TOWN OF WEDDINGTON
REGULAR TOWN COUNCIL MEETING
MONDAY, NOVEMBER 13, 2023 – 7:00 P.M.
WEDDINGTON TOWN HALL
1924 WEDDINGTON ROAD WEDDINGTON, NC 28104
AGENDA

1. Open the Meeting
2. Pledge of Allegiance
3. Determination of Quorum
4. Additions, Deletions and/or Adoption of the Agenda
5. Conflict of Interest Statement: *In accordance with the state government ethics act, it is the duty of every Council member to avoid conflicts of interest. Does any Council member have any known conflict of interest with respect to any matters on the agenda? If so, please identify the conflict and refrain from any participation in the matter involved.*
6. Enter into Closed Session Pursuant to NCGS 143-318.11(a)(3) to consult with an attorney on matters protected by the attorney-client privilege relating to Providence Volunteer Fire Department versus Town of Weddington.
7. Mayor/Councilmember Reports
8. Public Comments
9. Public Safety Report
10. Consent Agenda
    A. Approval of October 9, 2023 Regular Town Council Meeting Minutes
11. Old Business
12. New Business
    A. Conditional Zoning Application by Toll Brothers, Inc. requesting Conditional Zoning approval for the Luna Development, an 18-lot conventional subdivision generally located at 5932 Weddington–Matthews Road.
        i. Public Hearing
        ii. Discussion and Possible Consideration
    B. Conditional Zoning Application by Provident Land, Inc. requesting Conditional Zoning Approval for the Beckingham Development, a 38-lot subdivision located on Lochaven Road, parcel numbers 06153016 and 06153054A.
        i. Public Hearing
        ii. Discussion and Possible Consideration
    C. Discussion and Possible Consideration of Grant agreement with Union County Library Foundation for donation to the Southwest Regional Library.
13. Updates from Town Planner and Town Administrator
14. Code Enforcement Report
15. Update from Finance Officer and Tax Collector
16. Transportation Report
17. Council Comments
18. Adjournment

Business Objects

Weddington

10/2023

UCR Code	Description	Date of Report	Incident ID	
11B				
11B	SEXUAL BATTERY	10/31/23	202308265	
			Total:	1
11D				
11D	INDECENT EXPOSURE	10/18/23	202307886	
			Total:	1
13A				
13A	ASSAULT INFLICTING SERIOUS BODILY INJURY	10/26/23	202308113	
13A	ASSAULT INFLICTING INJURY(M)	10/26/23	202308139	
			Total:	2
13B				
13B	SIMPLE ASSAULT	10/4/23	202307462	
13B	SIMPLE AFFRAY	10/4/23	202307468	
13B	CYBERBULLYING	10/11/23	202307683	
13B	SIMPLE ASSAULT	10/16/23	202307804	
13B	SIMPLE ASSAULT	10/19/23	202307910	
13B	SIMPLE AFFRAY	10/26/23	202308116	
13B	ASSAULT ON FEMALE	10/27/23	202308177	
			Total:	7
13C				
13C	COMMUNICATING THREATS OF MASS VIOLENCE	10/20/23	202307939	
13C	COMMUNICATING THREATS OF MASS VIOLENCE	10/31/23	202308275	
			Total:	2
23H				
23H	LARCENY-MISDEMEANOR	10/8/23	202307600	
23H	LARCENY >$300 - <$1000 FROM CONSTRUC SIT	10/22/23	202307985	
			Total:	2
250				
250	UTTERING FORGED INSTRUMENT	10/26/23	202308123	
			Total:	1
26A				
26A	IDENTITY THEFT	10/9/23	202307619	
26A	IDENTITY THEFT	10/11/23	202307684	
26A	FRAUD-CREDIT CARD	10/28/23	202308195	
26A	FINANCIAL CARD FRAUD	10/28/23	202308196	
26A	OBTAINING PROPERTY BY FALSE PRETENSES	10/28/23	202308198	
			Total:	5
290				
290	INJURY TO PERSONAL PROPERTY	10/2/23	202307416	
290	INJURY TO PERSONAL PROPERTY	10/13/23	202307738	

Business Objects

Weddington

10/2023

UCR Code	Description	Date of Report	Incident ID	
			Total:	2
35A				
35A	POSSESS MARIJUANA UP TO 1/2 OZ	10/13/23	202307745	
			Total:	1
999				
999	ANIMAL CALL BITE	10/1/23	202307386	
999	ACCIDENT POSSIBLE INJURY	10/6/23	202307537	
999	OVERDOSE	10/7/23	202307582	
999	HIT & RUN ACCIDENT-PP OR PVA	10/12/23	202307724	
999	ANIMAL CALL BITE	10/16/23	202307816	
999	ANIMAL CALL	10/17/23	202307848	
999	ANIMAL CALL	10/18/23	202307873	
999	INVESTIGATION	10/24/23	202308047	
999	INVESTIGATION	10/25/23	202308093	
999	ANIMAL NUISANCE	10/26/23	202308137	
			Total:	10

Monthly Crime Total **34**

TOWN OF WEDDINGTON
REGULAR TOWN COUNCIL MEETING
MONDAY, OCTOBER 9, 2023 – 7:00 P.M.
WEDDINGTON TOWN HALL
1924 WEDDINGTON ROAD WEDDINGTON, NC 28104
MINUTES

1. Open the Meeting

Mayor Pro Tem Janice Propst called the meeting to order at 7:00 p.m.

2. Pledge of Allegiance

Council led the Pledge of Allegiance.

3. Determination of Quorum

Quorum was determined with Mayor Pro Tem Janice Propst, Councilmembers Brannon Howie, Anne Pruitt, and Jeff Perryman present. Mayor Craig Horn was absent.

Staff present: Town Administrator/Clerk Karen Dewey, Admin Asst/Deputy Clerk Debbie Coram, Finance Officer Leslie Gaylord, Town Attorney Karen Wolter, Planner Robert Tefft-via telephone.

Visitors: Walton Hogan, Jen Conway, Mike Morse, Rick Allen Schwieger, Bill Deter, Greg Doggett, John Allen, Shelia Allen, Drew Podrebarac, Tom Smith, Brian Bednar, Joyce Plyler, Nancy Anderson, Daryl Matthews, Elaina Wolfe, Kristin Nicholson, Marcus Nicholson, Patricia Hines, Christopher Neve, Julie Staley, Cooper Young, Tracy Stone, Jim Bell, Darcy Ladner

4. Additions, Deletions and/or Adoption of the Agenda

Motion: Councilmember Perryman made a motion to adopt the agenda as presented.
Vote: The motion passed with a unanimous vote.

5. Conflict of Interest Statement: *In accordance with the state government ethics act, it is the duty of every Council member to avoid conflicts of interest. Does any Council member have any known conflict of interest with respect to any matters on the agenda? If so, please identify the conflict and refrain from any participation in the matter involved.*

Ms. Dewey read the Conflict of Interest Statement. No councilmember had a conflict of interest.

6. Mayor/Councilmember Reports

Councilmember Perryman reported on the September WUMA meeting in Weddington. The delegates discussed the issues surrounding the state legislature chipping away and municipal controls. It started with the workforce housing bill and as of September 21st there is a bill before the Senate that was introduced in

April and revised that will allow all schools in certain zoning districts without completing a conditional zoning application process. The next WUMA meeting is in Stallings on October 26th at 4 p.m. The last meeting of the year will be in Wesley Chapel on Tuesday November 21st. After the first of the year, the delegates want to invite the Union County representatives to a meeting to discuss the issues.

Councilmember Pruitt reported that contact information for the Union County representatives in the General Assembly is on the WUMA website as well as links to the proposed bills that threaten municipal autonomy.

Mayor Pro Tem Propst reported that the Fall Shred Event had a pretty good attendance. We will hope to hold one again in the spring. The Tree Lighting is Friday, November 17th from 5:30 to 8:30. Mayor Pro Tem Propst also commented on the Union County Chamber of Commerce Event in September was attended by the Mayor, Town Administrator and herself. It was a presentation from ?? and his book, "Thirteen Ways to Kill Your Community". It was 2 hours of thought-provoking conversation and she highly recommends the book to all looking to better their community.

7. Public Comments

Bill Deter - 401 Havenchase Drive: Mr. Deter thanked the Council for the shredding event and hopes that it will continue. He also asked Councilmember Perryman for a copy of the draft of SB692 after the meeting.

Tom Smith – 1840 Tanglebriar Court: Mr. Smith commented on the Proclamation for World Polio Day on the agenda. He stated that The Rotary International Club has been working to eradicate polio since 1988 and has helped to drop the number of cases from 350,000 to just 8 this year and those cases are in Afghanistan and Pakistan. October 24th is World Polio Day.

Nancy Anderson – 13624 Providence Road – Ms. Anderson expressed concern with how Providence Road is accessed. She commented on the roundabout in front of town hall and that it was planned with an access point to move through the property off 84 to access Providence Road. Ms. Anderson also commented on SB 692 stating that she had a conversation with Senator Todd Johnson, and he was appalled to find his bill had been amended as it was.

8. Public Safety Report

Deputy Wrenn gave the public safety report. He thanked the public for their support in the community. He thanked residents for reaching out and letting the deputies know where they are needed. He commented on the resource officers at the schools are stretched thin as there has been a lot of social media activity on the schools. Deputy Wrenn also mentioned that HOAs are suggesting residents come to the end of their driveways for Halloween night to hand out candy to avoid strangers from casing homes for opportunities. He asked that residents to lock their cars. Valuables may not be taken, but garage codes can be.

9. Consent Agenda

- **A. Approval of September 11, 2023 Regular Town Council Meeting Minutes**
- **B. Approve Proclamation P-2023-03 designating October 24, 2023 as World Polio Day**
- **C. Approve Proclamation P-2023-04 designating October as Domestic Violence Awareness Month**

Motion: Councilmember Pruitt made a motion to approve the Consent Agenda as presented.

Vote: The motion passed with a unanimous vote.

10. Old Business

No Old Business

11. New Business

A. Conditional Zoning Application by Richard Daryl Matthews, requesting Conditional Zoning approval for the establishment of a Bed and Breakfast, and Event Venue use to be associated with the parcel located at 201 S. Providence Road.

i. Public Hearing

Mayor Pro Tem Propst opened the public hearing.
Mr. Tefft presented the staff report.

The existing single-family home located at 201 S. Providence Road was constructed circa 1883 as the residence of John Walker Matthews, and as the center of the Matthews family farming operations. The home has remained in the Matthews family since its construction and has recently been renovated with appropriate care given to maintain the architectural appearance of the original home.

The applicant is proposing the adaptive reuse of the historic single-family home as a bed and breakfast and event venue for weddings, banquets, retreats, birthday parties, and corporate events. In addition, while the property would continue to be used for the temporary sale of pumpkins and Christmas trees in the autumn and winter months, a farmers' market would be added to operate during the summer months.
As a part of the event venue development, the applicant envisions the conversion of an existing 586 square foot garage into a dressing room; the construction of an approximately 4,000 square foot event barn to include a catering kitchen; and the provision of exterior event seating areas and parking. The applicant proposes that the venue would operate Monday – Thursday: 8:00 am to 9:00 pm, and Friday – Sunday: 7:00 am to 10:00 pm.
Development Standards.
The development proposal includes Development Standards that form a part of the Conditional Zoning Plan (Plan). The development shall be governed by this Plan and all applicable Unified Development Ordinance (UDO) requirements unless specifically identified in the Plan.
Permissible Uses:
Pursuant to the Development Standards proposed by the applicant, the permissible uses for the development proposal would be as follows:
- Bed and Breakfast (historic home only)
- Event Venue
- Seasonal Farmers' Market, Pumpkin Patch, and Christmas Tree Lot

Town staff have no objections or concerns with the permissible uses.

Ms. Dewey read into the record comments from Henry and Adell Keen: 259 Old Mill Road - We have lived in Weddington for 34 years and at our residence on Old Mill Road since 1996. In that time we have seen Weddington grow and grow well . Few communities that have grown as much as we have can still boast of the open and green spaces, walking trails, produce market, and a farm for family fun; all in our midst, that we continue to enjoy.

We live on Old Mill Road near the proposed Matthews Family Event Space located on Providence Road in the Historic Home. We encourage you to approve this beautiful Historic Home as an event space. An event space of this size and it's use for family celebrations would fit in perfectly to the already established charm of our lovely town.

Another consideration is the fact that these owners are long-time residents of Weddington. They have always been, and continue to be invested in the Town of Weddington, fully supporting the managed growth and the well-being of the Town.
That fact should be considered and honored as well.

Please vote to approve the Matthews Family Historic Home on Providence as an Event Space of family celebrations..

Bill Deter: 401 Havenchase Drive-Mr. Deter commented on the application and the conditions set by the Planning Board. He asked how an event with 125 people would be accommodated with only two bathrooms. He commented on "bed and breakfast" and "event venue" not having a definition in the UDO. He stated his adamant opposition to the project with the unanswered questions and concerns that commercial zoning will be opened up down Providence Road.

Greg Doggett: Old Mill Road-Mr. Doggett commented that he was born and raised in the Town of Weddington and has been a neighbor to the home for 9 years. He stated his support in this project and preserving the beautiful home.

Drew Podrebarac: Eagle Road – Mr. Podrebarac commented that he was born and raised in the Town of Weddington and he was a member of the first class to attend Weddington schools from elementary through High School. He stated that he loves Weddington and he supports preserving the town this way. He believes this is a wise decision and is a good move. He doesn't agree that this will hurt the town.

Brian Bednar: 171 Larkfield – Mr. Bednar stated that he grew up in Mecklenburg County and has been a Weddington resident since 2015. He commented that this is a perfect use for this property, and it looks phenomenal. He stated that he understands the concerns with the unanswered questions, but he has confidence in the Planning Board and the Town Council, and the permitting rules will be followed, like stormwater and erosion control and NCDOT will govern the allowed curb cuts. He stated that this project is a tasteful way to protect the asset of the home and protects open space.

Nancy Anderson: 13624 Providence Road – Ms. Anderson stated that she is a 4th generation Weddington resident. She gave some background of the historic designation of the property. Ms. Anderson stated that she believes this rezoning is essential to allow the family to generate some revenue to restore and preserve the house. This is a great opportunity to preserve Weddington.

Darcey Ladner: 301 Old Mill Road – Ms. Ladner stated that she is neighbors with the applicant. She commented the project looks phenomenal. She asked if traffic would be coming off Providence Road or Old Mill. The applicant, Mr. Matthews confirmed traffic would come off Providence Road.

Rick Allen Swieger: - 332 Old Mill Road – Mr. Swieger stated that his property was once owned by the Matthews family and his wife works at the Matthews pumpkin patch and Christmas Tree lot. He commented

that he is 100% in favor of approving this project. It is great for Weddington and the community and will make Weddington more attractive.

Jen Conway: 3209 Hartford Way – Ms. Conway stated that she is a member of the town Planning Board and Historic Preservation Commission. She commented that she believes it is the boards' responsibility to help preserve the few historical homes that are left in the community. Ms. Conway referred to the demolished historic home on Providence Road without any aspects preserved. She stated that the town has already approved a conditional zoning application for a Wedding venue, and this will be a great addition to Weddington.

Mayor Pro Tem Propst closed the public hearing.

ii. Discussion and Possible Consideration

Councilmember Howie asked about the conditions from the Planning Board and the architectural details of the outbuildings. Ms. Wolter explained that council can make a condition that the architectural details of the outbuildings will be generally consistent with the existing historic home and refer to the pictures submitted to the council from the applicant. The architectural design and compliance will be reviewed and approved during the permit process.
Mr. Matthews agreed with the condition.

Councilmember Pruitt asked to clarify when its going to be approved during the permitting process, will drawings be submitted with the permit and the planner will approve those based on those conditions. Ms. Wolter confirmed.

Board member Howie asked about the parking surfaces. Ms. Wolter stated parking shall consist of no fewer than 66 parking spaces and the design of the parking area will be consistent with the existing character of the historical property. The material used for the parking lot will be either pea gravel or pervious surface and will be reviewed and approved at the permitting process.
Mr. Matthews agreed with the condition.

Board member Howie asked about the stormwater approvals. Ms. Wolter stated the applicant will meet all requirements for stormwater management as required by the Weddington Uniform Development Ordinance and as required by town engineers.
Mr. Matthews agreed with the condition and stated that the stormwater approvals are already in the process.

Councilmember Pruitt asked what the maximum number of bedrooms for the bed and breakfast would be. Mr. Matthews stated that there were 2 bedrooms maximum. Councilmember Pruitt asked for the condition providing for a maximum of 3 bedrooms.
Mr. Matthews agreed with the condition.

Councilmember Pruitt stated that a definition of bed and breakfast would be included in the list of conditions. Ms. Wolter explained that permitted uses would be included in the conditional zoning ordinance.

<u>Permitted Uses</u>. Permitted uses for this site include all uses permitted in the R-CD district. In addition, the following uses are permitted:

a. Bed and Breakfast in the Historical Home only that may provide three rooms for sleeping accommodations and a morning meal for a small number of guests.

b. Event Venue – Property intended to host up to 150 (people) for events such as weddings, reunions, corporate events.
    i. Conversion of existing 586 square foot garage into a dressing room
    ii. Construction of a 4000 square foot event Barn with catering kitchen with the ability to host events of up to 150 people
    iii. Outdoor event spaces as shown on the Site Plan

c. Permanent seasonal Farmer's market, Pumpkin patch and Christmas Tree sales (no enclosed retail).

Mr. Matthews agreed with the permitted uses.

Councilmember Pruitt asked if this changes anything with the historic designation of the property. Historic Preservation Chairman Jen Conway responded that it does not.

Councilmember Pruitt asked if Mr. Matthews or a subsequent owner wanted to change something, would they have to come back before the council? Ms. Wolter explained that there are two ways to amend a conditional zoning, a minor amendment that is administratively approved or a major amendment that would come before the council in the same process.

Councilmember Pruitt asked who is responsible for reviewing all conditions are met. Ms. Wolter stated that approvals are administrative after this. The project is required to meet all the requirements in the UDO.

Councilmember Perryman stated that he was at the community meeting and toured the house and property. He commented that this is an admirable effort to keep the historic house. He agreed with most of the public hearing comments. He stated that this decision will save this property it will not open the door to more commercial development all over the town.

