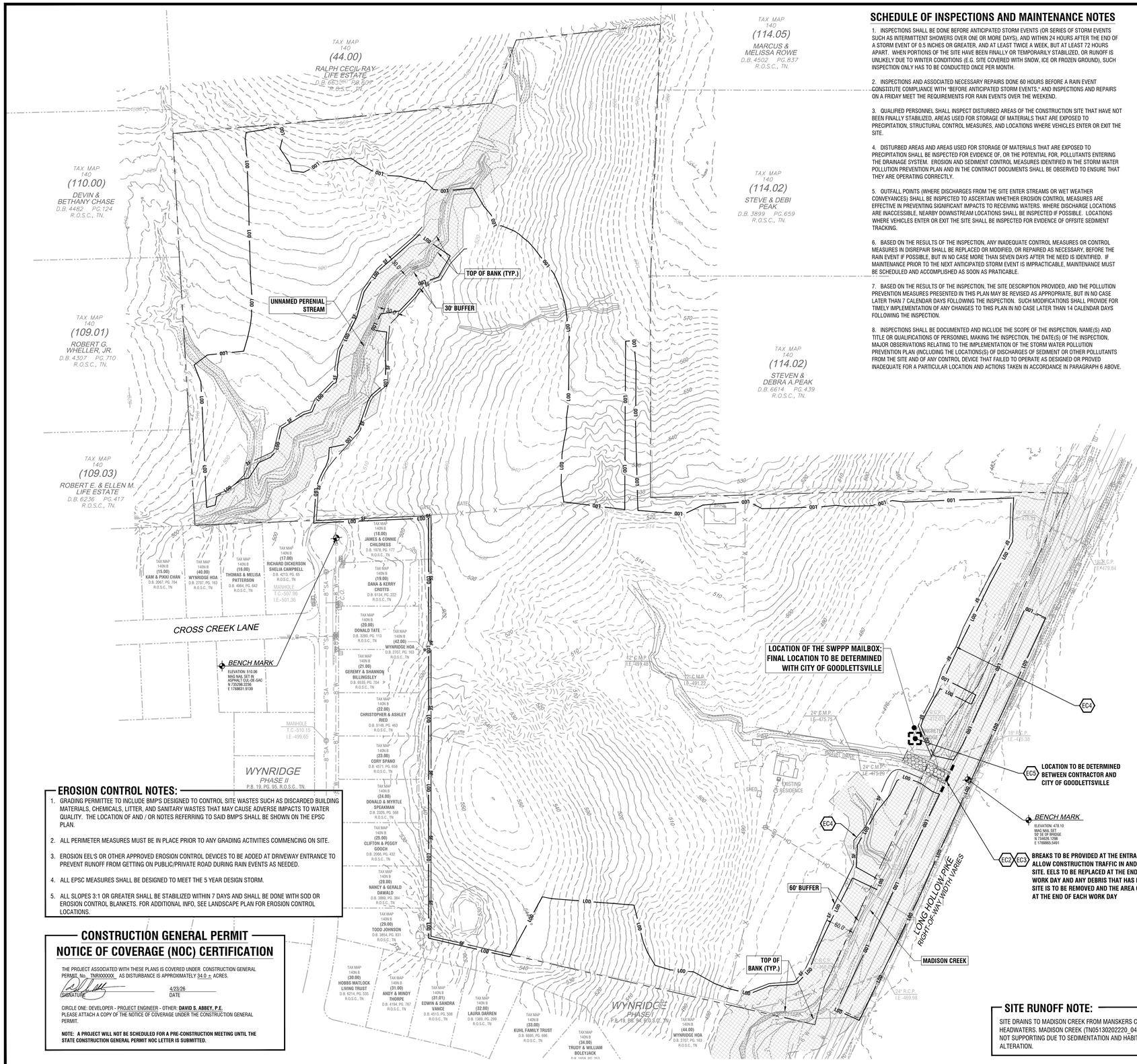
NO.	DATE	DESCRIPTION

DATE:	05/04/26
DMG Project No:	25184

GENERAL NOTES

C1.0

Z:\PROJECT DATABASE\2025\25184 - Phillips Builders - Residential Development - 4408 Long Hollow Pike -Goodlettsville TN\Plans\Engineer\25184 - Ironwood_C1.0 - Note.dwg-Layout1 May 04, 2026 - 9:52am GaryEmerson



SCHEDULE OF INSPECTIONS AND MAINTENANCE NOTES

1. INSPECTIONS SHALL BE DONE BEFORE ANTICIPATED STORM EVENTS (OR SERIES OF STORM EVENTS SUCH AS INTERMITTENT SHOWERS OVER ONE OR MORE DAYS), AND WITHIN 24 HOURS AFTER THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER, AND AT LEAST TWICE A WEEK, BUT AT LEAST 72 HOURS APART. WHEN PORTIONS OF THE SITE HAVE BEEN FINALLY OR TEMPORARILY STABILIZED, OR RUNOFF IS UNLIKELY DUE TO WINTER CONDITIONS (E.G. SITE COVERED WITH SNOW, ICE OR FROZEN GROUND), SUCH INSPECTION ONLY HAS TO BE CONDUCTED ONCE PER MONTH.

2. INSPECTIONS AND ASSOCIATED NECESSARY REPAIRS DONE 60 HOURS BEFORE A RAIN EVENT CONSTITUTE COMPLIANCE WITH "BEFORE ANTICIPATED STORM EVENTS," AND INSPECTIONS AND REPAIRS ON A FRIDAY MEET THE REQUIREMENTS FOR RAIN EVENTS OVER THE WEEKEND.

3. QUALIFIED PERSONNEL SHALL INSPECT DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.

4. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE STORM WATER POLLUTION PREVENTION PLAN AND IN THE CONTRACT DOCUMENTS SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY.

5. OUTFALL POINTS (WHERE DISCHARGES FROM THE SITE ENTER STREAMS OR WET WEATHER CONVEYANCES) SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWNSTREAM LOCATIONS SHALL BE INSPECTED IF POSSIBLE. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFFSITE SEDIMENT TRACKING.

6. BASED ON THE RESULTS OF THE INSPECTION, ANY INADEQUATE CONTROL MEASURES OR CONTROL MEASURES IN DISREPAIR SHALL BE REPLACED OR MODIFIED, OR REPAIRED AS NECESSARY, BEFORE THE RAIN EVENT IF POSSIBLE, BUT IN NO CASE MORE THAN SEVEN DAYS AFTER THE NEED IS IDENTIFIED. IF MAINTENANCE PRIOR TO THE NEXT ANTICIPATED STORM EVENT IS IMPRACTICABLE, MAINTENANCE MUST BE SCHEDULED AND ACCOMPLISHED AS SOON AS PRATICABLE.

7. BASED ON THE RESULTS OF THE INSPECTION, THE SITE DESCRIPTION PROVIDED, AND THE POLLUTION PREVENTION MEASURES PRESENTED IN THIS PLAN MAY BE REVISED AS APPROPRIATE, BUT IN NO CASE LATER THAN 7 CALENDAR DAYS FOLLOWING THE INSPECTION. SUCH MODIFICATIONS SHALL PROVIDE FOR TIMELY IMPLEMENTATION OF ANY CHANGES TO THIS PLAN IN NO CASE LATER THAN 14 CALENDAR DAYS FOLLOWING THE INSPECTION.

8. INSPECTIONS SHALL BE DOCUMENTED AND INCLUDE THE SCOPE OF THE INSPECTION, NAME(S) AND TITLE OR QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN (INCLUDING THE LOCATIONS(S) OF DISCHARGES OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE AND OF ANY CONTROL DEVICE THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION AND ACTIONS TAKEN IN ACCORDANCE IN PARAGRAPH 6 ABOVE.

EROSION CONTROL NOTES:

1. GRADING PERMITTEE TO INCLUDE BMPS DESIGNED TO CONTROL SITE WASTES SUCH AS DISCARDED BUILDING MATERIALS, CHEMICALS, LITTER, AND SANITARY WASTES THAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY. THE LOCATION OF AND / OR NOTES REFERRING TO SAID BMP'S SHALL BE SHOWN ON THE EPSC PLAN.
2. ALL PERIMETER MEASURES MUST BE IN PLACE PRIOR TO ANY GRADING ACTIVITIES COMMENCING ON SITE.
3. EROSION EEL'S OR OTHER APPROVED EROSION CONTROL DEVICES TO BE ADDED AT DRIVEWAY ENTRANCE TO PREVENT RUNOFF FROM GETTING ON PUBLIC/PRIVATE ROAD DURING RAIN EVENTS AS NEEDED.
4. ALL EPSC MEASURES SHALL BE DESIGNED TO MEET THE 5 YEAR DESIGN STORM.
5. ALL SLOPES 3:1 OR GREATER SHALL BE STABILIZED WITHIN 7 DAYS AND SHALL BE DONE WITH SOD OR EROSION CONTROL BLANKETS. FOR ADDITIONAL INFO, SEE LANDSCAPE PLAN FOR EROSION CONTROL LOCATIONS.

CONSTRUCTION GENERAL PERMIT
NOTICE OF COVERAGE (NOC) CERTIFICATION

THE PROJECT ASSOCIATED WITH THESE PLANS IS COVERED UNDER CONSTRUCTION GENERAL PERMIT, No. TNRXXXXXX, AS DISTURBANCE IS APPROXIMATELY 34.0 ± ACRES.

SIGNATURE — 4/23/26 DATE

CIRCLE ONE: DEVELOPER - PROJECT ENGINEER - OTHER: **DAVID S. ABBEY, P.E.**
PLEASE ATTACH A COPY OF THE NOTICE OF COVERAGE UNDER THE CONSTRUCTION GENERAL PERMIT.

NOTE: A PROJECT WILL NOT BE SCHEDULED FOR A PRE-CONSTRUCTION MEETING UNTIL THE STATE CONSTRUCTION GENERAL PERMIT NOC LETTER IS SUBMITTED.

SITE RUNOFF NOTE:

SITE DRAINS TO MADISON CREEK FROM MANSKERS CREEK TO HEADWATERS. MADISON CREEK (TN0513020222O_0400) IS NOT SUPPORTING DUE TO SEDIMENTATION AND HABITAT ALTERATION.

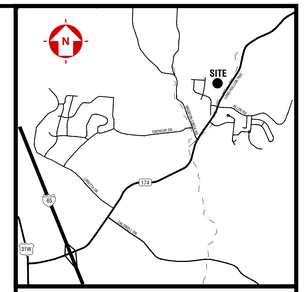
Know what's **below.** **Call** before you dig.

SITE BENCHMARKS:

BM 1
MAG NAIL SET 50' SE OF BRIDGE
ELEVATION: 478.10

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION: 466.98

BM3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06



VICINITY MAP

FLOOD NOTE:
BY GRAPHIC PLOTTING ONLY, PROJECT PARCEL IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AND IS SHOWN IN THE AREA ZONE 'X' ON FEMA FIRM MAP NUMBER 47165C0381H ON THE FLOOD INSURANCE RATE MAPS FOR CITY OF GOODLETTSVILLE, TN, WITH AN EFFECTIVE DATE OF 2/26/2017.

DISTURBED AREA:
TOTAL DISTURBED AREA = 34.0 ACRES±

SURVEY NOTE:
BASE INFORMATION WAS TAKEN FROM A BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY PRPARED BY BRACKMAN LAND SURVEYING DATED JANUARY 24, 2026, AND LIDAR INFORMATION. DEVELOPMENT MANAGEMENT GROUP, LLC SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY AND/OR COMPLETENESS OF THAT INFORMATION SHOWN HEREON OR ANY ERRORS OR OMISSIONS RESULTING FROM SUCH.

TYPICAL NOTES

1. ALL CONTROL MEASURES MUST BE PROPERLY SELECTED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURE'S SPECIFICATIONS AND THE CONTRACT DOCUMENTS. IF PERIODIC INSPECTIONS OR OTHER INFORMATION INDICATES A CONTROL HAS BEEN USED INAPPROPRIATELY OR INCORRECTLY, THE CONTRACTOR MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS.
2. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFFSITE IMPACTS. PERMITTEES SHALL NOT INITIATE REMEDIATION/RESTORATION OF A STREAM WITHOUT CONSULTING THE REGULATING AGENCY FIRST. THIS PERMIT DOES NOT, HOWEVER, AUTHORIZE ACCESS TO PRIVATE PROPERTY.
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3. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORM WATER SHALL BE PICKED UP PRIOR TO ANTICIPATED STORM EVENTS, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.
4. PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 7 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA IS SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED.
5. CLEARING AND GRUBBING MUST BE HELD TO THE MINIMUM NECESSARY FOR GRADING AND EQUIPMENT OPERATION.
6. CONSTRUCTION MUST BE SEQUENCED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED AREAS.
7. EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE AND FUNCTIONAL BEFORE EARTH MOVING OPERATIONS BEGIN, AND MUST BE CONSTRUCTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. TEMPORARY MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORK DAY, BUT MUST BE REPLACED AT THE END OF THE WORK DAY.
8. THE FOLLOWING RECORDS SHALL BE MAINTAINED ON SITE; THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR; THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
9. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN SEVEN DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. EXCEPT IN THE FOLLOWING TWO SITUATIONS: (1). WHERE THE INITIATION OF STABILIZATION MEASURES BY THE SEVENTH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL; OR (2). WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 7 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE.
10. CONSTRUCTION MUST BE PHASED FOR PROJECTS IN WHICH OVER 50 ACRES OF SOIL WILL BE DISTURBED. AREAS OF THE COMPLETED PHASE MUST BE STABILIZED WITHIN 7 DAYS AFTER ANOTHER PHASE HAS BEEN INITIATED OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES: AFTER USE, SILT FENCES SHOULD BE REMOVED OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.
11. TEMPORARY OR PERMANENT SOIL STABILIZATION SHALL BE ACCOMPLISHED WITHIN 7 DAYS AFTER FINAL GRADING OR OTHER EARTH WORK. PERMANENT STABILIZATION WITH PERENNIAL VEGETATION OR OTHER PERMANENTLY STABLE, NON-ERODING SURFACE SHALL REPLACE ANY TEMPORARY MEASURES AS SOON AS PRACTICABLE.
12. NO SOLID MATERIALS INCLUDING BUILDING MATERIAL, SHALL BE DISCHARGED TO WATERS OF THE UNITED STATES EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT AND/OR TENNESSEE AQUATIC RESOURCE ALTERATION PERMIT
13. OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED.

NOTES BY SYMBOL

CODE	DESCRIPTION	DETAIL
EC1	LIMIT OF DISTURBANCE	
EC2	TEMPORARY CONSTRUCTION ENTRANCE	1/C2.3
EC3	EROSION EEL	2/C2.3
EC4	SILT FENCE W/WIRE BACKING	3/C2.3
EC5	CONCRETE WASHOUT	4/C2.3
EC6	INLET PROTECTION	5/C2.3
EC7	ROCK CHECK DAM	6/C2.3
EC8	SEDIMENT BASIN	7/C2.3

PROPOSED FEATURE LEGEND

EROSION EEL
LIMITS OF DISTURBANCE — LOD
SILT FENCE — SF
CONCRETE WASHOUT STRUCTURE
INLET PROTECTION
ROCK CHECK DAM

NOTE: REFER TO SHEET C1.0 FOR GENERAL NOTES

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

EROSION & SEDIMENT CONTROL PLAN (PHASE I)
C2.0

DATE: 05/22/26
DMG Project No: 25184

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 50 100 200 300

SCALE 1" = 100'

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

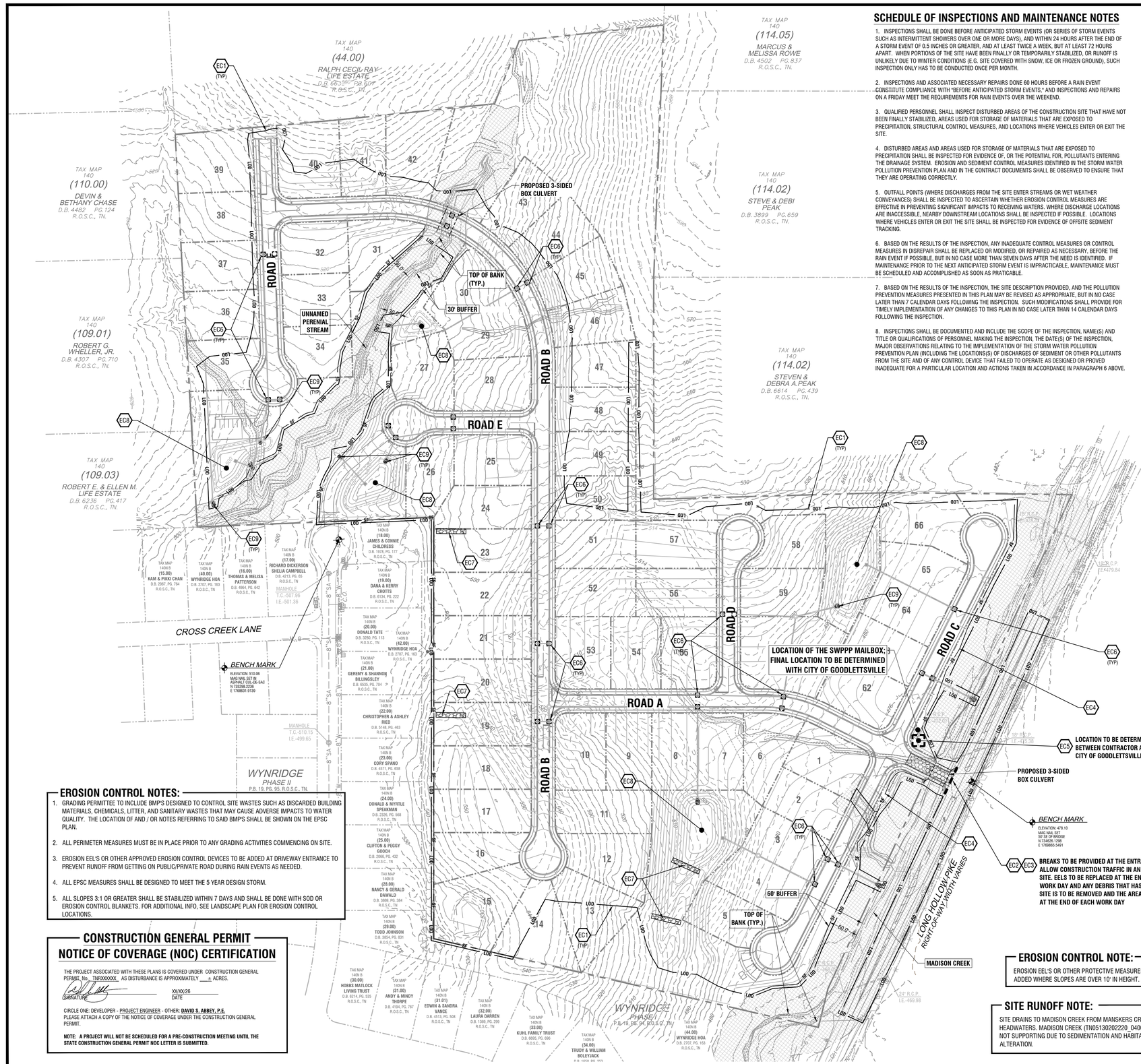
IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

DAVID S. ABBEY — REGISTERED ENGINEER — AGRICULTURAL — COMMERCIAL — STATE OF TENNESSEE — 26

REVISIONS

NO.	DESCRIPTION	DATE

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike – Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C2.0 – Ero.dwg—C2.0 May 26, 2026 – 7:28am GaryEmerson



SCHEDULE OF INSPECTIONS AND MAINTENANCE NOTES

1. INSPECTIONS SHALL BE DONE BEFORE ANTICIPATED STORM EVENTS (OR SERIES OF STORM EVENTS SUCH AS INTERMITTENT SHOWERS OVER ONE OR MORE DAYS), AND WITHIN 24 HOURS AFTER THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER, AND AT LEAST TWICE A WEEK, BUT AT LEAST 72 HOURS APART. WHEN PORTIONS OF THE SITE HAVE BEEN FINALLY OR TEMPORARILY STABILIZED, OR RUNOFF IS UNLIKELY DUE TO WINTER CONDITIONS (E.G. SITE COVERED WITH SNOW, ICE OR FROZEN GROUND), SUCH INSPECTION ONLY HAS TO BE CONDUCTED ONCE PER MONTH.

2. INSPECTIONS AND ASSOCIATED NECESSARY REPAIRS DONE 60 HOURS BEFORE A RAIN EVENT CONSTITUTE COMPLIANCE WITH "BEFORE ANTICIPATED STORM EVENTS," AND INSPECTIONS AND REPAIRS ON A FRIDAY MEET THE REQUIREMENTS FOR RAIN EVENTS OVER THE WEEKEND.

3. QUALIFIED PERSONNEL SHALL INSPECT DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.

4. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE STORM WATER POLLUTION PREVENTION PLAN AND IN THE CONTRACT DOCUMENTS SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY.

5. OUTFALL POINTS (WHERE DISCHARGES FROM THE SITE ENTER STREAMS OR WET WEATHER CONVEYANCES) SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWNSTREAM LOCATIONS SHALL BE INSPECTED IF POSSIBLE. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFFSITE SEDIMENT TRACKING.

6. BASED ON THE RESULTS OF THE INSPECTION, ANY INADEQUATE CONTROL MEASURES OR CONTROL MEASURES IN DISREPAIR SHALL BE REPLACED OR MODIFIED, OR REPAIRED AS NECESSARY, BEFORE THE RAIN EVENT IF POSSIBLE, BUT IN NO CASE MORE THAN SEVEN DAYS AFTER THE NEED IS IDENTIFIED. IF MAINTENANCE PRIOR TO THE NEXT ANTICIPATED STORM EVENT IS IMPRACTICABLE, MAINTENANCE MUST BE SCHEDULED AND ACCOMPLISHED AS SOON AS PRATICABLE.

7. BASED ON THE RESULTS OF THE INSPECTION, THE SITE DESCRIPTION PROVIDED, AND THE POLLUTION PREVENTION MEASURES PRESENTED IN THIS PLAN MAY BE REVISED AS APPROPRIATE, BUT IN NO CASE LATER THAN 7 CALENDAR DAYS FOLLOWING THE INSPECTION. SUCH MODIFICATIONS SHALL PROVIDE FOR TIMELY IMPLEMENTATION OF ANY CHANGES TO THIS PLAN IN NO CASE LATER THAN 14 CALENDAR DAYS FOLLOWING THE INSPECTION.

8. INSPECTIONS SHALL BE DOCUMENTED AND INCLUDE THE SCOPE OF THE INSPECTION, NAME(S) AND TITLE OR QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN (INCLUDING THE LOCATIONS(S) OF DISCHARGES OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE AND OF ANY CONTROL DEVICE THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION AND ACTIONS TAKEN IN ACCORDANCE IN PARAGRAPH 6 ABOVE.

EROSION CONTROL NOTES:

1. GRADING PERMITTEE TO INCLUDE BMP'S DESIGNED TO CONTROL SITE WASTES SUCH AS DISCARDED BUILDING MATERIALS, CHEMICALS, LITTER, AND SANITARY WASTES THAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY. THE LOCATION OF AND / OR NOTES REFERRING TO SAID BMP'S SHALL BE SHOWN ON THE EPSC PLAN.
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4. ALL EPSC MEASURES SHALL BE DESIGNED TO MEET THE 5 YEAR DESIGN STORM.
5. ALL SLOPES 3:1 OR GREATER SHALL BE STABILIZED WITHIN 7 DAYS AND SHALL BE DONE WITH SOD OR EROSION CONTROL BLANKETS. FOR ADDITIONAL INFO, SEE LANDSCAPE PLAN FOR EROSION CONTROL LOCATIONS.

CONSTRUCTION GENERAL PERMIT
NOTICE OF COVERAGE (NOC) CERTIFICATION

THE PROJECT ASSOCIATED WITH THESE PLANS IS COVERED UNDER CONSTRUCTION GENERAL PERMIT, No. TNRXXXXXX, AS DISTURBANCE IS APPROXIMATELY ___ ± ACRES.

SIGNATURE _____ XX/XX/26 DATE

CIRCLE ONE: DEVELOPER - PROJECT ENGINEER - OTHER: **DAVID S. ABBEY, P.E.**
PLEASE ATTACH A COPY OF THE NOTICE OF COVERAGE UNDER THE CONSTRUCTION GENERAL PERMIT.

NOTE: A PROJECT WILL NOT BE SCHEDULED FOR A PRE-CONSTRUCTION MEETING UNTIL THE STATE CONSTRUCTION GENERAL PERMIT NOC LETTER IS SUBMITTED.

EROSION CONTROL NOTE:

EROSION EEL'S OR OTHER PROTECTIVE MEASURES TO BE ADDED WHERE SLOPES ARE OVER 10' IN HEIGHT.

SITE RUNOFF NOTE:

SITE DRAINS TO MADISON CREEK FROM MANSKERS CREEK TO HEADWATERS. MADISON CREEK (TN05130202220_0400) IS NOT SUPPORTING DUE TO SEDIMENTATION AND HABITAT ALTERATION.

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

SCALE 1" = 100'

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

SITE BENCHMARKS:

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ELEVATION: 478.10

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BRASS DISC 30.1' NE OF BRIDGE
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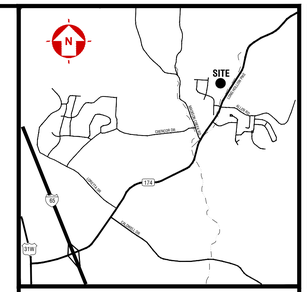

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NOTES BY SYMBOL

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EC9	RIP RAP PROTECTION	

PROPOSED FEATURE LEGEND

EROSION EEL
LIMITS OF DISTURBANCE — LOD
SILT FENCE — SF
CONCRETE WASHOUT STRUCTURE
INLET PROTECTION
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NOTE: REFER TO SHEET C1.0 FOR GENERAL NOTES

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PARCELS: 124 & 124.01
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PLANS PREPARED BY:
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IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

DAVID S. ABBEY — REGISTERED ENGINEER — STATE OF TENNESSEE — 26

REVISIONS

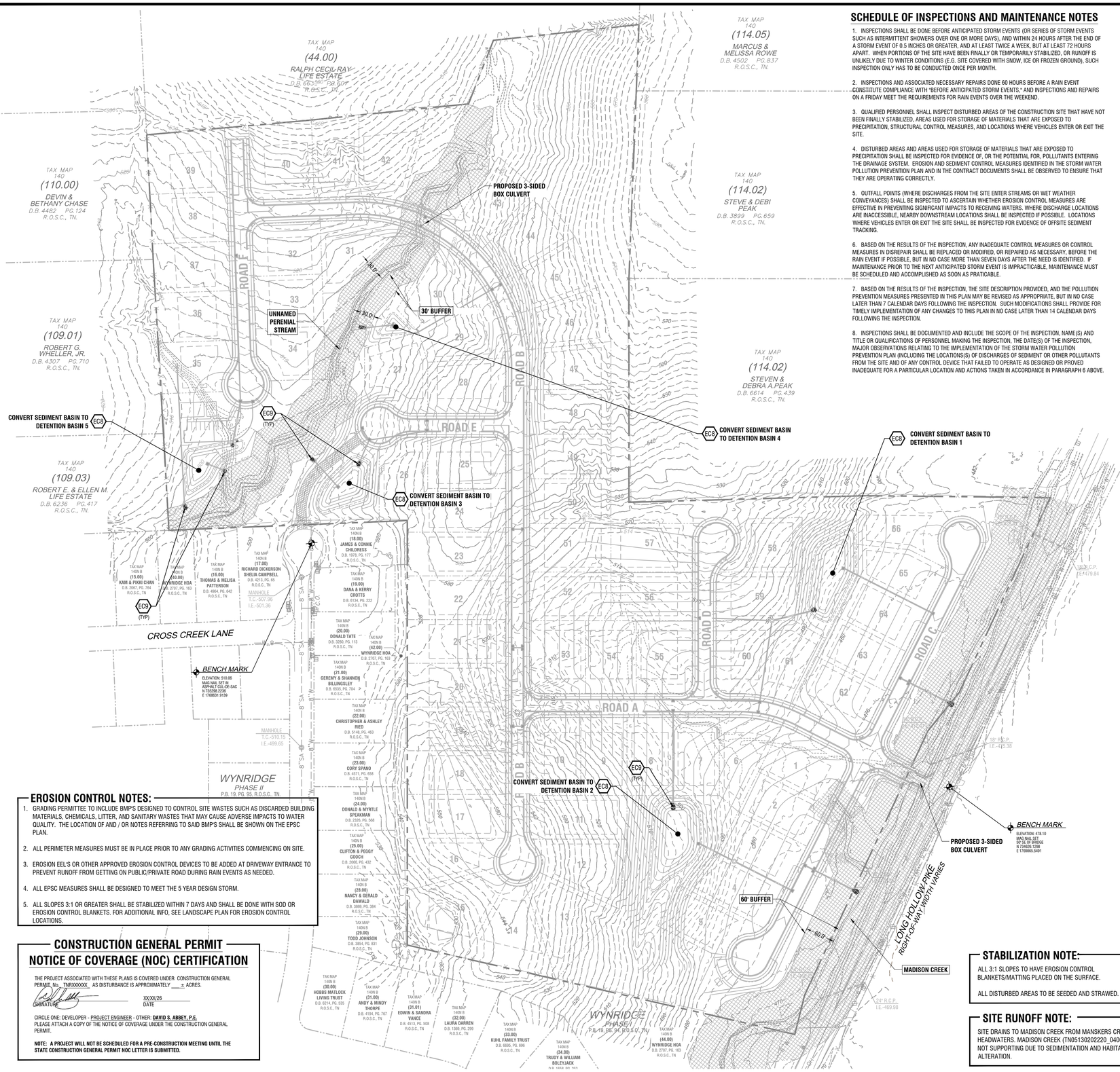
NO.	DESCRIPTION	DATE

DATE:	05/22/26
DMG Project No:	25184

EROSION & SEDIMENT CONTROL PLAN (PHASE II)

C2.1

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike – Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C2.0 – Ero.dwg—C2.1 May 26, 2026 – 7:31am GaryEmerson



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8. INSPECTIONS SHALL BE DOCUMENTED AND INCLUDE THE SCOPE OF THE INSPECTION, NAME(S) AND TITLE OR QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN (INCLUDING THE LOCATIONS(S) OF DISCHARGES OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE AND OF ANY CONTROL DEVICE THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION AND ACTIONS TAKEN IN ACCORDANCE IN PARAGRAPH 6 ABOVE.

EROSION CONTROL NOTES:

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4. ALL EPSC MEASURES SHALL BE DESIGNED TO MEET THE 5 YEAR DESIGN STORM.
5. ALL SLOPES 3:1 OR GREATER SHALL BE STABILIZED WITHIN 7 DAYS AND SHALL BE DONE WITH SOD OR EROSION CONTROL BLANKETS. FOR ADDITIONAL INFO, SEE LANDSCAPE PLAN FOR EROSION CONTROL LOCATIONS.

CONSTRUCTION GENERAL PERMIT
NOTICE OF COVERAGE (NOC) CERTIFICATION

THE PROJECT ASSOCIATED WITH THESE PLANS IS COVERED UNDER CONSTRUCTION GENERAL PERMIT, No. TNRXXXXXX, AS DISTURBANCE IS APPROXIMATELY ___± ACRES.

SIGNATURE — XX/XX/26 DATE

CIRCLE ONE: DEVELOPER - PROJECT ENGINEER - OTHER: **DAVID S. ABBEY, P.E.**
PLEASE ATTACH A COPY OF THE NOTICE OF COVERAGE UNDER THE CONSTRUCTION GENERAL PERMIT.

NOTE: A PROJECT WILL NOT BE SCHEDULED FOR A PRE-CONSTRUCTION MEETING UNTIL THE STATE CONSTRUCTION GENERAL PERMIT NOC LETTER IS SUBMITTED.

STABILIZATION NOTE:

ALL 3:1 SLOPES TO HAVE EROSION CONTROL BLANKETS/MATTING PLACED ON THE SURFACE.

ALL DISTURBED AREAS TO BE SEEDED AND STRAWED.

SITE RUNOFF NOTE:

SITE DRAINS TO MADISON CREEK FROM MANSKERS CREEK TO HEADWATERS. MADISON CREEK (TN0513020222O_0400) IS NOT SUPPORTING DUE TO SEDIMENTATION AND HABITAT ALTERATION.

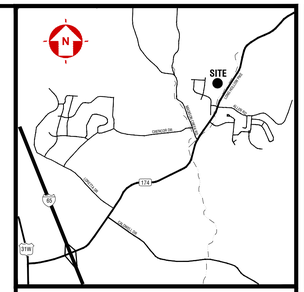
Know what's **below.** **Call** before you dig.

SITE BENCHMARKS:

BM 1
MAG NAIL SET 50' SE OF BRIDGE
ELEVATION: 478.10

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION: 466.98

BM3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06



VICINITY MAP

FLOOD NOTE:

BY GRAPHIC PLOTTING ONLY, PROJECT PARCEL IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AND IS SHOWN IN THE AREA ZONE 'X' ON FEMA FIRM MAP NUMBER 47165C0381H ON THE FLOOD INSURANCE RATE MAPS FOR CITY OF GOODLETTSVILLE, TN, WITH AN EFFECTIVE DATE OF 2/26/2017.

DISTURBED AREA:

TOTAL DISTURBED AREA = 34.0 ACRES±

SURVEY NOTE:

BASE INFORMATION WAS TAKEN FROM A BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY PRPARED BY BRACKMAN LAND SURVEYING DATED JANUARY 24, 2026, AND LIDAR INFORMATION. DEVELOPMENT MANAGEMENT GROUP, LLC SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY AND/OR COMPLETENESS OF THAT INFORMATION SHOWN HEREON OR ANY ERRORS OR OMISSIONS RESULTING FROM SUCH.

TYPICAL NOTES

1. ALL CONTROL MEASURES MUST BE PROPERLY SELECTED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURE'S SPECIFICATIONS AND THE CONTRACT DOCUMENTS. IF PERIODIC INSPECTIONS OR OTHER INFORMATION INDICATES A CONTROL HAS BEEN USED INAPPROPRIATELY OR INCORRECTLY, THE CONTRACTOR MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS.
2. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFFSITE IMPACTS. PERMITTEES SHALL NOT INITIATE REMEDIATION/RESTORATION OF A STREAM WITHOUT CONSULTING THE REGULATING AGENCY FIRST. THIS PERMIT DOES NOT, HOWEVER, AUTHORIZE ACCESS TO PRIVATE PROPERTY.
3. SEDIMENT SHOULD BE REMOVED FROM SEDIMENT TRAPS, SILT FENCES, SEDIMENTATION PONDS, AND OTHER SEDIMENT CONTROLS AS NECESSARY, AND MUST BE REMOVED WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50%.
3. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORM WATER SHALL BE PICKED UP PRIOR TO ANTICIPATED STORM EVENTS, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.
4. PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 7 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA IS SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED.
5. CLEARING AND GRUBBING MUST BE HELD TO THE MINIMUM NECESSARY FOR GRADING AND EQUIPMENT OPERATION.
6. CONSTRUCTION MUST BE SEQUENCED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED AREAS.
7. EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE AND FUNCTIONAL BEFORE EARTH MOVING OPERATIONS BEGIN, AND MUST BE CONSTRUCTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. TEMPORARY MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORK DAY, BUT MUST BE REPLACED AT THE END OF THE WORK DAY.
8. THE FOLLOWING RECORDS SHALL BE MAINTAINED ON SITE; THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR; THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
9. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN SEVEN DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. EXCEPT IN THE FOLLOWING TWO SITUATIONS: (1). WHERE THE INITIATION OF STABILIZATION MEASURES BY THE SEVENTH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL; OR (2). WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 7 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE.
10. CONSTRUCTION MUST BE PHASED FOR PROJECTS IN WHICH OVER 50 ACRES OF SOIL WILL BE DISTURBED. AREAS OF THE COMPLETED PHASE MUST BE STABILIZED WITHIN 7 DAYS AFTER ANOTHER PHASE HAS BEEN INITIATED OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES: AFTER USE, SILT FENCES SHOULD BE REMOVED OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.
11. TEMPORARY OR PERMANENT SOIL STABILIZATION SHALL BE ACCOMPLISHED WITHIN 7 DAYS AFTER FINAL GRADING OR OTHER EARTH WORK. PERMANENT STABILIZATION WITH PERENNIAL VEGETATION OR OTHER PERMANENTLY STABLE, NON-ERODING SURFACE SHALL REPLACE ANY TEMPORARY MEASURES AS SOON AS PRACTICABLE.
12. NO SOLID MATERIALS INCLUDING BUILDING MATERIAL, SHALL BE DISCHARGED TO WATERS OF THE UNITED STATES EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT AND/OR TENNESSEE AQUATIC RESOURCE ALTERATION PERMIT
13. OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED.

NOTES BY SYMBOL

CODE	DESCRIPTION	DETAIL
LOD	LIMIT OF DISTURBANCE	
EC1	TEMPORARY CONSTRUCTION ENTRANCE	1/C2.3
EC2	EROSION EEL	2/C2.3
EC4	SILT FENCE W/WIRE BACKING	3/C2.3
EC5	CONCRETE WASHOUT	4/C2.3
EC6	INLET PROTECTION	5/C2.3
EC7	ROCK CHECK DAM	6/C2.3
EC8	SEDIMENT BASIN	7/C2.3
EC9	RIP RAP PROTECTION	

PROPOSED FEATURE LEGEND

EROSION EEL
LIMITS OF DISTURBANCE — LOD
SILT FENCE — SF
CONCRETE WASHOUT STRUCTURE
INLET PROTECTION
ROCK CHECK DAM

NOTE: REFER TO SHEET C1.0 FOR GENERAL NOTES

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ▩ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 50 100 200 300

SCALE 1" = 100'

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

DAVID S. ABBEY — REGISTERED ENGINEER — AGRICULTURAL ENGINEER — COMMISSIONED — STATE OF TENNESSEE — 26

NO.	DESCRIPTION	DATE
	REVISIONS	

DATE:	05/22/26
DMG Project No:	25184

EROSION & SEDIMENT CONTROL PLAN (PHASE III)

C2.2

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike – Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C2.0 – Ero.dwg–C2.2 May 26, 2026 – 7:32am GaryEmerson

MATERIAL PROPERTY DATA SHEET

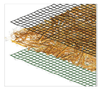
WESTERN GREEN

EroNet™ SC150®

Extended Term • Double Net • Coconut/Straw Matrix • Erosion Control Blanket

DESCRIPTION

The Coconut/Straw SC150 extended term Erosion Control Blanket consists of 30% coconut fibers and 70% weed free agricultural straw manufactured into a continuous matrix. The coconut/straw matrix is confined by a photodegradable, synthetic net on top and bottom, mechanically (stitch) bound on two-inch centers. SC150 is intended for applications requiring up to twenty-four months of functional longevity. The material is fully degradable. The net and thread are photodegradable and the fiber matrix is biodegradable. Actual field longevity is dependent on soil and climatic conditions.



Each roll of SC150 is made in the USA and manufactured under Western Green's Quality Assurance Program to ensure a continuous distribution of fibers and consistent thickness.

Material Content		
Matrix	Straw/ Coconut Blend	
Netting	Top Net: Medium weight, Synthetic, Regular Degradable Bottom Net: Lightweight, Synthetic Regular Degradable	Double Net (black)
Thread	Synthetic, Regular Degradable	

Standard Roll Sizes				
Width	8 ft	(2.4 m)	16 ft	(4.9 m)
Length	112 ft	(34.1 m)	563 ft	(171.0 m)
Weight ± 10%	53 lb	(24.1 kg)	530 lb	(241.0 kg)
Area	100 sy	(83.6 m^2)	1000 SY	(836.0 m^2)

Material available in custom roll sizes

Approvals & Classification	
Classification	FHWA: Type 3.B / ECTC: Type 3.B
TTI Approvals	N/A
NTPEP Number	ECP-2019-03-013

Index Property	Test Method	Typical	
Thickness	ASTM D6525	0.30 in.	(8 mm)
Mass/Unit Area	ASTM D6566	8.5 oz/sy	(290 g/m)
Tensile Strength – MD	ASTM D6818	150 lbs/ft	(2.2 kN/m)
Tensile Strength – TD	ASTM D6818	130 lbs/ft	(1.9 kN/m)
Elongation - MD	ASTM D6818	25%	
Elongation – TD	ASTM D6818	25%	
Density/Specific Gravity	D792	N/A	
Light Penetration	ASTM D6567	12%	
Biomass Improvement	ASTM D7322	500%	
Water Absorption	ASTM D1117	350%	

Design Parameters		
Property	**Unvegetated**	**Vegetated[3]**
RUSLE C Factor[2]	0.03	N/A
Slope Maximum Gradient[1]	2H:1V	N/A
Permissible Shear Stress[2]	2.0 psf (95 Pa)	N/A
Permissible Velocity[2]	8.0 fps (2.4 m/s)	N/A

Manning's n Roughness (HEC-15)		
T_{lower}	T_{mid}	T_{upper}
0.045	0.036	0.031

1 Maximum Gradient a recommendation for typical installations.
2 Hydraulic thresholds compliant with ASTM D6459/D6460 but generalized for typical applications.
3 Vegetated values dependent on established stand of vegetation

Disclaimer: The information contained herein may represent product index data, performance ratings, bench scale testing or other material utility quantifications. Each representation may have unique utility and limitations. Every effort has been made to ensure accuracy, however, no warranty is claimed and no liability shall be assumed by Western Green or its affiliates regarding the completeness, accuracy or fitness of these values for any particular application or interpretation. While testing methods are provided for reference, values shown may be derived from interpolation or adjustment to be representative of intended use. For further information, please feel free to contact Western Green.

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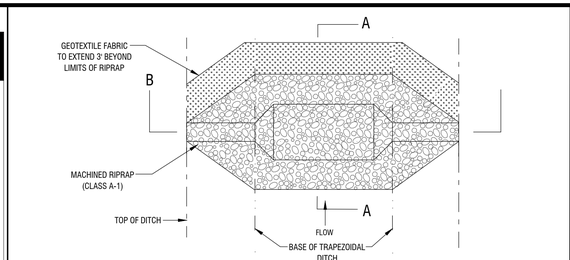
NORTH AMERICAN GREEN

Rev. 4.2023
Scan for additional and updated product information, or click here.

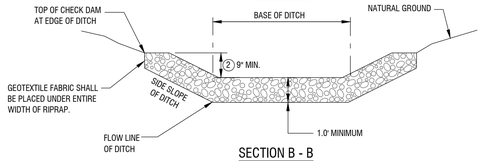
Western Green • 4609 E. Boonville-New Harmony Rd.
Evansville, IN 47725 • (800) 772-2040
westerngreen.com

8 EROSOION CONTROL MATTING

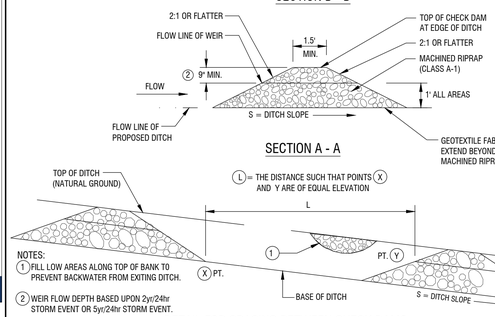
NTS



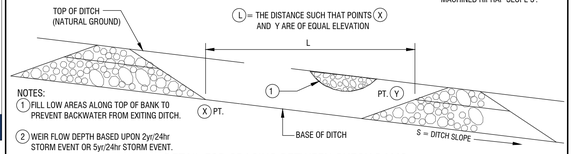
PLAN VIEW



SECTION B - B



SECTION A - A

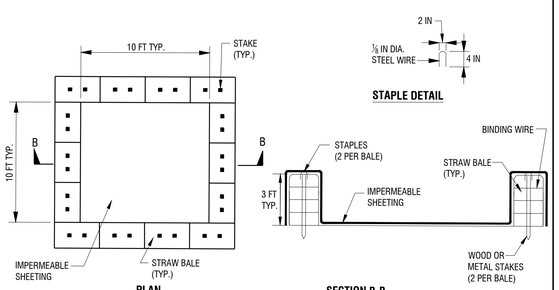


NOTES:
1. FILL LOW AREAS ALONG TOP OF BANK TO PREVENT BACKWATER FROM EXITING DITCH.
2. WEIR FLOW DEPTH BASED UPON 2yr/24hr STORM EVENT OR 5yr/24hr STORM EVENT.

DETAIL FOR SPACING BETWEEN CHECK DAMS

6 TEMPORARY ROCK CHECK DAM

NTS



NOTE: CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH

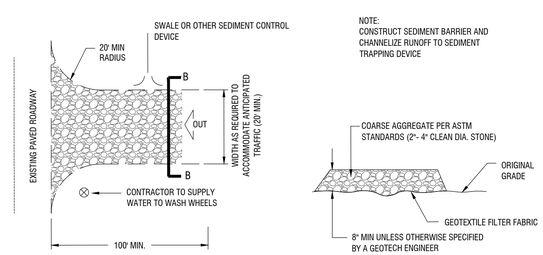
WASHOUT STRUCTURE WITH STRAW BALES

CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

4 CONCRETE WASHOUT STRUCTURE

NTS

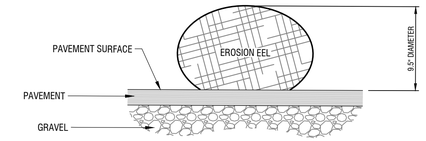


1 TEMPORARY CONSTRUCTION EXIT

NTS

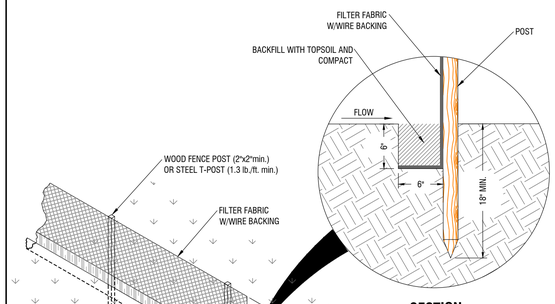
NOTE:
SILT PROTECTION PLACED IN ASPHALT LOCATIONS SHALL HAVE SAND BAGS PLACED AT POINTS ALONG THE BARRIER. BAGS ARE INTENDED TO PREVENT MOVEMENT AND PROVIDE STABILIZATION FOR THE DEVICE AND SHALL BE PLACED ON TOP, PERPENDICULAR TO RUN. SAND BAG PLACEMENT NOT MORE THAN 8 FEET APART.

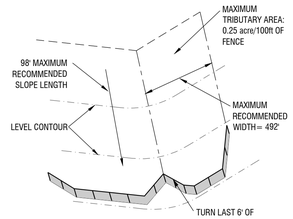
NOTE:
UTILIZE THE EROSION EEL BY JEN HILL OR APPROVED EQUAL



2 EROSION EEL

NTS



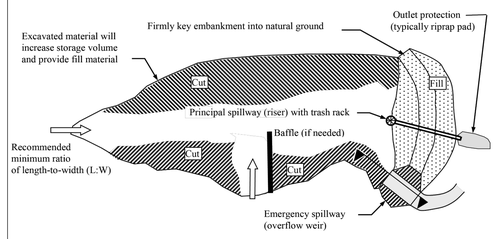


SPECIFICATIONS	
Tensile Strength (Lbs. Min.) (1) (ASTM D-4632)	Warp-120 Fill -100
Elongation (%Max.) (ASTM D-4632)	40
AOS (Apparent Opening Size) (Max. Sieve Size) (ASTM D-4751)	#30
Flow Rate (Gal/Min/Sq. Ft.) (GDT-87)	25
Ultraciolet Stability (2) (ASTM D-4632 after 300 hours weathering in accordance with ASTM D-4355)	80
Bursting Strength (PSI Min.) (ASTM D-3786 Diaphram Bursting Strength Tester)	175
Minimum Fabric Width (Inches)	36

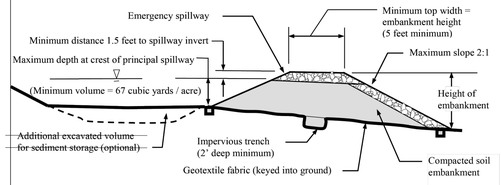
3 SILT FENCE W/WIRE BACKING

NTS

ACTIVITY: Sediment Basin | ES – 19



TYPICAL PLAN VIEW



TYPICAL CROSS SECTION

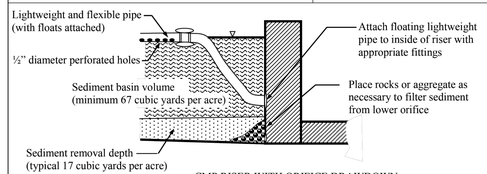
NOT TO SCALE

Figure ES-19-1
Typical Sediment Basin

Knoxville BMP Manual
Erosion & Sediment **ES-19 - 7** *January 2001*

7

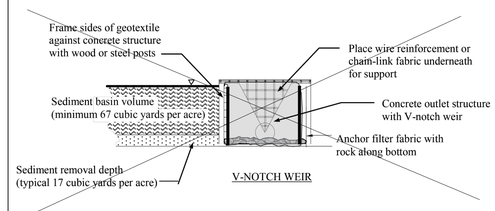
ACTIVITY: Sediment Basin | ES – 19



CMP RISER WITH ORIFICE DRAWDOWN

Notes:

1. The two details on this sheet suggest ways of modifying a permanent detention basin to serve as a temporary sediment basin. The basic methods shown here demonstrate a floating skimmer and geotextile filtration.
2. A permanent detention basin must always be designed by a professional engineer using hydrologic computations and different criteria than presented in this BMP. See ST-01 and ST-02 for detention basin design.

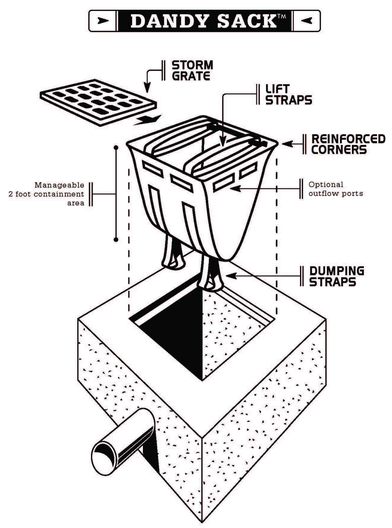


V-NOTCH WEIR

NOT TO SCALE

Figure ES-19-3
Possible Alterations to Permanent Detention Basin Outlet Structures

Knoxville BMP Manual
Erosion & Sediment **ES-19 - 9** *January 2001*



5 INLET PROTECTION

NTS

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

DAVID S. ABBEY — REGISTERED — AGRICULTURAL — ENGINEER — STATE OF TENNESSEE — 26

NO.	DATE	REVISIONS DESCRIPTION

DATE:	04/23/26
DMG Project No:	25184

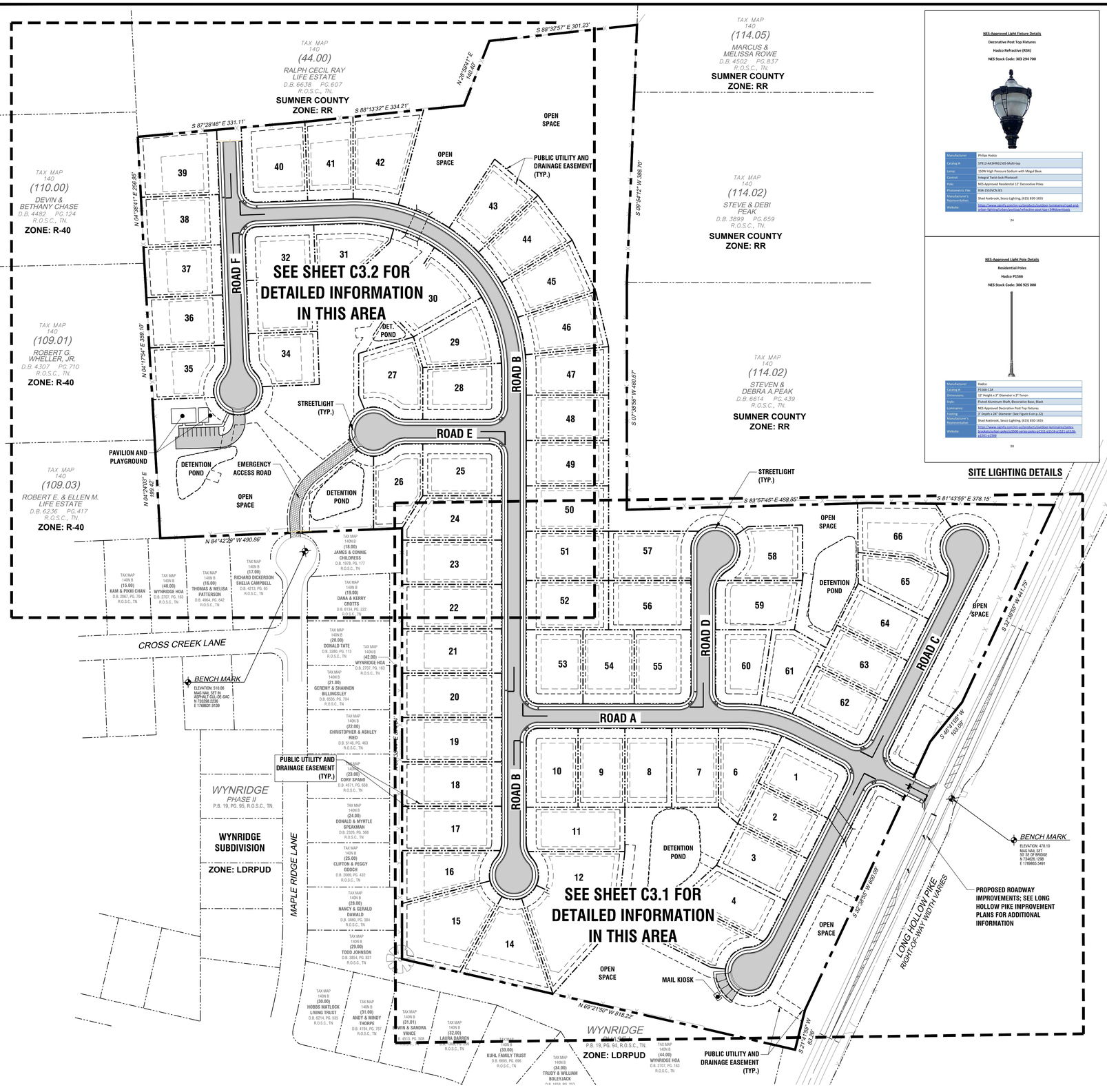
EROSION & SEDIMENT CONTROL DETAILS

C2.3

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike – Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C2.3 – EroDtl.dwg–C2.2 Apr 23, 2026 – 8:24am GaryEmerson



SITE LIGHTING DETAILS

NES-Approved Light Fixture Details
Decorative Post Top Fixtures
Hadco Refractive (R34)
NES Stock Code: 303 294 700

Manufacturer:	Philips Hadco
Catalog #:	57912-AK3HRC3205-Multi-tap
Lamp:	150W High Pressure Sodium with Mogul Base
Control:	Integral Twist-lock Photocell
Pole:	NES Approved Residential 12' Decorative Poles
Photometric File:	R34-150SCN-R3
Manufacturer's Representative:	Shad Axelrook, Sesco Lighting, (615) 830-1655
Website:	https://www.signify.com/en-us/products/outdoor-luminaires/road-and-urban-lighting/urban/postmax/refractive-post-top-r34#overview

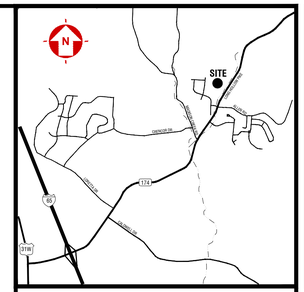
24

NES-Approved Light Pole Details
Residential Poles
Hadco P1566
NES Stock Code: 306 925 000

Manufacturer:	Hadco
Catalog #:	P1566-12A
Dimensions:	12' Height x 3" Diameter x 3" Tenon
Style:	Fluted Aluminum Shaft, Decorative Base, Black
Luminaires:	NES Approved Decorative Post Top Fixtures
Mounting:	3' Depth x 24" Diameter (See Figure 6 on p 22)
Manufacturer's Representative:	Shad Axelrook, Sesco Lighting, (615) 830-1655
Website:	https://www.signify.com/en-us/products/outdoor-luminaires/poles-brackets/urban-poles/p4300-series-poles-p5551-p5558-p5561-p5565-p5571-p5581-p5566

38

VICINITY MAP



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

SITE BENCHMARKS:

BM 1
MAG NAIL SET 50' SE OF BRIDGE
ELEVATION: 478.10

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION: 466.98

BM3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06

FLOOD NOTE:

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DISTURBED AREA:

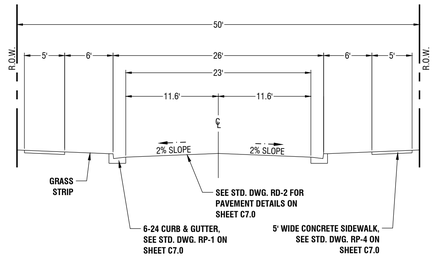
TOTAL DISTURBED AREA = 34.0 ACRES±

SURVEY NOTE:

BASE INFORMATION WAS TAKEN FROM A BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY PRPARED BY BRACKMAN LAND SURVEYING DATED JANUARY 24, 2026, AND LIDAR INFORMATION. DEVELOPMENT MANAGEMENT GROUP, LLC SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY AND/OR COMPLETENESS OF THAT INFORMATION SHOWN HEREON OR ANY ERRORS OR OMISSIONS RESULTING FROM SUCH.

SITE DATA

JURISDICTION:	**CITY OF GOODLETTSVILLE**
ZONING CLASSIFICATION:	**LDRPUD - LOW DENSITY RESIDENTIAL PLANNED UNIT DEVELOPMENT**
ADJACENT ZONING:	**WEST - R-40 LOW DENSITY RESIDENTIAL WEST / SOUTH - LDRPUD LOW DENSITY RESIDENTIAL NORTH - SUMNER COUNTY RR RURAL RESIDENTIAL**
PROPOSED USE:	**SINGLE FAMILY RESIDENTIAL SUBDIVISION**
PROJECT AREA:	**44.31± ACRES or 1,930,190 SF±**
LOT COUNT:	**66 LOTS**
ALLOWED DENSITY:	**LDRPUD - 0.0 TO 1.7 UNITS PER ACRE**
PROPOSED DENSITY:	**1.49 UNITS PER ACRE**
MIN. LOT SIZE:	**15,000 SF**
OPEN SPACE:	**MINIMUM - 10%; PROVIDED - 29±% (12.9± ACRES)**
MIN. YARD REQUIREMENTS:	
FRONT:	**30'**
SIDE:	**10'**
REAR:	**20' (LOTS 14-26 and 35-42 HAVE A 45' REAR BUILDING SETBACK)**
MIN. LOT WIDTH AT BUILDING SETBACK	**VARIES - SEE PROTO TYPICAL LOT LAYOUT**
PARKING REQUIREMENTS:	
SINGLE AND TWO-FAMILY:	**4 SPACES PER UNIT WITH 3 OR MORE BEDROOMS**
VISITOR PARKING:	**REQUIRED: 1 PARKING SPACE PER 5 RESIDENTIAL UNITS REQUIRED - 66/5 =13 SPACES; PROVIDED 13 SPACES**



TYPICAL LOCAL ROAD SECTION

N.T.S.

OPEN SPACE NOTE:

OPEN SPACE IS ALSO A DRAINAGE AND UTILITY EASEMENT.

NOTE:

REFER TO SHEET C1.0 FOR GENERAL NOTES

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
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DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

DAVID S. ABBOTT
REGISTERED ENGINEER
AGRICULTURE
COMMISSION
STATE OF TENNESSEE
26

REVISIONS

NO.	DESCRIPTION	DATE

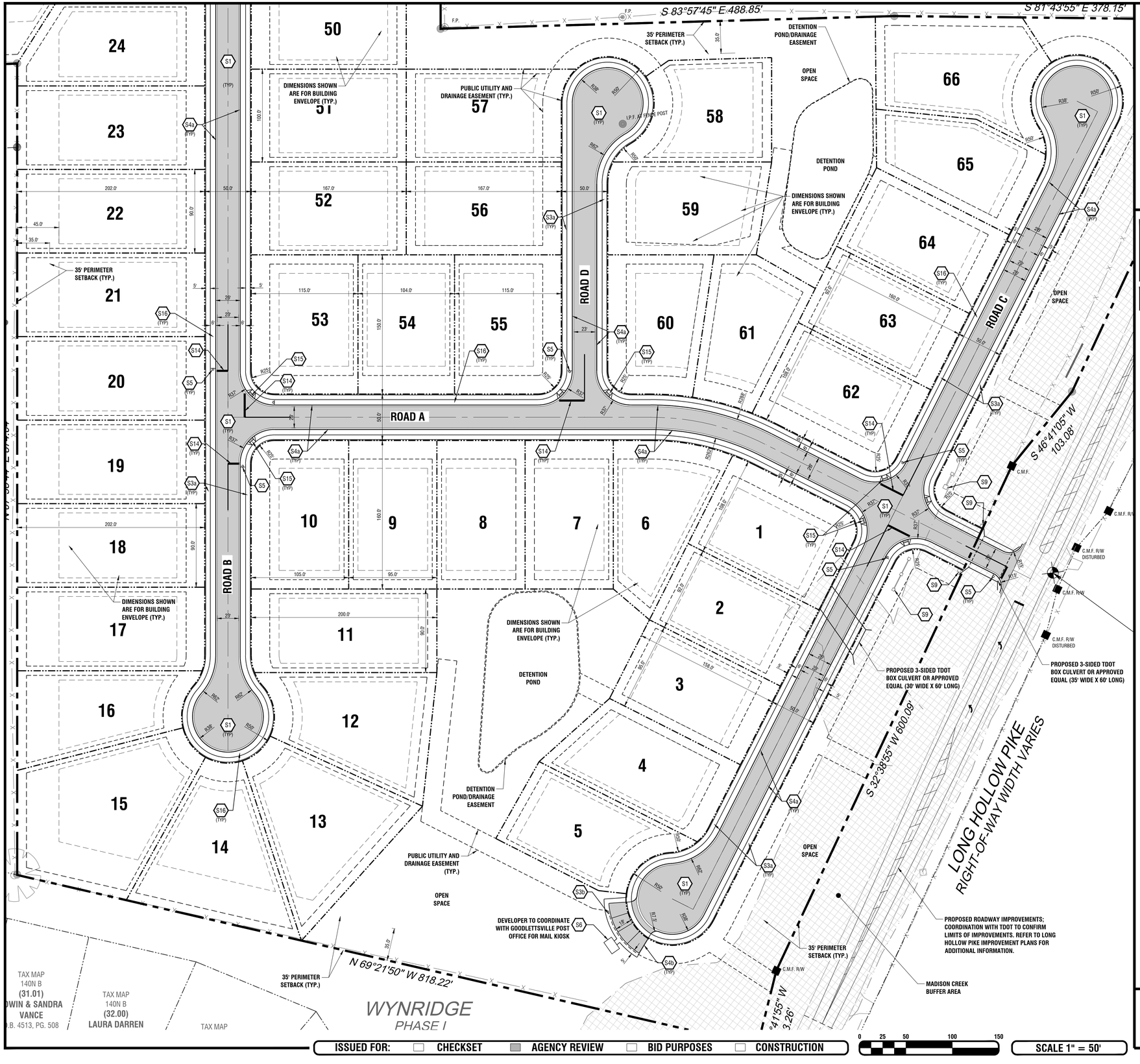
DATE:	05/22/26
DMG Project No:	25184

MASTER SITE PLAN

C3.0

ISSUED FOR: ☐ CHECKSET ☒ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodletsville TN\Plans\Engineer\25184 – Ironwood_C3.0 – Site.dwg–Layout1 May 26, 2026 – 7:45pm GaryEmerson



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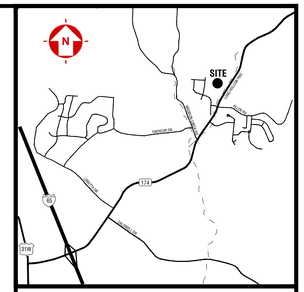
ELEVATION: 510.06



VICINITY MAP

FLOOD NOTE:

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DISTURBED AREA:

TOTAL DISTURBED AREA = 34.0 ACRES±

SURVEY NOTE:

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NOTES BY SYMBOL

CODE	DESCRIPTION	DETAIL
S1	ASPHALT PAVEMENT SECTION (PER GOODLETTSVILLE STANDARDS)	C7.0
S2	GRAVEL PERVIOUS PAVER SECTION (EMERGENCY ACCESS DRIVEWAY)	C7.0
S3a	CONCRETE SIDEWALK (PER GOODLETTSVILLE STANDARDS)	C7.0
S3b	CONCRETE SIDEWALK	
S4a	CONCRETE CURB AND GUTTER (PER GOODLETTSVILLE STANDARDS)	C7.0
S4b	CONCRETE POST CURB	
S5	STOP SIGN	C7.0
S6	MAIL KIOSK CENTER	C7.0
S7	PAVILION	SEE ARCH. PLANS
S8	PLAYGROUND	SEE ARCH PLANS.
S9	ENTRANCE MONUMENT SIGN	SEE LAND. PLAN
S10	CURB CUT	
S11	EMERGENCY ACCESS ROAD SIGN	
S12	EMERGENCY ACCESS ROAD GATE	
S13	BARRICADE SIGN	
S14	PAINTED STOP BAR	
S15	ADA SIDEWALK RAMP	C7.0
S16	SITE LIGHTING; SEE SHEET C3.0 FOR FIXTURE AND POLE INFORMATION	

OPEN SPACE NOTE:

OPEN SPACE IS ALSO A DRAINAGE AND UTILITY EASEMENT.

NOTE:

REFER TO SHEET C1.0 FOR GENERAL NOTES

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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PLANS PREPARED BY:

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SUMNER COUNTY, TENNESSEE

DAVID S. ABERNATHY
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
STATE OF TENNESSEE
26

REVISIONS

NO.	DATE	DESCRIPTION

DATE:	05/22/26
DMG Project No:	25184

DETAILED SITE PLAN

C3.1

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

SCALE 1" = 50'

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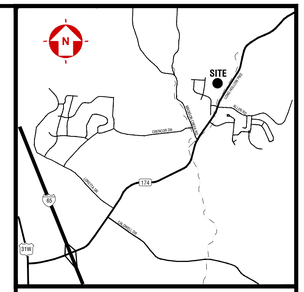
ELEVATION: 510.06



VICINITY MAP

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S7	PAVILION	SEE ARCH. PLANS
S8	PLAYGROUND	SEE ARCH PLANS.
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S10	CURB CUT	
S11	EMERGENCY ACCESS ROAD SIGN	
S12	EMERGENCY ACCESS ROAD GATE	
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S15	ADA SIDEWALK RAMP	C7.0
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TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 25 50 100 150

SCALE 1" = 50'

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IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

REVISIONS

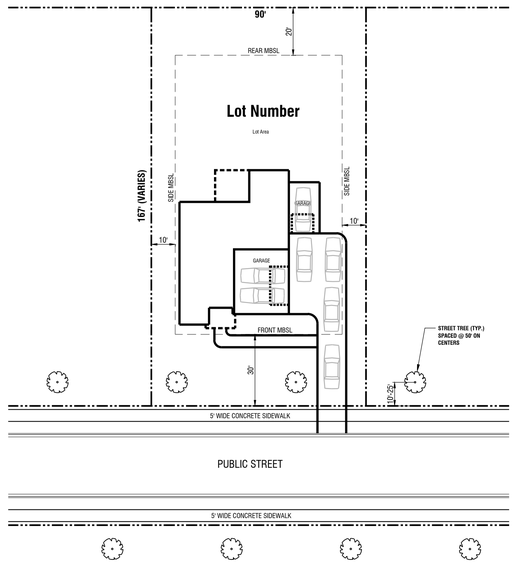
NO.	DESCRIPTION	DATE

DATE:	05/22/26
DMG Project No:	25184

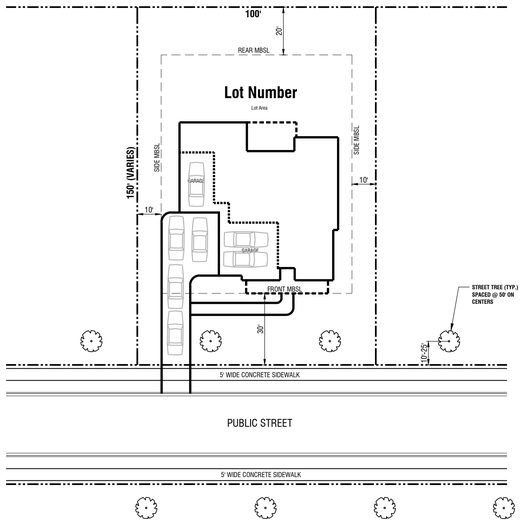
DETAILED SITE PLAN

C3.2

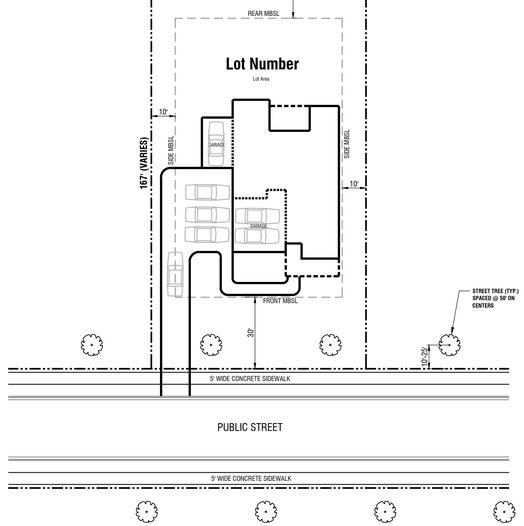
Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C3.2 – Det Site.dwg-Layout1 May 26, 2026 – 7:58am GaryEmerson



90' WIDE LOT



100' WIDE LOT



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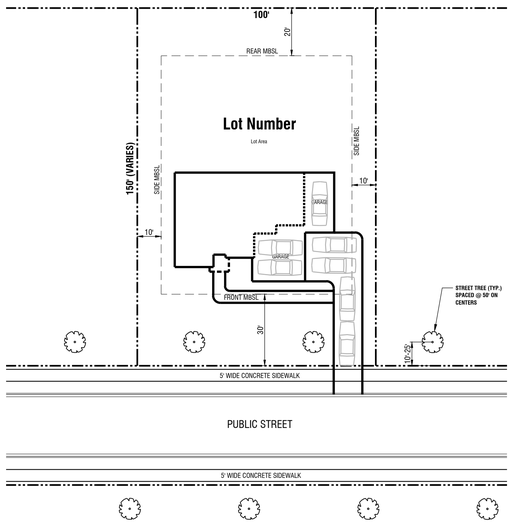

100' WIDE LOT

TYPICAL LOT CRITERIA
N.T.S.

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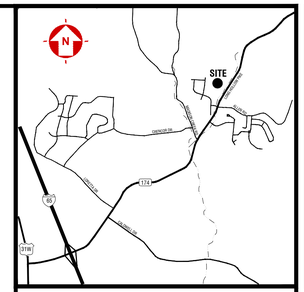

VICINITY MAP

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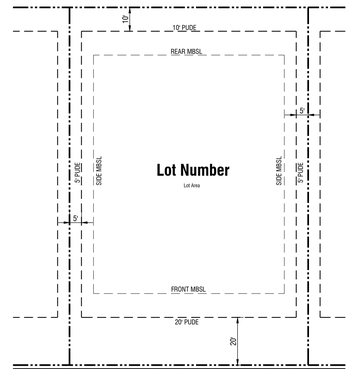

PUBLIC STREET

PUBLIC UTILITY LINES THAT RUN ALONG SIDE LOT LINES EASEMENT WIDTHS WILL BE INCREASED FROM 5' WIDE TO 10' WIDE

TYPICAL LOT EASEMENT CRITERIA
N.T.S.

NOTE:
REFER TO SHEET C1.0 FOR GENERAL NOTES

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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AGRICULTURE
COMMERCE
LOT
STATE OF TENNESSEE
26

REVISIONS

NO.	DESCRIPTION	DATE

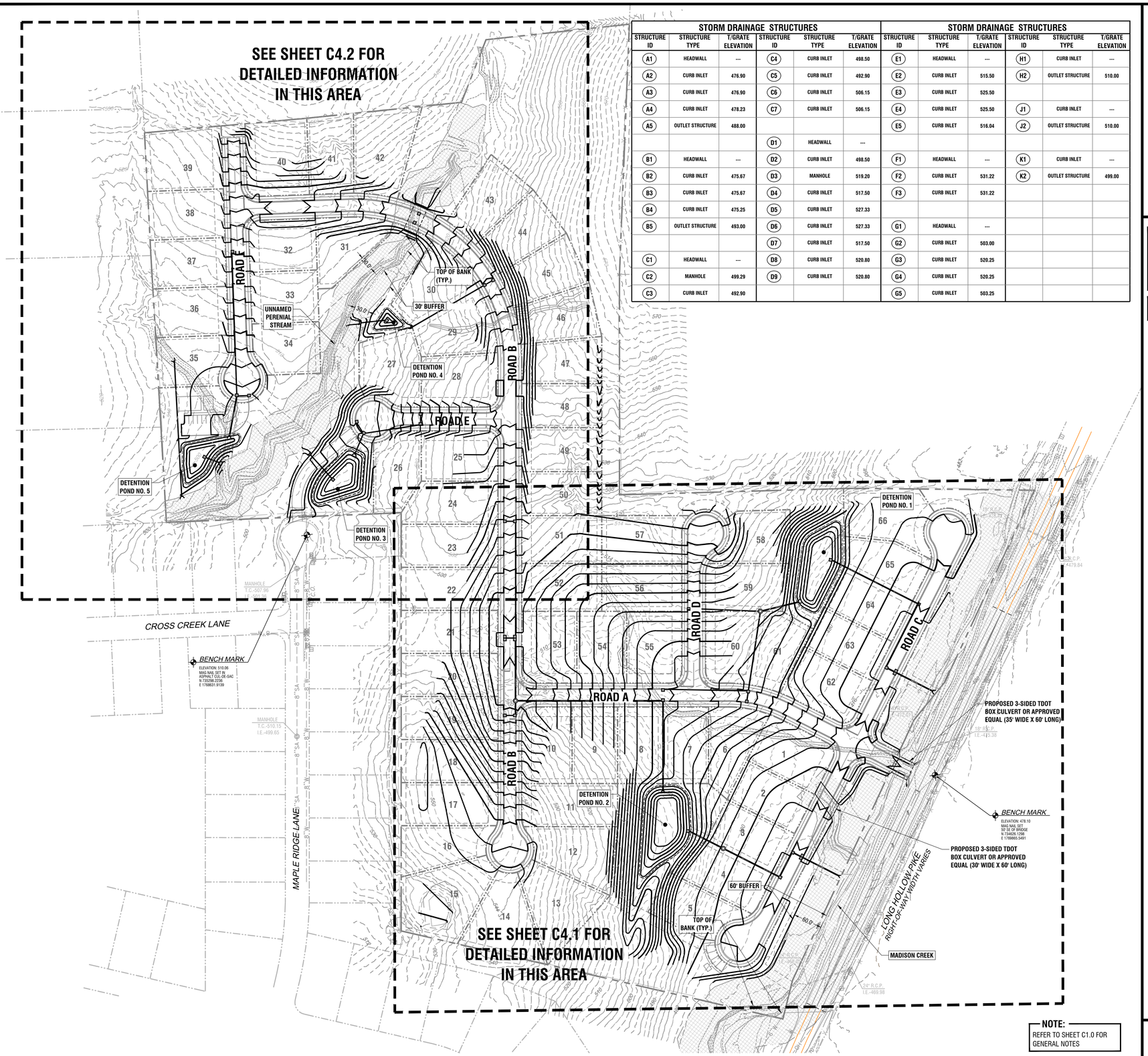
DATE:	05/22/26
DMG Project No:	25184

TYPICAL LOT CONFIGURATION

C3.3

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION — AS NOTED

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C3.3 – Typical Lot.dwg–Layout1 May 26, 2026 – 8:07am GaryEmerson



STORM DRAINAGE STRUCTURES

STRUCTURE ID	STRUCTURE TYPE	T/GRATE ELEVATION
A1	HEADWALL	---
A2	CURB INLET	476.90
A3	CURB INLET	476.90
A4	CURB INLET	478.23
A5	OUTLET STRUCTURE	488.00
B1	HEADWALL	---
B2	CURB INLET	475.67
B3	CURB INLET	475.67
B4	CURB INLET	475.25
B5	OUTLET STRUCTURE	493.00
C1	HEADWALL	---
C2	MANHOLE	499.29
C3	CURB INLET	492.90
C4	CURB INLET	498.50
C5	CURB INLET	492.90
C6	CURB INLET	506.15
C7	CURB INLET	506.15
D1	HEADWALL	---
D2	CURB INLET	498.50
D3	MANHOLE	519.20
D4	CURB INLET	517.50
D5	CURB INLET	527.33
D6	CURB INLET	527.33
D7	CURB INLET	517.50
D8	CURB INLET	520.80
D9	CURB INLET	520.80
E1	HEADWALL	---
E2	CURB INLET	515.50
E3	CURB INLET	525.50
E4	CURB INLET	525.50
E5	CURB INLET	516.04
F1	HEADWALL	---
F2	CURB INLET	531.22
F3	CURB INLET	531.22
G1	HEADWALL	---
G2	CURB INLET	503.00
G3	CURB INLET	520.25
G4	CURB INLET	520.25
G5	CURB INLET	503.25

STORM DRAINAGE STRUCTURES

STRUCTURE ID	STRUCTURE TYPE	T/GRATE ELEVATION
H1	CURB INLET	---
H2	OUTLET STRUCTURE	510.00
J1	CURB INLET	---
J2	OUTLET STRUCTURE	510.00
K1	CURB INLET	---
K2	OUTLET STRUCTURE	499.00

NOTE:
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SITE BENCHMARKS:

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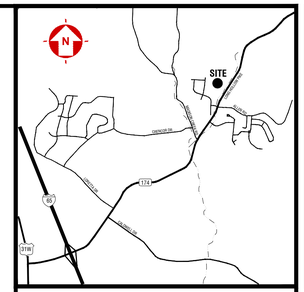

VICINITY MAP

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STORM DRAINAGE PIPE

FROM STRUCTURE ID	TO STRUCTURE ID	PIPE (SIZE/TYPE)	INVERT OUT	INVERT IN	LENGTH (LIN. FT.)	SLOPE (%)
A5	A4	24" HDPP	480.00	475.00	200	2.50
A4	A3	24" HDPP	474.90	472.00	150	2.00
A3	A2	24" HDPP	471.90	471.65	25	1.00
A2	A1	24" HDPP	471.55	469.85	86	2.00
B5	B4	24" HDPP	484.00	472.60	215	5.30
B4	B3	24" HDPP	472.50	471.90	60	1.00
B3	B2	24" HDPP	471.80	471.55	25	1.00
B2	B1	24" HDPP	471.45	469.75	86	2.00
C7	C6	15" HDPP	484.35	504.10	24	1.00
C6	C2	15" HDPP	504.00	486.20	128	14.00
C5	C3	15" HDPP	488.25	488.00	24	1.00
C4	C3	15" HDPP	491.50	488.00	178	2.00
C3	C2	18" HDPP	487.65	485.95	168	1.00
C2	C1	24" HDPP	485.45	484.20	82	1.50
D9	D8	15" HDPP	517.00	516.10	24	3.75
D8	D3	15" HDPP	516.00	513.70	31	7.40
D7	D4	15" HDPP	512.34	512.10	24	1.00
D6	D5	15" HDPP	524.34	524.10	24	1.00
D5	D4	15" HDPP	524.00	512.25	244	4.80
D4	D3	24" HDPP	511.50	508.95	131	2.00
D3	D2	24" HDPP	508.85	494.00	308	4.80
D2	D1	24" HDPP	493.90	490.15	190	2.00
E5	E2	15" HDPP	513.40	512.90	28	1.75
E4	E3	15" HDPP	523.00	522.75	24	1.00
E3	E2	15" HDPP	522.65	513.00	120	8.00
E2	E1	15" HDPP	512.90	510.00	46	6.35
F3	F2	15" HDPP	528.00	527.50	24	2.10
F2	F1	15" HDPP	527.40	512.00	173	7.76
G5	G2	15" HDPP	500.65	500.30	24	1.50
G4	G3	15" HDPP	517.00	516.50	24	2.00
G3	G2	15" HDPP	516.40	500.00	300	5.43
G2	G1	24" HDPP	499.90	499.00	90	1.00

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ▨ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 50 100 200 300

SCALE 1" = 100'

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:

4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

REVISIONS

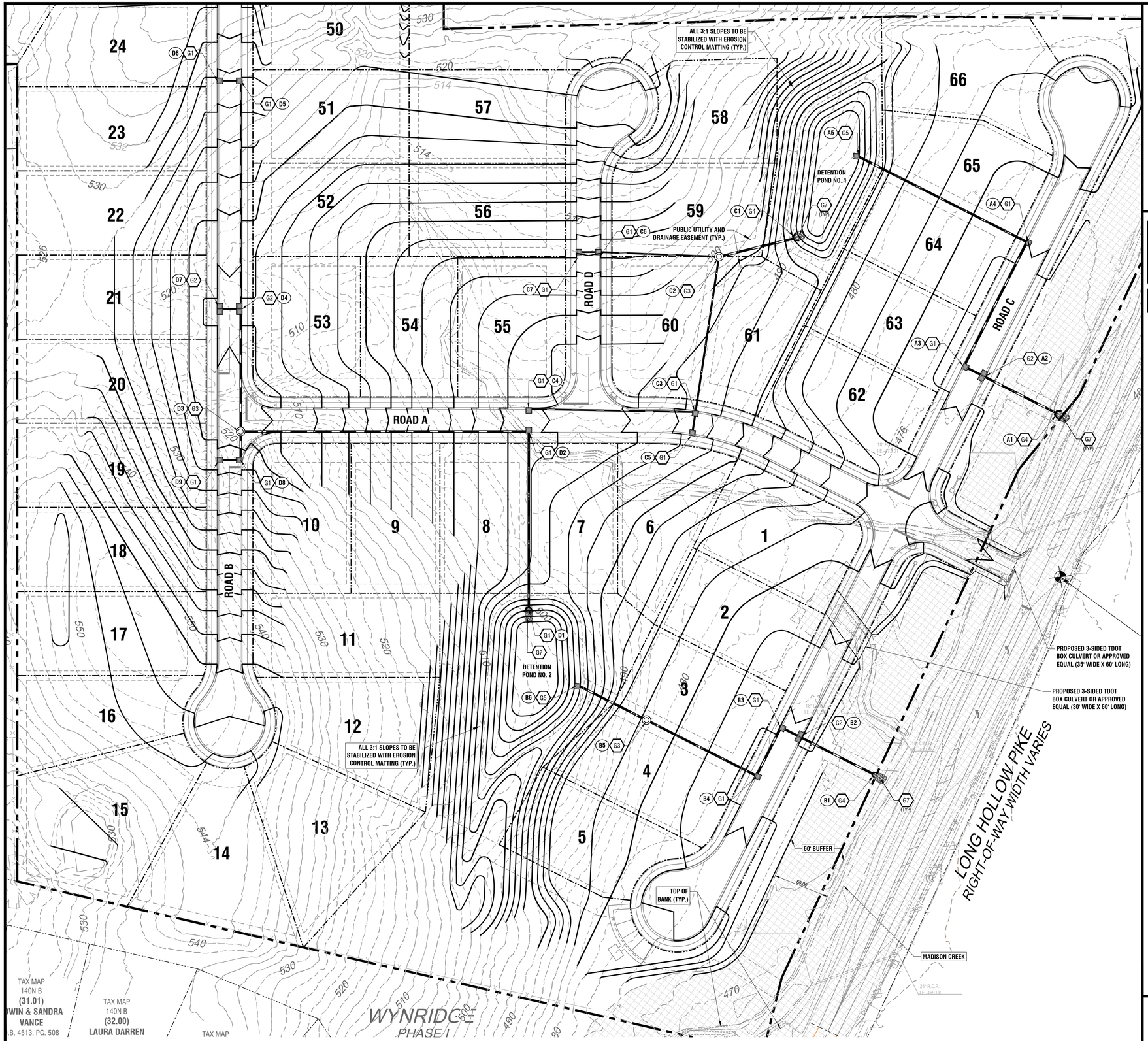
NO.	DATE	DESCRIPTION

DATE:	05/22/26
DMG Project No:	25184

GRADING & DRAINAGE PLAN

C4.0

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C4.0 – Gra.dwg–Layout1 May 26, 2026 – 7:53am GaryEmerson



ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

SCALE 1" = 50'

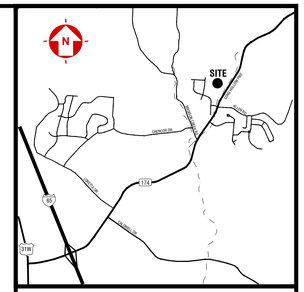
Know what's below. Call before you dig.

SITE BENCHMARKS:

BM 1
MAG NAIL SET 50' SE OF BRIDGE
ELEVATION: 478.10

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION: 466.98

BM3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06



VICINITY MAP

FLOOD NOTE:
BY GRAPHIC PLOTTING ONLY, PROJECT PARCEL IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AND IS SHOWN IN THE AREA ZONE 'X' ON FEMA FIRM MAP NUMBER 47165C0381H ON THE FLOOD INSURANCE RATE MAPS FOR CITY OF GOODLETTSVILLE, TN, WITH AN EFFECTIVE DATE OF 2/26/2017.

DISTURBED AREA:
TOTAL DISTURBED AREA = 34.0 ACRES±

SURVEY NOTE:
BASE INFORMATION WAS TAKEN FROM A BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY PRPARED BY BRACKMAN LAND SURVEYING DATED JANUARY 24, 2026, AND LIDAR INFORMATION. DEVELOPMENT MANAGEMENT GROUP, LLC SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY AND/OR COMPLETENESS OF THAT INFORMATION SHOWN HEREON OR ANY ERRORS OR OMISSIONS RESULTING FROM SUCH.

NOTES BY SYMBOL

CODE	DESCRIPTION	DETAIL
G1	SINGLE CURB INLET	.
G2	DOUBLE CURB INLET	.
G3	JUNCTION MANHOLE	.
G4	CONCRETE HEADWALL	.
G5	POND OUTLET STRUCTURE	.
G6	CONCRETE CURB CUT	.
G7	RIP RAP PROTECTION	

PROPOSED FEATURE LEGEND
PROPOSED CONTOUR — 950
PROPOSED SPOT ELEVATION — 506.50 TC / 506.50 PVT
PROPOSED DRAIN INLET
PROPOSED STORM DRAIN PIPE

NOTE: REFER TO SHEET C1.0 FOR GENERAL NOTES

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

PLANS PREPARED FOR:
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SUMNER COUNTY, TENNESSEE

DAVID S. ARGO
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
STATE OF TENNESSEE
26

REVISIONS

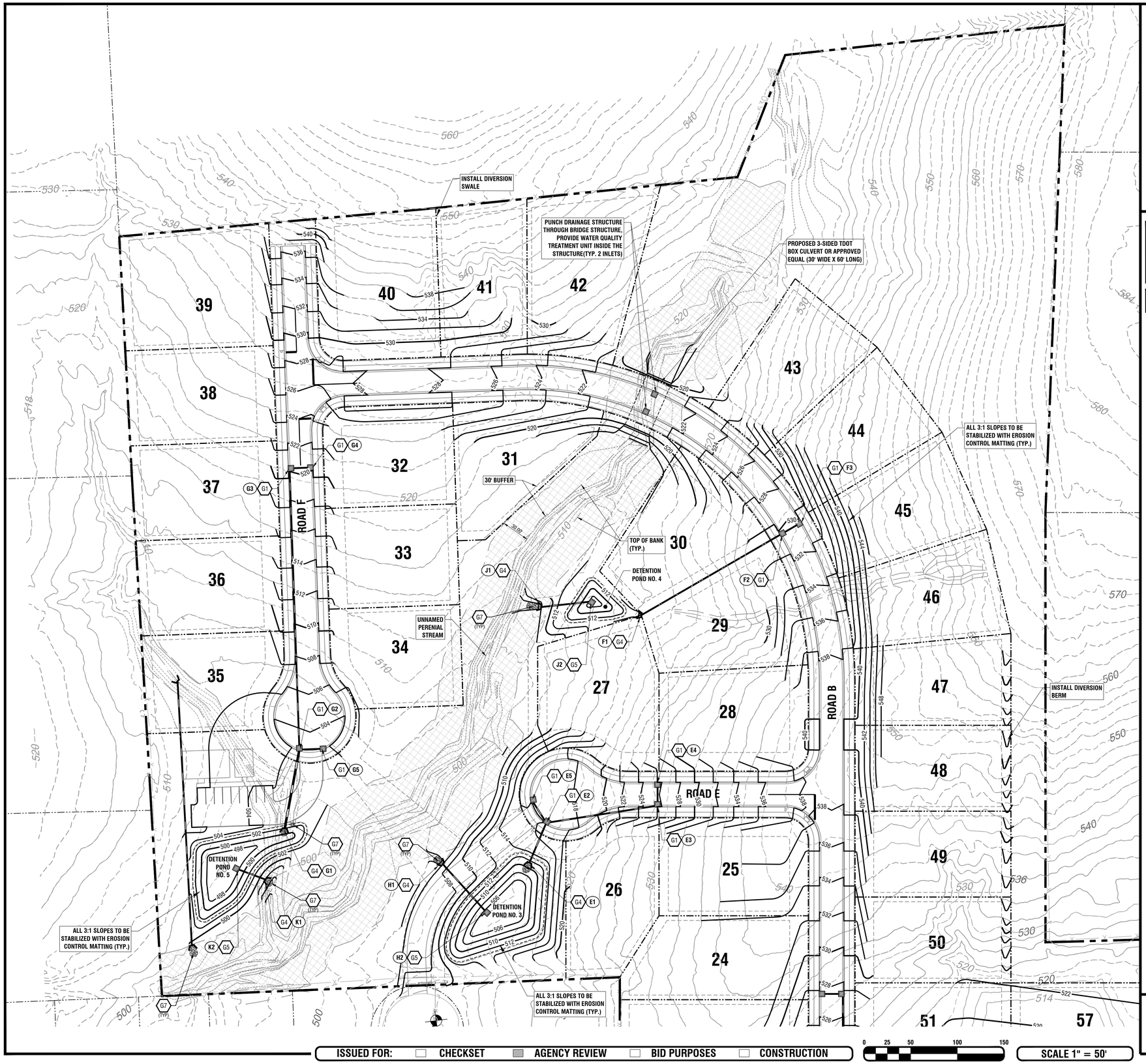
NO.	DESCRIPTION	DATE

DATE:	05/22/26
DMG Project No:	25184

DETAILED GRADING & DRAINAGE PLAN

C4.1

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C4.1 – Det Gro.dwg–Layout1 May 26, 2026 – 7:59am GaryEmerson



ISSUED FOR:

☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 25 50 100 150

SCALE 1" = 50'

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SITE BENCHMARKS:

BM 1
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ELEVATION: 478.10

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION: 466.98

BM3
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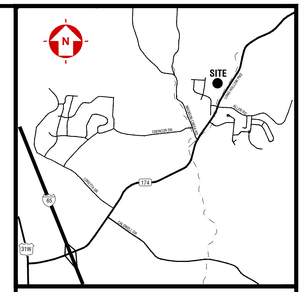
ELEVATION: 510.06



VICINITY MAP

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TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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SUMNER COUNTY, TENNESSEE

DAVID S. ABERY
REGISTERED ENGINEER
AGREEMENT NO. 2026
STATE OF TENNESSEE
05/22/26

REVISIONS

NO.	DATE	DESCRIPTION

DATE:	05/22/26
DMG Project No:	25184

DETAILED GRADING & DRAINAGE PLAN

C4.2

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C4.2 – Det Grd.dwg–Layout1 May 26, 2026 – 8:01am GaryEmerson

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Call before you dig.

SITE BENCHMARKS:

BM 1
MAG NAIL SET 50' SE OF BRIDGE
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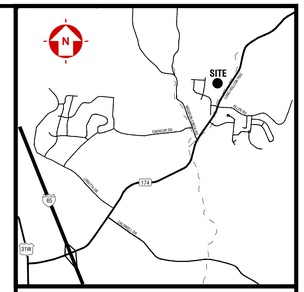
ELEVATION: 466.98

BM3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06



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TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 50 100 200 300

SCALE 1" = 100'

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NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
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4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

DAVID S. ARGEY
REGISTERED ENGINEER
AGRICULTURE
ENGINEER
STATE OF TENNESSEE
5-22-26

REVISIONS

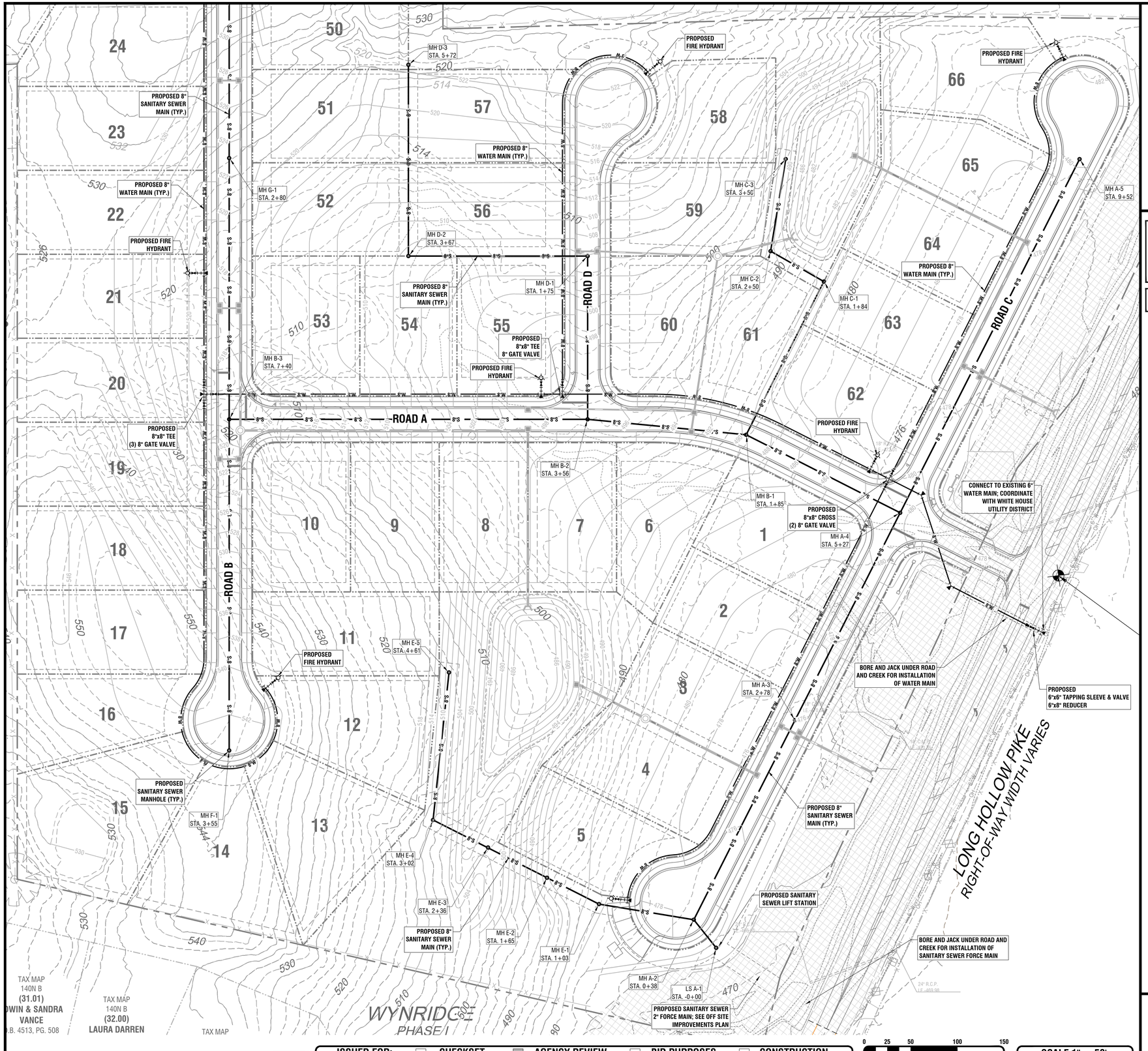
NO.	DATE	DESCRIPTION

DATE:	05/22/26
DMG Project No:	25184

SITE UTILITY PLAN

C5.0

Z:\PROJECT DATABASE\2025\25.184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C5.0 – Util.dwg–Layout1 May 26, 2026 – 7:49am GaryEmerson



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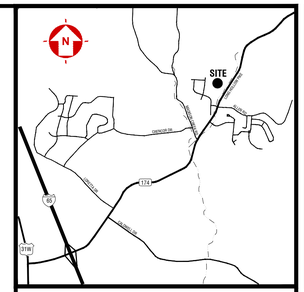

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DISTURBED AREA:

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NOTE:
REFER TO SHEET C1.0 FOR GENERAL NOTES

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 25 50 100 150

SCALE 1" = 50'

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:

4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

DAVID S. CASEY — REGISTERED ENGINEER — AGRICULTURE — CIVIL — COMMERCIAL — STATE OF TENNESSEE — 26

REVISIONS

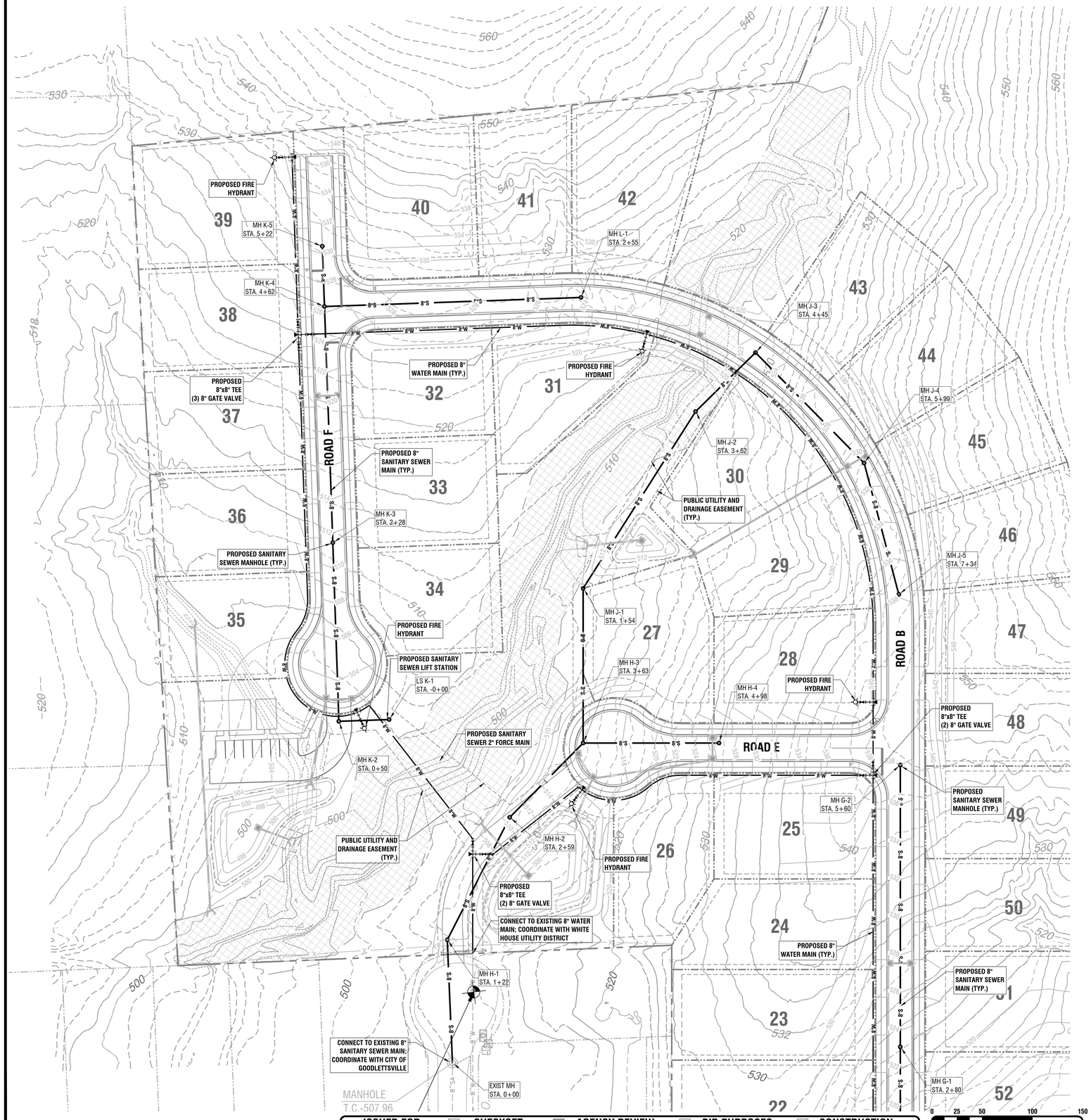
NO.	DATE	DESCRIPTION

DATE:	05/22/26
DMG Project No:	25184

DETAILED UTILITY PLAN

C5.1

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C5.1 – Det Util.dwg–Layout1 May 26, 2026 – 8:02am GaryEmerson



ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

SCALE 1" = 50'

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

SITE BENCHMARKS:

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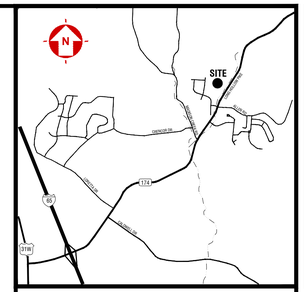

VICINITY MAP

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NOTE:
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TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:

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DAVID S. ABERNATHY — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — STATE OF TENNESSEE — 26

REVISIONS

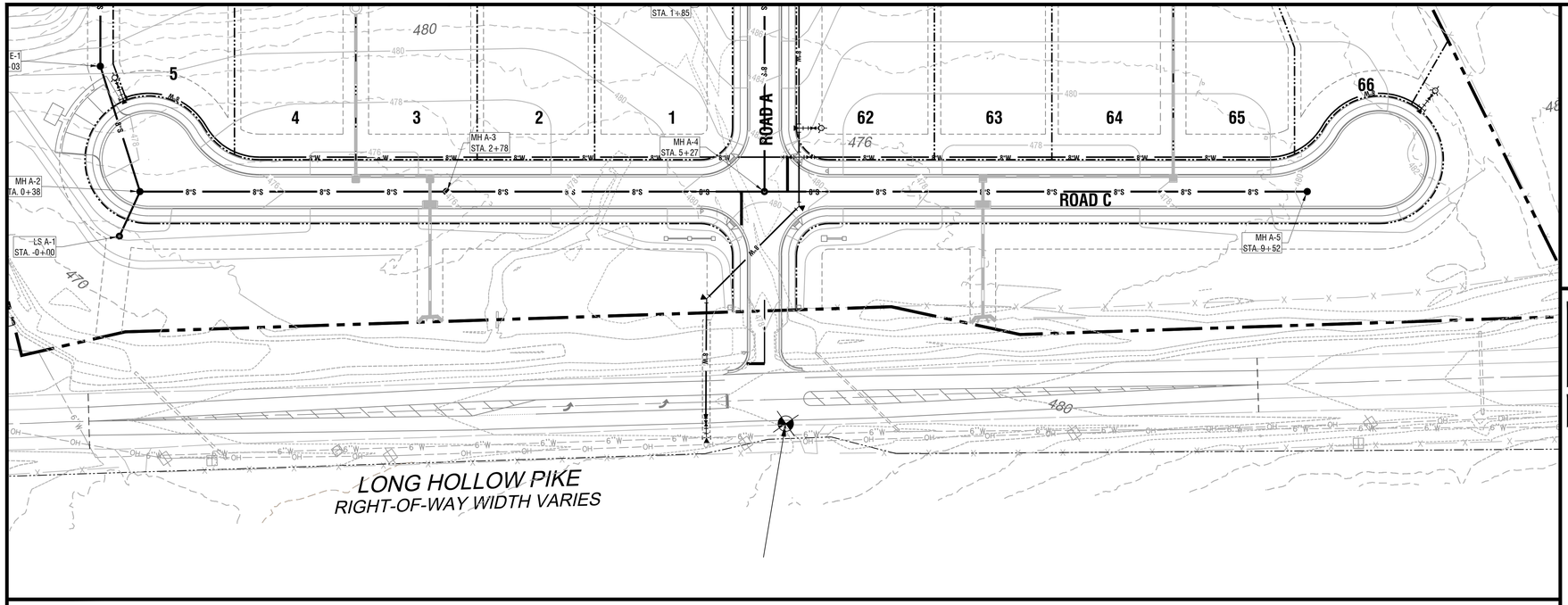
NO.	DESCRIPTION	DATE

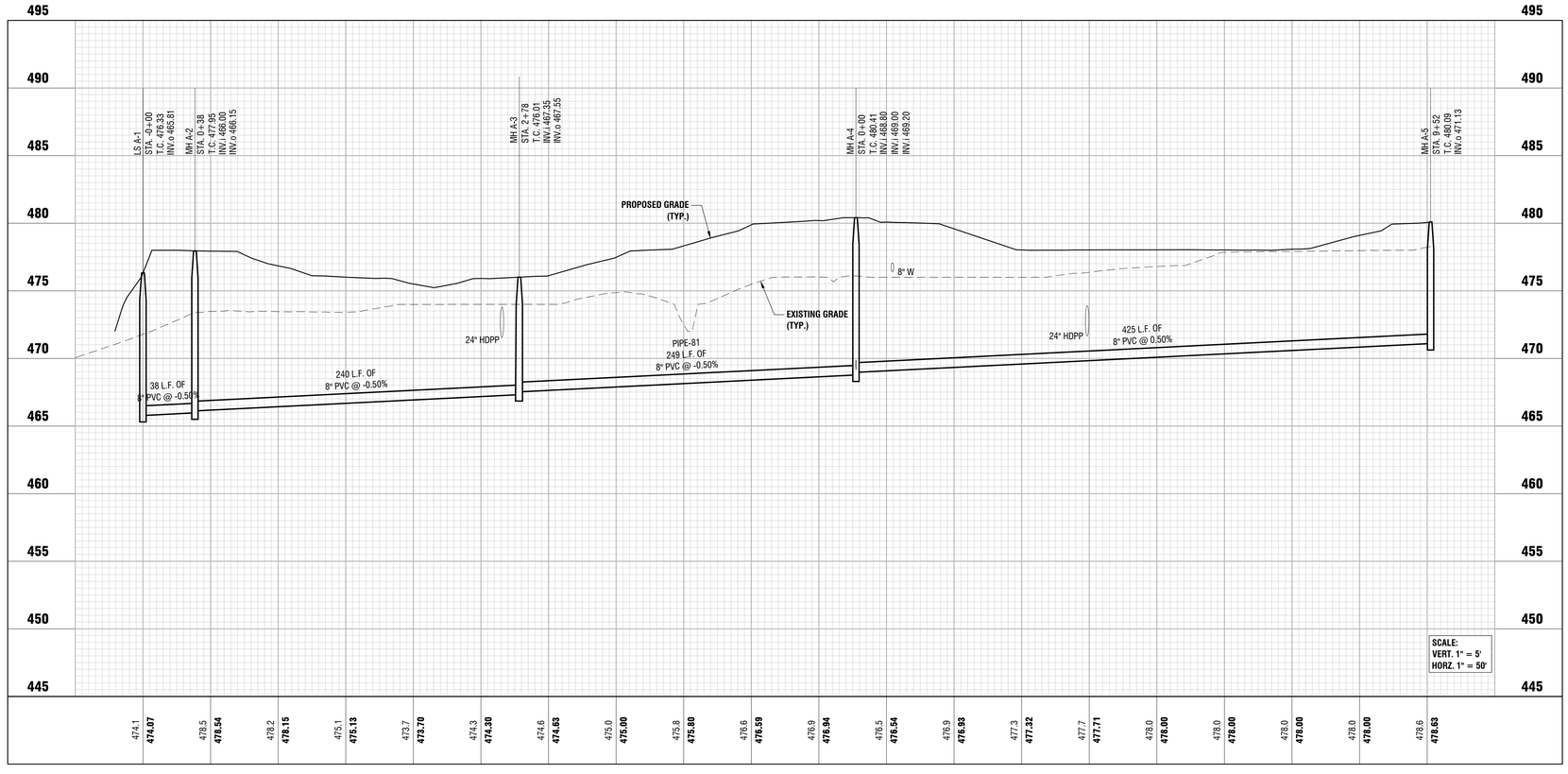
DATE:	05/22/26
DMG Project No:	25184

DETAILED UTILITY PLAN

C5.2

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C5.2 – Det Util.dwg–Layout1 May 26, 2026 – 8:03am GaryEmerson





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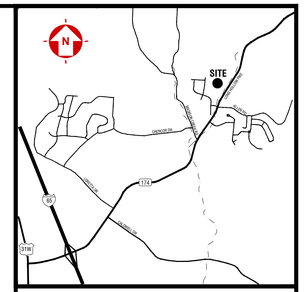

VICINITY MAP

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TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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SUMNER COUNTY, TENNESSEE

DAVID C. EMERSON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
LAND DEVELOPMENT
STATE OF TENNESSEE
5/22/26

REVISIONS

NO.	DATE	DESCRIPTION

DATE:	05/22/26
DMG Project No:	25184

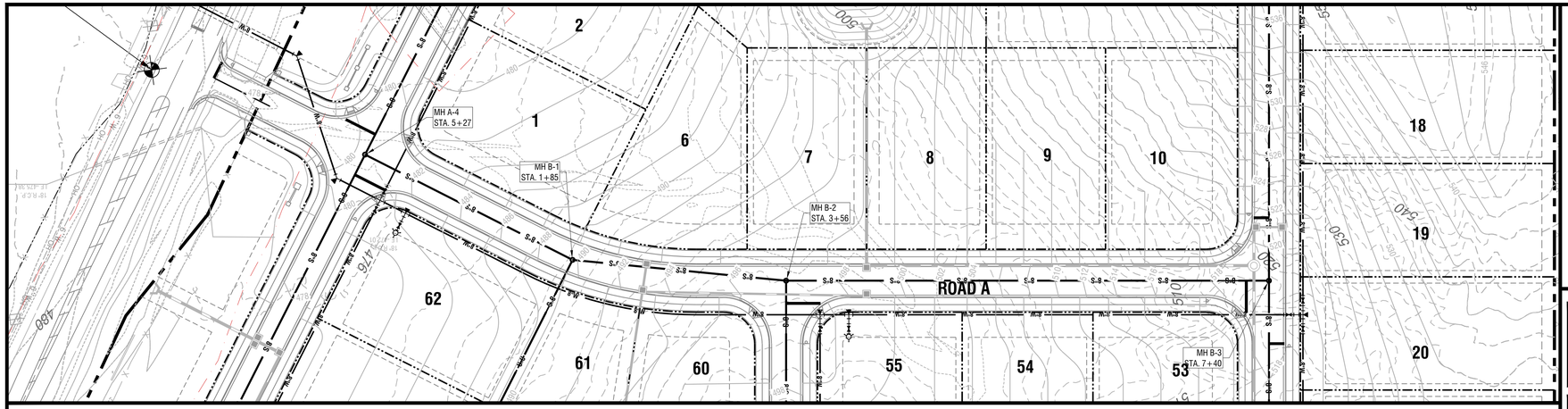
SANITARY SEWER LINE A
PLAN & PROFILE

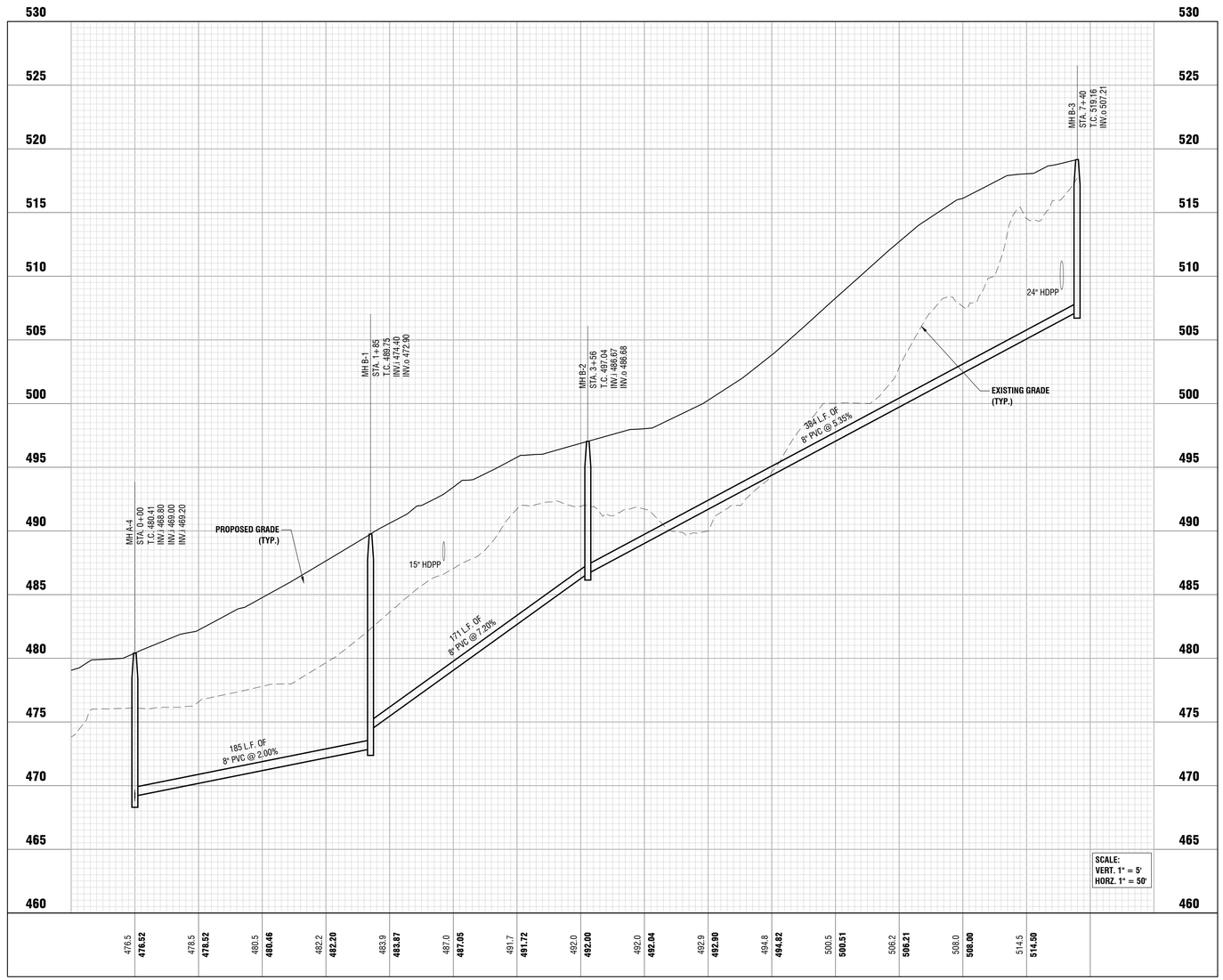
C5.3

ISSUED FOR: ☐ CHECKSET ☒ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C5.3 San A P&P.dwg–Layout1 May 26, 2026 – 9:29am GaryEmerson





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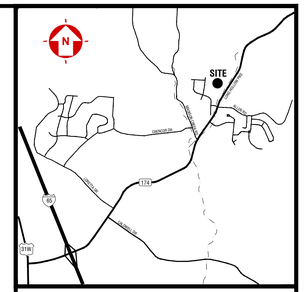

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PARCELS: 124 & 124.01
ZONING: LDRPUD

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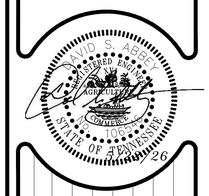


REVISIONS

NO.	DESCRIPTION	DATE

DATE:	05/22/26
DMG Project No:	25184

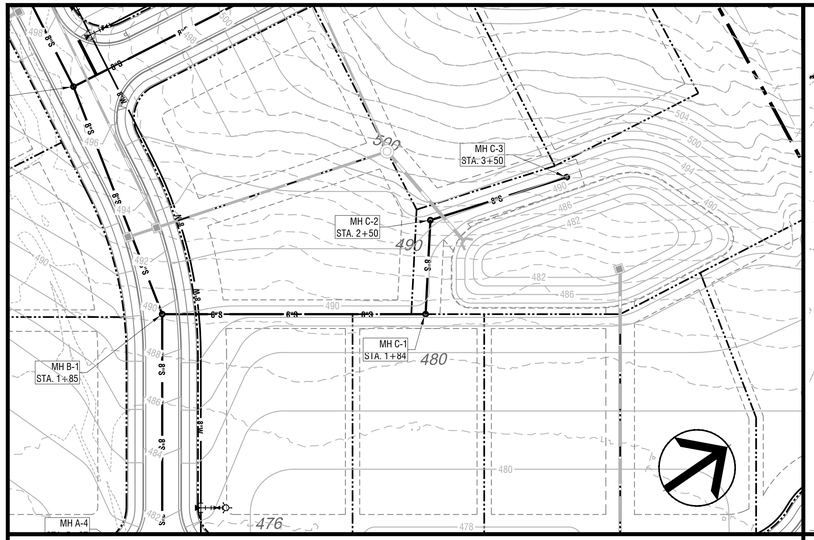
SANITARY SEWER LINE B
PLAN AND PROFILE

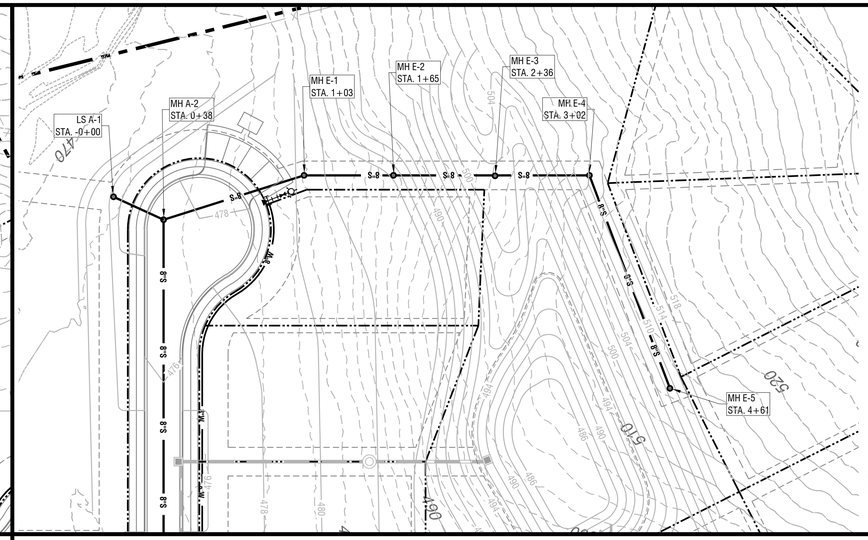
C5.4

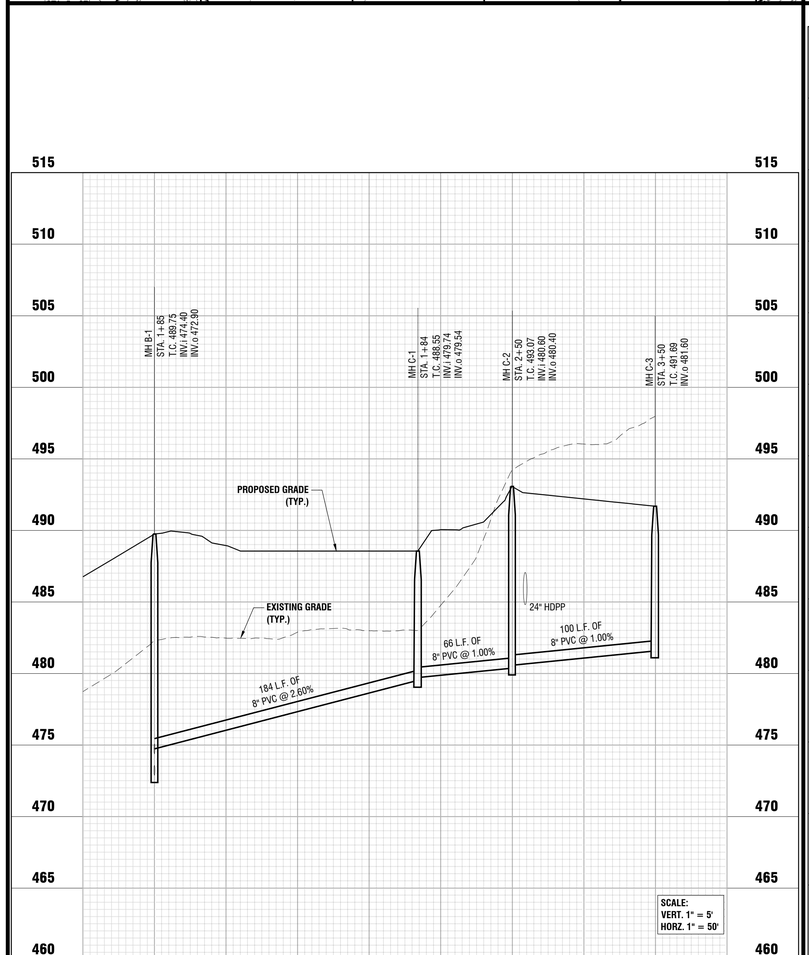
ISSUED FOR: ☐ CHECKSET ☒ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

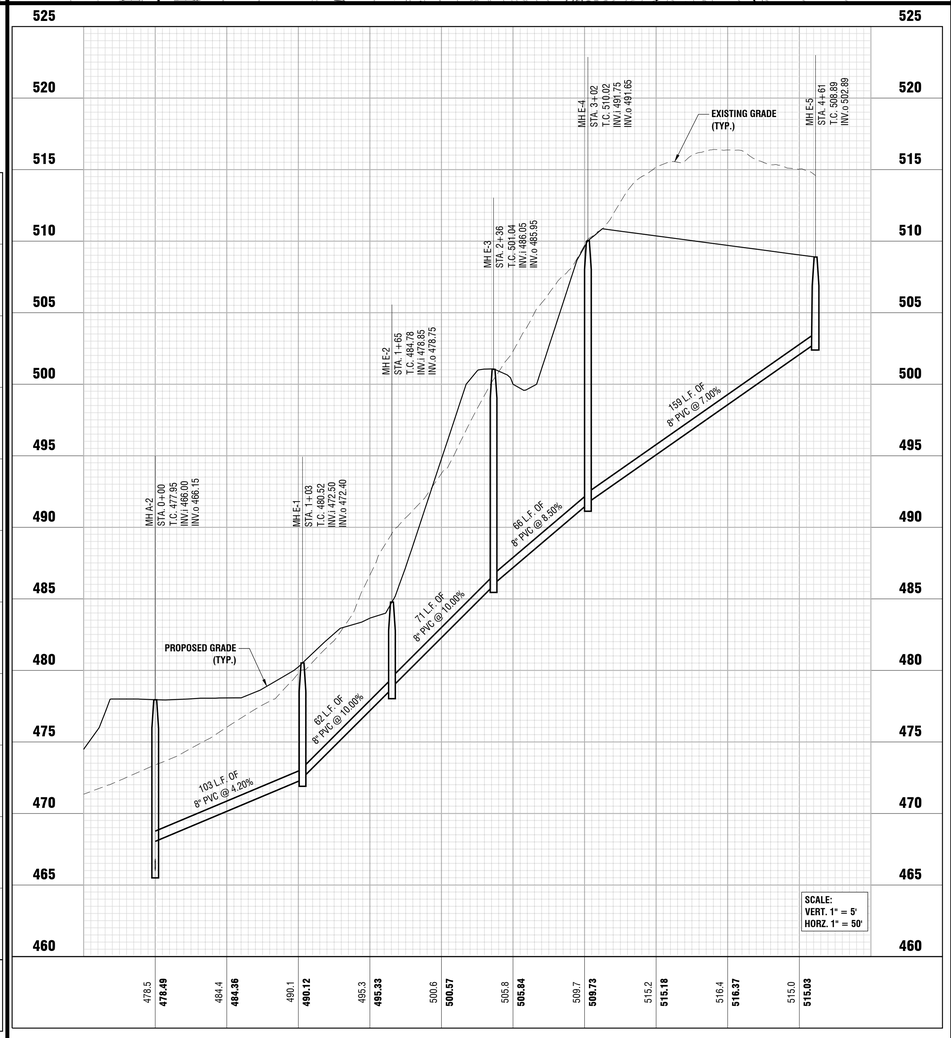
AS NOTED

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C5.4 San B P&P.dwg–Layout1 May 26, 2026 – 9:34am GaryEmerson









ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION — AS NOTED

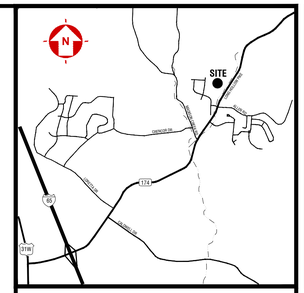
811 Know what's below. Call before you dig.

SITE BENCHMARKS:

BM 1
MAG NAIL SET 50' SE OF BRIDGE
ELEVATION: 478.10

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION: 466.98

BM3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06



VICINITY MAP

FLOOD NOTE:
BY GRAPHIC PLOTTING ONLY, PROJECT PARCEL IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AND IS SHOWN IN THE AREA ZONE 'X' ON FEMA FIRM MAP NUMBER 47165C0381H ON THE FLOOD INSURANCE RATE MAPS FOR CITY OF GOODLETTSVILLE, TN, WITH AN EFFECTIVE DATE OF 2/26/2017.

DISTURBED AREA:
TOTAL DISTURBED AREA = 34.0 ACRES±

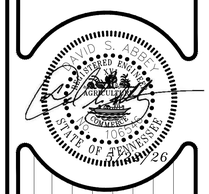
SURVEY NOTE:
BASE INFORMATION WAS TAKEN FROM A BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY PRPARED BY BRACKMAN LAND SURVEYING DATED JANUARY 24, 2026, AND LIDAR INFORMATION. DEVELOPMENT MANAGEMENT GROUP, LLC SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY AND/OR COMPLETENESS OF THAT INFORMATION SHOWN HEREON OR ANY ERRORS OR OMISSIONS RESULTING FROM SUCH.