Mayor Pro Tem Propst reiterated that this is not commercial zoning, but conditional zoning. Mr. Matthews cannot sell the property for something commercial. She stated that it will preserve the community history, and she appreciates the Matthews family wanting to preserve the community history.

Ms. Wolter asked Mr. Matthews if he agreed with all the development standards:

1. Development Standards. Development of the Property will be governed by these development standards, all submittals presented to the Town Board in support of this application, and the applicable provisions of the Town of Weddington Unified Development Ordinance in place on the Filing Date.

2. Applicability of Other Regulations. The Rezoning Plan shall comply with the current version of applicable non-Unified Development Ordinance at the time of individual permit submission unless otherwise specified under state or federal law, including G.S. 160D-108: Permit Choice and Vested Rights. Examples of these codes may include, but are not limited to, building codes, fire codes, and/or codes or regulations administered by outside agencies.

3. Schematic Nature of Rezoning Plan. The Rezoning Plan shows the general location of all structures and exact locations of structures may be altered or modified during design, engineering, and construction phases of the development so long as the minimum Ordinance standards are met, and such alterations or modifications are materially in keeping with the Rezoning Plan

4. Architectural Requirements. Architectural details of the outbuildings will be generally consistent with the existing historic home and what was submitted to the Town. Architectural design compliance will be reviewed and approved during the permitting process.

5. Parking. Parking shall consist of no fewer than 66 parking spaces and the design of the parking area will be consistent with the existing character of the historical property. The material used for the parking lot will be either pea gravel or pervious surface and will be reviewed and approved at the permitting process.

6. Permitted Uses. Permitted uses for this site include all uses permitted in the R-CD district. In addition, the following uses are permitted:

    a. Bed and Breakfast in the Historical Home only that may provide three rooms for sleeping accommodations and a morning meal for a small number of guests.

    b. Event Venue – Property intended to host up to 150 (people) for events such as weddings, reunions, corporate events.
        i. Conversion of existing 586 square foot garage into a dressing room
        ii. Construction of a 4000 square foot event Barn with catering kitchen with the ability to host events of up to 150 people
        iii. Outdoor event spaces as shown on the Site Plan

    c. Permanent seasonal Farmer's market, Pumpkin patch and Christmas Tree sales (no enclosed retail).

7. Stormwater Management. Applicant shall meet all requirements for storm water management as required by the Weddington Uniform Development Ordinance and as required by town engineers.

8. Driveway. Applicant will obtain NCDOT approval for a second curb cut on South Providence Road to allow for a driveway to the proposed parking lot.

Motion: Councilmember Perryman made a motion to approve Conditional Zoning Ordinance 2023-01with conditions and as read into the record above.
Vote: The motion passed with a unanimous vote.

Motion: Councilmember Perryman made a motion to approve the Land Use Plan Consistency Statement as presented:
While the development proposal can be found to be generally consistent with the adopted Land Use Plan, there are Goals and Policies for which compliance cannot be determined at the present time based upon the level of plans required to be submitted for this phase of

development. In addition, while there may also be Goals and Policies for which there may be reason for concern, positive findings can nonetheless be made in support of this development proposal.

***Vote**:* The motion passed with a unanimous vote.

12. Updates from Town Planner and Town Administrator

- **Liberty Classical Academy**
  - CZ for Private School
  - Planning Board: 7/24 and 10/23
  - Traffic PIM: 8/22 and 10/25
- **Ennis Road Subdivision**
  - Conventional subdivision of 12 lots
  - Public Information Meeting 8/21
  - Planning Board TBD
- **LDS Temple**
  - 345 Providence Road
  - No application submitted
- **Luna Subdivision**
  - Conventional subdivision of 18 lots
  - Public Information Meeting held 8/15
  - Planning Board: 9/25 and 10/23
- **Beckingham**
  - Conventional subdivision of 42 lots
  - Public Information Meeting held 9/12
  - Planning Board: 10/23
- **Comprehensive Land Use Plan and Town Center Plan**
  - Planning Board 11/27/23
  - Town Council: 1/8/24

Ms. Dewey stated that the roof on the council chambers has been repaired. The first quarter reporting for the SCIF grant has been completed. Painting on town hall will begin the end of November.

13. Update from Finance Officer and Tax Collector

Ms. Gaylord presented the update: 1st quarter financial statements are in the packed. Tax bills are at the printer to be mailed out next week, but are available online now. Trash fees are included with the taxes. at the printer to be mailed. The quarterly update on ARPA money: the town started with $1.6 million, was at $835,000 at the start of the current fiscal year and currently we are at $628,000. We are using the funds for payroll and the deputy contract. At the end of this fiscal year, we should be at $225,000 to be spent out by December 2024.

14. Transportation Report

None this month.

15. Council Comments

Councilmember Howie: Thank you staff, we have the best in the state-maybe even the nation. Thank you to Mayor Pro Tem Propst for spearheading our events. We just had a successful shred event and are planning our forthcoming successful tree lighting. Our tree lighting is magical, but there is someone pulling strings in the back. Thank you Matthews family for bringing forth an opportunity for Weddington to stay Weddington.

Councilmember Pruitt: Thank you Matthews family for keeping the house. I appreciate that it's right on Providence road for everybody to drive by and see. It's the perfect spot. And thank you Janice for everything you do for events.

Councilmember Perryman: I'd like to ditto everything already said. We've got a great town staff and a great set of deputies. We manage to always get the cream of the crop. I want to give a shout out to the student resource officer at Weddington High School. I have a daughter who is a senior and she had a group of friends over this weekend talking about how great and cool their resource officer is. It is awesome that high school students have that feeling toward these guys who put their life on the line everyday for us.

Mayor Pro Tem Propst: I agree with everything that has been said. We have a great staff of 5 people, 3 full-time and 2 part-time. Y'all are tremendous. Darryl, Sheila, and John-I am so excited for what you're bringing to Weddington. I think this is a wonderful opportunity for our community. My vision has always been about bringing people together and building community. This venue is going to be such an asses. I thank you for saving your home.

16. Adjournment

Motion: Councilmember Pruitt made a motion to adjourn the October 9, 2023 Regular Town Council meeting at 8:30 p.m.

Vote: The motion passed with a unanimous vote.

*Approved:*_____

_____
D. Craig Horn, Mayor

_____
Karen Dewey, Town Administrator/Clerk

TO:	Town Council
FROM:	Robert G. Tefft, CNU-A, Town Planner
DATE:	November 13, 2023
SUBJECT:	Application by Toll Brothers, Inc. requesting Conditional Zoning approval for the development of an 18-lot conventional subdivision generally located at 5932 Weddington – Matthews Road.

APPLICATION INFORMATION:

SUBMITTAL DATE:	August 18, 2023
APPLICANT:	Robert Price, Land Development Director, Toll Brothers
PROPERTY LOCATION:	5932 Weddington – Matthews Road
PARCEL ID#:	06123012 and 06123012C
ACREAGE:	+/- 28.959 acres
EXISTING LAND USE:	Conservation Residential
EXISTING ZONING:	Residential-Conservation District (R-CD)

PROPOSAL:

The applicant is proposing the development of an 18-lot conventional development subdivision to be known as Luna. The subdivision will extend the existing Delaney Road right-of-way from the Bromley neighborhood, as well as tie-in at the intersection of Weddington-Matthews and Cox Road.

Development Standards.

The development proposal does not include any changes to the Development Standards already set forth in the Unified Development Ordinance (UDO). The development shall be governed by this Plan and all applicable requirements of the UDO.

RELATION TO THE UNIFIED DEVELOPMENT ORDINANCE:

UDO Section D-607(C), Conditional Rezoning.

As required by UDO Section D-607(C)(5), the applicant held their required Community Meeting virtually on Tuesday, August 15, 2023, at 6:00 pm. The applicant has provided a Community Meeting Report which has been attached to this staff report and posted on the Town's website.

The Town Council is tentatively scheduled to hold a public hearing regarding this application on Monday, October 9, 2023, at 7:00 pm. The Conditional Zoning process allows the developer and the town to ask for conditions which could include special exceptions to rules or additional improvements. The town and the developer must agree on a condition for it to become a part of an approval.

UDO Section D-703(D), Permitted Uses (by zoning district).

Pursuant to Table 1, Permitted Uses, as contained within UDO Section D-703(D), Traditional Residential Development (> 6 Lots) is specifically listed as a permissible use within the R-CD, subject to Conditional Zoning approval.

UDO Section D-703(E), Lot and Building Standards Table.

Pursuant to Table 2, Lot and Building Standards, as contained within UDO Section D-703(E), all development within the R-CD is required to meet certain standards. The following table identifies those standards, as well as how the subject development proposal complies:

Lot and Building Standards		Standard	Proposed
Minimum Lot Size		40,000 sq. ft.	40,023 – 57,815 sq. ft.
Minimum Lot Width		120'	120' (min)
Minimum Setbacks	Front	50'	50'
	Side	15'	15'
	Rear	40'	40'
Maximum Height		35'	35'
Maximum Floor Area Ratio		N/A	N/A

UDO Section D-917A, Specific Requirements for All Residential Development.

UDO Section D-917A, establishes numerous rules for how residential development is intended to occur within the Town. These rules include, but are not limited to, the location of house sites, easements, the requirement of lots to abut public roads, street design and layout, cul-de-sacs, open space, buffering, and tree requirements. While not all these rules are appropriate to be included at this stage of the development process, there are many that must be considered.

UDO Section D-917A(A) *Side lot lines shall be substantially at right angles or radial to street lines, and double frontage lots are to be avoided wherever possible.*

The lots proposed with the subdivision are generally consistent with this provision. As such, positive findings of compliance can be made.

UDO Section D-917(F)(1) *All subdivision lots shall abut public roads.*

All lots within the subdivision shall abut a public road without need of an access easement. As such, positive findings of compliance can be made.

UDO Section D-917(J)(1) *Permanent dead-end streets shall not provide sole access to more than 16 dwelling units or 1,200 linear feet, whichever is less.*

One of the proposed cul-de-sacs will provide access to four lots, while the other will provide access to only two lots. Neither of these cul-de-sacs will exceed 200 linear feet. As such, positive findings of compliance can be made.

UDO Section D-917(J)(2) *When cul-de-sacs end in the vicinity of an adjacent undeveloped property capable of being developed in the future, a right-of-way or easement shall be shown on the final plan to enable the street to be extended when the adjoining property is developed.*

There are no undeveloped properties adjacent to the proposed subdivision. As such, this provision is not applicable.

UDO Section D-917(K)(2) *The proposed street layout shall be coordinated with the street system of the surrounding area. Where possible, existing principal streets shall be extended. Street connections shall be designed so as to minimize the number of new cul-de-sacs and to facilitate easy access to and from homes in different part of the tract (and on adjoining parcels).*

The development proposal will make use of the existing three-way intersection at Weddington-Matthews and Cox Roads, as well as a stub out within Bromley for Delaney Drive as the two points of access into the neighborhood. As such, positive findings of compliance can be made.

UDO Section D-917(K)(5) *Two points of ingress and egress onto an adjoining public road from subdivision containing more than 15 lots is required.*

As the subdivision consists of 18 lots, there will be one point of ingress/egress at the intersection of Weddington-Matthews and Cox Roads, and a second from Delaney Drive. As such, positive findings of compliance can be made.

UDO Section D-917(K)(6) *Developable lots shall be accessed from interior streets, rather than from roads bordering the tract.*

All 18 of the proposed lots will be accessed via one of the three internal streets within the neighborhood. As such, positive findings of compliance can be made.

UDO Section D-917(O)(1)(b) *Where the side or rear yards of lots may be oriented toward existing thoroughfare roads, a buffer at least 100 feet wide of existing woodland providing adequate visual screening throughout the year is required. The buffer width may be reduced to 50 feet if plantings are installed to include year-round screening.*

The development proposal includes the provision of a 50-foot thoroughfare buffer with evergreen screen in compliance with the allowable reduction provided. As such, positive findings of compliance can be made.

UDO Section D-917(P) *Any major subdivision shall be required to provide that a minimum of ten percent of the gross area of the subdivision, exclusive of any required minimum buffers along thoroughfares, consists of common open space.*

Per the above, the 28.959 acres site requires approximately 2.9 acres of open space. The plot plan denotes that 2.92 acres of open space are to be provided and located within and adjacent to the two stormwater BMP's. As such, positive findings of compliance can be made.

UDO Section D-917D, Supplemental Requirements for Certain Uses.

UDO Section D-917D, establishes supplements requirements for certain uses; however, not for all uses that are specifically listed in the UDO, including traditional residential development. As such, this Section is not applicable.

UDO Section D-918, General Requirements.

The various provisions set forth in UDO Section D-918, including, but not limited to visibility at intersections, lighting, screening, and landscaping, fences and walls, signs, and off-street parking and loading, as applicable, shall be reviewed for compliance with the submittal of plans for a Construction Permit. It is noted, however, that there do not appear to be any immediate concerns regarding compliance with these provisions.

UDO Appendix 5, Architectural Standards.

It is noted that many of the basic building design standards established in Appendix 5 are intended more for the engagement of pedestrians with retail storefronts and are not applicable to this development proposal.

RELATION TO THE CODE OF ORDINANCES:

Appendix C, Traffic Impact Analysis.

Pursuant to Sec. II (A) (1), a Traffic Impact Analysis (TIA) is required for any CZ which is expected to create 50 or more peak hour vehicle trips or 500 or more daily vehicle trips. As the proposal consists of only 18 single-family homes, this threshold is not being met and the provision of a TIA is not required.

LAND USE PLAN CONSISTENCY:

Land Use Goals:

Goal 3: *Minimize the visual effect of development from surrounding properties and roadways.*

The development proposal will be required to provide a perimeter landscape buffer that will, at minimum, meet the standards established within the UDO. As such, the development proposal meets the above Goal.

Goal 4: *To maintain the Town's strong single-family residential character.*

As the development proposal involves the creation of a new 18-lot single-family residential neighborhood, the development proposal will meet the above Goal.

Goal 5: *To retain a mix of land uses that reinforces Weddington's unique small-town character.*

The development proposal will not alter the existing land use of the property and, as such, will meet the above Goal.

Land Use Policies:

Policy 5: *Ensure that development is consistent with the Town's quality and aesthetic values, thereby protecting property values.*

The applicant has provided renderings of single-family homes that could be built in the proposed neighborhood. While these may not, definitively, be the specific homes that will be built, they are consistent with homes that are being built in Weddington neighborhoods today. Should the project be approved, further review shall be conducted upon submittal for Zoning Permits.

Policy 10: *Minimize the number of street curb cuts to avoid traffic congestion and ensure public safety.*

The development will make use of the existing three-way intersection at Weddington-Matthews and Cox Roads, as well as a stub out within Bromley for Delaney Drive as the two points of access into the neighborhood. As such, the development proposal has met the above Policy.

Policy 11: *Ensure that land uses abutting residential development are compatible with the scale, intensity, and overall character of existing and planned neighborhoods.*

The land uses abutting the subject property are as follows:

North	Single-Family Homes and Conservation Open Space
South	Single-Family Homes
East	Vacant *(owned by Union County Board of Education)*
West	Single-Family Homes

There are no compatibility concerns between the proposed development and the surrounding single-family homes and neighborhoods. Further, the proposed lot sizes are consistent with those found in the adjacent Bromley subdivision (west), and larger than those found in the adjacent Weddington Glen subdivision (north). As such, the development proposal will meet the Policy.

Policy 12: *Consider land use descriptions shown in Exhibit 1 and the Future Land Use Map shown in Exhibit 2 in making zoning and development decisions.*

Land Use	***Description***
Traditional Residential	*This category applies to areas where most of the lots and parcels are less than six acres in area. Most of this area is platted and is, or will be, zoned for 40,000 square foot lots at a density of approximately one dwelling unit per acre, in accordance with the Town's current Residential (R-40, R-40D, R-60, R-80, RE and RCD conventional) zoning districts.*

Conservation Residential	*This category applies to the areas within the Town that are currently zoned RCD or are six acres or greater in area. Some of this area has not been developed while some of the area is currently a conventional or conservation subdivision. Conventional subdivisions shall have minimum lot sizes of 40,000 square feet, plus be subject to a 10% open space requirement. Conservation subdivisions shall be subject to a conditional zoning permit and allow for smaller lot sizes yet retain a density of approximately one dwelling unit per 40,000 square feet.*
Neighborhood Business	*Existing commercially zoned (MX, B-1(CD) or B-2(CD)) parcels that lie in the vicinity of the "Town Center" or near the intersection of New Town Road and NC 16. This area is intended for neighborhood scale businesses that serve the needs of Weddington residents. All new commercial development will be in the Town Center and is subject to additional requirements found in the Downtown Overlay District.*

The subject parcel has a Conservation Residential Land Use designation, and the proposed conventional residential development is consistent with this designation. As such, the development proposal meets the above Policy.

Public Facilities and Services Goals:

Goal 2: *To ensure that all existing and future developments in Weddington are served by adequate water and sewage disposal facilities.*

It is expected that the proposed development would receive adequate water service without any anticipated issues; however, it is unclear as to the extent of sewer availability for the project. While there are no concerns regarding sewer access as there is a sewer line within the stub out for Delaney Drive, as well as at the northernmost end of the property, there is uncertainty as to the availability of capacity at present.

Public Facilities and Services Policies:

Policy 2: *Require transportation, water, wastewater, and drainage system improvements to be constructed concurrent with new development and that provide adequate capacity to meet demands from existing and new users.*

See response above for Public Facilities and Services Goal 2.

Community Design and Image Goals:

Goal 1: *To maintain and enhance the Town's aesthetic qualities and physical character.*

The applicant has provided renderings of single-family homes that could be built in the proposed neighborhood. While these may not, definitively, be the specific homes that will be built, they are consistent with homes that are being built in Weddington neighborhoods today. Should the project be approved, further review shall be conducted upon submittal for Zoning Permits.

Community Design and Image Policies:

Policy 1: Continue to encourage the preservation of older homes and structures in the community to preserve a sense of history.