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE



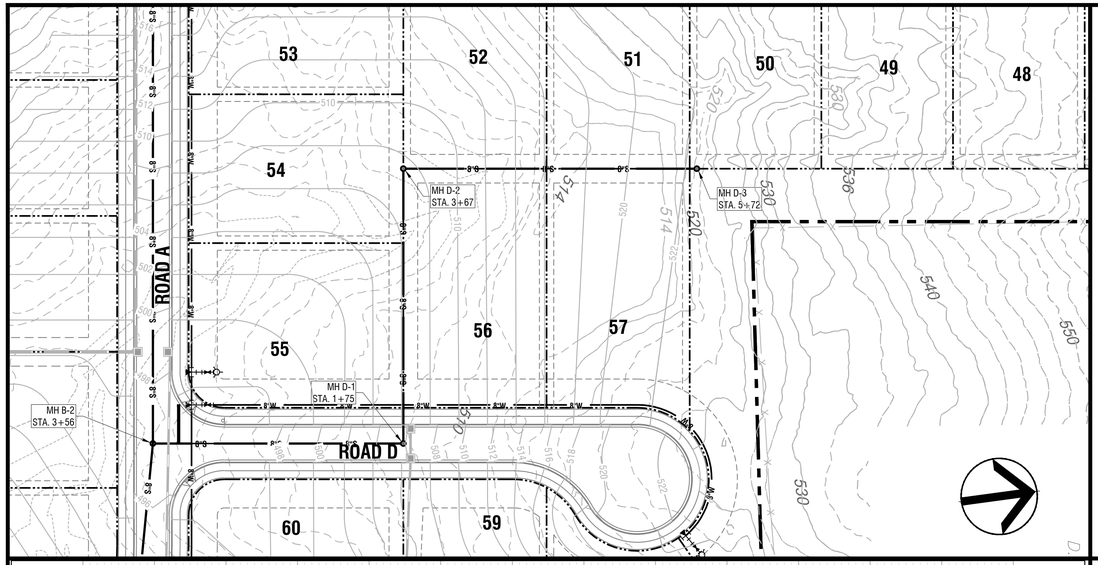
REVISIONS

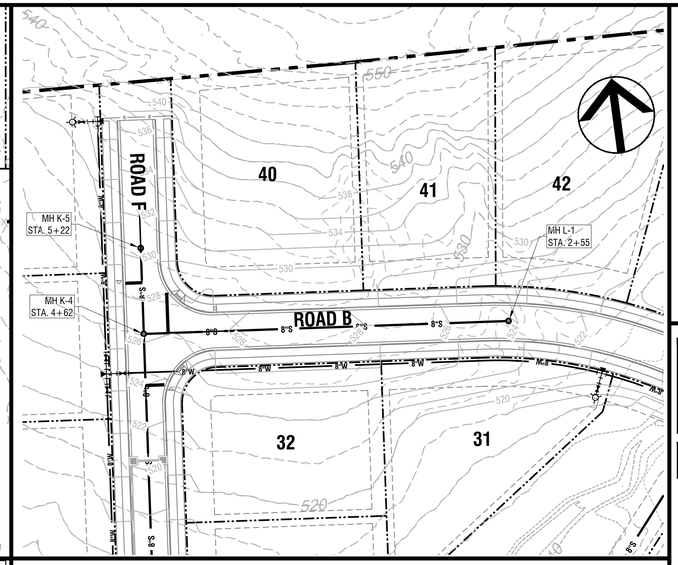
NO.	DATE	DESCRIPTION

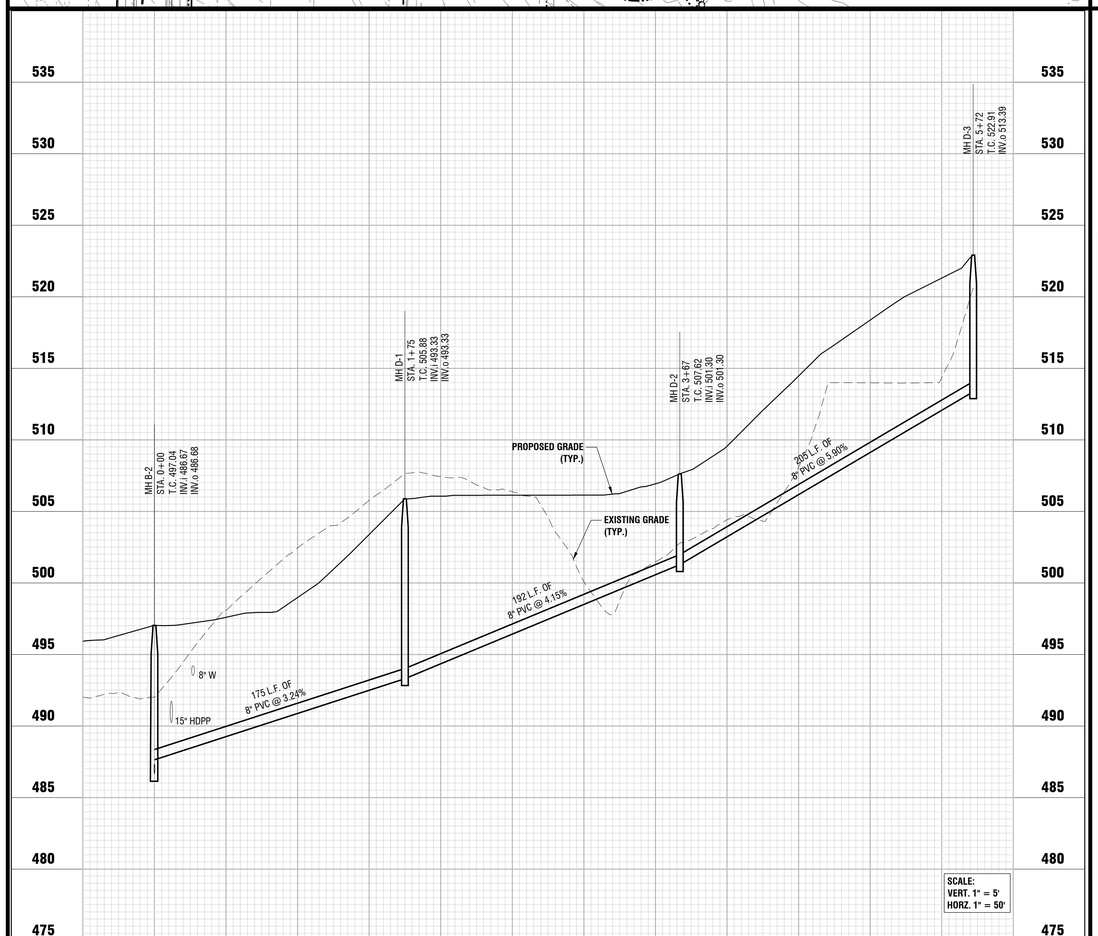
DATE:	05/22/26
DMG Project No:	25184

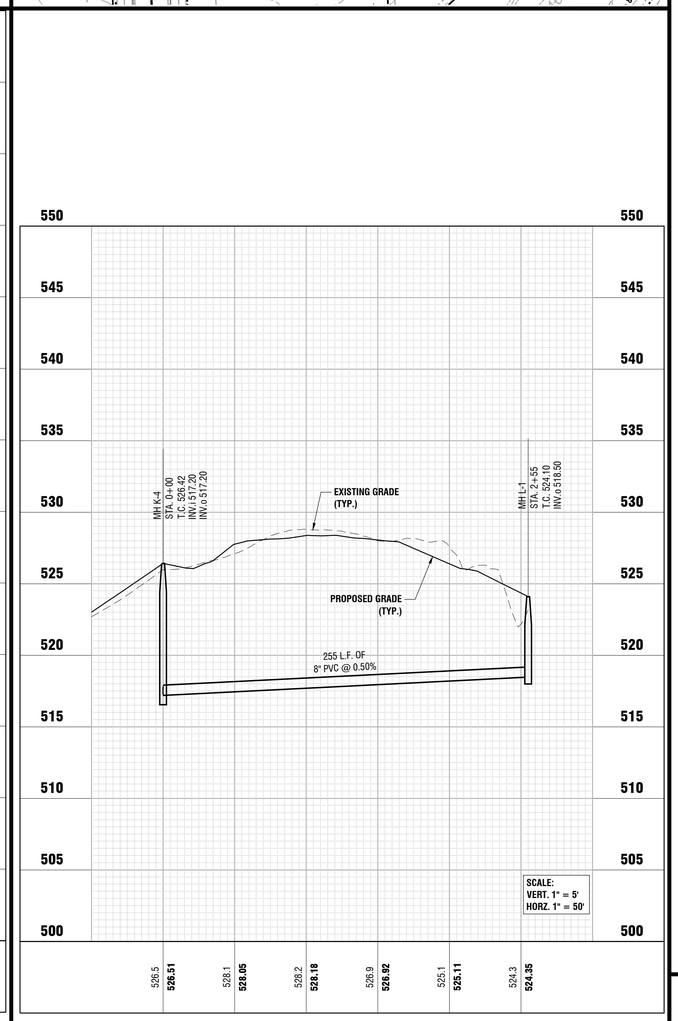
SANITARY SEWER LINE C & LINE E
PLAN & PROFILE
C5.5

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C5.5 San C P&P.dwg–Layout1 May 26, 2026 – 9:33am GaryEmerson









ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION — AS NOTED

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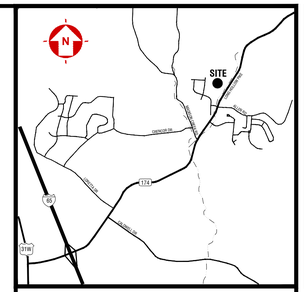
ELEVATION: 510.06



VICINITY MAP

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DISTURBED AREA:
TOTAL DISTURBED AREA = 34.0 ACRES±

SURVEY NOTE:
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TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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PLANS PREPARED BY:

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SUMNER COUNTY, TENNESSEE

DAVID S. ABBEY — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — STATE OF TENNESSEE — 5-26

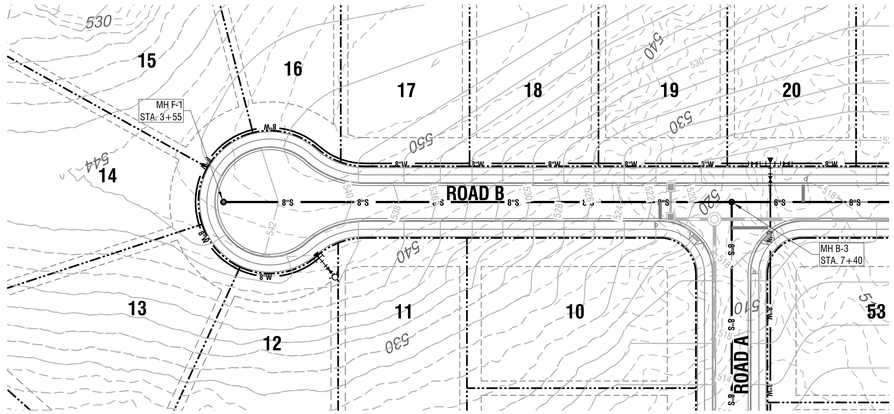
REVISIONS

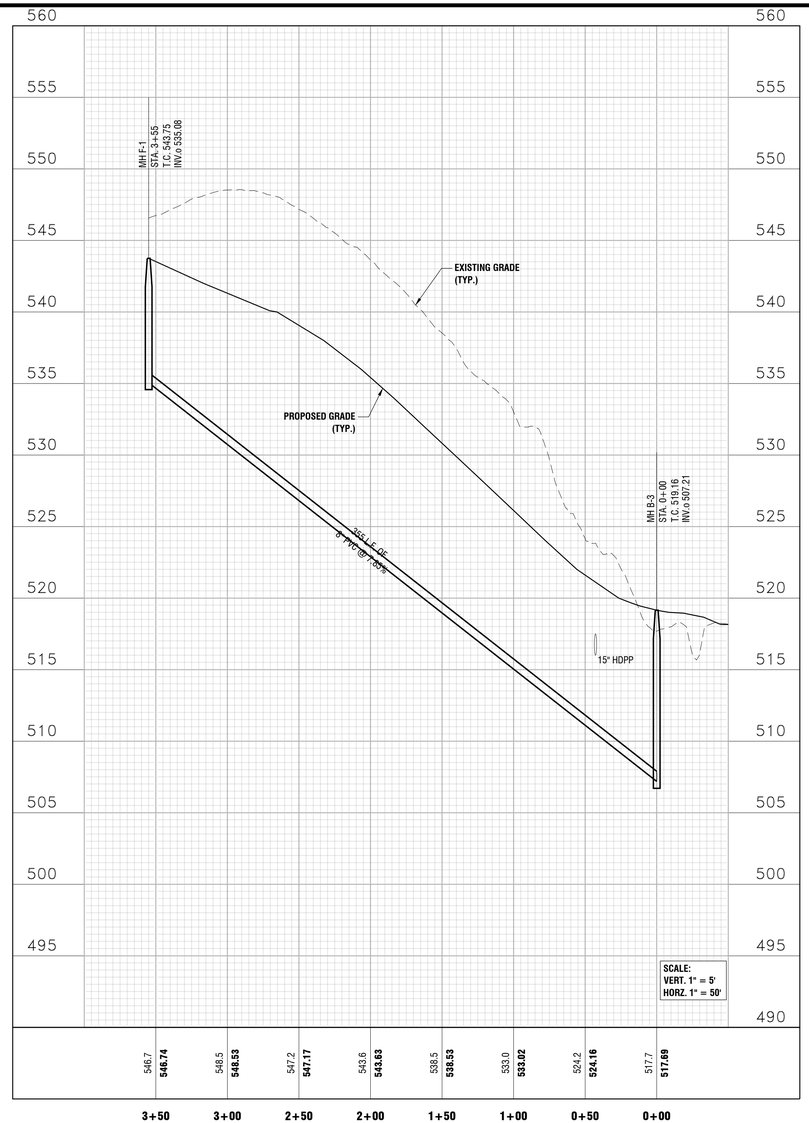
NO.	DESCRIPTION	DATE

DATE:	05/22/26
DMG Project No:	25184

SANITARY SEWER LINE D & LINE L
PLAN & PROFILE
C5.6

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C5.6 Son D P&P.dwg–Layout1 May 26, 2026 – 9:38am GaryEmerson





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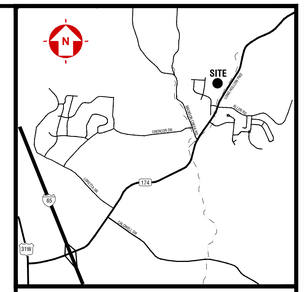

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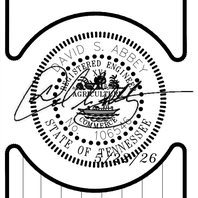


REVISIONS

NO.	DESCRIPTION	DATE

DATE:	05/22/26
DMG Project No:	25184

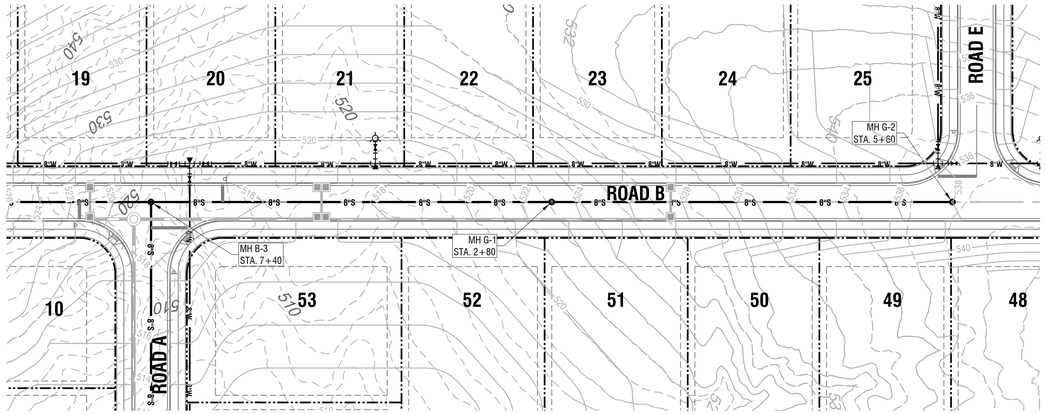
SANITARY SEWER LINE F
PLAN & PROFILE

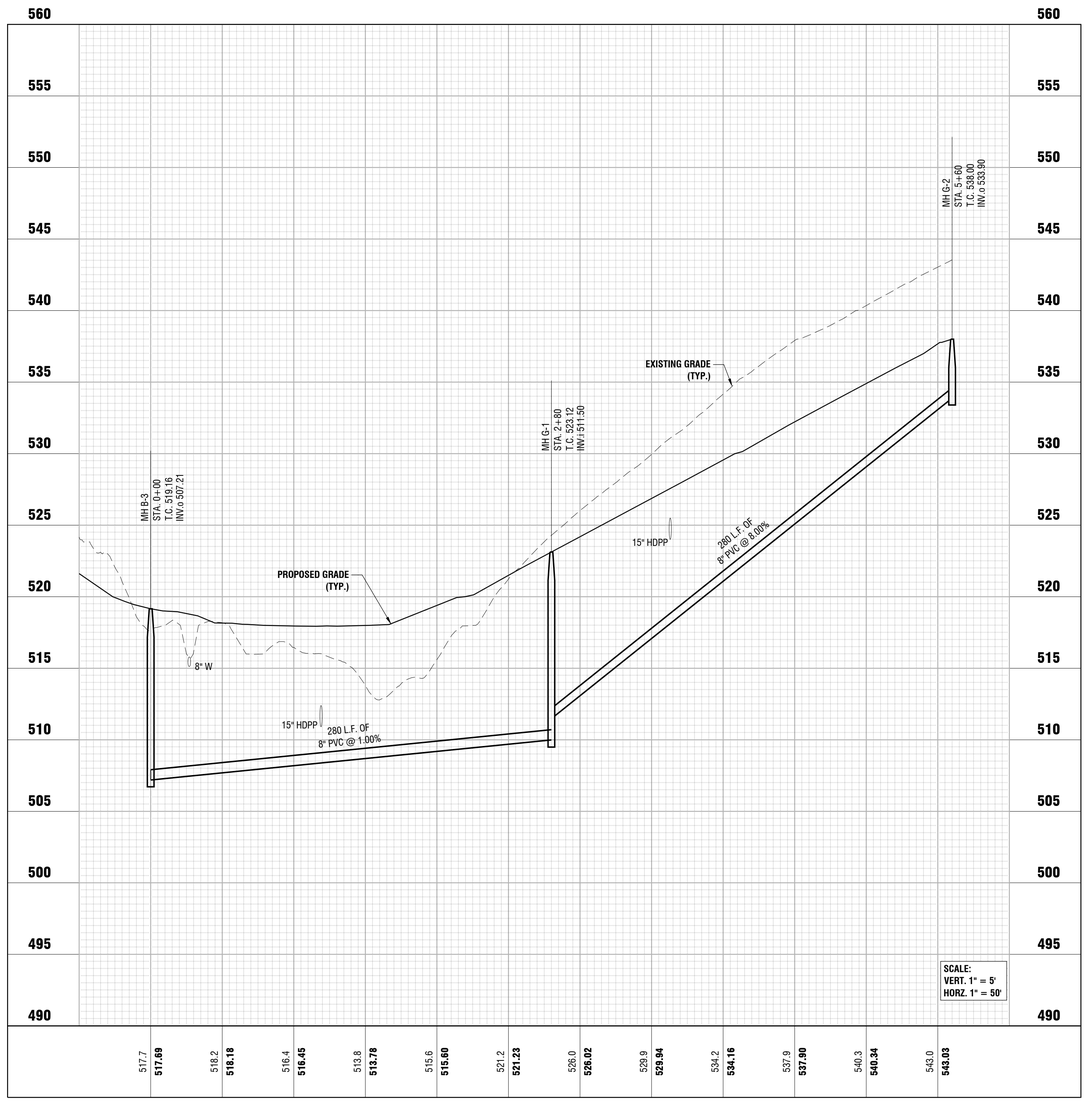
C5.7

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C5.7 San F P&P.dwg–Layout1 May 26, 2026 – 9:39am GaryEmerson





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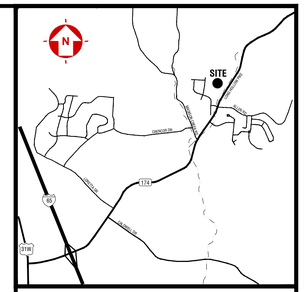

VICINITY MAP

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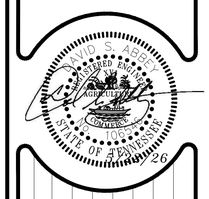

REVISIONS

NO.	DATE	DESCRIPTION

DATE:	05/22/26
DMG Project No:	25184

SANITARY SEWER LINE G
PLAN & PROFILE

C5.8

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

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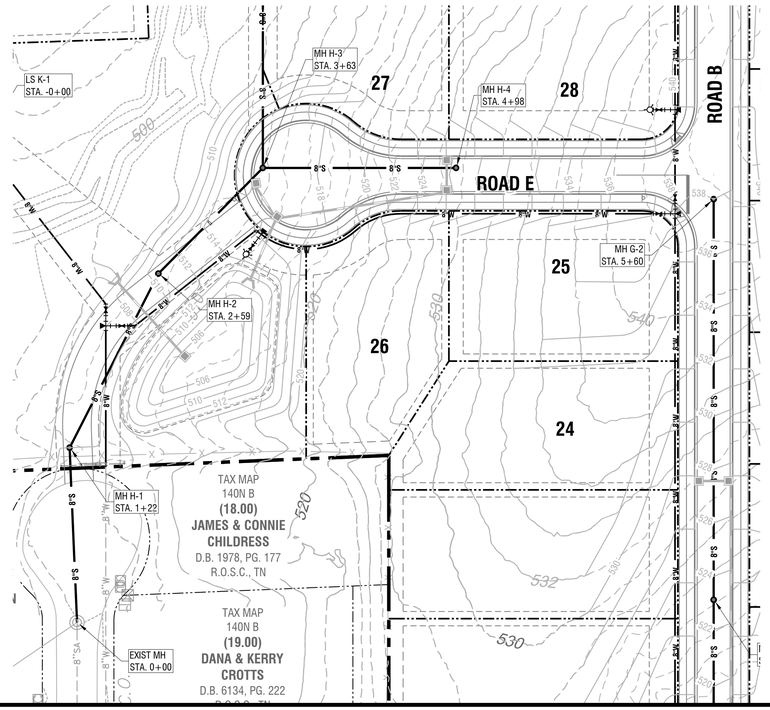

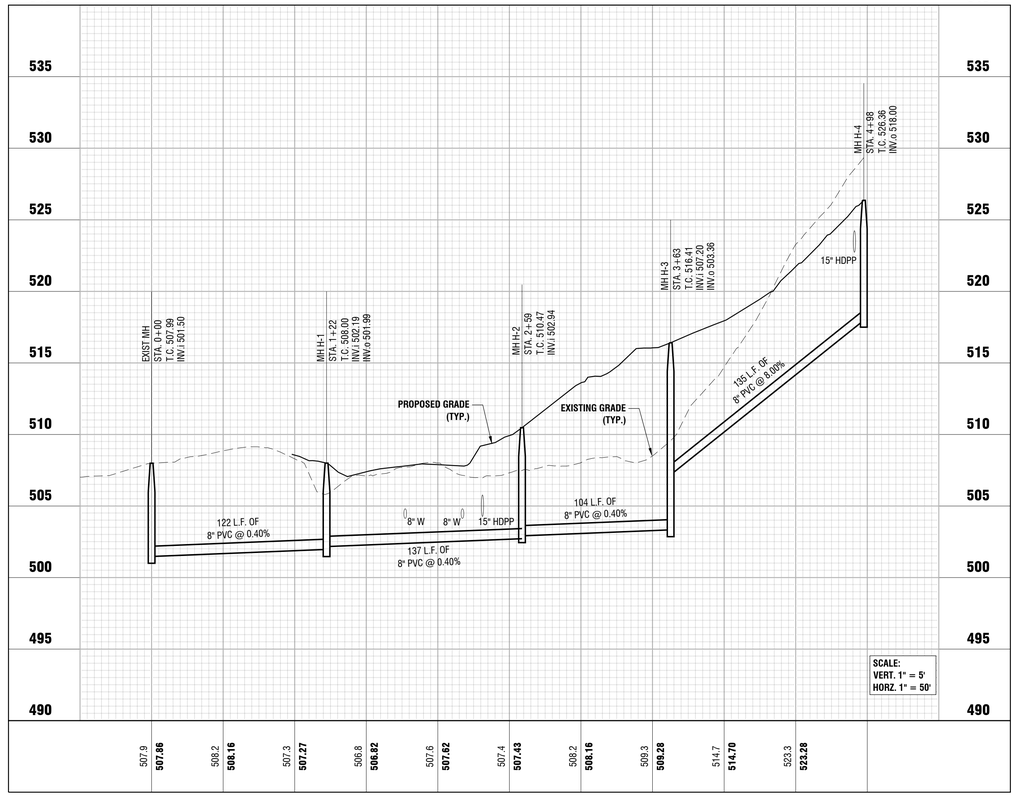

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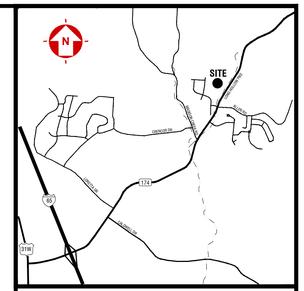

VICINITY MAP

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PARCELS: 124 & 124.01
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SUMNER COUNTY, TENNESSEE

REVISIONS

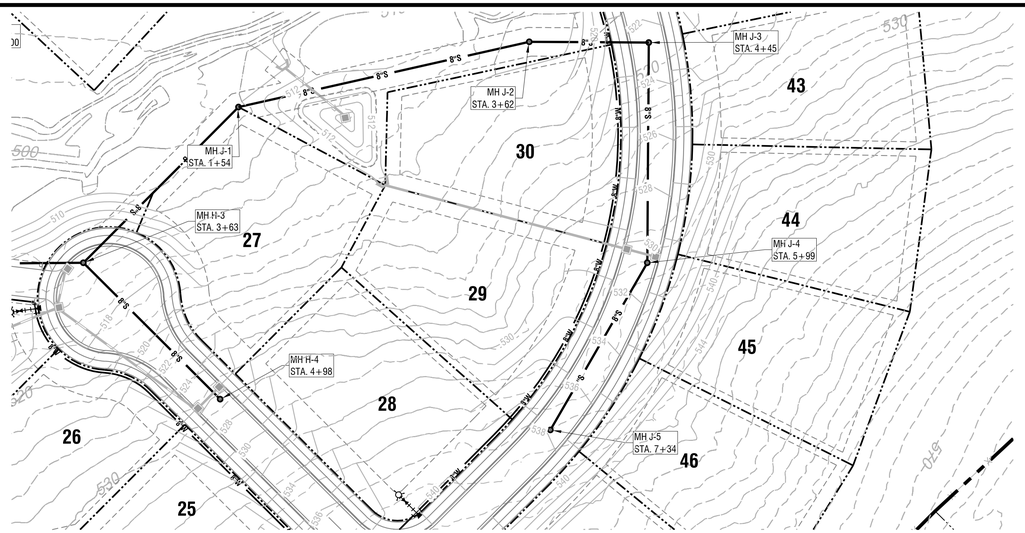
NO.	DATE	DESCRIPTION

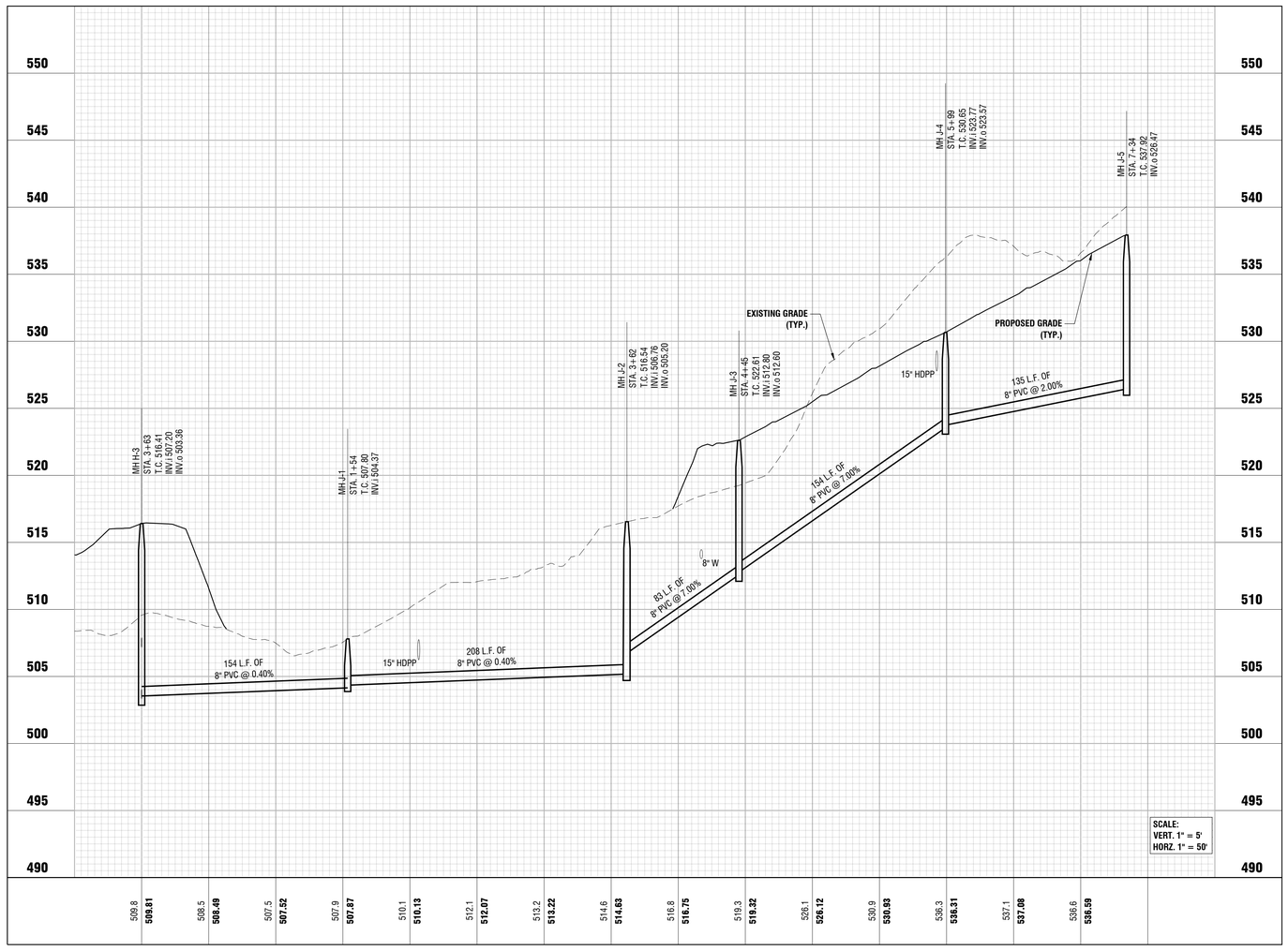
DATE:	05/22/26
DMG Project No:	25184

SANITARY SEWER LINE H
PLAN & PROFILE

C5.9

Z:\PROJECT DATABASE\2025\25184 - Phillips Builders - Residential Development - 4408 Long Hollow Pike -Goodlettsville TN\Plans\Engineer\25184 - Ironwood_C5.9 San H P&P.dwg-Layout1 May 26, 2026 - 9:43am GaryEmerson





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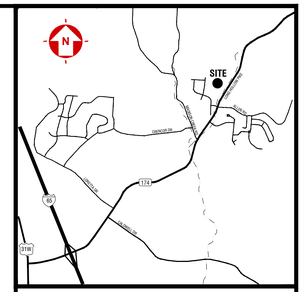

VICINITY MAP

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DAVID S. ABBEY
REGISTERED ENGINEER
AGRICULTURE
CIVIL
COMMERCE
STATE OF TENNESSEE
5/22/26

REVISIONS

NO.	DATE	DESCRIPTION

DATE:	05/22/26
DMG Project No:	25184

SANITARY SEWER LINE J
PLAN & PROFILE

C5.10

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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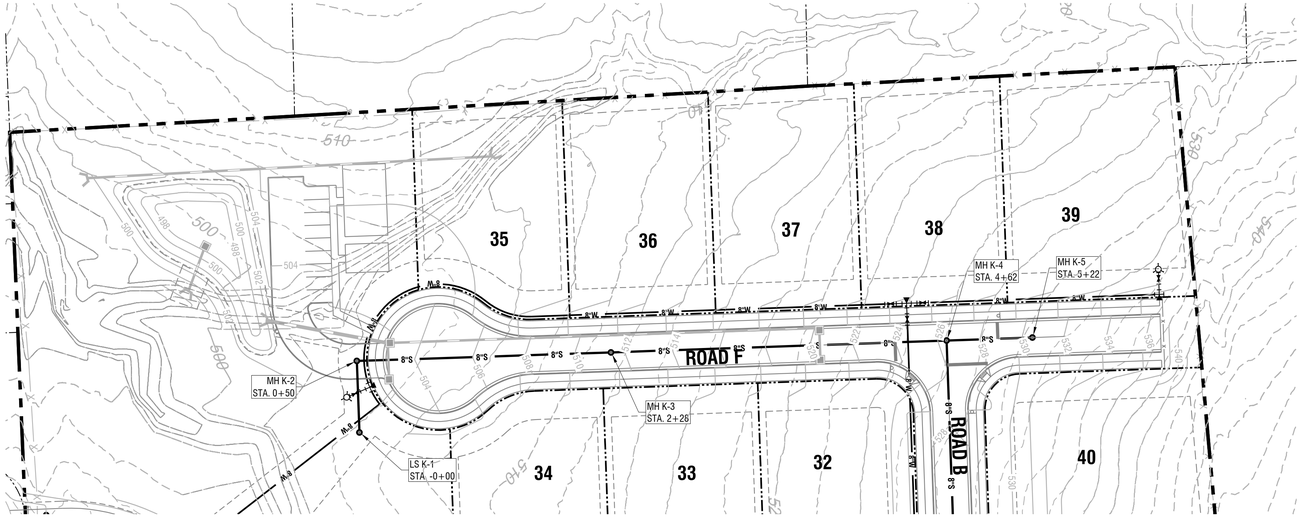
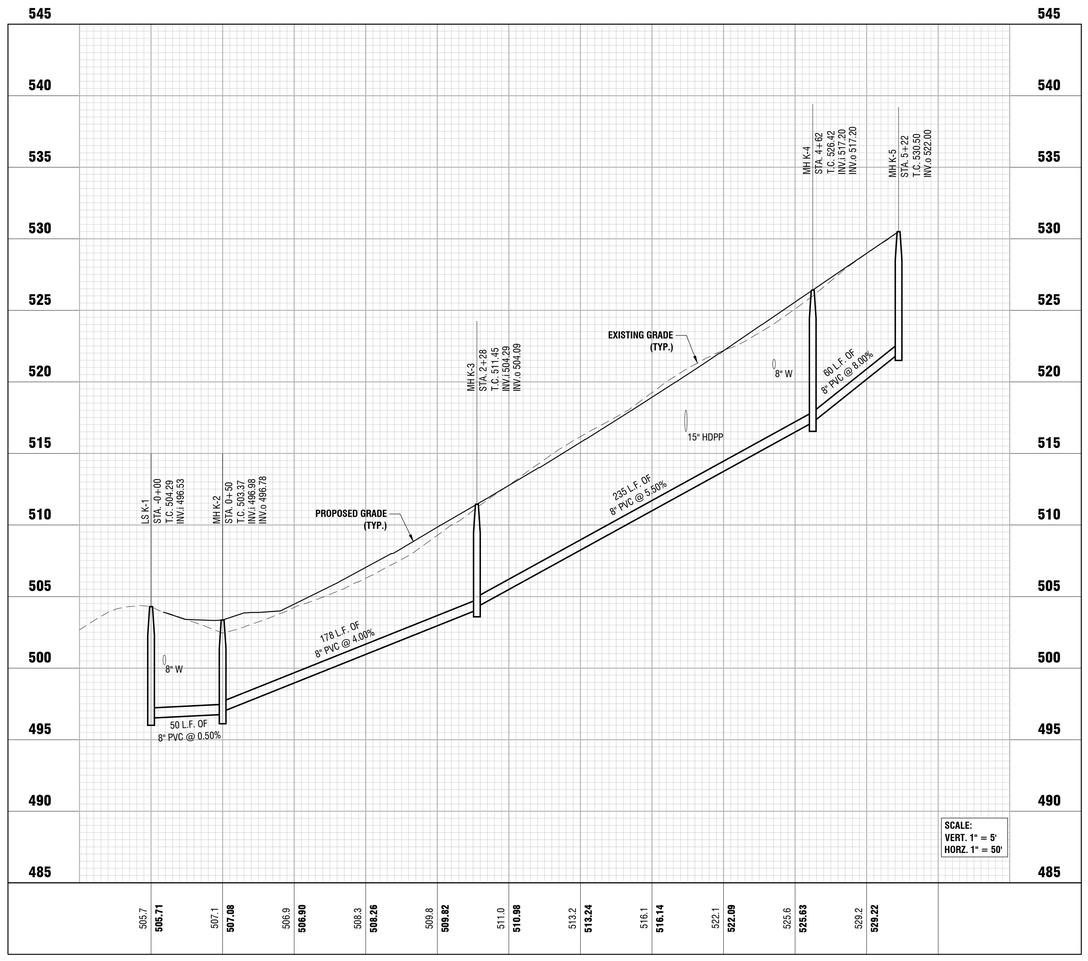
Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C5.10 San J P&P.dwg–Layout1 May 26, 2026 – 9:45am GoryEmerson





ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

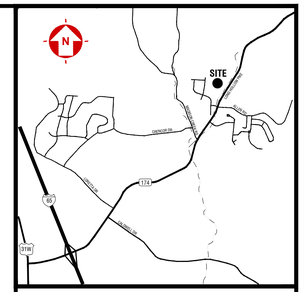
Know what's **below.**
Call before you dig.

SITE BENCHMARKS:

BM 1
MAG NAIL SET 50' SE OF BRIDGE
ELEVATION: 478.10

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION: 466.98

BM3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06



VICINITY MAP

FLOOD NOTE:

BY GRAPHIC PLOTTING ONLY, PROJECT PARCEL IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AND IS SHOWN IN THE AREA ZONE 'X' ON FEMA FIRM MAP NUMBER 47165C0381H ON THE FLOOD INSURANCE RATE MAPS FOR CITY OF GOODLETTSVILLE, TN, WITH AN EFFECTIVE DATE OF 2/26/2017.

DISTURBED AREA:

TOTAL DISTURBED AREA = 34.0 ACRES±

SURVEY NOTE:

BASE INFORMATION WAS TAKEN FROM A BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY PRPARED BY BRACKMAN LAND SURVEYING DATED JANUARY 24, 2026, AND LIDAR INFORMATION. DEVELOPMENT MANAGEMENT GROUP, LLC SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY AND/OR COMPLETENESS OF THAT INFORMATION SHOWN HEREON OR ANY ERRORS OR OMISSIONS RESULTING FROM SUCH.

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

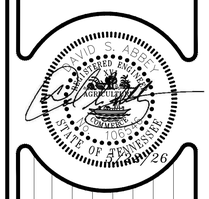
PLANS PREPARED FOR:

PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:

4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE



REVISIONS

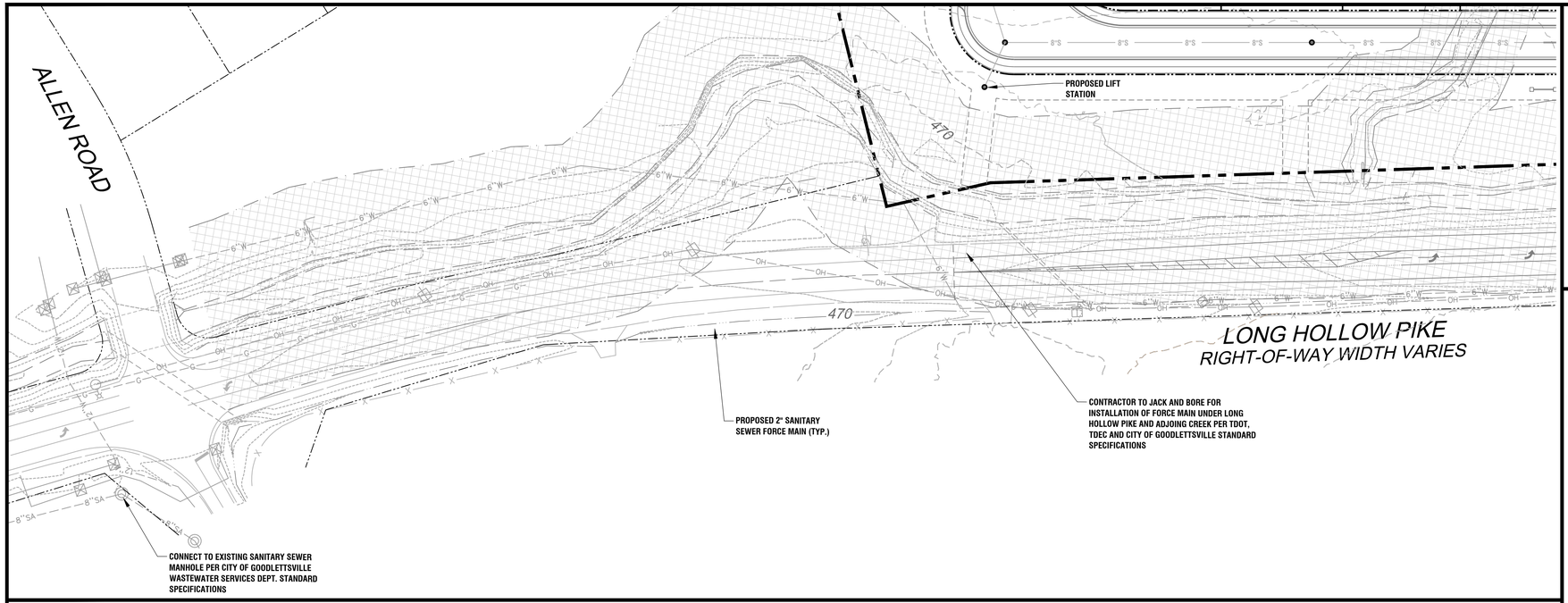
NO.	DESCRIPTION	DATE

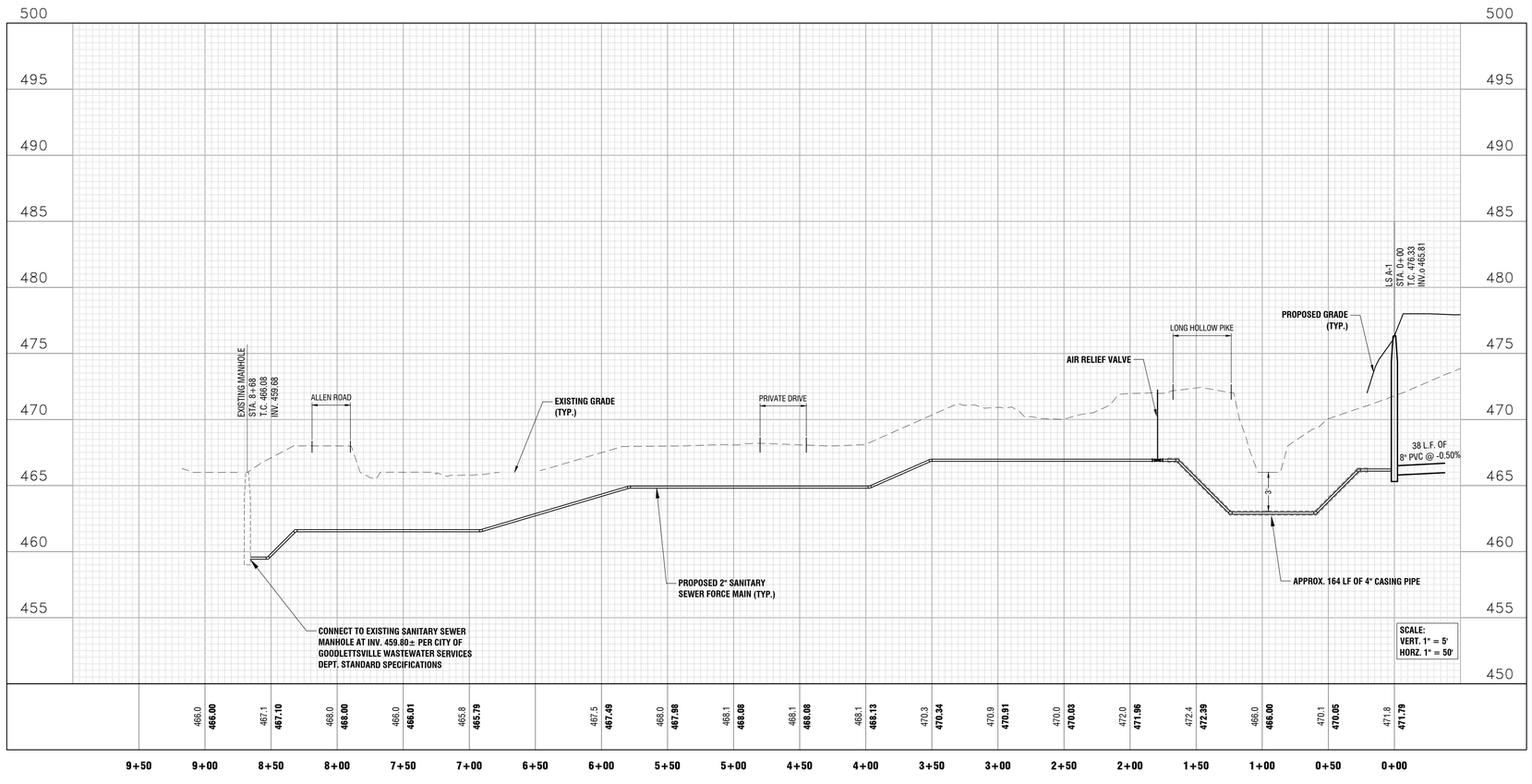
DATE:	05/22/26
DMG Project No:	25184

SANITARY SEWER LINE K
PLAN & PROFILE

C5.11

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C5.11 San K P&P.dwg–Layout1 May 26, 2026 – 9:46am GaryEmerson





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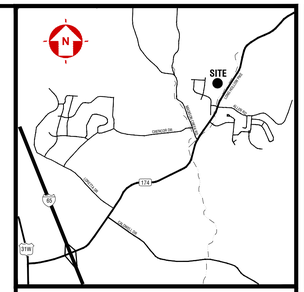

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PARCELS: 124 & 124.01
ZONING: LDRPUD

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SUMNER COUNTY, TENNESSEE

DAVID S. ABSHIER
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
TOWN
STATE OF TENNESSEE
26

REVISIONS

NO.	DESCRIPTION	DATE

DATE:	05/22/26
DMG Project No:	25184

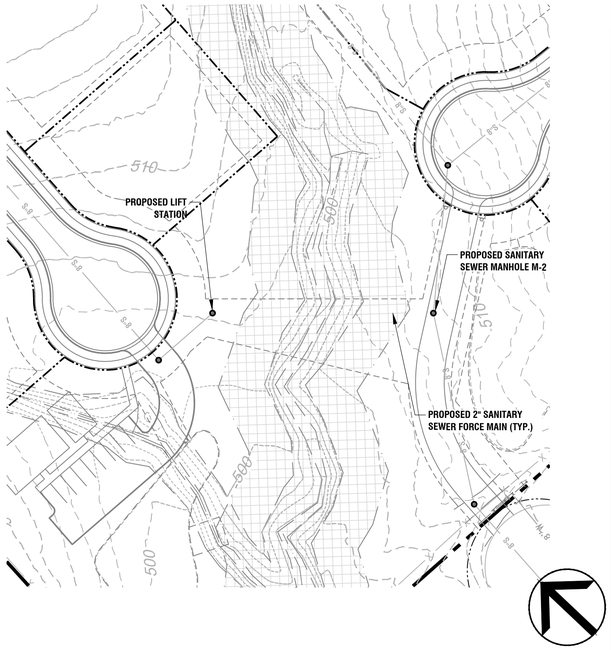
SANITARY SEWER FORCE MAIN 1

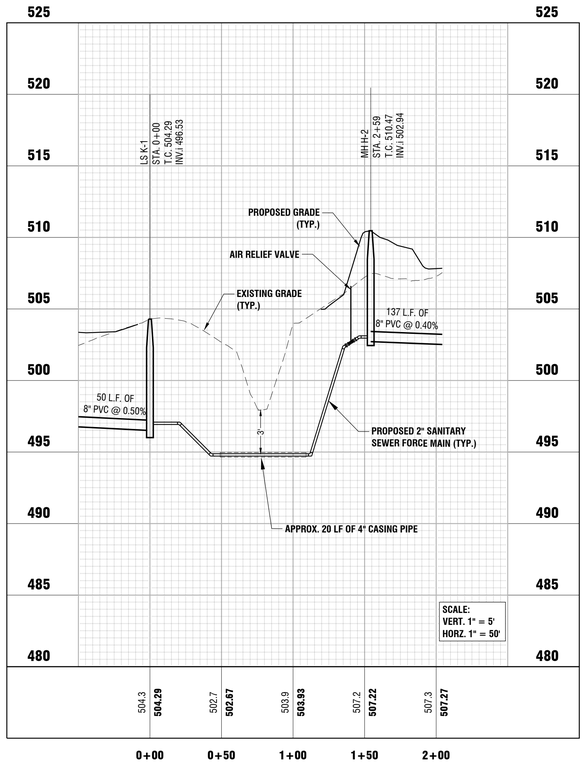
C5.12

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C5.12 Son FM1 P&P.dwg–Layout1 May 26, 2026 – 8:49am GaryEmerson





INFORMATION HAS BEEN PROVIDED TO EONE SEWER SYSTEMS TO DESIGN THE LIFT STATIONS. DETAILS AND INFORMATION WILL BE ADDED TO THIS SHEET ONCE AVAILABLE.

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

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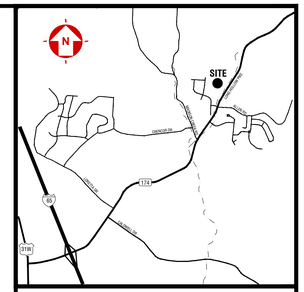

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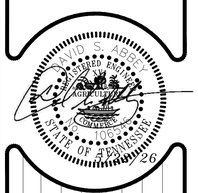

REVISIONS

NO.	DATE	DESCRIPTION

DATE:	05/22/26
DMG Project No:	25184

SANITARY SEWER FORCE MAIN 2 & DETAILS

C5.13

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

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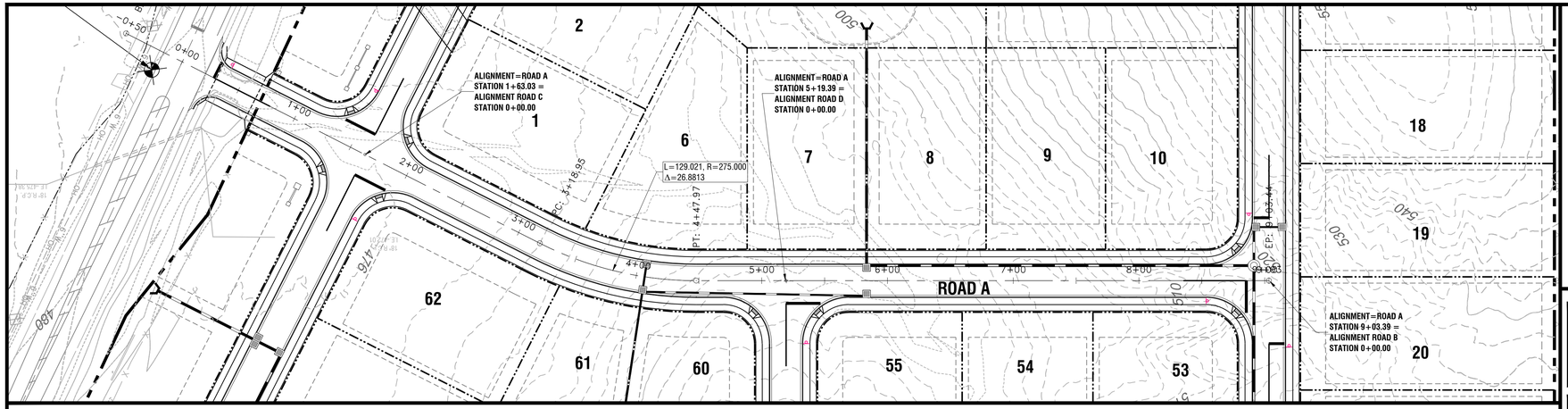

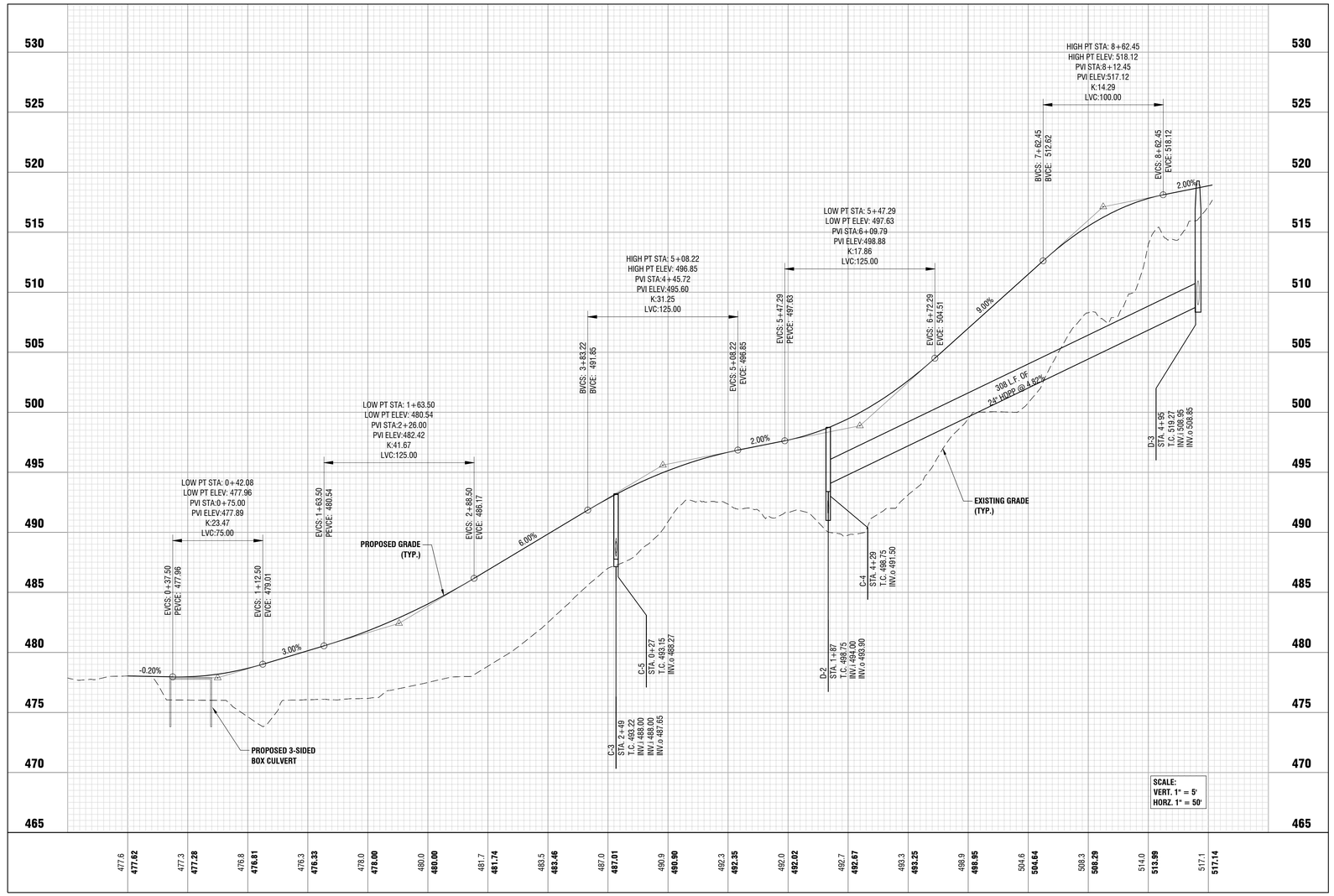

ISSUED FOR: ☐ CHECKSET ▩ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

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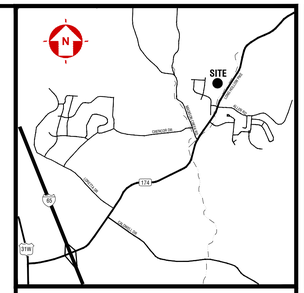

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TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:

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IRONWOOD
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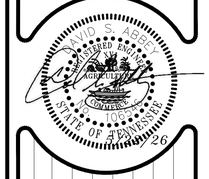
SUMNER COUNTY, TENNESSEE



REVISIONS

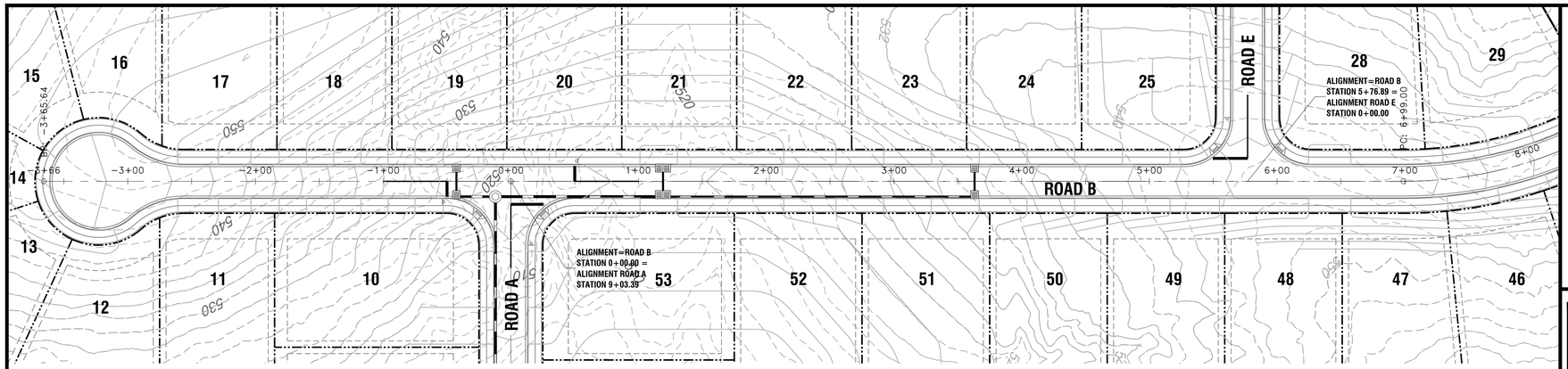
NO.	DATE	DESCRIPTION

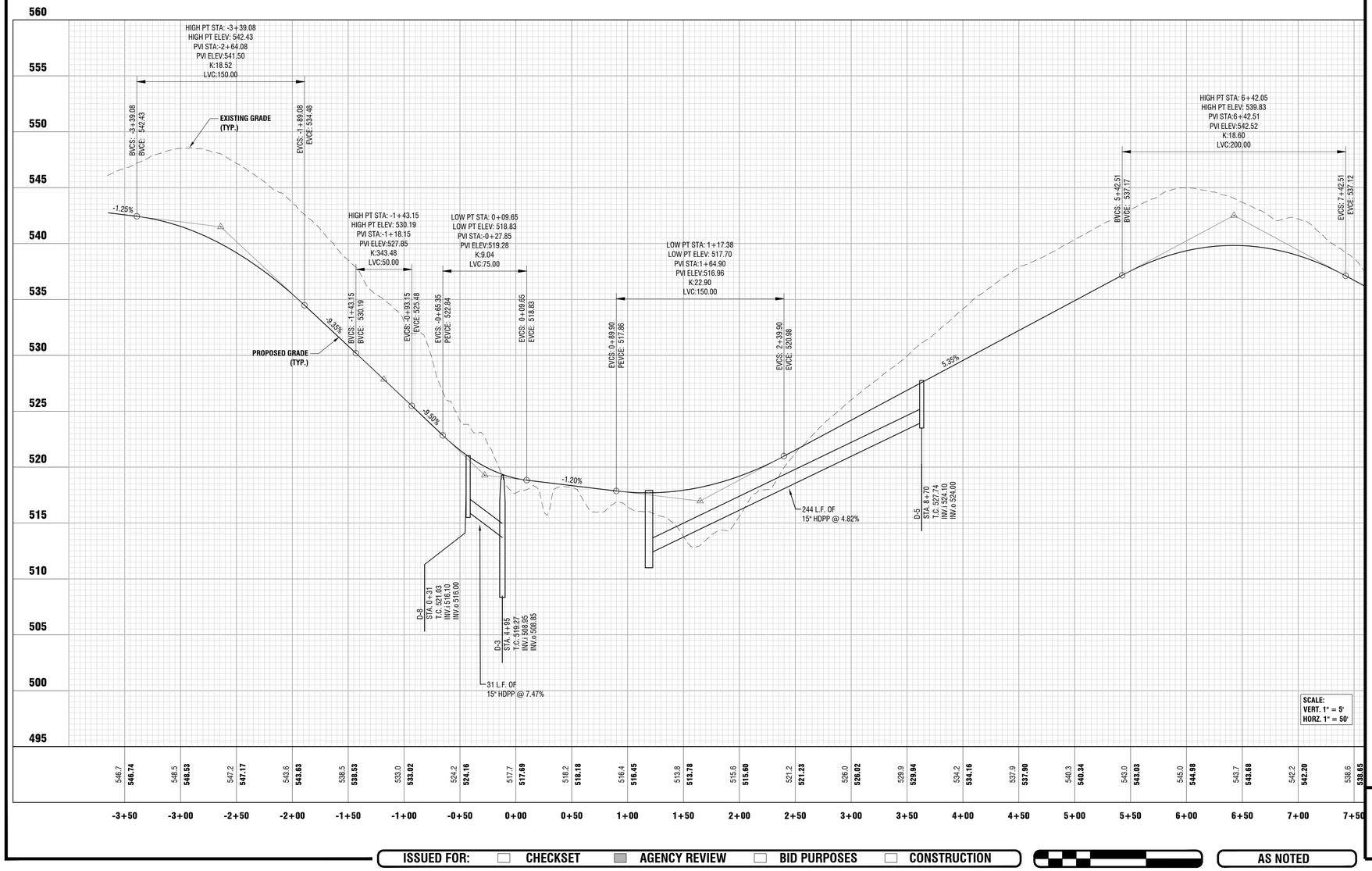
DATE:	05/22/26
DMG Project No:	25184

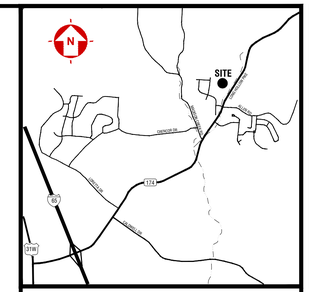
ROAD A
PLAN AND PROFILE

C6.0

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C6.0 – Road A P&P.dwg–Layout1 May 26, 2026 – 11:02am GaryEmerson







VICINITY MAP

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ELEVATION: 466.98

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PLANS PREPARED FOR:
PHILLIPS BUILDERS
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NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
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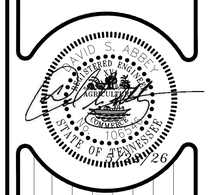


REVISIONS

NO.	DESCRIPTION	DATE

DATE:	05/22/26
DMG Project No:	25184

ROAD B
PLAN & PROFILE

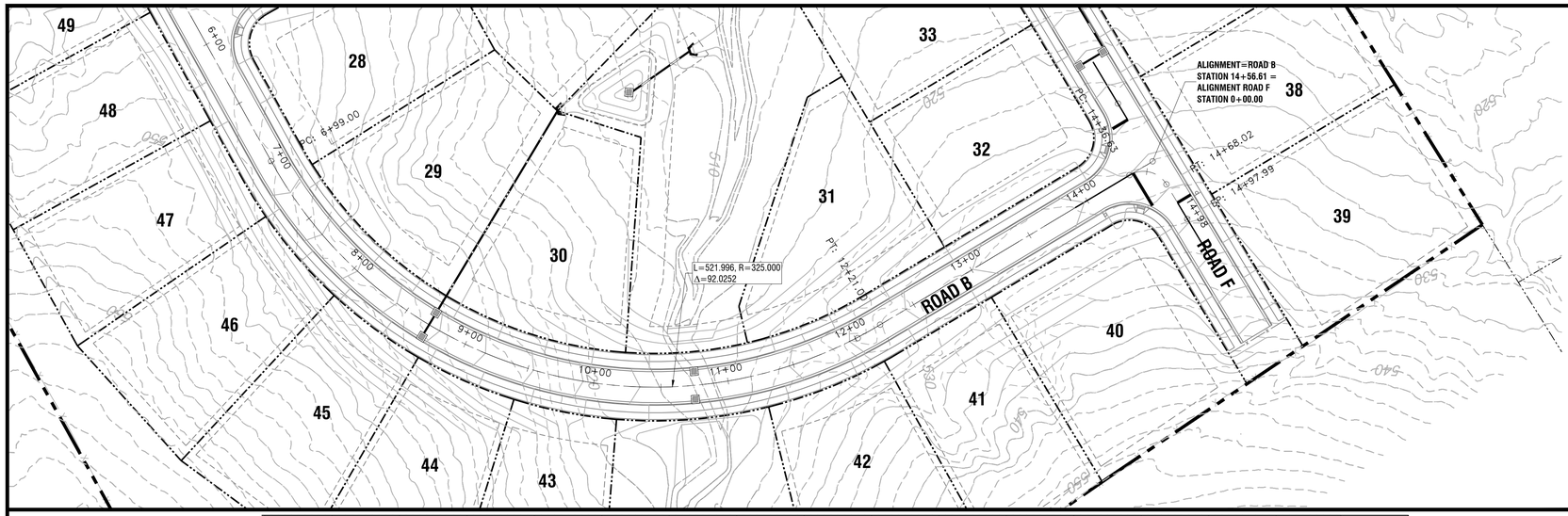
C6.1

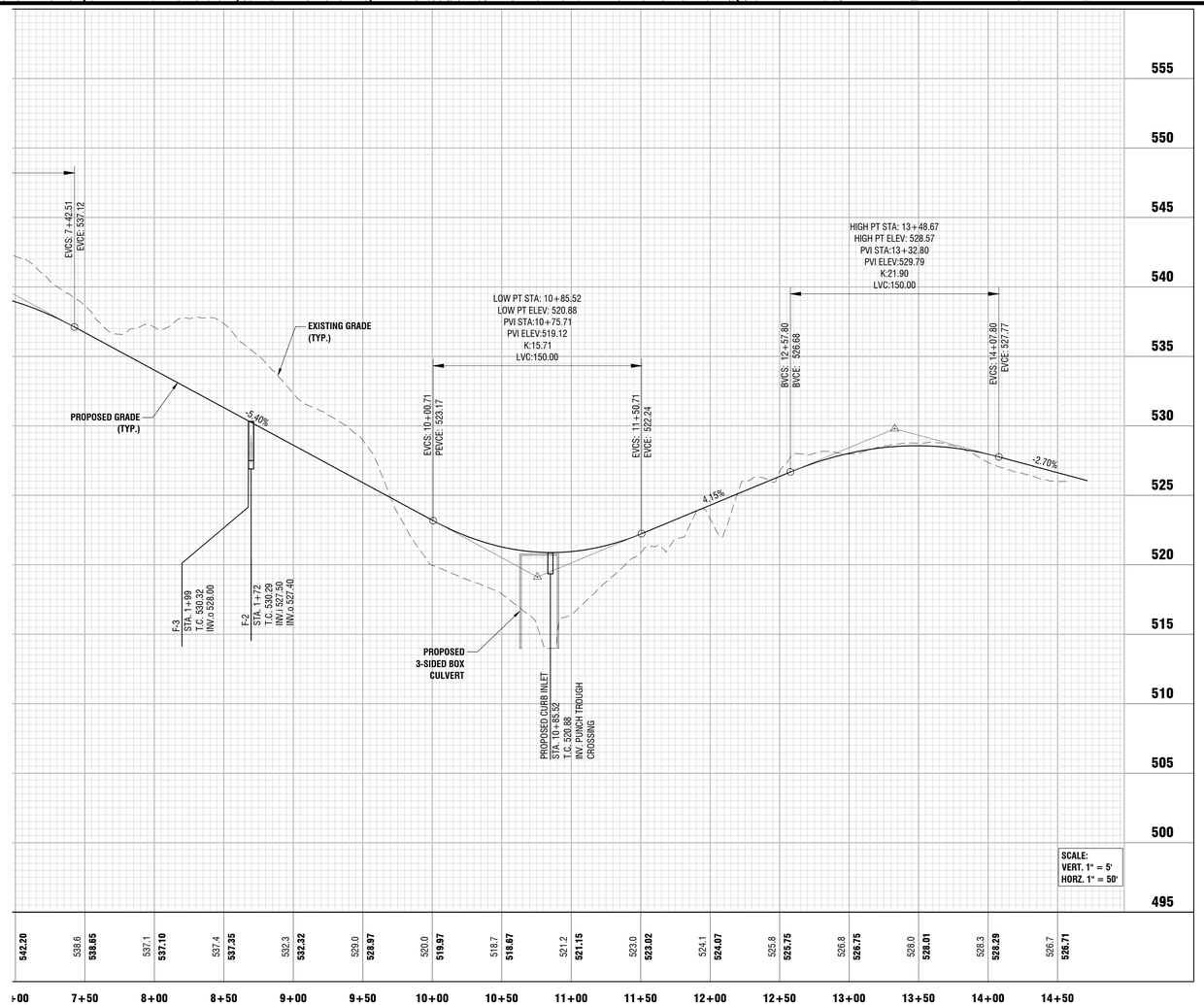
TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ☒ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C6.1 – Road B P&P.dwg–Layout1 May 26, 2026 – 11:03am GaryEmerson





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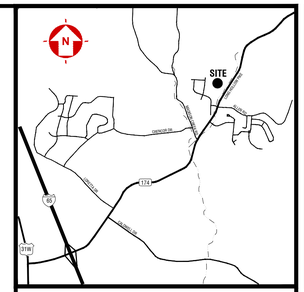

VICINITY MAP

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DAVID S. ARBIT
REGISTERED PROFESSIONAL ENGINEER
AGRICULTURE
COMMERCE
STATE OF TENNESSEE
'26

REVISIONS

NO.	DATE	DESCRIPTION

DATE:	05/22/26
DMG Project No:	25184

ROAD B
PLAN & PROFILE

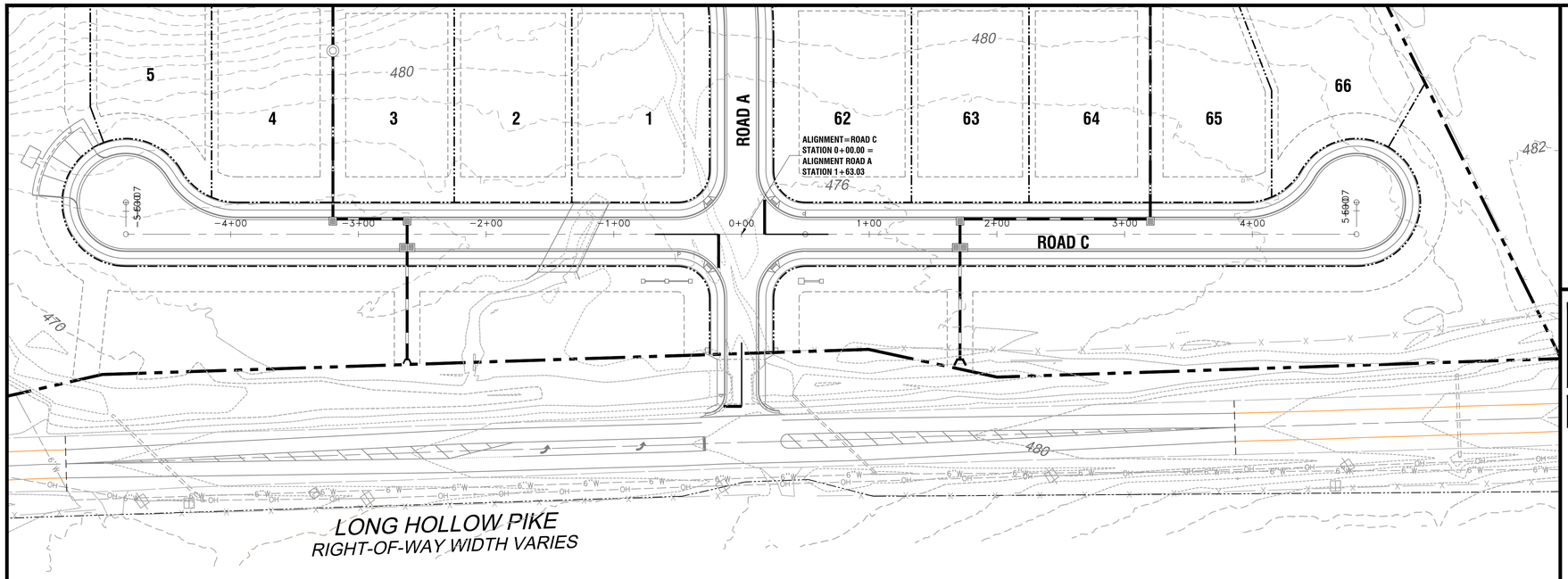
C6.2

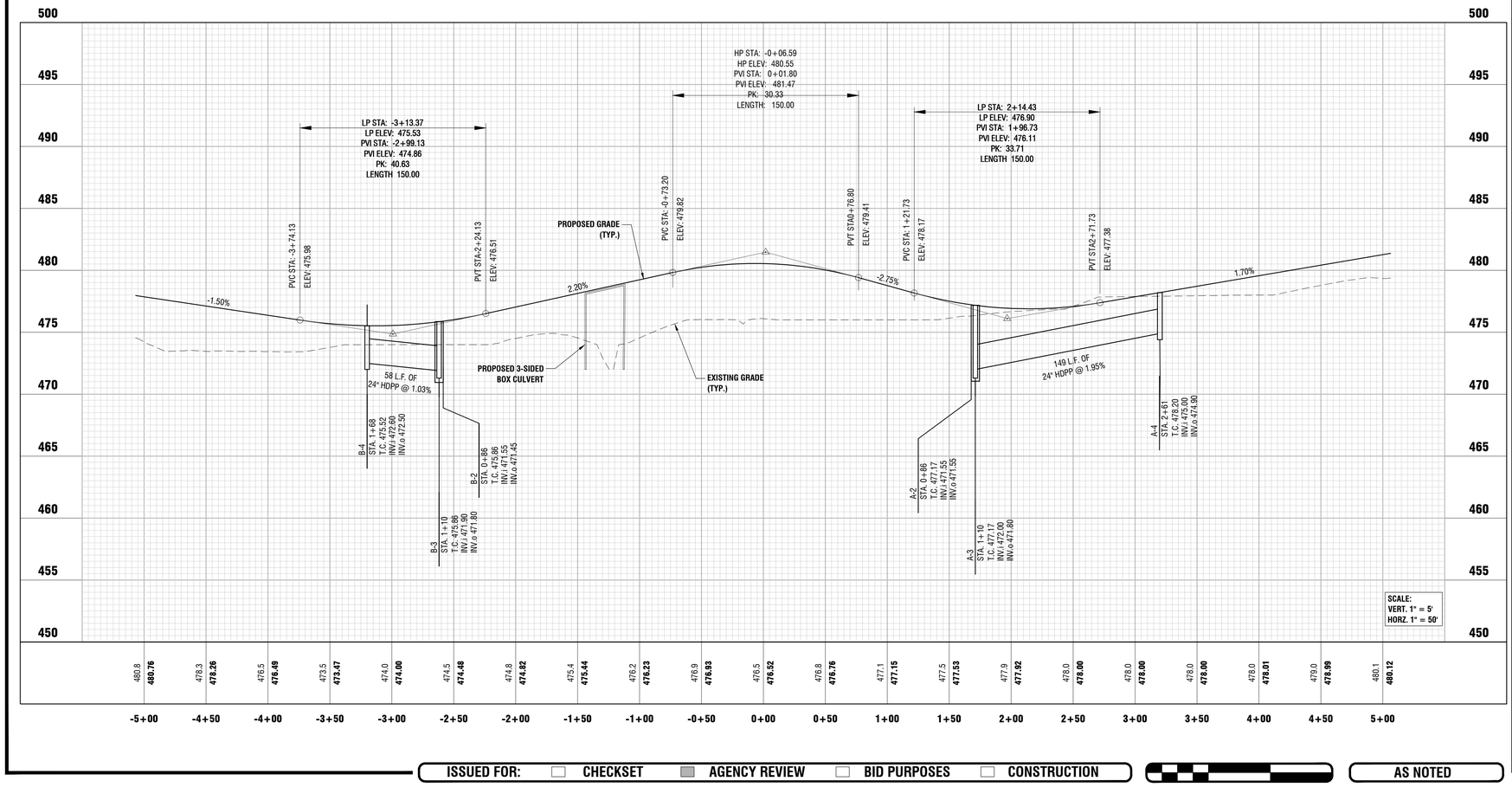
TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

Z:\PROJECT DATABASE\2025\25184 – Philips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C6.2 – Road B–2 P&P.dwg–Layout1 May 26, 2026 – 11:18am GaryEmerson





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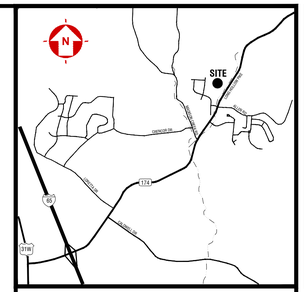

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TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:

4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

REVISIONS

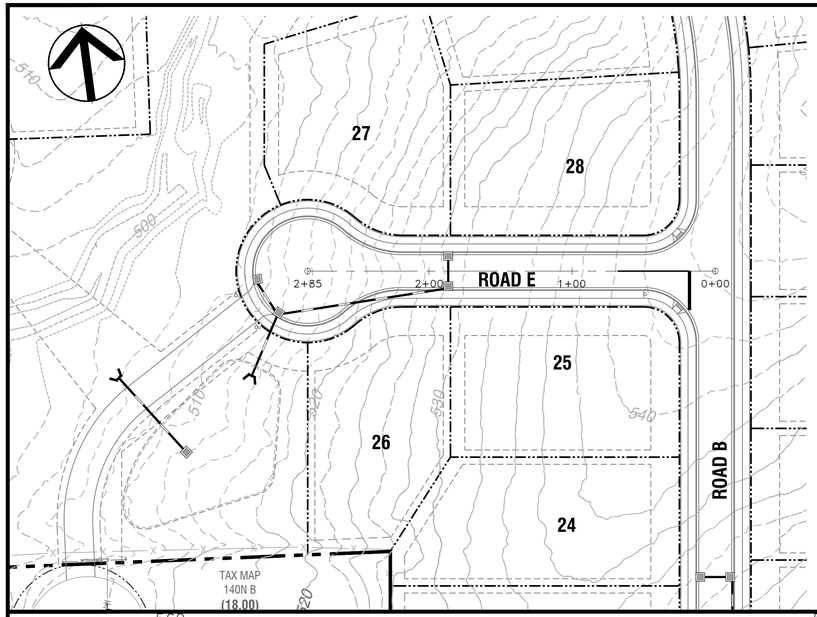
NO.	DATE	DESCRIPTION

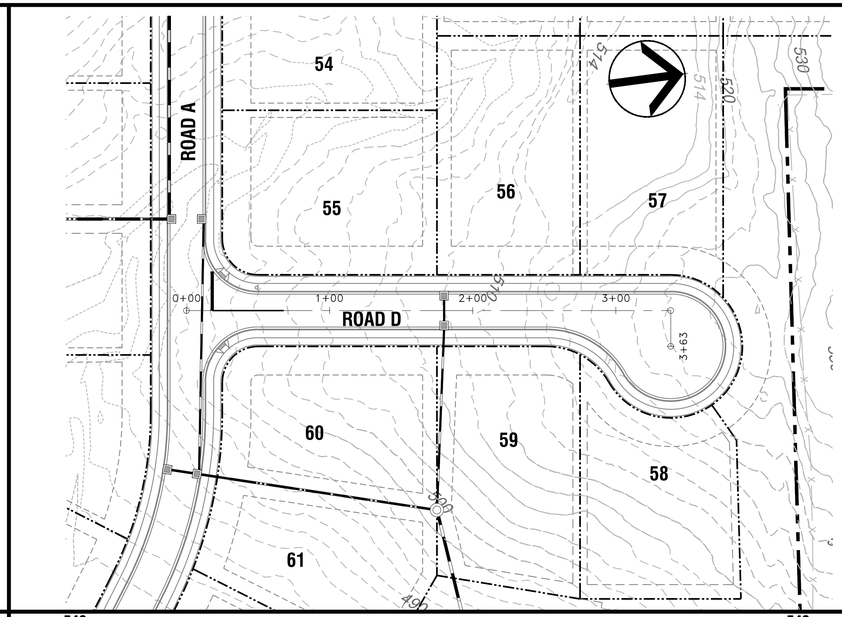
DATE:	05/22/26
DMG Project No:	25184

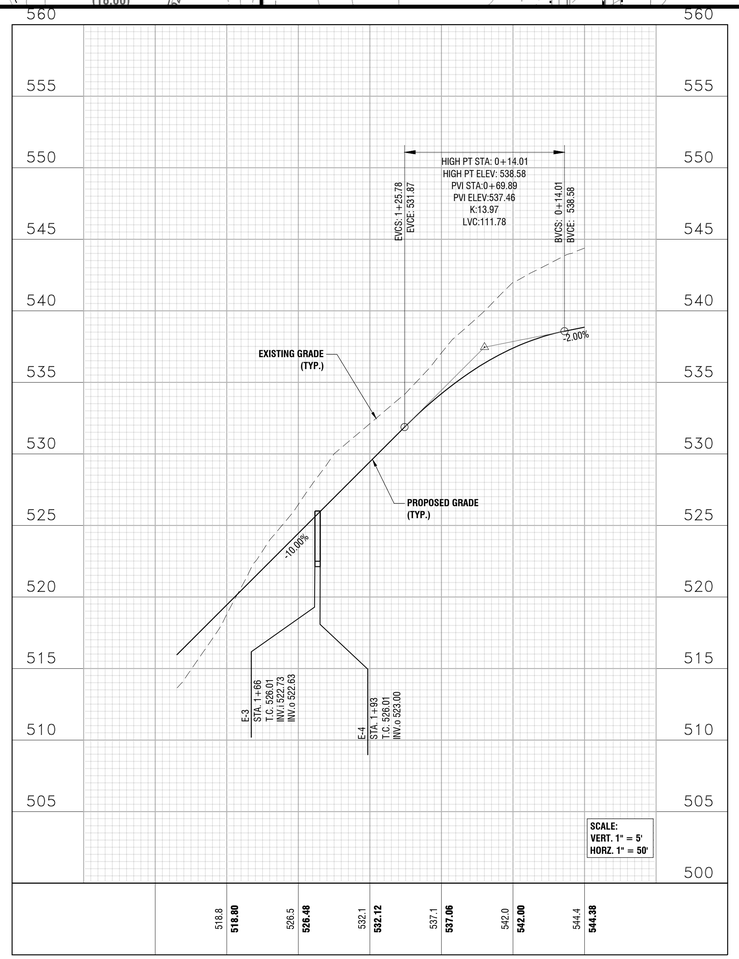
ROAD C
PLAN & PROFILE

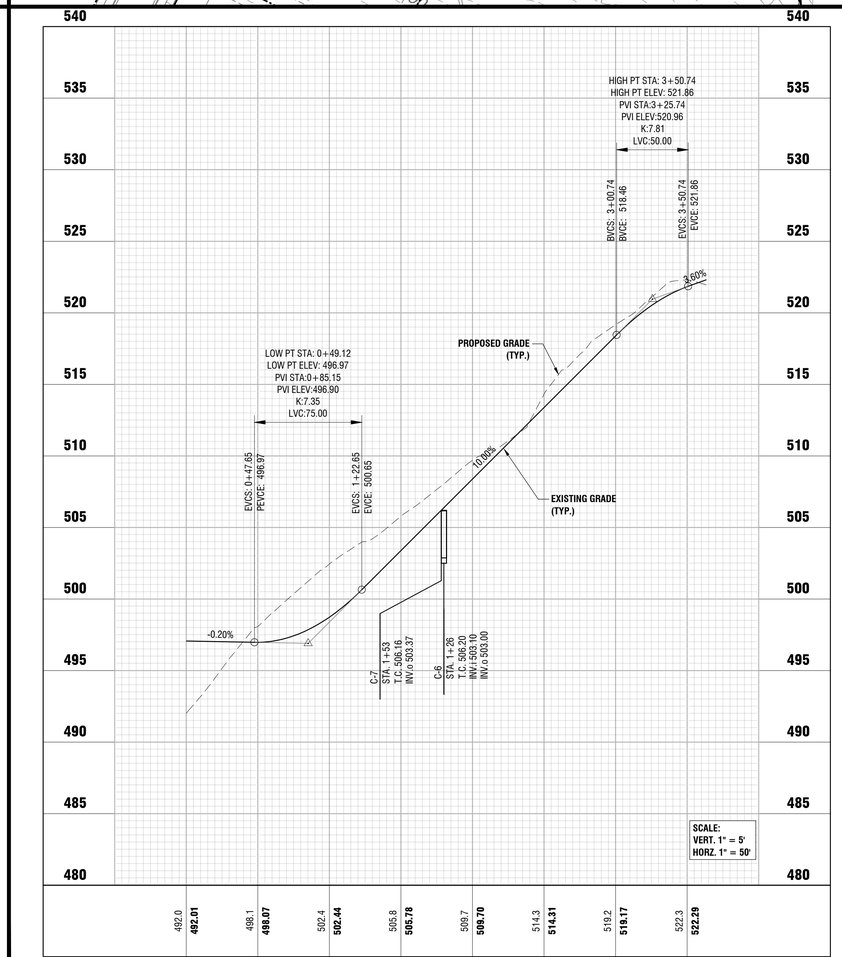
C6.3

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C6.3 – Road C P&P.dwg–Layout1 May 26, 2026 – 11:20am GaryEmerson









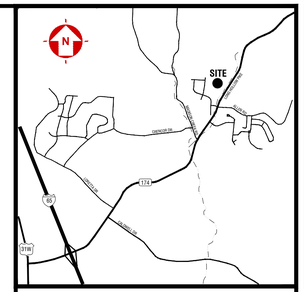
Know what's **below.**
Call before you dig.

SITE BENCHMARKS:

BM 1
MAG NAIL SET 50' SE OF BRIDGE
ELEVATION: 478.10

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION: 466.98

BM3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06



VICINITY MAP

FLOOD NOTE:
BY GRAPHIC PLOTTING ONLY, PROJECT PARCEL IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AND IS SHOWN IN THE AREA ZONE 'X' ON FEMA FIRM MAP NUMBER 47165C0381H ON THE FLOOD INSURANCE RATE MAPS FOR CITY OF GOODLETTSVILLE, TN, WITH AN EFFECTIVE DATE OF 2/26/2017.

DISTURBED AREA:
TOTAL DISTURBED AREA = 34.0 ACRES±

SURVEY NOTE:
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SUMNER COUNTY, TENNESSEE

DAVID S. ARGEY
REGISTERED ENGINEER
AGENT
NUMBER
STATE OF TENNESSEE
5/22/26

REVISIONS

NO.	DESCRIPTION	DATE

DATE:	05/22/26
DMG Project No:	25184

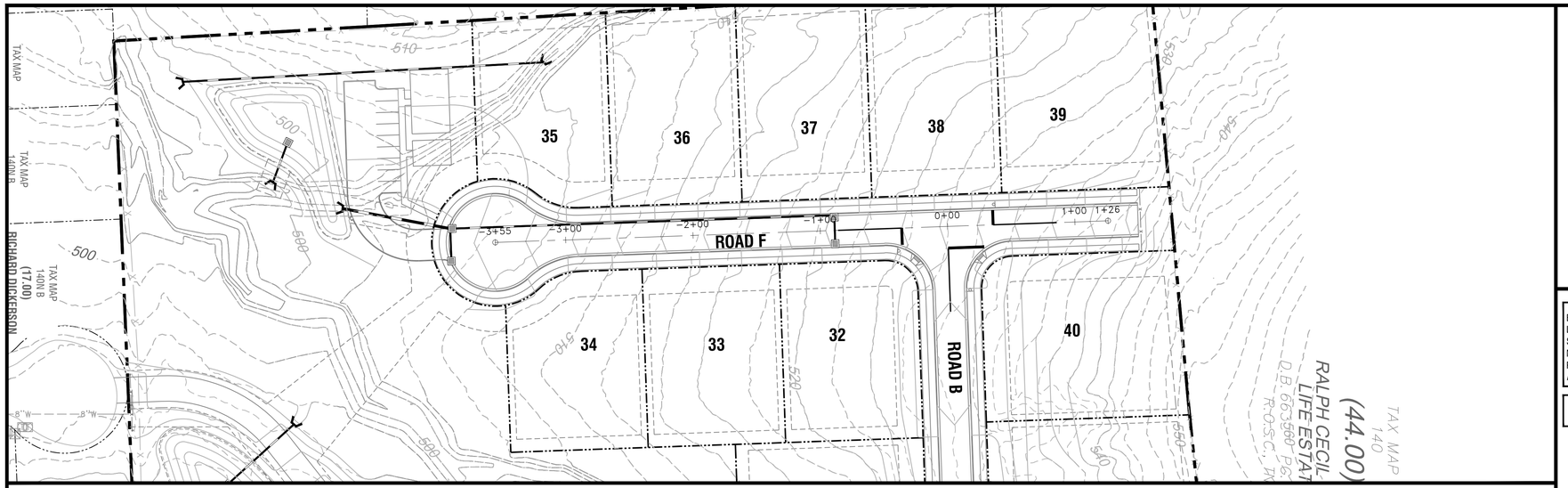
ROAD D & E
PLAN & PROFILE
C6.4

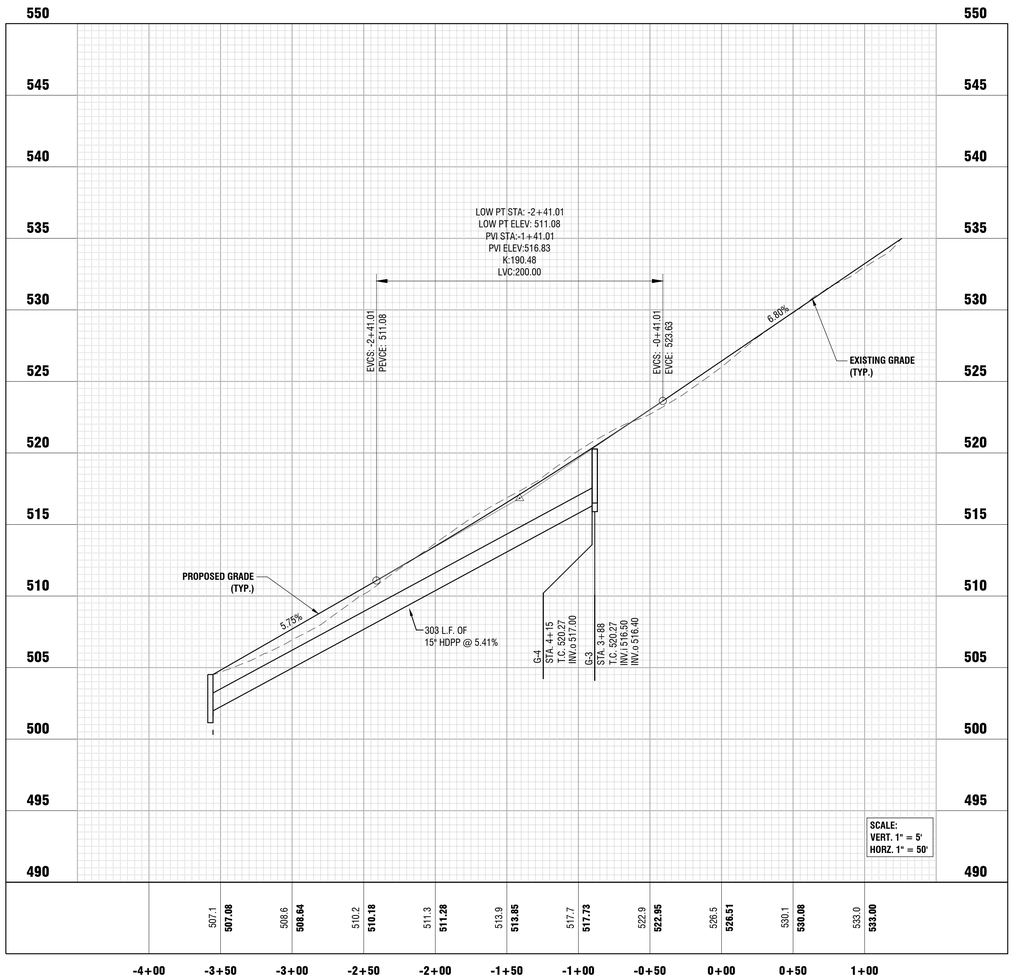
TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ☒ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

Z:\PROJECT DATABASE\2025\25184 - Phillips Builders - Residential Development - 4408 Long Hollow Pike -Goodlettsville TN\Plans\Engineer\25184 - Ironwood_C6.4 - Road D P&P.dwg-Layout1 May 26, 2026 - 11:13am GaryEmerson





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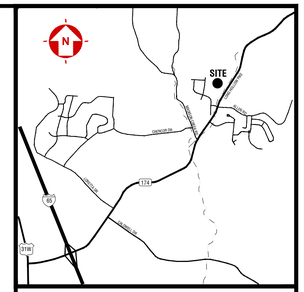

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CRAIG S. ARGEY
REGISTERED ENGINEER
AGENT
LICENSED PROFESSIONAL ENGINEER
STATE OF TENNESSEE
5/22/26

REVISIONS

NO.	DESCRIPTION	DATE

DATE:	05/22/26
DMG Project No:	25184

ROAD F
PLAN & PROFILE

C6.5

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

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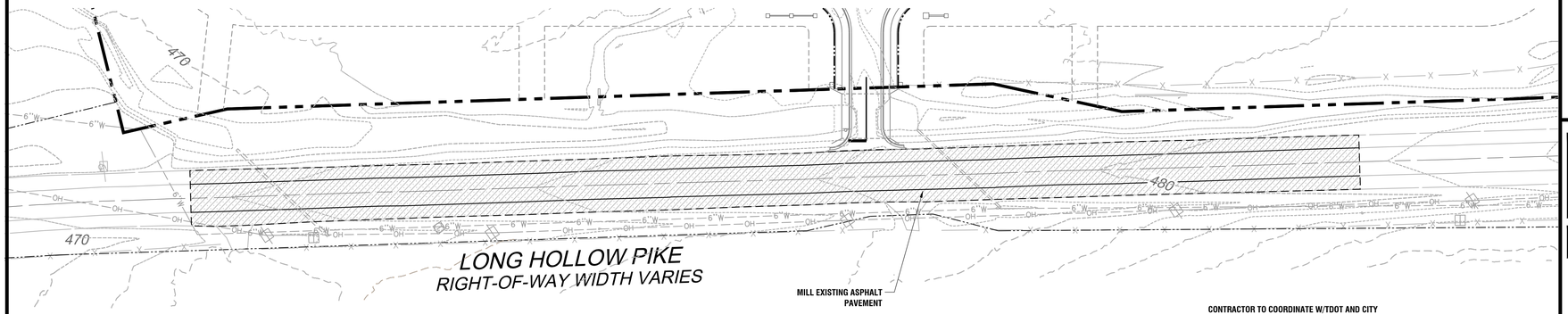
TDOT CONTROL ACCESS NOTES:

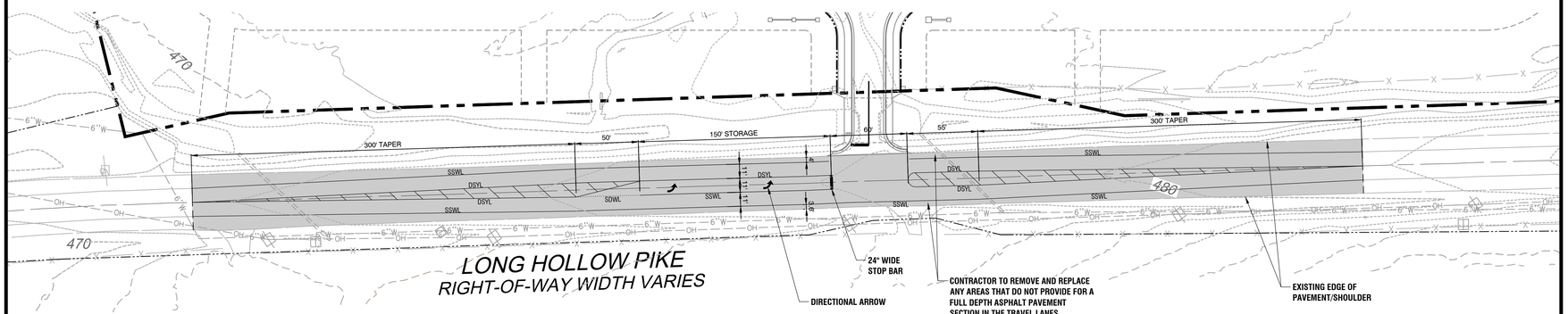
- NO PORTION OF THE TDOT CONTROLLED ACCESS FENCE SHALL BE PERMANENTLY REMOVED.
- ANY PORTION OF THE TDOT CONTROLLED ACCESS FENCE REMOVED DURING CONSTRUCTION SHALL BE REINSTALLED IN THE EXACT LOCATION IT WAS REMOVED IN ACCORDANCE WITH TDOT STD DRAWING S-F-108.



PRESENT LAYOUT / DEMOLITION PLAN

TDOT NOTES:

- ALL DRIVEWAY CONNECTIONS SHALL MEET AASHTO INTERSECTION SITE DISTANCE REQUIREMENTS
- ALL PAVEMENT MARKINGS WITHIN THE RIGHT-OF-WAY SHALL BE THERMOPLASTIC INCLUDING BUT NOT LIMITED TO STOP BAR, DIRECTIONAL ARROWS, STRIPING, ETC. & SHALL CONFORM TO TDOT STNDARD DRAWING T-M-1, T-M-2, T-M-3, & T-M-4.



PROPOSED LAYOUT

ISSUED FOR: ☐ CHECKSET ☒ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

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

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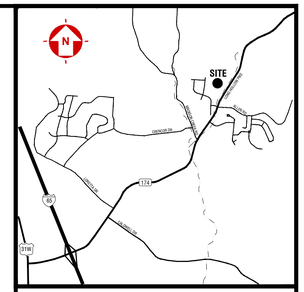

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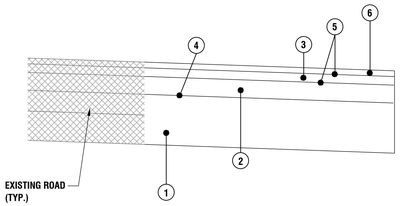
PROPOSED PAVEMENT SCHEDULE

1	MINERAL AGGREGATE BASE 10"± DEPTH UNDER ROADWAY ITEM NO. 303-01 MINERAL AGGREGATE TYPE 'A' BASE GRADING 'D'
2	BASE MODIFIED AT 4± THICK (APPROXIMATELY 460 LBS/SQ YD) ITEM NO. 307-01.01 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING 'A' MIXTURE ITEM NO. 307-02.01 ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING 'A' MIXTURE
3	BINDER MODIFIED 2"± THICK (APPROXIMATELY 226 LBS/SQ YD) ITEM NO. 307-01.06 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING 'B' MIXTURE ITEM NO. 307-02.06 ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING 'B' MIXTURE
4	PRIME COAT AT 0.30 - 0.35 GAL. PER SQ. YD. ITEM NO. 402-01 BITUMINOUS MATERIAL FOR PRIME COAT
5	TACK COAT AT 0.05 - 0.01 GAL. PER SQ. YD. ITEM NO. 403-01 BITUMINOUS MATERIAL FOR TACK COAT
6	BITUMINOUS SURFACING AT 1.25"± THICK (APPROXIMATELY 132.5 LBS/SQ YD) ITEM NO. 411-01.01 ACS MIX (PG64-22) GRADING 'D' MIXTURE ITEM NO. 411-02.10 ACS MIX (PG70-22) GRADING 'D' MIXTURE



TDOT PROPOSED PAVEMENT SECTION

NOTE:

CONTRACTOR MAY NEED TO FIELD ADJUST SLIGHTLY TO TIE BACK TO EXISTING GRADES OUTSIDE THE LIMITS SHOWN AND MAINTAIN POSITIVE DRAINAGE FLOW AS NEEDED.

TDOT HYDRAULIC DESIGN CRITERIA:

50-YR DESIGN FLOWS TO TDOT RIGHT-OF-WAY WILL NOT INCREASE DUE TO THE PROPOSED CONSTRUCTION ACTIVITIES:

- EXISTING 50-YR FLOW: ___ CFS
- PROPOSED 50-YR FLOW: ___ CFS

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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DAVID S. ARGEY
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AGRICULTURE
CIVIL
STATE OF TENNESSEE
5/22/26

REVISIONS

NO.	DESCRIPTION	DATE

DATE:	05/22/26
DMG Project No:	25184

LONG HOLLOW PIKE
IMPROVEMENT PLAN

C6.6

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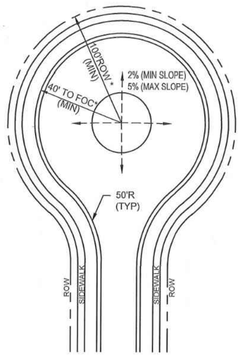
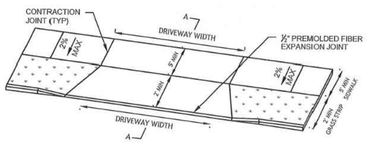
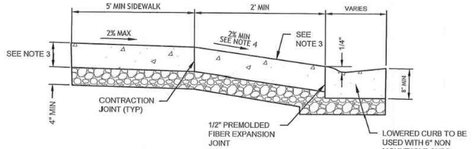


* FOR COMMERCIAL OR INDUSTRIAL APPLICATIONS. PAVEMENT RADIUS IS 140' WITH 160' R.O.W.

N.T.S.

DATE: 10.27.16	STANDARD CUL-DE-SAC
REVISIONS	STD. DWG. SD-1



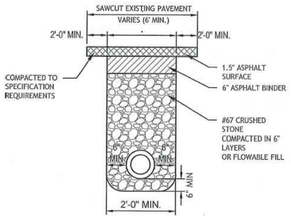


SECTION A-A

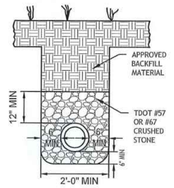
GENERAL NOTES
1. 5' MINIMUM SIDEWALK WITH A MAXIMUM CROSS SLOPE OF 2% THROUGH DRIVEWAYS
2. 4" MINIMUM BASE STONE REQUIRED UNDER ALL DRIVEWAYS.
3. RESIDENTIAL DRIVEWAYS SHALL BE A MINIMUM 6" OF CLASS "A" CONCRETE WITH SYNTHETIC FIBER REINFORCEMENT.
   COMMERCIAL DRIVEWAYS SHALL BE A MINIMUM 8" OF CLASS "A" CONCRETE WITH SYNTHETIC FIBER REINFORCEMENT.
4. DRIVEWAY RAMP GRADE VARIES, 8.33% MAXIMUM APRON GRADE FOR RESIDENTIAL DRIVEWAYS. 6.0% 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



INSIDE ROADWAY



OUTSIDE ROADWAY

* EXACT DEPTH TO BE PER UTILITY SPECIFICATIONS

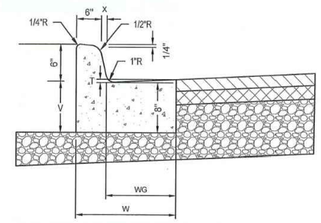
REFER TO CITY OF GOODLETTSVILLE UTILITY CUT REPAIR GUIDELINES AND SPECIFIATIONS FOR REQUIREMENTS. (APPENDIX A)

N.T.S.

DATE: 10.27.16	UTILITY TRENCH REPAIR DETAIL
REVISIONS	STD. DWG. RD-3

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

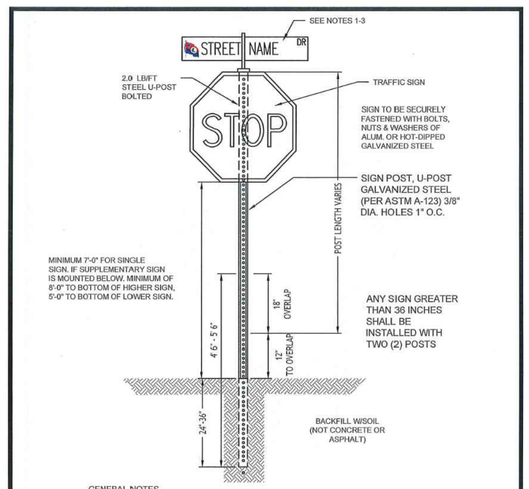
* 6-24 CURB TO BE USED ON MINOR RESIDENTIAL STREETS ONLY



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 3123
3. FOR SPECIFICATIONS SEE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION, SECTION 702 - 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 6 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.

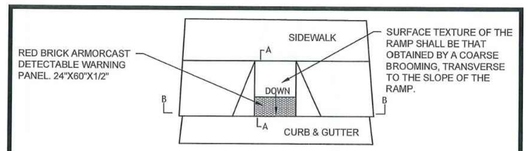
DATE: 10.27.16	STANDARD 6" NON MOUNTABLE CURBS & GUTTERS
REVISIONS	STD. DWG. RP-1



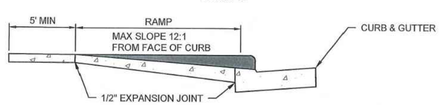
GENERAL NOTES
1. ALL PROPOSED SIGNAGE TO MATCH CURRENT CITY OF GOODLETTSVILLE VERSION OF STREET SIGNS
2. OVERHEAD TRAFFIC SIGNALS WITH ROAD NAME SIGNS :
   12 " TALL ALUMINUM WITH 6" WHITE REFLECTIVE LETTERS. THE BLUE BACKGROUND IS 3M ELECTROCUT FILM BLUE 1175C
3. ROAD NAME SIGNS: THE BLUE BACKGROUND IS OROCAL 651G-098 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.

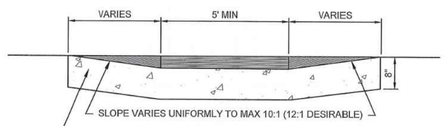
DATE: 10.27.16	TYPICAL STREET SIGN
REVISIONS	STD. DWG. SD-3



DETAIL "A"



SECTION A-A

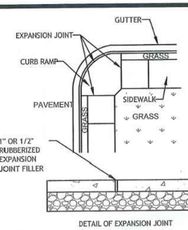


SECTION B-B

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 GOODLETTSVILLE.
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 8" CLASS "A" CONCRETE WITH SYNTHETIC MICROFIBER REINFORCEMENT.
6. 4" BASE STONE REQUIRED UNDER ALL RAMPS

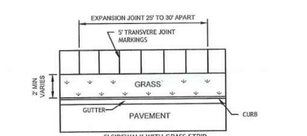
N.T.S.

DATE: 10.27.16	PERPENDICULAR CURB RAMP DETAIL
REVISIONS	STD. DWG. RP-5

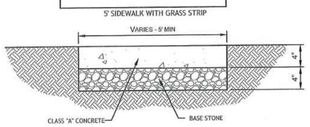


DETAIL OF EXPANSION JOINT

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.



5' SIDEWALK WITH GRASS STRIP



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.

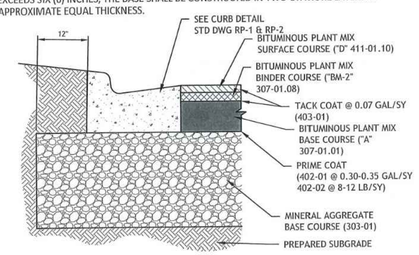
N.T.S.

DATE: 10.27.16	TYPICAL 5' CONCRETE SIDEWALK
REVISIONS	STD. DWG. RP-4

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

ISSUED FOR: ☐ CHECKSET ☒ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION — AS NOTED

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

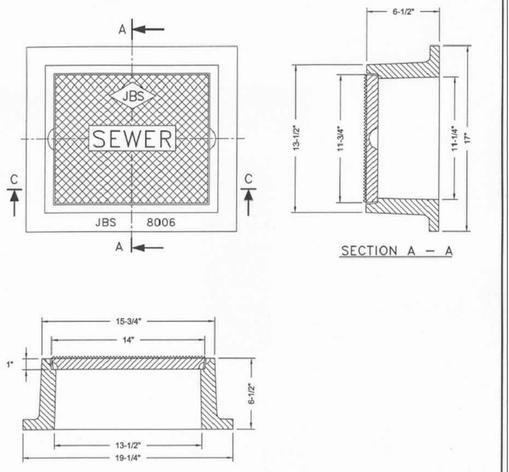
REVISIONS NO.	DATE	DESCRIPTION

DATE:	04/23/26
DMG Project No:	25184

SITE DETAILS
(CITY OF GOODLETTSVILLE)
C7.0

Z:\PROJECT DATABASE\2025\25184 - Philips Builders - Residential Development - 4408 Long Hollow Pike -Goodlettsville TN\Plans\Engineer\25184 - Ironwood_C7.0 - Dtl.dwg-C7.0 Apr 23, 2026 - 8:27am GaryEmerson

Traffic Bearing Cleanout Frame & Cover

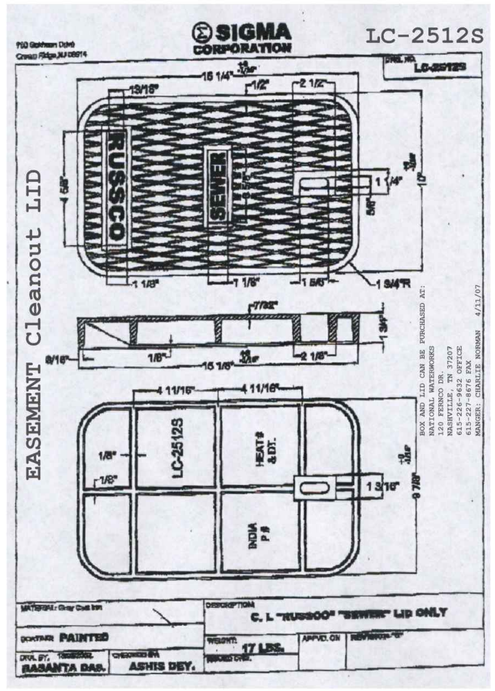


METRO STANDARD
TRAFFIC DUTY

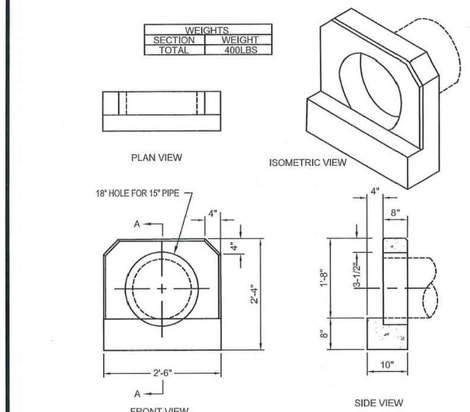
John Bouchard & Sons Co.
1024 Harrison Street, Nashville, TN 37203
Tel: 615-256-0112 Fax: 615-327-2427

8006 FRAME & COVER

SIGMA CORPORATION — LC-2512S



STANDARD DRIVEWAY CULVERT ENDWALL



GENERAL NOTES:
1. CONCRETE MINIMUM COMPRESSION STRENGTH: F'c=5,000 PSI @ 28 DAYS
2. REINFORCING STEEL: ASTM A615, Fy= 60,000 PSI
3. HEADWALL TO BE USED FOR 15" DRIVEWAY CULVERTS ONLY. FOR LARGER PIPES UP TO 24", USE STRAIGHT TYPE ENDWALLS PER TDOT STANDARD DRAWING D-PE-4. PIPES LARGER THAN 24" REQUIRE SAFETY TYPE ENDWALLS WITH GRATES, PER TDOT STANDARD DRAWING D-SEW-1A.

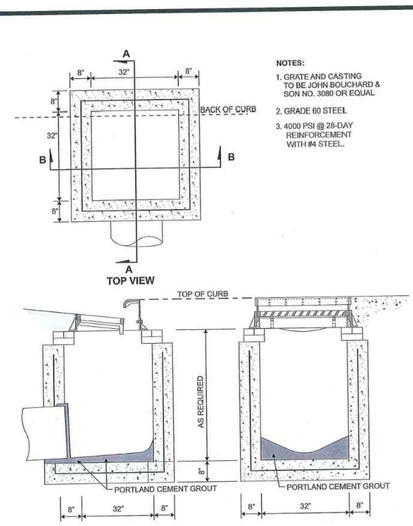
N.T.S.

DATE: 10.27.16
REVISIONS

STD. DWG. DR-6

GOODLETTSVILLE TENNESSEE

CONCRETE SINGLE INLET DETAIL FOR TYPE 6-24 CURB & GUTTER



NOTES:
1. GRATE AND CASTING TO BE JOHN BOUCHARD & SON NO. 3080 OR EQUAL
2. GRADE 60 STEEL
3. 4000 PSI @ 28-DAY REINFORCEMENT WITH #4 STEEL.

N.T.S.

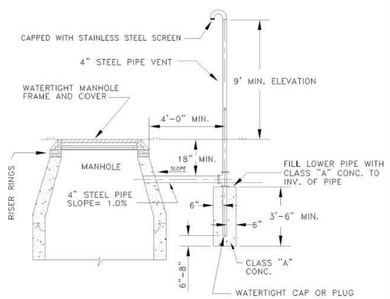
DATE: 10.27.16
REVISIONS

STD. DWG. DR-2

GOODLETTSVILLE TENNESSEE

INSERTION OF VENT PIPE INTO MANHOLE

MANHOLE CONE TO BE PRECAST FOR INSERTION OF VENT PIPE OR CONE CAN BE CORE DRILLED. USE KOR-N-SEAL I & II TOGGLE KORGBAND CONNECTOR FOR WATERTIGHT FIT.



PIPE LOCATION & FINISH

VENT PIPE SHALL BE LOCATED OUT OF A TRAVEL WAY, IN BACK OF A CURB OR SIDEWALK, OR AS CALLED FOR ON PLANS. PIPE SURFACE PREPARATION SHALL BE DONE USING SSPC-SP10 NEAR-WHITE BLAST CLEANING. ONLY ONE COAT IS REQUIRED: TNEMEC 435 PERMA-GLAZE AT 30.0 – 40.0 MILS D.F.T.

CITY OF GOODLETTSVILLE, TENNESSEE
SEWER DEPARTMENT

NOT TO SCALE | 3/1/06

VENT PIPE ASSEMBLY DETAILS

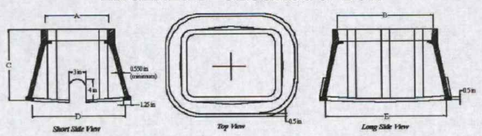
DEPARTMENT OF PUBLIC WORKS Goodlettsville

Mid-States Plastics, Inc.

Customer Service: KY 800-444-7615 TX 800-521-6554
Fax: KY 859-488-7919 TX 936-760-1357
Web: www.msmeterboxes.com Email: productinfo@msmeterboxes.com

MSBC Series Meter Boxes

EASEMENT Cleanout BOX



Part Number	A	B	C	D	E	Weight
MSBC1015-12	10.25"	15.5"	12"	15.5"	20.75"	13 lbs
MSBC1015-18	10.25"	15.5"	18"	15.5"	20.75"	20 lbs
MSBC1015-24	10.25"	15.5"	24"	15.5"	20.75"	26 lbs
MSBC1118-12	11.25"	18.125"	12"	16.75"	23.125"	18 lbs
MSBC1118-26	11.25"	18.125"	26"	16.75"	23.125"	30 lbs
MSBC1416-12	14.5"	16.5"	12"	17"	17.5"	14 lbs
MSBC1324-12	13.75"	23.1875"	12"	19"	27.625"	25 lbs
MSBC1730-18	17.625"	30.5"	18"	22.875	35"	40 lbs

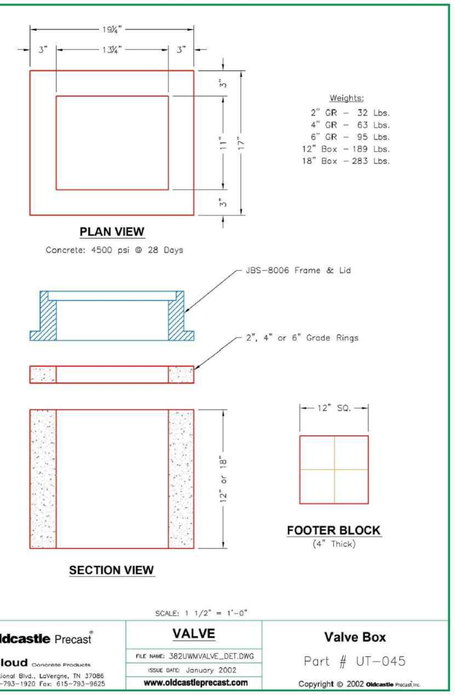
All dimensions and weights are nominal and subject to change without notice

Typical Specification:

The meter box shall be high-density Polyethylene of one-piece molded construction for durability and impact strength with dimensions as shown in the referenced drawing. The meter box must have a minimum wall thickness of .550" and have been tested to withstand a 15,000 lb. vertical load freestanding and a 200lb side load, applied with a 4"x4" plate 1" down for the top center of the box, without deflecting more than 1". All edges shall be clean and smooth for safety during handling and installation. Inner and outer walls are to be smooth with a bright white interior to ease meter reading with a black exterior to retard UV degradation. The meter box shall an anti-settling flange on the bottom for stability and pre-molded pipe entry areas on each end. The box shall weigh no more than listed weight for each meter size for safety and ease of handling, transport and installation. The meter box shall be MSBC style as manufactured by Mid-States Plastics Inc. or equal.

© Mid-States Plastics, Inc.♦ 280 Midland Trail, Mt. Sterling, KY 40353 ♦ 101 East Ave M, Conroe, TX 77301 0203

TRAFFIC BEARING Cleanout BOX



Oldcastle Precast
Cloud Concrete Products
125 International Blvd., LaVergne, TN 37086
Phone: 615-793-1920 Fax: 615-793-9625

VALVE
FILE NAME: 382UWVALVE_DET.DWG
ISSUE DATE: January 2002
www.oldcastleprecast.com

Valve Box
Part # UT-045

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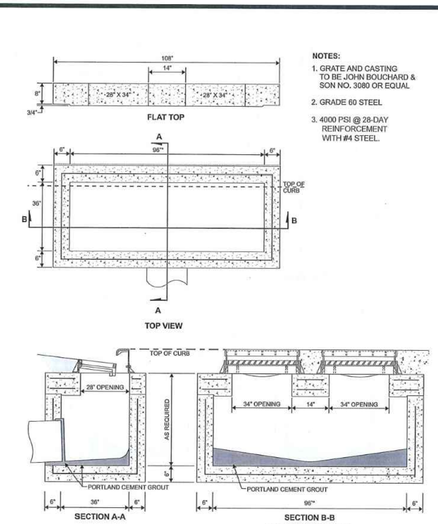
CONCRETE DOUBLE INLET DETAIL FOR TYPE 6-24 CURB & GUTTER



NOTES:
1. GRATE AND CASTING TO BE JOHN BOUCHARD & SON NO. 3080 OR EQUAL
2. GRADE 60 STEEL
3. 4000 PSI @ 28-DAY REINFORCEMENT WITH #4 STEEL.

* 84" Ø 1'3" 84" LINTEL PLATE IS USED INSTEAD OF FLAT TOP

N.T.S.

DATE: 10.27.16
REVISIONS

STD. DWG. DR-3

GOODLETTSVILLE TENNESSEE

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

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NO.	DATE	DESCRIPTION

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DATE:	04/23/26
DMG Project No:	25184

SITE DETAILS
(CITY OF GOODLETTSVILLE)

C7.1

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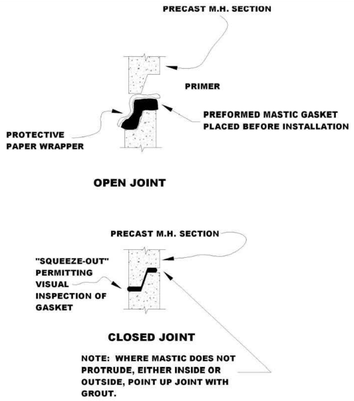
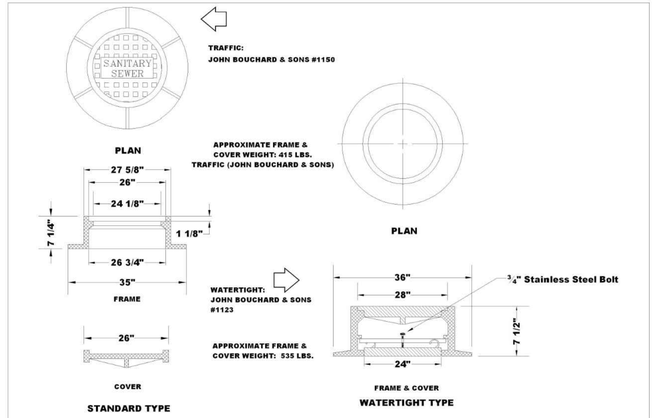
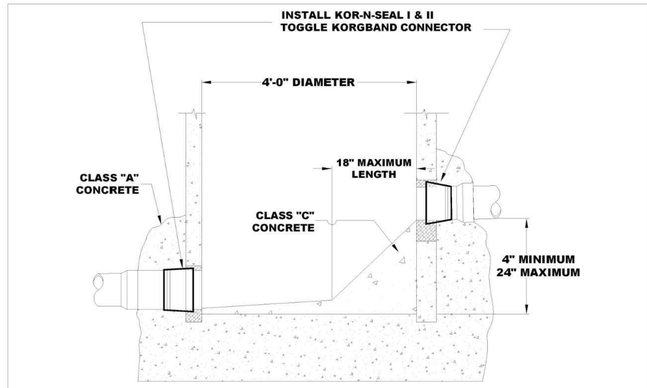


DETAILS OF MASTIC GASKET FOR PRECAST MANHOLE SECTIONS



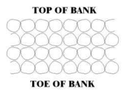
MANHOLE FRAMES AND COVERS

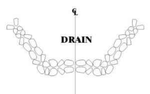
NOT TO SCALE



4" TO 24" DROP STRUCTURE INVERT DETAIL

NOTE: SEE STANDARD PRECAST MANHOLE FOR TYPICAL DEMENSIONS.



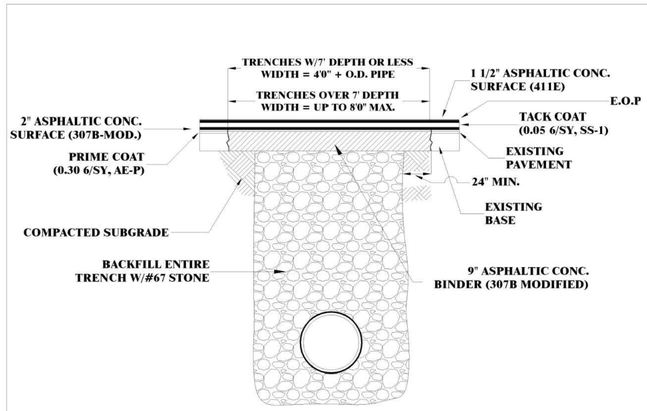


NOTE: FACE OF RIP-RAP IS TO BE FLUSH WITH SIDES AND BOTTOM OF DRAIN

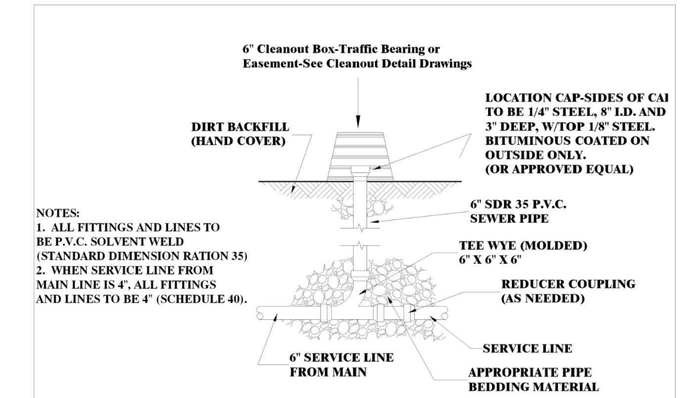
RIP-RAP STABILIZATION WHERE NOTED WILL CONSIST OF HAND-PLACED NATIVE LIMESTONE, HAVING A MAXIMUM LENGTH/WIDTH DIMENSION OF 12" IN EITHER DIRECTION AND A MAXIMUM THICKNESS OF 6". TREATMENT WILL BE PLACED IN TWO INTERLOCKING (NESTING) LAYERS. RIP-RAP SHALL BE PLACED FOR THE FULL WIDTH OF AREA DISTURBED BY PIPE LAYING OPERATIONS. LIMIT OF WIDTH FOR PAYMENT OF RIP-RAP SHALL BE AS FOLLOWS:

PIPE DIAMETER	RIP-RAP WIDTH
8"	5'
10"	5.5'
12"	6'
15"-16"	8'
18"	8.5'
21"	9'
24"	10'

RIP-RAP DETAIL

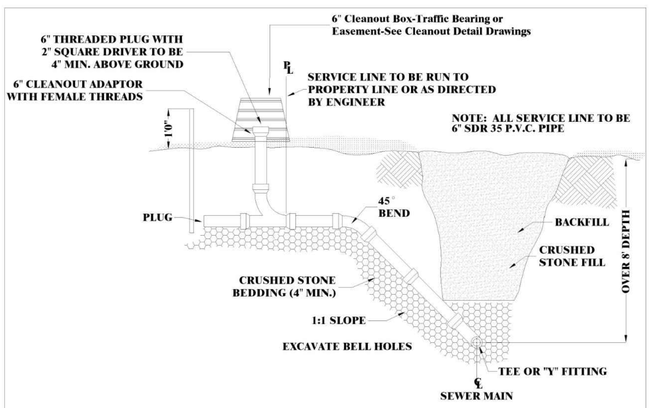


FULL WIDTH PAVEMENT REPLACEMENT



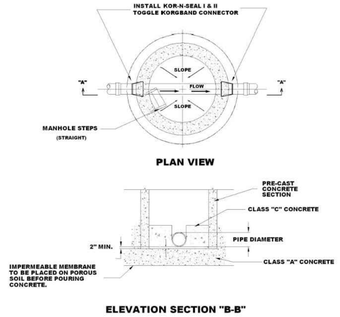
NOTES:
1. ALL FITTINGS AND LINES TO BE P.V.C. SOLVENT WELD (STANDARD DIMENSION RATION 35)
2. WHEN SERVICE LINE FROM MAIN LINE IS 4", ALL FITTINGS AND LINES TO BE 4" (SCHEDULE 40).

CLEANOUT

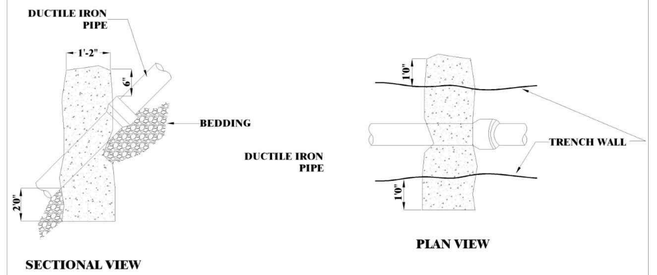


SERVICE LINE DETAIL FOR DEEP TRENCHES

(ONLY WHEN CALLED FOR ON PLANS OR DIRECTED BY CITY ENGINEER)



NOTE: CONCRETE WILL BE READY MIX AND SHALL COMPLY WITH THE SPECIFICATIONS ASTM DESIGNATION 94 FOR THE CLASSES A, B, AND C AS OUTLINED IN THE STANDARD SPECS.



COLLAR DETAIL

PLANS PREPARED FOR:
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SITE DETAILS
(CITY OF GOODLETTSVILLE)

C7.2

ISSUED FOR: ☐ CHECKSET ☒ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

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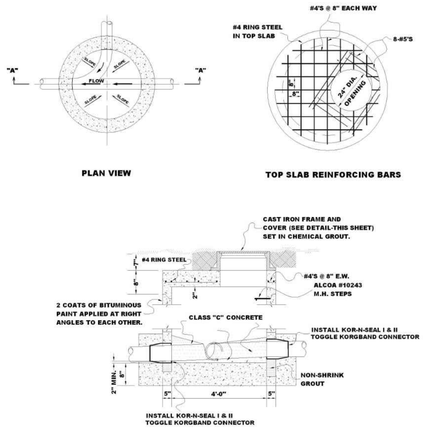
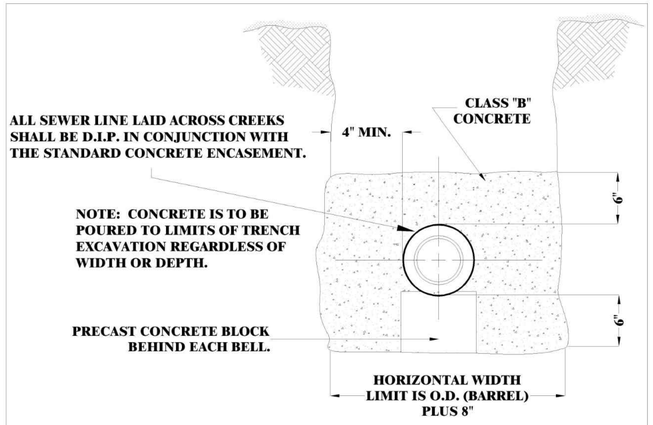
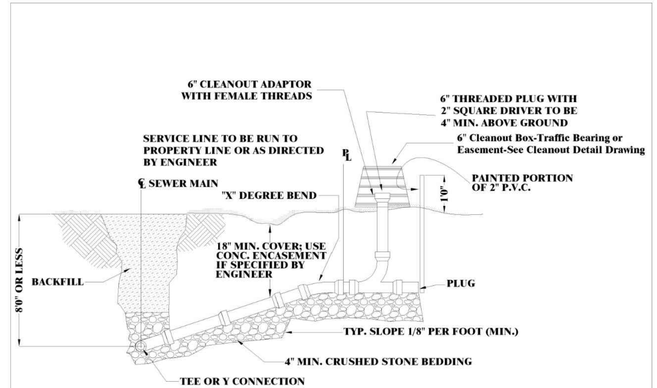


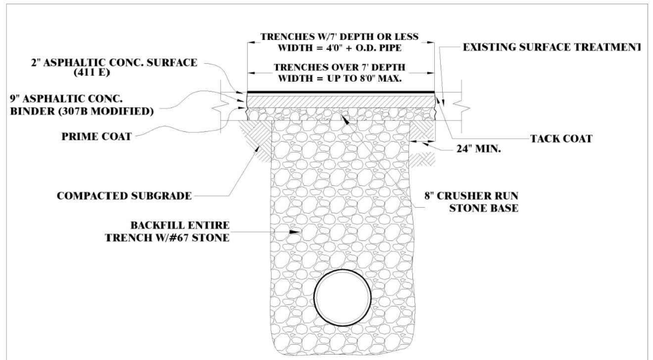
STANDARD SHALLOW MANHOLE (A-A)



STANDARD CONCRETE ENCASEMENT

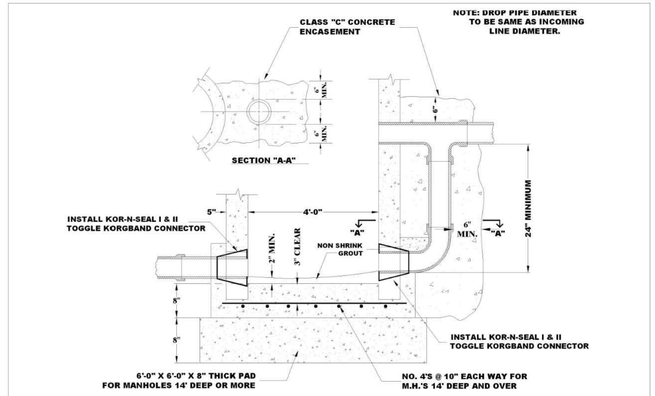


TYPICAL SERVICE LINE DETAIL



ASPHALTIC CONCRETE SURFACE

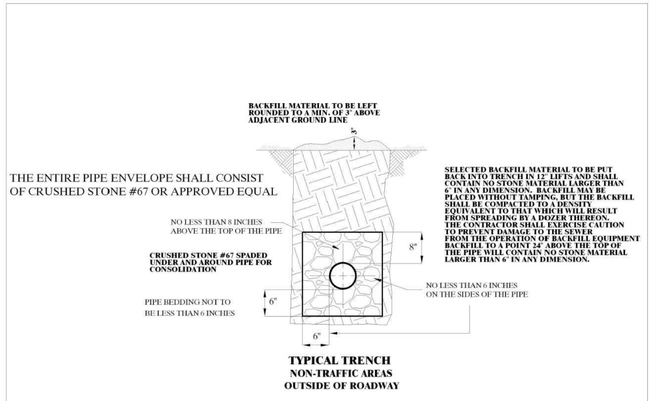
TRENCH REPAIR PAVEMENT REPLACEMENT



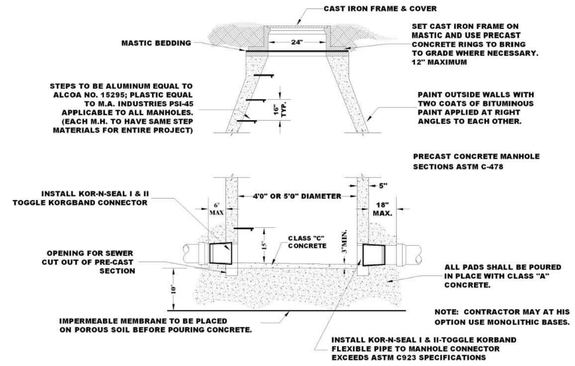
STANDARD DROP STRUCTURE

1. BACKFILL ON SERVICE LINES TO BE AS DESCRIBED IN PROJECT SPECS.
2. SERVICE LINES FOR DEEP TRENCHES TO BE USED WHERE SHOWN ON PLANS OR AS DIRECTED BY ENGINEER. SERVICE FOR DEEP TRENCHES SHALL BE CONSTRUCTED AS SHOWN IN DETAIL ABOVE IN LIEU OF VERTICAL STACKS ENCASED IN CONCRETE.
3. BATTER BOARDS NO REQUIRED FOR LAYING PIPE, BUT GRADE TO BE REASONABLY UNIFORM AND ALIGNMENT STRAIGHT. GRADE SHALL BE THAT WHICH IS SUFFICIENT TO PROVIDE SERVICE TO BUILDING OR AS DIRECTED BY ENGINEER WITH MINIMUM TO BE THAT ALLOWED BY LOCAL PLUMBING CODE OR 1/8" PER FOOT MINIMUM OR AS NOTED ON PLANS.
4. MARKING ROD SHALL EXTEND FROM BOTTOM OF END OF SERVICE LINE TO 1'0" ABOVE GROUND.

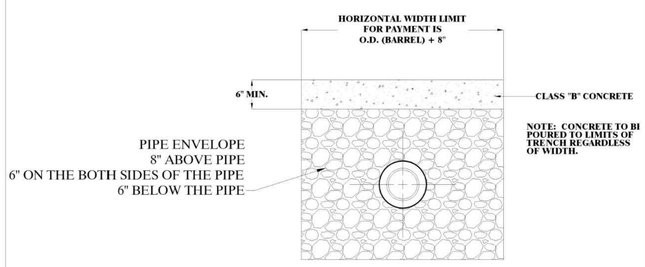
SERVICE LINE TRENCHING DETAILS



TYPICAL TRENCH
NON-TRAFFIC AREAS
OUTSIDE OF ROADWAY



STANDARD PRECAST MANHOLE (A-A)



STANDARD CONCRETE CAP

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

REVISIONS		
NO.	DATE	DESCRIPTION

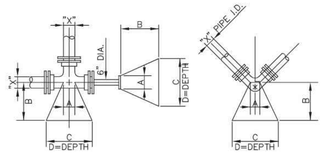
DATE:	04/23/26
DMG Project No:	25184

SITE DETAILS
(CITY OF GOODLETTSVILLE)
C7.3

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C7.0 – Dtl.dwg–C7.3 Apr 23, 2026 – 8:29am GaryEmerson



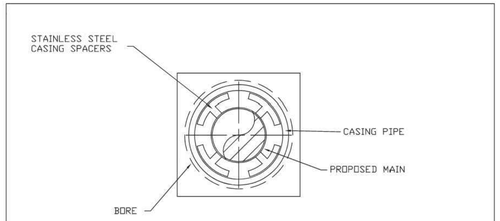
100 PSI TEST PRESSURE (SANITARY SEWER FORCE MAIN)
200 PSI TEST PRESSURE (WATER MAIN)
2000 PSF SOIL BEARING

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'-9"	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"

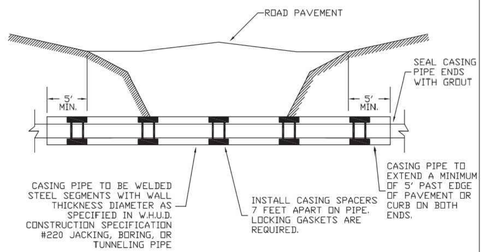
X* = DIAMETER OF PIPE TO BE BLOCKED

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 : Sept-2025 SCALE : N.T.S.
	TYPICAL BLOCKING DETAIL	STD-G-09



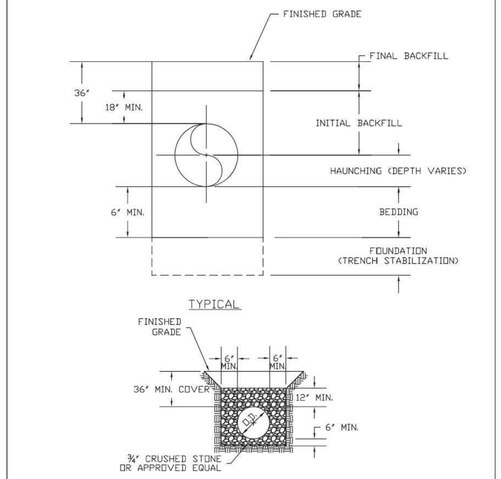
END VIEW



PROFILE VIEW

NOTES:
1. SEE APPROVED W.H.U.D. MATERIALS LIST.

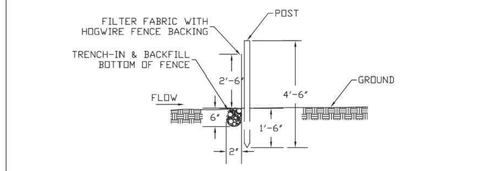
White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	CASING PIPE FOR ROAD CROSSING DETAIL	STD-G-07



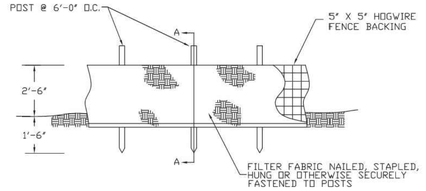
ROCK / EARTH TRENCH

NOTES:
1. BEDDING, HAUNCHING AND INITIAL BACKFILL LAYERS SHALL BE ¾" CRUSHED STONE OR APPROVED EQUAL.
2. TRENCH SLOPE TO MEET CURRENT OSHA AND STATE GUIDELINES.
3. SEE APPROVED W.H.U.D. MATERIALS LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	PIPE TRENCHING, BEDDING, AND HAUNCHING DETAILS	STD-G-05



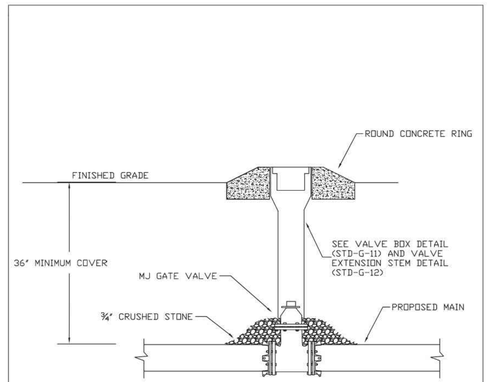
SECTION A-A



ELEVATION

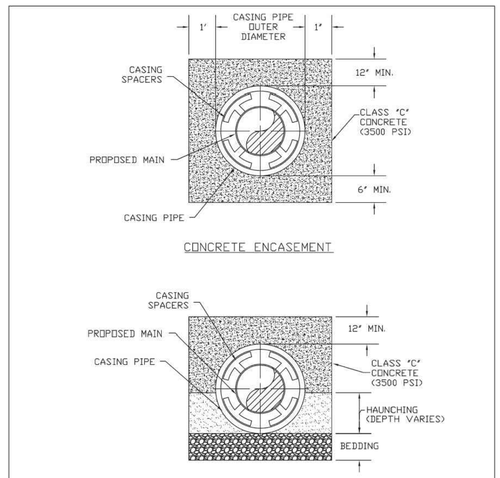
NOTES:
1. MINIMUM FABRIC WIDTH TO BE 36".
2. POSTS CAN BE 2" X 4" WOODEN POST, 1½" X 1½" OAK POST, OR STEEL POST (1.3 LB/FT MIN).
3. SILT FENCE TO BE INSTALLED AS PER CURRENT TDEC EROSION & SEDIMENTATION CONTROL HANDBOOK.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	EROSION CONTROL: SILT FENCE DETAIL	STD-G-01



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 : Sept-2025 SCALE : N.T.S.
	GATE VALVE INSTALLATION DETAIL	STD-G-10

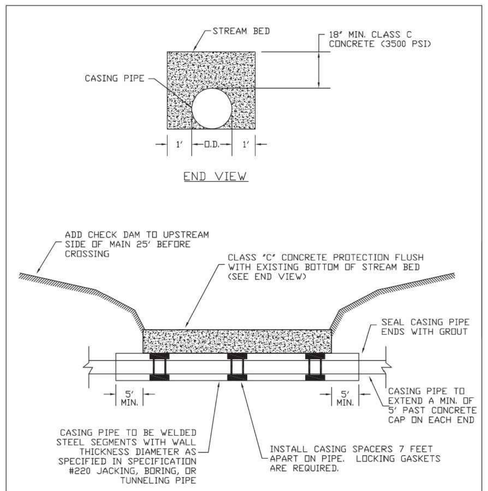


CONCRETE ENCASEMENT

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 : Sept-2025 SCALE : N.T.S.
	CONCRETE ENCASEMENT AND CONCRETE CAP DETAIL	STD-G-08



END VIEW

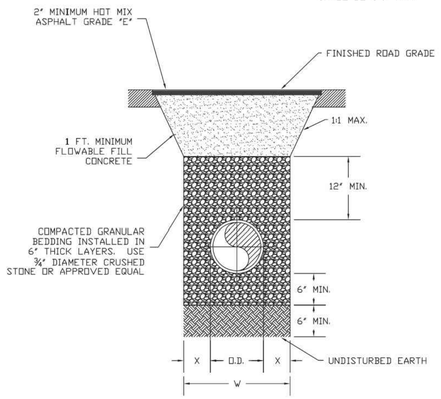
PROFILE VIEW

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 : Sept-2025 SCALE : N.T.S.
	CASING PIPE AND CONCRETE CAP FOR STREAMS OR LARGE DRAINAGE CHANNEL CROSSING DETAIL	STD-G-06

TABLE #1	
PIPE SIZE	X
LESS THAN 12"	**
12" - 30"	12"
30" - 42"	15"
42" AND LARGER	18"

** 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 : Sept-2025 SCALE : N.T.S.
	PAVEMENT REPLACEMENT: ASPHALT REPLACEMENT DETAIL	STD-G-03

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
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DEVELOPMENT MANAGEMENT GROUP, LLC

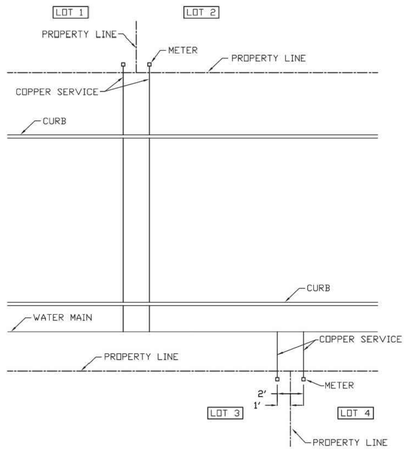
IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

REVISIONS		
NO.	DATE	DESCRIPTION

DATE:	04/23/26
DMG Project No:	25184

SITE DETAILS
(WHITE HOUSE UTILITY DIST.)
C7.4

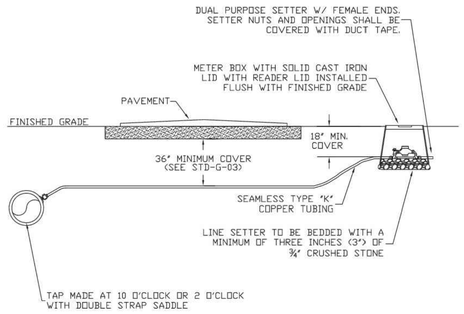
Z:\PROJECT DATABASE\2025\25184 - Phillips Builders - Residential Development - 4408 Long Hollow Pike - Goodlettsville TN\Plans\Engineer\25184 - Ironwood_C7.0 - Dtl.dwg-C7.4 Apr 23, 2026 - 8:30am GaryEmerson



DUAL SERVICE LINE AND METER

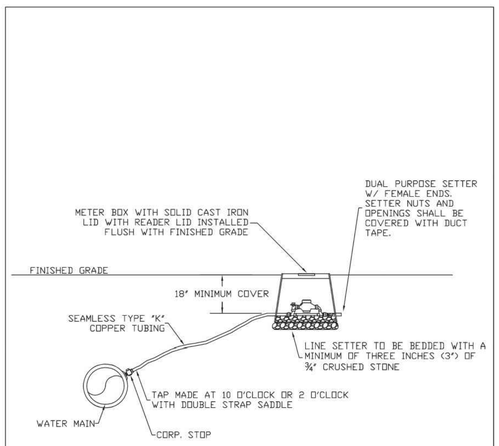
NOTES:
1. SEE APPROVED W.H.U.D. MATERIALS LIST..

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	TYPICAL ¾" WATER SERVICE ARRANGEMENT	STD-W-03



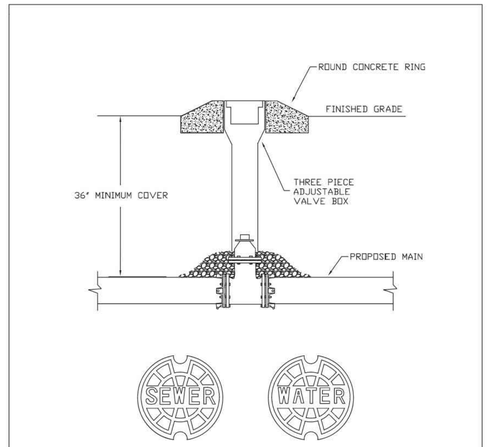
NOTES:
1. ¾" AND 1" METERS FURNISHED BY W.H.U.D.
2. SEE STD-W-03 AND STD-W-04 FOR ¾" WATER SERVICE ARRANGEMENTS.
3. SEE APPROVED W.H.U.D. MATERIAL LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	3/4" AND 1" LONG TAP ASSEMBLY DETAIL	STD-W-02



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.