The subject parcels contain a 1,129 square foot single-family home built circa 1950 that appears, from Union County records, to be in reasonably good condition. While it is certainly desirable to retain an older home that appears to be in good condition, the orientation of the home to Weddington-Matthews Road, as well as its location on the parcel and the constraint that applies to the balance of the land, make preservation of the home more difficult. This difficulty is compounded by the relatively small size of the home compared to those being constructed in the surrounding areas today. Relocation of the home may be worth pursuing; however, finding a suitable, vacant site that is ready to receive the building will not be any easier in the Weddington area. Nonetheless, the Planning Board may with to discuss this topic with the applicant.

Based upon the above, staff provides the following Land Use Plan Consistency Statement for consideration:

While the development proposal can be found to be generally consistent with the adopted Land Use Plan, there are Goals and Policies for which compliance cannot be determined at the present time based upon the level of plans required to be submitted for this phase of development. In addition, while there may also be Goals and Policies for which there may be reason for concern, positive findings can nonetheless be made in support of this development proposal.

RECOMMENDATION:

At its meeting of October 23, 2023, the Planning Board recommended **approval** of the Conditional Zoning request to allow for the development of an 18-lot major subdivision generally located at 5932 Weddington–Matthews Road.

Staff also recommends **approval** of the Conditional Zoning request to allow for the development of an 18-lot major subdivision generally located at 5932 Weddington–Matthews Road.

ATTACHMENTS:

Application
Sketch Plan
Zoning Map
Community Meeting Report
Downstream Stormwater Analysis Exhibit
Frontage Landscaping Exhibit
Sight Distance Exhibit

TOWN OF WEDDINGTON

Conditional Zoning Application

This application is required for all conditional zoning applications. Completed applications along with all associated submittal requirements, must be submitted via the Town's Self-Service Permitting Portal.

No application shall be considered complete unless accompanied by the application fee in the amount of $1,650.00.

It is the responsibility of the applicant to submit complete and correct information. Incomplete or incorrect information may invalidate your application. The applicant, by filing this application, agrees to comply with all applicable requirements of the Unified Development Ordinance.

APPLICANT INFORMATION

Name: Toll Brothers - Robert Price, Land Development Director

Mailing Address: 9130 Kings Parade Blvd; Charlotte, NC 28273

Phone Number: (980) 722-6715 Email: rprice1@tollbrothers.com

PROPERTY OWNER INFORMATION *(if different from applicant)*

Name: J Wayne & Cindy Carol Orr; Gerald D & Martha P Orr

Mailing Address: 6100 Matthews-Weddington Rd, Matthews, NC 28104 & 125 Lauren Dr, Indian Trail, NC 28079

Phone Number: J Wayne Orr: (704)526-6284 Email: Gerald D Orr: (704)574-6110

SUBJECT PROPERTY INFORMATION

Location: 5932 Weddington-Matthews Road; Weddington, NC

Parcel Number: 06123012 & 06123012C

Existing Zoning: R-CD

Use of Property: Single Family Residential

APPLICATION SUBMITTAL INFORMATION

All applications must include a site plan, drawn to scale, and supporting text that, as approved, will become a part of the Ordinance amendment. The site plan, drawn by an architect, landscape architect, or engineer licensed to practice in North Carolina, shall include any supporting information and text that specifies the actual use or uses intended for the property and any rules, regulations, and conditions in addition to all predetermined Ordinance requirements, will govern the development and use of the property. The applicant acknowledges that they will review the conditional zoning request prior to any zoning permits being issued by the Town for such project. The applicant shall, at a minimum, include as part of the application, each of the items listed below (including all submittal requirements listed in Appendix 2 of the UDO):

- A boundary survey showing the total acreage, present zoning classifications, date, and north arrow.
- The owner's names, addresses and the tax parcel numbers of all adjoining properties.
- All existing easements, reservations, and right-of-way on the property or properties in question.
- Proposed principal uses: a general summary of the uses that will take place, with reference made to the list of uses found in Section D-703 of the Unified Development Ordinance.
- Traffic impact analysis/study for the proposed service area, as determined by the Town Engineer, shall be required. In addition, traffic, parking and circulation plans, showing the proposed locations and arrangement of parking spaces and access points to adjacent streets including typical parking space dimensions and locations (for all shared parking facilities) along with typical street cross-sections.
- General information on the number, height, size, and location of structures.
- All proposed setbacks, buffers, screening, and landscaping required by these regulations or otherwise proposed by the petitioner.
- All existing and proposed points of access to public streets.
- Proposed phasing of the project.
- Proposed number, location, type, and size of all commercial signs.
- Exterior treatment of all principal structures.
- Delineation of all marginal lands, including areas within the regulatory floodplain, as shown on official Flood Hazard Boundary Maps for Union County.
- Existing and proposed topography at five-foot contour intervals or less.
- Scale and physical relationship of buildings relative to abutting properties.
- Public Involvement Meeting Labels.

Planning Board Review

Before the Planning Board review, the applicant must provide a written report of at least one community meeting held by the applicant. Reasonable notice of the required community meeting shall be provided as stated in Section D-607.C.5 of the Unified Development Ordinance. The Zoning Administrator shall present any properly completed application to the Planning Board at its next regularly scheduled meeting occurring at least 15 days after the

application has been deemed complete and ready for submission to the Planning Board. The Planning Board, by majority vote, may shorten or waive the time provided for receipt for a completed application. The Planning Board shall have 30 days from the date that the application is presented to it to review the application and to act. If such period expires without action taken by the Planning Board, the application shall then be transferred to the Town Council without a Planning Board recommendation.

Public Hearing Required
Prior to deciding on rezoning a piece of property to a Conditional Zoning District, the Town Council shall have held a public hearing. Notice of such public hearing shall have been given as prescribed in Section D-602 of the Unified Development Ordinance.

Action by Town Council
Conditional Zoning District decisions are a legislative process and shall consider applicable adopted land use plans for the area and other adopted land use policy documents and/or ordinances. A statement analyzing the reasonableness of the proposed rezoning shall be prepared for each application and evaluated by the Town Council. Once the public hearing has been held, the Town Council shall act on the petition. The Town Council shall have the authority to:

a. Approve the application as submitted.

b. Deny approval of the application.

c. Approve application with modifications that are agreed to by the applicant.

d. Submit the application to the Planning Board for further study. The Planning Board shall have up to 31 days from the date of such submission to make a report to the Town Council. If no report is issued, the Town Council can take final action on the petition. The Town Council reserves the right to schedule and advertise a new public hearing based on the Planning Board's report.

CERTIFICATION

I HEREBY CERTIFY that all the information provided for this application and all attachments is true and correct to the best of my knowledge. I further certify that I am familiar with all applicable requirements of the Weddington Unified Development Ordinance concerning this proposal, and I acknowledge that any violation of such will be grounds for revoking any approvals or permits granted or issued by the Town of Weddington.

Applicant — Date: 7/31/23

Property Owner — Date: 8-7-23

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TOWN OF WEDDINGTON

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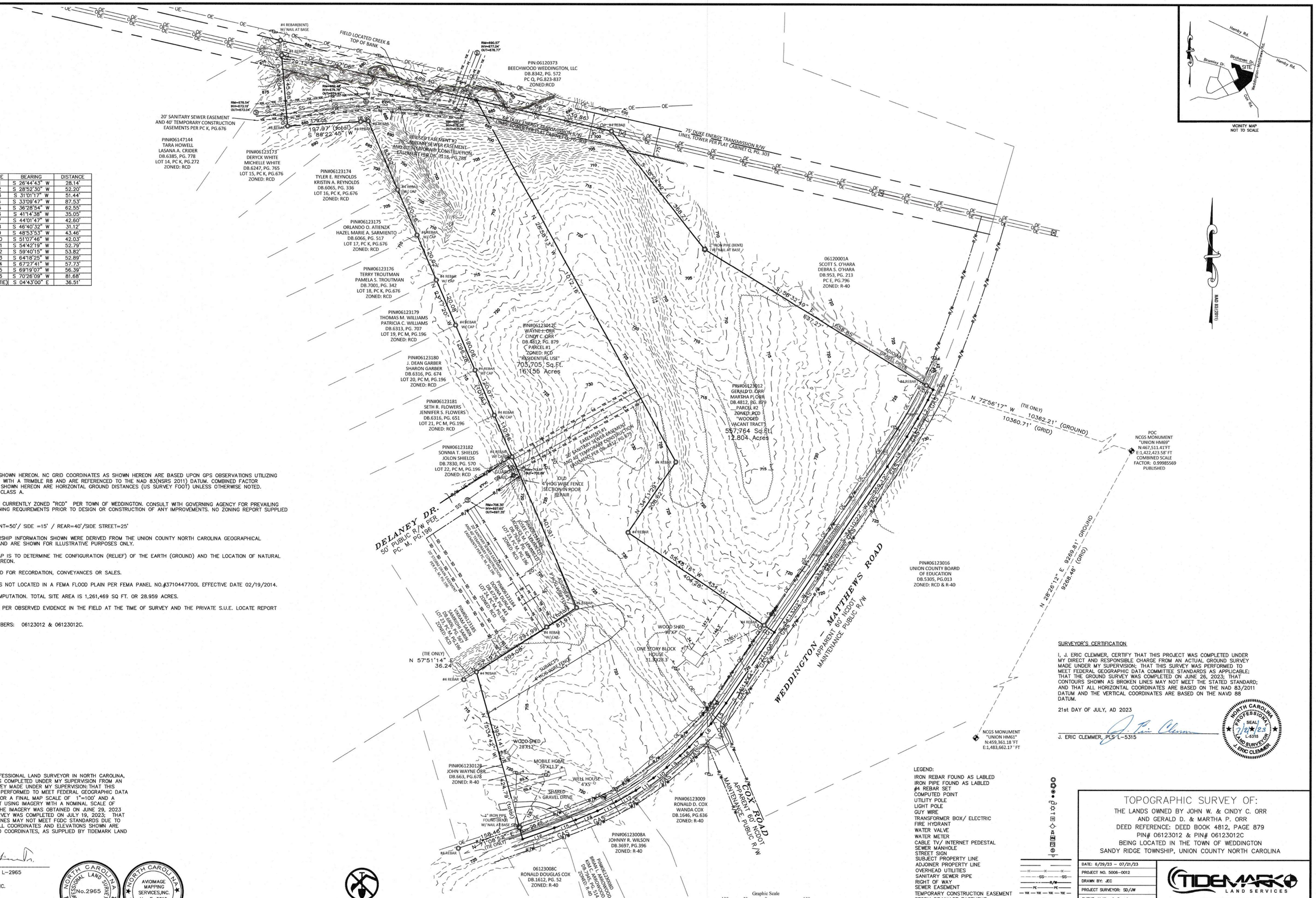
Applicant — Date: 7/31/23

DocuSigned by: Gerald Orr 4D1A7E4B213C46B... — 8/2/2023 | 5:16 PM EDT

DocuSigned by: Martha P Orr 971B2F27D22449A... — 8/2/2023 | 5:17 PM EDT

Property Owner — Date



LINE	BEARING	DISTANCE
L1	S 26°44'43" W	28.14'
L2	S 28°52'30" W	52.20'
L3	S 31°01'17" W	51.44'
L4	S 33°09'47" W	87.53'
L5	S 36°28'54" W	62.55'
L6	S 41°14'38" W	35.05'
L7	S 44°01'47" W	42.60'
L8	S 46°40'32" W	31.12'
L9	S 48°53'53" W	43.46'
L10	S 51°07'46" W	42.03'
L11	S 54°42'19" W	52.79'
L12	S 59°40'15" W	53.82'
L13	S 64°18'25" W	52.89'
L14	S 67°27'41" W	57.73'
L15	S 69°19'07" W	56.39'
L16	S 70°26'09" W	81.68'
L17(TIE)	S 04°43'00" E	36.51'

SURVEY NOTES:

1. TIE TO NCGS MONUMENT SHOWN HEREON. NC GRID COORDINATES AS SHOWN HEREON ARE BASED UPON GPS OBSERVATIONS UTILIZING NCGS' NETWORK RTK SYSTEM WITH A TRIMBLE R8 AND ARE REFERENCED TO THE NAD 83(NSRS 2011) DATUM. COMBINED FACTOR 0.99985569. ALL DISTANCES SHOWN HEREON ARE HORIZONTAL GROUND DISTANCES (US SURVEY FOOT) UNLESS OTHERWISE NOTED. CLASSIFICATION OF SURVEY: CLASS A.

2. SUBJECT PROPERTIES ARE CURRENTLY ZONED "RCD" PER TOWN OF WEDDINGTON. CONSULT WITH GOVERNING AGENCY FOR PREVAILING LAND DEVELOPMENT AND ZONING REQUIREMENTS PRIOR TO DESIGN OR CONSTRUCTION OF ANY IMPROVEMENTS. NO ZONING REPORT SUPPLIED BY THE CLIENT.

RDC ZONING SETBACKS: FRONT=50'/ SIDE =15' / REAR=40'/SIDE STREET=25'

3. PARCEL LINES AND OWNERSHIP INFORMATION SHOWN WERE DERIVED FROM THE UNION COUNTY NORTH CAROLINA GEOGRAPHICAL INFORMATION SYSTEM (GIS) AND ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY.

4. THE PURPOSE OF THIS MAP IS TO DETERMINE THE CONFIGURATION (RELIEF) OF THE EARTH (GROUND) AND THE LOCATION OF NATURAL AND ARTIFICIAL OBJECTS THEREON.

5. THIS MAP IS NOT INTENDED FOR RECORDATION, CONVEYANCES OR SALES.

6. THE SUBJECT PROPERTY IS NOT LOCATED IN A FEMA FLOOD PLAIN PER FEMA PANEL NO.#3710447700L EFFECTIVE DATE 02/19/2014.

7. AREA BY COORDINATE COMPUTATION. TOTAL SITE AREA IS 1,261,469 SQ FT. OR 28.959 ACRES.

8. THE UTILITIES SHOWN ARE PER OBSERVED EVIDENCE IN THE FIELD AT THE TIME OF SURVEY AND THE PRIVATE S.U.E. LOCATE REPORT PROVIDED BY CLIENT.

9. SUBJECT PARCEL PID NUMBERS: 06123012 & 06123012C.

SURVEYOR'S CERTIFICATION

I, J. ERIC CLEMMER, CERTIFY THAT THIS PROJECT WAS COMPLETED UNDER MY DIRECT AND RESPONSIBLE CHARGE FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THIS SURVEY WAS PERFORMED TO MEET FEDERAL GEOGRAPHIC DATA COMMITTEE STANDARDS AS APPLICABLE; THAT THE GROUND SURVEY WAS COMPLETED ON JUNE 26, 2023; THAT CONTOURS SHOWN AS BROKEN LINES MAY NOT MEET THE STATED STANDARD; AND THAT ALL HORIZONTAL COORDINATES ARE BASED ON THE NAD 83/2011 DATUM AND THE VERTICAL COORDINATES ARE BASED ON THE NAVD 88 DATUM.

21st DAY OF JULY, AD 2023

J. ERIC CLEMMER, PLS L-5315

NORTH CAROLINA PROFESSIONAL SEAL L-5315 LAND SURVEYOR J. ERIC CLEMMER 7/21/23

I, ROBERT F. AKERS, JR., A PROFESSIONAL LAND SURVEYOR IN NORTH CAROLINA, CERTIFY THAT THIS PROJECT WAS COMPLETED UNDER MY SUPERVISION FROM AN ACTUAL PHOTOGRAMMETRIC SURVEY MADE UNDER MY SUPERVISION; THAT THIS PHOTOGRAMMETRIC SURVEY WAS PERFORMED TO MEET FEDERAL GEOGRAPHIC DATA COMMITTEE (FGDC) STANDARDS FOR A FINAL MAP SCALE OF 1"=100' AND A CONTOUR INTERVAL OF ONE FOOT USING IMAGERY WITH A NOMINAL SCALE OF 0.20' PIXEL RESOLUTION; THAT THE IMAGERY WAS OBTAINED ON JUNE 29, 2023 AND THE PHOTOGRAMMETRIC SURVEY WAS COMPLETED ON JULY 19, 2023; THAT CONTOURS SHOWN AS BROKEN LINES MAY NOT MEET FGDC STANDARDS DUE TO OBSCURED GROUND AND THAT ALL COORDINATES AND ELEVATIONS SHOWN ARE BASED ON NORTH CAROLINA GRID COORDINATES, AS SUPPLIED BY TIDEMARK LAND SERVICES.

ROBERT F. AKERS, JR. PLS L-2965

AVIOIMAGE MAPPING SERVICES, INC.
4600 LEBANON ROAD – SUITE E
CHARLOTTE, NC 28227
PHONE: (704) 573-7080
bob@avioimage.com

NORTH CAROLINA PROFESSIONAL LAND SURVEYOR No.2965 ROBERT F. AKERS, JR.

NORTH CAROLINA AVIOIMAGE MAPPING SERVICES,INC. No. F-0810 CORPORATE LICENSE

BEFORE YOU DIG ! CALL 811 "ONE-CALL CENTER" N.C. ONE-CALL CENTER IT'S THE LAW !

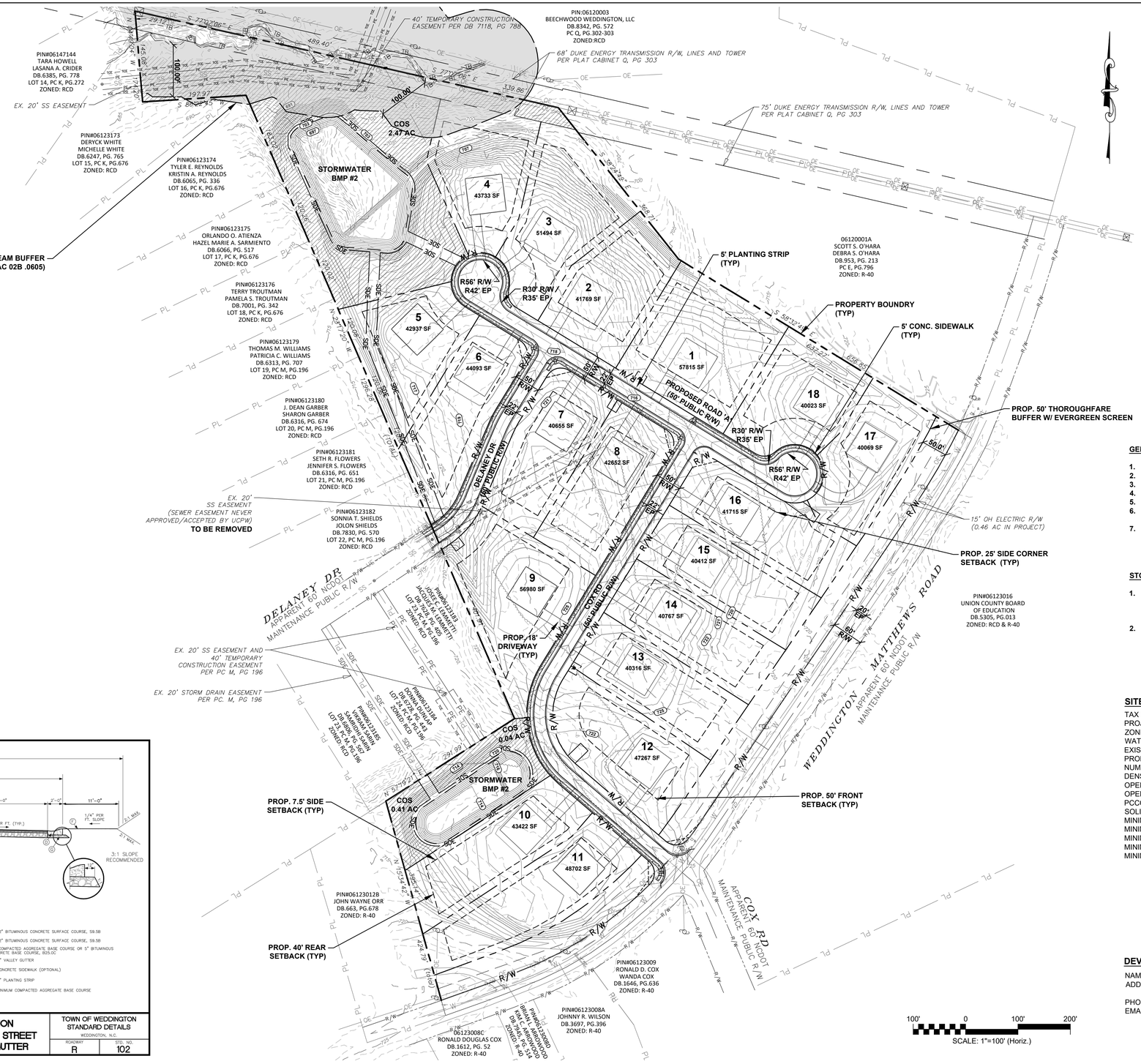
LEGEND:
IRON REBAR FOUND AS LABLED
IRON PIPE FOUND AS LABLED
#4 REBAR SET
COMPUTED POINT
UTILITY POLE
LIGHT POLE
GUY WIRE
TRANSFORMER BOX/ ELECTRIC
FIRE HYDRANT
WATER VALVE
WATER METER
CABLE TV/ INTERNET PEDESTAL
SEWER MANHOLE
STREET SIGN
SUBJECT PROPERTY LINE
ADJOINER PROPERTY LINE
OVERHEAD UTILITIES
SANITARY SEWER PIPE
RIGHT OF WAY
SEWER EASEMENT
TEMPORARY CONSTRUCTION EASEMENT
STORM DRAINAGE EASEMENT
UNDERGROUND ELECTRIC
NATURAL GAS LINE
TREE LINE / WOODS LINE
UNDERGROUND PHONE/COMMUNATIONS

TOPOGRAPHIC SURVEY OF:

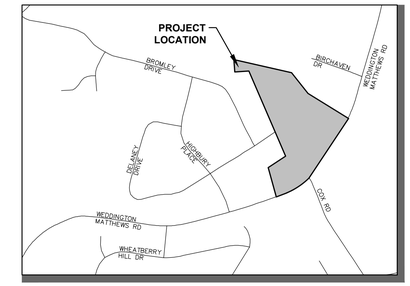
THE LANDS OWNED BY JOHN W. & CINDY C. ORR
AND GERALD D. & MARTHA P. ORR
DEED REFERENCE: DEED BOOK 4812, PAGE 879
PIN# 06123012 & PIN# 06123012C
BEING LOCATED IN THE TOWN OF WEDDINGTON
SANDY RIDGE TOWNSHIP, UNION COUNTY NORTH CAROLINA

DATE: 6/29/23 – 07/21/23	
PROJECT NO. 5006-0012	
DRAWN BY: JEC	
PROJECT SURVEYOR: SD/JW	
CLIENT: McKim & Creed	
SHEET 1 OF 1	
SCALE: 1' = 100'	
LAST REVISED:	

TIDEMARK LAND SERVICES
3556 CENTRE CIRCLE DRIVE, SUITE A
FORT MILL, SC 29715
OFFICE: 844.865.5263
WWW.TIDEMARKLAND.COM
NC FIRM C-4291 / SC COA 5654



VICINITY MAP N.T.S.



GENERAL NOTES:

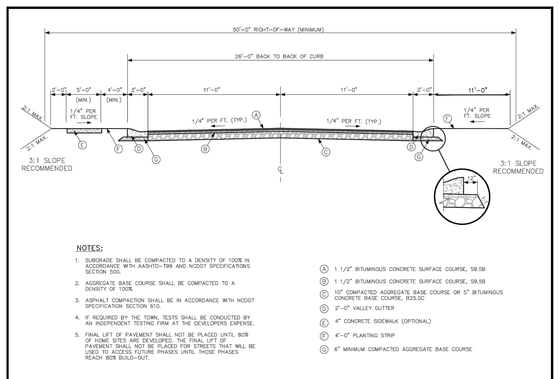
1. THE PROPOSED DEVELOPMENT IS A SINGLE FAMILY RESIDENTIAL SUBDIVISION.
2. A TRAFFIC IMPACT ANALYSIS IS NOT REQUIRED FOR THIS DEVELOPMENT.
3. THE PROPOSED DEVELOPMENT WILL NOT BE PHASED.
4. THE PROPOSED 3000-5000 SF HOMES ARE TO BE 2 STORIES HIGH.
5. THE PROPOSED HOMES WILL HAVE A FIBER CEMENT SIDING EXTERIOR FINISH.
6. THE PROPOSED HOMES WILL BE THE SAME MAXIMUM HEIGHT AS THE ADJOINING HOMES IN THE AREA.
7. IDENTIFIED WETLANDS SHALL NOT BE DISTURBED, OR THE APPROPRIATE PERMITS WILL BE OBTAINED.

STORMWATER MANAGEMENT NOTES:

1. THE DOWNSTREAM STORMWATER MANAGEMENT SYSTEM FROM THE PROPOSED STORMWATER BMP #2 WILL BE ANALYZED DURING THE CONSTRUCTION PLAN PHASE TO ENSURE THAT THE EXISTING SYSTEM CAN HANDLE THE ADDITIONAL FLOW.
2. THE STORM DRAINAGE WILL BE CONVEYED VIA CHANNELS AND A STORM PIPE SYSTEM TO THE PROPOSED BMPS. BOTH THE SWALES AND THE DRAINAGE SYSTEM WILL BE DESIGNED FOR THE 100 YEAR RUNOFF.

SITE STATISTICS

TAX MAP & PARCEL #:	06123012 & 06123012C
PROJECT AREA:	28.959 ACRES
ZONING:	R-CD
WATERSHED:	SIX MILE CREEK (LOWER CATAWBA)
EXISTING LAND USE:	SINGLE FAMILY RESIDENTIAL
PROPOSED LAND USE:	SINGLE FAMILY RESIDENTIAL
NUMBER OF LOTS:	18
DENSITY PROPOSED:	1.61 DUA
OPEN SPACE REQUIRED:	2.90 AC (10% GROSS AREA)
OPEN SPACE PROPOSED:	2.92 AC (10% GROSS AREA)
PCCO:	PER ORDINACE
SOLID WASTE:	ROLLOUT CONTAINERS
MINIMUM LOT SIZE REQUIRED:	40,000 SF
MINIMUM LOT SIZE PROVIDED:	40,000 SF +
MINIMUM LOT WIDTH REQUIRED:	120 LF
MINIMUM LOT WIDTH PROVIDED:	120 LF +
MINIMUM SETBACKS:	
FRONT	50'
SIDE	15'
SIDE CORNER:	25'
REAR	40'



NOTES:

1. SUBGRADE SHALL BE COMPACTED TO A DENSITY OF 100% IN ACCORDANCE WITH AASHTO-T99 AND NCDOT SPECIFICATIONS SECTION 500.
2. AGGREGATE BASE COURSE SHALL BE COMPACTED TO A DENSITY OF 100%.
3. ASPHALT COMPACTION SHALL BE IN ACCORDANCE WITH NCDOT SPECIFICATION SECTION 610.
4. IF REQUIRED BY THE TOWN, TESTS SHALL BE CONDUCTED BY AN INDEPENDENT TESTING FIRM AT THE DEVELOPERS EXPENSE.
5. FINAL LIFT OF PAVEMENT SHALL NOT BE PLACED UNTIL 80% OF HOME SITES ARE DEVELOPED. THE FINAL LIFT OF PAVEMENT SHALL NOT BE PLACED FOR STREETS THAT WILL BE USED TO ACCESS FUTURE PHASES UNTIL THOSE PHASES REACH 80% BUILD-OUT.

(A) 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE, S9.5B
(B) 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE, S9.5B
(C) 10" COMPACTED AGGREGATE BASE COURSE OR 5" BITUMINOUS CONCRETE BASE COURSE, B25.0C
(D) 2'-0" VALLEY GUTTER
(E) 4" CONCRETE SIDEWALK (OPTIONAL)
(F) 4'-0" PLANTING STRIP
(G) 6" MINIMUM COMPACTED AGGREGATE BASE COURSE

DATE: SEPTEMBER 2014 | SCALE: NTS
REVISIONS

TYPICAL SECTION RESIDENTIAL LOCAL STREET WITH CURB AND GUTTER

TOWN OF WEDDINGTON STANDARD DETAILS
WEDDINGTON, N.C.
ROADWAY: R | STD. NO.: 102

DEVELOPER

NAME: TOLL BROTHERS
ADDRESS: 9130 KINGS PARADE BLVD
CHARLOTTE, NC 28273
PHONE #: (980) 722-6715
EMAIL: rprice1@tollbrothers.com

OWNERS

NAME: J WAYNE & CINDY CAROL ORR
ADDRESS: 6100 MATTHEWS-WEDDINGTON RD
MATTHEWS, NC 28104
PHONE #: (704) 526-6284

NAME: GERALD D. & MARTHA P. ORR
ADDRESS: 125 LAUREN DR
INDIAN TRAIL, NC 28079
PHONE #: (704) 574-6110

REV.NO.	DESCRIPTIONS	DATE

REVISIONS

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and is not to be used for any purpose without the written consent of the engineer whose seal appears on the original certified document.

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Charlotte, North Carolina 28227
Phone: (704) 841-2588, Fax: (704) 841-2567
NC License# F-1222
www.mckimcreed.com

Toll Brothers
AMERICA'S LUXURY HOME BUILDER®

LUNA SUBDIVISION
WEDDINGTON, UNION COUNTY
NORTH CAROLINA

CONDITIONAL ZONING PLAN

DATE:	AUGUST 2023
MCE PROJ. #	02741-0010
DRAWN	ECB
DESIGNED	ECB
CHECKED	TMM
PROJ. MGR.	TMM

SCALE
HORIZONTAL: 1" = 100'
VERTICAL: N/A

DRAWING NUMBER
REVISION

STATUS: **PRELIMINARY DRAWING NOT FOR CONSTRUCTION**

I:\02741\0010\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\1_PRELIMINARY_DWGS\02741-0010_PRELIMINARY PLAT.DWG ---- 09/11/2023 10:29:56

LUNA SUBDIVISION
STORMWATER RUNOFF MANAGEMENT PLAN

LUNA IS A PROPOSED 18-LOT SINGLE-FAMILY SUBDIVISION LOCATED ON THE +/- 29 ACRES IN WEDDINGTON, UNION COUNTY, NORTH CAROLINA. THE EXISTING SITE CONDITIONS INCLUDE A MIX OF GRASS AND TREES. THE PREDOMINANT SOIL TYPES ACCORDING TO THE USDA SOIL SURVEY ARE CECIL, HELENA & APPLING, BOTH CECIL AND APPLING ARE WITH A HYDROLOGIC SOIL GROUP RATING OF "B" WHILE HELENA IS WITH A HYDROLOGIC SOIL GROUP RATING OF "D". THE PROPOSED AREA OF DISTURBANCE FOR THE PROJECT IS APPROXIMATELY 8.0 ACRES. THE SITE IS LOCATED IN THE SIXMILE CREEK WATERSHED, WITHIN THE CATAWBA RIVER BASIN. THE DEVELOPMENT WILL BE LOCATED OFF WEDDINGTON-MATTHEWS ROAD, APPROXIMATELY 70 FEET NORTH OF COX ROAD.

STORMWATER MANAGEMENT FOR THE SITE WILL BE DESIGNED IN ACCORDANCE WITH THE CHARLOTTE-MECKLENBURG STORMWATER DESIGN MANUAL, WITH EXCEPTIONS WHERE WEDDINGTON'S ORDINANCES LIST A STRICTER REGULATION.

OVER 20,000 SQUARE FEET OF NEW IMPERVIOUS WILL BE CREATED AS PART OF THE LUNA DEVELOPMENT, THEREFORE STORMWATER DETENTION WILL BE PROVIDED TO CONTROL RUNOFF TO PRE-DEVELOPED RATES FOR THE 2-, 10-, 25-, 50-, AND 100-YEAR, 24-HOUR STORM EVENTS. VOLUME CONTROL FOR THE 1-YEAR, 24-HOUR STORM WILL ALSO BE PROVIDED. THE SITE'S PROPOSED IMPERVIOUS PERCENTAGE MEETS THE THRESHOLD FOR A NCDEQ LOW-DENSITY STORMWATER PERMIT (<24%). HOWEVER, THE TOWN OF WEDDINGTON REQUIRES THAT THE STREET SECTIONS INCLUDE CURB AND GUTTER RATHER THAN GRASSED SWALES AND DRIVEWAY CULVERTS, WHICH TRIGGERS A NCDEQ HIGH-DENSITY PERMIT.

THE PROPOSED OUTFALL PIPE FROM BMP #2 WILL CONNECT TO AN EXISTING 36" RCP LOCATED WITHIN A STORM DRAINAGE EASEMENT (SDE) ALONG THE PROPERTY LINE BETWEEN 1316 DELANEY DRIVE AND 1400 DELANEY DRIVE IN THE BROMLEY SUBDIVISION. A DOWNSTREAM DRAINAGE ANALYSIS WILL BE PERFORMED TO ENSURE THE EXISTING SYSTEM CAN HANDLE FLOWS FROM THE PROPOSED DEVELOPMENT. THE POST-DEVELOPMENT PEAK FLOWS FOR THE 2-, 10-, 25-, 50-, AND 100-YEAR, 24-HOUR STORM EVENTS ENTERING THE EXISTING BROMLEY STORM SYSTEM FROM BMP #2 WILL BE NO GREATER THAN THE CURRENT PRE-DEVELOPMENT FLOWS.

STORMWATER MANAGEMENT NOTES:

1. **THE DOWNSTREAM STORMWATER MANAGEMENT SYSTEM FROM THE PROPOSED STORMWATER BMP #2 WILL BE ANALYZED DURING THE CONSTRUCTION PLAN PHASE TO ENSURE THAT THE EXISTING SYSTEM CAN HANDLE THE ADDITIONAL FLOW.**
2. **THE STORM DRAINAGE WILL BE CONVEYED VIA CHANNELS AND A STORM PIPE SYSTEM TO THE PROPOSED BMPS. BOTH THE SWALES AND THE DRAINAGE SYSTEM WILL BE DESIGNED FOR THE 100 YEAR RUNOFF.**

100' 50' 0 100' 200'
1"=100'

REV.NO.	DESCRIPTIONS	DATE

REVISIONS

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NC License# F-1222
www.mckimcreed.com

LUNA SUBDIVISION
TOWN OF WEDDINGTON, UNION COUNTY
NORTH CAROLINA

STORMWATER CONCEPT PLAN

DATE:	APRIL 2023
MCE PROJ. #	07780-0033
DRAWN	DJS
DESIGNED	DJS
CHECKED	BBJ
PROJ. MGR.	BBJ

SCALE
HORIZONTAL: 1" = 100'
VERTICAL: N/A

DRAWING NUMBER
REVISION

STATUS: **PRELIMINARY DRAWING NOT FOR CONSTRUCTION**

I:\02741\0010\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\02741-0010 STORMWATER CONCEPT.DWG ---- 09/11/2023 06:22:02

Ashdale

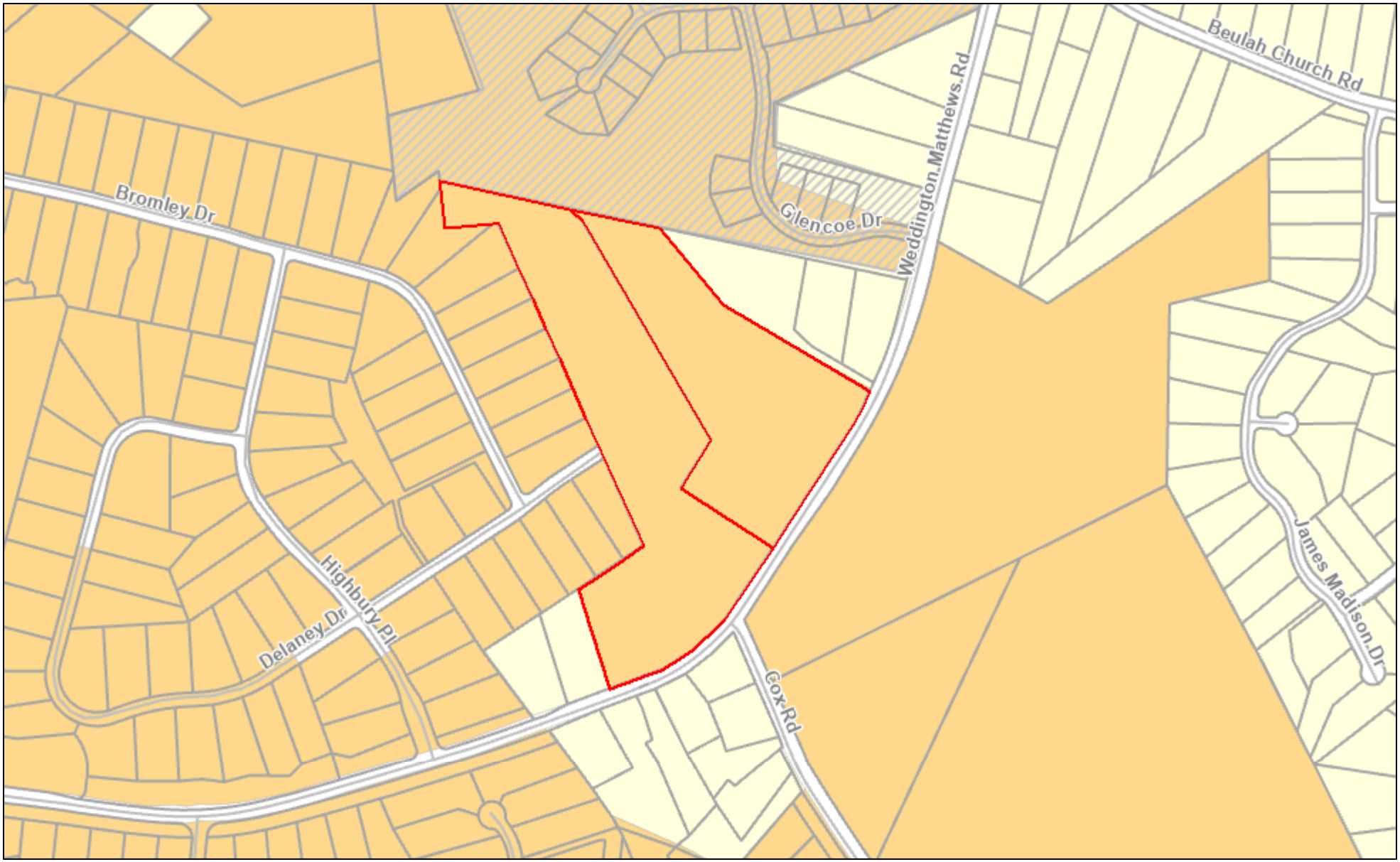
Dunmore

Halstead

Kendrick

Stoneridge

LUNA SUBDIVISION



September 18, 2023

Weddington Zoning

- B1 (CD)
- B2 (CD)
- ED
- MX
- R-40
- R-40D
- R-60
- R-80
- R-CD
- RE
- Conditional Zoning
- Downtown Overlay

1:7,367

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Luna Subdivision - Community Meeting Report

COMMUNITY MEETING REPORT
Petitioner: Toll Brothers
Note: This Petition is not for rezoning.
The current R-CD zoning designation will remain.