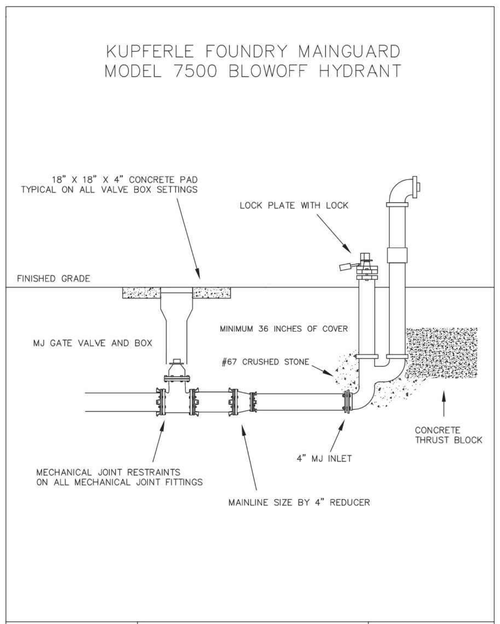
White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	3/4" AND 1" SHORT TAP ASSEMBLY DETAIL	STD-W-01



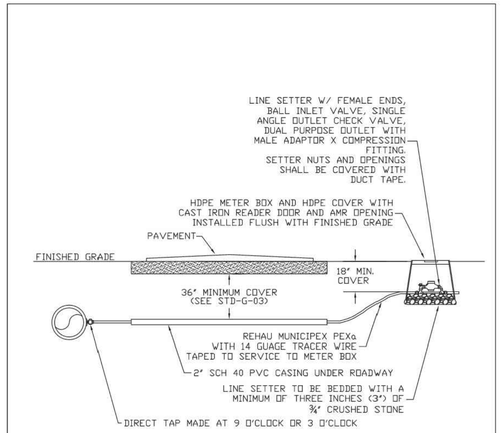
ROUND CAST-IRON, VALVE BOX LID SHALL BE LABELED WITH APPROPRIATE CALLOUT, 'SEWER' OR 'WATER'

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 : Sept-2025 SCALE : N.T.S.
	VALVE BOX DETAIL	STD-G-11

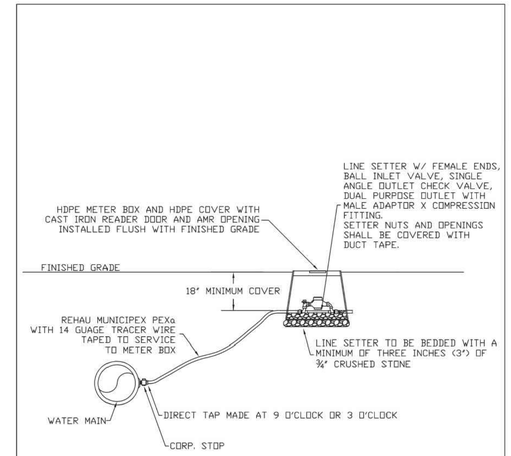


White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	4" PERMANENT DEAD-END DETAIL	STD-W-09



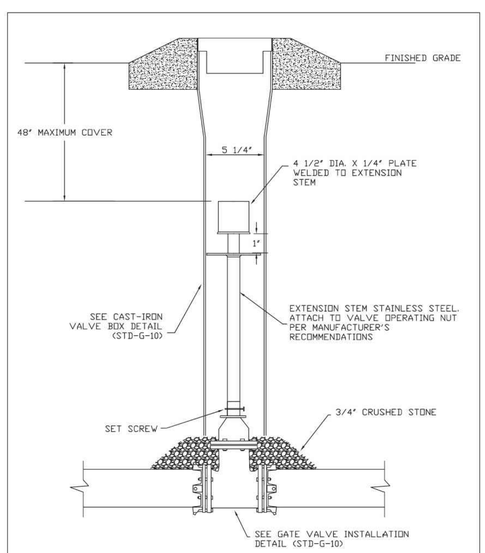
NOTES:
1. ¾" AND 1" METERS FURNISHED BY W.H.U.D.
2. SEE STD-W-03 AND STD-W-04 FOR ¾" WATER SERVICE ARRANGEMENTS.
3. SEE APPROVED W.H.U.D. MATERIAL LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	3/4" AND 1" LONG TAP ASSEMBLY DETAIL	STD-W-02P



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	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	3/4" AND 1" SHORT TAP ASSEMBLY DETAIL	STD-W-01P



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.
	VALVE EXTENSION STEM DETAIL	STD-G-12

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
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PLANS PREPARED BY:
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NO.	DATE	REVISIONS DESCRIPTION

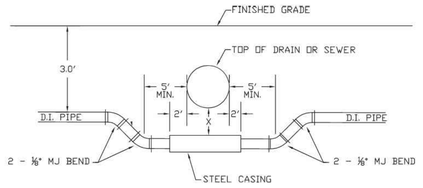
DATE:	04/23/26
DMG Project No:	25184

SITE DETAILS
(WHITE HOUSE UTILITY DIST.)
C7.5

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

Z:\PROJECT DATABASE\2025\25184 - Philips Builders - Residential Development - 4408 Long Hollow Pike -Goodlettsville TN\Plans\Engineer\25184 - Ironwood_C7.0 - Dtl.dwg-C7.5 Apr 23, 2026 - 8:30am GaryEmerson

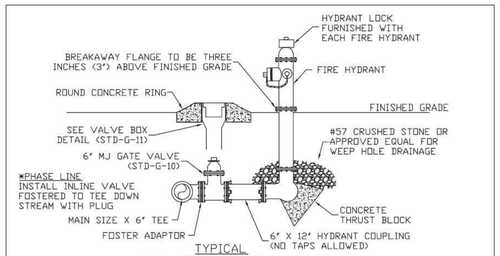


SIDE VIEW
(THIS DETAIL IS VERTICAL ONLY, NOT HORIZONTAL)

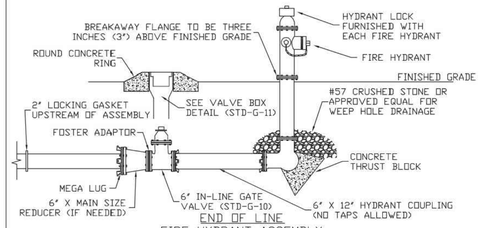
WATER CROSSING	
PIPE SIZE	MIN. CASING SIZE
6"	12"
8"	16"
12"	20"
16"	24"
24"	36"
30"	42"

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
	STORM DRAIN OR SANITARY SEWER MAIN & WATER MAIN CROSSING DETAIL	SCALE : N.T.S.
		STD-W-20



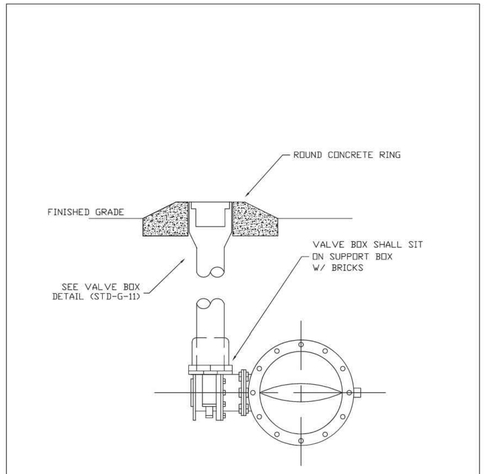
TYPICAL
FIRE HYDRANT ASSEMBLY



END OF LINE
FIRE HYDRANT ASSEMBLY

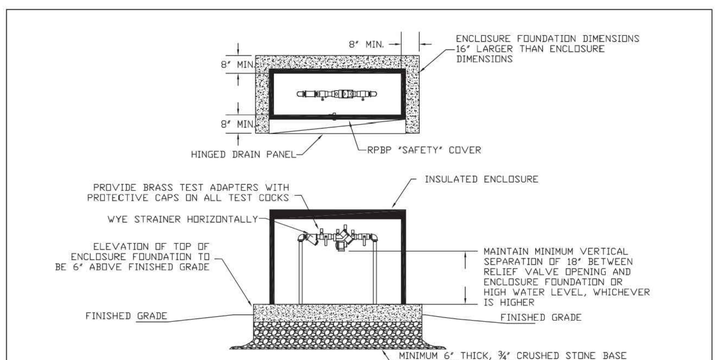
NOTES:
1. IF FIRE HYDRANT ASSEMBLY IS INSTALLED WITH NEW DEVELOPMENT, THE DEVELOPER SHALL SUPPLY A MINIMUM OF ONE (1) FIRE HYDRANT WRENCH EACH TO W.H.U.D. INSPECTOR AND THE LOCAL FIRE DEPARTMENT.
2. SERVICE LINES ARE NOT PERMITTED ON FIRE HYDRANT ASSEMBLY SECTION.
3. THE 6" GATE VALVE CAN BE ATTACHED TO A TEE OR REDUCER IF FOSTER COUPLINGS ARE USED.
4. MECHANICAL JOINT RESTRAINTS SHALL BE USED ON ALL MECHANICAL JOINT FITTINGS.
5. CONCRETE THRUST BLOCKS ARE REQUIRED FOR TEE AND 90° BEND ON FIRE HYDRANT ASSEMBLIES. SEE DETAIL STD-G-09 FOR TYPICAL CONCRETE BLOCKING REQUIREMENTS.
6. SEE APPROVED W.H.U.D. MATERIAL LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025
	FIRE HYDRANT ASSEMBLY DETAIL	SCALE : N.T.S.
		STD-W-18



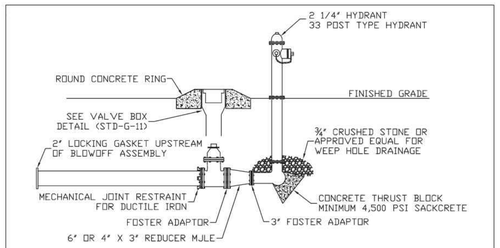
NOTES:
1. THE VALVE BOX SHALL NOT REST DIRECTLY ON VALVE.
2. BUTTERFLY VALVES ARE ONLY ALLOWED ON 24" DIAMETER OR LARGER WATER MAINS.
3. SEE APPROVED W.H.U.D. MATERIAL LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025
	BUTTERFLY VALVE INSTALLATION DETAIL	SCALE : N.T.S.
		STD-W-14

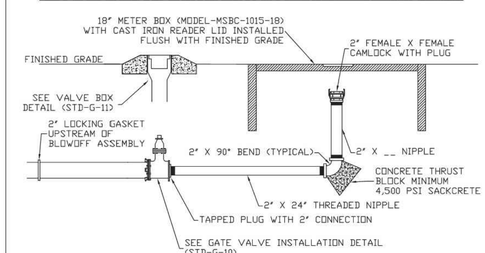


NOTES:
1. A THREE FOOT (3') MINIMUM HORIZONTAL SEPARATION BETWEEN RPBP FOUNDATION AND ALL OTHER ITEMS SHALL BE MAINTAINED.
2. CONDUIT AND ELECTRICAL CIRCUIT FOR HEAT TRACING OF RPBP ASSEMBLY INSTALLATION SHALL BE PROVIDED BY CONTRACTOR.
3. SEE APPROVED W.H.U.D. MATERIAL LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025
	SMALL RPBP PLAN & PROFILE VIEW DETAIL (3/4" - 2")	SCALE : N.T.S.
		STD-W-10



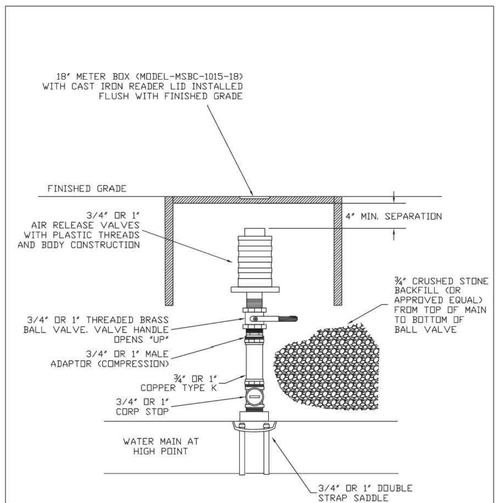
2" DEAD-END ABOVE GROUND ASSEMBLY FOR 4" - 6" WATER MAIN



2" DEAD-END BELOW GROUND ASSEMBLY FOR 4" - 6" WATER MAIN

NOTES:
1. SERVICE LINES ARE NOT PERMITTED DOWNSTREAM OF MAIN-SIZE GATE VALVE.
2. SEE APPROVED W.H.U.D. MATERIAL LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025
	2" DEAD END ASSEMBLY DETAIL (MAINS 2" - 6")	SCALE : N.T.S.
		STD-W-19



NOTES:
1. METER BOX TO BE INSTALLED PARALLEL WITH ROADWAY WHENEVER POSSIBLE.
2. FOR MAINS WITH A DIAMETER OF 2" TO 6", A ¾" AIR RELEASE VALVE ASSEMBLY IS REQUIRED.
3. FOR MAINS WITH A DIAMETER OF 8" TO 10", A 1" AIR RELEASE VALVE ASSEMBLY IS REQUIRED.
4. SEE APPROVED W.H.U.D. MATERIAL LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025
	3/4" AND 1" AIR RELEASE VALVE ASSEMBLY DETAIL	SCALE : N.T.S.
		STD-W-15

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION — AS NOTED

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

NO.	DATE	DESCRIPTION
		REVISIONS

DATE:	04/23/26
DMG Project No:	25184

SITE DETAILS
(WHITE HOUSE UTILITY DIST.)
C7.6

Z:\PROJECT DATABASE\2025\25184 - Phillips Builders - Residential Development - 4408 Long Hollow Pike -Goodlettsville TN\Plans\Engineer\25184 - Ironwood_C7.0 - Dtl.dwg-C7.6 Apr 23, 2026 - 8:31am GaryEmerson

ISSUED FOR: ☐ CHECKSET ☐ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

PLANS PREPARED FOR:

PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:

4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DAVELLO MEMBER MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

KYLE B. SMITH
REGISTERED LANDSCAPE ARCHITECT
TENNESSEE
COMMERCE
LANDSCAPE ARCHITECT
4/29/26

REVISIONS

NO.	DESCRIPTION	DATE

DATE:	03/30/26
DMG Project No:	25184

TREE PRESERVATION AND REMOVAL PLAN

L0.0

TREE #	DBH	SPECIES	REMOVE/SAVE
1	36	OAK	REMOVE
2	8	BEECH	REMOVE
3	15	OAK	REMOVE
4	8	OAK	REMOVE
5	24	PIN OAK	REMOVE
6	24	OAK	REMOVE
7	8	MAPLE	REMOVE
8	12	OAK	REMOVE
9	24	OAK	REMOVE
10	40	PINE	REMOVE
11	30	PINE	REMOVE
12	30	BEECH	REMOVE
13	36	BEECH	REMOVE
14	24	CEDAR	REMOVE
15	24	HACKBERRY	REMOVE
16	15	HACKBERRY	REMOVE
17	30	BEECH	REMOVE
18	36	BEECH	REMOVE
19	30	WEEPING WILLOW	REMOVE
20	30	WEEPING WILLOW	REMOVE
21	40	HACKBERRY	REMOVE
22	24	HOP-HORNBEAM	REMOVE
23	36	OAK	REMOVE
24	24	OAK	REMOVE
25	24	OAK	REMOVE
26	8	HACKBERRY	REMOVE
27	15	OAK	REMOVE
28	23	HACKBERRY	REMOVE
29	24	HACKBERRY	REMOVE
30	24	HACKBERRY	REMOVE
31	24	PIN OAK	REMOVE
32	36	OAK	REMOVE
33	36	PIN OAK	REMOVE
34	24	MAPLE	REMOVE
35	24	OAK	REMOVE
36	24	OAK	REMOVE
37	24	OAK	REMOVE
38	24	PIN OAK	REMOVE
39	36	OAK	REMOVE
40	15	OAK	REMOVE
41	60	MAGNOLIA	REMOVE
42	36	OAK	REMOVE
43	30	OAK	REMOVE
44	24	PIN OAK	REMOVE
45	8	MAPLE	REMOVE
46	8	WALNUT	REMOVE
47	8	MAPLE	REMOVE
48	18	OAK	REMOVE
49	18	MAPLE	REMOVE
50	20	HACKBERRY	SAVE
51	36	HACKBERRY	REMOVE
52	30	MAGNOLIA	REMOVE
53	36	BEECH	REMOVE
54	30	OAK	REMOVE
55	30	OAK	REMOVE
56	30	HACKBERRY	REMOVE
57	30	CEDAR	REMOVE
58	18	BEECH	REMOVE
59	36	MAPLE	REMOVE
60	24	OAK	REMOVE
61	24	OAK	REMOVE
62	12	DOGWOOD	REMOVE
63	24	MAPLE	REMOVE
64	18	OAK	REMOVE
65	24	MAPLE	SAVE
66	18	MAPLE	REMOVE
67	12	BEECH	SAVE
68	8	HACKBERRY	SAVE
69	36	HACKBERRY	SAVE
70	12	HACKBERRY	SAVE
71	8	HACKBERRY	SAVE
72	8	HACKBERRY	SAVE
73	18	OAK	SAVE
74	30	OAK	SAVE
75	12	HACKBERRY	SAVE
76	12	HACKBERRY	SAVE
77	12	HACKBERRY	SAVE
78	12	HACKBERRY	SAVE
79	8	MAPLE	SAVE
80	12	OAK	SAVE
81	12	HACKBERRY	SAVE
82	12	HACKBERRY	SAVE
83	12	HACKBERRY	SAVE
84	12	OAK	SAVE
85	8	MAPLE	SAVE
86	8	BEECH	SAVE
87	8	MAPLE	SAVE
88	18	HACKBERRY	SAVE
89	18	HACKBERRY	SAVE
90	12	MAPLE	SAVE
91	12	MAPLE	SAVE
92	12	MAPLE	SAVE
93	12	OAK	SAVE
94	12	HACKBERRY	SAVE
95	12	HACKBERRY	SAVE
96	12	HACKBERRY	SAVE
97	12	HACKBERRY	SAVE
98	12	HACKBERRY	SAVE
99	12	HACKBERRY	OFF PROPERTY
100	12	HACKBERRY	SAVE
101	18	OAK	SAVE
102	18	OAK	SAVE
103	12	HACKBERRY	SAVE
104	18	HACKBERRY	SAVE
105	12	HACKBERRY	SAVE
106	12	HACKBERRY	SAVE
107	8	HACKBERRY	SAVE
108	18	OAK	SAVE
109	30	OAK	OFF PROPERTY
110	30	OAK	SAVE
111	30	OAK	SAVE
112	8	HACKBERRY	SAVE
113	12	OAK	SAVE
114	12	MAPLE	SAVE
115	15	HACKBERRY	SAVE
116	15	HACKBERRY	SAVE
117	24	HACKBERRY	SAVE
118	24	HACKBERRY	SAVE
119	12	OSAGE-ORANGE	OFF PROPERTY
120	12	MAPLE	OFF PROPERTY
121	12	MAPLE	OFF PROPERTY
122	30	OAK	SAVE
123	30	MAPLE	SAVE
124	30	OAK	SAVE
125	30	MAPLE	SAVE
126	30	OAK	REMOVE
127	12	PEAR	REMOVE
128	8	HACKBERRY	REMOVE
129	15	HACKBERRY	REMOVE
130	15	HACKBERRY	REMOVE
131	12	HACKBERRY	REMOVE
132	12	HACKBERRY	REMOVE
133	15	MAPLE	REMOVE
134	60	HACKBERRY	REMOVE
135	12	MAPLE	REMOVE
136	24	OAK	REMOVE
137	24	OAK	REMOVE
138	30	OAK	REMOVE
139	12	OAK	REMOVE
140	12	MAPLE	REMOVE
141	24	MAPLE	REMOVE
142	24	MAPLE	REMOVE
143	24	OAK	REMOVE
144	12	HACKBERRY	REMOVE
145	12	HACKBERRY	REMOVE
146	8	HACKBERRY	REMOVE
147	8	OAK	REMOVE
148	12	HACKBERRY	REMOVE
149	36	HACKBERRY	REMOVE
150	36	HACKBERRY	REMOVE
151	24	MAPLE	REMOVE
152	8	HACKBERRY	REMOVE
153	36	HACKBERRY	REMOVE
154	24	HACKBERRY	REMOVE
155	24	OAK	REMOVE
156	12	HACKBERRY	REMOVE
157	12	HACKBERRY	REMOVE
158	12	OAK	REMOVE
159	12	OAK	REMOVE
160	50	HACKBERRY	REMOVE
161	12	HACKBERRY	REMOVE
162	12	HACKBERRY	REMOVE
163	18	CEDAR	REMOVE
164	18	OAK	REMOVE
165	12	OAK	REMOVE
166	24	HACKBERRY	REMOVE
167	8	OAK	REMOVE
168	12	OAK	REMOVE
169	18	OAK	REMOVE
170	18	OAK	REMOVE
171	8	OAK	REMOVE
172	24	OAK	REMOVE
173	18	OAK	REMOVE
174	12	OAK	REMOVE
175	18	OAK	OFF PROPERTY
176	18	OAK	OFF PROPERTY
177	18	OAK	OFF PROPERTY
178	12	OAK	OFF PROPERTY
179	18	OAK	OFF PROPERTY
180	24	PIN OAK	OFF PROPERTY
181	30	OAK	OFF PROPERTY
182	8	HACKBERRY	OFF PROPERTY
183	8	HACKBERRY	OFF PROPERTY
184	12	CEDAR	REMOVE
185	8	CEDAR	SAVE
186	12	OAK	SAVE
187	8	WEEPING WILLOW	OFF PROPERTY
188	24	WEEPING WILLOW	OFF PROPERTY
189	12	HACKBERRY	OFF PROPERTY
190	8	HACKBERRY	SAVE
191	12	OAK	SAVE
192	8	HACKBERRY	SAVE
193	12	HACKBERRY	SAVE
194	12	OAK	SAVE
195	12	OAK	SAVE
196	12	HACKBERRY	OFF PROPERTY
197	12	PINE	OFF PROPERTY
198	12	OAK	OFF PROPERTY
199	15	BEECH	SAVE
200	24	BASSWOOD	OFF PROPERTY

TREE #	DBH	SPECIES	REMOVE/SAVE
201	18	OAK	OFF PROPERTY
202	15	BASSWOOD	OFF PROPERTY
203	24	OAK	OFF PROPERTY
204	24	OAK	OFF PROPERTY
205	24	HACKBERRY	OFF PROPERTY
206	12	HACKBERRY	OFF PROPERTY
207	12	OAK	OFF PROPERTY
208	12	OAK	OFF PROPERTY
209	12	OAK	OFF PROPERTY
210	12	OAK	OFF PROPERTY
211	8	OAK	OFF PROPERTY
212	8	HACKBERRY	SAVE
213	8	HACKBERRY	SAVE
214	13	PINE	SAVE
215	8	OAK	SAVE
216	30	HACKBERRY	SAVE
217	24	OAK	SAVE
218	18	HACKBERRY	SAVE
219	18	HACKBERRY	SAVE
220	24	HACKBERRY	SAVE
221	30	OAK	SAVE
222	12	OAK	SAVE
223	8	OAK	SAVE
224	30	PINE	SAVE
225	12	OAK	SAVE
226	12	HACKBERRY	SAVE
227	12	OAK	SAVE
228	18	HACKBERRY	SAVE
229	18	HACKBERRY	SAVE
230	8	OAK	SAVE
231	8	PINE	SAVE
232	8	OAK	SAVE
233	8	OAK	SAVE
234	8	OAK	SAVE
235	24	OAK	SAVE
236	12	HACKBERRY	SAVE
237	12	HACKBERRY	SAVE
238	18	HACKBERRY	SAVE
239	30	OAK	SAVE
240	30	OAK	SAVE
241	12	OAK	SAVE
242	8	BEECH	SAVE
243	12	HACKBERRY	SAVE
244	8	PINE	SAVE
245	8	OAK	SAVE
246	8	HACKBERRY	SAVE
247	24	OAK	SAVE
248	12	OAK	SAVE
249	12	OAK	SAVE
250	12	HACKBERRY	SAVE
251	12	OAK	SAVE
252	8	OAK	SAVE
253	18	OAK	SAVE
254	18	OAK	SAVE
255	12	MAPLE	SAVE
256	18	MAPLE	SAVE
257	18	OAK	SAVE
258	18	OAK	SAVE
259	18	OAK	REMOVE
260	24	ELM	OFF PROPERTY
261	12	MAPLE	OFF PROPERTY
262	12	HACKBERRY	OFF PROPERTY
263	8	CEDAR	OFF PROPERTY
264	12	MAPLE	OFF PROPERTY
265	12	OAK	OFF PROPERTY
266	12	OAK	OFF PROPERTY
267	8	HACKBERRY	OFF PROPERTY
268	12	OAK	OFF PROPERTY
269	12	OAK	OFF PROPERTY
270	30	MAPLE	OFF PROPERTY
271	12	SASSAFRAS	OFF PROPERTY
272	8	MAPLE	OFF PROPERTY
273	8	OAK	OFF PROPERTY
274	18	BEECH	OFF PROPERTY
275	12	MAPLE	OFF PROPERTY
276	15	OAK	OFF PROPERTY
277	12	HACKBERRY	OFF PROPERTY
278	18	OAK	OFF PROPERTY
279	12	MAPLE	OFF PROPERTY
280	8	BEECH	OFF PROPERTY
281	12	BEECH	OFF PROPERTY
282	8	PINE	OFF PROPERTY
283	8	PINE	OFF PROPERTY
284	30	POPLAR	OFF PROPERTY
285	12	MAPLE	OFF PROPERTY
286	12	OAK	OFF PROPERTY
287	12	ASH	OFF PROPERTY
288	12	MAPLE	OFF PROPERTY
289	12	MAPLE	OFF PROPERTY
290	18	OAK	OFF PROPERTY
291	12	MAPLE	OFF PROPERTY
292	15	BEECH	OFF PROPERTY
293	12	SASSAFRAS	OFF PROPERTY
294	30	SYCAMORE	OFF PROPERTY
295	12	SASSAFRAS	OFF PROPERTY
296	12	HACKBERRY	OFF PROPERTY
297	12	MAPLE	OFF PROPERTY
298	12	MAPLE	OFF PROPERTY
299	12	ASH	OFF PROPERTY
300	12	HACKBERRY	OFF PROPERTY
301	18	PINE	OFF PROPERTY
302	18	OAK	OFF PROPERTY
303	18	OAK	OFF PROPERTY
304	18	HACKBERRY	OFF PROPERTY
305	18	HACKBERRY	OFF PROPERTY
306	12	OAK	OFF PROPERTY
307	18	OAK	OFF PROPERTY
308	30	OAK	OFF PROPERTY
309	18	HACKBERRY	OFF PROPERTY
310	18	OAK	OFF PROPERTY
311	18	PINE	OFF PROPERTY
312	24	OAK	OFF PROPERTY

TREE #	DBH	SPECIES	REMOVE/SAVE
401	15	OAK	REMOVE
402	15	HACKBERRY	REMOVE
403	15	HACKBERRY	REMOVE
404	15	OAK	REMOVE
405	12	HACKBERRY	REMOVE
406	12	OAK	REMOVE
407	8	CEDAR	REMOVE
408	15	OAK	REMOVE
409	12	HACKBERRY	REMOVE
410	12	HACKBERRY	REMOVE
411	12	PINE	REMOVE
412	12	PINE	REMOVE
413	24	PINE	REMOVE
414	24	OAK	REMOVE
415	24	OAK	REMOVE
416	36	OAK	REMOVE
417	24	PINE	SAVE
418	12	OAK	SAVE
419	12	OAK	SAVE
420	8	HACKBERRY	SAVE
421	8	PIN OAK	SAVE
422	24	PIN OAK	SAVE
423	24	OAK	SAVE
424	15	CHERRY	SAVE
425	15	HACKBERRY	SAVE
426	15	HACKBERRY	SAVE
427	8	HACKBERRY	SAVE
428	8	12	HACKBERRY
429	8	OSAGE-ORANGE	SAVE
430	36	HACKBERRY	SAVE
431	48	ELM	SAVE
432	8	PINE	SAVE
433	8	PINE	SAVE
434	12	OAK	SAVE
435	8	CEDAR	SAVE
436	8	CEDAR	SAVE
437	8	CEDAR	SAVE
438	8	CEDAR	SAVE
439	8	CEDAR	SAVE
440	12	OAK	REMOVE
441	12	CEDAR	REMOVE
442	12	LOCUST	REMOVE
443	8	CEDAR	REMOVE
444	8	HACKBERRY	REMOVE
445	8	OAK	SAVE
446	8	HACKBERRY	REMOVE
447	8	CEDAR	REMOVE
448	8	MAPLE	REMOVE
449	18	OAK	REMOVE
450	24	OAK	REMOVE
451	12	HACKBERRY	REMOVE
452	18	HACKBERRY	REMOVE
453	12	HACKBERRY	SAVE
454	12	HACKBERRY	OFF PROPERTY
455	12	HACKBERRY	OFF PROPERTY
456	8	OSAGE-ORANGE	OFF PROPERTY
457	24	OAK	REMOVE
458	30	OAK	REMOVE
459	24	OAK	REMOVE
460	8	HACKBERRY	REMOVE
461	12	HACKBERRY	REMOVE
462	12	HACKBERRY	REMOVE
463	12	HACKBERRY	OFF PROPERTY
464	8	HACKBERRY	SAVE
465	24	PERSIMMON	REMOVE
466	24	OAK	OFF PROPERTY
467	8	HACKBERRY	OFF PROPERTY
468	12	OAK	OFF PROPERTY
469	12	HACKBERRY	OFF PROPERTY
470	12	HACKBERRY	OFF PROPERTY
471	12	HACKBERRY	OFF PROPERTY
472	30	OAK	SAVE
473	60	OAK	OFF PROPERTY
474	24	OAK	OFF PROPERTY
475	48	OAK	OFF PROPERTY
476	8	CEDAR	OFF PROPERTY
477	24	OAK	OFF PROPERTY
478	60	OAK	OFF PROPERTY
479	24	OAK	OFF PROPERTY
480	24	OAK	OFF PROPERTY
481	8	HACKBERRY	OFF PROPERTY
482	24	OAK	OFF PROPERTY
483	30	OAK	OFF PROPERTY
484	24	OAK	OFF PROPERTY
485	24	OAK	SAVE
486	24	OAK	OFF PROPERTY
487	30	OAK	OFF PROPERTY
488	12	HACKBERRY	OFF PROPERTY
489	12	HACKBERRY	OFF PROPERTY
490	30	OAK	OFF PROPERTY
491	15	HACKBERRY	OFF PROPERTY
492	15	HACKBERRY	OFF PROPERTY
493	18	HACKBERRY	OFF PROPERTY
494	24	HACKBERRY	OFF PROPERTY
495	24	OAK	OFF PROPERTY
496	18	HACKBERRY	OFF PROPERTY
497	18	HACKBERRY	OFF PROPERTY
498	12	HACKBERRY	OFF PROPERTY
499	12	HACKBERRY	OFF PROPERTY
500	12	HACKBERRY	OFF PROPERTY
501	12	HACKBERRY	OFF PROPERTY
502	24	OAK	REMOVE
503	8	OAK	SAVE
504	8	OAK	SAVE
505	18	HACKBERRY	SAVE
506	12	OAK	SAVE
507	18	OAK	SAVE
508	18	HACKBERRY	SAVE
509	30	OAK	SAVE
510	12	HACKBERRY	SAVE
511	8	HACKBERRY	SAVE
512	12	LOCUST	SAVE

TREE #	DBH	SPECIES	REMOVE/SAVE
601	12	ELM	REMOVE
602	15	OAK	REMOVE
603	8	OAK	REMOVE
604	12	HACKBERRY	REMOVE
605	12	HACKBERRY	REMOVE
606	12	HACKBERRY	REMOVE
607	12	LOCUST	REMOVE
608	12	OAK	REMOVE
609	8	HACKBERRY	REMOVE
610	15	HACKBERRY	REMOVE
611	15	HACKBERRY	REMOVE
612	12	HACKBERRY	REMOVE
613	12	LOCUST	REMOVE
614	12	HACKBERRY	REMOVE
615	12	HACKBERRY	REMOVE
616	8	HACKBERRY	REMOVE
617	24	OAK	REMOVE
618	15	HACKBERRY	REMOVE
619	18	OAK	REMOVE
620	15	OAK	REMOVE
621	8	ASH	REMOVE
622	15	HACKBERRY	REMOVE
623	12	OAK	REMOVE
624	8	OAK	REMOVE
625	18	OAK	REMOVE
626	8	HACKBERRY	REMOVE
627	12	HACKBERRY	REMOVE
628	8	12	HACKBERRY
629	12	HACKBERRY	REMOVE
630	12	OAK	REMOVE
631	8	HACKBERRY	REMOVE
632	12	HACKBERRY	REMOVE
633	8	HACKBERRY	REMOVE
634	8	HACKBERRY	REMOVE
635	8	OAK	REMOVE
636	8	HACKBERRY	REMOVE
637	8	HACKBERRY	REMOVE
638	8	OAK	REMOVE
639	12	MAPLE	REMOVE
640	8	HACKBERRY	REMOVE
641	8	HACKBERRY	REMOVE
642	8	HACKBERRY	REMOVE
643	12	HACKBERRY	REMOVE
644	8	HACKBERRY	REMOVE
645	8	HACKBERRY	REMOVE
646	10	HACKBERRY	REMOVE
647	12	MAPLE	REMOVE
648	12	LOCUST	REMOVE
649	18	LOCUST	REMOVE
650	18	LOCUST	REMOVE
651	30	LOCUST	REMOVE
652	12	HACKBERRY	REMOVE
653	8	ELM	REMOVE
654	12	ELM	REMOVE
655	18	HACKBERRY	REMOVE
656	18	HACKBERRY	REMOVE
657	8	CEDAR	REMOVE
658	12	HACKBERRY	REMOVE
659	8	ASH	REMOVE
660	36	OAK	REMOVE
661	8	CEDAR	REMOVE
662	36	HACKBERRY	REMOVE
663	8	CEDAR	REMOVE
664	20	HACKBERRY	REMOVE
665	8	HACKBERRY	REMOVE
666	12	ELM	REMOVE
667	8	ELM	REMOVE
668	24	ELM	REMOVE
669	8	HACKBERRY	REMOVE
670	8	HACKBERRY	REMOVE
671	8	ELM	REMOVE
672	40	OAK	REMOVE
673	8	HACKBERRY	REMOVE
674	12	HACKBERRY	REMOVE
675	12	HACKBERRY	REMOVE
676	12	HACKBERRY	REMOVE
677	12	MAPLE	REMOVE
678	18	OAK	REMOVE
679	8	HACKBERRY	REMOVE
680	24	ELM	REMOVE
681	8	HACKBERRY	REMOVE
682	24	OAK	REMOVE
683	12	CEDAR	REMOVE
684	40	ELM	REMOVE
685	30	OAK	REMOVE
686	12	ELM	REMOVE
687	30	ELM	REMOVE
688	40	ELM	REMOVE
689	12	ELM	REMOVE
690	8	CEDAR	REMOVE
691	10	HACKBERRY	REMOVE
692	10	HACKBERRY	REMOVE
693	10	HACKBERRY	REMOVE
694	24	OAK	REMOVE
695	12	HACKBERRY	REMOVE
696	12	HACKBERRY	REMOVE
697	12	HACKBERRY	REMOVE
698	12	HACKBERRY	REMOVE
699	12	HACKBERRY	REMOVE
700	12	HACKBERRY	REMOVE
701	24	ELM	REMOVE
702	18	HACKBERRY	REMOVE
703	8	HACKBERRY	REMOVE
704	8	HACKBERRY	REMOVE
705	8	HACKBERRY	REMOVE
706	8	HACKBERRY	REMOVE
707	8	HACKBERRY	REMOVE
708	8	HACKBERRY	REMOVE
709	8	HACKBERRY	REMOVE
710	10	CHERRY	REMOVE
711	10	OAK	REMOVE
712	18	HACKBERRY	REMOVE
713	8	OAK	REMOVE
714	8	OAK	REMOVE
715	8	HACKBERRY	REMOVE
716	8	HACKBERRY	REMOVE
717	12	HACKBERRY	REMOVE
718	10	CEDAR	REMOVE
719	12	OAK	REMOVE
720	12	ELM	REMOVE
721	12	HACKBERRY	REMOVE
722	12	CEDAR	REMOVE
723	48	OAK	REMOVE
724	8	OAK	REMOVE
725	18	ELM	REMOVE
726	8	HACKBERRY	REMOVE
727	8	OAK	REMOVE
728	18	HACKBERRY	REMOVE
729	8	HACKBERRY	REMOVE
730	8	HACKBERRY	REMOVE
731	12	HACKBERRY	REMOVE
732	12	HACKBERRY	REMOVE
733	12	OAK	REMOVE
734	12	HACKBERRY	REMOVE
735	18	HACKBERRY	REMOVE
736	8	HACKBERRY	REMOVE
737	8	HACKBERRY	REMOVE
738	18	HACKBERRY	REMOVE
739	18	LOCUST	REMOVE
740	8	OAK	REMOVE
741	8	HACKBERRY	REMOVE
742	8	ELM	REMOVE
743	12	ELM	REMOVE
744	8	LOCUST	REMOVE
745	15	LOCUST	REMOVE
746	8	HACKBERRY	REMOVE
747	8	HACKBERRY	REMOVE
748	8	HACKBERRY	REMOVE
749	8	OAK	REMOVE
750	8	ELM	REMOVE
751	8	ELM	REMOVE
752	12	HACKBERRY	REMOVE
753	12	HACKBERRY	REMOVE
754	12	HACKBERRY	REMOVE
755	8	HACKBERRY	REMOVE
756	8	OAK	REMOVE
757	8	HACKBERRY	REMOVE
758	12	HACKBERRY	REMOVE
759	60	OAK	REMOVE
760	8	CEDAR	REMOVE
761	12	ELM	REMOVE
762	12	LOCUST	REMOVE
763	12	ELM	REMOVE
764	40	OAK	REMOVE
765	10	HACKBERRY	REMOVE
766	24	ELM	REMOVE
767	12	CEDAR	REMOVE
768	18	LOCUST	REMOVE
769	8	HACKBERRY	REMOVE
770	8	HACKBERRY	REMOVE
771	12	HACKBERRY	REMOVE
772	12	HACKBERRY	REMOVE
773	12	HACKBERRY	REMOVE
774	12	ELM	REMOVE
775	12	HACKBERRY	REMOVE
776	12	HACKBERRY	REMOVE
777	12	CEDAR	REMOVE
778	12	LOCUST	REMOVE
779	18	ELM	REMOVE
780	12	ELM	REMOVE
781	8	ELM	REMOVE
782	24	ELM	REMOVE
783	12	HACKBERRY	REMOVE
784	8	HACKBERRY	REMOVE
785	8	HACKBERRY	REMOVE
786	12	ELM	REMOVE
787	8	HACKBERRY	REMOVE
788	15	OAK	REMOVE
789	15	OAK	REMOVE
790	12	OAK	REMOVE
791	12	HACKBERRY	REMOVE
792	12	HACKBERRY	REMOVE
793	12	ASH	REMOVE
794	12	HACKBERRY	REMOVE
795	30	OAK	REMOVE
796	40	HACKBERRY	REMOVE
797	8	CEDAR	REMOVE
798	24	HACKBERRY	REMOVE
799	8	HACKBERRY	REMOVE
800	15	HACKBERRY	REMOVE

TREE #	DBH	SPECIES	REMOVE/SAVE
801	8	HACKBERRY	REMOVE
802	8	HACKBERRY	REMOVE
803	8	ELM	REMOVE
804	8	HACKBERRY	REMOVE
805	8	LOCUST	REMOVE
806	8	HACKBERRY	REMOVE
807	12	ASH	REMOVE
808	8	HACKBERRY	REMOVE
809	8	HACKBERRY	REMOVE
810	8	HACKBERRY	REMOVE
811	8	HACKBERRY	REMOVE
812	8	HACKBERRY	REMOVE
813	12	LOCUST	REMOVE
814	8	CEDAR	REMOVE
815	12	LOCUST	REMOVE
816	12	HACKBERRY	REMOVE
817	36	OAK	REMOVE
818	18	HACKBERRY	REMOVE
819	8	OAK	REMOVE
820	12	HACKBERRY	REMOVE
821	8	ASH	REMOVE
822	8	OAK	REMOVE
823	15	OAK	REMOVE
824	8	HACKBERRY	REMOVE
825	8	HACKBERRY	REMOVE
826	8	OAK	REMOVE
827	40	OAK	REMOVE
828	8	HACKBERRY	REMOVE
829	8	HACKBERRY	REMOVE
830	12	OAK	REMOVE
831	8	OAK	REMOVE
832	8	OAK	REMOVE
833	8	OAK	REMOVE
834	12	HACKBERRY	REMOVE
835	12	HACKBERRY	REMOVE
836	8	HACKBERRY	REMOVE
837	8	HACKBERRY	REMOVE
838	12	HACKBERRY	REMOVE
839	12	MAPLE	REMOVE
840	8	HACKBERRY	REMOVE
841	8	HACKBERRY	REMOVE
842	8	HACKBERRY	REMOVE
843	8	HACKBERRY	REMOVE
844	8	HACKBERRY	REMOVE
845	12	HACKBERRY	REMOVE
846	8	CEDAR	REMOVE
847	60	OAK	REMOVE
848	12	HACKBERRY	REMOVE
849	30	ASH	REMOVE
850	12	MAPLE	REMOVE
851	15	ELM	REMOVE
852	12	MAPLE	REMOVE
853	12	ELM	REMOVE
854	12	ELM	REMOVE
855	12	ELM	REMOVE
856	15	CEDAR	REMOVE
857	15	CEDAR	REMOVE
858	12	HACKBERRY	REMOVE
859	8	ASH	REMOVE
860	36	OAK	REMOVE
861	8	CEDAR	REMOVE
862	36	HACKBERRY	REMOVE
863	8	CEDAR	REMOVE
864	20	HACKBERRY	REMOVE
865	12	ELM	REMOVE
866	12	ELM	REMOVE
867	8	ELM	REMOVE
868	8	ELM	REMOVE
869	15	HACKBERRY	REMOVE
870	8	ELM	REMOVE
871	8	ELM	REMOVE
872	18	HACKBERRY	REMOVE
873	18	HACKBERRY	REMOVE
874	24	HACKBERRY	REMOVE
875	36	HACKBERRY	REMOVE
876	18	HACKBERRY	REMOVE

LANDSCAPE CALCULATIONS

LOT AREA	45.02 ACRES	
ACI: EXISTING TREES TO BE PRESERVED	10,477	
	REQUIRED	PROVIDED
REQUIRED TREES:		
70 ACI / ACRE	3151.40	5,238
REQUIRED REPLACEMENT TREES:	4727.10	5,238
STREET YARD:		
LONG HOLLOW PIKE (1201 LF)		
1 TREE/50 LF FRONTAGE	24.02	31

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 50 100 200 300

SCALE 1" = 100'

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
DEVELOPMENT MANAGEMENT GROUP, LLC
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IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

KYLE B. SMITH
REGISTERED LANDSCAPE ARCHITECT
TENNESSEE
4/29/26

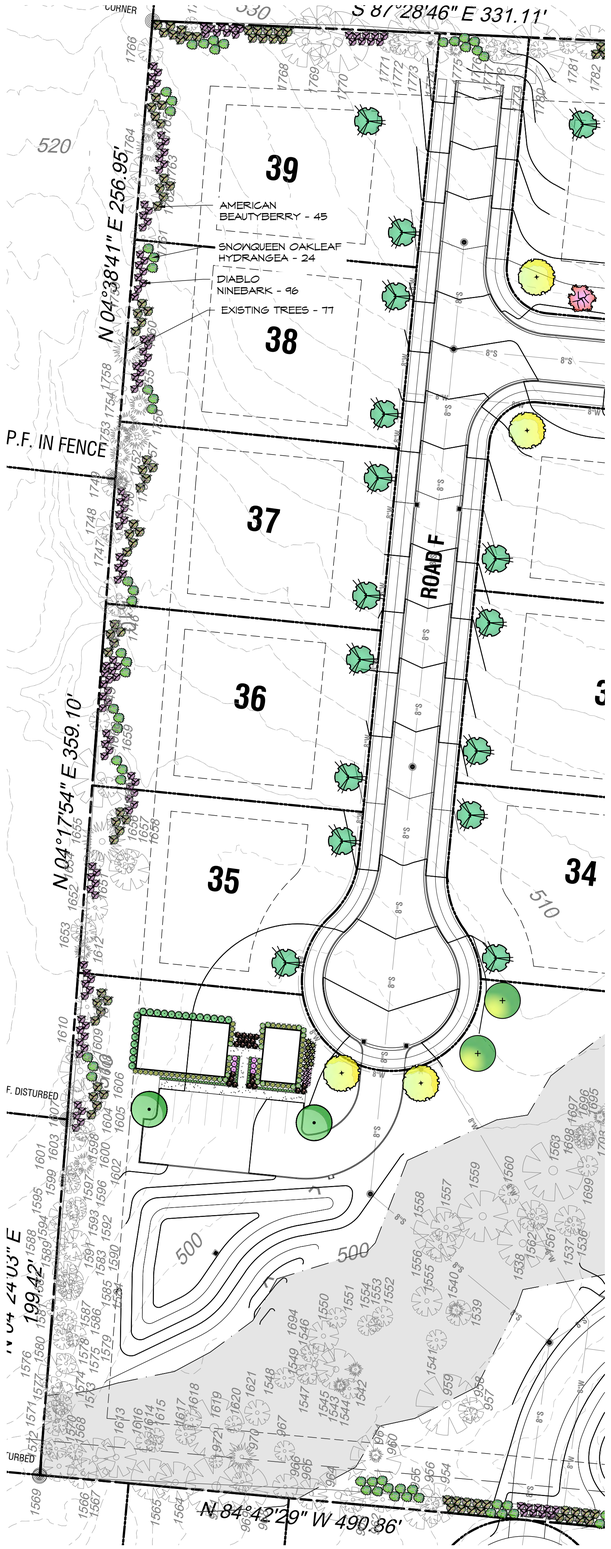
REVISIONS

NO.	DATE	DESCRIPTION

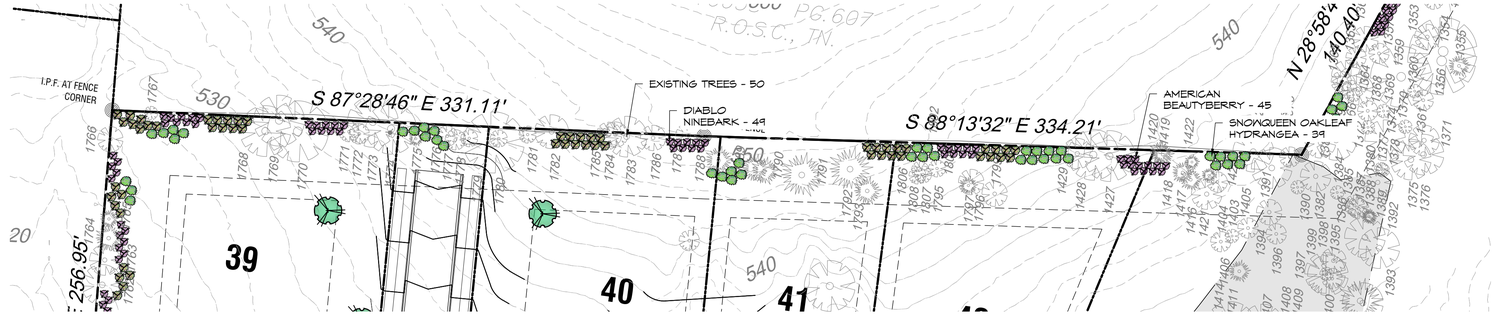
DATE:	03/30/26
DMG Project No:	25184

LANDSCAPE PLAN

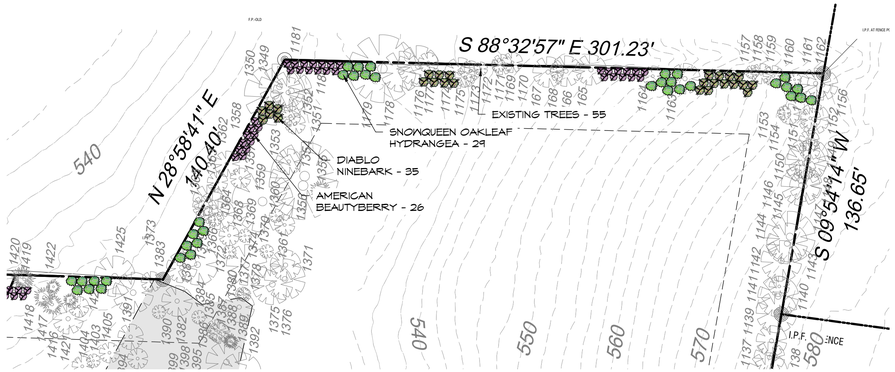
L1.0



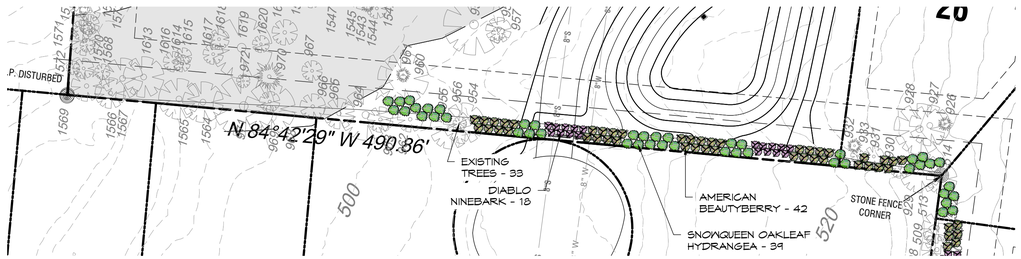
BUFFER A



BUFFER B



BUFFER C



BUFFER D

BUFFER A: TYPE 1		
TYPE 1 BUFFER 815.47 LF		
	REQUIRED	PROVIDED
REQUIRED TREES:		
6 CANOPY OR LARGE EVERGREEN / 100 LF	48.93	77 EXISTING
20 SHRUBS / 100 LF	163.09	165

BUFFER B: TYPE 1		
TYPE 1 BUFFER 665.32 LF		
	REQUIRED	PROVIDED
REQUIRED TREES:		
6 CANOPY OR LARGE EVERGREEN / 100 LF	39.92	50 EXISTING
20 SHRUBS / 100 LF	133.06	133

BUFFER C: TYPE 1		
TYPE 1 BUFFER 441.63 LF		
	REQUIRED	PROVIDED
REQUIRED TREES:		
6 CANOPY OR LARGE EVERGREEN / 100 LF	26.50	55 EXISTING
20 SHRUBS / 100 LF	88.33	90

BUFFER D: TYPE 1		
TYPE 1 BUFFER 490.86 LF		
	REQUIRED	PROVIDED
REQUIRED TREES:		
6 CANOPY OR LARGE EVERGREEN / 100 LF	29.45	33 EXISTING
20 SHRUBS / 100 LF	98.17	99

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 10 20 30 40 80 120

SCALE 1" = 40'

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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KYLE B. SMITH — REGISTERED LANDSCAPE ARCHITECT — TENNESSEE — 4/29/26

REVISIONS

NO.	DATE	DESCRIPTION

DATE:	03/30/26
DMG Project No:	25184

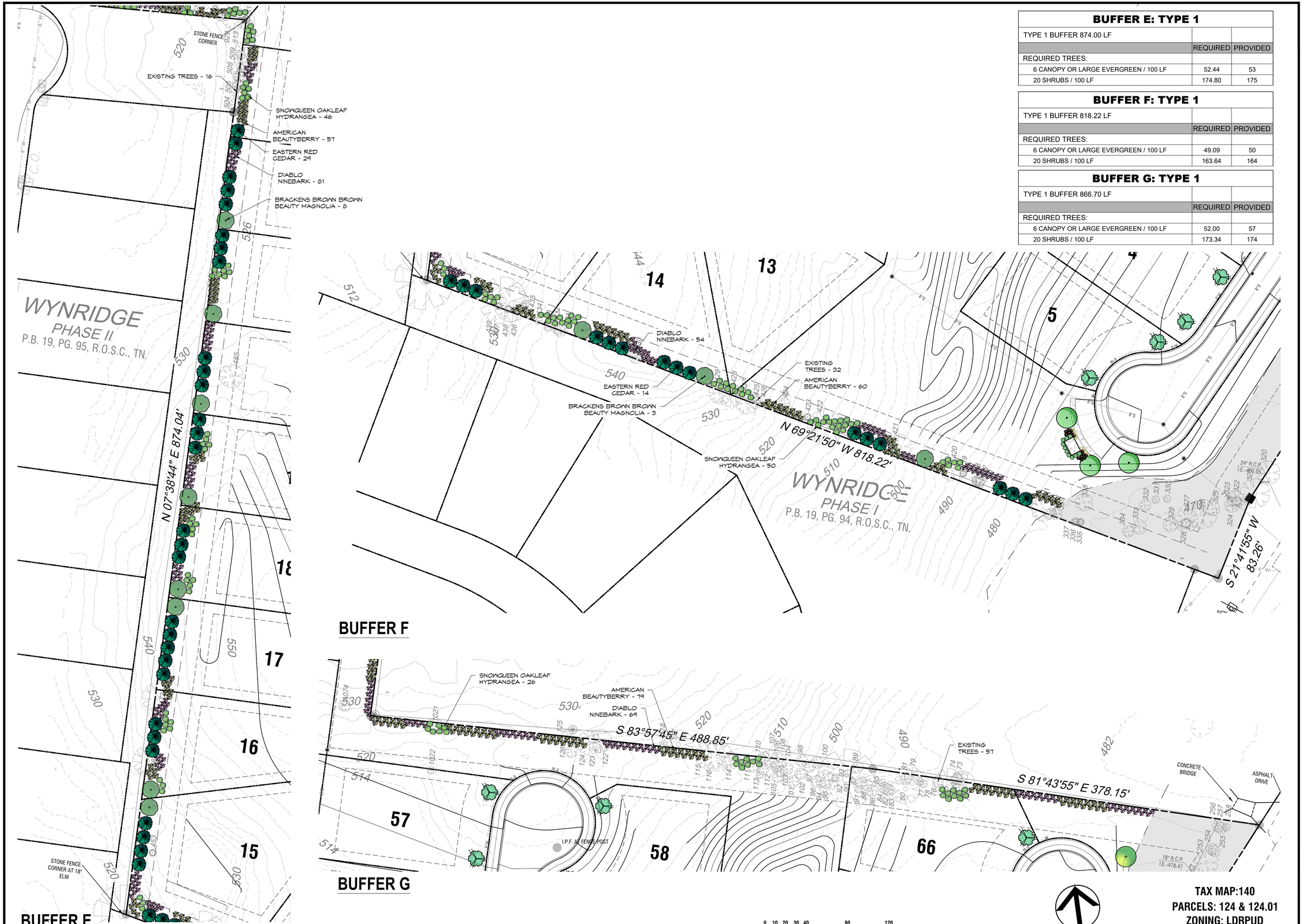
BUFFER PLAN

L1.1

BUFFER E: TYPE 1		
TYPE 1 BUFFER 874.00 LF		
	REQUIRED	PROVIDED
REQUIRED TREES:		
6 CANOPY OR LARGE EVERGREEN / 100 LF	52.44	53
20 SHRUBS / 100 LF	174.80	175

BUFFER F: TYPE 1		
TYPE 1 BUFFER 818.22 LF		
	REQUIRED	PROVIDED
REQUIRED TREES:		
6 CANOPY OR LARGE EVERGREEN / 100 LF	49.09	50
20 SHRUBS / 100 LF	163.64	164

BUFFER G: TYPE 1		
TYPE 1 BUFFER 866.70 LF		
	REQUIRED	PROVIDED
REQUIRED TREES:		
6 CANOPY OR LARGE EVERGREEN / 100 LF	52.00	57
20 SHRUBS / 100 LF	173.34	174



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4/29/26

REVISIONS		
NO.	DATE	DESCRIPTION

DATE:	03/30/26
DMG Project No:	25184

BUFFER PLAN

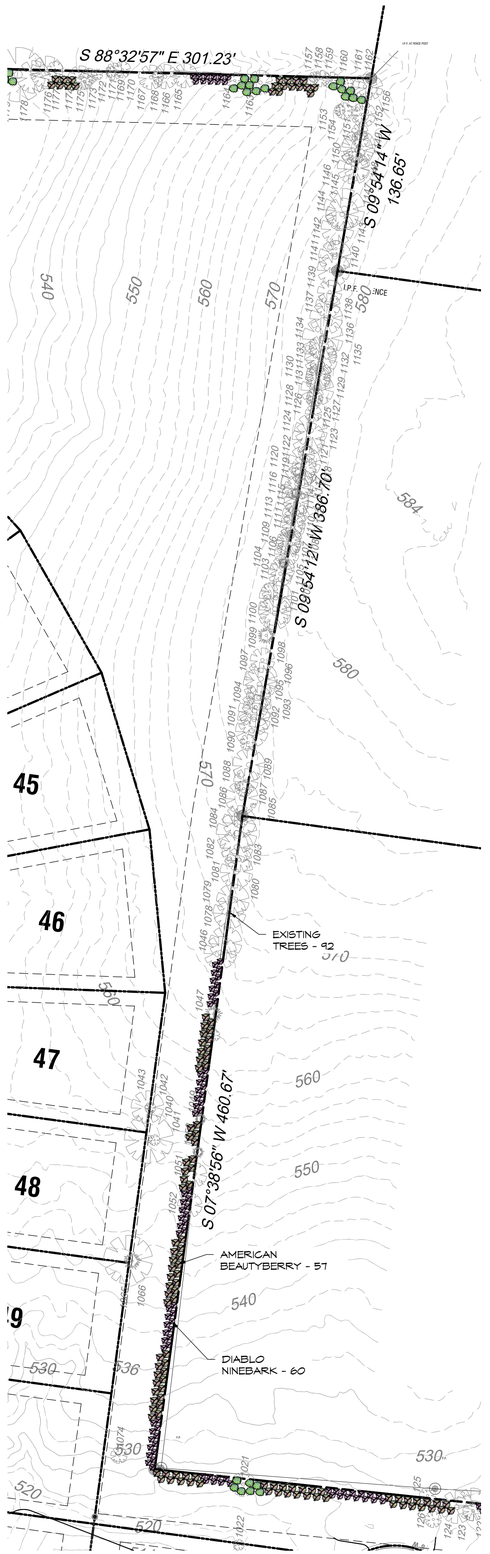
L1.11

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 10 20 30 40 80 120

SCALE 1" = 40'



BUFFER H: TYPE 1		
TYPE 1 BUFFER 984.00 LF		
	REQUIRED	PROVIDED
REQUIRED TREES:		
6 CANOPY OR LARGE EVERGREEN / 100 LF	59.04	92
20 SHRUBS / 100 LF	196.80	117

BUFFER H

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 25 50 100 150

SCALE 1" = 50'

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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TENNESSEE
4/29/26

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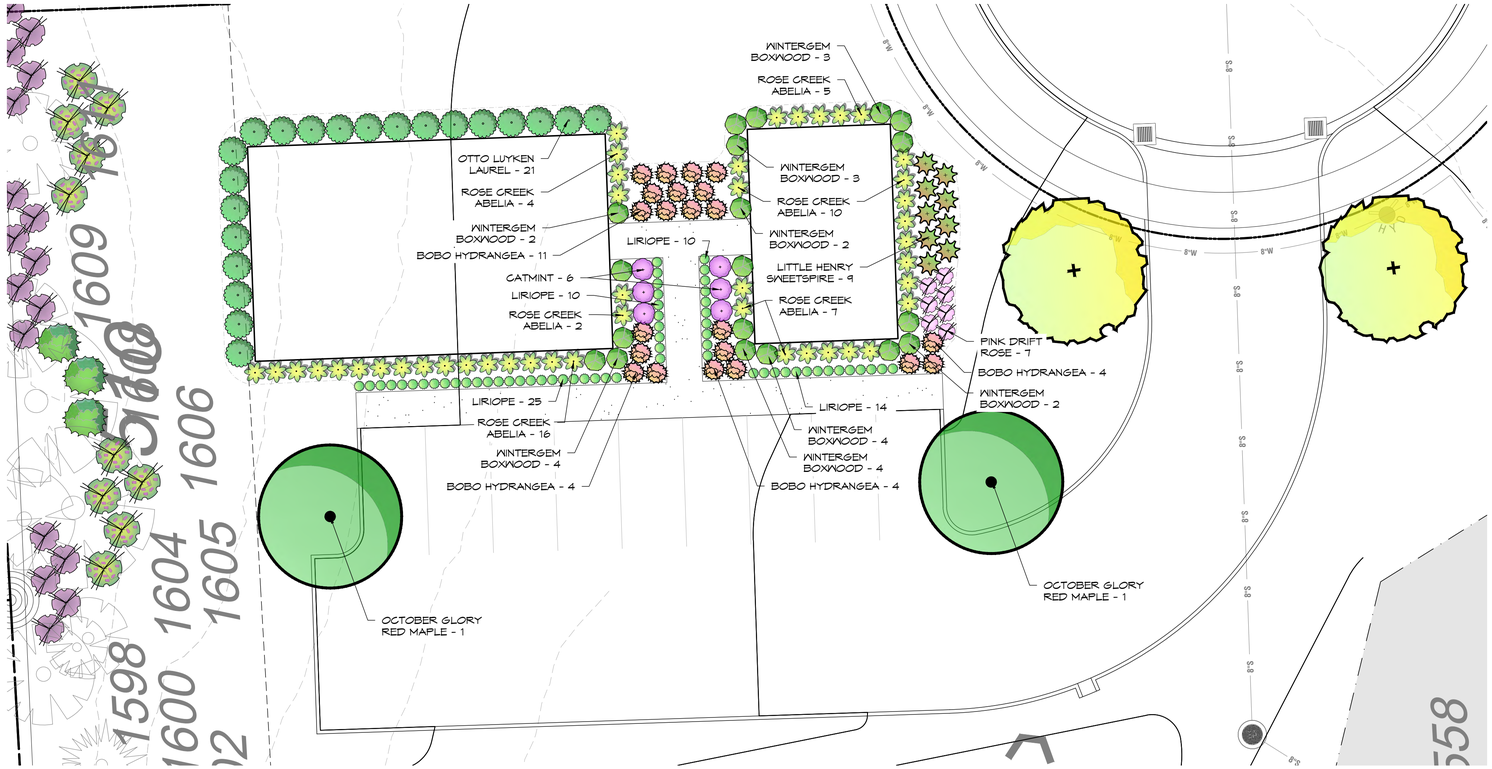
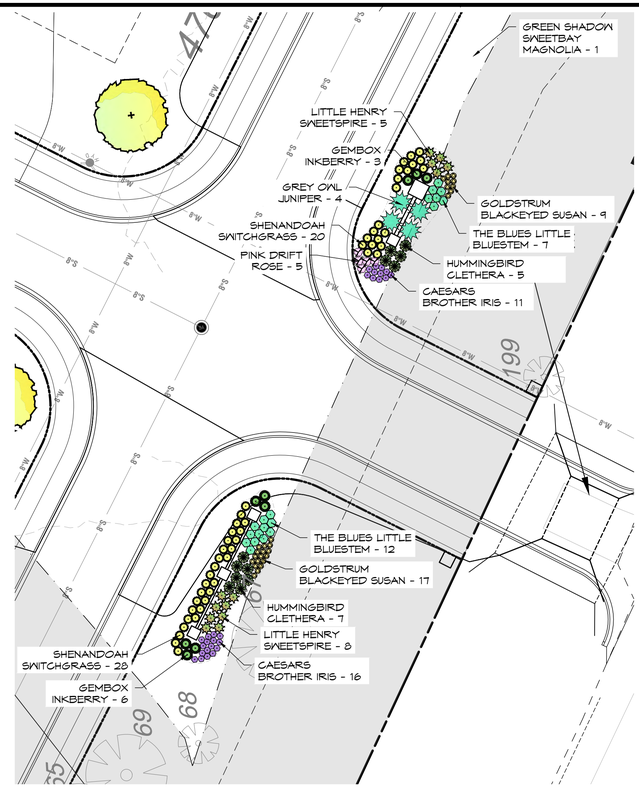
BUFFER PLAN

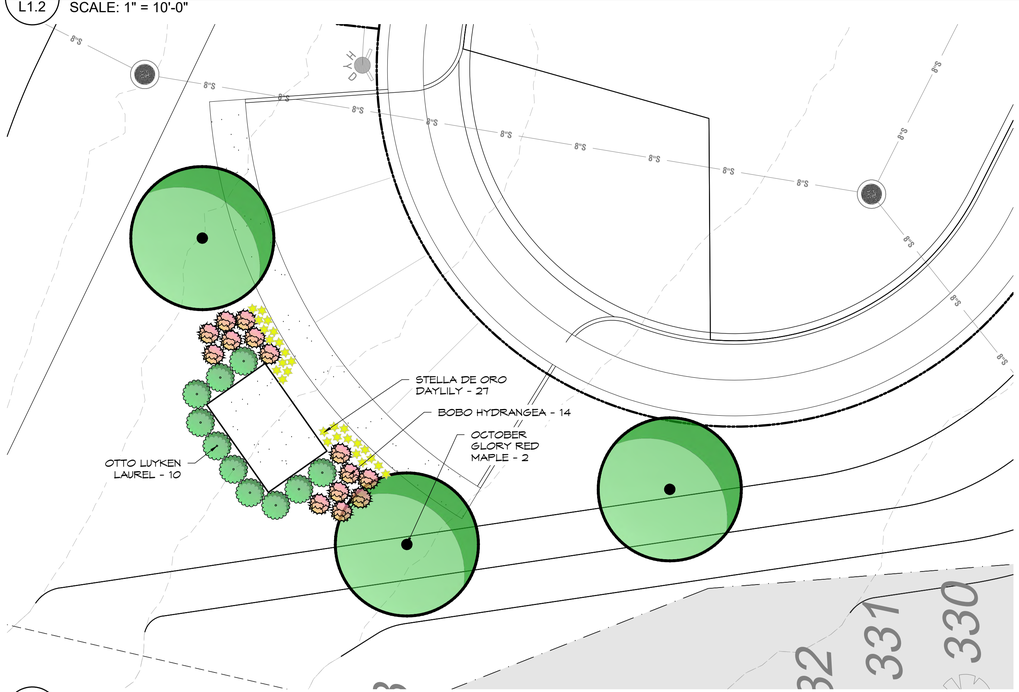
L1.11



1 L1.2 AMENITY CENTER PLANTING PLAN
SCALE: 1" = 10'-0"



2 L1.2 ENTRY MONUMENT PLANTING
SCALE: 1" = 10'-0"



3 L1.2 MAIL KIOSK PLANTING PLAN
SCALE: 1" = 10'-0"

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TENNESSEE
4/29/26

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DATE:	03/30/26
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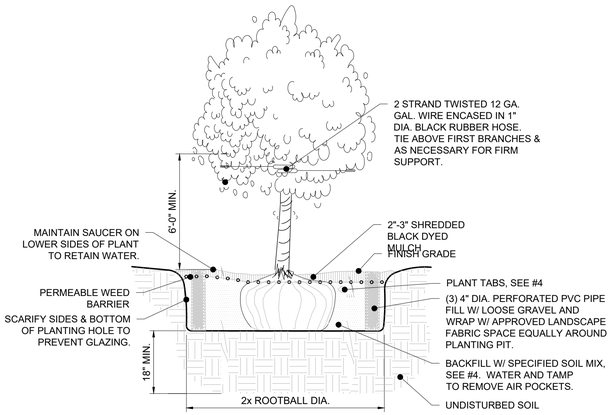
AMENITY PLANTING PLAN
L1.2

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ☒ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

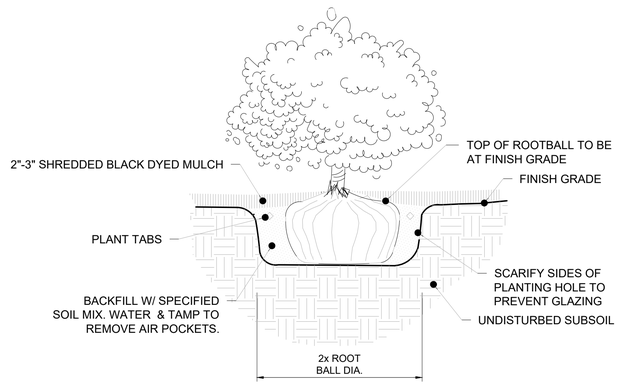
AS NOTED

NOTES:
1. TOP OF ROOTBALL TO BE AT FINISHED GRADE.
2. RUN (1) DRIP TUBE TO EACH 4" DIA. DRAIN PIPE.
3. SIDES OF PLANTER PIT ARE TO BE VERTICAL, BOTTOM IS TO BE FLAT AND UNCOMPACTED.
4. FILL PLANTER PITS WITH WATER PRIOR TO PLANTING. ANY PITS THAT DO NOT DRAIN ARE TO BE BROUGHT TO THE ATTENTION OF THE OWNER.



TYPICAL TREE PLANTING DETAIL
NOT TO SCALE

NOTES:
1. TOP OF ROOTBALL TO BE AT FINISHED GRADE.
2. SIDES OF PLANTER PIT ARE TO BE VERTICAL, BOTTOM IS TO BE FLAT AND UNCOMPACTED.
3. FILL PLANTER PITS WITH WATER PRIOR TO PLANTING. ANY PITS THAT DO NOT DRAIN ARE TO BE BROUGHT TO THE ATTENTION OF THE OWNER.
4. EXCAVATE WIDTH OF PLANTING PIT TO 2 TIMES THE WIDTH OF ROOTBALL.



SHRUB PLANTING DETAIL
NOT TO SCALE

LANDSCAPE GENERAL NOTES:

1. NO PLANT SUBSTITUTIONS, TYPE OR QUANTITY DEVIATION FROM THE APPROVED LANDSCAPE PLANS SHALL BE PERMITTED WITHOUT PRIOR APPROVAL FROM THE LANDSCAPE ARCHITECT, AND THE CITY OF GOODLETTSVILLE.
2. ALL PLANT MATERIAL AND SPECIFICATIONS TO CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1)
3. COORDINATE WORK WITH ALL TRADES.
4. CONTRACTOR SHALL HAVE PROJECT BLUE STAKED PRIOR TO COMMENCEMENT OF WORK.
5. ALL PLANT MATERIALS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT, OR OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
   TREE HEIGHT AND CALIPER SIZE IS TO COMPLY WITH STANDARD FOR NURSERY STOCK (ANSI Z60.1)
6. PER TREE SPECIES. NURSERY ASSOCIATION STANDARDS PER TREE SPECIES.
7. CONTRACTOR TO STAKE LOCATIONS OF ALL PLANT MATERIAL FOR APPROVAL BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
8. TOP OF SHREDDED BLACK DYED MULCH SHALL BE 1" BELOW ADJACENT TOP OF CURBS OR PAVEMENT.
9. LANDSCAPE AREAS SHALL BE AT +/- .10 OF A FOOT FROM FINISHED GRADE PRIOR TO THE COMMENCEMENT OF WORK. ALL GRADING SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO THE INSTALLATION OF PLANT MATERIALS, OR THE IRRIGATION SYSTEM.
10. ALL TREES TO BE GUARANTEED FOR ONE YEAR AFTER FINAL ACCEPTANCE.
11. PROVIDE POSITIVE DRAINAGE AWAY FROM ALL WALLS AND STRUCTURES.
12. ALL SLOPES NOT TO EXCEED 4:1 IN LANDSCAPED AREAS.
13. CONTRACTOR IS TO VERIFY ALL QUANTITIES BASED ON THE APPROVED LANDSCAPE PLAN.
14. CONTRACTOR TO VISIT SITE AND VERIFY ALL EXISTING CONDITIONS PRIOR TO THE COMMENCEMENT OF WORK. ALL POTENTIAL CONFLICTS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT, OR OWNER'S REPRESENTATIVE IMMEDIATELY.
15. CONTRACTOR SHALL PROTECT ALL EXISTING PAVEMENT AND LANDSCAPE TO REMAIN THROUGHOUT CONSTRUCTION ALL DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT NO EXPENSE TO THE OWNER.
16. CONSTRUCTION AND INSTALLATION SHALL BE IN ACCORDANCE WITH THIS PLAN. ANY AND ALL DEVIATION WILL SERVICES PRIOR TO CERTIFICATE OF OCCUPANCY BEING ISSUED.
17. ALL LANDSCAPE AREAS & MATERIALS SHALL BE MAINTAINED IN A HEALTHY, NEAT, CLEAN, AND WEED-FREE CONDITION DURING CONSTRUCTION. THIS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
18. AREAS WITHIN THE SIGHT DISTANCE TRIANGLE SHALL BE KEPT CLEAR OF ANY OBSTRUCTIONS WITH A HEIGHT GREATER THAN 2'-0". TREE CANOPIES SHALL BE KEPT HIGHER THAN 7'-0"
19. COMMON LANDSCAPE AREAS SHALL BE MAINTAINED BY THE OWNER AND/OR ASSOCIATION.
20. ALL PLANTING SHALL BE MAINTAINED IN HEALTHY GROWING CONDITION. FERTILIZATION, CULTIVATION, AND PRUNING SHALL BE CARRIED OUT ON A REGULAR BASIS.
21. DEAD OR DYING PLANTS SHALL BE REMOVED AND REPLACED PROMPTLY.

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ☒ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

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KYLE B. SMITH — REGISTERED — TENNESSEE — LANDSCAPE ARCHITECT — 4/29/26

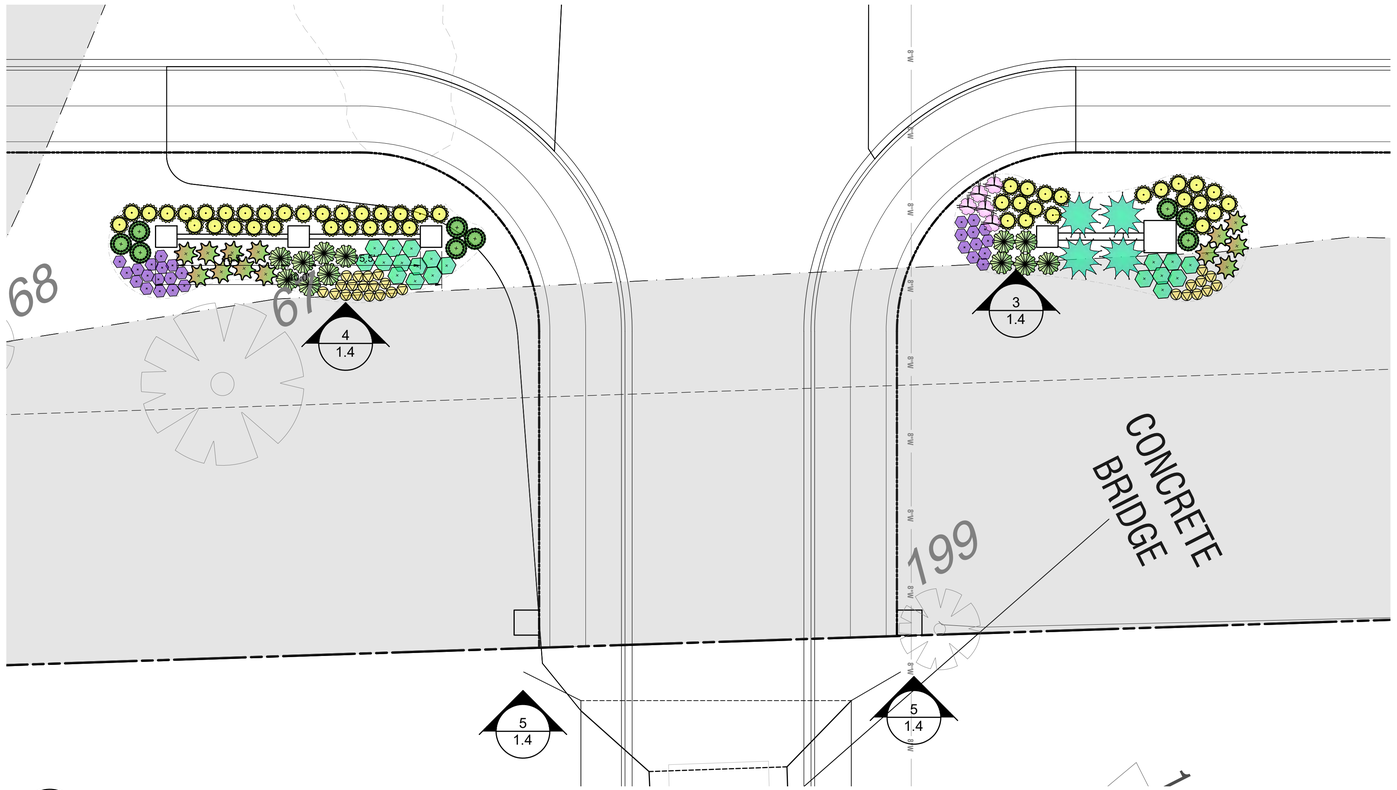
REVISIONS:

NO.	DESCRIPTION	DATE

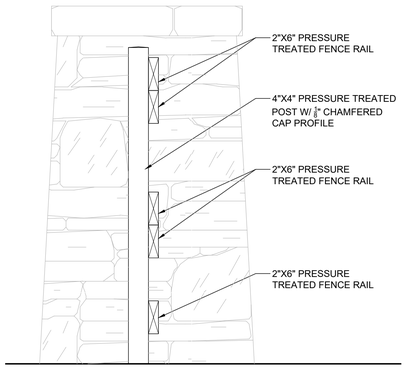
DATE:	03/30/26
DMG Project No:	25184

PLANTING NOTES, DETAILS, & SCHEDULE

L1.3



1 / L1.4 IRONWOOD ENTRY MONUMENT LAYOUT
SCALE: 1" = 10'-0"



2 / L1.4 5 RAIL FENCE SECTION
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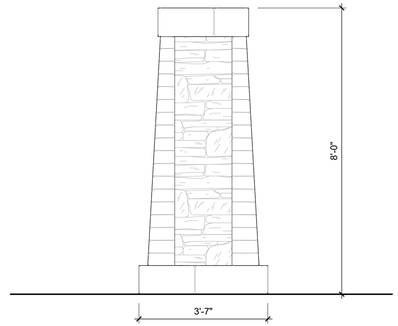
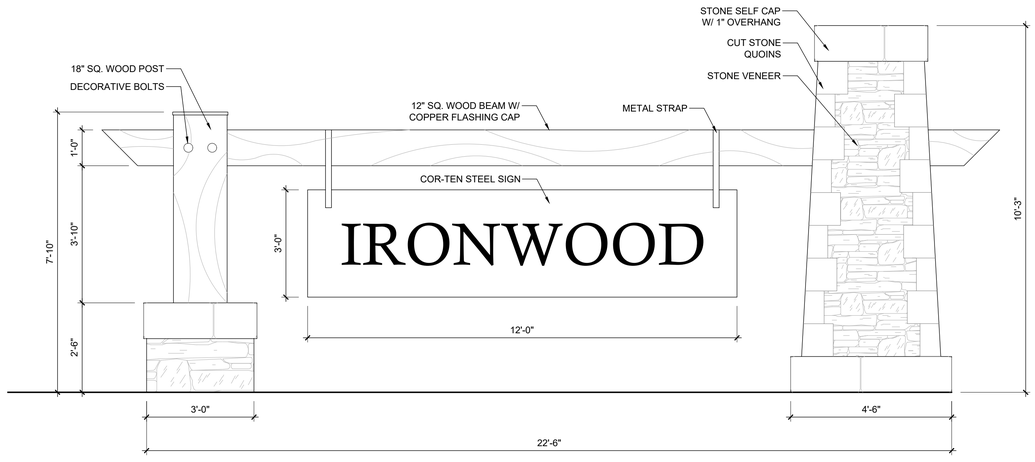
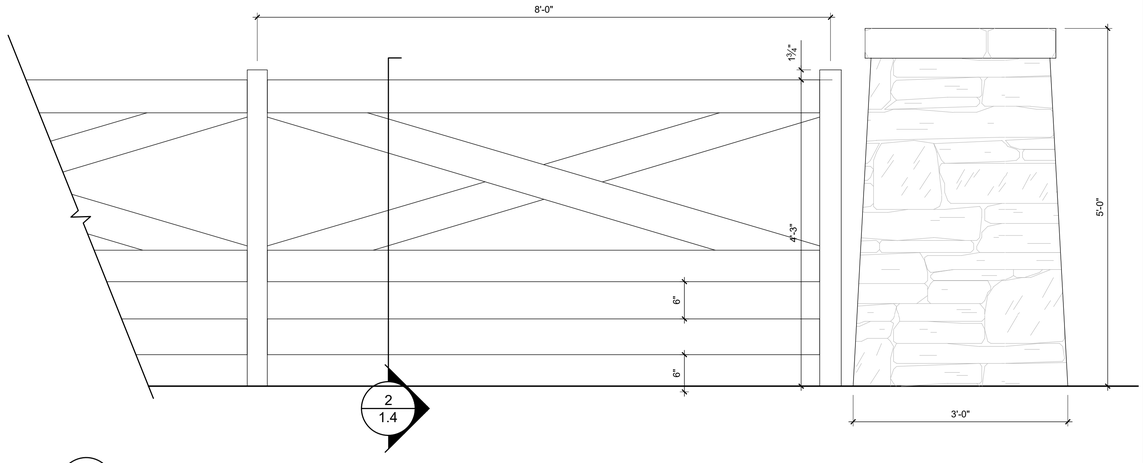


5 / L1.4 ENTRY MONUMENT
SCALE: ½" = 1'-0"



3 / L1.4 ENTRY SIGNAGE MONUMENT
SCALE: ½" = 1'-0"



4 / L1.4 5 RAIL FENCE ELEVATION
SCALE: 1" = 1'-0"

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION — AS NOTED

PLANS PREPARED FOR:
PHILLIPS BUILDERS
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PLANS PREPARED BY:
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DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

KYLE B. SMITH
REGISTERED
TENNESSEE
LANDSCAPE ARCHITECT
4/29/26

REVISIONS

NO.	DATE	DESCRIPTION

DATE:	03/30/26
DMG Project No:	25184

ENTRY LAYOUT AND DETAILS

L1.4

GENERAL NOTES

1. ALL DISTANCES WERE MEASURED WITH E.D.M. EQUIPMENT AND HAVE BEEN ADJUSTED FOR TEMPERATURE AND PRESSURE.
2. THE PROPERTY (BOUNDARY) LINE SURVEY EXCEEDS THE MINIMUM REQUIREMENTS OF AN URBAN LAND SURVEY CATEGORY 1 AS PER STANDARDS OF PRACTICE ADOPTED BY THE STATE BOARD OF EXAMINERS FOR LAND SURVEYORS FOR THE STATE OF TENNESSEE THE PRECISION OF THE UNADJUSTED SURVEY IS GREATER THAN 1 FOOT IN 10,000 FEET.
3. UTILITIES HAVE BEEN PLOTTED FROM SURFACE FEATURES FOUND AT THE TIME OF SURVEY AND AVAILABLE MAPS AND RECORDS. THERE MAY BE OTHER UTILITIES, THE EXISTENCE OF WHICH ARE NOT KNOWN TO THE UNDERSIGNED. SIZE AND LOCATION OF ALL UNDERGROUND UTILITIES MUST BE VERIFIED BY THE APPROPRIATE UTILITY COMPANY PRIOR TO ANY CONSTRUCTION.
4. THE PROPERTY SHOWN HEREON IS LOCATED WITHIN THE CITY OF GOODLETTESVILLE. ALL MATTERS PERTAINING TO CONSTRUCTION, USE, LOCATION OF IMPROVEMENTS, SIGNAGE, PARKING, NOISE, VIBRATION, EMISSIONS, FIRE HAZARDS, RADIATION, ILLUMINATION, SETBACK PROVISIONS, ETC., ARE SUBJECT TO THE CITY OF GOODLETTESVILLE ZONING REGULATIONS AS INTERPRETED AND REGULATED BY THE DEPARTMENT OF PLANNING AND CODES.
5. THE TOTAL AREA OF THE PARCELS AS SHOWN HEREON IS 44.31 ACRES OR 1,930,190.08 SQUARE FEET.
6. THIS PROPERTY CURRENTLY IDENTIFIED AS TAX MAP NO. 140 PARCELS 124.00 & 124.01.
7. OWNER REFERENCE – PARCEL 124.00: WILLIAM B. RALPH, JR., DEED BOOK 1422, PAGE 202, R.O.S.C., TN.

   OWNER REFERENCE – PARCEL 124.00: WILLIAM B. RALPH, JR. TRUSTEE, DEED BOOK 1422, PAGE 191, R.O.S.C., TN.
8. THIS DRAWING WAS PREPARED IN ACCORDANCE WITH OUR FIELD SURVEY NOTES. IT SHOWS IMPROVEMENTS AS THEY EXIST TO THE BEST OF OUR KNOWLEDGE, BUT IS NOT GUARANTEED TO BE CORRECT IN EACH AND EVERY DETAIL.
9. THIS SURVEY WAS PREPARED FROM CURRENT DEEDS OF RECORD AND DOES NOT REPRESENT A TITLE SEARCH OR A GUARANTEE OF TITLE, AND IS SUBJECT TO ANY STATE OF FACTS A CURRENT AND ACCURATE SEARCH MAY REVEAL.
10. THIS SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF THE PERSON, PERSONS, OR ENTITY, IF ANY, NAMED ON THE CERTIFICATION HEREON. SAID CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED PERSON WITHOUT AN EXPRESS RECERTIFICATION BY THE SURVEYOR NAMING SAID PERSON.
11. THE CERTIFICATION AS PROVIDED ON THIS SURVEY, IS PURELY A STATEMENT OF PROFESSIONAL OPINION BASED ON KNOWLEDGE, INFORMATION AND BELIEF, BASED ON EXISTING FIELD EVIDENCE AND DOCUMENTARY EVIDENCE PROVIDED BY OTHERS.
12. THE CERTIFICATION IS NOT AN EXPRESSED OR IMPLIED WARRANTY OR GUARANTEE.
13. THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON F.E.M.A. FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 417165C381H, DATED FEBRUARY 26, 2021.

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS IS A CATEGORY 1 SURVEY AND THE SURVEY WAS PERFORMED IN ACCORDANCE WITH THE CURRENT STANDARDS OF PRACTICE AND UNDER THE AUTHORITY OF TCA 62-18-126 FOR SURVEYORS IN TENNESSEE AND THE UNADJUSTED CLOSURE IS GREATER THAN 1 : 10,000.

1-24-26
Date

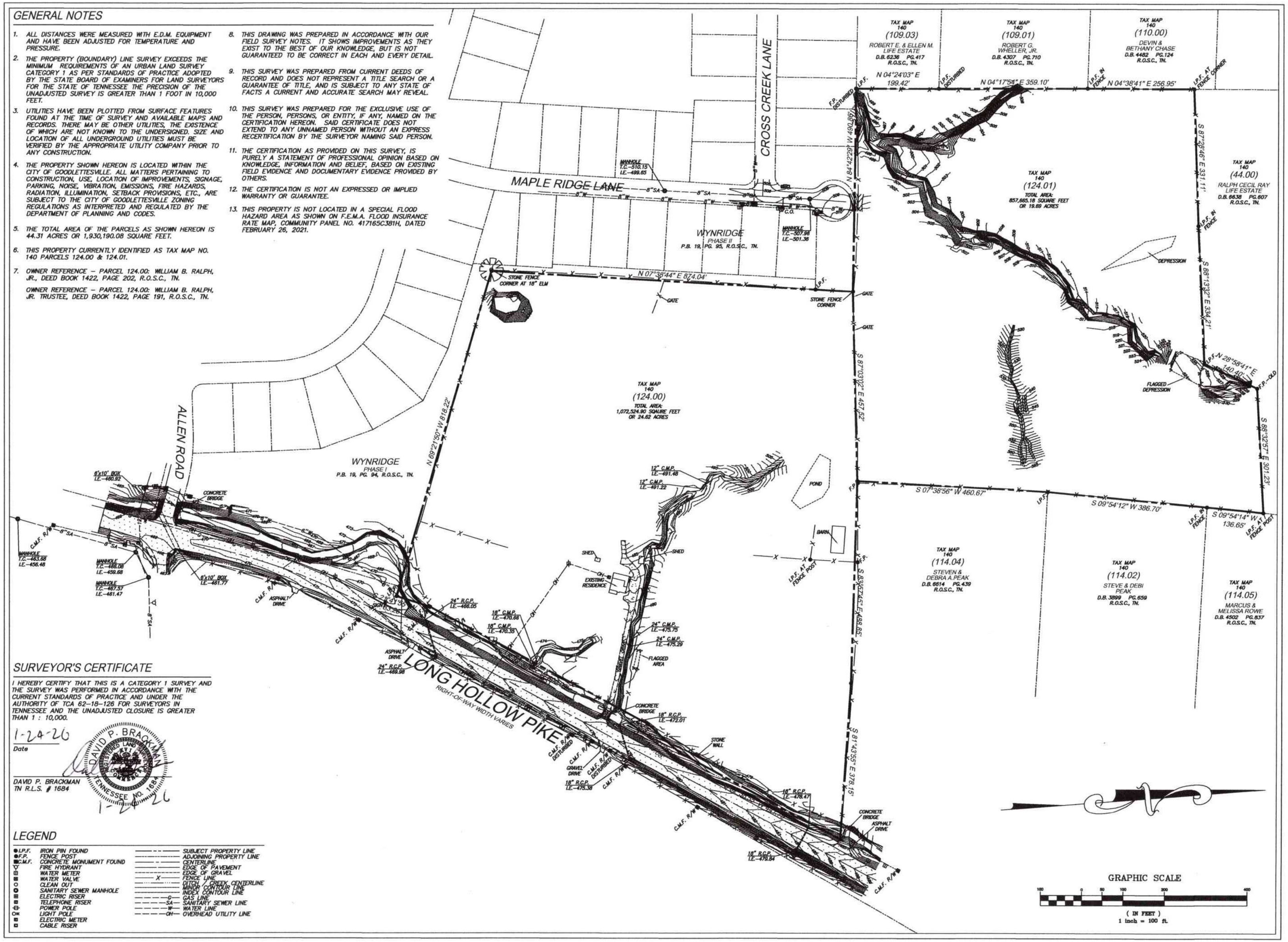
DAVID P. BRACKMAN
TN R.L.S. # 1684

DAVID P. BRACKMAN — REGISTERED LAND SURVEYOR — TENNESSEE NO. 1684 — 1-24-26

LEGEND

- ● I.P.F. IRON PIN FOUND
- ● F.P. FENCE POST
- ■ C.M.F. CONCRETE MONUMENT FOUND
- FIRE HYDRANT
- WATER METER
- WATER VALVE
- CLEAN OUT
- SANITARY SEWER MANHOLE
- ELECTRIC RISER
- TELEPHONE RISER
- POWER POLE
- LIGHT POLE
- ELECTRIC METER
- CABLE RISER

- SUBJECT PROPERTY LINE
- ADJOINING PROPERTY LINE
- CENTERLINE
- EDGE OF PAVEMENT
- EDGE OF GRAVEL
- FENCE LINE
- DITCH / CREEK CENTERLINE
- MINOR CONTOUR LINE
- INDEX CONTOUR LINE
- GAS LINE
- SA SANITARY SEWER LINE
- W WATER LINE
- OH OVERHEAD UTILITY LINE



GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

BRACKMAN
LAND SURVEYING
1707 Gale Ln.
Nashville, TN 37212
PH (615) 476-8107
FAX (615) 298-2605
Email: david@brackmansurvey.com

BOUNDARY & PARTIAL TOPOGRAPHIC SURVEY

RALPH PROPERTY

4408 LONG HOLLOW PIKE

TAX MAP 140 PARCELS 124.00 & 124.01

GOODLETTESVILLE, SUMNER COUNTY, TENNESSEE

REVISION

DATE: JAN. 24, 2026

FILE NO: 25182

SHEET NO. 1 OF 1

STORM WATER DRAINAGE CALCULATIONS

Prepared for

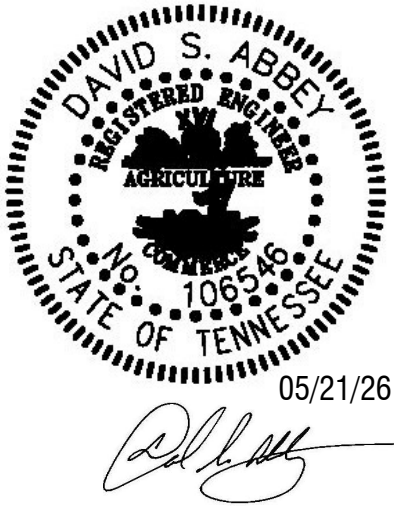
Ironwood Residential Development

4408 Long Hollow Pike
Goodlettsville, Sumner County, Tennessee

April 06, 2026

Prepared By

David S. Abbey, PE
4209 Gallatin Pike
Nashville, Tennessee 37216



Ironwood Residential Development
4408 Long Hollow Pike
Goodlettsville, Sumner County, Tennessee
Stormwater Hydraulic Calculations

Prepared by
DMG; Project No. 25184

Overview

Proposed on the subject property is a subdivision development, creating multiple new roadways, utility appurtenances, and stormwater conveyance improvement for the development of 66 single family residential lots. The project site is located north of Wynridge subdivision, past the Long Hollow Pike / Madison Creek Rd intersection in Goodlettsville, Tn. The existing site is zoned as Low Density Residential Planned Unit Development (LDRPUD) and currently is existing farmland. The proposed parcel is bordered to the north by residential property, to the east by Long Hollow Pike, to the south by Wynridge, and to the west by more single-family residential. Access for the site will be provided by a curb cut along Long Hollow Pike.

The existing site is being utilized as farmland and has a single farmhouse with some disconnected barns and storage sheds. The existing site has two drainageways, an unnamed perennial stream (Existing Area 1) to the rear of the site and Madison Creek (Existing Area 2) which runs along Long Hollow Pike. The site has an existing ridgeline through the middle of the site, separating the two areas to drain east and west to the respective conveyances. Both waterways converge downstream into a lower area of Madison Creek (TN05130202220_0400). Madison Creek is not supporting and is impaired by sedimentation and habitat alteration.

The proposed site will be treated by a network of dry detention basins in series with water quality units downstream of the pond. Ponds 1 and 2 will drain to Madison Creek (Proposed Area 2), while Ponds 3, 4, and 5 will discharge to the perennial stream in the rear of the site (Proposed Area 1). The site has been designed to follow existing drainage areas to the best extent possible. See Attachment 1 in the appendix for existing and proposed drainage maps.

The proposed project lies within 'Flood Zone X', per graphical analysis of the FEMA FIRM map, which is outside of the 100-yr regulatory floodplain. (See Attachment 5 in the appendix).

Storm Water Design

Due to the natural drainage pattern of the project site, the outfall criteria falls under the City of Goodlettsville jurisdiction. The proposed development will add impervious area, which makes the post-development CN value greater than the pre-development CN value for the site. Therefore, the proposed project will be required to meet both water quality and quantity requirements, as set forth in the current regulations.

Existing Conditions

Under existing conditions, the 44.31-acre site consists of two main drainage areas. USGS soils maps indicate primarily C-type soils, with A and B-type soils near Madison Creek. Both drainage areas were evaluated using SCS methodology for CN and Tc values, which are shown on the drainage maps and in the hydrographs report provided in Attachment 2. CN values were approx. 79 for the ± 20.44-ac Area 1 and 72 for the ± 23.87-ac Area 2. Tc Values were calculated at 13.2-mins and 10.1-mins, respectively. Using the AutoCAD Hydrographs extension, the existing peak flows for the two areas are as follows:

Return Period of Storm	Existing Outfall 1 Pre-Development Flow (cfs)	Existing Outfall 2 Pre-Development Flow (cfs)
1 year	31.82	23.45
2 year	44.07	35.56
5 year	61.77	53.39
10 year	76.87	69.04
25 year	98.39	92.34
50 year	116.09	111.95
100 year	134.43	132.55

Proposed Conditions

Under proposed conditions, the five (5) proposed ponds will treat runoff conveyed as either sheet flow, or by a system of pipe networks. Areas not captured by the ponds are intended to bypass. These areas have been quantified and are included with the overall areas to the two outfalls.

Each Pond was set up in a similar manner. The 1-year volume was run through a 4” orifice set at the bottom of the pond. The water surface elevation for that routing was used to set a 6” weir to control higher event storms. The top of the outlet structure was set 2 ft below the top of pond, and a 10-ft emergency overflow weir was set 1 foot below the top of berm. Pond areas and heights were then adjusted to meet attenuation of the 100-yr event storms, while still maintaining 12” of freeboard. Actual values for each outlet control structure are shown on the ‘pond report’ sheets in the Hydrographs report. Once released through the control structure, the discharge will enter a 50% water quality unit. The detention pond and water quality unit will work in series of each other to provide 80% TSS removal, per the amended stormwater management ordinance 23-1071 of the City of Goodlettsville section 18-305 part 4. The proposed peak flows are as follows:

Return Period of Storm	Proposed Outfall 1 Post-Development Flow (cfs)	Proposed Outfall 2 Post-Development Flow (cfs)
1 year	30.52	11.89
2 year	42.05	17.89
5 year	61.22	28.47
10 year	76.52	43.59
25 year	94.25	74.85
50 year	111.39	101.27
100 year	128.58	131.31

Water Quality

The upsized 50% TSS water quality unit, in conjunction with the dry pond providing 60% TSS removal, the treatment train will provide 80% TSS removal for the site. TR = A + (1-A) x B = [0.5 + (1-0.5) x 0.6] x 100 = 80% Detention-only facilities must be used in a treatment train approach with other structural controls that provide treatment of the WQv. This type of facility should provide 60% TSS removal under typical urban post-development runoff when sized, designed, constructed and maintained in accordance with the specifications provided in the design manual.

Pipe Network

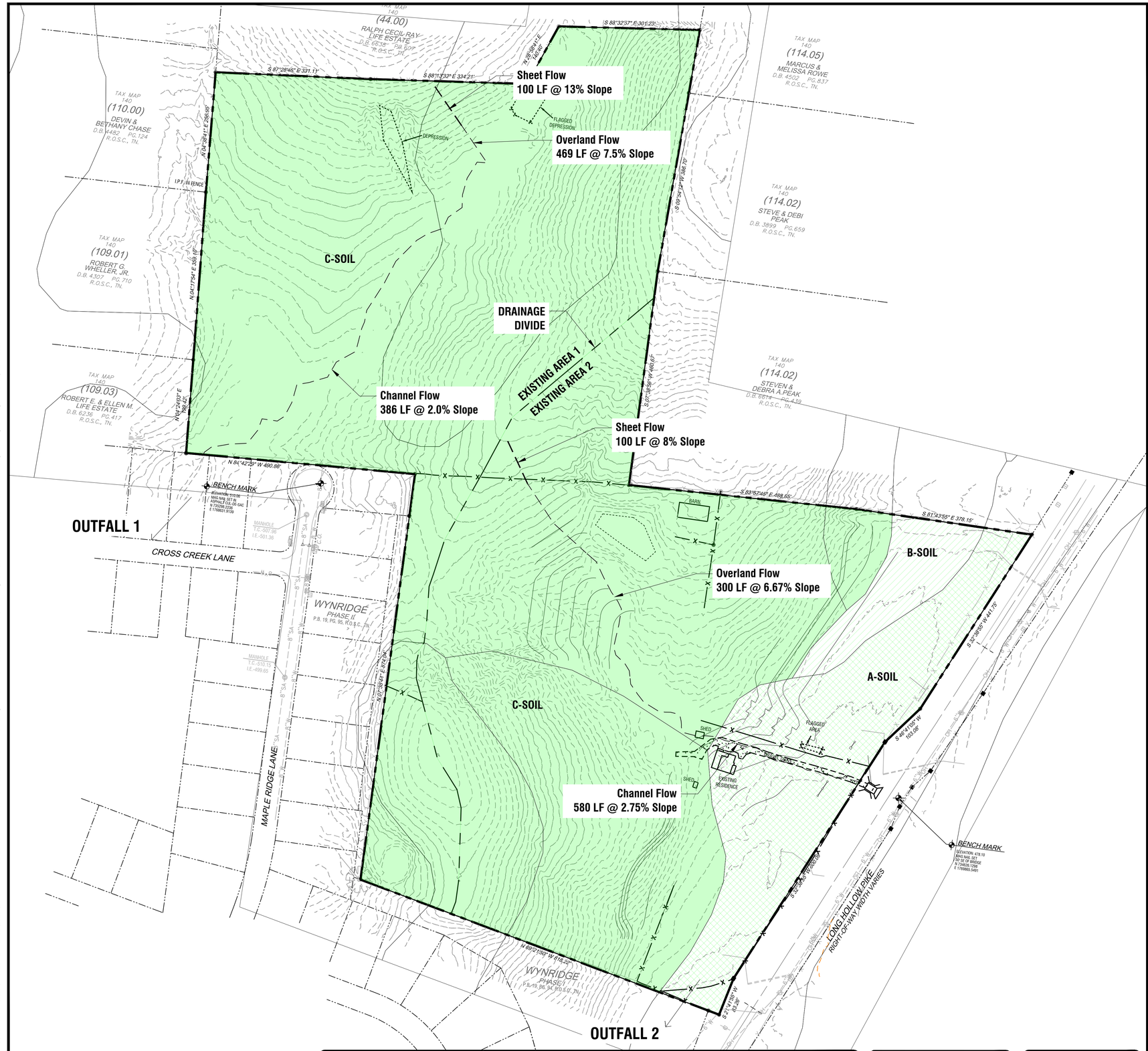
Using AutoCAD's Storm Sewers extension, the 7 traditional pipe networks on site were sized for the 10-yr event. The results of this analysis, along with profiles and hydraulic grade lines, are provided in Attachment 3.

Attachments

Attachment 1	Drainage Plan & Map
Attachment 2	Hydrographs Model
Attachment 3	Storm Sewers Model
Attachment 4	Hydrologic Soil Information
Attachment 5	FEMA FIRM
Attachment 6	Atlas 14 Precipitation/Intensity Data
Attachment 7	Vendor Supplied Calculations
Attachment 8	NJCAT Testing for Water Quality Unit

Attachment 1

Proposed Drainage Plan & Maps



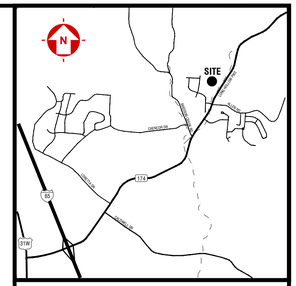
811 Know what's below. Call before you dig.

SITE BENCHMARKS:

BM 1
MAG NAIL SET 50' SE OF BRIDGE
ELEVATION: 478.10

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION: 466.98

BM3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06



VICINITY MAP

FLOOD NOTE:
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DISTURBED AREA:
TOTAL DISTURBED AREA = 34.0 ACRES±

SURVEY NOTE:
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EXISTING AREA 1				
Land Cover	HSG (Soil Type)	Area (ac)	CN	
Impervious		0.000	98	0.0
Pervious	A	0.000	49	0.0
Pervious	B	0.000	69	0.0
Pervious	C	20.442	79	79.0
		20.442		79.0

EXISTING AREA 2				
Land Cover	HSG (Soil Type)	Area (ac)	CN	
Impervious		0.000	98	0.0
Pervious	A	4.978	49	10.2
Pervious	B	1.088	69	3.1
Pervious	C	17.804	79	58.9
		23.869		72.3

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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DAVID S. OBEY — REGISTERED ENGINEER — AGRICULTURE — COMMERCIAL — STATE OF TENNESSEE — 26

REVISIONS

NO.	DESCRIPTION	DATE

DATE:	05/04/26
DMG Project No:	25184

EXISTING DRAINAGE MAP

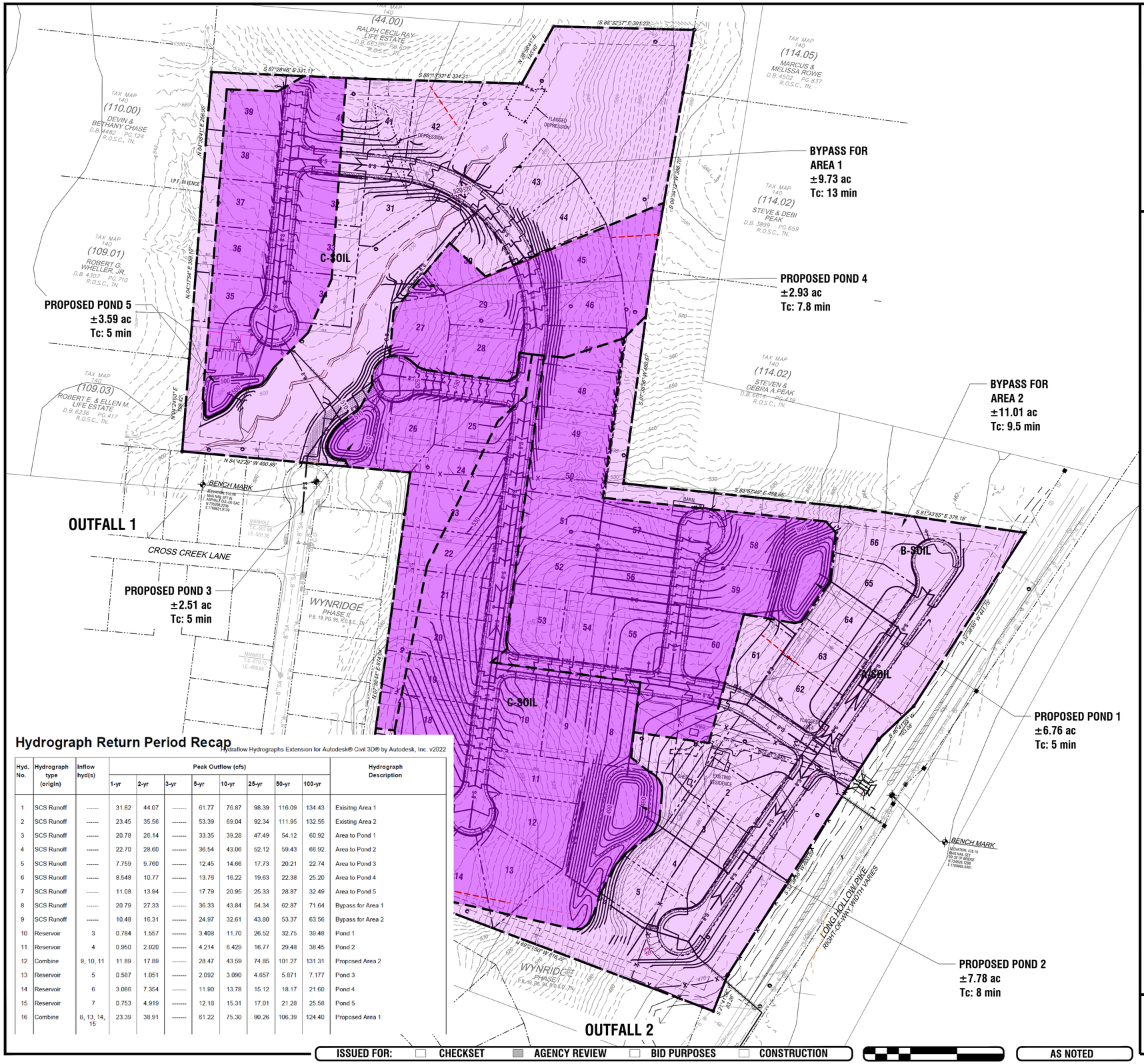
EXHIBIT

ISSUED FOR: ☐ CHECKSET ☒ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

\\192.168.1.7\data\PROJECT DATABASE\2025\25184 - Philips Builders - Residential Development - 4408 Long Hollow Pike - Goodlettsville TN\Plans\Engineer\25184 - Ironwood - Stormwater.dwg-Existing Drainage Map May 21, 2026 - 1:04pm MarkAno

\\192.168.1.7\data\PROJECT DATABASE\2025\25184 – Philips Builders – Residential Development – 4408 Long Hollow Pike – Goodlettsville TN\Plans\Engineer\25184 – Ironwood – Stormwater.dwg–Proposed Drainage Map May 21, 2026 – 1:07pm MarkAno



Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs) 1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	Hydrograph Description
1	SCS Runoff	-------	31.82	44.07	-------	61.77	76.87	98.39	116.09	134.43	Exisitng Area 1
2	SCS Runoff	-------	23.45	35.56	-------	53.39	69.04	92.34	111.95	132.55	Existing Area 2
3	SCS Runoff	-------	20.78	26.14	-------	33.35	39.28	47.49	54.12	60.92	Area to Pond 1
4	SCS Runoff	-------	22.70	28.60	-------	36.54	43.06	52.12	59.43	66.92	Area to Pond 2
5	SCS Runoff	-------	7.759	9.760	-------	12.45	14.66	17.73	20.21	22.74	Area to Pond 3
6	SCS Runoff	-------	8.548	10.77	-------	13.76	16.22	19.63	22.38	25.20	Area to Pond 4
7	SCS Runoff	-------	11.08	13.94	-------	17.79	20.95	25.33	28.87	32.49	Area to Pond 5
8	SCS Runoff	-------	20.79	27.33	-------	36.33	43.84	54.34	62.87	71.64	Bypass for Area 1
9	SCS Runoff	-------	10.48	16.31	-------	24.97	32.61	43.80	53.37	63.56	Bypass for Area 2
10	Reservoir	3	0.784	1.557	-------	3.408	11.70	26.52	32.75	39.48	Pond 1
11	Reservoir	4	0.950	2.020	-------	4.214	6.429	16.77	29.48	38.45	Pond 2
12	Combine	9, 10, 11	11.89	17.89	-------	28.47	43.59	74.85	101.27	131.31	Proposed Area 2
13	Reservoir	5	0.567	1.051	-------	2.092	3.090	4.657	5.871	7.177	Pond 3
14	Reservoir	6	3.086	7.354	-------	11.90	13.78	15.12	18.17	21.60	Pond 4
15	Reservoir	7	0.753	4.919	-------	12.18	15.31	17.01	21.28	25.58	Pond 5
16	Combine	8, 13, 14, 15	23.39	38.91	-------	61.22	75.30	90.26	106.39	124.40	Proposed Area 1

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

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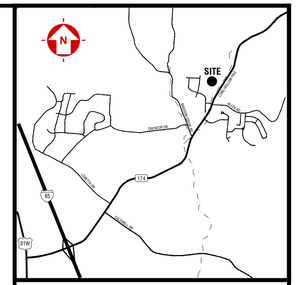

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POND 1				
Land Cover	HSG (Soil Type)	Area (ac)	CN	
Impervious		4.054	98	58.8
Pervious	A	0.000	49	0.0
Pervious	B	0.000	69	0.0
Pervious	C	2.703	79	31.6
Pervious	D	0.000	84	0.0
		6.757		90.4

POND 2				
Land Cover	HSG (Soil Type)	Area (ac)	CN	
Impervious		4.666	98	58.8
Pervious	A	0.000	49	0.0
Pervious	B	0.000	69	0.0
Pervious	C	3.111	79	31.6
Pervious	D	0.000	84	0.0
		7.777		90.4

POND 3				
Land Cover	HSG (Soil Type)	Area (ac)	CN	
Impervious		1.508	98	58.8
Pervious	A	0.000	49	0.0
Pervious	B	0.000	69	0.0
Pervious	C	1.005	79	31.6
Pervious	D	0.000	84	0.0
		2.513		90.4

POND 4				
Land Cover	HSG (Soil Type)	Area (ac)	CN	
Impervious		1.758	98	58.8
Pervious	A	0.000	49	0.0
Pervious	B	0.000	69	0.0
Pervious	C	1.172	79	31.6
Pervious	D	0.000	84	0.0
		2.930		90.4

POND 5				
Land Cover	HSG (Soil Type)	Area (ac)	CN	
Impervious		2.156	98	58.8
Pervious	A	0.000	49	0.0
Pervious	B	0.000	69	0.0
Pervious	C	1.437	79	31.6
Pervious	D	0.000	84	0.0
		3.593		90.4

BYPASS FOR AREA 1				
Land Cover	HSG (Soil Type)	Area (ac)	CN	
Impervious		2.920	98	29.4
Pervious	A	0.000	49	0.0
Pervious	B	0.000	69	0.0
Pervious	C	6.813	79	55.3
Pervious	D	0.000	84	0.0
		9.733		84.7

BYPASS FOR AREA 2				
Land Cover	HSG (Soil Type)	Area (ac)	CN	
Impervious		2.965	98	26.4
Pervious	A	4.978	49	22.2
Pervious	B	1.088	69	6.8
Pervious	C	1.977	79	14.2
Pervious	D	0.000	84	0.0
		11.007		69.6

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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DAVID S. ARGENTI REGISTERED ENGINEER 102.0 AGRICULTURE COMMERCE STATE OF TENNESSEE 26

REVISIONS

NO.	DESCRIPTION	DATE

DATE: 05/04/26
DMG Project No: 25184

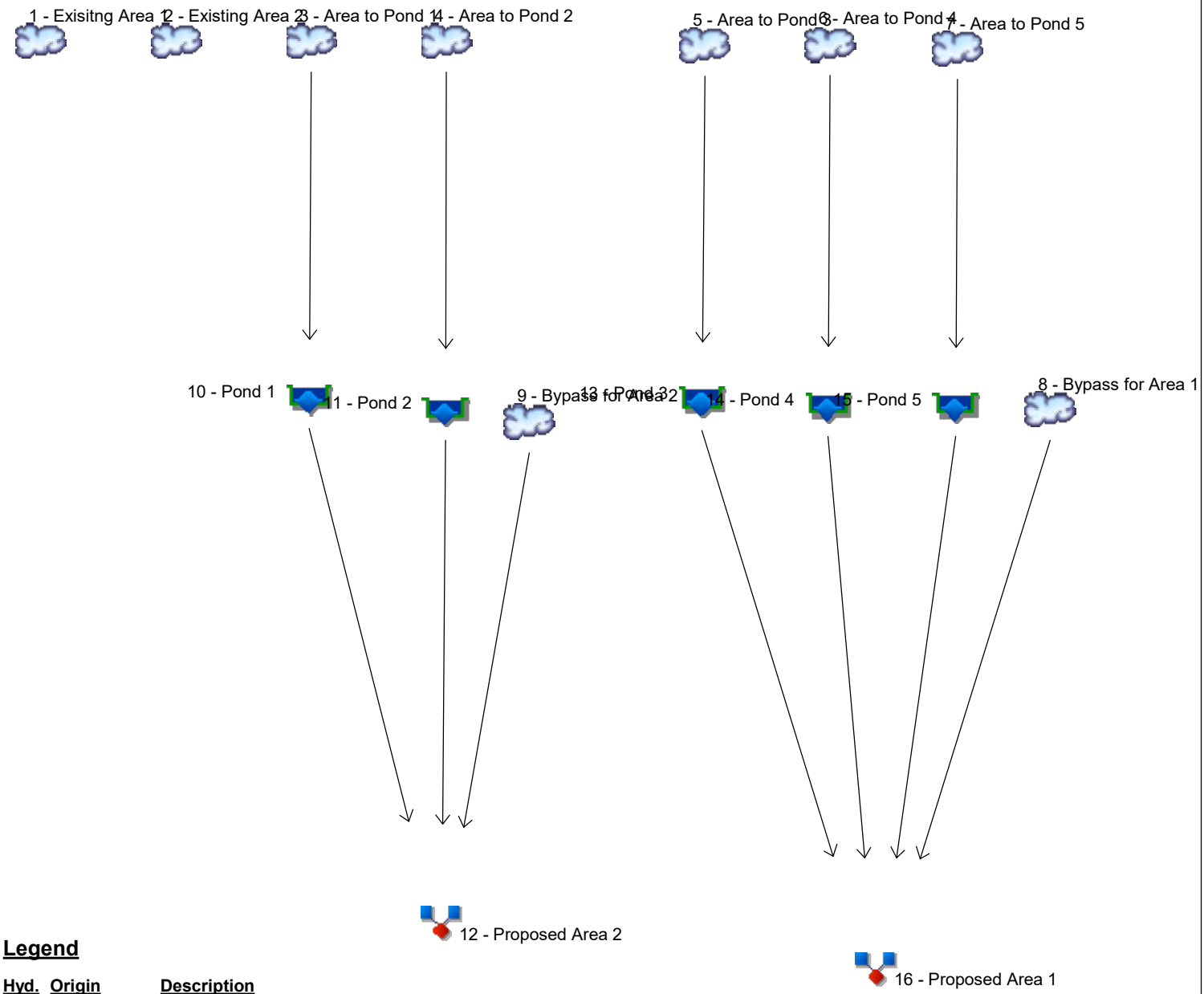
PROPOSED DRAINAGE MAP

EXHIBIT

Attachment 2

Hydrographs Model

Watershed Model Schematic



Legend

Hyd.	Origin	Description
1	SCS Runoff	Exisitng Area 1
2	SCS Runoff	Existing Area 2
3	SCS Runoff	Area to Pond 1
4	SCS Runoff	Area to Pond 2
5	SCS Runoff	Area to Pond 3
6	SCS Runoff	Area to Pond 4
7	SCS Runoff	Area to Pond 5
8	SCS Runoff	Bypass for Area 1
9	SCS Runoff	Bypass for Area 2
10	Reservoir	Pond 1
11	Reservoir	Pond 2
12	Combine	Proposed Area 2
13	Reservoir	Pond 3
14	Reservoir	Pond 4
15	Reservoir	Pond 5
16	Combine	Proposed Area 1

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	------	31.82	44.07	-------	61.77	76.87	98.39	116.09	134.43	Exisitng Area 1
2	SCS Runoff	------	23.45	35.56	-------	53.39	69.04	92.34	111.95	132.55	Existing Area 2
3	SCS Runoff	------	20.78	26.14	-------	33.35	39.28	47.49	54.12	60.92	Area to Pond 1
4	SCS Runoff	------	22.70	28.60	-------	36.54	43.06	52.12	59.43	66.92	Area to Pond 2
5	SCS Runoff	------	7.759	9.760	-------	12.45	14.66	17.73	20.21	22.74	Area to Pond 3
6	SCS Runoff	------	8.548	10.77	-------	13.76	16.22	19.63	22.38	25.20	Area to Pond 4
7	SCS Runoff	------	11.08	13.94	-------	17.79	20.95	25.33	28.87	32.49	Area to Pond 5
8	SCS Runoff	------	20.79	27.33	-------	36.33	43.84	54.34	62.87	71.64	Bypass for Area 1
9	SCS Runoff	------	10.48	16.31	-------	24.97	32.61	43.80	53.37	63.56	Bypass for Area 2
10	Reservoir	3	0.784	1.557	-------	3.408	11.70	26.52	32.75	39.48	Pond 1
11	Reservoir	4	0.950	2.020	-------	4.214	6.429	16.77	29.48	38.45	Pond 2
12	Combine	9, 10, 11	11.89	17.89	-------	28.47	43.59	74.85	101.27	131.31	Proposed Area 2
13	Reservoir	5	0.587	1.051	-------	2.092	3.090	4.657	5.871	7.177	Pond 3
14	Reservoir	6	3.086	7.354	-------	11.90	13.78	15.12	18.17	21.60	Pond 4
15	Reservoir	7	0.753	4.919	-------	12.18	15.31	17.01	21.28	25.58	Pond 5
16	Combine	8, 13, 14, 15	23.39	38.91	-------	61.22	75.30	90.26	106.39	124.40	Proposed Area 1

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

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	31.82	2	722	83,733	------	------	------	Exisitng Area 1
2	SCS Runoff	23.45	2	722	65,397	------	------	------	Existing Area 2
3	SCS Runoff	20.78	2	716	42,844	------	------	------	Area to Pond 1
4	SCS Runoff	22.70	2	718	52,673	------	------	------	Area to Pond 2
5	SCS Runoff	7.759	2	716	15,995	------	------	------	Area to Pond 3
6	SCS Runoff	8.548	2	718	19,837	------	------	------	Area to Pond 4
7	SCS Runoff	11.08	2	716	22,850	------	------	------	Area to Pond 5
8	SCS Runoff	20.79	2	720	53,895	------	------	------	Bypass for Area 1
9	SCS Runoff	10.48	2	720	25,731	------	------	------	Bypass for Area 2
10	Reservoir	0.784	2	810	42,821	3	485.75	24,653	Pond 1
11	Reservoir	0.950	2	814	52,652	4	490.63	30,609	Pond 2
12	Combine	11.89	2	720	121,204	9, 10, 11	------	------	Proposed Area 2
13	Reservoir	0.587	2	750	15,981	5	508.29	7,849	Pond 3
14	Reservoir	3.086	2	728	19,831	6	511.14	7,127	Pond 4
15	Reservoir	0.753	2	754	22,841	7	501.59	11,083	Pond 5
16	Combine	23.39	2	720	112,547	8, 13, 14, 15	------	------	Proposed Area 1

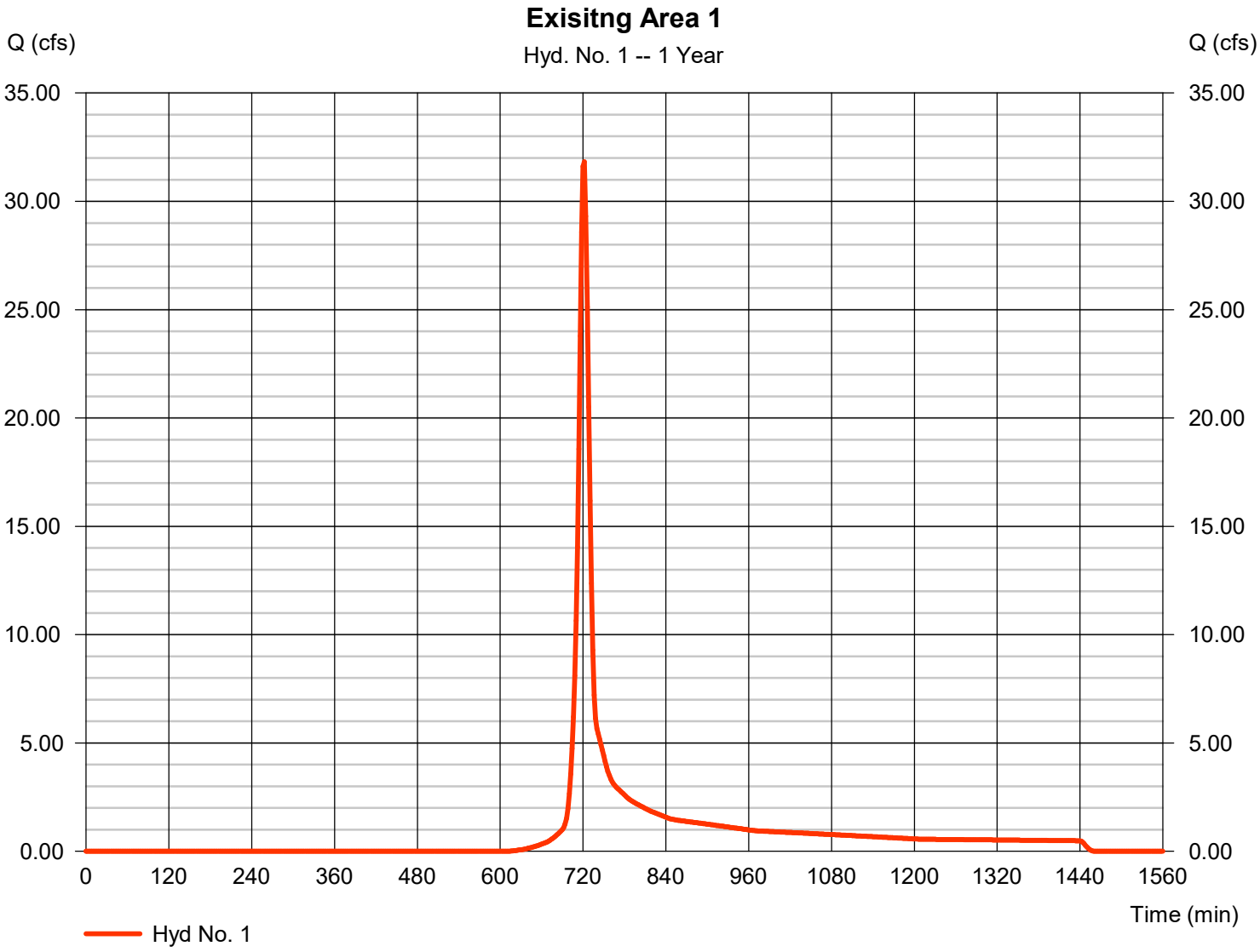
Hydrograph Report

Hyd. No. 1

Exisitng Area 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	31.82 cfs
Storm frequency	=	1 yrs	Time to peak	=	722 min
Time interval	=	2 min	Hyd. volume	=	83,733 cuft
Drainage area	=	20.440 ac	Curve number	=	79*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	13.20 min
Total precip.	=	2.87 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(20.442 x 79)] / 20.440



TR55 Tc Worksheet

Hyd. No. 1

Exisitng Area 1

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)	= 3.42		0.00		0.00		
Land slope (%)	= 14.00		0.00		0.00		
Travel Time (min)	**= 6.34**	**+**	**0.00**	**+**	**0.00**	**=**	**6.34**
Shallow Concentrated Flow							
Flow length (ft)	= 90.00		961.00		0.00		
Watercourse slope (%)	= 11.00		2.30		0.00		
Surface description	= Unpaved		Unpaved		Paved		
Average velocity (ft/s)	=5.35		2.45		0.00		
Travel Time (min)	**= 0.28**	**+**	**6.55**	**+**	**0.00**	**=**	**6.83**
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							**13.20 min**

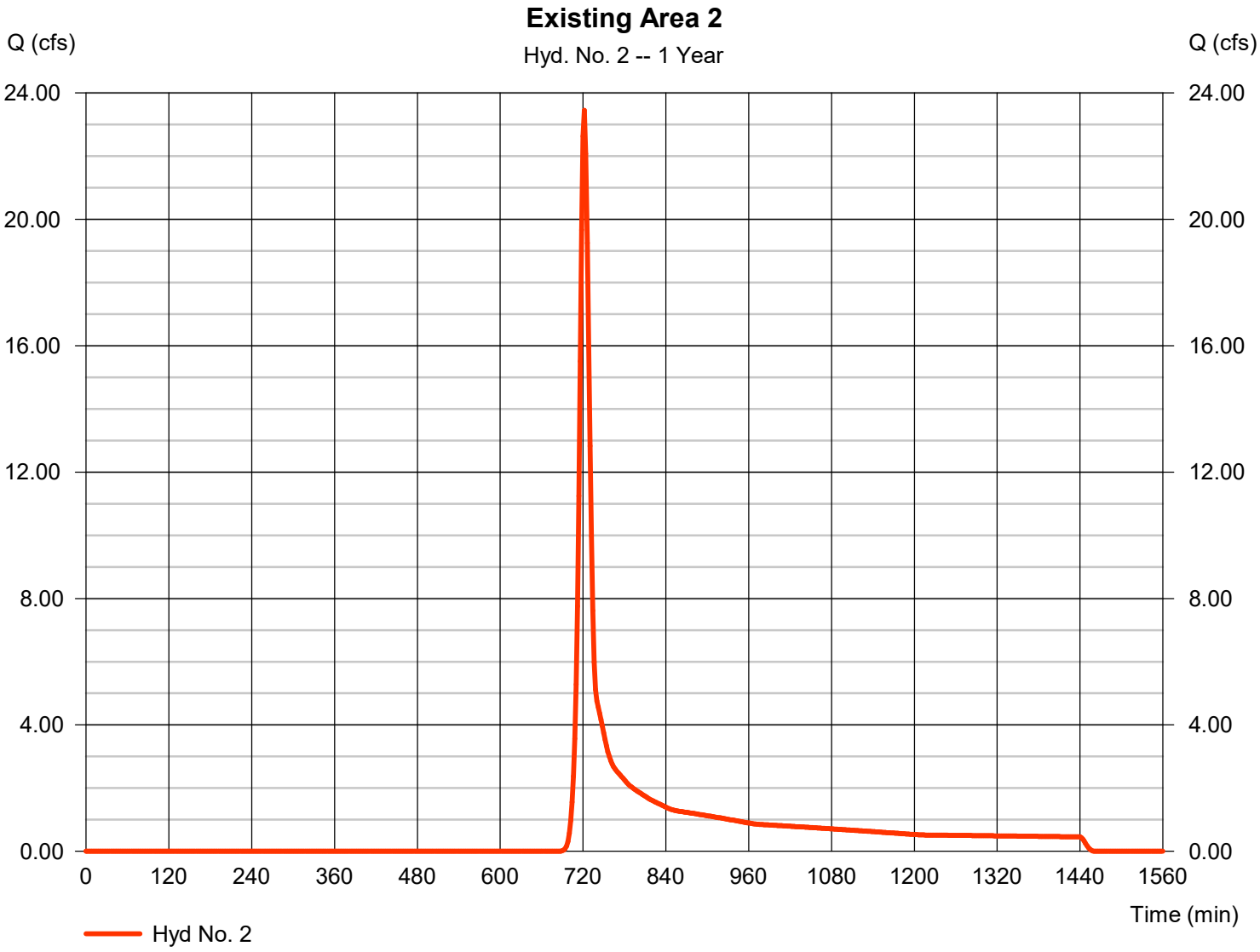
Hydrograph Report

Hyd. No. 2

Existing Area 2

Hydrograph type	= SCS Runoff	Peak discharge	= 23.45 cfs
Storm frequency	= 1 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 65,397 cuft
Drainage area	= 23.870 ac	Curve number	= 72*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 10.10 min
Total precip.	= 2.87 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.978 x 49) + (1.088 x 69) + (17.804 x 79)] / 23.870



TR55 Tc Worksheet

Hyd. No. 2

Existing Area 2

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)	= 3.42		0.00		0.00		
Land slope (%)	= 8.00		0.00		0.00		
Travel Time (min)	**= 7.93**	**+**	**0.00**	**+**	**0.00**	**=**	**7.93**
Shallow Concentrated Flow							
Flow length (ft)	= 300.00		0.00		0.00		
Watercourse slope (%)	= 6.67		0.00		0.00		
Surface description	= Unpaved		Paved		Paved		
Average velocity (ft/s)	=4.17		0.00		0.00		
Travel Time (min)	**= 1.20**	**+**	**0.00**	**+**	**0.00**	**=**	**1.20**
Channel Flow							
X sectional flow area (sqft)	= 20.00		0.00		0.00		
Wetted perimeter (ft)	= 15.00		0.00		0.00		
Channel slope (%)	= 2.75		0.00		0.00		
Manning's n-value	= 0.030		0.015		0.015		
Velocity (ft/s)	=9.99						
			0.00				
					0.00		
Flow length (ft)	({0})580.0		0.0		0.0		
Travel Time (min)	**= 0.97**	**+**	**0.00**	**+**	**0.00**	**=**	**0.97**

Total Travel Time, Tc ..... 10.10 min

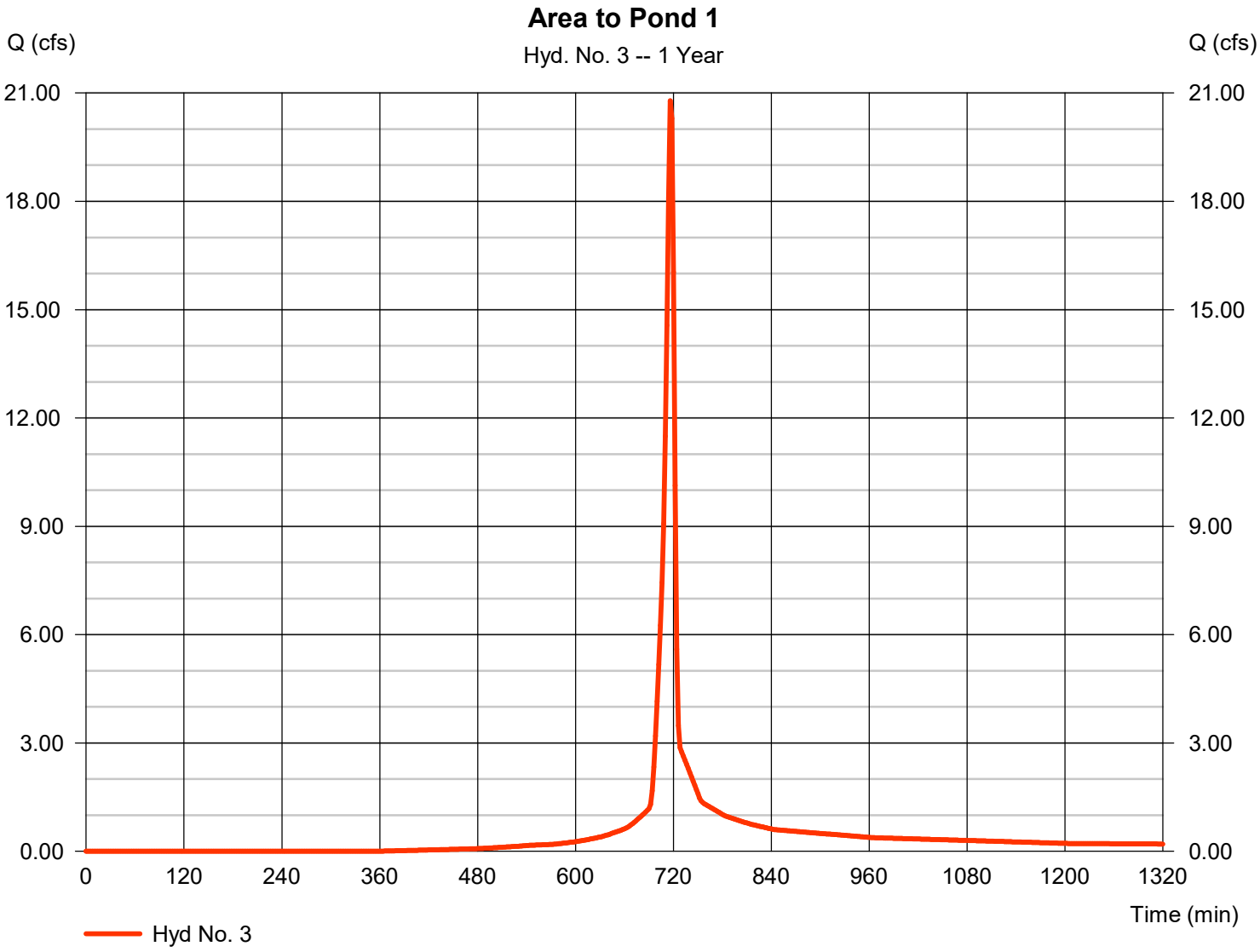
Hydrograph Report

Hyd. No. 3

Area to Pond 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	20.78 cfs
Storm frequency	=	1 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	42,844 cuft
Drainage area	=	6.750 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	2.87 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.050 x 98) + (2.700 x 79)] / 6.750



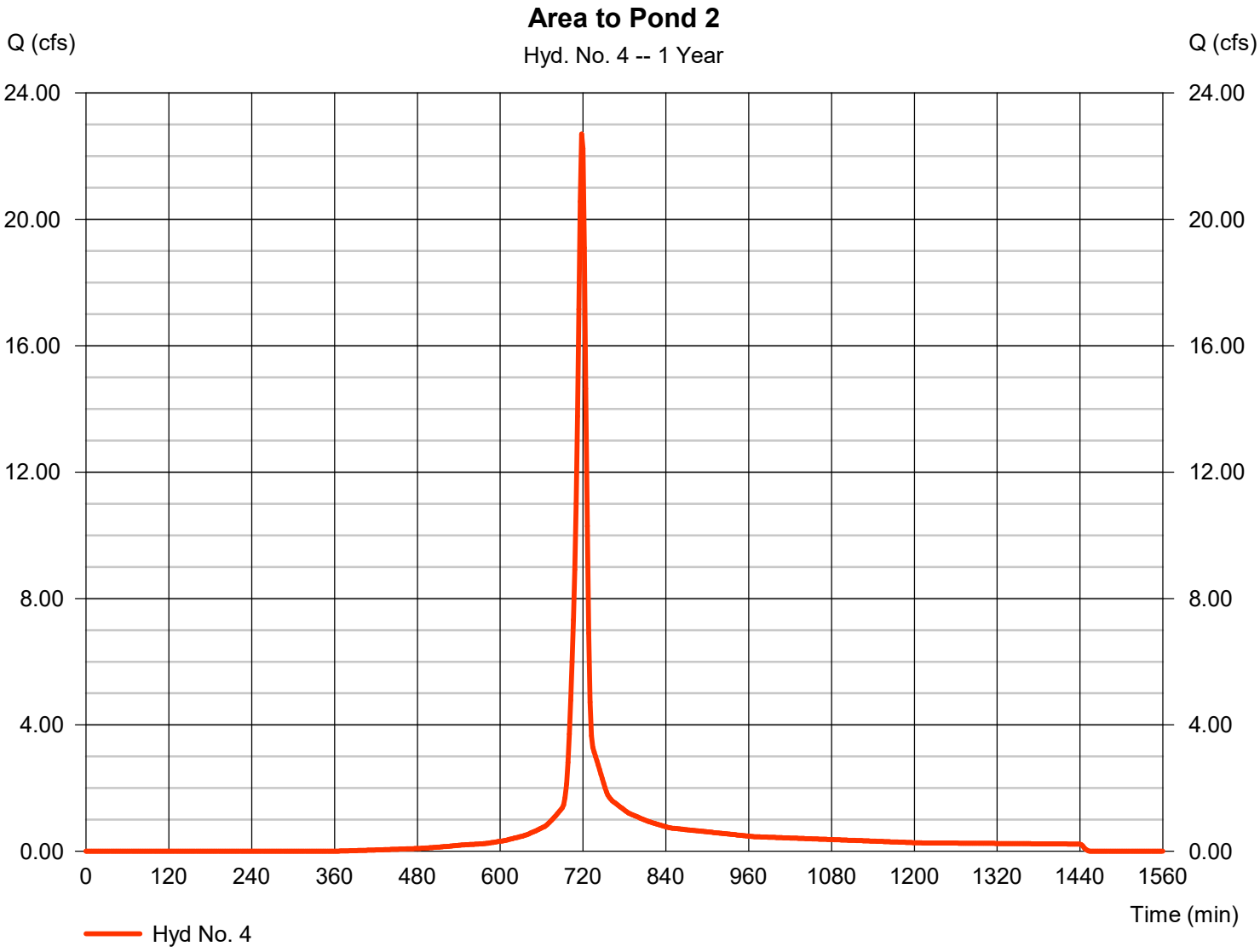
Hydrograph Report

Hyd. No. 4

Area to Pond 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	22.70 cfs
Storm frequency	=	1 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	52,673 cuft
Drainage area	=	7.780 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	8.00 min
Total precip.	=	2.87 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.670 x 98) + (3.110 x 79)] / 7.780



TR55 Tc Worksheet

Hyd. No. 4

Area to Pond 2

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)	= 3.42		0.00		0.00		
Land slope (%)	= 12.00		0.00		0.00		
Travel Time (min)	**= 6.74**	**+**	**0.00**	**+**	**0.00**	**=**	**6.74**
Shallow Concentrated Flow							
Flow length (ft)	= 260.00		127.00		0.00		
Watercourse slope (%)	= 16.25		5.70		0.00		
Surface description	= Unpaved		Unpaved		Paved		
Average velocity (ft/s)	=6.50		3.85		0.00		
Travel Time (min)	**= 0.67**	**+**	**0.55**	**+**	**0.00**	**=**	**1.22**
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 ..... 8.00 min