This Community Meeting Report is being provided to Town of Weddington Planning Staff/Administrator pursuant to the provisions of the "Town of Weddington, NC Unified Development Ordinance" Section D-607.C.5.

PERSONS AND ORGANIZATIONS CONTACTED WITH DATE AND EXPLANATION OF HOW CONTACTED:

McKim & Creed, a representative of the Petitioner, provided the Town of Weddington (the Town) with a written notice of the date, time, and instructions for interested parties to respond to the notice of the Community Meeting on August 8, 2023. The Town then mailed that notice to adjacent property owners within 1,300 linear feet of the proposed development by depositing such notice in the U.S. mail and posted the notice on the Town's website. The mailing list is attached hereto as Exhibit A. A copy of the written notice is attached hereto as Exhibit B.

DATE, TIME AND LOCATION OF MEETING:

The Community Meeting was held on (08/15/2023) at (6:00pm) online via Zoom.

PERSONS IN ATTENDANCE AT MEETING (see **attached copy of participants**)**:**

The Community Meeting was attended by those individuals identified on the Zoom screen and attached hereto as Exhibit C. The Petitioner was represented at the Community Meeting by Beth Johnston and Tracey McCormick of McKim & Creed.

SUMMARY OF PRESENTATION/DISCUSSION:

Minutes: The Petitioner's agent, Beth Johnston, welcomed the participants, explained that there would be a short presentation and a time for questions at the end of the presentation, and introduced the Petitioner's team. Ms. Johnston indicated that Toll Brothers proposed to develop the approximately 29-acre site located at 5932 Weddington-Matthews Road, Weddington, NC, with the intention to subdivide the parcel into 18 lots to construct for-sale, market-rate single-family homes. Ms. Johnston conducted the presentation that described the existing site conditions, described the proposed site plan, and presented a typical conceptual timeline of the review and approval process. At the conclusion of the presentation, the meeting was opened for questions and concerns from participants. A copy of the presentation is attached hereto as Exhibit D.

Twenty-three (23) log-in names, not including petitioner or petitioner's representatives, were recorded in attendance as set out in Exhibit E. Many spoke with questions and comments, with the main concerns being: 1) The increase in traffic volume on Weddington-Matthews Road, 2) Cut-through traffic in Bromley due to the proposed connection at Delaney Drive, 3) Potential issues with an increase in sewer volume if connecting to existing lines in Bromley, 4) The potential adverse effect of stormwater runoff from Luna into Bromley and the potential for Bromley homeowners to have to pay for further repairs, 5) Potential safety issues from the alignment of the main entry for Luna with Cox Road, 6) The need for a traffic study, and 7) the lack of a buffer between Bromley and Luna.

A summary of questions asked/*replies given*, and comments is as follows:

From Bill Deter:
- Clarified that the site is 28.9 acres. *Beth misspoke during the presentation and gave the acreage as 18.9.*
- Can you explain the Buffer along Matthews-Weddington Road?
  The buffer is a 50' landscaped buffer required when the side or rear of lots are adjacent to an existing road. The plant material must create a year-round screen.
- Will the streets be curbed? *Yes*
- Other concerns: The BMP located between Luna Lot 10 and the property boundary (*positioned as topography and drainage area requires and is shown connecting to an existing 20' storm drain easement)*, Sight Distance at Weddington-Matthews Road (*Site Distance study will be a part of civil design)*, and would like to see turn lanes added, especially a left-turn so traffic doesn't back up (*The Town determines if a TIA will be required, and has determined that Luna does not meet the threshold established in the TIA Ordinance)*

From Chris Gushue:
- Concerned that the only other entrance into Luna besides the Matthews-Weddington Road one is via a connection to Delaney Drive, and the cut-through traffic that connection will inflict on Bromley. Feels this

connection will impede Bromley homeowners. *When a road is stubbed at a property line, the Town's UDO requires a connection.*

- Stated that Bromley homeowners pay a yearly HOA fee for shared amenities and are currently paying an additional assessment for repairs to the existing lake due to stormwater damage. Concerned that stormwater from Luna will adversely affect Bromley's system, causing Bromley's homeowners to pay for possible damage without consequences to Luna homeowners. Proposed that, as mitigation to this possibility, HOA's for Bromley and Luna be combined. *Storm facilities will be designed per local and state requirements, which have become more rigorous since Bromley's infrastructure was designed.*
- Concerned about connecting Luna to the existing sanitary sewer in Bromley. Stated the there is a current issue with unacceptable results from a system clean-out by the Town to eliminate blockages for some homes in Bromley. *Since public water and sewer are controlled by Union County, per that UDO, when sewer is available within 300', new development must connect.*
- Concerned about traffic speed, and asked if there will be barriers and/or speed bumps. *Neither are required or planned at this time.*
- Stated that he would like the Town to provide existing residents with an opportunity to voice concerns about layout and road connections. *Robert Tefft, Weddington Town Planner, responded that the current plan is neither final nor approved, and that there will be a public hearing if/when the plan reaches Town Council.*
- Requested that Toll Brothers provide an opportunity for Bromley residents to voice their concerns about the proposed plan and stated that he will submit his concerns to the Bromley HOA board.

From Jolon Shields:

- Lives at the corner of Bromley Drive and Delaney Drive and backs up to the Luna property line.
- Is there a possible connection from Luna to Hemby Road. *No – the Luna parcel does not reach Hemby Road.*
- Is there fencing required or proposed between Luna & Bromley. *No, there is no fencing proposed, as the zoning designation and use for both communities is the same, but it will be brought to the attention of Toll Brothers.*
- Can there be a gate installed in Luna at the connection to Delaney. *Currently, Delaney is a public street, so the extension into Laney will have to be public as well. NCDOT will not allow gates on a public street.*

From Richard:

- Lives in Bromley and has the same issues as Mr. Gushue.
- Also is concerned with the proposed connection point for Luna at Cox Road. Cox already has speed issues and feels the connection alignment is not safe, needs review and possible realignment.
- Is concerned that sanitary sewer capacity is not adequate.
- What are the proposed price points for homes in Luna? *The market will ultimately determine price, but homes are expected to be priced similarly to those in The Enclave at Baxley, at the corner of Providence and Hemby Roads. (Current median list price is $1,514,402)* Is concerned that Enclave at Baxley pricing is much lower than the current Bromley price point.

From Bill Fox:

- Requested a copy of the presentation. *PDF copy emailed to Mr. Fox 8/16/2023.*

From Gale Swartz:

- Concerned about construction traffic, damage to streets, noise, etc. Stated she would like to have assurance that no construction traffic will go through Bromley. *Tracey McCormick stated that civil plans approved for construction will be noted that all construction traffic shall use the provided construction entrance, which should be off of Matthews-Weddington Road.*

From Debra O'Hara:

- Lives on the property adjacent to Luna at the northern boundary. Will there be a buffer between the two properties? *No, there is no buffer required or proposed, as the zoning designation and use for both properties is the same. Per the UDO, there will be a 40' rear setback on all lots in Luna.*

From Wanda Shaver:

- Lives adjacent to Weddington-Matthews Road just north of the Luna parcel. Requests that a buffer be provided in Luna along the adjacent boundary. Concerned about the speed of traffic on both Weddington-Matthews Road and Cox Road, as well as drivers not stopping at the intersection of Weddington-Matthews and Cox Roads, and that the addition of an entrance to Luna will be detrimental to the safety of the intersection.

From Robert Tefft, Weddington Town Planner:
The most likely date for the project to come before the Planning Commission is the September 25th meeting.

From Robert Price, Land Development Director, Charlotte, Toll Brothers:
Believes Luna will be a great addition to the community of Weddington and is excited for the project to move forward.

From Zoom Chat Log:

00:36:10 Robert Tefft: This project will not be on the Planning Board agenda for August 28th.

00:49:17 Gale Schwartz: Who is addressing this question

00:49:50 Bill Deter: Robert Teft Town Planner

01:10:31 Ken Mertzel: Thanks for the update. I strongly agree with the need for the left turn lane. I also believe the HOAs should be combined as long as our Bromley fees are not increased.

01:16:32 Gale Schwartz: Traffic in Bromley as well at Cox Rd will be a BIG ISSUE. Please do a proper study on this.

Respectfully submitted, this 1st day of September 2023.