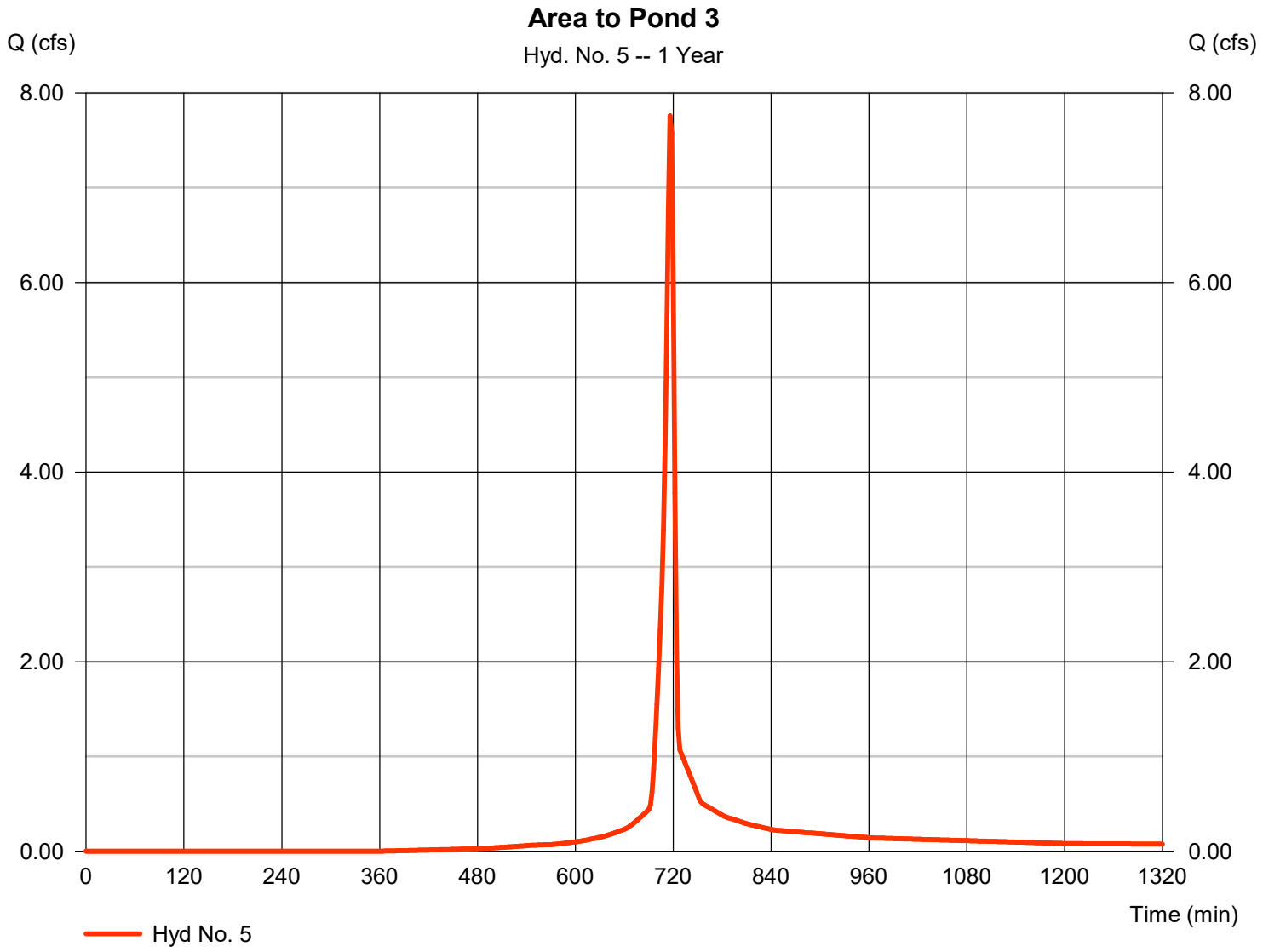
Hydrograph Report

Hyd. No. 5

Area to Pond 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	7.759 cfs
Storm frequency	=	1 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	15,995 cuft
Drainage area	=	2.520 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	2.87 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.510 x 98) + (1.010 x 79)] / 2.520



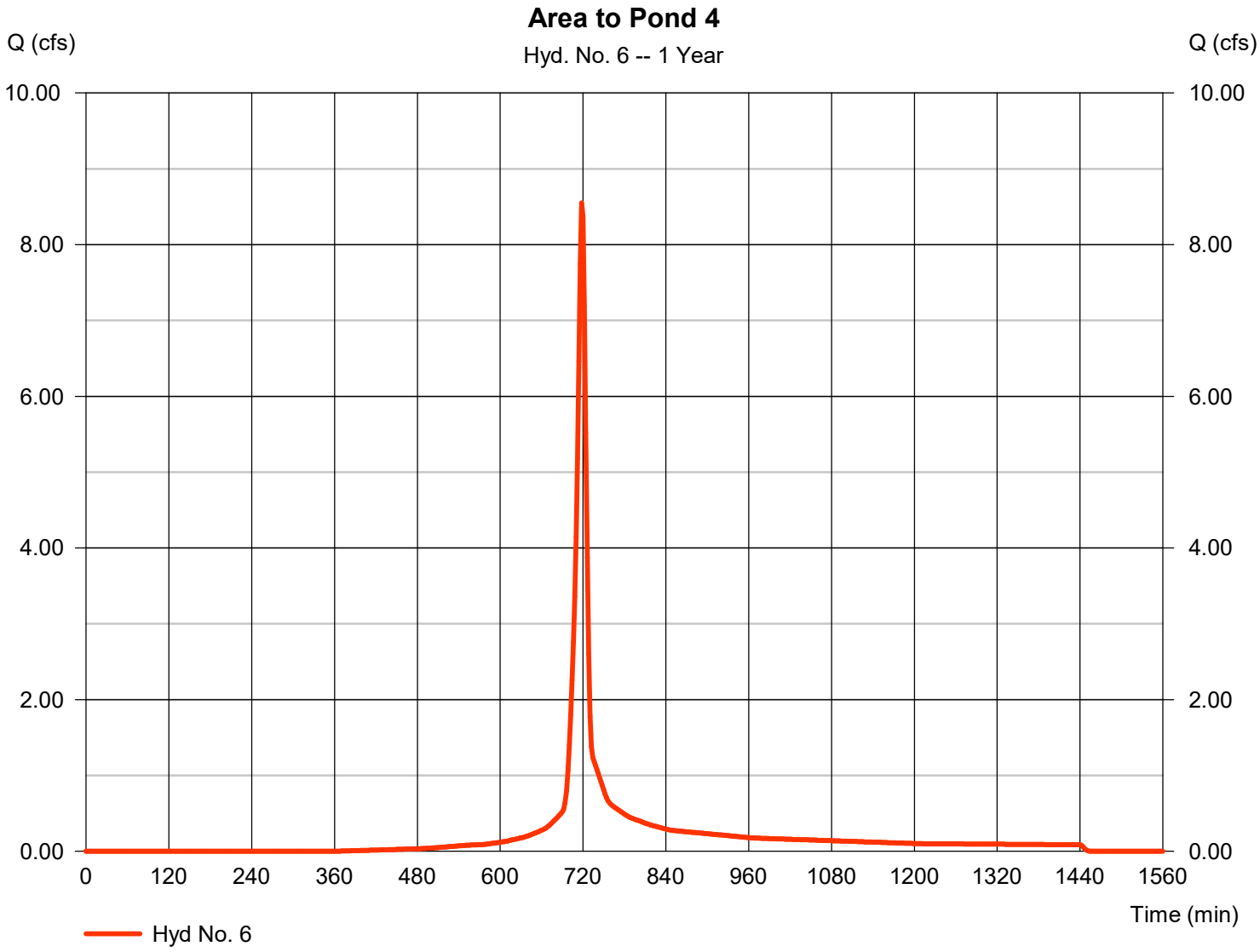
Hydrograph Report

Hyd. No. 6

Area to Pond 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	8.548 cfs
Storm frequency	=	1 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	19,837 cuft
Drainage area	=	2.930 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	7.80 min
Total precip.	=	2.87 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.760 x 98) + (1.172 x 79)] / 2.930



TR55 Tc Worksheet

Hyd. No. 6

Area to Pond 4

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)	= 3.42		0.00		0.00		
Land slope (%)	= 12.00		0.00		0.00		
Travel Time (min)	**= 6.74**	**+**	**0.00**	**+**	**0.00**	**=**	**6.74**
Shallow Concentrated Flow							
Flow length (ft)	= 380.00		0.00		0.00		
Watercourse slope (%)	= 12.60		0.00		0.00		
Surface description	= Unpaved		Paved		Paved		
Average velocity (ft/s)	=5.73		0.00		0.00		
Travel Time (min)	**= 1.11**	**+**	**0.00**	**+**	**0.00**	**=**	**1.11**
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							**7.80 min**

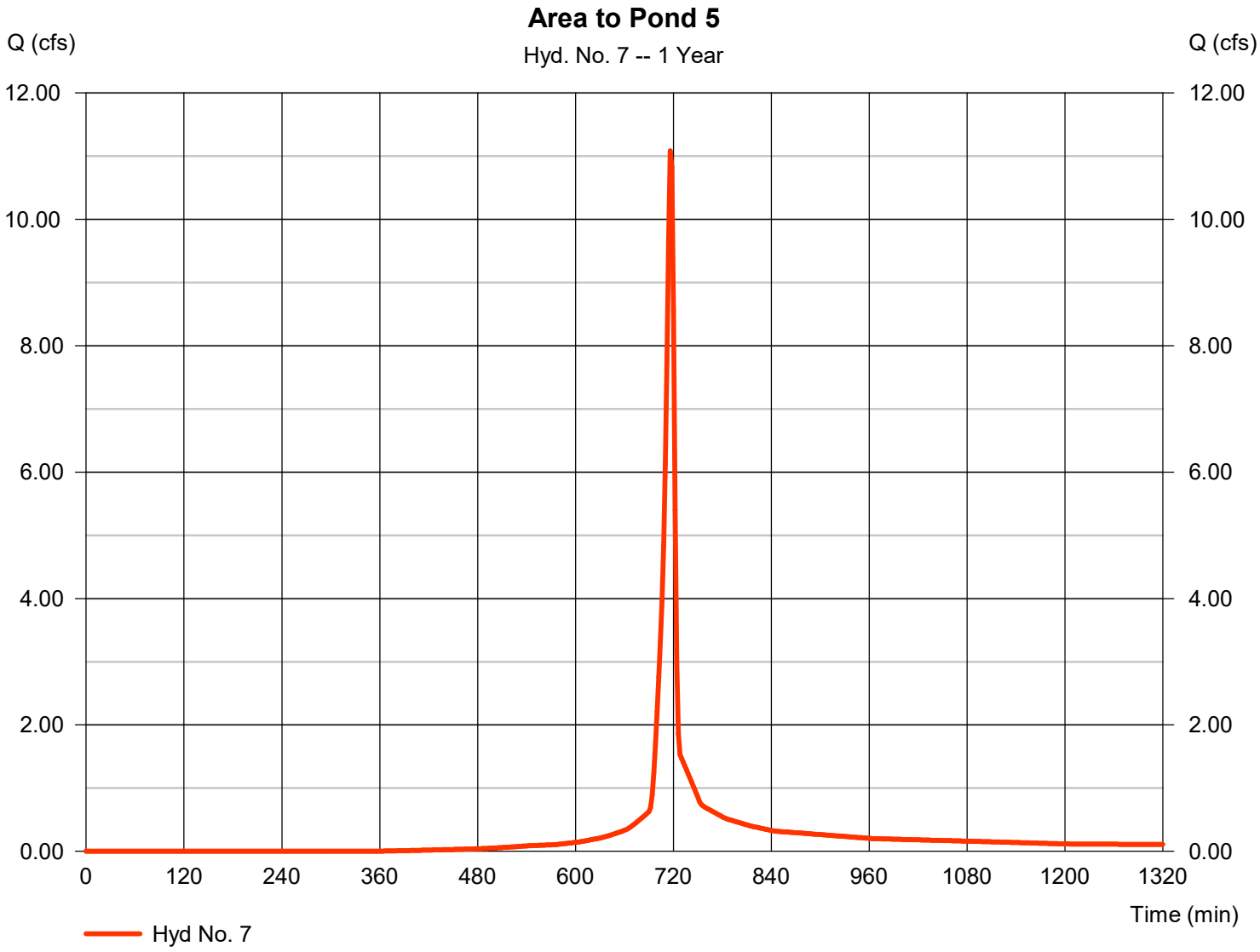
Hydrograph Report

Hyd. No. 7

Area to Pond 5

Hydrograph type	=	SCS Runoff	Peak discharge	=	11.08 cfs
Storm frequency	=	1 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	22,850 cuft
Drainage area	=	3.600 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	2.87 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.160 x 98) + (1.437 x 79)] / 3.600



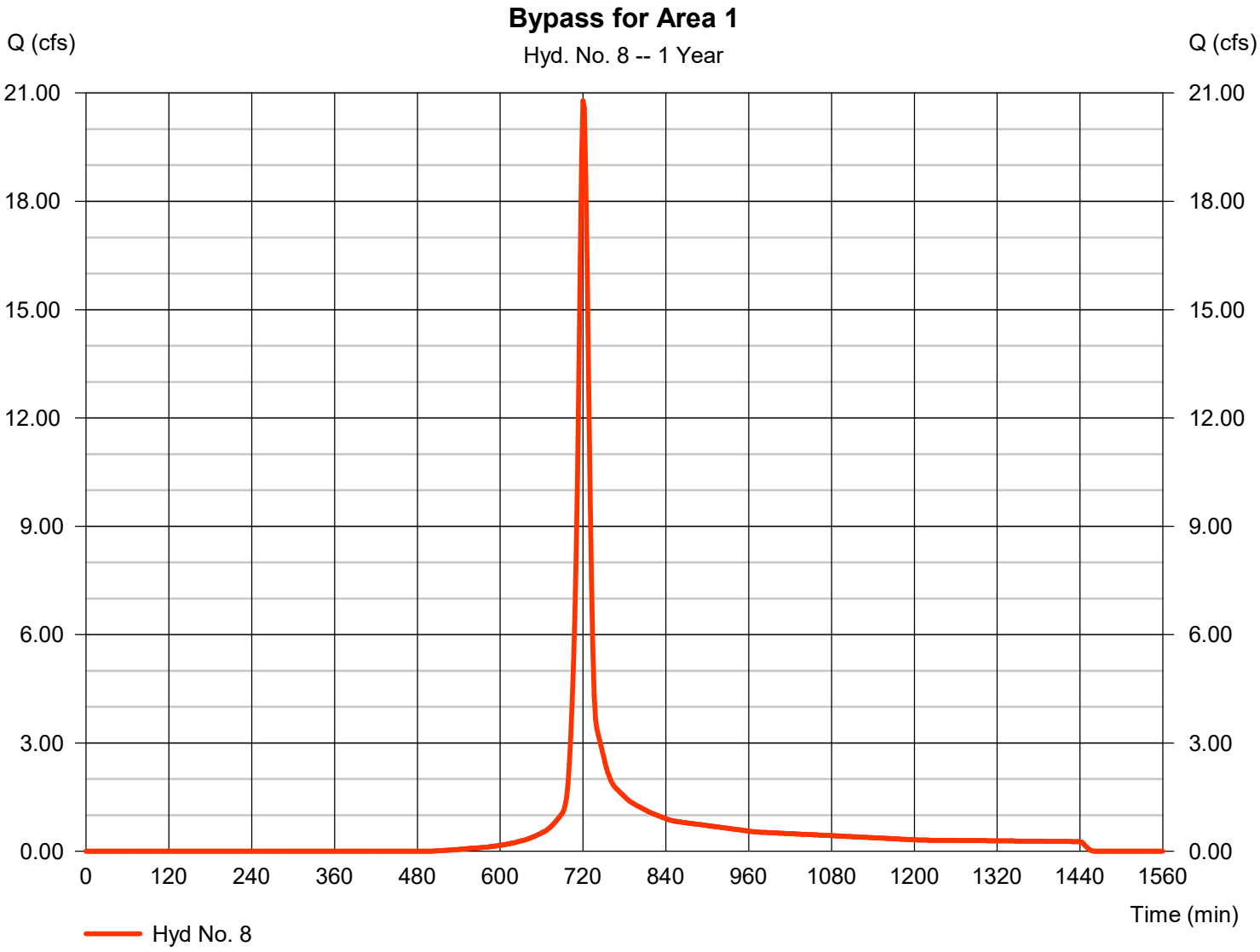
Hydrograph Report

Hyd. No. 8

Bypass for Area 1

Hydrograph type	= SCS Runoff	Peak discharge	= 20.79 cfs
Storm frequency	= 1 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 53,895 cuft
Drainage area	= 9.730 ac	Curve number	= 85*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 13.00 min
Total precip.	= 2.87 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(2.920 x 98) + (6.813 x 79)] / 9.730



TR55 Tc Worksheet

Hyd. No. 8

Bypass for Area 1

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)	= 3.42		0.00		0.00		
Land slope (%)	= 14.00		0.00		0.00		
Travel Time (min)	**= 6.34**	**+**	**0.00**	**+**	**0.00**	**=**	**6.34**
Shallow Concentrated Flow							
Flow length (ft)	= 90.00		944.00		0.00		
Watercourse slope (%)	= 11.11		2.30		0.00		
Surface description	= Unpaved		Unpaved		Paved		
Average velocity (ft/s)	=5.38		2.45		0.00		
Travel Time (min)	**= 0.28**	**+**	**6.43**	**+**	**0.00**	**=**	**6.71**
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 ..... 13.00 min

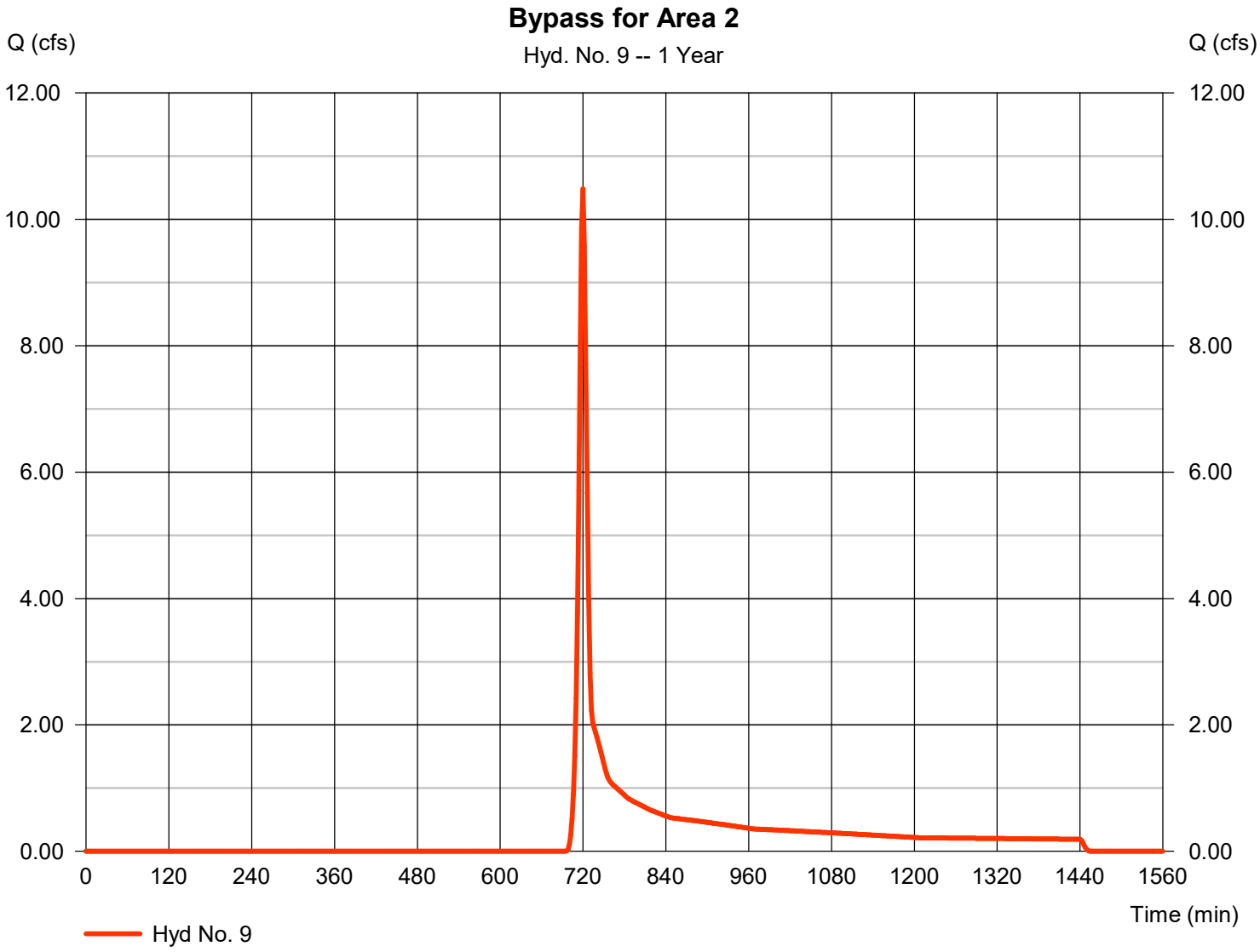
Hydrograph Report

Hyd. No. 9

Bypass for Area 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	10.48 cfs
Storm frequency	=	1 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	25,731 cuft
Drainage area	=	11.020 ac	Curve number	=	70*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	9.50 min
Total precip.	=	2.87 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.970 x 98) + (4.980 x 49) + (1.090 x 69) + (1.980 x 79)] / 11.020



TR55 Tc Worksheet

Hyd. No. 9

Bypass for Area 2

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)	= 3.42		0.00		0.00		
Land slope (%)	= 9.00		0.00		0.00		
Travel Time (min)	**= 7.56**	**+**	**0.00**	**+**	**0.00**	**=**	**7.56**
Shallow Concentrated Flow							
Flow length (ft)	= 240.00		40.00		0.00		
Watercourse slope (%)	= 2.00		2.00		0.00		
Surface description	= Unpaved		Paved		Paved		
Average velocity (ft/s)	=2.28		2.87		0.00		
Travel Time (min)	**= 1.75**	**+**	**0.23**	**+**	**0.00**	**=**	**1.98**
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 ..... 9.50 min

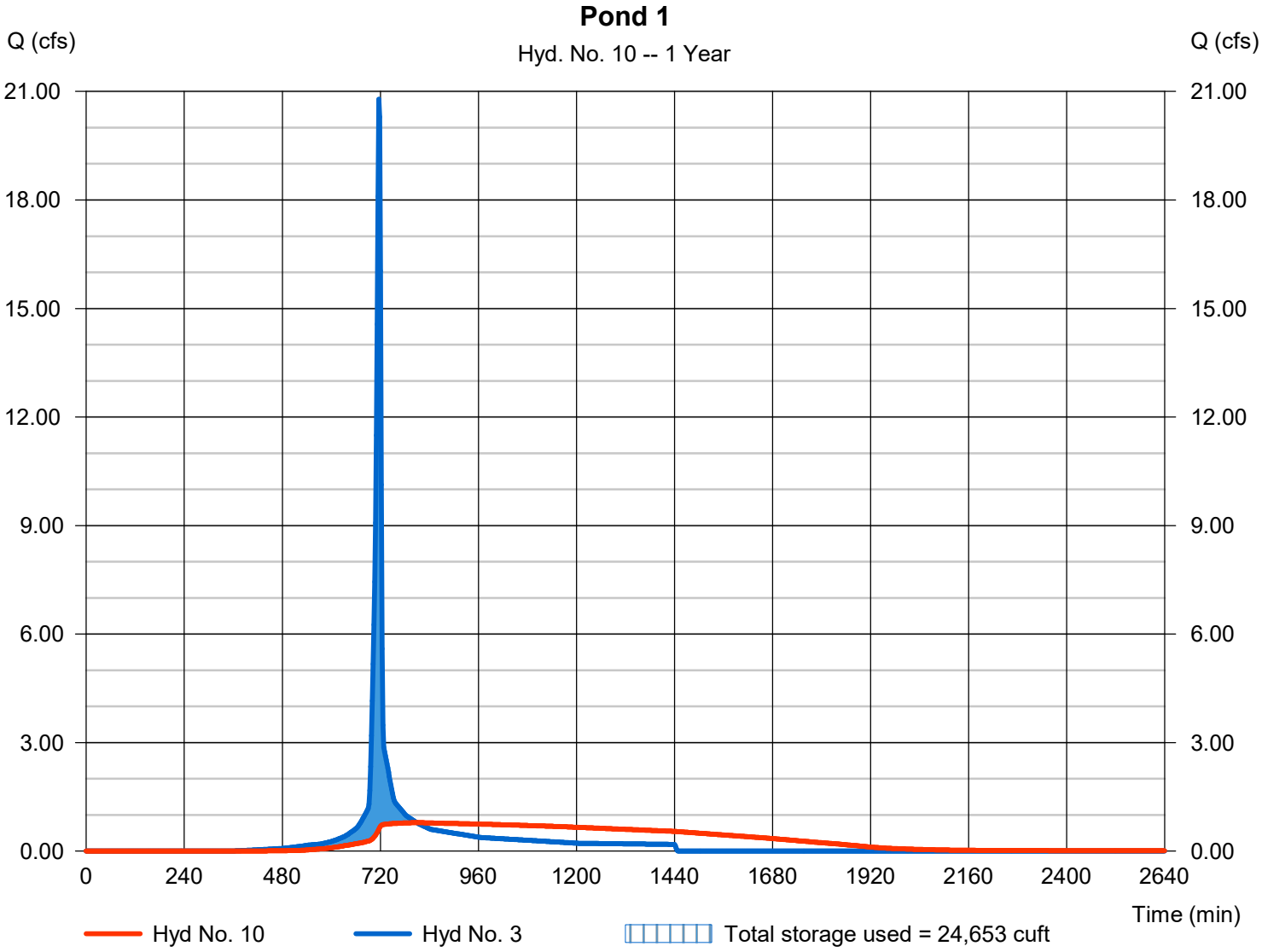
Hydrograph Report

Hyd. No. 10

Pond 1

Hydrograph type	=	Reservoir	Peak discharge	=	0.784 cfs
Storm frequency	=	1 yrs	Time to peak	=	810 min
Time interval	=	2 min	Hyd. volume	=	42,821 cuft
Inflow hyd. No.	=	3 - Area to Pond 1	Max. Elevation	=	485.75 ft
Reservoir name	=	Pond 1	Max. Storage	=	24,653 cuft

Storage Indication method used.



Pond Report

Pond No. 1 - Pond 1

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 482.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	482.00	4,533	0	0
1.00	483.00	5,540	5,028	5,028
2.00	484.00	6,638	6,080	11,108
3.00	485.00	7,806	7,213	18,321
4.00	486.00	9,030	8,410	26,731
5.00	487.00	10,342	9,678	36,408
6.00	488.00	11,709	11,017	47,426
7.00	489.00	13,100	12,397	59,823

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	4.00	0.00	0.00
Span (in)	= 24.00	4.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 482.00	482.00	0.00	0.00
Length (ft)	= 200.00	0.00	0.00	0.00
Slope (%)	= 2.50	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

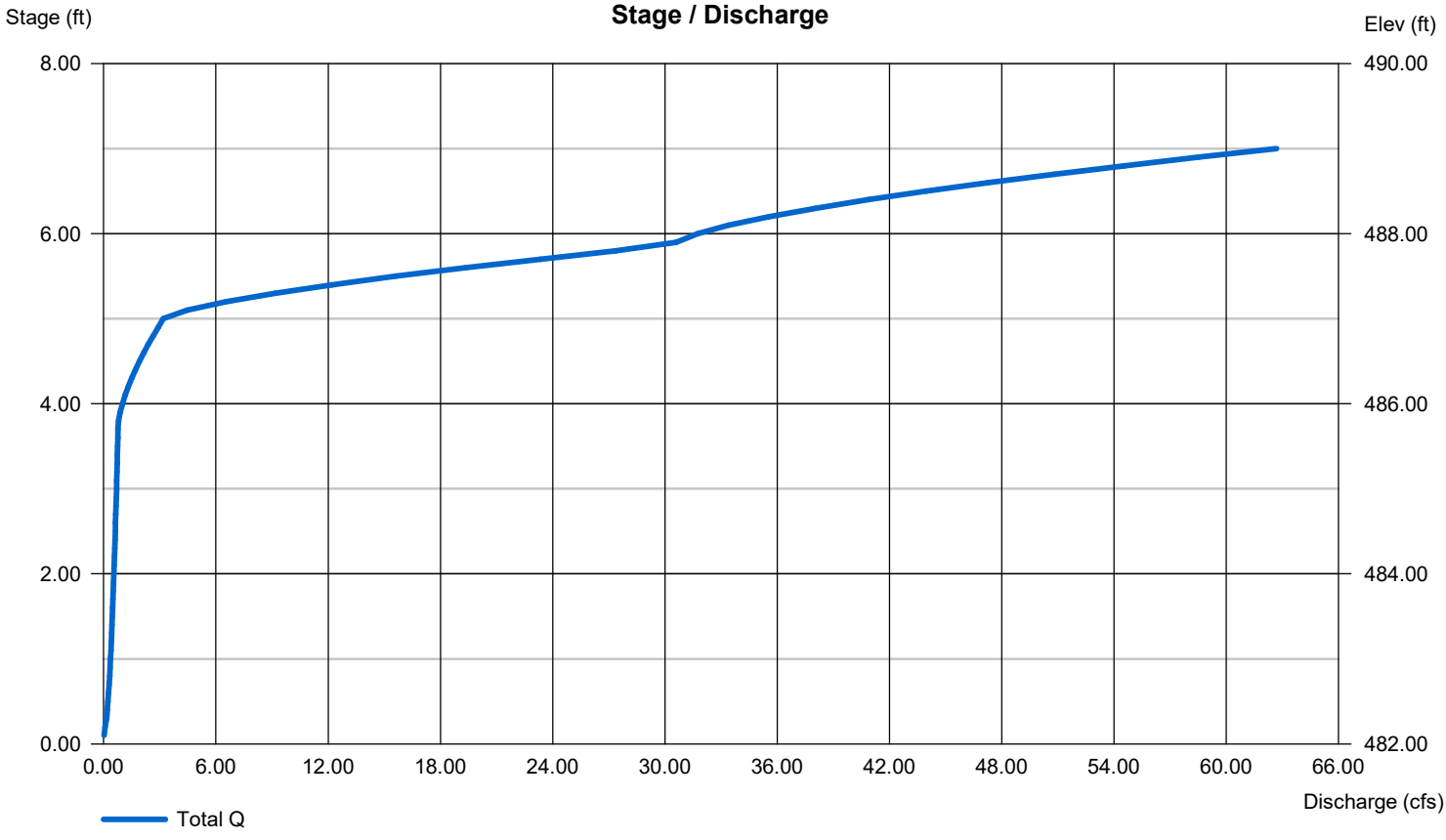
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.50	9.32	10.00	0.00
Crest El. (ft)	= 485.75	487.00	488.00	0.00
Weir Coeff.	= 3.33	3.33	2.60	3.33
Weir Type	= Rect	Ciplti	Broad	---
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).



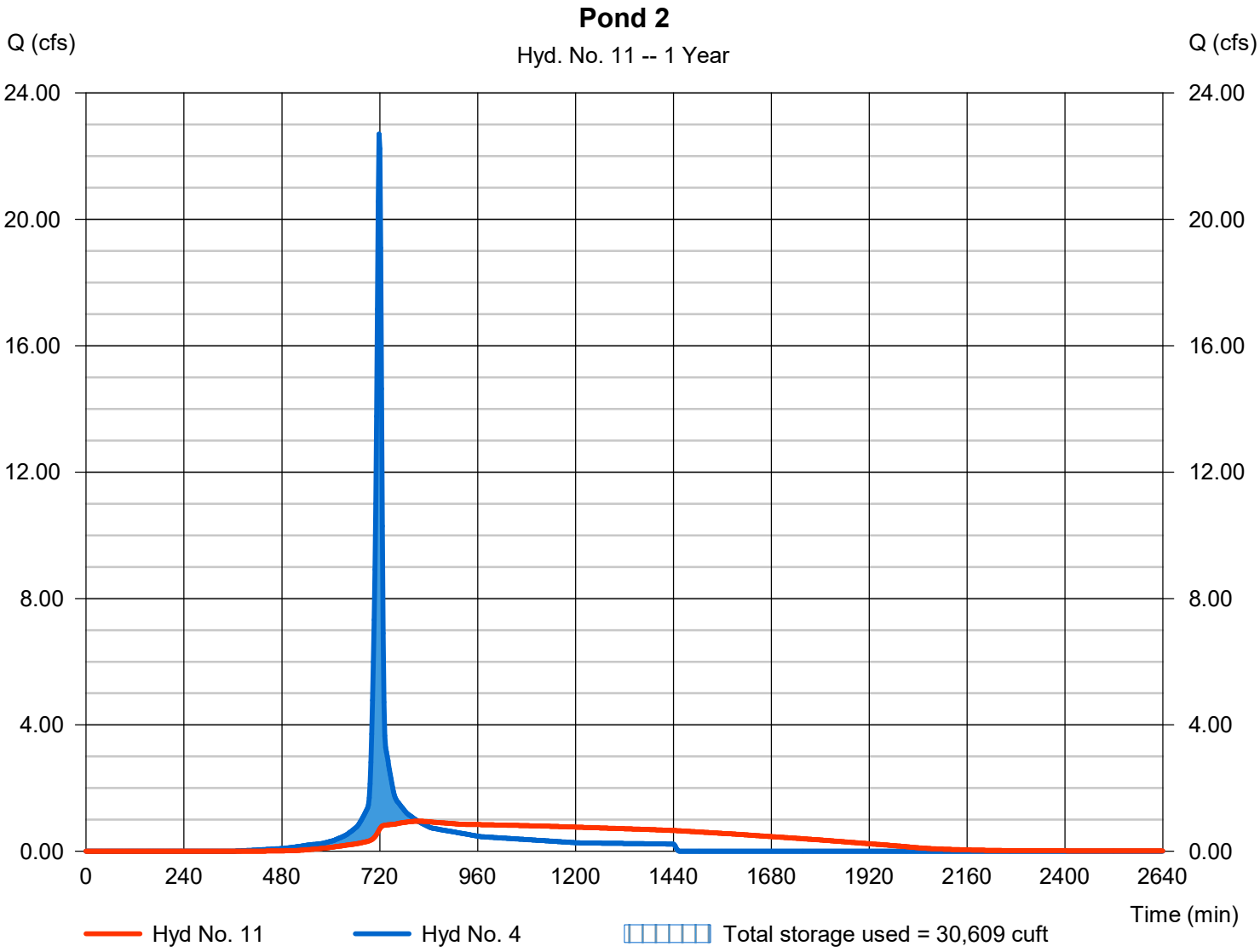
Hydrograph Report

Hyd. No. 11

Pond 2

Hydrograph type	=	Reservoir	Peak discharge	=	0.950 cfs
Storm frequency	=	1 yrs	Time to peak	=	814 min
Time interval	=	2 min	Hyd. volume	=	52,652 cuft
Inflow hyd. No.	=	4 - Area to Pond 2	Max. Elevation	=	490.63 ft
Reservoir name	=	Pond 2	Max. Storage	=	30,609 cuft

Storage Indication method used.



Pond Report

Pond No. 2 - Pond 2

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 486.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	486.00	4,234	0	0
1.00	487.00	5,268	4,741	4,741
2.00	488.00	6,185	5,720	10,461
3.00	489.00	7,160	6,666	17,127
4.00	490.00	8,413	7,777	24,904
5.00	491.00	9,619	9,008	33,912
6.00	492.00	10,949	10,276	44,188
7.00	493.00	12,319	11,626	55,814
8.00	494.00	13,842	13,072	68,886
9.00	495.00	15,431	14,628	83,514

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	4.00	0.00	0.00
Span (in)	= 24.00	4.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 486.00	486.00	0.00	0.00
Length (ft)	= 214.00	0.00	0.00	0.00
Slope (%)	= 5.32	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

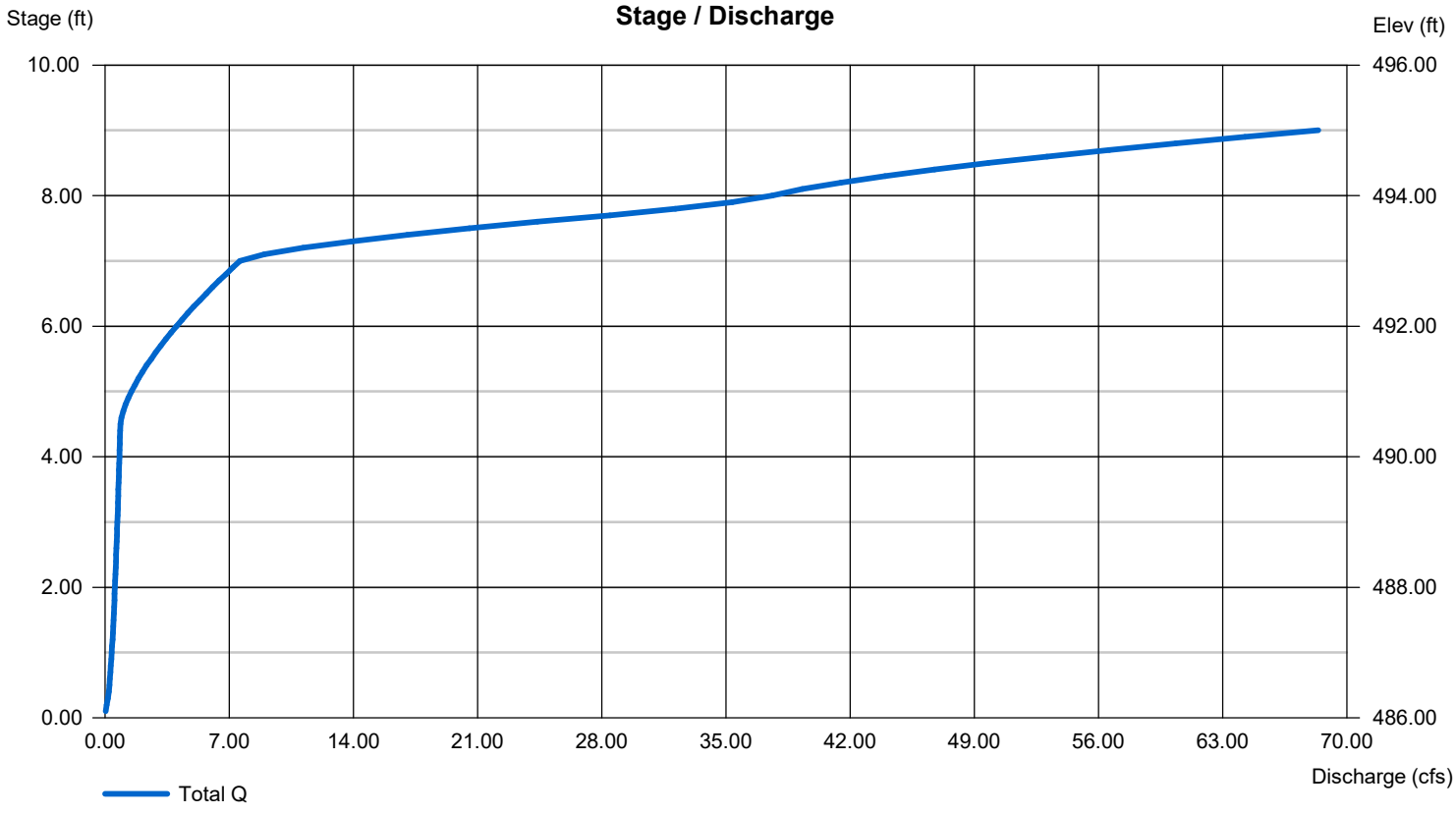
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.50	9.32	10.00	0.00
Crest El. (ft)	= 490.50	493.00	494.00	0.00
Weir Coeff.	= 3.33	3.33	2.60	3.33
Weir Type	= Rect	Ciplti	Broad	---
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).

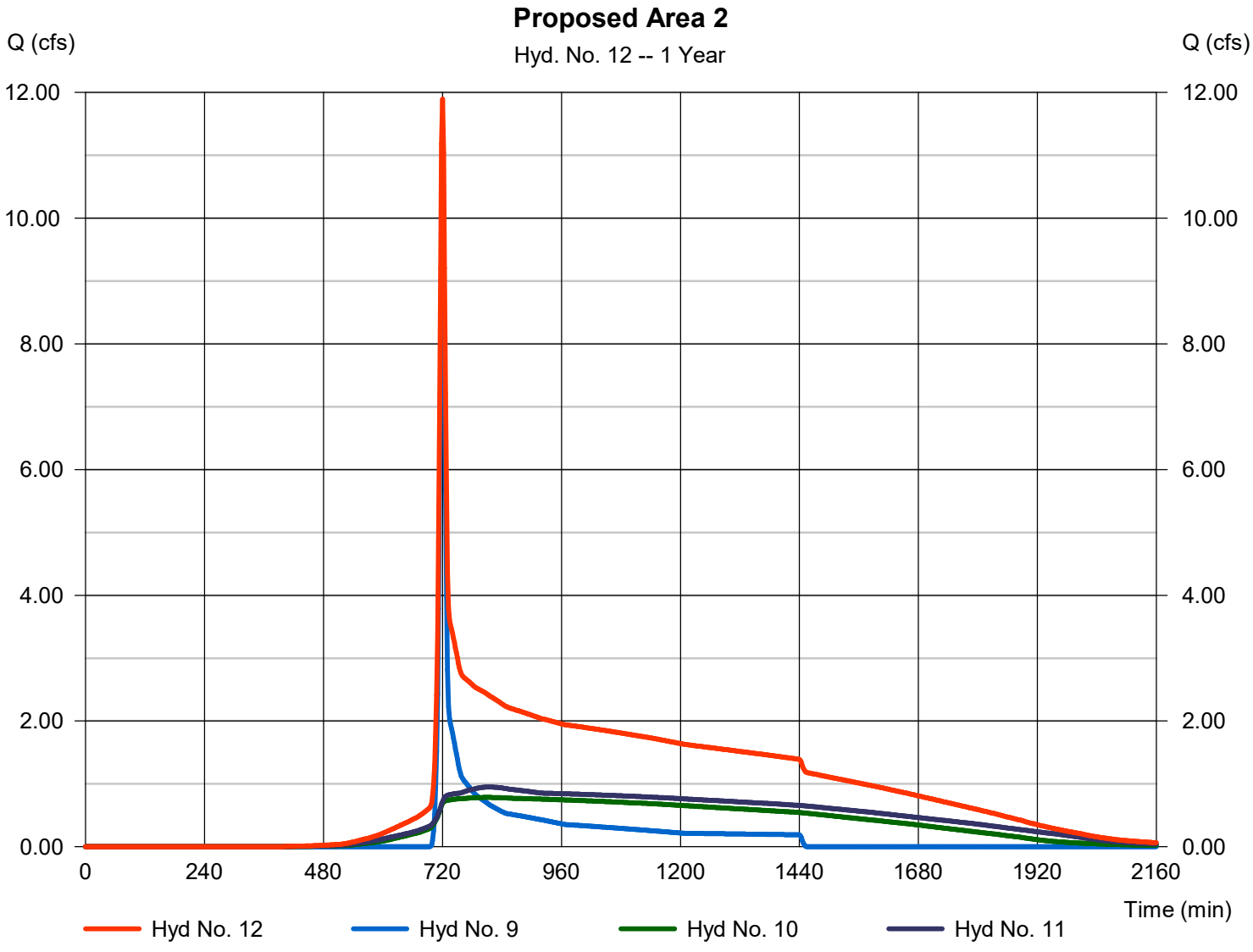


Hydrograph Report

Hyd. No. 12

Proposed Area 2

Hydrograph type	= Combine	Peak discharge	= 11.89 cfs
Storm frequency	= 1 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 121,204 cuft
Inflow hyds.	= 9, 10, 11	Contrib. drain. area	= 11.020 ac



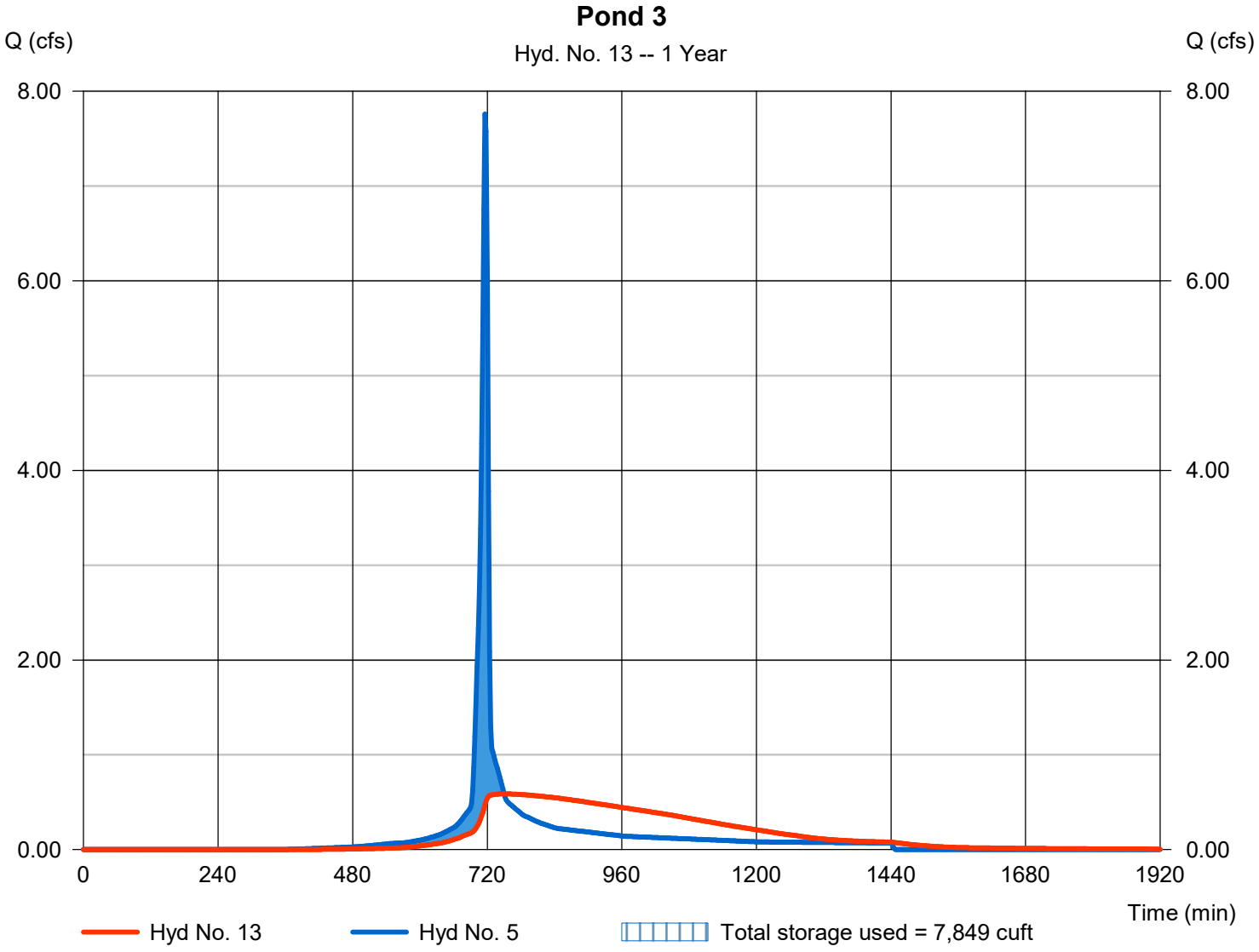
Hydrograph Report

Hyd. No. 13

Pond 3

Hydrograph type	=	Reservoir	Peak discharge	=	0.587 cfs
Storm frequency	=	1 yrs	Time to peak	=	750 min
Time interval	=	2 min	Hyd. volume	=	15,981 cuft
Inflow hyd. No.	=	5 - Area to Pond 3	Max. Elevation	=	508.29 ft
Reservoir name	=	Pond 3	Max. Storage	=	7,849 cuft

Storage Indication method used.



Pond Report

Pond No. 3 - Pond 3

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 506.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	506.00	2,589	0	0
1.00	507.00	3,276	2,925	2,925
2.00	508.00	4,008	3,635	6,561
3.00	509.00	4,920	4,456	11,017
4.00	510.00	5,788	5,348	16,364
5.00	511.00	6,807	6,290	22,654
6.00	512.00	7,805	7,300	29,954
7.00	513.00	8,860	8,326	38,280

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	4.00	0.00	0.00
Span (in)	= 18.00	4.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 506.00	506.00	0.00	0.00
Length (ft)	= 67.00	0.00	0.00	0.00
Slope (%)	= 3.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

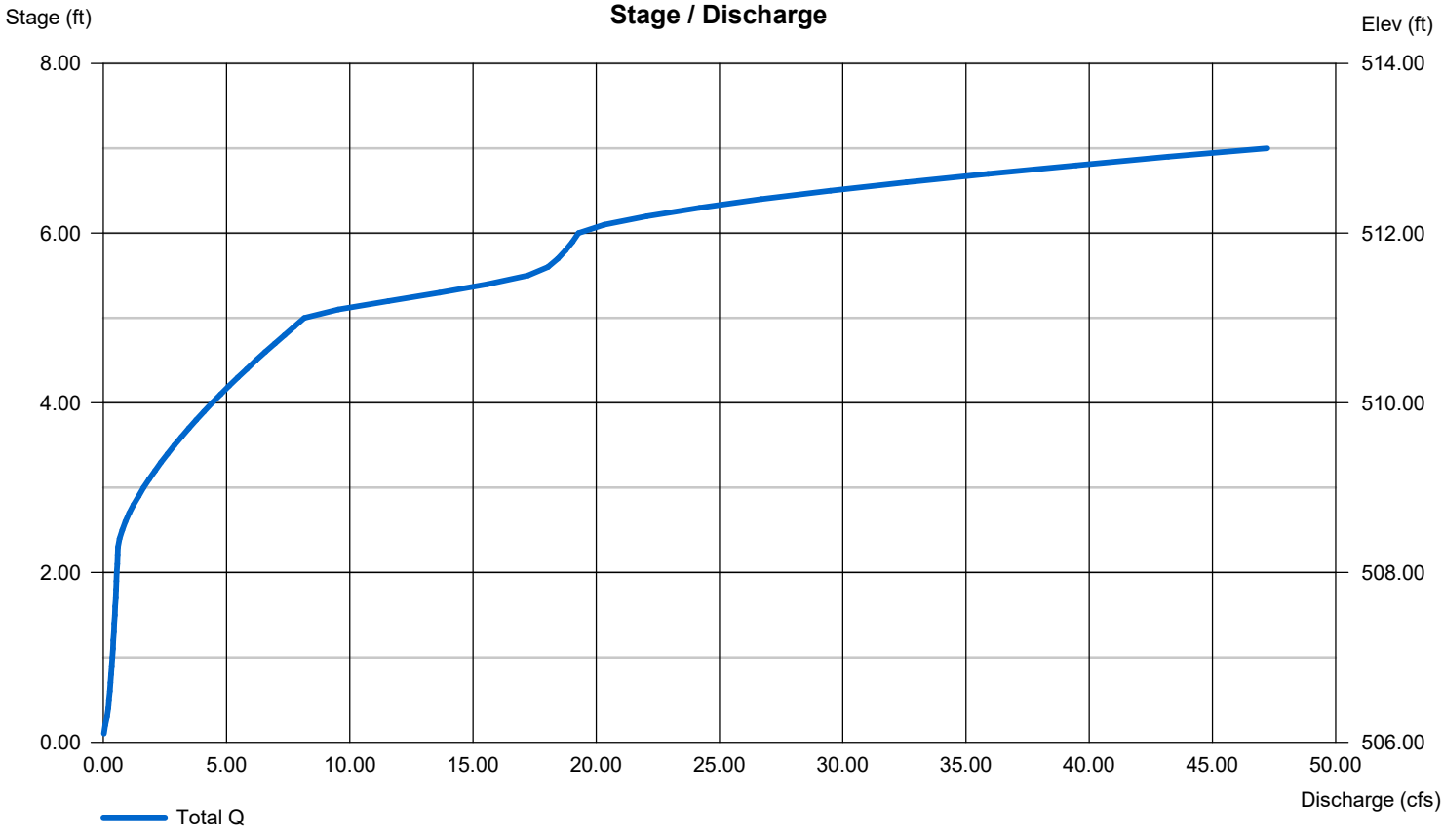
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.50	9.32	10.00	0.00
Crest El. (ft)	= 508.30	511.00	512.00	0.00
Weir Coeff.	= 3.33	3.33	2.60	3.33
Weir Type	= Rect	Ciplti	Broad	---
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).



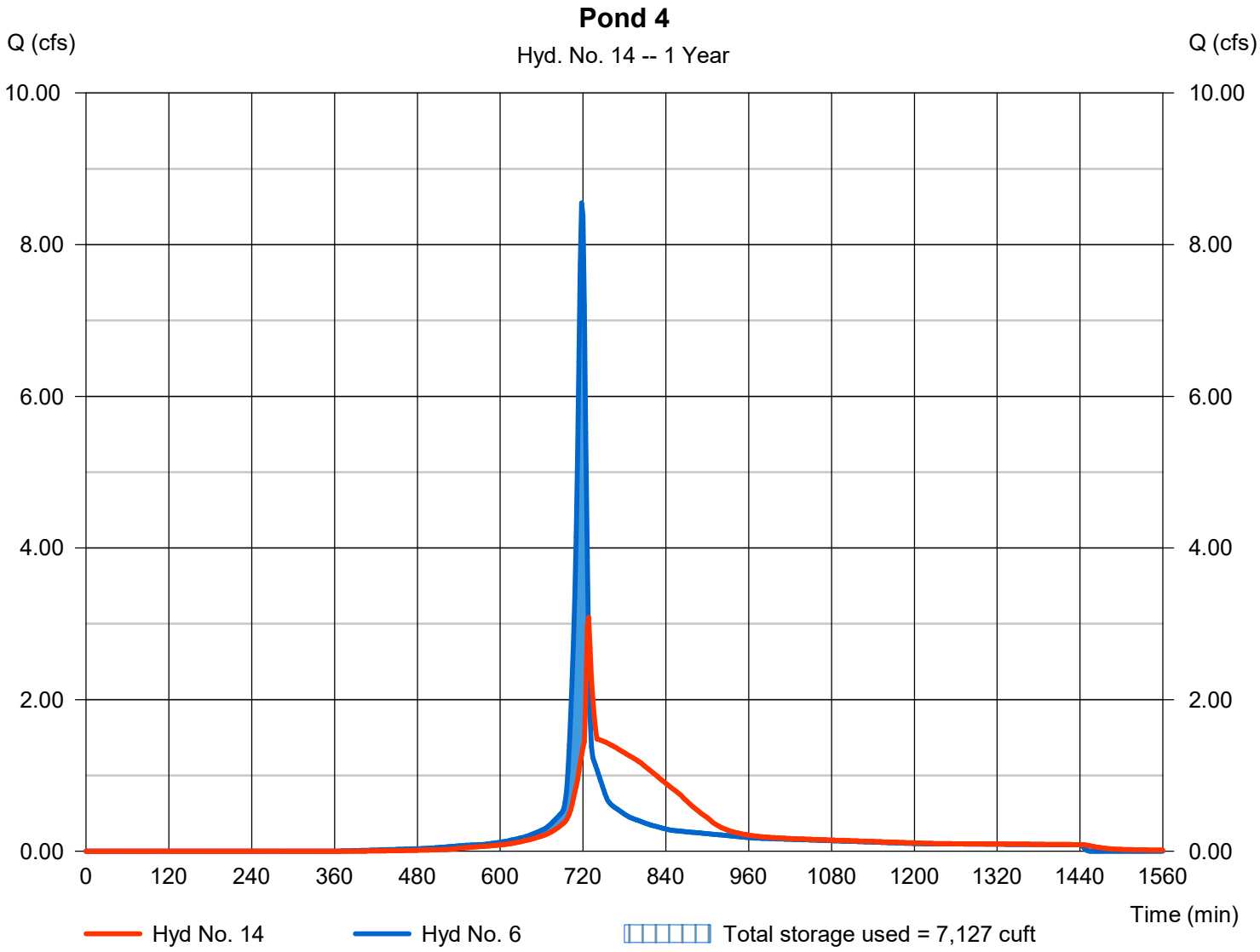
Hydrograph Report

Hyd. No. 14

Pond 4

Hydrograph type	=	Reservoir	Peak discharge	=	3.086 cfs
Storm frequency	=	1 yrs	Time to peak	=	728 min
Time interval	=	2 min	Hyd. volume	=	19,831 cuft
Inflow hyd. No.	=	6 - Area to Pond 4	Max. Elevation	=	511.14 ft
Reservoir name	=	Pond 4	Max. Storage	=	7,127 cuft

Storage Indication method used.



Pond Report

Pond No. 4 - Pond 4

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 508.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	508.00	1,326	0	0
1.00	509.00	1,886	1,598	1,598
2.00	510.00	2,507	2,189	3,787
3.00	511.00	3,208	2,850	6,637
4.00	512.00	3,969	3,581	10,218
5.00	513.00	4,828	4,391	14,609

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	6.00	0.00	0.00
Span (in)	= 18.00	6.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 508.00	508.00	0.00	0.00
Length (ft)	= 50.00	0.00	0.00	0.00
Slope (%)	= 4.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

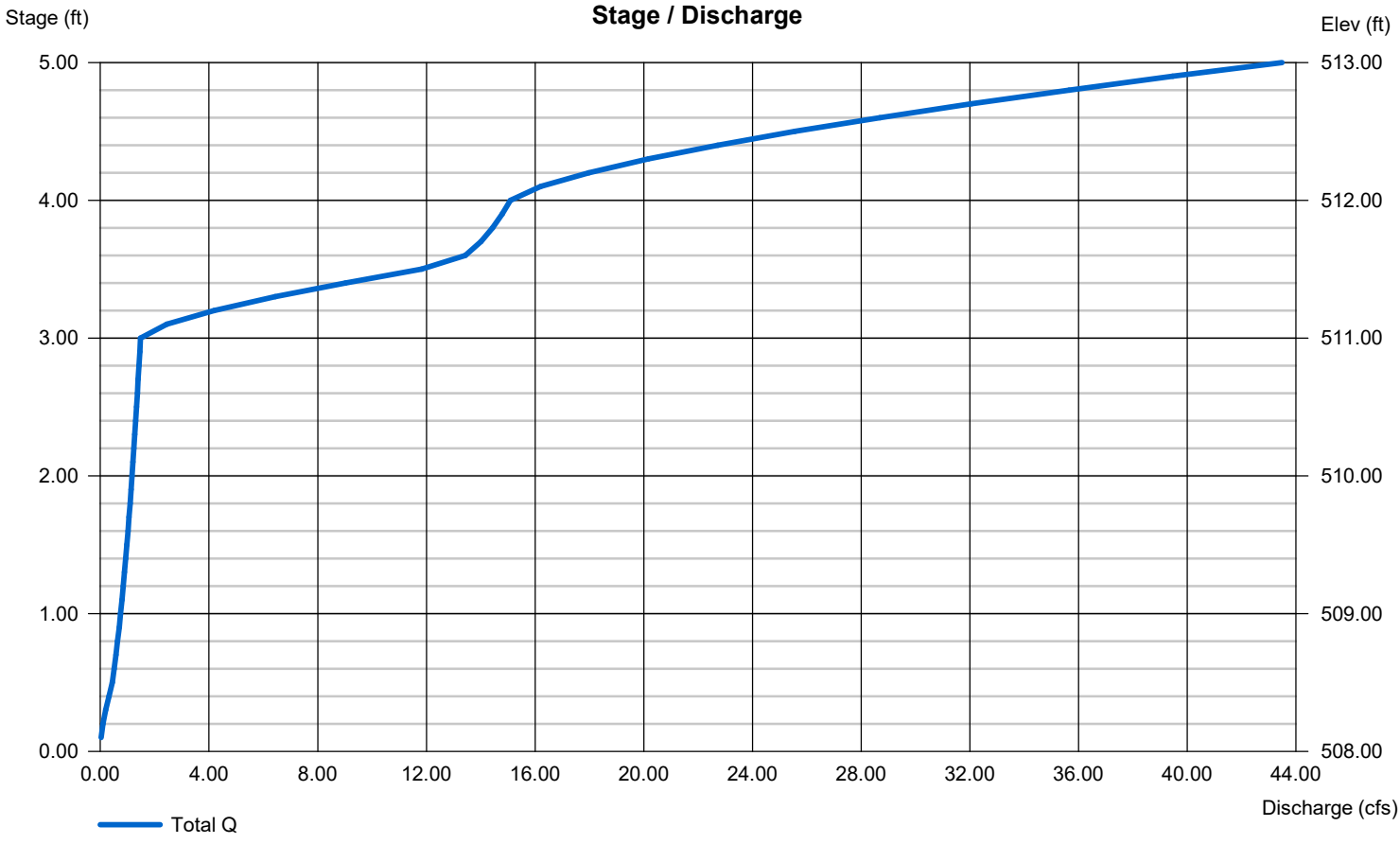
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 9.32	10.00	0.00	0.00
Crest El. (ft)	= 511.00	512.00	0.00	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= Ciplti	Broad	---	---
Multi-Stage	= Yes	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).



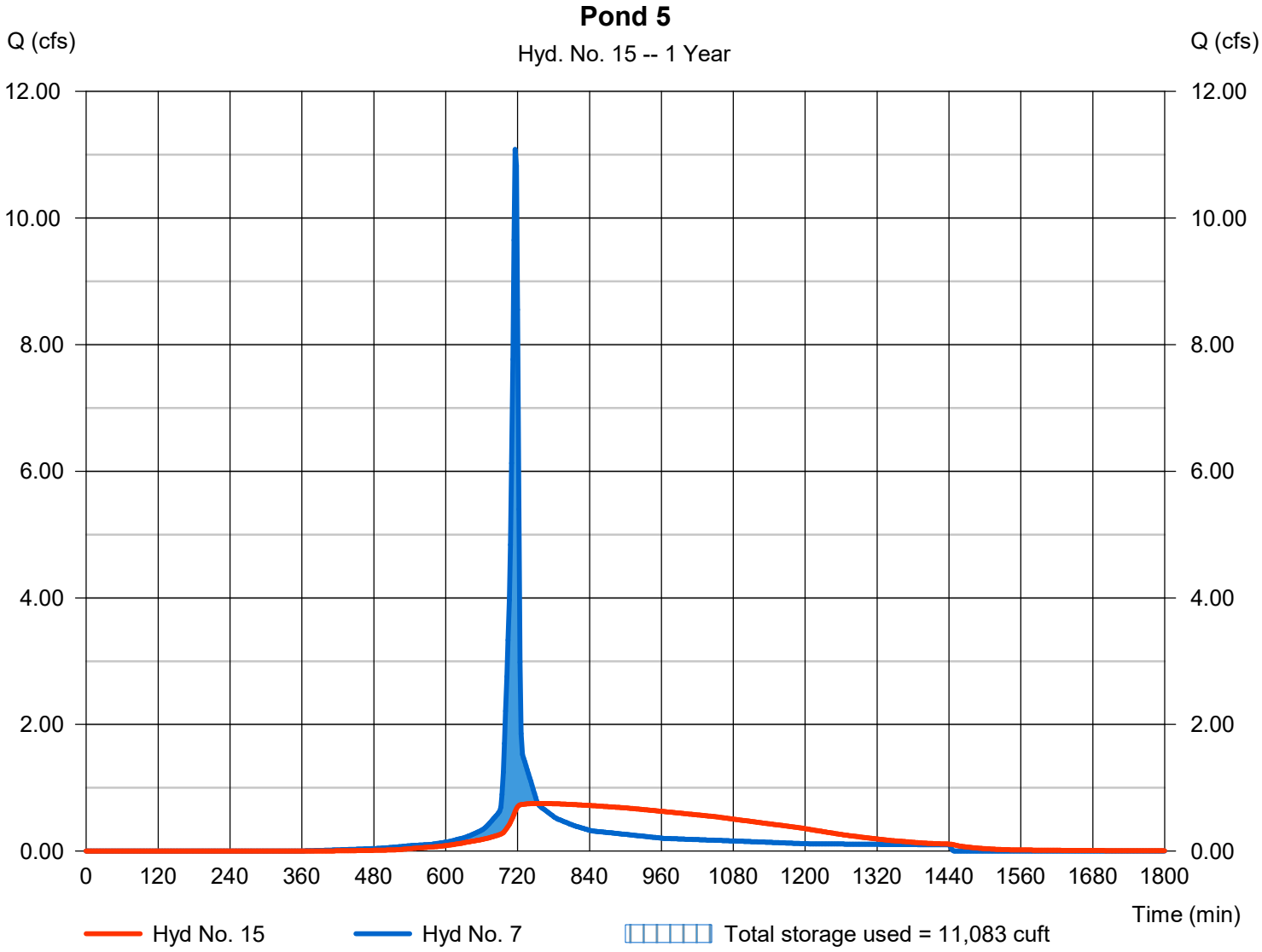
Hydrograph Report

Hyd. No. 15

Pond 5

Hydrograph type	=	Reservoir	Peak discharge	=	0.753 cfs
Storm frequency	=	1 yrs	Time to peak	=	754 min
Time interval	=	2 min	Hyd. volume	=	22,841 cuft
Inflow hyd. No.	=	7 - Area to Pond 5	Max. Elevation	=	501.59 ft
Reservoir name	=	Pond 5	Max. Storage	=	11,083 cuft

Storage Indication method used.



Pond Report

Pond No. 5 - Pond 5

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 498.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	498.00	1,625	0	0
1.00	499.00	2,275	1,941	1,941
2.00	500.00	3,192	2,720	4,661
3.00	501.00	4,170	3,670	8,331
4.00	502.00	5,200	4,675	13,006
5.00	503.00	6,275	5,729	18,734
5.60	503.60	6,947	3,964	22,699

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	4.00	0.00	0.00
Span (in)	= 18.00	4.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 498.00	498.00	0.00	0.00
Length (ft)	= 32.00	0.00	0.00	0.00
Slope (%)	= 2.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

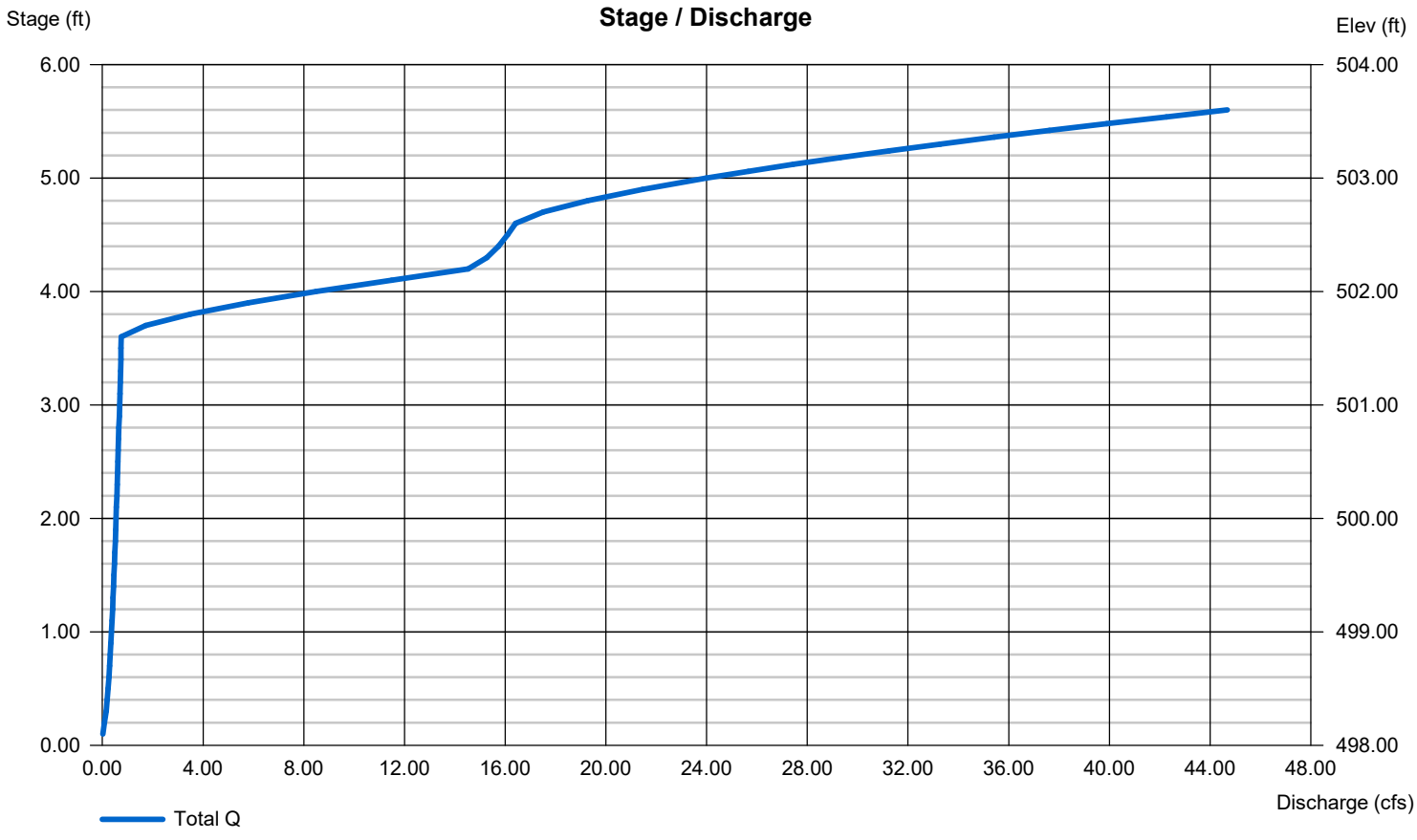
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 9.32	10.00	0.00	0.00
Crest El. (ft)	= 501.60	502.60	0.00	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= Ciplti	Broad	---	---
Multi-Stage	= Yes	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).

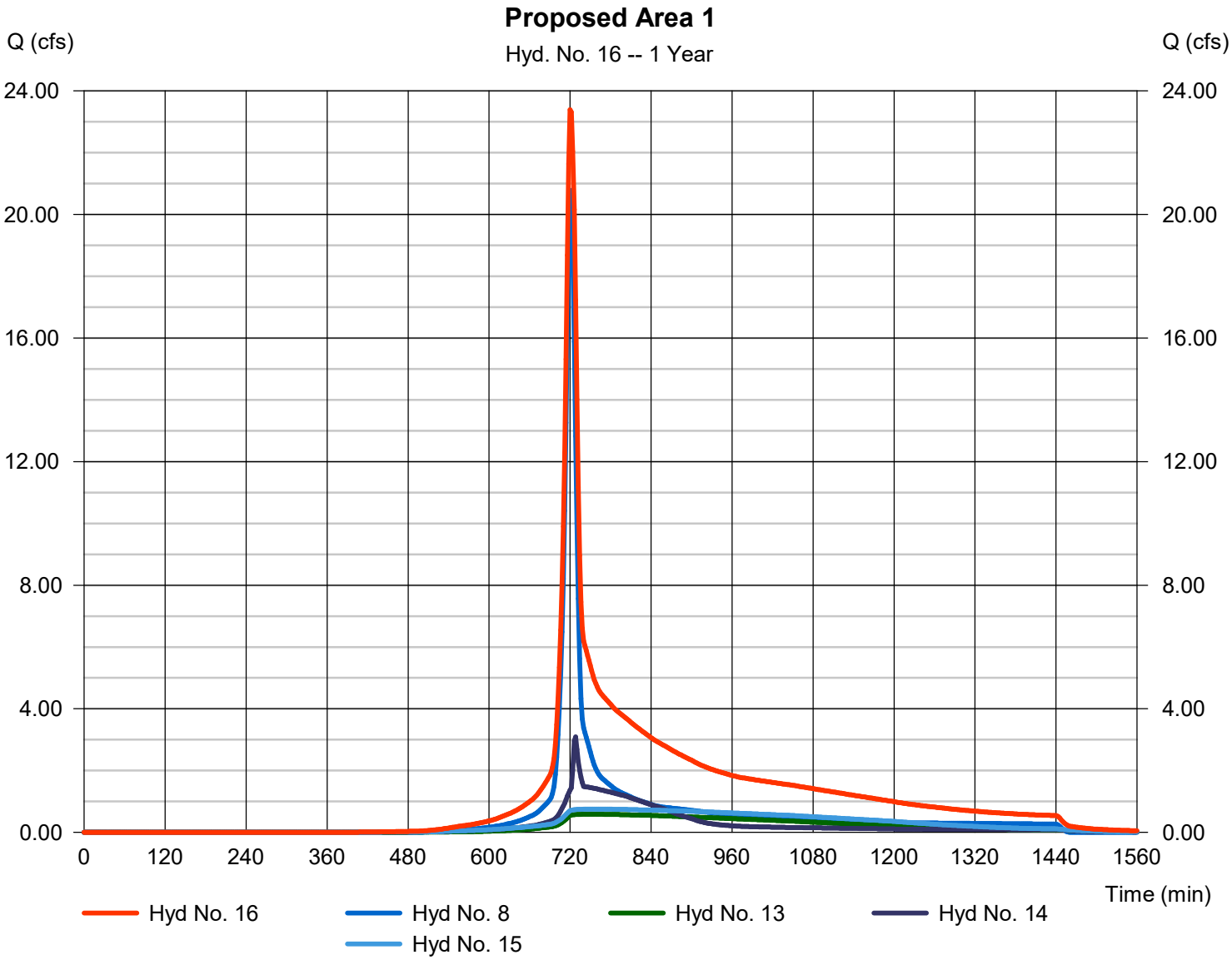


Hydrograph Report

Hyd. No. 16

Proposed Area 1

Hydrograph type	= Combine	Peak discharge	= 23.39 cfs
Storm frequency	= 1 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 112,547 cuft
Inflow hyds.	= 8, 13, 14, 15	Contrib. drain. area	= 9.730 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

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	44.07	2	720	115,087	------	------	------	Exisitng Area 1
2	SCS Runoff	35.56	2	722	95,516	------	------	------	Existing Area 2
3	SCS Runoff	26.14	2	716	54,515	------	------	------	Area to Pond 1
4	SCS Runoff	28.60	2	718	67,022	------	------	------	Area to Pond 2
5	SCS Runoff	9.760	2	716	20,352	------	------	------	Area to Pond 3
6	SCS Runoff	10.77	2	718	25,241	------	------	------	Area to Pond 4
7	SCS Runoff	13.94	2	716	29,074	------	------	------	Area to Pond 5
8	SCS Runoff	27.33	2	720	70,912	------	------	------	Bypass for Area 1
9	SCS Runoff	16.31	2	720	38,365	------	------	------	Bypass for Area 2
10	Reservoir	1.557	2	762	54,492	3	486.33	29,917	Pond 1
11	Reservoir	2.020	2	760	67,000	4	491.26	36,614	Pond 2
12	Combine	17.89	2	720	159,857	9, 10, 11	------	------	Proposed Area 2
13	Reservoir	1.051	2	738	20,338	5	508.70	9,679	Pond 3
14	Reservoir	7.354	2	724	25,235	6	511.34	7,839	Pond 4
15	Reservoir	4.919	2	724	29,065	7	501.86	12,361	Pond 5
16	Combine	38.91	2	722	145,550	8, 13, 14, 15	------	------	Proposed Area 1

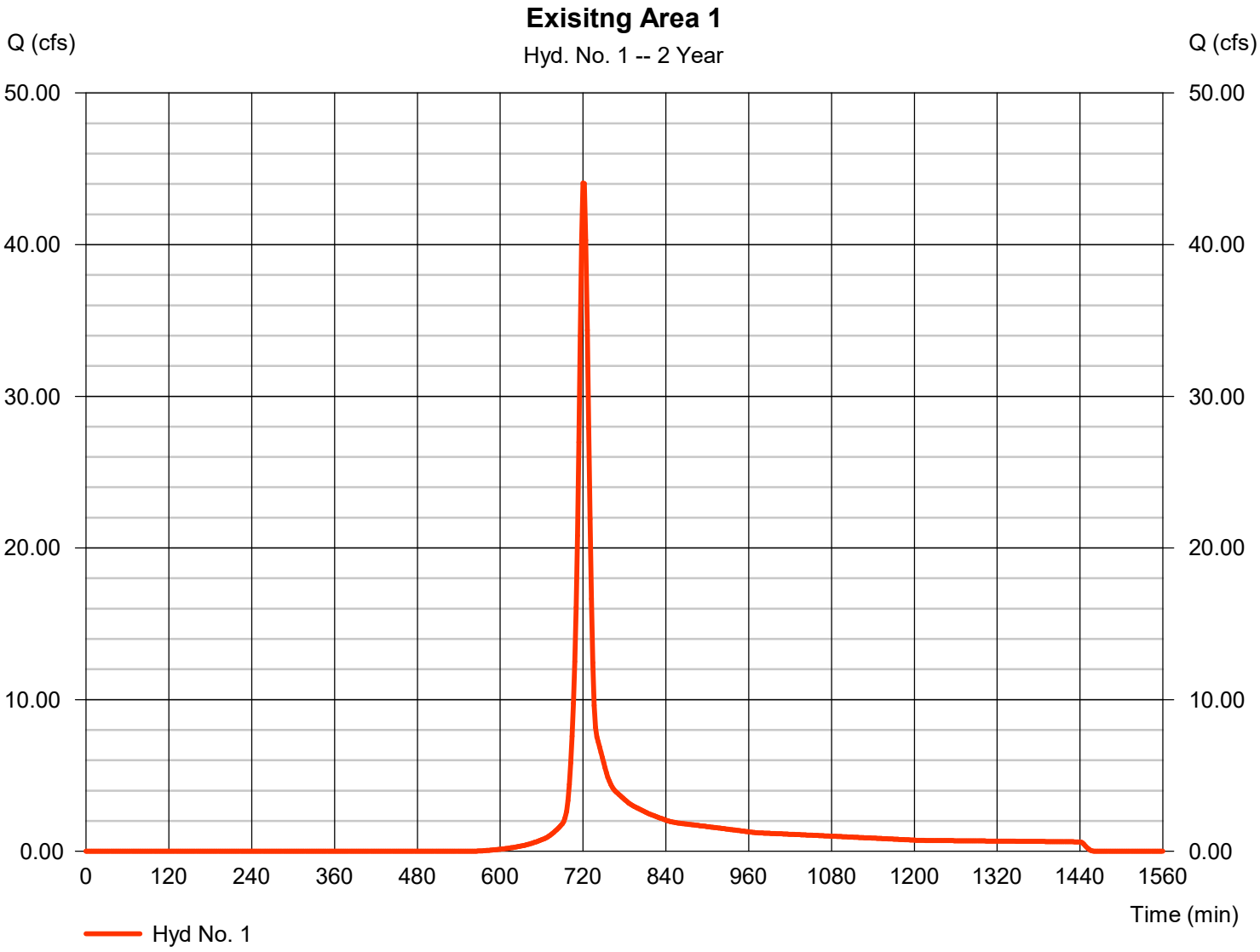
Hydrograph Report

Hyd. No. 1

Exisitng Area 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	44.07 cfs
Storm frequency	=	2 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	115,087 cuft
Drainage area	=	20.440 ac	Curve number	=	79*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	13.20 min
Total precip.	=	3.42 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(20.442 x 79)] / 20.440



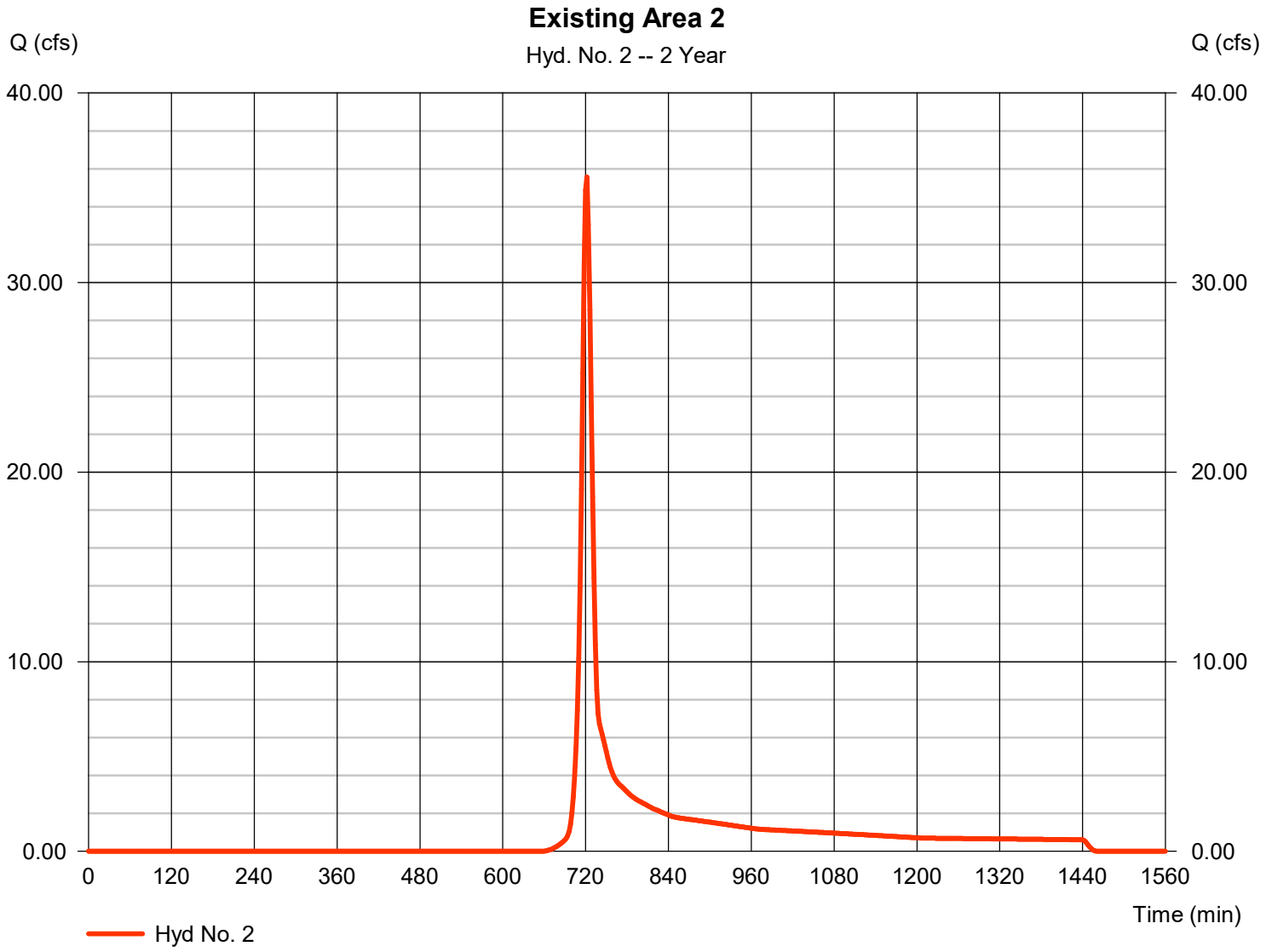
Hydrograph Report

Hyd. No. 2

Existing Area 2

Hydrograph type	= SCS Runoff	Peak discharge	= 35.56 cfs
Storm frequency	= 2 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 95,516 cuft
Drainage area	= 23.870 ac	Curve number	= 72*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 10.10 min
Total precip.	= 3.42 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.978 x 49) + (1.088 x 69) + (17.804 x 79)] / 23.870



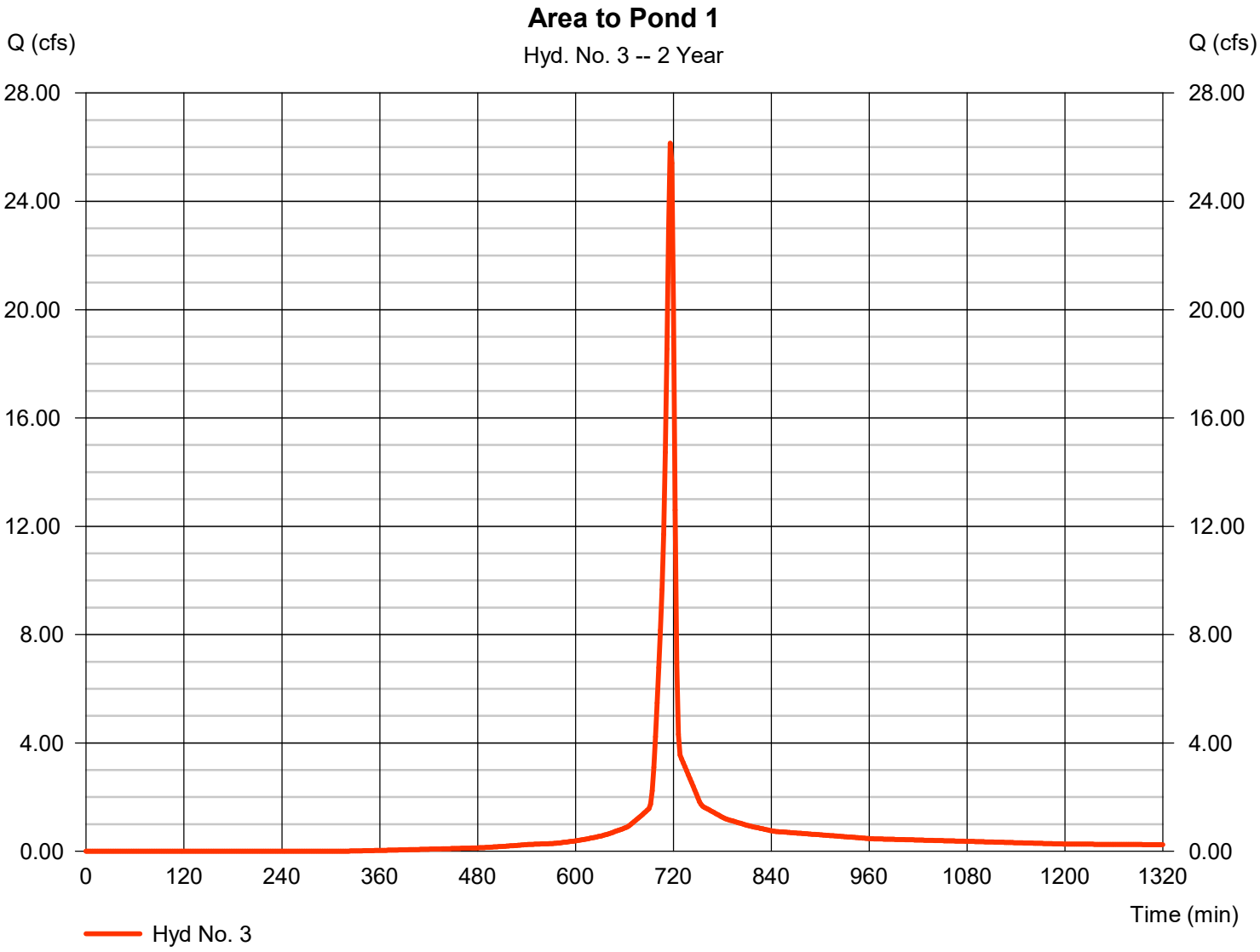
Hydrograph Report

Hyd. No. 3

Area to Pond 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	26.14 cfs
Storm frequency	=	2 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	54,515 cuft
Drainage area	=	6.750 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.42 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.050 x 98) + (2.700 x 79)] / 6.750



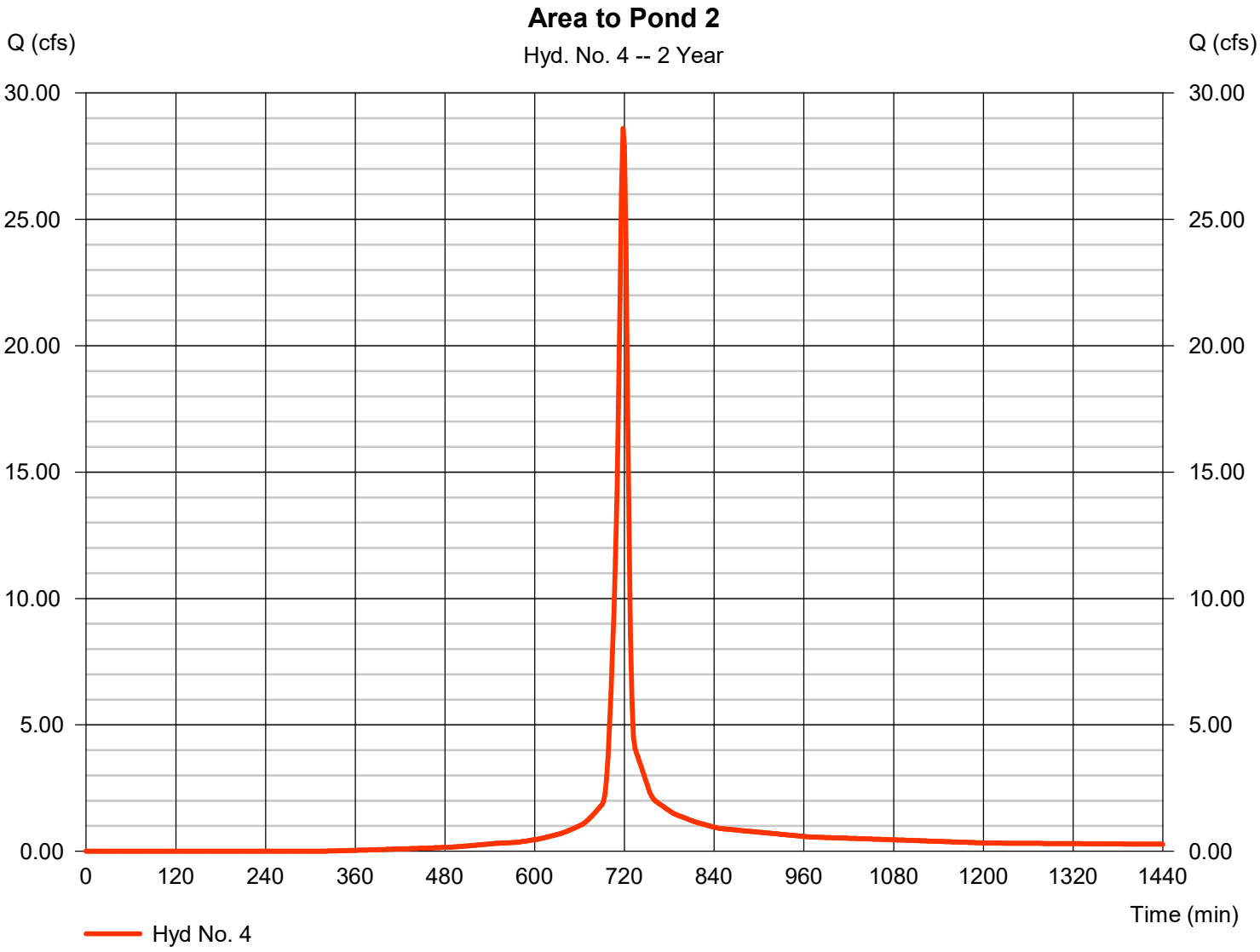
Hydrograph Report

Hyd. No. 4

Area to Pond 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	28.60 cfs
Storm frequency	=	2 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	67,022 cuft
Drainage area	=	7.780 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	8.00 min
Total precip.	=	3.42 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.670 x 98) + (3.110 x 79)] / 7.780



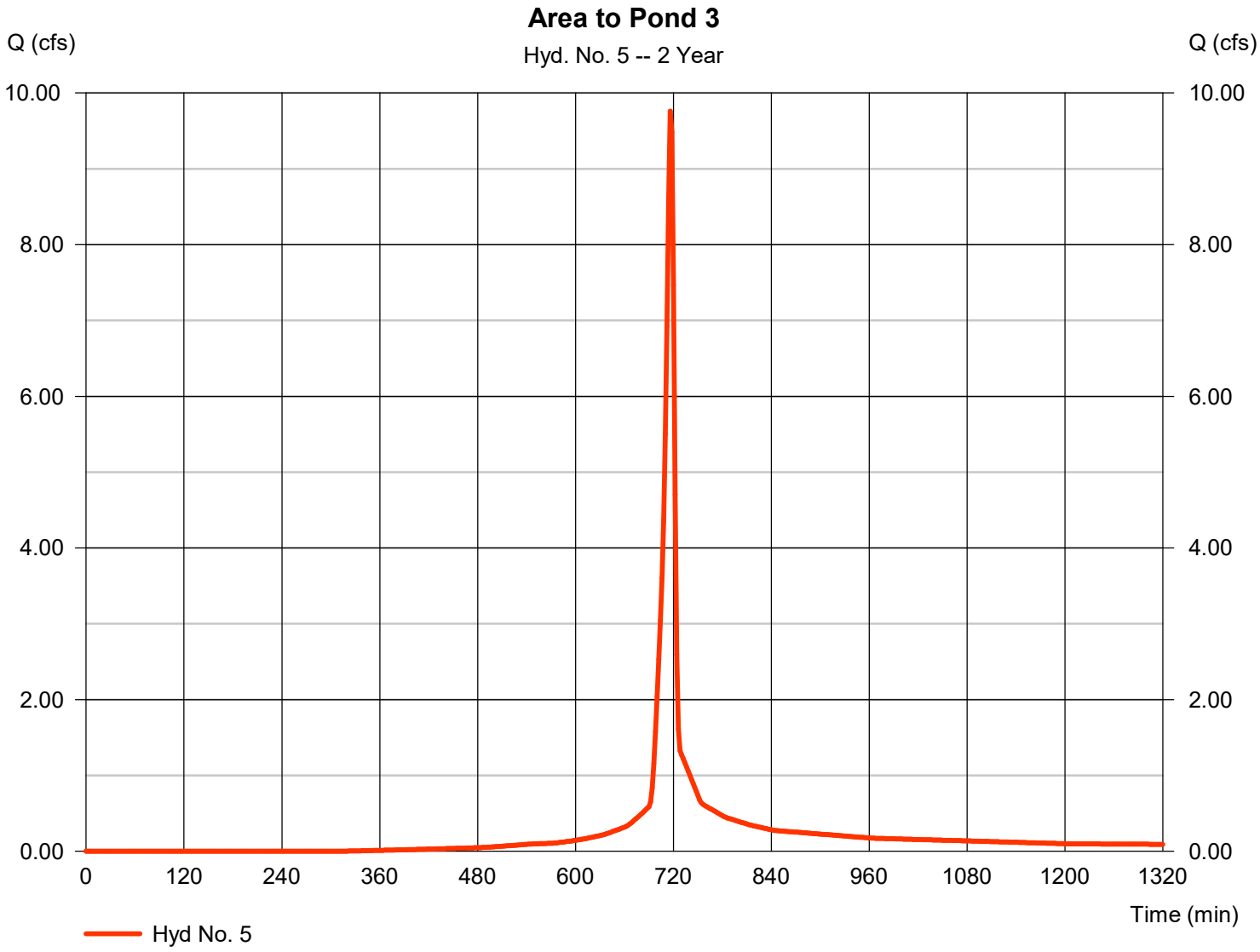
Hydrograph Report

Hyd. No. 5

Area to Pond 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	9.760 cfs
Storm frequency	=	2 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	20,352 cuft
Drainage area	=	2.520 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.42 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.510 x 98) + (1.010 x 79)] / 2.520



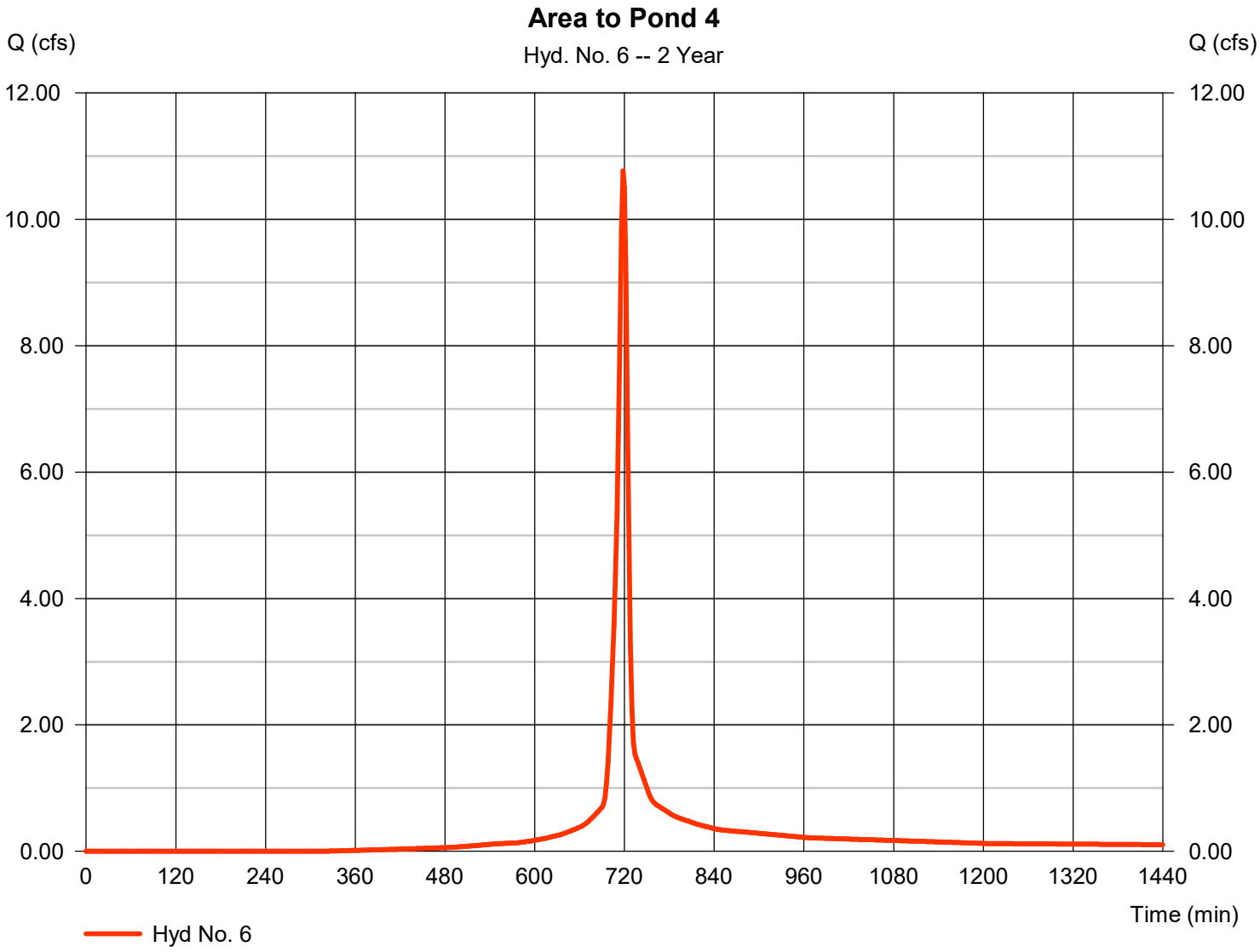
Hydrograph Report

Hyd. No. 6

Area to Pond 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	10.77 cfs
Storm frequency	=	2 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	25,241 cuft
Drainage area	=	2.930 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	7.80 min
Total precip.	=	3.42 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.760 x 98) + (1.172 x 79)] / 2.930



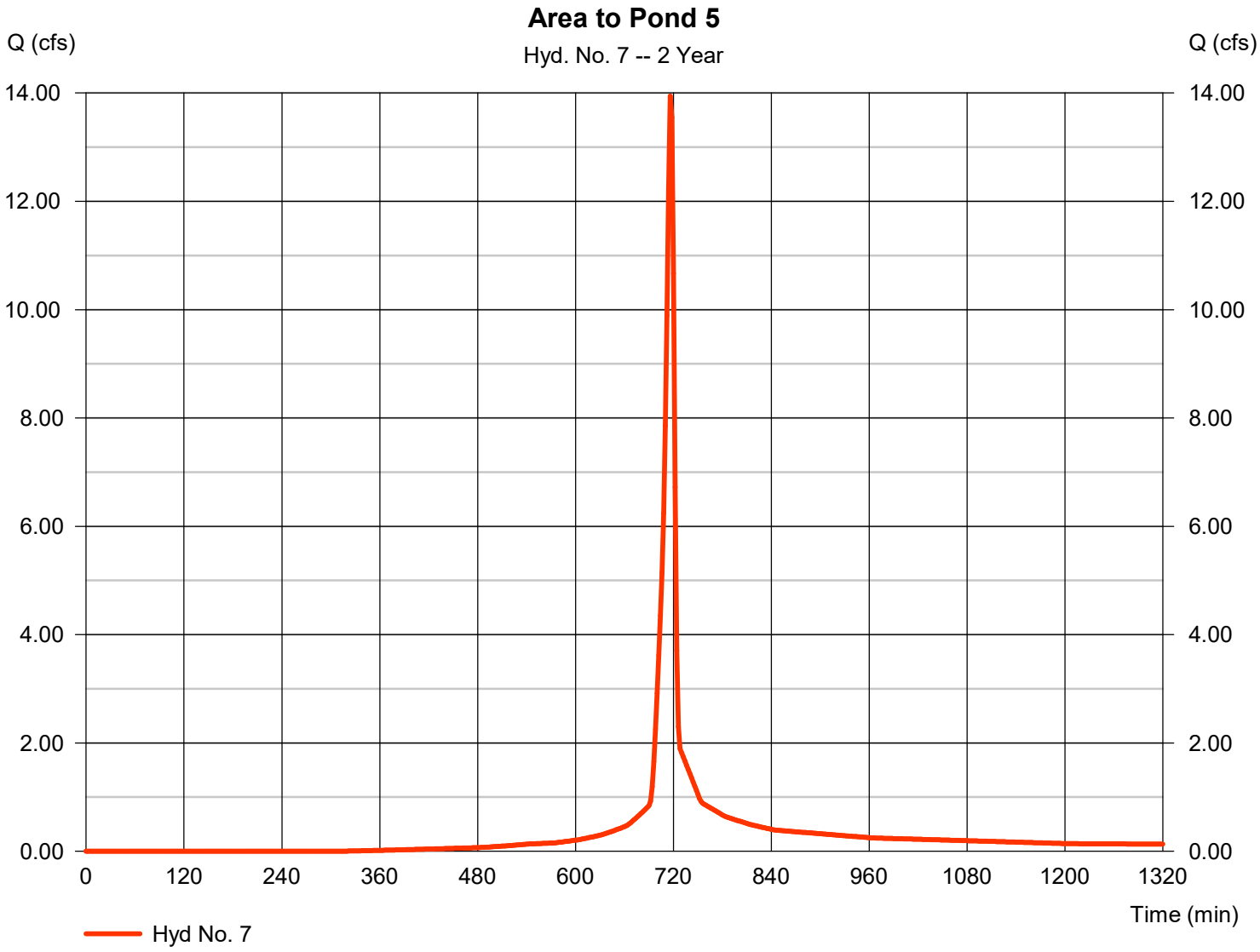
Hydrograph Report

Hyd. No. 7

Area to Pond 5

Hydrograph type	=	SCS Runoff	Peak discharge	=	13.94 cfs
Storm frequency	=	2 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	29,074 cuft
Drainage area	=	3.600 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.42 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.160 x 98) + (1.437 x 79)] / 3.600



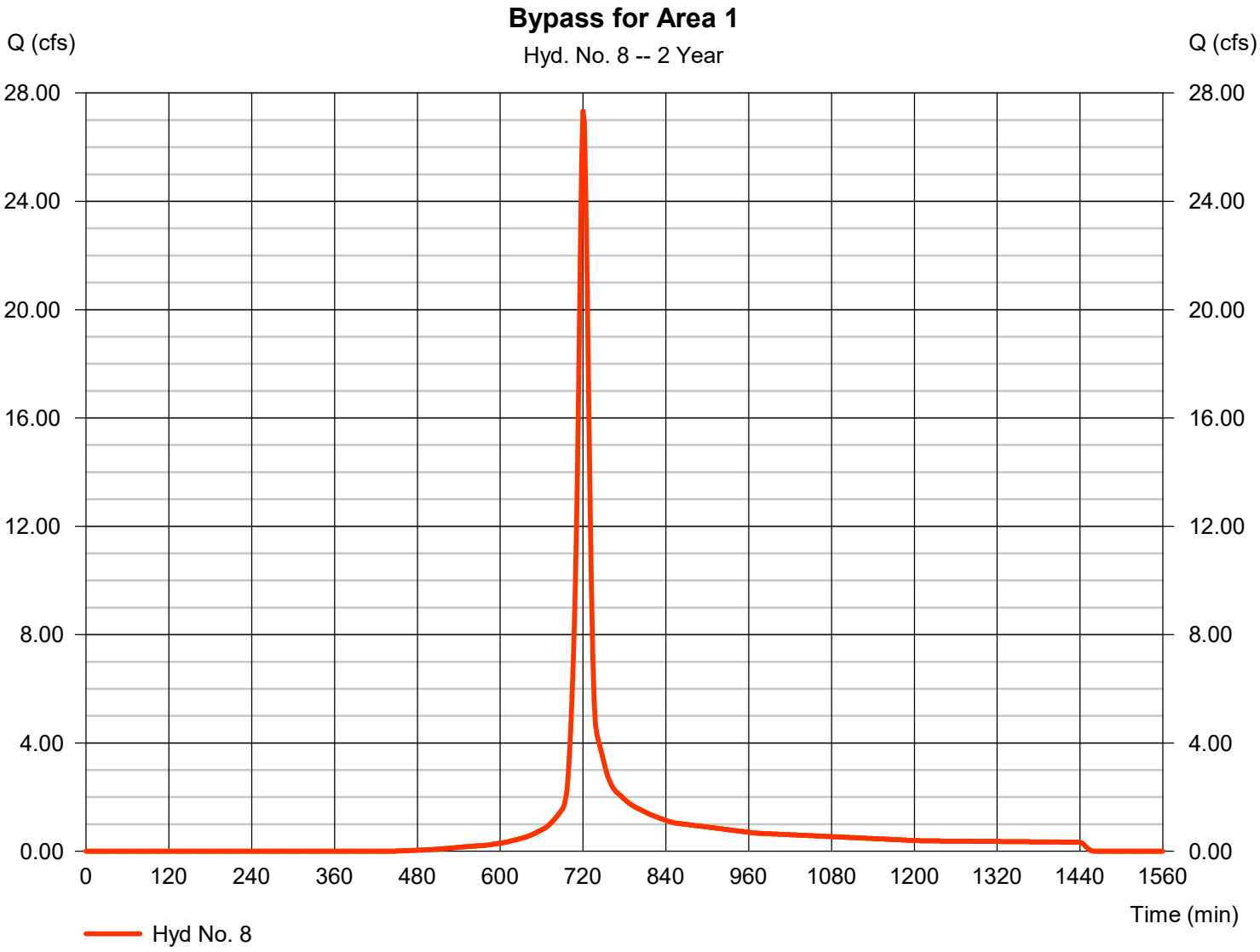
Hydrograph Report

Hyd. No. 8

Bypass for Area 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	27.33 cfs
Storm frequency	=	2 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	70,912 cuft
Drainage area	=	9.730 ac	Curve number	=	85*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	13.00 min
Total precip.	=	3.42 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.920 x 98) + (6.813 x 79)] / 9.730



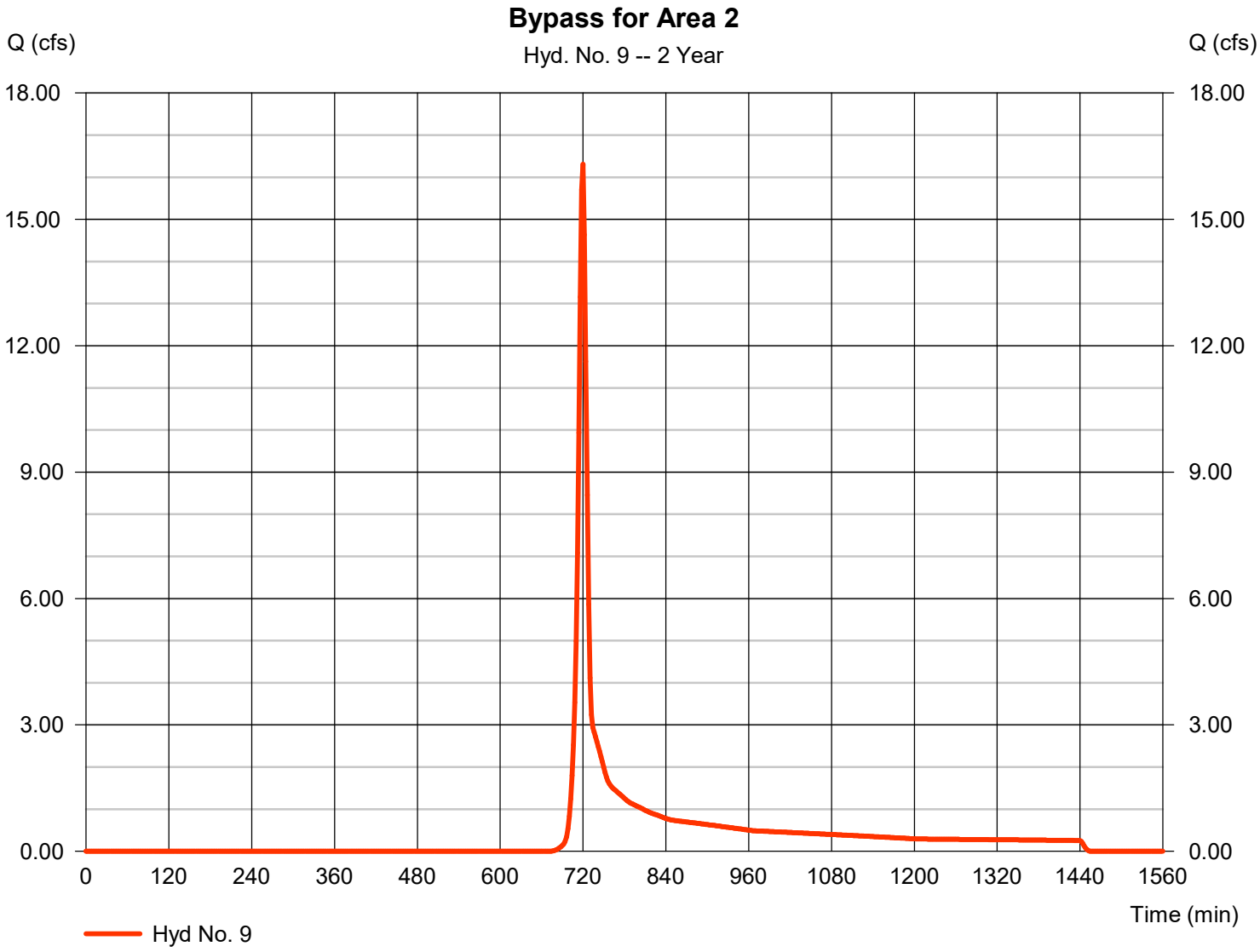
Hydrograph Report

Hyd. No. 9

Bypass for Area 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	16.31 cfs
Storm frequency	=	2 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	38,365 cuft
Drainage area	=	11.020 ac	Curve number	=	70*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	9.50 min
Total precip.	=	3.42 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.970 x 98) + (4.980 x 49) + (1.090 x 69) + (1.980 x 79)] / 11.020



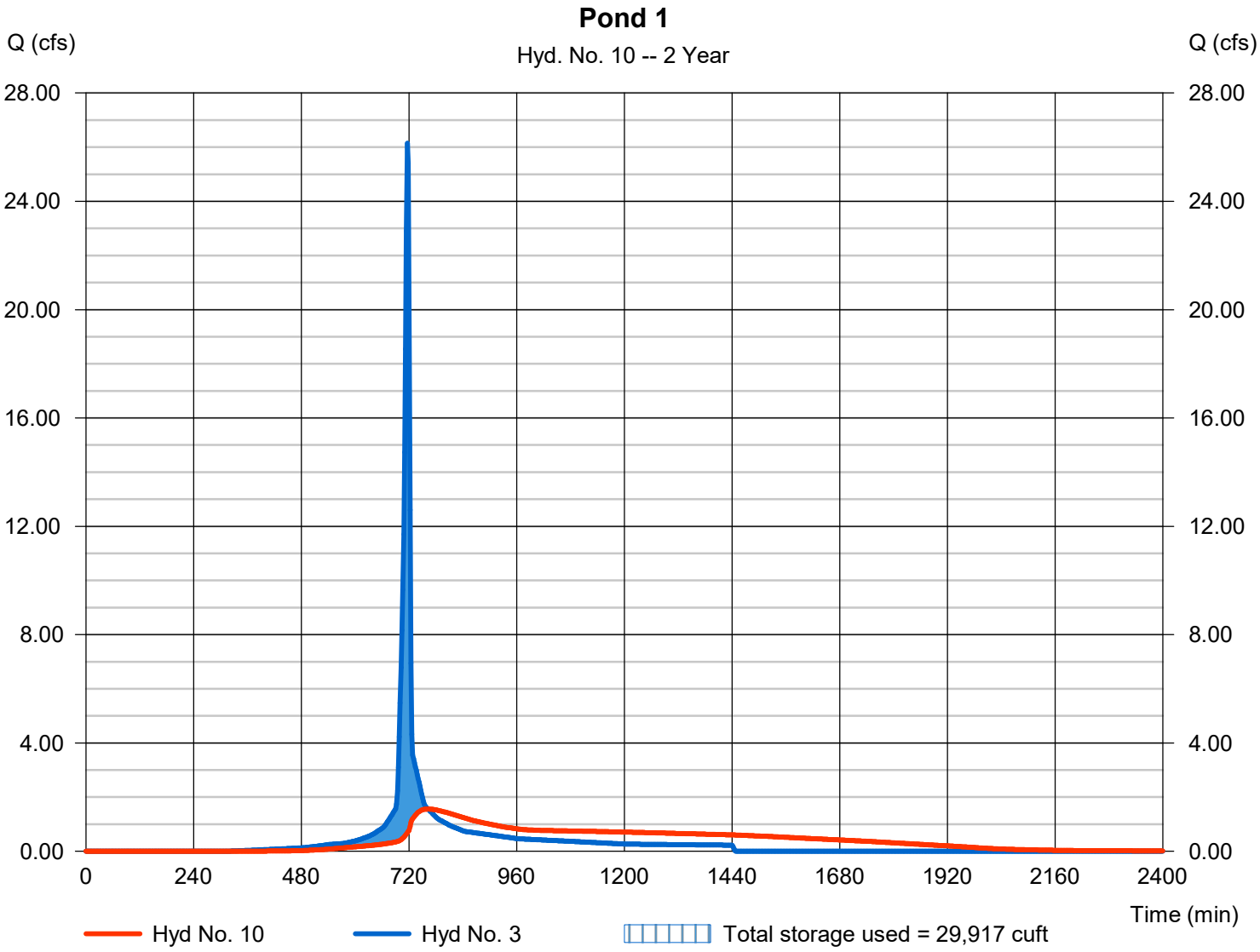
Hydrograph Report

Hyd. No. 10

Pond 1

Hydrograph type	=	Reservoir	Peak discharge	=	1.557 cfs
Storm frequency	=	2 yrs	Time to peak	=	762 min
Time interval	=	2 min	Hyd. volume	=	54,492 cuft
Inflow hyd. No.	=	3 - Area to Pond 1	Max. Elevation	=	486.33 ft
Reservoir name	=	Pond 1	Max. Storage	=	29,917 cuft

Storage Indication method used.



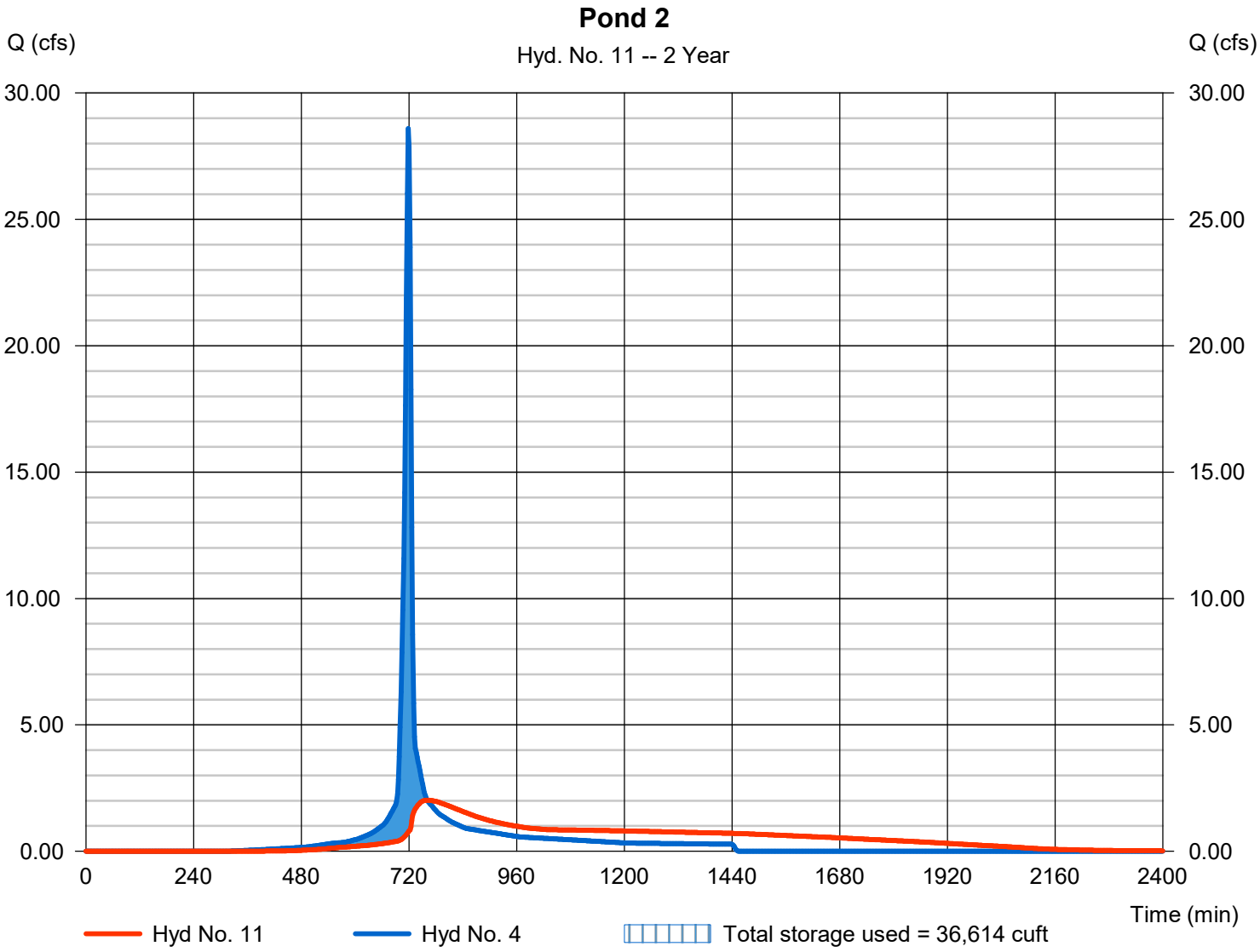
Hydrograph Report

Hyd. No. 11

Pond 2

Hydrograph type	=	Reservoir	Peak discharge	=	2.020 cfs
Storm frequency	=	2 yrs	Time to peak	=	760 min
Time interval	=	2 min	Hyd. volume	=	67,000 cuft
Inflow hyd. No.	=	4 - Area to Pond 2	Max. Elevation	=	491.26 ft
Reservoir name	=	Pond 2	Max. Storage	=	36,614 cuft

Storage Indication method used.

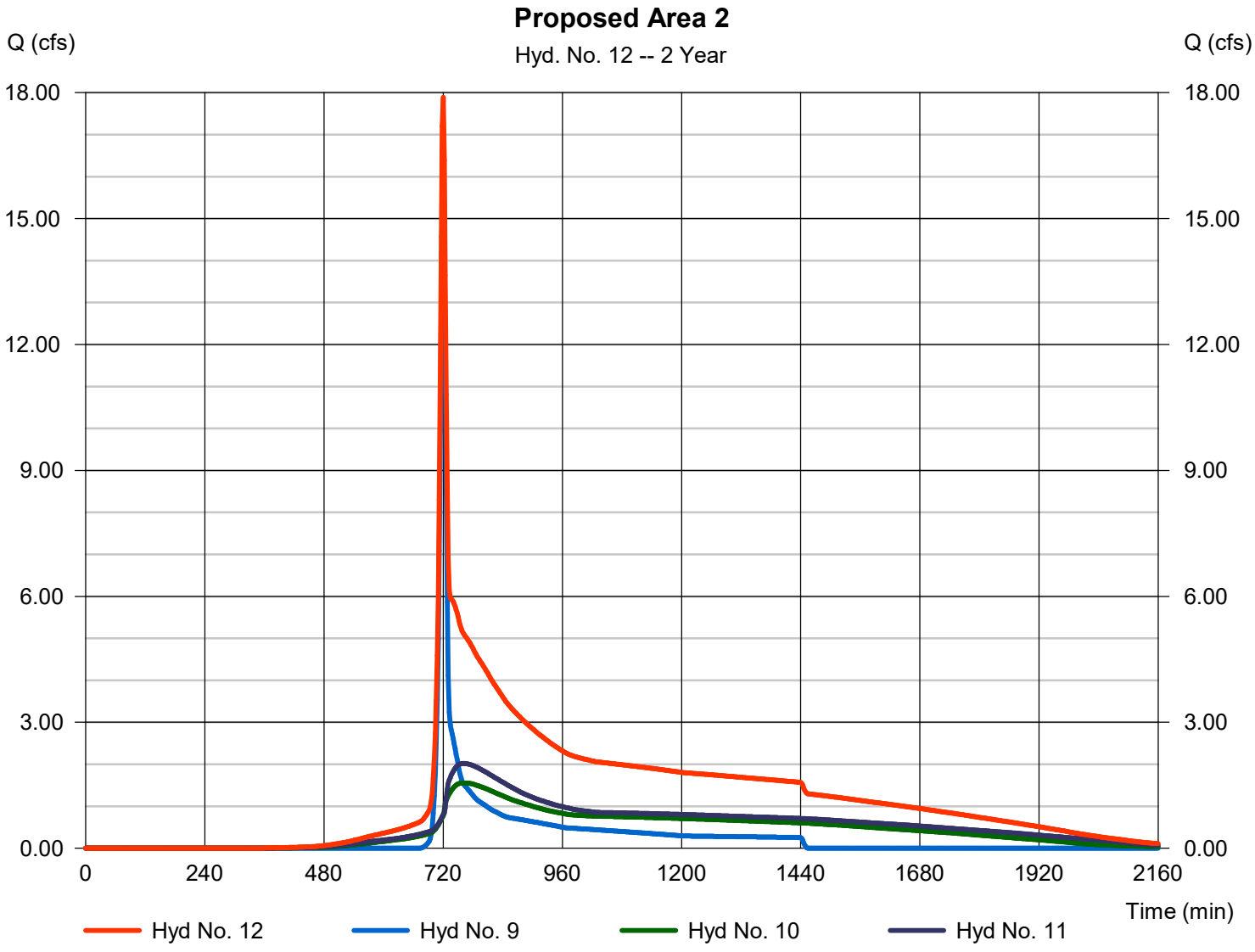


Hydrograph Report

Hyd. No. 12

Proposed Area 2

Hydrograph type	= Combine	Peak discharge	= 17.89 cfs
Storm frequency	= 2 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 159,857 cuft
Inflow hyds.	= 9, 10, 11	Contrib. drain. area	= 11.020 ac



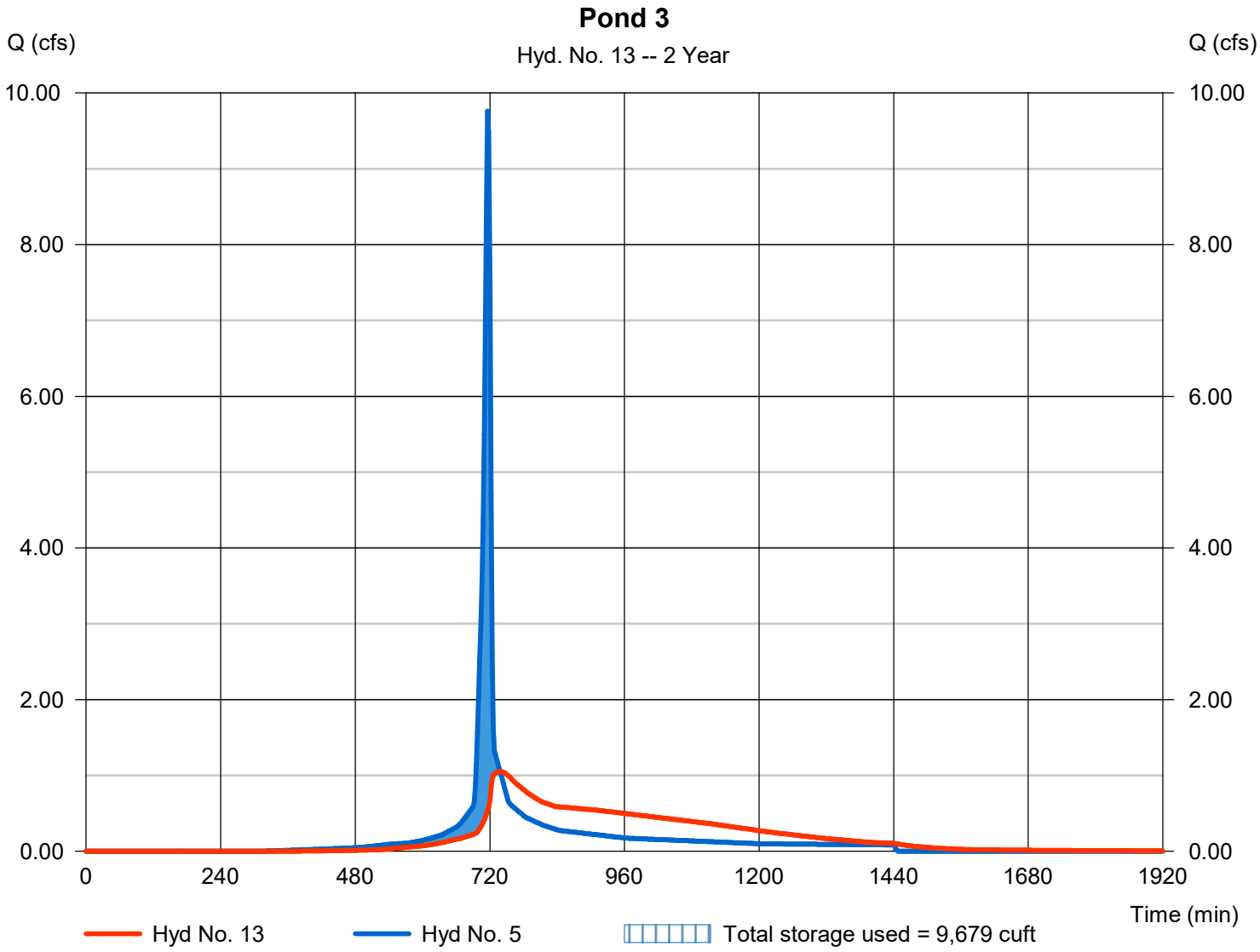
Hydrograph Report

Hyd. No. 13

Pond 3

Hydrograph type	=	Reservoir	Peak discharge	=	1.051 cfs
Storm frequency	=	2 yrs	Time to peak	=	738 min
Time interval	=	2 min	Hyd. volume	=	20,338 cuft
Inflow hyd. No.	=	5 - Area to Pond 3	Max. Elevation	=	508.70 ft
Reservoir name	=	Pond 3	Max. Storage	=	9,679 cuft

Storage Indication method used.



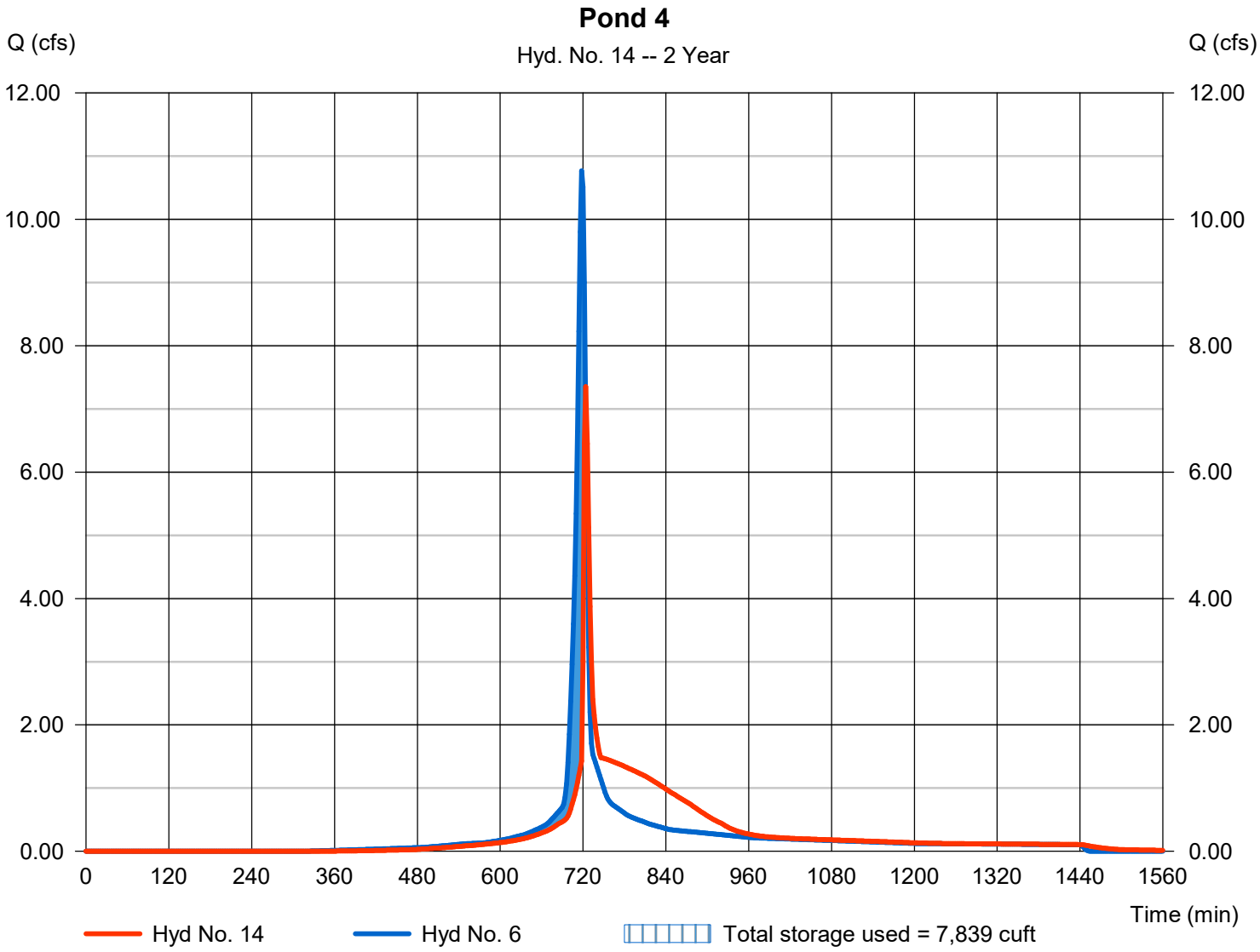
Hydrograph Report

Hyd. No. 14

Pond 4

Hydrograph type	=	Reservoir	Peak discharge	=	7.354 cfs
Storm frequency	=	2 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	25,235 cuft
Inflow hyd. No.	=	6 - Area to Pond 4	Max. Elevation	=	511.34 ft
Reservoir name	=	Pond 4	Max. Storage	=	7,839 cuft

Storage Indication method used.



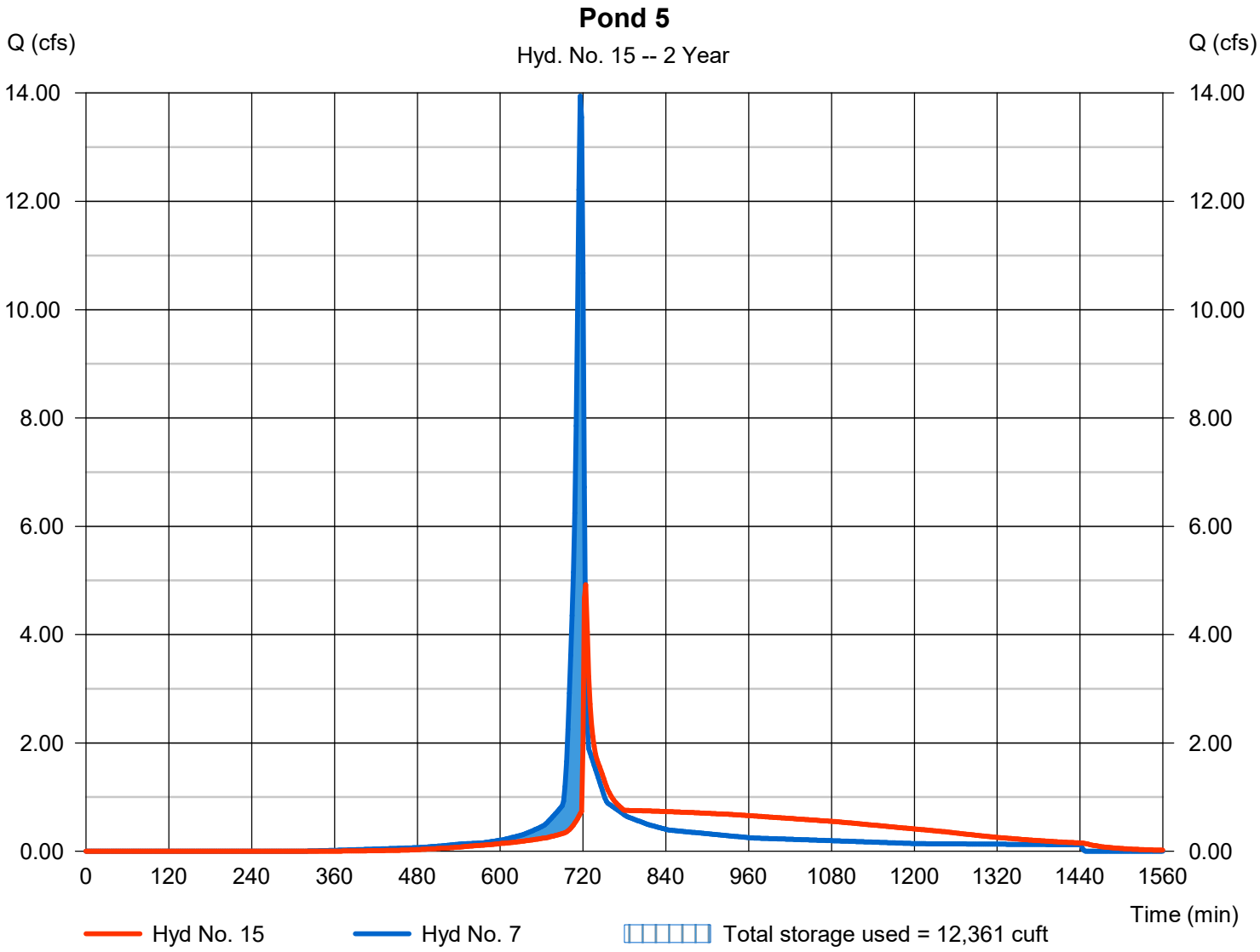
Hydrograph Report

Hyd. No. 15

Pond 5

Hydrograph type	= Reservoir	Peak discharge	= 4.919 cfs
Storm frequency	= 2 yrs	Time to peak	= 724 min
Time interval	= 2 min	Hyd. volume	= 29,065 cuft
Inflow hyd. No.	= 7 - Area to Pond 5	Max. Elevation	= 501.86 ft
Reservoir name	= Pond 5	Max. Storage	= 12,361 cuft

Storage Indication method used.

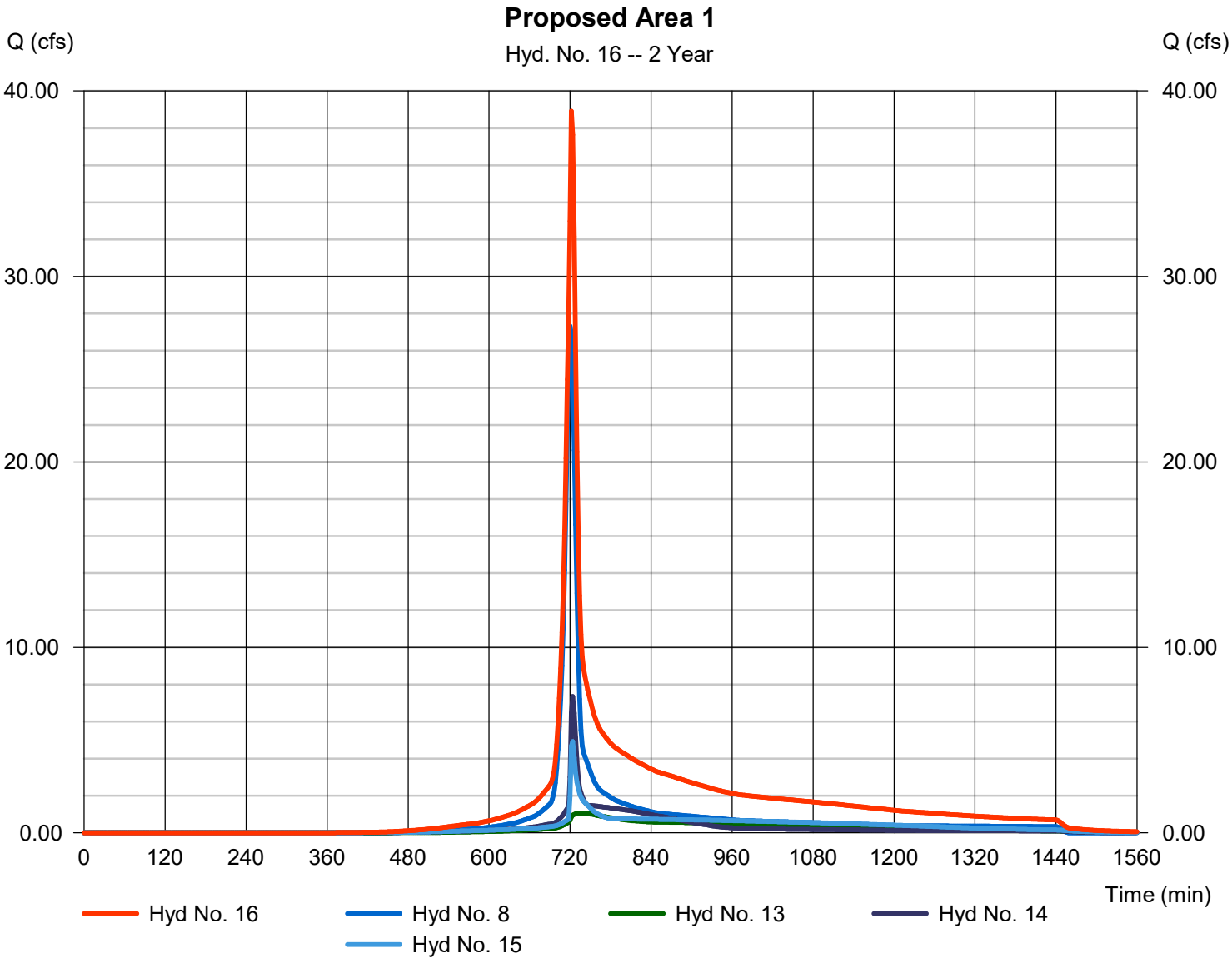


Hydrograph Report

Hyd. No. 16

Proposed Area 1

Hydrograph type	= Combine	Peak discharge	= 38.91 cfs
Storm frequency	= 2 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 145,550 cuft
Inflow hyds.	= 8, 13, 14, 15	Contrib. drain. area	= 9.730 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

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	61.77	2	720	160,235	------	------	------	Exisitng Area 1
2	SCS Runoff	53.39	2	722	140,581	------	------	------	Existing Area 2
3	SCS Runoff	33.35	2	716	70,549	------	------	------	Area to Pond 1
4	SCS Runoff	36.54	2	718	86,735	------	------	------	Area to Pond 2
5	SCS Runoff	12.45	2	716	26,338	------	------	------	Area to Pond 3
6	SCS Runoff	13.76	2	718	32,665	------	------	------	Area to Pond 4
7	SCS Runoff	17.79	2	716	37,626	------	------	------	Area to Pond 5
8	SCS Runoff	36.33	2	720	94,748	------	------	------	Bypass for Area 1
9	SCS Runoff	24.97	2	720	57,505	------	------	------	Bypass for Area 2
10	Reservoir	3.408	2	740	70,526	3	487.02	36,596	Pond 1
11	Reservoir	4.214	2	742	86,713	4	492.06	44,928	Pond 2
12	Combine	28.47	2	720	214,744	9, 10, 11	------	------	Proposed Area 2
13	Reservoir	2.092	2	726	26,324	5	509.20	12,087	Pond 3
14	Reservoir	11.90	2	722	32,659	6	511.50	8,443	Pond 4
15	Reservoir	12.18	2	720	37,617	7	502.12	13,709	Pond 5
16	Combine	61.22	2	720	191,347	8, 13, 14, 15	------	------	Proposed Area 1

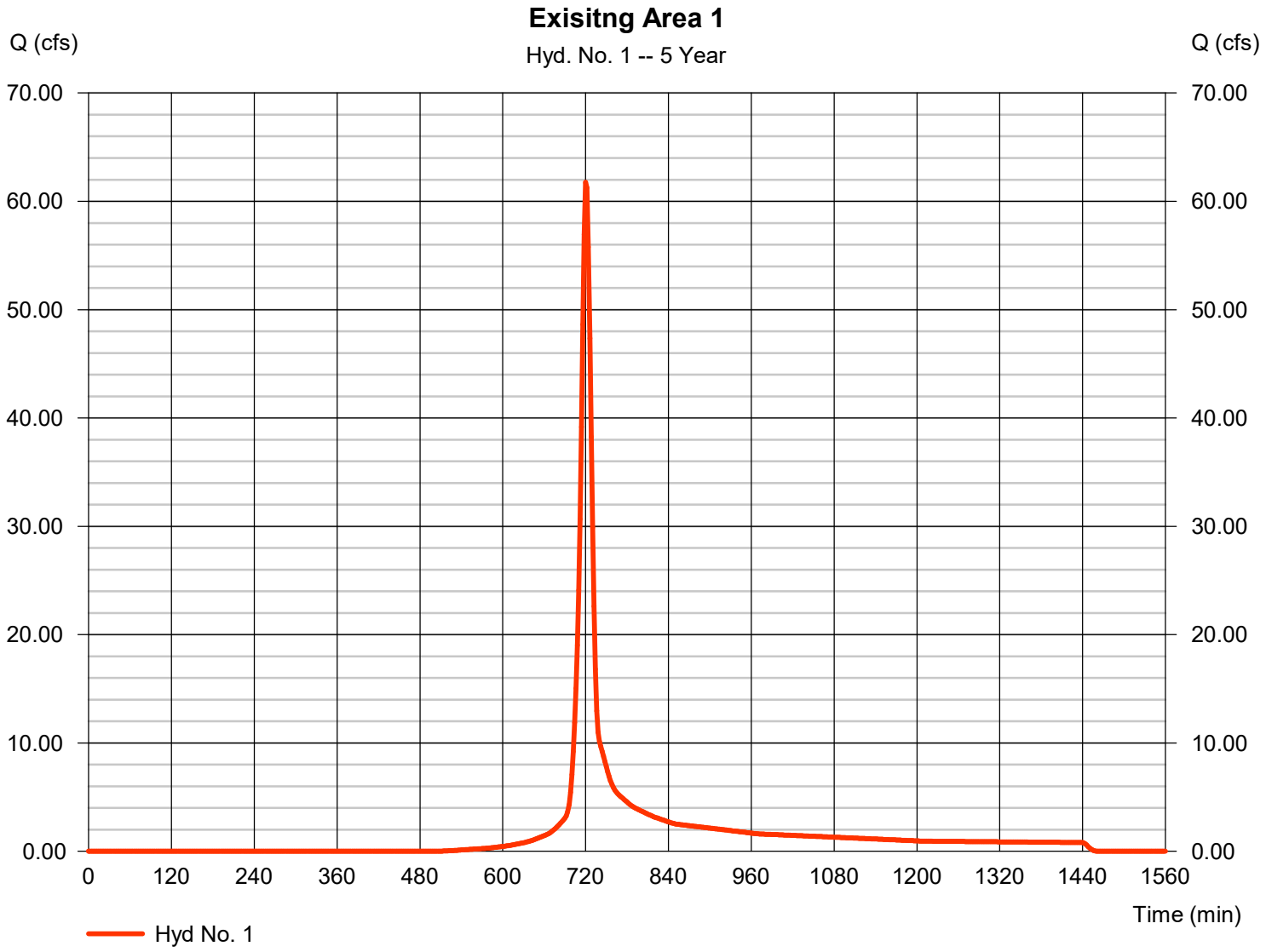
Hydrograph Report

Hyd. No. 1

Exisitng Area 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	61.77 cfs
Storm frequency	=	5 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	160,235 cuft
Drainage area	=	20.440 ac	Curve number	=	79*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	13.20 min
Total precip.	=	4.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(20.442 x 79)] / 20.440



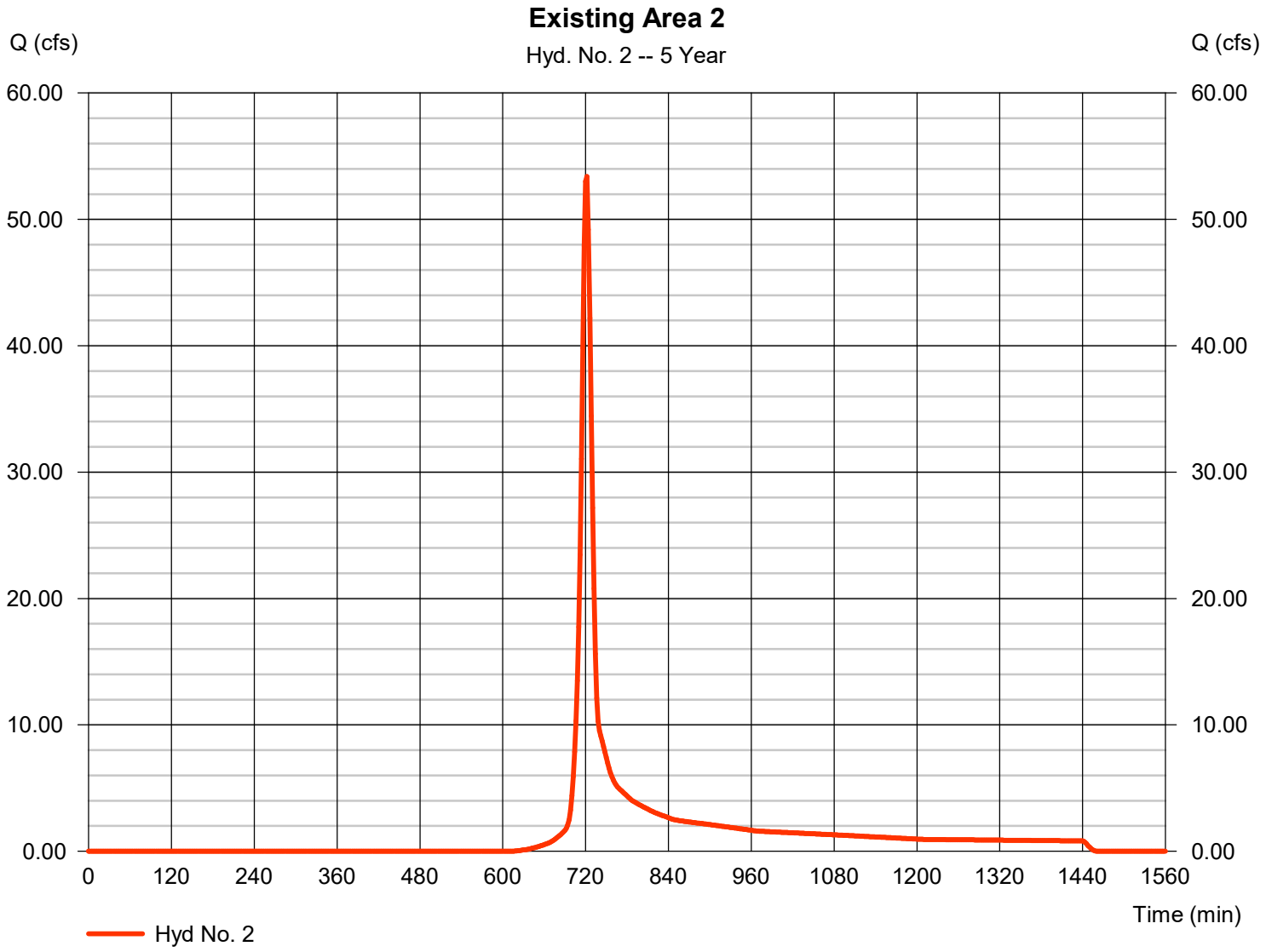
Hydrograph Report

Hyd. No. 2

Existing Area 2

Hydrograph type	= SCS Runoff	Peak discharge	= 53.39 cfs
Storm frequency	= 5 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 140,581 cuft
Drainage area	= 23.870 ac	Curve number	= 72*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 10.10 min
Total precip.	= 4.16 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.978 x 49) + (1.088 x 69) + (17.804 x 79)] / 23.870



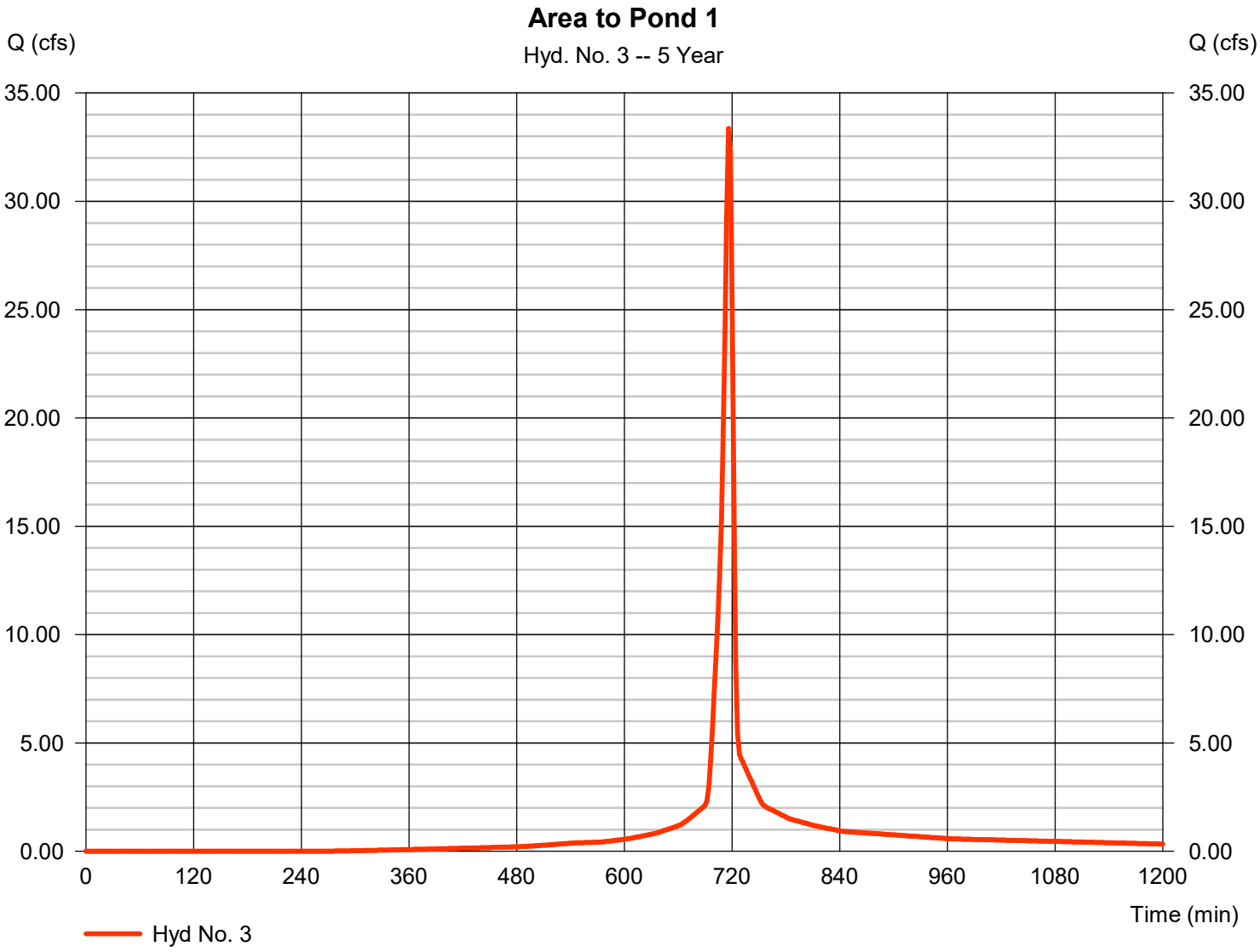
Hydrograph Report

Hyd. No. 3

Area to Pond 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	33.35 cfs
Storm frequency	=	5 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	70,549 cuft
Drainage area	=	6.750 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.050 x 98) + (2.700 x 79)] / 6.750



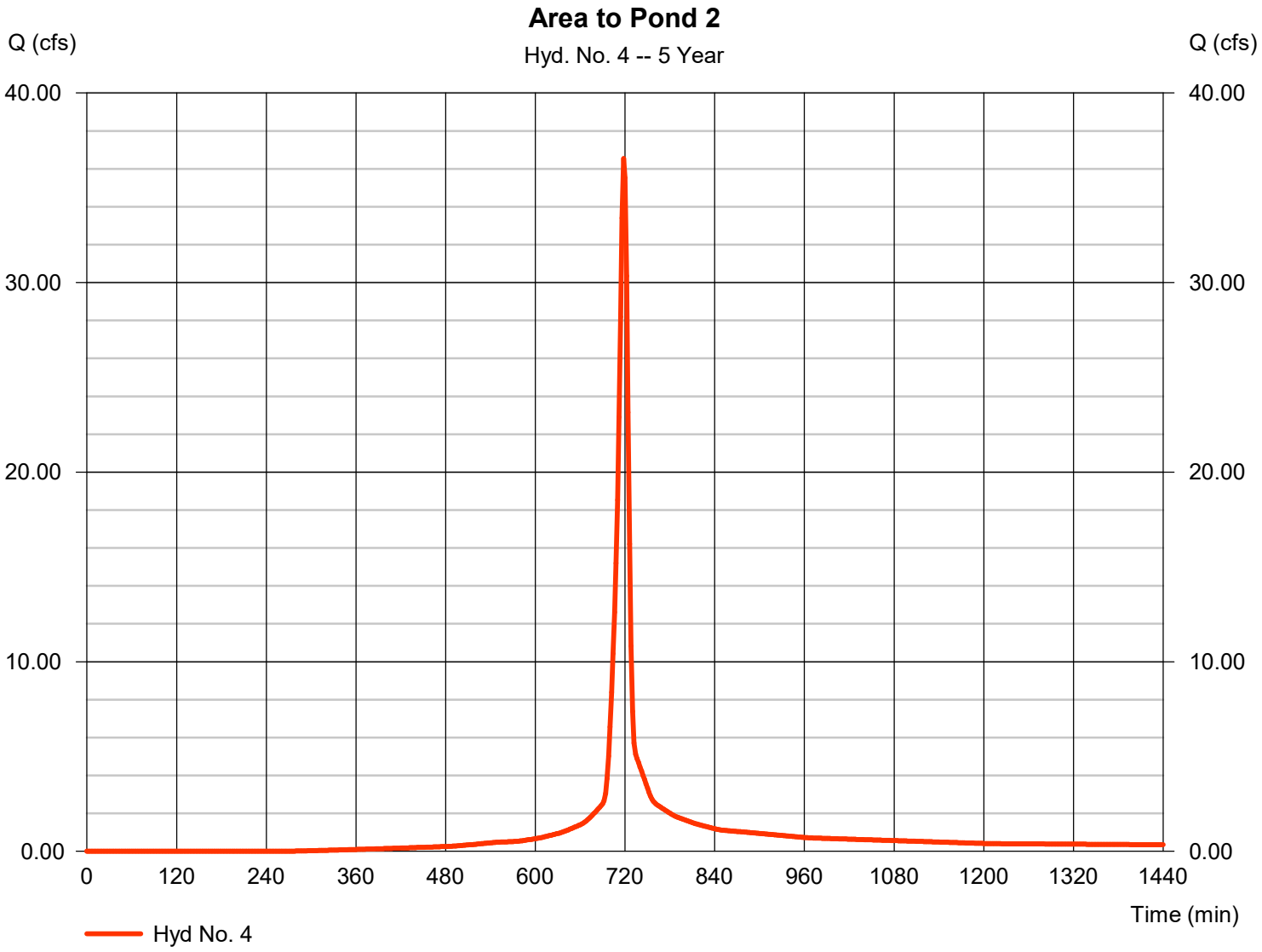
Hydrograph Report

Hyd. No. 4

Area to Pond 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	36.54 cfs
Storm frequency	=	5 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	86,735 cuft
Drainage area	=	7.780 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	8.00 min
Total precip.	=	4.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.670 x 98) + (3.110 x 79)] / 7.780



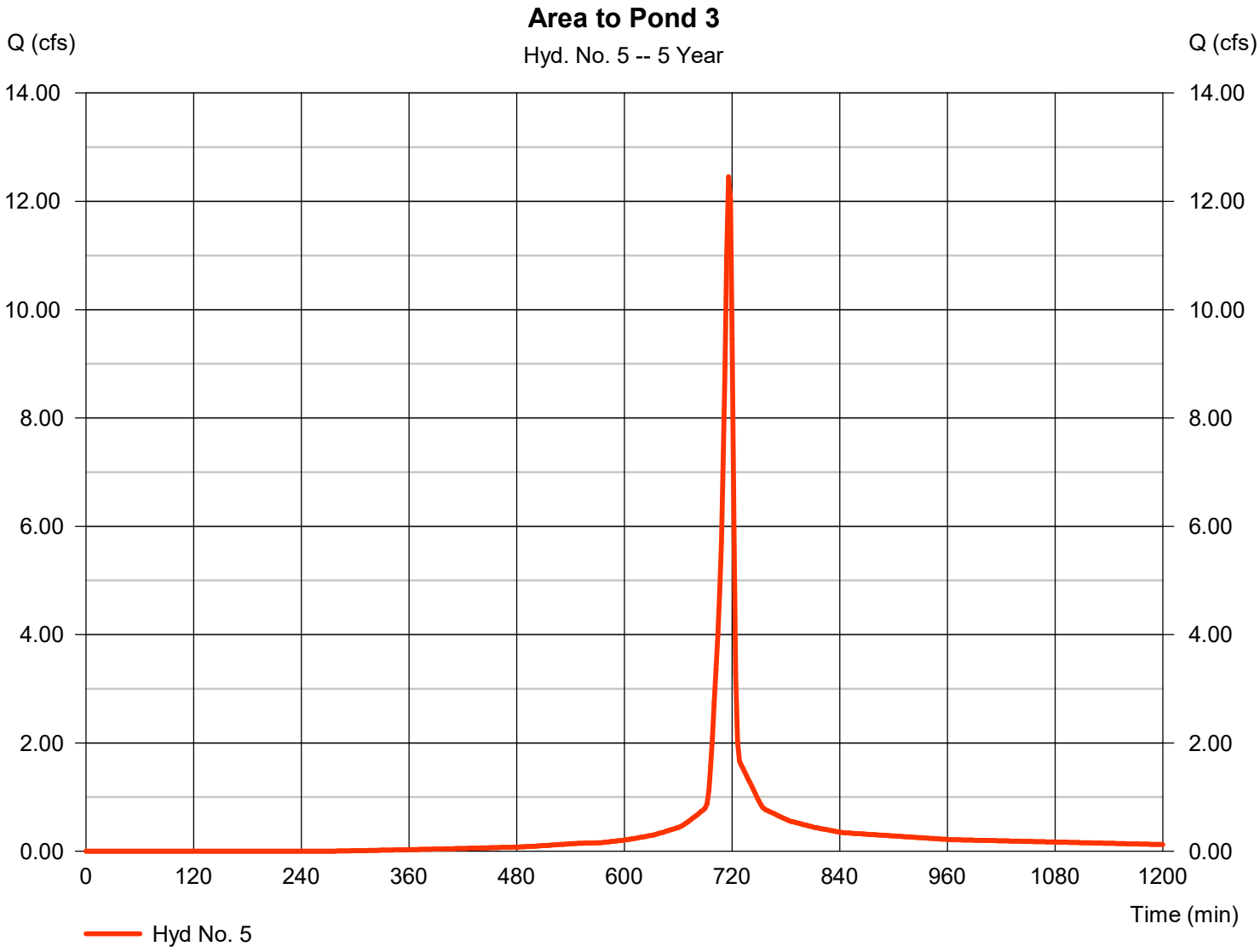
Hydrograph Report

Hyd. No. 5

Area to Pond 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	12.45 cfs
Storm frequency	=	5 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	26,338 cuft
Drainage area	=	2.520 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.510 x 98) + (1.010 x 79)] / 2.520



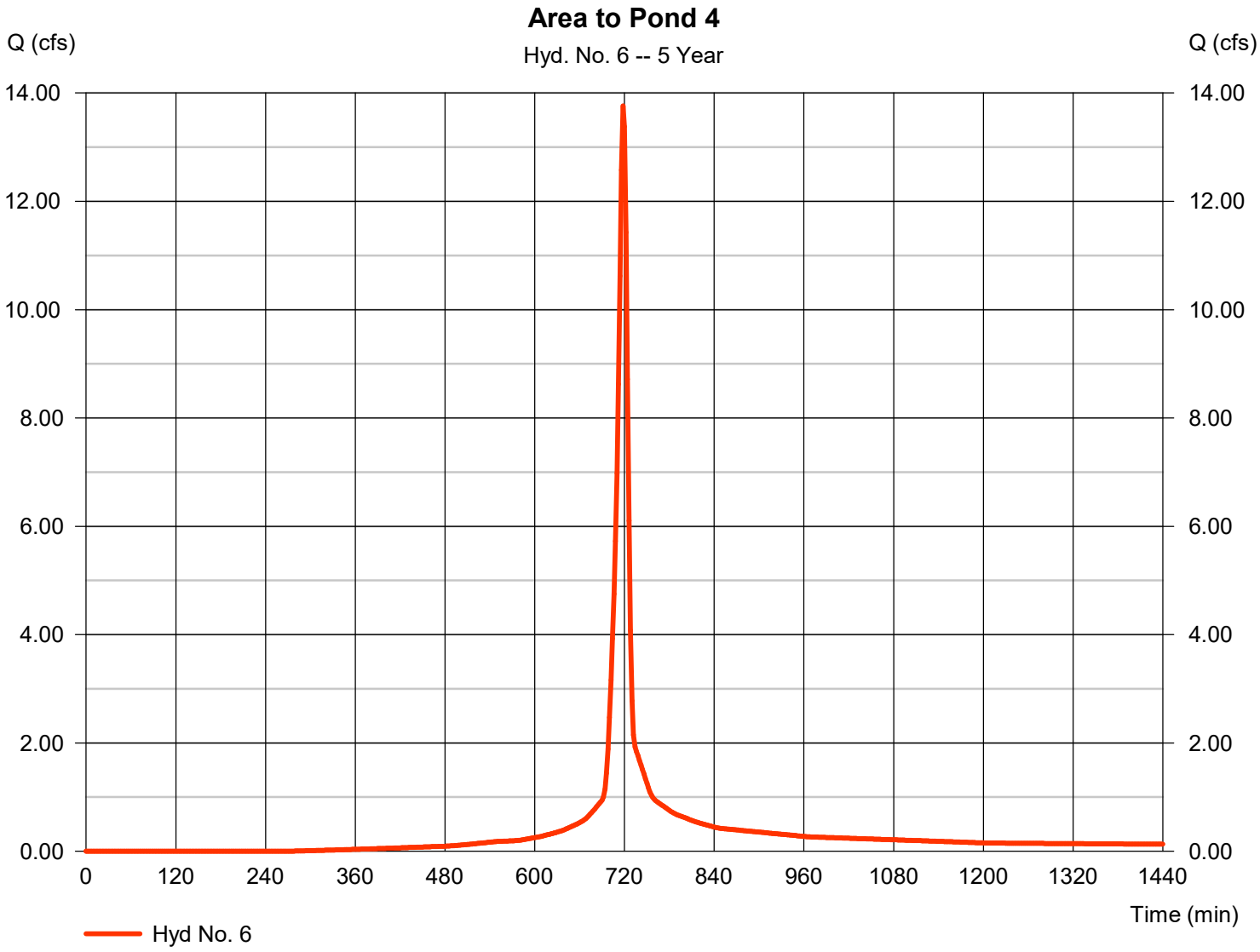
Hydrograph Report

Hyd. No. 6

Area to Pond 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	13.76 cfs
Storm frequency	=	5 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	32,665 cuft
Drainage area	=	2.930 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	7.80 min
Total precip.	=	4.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.760 x 98) + (1.172 x 79)] / 2.930



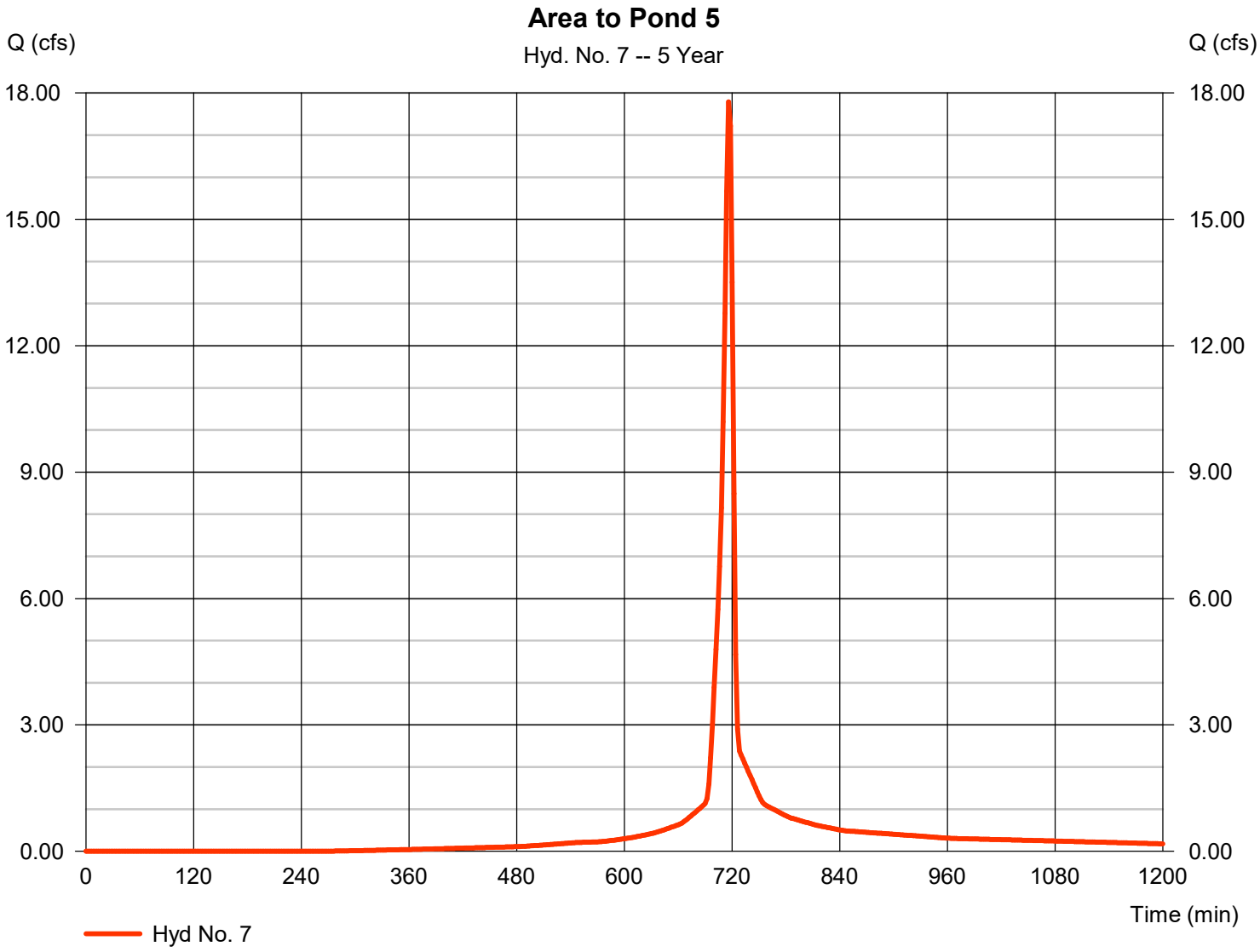
Hydrograph Report

Hyd. No. 7

Area to Pond 5

Hydrograph type	=	SCS Runoff	Peak discharge	=	17.79 cfs
Storm frequency	=	5 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	37,626 cuft
Drainage area	=	3.600 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.160 x 98) + (1.437 x 79)] / 3.600



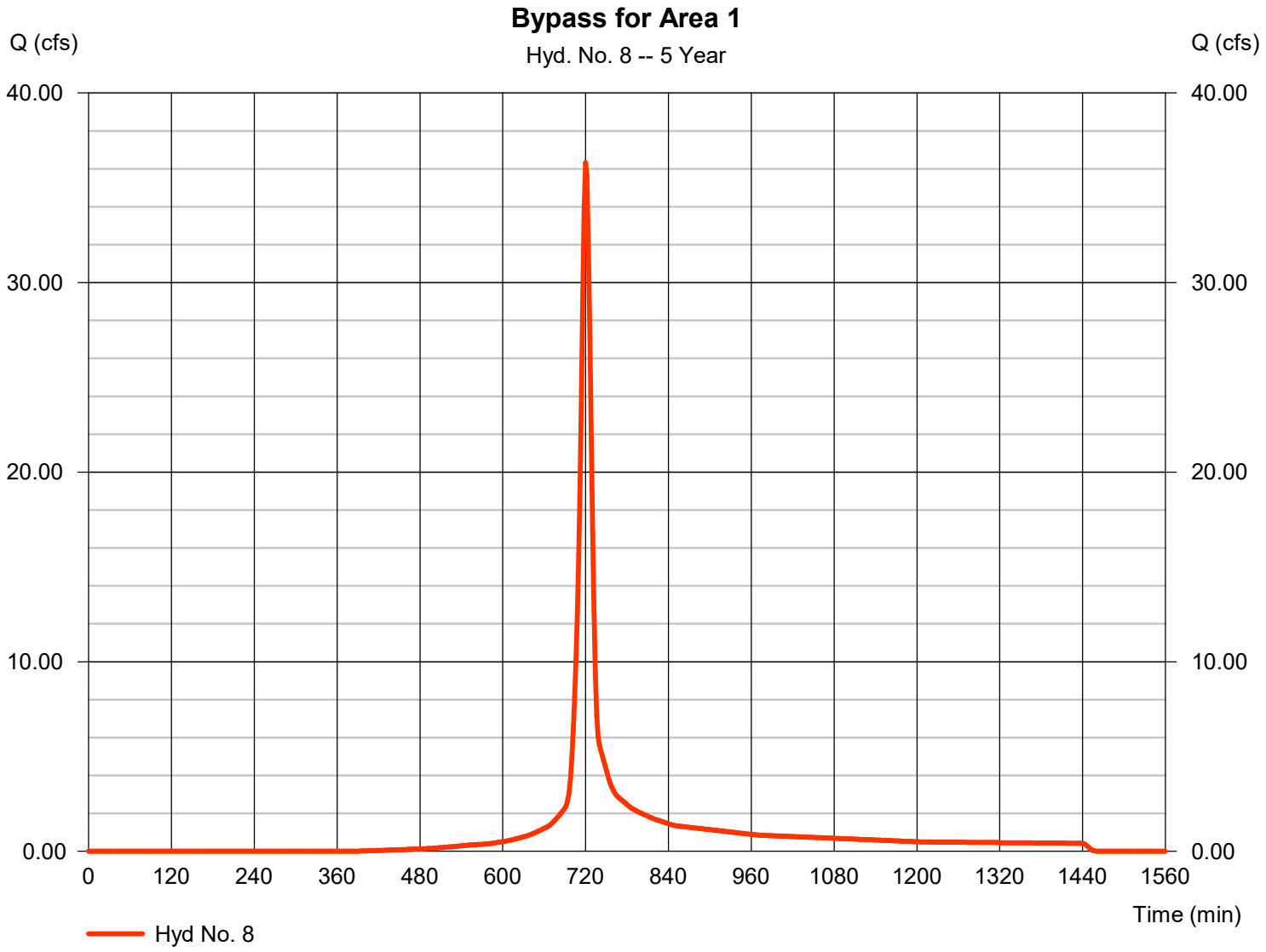
Hydrograph Report

Hyd. No. 8

Bypass for Area 1

Hydrograph type	= SCS Runoff	Peak discharge	= 36.33 cfs
Storm frequency	= 5 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 94,748 cuft
Drainage area	= 9.730 ac	Curve number	= 85*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 13.00 min
Total precip.	= 4.16 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(2.920 x 98) + (6.813 x 79)] / 9.730



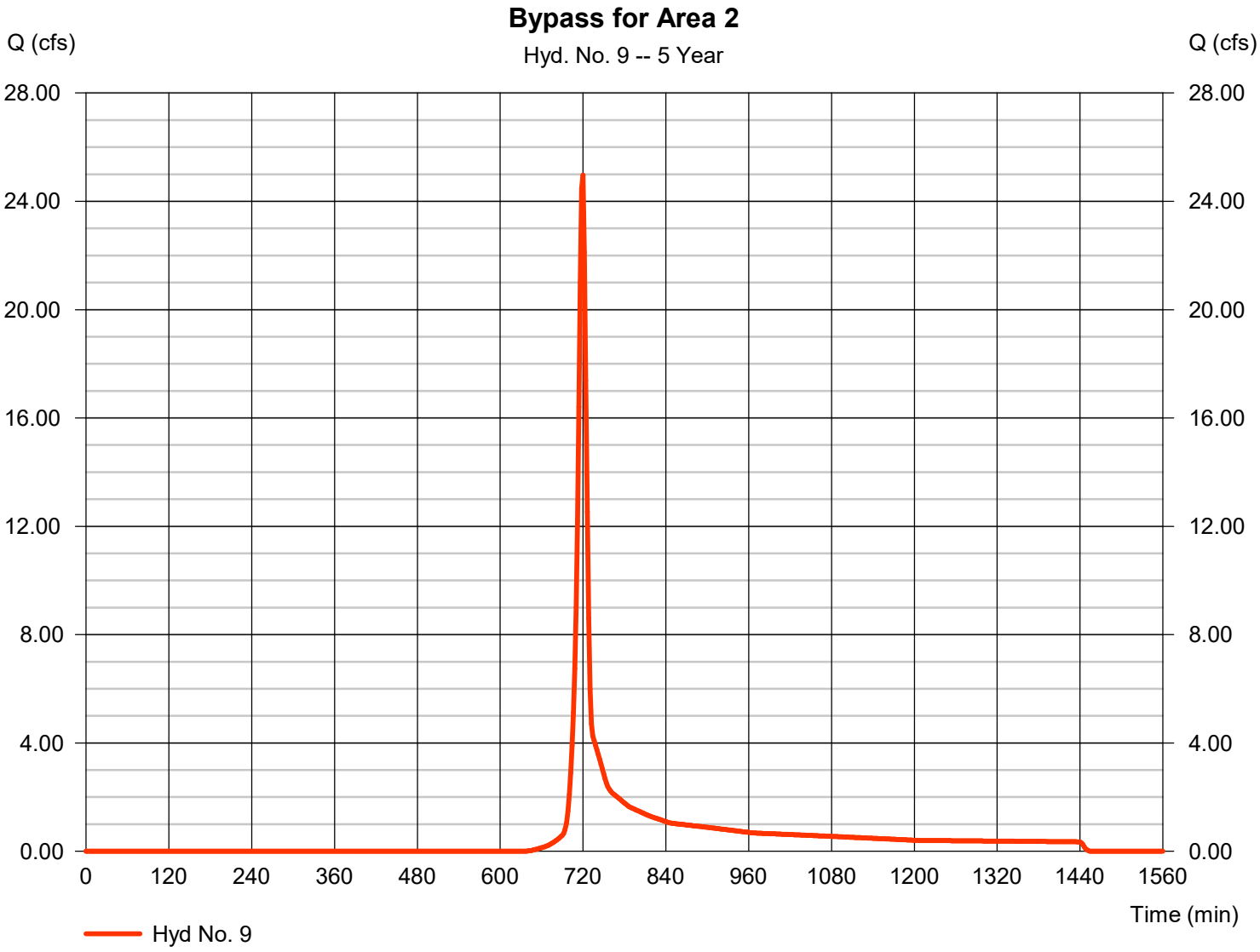
Hydrograph Report

Hyd. No. 9

Bypass for Area 2

Hydrograph type	= SCS Runoff	Peak discharge	= 24.97 cfs
Storm frequency	= 5 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 57,505 cuft
Drainage area	= 11.020 ac	Curve number	= 70*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 9.50 min
Total precip.	= 4.16 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(2.970 x 98) + (4.980 x 49) + (1.090 x 69) + (1.980 x 79)] / 11.020



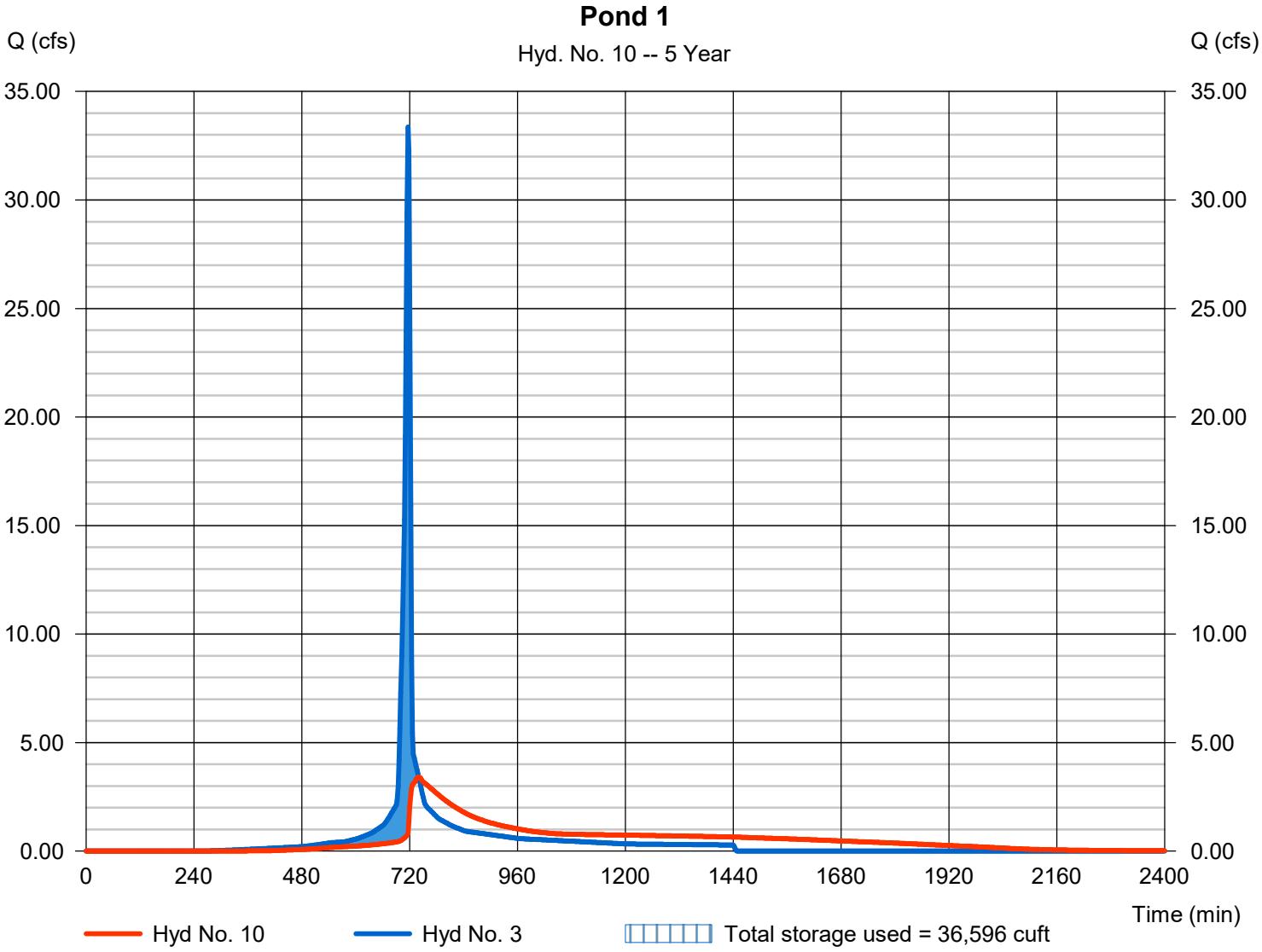
Hydrograph Report

Hyd. No. 10

Pond 1

Hydrograph type	=	Reservoir	Peak discharge	=	3.408 cfs
Storm frequency	=	5 yrs	Time to peak	=	740 min
Time interval	=	2 min	Hyd. volume	=	70,526 cuft
Inflow hyd. No.	=	3 - Area to Pond 1	Max. Elevation	=	487.02 ft
Reservoir name	=	Pond 1	Max. Storage	=	36,596 cuft

Storage Indication method used.



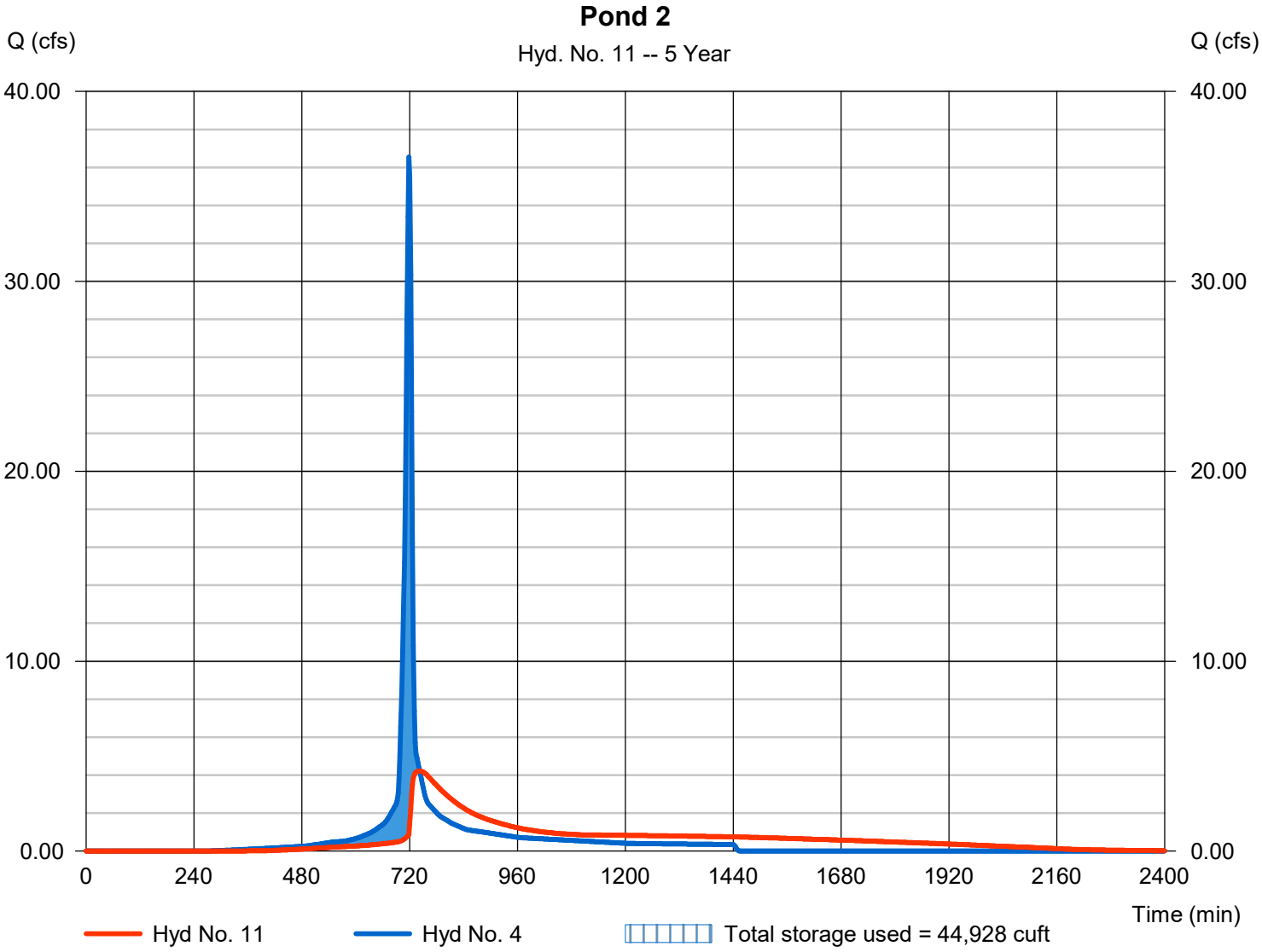
Hydrograph Report

Hyd. No. 11

Pond 2

Hydrograph type	=	Reservoir	Peak discharge	=	4.214 cfs
Storm frequency	=	5 yrs	Time to peak	=	742 min
Time interval	=	2 min	Hyd. volume	=	86,713 cuft
Inflow hyd. No.	=	4 - Area to Pond 2	Max. Elevation	=	492.06 ft
Reservoir name	=	Pond 2	Max. Storage	=	44,928 cuft

Storage Indication method used.

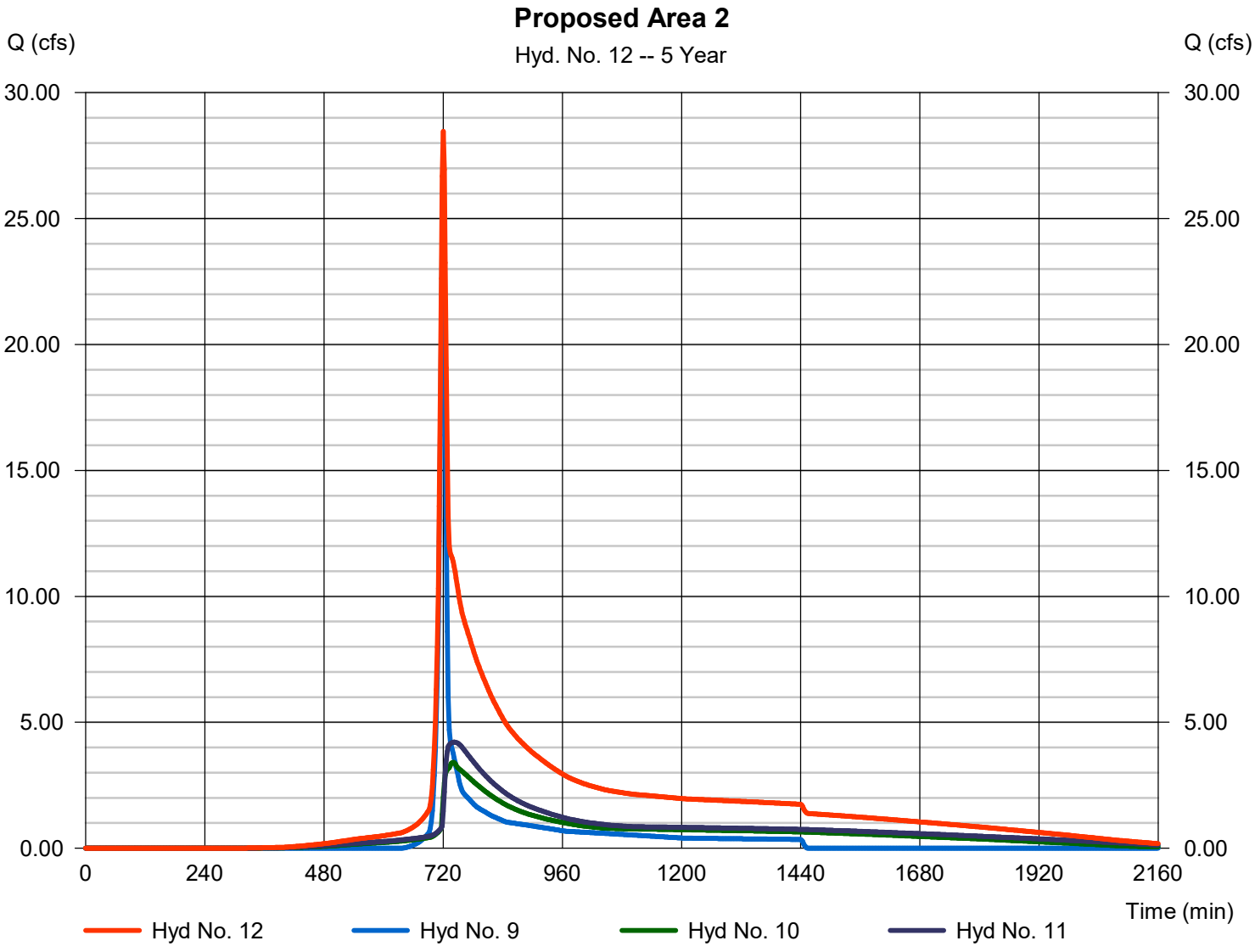


Hydrograph Report

Hyd. No. 12

Proposed Area 2

Hydrograph type	= Combine	Peak discharge	= 28.47 cfs
Storm frequency	= 5 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 214,744 cuft
Inflow hyds.	= 9, 10, 11	Contrib. drain. area	= 11.020 ac



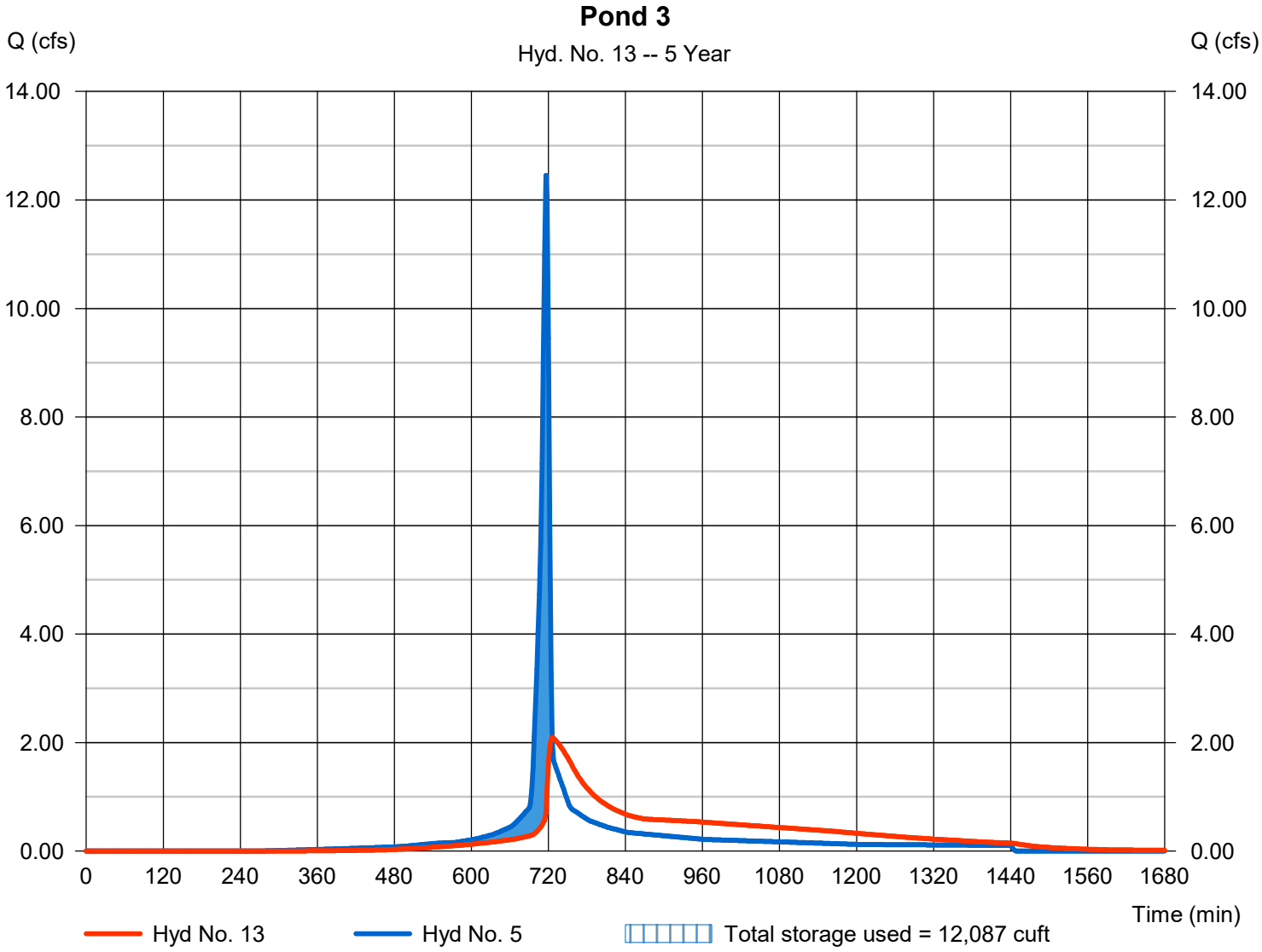
Hydrograph Report

Hyd. No. 13

Pond 3

Hydrograph type	=	Reservoir	Peak discharge	=	2.092 cfs
Storm frequency	=	5 yrs	Time to peak	=	726 min
Time interval	=	2 min	Hyd. volume	=	26,324 cuft
Inflow hyd. No.	=	5 - Area to Pond 3	Max. Elevation	=	509.20 ft
Reservoir name	=	Pond 3	Max. Storage	=	12,087 cuft

Storage Indication method used.



Hydrograph Report

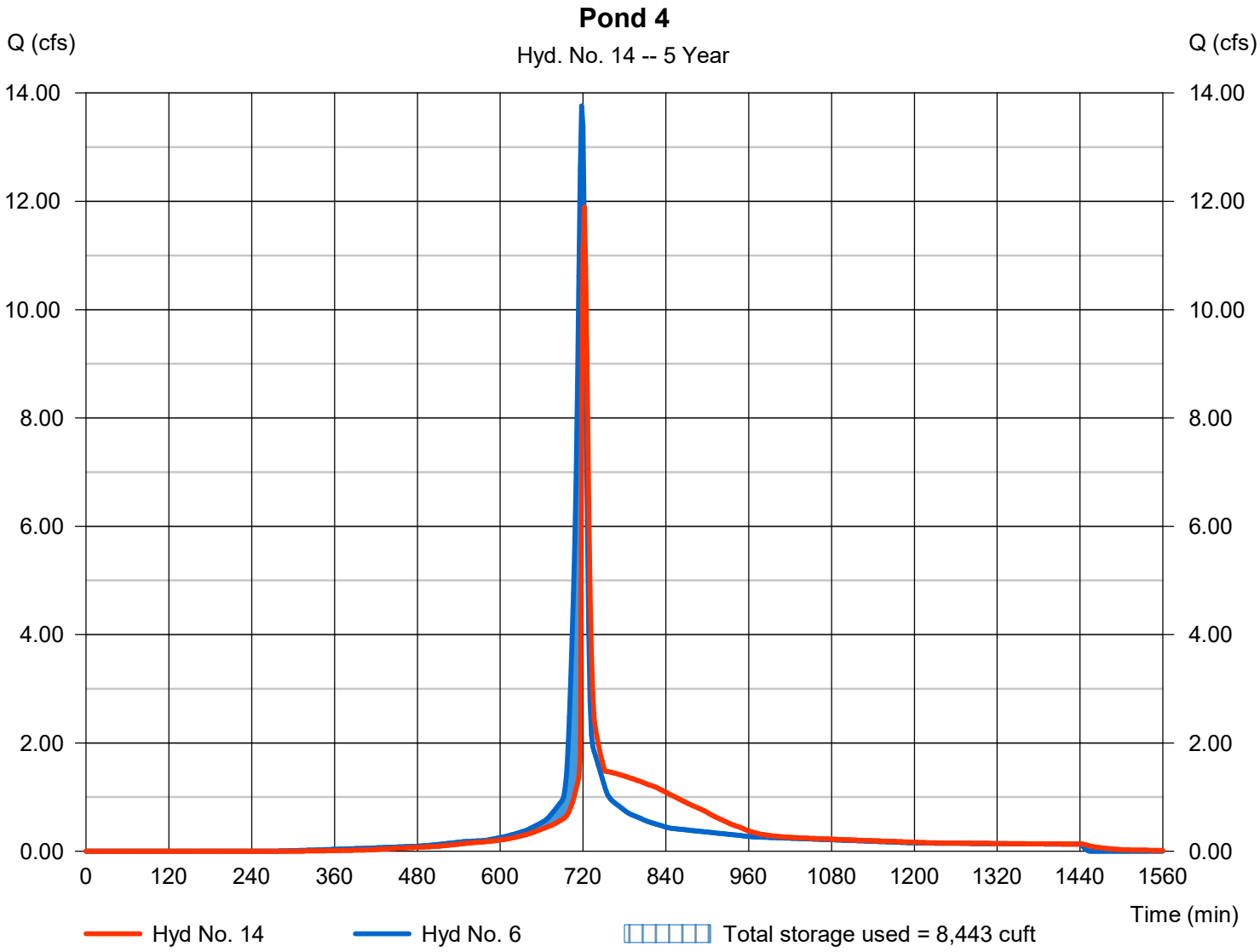
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Thursday, 05 / 21 / 2026

Hyd. No. 14

Pond 4

Hydrograph type	= Reservoir	Peak discharge	= 11.90 cfs
Storm frequency	= 5 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 32,659 cuft
Inflow hyd. No.	= 6 - Area to Pond 4	Max. Elevation	= 511.50 ft
Reservoir name	= Pond 4	Max. Storage	= 8,443 cuft

Storage Indication method used.



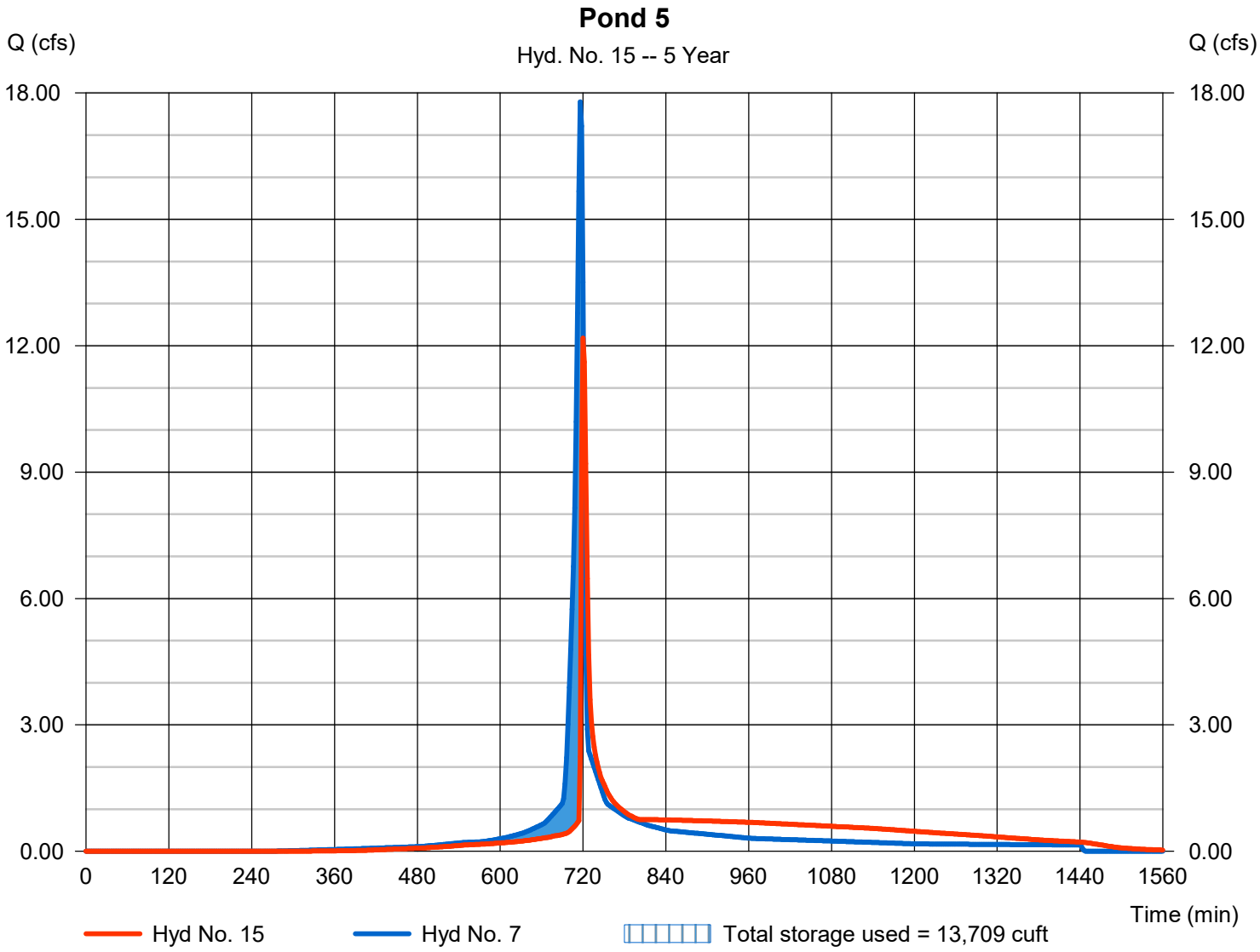
Hydrograph Report

Hyd. No. 15

Pond 5

Hydrograph type	=	Reservoir	Peak discharge	=	12.18 cfs
Storm frequency	=	5 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	37,617 cuft
Inflow hyd. No.	=	7 - Area to Pond 5	Max. Elevation	=	502.12 ft
Reservoir name	=	Pond 5	Max. Storage	=	13,709 cuft

Storage Indication method used.

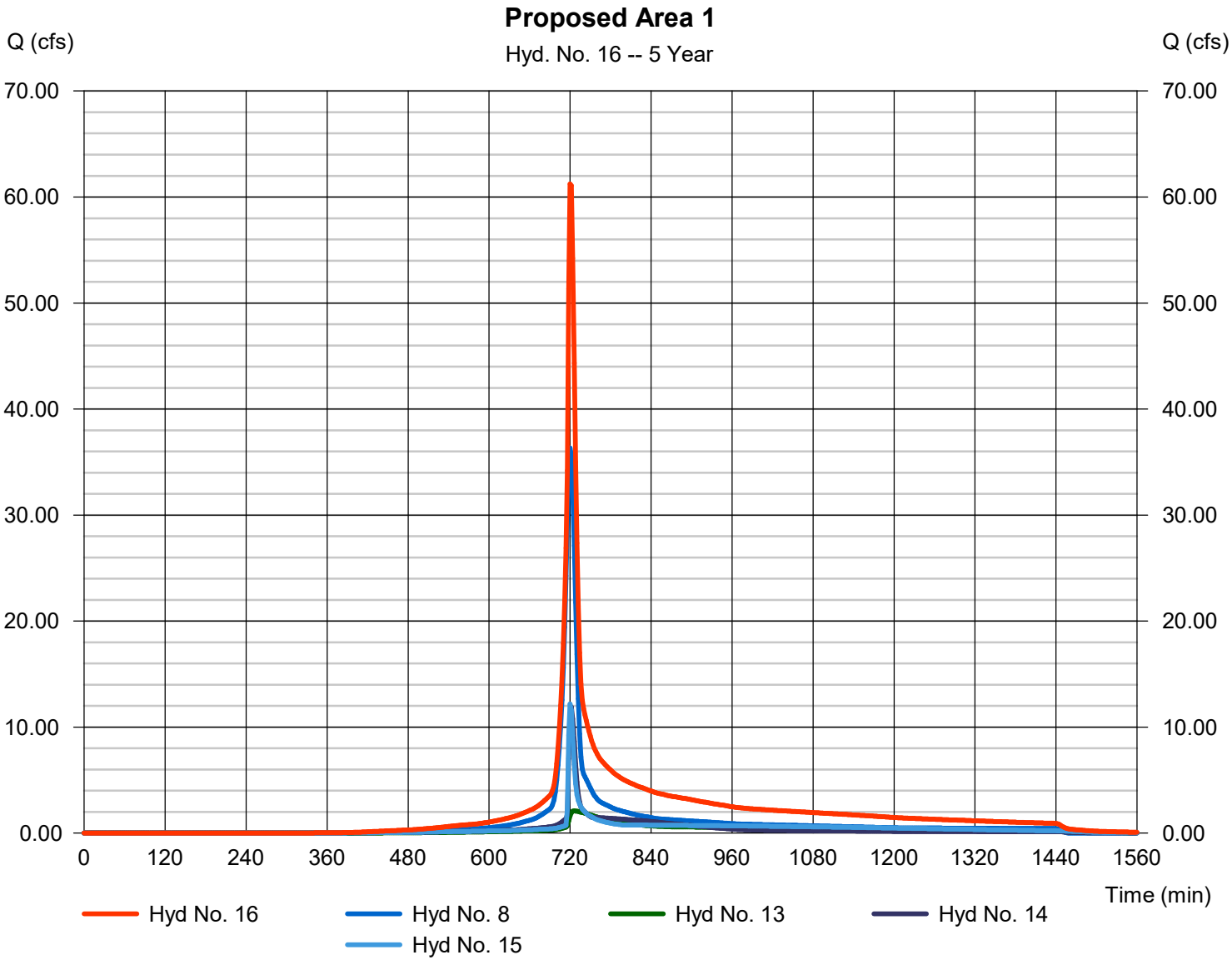


Hydrograph Report

Hyd. No. 16

Proposed Area 1

Hydrograph type	= Combine	Peak discharge	= 61.22 cfs
Storm frequency	= 5 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 191,347 cuft
Inflow hyds.	= 8, 13, 14, 15	Contrib. drain. area	= 9.730 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

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	76.87	2	720	199,302	------	------	------	Exisitng Area 1
2	SCS Runoff	69.04	2	722	180,703	------	------	------	Existing Area 2
3	SCS Runoff	39.28	2	716	83,955	------	------	------	Area to Pond 1
4	SCS Runoff	43.06	2	718	103,218	------	------	------	Area to Pond 2
5	SCS Runoff	14.66	2	716	31,343	------	------	------	Area to Pond 3
6	SCS Runoff	16.22	2	718	38,872	------	------	------	Area to Pond 4
7	SCS Runoff	20.95	2	716	44,776	------	------	------	Area to Pond 5
8	SCS Runoff	43.84	2	720	114,957	------	------	------	Bypass for Area 1
9	SCS Runoff	32.61	2	720	74,703	------	------	------	Bypass for Area 2
10	Reservoir	11.70	2	724	83,933	3	487.38	40,636	Pond 1
11	Reservoir	6.429	2	732	103,196	4	492.70	52,334	Pond 2
12	Combine	43.59	2	722	261,832	9, 10, 11	------	------	Proposed Area 2
13	Reservoir	3.090	2	726	31,329	5	509.57	14,081	Pond 3
14	Reservoir	13.78	2	722	38,866	6	511.66	9,001	Pond 4
15	Reservoir	15.31	2	720	44,767	7	502.31	14,773	Pond 5
16	Combine	75.30	2	720	229,920	8, 13, 14, 15	------	------	Proposed Area 1

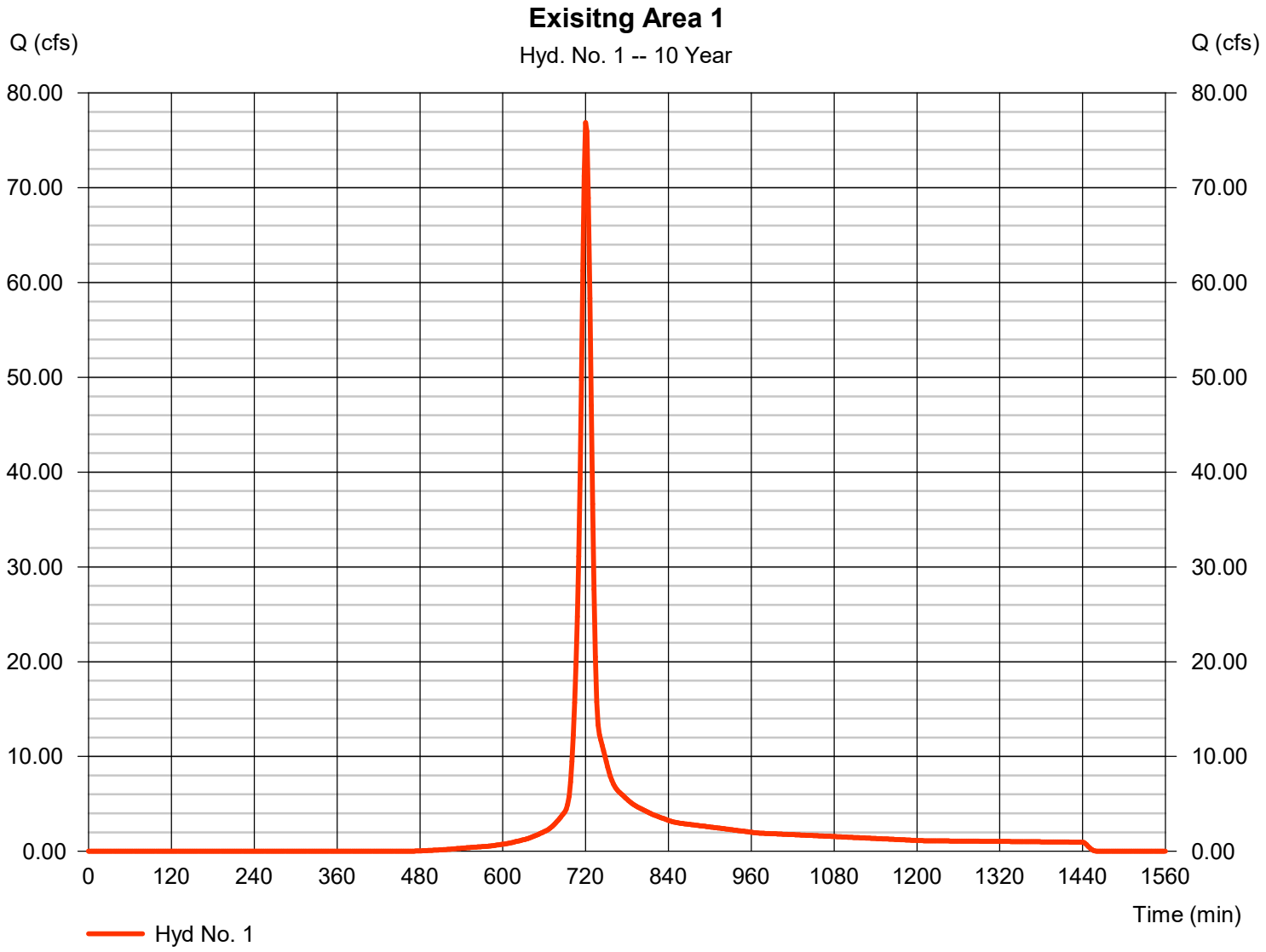
Hydrograph Report

Hyd. No. 1

Exisitng Area 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	76.87 cfs
Storm frequency	=	10 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	199,302 cuft
Drainage area	=	20.440 ac	Curve number	=	79*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	13.20 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(20.442 x 79)] / 20.440



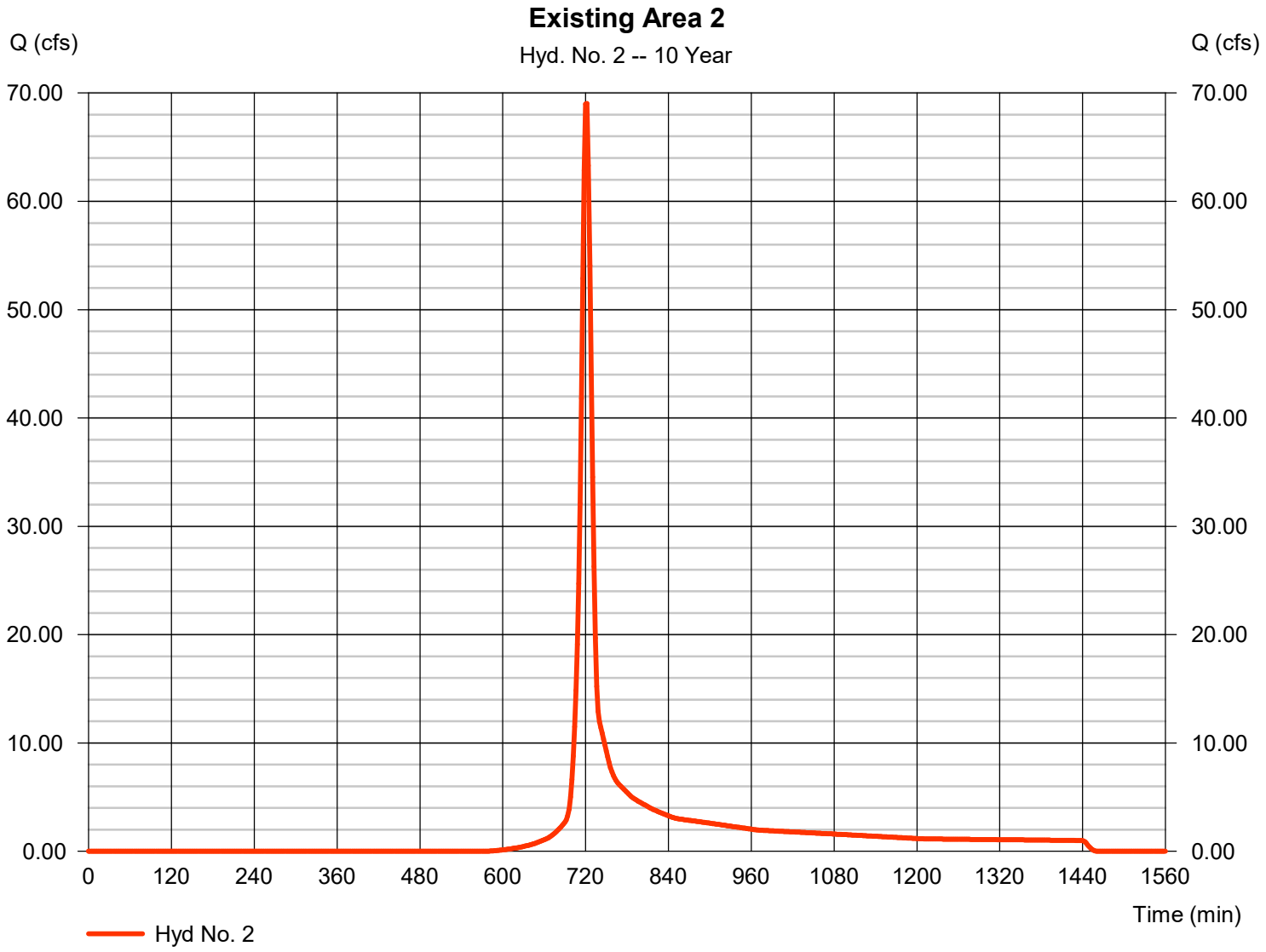
Hydrograph Report

Hyd. No. 2

Existing Area 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	69.04 cfs
Storm frequency	=	10 yrs	Time to peak	=	722 min
Time interval	=	2 min	Hyd. volume	=	180,703 cuft
Drainage area	=	23.870 ac	Curve number	=	72*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	10.10 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.978 x 49) + (1.088 x 69) + (17.804 x 79)] / 23.870



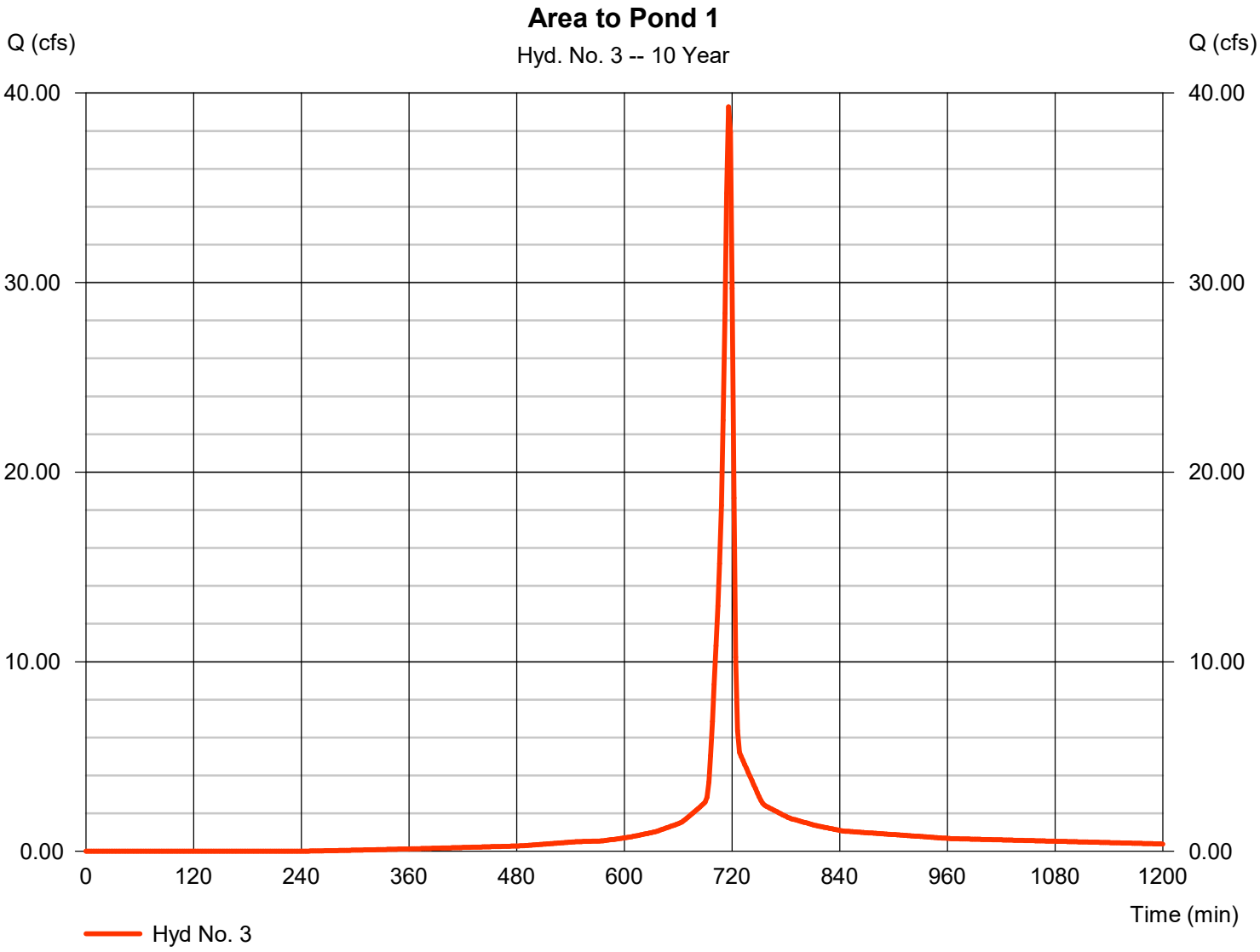
Hydrograph Report

Hyd. No. 3

Area to Pond 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	39.28 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	83,955 cuft
Drainage area	=	6.750 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.050 x 98) + (2.700 x 79)] / 6.750



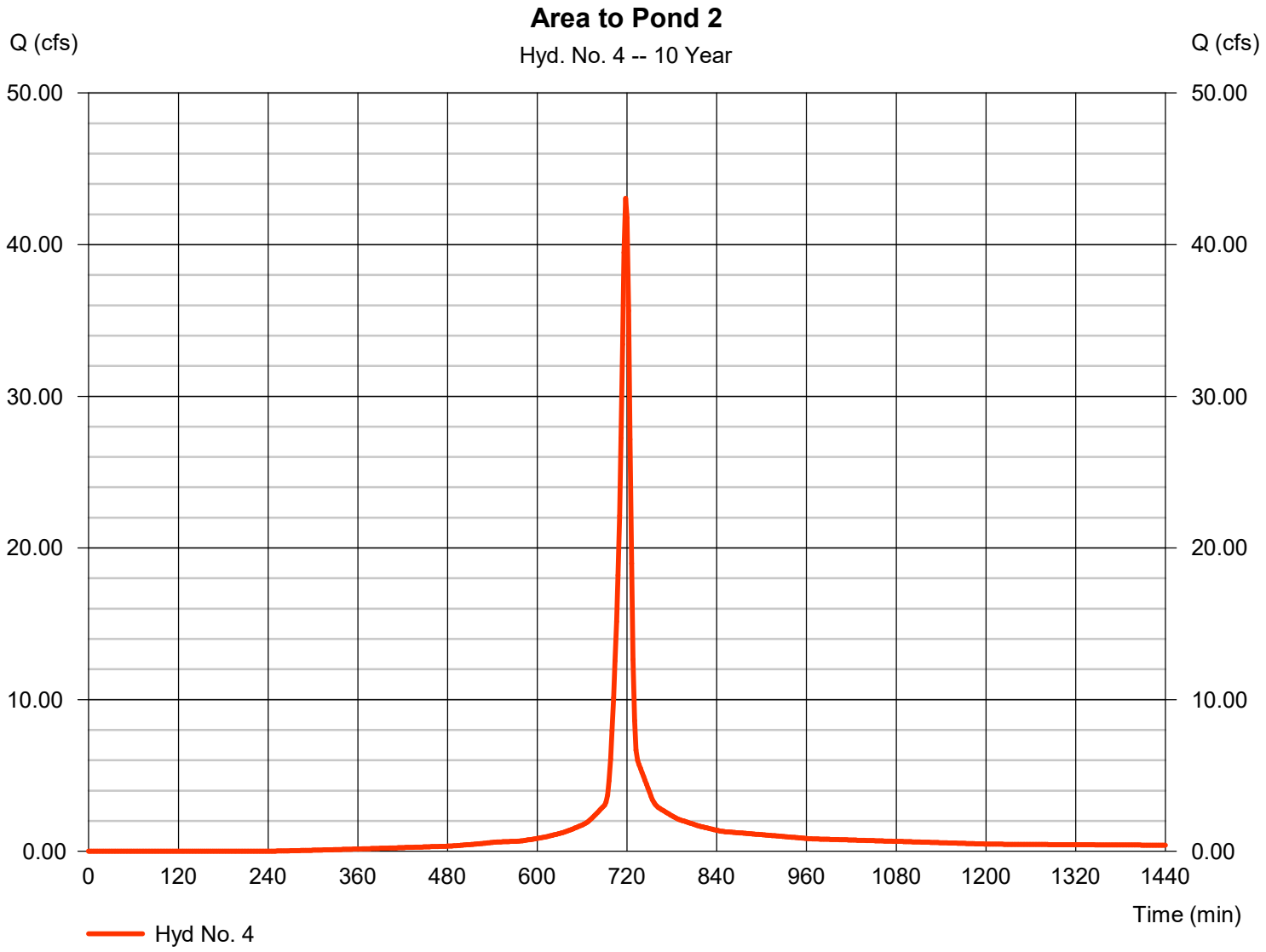
Hydrograph Report

Hyd. No. 4

Area to Pond 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	43.06 cfs
Storm frequency	=	10 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	103,218 cuft
Drainage area	=	7.780 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	8.00 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.670 x 98) + (3.110 x 79)] / 7.780



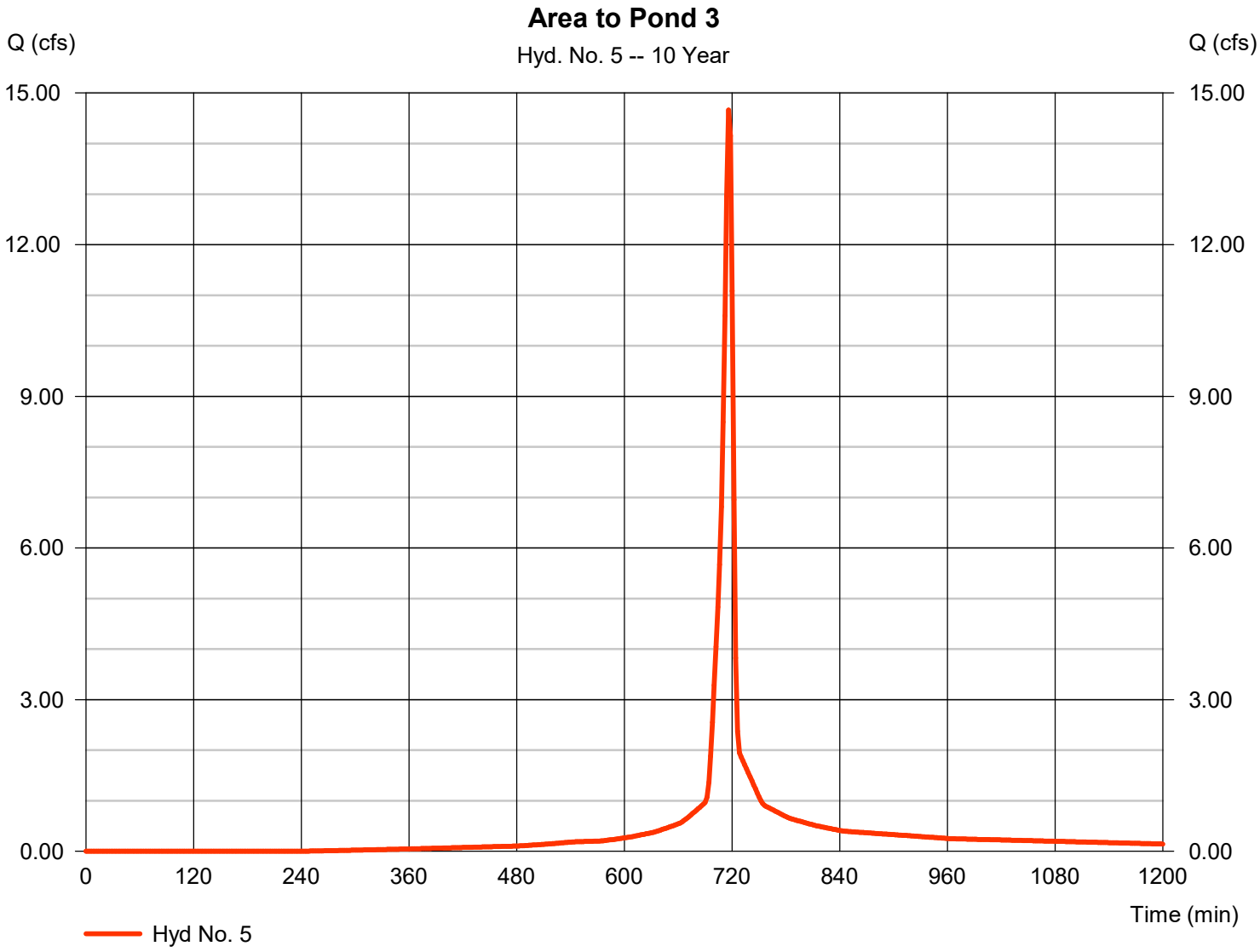
Hydrograph Report

Hyd. No. 5

Area to Pond 3

Hydrograph type	= SCS Runoff	Peak discharge	= 14.66 cfs
Storm frequency	= 10 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 31,343 cuft
Drainage area	= 2.520 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.77 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.510 x 98) + (1.010 x 79)] / 2.520



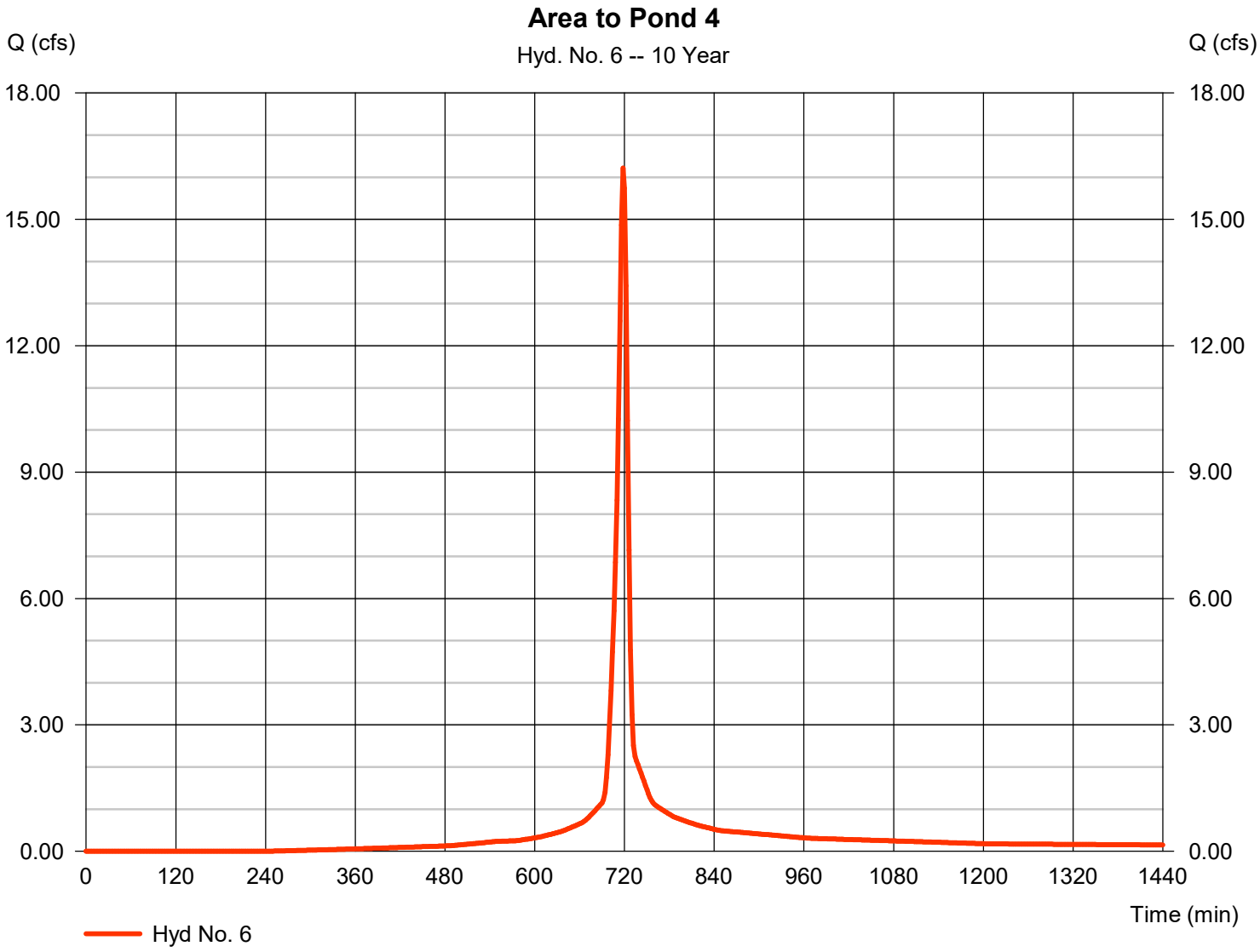
Hydrograph Report

Hyd. No. 6

Area to Pond 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	16.22 cfs
Storm frequency	=	10 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	38,872 cuft
Drainage area	=	2.930 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	7.80 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.760 x 98) + (1.172 x 79)] / 2.930



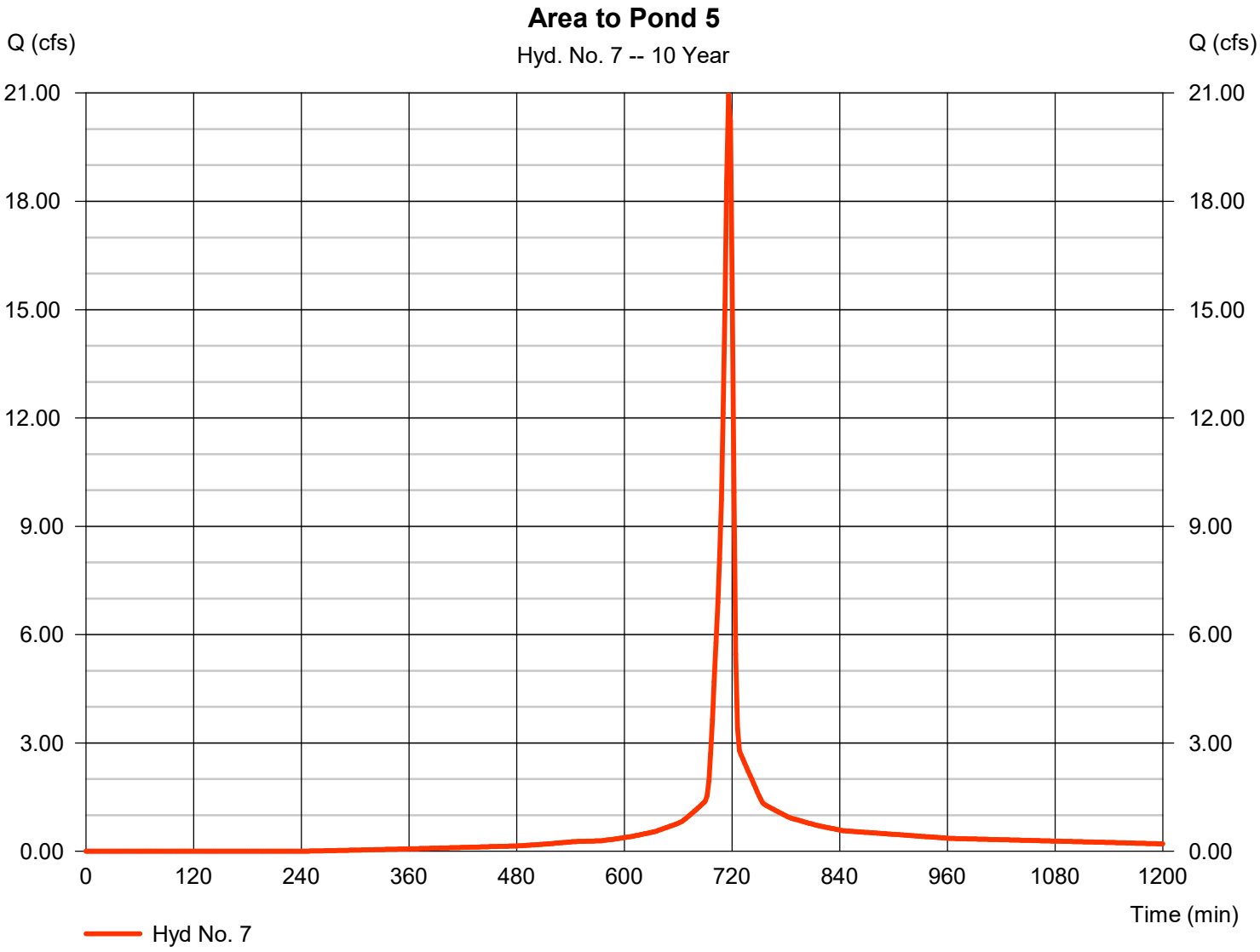
Hydrograph Report

Hyd. No. 7

Area to Pond 5

Hydrograph type	=	SCS Runoff	Peak discharge	=	20.95 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	44,776 cuft
Drainage area	=	3.600 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.160 x 98) + (1.437 x 79)] / 3.600



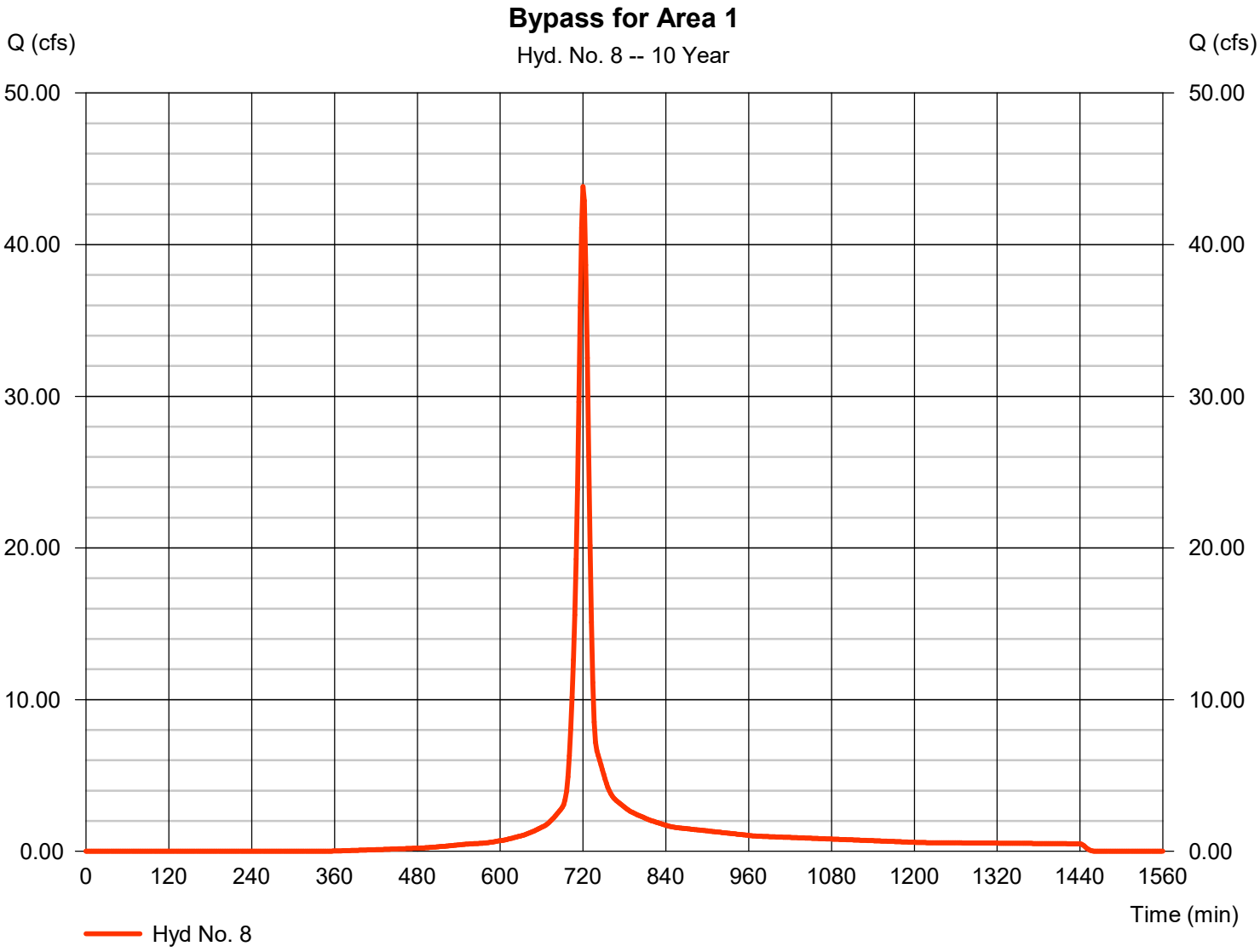
Hydrograph Report

Hyd. No. 8

Bypass for Area 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	43.84 cfs
Storm frequency	=	10 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	114,957 cuft
Drainage area	=	9.730 ac	Curve number	=	85*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	13.00 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.920 x 98) + (6.813 x 79)] / 9.730



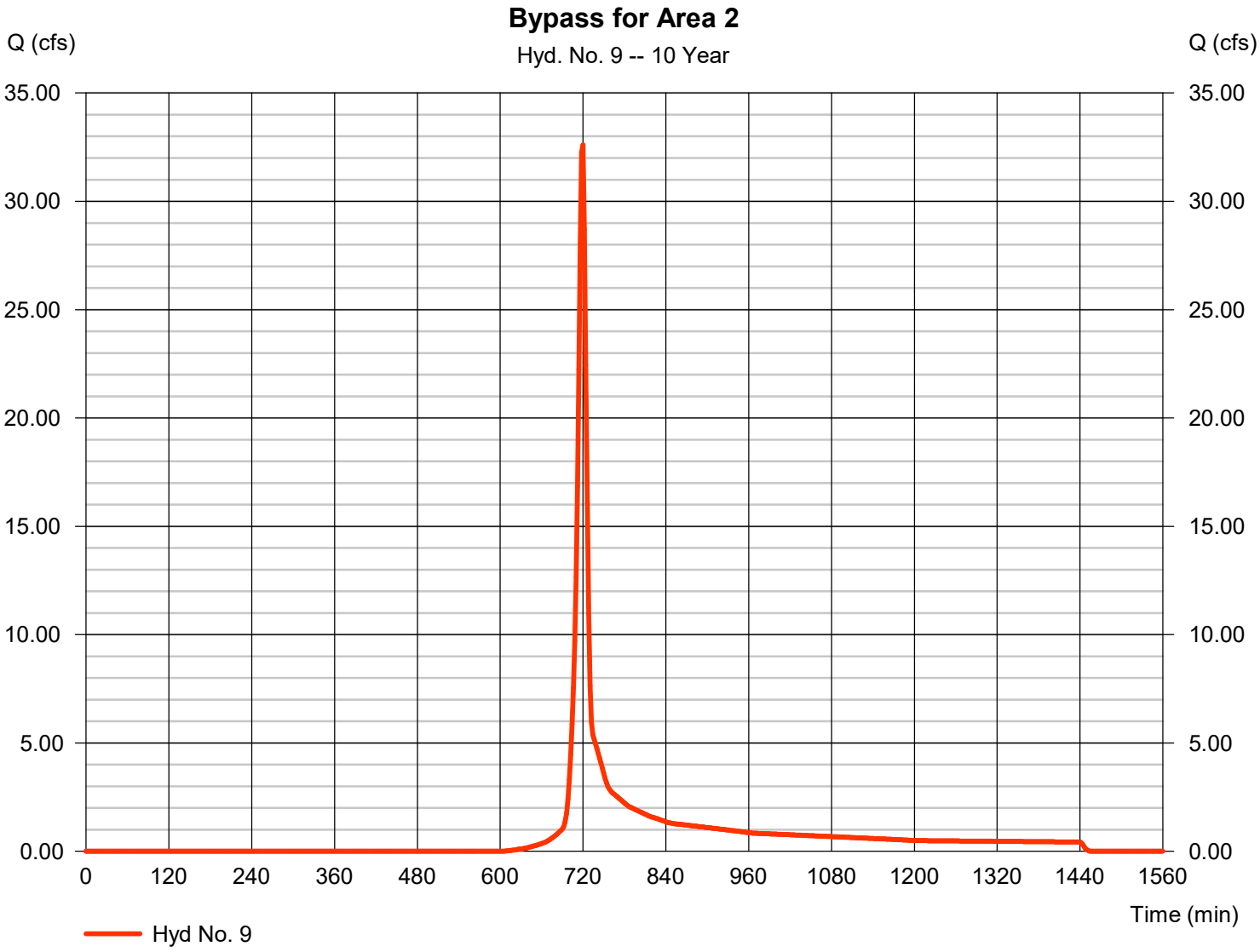
Hydrograph Report

Hyd. No. 9

Bypass for Area 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	32.61 cfs
Storm frequency	=	10 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	74,703 cuft
Drainage area	=	11.020 ac	Curve number	=	70*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	9.50 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.970 x 98) + (4.980 x 49) + (1.090 x 69) + (1.980 x 79)] / 11.020



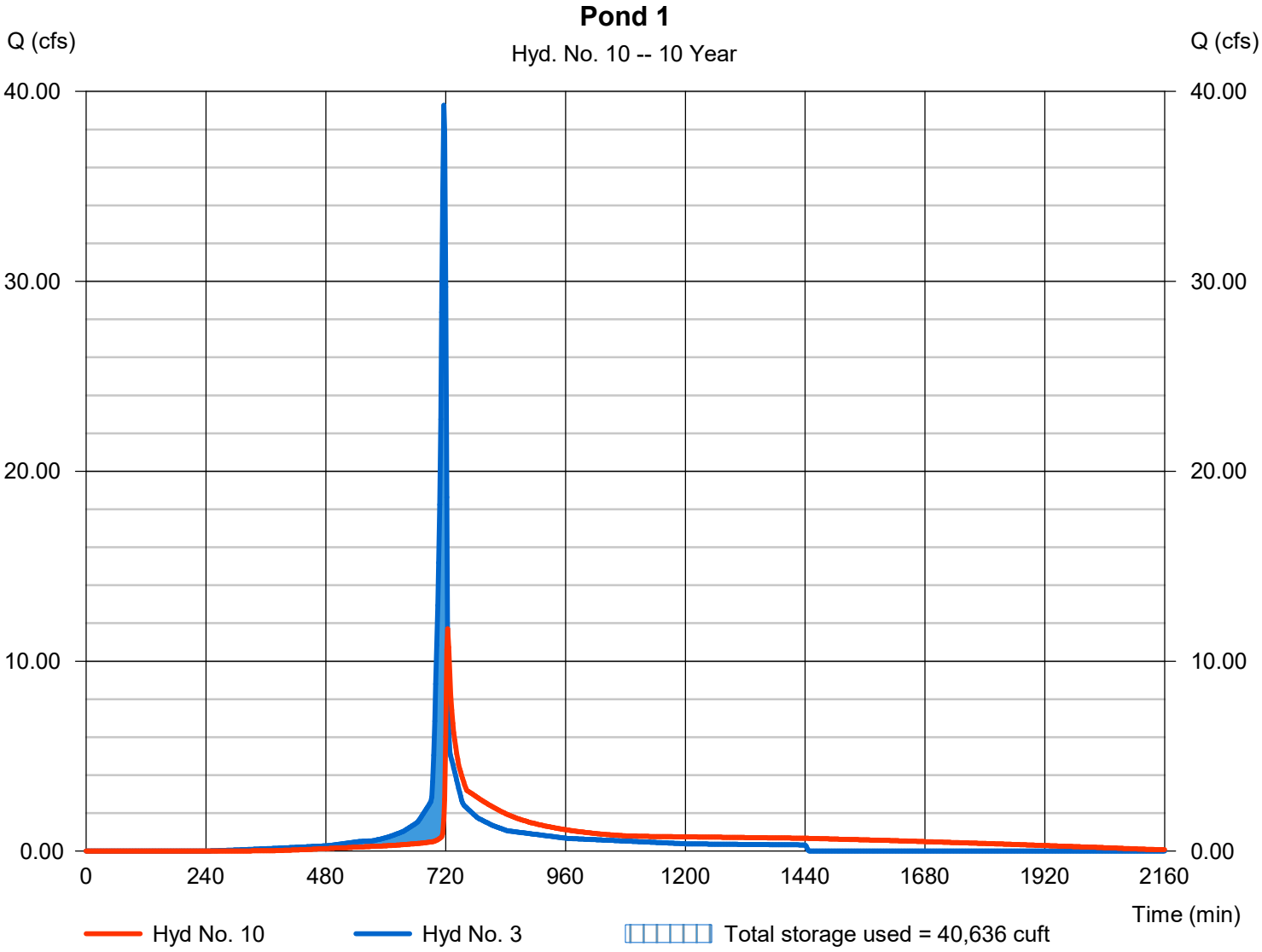
Hydrograph Report

Hyd. No. 10

Pond 1

Hydrograph type	=	Reservoir	Peak discharge	=	11.70 cfs
Storm frequency	=	10 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	83,933 cuft
Inflow hyd. No.	=	3 - Area to Pond 1	Max. Elevation	=	487.38 ft
Reservoir name	=	Pond 1	Max. Storage	=	40,636 cuft

Storage Indication method used.



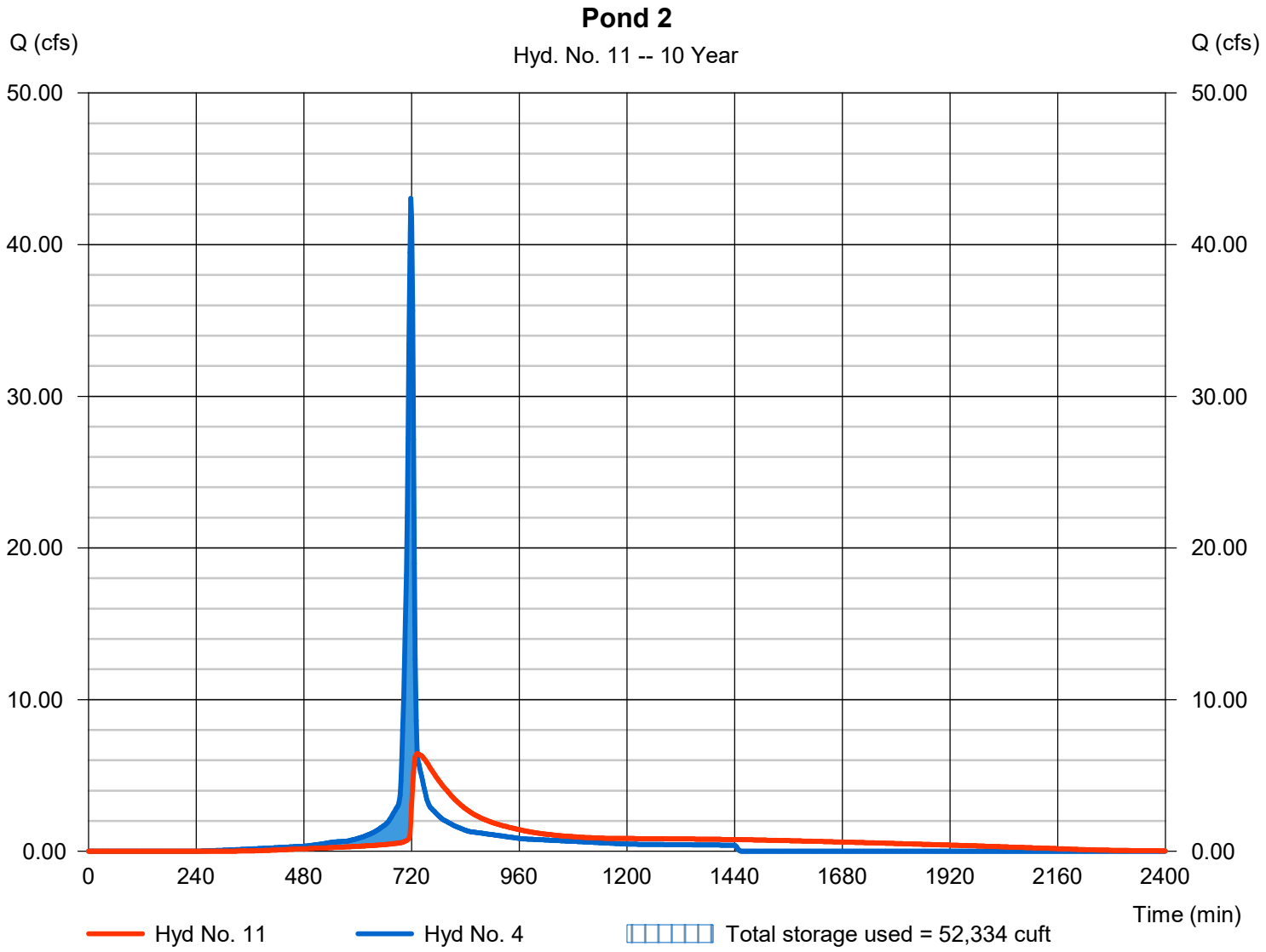
Hydrograph Report

Hyd. No. 11

Pond 2

Hydrograph type	=	Reservoir	Peak discharge	=	6.429 cfs
Storm frequency	=	10 yrs	Time to peak	=	732 min
Time interval	=	2 min	Hyd. volume	=	103,196 cuft
Inflow hyd. No.	=	4 - Area to Pond 2	Max. Elevation	=	492.70 ft
Reservoir name	=	Pond 2	Max. Storage	=	52,334 cuft

Storage Indication method used.

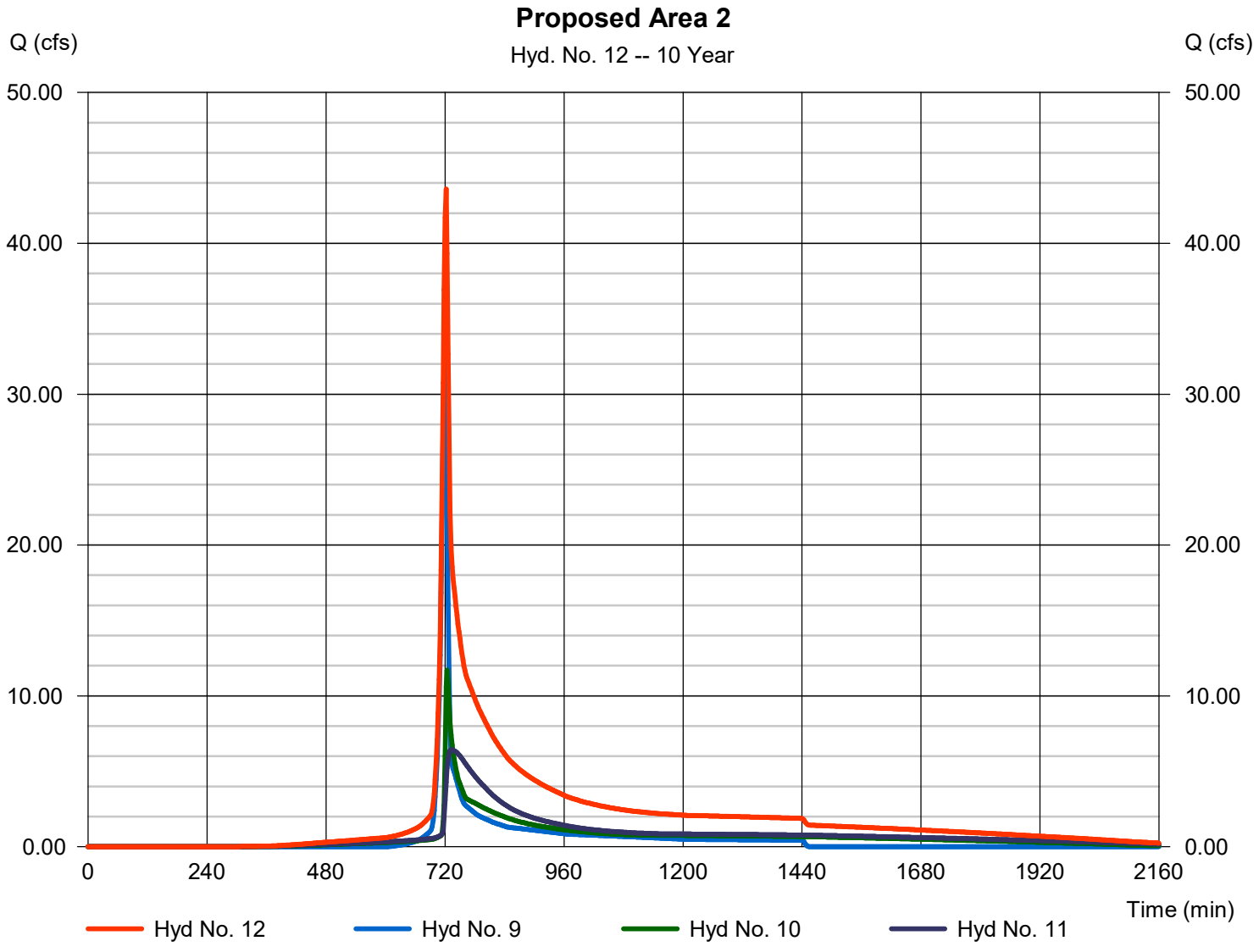


Hydrograph Report

Hyd. No. 12

Proposed Area 2

Hydrograph type	= Combine	Peak discharge	= 43.59 cfs
Storm frequency	= 10 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 261,832 cuft
Inflow hyds.	= 9, 10, 11	Contrib. drain. area	= 11.020 ac



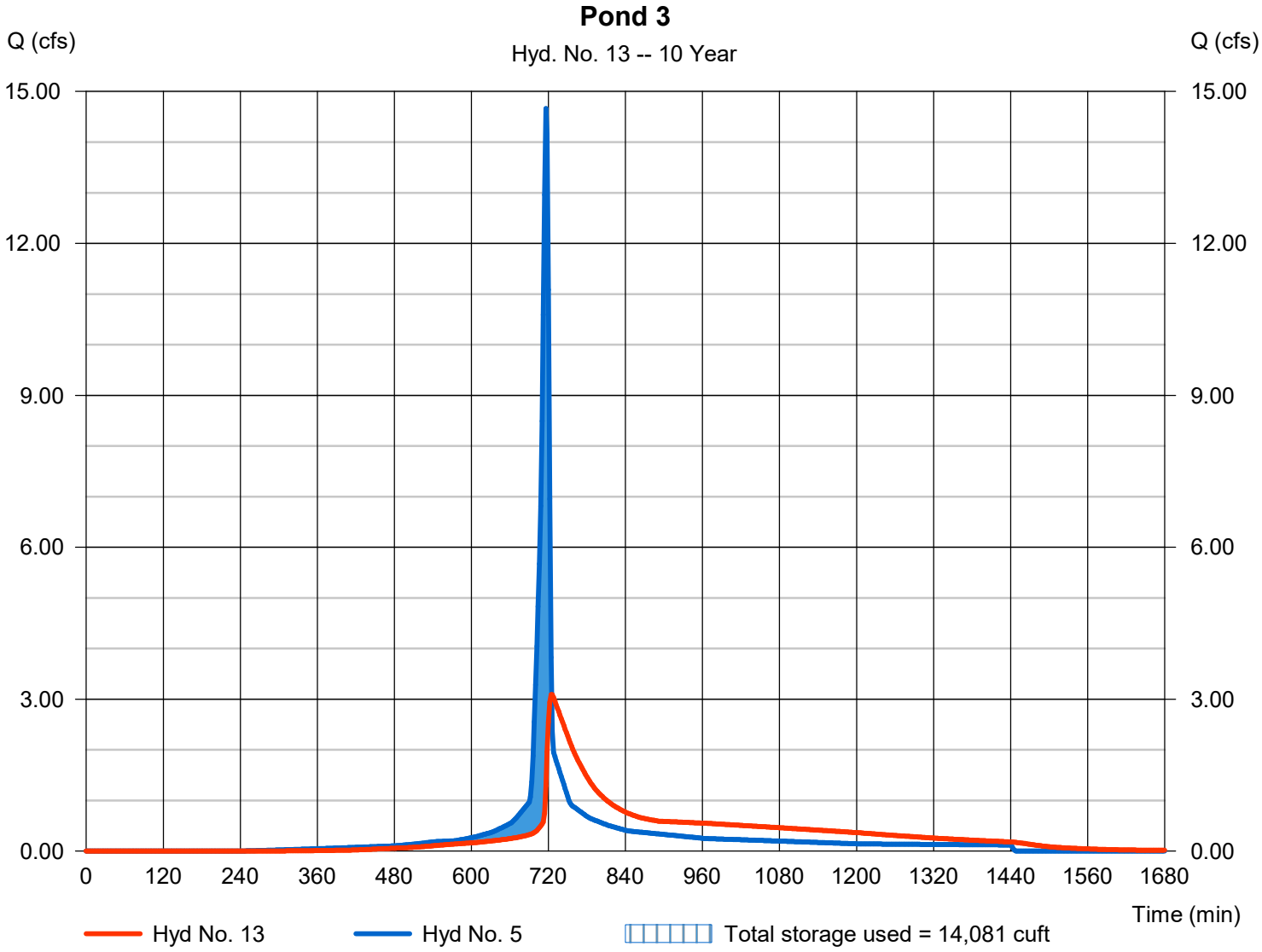
Hydrograph Report

Hyd. No. 13

Pond 3

Hydrograph type	=	Reservoir	Peak discharge	=	3.090 cfs
Storm frequency	=	10 yrs	Time to peak	=	726 min
Time interval	=	2 min	Hyd. volume	=	31,329 cuft
Inflow hyd. No.	=	5 - Area to Pond 3	Max. Elevation	=	509.57 ft
Reservoir name	=	Pond 3	Max. Storage	=	14,081 cuft

Storage Indication method used.



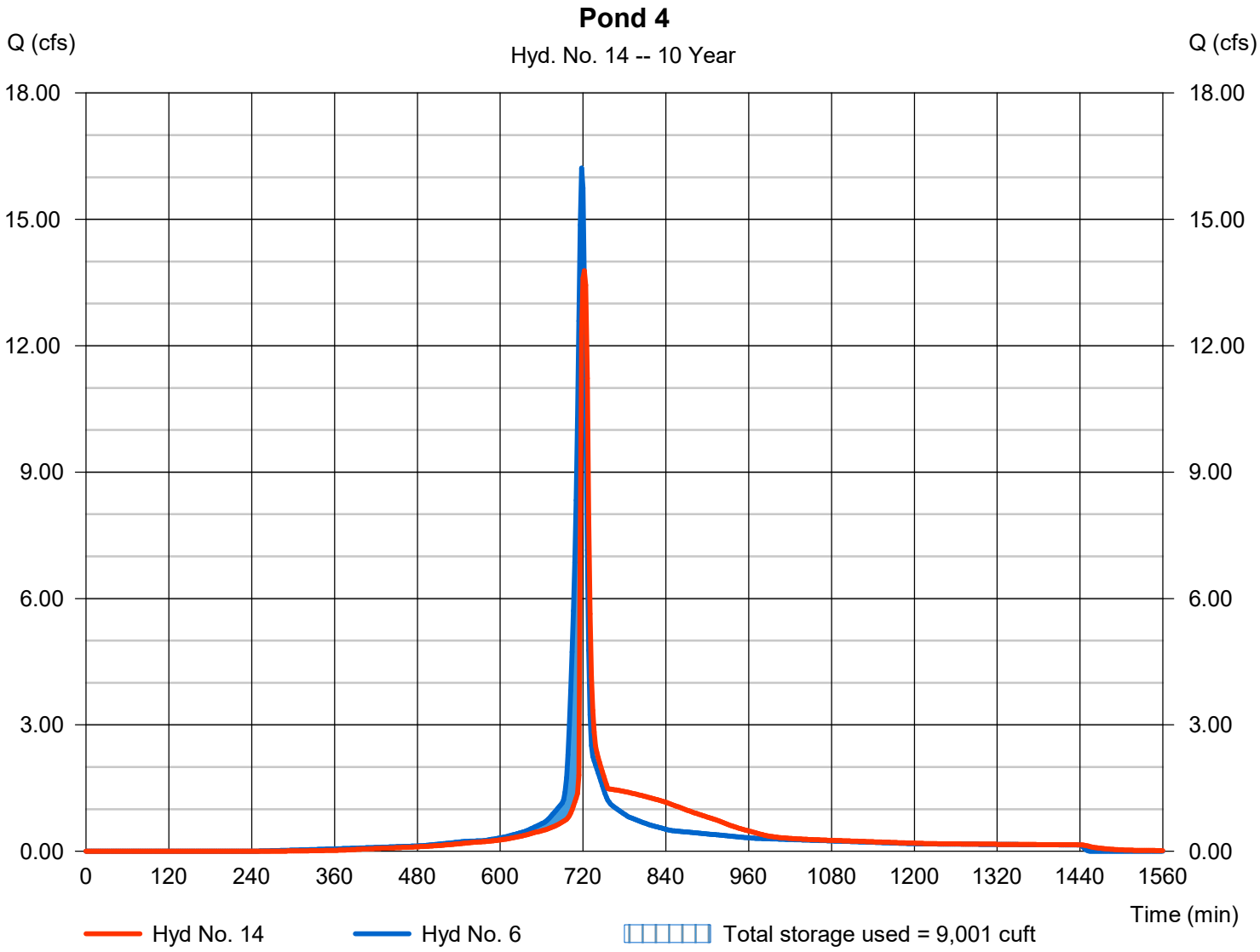
Hydrograph Report

Hyd. No. 14

Pond 4

Hydrograph type	=	Reservoir	Peak discharge	=	13.78 cfs
Storm frequency	=	10 yrs	Time to peak	=	722 min
Time interval	=	2 min	Hyd. volume	=	38,866 cuft
Inflow hyd. No.	=	6 - Area to Pond 4	Max. Elevation	=	511.66 ft
Reservoir name	=	Pond 4	Max. Storage	=	9,001 cuft

Storage Indication method used.



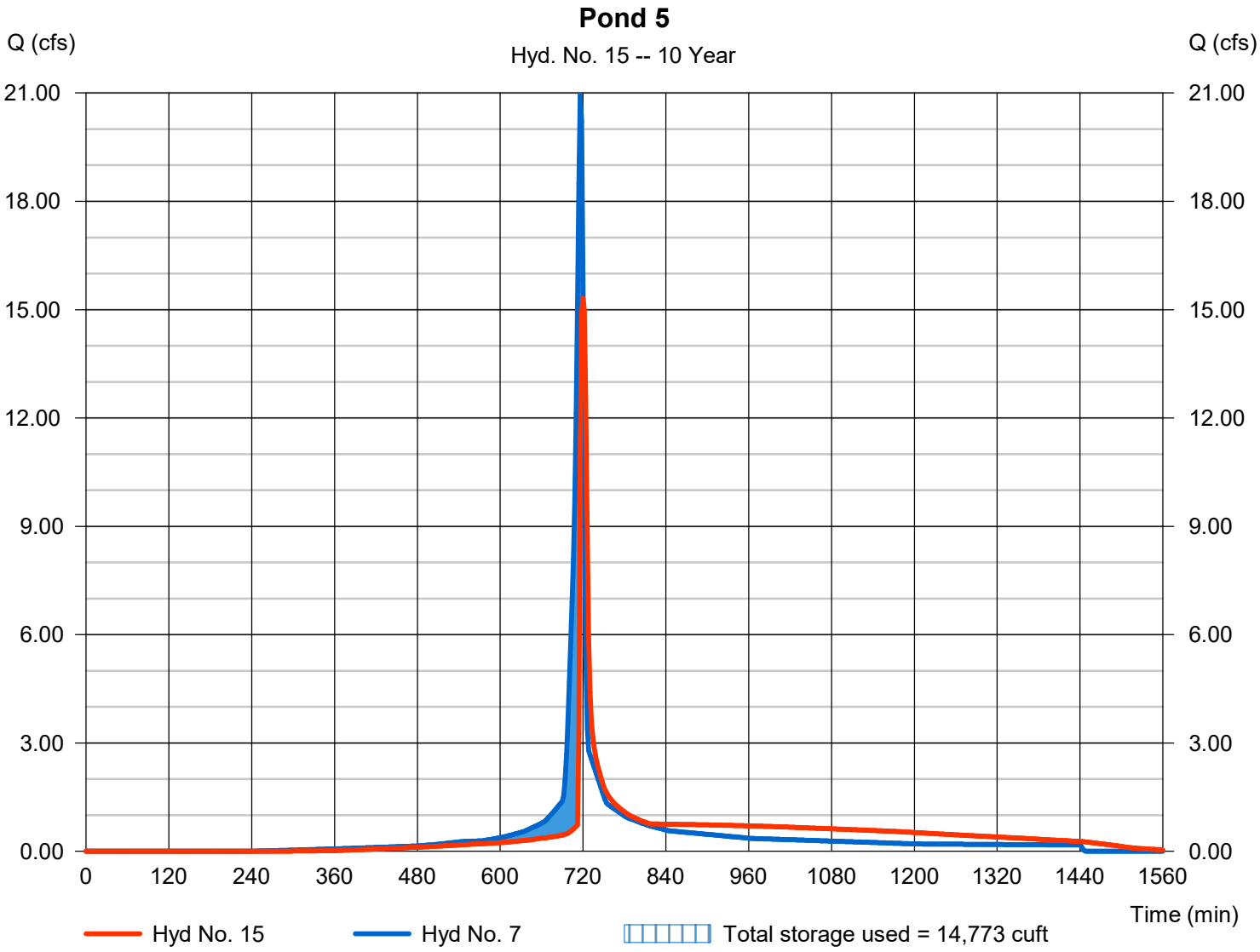
Hydrograph Report

Hyd. No. 15

Pond 5

Hydrograph type	=	Reservoir	Peak discharge	=	15.31 cfs
Storm frequency	=	10 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	44,767 cuft
Inflow hyd. No.	=	7 - Area to Pond 5	Max. Elevation	=	502.31 ft
Reservoir name	=	Pond 5	Max. Storage	=	14,773 cuft

Storage Indication method used.