EXHIBIT A

ADJOINING OWNERS, INDIVIDUALS AND ORGANIZATIONS

BEECHWOOD WEDDINGTON LLC
C/O THE BEECHWOOD ORGANIZATION
JERICHO, NY 11753

ORR J WAYNE
6100 MATTHEWS WEDDINGTON RD
MATTHEWS, NC 28104

ATIENZA ORLANDO O
1225 BROMLEY DR
WEDDINGTON, NC 28104

GARBER J DEAN
1237 BROMLEY DR
WEDDINGTON, NC 28104

LEMMETTI JOSEE C
1404 DELANEY DR
WEDDINGTON, NC 28104

HOWELL TARA
1213 BROMLEY DR
MATTHEWS, NC 28104

FAHRUDIN, AJANOVIC
1040 JAMES MADISON DR
WEDDINGTON, NC 28104

HP NORTH CAROLINA, LLC
120 S RIVERSIDE PLAZA
CHICAGO, IL 60606

ARROWOOD, KIM C
6011 WEDDINGTON MATTHEWS RD
MATTHEWS, NC 28104

RODOLFO, LEIVA
6110 WEDDINGTON MATTHEWS RD
MATTHEWS, NC 28104

ORR GERALD D
125 LAUREN DR
INDIAN TRAIL, NC 28079

WHITE DERYCK
1217 BROMLEY DR
WEDDINGTON, NC 28104

TROUTMAN TERRY
1229 BROMLEY DR
WEDDINGTON, NC 28104

FLOWERS SETH RICHARD
1241 BROMLEY DR
WEDDINGTON, NC 28104

DUNLAP DONNA
1400 DELANEY DR
WEDDINGTON, NC 28104

O'HARA SCOTT S
5810 MATTHEWS WEDDINGTON RD
MATTHEWS, NC 28104

KONDRATUK, PEDRO
3008 PROVIDENCE FOREST DRIVE
MATTHEWS, NC 28104

SHAVER, WANDA Y
5800 WEDDINGTON MATTHEWS RD
MATTHEWS, NC 28104

COX, RONALD D
6001 WEDDINGTON MATTHEWS RD
MATTHEWS, NC 28104

SCHICK, JOHN T
5017 HEMBY ROAD
MATTHEWS, NC 28104

ORR JOHN WAYNE
6100 MATTHEWS WEDDINGTON RD
MATTHEWS, NC 28104-9345

REYNOLDS TYLER EDWARD TRUSTEE
1221 BROMLEY DR
MATTHEWS, NC 28104

WILLIAMS THOMAS M
1233 BROMLEY DR
WEDDINGTON, NC 28104

SHIELDS SONNIA T
1401 DELANEY DR
MATTHEWS, NC 28104

SARIN VIKRAM
1316 DELANEY DR
WEDDINGTON, NC 28104

HINSON FARMS, LLC
1300 COX RD
MATTHEWS, NC 28104

JONES, PATRICIA
5516 WEDDINGTON MATTEWS RD
MATTHEWS, NC 28104

COX, RONALD DOUGLAS
6015 WEDDINGTON MATTHEWS RD
MATTHEWS, NC 28104

COX, KENNETH MORRIS
6101 WEDDINGTON MATTHEWS RD
MATTHEWS, NC 28104

KHALID, KEVIN
1216 COX RD
MATTHEWS, NC 28104

GHORY, WILLIAM JOSEPH TRUSTEE
1032 MADISON DR
MATTHEWS, NC 28104

WILSON, JOHNNY RAY
6009 WEDDINGTON MATTHEWS RD
MATTHEWS, NC 28104

TROUTMAN, TERRY
1229 BROMLEY DR
WEDDINGTON, NC 28104

WHITE, DERYCK
1217 BROMLEY DRIVE
WEDDINGTON, NC 28104

HOWELL, TARA
1213 BROMLEY DRIVE
WEDDINGTON, NC 28104

KALASCH, CRAIG D
1201 BROMLEY DRIVE
WEDDINGTON, NC 28104

CHUDGAR, ASHOK B
1208 BROMLEY DRIVE
WEDDINGTON, NC 28104

WILLIAMS, THOMAS
1233 BROMLEY DRIVE
WEDDINGTON, NC 28104

SHIELDS, SONNIA T
1401 DELANEY DRIVE
WEDDINGTON, NC 28104

LEAKE, JASON L
1238 BROMLEY DRIVE
WEDDINGTON, NC 28104

STEWART, LAMAR SR.
PO BOX 78351
CHARLOTTE, NC 28271

JENSON, KIRK
1140 BROMLEY DRIVE
WEDDINGTON, NC 28104

ORLANDO, ARTIENZA O
1225 BROMLEY DRIVE
WEDDINGTON, NC 28104

VITALE, RORY D
1218 BROMLEY DRIVE
WEDDINGTON, NC 28104

ARRESE, MANUEL R TRUSTEE
1209 BROMLEY DRIVE
WEDDINGTON, NC 28104

MARTIN, MATTHEW A
1139 BROMLEY DRIVE
WEDDINGTON, NC 28104

SUTTON, ERIC CHRISTOPHER TRUSTEE
3009 HIGHBURY PLACE
WEDDINGTON, NC 28104

GARBER, DEAN J
1237 BROMLEY DRIVE
WEDDINGTON, NC 28104

RAMIREZ, RICHARD
1230 BROMLEY DRIVE
WEDDINGTON, NC 28104

RANDAZZO, JAMES
3121 HIGHBURY PLACE
WEDDINGTON, NC 28104

JONES, JAMES SCOTT, JR.
5532 WEDDINGTON MATTHEWS RD
MATTHEWS, NC 28104

BADALYAN, GRIGOR
3017 HIGHBURY PLACE
MATTHEWS, NC 28104

REYNOLDS, TYLER EDWARDS TRUSTEE
1221 BROMLEY DRIVE
WEDDINGTON, NC 28104

ANELLI, CHRISTOPHER R
1226 BROMLEY DRIVE
WEDDINGTON, NC 28104

BERRY, JESSE WADE
1205 BROMLEY DRIVE
WEDDINGTON, NC 28104

INCALCATERA, SALVATORE
1133 BROMLEY DRIVE
WEDDINGTON, NC 28104

MATTHEWS, GRANT J
3013 HIGHBURY PLACE
WEDDINGTON, NC 28104

FLOWERS, SETH RICHARD
1241 BROMLEY DRIVE
WEDDINGTON, NC 28104

JIANG, LIANG
1234 BROMLEY DRIVE
WEDDINGTON, NC 28104

PATEL, MILAPKUMAR R
3129 HIGHBURY PLACE
WEDDINGTON, NC 28104

CLYNES, VICENTE FUSCO
1305 DELANEY DRIVE
WEDDINGTON, NC 28104

DUNLAP, DONNA
1400 DELANEY DRIVE
WEDDINGTON, NC 28104

MALISETTY, RAMYA
1308 DELANEY DRIVE
WEDDINGTON, NC 28104

CASTALDO, CHRISTOPHER
3225 HIGHBURY PLACE
WEDDINGTON. NC 28104

PATEL, JAY G
320 SQUASH HARVEST COURT
WEDDINGTON, NC 28104

BROMLEY COMMUNITY ASSOCIATION, INC
312 BULKHEAD WAY, STE 104-301
CLOVER, SC 29710

PALARDY, MICHAEL
6001 WEDDINGTON MATTHEWS ROAD
MATTHEWS, NC 28104

DIXON, RYAN E
3105 HIGHBURY PLACE
MATTHEWS, NC 28104

CONES, JOHN ANTHONY
1129 BROMLEY DRIVE
MATTHEWS, NC 28104

FIELDING, ROBERT J
1309 DELANEY DRIVE
WEDDINGTON, NC 28104

SARIN, VIKRIM
1316 DELANEY DRIVE
WEDDINGTON, NC 28104

ALROMAIZAN, WALEED SALEH
1304 DELANEY DRIVE
WEDDINGTON, NC 28104

PARIKH, DOLLYBEN V
3217 HIGHBURY PLACE
WEDDINGTON, NC 28104

APPEL, FREDRIK F
324 SQUASH HARVEST COURT
WEDDINGTON, NC 28104

PALARDY, MICHAEL
501 WINTER WHEAT COURT
WEDDINGTON, NC 28104

BEECHWOOD ORGANIZATION, LLC
200 ROBBINS LN
JERICHO, NY 11753

EATON, JONATHAN
1121 BROMLEY DRIVE
MATTHEWS, NC 28104

DROST, JAMES EDWARD TRUSTEE
1203 DELANEY DRIVE
WEDDINGTON, NC 28104

LEMMENTTI, JOSEE C
1404 DELANEY DRIVE
WEDDINGTON, NC 28104

LIU, WEICHENG
1312 DELANEY DRIVE
WEDDINGTON, NC 28104

SCHWARTZ, STEVEN A
3201 HIGHBURY PLACE
WEDDINGTON, NC 28104

OLLMAN, RICHARD J
3209 HIGHBURY PLACE
WEDDINGTON, NC 28104

SCOTT, TROY B
321 SQUASH HARVEST COURT
WEDDINGTON, NC 28104

HONOR NC, LLC
PO BOX 79306
CHARLOTTE, NC 28271

MOBRAY, WANDA MORRIS
5207 HEMBY RD
MATTHEWS, NC 28104 - 9300

HARP, DEAN J
1125 BROMLEY DRIVE
MATTHEWS, NC 28104

ALLENSPACH, BRIAN THOMAS
1206 DELANEY DRIVE
WEDDINGTON, NC 28104

LOWE, CARL JARRETT JR.
3106 HIGHBURY PLACE
WEDDINGTON, NC 28104

MCLAUGHLIN, MICHAEL & ELLEN FLODIN TRUST
3021 HIGHBURY PLACE
WEDDINGTON, NC 28104

ZELENZ, JOHN H
3018 HIGHBURY PLACE
WEDDINGTON, NC 28104-2400

TOPETE, KARLA A
3018 HIGHBURY PLACE
MATTHEWS, NC 28104-2400

DAVIS, GREORGE R
1134 BROMLEY DRIVE
WEDDINGTON, NC 28104

PATTISON, ERIC HAYES
1130 BROMLEY DR
WEDDINGTON, NC 28104

WARREN, KEVIN O
1134 BROMLEY DRIVE
WEDDINGTON, NC 28104

CULBREATH, IKO JERMAINE
1134 BROMLEY DRIVE
WEDDINGTON, NC 28104

GADIRAJU, RAVI
1120 BROMLEY DRIVE
WEDDINGTON, NC 28104

GADIRAJU, RAVI
1120 BROMLEY DRIVE
WEDDINGTON, NC 28104

PATEL, PRANAV
3118 HIGHBURY PLACE
WEDDINGTON, NC 28104

DENDY, COREY O
3109 HIGHBURY PLACE
WEDDINGTON, NC 28104

HATAM, MATTHEW K
3115 HIGHBURY PLACE
WEDDINGTON, NC 28104

FOX, WILLIAM A III
1269 DELANEY DRIVE
MATTHEWS, NC 28104

CHELLAMANI, RAJESH
3200 HIGHBURY PLACE
WEDDINGTON, NC 28104

CHEN, HONG
1269 DELANEY DRIVE
MATTHEWS, NC 28104

VATTEPU, NARENDER
1269 DELANEY DRIVE
WEDDINGTON, NC 28104

LOPES, ALEXANDRE RICARTE
1265 DELANEY DRIVE
WEDDINGTON, NC 28104

WIGGERS, MICHAEL J TRUSTEE
1261 DELANEY DRIVE
MATTHEWS, NC 28104

PRABHU, VIJAYA S TRUSTEE
3208 HIGHBURY PLACE
WEDDINGTON, NC 28104

PATEL, DAPESH
3216 HIGHBURY PLACE
WEDDINGTON, NC 28104

HUBER, MARK EDWARD
312 SQUASH HARVEST COURT
WEDDINGTON, NC 28104

HOWARD, GORDON F
316 SQUASH HARVEST COURT
MATTHEWS, NC 28104

WALTHALL, JEFFERY D
317 SQUASH HARVEST COURT
WEDDINGTON, NC 28104

WEIBEL, TIMOTH JOHN JR
413 WHEATBERRY HILL DRIVE
MATTHEWS, NC 28104

DETIG, JEFFREY K
417 WHEATBERRY HILL DRIVE
MATTHEWS, NC 28104

ALPERN, JASON STANLEY
421 WHEATBERRY HILL DRIVE
MATTHEWS, NC 28104

SWEENEY, BRANDON
608 WINTER WHEAT COURT
MATTHEWS, NC 28104

HICKEY, WALTER L
604 WINTER WHEAT COURT
MATTHEWS, NC 28104

VAZIRI, KIM ANN
600 WINTER WHEAT COURT
MATTHEWS, NC 28104

PATEL, KETALKUMAR
512 WINTER WHEAT COURT
MATTHEWS, NC 28104

BHATIA, TEJWANT
504 WINTER WHEAT COURT
MATTHEWS, NC 28104

CIAMPI, JOSEPH J
500 WINTER WHEAT COURT
MATTHEWS, NC 28104

PALARDY, MICHAEL
501 WINTER WHEAT COURT
MATTHEWS, NC 28104

PORTER, SHEILA DIANE TRUSTEE
509 WINTER WHEAT COURT
MATTHEWS, NC 28104

BERTOSSI, PAUL
513 WINTER WHEAT COURT
MATTHEWS, NC 28104

NOONAN, EDWARD WILLIAM
601 WINTER WHEAT COURT
MATTHEWS, NC 28104

EKWONU, NWAMAKA N TRUSTEE
605 WINTER WHEAT COURT
MATTHEWS, NC 28104

GILBOY, KRISTOPHER
609 WINTER WHEAT COURT
MATTHEWS, NC 28104

ORAVEC, JEFFREY G
613 WINTER WHEAT COURT
MATTHEWS, NC 28104

STEWART, MATTHEW STEPHAN
1120 COX DRIVE
MATTHEWS, NC 28104

NOONAN, EDWARD WILLIAM
112 GLENCOE DRIVE
MATTHEWS, NC 28104

EXHIBIT C

NOTICE TO INTERESTED PARTIES
OF COMMUNITY MEETING

Subject: Community Meeting – Application filed by Toll Brothers, Inc. to develop approximately 29 acres located at 5932 Matthews-Weddington Rd, Matthews, NC 28104 within the Town of Weddington, consisting of eighteen (18) single family detached lots and required associated improvements.

Date and Time of Meeting: August 15, 2023; 6:00 – 7:00pm

Place of Meeting: Virtual via Zoom link.
Instructions to obtain the link are outlined below.

Petitioner: Toll Brothers, Inc.

Petition No.: TBD

We are assisting Toll Brothers, Inc. (the "Petitioner") with a Development Application filed with the Town of Weddington. The petitioner is not seeking a rezoning. The parcels will remain R-CD as currently zoned and developed according to the standards applicable to R-CD. The Town of Weddington utilizes the Conditional Zoning Application form and review process for any residential development over 5 lots.

In accordance with the requirements of the Town of Weddington, the Petitioner will hold a Community Meeting prior to the Planning Board review on this Development Application to discuss this proposal with nearby property owners and organizations. The Town of Weddington's records indicate that either you are:

1) An owner of property that adjoins, is located across the street from, or is near the Site, or
2) A representative of a registered neighborhood organization.

Accordingly, on behalf of the Petitioner, we give you notice that representatives of the Petitioner will hold a Virtual Community Meeting regarding this Development Application on August 15, 2023, via Zoom from 6:00-7:00 pm. The Petitioner's representative's look forward to sharing this proposal with you and to answering questions you may have with respect to this Development Application.

To request a direct link to the presentation and community meeting, please email
communitymeetingaccess@mckimcreed.com

You will receive a reply email containing a direct link to the presentation and community meeting, which will be accessible 15 minutes prior to the stated start time.

In the meantime, should you have any questions or comments about this matter, please call Tracey McCormick at 704-945-3367.

cc: File

EXHIBIT D

LIST OF PARTICIPANTS

Community Information Meeting via Zoom
Luna Subdivision
August 15, 2023
6:00 pm

Beth Bailey Johnston– Presenting – McKim & Creed, Petitioner's Representative
Tracey McCormick – McKim & Creed, Petitioner's Representative

Robert Price – Toll Brothers, Petitioner

1 Eileen Fellmeth
2 Kim Topalian
3 Sharon Barber
4 Wanda Shaver
5 Craig Horn
6 Gale Swartz
7 Jolon Shields
8 Jim Bell
9 Chris Fault
10 Bill Deter
11 Richard
12 Ruth Pagano
13 Chris Gushue
14 Dolly Parkih
15 George
16 Ken Mertzel
17 Harold Washington
18 Josee Lemmetti
19 Terry Troutman
20 Bill Fox
21 ipad
22 Robert Tefft – Town of Weddington
23 Kim Dewey – Town of Weddington

EXHIBIT E

PRESENTATION

Luna

August 15, 2023

6:00 – 7:00 pm

McKIM&CREED
ENGINEERS SURVEYORS PLANNERS

OUR TEAM

Toll Brothers
AMERICA'S LUXURY HOME BUILDER®

ROBERT PRICE
Land Development Director, Charlotte

McKIM&CREED
ENGINEERS SURVEYORS PLANNERS

TRACEY M. McCORMICK, PE
Senior Project Manager

BETH BAILEY, PLA
Senior Landscape Architect

McKIM&CREED
ENGINEERS SURVEYORS PLANNERS

EXHIBIT E

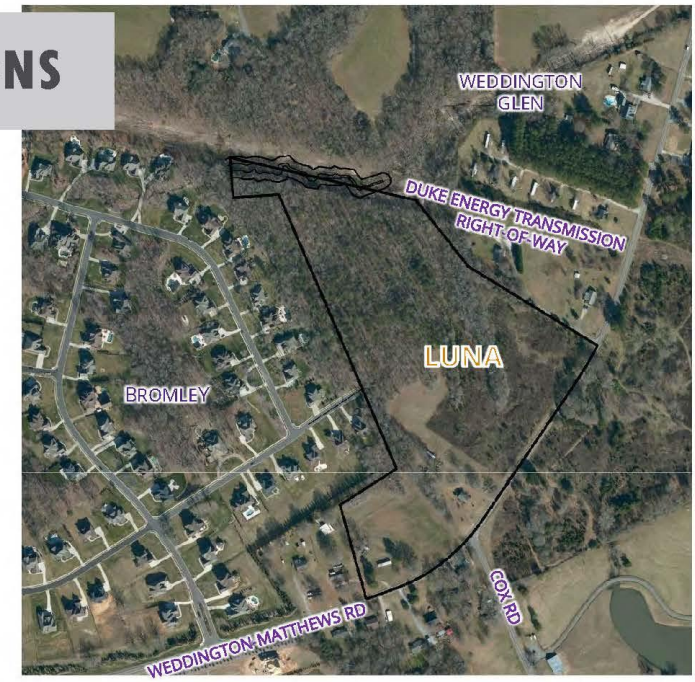
WHERE WE ARE

01 Approved Sketch Plan: Town of Weddington

02 Approved Utility Sketch Plan: Union County

03 Civil Design Underway

EXISTING CONDITIONS



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McKIM&CREED
ENGINEERS SURVEYORS PLANNERS

EXHIBIT E

LUNA

01 R-CD Zoning
Average Lot Size: 40,000 sf (.92 Acres)
Minimum Lot Width: 120'

02 18 Single-Family Homes (1.61 DUA)

03 Open Space: +/- 2.92 Acres (10% of site)

McKIM&CREED
ENGINEERS SURVEYORS PLANNERS

PROCESS FORWARD

01 COMMUNITY MEETING REPORT TO TOWN STAFF
Week of August 21

02 PLANNING BOARD REVIEW
Tentatively September 25

03 PUBLIC HEARING / TOWN COUNCIL VOTE
Tentatively October 9

If / When Approved by Town Council:

- Civil Design / Construction Drawings submitted to Weddington & Union County Public Works: August 2023
- Review & Permitting: 3 – 4 Months
- Construction Begins: Summer 2024

EXHIBIT E

ARCHITECTURE

01 Proposed Exteriors: Fiber-Cement Siding & Trim, Stone, Brick

02 Size Range: 4,075 sf - 4,307 sf

03 Height Range: 2-Story

04 Proposed Plans: 4 – 5- BR / 2.53 – 4 BA

05 Projected Price Range: Similar to Enclave at Baxley (Corner of Providence & Hemby Roads)

EXAMPLE ELEVATION #1: ASHDALE

McKIM&CREED
ENGINEERS SURVEYORS PLANNERS

EXAMPLE ELEVATION #2: DUNMORE

McKIM&CREED
ENGINEERS SURVEYORS PLANNERS

EXAMPLE ELEVATION #3: HALSTEAD

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ENGINEERS SURVEYORS PLANNERS

EXHIBIT E

EXAMPLE ELEVATION #4: KENDRICK

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EXAMPLE ELEVATION #5: STONERIDGE

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ENGINEERS SURVEYORS PLANNERS

EXHIBIT E

LUNA SUBDIVISION

MC # ***02741-0010***

CALCULATIONS FOR:

Downstream
Stormwater
Analysis

DATE: ***10/02/23***

REV: ***N/A***

8020 TOWER POINT DRIVE. CHARLOTTE, NORTH CAROLINA 28227
TEL 704.841.2588 www.mckimcreed.com

TABLE OF CONTENTS

DESCRIPTION	PAGE
Cover	*X*
Table of Contents	*X*
Narrative	*X*
Pre-Development vs. Post-Development Summary Tables	*X*
Appendix A - Drainage Area Maps	*X*
Appendix B - StormCAD Calculations for Bromley Storm System (Existing Conditions)	*X*
Appendix C - StormCAD Calculations for Bromley Storm System (Proposed Conditions)	*X*
Appendix D - HydroCAD Calculations for Luna Subdivision	*X*
Appendix E - Bromley Subdivision Drainage Design Drawings	*X*

LUNA SUBDIVISION
DOWNSTREAM ANALYSIS NARRATIVE

Luna is a proposed 18-lot single-family subdivision located on +/- 29 acres in Weddington, Union County, North Carolina. The existing site conditions include a mix of grass and trees. The predominant soil types according to the USDA Soil Survey are Cecil, Helena & Appling, both Cecil and Appling have a hydrologic soil group rating of "B" while Helena has a hydrologic soil group rating of "D". The site is located in the Sixmile Creek watershed, within the Catawba River Basin. The development will be located off Weddington-Matthews Road, adjacent to the existing Bromley Subdivision.

Stormwater management for the project will be designed in accordance with the Charlotte-Mecklenburg Stormwater Design Manual, with exceptions where Weddington's ordinances list a stricter regulation. Over 20,000 square feet of new impervious will be created as part of the Luna development, therefore stormwater detention will be provided to control runoff to pre-developed rates for the 2-, 10-, 25-, 50- and 100-year, 24-hour storm events. Volume control for the 1-year, 24-hour storm will also be provided.

A downstream analysis of the existing Bromley subdivision storm system was performed to ensure that the proposed Luna development will not create downstream drainage issues. The existing Bromley storm system was modeled using Bentley StormCAD to compare flows under existing conditions versus flows after the development of Luna subdivision. The storm system was modeled for the 10-, 25- and 100-year storm events.