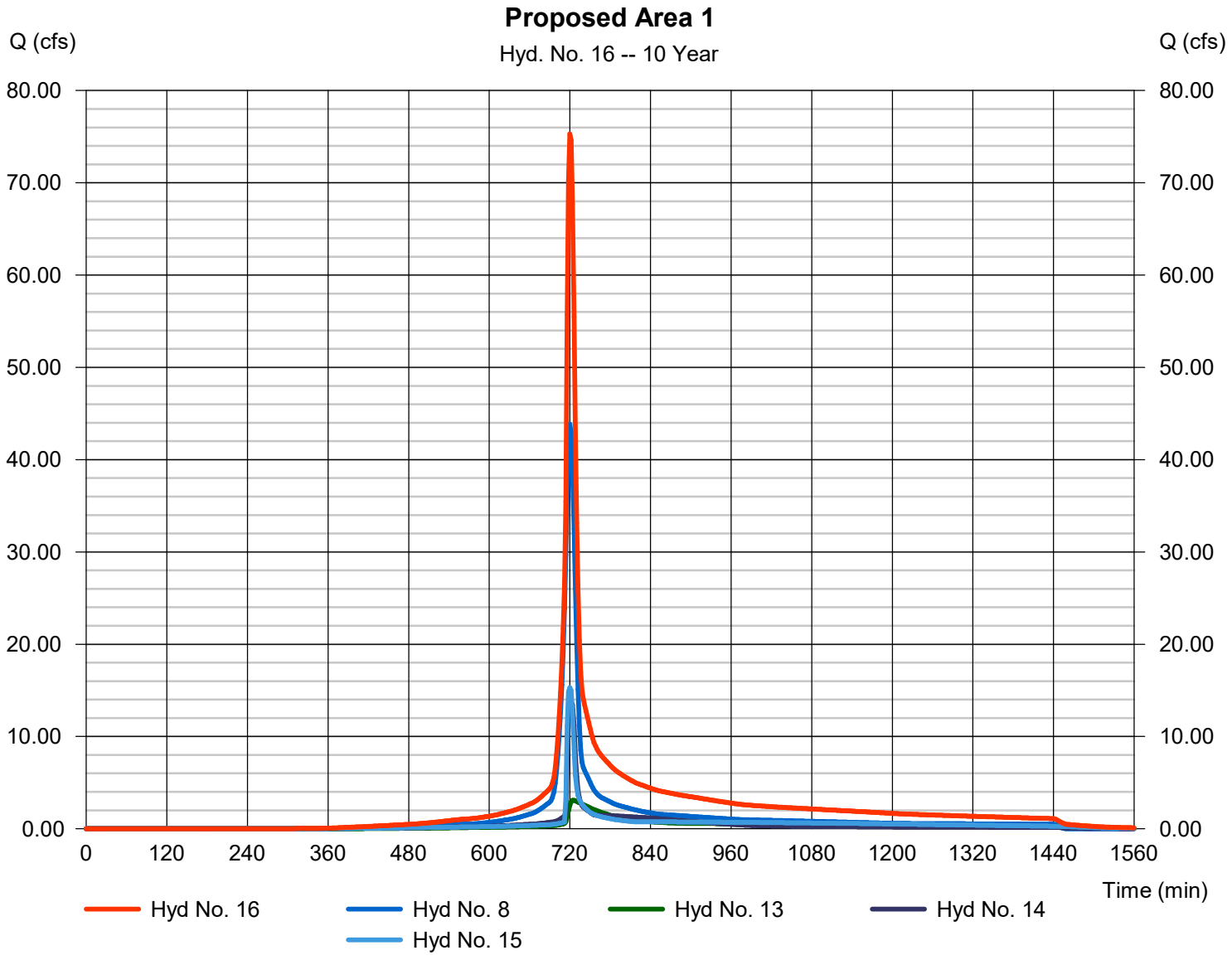


Hydrograph Report

Hyd. No. 16

Proposed Area 1

Hydrograph type	= Combine	Peak discharge	= 75.30 cfs
Storm frequency	= 10 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 229,920 cuft
Inflow hyds.	= 8, 13, 14, 15	Contrib. drain. area	= 9.730 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

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	98.39	2	720	255,739	------	------	------	Exisitng Area 1
2	SCS Runoff	92.34	2	720	239,962	------	------	------	Existing Area 2
3	SCS Runoff	47.49	2	716	102,826	------	------	------	Area to Pond 1
4	SCS Runoff	52.12	2	718	126,418	------	------	------	Area to Pond 2
5	SCS Runoff	17.73	2	716	38,389	------	------	------	Area to Pond 3
6	SCS Runoff	19.63	2	718	47,610	------	------	------	Area to Pond 4
7	SCS Runoff	25.33	2	716	54,841	------	------	------	Area to Pond 5
8	SCS Runoff	54.34	2	720	143,700	------	------	------	Bypass for Area 1
9	SCS Runoff	43.80	2	720	100,287	------	------	------	Bypass for Area 2
10	Reservoir	26.52	2	722	102,804	3	487.78	44,992	Pond 1
11	Reservoir	16.77	2	728	126,397	4	493.39	60,935	Pond 2
12	Combine	74.85	2	720	329,487	9, 10, 11	------	------	Proposed Area 2
13	Reservoir	4.657	2	724	38,375	5	510.07	16,815	Pond 3
14	Reservoir	15.12	2	722	47,604	6	512.00	10,226	Pond 4
15	Reservoir	17.01	2	720	54,832	7	502.65	16,757	Pond 5
16	Combine	90.26	2	720	284,510	8, 13, 14, 15	------	------	Proposed Area 1

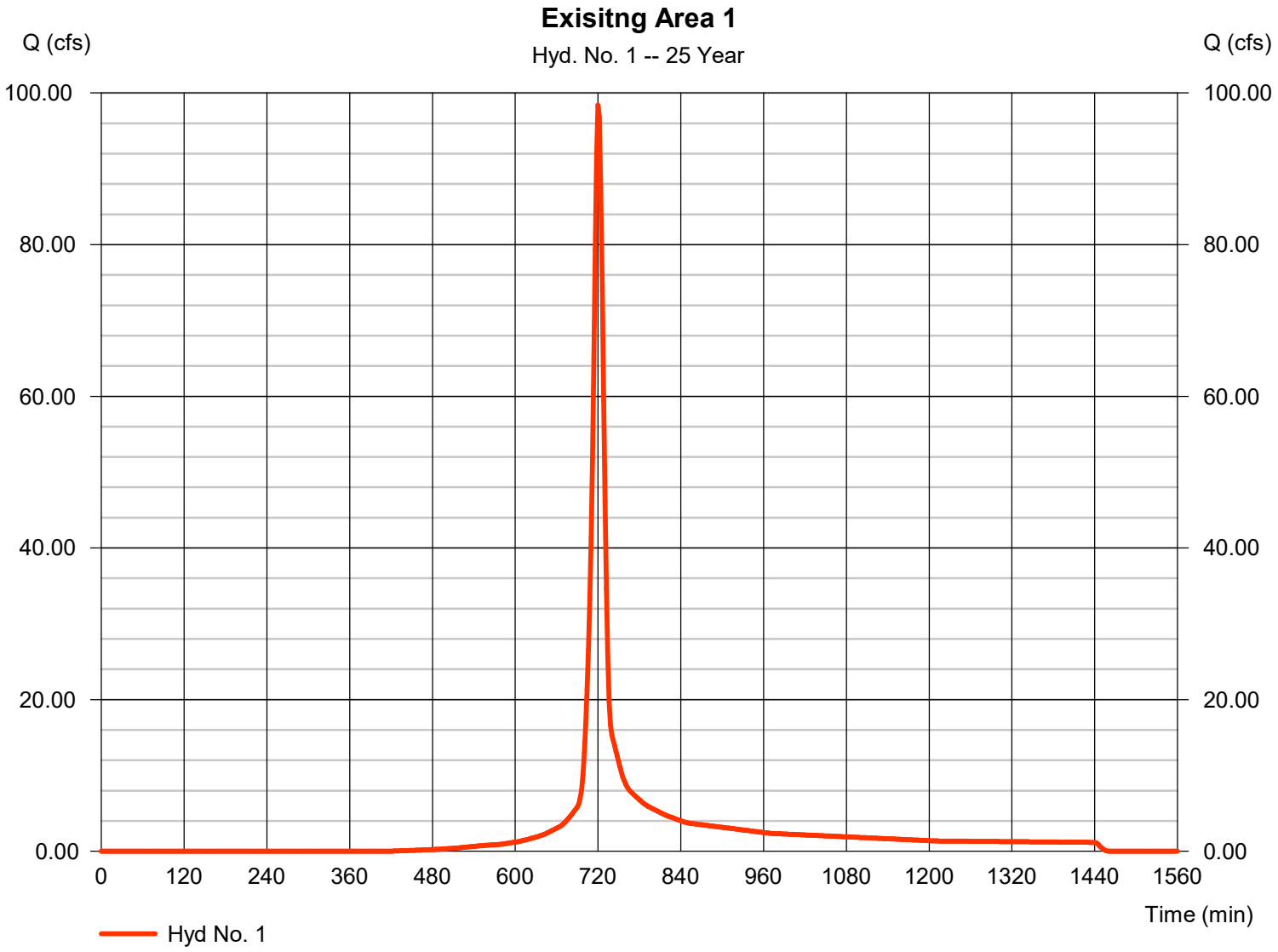
Hydrograph Report

Hyd. No. 1

Exisitng Area 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	98.39 cfs
Storm frequency	=	25 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	255,739 cuft
Drainage area	=	20.440 ac	Curve number	=	79*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	13.20 min
Total precip.	=	5.62 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(20.442 x 79)] / 20.440



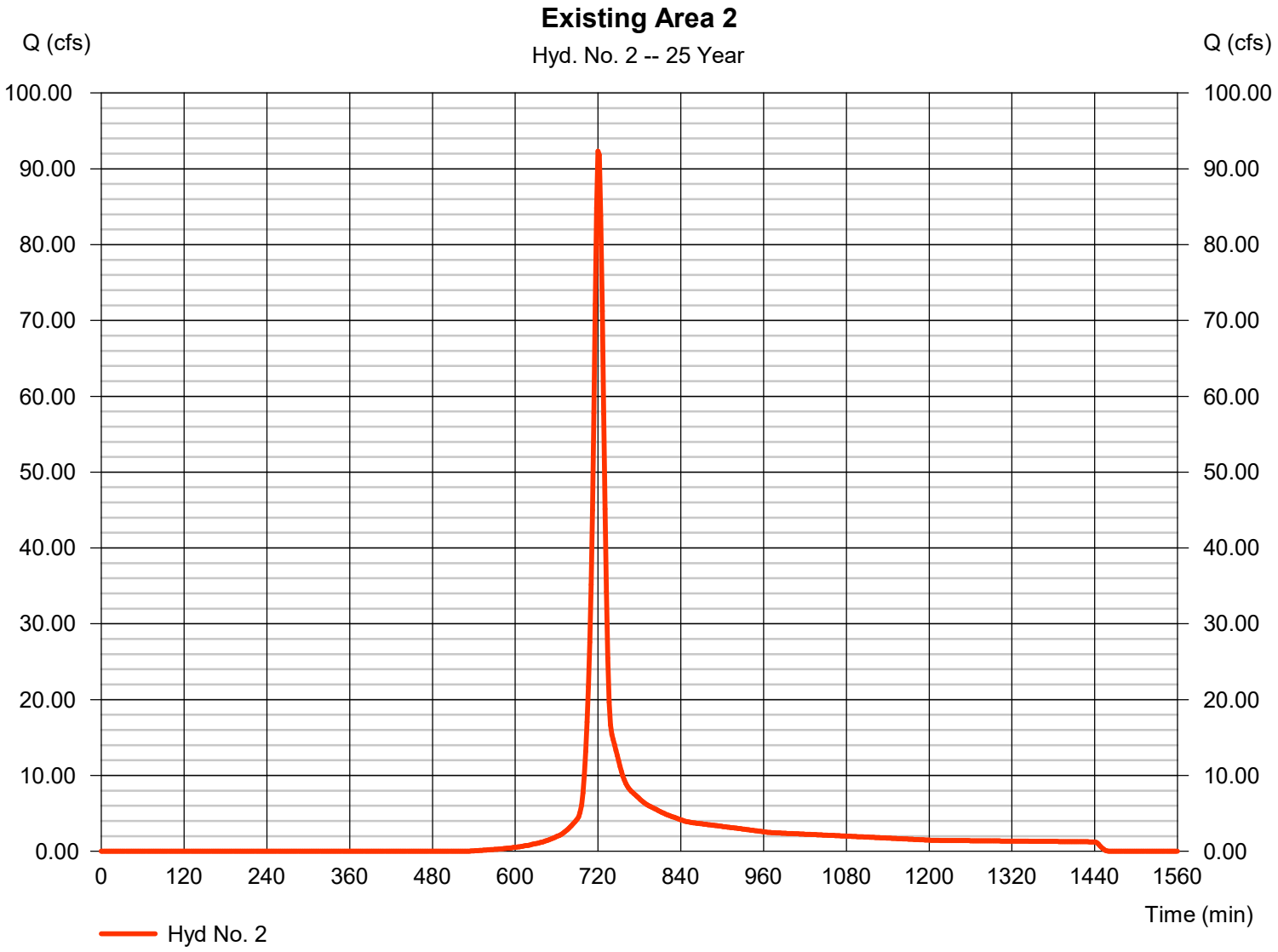
Hydrograph Report

Hyd. No. 2

Existing Area 2

Hydrograph type	= SCS Runoff	Peak discharge	= 92.34 cfs
Storm frequency	= 25 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 239,962 cuft
Drainage area	= 23.870 ac	Curve number	= 72*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 10.10 min
Total precip.	= 5.62 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.978 x 49) + (1.088 x 69) + (17.804 x 79)] / 23.870



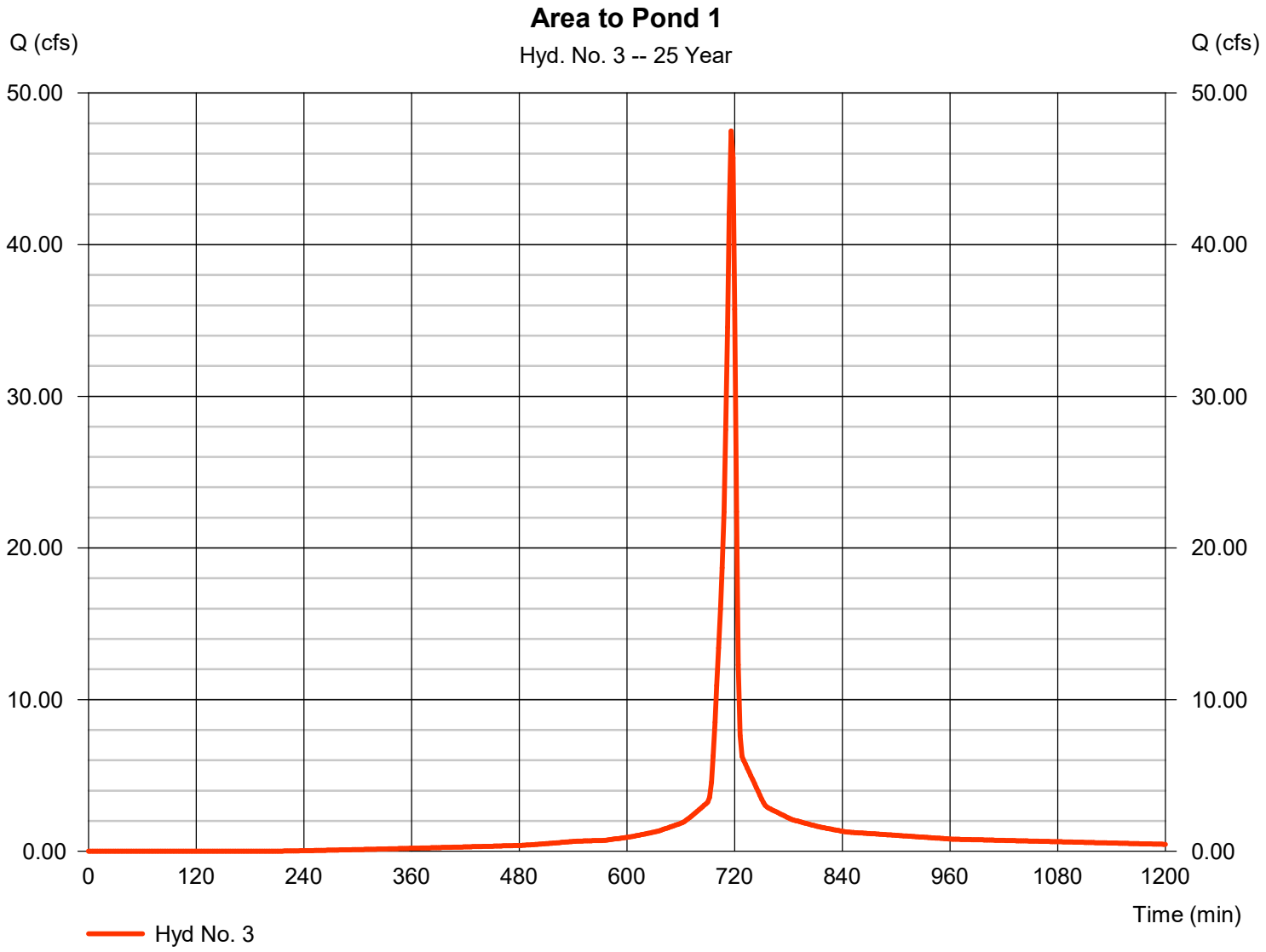
Hydrograph Report

Hyd. No. 3

Area to Pond 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	47.49 cfs
Storm frequency	=	25 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	102,826 cuft
Drainage area	=	6.750 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.62 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.050 x 98) + (2.700 x 79)] / 6.750



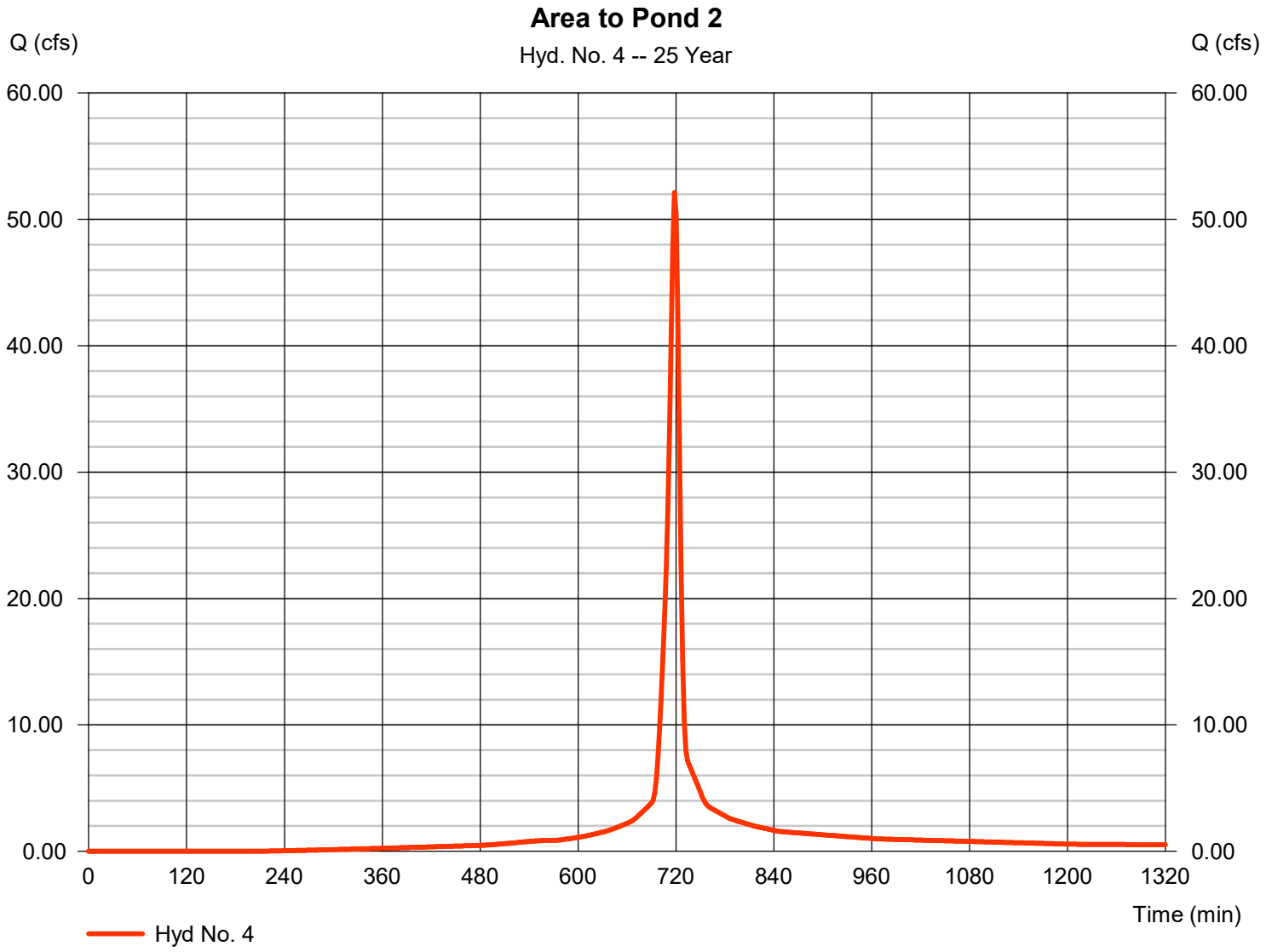
Hydrograph Report

Hyd. No. 4

Area to Pond 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	52.12 cfs
Storm frequency	=	25 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	126,418 cuft
Drainage area	=	7.780 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	8.00 min
Total precip.	=	5.62 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.670 x 98) + (3.110 x 79)] / 7.780



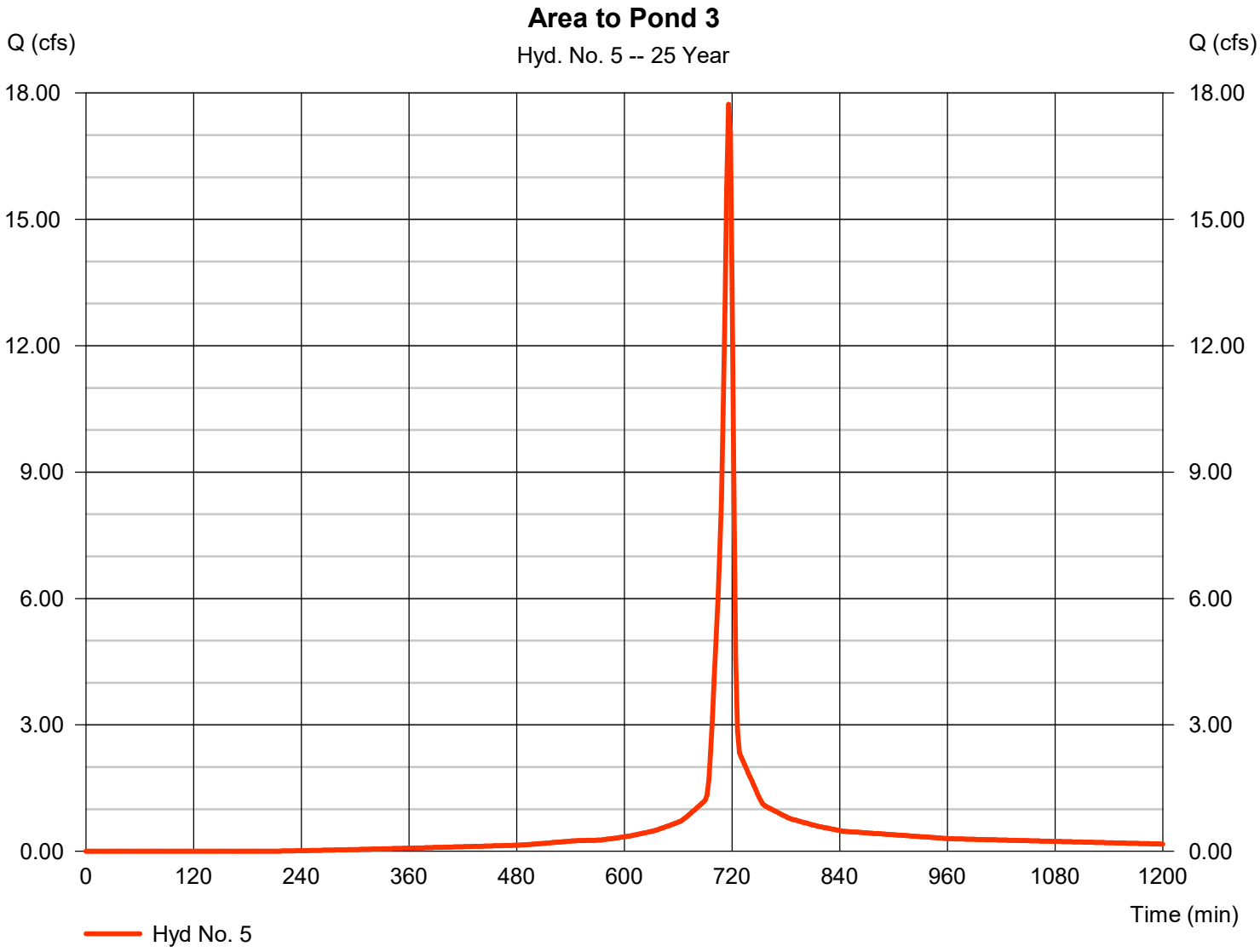
Hydrograph Report

Hyd. No. 5

Area to Pond 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	17.73 cfs
Storm frequency	=	25 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	38,389 cuft
Drainage area	=	2.520 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.62 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.510 x 98) + (1.010 x 79)] / 2.520



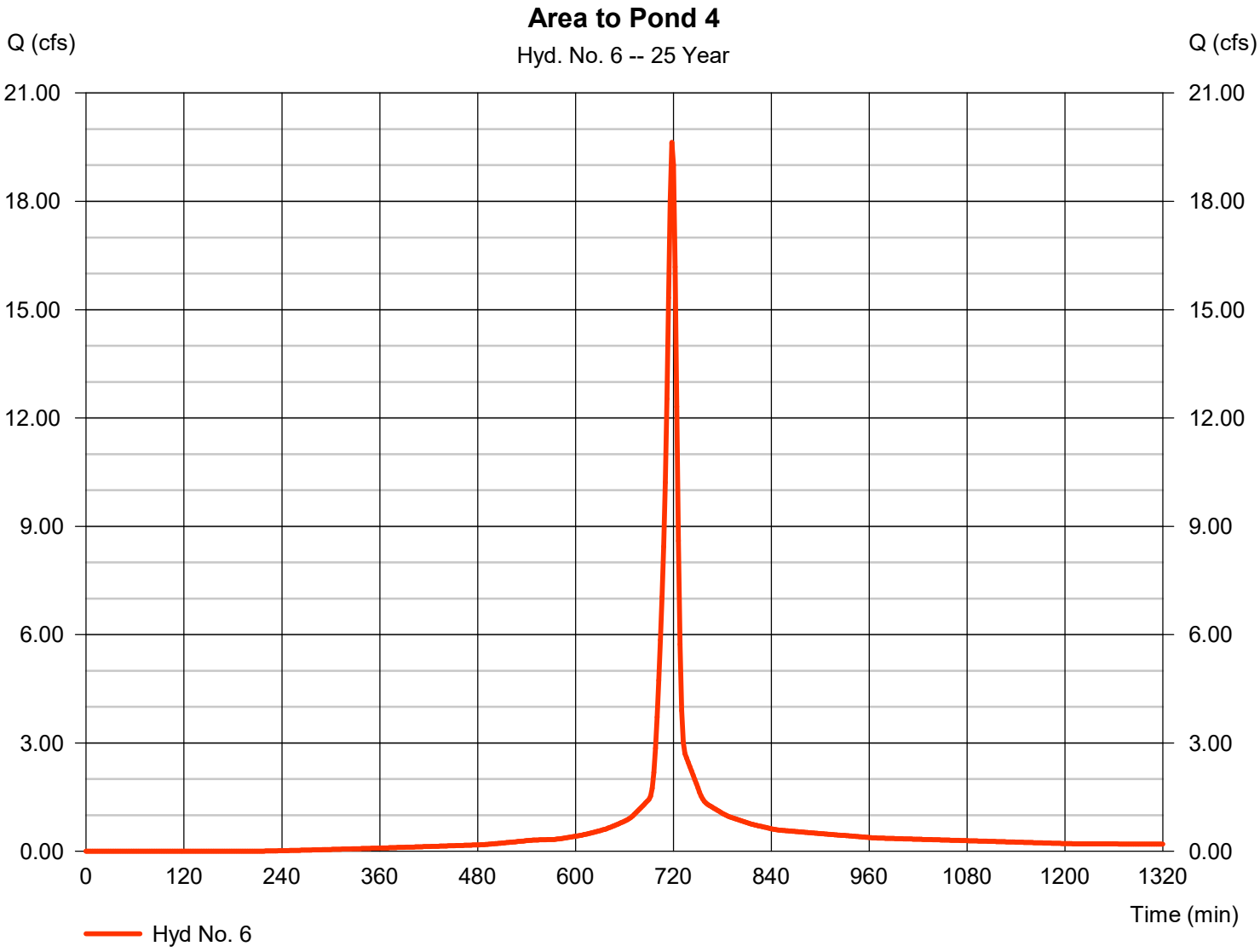
Hydrograph Report

Hyd. No. 6

Area to Pond 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	19.63 cfs
Storm frequency	=	25 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	47,610 cuft
Drainage area	=	2.930 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	7.80 min
Total precip.	=	5.62 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.760 x 98) + (1.172 x 79)] / 2.930



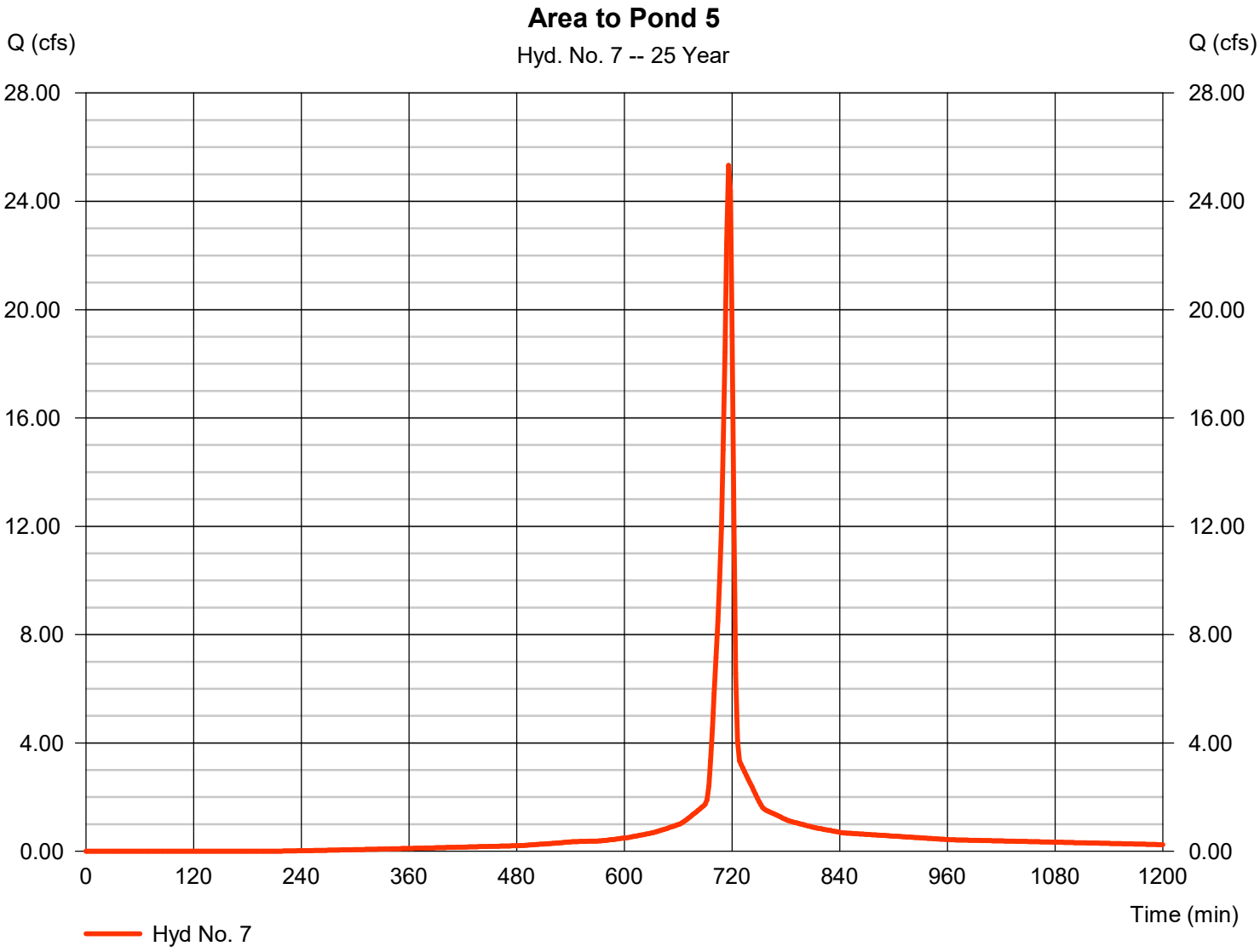
Hydrograph Report

Hyd. No. 7

Area to Pond 5

Hydrograph type	=	SCS Runoff	Peak discharge	=	25.33 cfs
Storm frequency	=	25 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	54,841 cuft
Drainage area	=	3.600 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.62 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.160 x 98) + (1.437 x 79)] / 3.600



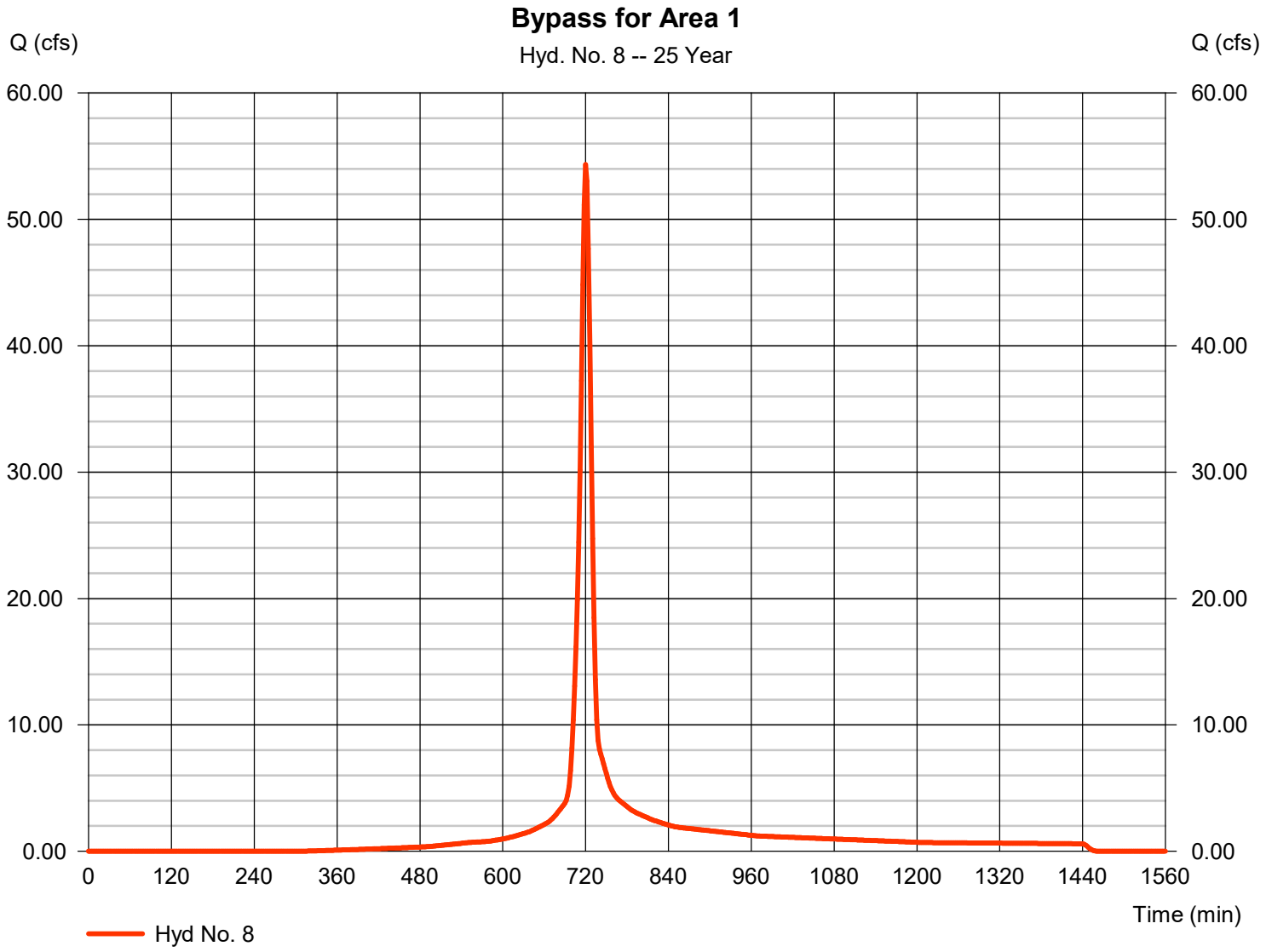
Hydrograph Report

Hyd. No. 8

Bypass for Area 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	54.34 cfs
Storm frequency	=	25 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	143,700 cuft
Drainage area	=	9.730 ac	Curve number	=	85*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	13.00 min
Total precip.	=	5.62 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.920 x 98) + (6.813 x 79)] / 9.730



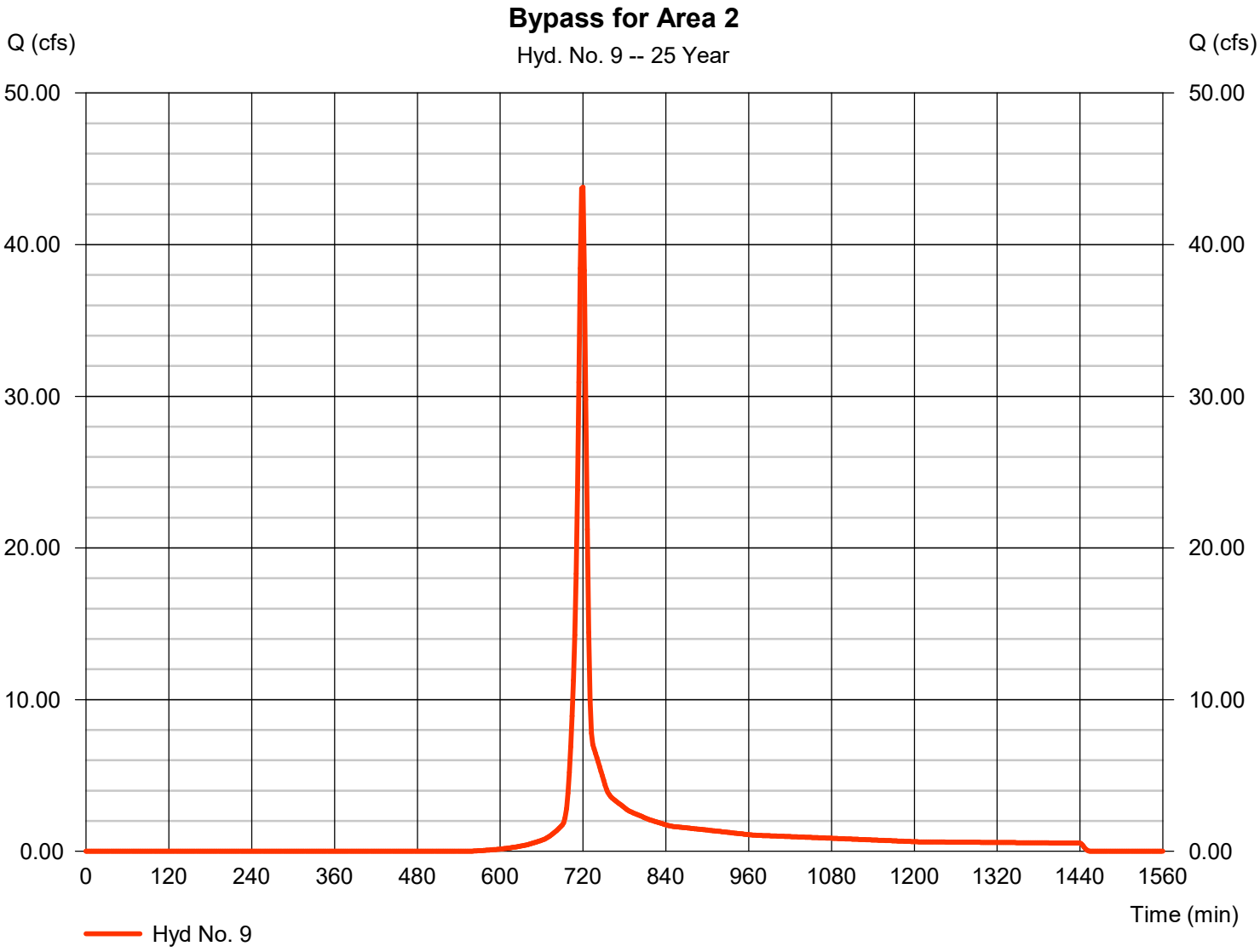
Hydrograph Report

Hyd. No. 9

Bypass for Area 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	43.80 cfs
Storm frequency	=	25 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	100,287 cuft
Drainage area	=	11.020 ac	Curve number	=	70*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	9.50 min
Total precip.	=	5.62 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.970 x 98) + (4.980 x 49) + (1.090 x 69) + (1.980 x 79)] / 11.020



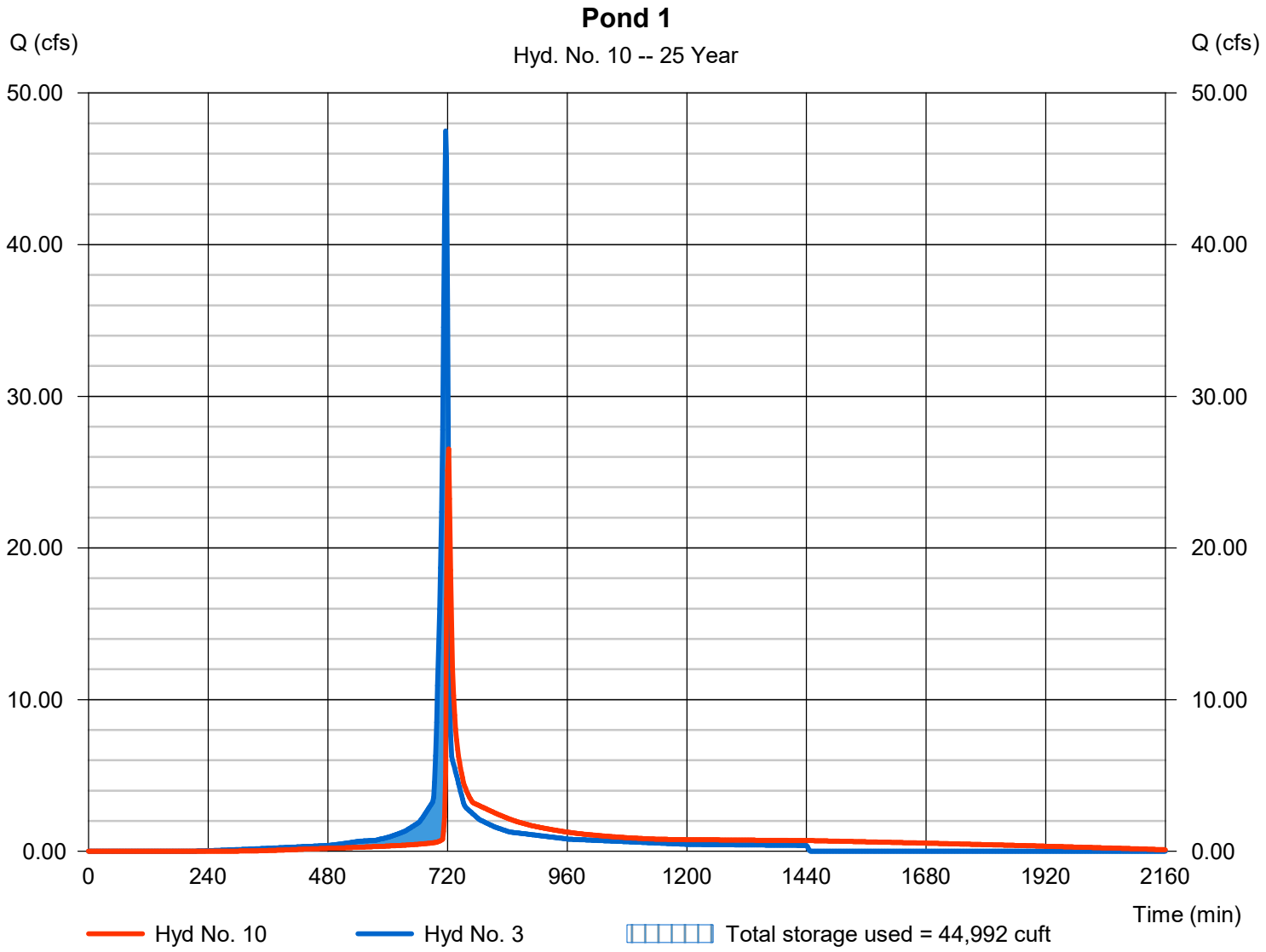
Hydrograph Report

Hyd. No. 10

Pond 1

Hydrograph type	=	Reservoir	Peak discharge	=	26.52 cfs
Storm frequency	=	25 yrs	Time to peak	=	722 min
Time interval	=	2 min	Hyd. volume	=	102,804 cuft
Inflow hyd. No.	=	3 - Area to Pond 1	Max. Elevation	=	487.78 ft
Reservoir name	=	Pond 1	Max. Storage	=	44,992 cuft

Storage Indication method used.



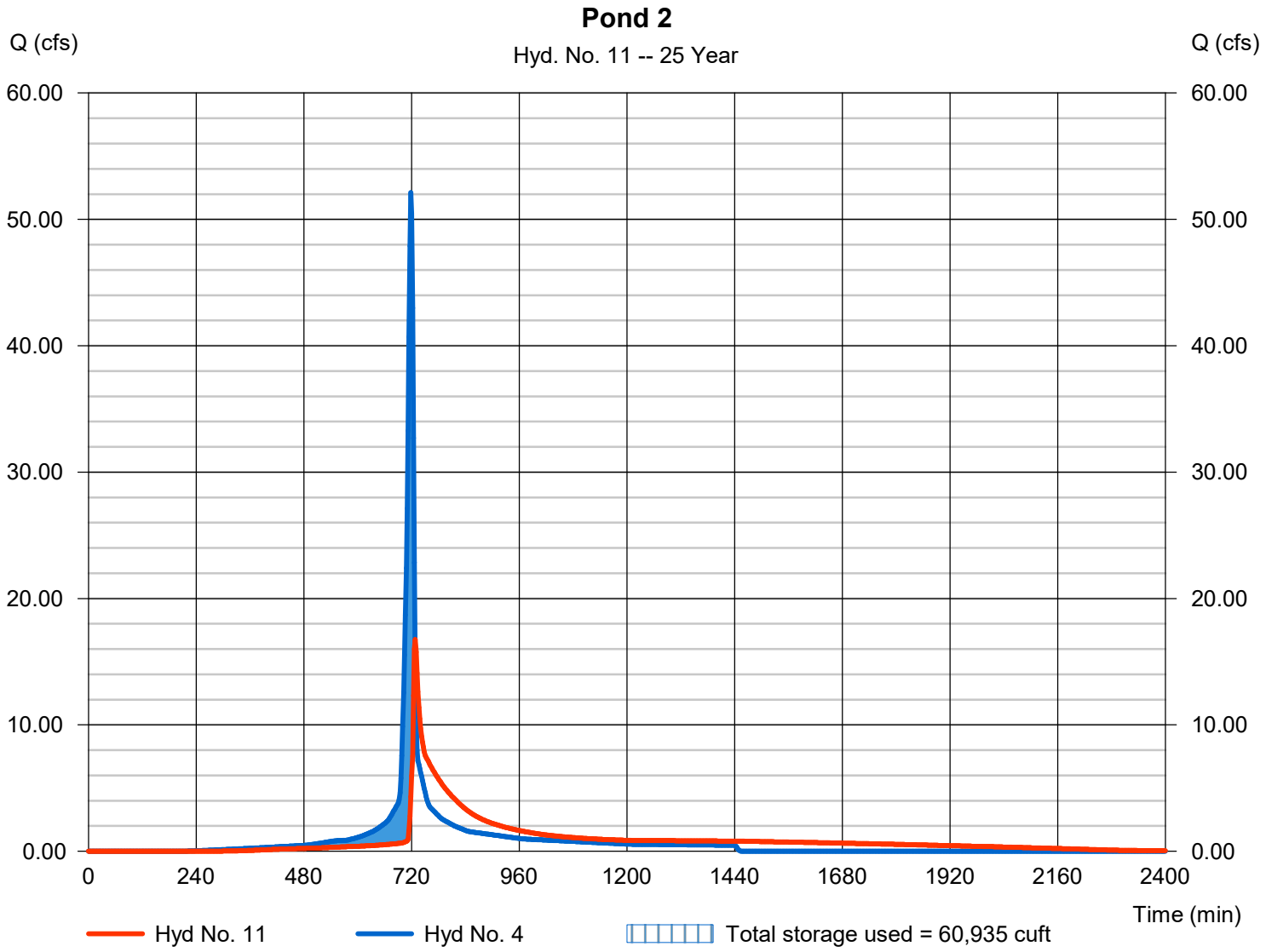
Hydrograph Report

Hyd. No. 11

Pond 2

Hydrograph type	=	Reservoir	Peak discharge	=	16.77 cfs
Storm frequency	=	25 yrs	Time to peak	=	728 min
Time interval	=	2 min	Hyd. volume	=	126,397 cuft
Inflow hyd. No.	=	4 - Area to Pond 2	Max. Elevation	=	493.39 ft
Reservoir name	=	Pond 2	Max. Storage	=	60,935 cuft

Storage Indication method used.

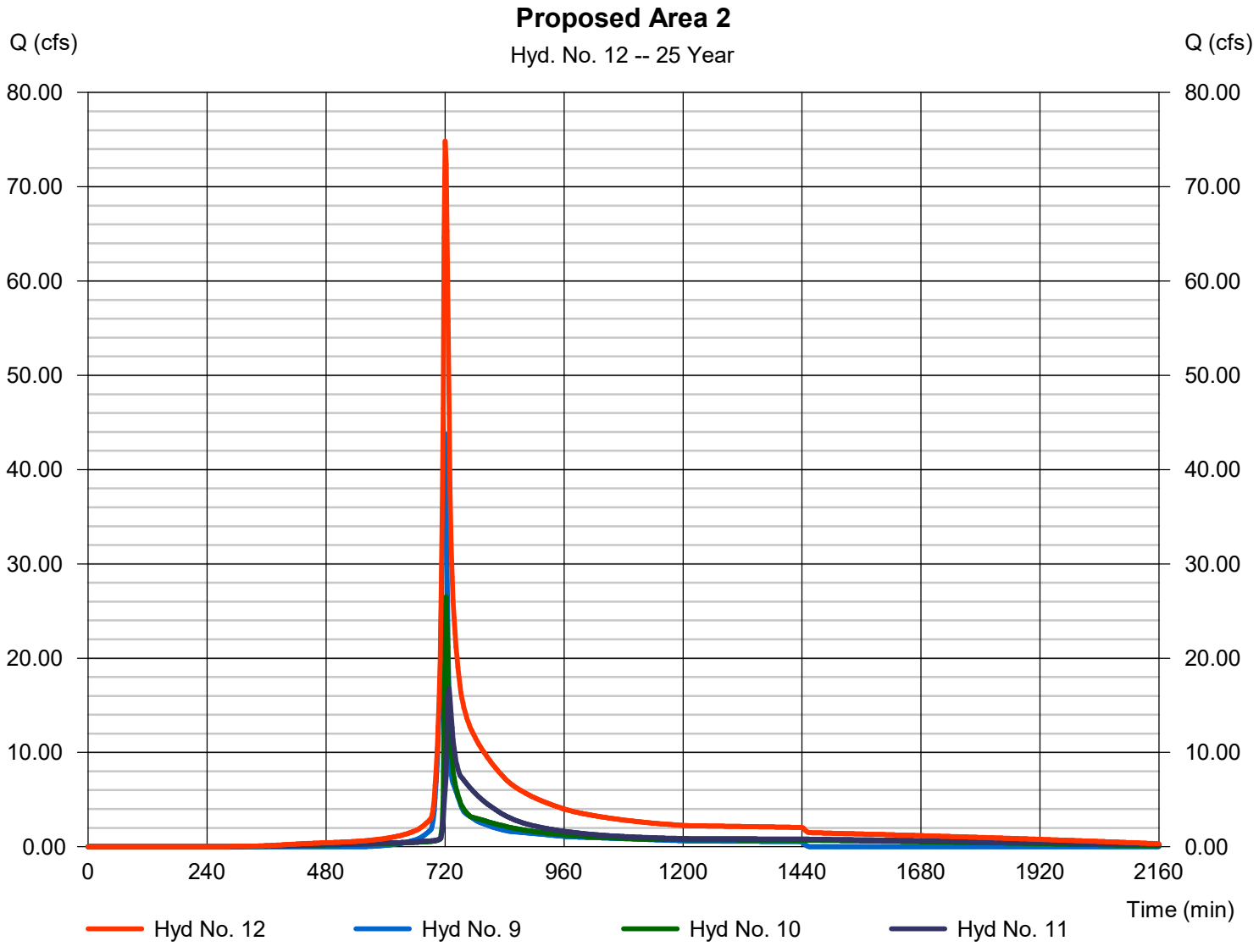


Hydrograph Report

Hyd. No. 12

Proposed Area 2

Hydrograph type	= Combine	Peak discharge	= 74.85 cfs
Storm frequency	= 25 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 329,487 cuft
Inflow hyds.	= 9, 10, 11	Contrib. drain. area	= 11.020 ac



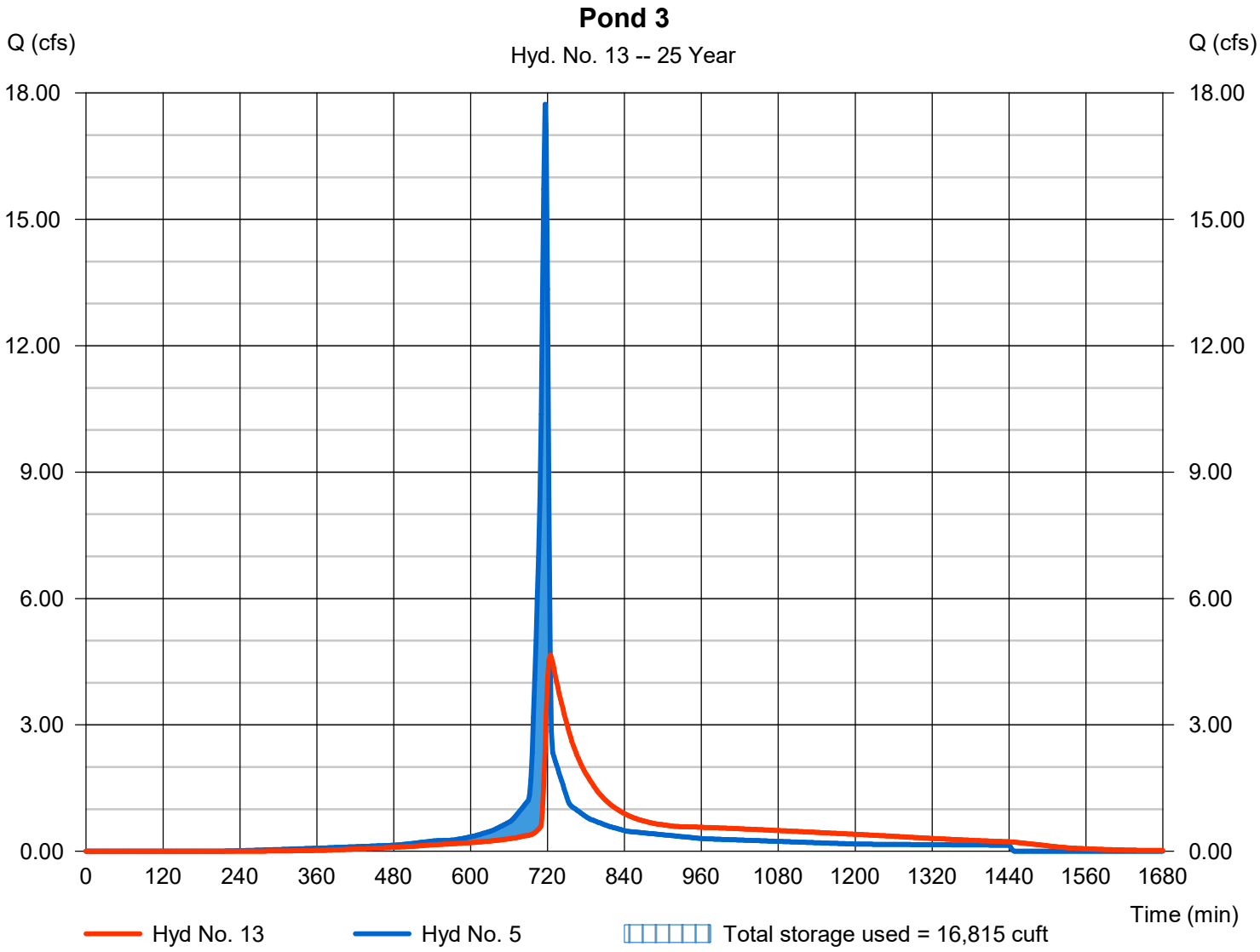
Hydrograph Report

Hyd. No. 13

Pond 3

Hydrograph type	=	Reservoir	Peak discharge	=	4.657 cfs
Storm frequency	=	25 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	38,375 cuft
Inflow hyd. No.	=	5 - Area to Pond 3	Max. Elevation	=	510.07 ft
Reservoir name	=	Pond 3	Max. Storage	=	16,815 cuft

Storage Indication method used.



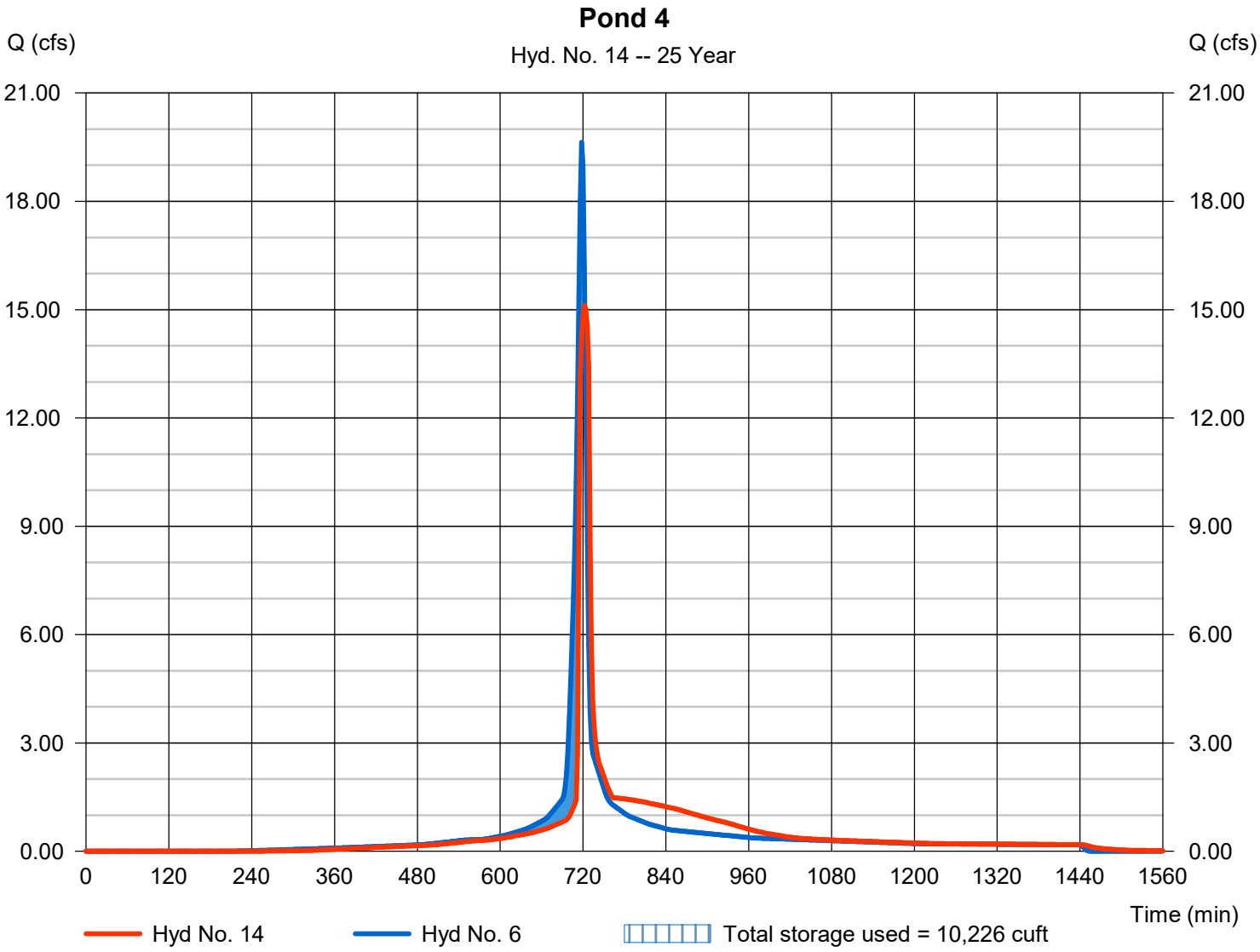
Hydrograph Report

Hyd. No. 14

Pond 4

Hydrograph type	=	Reservoir	Peak discharge	=	15.12 cfs
Storm frequency	=	25 yrs	Time to peak	=	722 min
Time interval	=	2 min	Hyd. volume	=	47,604 cuft
Inflow hyd. No.	=	6 - Area to Pond 4	Max. Elevation	=	512.00 ft
Reservoir name	=	Pond 4	Max. Storage	=	10,226 cuft

Storage Indication method used.



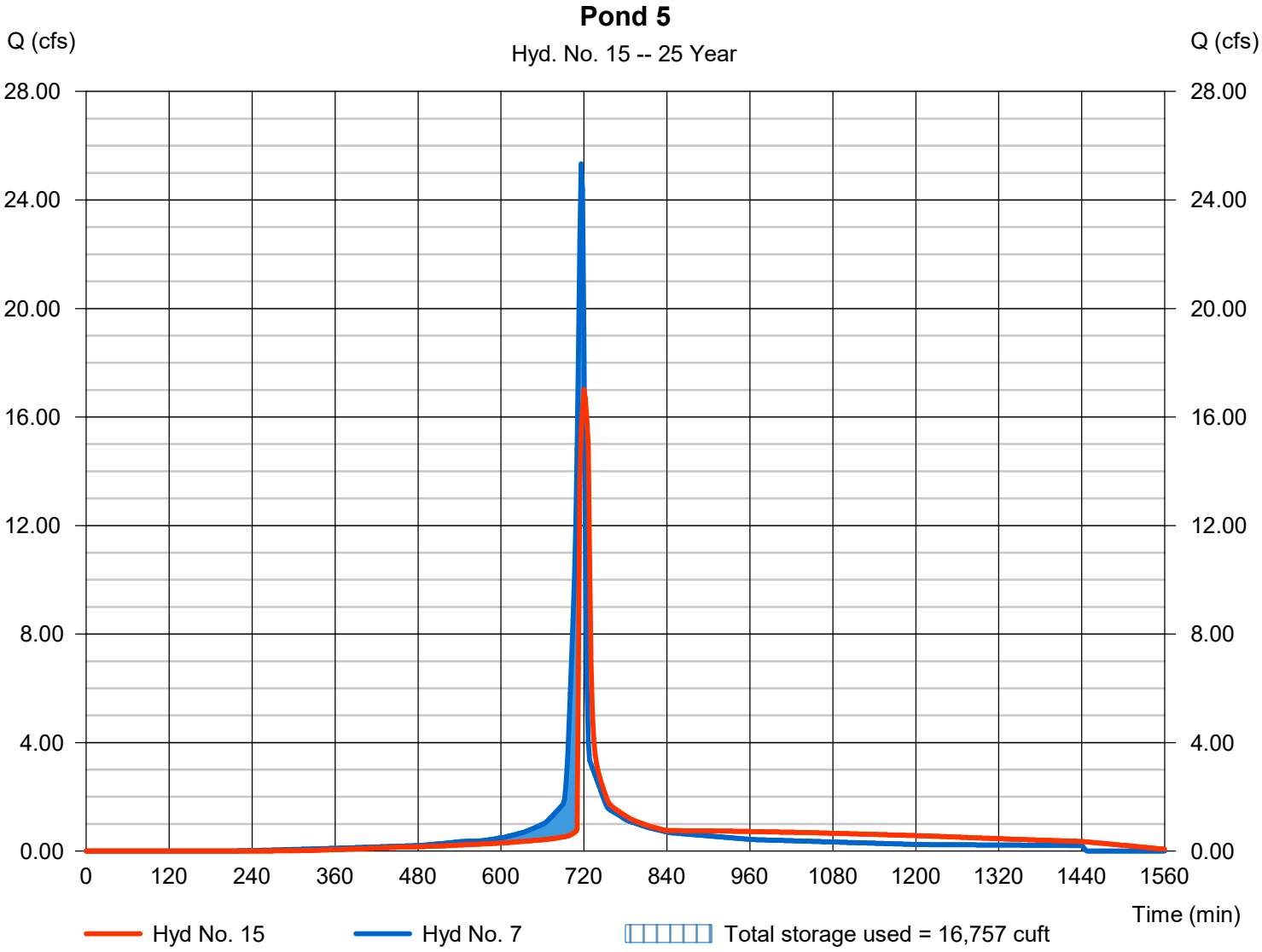
Hydrograph Report

Hyd. No. 15

Pond 5

Hydrograph type	=	Reservoir	Peak discharge	=	17.01 cfs
Storm frequency	=	25 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	54,832 cuft
Inflow hyd. No.	=	7 - Area to Pond 5	Max. Elevation	=	502.65 ft
Reservoir name	=	Pond 5	Max. Storage	=	16,757 cuft

Storage Indication method used.

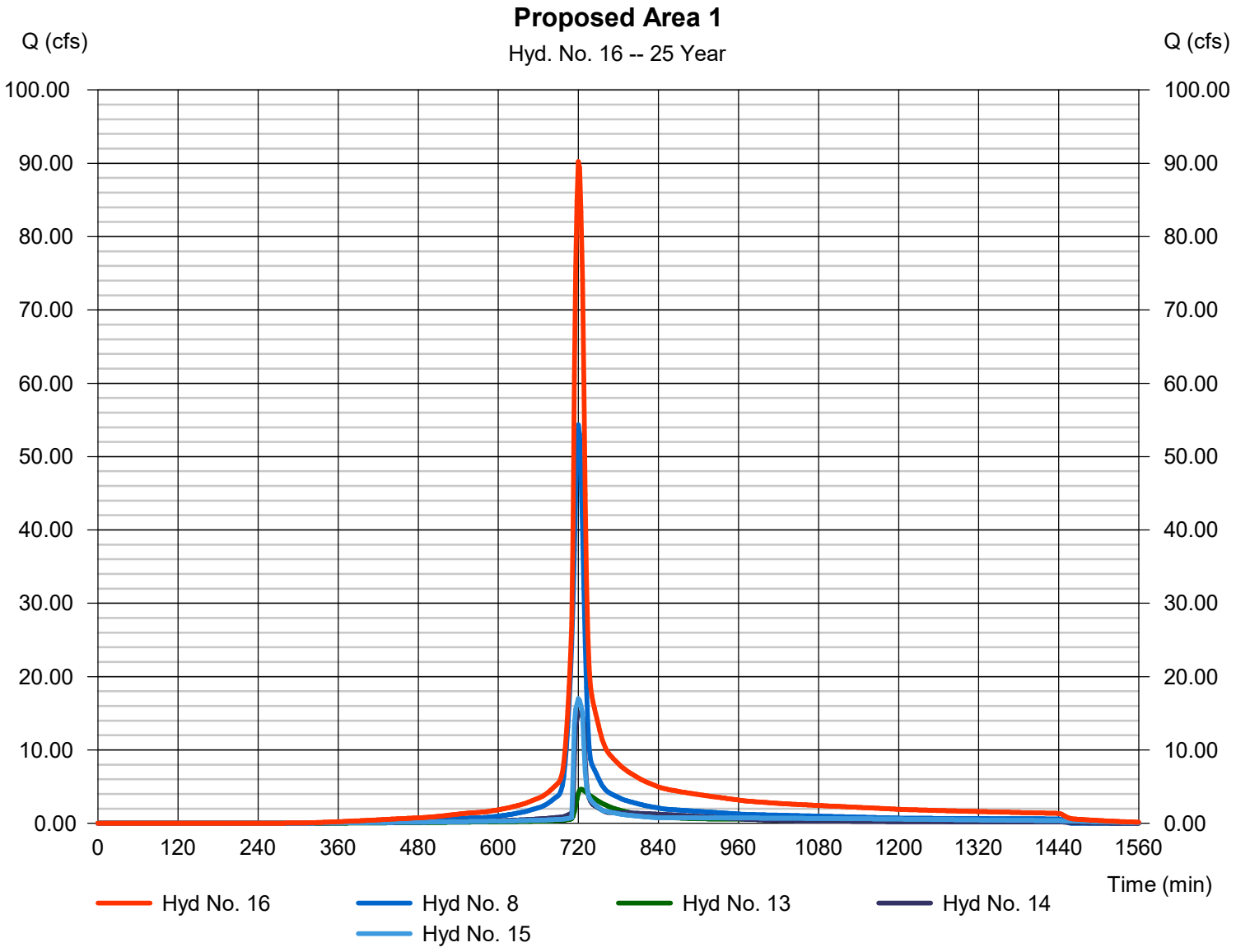


Hydrograph Report

Hyd. No. 16

Proposed Area 1

Hydrograph type	= Combine	Peak discharge	= 90.26 cfs
Storm frequency	= 25 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 284,510 cuft
Inflow hyds.	= 8, 13, 14, 15	Contrib. drain. area	= 9.730 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

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	116.09	2	720	302,826	------	------	------	Exisitng Area 1
2	SCS Runoff	111.95	2	720	290,282	------	------	------	Existing Area 2
3	SCS Runoff	54.12	2	716	118,259	------	------	------	Area to Pond 1
4	SCS Runoff	59.43	2	718	145,391	------	------	------	Area to Pond 2
5	SCS Runoff	20.21	2	716	44,150	------	------	------	Area to Pond 3
6	SCS Runoff	22.38	2	718	54,755	------	------	------	Area to Pond 4
7	SCS Runoff	28.87	2	716	63,071	------	------	------	Area to Pond 5
8	SCS Runoff	62.87	2	720	167,390	------	------	------	Bypass for Area 1
9	SCS Runoff	53.37	2	718	122,135	------	------	------	Bypass for Area 2
10	Reservoir	32.75	2	722	118,236	3	488.06	48,179	Pond 1
11	Reservoir	29.48	2	726	145,370	4	493.73	65,330	Pond 2
12	Combine	101.27	2	722	385,741	9, 10, 11	------	------	Proposed Area 2
13	Reservoir	5.871	2	724	44,136	5	510.41	18,973	Pond 3
14	Reservoir	18.17	2	722	54,749	6	512.21	11,136	Pond 4
15	Reservoir	21.28	2	720	63,062	7	502.89	18,115	Pond 5
16	Combine	106.39	2	720	329,338	8, 13, 14, 15	------	------	Proposed Area 1

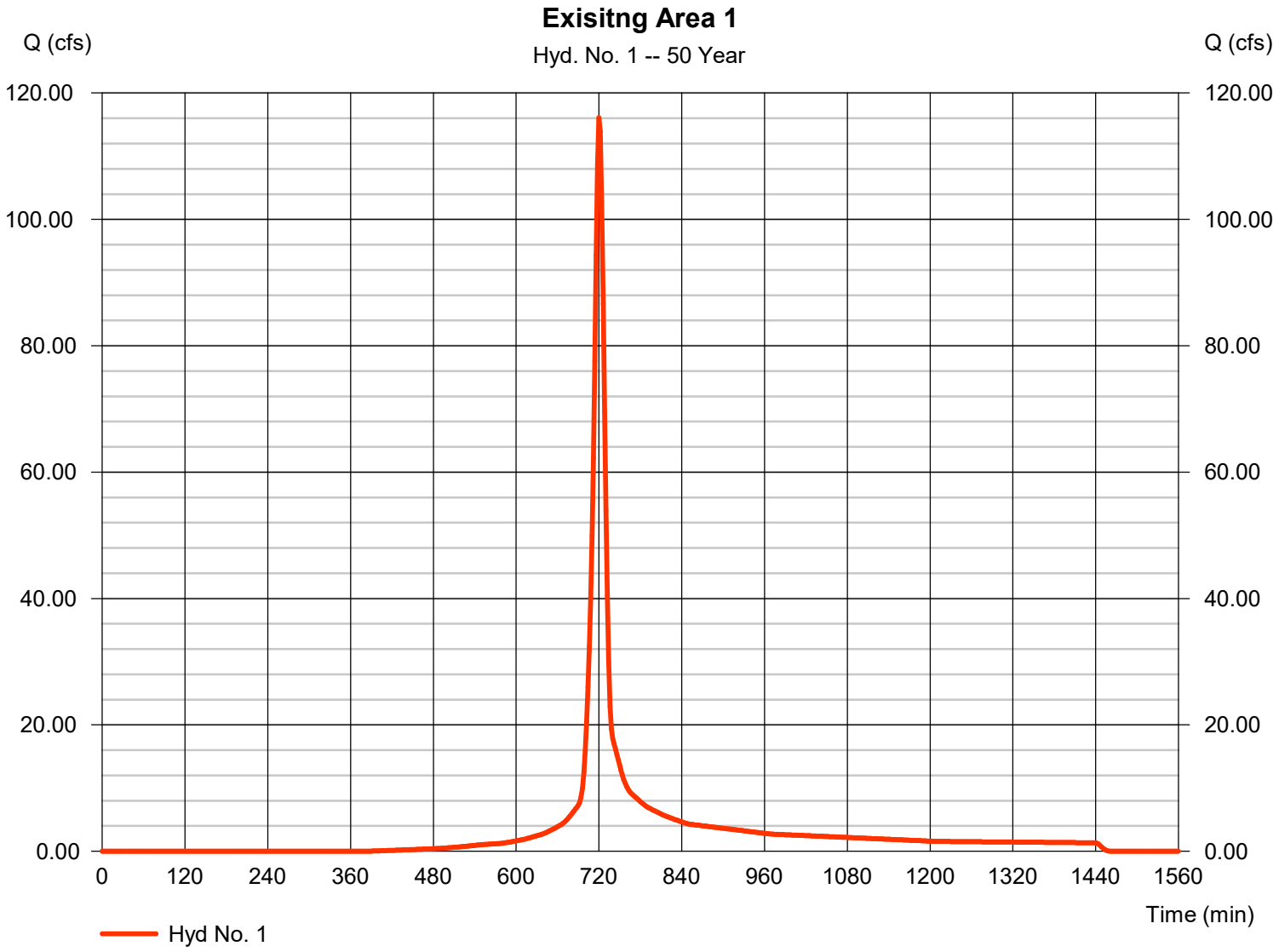
Hydrograph Report

Hyd. No. 1

Exisitng Area 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	116.09 cfs
Storm frequency	=	50 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	302,826 cuft
Drainage area	=	20.440 ac	Curve number	=	79*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	13.20 min
Total precip.	=	6.31 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(20.442 x 79)] / 20.440



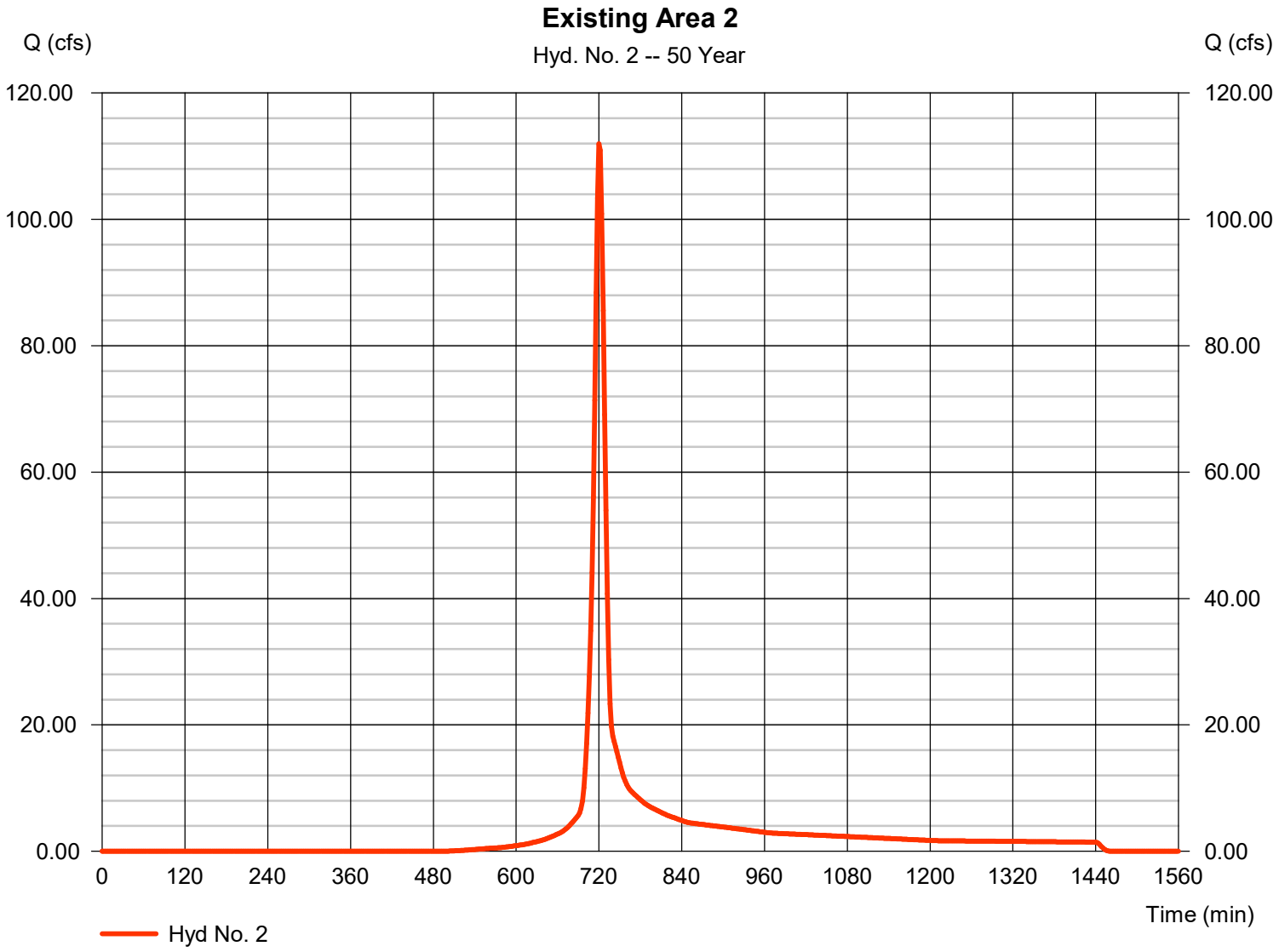
Hydrograph Report

Hyd. No. 2

Existing Area 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	111.95 cfs
Storm frequency	=	50 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	290,282 cuft
Drainage area	=	23.870 ac	Curve number	=	72*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	10.10 min
Total precip.	=	6.31 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.978 x 49) + (1.088 x 69) + (17.804 x 79)] / 23.870



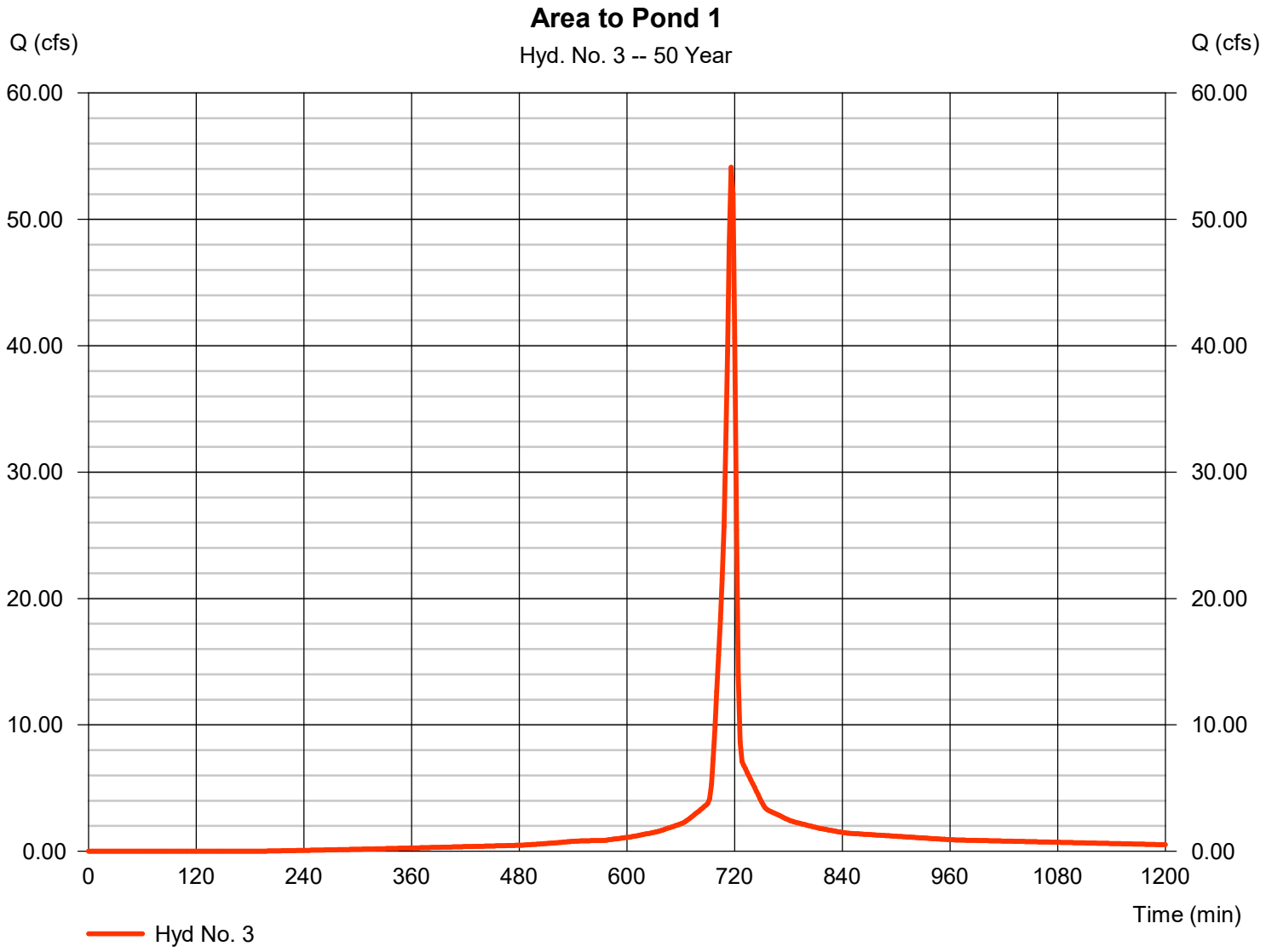
Hydrograph Report

Hyd. No. 3

Area to Pond 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	54.12 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	118,259 cuft
Drainage area	=	6.750 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.31 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.050 x 98) + (2.700 x 79)] / 6.750



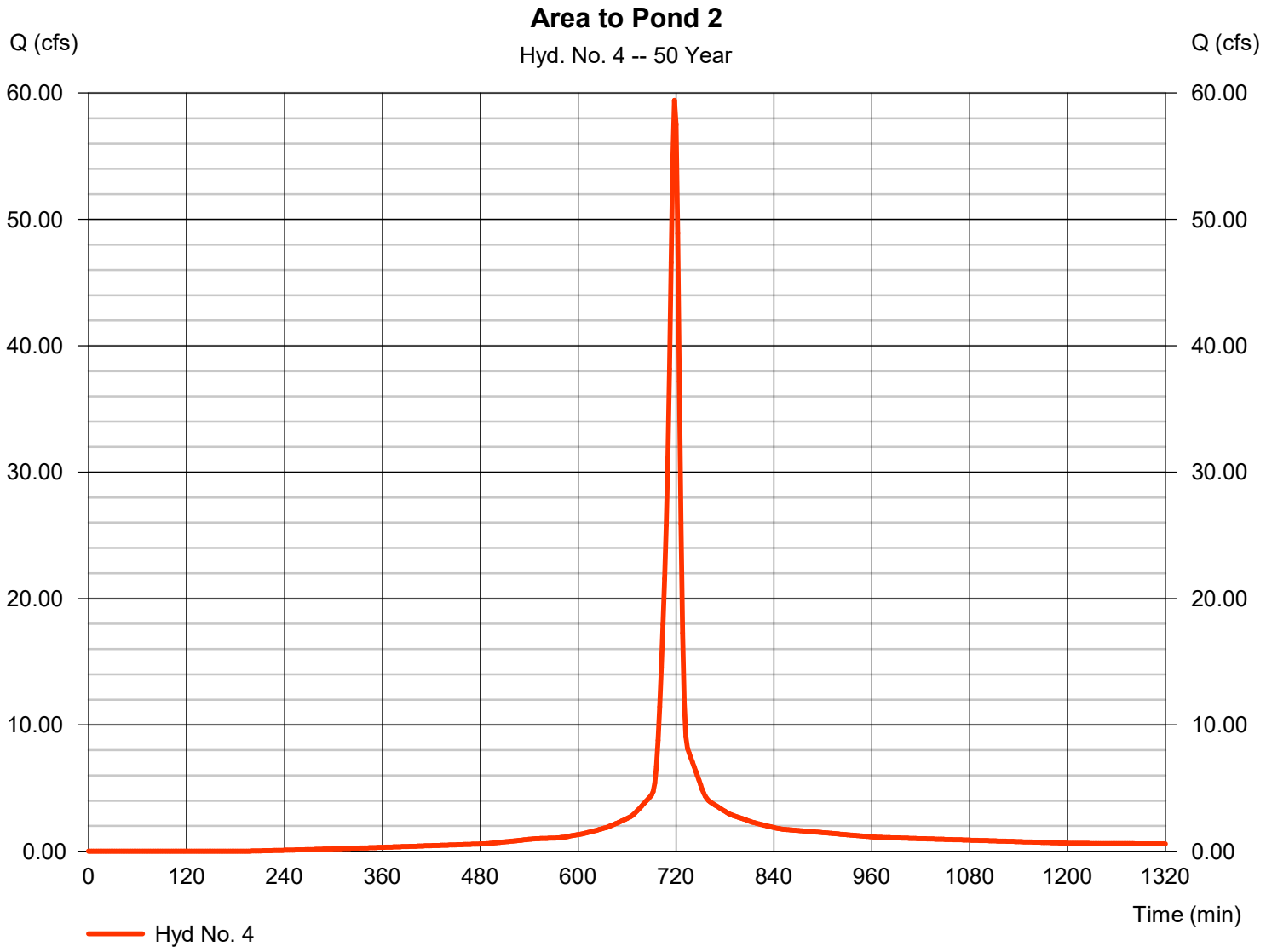
Hydrograph Report

Hyd. No. 4

Area to Pond 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	59.43 cfs
Storm frequency	=	50 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	145,391 cuft
Drainage area	=	7.780 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	8.00 min
Total precip.	=	6.31 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.670 x 98) + (3.110 x 79)] / 7.780



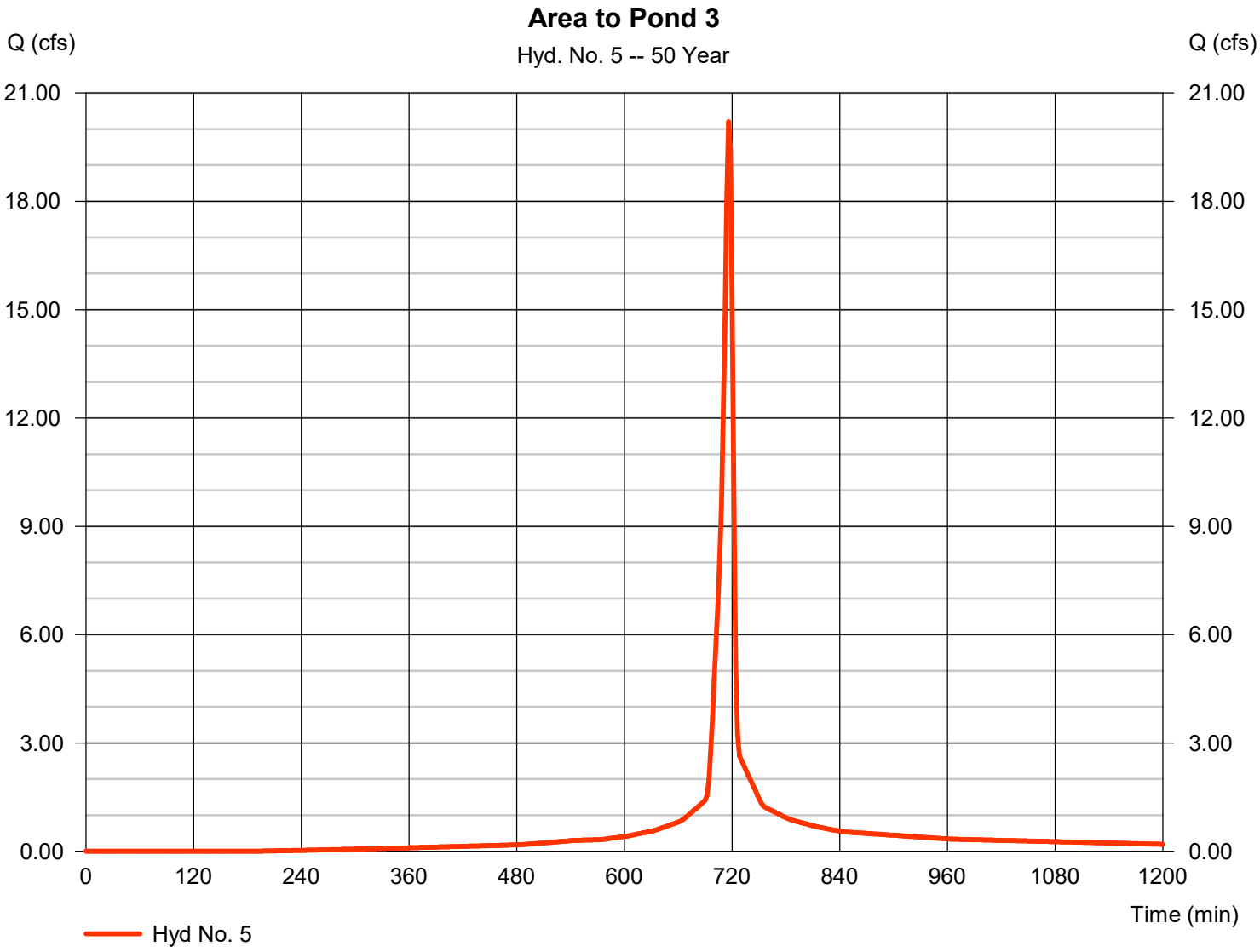
Hydrograph Report

Hyd. No. 5

Area to Pond 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	20.21 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	44,150 cuft
Drainage area	=	2.520 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.31 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.510 x 98) + (1.010 x 79)] / 2.520



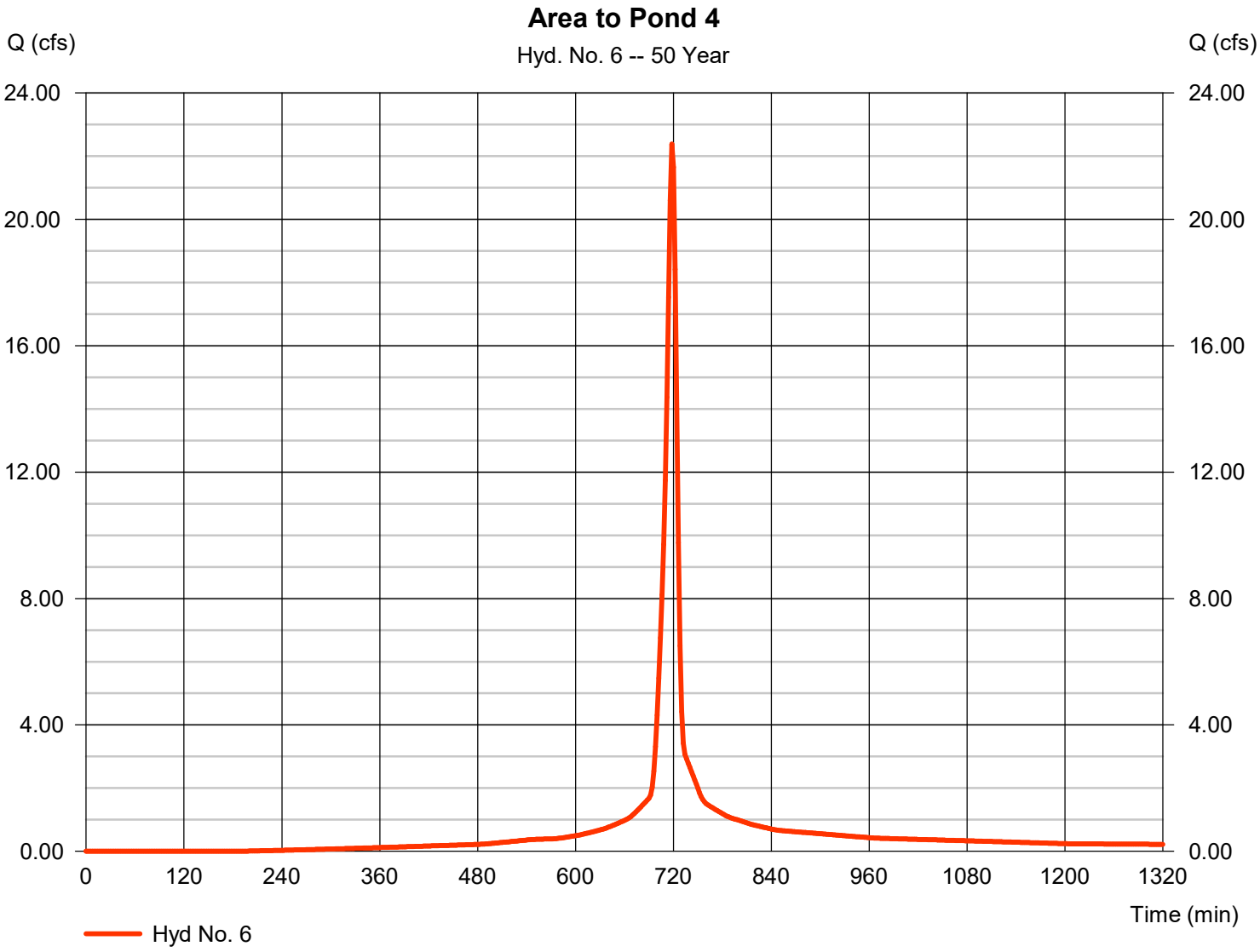
Hydrograph Report

Hyd. No. 6

Area to Pond 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	22.38 cfs
Storm frequency	=	50 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	54,755 cuft
Drainage area	=	2.930 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	7.80 min
Total precip.	=	6.31 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.760 x 98) + (1.172 x 79)] / 2.930



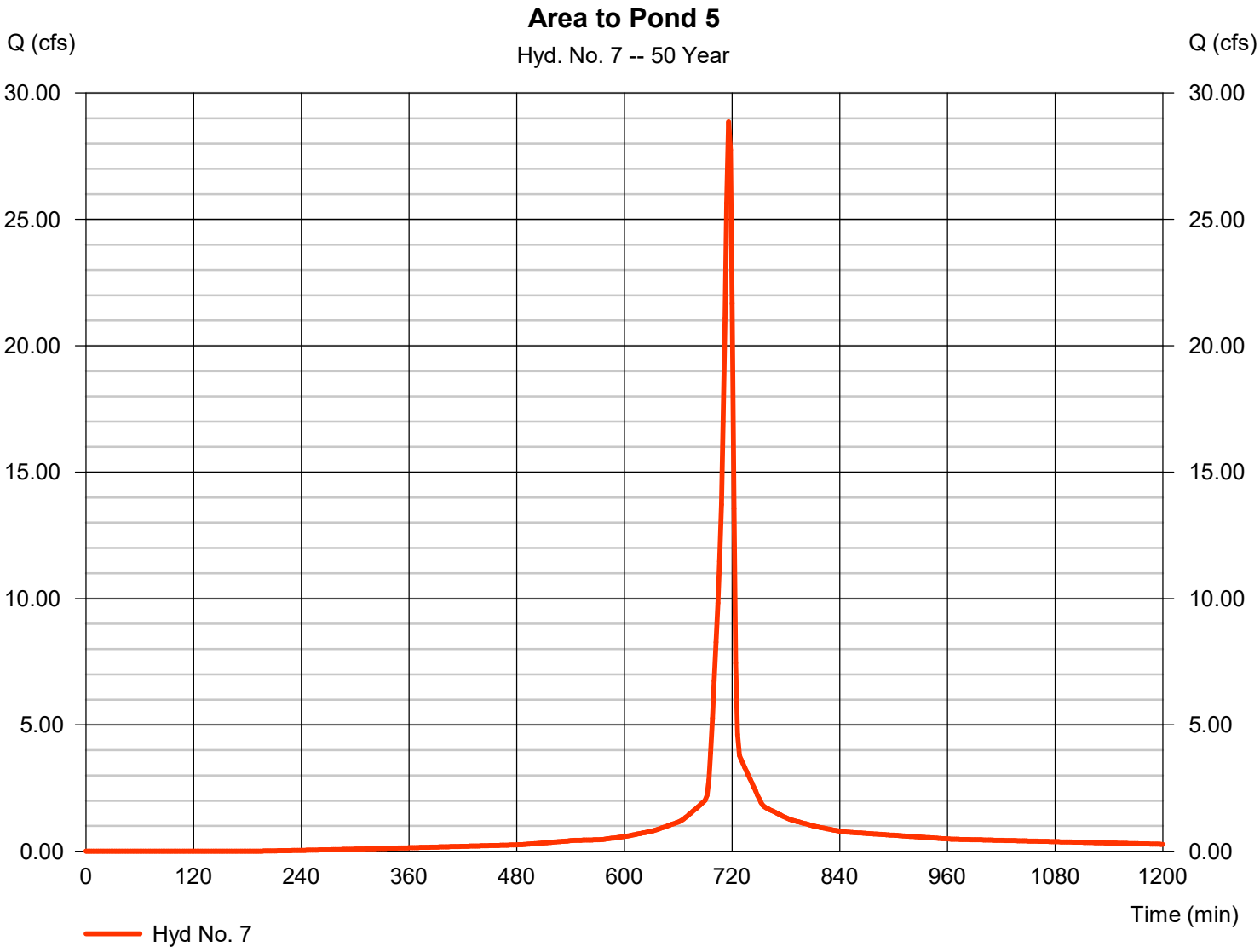
Hydrograph Report

Hyd. No. 7

Area to Pond 5

Hydrograph type	=	SCS Runoff	Peak discharge	=	28.87 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	63,071 cuft
Drainage area	=	3.600 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.31 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.160 x 98) + (1.437 x 79)] / 3.600



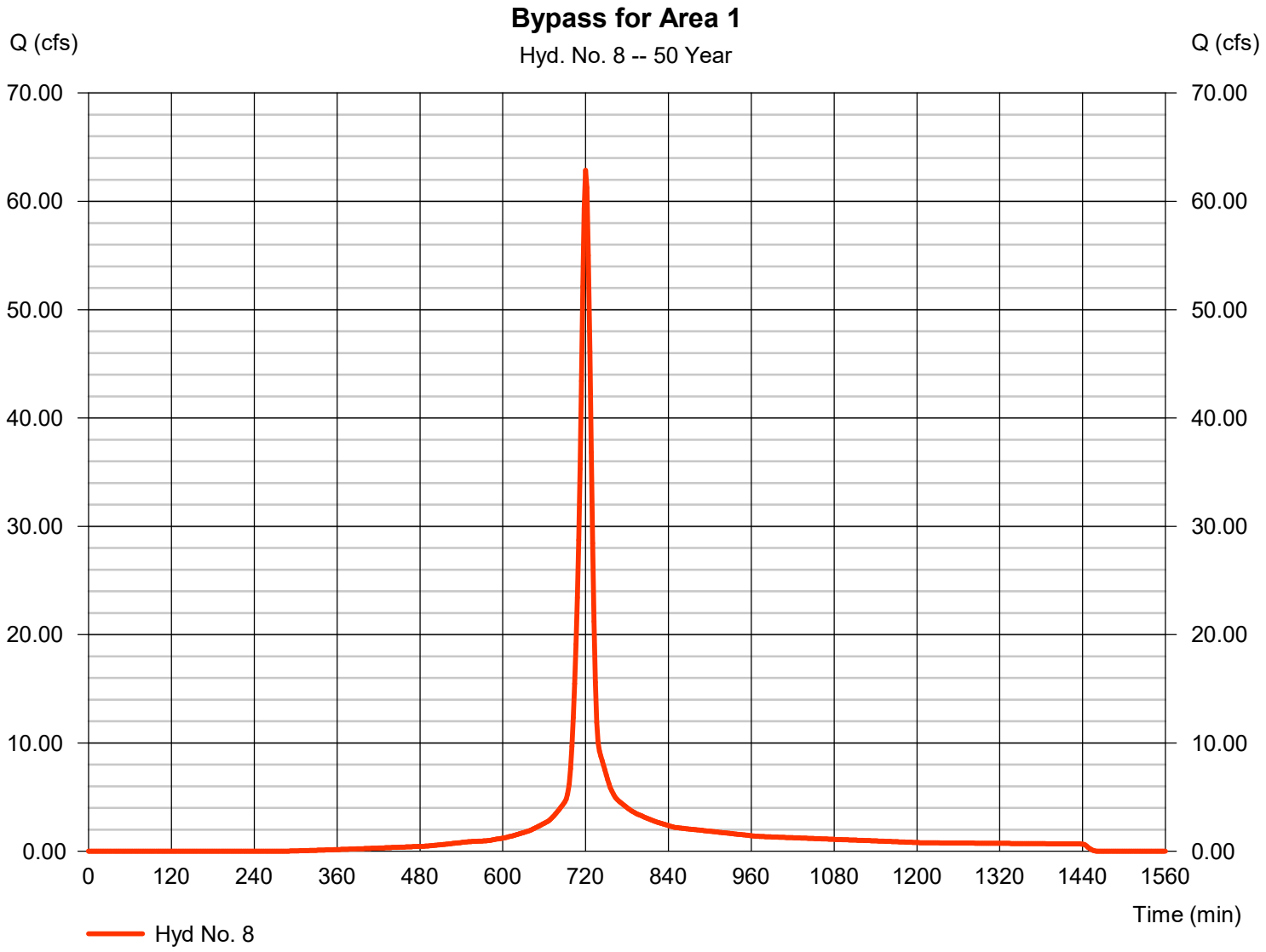
Hydrograph Report

Hyd. No. 8

Bypass for Area 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	62.87 cfs
Storm frequency	=	50 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	167,390 cuft
Drainage area	=	9.730 ac	Curve number	=	85*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	13.00 min
Total precip.	=	6.31 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.920 x 98) + (6.813 x 79)] / 9.730



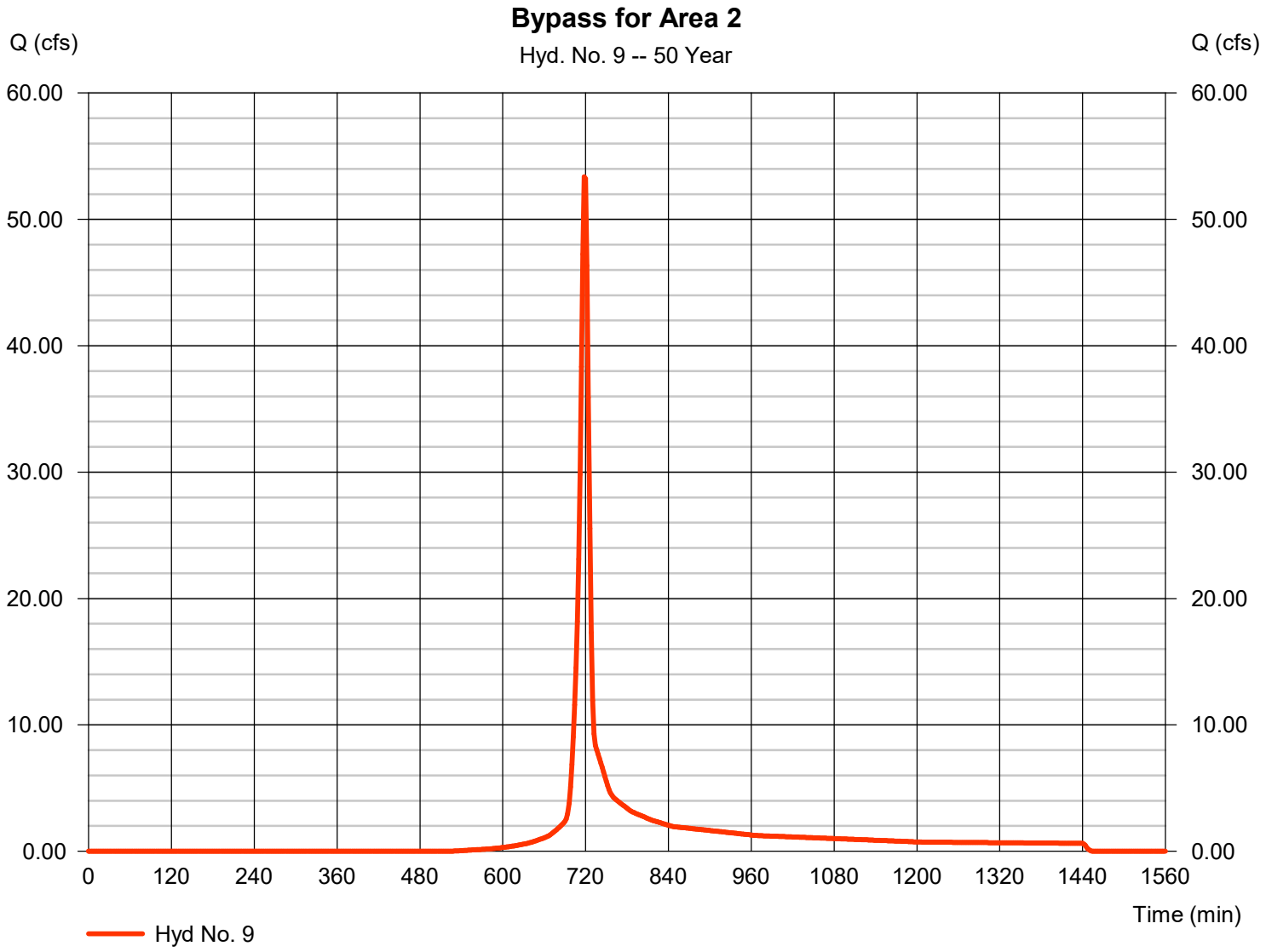
Hydrograph Report

Hyd. No. 9

Bypass for Area 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	53.37 cfs
Storm frequency	=	50 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	122,135 cuft
Drainage area	=	11.020 ac	Curve number	=	70*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	9.50 min
Total precip.	=	6.31 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.970 x 98) + (4.980 x 49) + (1.090 x 69) + (1.980 x 79)] / 11.020



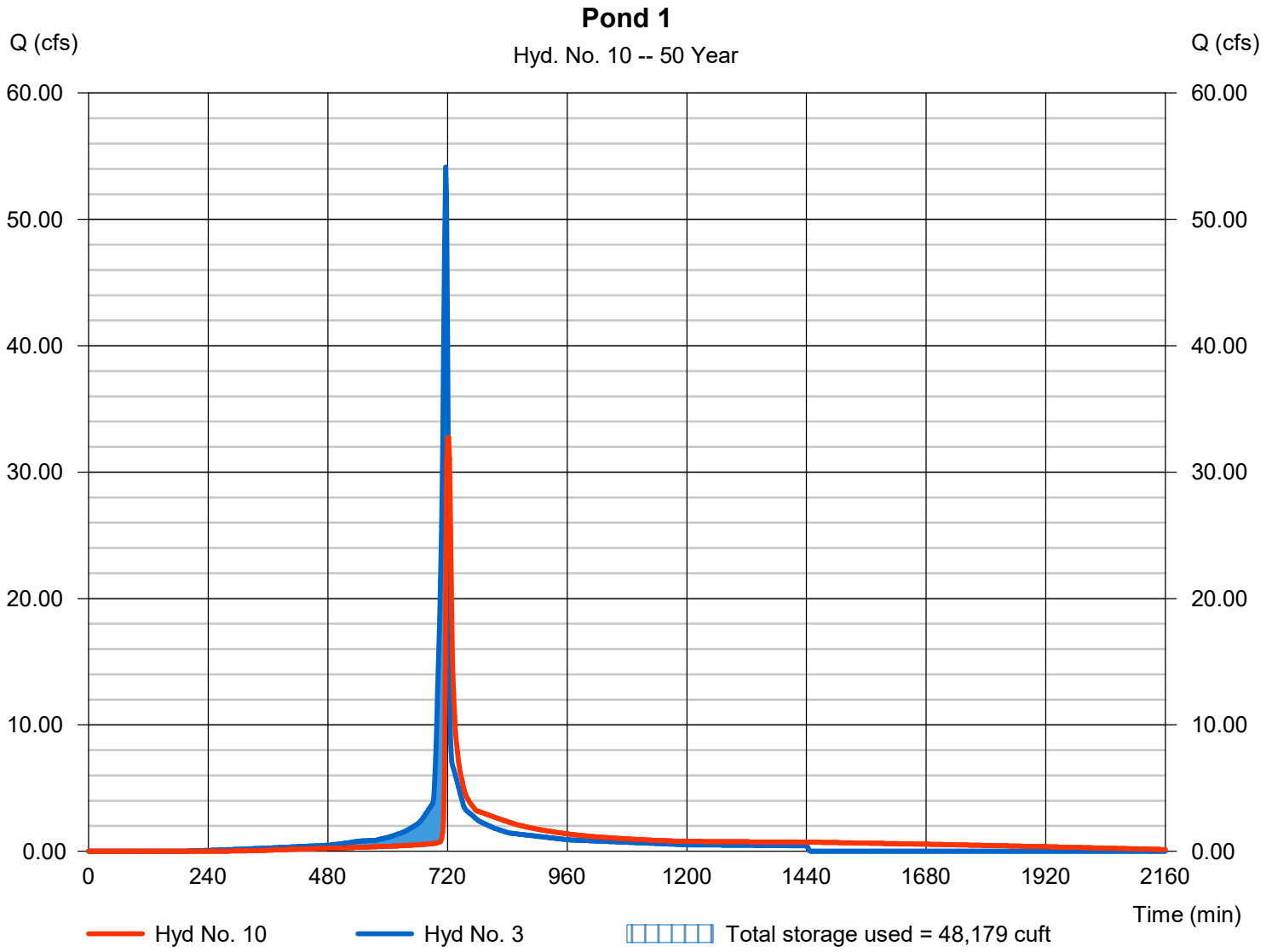
Hydrograph Report

Hyd. No. 10

Pond 1

Hydrograph type	=	Reservoir	Peak discharge	=	32.75 cfs
Storm frequency	=	50 yrs	Time to peak	=	722 min
Time interval	=	2 min	Hyd. volume	=	118,236 cuft
Inflow hyd. No.	=	3 - Area to Pond 1	Max. Elevation	=	488.06 ft
Reservoir name	=	Pond 1	Max. Storage	=	48,179 cuft

Storage Indication method used.



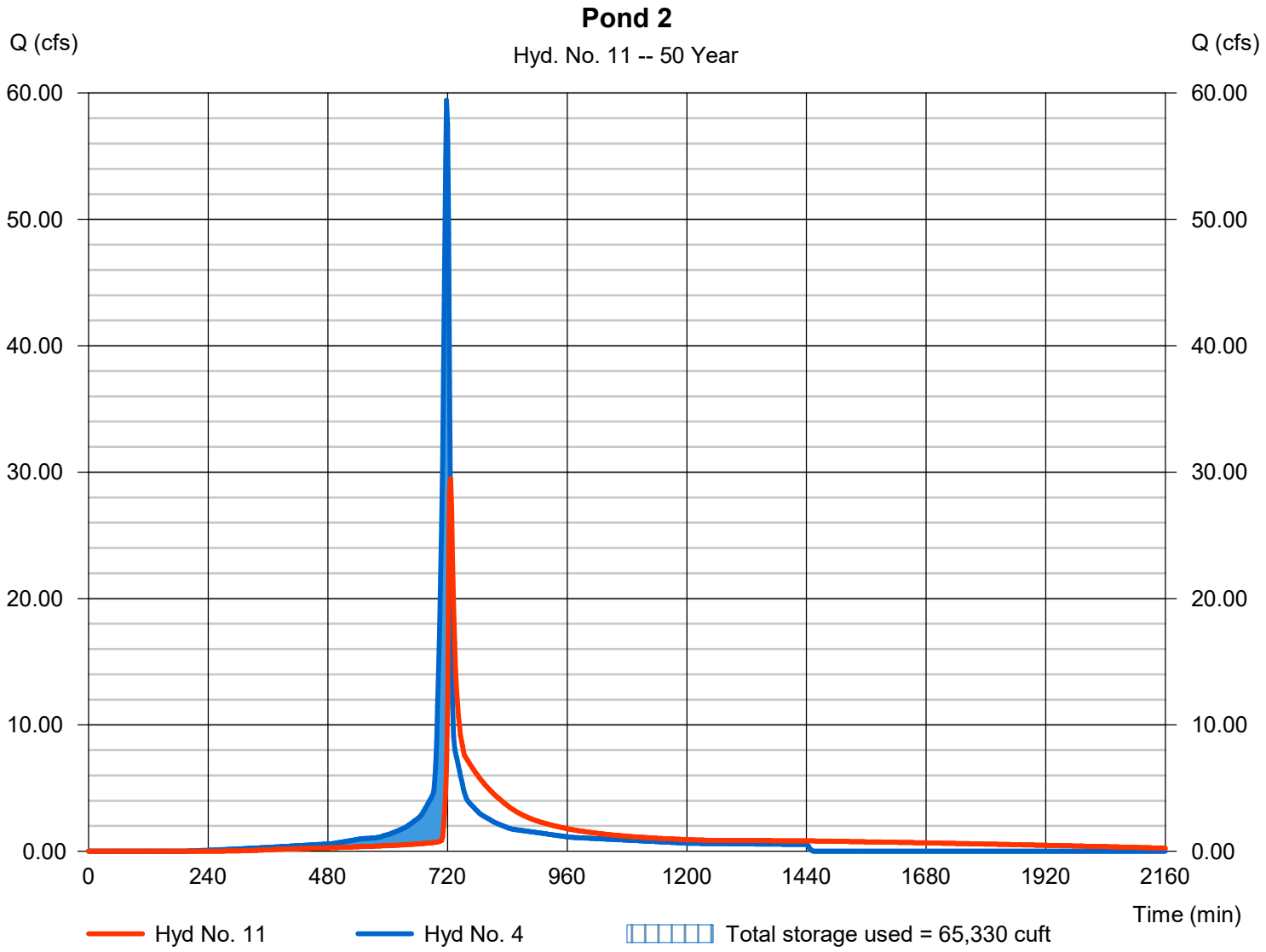
Hydrograph Report

Hyd. No. 11

Pond 2

Hydrograph type	=	Reservoir	Peak discharge	=	29.48 cfs
Storm frequency	=	50 yrs	Time to peak	=	726 min
Time interval	=	2 min	Hyd. volume	=	145,370 cuft
Inflow hyd. No.	=	4 - Area to Pond 2	Max. Elevation	=	493.73 ft
Reservoir name	=	Pond 2	Max. Storage	=	65,330 cuft

Storage Indication method used.

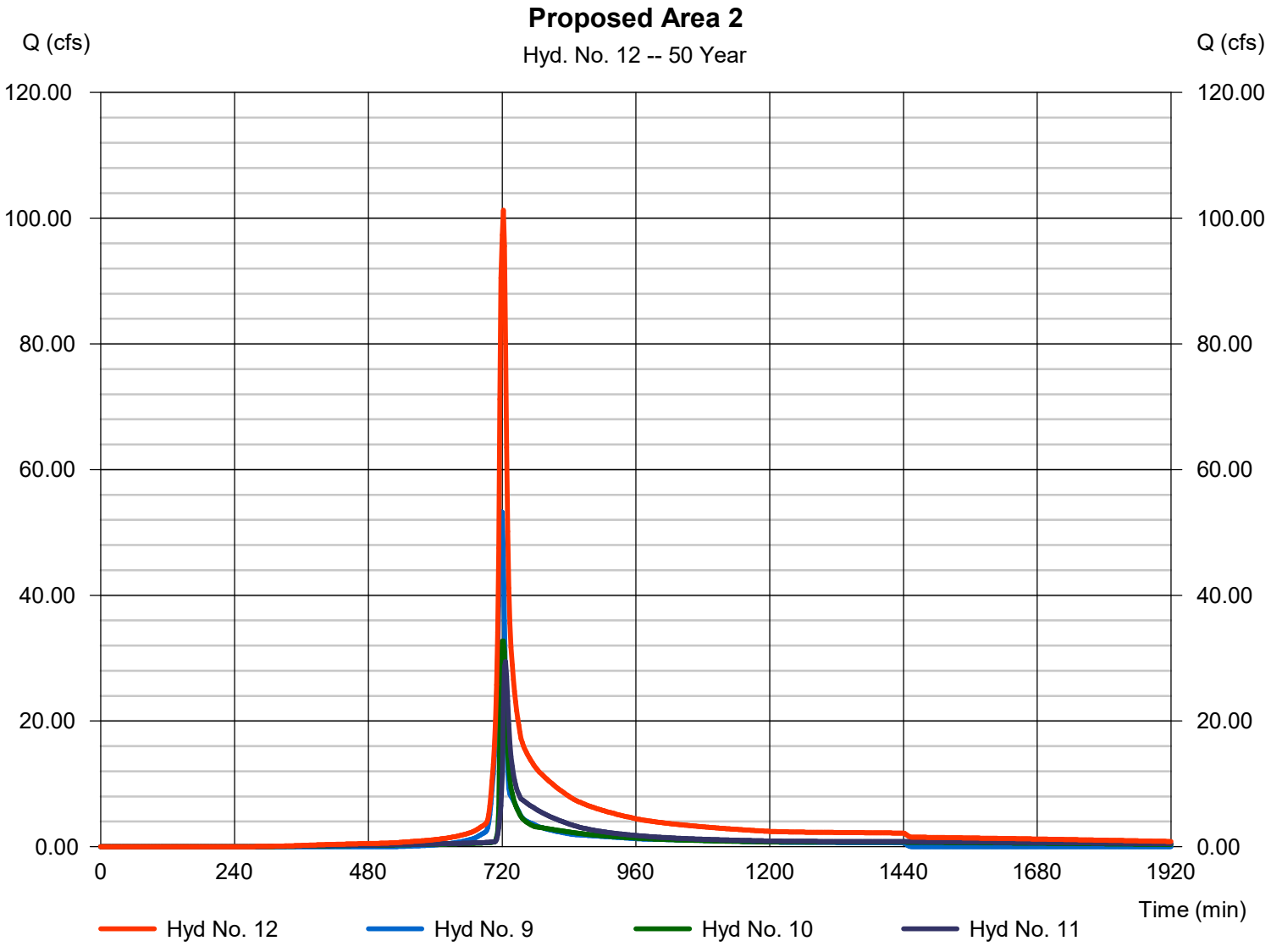


Hydrograph Report

Hyd. No. 12

Proposed Area 2

Hydrograph type	= Combine	Peak discharge	= 101.27 cfs
Storm frequency	= 50 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 385,741 cuft
Inflow hyds.	= 9, 10, 11	Contrib. drain. area	= 11.020 ac



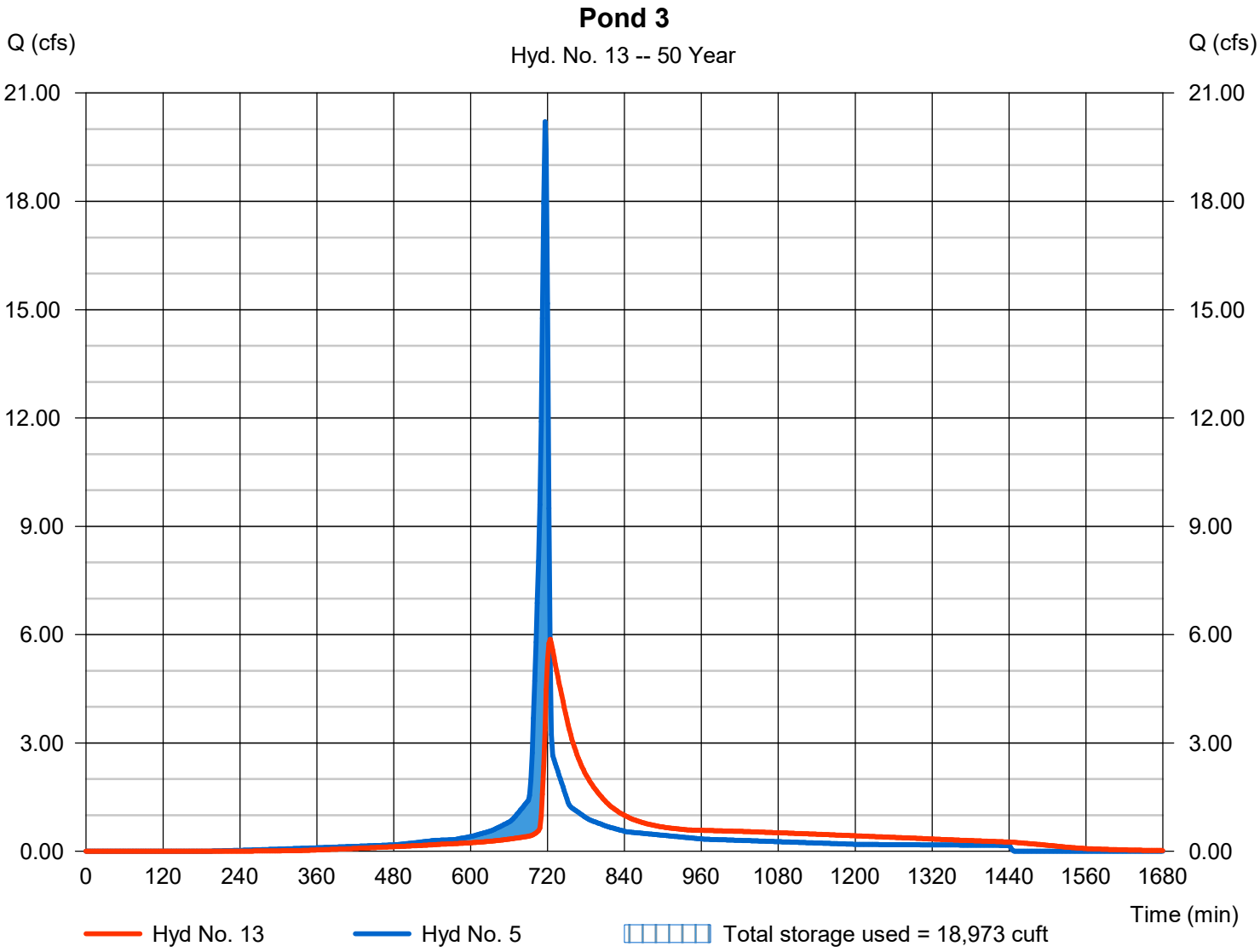
Hydrograph Report

Hyd. No. 13

Pond 3

Hydrograph type	=	Reservoir	Peak discharge	=	5.871 cfs
Storm frequency	=	50 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	44,136 cuft
Inflow hyd. No.	=	5 - Area to Pond 3	Max. Elevation	=	510.41 ft
Reservoir name	=	Pond 3	Max. Storage	=	18,973 cuft

Storage Indication method used.



Hydrograph Report

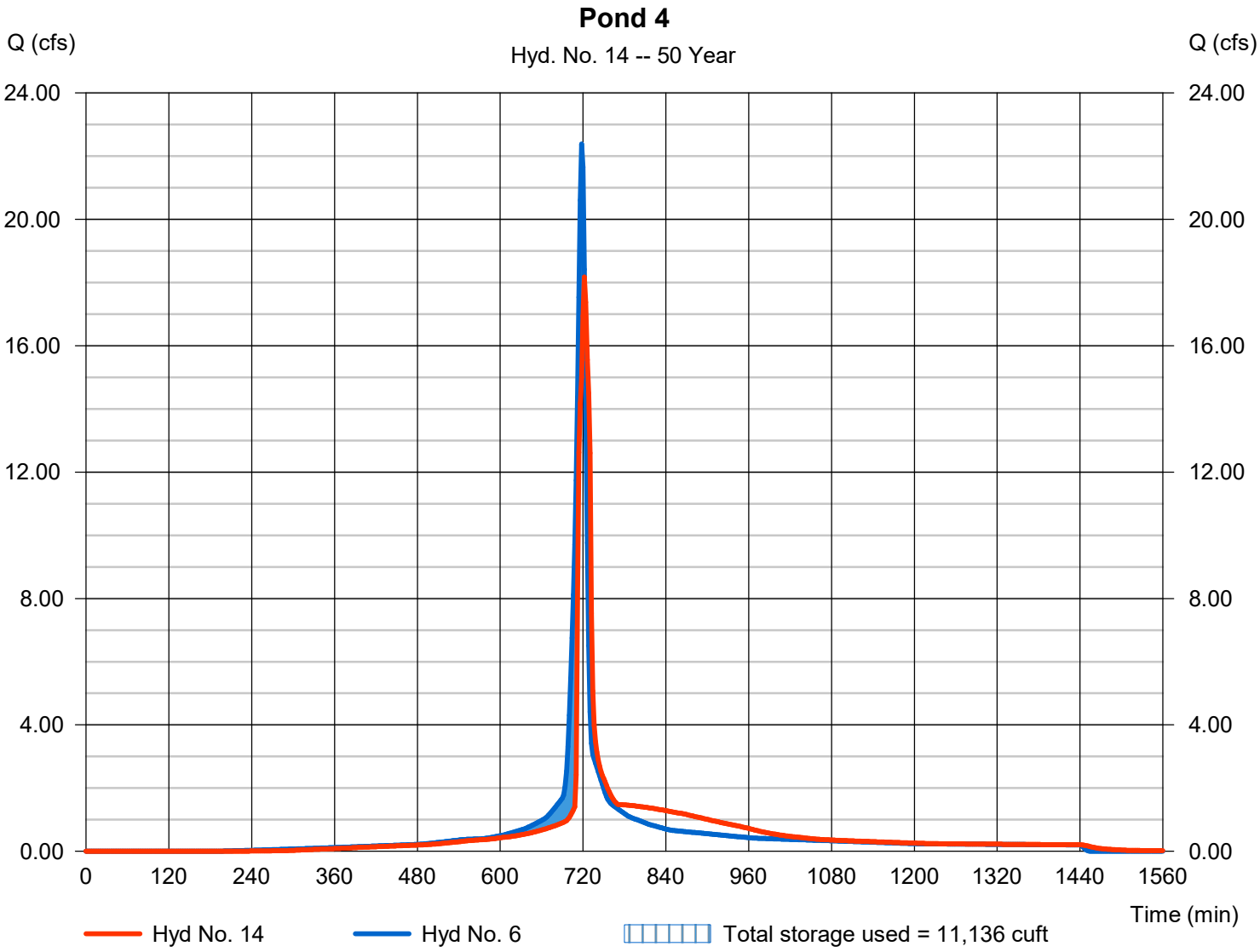
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Thursday, 05 / 21 / 2026

Hyd. No. 14

Pond 4

Hydrograph type	=	Reservoir	Peak discharge	=	18.17 cfs
Storm frequency	=	50 yrs	Time to peak	=	722 min
Time interval	=	2 min	Hyd. volume	=	54,749 cuft
Inflow hyd. No.	=	6 - Area to Pond 4	Max. Elevation	=	512.21 ft
Reservoir name	=	Pond 4	Max. Storage	=	11,136 cuft

Storage Indication method used.



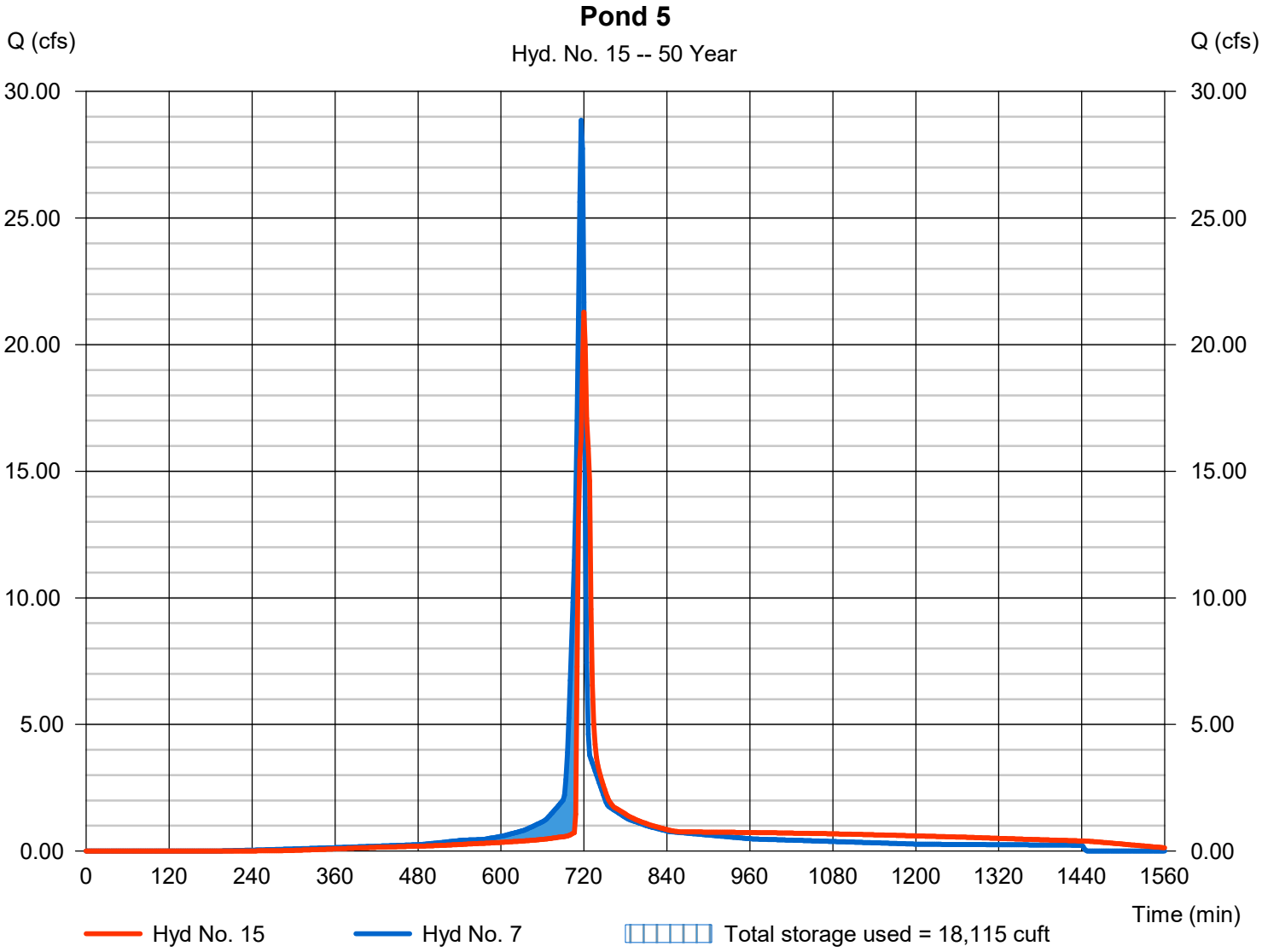
Hydrograph Report

Hyd. No. 15

Pond 5

Hydrograph type	=	Reservoir	Peak discharge	=	21.28 cfs
Storm frequency	=	50 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	63,062 cuft
Inflow hyd. No.	=	7 - Area to Pond 5	Max. Elevation	=	502.89 ft
Reservoir name	=	Pond 5	Max. Storage	=	18,115 cuft

Storage Indication method used.