The summary tables provided on the following page demonstrate that flows entering Bromley Subdivision will decrease as a result of the Luna development. Stormwater Control Measure (SCM) #2 located behind Bromley lots 23-25 is designed to restrict flows leaving the site at point of interest (POI) #2 to below pre-development rates. The offsite drainage area flowing to Bromley lots 19-22 and the dead end of Delaney Drive will be reduced from 2.99 acres to approximately 0.15 acres

PRE-DEVELOPMENT FLOWS TO POINT OF INTEREST #2

STORM EVENT	PEAK FLOW (CFS)
2-YEAR	6.65
10-YEAR	17.78
25-YEAR	25.64
50-YEAR	32.31
100-YEAR	39.50

POST-DEVELOPMENT FLOWS TO POINT OF INTEREST #2

STORM EVENT	PEAK FLOW (CFS)
2-YEAR	5.60
10-YEAR	13.75
25-YEAR	19.66
50-YEAR	24.51
100-YEAR	29.68

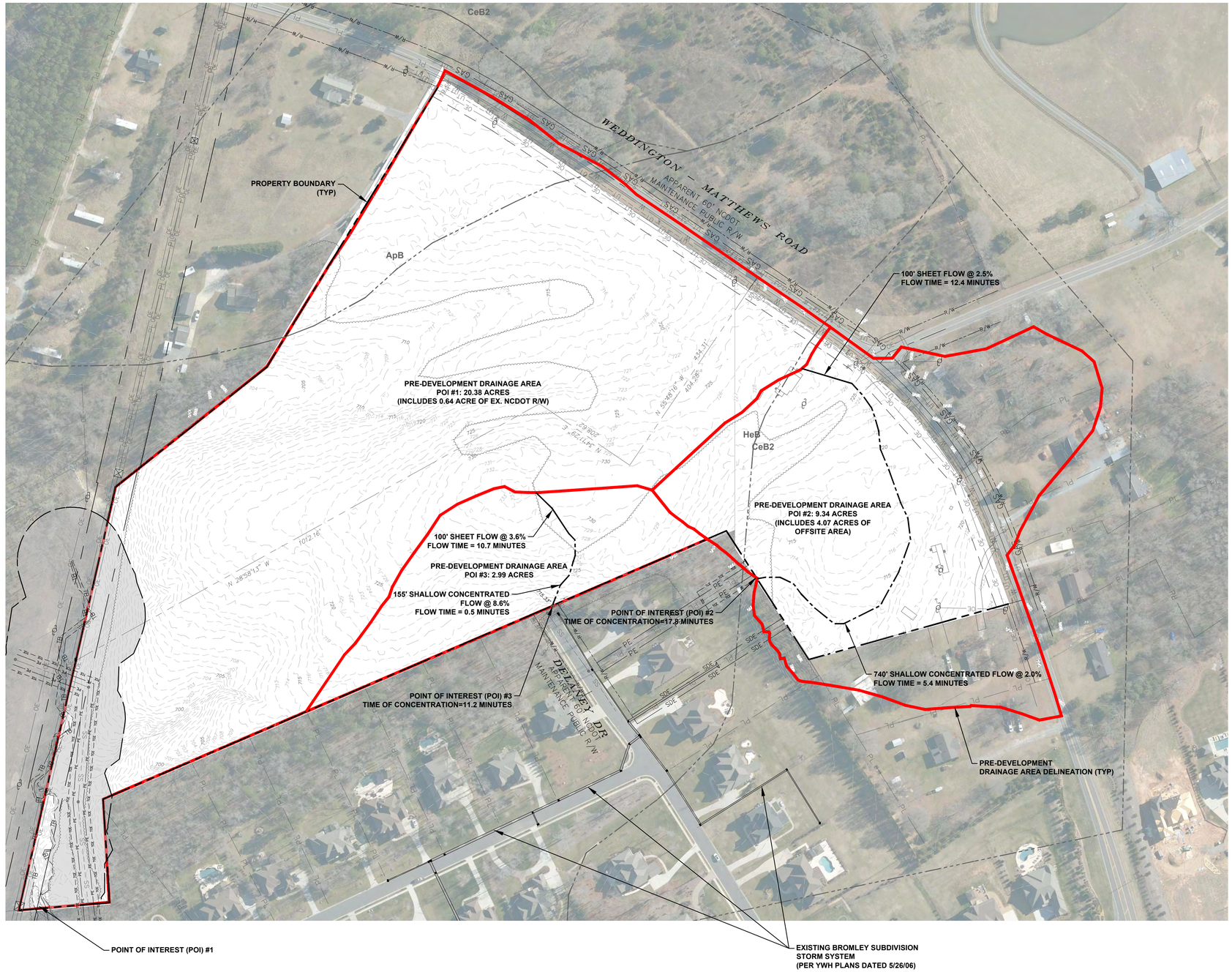
PRE-DEVELOPMENT FLOWS TO POINT OF INTEREST #3

STORM EVENT	PEAK FLOW (CFS)
2-YEAR	6.39
10-YEAR	12.13
25-YEAR	15.82
50-YEAR	18.80
100-YEAR	21.93

POST-DEVELOPMENT FLOWS TO POINT OF INTEREST #3

STORM EVENT	PEAK FLOW (CFS)
2-YEAR	0.46
10-YEAR	0.83
25-YEAR	1.06
50-YEAR	1.24
100-YEAR	1.43

APPENDIX A



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

100' 0 100' 200'

SCALE: 1"=100' (Horiz.)

REV.NO.	DESCRIPTIONS	DATE

REVISIONS

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McKim & Creed, Inc.

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McKIM&CREED

8020 Tower Point Drive
Charlotte, North Carolina 28227
Phone: (704) 841-2588, Fax: (704) 841-2567

NC License# F-1222

www.mckimcreed.com

Toll Brothers
AMERICA'S LUXURY HOME BUILDER®

LUNA SUBDIVISION
WEDDINGTON, UNION COUNTY
NORTH CAROLINA

PRE-DEVELOPMENT DRAINAGE AREA MAP

DATE:	AUGUST 2023
MCE PROJ. #	02741-0010
DRAWN	ECB
DESIGNED	ECB
CHECKED	TMM
PROJ. MGR.	TMM

SCALE
HORIZONTAL: 1" = 100'
VERTICAL: N/A

DA-1
DRAWING NUMBER

REVISION

STATUS: PRELIMINARY DRAWING NOT FOR CONSTRUCTION

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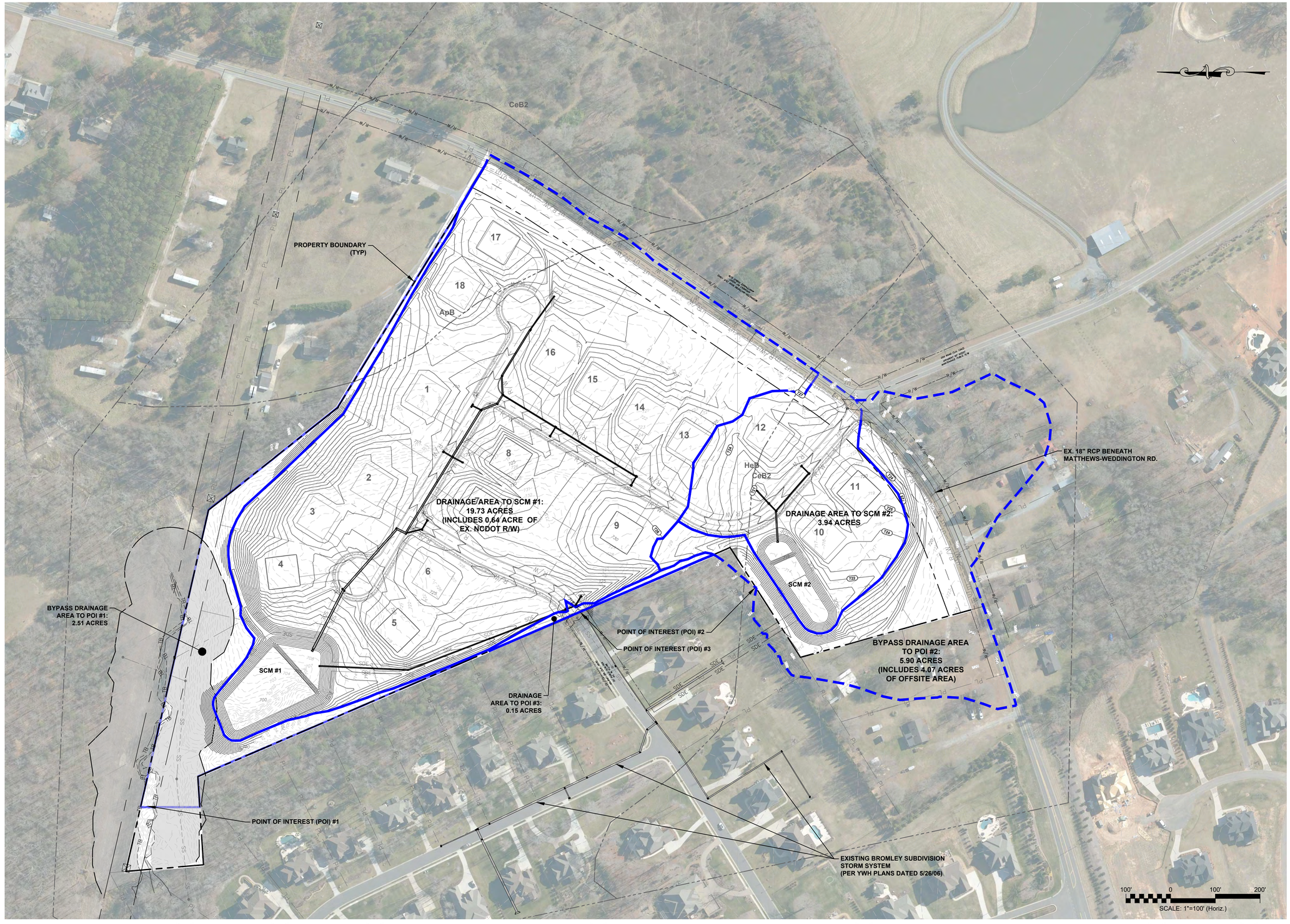

Know what's below. Call before you dig.

REV.NO.	DESCRIPTIONS	DATE

REVISIONS

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LUNA SUBDIVISION
WEDDINGTON, UNION COUNTY
NORTH CAROLINA

POST-DEVELOPMENT DRAINAGE AREA MAP

DATE:	AUGUST 2023
MCE PROJ. #	02741-0010
DRAWN	ECB
DESIGNED	ECB
CHECKED	TMM
PROJ. MGR.	TMM

SCALE
HORIZONTAL: 1" = 100'
VERTICAL: N/A

DA-2
DRAWING NUMBER

REVISION

STATUS: PRELIMINARY DRAWING NOT FOR CONSTRUCTION

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APPENDIX B

EXISTING CONDITIONS - 10-YEAR STORM

FlexTable: Conduit Table

Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Unified) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Manning's n	Flow (ft^3/s)	Capacity (Full Flow) (ft^3/s)	Velocity (ft/s)	System Intensity (in/h)
DI 63	706.00	DI 64	702.20	119.83	0.032	15.0	706.78	702.69	0.013	3.67	11.50	8.33	7.540
HW 51	705.00	CB 52	696.00	199.93	0.045	36.0	706.35	697.40	0.013	17.78	141.51	13.68	7.570
DI 64	701.45	CB 65	698.53	195.10	0.015	24.0	702.65	699.41	0.013	11.14	27.67	8.33	7.467
OPEN PIPE	707.00	CB 62	701.80	120.71	0.043	15.0	707.74	702.23	0.013	3.35	13.41	9.08	7.540
CB 62	701.60	CB 52	697.75	120.64	0.032	15.0	702.54	698.35	0.013	5.33	11.54	9.22	7.473
CB 65	698.33	CB 66	696.89	121.41	0.012	24.0	699.65	697.94	0.013	13.38	24.64	8.00	7.348
CB 66	696.69	DCB 53	695.72	83.70	0.012	24.0	698.08	696.86	0.013	14.91	24.35	8.14	7.272
CB 52	695.80	DCB 53	694.72	35.62	0.030	36.0	697.40	696.60	0.013	24.70	116.14	13.05	7.406
CB 54	693.80	CB 55	693.23	52.34	0.011	36.0	695.91	694.99	0.013	41.82	69.60	10.29	7.209
DCB 53	694.52	CB 54	694.00	25.96	0.020	36.0	696.60	695.63	0.013	40.81	94.39	12.87	7.220
CB 55	693.00	CB 56	688.59	131.67	0.033	36.0	695.11	690.79	0.013	41.88	122.06	15.65	7.184
CB 56	688.49	CB 57	687.42	54.96	0.019	36.0	690.79	689.15	0.013	49.90	93.06	13.40	7.141
CB 68	690.00	DCB 59	689.00	88.92	0.011	15.0	690.54	689.44	0.013	1.84	6.85	4.73	7.540
CB 57	687.42	CB 58	686.39	186.20	0.006	42.0	689.70	688.70	0.013	52.92	74.82	8.43	7.120
CB 67	690.00	CB 57	689.74	25.92	0.010	15.0	690.45	690.12	0.013	1.28	6.47	4.10	7.540
CB 60	685.90	FES 61	685.00	179.96	0.005	42.0	688.32	687.40	0.013	58.53	71.15	8.26	6.974
DCB 59	686.13	CB 60	686.00	24.79	0.005	42.0	688.52	688.36	0.013	58.05	72.86	8.41	6.989
CB 58	686.39	DCB 59	686.23	30.78	0.005	42.0	688.70	688.49	0.013	54.22	72.53	8.27	7.008
DI 56A	694.48	CB 56	690.70	180.00	0.021	18.0	695.47	691.39	0.013	6.60	15.22	8.31	7.540

EXISTING CONDITIONS - 25-YEAR STORM

FlexTable: Conduit Table

Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Unified) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Manning's n	Flow (ft^3/s)	Capacity (Full Flow) (ft^3/s)	Velocity (ft/s)	System Intensity (in/h)
DI 63	706.00	DI 64	702.20	119.83	0.032	15.0	706.82	702.71	0.013	4.06	11.50	8.56	8.330
HW 51	705.00	CB 52	696.00	199.93	0.045	36.0	706.64	697.67	0.013	25.64	141.51	15.20	8.364
DI 64	701.45	CB 65	698.53	195.10	0.015	24.0	702.71	699.47	0.013	12.31	27.67	8.55	8.251
OPEN PIPE	707.00	CB 62	701.80	120.71	0.043	15.0	707.78	702.58	0.013	3.70	13.41	9.34	8.330
CB 62	701.60	CB 52	697.75	120.64	0.032	15.0	702.58	698.38	0.013	5.88	11.54	9.45	8.257
CB 65	698.33	CB 66	696.89	121.41	0.012	24.0	699.72	698.01	0.013	14.79	24.64	8.20	8.123
CB 66	696.69	DCB 53	695.72	83.70	0.012	24.0	698.16	696.93	0.013	16.48	24.35	8.33	8.039
CB 52	695.80	DCB 53	694.72	35.62	0.030	36.0	697.67	696.85	0.013	33.29	116.14	14.18	8.185
CB 54	693.80	CB 55	693.23	52.34	0.011	36.0	696.15	695.26	0.013	52.22	69.60	10.81	7.972
DCB 53	694.52	CB 54	694.00	25.96	0.020	36.0	696.85	695.87	0.013	51.10	94.39	13.62	7.983
CB 55	693.00	CB 56	688.59	131.67	0.033	36.0	695.35	691.01	0.013	52.29	122.06	16.60	7.945
CB 56	688.49	CB 57	687.42	54.96	0.019	36.0	691.01	689.39	0.013	61.18	93.06	14.05	7.900
CB 68	690.00	DCB 59	689.00	88.92	0.011	15.0	690.57	689.47	0.013	2.03	6.85	4.86	8.330
CB 57	687.42	CB 58	686.39	186.20	0.006	42.0	689.94	689.02	0.013	64.52	74.82	8.75	7.878
CB 67	690.00	CB 57	689.74	25.92	0.010	15.0	690.47	690.14	0.013	1.41	6.47	4.22	8.330
CB 60	685.90	FES 61	685.00	179.96	0.005	42.0	688.75	687.64	0.013	70.75	71.15	8.43	7.721
DCB 59	686.13	CB 60	686.00	24.79	0.005	42.0	688.88	688.75	0.013	70.22	72.86	8.63	7.738
CB 58	686.39	DCB 59	686.23	30.78	0.005	42.0	689.02	688.88	0.013	65.98	72.53	8.54	7.758
DI 56A	694.48	CB 56	690.70	180.00	0.021	18.0	695.53	691.43	0.013	7.29	15.22	8.52	8.330

EXISTING CONDITIONS - 100-YEAR STORM

FlexTable: Conduit Table

Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Unified) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Manning's n	Flow (ft^3/s)	Capacity (Full Flow) (ft^3/s)	Velocity (ft/s)	System Intensity (in/h)
DI 63	706.00	DI 64	702.20	119.83	0.032	15.0	706.87	702.75	0.013	4.56	11.50	8.83	9.370
HW 51	705.00	CB 52	696.00	199.93	0.045	36.0	707.05	698.06	0.013	39.50	141.51	17.16	9.408
DI 64	701.45	CB 65	698.53	195.10	0.015	24.0	702.79	699.53	0.013	13.85	27.67	8.81	9.283
OPEN PIPE	707.00	CB 62	701.80	120.71	0.043	15.0	707.83	702.64	0.013	4.17	13.41	9.64	9.370
CB 62	701.60	CB 52	697.75	120.64	0.032	15.0	702.64	698.43	0.013	6.62	11.54	9.73	9.290
CB 65	698.33	CB 66	696.89	121.41	0.012	24.0	699.80	698.10	0.013	16.64	24.64	8.42	9.141
CB 66	696.69	DCB 53	695.72	83.70	0.012	24.0	698.24	697.03	0.013	18.55	24.35	8.53	9.049
CB 52	695.80	DCB 53	694.72	35.62	0.030	36.0	698.06	697.15	0.013	48.11	116.14	15.66	9.210
CB 54	693.80	CB 55	693.23	52.34	0.011	36.0	696.45	695.72	0.013	69.42	69.60	11.22	8.975
DCB 53	694.52	CB 54	694.00	25.96	0.020	36.0	697.15	696.22	0.013	68.16	94.39	14.54	8.986
CB 55	693.00	CB 56	688.59	131.67	0.033	36.0	695.65	692.11	0.013	69.51	122.06	17.83	8.945
CB 56	688.49	CB 57	687.42	54.96	0.019	36.0	692.11	691.33	0.013	79.52	93.06	11.25	8.898
CB 68	690.00	DCB 59	689.00	88.92	0.011	15.0	690.60	689.84	0.013	2.28	6.85	5.02	9.370
CB 57	687.42	CB 58	686.39	186.20	0.006	42.0	691.33	690.06	0.013	83.26	74.82	8.65	8.866
CB 67	690.00	CB 57	689.74	25.92	0.010	15.0	691.35	691.33	0.013	1.59	6.47	1.29	9.370
CB 60	685.90	FES 61	685.00	179.96	0.005	42.0	689.64	687.95	0.013	90.27	71.15	9.38	8.689
DCB 59	686.13	CB 60	686.00	24.79	0.005	42.0	689.84	689.64	0.013	89.66	72.86	9.32	8.706
CB 58	686.39	DCB 59	686.23	30.78	0.005	42.0	690.06	689.84	0.013	84.89	72.53	8.82	8.729
DI 56A	694.48	CB 56	690.70	180.00	0.021	18.0	695.59	692.11	0.013	8.20	15.22	8.77	9.370