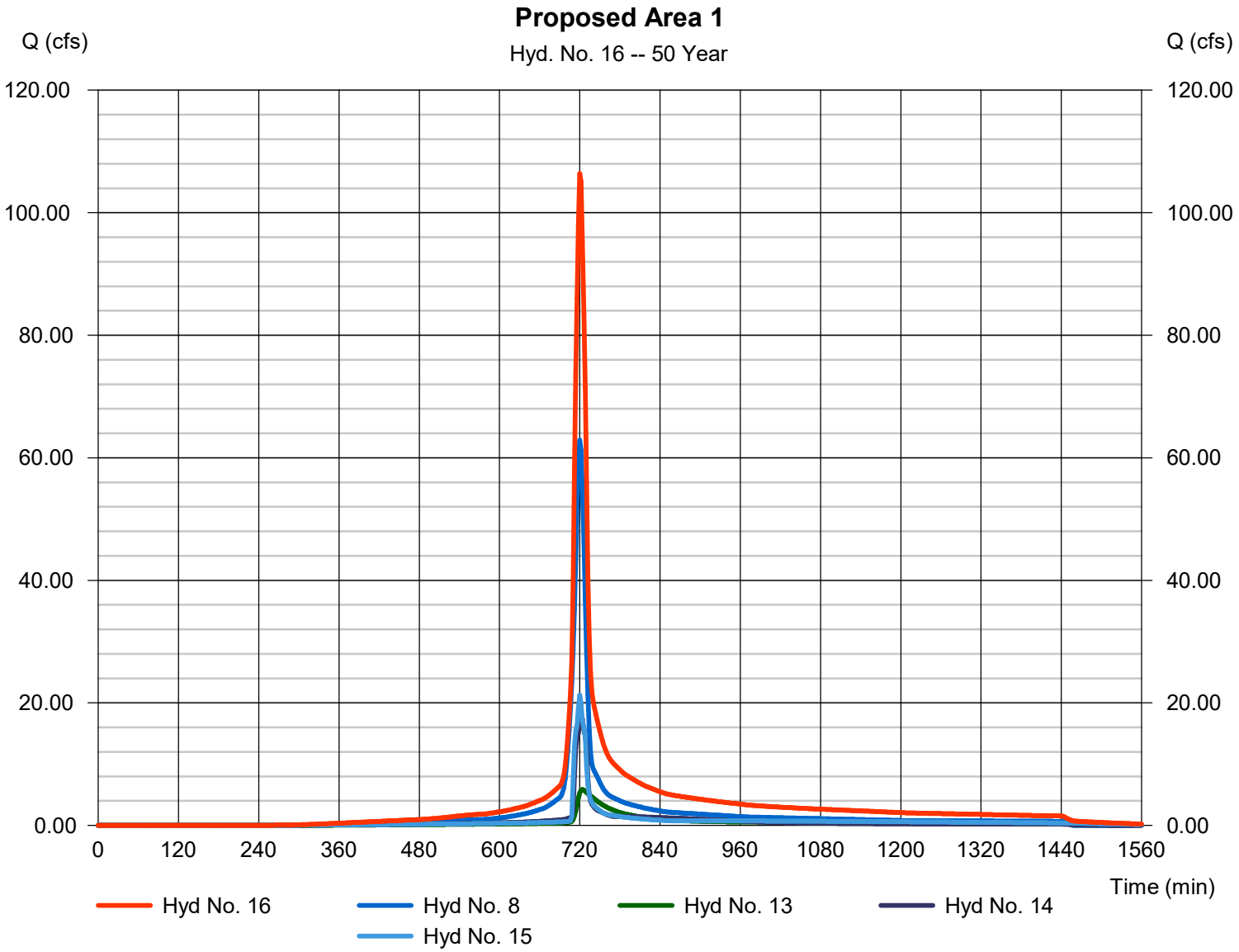


Hydrograph Report

Hyd. No. 16

Proposed Area 1

Hydrograph type	=	Combine	Peak discharge	=	106.39 cfs
Storm frequency	=	50 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	329,338 cuft
Inflow hyds.	=	8, 13, 14, 15	Contrib. drain. area	=	9.730 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

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	134.43	2	720	352,178	------	------	------	Exisitng Area 1
2	SCS Runoff	132.55	2	720	343,672	------	------	------	Existing Area 2
3	SCS Runoff	60.92	2	716	134,215	------	------	------	Area to Pond 1
4	SCS Runoff	66.92	2	718	165,008	------	------	------	Area to Pond 2
5	SCS Runoff	22.74	2	716	50,107	------	------	------	Area to Pond 3
6	SCS Runoff	25.20	2	718	62,143	------	------	------	Area to Pond 4
7	SCS Runoff	32.49	2	716	71,581	------	------	------	Area to Pond 5
8	SCS Runoff	71.64	2	720	192,014	------	------	------	Bypass for Area 1
9	SCS Runoff	63.56	2	718	145,410	------	------	------	Bypass for Area 2
10	Reservoir	39.48	2	720	134,192	3	488.35	51,769	Pond 1
11	Reservoir	38.45	2	724	164,986	4	494.05	69,616	Pond 2
12	Combine	131.31	2	720	444,589	9, 10, 11	------	------	Proposed Area 2
13	Reservoir	7.177	2	724	50,093	5	510.76	21,126	Pond 3
14	Reservoir	21.60	2	722	62,137	6	512.36	11,781	Pond 4
15	Reservoir	25.58	2	720	71,572	7	503.06	19,113	Pond 5
16	Combine	124.40	2	720	375,816	8, 13, 14, 15	------	------	Proposed Area 1

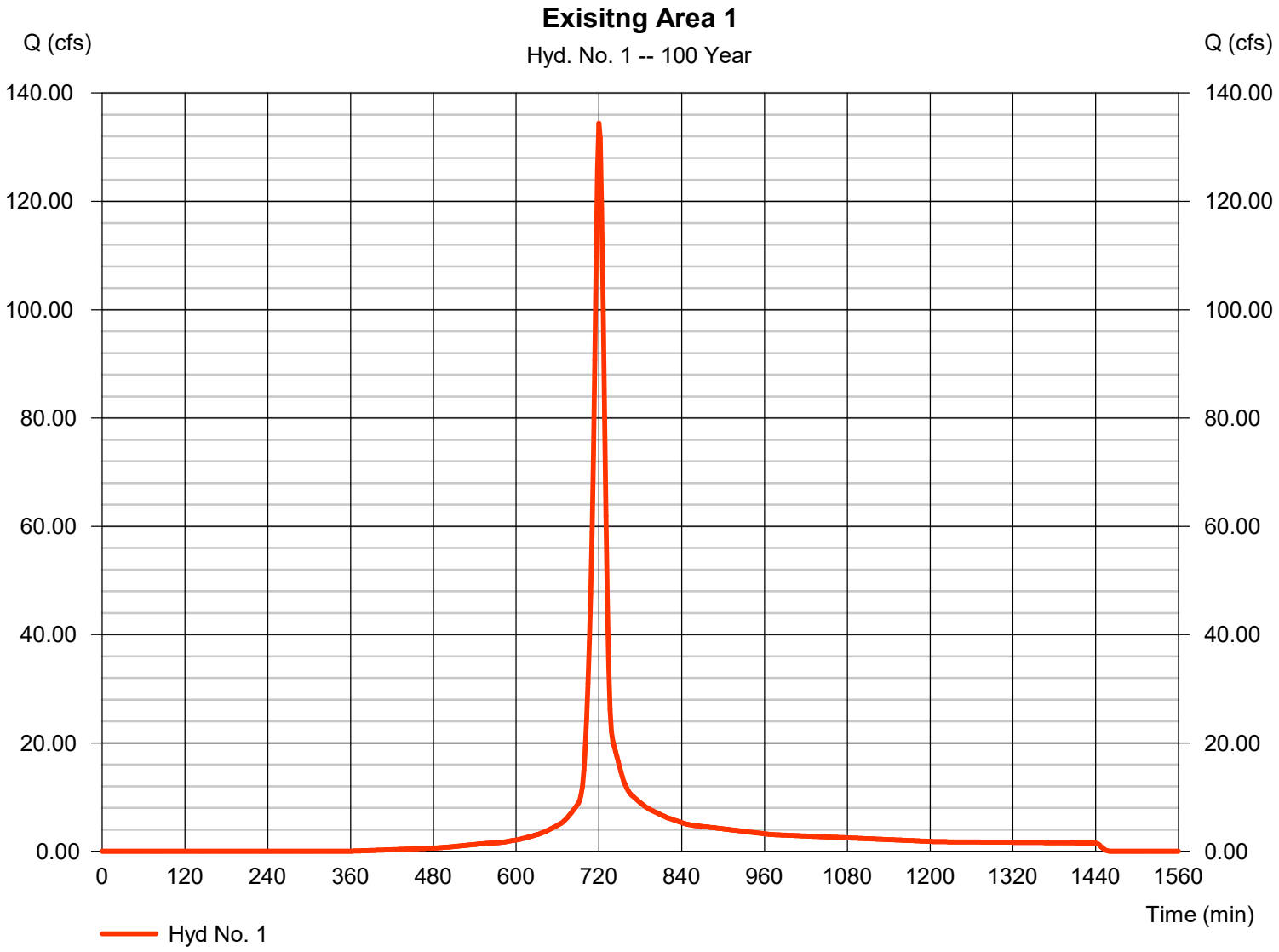
Hydrograph Report

Hyd. No. 1

Exisitng Area 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	134.43 cfs
Storm frequency	=	100 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	352,178 cuft
Drainage area	=	20.440 ac	Curve number	=	79*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	13.20 min
Total precip.	=	7.02 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(20.442 x 79)] / 20.440



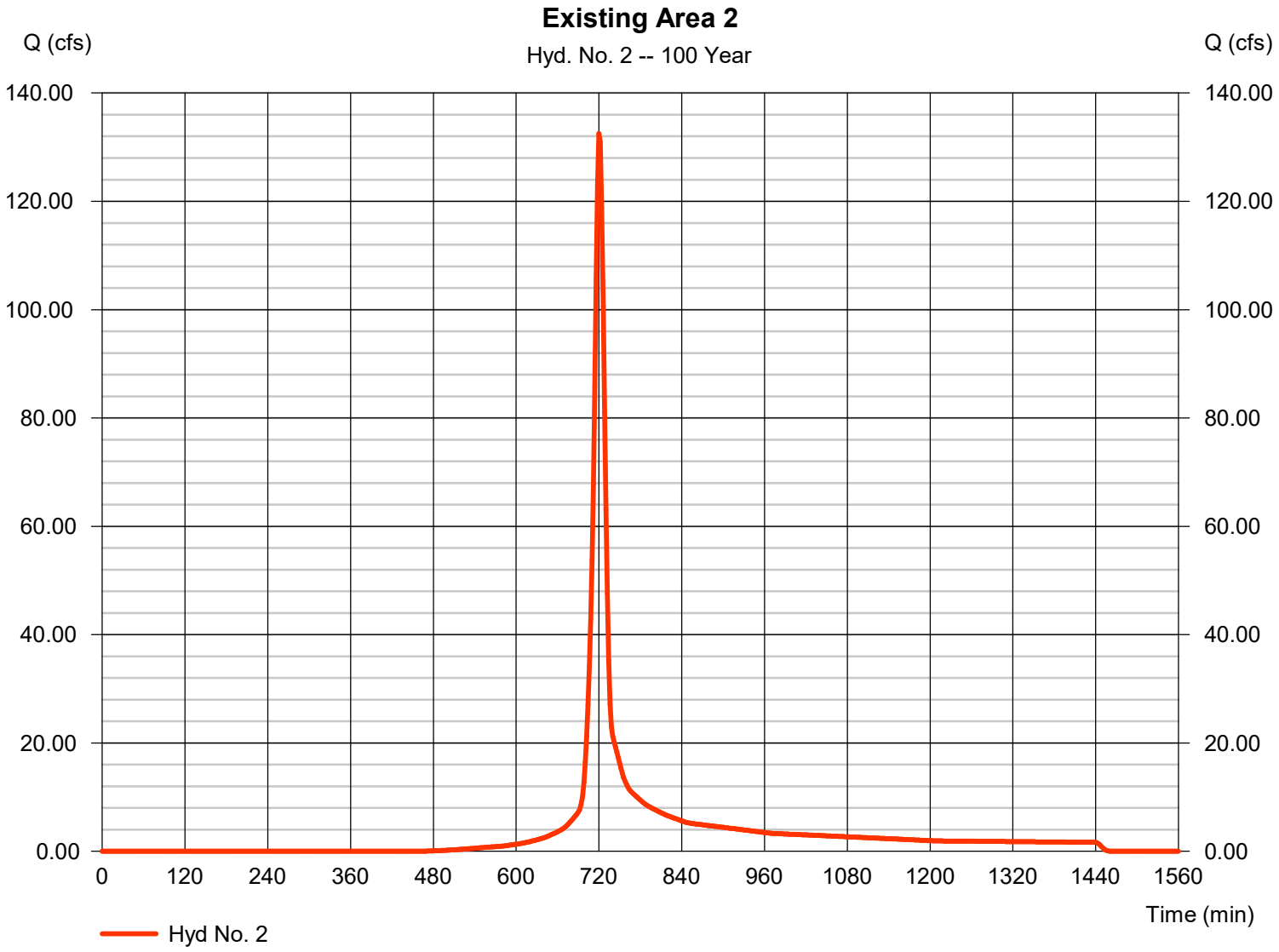
Hydrograph Report

Hyd. No. 2

Existing Area 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	132.55 cfs
Storm frequency	=	100 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	343,672 cuft
Drainage area	=	23.870 ac	Curve number	=	72*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	10.10 min
Total precip.	=	7.02 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.978 x 49) + (1.088 x 69) + (17.804 x 79)] / 23.870



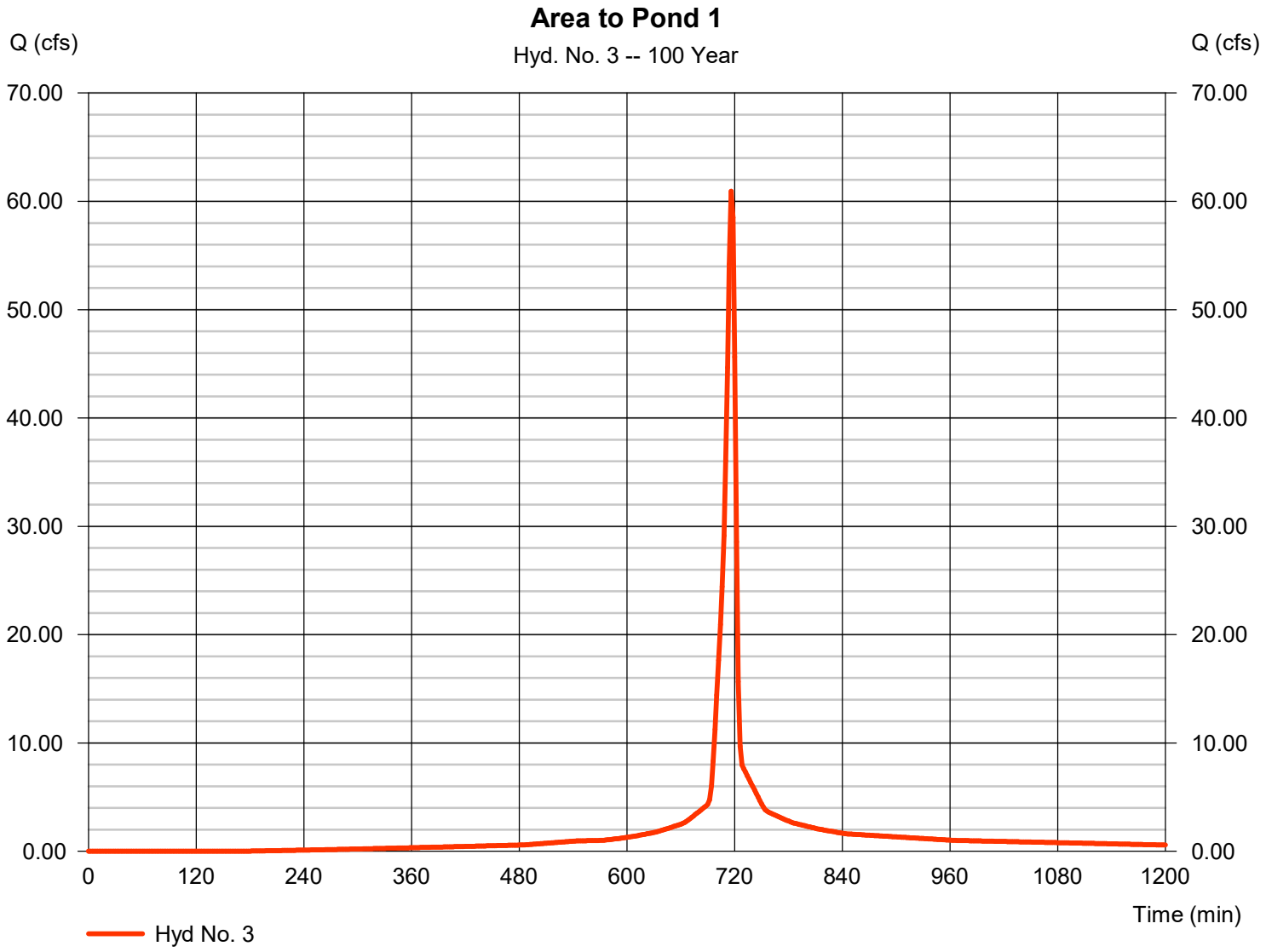
Hydrograph Report

Hyd. No. 3

Area to Pond 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	60.92 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	134,215 cuft
Drainage area	=	6.750 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.02 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.050 x 98) + (2.700 x 79)] / 6.750



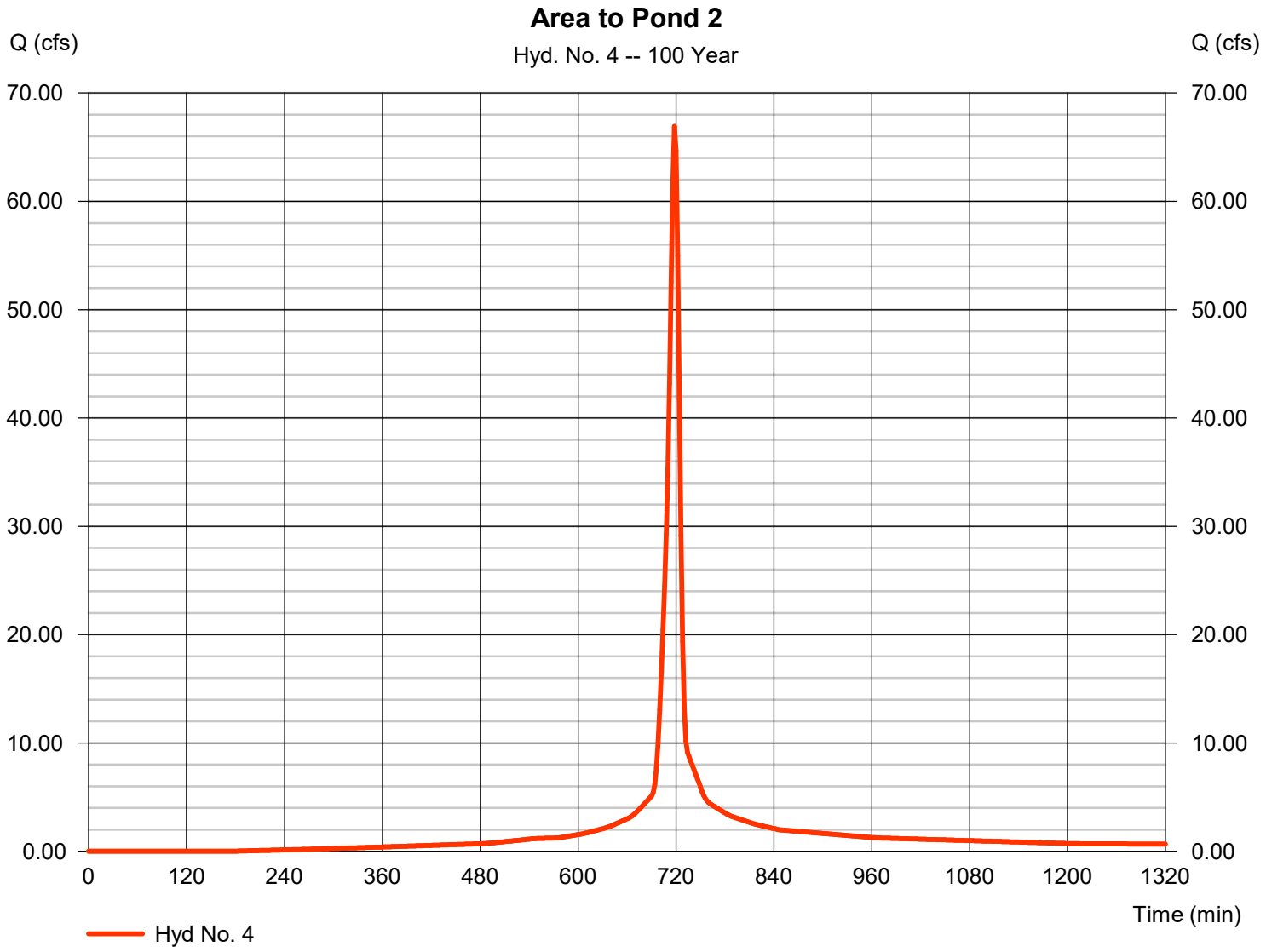
Hydrograph Report

Hyd. No. 4

Area to Pond 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	66.92 cfs
Storm frequency	=	100 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	165,008 cuft
Drainage area	=	7.780 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	8.00 min
Total precip.	=	7.02 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.670 x 98) + (3.110 x 79)] / 7.780



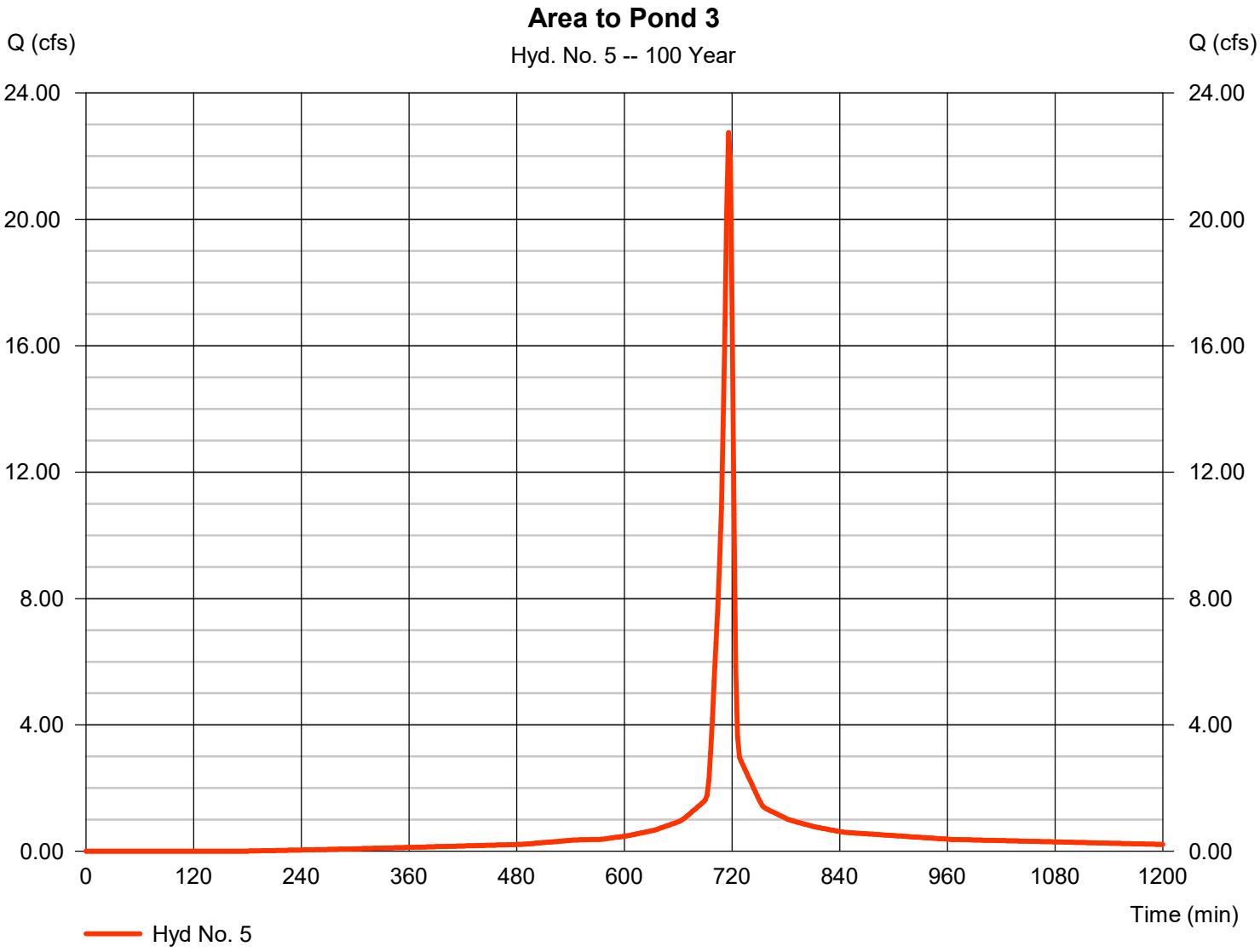
Hydrograph Report

Hyd. No. 5

Area to Pond 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	22.74 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	50,107 cuft
Drainage area	=	2.520 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.02 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.510 x 98) + (1.010 x 79)] / 2.520



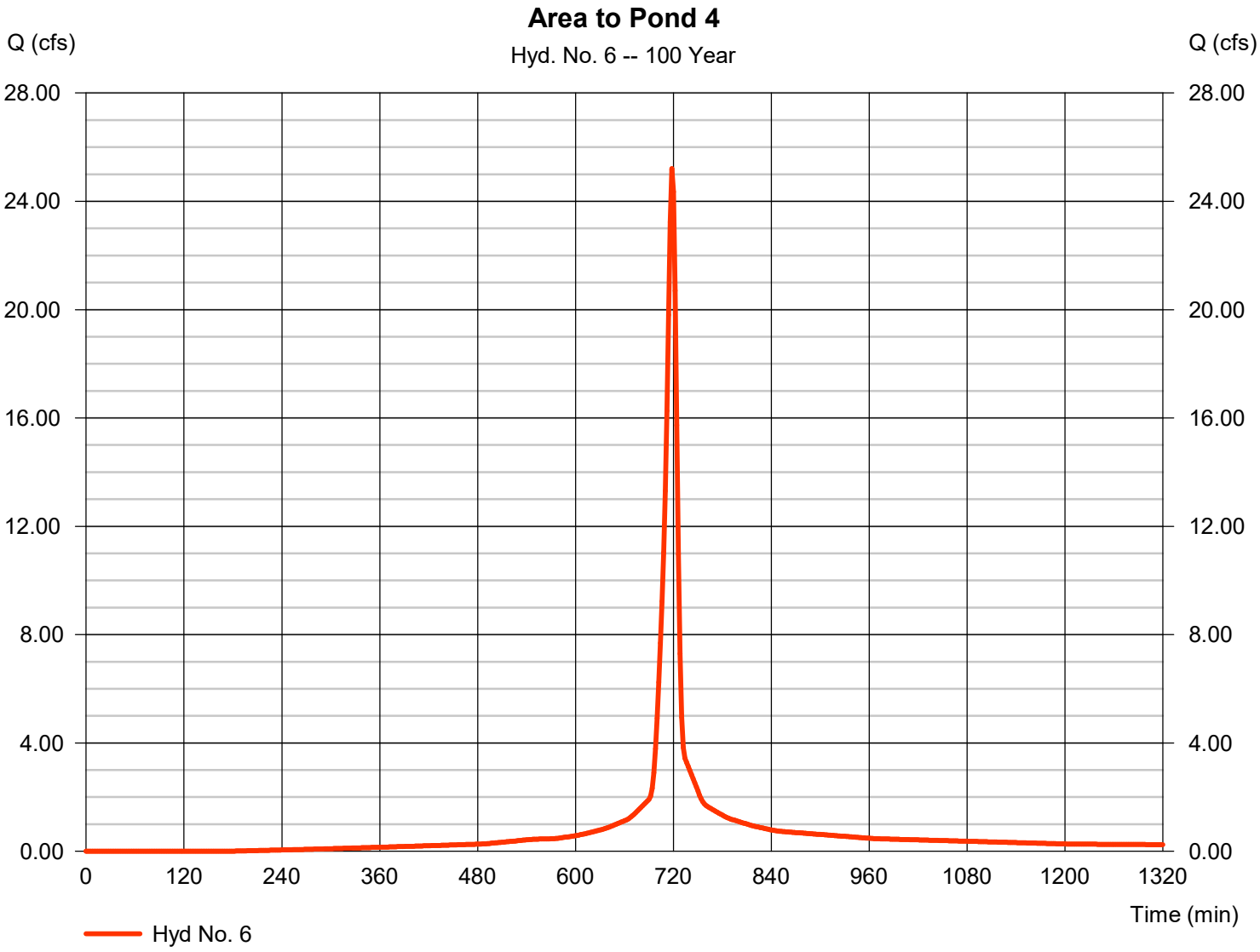
Hydrograph Report

Hyd. No. 6

Area to Pond 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	25.20 cfs
Storm frequency	=	100 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	62,143 cuft
Drainage area	=	2.930 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	7.80 min
Total precip.	=	7.02 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.760 x 98) + (1.172 x 79)] / 2.930



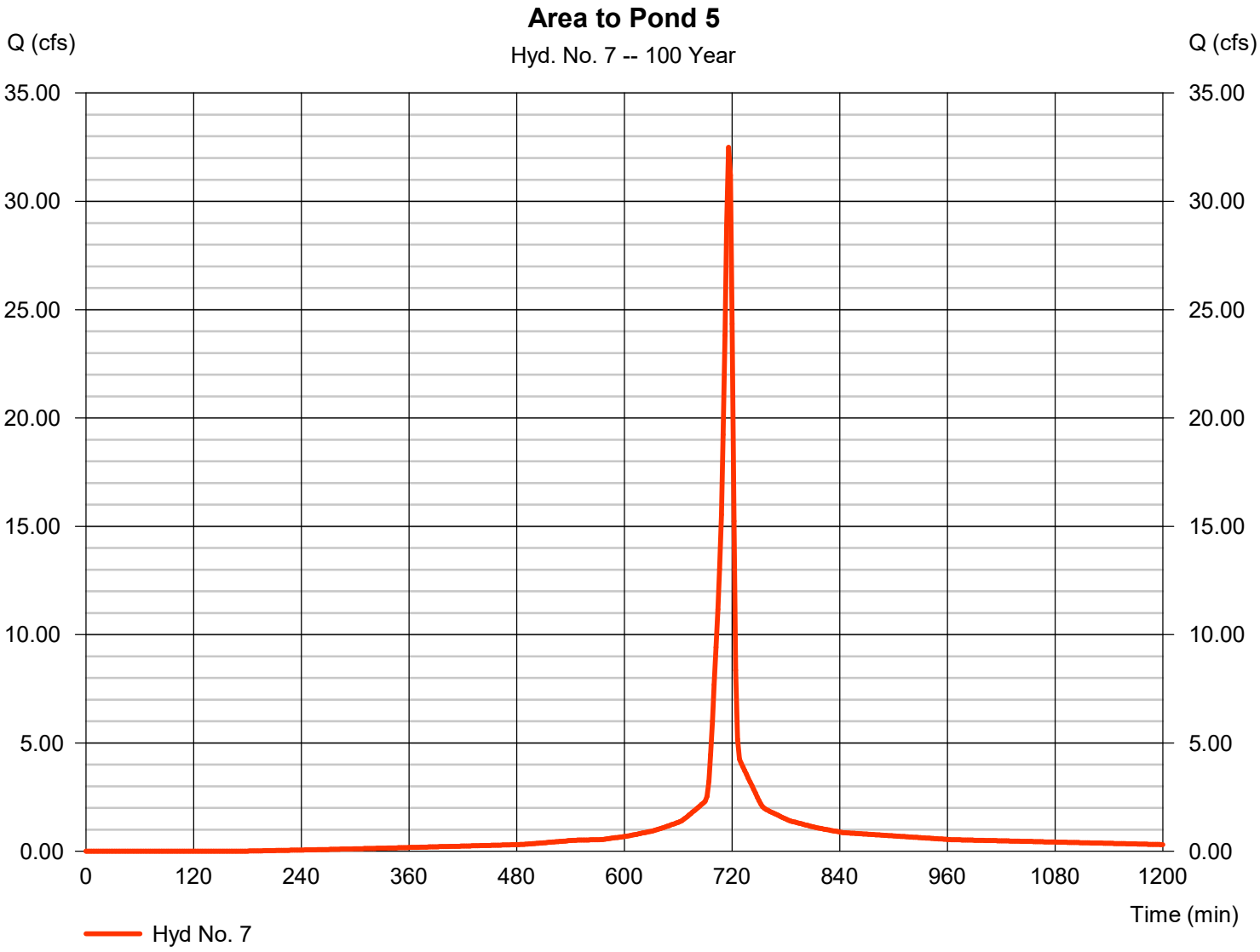
Hydrograph Report

Hyd. No. 7

Area to Pond 5

Hydrograph type	=	SCS Runoff	Peak discharge	=	32.49 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	71,581 cuft
Drainage area	=	3.600 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.02 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.160 x 98) + (1.437 x 79)] / 3.600



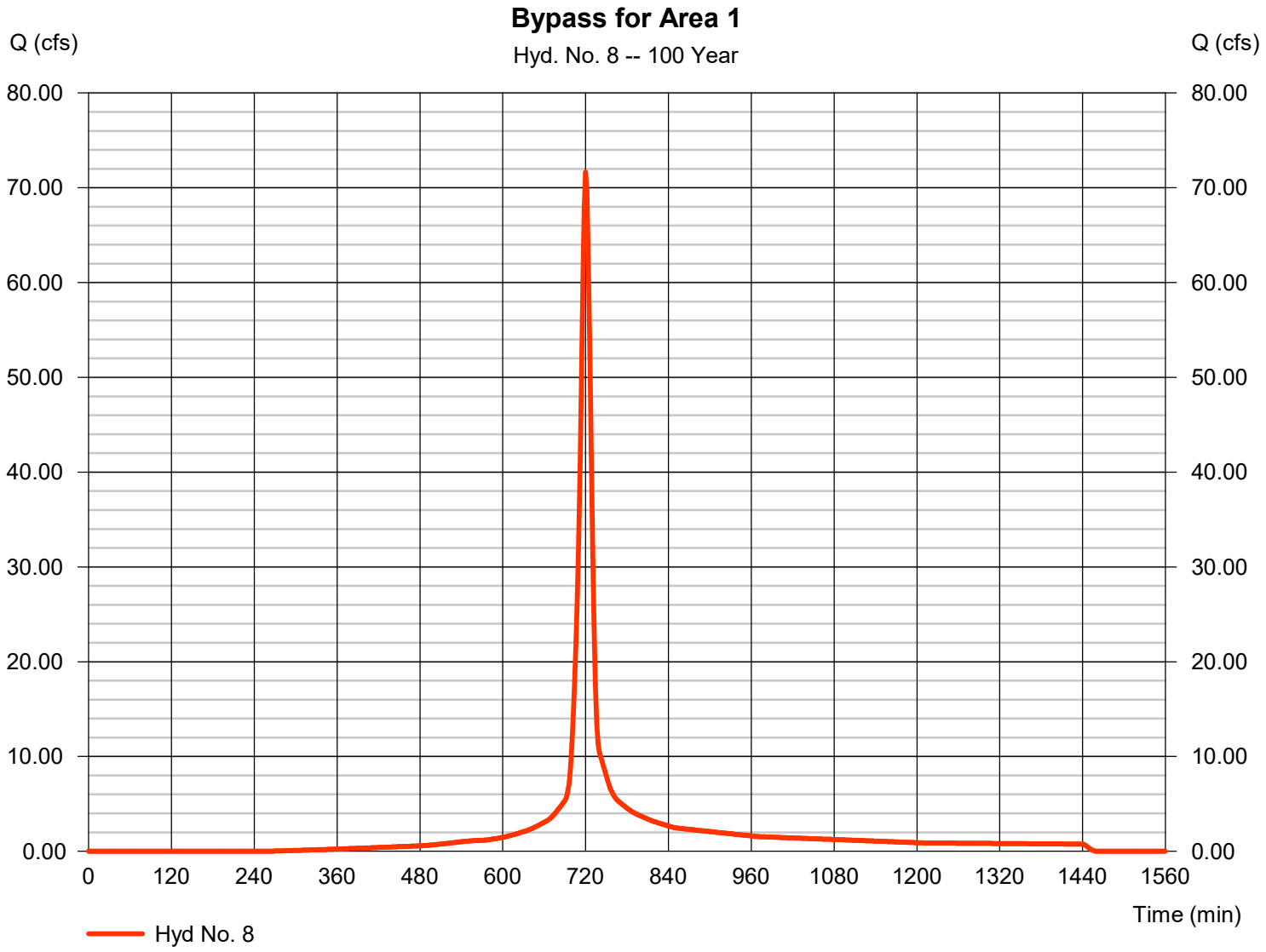
Hydrograph Report

Hyd. No. 8

Bypass for Area 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	71.64 cfs
Storm frequency	=	100 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	192,014 cuft
Drainage area	=	9.730 ac	Curve number	=	85*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	13.00 min
Total precip.	=	7.02 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.920 x 98) + (6.813 x 79)] / 9.730



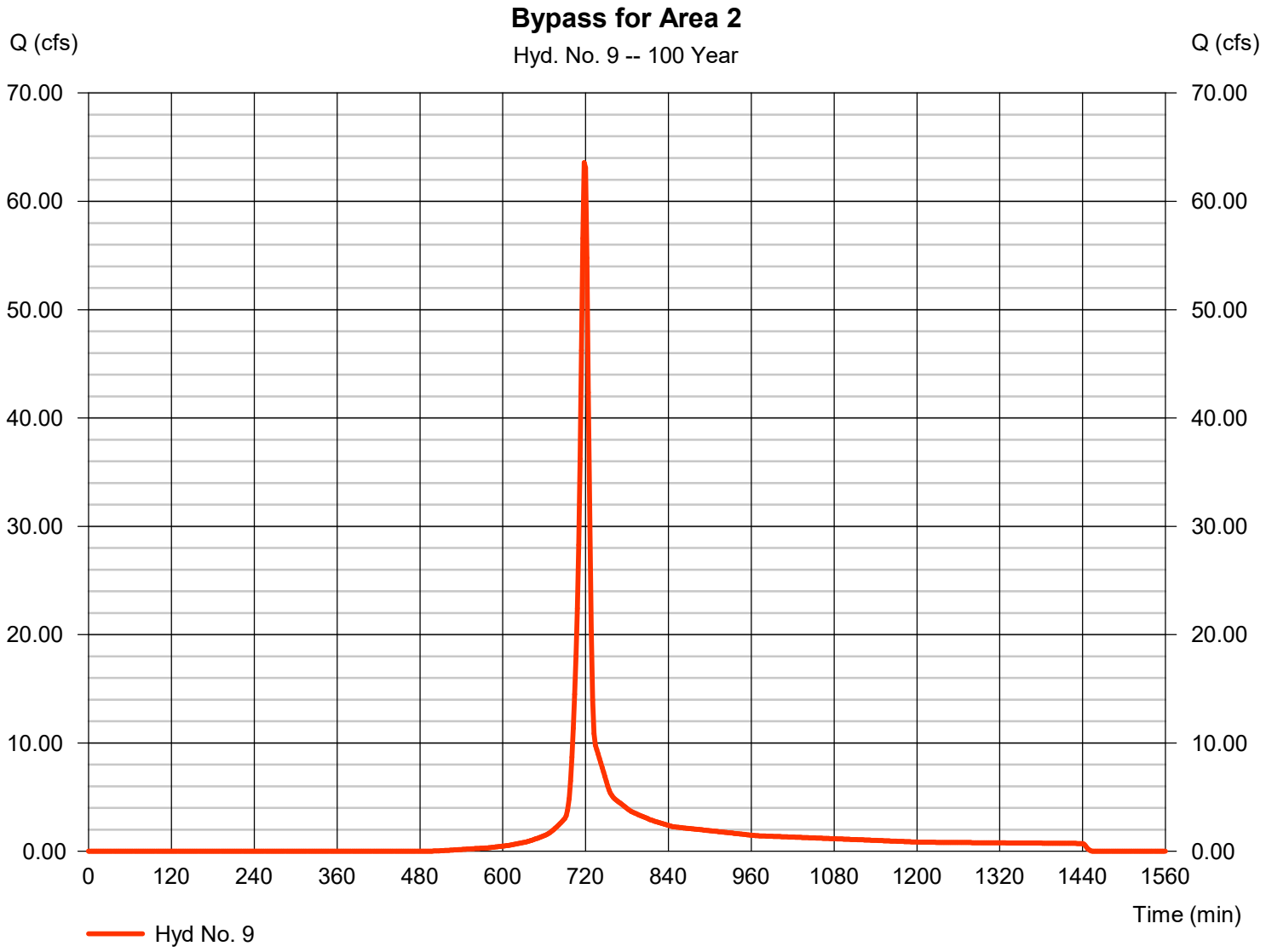
Hydrograph Report

Hyd. No. 9

Bypass for Area 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	63.56 cfs
Storm frequency	=	100 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	145,410 cuft
Drainage area	=	11.020 ac	Curve number	=	70*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	9.50 min
Total precip.	=	7.02 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.970 x 98) + (4.980 x 49) + (1.090 x 69) + (1.980 x 79)] / 11.020



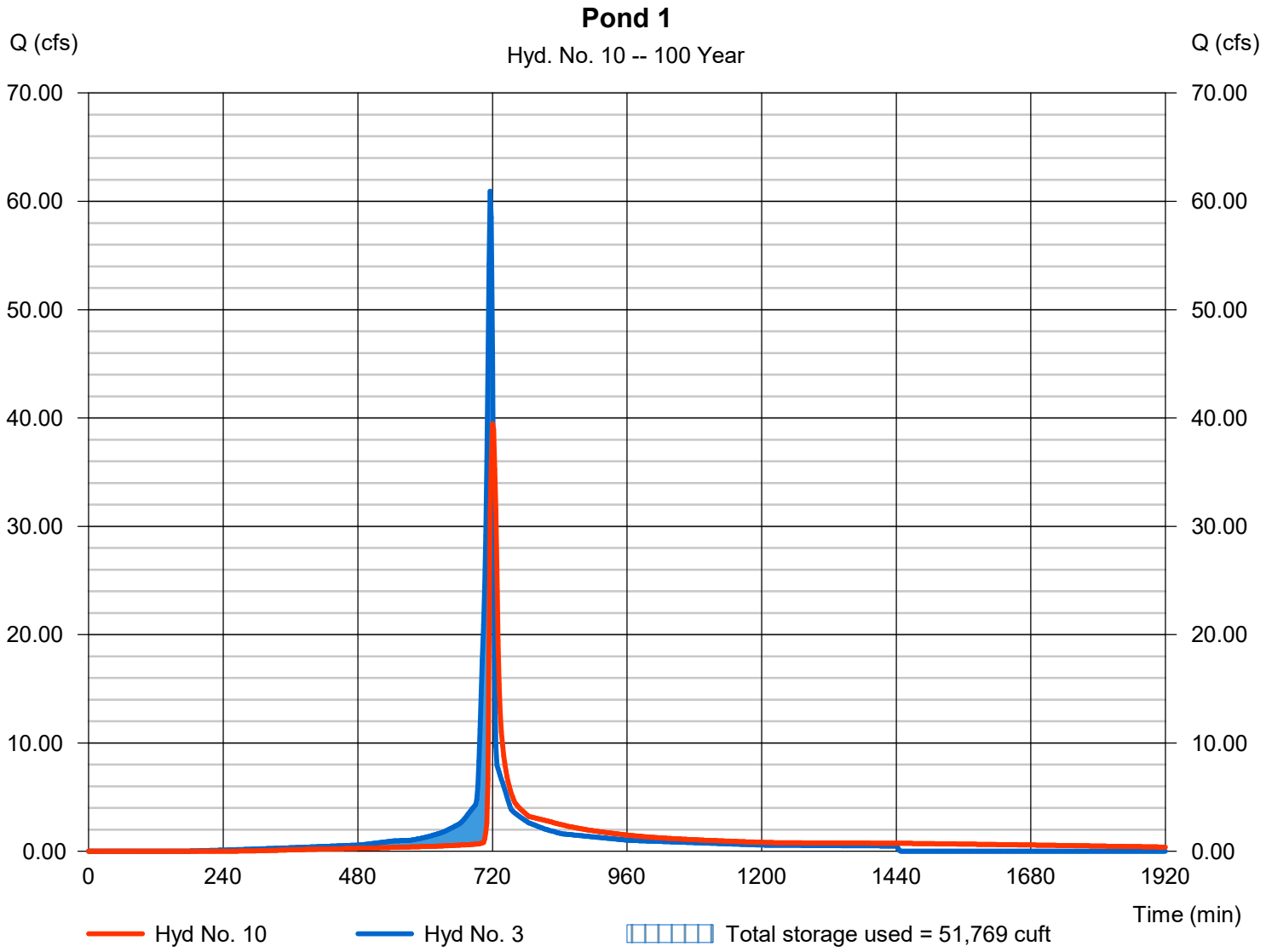
Hydrograph Report

Hyd. No. 10

Pond 1

Hydrograph type	=	Reservoir	Peak discharge	=	39.48 cfs
Storm frequency	=	100 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	134,192 cuft
Inflow hyd. No.	=	3 - Area to Pond 1	Max. Elevation	=	488.35 ft
Reservoir name	=	Pond 1	Max. Storage	=	51,769 cuft

Storage Indication method used.



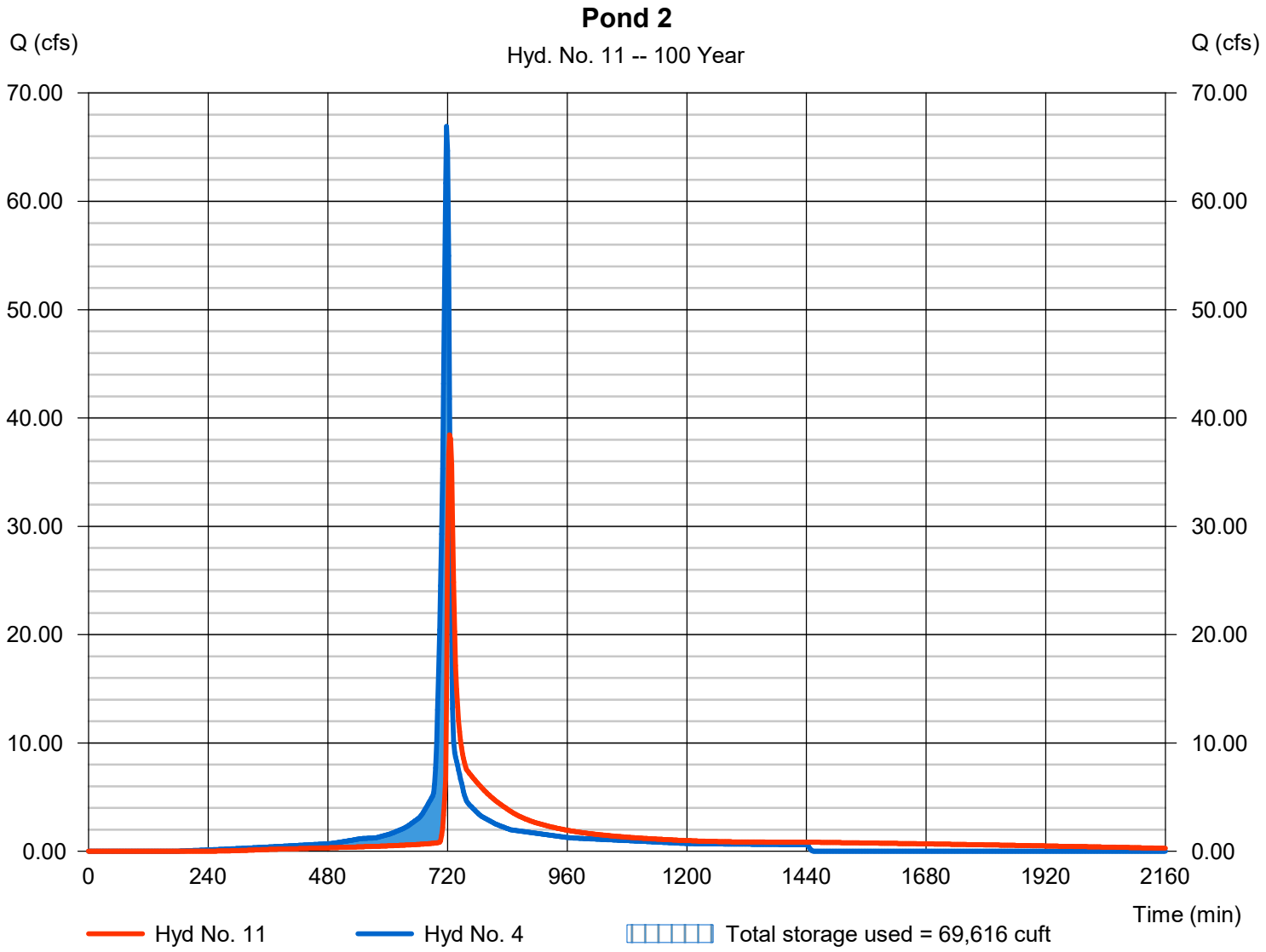
Hydrograph Report

Hyd. No. 11

Pond 2

Hydrograph type	=	Reservoir	Peak discharge	=	38.45 cfs
Storm frequency	=	100 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	164,986 cuft
Inflow hyd. No.	=	4 - Area to Pond 2	Max. Elevation	=	494.05 ft
Reservoir name	=	Pond 2	Max. Storage	=	69,616 cuft

Storage Indication method used.

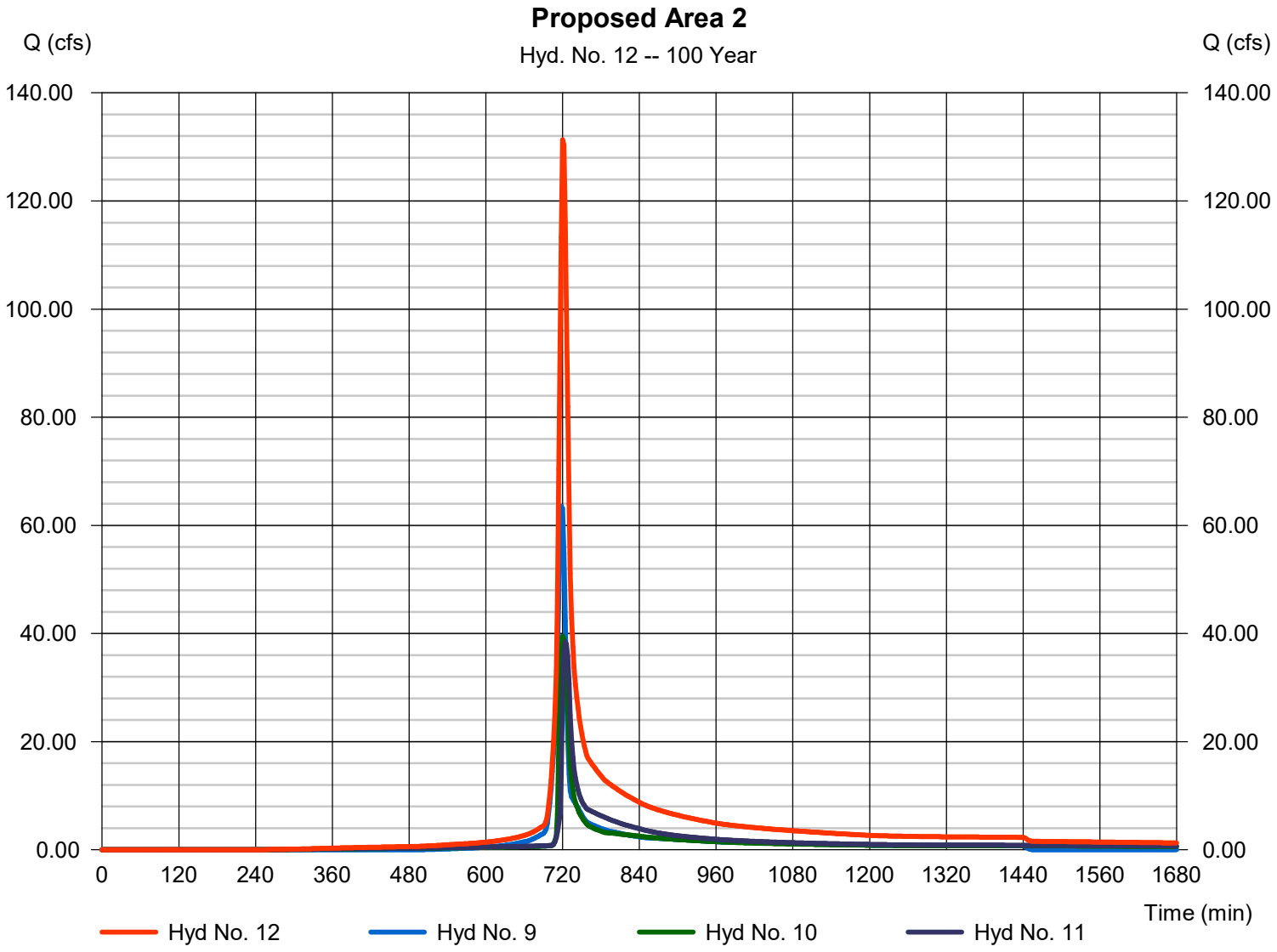


Hydrograph Report

Hyd. No. 12

Proposed Area 2

Hydrograph type	= Combine	Peak discharge	= 131.31 cfs
Storm frequency	= 100 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 444,589 cuft
Inflow hyds.	= 9, 10, 11	Contrib. drain. area	= 11.020 ac



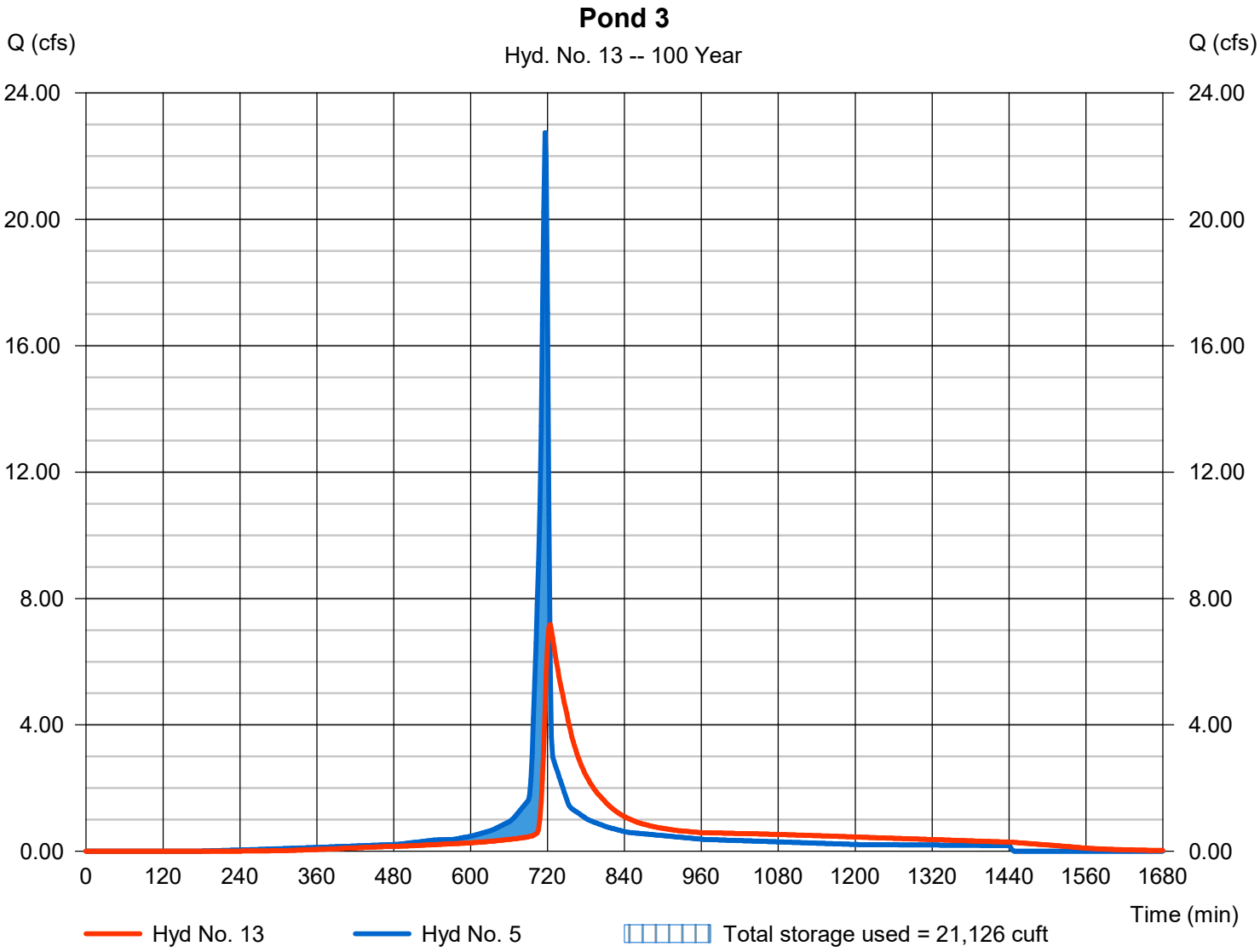
Hydrograph Report

Hyd. No. 13

Pond 3

Hydrograph type	=	Reservoir	Peak discharge	=	7.177 cfs
Storm frequency	=	100 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	50,093 cuft
Inflow hyd. No.	=	5 - Area to Pond 3	Max. Elevation	=	510.76 ft
Reservoir name	=	Pond 3	Max. Storage	=	21,126 cuft

Storage Indication method used.



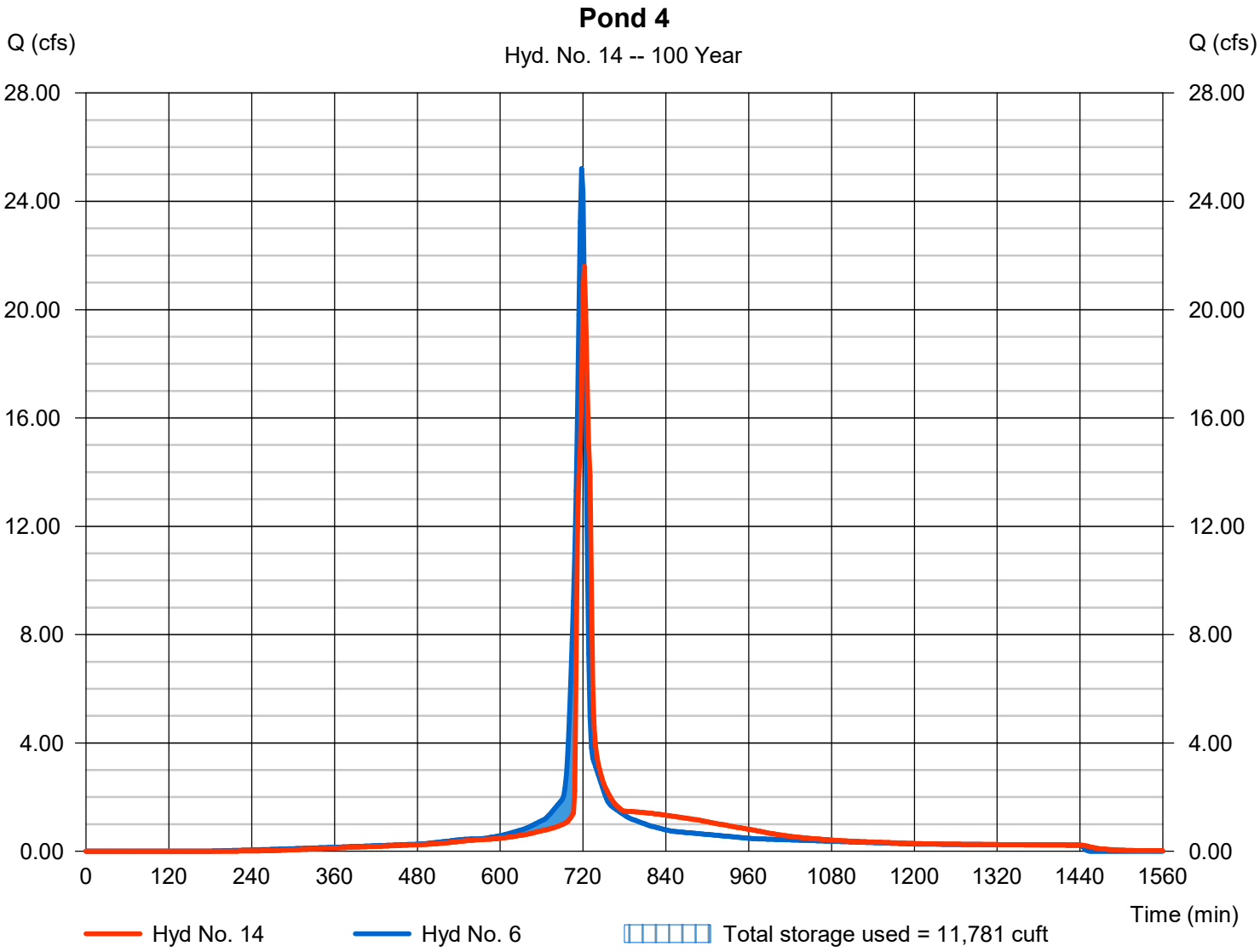
Hydrograph Report

Hyd. No. 14

Pond 4

Hydrograph type	=	Reservoir	Peak discharge	=	21.60 cfs
Storm frequency	=	100 yrs	Time to peak	=	722 min
Time interval	=	2 min	Hyd. volume	=	62,137 cuft
Inflow hyd. No.	=	6 - Area to Pond 4	Max. Elevation	=	512.36 ft
Reservoir name	=	Pond 4	Max. Storage	=	11,781 cuft

Storage Indication method used.



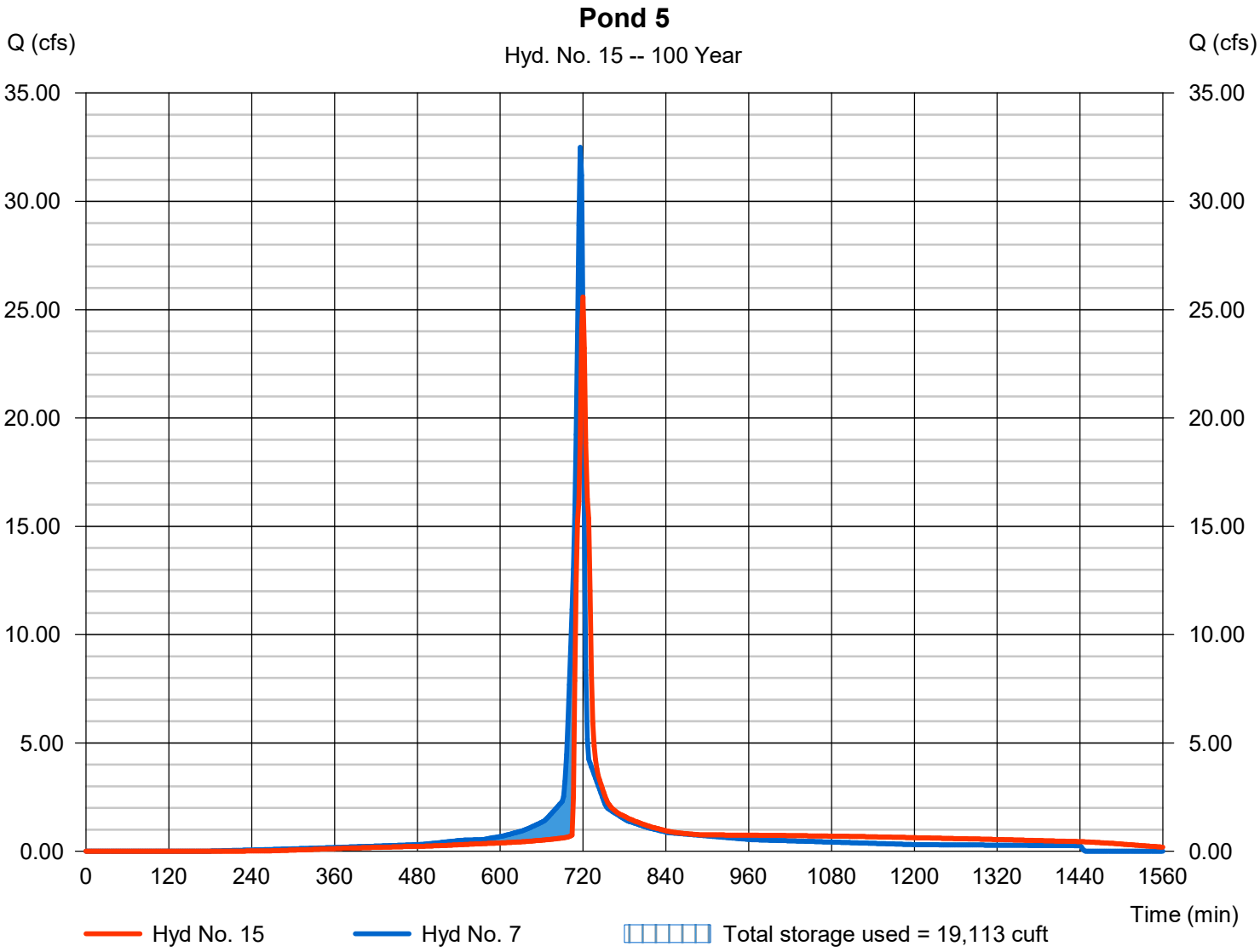
Hydrograph Report

Hyd. No. 15

Pond 5

Hydrograph type	=	Reservoir	Peak discharge	=	25.58 cfs
Storm frequency	=	100 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	71,572 cuft
Inflow hyd. No.	=	7 - Area to Pond 5	Max. Elevation	=	503.06 ft
Reservoir name	=	Pond 5	Max. Storage	=	19,113 cuft

Storage Indication method used.

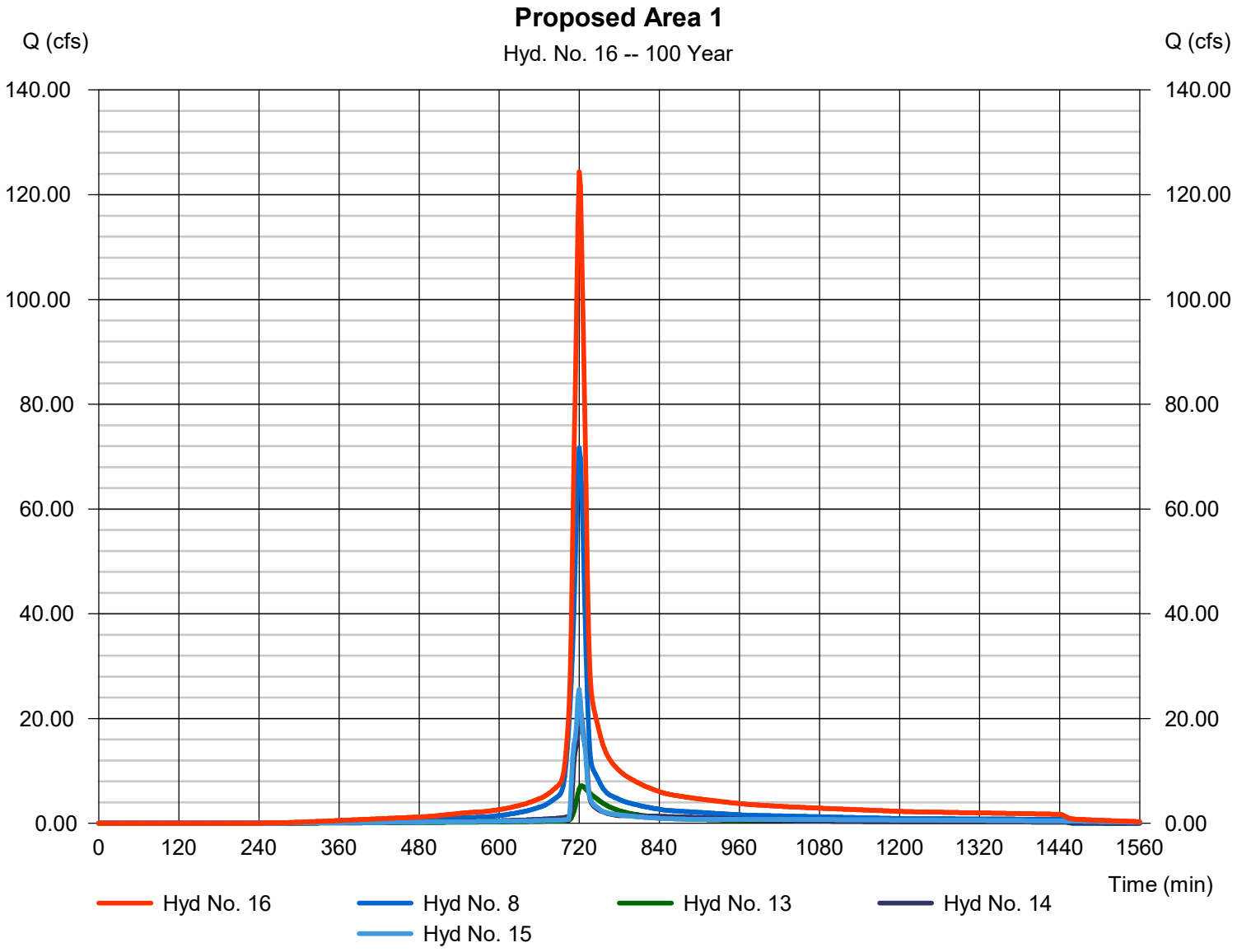


Hydrograph Report

Hyd. No. 16

Proposed Area 1

Hydrograph type	= Combine	Peak discharge	= 124.40 cfs
Storm frequency	= 100 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 375,816 cuft
Inflow hyds.	= 8, 13, 14, 15	Contrib. drain. area	= 9.730 ac



Hydraflow Rainfall Report

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	1.2500	0.1000	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: METRO IDF 2021.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	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
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.

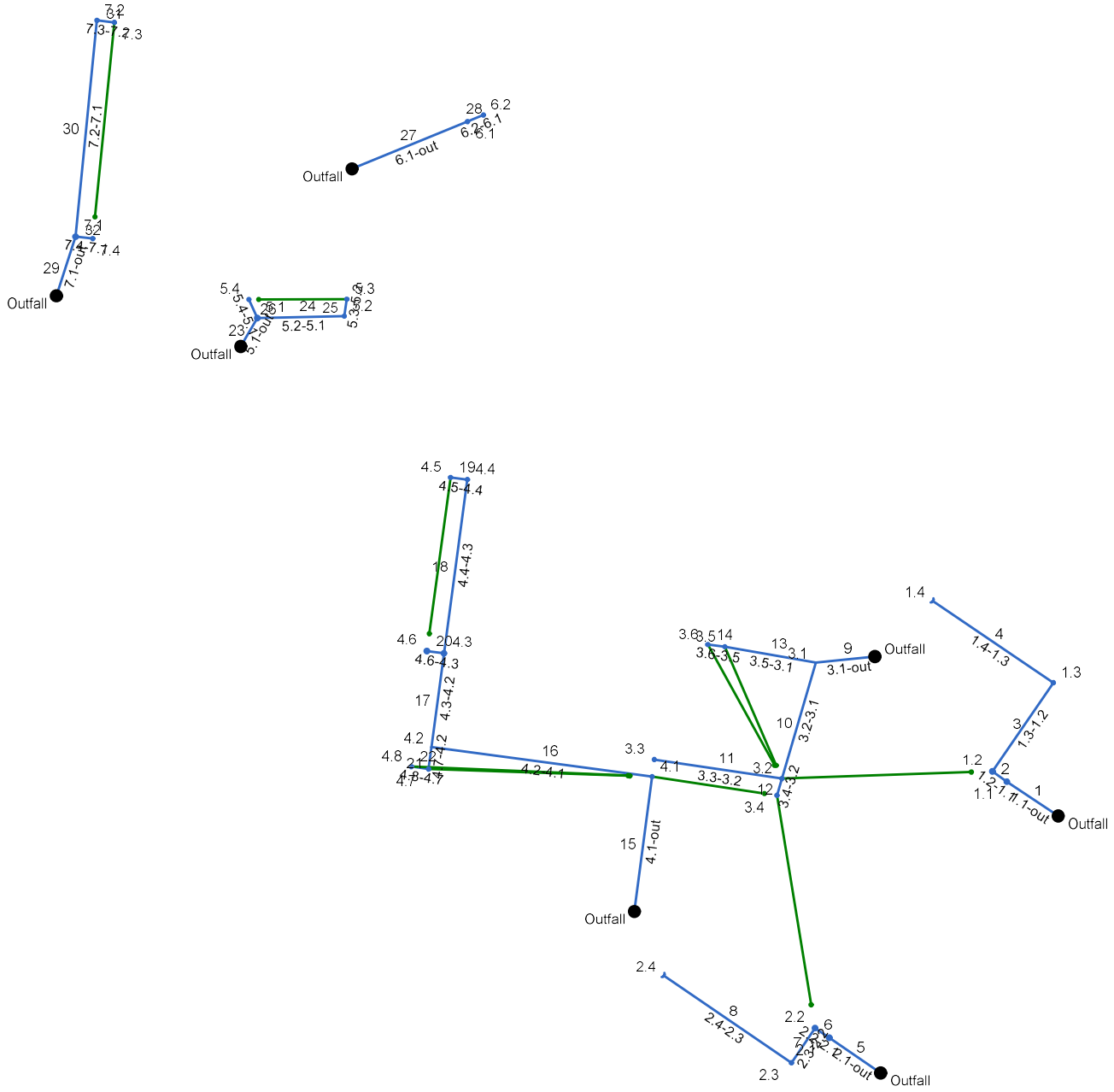
velopment - 4408 Long Hollow Pike -Goodlettsville TN\Plans\Engineer\Stormwater\Atlas 14 Hydrographs SCS data.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	2.87	3.42	0.00	4.16	4.77	5.62	6.31	7.02
SCS 6-Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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

Attachment 3

Storm Sewers Model

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: 25184 - Pipe Network Model.stm	Number of lines: 32	Date: 5/21/2026

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)	
1	End	85.628	-146.181	Comb	1.00	0.33	0.95	5.0	469.85	1.99	471.55	24	Cir	0.012	0.50	476.90	1.1-out
2	1	24.571	1.980	Comb	1.00	1.76	0.65	5.0	471.65	1.02	471.90	24	Cir	0.012	1.50	476.90	1.2-1.1
3	2	149.212	88.588	Comb	1.00	0.87	0.65	5.0	472.00	1.94	474.90	24	Cir	0.012	1.50	478.00	1.3-1.2
4	3	201.598	-90.096	Hdwl	10.00	0.00	0.65	5.0	475.00	2.48	480.00	24	Cir	0.012	1.00	488.00	1.4-1.3
5	End	86.325	-145.503	Comb	1.00	0.36	0.95	5.0	469.75	1.97	471.45	24	Cir	0.012	0.50	475.67	2.1-out
6	5	24.002	-0.293	Comb	1.00	1.81	0.65	5.0	471.55	1.04	471.80	24	Cir	0.012	1.50	475.67	2.2-2.1
7	6	58.211	-90.198	Comb	1.00	1.15	0.65	5.0	471.90	0.60	472.25	24	Cir	0.012	1.50	475.25	2.3-2.2
8	7	214.087	90.447	Hdwl	10.00	0.00	0.65	5.0	472.35	5.44	484.00	24	Cir	0.012	1.00	494.00	2.4-2.3
9	End	82.226	174.174	MH	0.01	0.00	0.65	5.0	484.20	1.52	485.45	24	Cir	0.012	0.94	500.00	3.1-out
10	9	167.886	-67.962	Comb	1.00	0.74	0.65	5.0	485.95	1.01	487.65	18	Cir	0.012	2.06	492.90	3.2-3.1
11	10	178.462	82.331	Comb	1.00	0.61	0.65	5.0	488.00	1.96	491.50	15	Cir	0.012	1.00	498.50	3.3-3.2
12	10	24.269	0.318	Comb	1.00	0.42	0.65	5.0	488.00	1.03	488.25	15	Cir	0.012	1.00	492.90	3.4-3.2
13	9	127.617	15.704	Comb	1.00	0.66	0.65	5.0	486.20	13.56	503.50	15	Cir	0.012	0.50	506.15	3.5-3.1
14	13	23.826	-2.351	Comb	1.00	1.75	0.65	5.0	503.60	1.05	503.85	15	Cir	0.012	1.00	506.15	3.6-3.5
15	End	188.905	-82.526	Comb	1.00	0.68	0.65	5.0	490.15	1.99	493.90	24	Cir	0.012	1.50	498.50	4.1-out
16	15	308.359	-89.811	MH	0.01	0.00	0.65	5.0	494.00	4.82	508.85	24	Cir	0.012	1.00	519.20	4.2-4.1
17	16	131.389	89.979	Comb	1.00	0.77	0.65	5.0	508.95	1.94	511.50	24	Cir	0.012	1.50	517.50	4.3-4.2
18	17	243.539	0.022	Comb	1.00	0.84	0.65	5.0	512.25	4.82	524.00	15	Cir	0.012	1.50	527.33	4.4-4.3
19	18	23.513	-90.618	Comb	1.00	0.34	0.65	5.0	524.10	1.06	524.35	15	Cir	0.012	1.00	527.33	4.5-4.4
20	17	23.759	-90.150	Comb	1.00	1.27	0.65	5.0	512.10	1.05	512.35	15	Cir	0.012	1.00	517.50	4.6-4.3
21	16	30.779	-90.455	Comb	1.00	1.17	0.65	5.0	513.70	7.80	516.10	15	Cir	0.012	1.50	520.80	4.7-4.2
22	21	24.086	90.756	Comb	1.00	1.60	0.65	5.0	516.10	3.74	517.00	15	Cir	0.012	1.00	520.80	4.8-4.7
23	End	45.648	-59.837	Comb	1.00	0.26	0.65	5.0	510.00	6.35	512.90	15	Cir	0.012	1.90	515.50	5.1-out

Project File: 25184 - Pipe Network Model.stm | Number of lines: 32 | Date: 5/21/2026

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	120.402	58.583	Comb	1.00	0.31	0.65	5.0	513.00	8.01	522.65	15	Cir	0.012	1.48	525.50	5.2-5.1
25	24	23.847	-80.390	Comb	1.00	0.15	0.95	5.0	522.75	1.05	523.00	15	Cir	0.012	1.00	525.50	5.3-5.2
26	23	28.428	-54.404	Comb	1.00	0.14	0.95	5.0	512.90	1.76	513.40	15	Cir	0.012	1.00	516.00	5.4-5.1
27	End	172.623	-22.338	Comb	1.00	1.44	0.65	5.0	514.00	7.76	527.40	15	Cir	0.012	0.50	530.22	6.1-out
28	27	23.919	-0.121	Comb	1.00	0.11	0.95	5.0	527.50	2.09	528.00	15	Cir	0.012	1.00	530.22	6.2-6.1
29	End	86.278	-72.156	Comb	1.00	0.61	0.65	5.0	499.00	1.04	499.90	24	Cir	0.012	1.48	503.00	7.1-out
30	29	301.871	-12.237	Comb	1.00	0.54	0.65	5.0	500.00	5.43	516.40	15	Cir	0.012	1.50	520.25	7.2-7.1
31	30	24.278	90.866	Comb	1.00	0.67	0.65	5.0	516.50	2.06	517.00	15	Cir	0.012	1.00	520.25	7.3-7.2
32	29	23.959	78.439	Comb	1.00	1.34	0.65	5.0	500.30	1.46	500.65	15	Cir	0.012	1.00	503.25	7.4-7.1

Project File: 25184 - Pipe Network Model.stm | Number of lines: 32 | Date: 5/21/2026

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	1.1	Combination	476.90	Cir	6.00	6.00	24	Cir	471.55	24	Cir	471.65
2	1.2	Combination	476.90	Cir	6.00	6.00	24	Cir	471.90	24	Cir	472.00
3	1.3	Combination	478.00	Cir	4.00	4.00	24	Cir	474.90	24	Cir	475.00
4	1.4	OpenHeadwall	488.00	n/a	n/a	n/a	24	Cir	480.00			
5	2.1	Combination	475.67	Cir	6.00	6.00	24	Cir	471.45	24	Cir	471.55
6	2.2	Combination	475.67	Cir	6.00	6.00	24	Cir	471.80	24	Cir	471.90
7	2.3	Combination	475.25	Cir	4.00	4.00	24	Cir	472.25	24	Cir	472.35
8	2.4	OpenHeadwall	494.00	n/a	n/a	n/a	24	Cir	484.00			
9	3.1	Manhole	500.00	Cir	0.00	0.00	24	Cir	485.45	18 15	Cir Cir	485.95 486.20
10	3.2	Combination	492.90	Cir	4.00	4.00	18	Cir	487.65	15 15	Cir Cir	488.00 488.00
11	3.3	Combination	498.50	Cir	4.00	4.00	15	Cir	491.50			
12	3.4	Combination	492.90	Cir	4.00	4.00	15	Cir	488.25			
13	3.5	Combination	506.15	Cir	4.00	4.00	15	Cir	503.50	15	Cir	503.60
14	3.6	Combination	506.15	Cir	4.00	4.00	15	Cir	503.85			
15	4.1	Combination	498.50	Cir	4.00	4.00	24	Cir	493.90	24	Cir	494.00
16	4.2	Manhole	519.20	Cir	0.00	0.00	24	Cir	508.85	24 15	Cir Cir	508.95 513.70
17	4.3	Combination	517.50	Cir	6.00	6.00	24	Cir	511.50	15 15	Cir Cir	512.25 512.10
18	4.4	Combination	527.33	Cir	4.00	4.00	15	Cir	524.00	15	Cir	524.10
19	4.5	Combination	527.33	Cir	4.00	4.00	15	Cir	524.35			
20	4.6	Combination	517.50	Cir	6.00	6.00	15	Cir	512.35			
21	4.7	Combination	520.80	Cir	4.00	4.00	15	Cir	516.10	15	Cir	516.10

Project File: 25184 - Pipe Network Model.stm | Number of Structures: 32 | Run Date: 5/21/2026

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)
22	4.8	Combination	520.80	Cir	4.00	4.00	15	Cir	517.00			
23	5.1	Combination	515.50	Cir	6.00	6.00	15	Cir	512.90	15 15	Cir Cir	513.00 512.90
24	5.2	Combination	525.50	Cir	4.00	4.00	15	Cir	522.65	15	Cir	522.75
25	5.3	Combination	525.50	Cir	4.00	4.00	15	Cir	523.00			
26	5.4	Combination	516.00	Cir	4.00	4.00	15	Cir	513.40			
27	6.1	Combination	530.22	Cir	4.00	4.00	15	Cir	527.40	15	Cir	527.50
28	6.2	Combination	530.22	Cir	4.00	4.00	15	Cir	528.00			
29	7.1	Combination	503.00	Cir	6.00	6.00	24	Cir	499.90	15 15	Cir Cir	500.00 500.30
30	7.2	Combination	520.25	Cir	4.00	4.00	15	Cir	516.40	15	Cir	516.50
31	7.3	Combination	520.25	Cir	4.00	4.00	15	Cir	517.00			
32	7.4	Combination	503.25	Cir	4.00	4.00	15	Cir	500.65			

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	1.1-out	25.70	24	Cir	85.628	469.85	471.55	1.985	471.14	473.33	n/a	473.33	End	Combination
2	1.2-1.1	22.76	24	Cir	24.571	471.65	471.90	1.017	473.33	473.60	1.49	473.60	1	Combination
3	1.3-1.2	14.64	24	Cir	149.212	472.00	474.90	1.944	473.60	476.28	n/a	476.28 j	2	Combination
4	1.4-1.3	10.00	24	Cir	201.598	475.00	480.00	2.480	476.28	481.13	n/a	481.13 j	3	OpenHeadwall
5	2.1-out	27.40	24	Cir	86.325	469.75	471.45	1.969	471.10	473.27	0.65	473.27	End	Combination
6	2.2-2.1	24.25	24	Cir	24.002	471.55	471.80	1.042	473.27	473.54	n/a	473.54	5	Combination
7	2.3-2.2	15.80	24	Cir	58.211	471.90	472.25	0.601	473.54	473.68	1.00	473.68	6	Combination
8	2.4-2.3	10.00	24	Cir	214.087	472.35	484.00	5.442	473.68	485.13	n/a	485.13 j	7	OpenHeadwall
9	3.1-out	22.20	24	Cir	82.226	484.20	485.45	1.520	485.47	487.13	0.91	487.13	End	Manhole
10	3.2-3.1	10.43	18	Cir	167.886	485.95	487.65	1.013	487.13	488.89	1.43	488.89	9	Combination
11	3.3-3.2	3.68	15	Cir	178.462	488.00	491.50	1.961	488.89	492.27	n/a	492.27 j	10	Combination
12	3.4-3.2	2.84	15	Cir	24.269	488.00	488.25	1.030	488.89	488.93	n/a	488.93 j	10	Combination
13	3.5-3.1	12.55	15	Cir	127.617	486.20	503.50	13.556	487.13	504.72	0.82	504.72	9	Combination
14	3.6-3.5	8.68	15	Cir	23.826	503.60	503.85	1.049	504.85*	505.22*	0.78	506.00	13	Combination
15	4.1-out	34.02	24	Cir	188.905	490.15	493.90	1.985	491.76	495.81	n/a	495.81	End	Combination
16	4.2-4.1	30.83	24	Cir	308.359	494.00	508.85	4.816	495.81	510.72	1.58	510.72	15	Manhole
17	4.3-4.2	17.58	24	Cir	131.389	508.95	511.50	1.941	510.72	513.01	n/a	513.01 j	16	Combination
18	4.4-4.3	7.13	15	Cir	243.539	512.25	524.00	4.825	513.01	525.07	0.95	525.07	17	Combination
19	4.5-4.4	2.49	15	Cir	23.513	524.10	524.35	1.063	525.07	524.98	n/a	524.98	18	Combination
20	4.6-4.3	6.57	15	Cir	23.759	512.10	512.35	1.052	513.04	513.38	n/a	513.38	17	Combination
21	4.7-4.2	14.12	15	Cir	30.779	513.70	516.10	7.797	514.49	517.33	n/a	517.33	16	Combination
22	4.8-4.7	8.02	15	Cir	24.086	516.10	517.00	3.737	517.33	518.12	n/a	518.12 j	21	Combination
23	5.1-out	8.20	15	Cir	45.648	510.00	512.90	6.353	510.60	514.02	n/a	514.02	End	Combination
24	5.2-5.1	4.30	15	Cir	120.402	513.00	522.65	8.015	514.02	523.49	n/a	523.49 j	23	Combination

Project File: 25184 - Pipe Network Model.stm | Number of lines: 32 | Run Date: 5/21/2026

NOTES: Return period = 10 Yrs. ; *Surcharged (HGL above crown). ; 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	5.3-5.2	1.96	15	Cir	23.847	522.75	523.00	1.048	523.49	523.56	n/a	523.56 j	24	Combination
26	5.4-5.1	1.90	15	Cir	28.428	512.90	513.40	1.759	514.02	513.95	n/a	513.95 j	23	Combination
27	6.1-out	8.93	15	Cir	172.623	514.00	527.40	7.763	514.59	528.55	0.44	528.55	End	Combination
28	6.2-6.1	1.71	15	Cir	23.919	527.50	528.00	2.090	528.55	528.52	n/a	528.52 j	27	Combination
29	7.1-out	17.27	24	Cir	86.278	499.00	499.90	1.043	500.22	501.40	1.08	501.40	End	Combination
30	7.2-7.1	7.28	15	Cir	301.871	500.00	516.40	5.433	501.40	517.48	n/a	517.48 j	29	Combination
31	7.3-7.2	3.94	15	Cir	24.278	516.50	517.00	2.059	517.48	517.80	n/a	517.80 j	30	Combination
32	7.4-7.1	6.88	15	Cir	23.959	500.30	500.65	1.461	501.40	501.70	n/a	501.70 j	29	Combination

Project File: 25184 - Pipe Network Model.stm | Number of lines: 32 | Run Date: 5/21/2026

NOTES: Return period = 10 Yrs. ; *Surcharged (HGL above crown). ; j - Line contains hyd. jump.

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	85.628	0.33	2.96	0.95	0.31	2.02	5.0	6.6	6.3	25.70	34.52	10.35	24	1.99	469.85	471.55	471.14	473.33	473.00	476.90	1.1-out
2	1	24.571	1.76	2.63	0.65	1.14	1.71	5.0	6.6	6.3	22.76	24.72	8.05	24	1.02	471.65	471.90	473.33	473.60	476.90	476.90	1.2-1.1
3	2	149.212	0.87	0.87	0.65	0.57	0.57	5.0	6.1	6.4	14.64	34.16	5.89	24	1.94	472.00	474.90	473.60	476.28	476.90	478.00	1.3-1.2
4	3	201.598	0.00	0.00	0.65	0.00	0.00	5.0	5.0	0.0	10.00	38.59	5.09	24	2.48	475.00	480.00	476.28	481.13	478.00	488.00	1.4-1.3
5	End	86.325	0.36	3.32	0.95	0.34	2.27	5.0	6.4	6.4	27.40	34.39	10.64	24	1.97	469.75	471.45	471.10	473.27	473.00	475.67	2.1-out
6	5	24.002	1.81	2.96	0.65	1.18	1.92	5.0	6.3	6.4	24.25	25.01	8.41	24	1.04	471.55	471.80	473.27	473.54	475.67	475.67	2.2-2.1
7	6	58.211	1.15	1.15	0.65	0.75	0.75	5.0	6.1	6.4	15.80	19.00	6.15	24	0.60	471.90	472.25	473.54	473.68	475.67	475.25	2.3-2.2
8	7	214.087	0.00	0.00	0.65	0.00	0.00	5.0	5.0	0.0	10.00	57.16	4.98	24	5.44	472.35	484.00	473.68	485.13	475.25	494.00	2.4-2.3
9	End	82.226	0.00	4.18	0.65	0.00	2.72	5.0	6.5	6.3	22.20	30.21	9.19	24	1.52	484.20	485.45	485.47	487.13	490.00	500.00	3.1-out
10	9	167.886	0.74	1.77	0.65	0.48	1.15	5.0	6.0	6.5	10.43	11.45	6.83	18	1.01	485.95	487.65	487.13	488.89	500.00	492.90	3.2-3.1
11	10	178.462	0.61	0.61	0.65	0.40	0.40	5.0	5.0	6.8	3.68	9.80	4.27	15	1.96	488.00	491.50	488.89	492.27	492.90	498.50	3.3-3.2
12	10	24.269	0.42	0.42	0.65	0.27	0.27	5.0	5.0	6.8	2.84	7.10	3.62	15	1.03	488.00	488.25	488.89	488.93	492.90	492.90	3.4-3.2
13	9	127.617	0.66	2.41	0.65	0.43	1.57	5.0	5.1	6.7	12.55	25.76	11.55	15	13.56	486.20	503.50	487.13	504.72	500.00	506.15	3.5-3.1
14	13	23.826	1.75	1.75	0.65	1.14	1.14	5.0	5.0	6.8	8.68	7.17	7.08	15	1.05	503.60	503.85	504.85	505.22	506.15	506.15	3.6-3.5
15	End	188.905	0.68	6.67	0.65	0.44	4.34	5.0	6.8	6.2	34.02	34.52	11.76	24	1.99	490.15	493.90	491.76	495.81	494.00	498.50	4.1-out
16	15	308.359	0.00	5.99	0.65	0.00	3.89	5.0	6.3	6.4	30.83	53.77	10.19	24	4.82	494.00	508.85	495.81	510.72	498.50	519.20	4.2-4.1
17	16	131.389	0.77	3.22	0.65	0.50	2.09	5.0	5.9	6.5	17.58	34.14	6.44	24	1.94	508.95	511.50	510.72	513.01	519.20	517.50	4.3-4.2
18	17	243.539	0.84	1.18	0.65	0.55	0.77	5.0	5.2	6.7	7.13	15.37	7.77	15	4.82	512.25	524.00	513.01	525.07	517.50	527.33	4.4-4.3
19	18	23.513	0.34	0.34	0.65	0.22	0.22	5.0	5.0	6.8	2.49	7.21	3.23	15	1.06	524.10	524.35	525.07	524.98	527.33	527.33	4.5-4.4
20	17	23.759	1.27	1.27	0.65	0.83	0.83	5.0	5.0	6.8	6.57	7.18	6.35	15	1.05	512.10	512.35	513.04	513.38	517.50	517.50	4.6-4.3
21	16	30.779	1.17	2.77	0.65	0.76	1.80	5.0	5.1	6.7	14.12	19.53	14.44	15	7.80	513.70	516.10	514.49	517.33	519.20	520.80	4.7-4.2
22	21	24.086	1.60	1.60	0.65	1.04	1.04	5.0	5.0	6.8	8.02	13.52	6.75	15	3.74	516.10	517.00	517.33	518.12	520.80	520.80	4.8-4.7

Project File: 25184 - Pipe Network Model.stm | Number of lines: 32 | Run Date: 5/21/2026

NOTES:Intensity = 65.35 / (Inlet time + 12.20) ^ 0.80; Return period =Yrs. 10 ; c = cir e = ellip b = box

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
23	End	45.648	0.26	0.86	0.65	0.17	0.65	5.0	5.8	6.5	8.20	17.63	10.57	15	6.35	510.00	512.90	510.60	514.02	512.00	515.50	5.1-out
24	23	120.402	0.31	0.46	0.65	0.20	0.34	5.0	5.2	6.7	4.30	19.80	4.45	15	8.01	513.00	522.65	514.02	523.49	515.50	525.50	5.2-5.1
25	24	23.847	0.15	0.15	0.95	0.14	0.14	5.0	5.0	6.8	1.96	7.16	3.15	15	1.05	522.75	523.00	523.49	523.56	525.50	525.50	5.3-5.2
26	23	28.428	0.14	0.14	0.95	0.13	0.13	5.0	5.0	6.8	1.90	9.28	2.65	15	1.76	512.90	513.40	514.02	513.95	515.50	516.00	5.4-5.1
27	End	172.623	1.44	1.55	0.65	0.94	1.04	5.0	5.3	6.7	8.93	19.49	11.54	15	7.76	514.00	527.40	514.59	528.55	517.00	530.22	6.1-out
28	27	23.919	0.11	0.11	0.95	0.10	0.10	5.0	5.0	6.8	1.71	10.11	2.55	15	2.09	527.50	528.00	528.55	528.52	530.22	530.22	6.2-6.1
29	End	86.278	0.61	3.16	0.65	0.40	2.05	5.0	6.0	6.5	17.27	25.03	7.72	24	1.04	499.00	499.90	500.22	501.40	502.00	503.00	7.1-out
30	29	301.871	0.54	1.21	0.65	0.35	0.79	5.0	5.1	6.7	7.28	16.31	6.21	15	5.43	500.00	516.40	501.40	517.48	503.00	520.25	7.2-7.1
31	30	24.278	0.67	0.67	0.65	0.44	0.44	5.0	5.0	6.8	3.94	10.04	4.28	15	2.06	516.50	517.00	517.48	517.80	520.25	520.25	7.3-7.2
32	29	23.959	1.34	1.34	0.65	0.87	0.87	5.0	5.0	6.8	6.88	8.46	6.14	15	1.46	500.30	500.65	501.40	501.70	503.00	503.25	7.4-7.1

Project File: 25184 - Pipe Network Model.stm

Number of lines: 32

Run Date: 5/21/2026

NOTES:Intensity = 65.35 / (Inlet time + 12.20) ^ 0.80; Return period =Yrs. 10 ; c = cir e = ellip b = box

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
1	1.1	3.12*	0.00	3.12	0.00	Comb	4.0	5.33	10.66	5.33	2.00	Sag	2.00	0.083	0.030	0.000	0.31	6.95	0.31	6.95	0.0	Off
2	1.2	8.73*	3.92	12.65	0.00	Comb	4.0	5.33	10.66	5.33	2.00	Sag	2.00	0.083	0.080	0.000	0.67	8.32	0.67	8.32	0.0	Off
3	1.3	4.82*	0.00	3.24	1.58	Comb	4.0	2.33	0.00	2.33	2.00	0.027	2.00	0.083	0.020	0.012	0.30	8.47	0.21	4.35	0.0	Off
4	1.4	10.00*	0.00	10.00	0.00	Hdwl	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
5	2.1	3.31*	0.00	3.31	0.00	Comb	4.0	5.33	10.66	5.33	2.00	Sag	2.00	0.083	0.030	0.000	0.32	7.26	0.32	7.26	0.0	Off
6	2.2	8.94*	1.43	10.38	0.00	Comb	4.0	5.33	10.66	5.33	2.00	Sag	2.00	0.083	0.080	0.000	0.60	7.41	0.60	7.41	0.0	Off
7	2.3	6.05*	0.00	3.96	2.09	Comb	4.0	2.33	0.00	2.33	2.00	0.020	2.00	0.083	0.030	0.012	0.34	7.95	0.25	4.71	0.0	Off
8	2.4	10.00*	0.00	10.00	0.00	Hdwl	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
9	3.1	0.01*	0.00	0.00	0.01	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
10	3.2	4.25*	5.80	6.13	3.92	Comb	4.0	2.33	0.00	2.33	2.00	0.054	2.00	0.083	0.030	0.012	0.35	7.99	0.26	5.07	0.0	2
11	3.3	3.68*	0.00	2.80	0.88	Comb	4.0	2.33	0.00	2.33	2.00	0.033	2.00	0.083	0.020	0.012	0.27	7.00	0.17	2.10	0.0	10
12	3.4	2.84*	2.76	4.17	1.43	Comb	4.0	2.33	0.00	2.33	2.00	0.054	2.00	0.083	0.025	0.012	0.28	6.74	0.18	2.71	0.0	6
13	3.5	3.90*	0.00	3.01	0.89	Comb	4.0	2.33	0.00	2.33	2.00	0.114	2.00	0.083	0.020	0.012	0.23	4.98	0.13	1.61	0.0	10
14	3.6	8.68*	0.00	4.65	4.04	Comb	4.0	2.33	0.00	2.33	2.00	0.114	2.00	0.083	0.020	0.012	0.28	7.93	0.23	5.10	0.0	10
15	4.1	3.98*	4.50	5.72	2.76	Comb	4.0	2.33	0.00	2.33	2.00	0.033	2.00	0.083	0.040	0.012	0.37	6.99	0.25	4.17	0.0	12
16	4.2	0.01*	0.00	0.00	0.01	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
17	4.3	4.38*	0.97	5.35	0.00	Comb	4.0	5.33	10.66	5.33	2.00	Sag	2.00	0.083	0.050	0.000	0.41	6.98	0.41	6.98	0.0	Off
18	4.4	4.69*	0.00	3.71	0.97	Comb	4.0	2.33	0.00	2.33	2.00	0.071	2.00	0.083	0.020	0.012	0.26	6.47	0.15	1.82	0.0	17
19	4.5	2.49*	0.00	2.34	0.16	Comb	4.0	2.33	0.00	2.33	2.00	0.071	2.00	0.083	0.020	0.012	0.21	4.27	0.08	0.92	0.0	20
20	4.6	6.57*	0.16	6.73	0.00	Comb	4.0	5.33	10.66	5.33	2.00	Sag	2.00	0.083	0.060	0.000	0.47	7.06	0.47	7.06	0.0	Off
21	4.7	6.14*	0.00	4.29	1.85	Comb	4.0	2.33	0.00	2.33	2.00	0.057	2.00	0.083	0.020	0.012	0.28	7.93	0.20	3.63	0.0	15
22	4.8	8.02*	0.00	5.37	2.65	Comb	4.0	2.33	0.00	2.33	2.00	0.057	2.00	0.083	0.026	0.012	0.32	7.74	0.22	4.25	0.0	15
23	5.1	2.14*	0.67	2.81	0.00	Comb	4.0	5.33	10.66	5.33	2.00	Sag	2.00	0.083	0.023	0.000	0.30	7.79	0.30	7.79	0.0	Off

Project File: 25184 - Pipe Network Model.stm | Number of lines: 32 | Run Date: 5/21/2026

NOTES: Inlet N-Values = 0.016; Intensity = 65.35 / (Inlet time + 12.20) ^ 0.80; Return period = 10 Yrs. ; * Indicates Known Q added. All curb inlets are throat.

Inlet Report

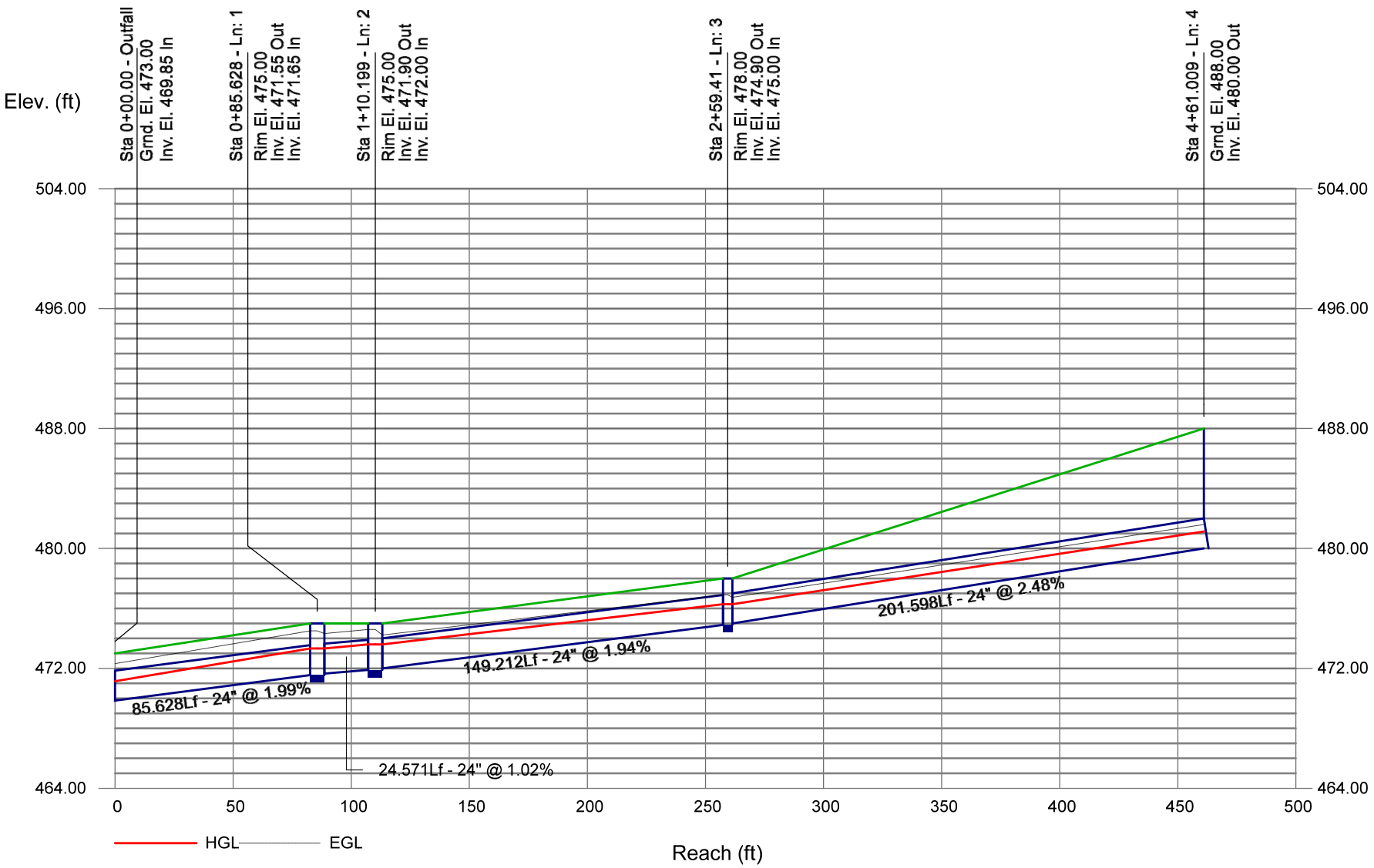
Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
24	5.2	2.36*	0.00	2.03	0.33	Comb	4.0	2.33	0.00	2.33	2.00	0.121	2.00	0.083	0.020	0.012	0.19	3.20	0.09	1.10	0.0	23
25	5.3	1.96*	0.00	1.74	0.22	Comb	4.0	2.33	0.00	2.33	2.00	0.121	2.00	0.083	0.020	0.012	0.18	2.60	0.08	0.95	0.0	26
26	5.4	1.90*	0.22	1.78	0.34	Comb	4.0	2.33	0.00	2.33	2.00	0.020	2.00	0.083	0.020	0.012	0.24	5.89	0.13	1.56	0.0	23
27	6.1	7.32*	0.00	4.89	2.43	Comb	4.0	2.33	0.00	2.33	2.00	0.071	2.00	0.083	0.021	0.012	0.29	7.97	0.21	4.09	0.0	Off
28	6.2	1.71*	0.00	1.69	0.02	Comb	4.0	2.33	0.00	2.33	2.00	0.071	2.00	0.083	0.020	0.012	0.19	3.01	0.03	0.39	0.0	Off
29	7.1	3.68*	3.05	6.73	0.00	Comb	4.0	5.33	10.66	5.33	2.00	Sag	2.00	0.083	0.060	0.000	0.47	7.06	0.47	7.06	0.0	Off
30	7.2	3.37*	0.00	2.92	0.45	Comb	4.0	2.33	0.00	2.33	2.00	0.067	2.00	0.083	0.020	0.012	0.23	5.40	0.11	1.38	0.0	29
31	7.3	3.94*	0.00	3.26	0.68	Comb	4.0	2.33	0.00	2.33	2.00	0.067	2.00	0.083	0.020	0.012	0.24	5.95	0.13	1.61	0.0	32
32	7.4	6.88*	0.68	4.95	2.61	Comb	4.0	2.33	0.00	2.33	2.00	0.020	2.00	0.083	0.040	0.012	0.38	7.41	0.27	4.58	0.0	29

Project File: 25184 - Pipe Network Model.stm | Number of lines: 32 | Run Date: 5/21/2026

NOTES: Inlet N-Values = 0.016; Intensity = 65.35 / (Inlet time + 12.20) ^ 0.80; Return period = 10 Yrs. ; * Indicates Known Q added. All curb inlets are throat.

Storm Sewer Profile

Proj. file: 25184 - Pipe Network Model.stm



Storm Sewer Profile

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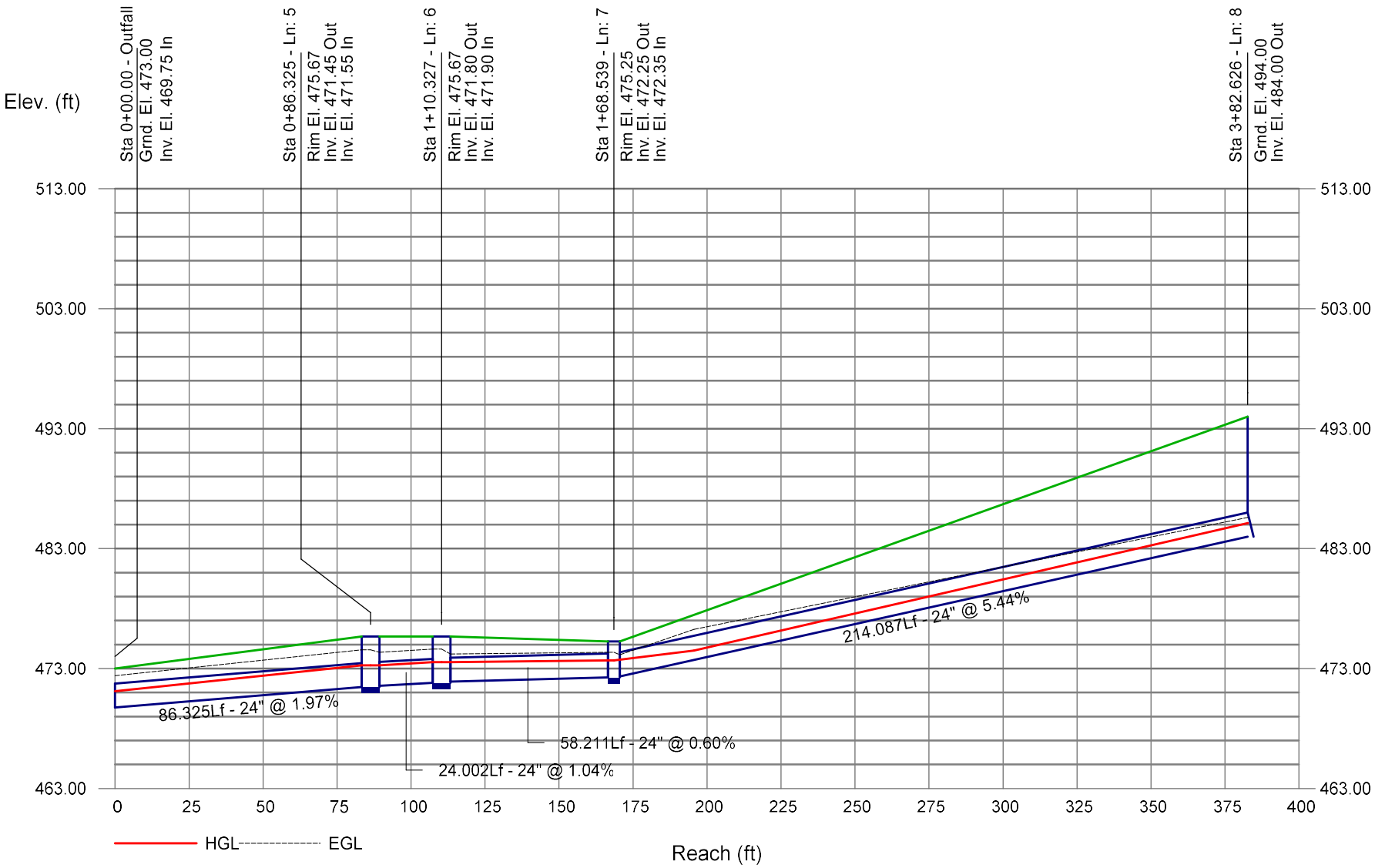

Storm Sewer Profile

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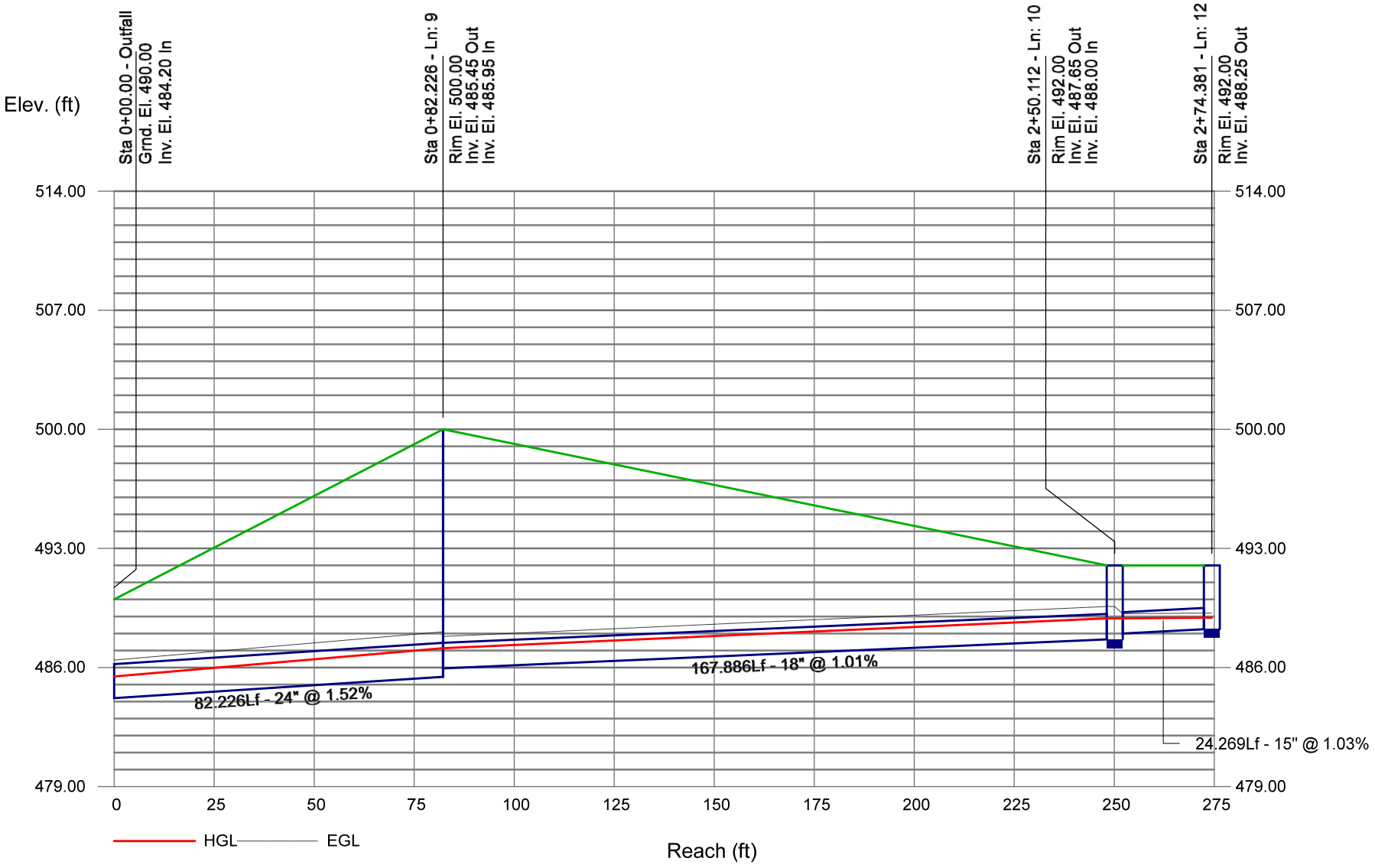

Storm Sewer Profile

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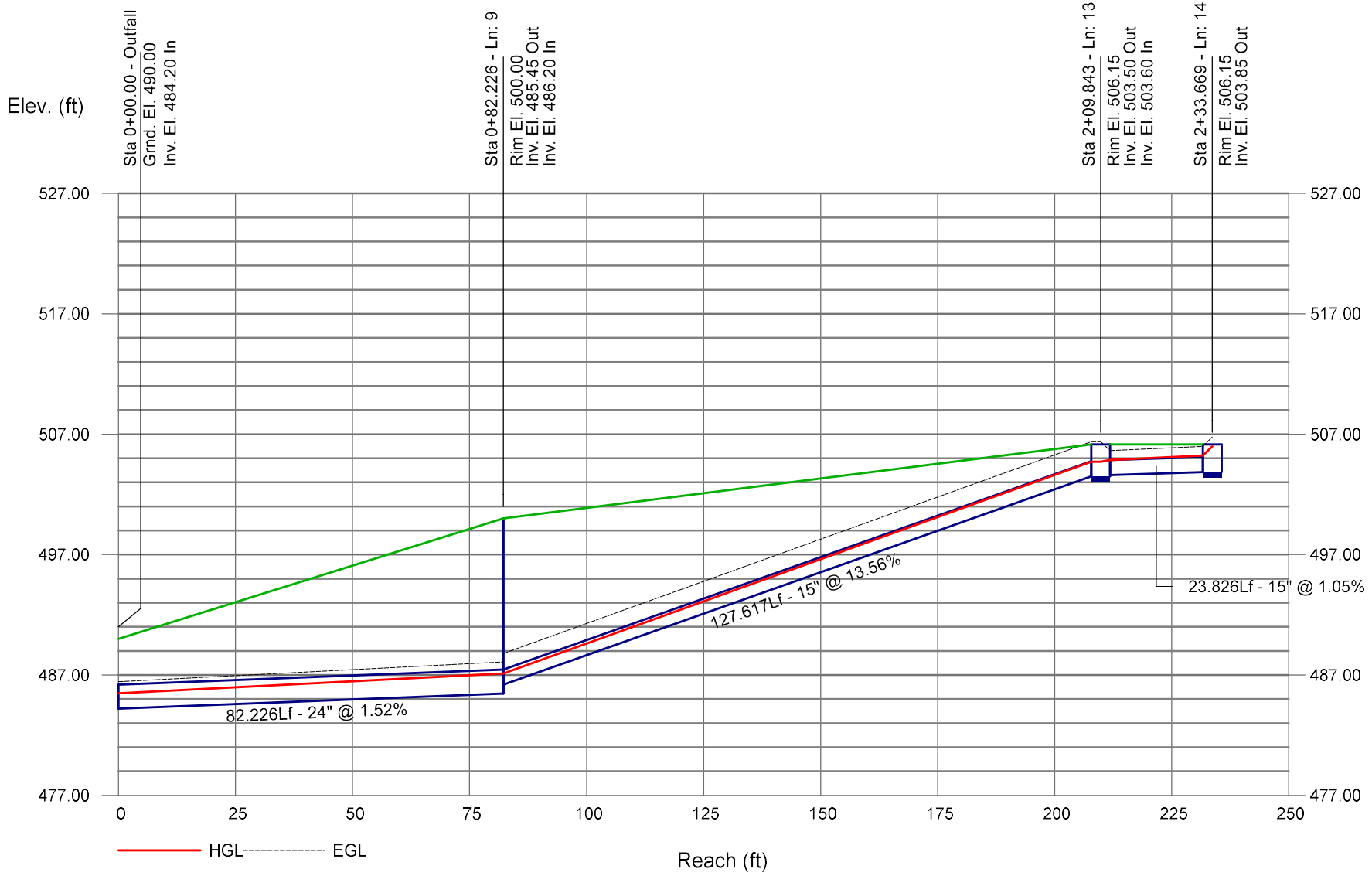

Bentley Systems

Storm Sewer Profile

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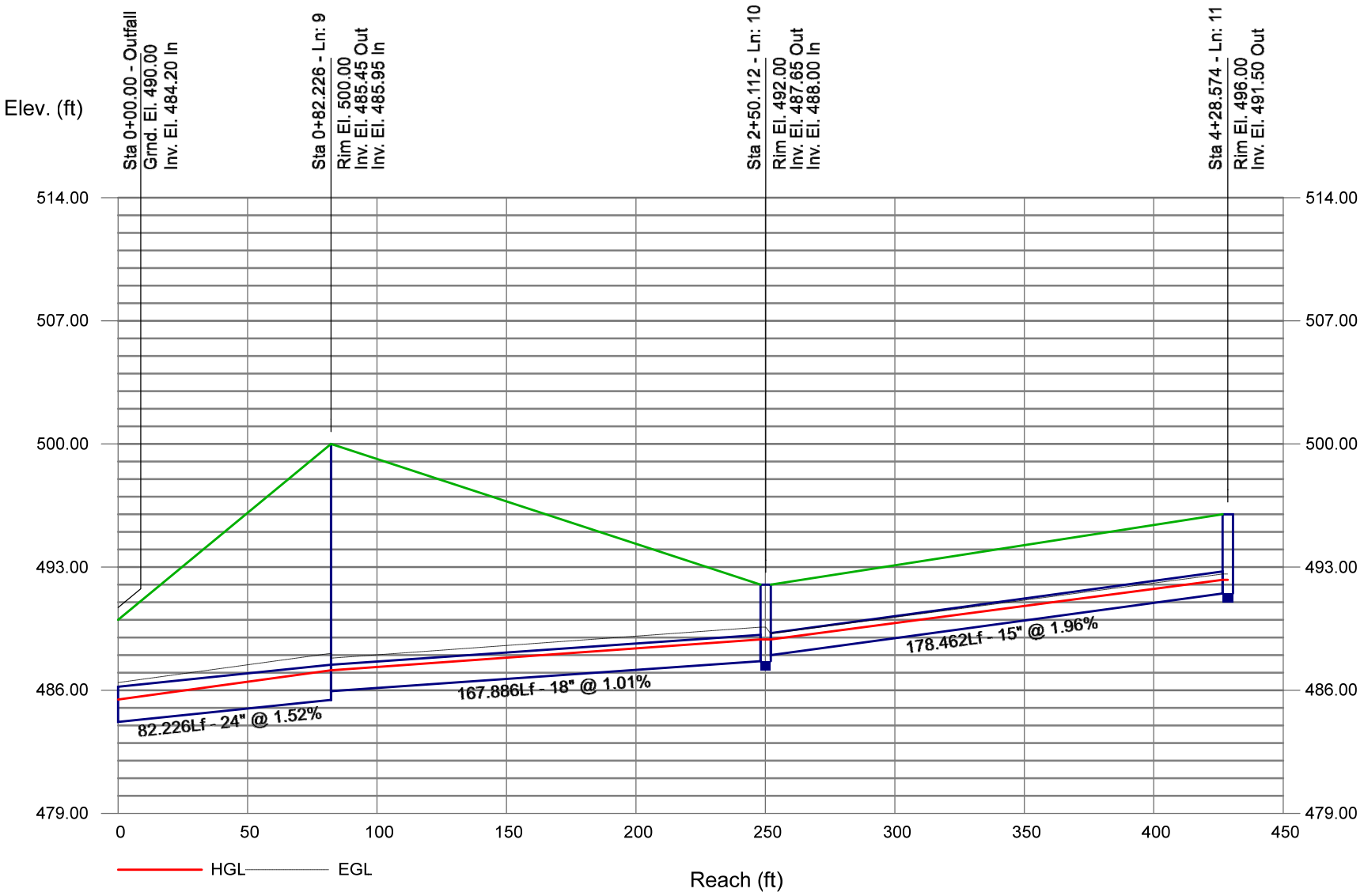

Storm Sewer Profile

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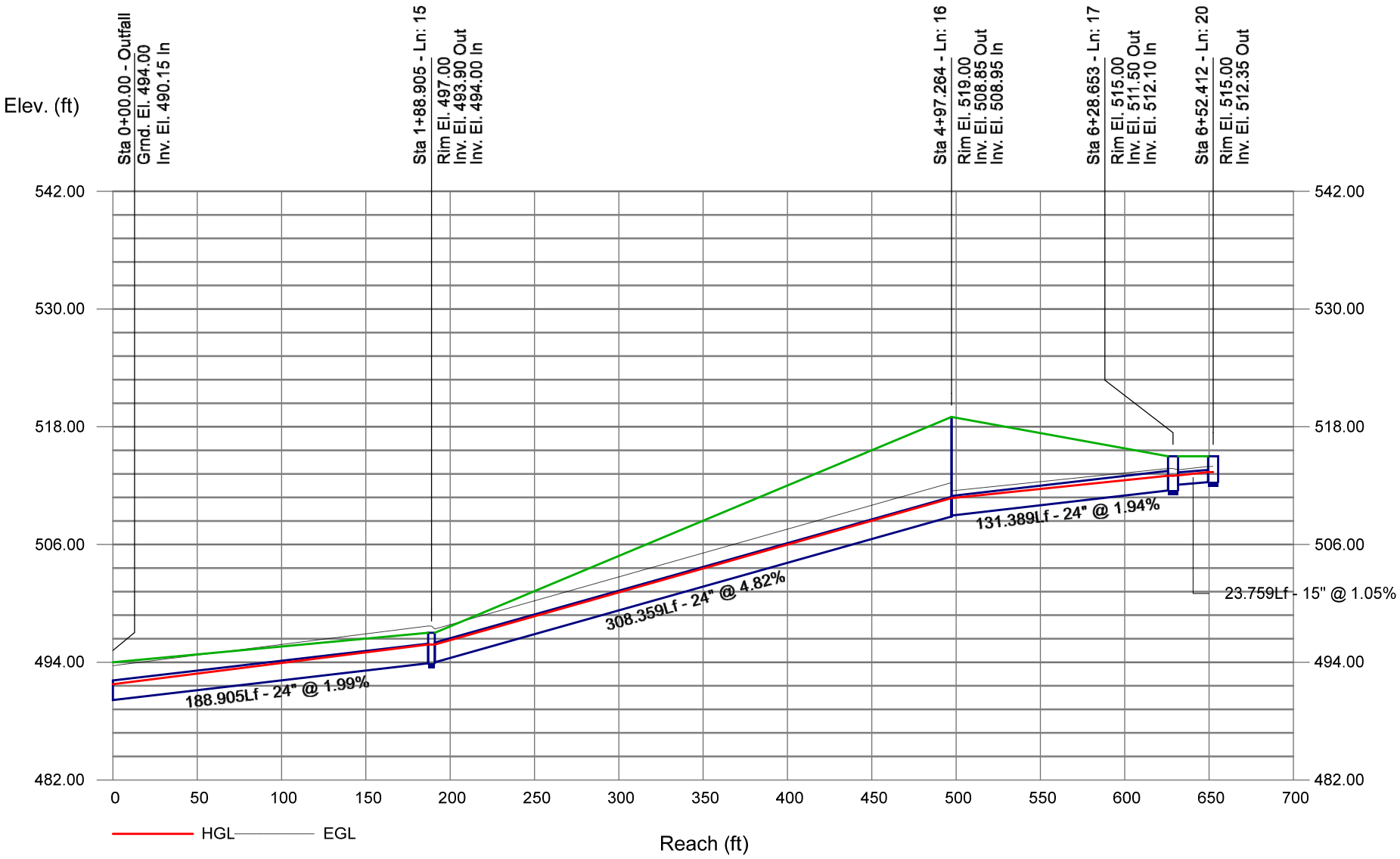

Storm Sewer Profile

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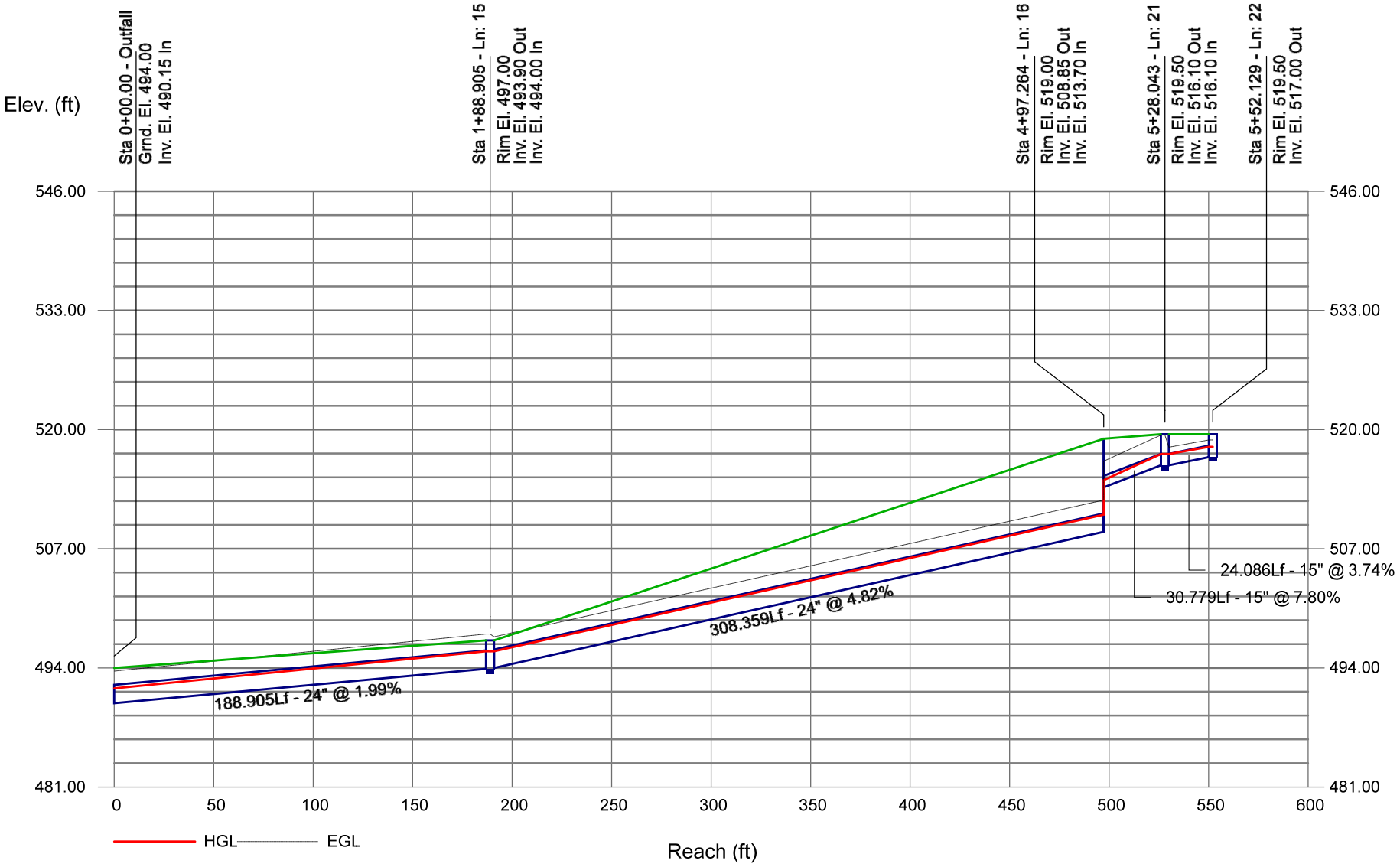

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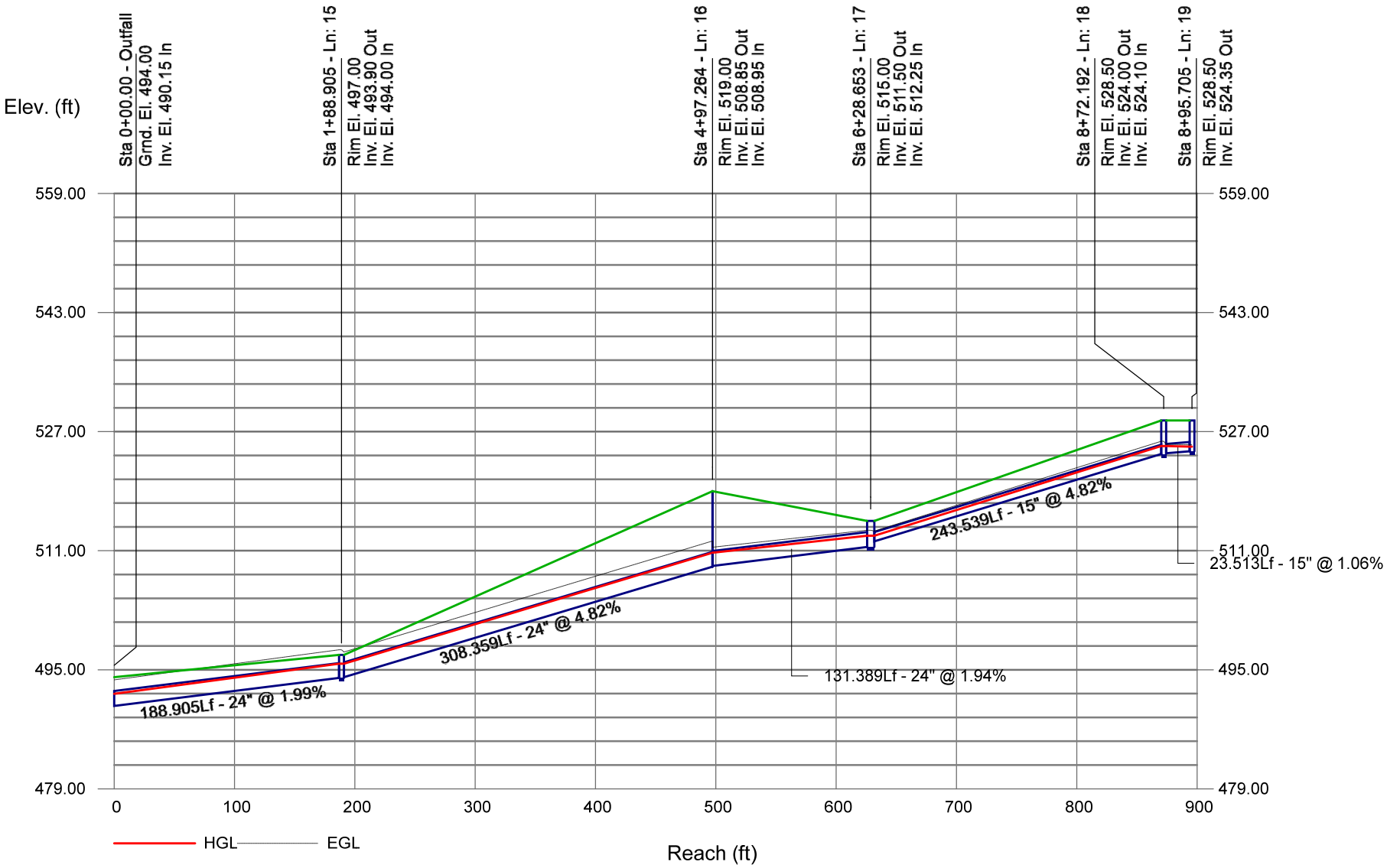

Storm Sewer Profile

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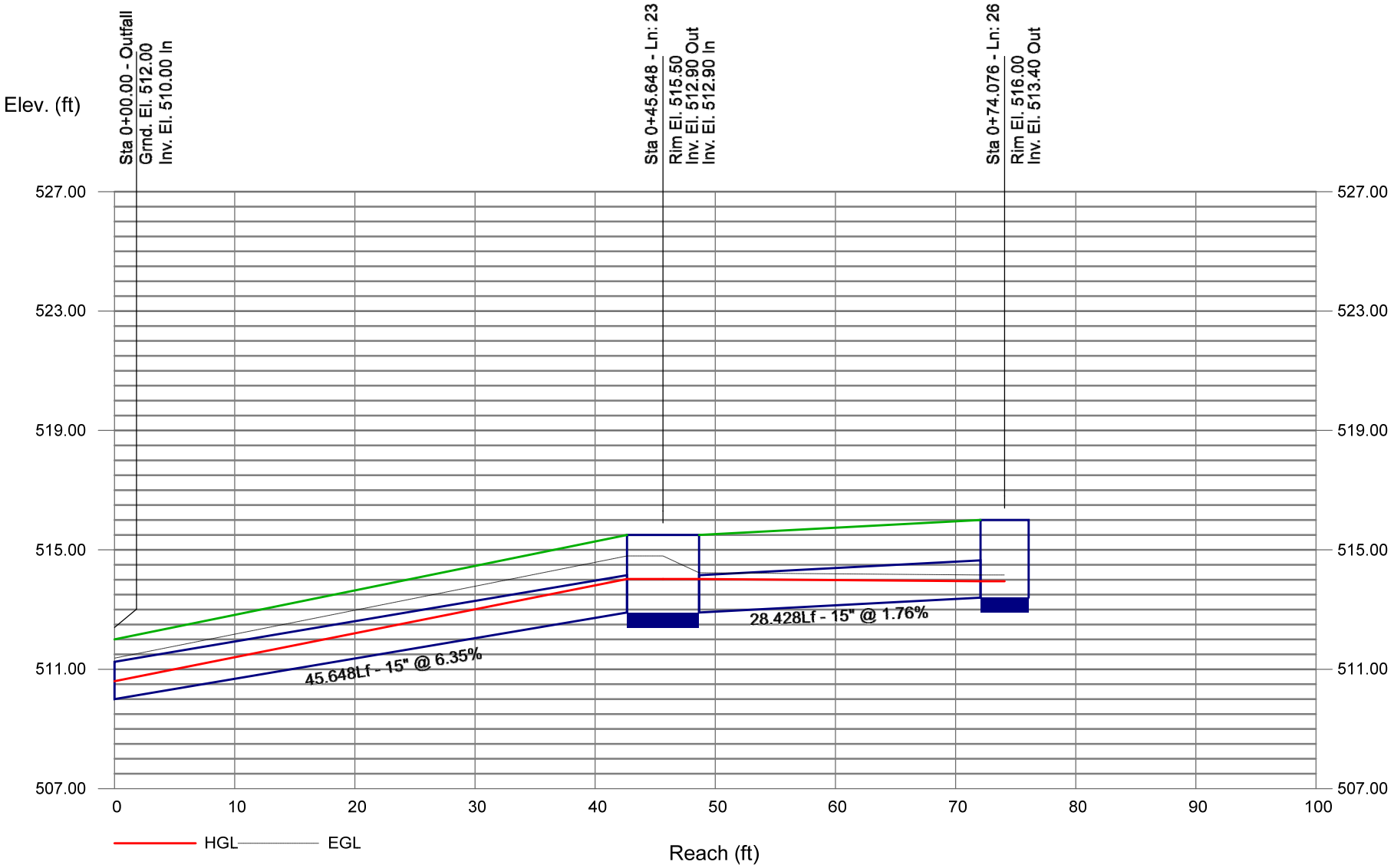

Storm Sewer Profile

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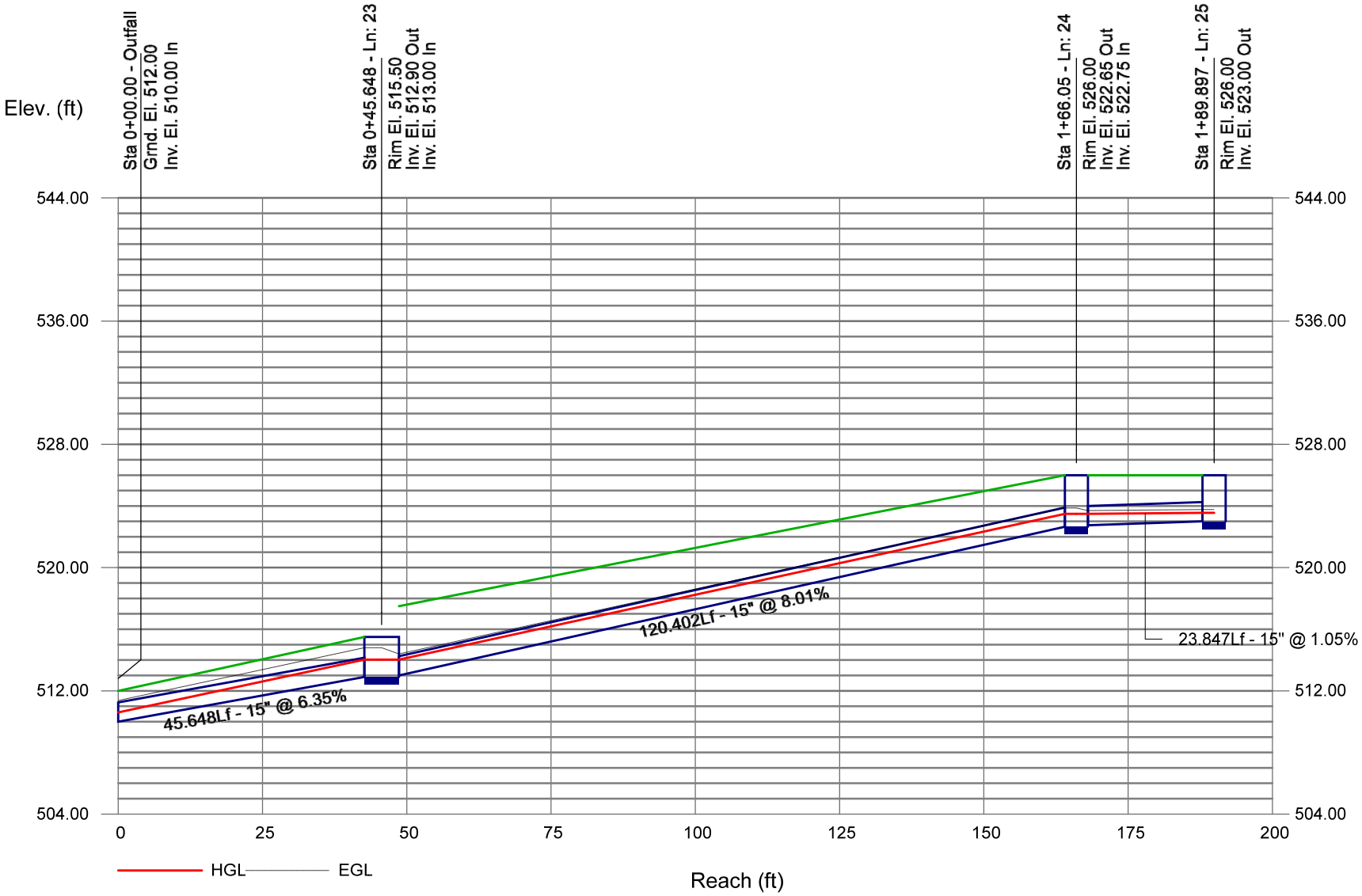

Storm Sewer Profile

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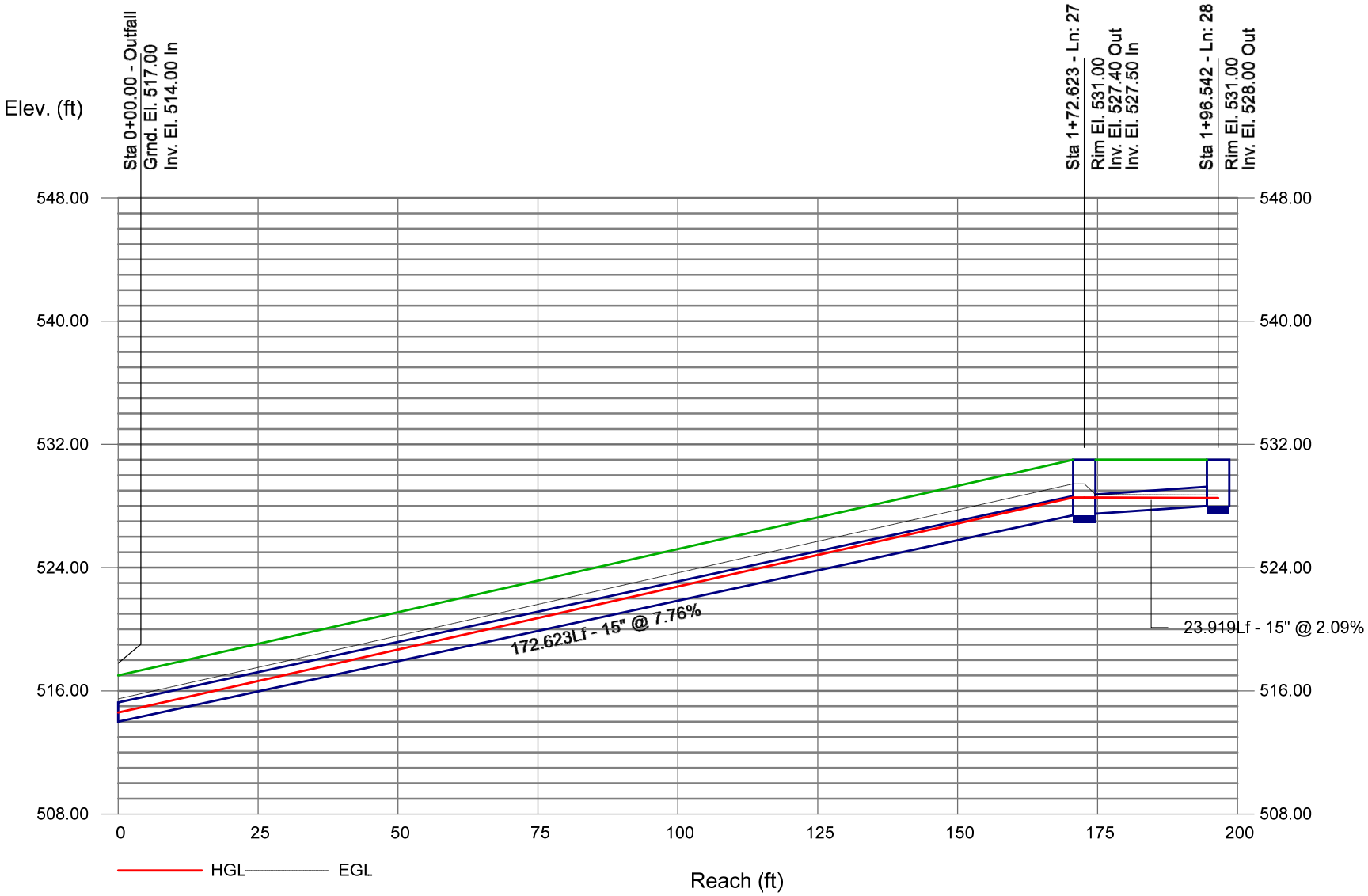

Storm Sewer Profile

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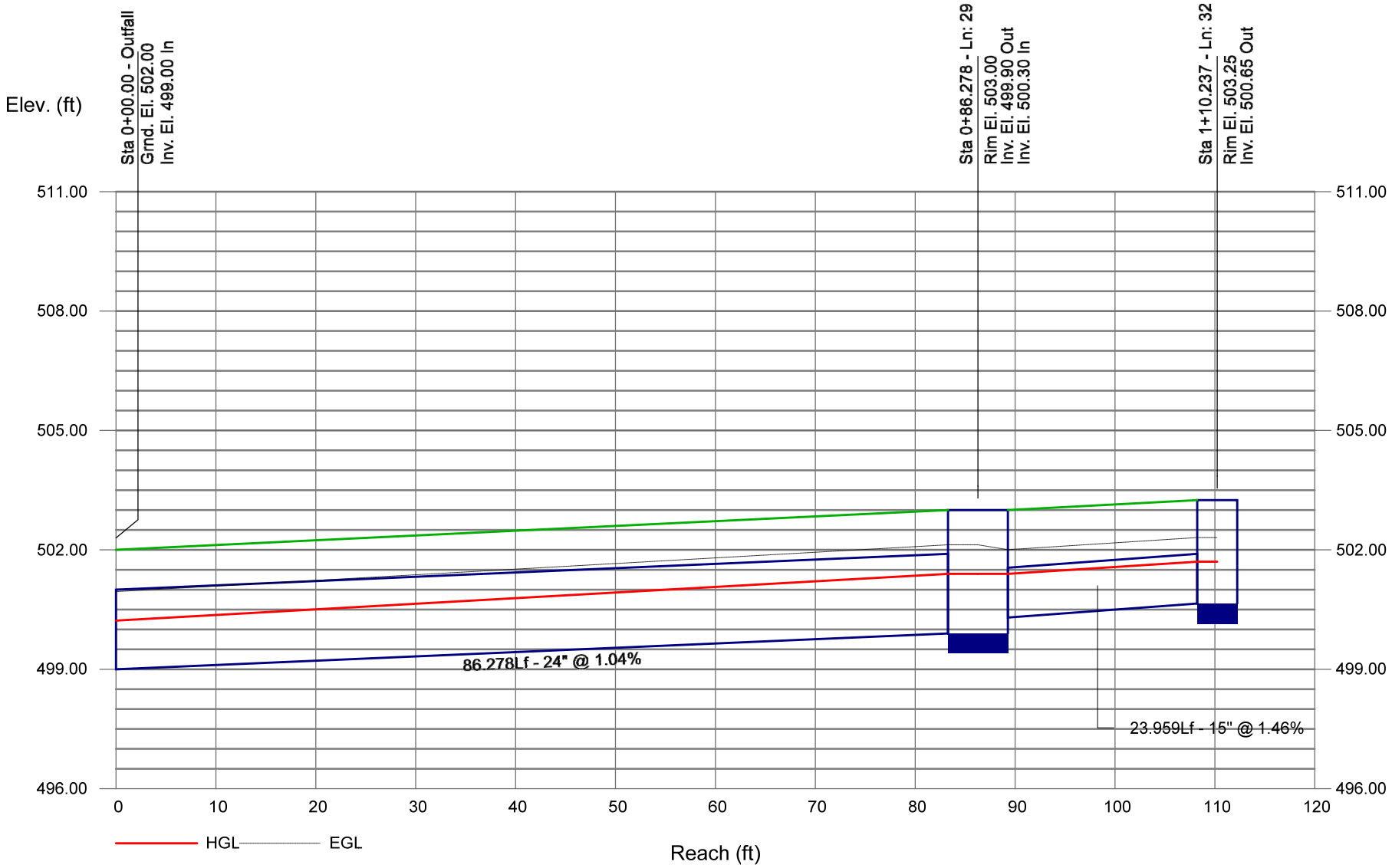

Storm Sewer Profile

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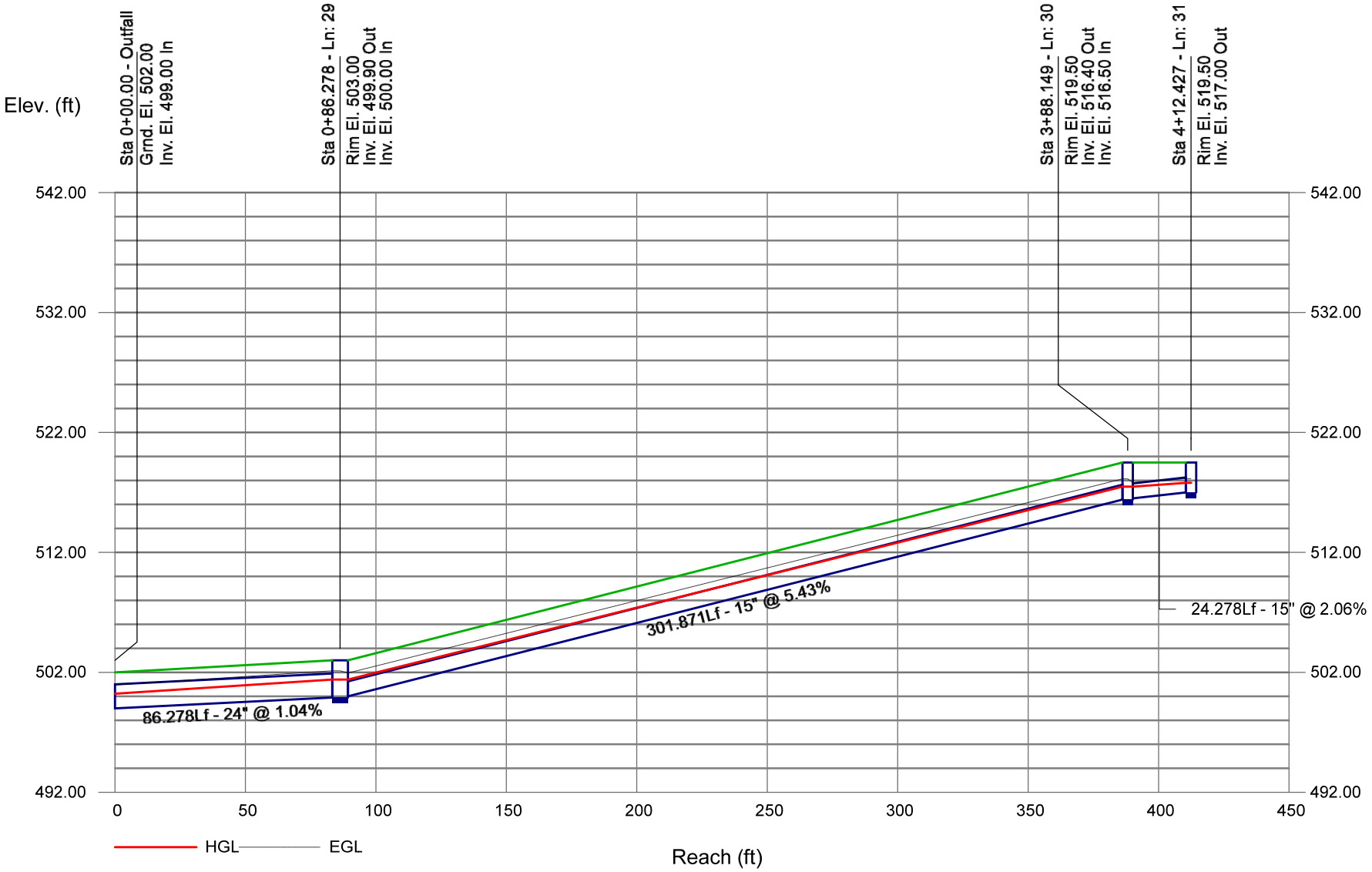
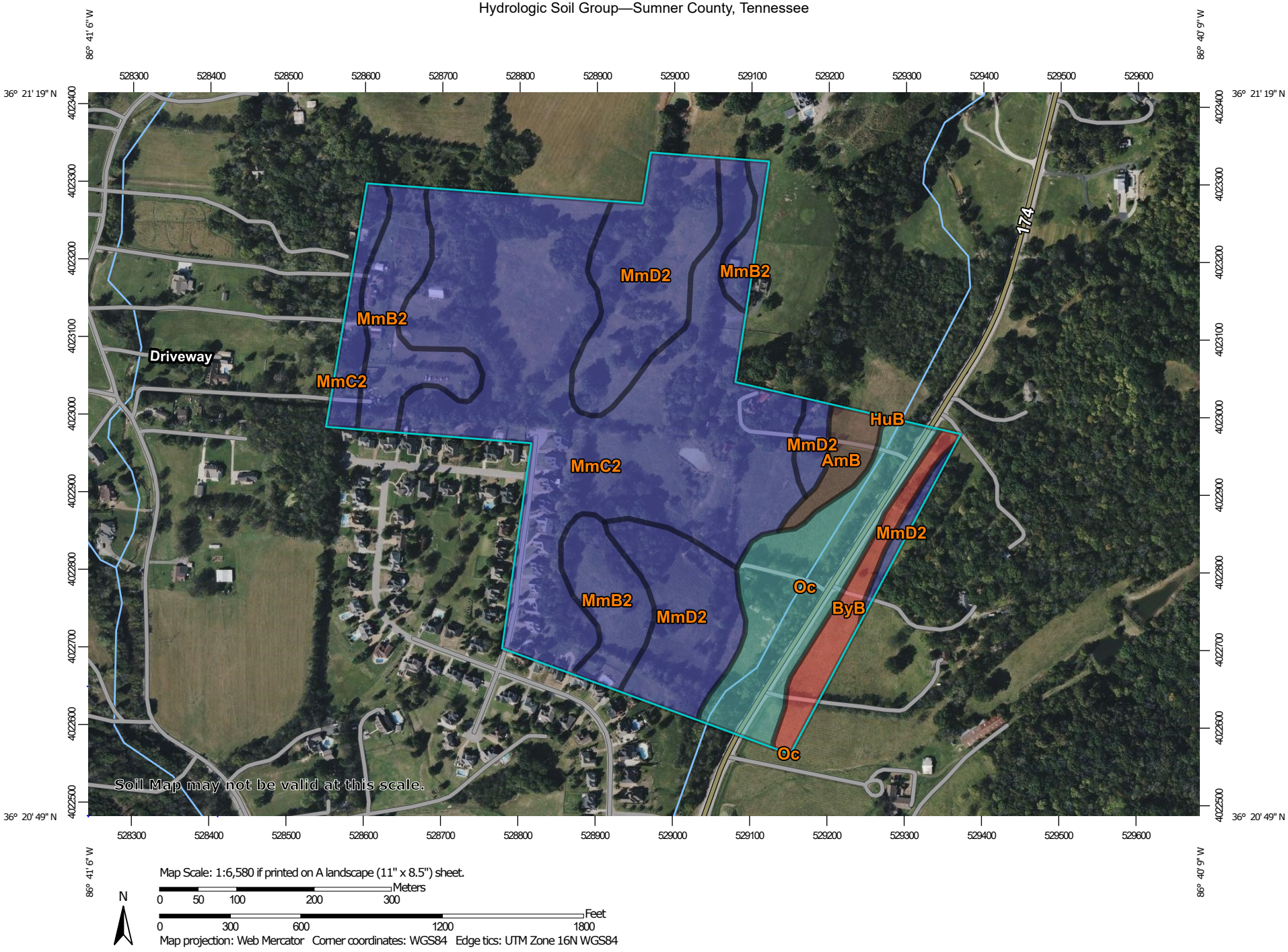


Attachment 4

Hydrologic Soil Information



Map Scale: 1:6,580 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 300 600 1200 1800

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 Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

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.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AmB	Armour silt loam, 2 to 5 percent slopes	B	2.0	2.3%
ByB	Byler silt loam, 1 to 4 percent slopes	D	3.5	4.1%
HuB	Humphreys gravelly silt loam, 2 to 5 percent slopes	A	0.0	0.0%
MmB2	Mimosa silt loam, 2 to 5 percent slopes, eroded	C	11.0	12.8%
MmC2	Mimosa silt loam, 5 to 12 percent slopes, eroded	C	41.7	48.4%
MmD2	Mimosa silt loam, 12 to 20 percent slopes, eroded	C	17.9	20.7%
Oc	Ocana gravelly silt loam, bedrock substratum, occasionally flooded	A	10.1	11.7%
Totals for Area of Interest			**86.1**	**100.0%**

Description

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

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

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

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

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

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

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

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

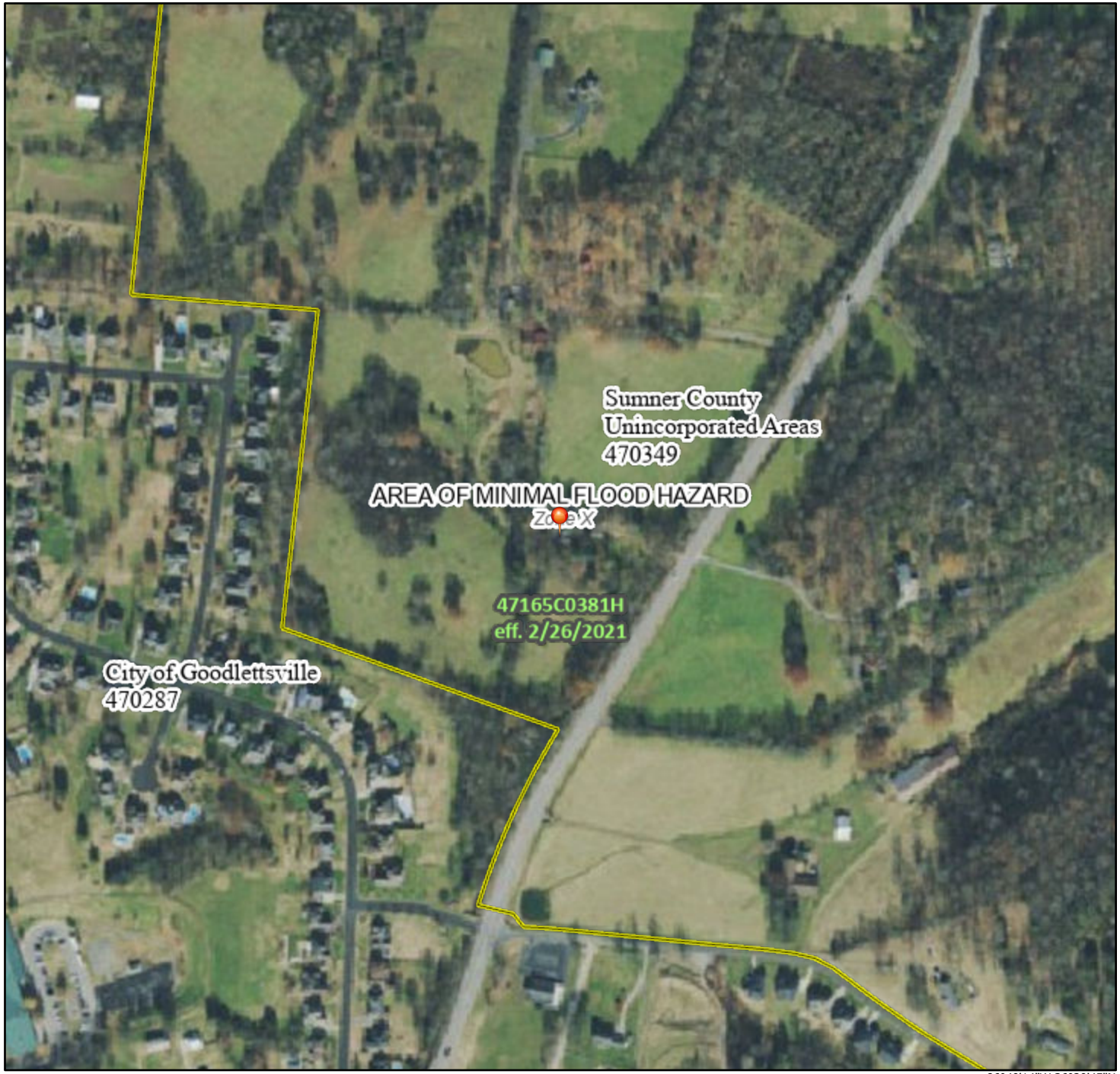
Attachment 5

FEMA FIRM

National Flood Hazard Layer FIRMette

FEMA

86°40'51"W 36°21'14"N



86°40'14"W 36°20'45"N

Feet

0 250 500 1,000 1,500 2,000

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/6/2026 at 6:01 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Attachment 6

Atlas 14 Precipitation/Intensity Data

NOAA Atlas 14, Volume 2, Version 3
Location name: Goodlettsville, Tennessee, USA*
Latitude: 36.3497°, Longitude: -86.6777°
Elevation: m/ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.379 (0.351-0.411)	0.443 (0.411-0.483)	0.510 (0.471-0.554)	0.563 (0.520-0.612)	0.628 (0.576-0.682)	0.677 (0.617-0.735)	0.724 (0.656-0.787)	0.767 (0.690-0.836)	0.821 (0.732-0.898)	0.862 (0.761-0.945)
10-min	0.605 (0.561-0.657)	0.709 (0.657-0.772)	0.817 (0.755-0.887)	0.900 (0.831-0.978)	1.00 (0.918-1.09)	1.08 (0.983-1.17)	1.15 (1.04-1.25)	1.22 (1.09-1.32)	1.30 (1.16-1.42)	1.36 (1.20-1.49)
15-min	0.756 (0.701-0.821)	0.891 (0.826-0.971)	1.03 (0.955-1.12)	1.14 (1.05-1.24)	1.27 (1.16-1.38)	1.36 (1.24-1.48)	1.45 (1.32-1.58)	1.54 (1.38-1.67)	1.64 (1.46-1.79)	1.70 (1.50-1.87)
30-min	1.04 (0.961-1.12)	1.23 (1.14-1.34)	1.47 (1.36-1.59)	1.65 (1.52-1.79)	1.88 (1.72-2.04)	2.06 (1.88-2.23)	2.23 (2.02-2.42)	2.39 (2.15-2.60)	2.60 (2.32-2.84)	2.76 (2.44-3.03)
60-min	1.29 (1.20-1.40)	1.54 (1.43-1.68)	1.88 (1.74-2.04)	2.15 (1.98-2.33)	2.50 (2.30-2.72)	2.78 (2.54-3.02)	3.07 (2.78-3.33)	3.35 (3.02-3.65)	3.73 (3.32-4.08)	4.03 (3.56-4.42)
2-hr	1.52 (1.41-1.65)	1.81 (1.68-1.97)	2.19 (2.03-2.38)	2.50 (2.31-2.71)	2.92 (2.68-3.16)	3.26 (2.97-3.53)	3.60 (3.26-3.91)	3.95 (3.55-4.30)	4.42 (3.93-4.83)	4.80 (4.22-5.25)
3-hr	1.66 (1.54-1.80)	1.97 (1.83-2.15)	2.39 (2.21-2.60)	2.73 (2.51-2.97)	3.20 (2.92-3.47)	3.57 (3.25-3.88)	3.96 (3.58-4.30)	4.36 (3.91-4.75)	4.91 (4.35-5.37)	5.34 (4.68-5.86)
6-hr	2.00 (1.84-2.19)	2.37 (2.18-2.61)	2.87 (2.64-3.16)	3.30 (3.02-3.62)	3.89 (3.53-4.26)	4.38 (3.94-4.80)	4.89 (4.37-5.36)	5.42 (4.80-5.97)	6.18 (5.39-6.82)	6.78 (5.84-7.50)
12-hr	2.38 (2.20-2.60)	2.84 (2.61-3.10)	3.44 (3.16-3.76)	3.94 (3.61-4.30)	4.65 (4.23-5.08)	5.23 (4.73-5.71)	5.85 (5.24-6.39)	6.50 (5.76-7.11)	7.40 (6.46-8.12)	8.13 (7.00-8.96)
24-hr	2.87 (2.68-3.07)	3.42 (3.20-3.67)	4.16 (3.90-4.46)	4.77 (4.46-5.12)	5.62 (5.23-6.02)	6.31 (5.85-6.75)	7.02 (6.48-7.51)	7.76 (7.14-8.30)	8.79 (8.02-9.40)	9.60 (8.70-10.3)
2-day	3.44 (3.20-3.69)	4.10 (3.83-4.40)	5.01 (4.68-5.39)	5.77 (5.37-6.18)	6.84 (6.34-7.33)	7.71 (7.12-8.26)	8.64 (7.94-9.24)	9.60 (8.78-10.3)	11.0 (9.94-11.8)	12.1 (10.9-13.0)
3-day	3.64 (3.40-3.90)	4.34 (4.05-4.65)	5.29 (4.94-5.67)	6.07 (5.66-6.50)	7.16 (6.65-7.66)	8.05 (7.45-8.60)	8.97 (8.27-9.58)	9.94 (9.10-10.6)	11.3 (10.2-12.1)	12.3 (11.1-13.2)
4-day	3.84 (3.59-4.11)	4.57 (4.28-4.90)	5.57 (5.21-5.96)	6.37 (5.95-6.81)	7.48 (6.96-7.99)	8.38 (7.77-8.94)	9.31 (8.59-9.93)	10.3 (9.43-11.0)	11.6 (10.6-12.4)	12.6 (11.4-13.5)
7-day	4.64 (4.33-4.99)	5.53 (5.16-5.95)	6.74 (6.29-7.24)	7.74 (7.20-8.30)	9.14 (8.48-9.78)	10.3 (9.50-11.0)	11.5 (10.6-12.3)	12.8 (11.7-13.6)	14.5 (13.2-15.6)	16.0 (14.3-17.1)
10-day	5.31 (4.97-5.66)	6.32 (5.92-6.75)	7.62 (7.14-8.13)	8.66 (8.09-9.23)	10.1 (9.40-10.7)	11.2 (10.4-11.9)	12.4 (11.5-13.2)	13.6 (12.5-14.4)	15.2 (13.9-16.2)	16.5 (15.0-17.6)
20-day	7.18 (6.77-7.62)	8.50 (8.02-9.03)	10.0 (9.48-10.7)	11.2 (10.6-11.9)	12.8 (12.0-13.6)	14.0 (13.1-14.8)	15.2 (14.2-16.1)	16.3 (15.2-17.3)	17.8 (16.5-18.9)	18.9 (17.5-20.1)
30-day	8.79 (8.32-9.30)	10.4 (9.82-11.0)	12.1 (11.5-12.8)	13.5 (12.7-14.2)	15.3 (14.4-16.1)	16.6 (15.6-17.6)	18.0 (16.8-19.0)	19.3 (18.0-20.4)	21.0 (19.5-22.3)	22.3 (20.7-23.7)
45-day	11.0 (10.4-11.6)	12.9 (12.2-13.6)	14.8 (14.1-15.7)	16.4 (15.5-17.3)	18.3 (17.3-19.3)	19.8 (18.7-20.9)	21.2 (19.9-22.4)	22.5 (21.2-23.9)	24.3 (22.7-25.7)	25.5 (23.8-27.1)
60-day	13.2 (12.5-13.9)	15.5 (14.7-16.3)	17.8 (16.9-18.7)	19.5 (18.4-20.5)	21.6 (20.4-22.7)	23.1 (21.9-24.4)	24.6 (23.2-25.9)	25.9 (24.5-27.4)	27.6 (26.0-29.2)	28.8 (27.0-30.4)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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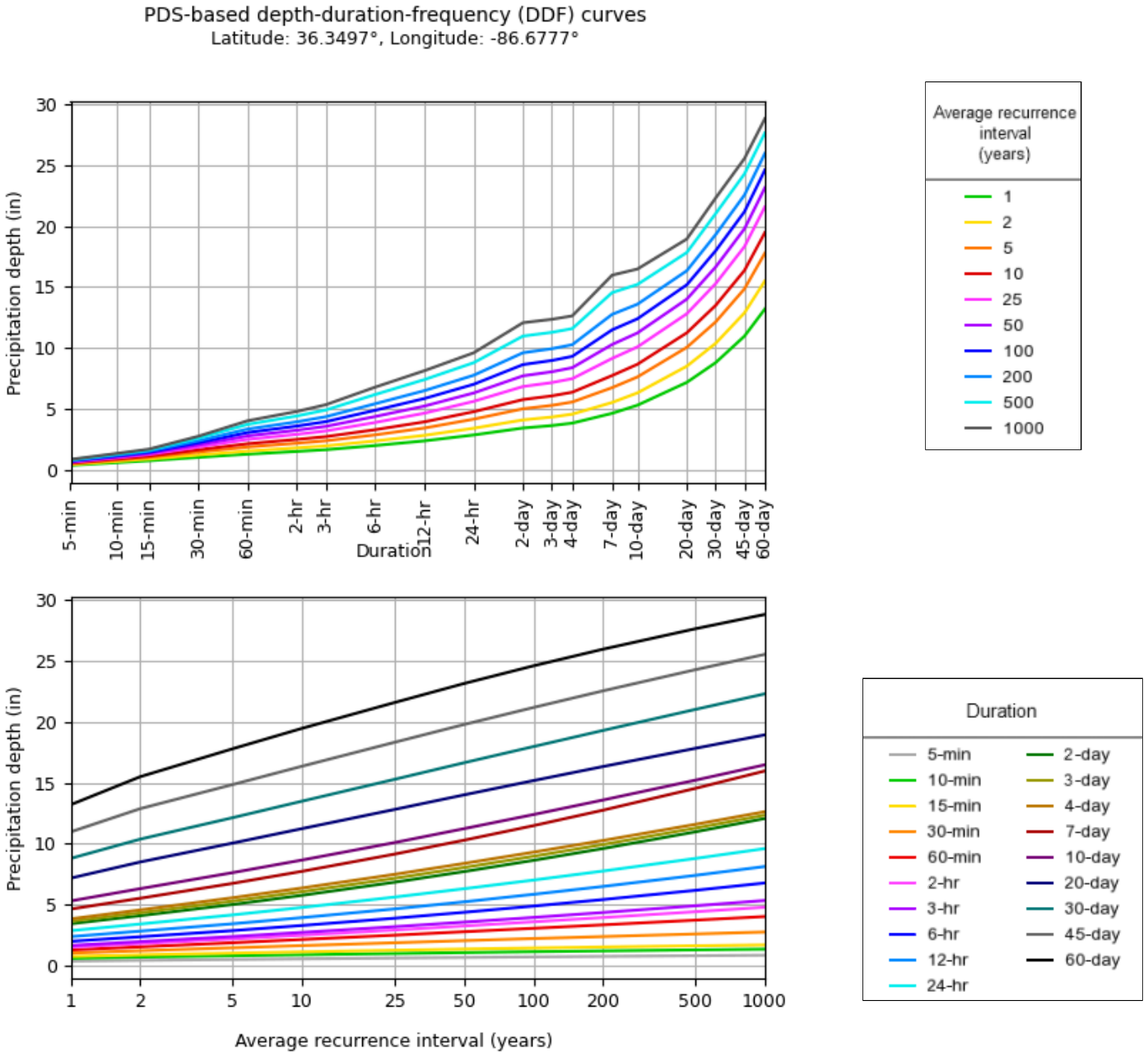
PF graphical



NOAA Atlas 14, Volume 2, Version 3 Created (GMT): Fri Apr 3 15:40:23 2026

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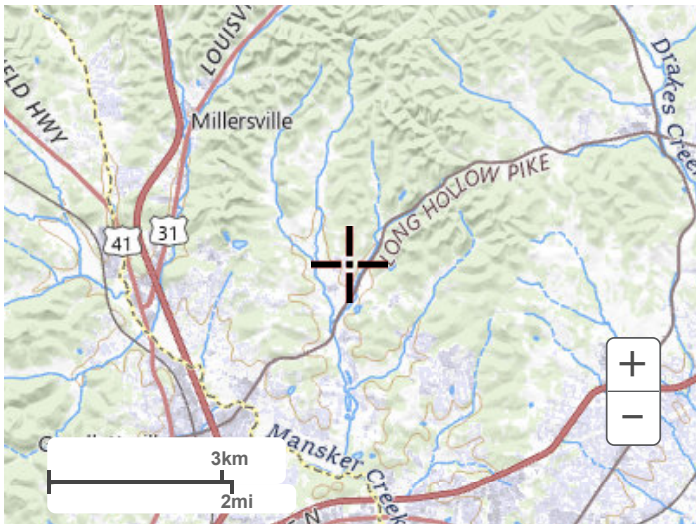
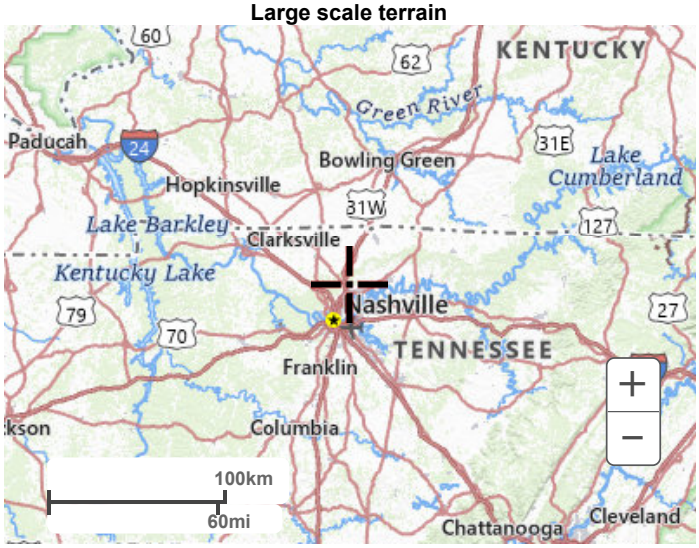
Maps & aerials

Small scale terrain



Large scale terrain



Large scale map

Large scale aerial

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National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

NOAA Atlas 14, Volume 2, Version 3
Location name: Goodlettsville, Tennessee, USA*
Latitude: 36.3497°, Longitude: -86.6777°
Elevation: 553 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	4.55 (4.21-4.93)	5.32 (4.93-5.80)	6.12 (5.65-6.65)	6.76 (6.24-7.34)	7.54 (6.91-8.18)	8.12 (7.40-8.82)	8.69 (7.87-9.44)	9.20 (8.28-10.0)	9.85 (8.78-10.8)	10.3 (9.13-11.3)
10-min	3.63 (3.37-3.94)	4.25 (3.94-4.63)	4.90 (4.53-5.32)	5.40 (4.99-5.87)	6.01 (5.51-6.53)	6.47 (5.90-7.02)	6.90 (6.26-7.50)	7.30 (6.56-7.95)	7.79 (6.94-8.52)	8.15 (7.19-8.93)
15-min	3.02 (2.80-3.28)	3.56 (3.30-3.88)	4.13 (3.82-4.49)	4.55 (4.20-4.95)	5.08 (4.66-5.52)	5.46 (4.98-5.92)	5.81 (5.27-6.32)	6.14 (5.52-6.69)	6.54 (5.82-7.15)	6.82 (6.02-7.48)
30-min	2.07 (1.92-2.25)	2.46 (2.28-2.68)	2.94 (2.71-3.19)	3.30 (3.05-3.59)	3.76 (3.45-4.08)	4.11 (3.75-4.46)	4.45 (4.04-4.84)	4.78 (4.30-5.20)	5.21 (4.64-5.69)	5.52 (4.87-6.05)
60-min	1.29 (1.20-1.40)	1.54 (1.43-1.68)	1.88 (1.74-2.04)	2.15 (1.98-2.33)	2.50 (2.30-2.72)	2.78 (2.54-3.02)	3.07 (2.78-3.33)	3.35 (3.02-3.65)	3.73 (3.32-4.08)	4.03 (3.56-4.42)
2-hr	0.760 (0.704-0.824)	0.905 (0.838-0.983)	1.10 (1.01-1.19)	1.25 (1.15-1.36)	1.46 (1.34-1.58)	1.63 (1.48-1.76)	1.80 (1.63-1.95)	1.97 (1.78-2.15)	2.21 (1.96-2.42)	2.40 (2.11-2.63)
3-hr	0.552 (0.511-0.600)	0.657 (0.608-0.715)	0.795 (0.735-0.865)	0.909 (0.837-0.988)	1.06 (0.974-1.15)	1.19 (1.08-1.29)	1.32 (1.19-1.43)	1.45 (1.30-1.58)	1.64 (1.45-1.79)	1.78 (1.56-1.95)
6-hr	0.333 (0.306-0.366)	0.396 (0.364-0.435)	0.479 (0.441-0.527)	0.550 (0.504-0.603)	0.649 (0.590-0.711)	0.730 (0.658-0.801)	0.816 (0.729-0.895)	0.905 (0.801-0.996)	1.03 (0.899-1.14)	1.13 (0.975-1.25)
12-hr	0.197 (0.182-0.216)	0.235 (0.216-0.257)	0.285 (0.262-0.311)	0.327 (0.299-0.357)	0.386 (0.351-0.421)	0.434 (0.392-0.473)	0.485 (0.434-0.530)	0.539 (0.477-0.589)	0.614 (0.535-0.674)	0.674 (0.581-0.744)
24-hr	0.119 (0.111-0.127)	0.142 (0.133-0.152)	0.173 (0.162-0.185)	0.198 (0.185-0.213)	0.234 (0.217-0.250)	0.262 (0.243-0.281)	0.292 (0.270-0.312)	0.323 (0.297-0.345)	0.366 (0.334-0.391)	0.400 (0.362-0.428)
2-day	0.071 (0.066-0.076)	0.085 (0.079-0.091)	0.104 (0.097-0.112)	0.120 (0.111-0.128)	0.142 (0.132-0.152)	0.160 (0.148-0.171)	0.179 (0.165-0.192)	0.200 (0.182-0.214)	0.228 (0.207-0.244)	0.251 (0.226-0.269)
3-day	0.050 (0.047-0.054)	0.060 (0.056-0.064)	0.073 (0.068-0.078)	0.084 (0.078-0.090)	0.099 (0.092-0.106)	0.111 (0.103-0.119)	0.124 (0.114-0.133)	0.137 (0.126-0.147)	0.156 (0.142-0.167)	0.171 (0.154-0.183)
4-day	0.039 (0.037-0.042)	0.047 (0.044-0.051)	0.058 (0.054-0.062)	0.066 (0.061-0.070)	0.077 (0.072-0.083)	0.087 (0.080-0.093)	0.096 (0.089-0.103)	0.106 (0.098-0.114)	0.120 (0.109-0.129)	0.131 (0.119-0.140)
7-day	0.027 (0.025-0.029)	0.032 (0.030-0.035)	0.040 (0.037-0.043)	0.046 (0.042-0.049)	0.054 (0.050-0.058)	0.061 (0.056-0.065)	0.068 (0.062-0.073)	0.075 (0.069-0.081)	0.086 (0.078-0.092)	0.095 (0.085-0.101)
10-day	0.022 (0.020-0.023)	0.026 (0.024-0.028)	0.031 (0.029-0.033)	0.036 (0.033-0.038)	0.042 (0.039-0.044)	0.046 (0.043-0.049)	0.051 (0.047-0.054)	0.056 (0.052-0.060)	0.063 (0.057-0.067)	0.068 (0.062-0.073)
20-day	0.014 (0.014-0.015)	0.017 (0.016-0.018)	0.020 (0.019-0.022)	0.023 (0.022-0.024)	0.026 (0.025-0.028)	0.029 (0.027-0.030)	0.031 (0.029-0.033)	0.034 (0.031-0.036)	0.037 (0.034-0.039)	0.039 (0.036-0.041)
30-day	0.012 (0.011-0.012)	0.014 (0.013-0.015)	0.016 (0.015-0.017)	0.018 (0.017-0.019)	0.021 (0.019-0.022)	0.023 (0.021-0.024)	0.024 (0.023-0.026)	0.026 (0.025-0.028)	0.029 (0.027-0.030)	0.030 (0.028-0.032)
45-day	0.010 (0.009-0.010)	0.011 (0.011-0.012)	0.013 (0.013-0.014)	0.015 (0.014-0.016)	0.016 (0.016-0.017)	0.018 (0.017-0.019)	0.019 (0.018-0.020)	0.020 (0.019-0.022)	0.022 (0.021-0.023)	0.023 (0.022-0.025)
60-day	0.009 (0.008-0.009)	0.010 (0.010-0.011)	0.012 (0.011-0.012)	0.013 (0.012-0.014)	0.014 (0.014-0.015)	0.016 (0.015-0.016)	0.017 (0.016-0.017)	0.018 (0.016-0.018)	0.019 (0.018-0.020)	0.019 (0.018-0.021)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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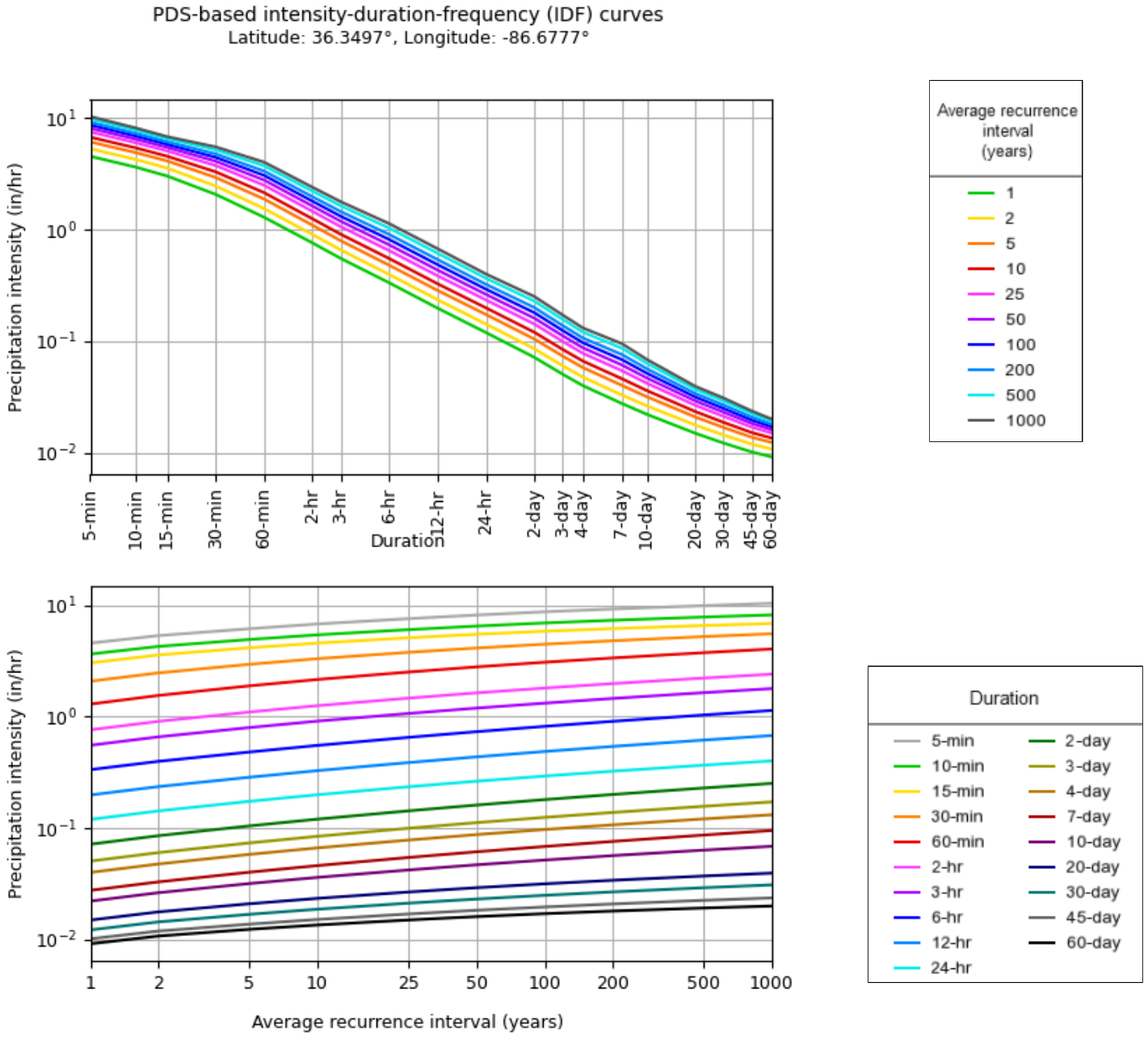
PF graphical



NOAA Atlas 14, Volume 2, Version 3

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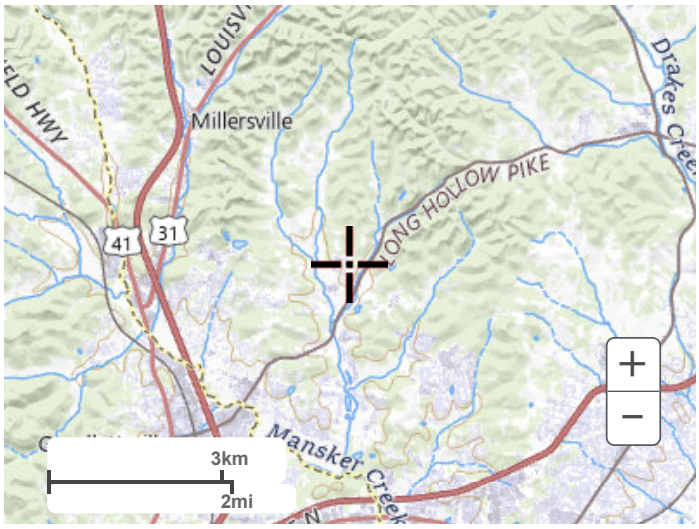
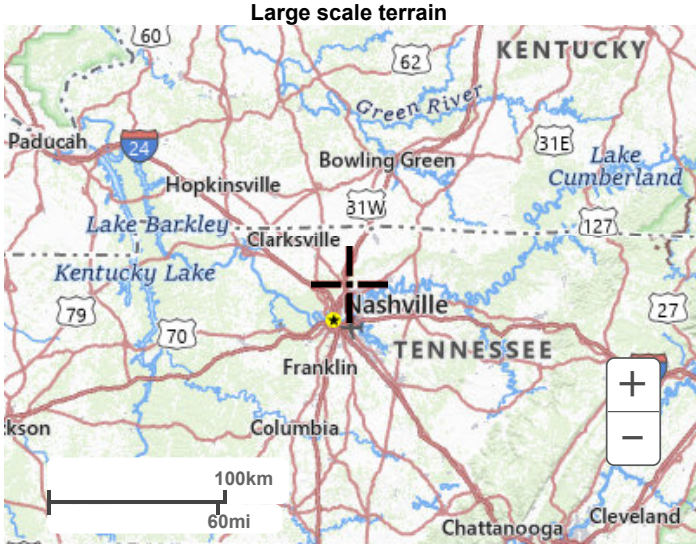
Maps & aerials

Small scale terrain



Large scale terrain



Large scale map

Large scale aerial

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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

Attachment 7

Vendor Supplied Calculations

Attachment 8

NJCAT Testing for Water Quality Unit

5 STORY
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HOTEL
CREAM

ADDRESS	622 RIVERGATE PARKWAY, 611, 645, & 647 WADE CIRCLE
EXISTING ZONING	COMMERCIAL SERVICES LIMITED (CSL) INTERCHANGE OVERLAY DISTRCIT
PROPOSED ZONING	REGIONAL CENTER PLANNED UNIT DEVELOPMENT (RC2 LOW INTENSITY)
SIZE	4.73 AC (TOTAL)

RIVERGATE PARKWAY MIXED-USE | site plan

GOODLETTSVILLE, TN | JUNE 2024

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SITE PLAN SUBMITTAL DOCUMENTS

LINDBERG AVENUE
INDUSTRIAL DEVELOPMENT

SITE DATA TABLE

SITE ADDRESS:	114 LINDBERG AVENUE GOODLETTSVILLE, TN 37072
OWNER:	RICHARDS AND SOUTHERN, INC
PARCEL ID:	01816004000, 01816004100, 01816004300, & 01816004400
SITE AREA:	+/- 1.59 ACRES (69,330 SF)
EXISTING IMPERVIOUS AREA: PROPOSED IMPERVIOUS AREA:	0.29 ACRES (12,542 SF) 0.37 ACRES (16,185 SF)
TOTAL DISTURBANCE:	+/- 0.35 ACRES (15,354 SF)
EXISTING ZONING:	CG - COMMERCIAL GENERAL CSL - COMMERCIAL SERVICES LIMITED
EXISTING USE: PROPOSED USE:	WAREHOUSE WAREHOUSE
MINIMUM LOT SIZE:	20,000 SF
MINIMUM LOT WIDTH:	100 FT
MAXIMUM LOT COVERAGE:	40%
MAXIMUM HEIGHT:	CG - 4 STORIES CSL - 5 STORIES
MAXIMUM FLOOR AREA RATIO:	CG - 2.00 CSL - 1.00

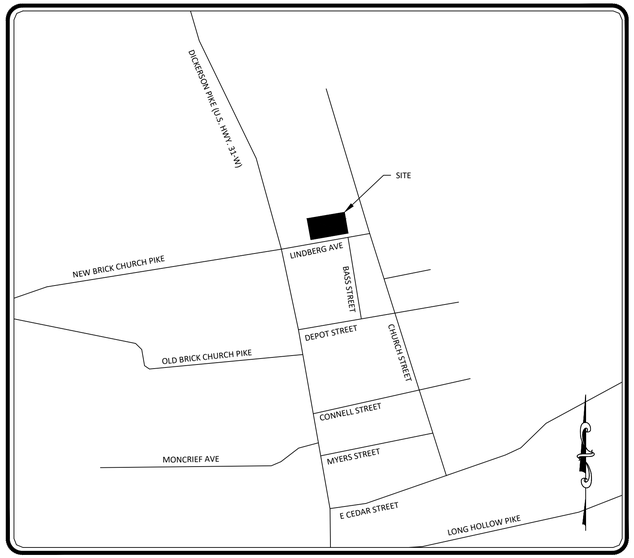
MINIMUM SETBACKS

	CSL	CG
FRONT:	40 FT	40 FT
REAR:	10 FT	30 FT
SIDE:	15 FT	10 FT

EXISTING BLDG AREA:	14,925 SF
PROPOSED ADDED BLDG AREA:	4,536 SF
PROPOSED TOTAL BLDG AREA:	19,461 SF
PARKING REQUIRED: INDUSTRIAL/WAREHOUSE:	1 SPACE / 1000 SF OF FLOOR AREA 20 SPACES (19,461 SF / 1000 SF)
PARKING PROVIDED:	53 SPACES

NOTES:

1. EXISTING SURVEY INFORMATION IS DERIVED FROM A BOUNDARY AND TOPOGRAPHIC SURVEY PROVIDED BY CAMPBELL, MCRAE, & ASSOCIATES SURVEYING, INC, DATED 12/03/2025.
2. NO PORTION OF THIS PROPERTY IS LOCATED IN A SPECIAL FLOOD AREA AS PER F.I.R.M. MAP NO. 47037C0129J, DATED 2/25/2022.



LOCATION MAP
NOT TO SCALE

CONTACTS

CONTACTS:

OWNER:

TERRY CALONGE
501 N MAIN STREET
GOODLETTSVILLE, TN 37072
615-859-4121
terry@richards-southern.com

CIVIL ENGINEER:

ERIC COX
615 DESIGN GROUP
1517 HUNT CLUB BLVD., SUITE 300
GALLATIN, TN 37066
615-829-6899
eric@615designgroup.com

SURVEYOR:

CAMPBELL, MCRAE, & ASSOCIATES SURVEYING, INC
P.O. BOX 41153
NASHVILLE, TN 37204
615-298-2424
cmas@att.net

UTILITY CONTACTS

SEWER:

GOODLETTSVILLE SEWER DEPARTMENT
105 S MAIN STREET
GOODLETTSVILLE, TN 37072
615-851-2200

WATER:

MADISON SUBURBAN UTILITY DISTRICT
721 MYATT DRIVE
MADISON, TN 37115
615-868-3201
info@msud.net

ELECTRIC:

NASHVILLE ELECTRIC SERVICE
1214 CHURCH STREET
NASHVILLE, TN 37246
615-736-6900

TELECOM:

AT&T: 800-288-2020
COMCAST: 615-244-5900

Sheet List Table

Sheet Number	Sheet Title
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C1.0	EXISTING CONDITIONS
C2.0	SITE PLAN
C3.0	EROSION CONTROL PLAN - INITIAL
C3.1	EROSION CONTROL PLAN - INTERMEDIATE
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L1.0	LANDSCAPE PLAN
A2.1	ELEVATIONS

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AGRICULTURE
COMMERCE
No. 132866
STATE OF TENNESSEE
05/21/2026

LINDBERG AVENUE
114 LINDBERG AVENUE
GOODLETTSVILLE, TN 37072

REVISIONS

NUMBER	DESCRIPTION	DATE

PROJECT #:	1098001
DESIGNED BY:	ERC
DRAWN BY:	ERC
DATE:	05/21/2026

COVER

C0.0

GENERAL NOTES:

1. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR:

   A. THE CONTRACTOR SHALL VERIFY ALL PROPOSED AND EXISTING CONDITIONS INCLUDING UTILITIES (INVERTS, CONNECTIONS, MATERIALS, ETC.) AND DIMENSIONS WITHIN THE LIMITS OF WORK PRIOR TO THE START OF CONSTRUCTION.

   B. THE LOCATION OF EXISTING UTILITIES, SUCH AS WATER, SEWER, GAS, ELECTRICAL, ETC., AS SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST AVAILABLE INFORMATION BY ACTUAL SURVEYS, OR TAKEN FROM THE RECORDS AND DRAWINGS OF THE EXISTING UTILITIES. HOWEVER, THE CIVIL ENGINEER DOES NOT ASSUME RESPONSIBILITY THAT, DURING CONSTRUCTION, THE POSSIBILITY OF UTILITIES OTHER THAN THOSE SHOWN MAY BE ENCOUNTERED OR THAT ACTUAL LOCATION OF THOSE SHOWN MAY VARY SOMEWHAT FROM THE LOCATION DESIGNATED ON THE PLANS. IN AREAS WHERE IT IS NECESSARY THAT THE EXACT LOCATION OF UNDERGROUND LINES BE KNOWN, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, FURNISH ALL LABOR AND TOOLS TO EITHER VERIFY OR ESTABLISH THE LOCATION OF THE UTILITY.

   C. REFER TO ARCHITECTURAL DRAWINGS FOR INFORMATION RELATED TO THE CONSTRUCTION OF THE PROPOSED BUILDINGS ONSITE.

   D. THE CONTRACTOR IS RESPONSIBLE FOR ALL NOTIFICATIONS AND LIAISONS WITH UTILITY COMPANIES DURING THE PROCESS OF LOCATING, RELOCATING, AND TYING INTO PUBLIC UTILITIES.

   E. PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS. THE LOCATION AND EXTENT OF ALL AUTHORIZED LAND DISTURBANCE SHALL OCCUR INSIDE THE APPROVED LIMITS INDICATED ON THE APPROVED PLANS.

   F. THE CONTRACTOR SHALL USE MATERIALS AND EMPLOY CONSTRUCTION METHODS IN ORDER TO COMPLY AND CONFORM TO THE PLANS, STANDARDS, SPECIFICATIONS, AND CODES OF THE GOVERNING MUNICIPALITIES. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION. WHERE A CONFLICT OCCURS, THE STRICTEST DESIGN SHALL GOVERN. THE ENGINEER'S REVIEW OF SHOP DRAWINGS, PRODUCT DATA, ETC., DOES NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE CONTRACT DOCUMENTS. IN CASE OF UNFORESEEN OR FORESEEN CONSTRUCTION DEVIATIONS AND/OR DISCREPANCIES THE CONTRACTOR IS TO IMMEDIATELY INFORM THE ENGINEER IN WRITING AND OBTAIN ENGINEER'S WRITTEN APPROVAL OF THE SPECIFIC DEVIATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVIATIONS FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT OF THE ENGINEER MAY CAUSE THE WORK TO BE UNACCEPTABLE.

   G. CONSTRUCTION SHALL MEET ALL CURRENT STANDARDS SET FORTH IN THE AMERICANS WITH DISABILITIES ACT (ADA).

   H. IF THE CONTRACTOR DAMAGES ANY EXISTING UTILITIES DURING CONSTRUCTION, HE SHALL, AT HIS OWN EXPENSE, REPLACE OR REPAIR THE UTILITIES TO ORIGINAL CONDITION AND QUALITY AS APPROVED BY THE OWNER AND REPRESENTATIVE OF THE APPROPRIATE UTILITY COMPANY.

   I. FIRE DEPARTMENT ACCESS SHALL BE MAINTAINED AT ALL TIMES.

   J. CONTRACTOR SHALL SHORE AND BRACE ALL EARTH, FORMS, CONCRETE, STEEL, WOOD, AND MASONRY TO RESIST GRAVITY, EARTH, WIND, THERMAL, CONSTRUCTION, AND MISCELLANEOUS LOADS DURING CONSTRUCTION.

   K. UNLESS OTHERWISE NOTED THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL FABRICATED MATERIALS TO THE ENGINEER. DESIGN DOCUMENTS SHALL NOT BE REPRODUCED AS SHOP DRAWINGS.

   L. AS-BUILT DRAWINGS OF ROADWAYS, STORM DRAINS, SANITARY SEWER AND WATER LINES, FIELD APPROVAL BY THE ENGINEER, AND ALL APPLICABLE BONDS ARE REQUIRED PRIOR TO FINAL ACCEPTANCE BY THE OWNER.

   M. CONTRACTOR SHALL MAINTAIN CONTINUOUS UTILITY SERVICE TO ALL EXISTING BUILDINGS THROUGHOUT CONSTRUCTION UNLESS APPROVAL FOR SERVICE INTERRUPTION IS OBTAINED FROM THE OWNERS IN ADVANCE.

   N. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS TO ENSURE THAT THE NEW WORK SHALL FIT INTO THE EXISTING SITE IN THE MANNER INTENDED AND AS SHOWN ON THE DRAWINGS. SHOULD ANY CONDITIONS EXIST THAT ARE CONTRARY TO THOSE SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE PRIOR TO PERFORMING ANY WORK IN THE AREA INVOLVING DIFFERENCES. NOTIFICATION SHALL BE IN THE FORM OF A DRAWING OR SKETCH INDICATING FIELD MEASUREMENTS AND NOTES RELATING TO THE AREA.

   O. ANY FOREIGN ITEM FOUND DURING CONSTRUCTION IS THE PROPERTY OF THE OWNER. THIS INCLUDES, BUT IS NOT LIMITED TO, PRECIOUS METALS, COINS, PAPER CURRENCY, ARTIFACTS AND ANTIQUITIES.

   P. THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN ALL NECESSARY TEMPORARY WORKS FOR THE PROTECTION OF THE WORK AND THE PUBLIC, INCLUDING BARRICADES, WARNING SIGNS, LIGHTS, ETC.

   Q. THE CONTRACTOR ACKNOWLEDGES & AGREES THAT THE WORK IS ENTIRELY AT HIS RISK UNTIL SITE IS ACCEPTED, AND HE WILL BE HELD RESPONSIBLE FOR ITS SAFETY BY THE OWNER. THE CONTRACTOR WILL INDEMNIFY THE OWNER & OWNER'S REPRESENTATIVE FROM LIABILITY AT THE SITE THROUGHOUT THE CONSTRUCTION PROCESS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO THE PREMISES OR ADJACENT PREMISES, OR INJURIES TO THE PUBLIC DURING THE CONSTRUCTION OF THE WORK, WHETHER CAUSED BY HIMSELF, HIS SUBCONTRACTORS, OR THE CARELESSNESS OF ANY OF HIS EMPLOYEES.

   R. THE CONTRACTOR SHALL COMPLY WITH ALL CITY, COUNTY AND STATE BUILDING LAWS, ORDINANCES OR REGULATIONS RELATING TO BUILDING SIDEWALKS, STREETS, BLASTING, PUBLIC INFRASTRUCTURE, STORMWATER REGULATIONS, ETC.

   S. THE CONTRACTOR IS TO CHECK AND VERIFY ALL MEASUREMENTS, LEVELS, ETC. BEFORE ORDERING MATERIALS AND PROCEEDING WITH THE WORK, AND IS TO BE RESPONSIBLE FOR THE SAME.

   T. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE DAMAGE OR LOSS OF ANY REFERENCE POINTS AND HUBS DURING THE CONSTRUCTION OF HIS WORK, AND SHALL BEAR THE COST OF REPLACING SAME.

   U. CARE SHALL BE TAKEN TO PROTECT ANY UTILITIES, TREES, ETC. WHICH ARE TO REMAIN AND NOT TO BE DISTURBED BY THE CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO SUCH PROPERTY.

   V. NOTHING IN THE GENERAL NOTES OR PLANS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS AT OR ALONG THE PROPOSED CONSTRUCTION AREA. THE CONTRACTOR WILL INDEMNIFY THE OWNER & OWNER'S REPRESENTATIVE FROM LIABILITY AT THE SITE THROUGHOUT THE CONSTRUCTION PROCESS.

DEMOLITION AND CLEARING INFORMATION:

1. NOTIFICATIONS:

   A. THE CONTRACTOR SHALL NOTIFY THE OWNER AND CITY INSPECTOR(S) 24 HOURS PRIOR TO ANY DEMOLITION OR CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.

   B. THE CONTRACTOR SHALL FIELD VERIFY THE LIMITS OF DEMOLITION WITH THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK.

   C. THE CONTRACTOR SHALL CONFORM TO LOCAL CODES, OBTAIN ALL PERMITS AND GIVE ALL NOTICES REQUIRED FOR EXECUTION OF THE WORK.

2. DISPOSAL GUIDELINES:

   A. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S. THESE MATERIALS SHALL BE REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFFSITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES. AFTER USE, MATERIALS USED FOR EPSC SHALL BE REMOVED FROM THE SITE.

   B. ONLY ITEMS SPECIFICALLY NOTED TO BE DEMOLISHED SHALL BE REMOVED FROM THE SITE.

   C. REMOVE EXISTING PAVED AREAS AS SHOWN INCLUDING DRIVEWAYS, SIDEWALKS, PARKING AREAS, SERVICE AREAS, EQUIPMENT PADS, AND ALL MISCELLANEOUS PAVING.

   D. ALL DEBRIS RESULTING FROM DEMOLITION SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY BY THE CONTRACTOR IN ACCORDANCE WITH LOCAL STATE AND FEDERAL REGULATIONS. BACKFILL ALL TRENCHES AND EXCAVATIONS RESULTING FROM DEMOLITION.

   E. ALL DEMOLISHED MATERIAL BECOMES THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE NOTED.

3. TREE PROTECTION GUIDELINES:

   A. PROTECT ALL EXISTING TREES NOTED "TO REMAIN" AND ALL ITEMS TO BE TURNED OVER TO THE OWNER DURING DEMOLITION. TAKE ALL NECESSARY PRECAUTIONS AND PROTECTIVE MEASURES. ANY EXISTING ITEMS TO BE TURNED OVER TO THE OWNER WHICH ARE DAMAGED DURING DEMOLITION SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. TREES WHICH ARE DAMAGED WILL BE REPLACED OR REIMBURSED AT A RATE TO BE DETERMINED BY THE OWNER.

4. UTILITIES:

   A. PRIOR TO REMOVING OR ABANDONING ANY UTILITY THE CONTRACTOR SHALL VERIFY THAT NO UPSTREAM SERVICE WILL BE TERMINATED. THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF ANY TERMINATION NOT SHOWN ON THE PLANS.

   B. ALL ABANDONED WATER LINES, STORM SEWER PIPE, SANITARY SEWER PIPES, GAS LINES, OR ANY OTHER ABANDONED UNDERGROUND UTILITY SHALL BE ABANDONED IN PLACE UNLESS NOTED OTHERWISE.

5. CLEARING AND GRUBBING:

   A. DO NOT EXCEED CLEARING AND GRUBBING LIMITS OF CONSTRUCTION LINES INDICATED ON THE PLANS.

   B. ALL AREAS OUTSIDE THE LIMITS OF CONSTRUCTION LINE SHALL NOT BE CROSSED BY HEAVY EQUIPMENT OR USED FOR STORING HEAVY EQUIPMENT OR MATERIALS.

   C. NO EQUIPMENT SHALL BE STORED UNDER THE DRIP LINE OF TREES TO REMAIN.

   D. DO NOT FALL ANY TREES OR PUSH PILES OF DEBRIS AGAINST ANY TREES TO REMAIN.

   E. REMOVE ALL STUMPS, ROCKS, ASPHALT & CONCRETE DEBRIS, ETC. AND DISPOSE OFF SITE IN ACCORDANCE WITH LOCAL, STATE & FEDERAL REGULATIONS.

   F. CONTACT ALL UTILITY AUTHORITIES WHO HAVE LINES WITHIN THE CLEARING AND GRUBBING LIMITS BEFORE STARTING WORK.

   E. ALL EROSION CONTROL SEDIMENT BARRIERS, SILT FENCES, AND TREE PROTECTION DEVICES SHALL BE INSTALLED PRIOR TO STARTING CLEARING AND GRUBBING.

   F. AFTER STAKING IS COMPLETED, TREES WITHIN GRADING LIMITS TO BE SAVED WILL BE IDENTIFIED BY THE OWNER'S REPRESENTATIVE. FIELD CHANGES TO GRADING PLANS SHALL BE MADE FOR SMOOTH TRANSITION OF GRADES AROUND ALL TREES WHICH REQUITE TREE WELLS WITHIN THE GRADING LIMITS.

   G. ALL CLEARING SHALL BE LIMITED TO AREAS TO BE GRADED WITHIN 15 CALENDAR DAYS.

SITE INFORMATION:

1. THE FOLLOWING ARE APPLICABLE TO ALL CIVIL DOCUMENTS:

   A. WHERE A DETAIL SECTION, TYPICAL SECTION, OR A NOTE IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL LIKE OR SIMILAR CONDITIONS, UNLESS OTHERWISE NOTED ON THE PLANS.

   B. EXISTING AND PROPOSED CONTOURS ARE AT ONE (2) FOOT INTERVALS UNLESS OTHERWISE NOTED.

   C. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

   D. ALL PIPE LENGTHS SPECIFIED IN THESE PLANS ARE THE HORIZONTAL DISTANCE AND ARE SHOWN FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE ACTUAL LENGTHS BASED ON PROPOSED PIPE SLOPE.

   E. PIPE LENGTHS IN PLANS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.

   F. HANDICAP RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1:12

   G. IN THE EVENT OF ANY DISCREPANCIES AND/OR ERRORS FOUND IN THE DRAWING, OR IF PROBLEMS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

EROSION AND SEDIMENT CONTROL INFORMATION:

   A. THE CONTRACTOR IS RESPONSIBLE FOR MAKING SURE THAT A COPY OF THE SWPPP IS RETAINED ON-SITE AT OR NEAR THE CONSTRUCTION ENTRANCE. IF A CONSTRUCTION TRAILER IN NOT AVAILABLE, THE CONTRACTOR SHALL PROVIDE A WATERPROOF ENCLOSURE NEAR THE CONSTRUCTION ENTRANCE TO PLACE THE SWPPP. IN ADDITION TO THE SWPPP, THE CONTRACTOR SHALL MAKE CERTAIN THAT THE FOLLOWING INFORMATION MUST ALSO BE POSTED AT THE CONSTRUCTION SITE (IN A CONSTRUCTION TRAILER OR IN THE WATERPROOF ENCLOSURE):
      A) A COPY OF THE NOTICE OF COVERAGE (NOC) WITH THE NPDES PERMIT TRACKING NUMBER FOR THE CONSTRUCTION PROJECT NUMBER
      B) NAME, COMPANY NAME, EMAIL ADDRESS, TELEPHONE NUMBER AND ADDRESS OF THE PROJECT SITE OWNER OR A LOCAL CONTACT PERSON
      C) A BRIEF DESCRIPTION OF THE PROJECT
      D) THE LOCATION OF THE SWPPP IF AN ON-SITE LOCATION FOR STORING THE PLAN IS NOT AVAILABLE.

   B. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL MEASURES SPECIFIED IN THE EROSION CONTROL PLANS OR REQUIRED BY THE RESPECTIVE MUNICIPALITY THAT THE PROJECT IS LOCATED. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO LAND DISTURBANCE.

   C. PROVISIONS TO PREVENT EROSION OF SOIL FROM THE SITE SHALL BE AT A MINIMUM IN CONFORMANCE WITH THE REQUIREMENTS OF THE TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOKS. EROSION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

   D. FAILURE TO INSTALL, OPERATE, OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE STANDARDS SPECIFIED IN THE TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOKS, CURRENT EDITION.

   E. CONSTRUCTION EXITS SHALL BE CONSTRUCTED AT EACH POINT OF ENTRY OR EXIT FROM THE SITE AND SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY.

GRADING INFORMATION:

   A. THE CONTRACTOR SHALL CALL "TENNESSEE ONE CALL" (811) 72 HOURS PRIOR TO PROCEEDING WITH ANY EXCAVATION.

   B. ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR BY HIS EXPENSE.

   C. THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF STATE-OWNED RIGHT-OF-WAY IN A REGULATORY FLOOD WAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) WITHOUT APPROVAL BY FEMA. ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THE DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL, STATE, OR LOCAL AGENCY.

   D. TOPSOIL SHALL BE STORED ON SITE IN LOCATIONS APPROVED BY THE OWNER'S REPRESENTATIVE. STOCKPILED TOPSOIL OR FILL MATERIAL SHALL BE TREATED SO NO SEDIMENT RUN-OFF WILL CONTAMINATE SURROUNDING AREAS OR ENTER NEARBY STREAMS.

   E. UNSUITABLE SOILS SHALL BE UNIFORMLY SPREAD ACROSS NON-STRUCTURAL FILL AREAS AND COVERED WITH TOPSOIL AND SEEDED.

   F. FILL AREA SHALL BE PROOF-ROLLED WITH RUBBER-TIRED EQUIPMENT WITH A MINIMUM WEIGHT OF FIFTEEN TONS PRIOR TO BEGINNING FILL OPERATION. AREAS WHICH ARE SOFT OR UNSTABLE SHALL BE UNDERCUT UNTIL STABLE SOILS ARE FOUND. RE-COMPACTION OF THESE SOILS SHALL BE TO 98% MAXIMUM DRY DENSITY AS PER ASTM D698 (STANDARD PROCTOR).

   G. CUT AREA SHALL BE PROOF-ROLLED AFTER FINAL SUBGRADE IS ACHIEVED IN THE SAME MANNER AS FILLED AREAS. SOFT OR UNSTABLE SOILS SHALL BE SCARIFIED TO A DEPTH OF 12" AND RE-COMPACTED TO THE RECOMMENDATIONS PROVIDED BY THE GEOTECHNICAL ENGINEER.

   H. ALL GRADING SHALL BE COMPLETED TO THE LEVEL INDICATED BY THE SCOPE OF WORK LISTED IN THE BID DOCUMENTS.

   I. ELEVATIONS SHOWN ON THE PLANS IS THE FINISH GRADE ELEVATION.

   J. GRADING SHALL BE SEQUENCED SO THAT BASE STONE IS PLACED WITHIN 10 CALENDAR DAYS PF ACHIEVING OPTIMUM SUBGRADE COMPACTION.

   K. CONTRACTOR TO EMPLOY A QUALIFIED SOILS TESTING LABORATORY/ ENGINEER TO OBSERVE AN REQUIRED SOILS TESTING AND MAKE TESTS AS REQUIRED.

   L. HAVE EARTH BORROW FILL, AGGREGATE, AND TOPSOIL, AND STRUCTURAL FILL TESTED AND APPROVED BY DESIGNATED TESTING LABORATORY BEFORE MOVING IT TO THE JOB SITE.

   M. CONTRACTOR SHALL OBSERVE PROOF-ROLLING OF AREAS WHERE BUILDING AND PAVING WILL BE LOCATED TO DETERMINE ADEQUACY OF SOIL COMPACTION AND IN-PLACE SOILS. OTHER AREAS WILL BE INSPECTED BY SOILS ENGINEER TO DETERMINE ADEQUACY IN THOSE AREAS. IF SOILS ARE NOT ADEQUATE TO BEAR WEIGHTS THAT WILL BE IMPOSED, TESTING LABORATORY WILL OBSERVE AND REPORT CORRECTIVE ACTION TAKEN.

   N. TEST IN-PLACE SOIL AND FILLED AND COMPACTED AREAS. IF THESE ARE NOT ADEQUATE TO BEAR WEIGHTS IMPOSED, TESTING LABORATORY WILL ADVICE THE OWNER'S REPRESENTATIVE OF THEIR RECOMMENDATIONS. HE WILL DIRECT ANY CORRECTIVE MEASURES THAT ARE NECESSARY.

   O. SOILS COMPACTION TESTING OF IN-PLACE AND FILLED AND COMPACTED AREAS WILL BE PERFORMED BY TESTING LABORATORY IN ACCORDANCE WITH THEIR REQUIREMENTS.

   P. THE SOILS ENGINEER'S AND TESTING LABORATORY'S FEES WILL BE PAID BY THE CONTRACTOR.

   Q. APPLICABLE SPECIFICATIONS FOR COMPACTED FILL: THE FOLLOWING CURRENT AMERICAN SOCIETY OF TESTING MATERIALS (ASTM) STANDARDS ARE HEREBY MADE PART OF THIS SPECIFICATION:

   - D421-58, DRY PREPARATION OF SOIL SAMPLES FOR GRAIN-SIZE ANALYSIS AND DETERMINATION OF SOIL CONSTANTS.
   - D422-63, STANDARD METHOD OF PARTICLE SIZE ANALYSIS OF SOILS.
   - D1140-54, METHOD OF TEST FOR AMOUNT OF MATERIAL IN SOILS FINER THAN NO.200 SIEVE.
   - D698, METHOD FOR LABORATORY COMPACTION CHARACTERISTICS OF SOIL USING STANDARD EFFORT
   - D1557-78, STANDARD TEST METHODS FOR MOISTURE-DENSITY RELATIONS OF SOILS AND SOIL-AGGREGATE MIXTURES USING 10 LB. (4.54-KG) RAMMER AND 18-INCH (457 MM) DROP.

   O. PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS AT ALL LOCATIONS UNLESS OTHERWISE NOTED.

   P. CONTRACTOR SHALL REVIEW THE SITE SPECIFIC GEOTECHNICAL REPORT PRIOR TO COMMENCING WITH GRADING OPERATIONS. WHERE CONFLICTS BETWEEN THE GRADING NOTES AND GEOTECHNICAL REPORT EXIST, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

   Q. CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING WITH LOAD TICKETS, PHOTOGRAPHS, LOG BOOK, VIDEO RECORDING AND OTHER MEANS AS NECESSARY TO VERIFY THE INSTALLATION OF STORMWATER BEST MANAGEMENT PRACTICES REQUIRED BY THE LOCAL MUNICIPALITY AND JURISDICTION. AS-BUILT TOPOGRAPHY AND UTILITY PLANS HAVING BEEN PREPARED BY A QUALIFIED LAND SURVEYOR ARE REQUIRED TO BE SUBMITTED TO THE CIVIL ENGINEER AT THE CONCLUSION OF THE PROJECT FOR VERIFICATION OF DESIGN INTENT. ANY MODIFICATIONS TO THE GRADING AND UTILITY SYSTEMS REQUIRED, NOT PREVIOUSLY APPROVED BY THE OWNER AND ENGINEER ARE THE RESPONSIBILITY OF THE CONTRACTOR.

STORM INFORMATION:

1. REINFORCED CONCRETE PIPE SHALL BE RCP CLASS III UNLESS OTHERWISE NOTED WITH BELL-AND-SPIGOT AND GASKETED JOINTS WITH ASTM C 443 RUBBER GASKETS. FILL HEIGHTS OVER 13 FEET SHALL REQUIRE CLASS IV RCP STORM PIPE.

2. STORM INLETS SHALL BE PRECAST IN ACCORDANCE WITH CITY OF GOODLETTSVILLE SPECIFICATIONS WHICH MEET OR EXCEED ASTM C 478.

3. ALL MANHOLE FRAMES AND COVERS ARE TO BE PER CITY OF GOODLETTSVILLE STANDARD DETAIL FOR DIMENSIONS AND MATERIALS AND AS BELOW IF NOT OTHERWISE INDICATED. FERROUS; 24-INCH (610-MM) ID BY 7- TO 9-INCH (175- TO 225-MM) RISER WITH 4-INCH- (102-MM-) MINIMUM WIDTH FLANGE AND 26-INCH- (660-MM-) DIAMETER COVER. INCLUDE INDENTED TOP DESIGN WITH LETTERING CAST INTO COVER, USING WORDING EQUIVALENT TO "STORM SEWER."

4. MATERIAL: GRAY IRON ASTM A48 CLASS 30 UNLESS OTHERWISE INDICATED.

5. ALL HDPE PIPE SHALL BE CORRUGATED HIGH DENSITY POLYETHYLENE SMOOTH INTERIOR PIPE. HDPE PIPE SHALL CONFORM TO ASTM D3350 WITH SOIL TIGHT JOINTS.

6. ALL HDPE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND AASHTO SECTION 30.

7. CONTRACTOR TO PROVIDE AND INSTALL MANUFACTURER RECOMMENDED FITTINGS ON RCP CONNECTIONS TO HDPE STRUCTURES.

8. REFER TO PIPE CHART FOR CASTING TYPES. INSTALL REDUCERS AS NECESSARY PER MANUFACTURER'S SPECIFICATIONS TO ACCOMMODATE LARGER INLET SIZES.

9. FOLLOW CONSTRUCTION PLANS AND MANUFACTURER DETAILS, SPECIFICATIONS, AND INSTALLATION INSTRUCTION AS INCLUDED WITHIN THE PLANS AND PROVIDED BY MANUFACTURER FOR THE INSTALLATION OF WATER QUALITY AND DETENTION SYSTEMS.

10. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL STORM SEWER PIPE, STRUCTURES, WATER QUALITY STRUCTURES, AND DETENTION STRUCTURES FOR ENGINEER AND OWNER APPROVAL PRIOR TO ORDERING MATERIALS.

11. WHERE A CULVERT (PIPE, SLAB, OR BOX) IS MOVED TO A NEW LOCATION OTHER THAN THAT SHOWN ON THE PLANS, INCREASING OR DECREASING THE AMOUNT OF CULVERT EXCAVATION WILL NOT RESULT IN AN INCREASE OR DECREASE IN THE AMOUNT OF PAYMENT THAT WILL BE MADE DUE TO SUCH CHANGE.

PAVEMENT INFORMATION:

1. PAVEMENT:

   A. ALL MATERIALS, EQUIPMENT, METHODS OF CONSTRUCTION, AND WORKMANSHIP SHALL CONFORM TO THE TENNESSEE DEPARTMENT OF TRANSPORTATION, TDOT, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.

   B. SEE PAVEMENT DETAILS ON CONSTRUCTION DOCUMENTS FOR SPECIFIC DESIGN INFORMATION AND REQUIREMENTS.

   C. ALL CURB AND GUTTER TO BE 24" AND CONSTRUCTED OF 3000 P.S.I. CONCRETE UNLESS OTHERWISE NOTED.

   D. THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND/OR PAVE IN THE DIRECTION OF TRAFFIC.

   E. THE CONTRACTOR SHALL ATTACH A DEVICE TO THE SCREED OF THE PAVER SUCH THAT MATERIAL IS CONFINED AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A CONSOLIDATED WEDGE-SHAPE PAVEMENT EDGE OF APPROXIMATELY 25 TO 30 DEGREES AS IT LEAVES THE PAVER (MEASURED FROM A LINE PARALLELL TO THE PAVEMENT SURFACE.) THE DEVICE SHALL MEET THE REQUIREMENTS THAT ARE CURRENTLY SET FORTH IN SPECIAL PROVISION 407SE.

2. SIGNING AND STRIPING:

   A. SIGNING AND STRIPING TO BE PROVIDED BY THE CONTRACTOR ACCORDING TO THE DRAWINGS AND SPECIFICATIONS.

   B. ALL PAVEMENT MARKINGS SHALL CONFORM TO CURRENT MUTCD STANDARDS. ALL PAVEMENT MARKINGS ON PRIVATE PROPERTY SHALL BE PAINT, UNLESS NOTED OTHERWISE. ALL PAVEMENT MARKINGS ON PUBLIC RIGHT-OF-WAY SHALL BE PREFORMED PLASTIC OR THERMOPLASTIC, UNLESS NOTED OTHERWISE.

TRAFFIC CONTROL:

   A. SUFFICIENT BARRICADES, LIGHTS, SIGNS, AND OTHER TRAFFIC CONTROL METHODS IN ACCORDANCE WITH GOVERNING ORDINANCES MAY BE NECESSARY FOR THE PROTECTION AND SAFETY OF THE PUBLIC. SAID CONTROL DEVICES SHALL BE PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CURRENT EDITION, AND SHALL BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION.

   B. TRAFFIC CONTROLS AND OTHER WARNING DEVICES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY WORK ON CITY, COUNTY, OR TENNESSEE DEPARTMENT OF TRANSPORTATION ROADS. THEY SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL THE CONCLUSION OF ALL WORK. CONTRACTOR TO COORDINATE ANY (ROAD CLOSURE, LANE CLOSURE) WITH LOCAL CITY, POLICE, AND FIRE DEPARTMENT IN ADVANCE MINIMUM 7 DAY NOTICE.

   C. ALL WARNING DEVICES SHALL BE EITHER TYPE I BARRICADES OR DRUMS WITH WARNING LIGHTS ON EVERY OTHER DEVICE. THEY SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CURRENT EDITION, AND CITY OF GOODLETTSVILLE FOR COLOR, SIZE, REFLECTIVITY, HEIGHT, AND PLACEMENT.

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No. 132886
COMMERCE
STATE OF TENNESSEE
PRELIMINARY
05/21/2026

LINDBERG AVENUE
114 LINDBERG AVENUE
GOODLETTSVILLE, TN 37072

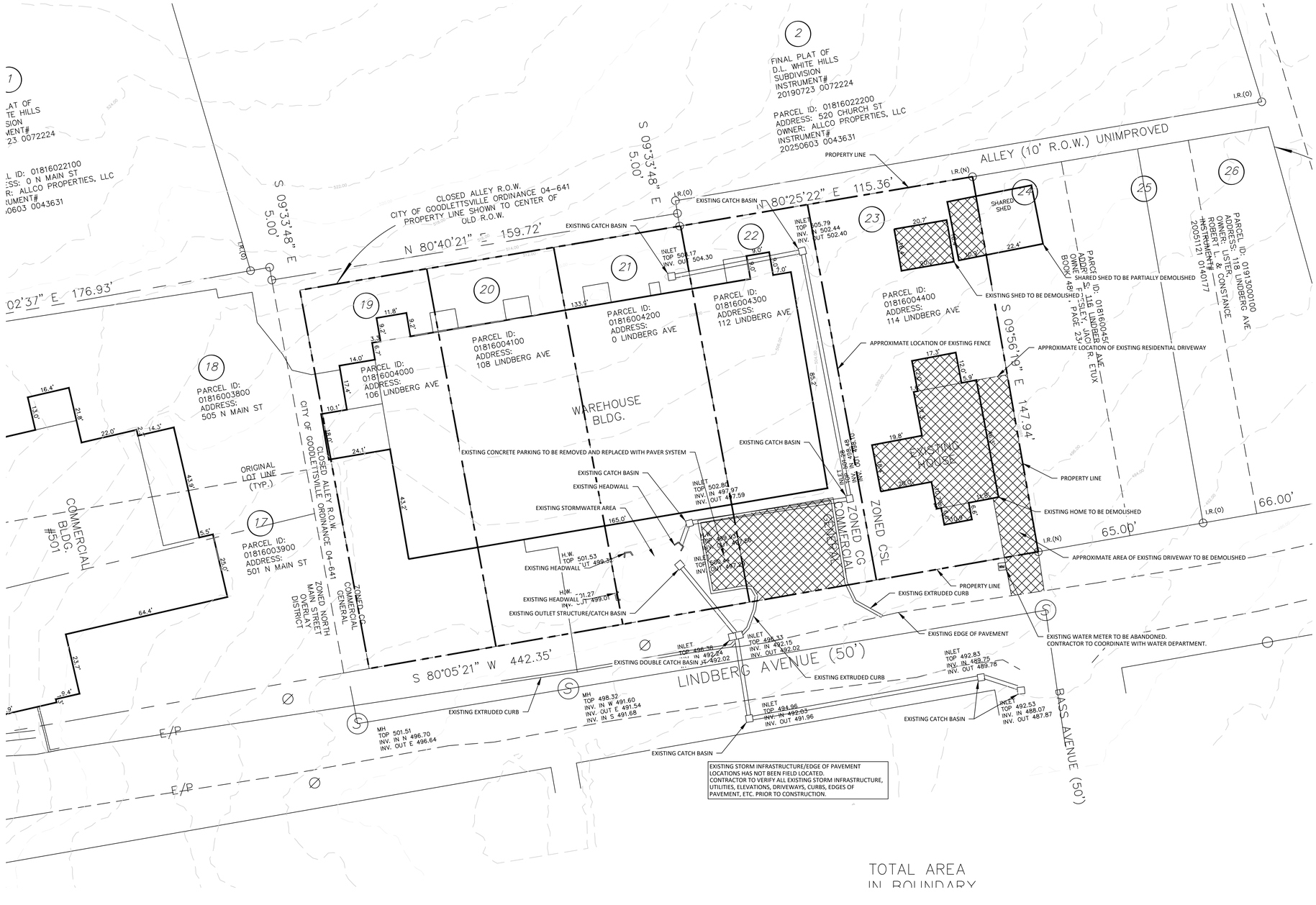
REVISIONS

NUMBER	DESCRIPTION	DATE

PROJECT #:	1098001
DESIGNED BY:	ERC
DRAWN BY:	ERC
DATE:	05/21/2026

GENERAL NOTES

C0.1



EXISTING CONDITIONS NOTES

1. EXISTING SURVEY INFORMATION IS DERIVED FROM A BOUNDARY AND TOPOGRAPHIC SURVEY PROVIDED BY CAMBELL, MCRAE, AND ASSOCIATES, INC., DATED 3/10/2022.
2. ALL EXISTING STRUCTURES TO BE DEMOLISHED UNLESS OTHERWISE NOTED.
3. PRIOR TO THE START OF DEMOLITION / GRADING OPERATIONS, ALL OVERHEAD AND UNDERGROUND UTILITIES SHALL BE LOCATED. ALL REMOVAL AND / OR RELOCATION OF UTILITIES SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY COMPANIES.
4. THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT.

EXISTING UTILITIES NOTE

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

EXISTING UTILITIES NOTE

- DEMOLISH STRUCTURE
- DEMOLISH PAVEMENT / GRAVEL
- DEMOLISH LINEAR OBJECT
- DEMOLISH OBJECT

HORIZONTAL DATUM: NAD83
VERTICAL DATUM: NAVD88

0 20 40 Feet

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05/21/2026

LINDBERG AVENUE
114 LINDBERG AVENUE
GOODLETTSVILLE, TN 37072

REVISIONS

NUMBER	DESCRIPTION	DATE

PROJECT #:	1098001
DESIGNED BY:	ERC
DRAWN BY:	ERC
DATE:	05/21/2026

EXISTING CONDITIONS

C1.0

PAVEMENT CROSS-SECTIONS

PAVEMENT SCHEDULE (HEAVY DUTY)		PAVEMENT SCHEDULE (LIGHT DUTY)	
2" 411-E MIX		1.5" 411-E MIX	
3" 307 BM MIX		2" 307 BM MIX	
8" MINERAL AGGREGATE		6" MINERAL AGGREGATE	

SITE DATA TABLE

SITE ADDRESS:	114 LINDBERG AVENUE GOODLETTSVILLE, TN 37072
OWNER:	RICHARDS AND SOUTHERN, INC
PARCEL ID:	01816004000, 01816004100, 01816004300, & 01816004400
SITE AREA:	+/- 1.59 ACRES (69,330 SF)
EXISTING IMPERVIOUS AREA: PROPOSED IMPERVIOUS AREA:	0.29 ACRES (12,542 SF) 0.37 ACRES (16,185 SF)
TOTAL DISTURBANCE:	+/- 0.35 ACRES (15,354 SF)
EXISTING ZONING:	CG - COMMERCIAL GENERAL CSL - COMMERCIAL SERVICES LIMITED
EXISTING USE: PROPOSED USE:	WAREHOUSE WAREHOUSE
MINIMUM LOT SIZE:	20,000 SF
MINIMUM LOT WIDTH:	100 FT
MAXIMUM LOT COVERAGE:	40%
MAXIMUM HEIGHT:	CG - 4 STORIES CSL - 5 STORIES
MAXIMUM FLOOR AREA RATIO:	CG - 2.00 CSL - 1.00

MINIMUM SETBACKS

	CSL	CG
FRONT:	40 FT	40 FT
REAR:	10 FT	30 FT
SIDE:	15 FT	10 FT

EXISTING BLDG AREA:	14,925 SF
PROPOSED ADDED BLDG AREA:	4,536 SF
PROPOSED TOTAL BLDG AREA:	19,461 SF
PARKING REQUIRED: INDUSTRIAL/WAREHOUSE:	1 SPACE / 1000 SF OF FLOOR AREA 20 SPACES (19,461 SF / 1000 SF)
PARKING PROVIDED:	53 SPACES

NOTES:

1. EXISTING SURVEY INFORMATION IS DERIVED FROM A BOUNDARY AND TOPOGRAPHIC SURVEY PROVIDED BY CAMPBELL, MCRAE, & ASSOCIATES SURVEYING, INC, DATED 12/03/2025.
2. NO PORTION OF THIS PROPERTY IS LOCATED IN A SPECIAL FLOOD AREA AS PER F.I.R.M. MAP NO. 47037C0129J, DATED 2/25/2022.

PAVEMENT LEGEND

- PROPOSED CONCRETE
- PROPOSED HEAVY DUTY ASPHALT
- PROPOSED LIGHT DUTY ASPHALT

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05/21/2026

LINDBERG AVENUE
114 LINDBERG AVENUE
GOODLETTSVILLE, TN 37072

REVISIONS	DESCRIPTION	DATE
NUMBER		

PROJECT #:	1098001
DESIGNED BY:	ERC
DRAWN BY:	ERC
DATE:	05/21/2026

SITE PLAN

C2.0

EROSION CONTROL LEGEND

LOD	LIMIT OF DISTURBANCE
SF	SILT FENCE
TP	TREE PROTECTION
>	DIVERSION DITCH
	EROSION EEL
	OUTLET PROTECTION
CW	CONCRETE WASHOUT
	INLET PROTECTION
	EROSION CONTROL BLANKET

EROSION CONTROL NOTES

1. EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO CONSTRUCTION AND MUST BE MAINTAINED THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS.
2. ALL CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED ACCORDING TO LOCAL STANDARDS.
3. TEMPORARY CONSTRUCTION ACCESS MUST BE PROVIDED AT ALL POINTS WHERE CONSTRUCTION VEHICLES EXIT THE CONSTRUCTION AREA. CONTRACTOR TO MAINTAIN ALL PUBLIC ROADWAYS AND KEEP FREE FROM TRACKED MUD AND DIRT.
4. CONTRACTOR NOT TO DISTURB VEGETATION EXCEPT WHEN NECESSARY FOR GRADING PURPOSES.
5. WHERE VEGETATION COVER IS USED AS A CONTROL MEASURE, THE PLANTING OF THE VEGETATION COVER DURING WINTER OR DRY MONTHS SHOULD BE AVOIDED.
6. CONSTRUCTION DEBRIS EXPOSED TO STORM WATER SHALL BE PICKED UP PRIOR TO ANTICIPATED STORM EVENTS AND PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.
7. BMP CONTROLS SHALL BE INSPECTED AT LEAST TWICE PER CALENDAR WEEK AND SHALL BE PERFORMED AT LEAST 72 HOURS APART. ANY INADEQUATE CONTROL MEASURE THAT IS NOT FUNCTIONING CORRECTLY SHALL BE REPLACED OR REPAIRED PRIOR TO THE NEXT RAIN EVENT AND IN NO CASE MORE THAN 7 DAYS AFTER THE NEED FOR REPAIR OR REPLACEMENT IS IDENTIFIED.
8. MULCH AND SEED ALL DISTURBED AREAS WITHIN 14 DAYS FROM WHEN FINAL GRADING IS COMPLETED. STEEP SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITHIN 7 DAYS AFTER FINAL GRADING IS COMPLETED.
9. CONTRACTOR TO MAINTAIN PUBLIC ROADWAYS AND KEEP THEM CLEAR OF TRACKED MUD AND DIRT.
10. THE EROSION CONTROL MEASURES FOR THIS SITE WERE DESIGNED TO HANDLE A 5-YEAR STORM EVENT.
11. CONTRACTOR SHALL PROVIDE AN AREA FOR CONCRETE WASH DOWN AND EQUIPMENT FUELING. CONTRACTOR TO COORDINATE EXACT LOCATION WITH NPDES DEPARMENT DURING PRE-CONSTRUCTION MEETING. CONTROL OF OTHER SITE WASTES SUCH AS DISCARDED BUILDING MATERIALS, CHEMICALS, LITTER, AND SANITARY WASTES THAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY IS ALSO REQUIRED BY THE GRADING PERMITTEE.
12. EROSION AND SEDIMENT CONTROL MUST BE IN PLACE AND INSPECTED BY THE ENGINEERING DIVISION PRIOR TO BEGINNING GRADING.
13. INSPECTION AND MAINTENANCE AND EROSION CONTROL DEVICES WILL BE PERFORMED ON A REGULAR BASIS AND AFTER EACH STORM EVENT.
14. ADDITIONAL EPSC MEASURES SUCH AS SILT FENCES, SWALES, AND/OR DIVERSION DITCHES MAY BE REQUIRED AS FIELD CHANGES AT THE REQUEST OF THE CITY OF GOODLETTSVILLE STORMWATER TECHNICIAN.
15. THE CITY OF GOODLETTSVILLE SHALL BE NOTIFIED AND COPIED ON ALL SITE ASSESSMENTS, NOTIFICATION FROM TDEC, AND ANY CORRECTIVE ACTIONS OR INSPECTIONS REQUIRED.
16. A SITE ASSESSMENT AT EACH OUTFALL IS REQUIRED PER TDEC CGP SECTION 5.5.3.8. THIS SITE ASSESSMENT IS A DOCUMENTED SITE INSPECTION CONDUCTED BY A QUALIFIED INDIVIDUAL (LICENSED PE OR LA, CPESC, OR LEVEL II EPSC DESIGN CERTIFIED PERSONNEL) TO VERIFY THE INSTALLATION, FUNCTIONALITY, AND PERFORMANCE OF THE EPSC MEASURES DESCRIBED IN THE SWPPP. THIS SITE ASSESSMENT SHALL COVER THE ENTIRE DISTURBED AREA AND OCCUR WITHIN 30 DAYS OF ISSUANCE OF THE LDP. IF STRUCTURAL BMPS (OR EQUIVALENT EPSC MEASURES) ARE NOT CONSTRUCTED OR CONSTRUCTION IS IN PROGRESS AT THE TIME OF THE SITE ASSESSMENT, A FOLLOW-UP MONTHLY ASSESSMENT(S) ARE REQUIRED UNTIL THE BMPS ARE CONSTRUCTED PER THE SWPPP. THIS SITE ASSESSMENT SHALL BE KEPT IN THE SWPPP BOX AND A COURTESY COPY PROVIDED TO THE CITY OF GALLATIN ENGINEERING DIVISION.
17. PRIOR TO COVERING OF BIORETENTION PIPING OR INSTALLATION OF ANY STORMWATER CONTROL MEASURE (I.E. BIORETENTION, DETENTION PONDS, PERVIOUS PAVERS, WATER QUALITY UNITS, ETC.), THE ENGINEERING/STORMWATER DIVISION SHALL BE CONTACTED TO INSPECT/OBSERVE THE INSTALLATION. ANY PIPING OR STORMWATER CONTROL MEASURE THAT IS INSTALLED WITHOUT AN INSPECTION MAY BE REQUIRED TO BE REMOVED AND RE-INSTALLED.
18. THE ENGINEERING/STORMWATER DIVISION WILL BE CONTACTED PRIOR TO THE TIME THIS DEVELOPMENT WILL BEGIN THEIR PERMITTED STREAM CROSSING.
19. NO MORE THAN 50 ACRES SHALL BE DISTURBED AND /OR LEFT DISTURBED AT ONE TIME DURING CONSTRUCTION. INTERMEDIATE PHASING MAY OCCUR SO LONG AS EQUIVALENT PREVIOUSLY DISTURBED AREA HAS PERMANENT STABILIZATION IN PLACE.
20. PRIOR TO FINAL INSPECTION AND RELEASE OF LDP, A FULL CLEANING/VACUUMING OF ALL MECHANICAL UNITS/WATER QUALITY UNITS IS REQUIRED.

SLOPE NOTE

ALL SLOPES ONSITE TO BE LESS THAN 3:1

EPSC DATA TABLE

TOTAL LIMIT OF DISTURBANCE:	+/- 0.35 AC
TOTAL SILT FENCE:	+/- 333 LF
EXISTING IMPERVIOUS AREA:	0.29 AC
PROPOSED IMPERVIOUS AREA:	0.37 AC

GRADING PERMIT NOTE

ALL INITIAL EPSC MEASURES MUST BE INSTALLED AND INSPECTED BY THE ENGINEERING DIVISION AFTER A PRE-CONSTRUCTION MEETING IS HELD TO DISCUSS THE PLANS. FOLLOWING THE INSPECTION, A LDP MAY BE ISSUED IF THE EPSC MEASURES ARE PROPERLY IN PLACE.

TDEC NOTICE OF COVERAGE NOTE

THIS SITE DISTURBS LESS THAN 1 ACRE AND THEREFORE DOES NOT REQUIRE COVERAGE UNDER A TENNESSEE CONSTRUCTION GENERAL PERMIT. THE TOTAL DISTURBED AREA IS: +/- 0.35 ACRES.

NOTE: REMOVAL OF TRAPPED SEDIMENT FROM EROSION CONTROL BMPS AT OR BEFORE 50% DESIGN CAPACITY REQUIRED

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05/21/2026

LINDBERG AVENUE
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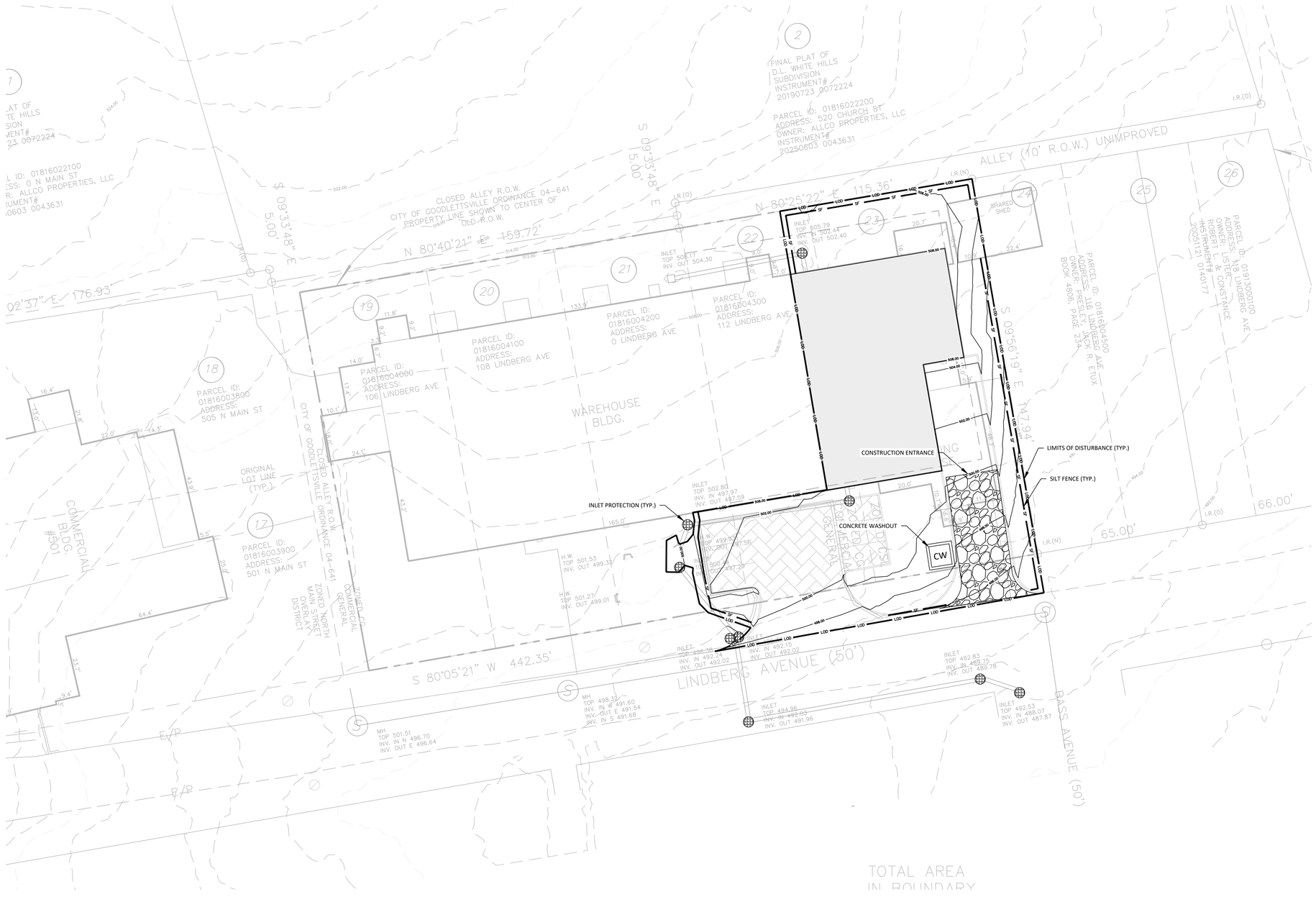
GOODLETTSVILLE, TN 37072

REVISIONS		
NUMBER	DESCRIPTION	DATE

PROJECT #:	1098001
DESIGNED BY:	ERC
DRAWN BY:	ERC
DATE:	05/21/2026

EROSION CONTROL PLAN - INITIAL

C3.0



EROSION CONTROL LEGEND

LOD	LIMIT OF DISTURBANCE
SF	SILT FENCE
TP	TREE PROTECTION
>	DIVERSION DITCH
	EROSION EEL
	OUTLET PROTECTION
CW	CONCRETE WASHOUT
	INLET PROTECTION
	EROSION CONTROL BLANKET

EROSION CONTROL NOTES

1. EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO CONSTRUCTION AND MUST BE MAINTAINED THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS.
2. ALL CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED ACCORDING TO LOCAL STANDARDS.
3. TEMPORARY CONSTRUCTION ACCESS MUST BE PROVIDED AT ALL POINTS WHERE CONSTRUCTION VEHICLES EXIT THE CONSTRUCTION AREA. CONTRACTOR TO MAINTAIN ALL PUBLIC ROADWAYS AND KEEP FREE FROM TRACKED MUD AND DIRT.
4. CONTRACTOR NOT TO DISTURB VEGETATION EXCEPT WHEN NECESSARY FOR GRADING PURPOSES.
5. WHERE VEGETATION COVER IS USED AS A CONTROL MEASURE, THE PLANTING OF THE VEGETATION COVER DURING WINTER OR DRY MONTHS SHOULD BE AVOIDED.
6. CONSTRUCTION DEBRIS EXPOSED TO STORM WATER SHALL BE PICKED UP PRIOR TO ANTICIPATED STORM EVENTS AND PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.
7. BMP CONTROLS SHALL BE INSPECTED AT LEAST TWICE PER CALENDAR WEEK AND SHALL BE PERFORMED AT LEAST 72 HOURS APART. ANY INADEQUATE CONTROL MEASURE THAT IS NOT FUNCTIONING CORRECTLY SHALL BE REPLACED OR REPAIRED PRIOR TO THE NEXT RAIN EVENT AND IN NO CASE MORE THAN 7 DAYS AFTER THE NEED FOR REPAIR OR REPLACEMENT IS IDENTIFIED.
8. MULCH AND SEED ALL DISTURBED AREAS WITHIN 14 DAYS FROM WHEN FINAL GRADING IS COMPLETED. STEEP SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITHIN 7 DAYS AFTER FINAL GRADING IS COMPLETED.
9. CONTRACTOR TO MAINTAIN PUBLIC ROADWAYS AND KEEP THEM CLEAR OF TRACKED MUD AND DIRT.
10. THE EROSION CONTROL MEASURES FOR THIS SITE WERE DESIGNED TO HANDLE A 5-YEAR STORM EVENT.
11. CONTRACTOR SHALL PROVIDE AN AREA FOR CONCRETE WASH DOWN AND EQUIPMENT FUELING. CONTRACTOR TO COORDINATE EXACT LOCATION WITH NPDES DEPARMENT DURING PRE-CONSTRUCTION MEETING. CONTROL OF OTHER SITE WASTES SUCH AS DISCARDED BUILDING MATERIALS, CHEMICALS, LITTER, AND SANITARY WASTES THAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY IS ALSO REQUIRED BY THE GRADING PERMITTEE.
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14. ADDITIONAL EPSC MEASURES SUCH AS SILT FENCES, SWALES, AND/OR DIVERSION DITCHES MAY BE REQUIRED AS FIELD CHANGES AT THE REQUEST OF THE CITY OF GOODLETTSVILLE STORMWATER TECHNICIAN.
15. THE CITY OF GOODLETTSVILLE SHALL BE NOTIFIED AND COPIED ON ALL SITE ASSESSMENTS, NOTIFICATION FROM TDEC, AND ANY CORRECTIVE ACTIONS OR INSPECTIONS REQUIRED.
16. A SITE ASSESSMENT AT EACH OUTFALL IS REQUIRED PER TDEC CGP SECTION 5.5.3.8. THIS SITE ASSESSMENT IS A DOCUMENTED SITE INSPECTION CONDUCTED BY A QUALIFIED INDIVIDUAL (LICENSED PE OR LA, CPESC, OR LEVEL II EPSC DESIGN CERTIFIED PERSONNEL) TO VERIFY THE INSTALLATION, FUNCTIONALITY, AND PERFORMANCE OF THE EPSC MEASURES DESCRIBED IN THE SWPPP. THIS SITE ASSESSMENT SHALL COVER THE ENTIRE DISTURBED AREA AND OCCUR WITHIN 30 DAYS OF ISSUANCE OF THE LDP. IF STRUCTURAL BMPS (OR EQUIVALENT EPSC MEASURES) ARE NOT CONSTRUCTED OR CONSTRUCTION IS IN PROGRESS AT THE TIME OF THE SITE ASSESSMENT, A FOLLOW-UP MONTHLY ASSESSMENT(S) ARE REQUIRED UNTIL THE BMPS ARE CONSTRUCTED PER THE SWPPP. THIS SITE ASSESSMENT SHALL BE KEPT IN THE SWPPP BOX AND A COURTESY COPY PROVIDED TO THE CITY OF GALLATIN ENGINEERING DIVISION.
17. PRIOR TO COVERING OF BIORETENTION PIPING OR INSTALLATION OF ANY STORMWATER CONTROL MEASURE (I.E. BIORETENTION, DETENTION PONDS, PERVIOUS PAVERS, WATER QUALITY UNITS, ETC.), THE ENGINEERING/STORMWATER DIVISION SHALL BE CONTACTED TO INSPECT/OBSERVE THE INSTALLATION. ANY PIPING OR STORMWATER CONTROL MEASURE THAT IS INSTALLED WITHOUT AN INSPECTION MAY BE REQUIRED TO BE REMOVED AND RE-INSTALLED.
18. THE ENGINEERING/STORMWATER DIVISION WILL BE CONTACTED PRIOR TO THE TIME THIS DEVELOPMENT WILL BEGIN THEIR PERMITTED STREAM CROSSING.
19. NO MORE THAN 50 ACRES SHALL BE DISTURBED AND /OR LEFT DISTURBED AT ONE TIME DURING CONSTRUCTION. INTERMEDIATE PHASING MAY OCCUR SO LONG AS EQUIVALENT PREVIOUSLY DISTURBED AREA HAS PERMANENT STABILIZATION IN PLACE.
20. PRIOR TO FINAL INSPECTION AND RELEASE OF LDP, A FULL CLEANING/VACUUMING OF ALL MECHANICAL UNITS/WATER QUALITY UNITS IS REQUIRED.

SLOPE NOTE

ALL SLOPES ONSITE TO BE LESS THAN 3:1

EPSC DATA TABLE

TOTAL LIMIT OF DISTURBANCE:	+/- 0.35 AC
TOTAL SILT FENCE:	+/- 333 LF
EXISTING IMPERVIOUS AREA:	0.29 AC
PROPOSED IMPERVIOUS AREA:	0.37 AC

GRADING PERMIT NOTE

ALL INITIAL EPSC MEASURES MUST BE INSTALLED AND INSPECTED BY THE ENGINEERING DIVISION AFTER A PRE-CONSTRUCTION MEETING IS HELD TO DISCUSS THE PLANS. FOLLOWING THE INSPECTION, A LDP MAY BE ISSUED IF THE EPSC MEASURES ARE PROPERLY IN PLACE.

TDEC NOTICE OF COVERAGE NOTE

THIS SITE DISTURBS LESS THAN 1 ACRE AND THEREFORE DOES NOT REQUIRE COVERAGE UNDER A TENNESSEE CONSTRUCTION GENERAL PERMIT. THE TOTAL DISTURBED AREA IS: +/- 0.35 ACRES.

NOTE: REMOVAL OF TRAPPED SEDIMENT FROM EROSION CONTROL BMPS AT OR BEFORE 50% DESIGN CAPACITY REQUIRED

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05/21/2026

LINDBERG AVENUE
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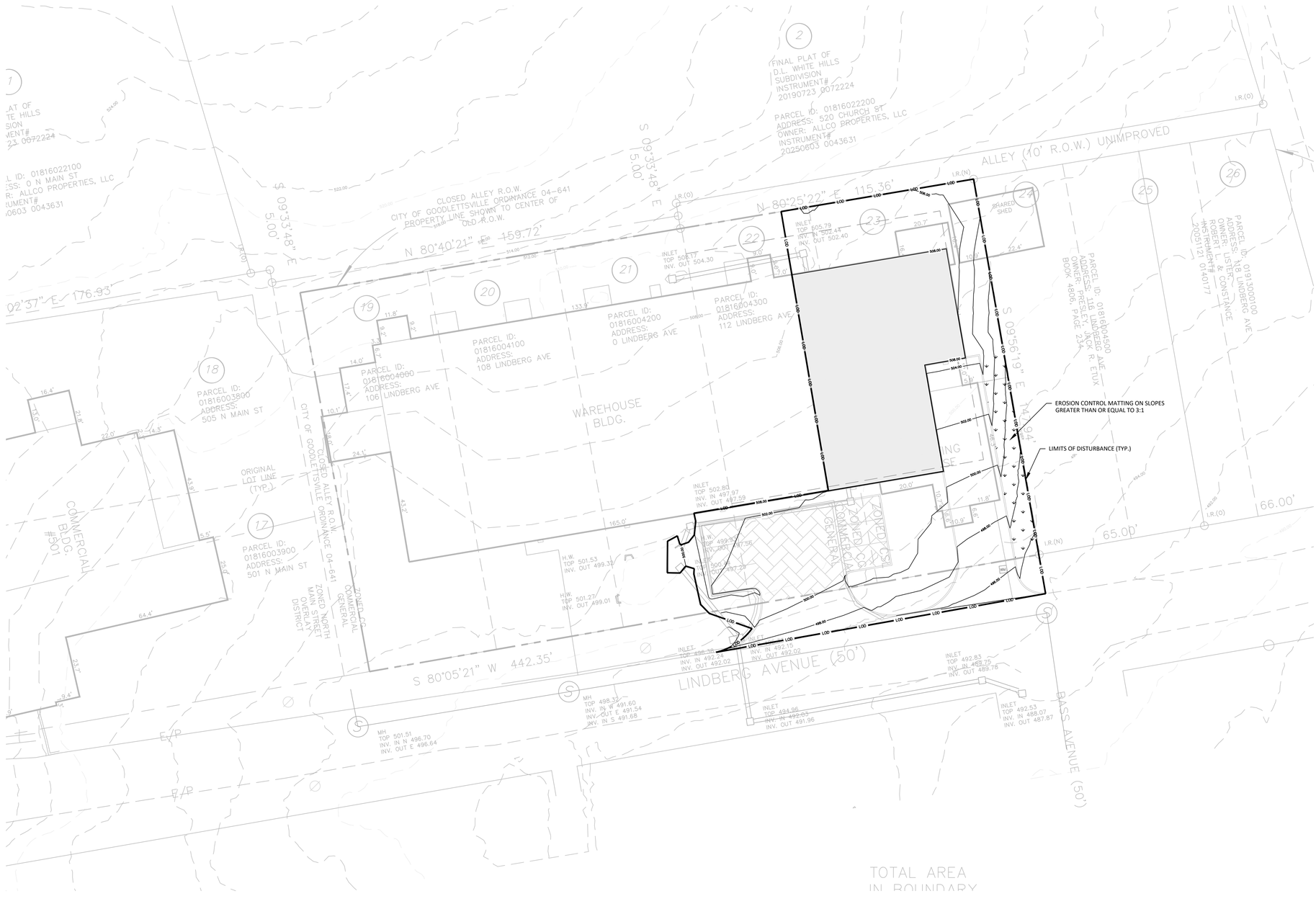
GOODLETTSVILLE, TN 37072

REVISIONS		
NUMBER	DESCRIPTION	DATE

PROJECT #:	1098001
DESIGNED BY:	ERC
DRAWN BY:	ERC
DATE:	05/21/2026

EROSION CONTROL PLAN - INTERMEDIATE

C3.1



EROSION CONTROL LEGEND

LOD	LIMIT OF DISTURBANCE
SF	SILT FENCE
TP	TREE PROTECTION
>	DIVERSION DITCH
	EROSION EEL
	OUTLET PROTECTION
CW	CONCRETE WASHOUT
	INLET PROTECTION
	EROSION CONTROL BLANKET

EROSION CONTROL NOTES

1. EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO CONSTRUCTION AND MUST BE MAINTAINED THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS.
2. ALL CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED ACCORDING TO LOCAL STANDARDS.
3. TEMPORARY CONSTRUCTION ACCESS MUST BE PROVIDED AT ALL POINTS WHERE CONSTRUCTION VEHICLES EXIT THE CONSTRUCTION AREA. CONTRACTOR TO MAINTAIN ALL PUBLIC ROADWAYS AND KEEP FREE FROM TRACKED MUD AND DIRT.
4. CONTRACTOR NOT TO DISTURB VEGETATION EXCEPT WHEN NECESSARY FOR GRADING PURPOSES.
5. WHERE VEGETATION COVER IS USED AS A CONTROL MEASURE, THE PLANTING OF THE VEGETATION COVER DURING WINTER OR DRY MONTHS SHOULD BE AVOIDED.
6. CONSTRUCTION DEBRIS EXPOSED TO STORM WATER SHALL BE PICKED UP PRIOR TO ANTICIPATED STORM EVENTS AND PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.
7. BMP CONTROLS SHALL BE INSPECTED AT LEAST TWICE PER CALENDAR WEEK AND SHALL BE PERFORMED AT LEAST 72 HOURS APART. ANY INADEQUATE CONTROL MEASURE THAT IS NOT FUNCTIONING CORRECTLY SHALL BE REPLACED OR REPAIRED PRIOR TO THE NEXT RAIN EVENT AND IN NO CASE MORE THAN 7 DAYS AFTER THE NEED FOR REPAIR OR REPLACEMENT IS IDENTIFIED.
8. MULCH AND SEED ALL DISTURBED AREAS WITHIN 14 DAYS FROM WHEN FINAL GRADING IS COMPLETED. STEEP SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITHIN 7 DAYS AFTER FINAL GRADING IS COMPLETED.
9. CONTRACTOR TO MAINTAIN PUBLIC ROADWAYS AND KEEP THEM CLEAR OF TRACKED MUD AND DIRT.
10. THE EROSION CONTROL MEASURES FOR THIS SITE WERE DESIGNED TO HANDLE A 5-YEAR STORM EVENT.
11. CONTRACTOR SHALL PROVIDE AN AREA FOR CONCRETE WASH DOWN AND EQUIPMENT FUELING. CONTRACTOR TO COORDINATE EXACT LOCATION WITH NPDES DEPARMENT DURING PRE-CONSTRUCTION MEETING. CONTROL OF OTHER SITE WASTES SUCH AS DISCARDED BUILDING MATERIALS, CHEMICALS, LITTER, AND SANITARY WASTES THAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY IS ALSO REQUIRED BY THE GRADING PERMITTEE.
12. EROSION AND SEDIMENT CONTROL MUST BE IN PLACE AND INSPECTED BY THE ENGINEERING DIVISION PRIOR TO BEGINNING GRADING.
13. INSPECTION AND MAINTENANCE AND EROSION CONTROL DEVICES WILL BE PERFORMED ON A REGULAR BASIS AND AFTER EACH STORM EVENT.
14. ADDITIONAL EPSC MEASURES SUCH AS SILT FENCES, SWALES, AND/OR DIVERSION DITCHES MAY BE REQUIRED AS FIELD CHANGES AT THE REQUEST OF THE CITY OF GOODLETTSVILLE STORMWATER TECHNICIAN.
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NOTE: REMOVAL OF TRAPPED SEDIMENT FROM EROSION CONTROL BMPS AT OR BEFORE 50% DESIGN CAPACITY REQUIRED

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05/21/2026

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GOODLETTSVILLE, TN 37072

REVISIONS		
NUMBER	DESCRIPTION	DATE

PROJECT #:	1098001
DESIGNED BY:	ERC
DRAWN BY:	ERC
DATE:	05/21/2026

EROSION CONTROL PLAN - FINAL

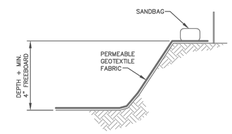
C3.2

TENNESSEE DEPARTMENT OF ENVIRONMENT & CONSERVATION

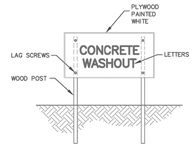
FILE NO. — 7.16

TYPE	YEAR	PROJECT NO.	SHEET NO.
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

REV. —

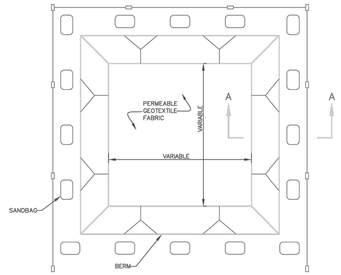


SECTION A–A
NOT TO SCALE



CONCRETE WASHOUT
SIGN (OR EQUIVALENT)

SECTION B–B
NOT TO SCALE



PLAN VIEW
NOT TO SCALE

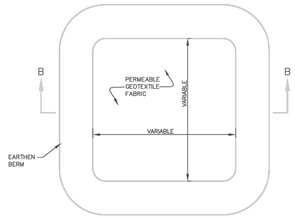
TYPE "BELOW GRADE"

NOTES:

1. ACTUAL LAYOUT DETERMINED IN THE FIELD.

2. SIGNAGE IDENTIFYING THE CONCRETE WASHOUT AREA SHALL BE INSTALLED WITHIN 5FT.OF THE WASHOUT FACILITY.

EROSION CONTROL PLAN LEGEND: CONCRETE WASHOUT



PLAN VIEW
NOT TO SCALE

TYPE "ABOVE GRADE"
WITH EATHERN BERMS

NOT TO SCALE

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

CONCRETE WASHOUT

7.16

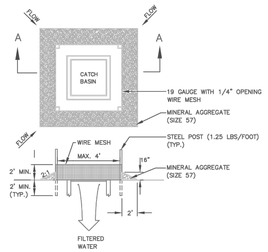
TENNESSEE DEPARTMENT OF ENVIRONMENT & CONSERVATION

FILE NO. — 7.35

TYPE	YEAR	PROJECT NO.	SHEET NO.
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

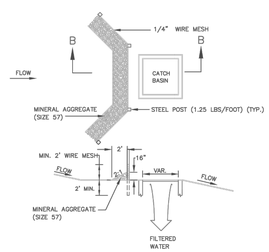
REV. —

HARDWARE CLOTH AND
GRAVEL INLET PROTECTION



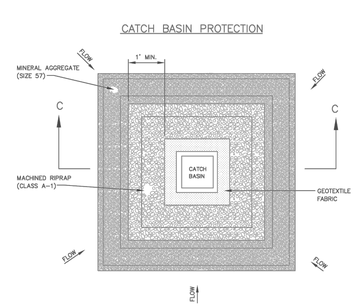
SECTION A–A

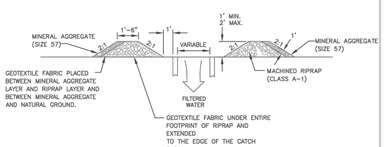
HARDWARE CLOTH AND GRAVEL INLET
PROTECTION (FLOW FROM ONE SIDE)



SECTION B–B

CATCH BASIN PROTECTION





SECTION C–C

EROSION CONTROL PLAN LEGEND:

EXCAVATED INLET PROTECTION

HARDWARE CLOTH AND GRAVEL INLET PROTECTION

ROCK RING INLET PROTECTION

BLOCK AND GRAVEL INLET PROTECTION

NOT TO SCALE

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

INLET PROTECTION

7.35

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GOODLETTSVILLE, TN 37072

REVISIONS

NUMBER	DESCRIPTION	DATE

PROJECT #:	1098001
DESIGNED BY:	ERC
DRAWN BY:	ERC
DATE:	05/21/2026

EROSION CONTROL DETAILS

C3.3

TENNESSEE DEPARTMENT OF ENVIRONMENT & CONSERVATION

FILE NO. – 7.34

TYPE	YEAR	PROJECT NO.	SHEET NO.
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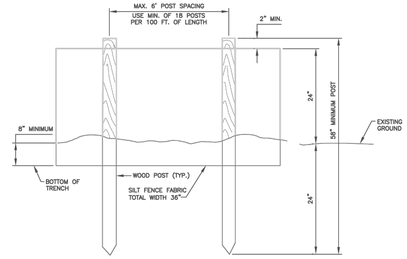
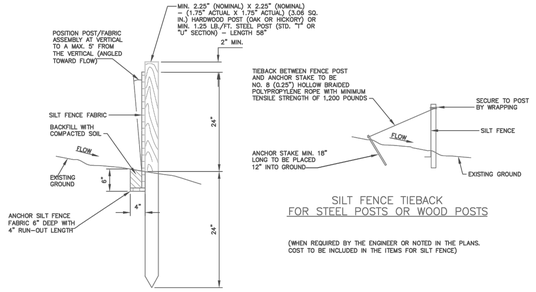
REV. --



ELEVATION VIEW



SECTIONAL VIEW

SILT FENCE TIEBACK
FOR STEEL POSTS OR WOOD POSTS

(WHEN REQUIRED BY THE ENGINEER OR NOTED IN THE PLANS. COST TO BE INCLUDED IN THE ITEMS FOR SILT FENCE)

EROSION CONTROL PLAN LEGEND: SILT FENCE

NOT TO SCALE

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

SILT FENCE

7.34

TENNESSEE DEPARTMENT OF ENVIRONMENT & CONSERVATION

FILE NO. – 7.28

TYPE	YEAR	PROJECT NO.	SHEET NO.
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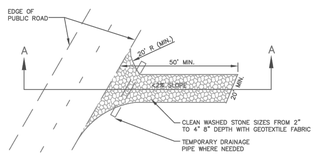
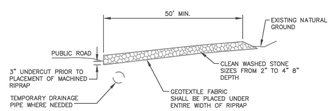
REV. --



PLAN VIEW OF TEMPORARY CONSTRUCTION ROAD



SECTION A–A

CONSTRUCTION EXIT

NOT TO SCALE

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

CONSTRUCTION EXIT

7.28

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GOODLETTSVILLE, TN 37072

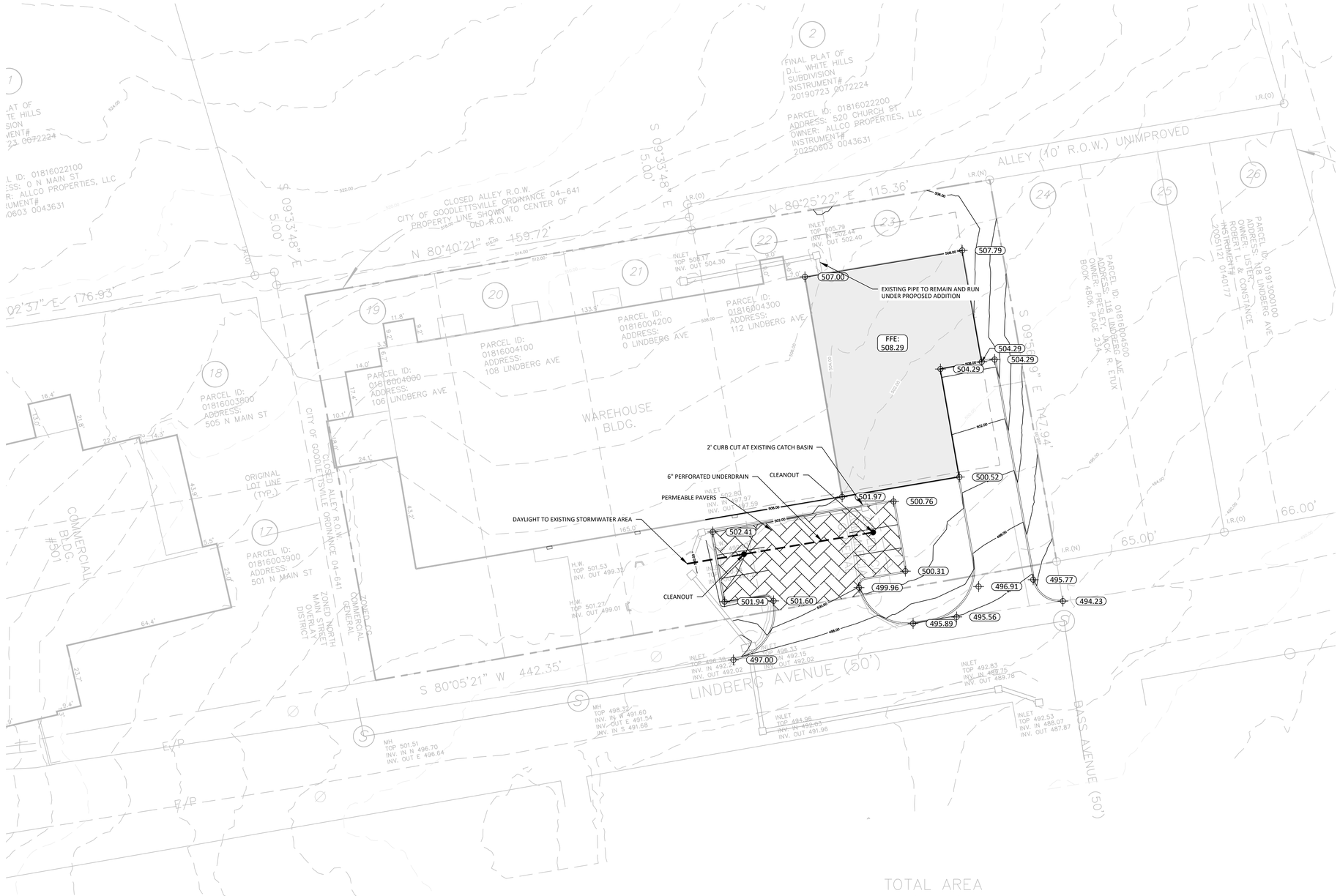
REVISIONS

NUMBER	DESCRIPTION	DATE

PROJECT #:	1098001
DESIGNED BY:	ERC
DRAWN BY:	ERC
DATE:	05/21/2026

EROSION CONTROL DETAILS

C3.4



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05/21/2026

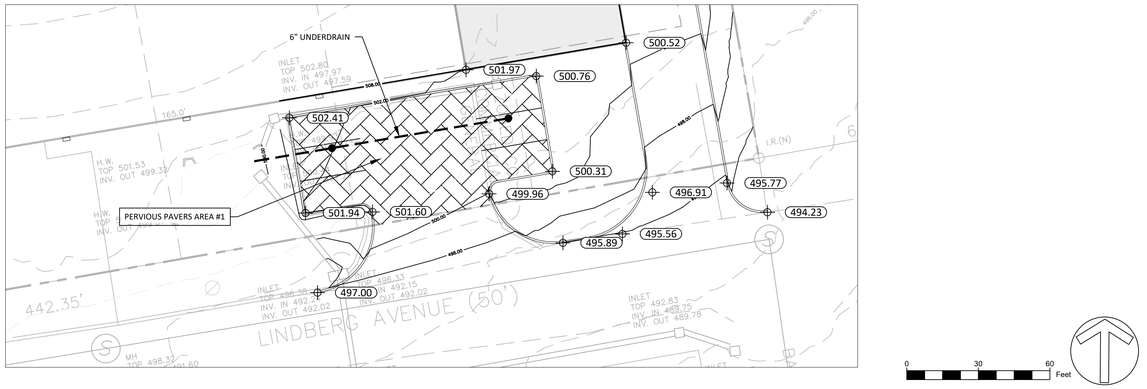
LINDBERG AVENUE
114 LINDBERG AVENUE
GOODLETTSVILLE, TN 37072

REVISIONS	DESCRIPTION	DATE
NUMBER		

PROJECT #:	1098001
DESIGNED BY:	ERC
DRAWN BY:	ERC
DATE:	05/21/2026

GRADING AND DRAINAGE PLAN

C4.0



GIP - 03A
PERMEABLE PAVERS WITH UNDERDRAIN

Detail Notes:

- Vehicular traffic shall be prohibited on the pervious pavement until the site is stable to prevent sediment from being deposited by vehicles.
- Contractor, Engineer, or Owners Representative shall notify City of Goodlettsville Staff at least 48 hours prior to the installation of the pervious layer to observe the sub-base material.

Permeable Paver Number :	Design	As-Built
Treatment Volume (Tv), CF	842.8	
Surface Area, SF	2,107	
Overflow (TOC) Elevation*	N/A	
Reservoir Depth	12"	
Underdrain Invert Depth*	498.33	
Outlet Elevation*		
Sump Depth	0"	
* N/A if not required		
All elevations shall be NAVD88		

Permeable Pavers With Underdrain Material Specifications

Material	Specifications	Notes
Permeable Pavement System	*Permeable Interlocking Concrete Pavers* [1] *Pervious Concrete* [2] *Reinforced Turf Systems* [3] *Reinforced Gravel Systems* [4]	[1]*ASTM C936* [2]*ASTM C1688/C1688M & ACI 522* [3]*ASTM D638* [4]*ASTM D638*
Bedding Layer *	#8 or #89 clean washed stone	Meet TDOT Construction Specifications.
Reservoir Layer *	#57 or #2 clean washed stone	Meet TDOT Construction Specifications.
Underdrain *	4- or 6-inch dual wall HDPE or SDR 35 PVC pipe with 3/8-inch perforations at 6 inches on center.	*AASHTO M 252* Place perforated pipe at base of reservoir layer at the lower end of the paver cell.
Cleanout	6-inch SDR 35 PVC pipe with vented cap	Use traffic rated casting where required. Provide cleanouts at the upper end of the underdrain.
Observation Well	6-inch SDR 35 PVC pipe with vented cap and anchor plate	Use traffic rated casting where required. Number of wells equals the number of test pits required for infiltration testing (see Appendix 1-A)
Sand Choker/ * Geotextile	*2- to 4-inch layer of coarse sand* [1] Filter fabric (125 gpm/sq.ft.) [2]	[1]*Meet TDOT Construction Specifications* [2]AASHTO M288-06, ASTM D4491 & D4751
Impermeable Liner (if needed)	Use a thirty mil (minimum) PVC Geomembrane liner covered by 8 to 12 oz./sq. yd.[2] non-woven geotextile.	

*Item receipts may be required to be included with as-built submittal.

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REVISIONS		
NUMBER	DESCRIPTION	DATE

PROJECT #:	1098001
DESIGNED BY:	ERC
DRAWN BY:	ERC
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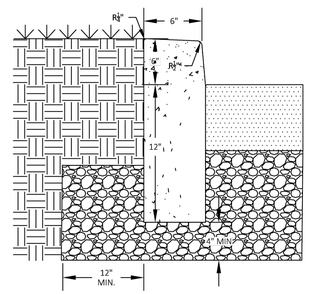
PERMEABLE PAVERS DETAILS

C4.1



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

6" DETACHED CONCRETE CURB (POST CURB)

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STATE OF TENNESSEE
05/21/2026

LINDBERG AVENUE
114 LINDBERG AVENUE
GOODLETTSVILLE, TN 37072

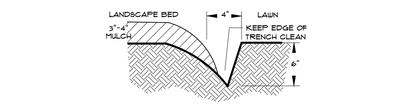
REVISIONS

NUMBER	DESCRIPTION	DATE

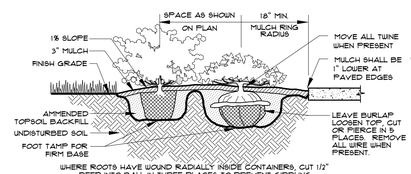
PROJECT #:	1098001
DESIGNED BY:	ERC
DRAWN BY:	ERC
DATE:	05/21/2026

SITE DETAILS

C5.0



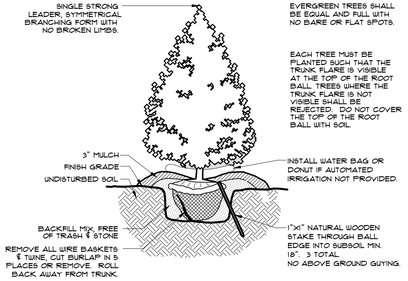
MULCH BED EDGE



WHERE ROOTS HAVE WOUND RADIALLY INSIDE CONTAINERS, CUT 1/2" DEEP INTO BALL IN THREE PLACES TO PREVENT GIRDLING.

PLANT MATERIAL TO MEET ANSI (Z60.1) AMERICAN STANDARD FOR NURSERY STOCK.
DETAIL BY CUMBERLAND LANDESIGN INC. 615-333-4636 NOT TO SCALE

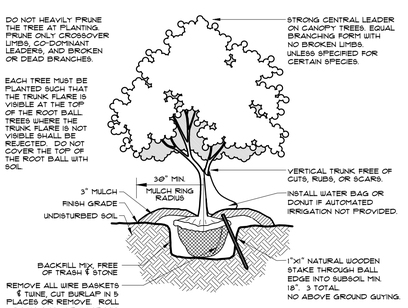
SHRUB PLANTING DETAIL



24" RADIUS MULCH RING ON ALL PROPOSED TREES

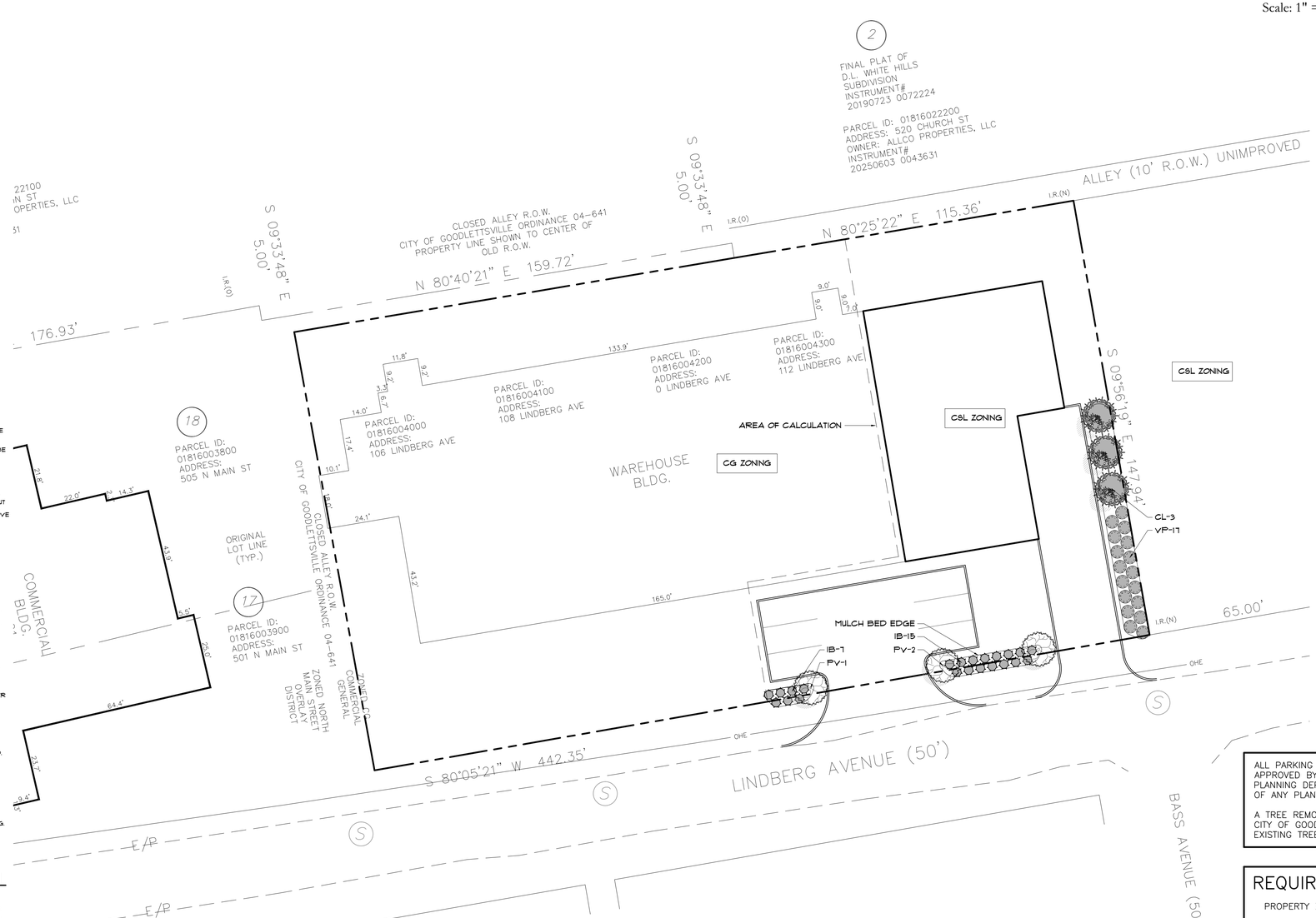
PLANT MATERIAL TO MEET ANSI (Z60.1) AMERICAN STANDARD FOR NURSERY STOCK.
DETAIL BY CUMBERLAND LANDESIGN INC. 615-333-4636 NOT TO SCALE

EVERGREEN TREE PLANTING DETAIL



PLANT MATERIAL TO MEET ANSI (Z60.1) AMERICAN STANDARD FOR NURSERY STOCK.
DETAIL BY CUMBERLAND LANDESIGN INC. 615-333-4636 NOT TO SCALE

DECIDUOUS TREE PLANTING DETAIL



ALL PARKING ISLANDS ARE TO BE INSPECTED AND APPROVED BY THE CITY OF GOODLETTSVILLE PLANNING DEPARTMENT PRIOR TO INSTALLATION OF OF ANY PLANT MATERIAL OR SOIL.

A TREE REMOVAL PERMIT IS REQUIRED FROM THE CITY OF GOODLETTSVILLE BEFORE DISTURBING EXISTING TREES.

PRIOR TO EXCAVATION AND INSTALLATION FIELD VERIFY ALL UTILITIES.

NEW PLANTING AREAS SHALL BE FERTILIZED WITH 12# / 1000 S.F. OF 10-10-10 FERTILIZER OR CONTAIN 30% ADDED "HOLY COW" (OR EQUAL) MIX TOPSOIL AMENDMENT.

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

NOTIFY THE LANDSCAPE ARCHITECT OF ANY FEATURES SUCH AS WALKWAYS, WINDOWS, OR BUILT ELEMENTS WHICH CONFLICT WITH THE PLANTING PLAN.

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

PLANT SIZES SHOWN ARE MINIMUMS REQUIRED BY THE LOCAL MUNICIPALITY AND MATERIALS SHOWN HAVE BEEN SELECTED SPECIFICALLY FOR THIS PROJECT.

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

NO CANOPY TREE SHALL BE LOCATED WITHIN 20' OF AN OVERHEAD UTILITY, POWER LINE, OR LIGHT POLE (UNLESS SPECIFIC VERTICAL / NARROW CULTIVAR (10')). NO CANOPY TREE SHALL BE LOCATED WITHIN A GAS, WATER, SEWER, UNDERGROUND ELECTRIC, CABLE, FIBER, OR PUBLIC UTILITY EASEMENT WITHOUT SIGNING OF A RELEASE WAIVER AND APPROVAL BY THE EASEMENT HOLDER.

LOCATING PLANT MATERIALS WITHIN DRAINAGE IS ACCEPTABLE. MATERIALS SHALL BE NO CLOSER THAN 3' FROM THE CENTER OF FLOWLINE.

MATERIALS SCHEDULE

KEY	AMOUNT	SCIENTIFIC NAME/ COMMON NAME	HEIGHT	SPREAD	TRUNK	NOTES
		TREES				
CL	3	Cupressocyparis leylandii/ Leyland Cypress	6' Min.	2'-3'	2.0"	FTB
PV	3	Prunus virginiana 'Canada Red'/ Canada Red Chokecherry	7' Min.	3'-4'	3.0"	Matched, Symmetrical
		SHRUBS				
IB	22	Ilex cornuta 'Dwarf Burford'/ Dwarf Burford Holly	24" Min.	18"-24"	FTB	
VP	17	Viburnum x 'Pragense'/ Prague Viburnum	36" Min.	24"-30"	FTB	
		TURF				
SEED		Rebel II Fine Bladed Fescue	Seed at 5 lbs per 1,000 sf Install w/ weed free Straw			
		MISCELLANEOUS	REMARKS			
Mulch Bed		Hardwood Bark Mulch	Minimum 3" depth throughout.			

NOTES

FTB = Full To Bottom

THE LANDSCAPE CONTRACTOR SHALL NOT MAKE SUBSTITUTIONS

REQUIREMENTS

PROPERTY ZONE:	CSL		
IMPROVEMENT AREA:			0.30 AC
NEW BUILDING:		-	0.10 AC
ADJUSTED AREA:		=	0.20 AC
CALIPER INCHES		x	70.0
REQUIRED CALIPER INCH:			14.0
PROPOSED NEW TREES:			
3.0" CALIPER TREES	x 3	=	9.0 (50%)
2.0" CALIPER TREES	x 3	=	6.0
CREDIT FOR NEW TREES:			15.0
EXISTING & REPLACEMENT TREES:			
NOT CALCULATED			
PARKING LOT TREES:			
6 STALLS / 15		=	*1 TREES
STREET YARD LANDSCAPING:			
(130 LF - ENTRY DRIVES)			
70 LF / 2		=	35 SHRUBS
70 LF / 40		=	*2 TREES
TRANSITIONAL BUFFERYARDS			NA
UTILTY & LOADING SCREENING			SATISFIED
50% OF TREES 3" IN CALIPER			SATISFIED
MIN. 2" CALIPER TREES			SATISFIED
20%-50% TREES UNDERSTORY			SATISFIED
75% NATIVE TREES			SATISFIED
24" SHRUB ROW AT PARKING			SATISFIED
FOUNDATION PLANTING			NA

* UNDERSTORY TREES UTILIZED AT O.H.E.

AUTOMATED IRRIGATION IS REQUIRED AT ALL NEW PLANTINGS. CLIENT SHALL COORDINATE SERVICE, METER, BACKFLOW, CONTROLLER, VALVES, SPRAY, DRIP, AND ASSOCIATED FIXTURES.

www.landscapearchitect-tn.com
CLD@landscapearchitect-tn.com
615-333-4636
615-512-3018
Nashville, TN

2023 - Cumberland Landesign Inc.

CALL BEFORE YOU DIG

SOLAR POWERED PLANS

Date: 05-20-2026
Revisions:
00-00-2026

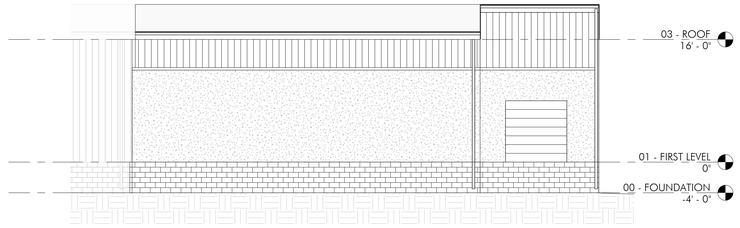
Landscape Plan
Lindberg Avenue
114 Lindberg Avenue
Goodlettsville, TN 37072

CLD

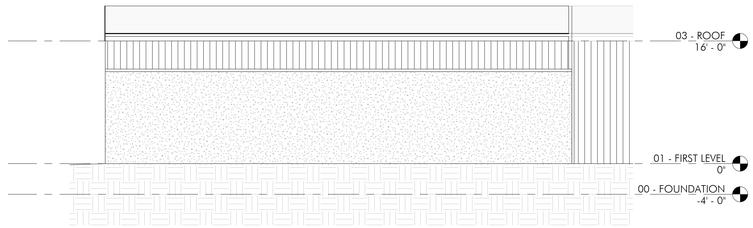
ROBERT BRIAN LOVELL
REGISTERED LANDSCAPE ARCHITECT
TENNESSEE

26135
Sheet:
L1.0
1 of 1

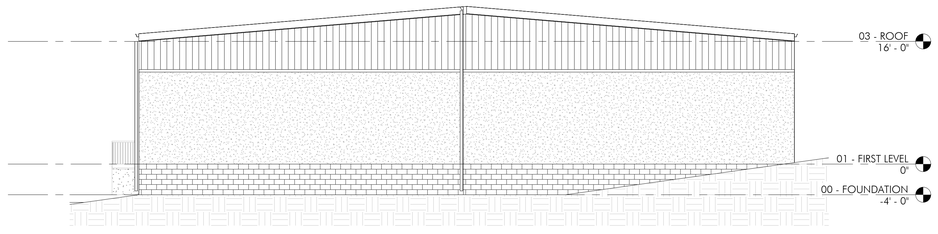
ADD-ALTERNATE FACADE OPTIONS



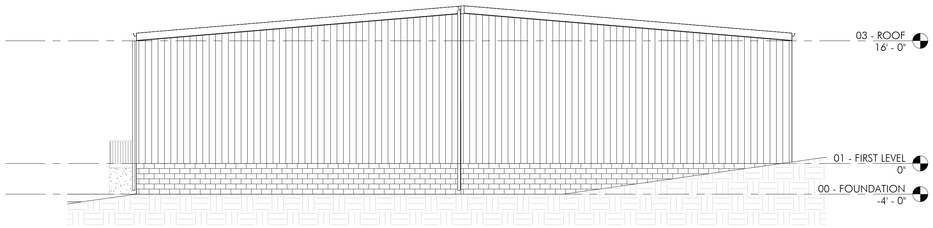
6 SOUTH ELEVATION - ALTERNATE FACADE
1/8" = 1'-0"



5 NORTH ELEVATION - ALTERNATE FACADE
1/8" = 1'-0"

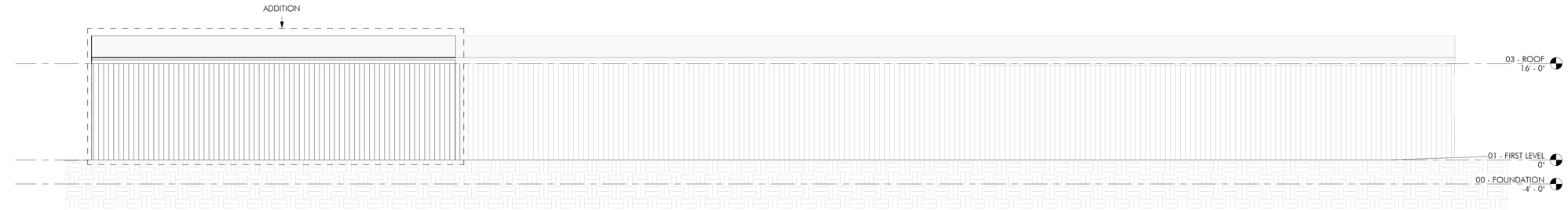


3 EAST ELEVATION - ALTERNATE FACADE
1/8" = 1'-0"

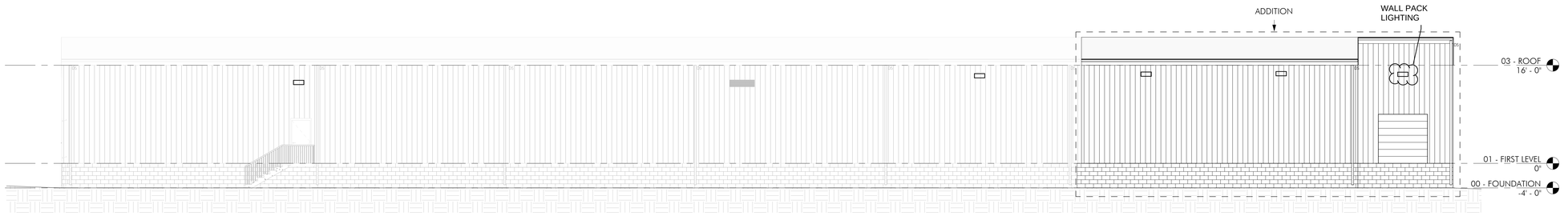


4 EAST ELEVATION
1/8" = 1'-0"

ELEVATION MATERIAL LEGEND	
	STUCCO
	STANDING SEAM METAL ROOF
	CONCRETE MASONRY UNIT
	METAL SIDING
DS	DOWNSPOUT



2 NORTH ELEVATION
1/8" = 1'-0"



1 SOUTH ELEVATION
1/8" = 1'-0"

daniels chandler +

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Nashville, TN 37203

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Do Not Scale Drawings.

Contractor must verify all dimensions prior to construction.

ADDITION TO
114 LINDBERG AVE WAREHOUSE

PROJECT No.	26138
DATE:	04.24.2026
REV DATE:	

SHEET NAME

BUILDING ELEVATIONS

SHEET NUMBER

A2.1

SCHEMATIC PLANNING DESIGN