APPENDIX C

PROPOSED CONDITIONS - 10-YEAR STORM

FlexTable: Conduit Table

Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Unified) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Manning's n	Flow (ft^3/s)	Capacity (Full Flow) (ft^3/s)	Velocity (ft/s)	System Intensity (in/h)
DI 63	706.00	DI 64	702.20	119.83	0.032	15.0	706.78	702.69	0.013	3.67	11.50	8.33	7.540
HW 51	705.00	CB 52	696.00	199.93	0.045	36.0	706.18	696.63	0.013	13.75	141.51	12.69	7.570
DI 64	701.45	CB 65	698.53	195.10	0.015	24.0	702.65	699.41	0.013	11.14	27.67	8.33	7.467
OPEN PIPE	707.00	CB 62	701.80	120.71	0.043	15.0	707.37	702.28	0.013	0.90	13.41	6.22	7.540
CB 62	701.60	CB 52	697.75	120.64	0.032	15.0	702.28	698.18	0.013	2.89	11.54	7.82	7.442
CB 65	698.33	CB 66	696.89	121.41	0.012	24.0	699.65	697.94	0.013	13.38	24.64	8.00	7.348
CB 66	696.69	DCB 53	695.72	83.70	0.012	24.0	698.08	696.86	0.013	14.91	24.35	8.14	7.272
CB 52	695.80	DCB 53	694.72	35.62	0.030	36.0	697.17	696.43	0.013	18.24	116.14	11.98	7.364
CB 54	693.80	CB 55	693.23	52.34	0.011	36.0	695.74	694.83	0.013	35.44	69.60	9.89	7.209
DCB 53	694.52	CB 54	694.00	25.96	0.020	36.0	696.43	695.48	0.013	34.43	94.39	12.30	7.220
CB 55	693.00	CB 56	688.59	131.67	0.033	36.0	694.94	690.56	0.013	35.52	122.06	14.97	7.182
CB 56	688.49	CB 57	687.42	54.96	0.019	36.0	690.56	688.94	0.013	40.19	93.06	12.68	7.137
CB 68	690.00	DCB 59	689.00	88.92	0.011	15.0	690.54	689.44	0.013	1.84	6.85	4.73	7.540
CB 57	687.42	CB 58	686.39	186.20	0.006	42.0	689.47	688.47	0.013	43.22	74.82	8.06	7.116
CB 67	690.00	CB 57	689.74	25.92	0.010	15.0	690.45	690.12	0.013	1.28	6.47	4.10	7.540
CB 60	685.90	FES 61	685.00	179.96	0.005	42.0	688.09	687.13	0.013	48.90	71.15	7.97	6.963
DCB 59	686.13	CB 60	686.00	24.79	0.005	42.0	688.30	688.10	0.013	48.42	72.86	8.10	6.979
CB 58	686.39	DCB 59	686.23	30.78	0.005	42.0	688.47	688.23	0.013	44.59	72.53	7.92	6.998
DI 56A	694.48	CB 56	690.70	180.00	0.021	18.0	695.15	691.16	0.013	3.06	15.22	6.73	7.540

PROPOSED CONDITIONS - 25-YEAR STORM

FlexTable: Conduit Table

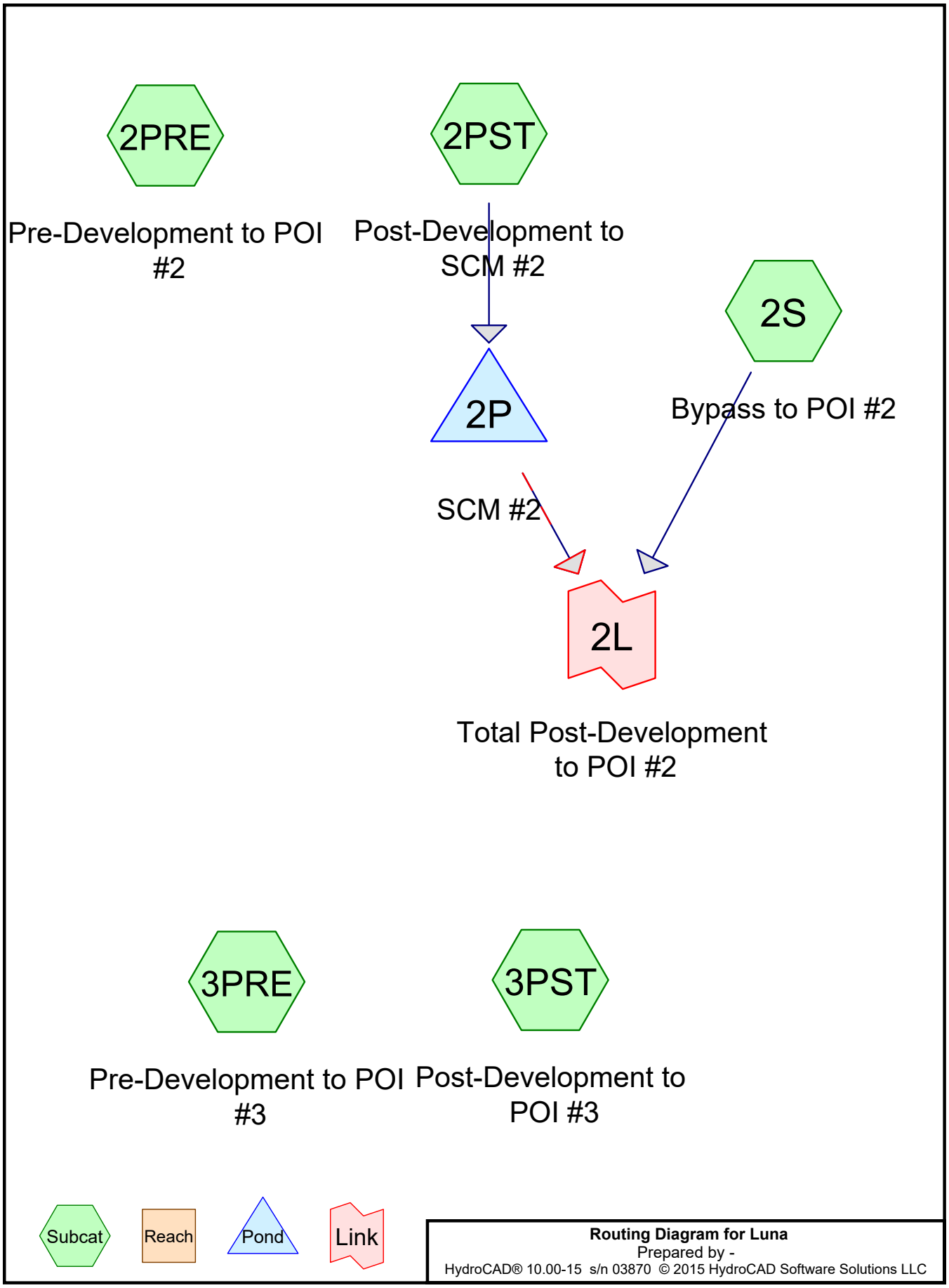
Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Unified) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Manning's n	Flow (ft^3/s)	Capacity (Full Flow) (ft^3/s)	Velocity (ft/s)	System Intensity (in/h)
DI 63	706.00	DI 64	702.20	119.83	0.032	15.0	706.82	702.71	0.013	4.06	11.50	8.56	8.330
HW 51	705.00	CB 52	696.00	199.93	0.045	36.0	706.42	696.76	0.013	19.66	141.51	14.08	8.364
DI 64	701.45	CB 65	698.53	195.10	0.015	24.0	702.71	699.47	0.013	12.31	27.67	8.55	8.251
OPEN PIPE	707.00	CB 62	701.80	120.71	0.043	15.0	707.39	702.32	0.013	1.00	13.41	6.41	8.330
CB 62	701.60	CB 52	697.75	120.64	0.032	15.0	702.32	698.20	0.013	3.19	11.54	8.04	8.224
CB 65	698.33	CB 66	696.89	121.41	0.012	24.0	699.72	698.01	0.013	14.79	24.64	8.20	8.123
CB 66	696.69	DCB 53	695.72	83.70	0.012	24.0	698.16	696.93	0.013	16.48	24.35	8.33	8.039
CB 52	695.80	DCB 53	694.72	35.62	0.030	36.0	697.40	696.65	0.013	24.63	116.14	13.04	8.139
CB 54	693.80	CB 55	693.23	52.34	0.011	36.0	695.95	695.04	0.013	43.65	69.60	10.40	7.971
DCB 53	694.52	CB 54	694.00	25.96	0.020	36.0	696.65	695.67	0.013	42.53	94.39	13.01	7.983
CB 55	693.00	CB 56	688.59	131.67	0.033	36.0	695.16	690.77	0.013	43.73	122.06	15.84	7.943
CB 56	688.49	CB 57	687.42	54.96	0.019	36.0	690.77	689.13	0.013	48.91	93.06	13.33	7.896
CB 68	690.00	DCB 59	689.00	88.92	0.011	15.0	690.57	689.47	0.013	2.03	6.85	4.86	8.330
CB 57	687.42	CB 58	686.39	186.20	0.006	42.0	689.68	688.69	0.013	52.27	74.82	8.41	7.873
CB 67	690.00	CB 57	689.74	25.92	0.010	15.0	690.47	690.14	0.013	1.41	6.47	4.22	8.330
CB 60	685.90	FES 61	685.00	179.96	0.005	42.0	688.32	687.40	0.013	58.59	71.15	8.26	7.711
DCB 59	686.13	CB 60	686.00	24.79	0.005	42.0	688.52	688.36	0.013	58.04	72.86	8.41	7.727
CB 58	686.39	DCB 59	686.23	30.78	0.005	42.0	688.69	688.48	0.013	53.80	72.53	8.26	7.748
DI 56A	694.48	CB 56	690.70	180.00	0.021	18.0	695.18	691.18	0.013	3.38	15.22	6.93	8.330

PROPOSED CONDITIONS - 100-YEAR STORM

FlexTable: Conduit Table

Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Unified) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Manning's n	Flow (ft^3/s)	Capacity (Full Flow) (ft^3/s)	Velocity (ft/s)	System Intensity (in/h)
DI 63	706.00	DI 64	702.20	119.83	0.032	15.0	706.87	702.75	0.013	4.56	11.50	8.83	9.370
HW 51	705.00	CB 52	696.00	199.93	0.045	36.0	706.77	696.93	0.013	29.68	141.51	15.84	9.408
DI 64	701.45	CB 65	698.53	195.10	0.015	24.0	702.79	699.53	0.013	13.85	27.67	8.81	9.283
OPEN PIPE	707.00	CB 62	701.80	120.71	0.043	15.0	707.42	702.37	0.013	1.12	13.41	6.63	9.370
CB 62	701.60	CB 52	697.75	120.64	0.032	15.0	702.37	698.23	0.013	3.59	11.54	8.30	9.254
CB 65	698.33	CB 66	696.89	121.41	0.012	24.0	699.80	698.10	0.013	16.64	24.64	8.42	9.141
CB 66	696.69	DCB 53	695.72	83.70	0.012	24.0	698.24	697.03	0.013	18.55	24.35	8.53	9.049
CB 52	695.80	DCB 53	694.72	35.62	0.030	36.0	697.73	696.94	0.013	35.27	116.14	14.41	9.160
CB 54	693.80	CB 55	693.23	52.34	0.011	36.0	696.24	695.37	0.013	56.69	69.60	10.97	8.974
DCB 53	694.52	CB 54	694.00	25.96	0.020	36.0	696.94	695.96	0.013	55.42	94.39	13.89	8.986
CB 55	693.00	CB 56	688.59	131.67	0.033	36.0	695.44	691.04	0.013	56.78	122.06	16.95	8.944
CB 56	688.49	CB 57	687.42	54.96	0.019	36.0	691.04	689.99	0.013	62.63	93.06	14.12	8.894
CB 68	690.00	DCB 59	689.00	88.92	0.011	15.0	690.60	689.50	0.013	2.28	6.85	5.02	9.370
CB 57	687.42	CB 58	686.39	186.20	0.006	42.0	689.99	689.12	0.013	66.42	74.82	8.79	8.869
CB 67	690.00	CB 57	689.74	25.92	0.010	15.0	690.50	690.16	0.013	1.59	6.47	4.36	9.370
CB 60	685.90	FES 61	685.00	179.96	0.005	42.0	688.86	687.69	0.013	73.56	71.15	8.41	8.692
DCB 59	686.13	CB 60	686.00	24.79	0.005	42.0	688.99	688.86	0.013	72.95	72.86	8.63	8.711
CB 58	686.39	DCB 59	686.23	30.78	0.005	42.0	689.12	688.99	0.013	68.16	72.53	8.57	8.734
DI 56A	694.48	CB 56	690.70	180.00	0.021	18.0	695.23	691.21	0.013	3.80	15.22	7.16	9.370

APPENDIX D



Routing Diagram for Luna
Prepared by -
HydroCAD® 10.00-15 s/n 03870 © 2015 HydroCAD Software Solutions LLC

Summary for Subcatchment 2PRE: Pre-Development to POI #2

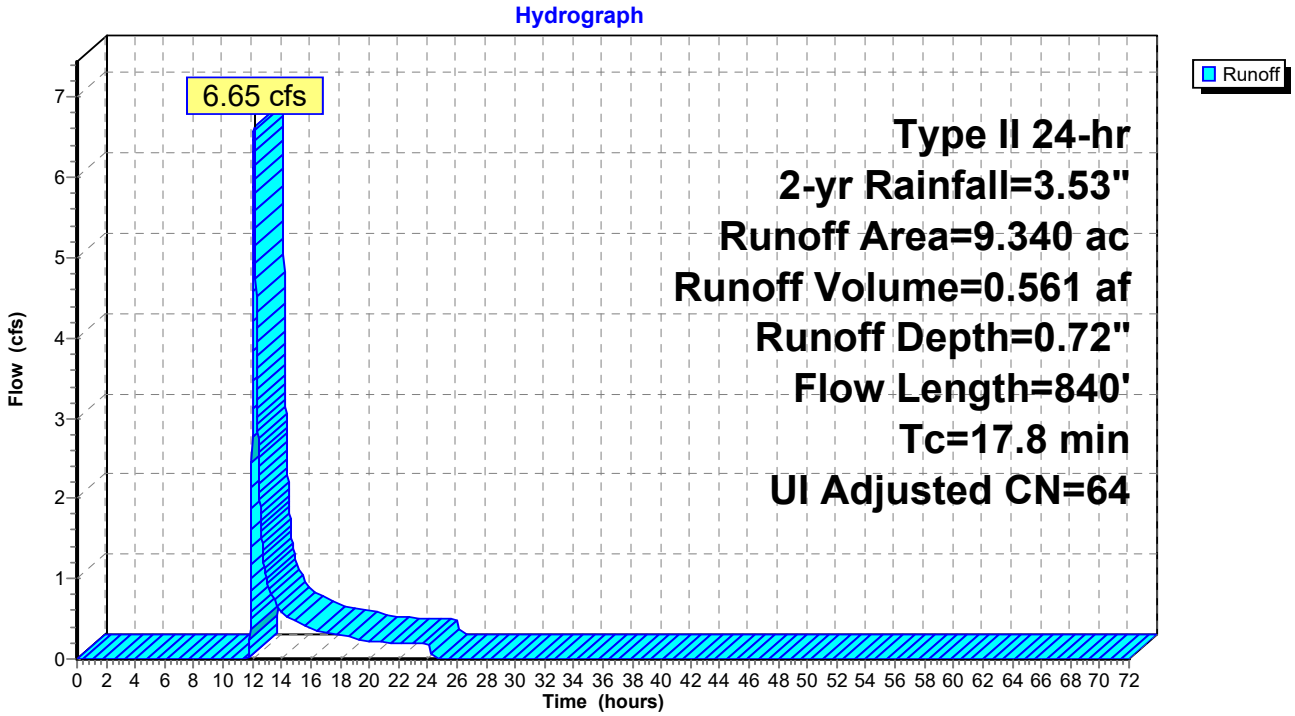
Runoff = 6.65 cfs @ 12.13 hrs, Volume= 0.561 af, Depth= 0.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-yr Rainfall=3.53"

Area (ac)	CN	Adj	Description
0.590	55		Woods, Good, HSG B
0.700	77		Woods, Good, HSG D
0.750	98		Unconnected roofs, HSG B
0.080	80		>75% Grass cover, Good, HSG D
7.220	61		>75% Grass cover, Good, HSG B
9.340	65	64	Weighted Average, UI Adjusted
8.590			91.97% Pervious Area
0.750			8.03% Impervious Area
0.750			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0250	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.53"
5.4	740	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
17.8	840	Total			

Subcatchment 2PRE: Pre-Development to POI #2



Hydrograph for Subcatchment 2PRE: Pre-Development to POI #2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.08	0.00	0.00
3.00	0.12	0.00	0.00
4.00	0.17	0.00	0.00
5.00	0.22	0.00	0.00
6.00	0.28	0.00	0.00
7.00	0.35	0.00	0.00
8.00	0.42	0.00	0.00
9.00	0.52	0.00	0.00
10.00	0.64	0.00	0.00
11.00	0.83	0.00	0.00
12.00	2.34	0.22	**3.48**
13.00	2.73	0.35	**0.97**
14.00	2.89	0.42	0.59
15.00	3.01	0.47	0.46
16.00	3.11	0.52	0.37
17.00	3.18	0.55	0.32
18.00	3.25	0.58	0.29
19.00	3.31	0.61	0.26
20.00	3.36	0.64	0.22
21.00	3.41	0.66	0.21
22.00	3.45	0.68	0.20
23.00	3.49	0.70	0.19
24.00	**3.53**	**0.72**	0.19
25.00	3.53	0.72	0.00
26.00	3.53	0.72	0.00
27.00	3.53	0.72	0.00
28.00	3.53	0.72	0.00
29.00	3.53	0.72	0.00
30.00	3.53	0.72	0.00
31.00	3.53	0.72	0.00
32.00	3.53	0.72	0.00
33.00	3.53	0.72	0.00
34.00	3.53	0.72	0.00
35.00	3.53	0.72	0.00
36.00	3.53	0.72	0.00
37.00	3.53	0.72	0.00
38.00	3.53	0.72	0.00
39.00	3.53	0.72	0.00
40.00	3.53	0.72	0.00
41.00	3.53	0.72	0.00
42.00	3.53	0.72	0.00
43.00	3.53	0.72	0.00
44.00	3.53	0.72	0.00
45.00	3.53	0.72	0.00
46.00	3.53	0.72	0.00
47.00	3.53	0.72	0.00
48.00	3.53	0.72	0.00
49.00	3.53	0.72	0.00
50.00	3.53	0.72	0.00
51.00	3.53	0.72	0.00
52.00	3.53	0.72	0.00
53.00	3.53	0.72	0.00
54.00	3.53	0.72	0.00
55.00	3.53	0.72	0.00
56.00	3.53	0.72	0.00
57.00	3.53	0.72	0.00
58.00	3.53	0.72	0.00
59.00	3.53	0.72	0.00
60.00	3.53	0.72	0.00
61.00	3.53	0.72	0.00
62.00	3.53	0.72	0.00
63.00	3.53	0.72	0.00
64.00	3.53	0.72	0.00
65.00	3.53	0.72	0.00
66.00	3.53	0.72	0.00
67.00	3.53	0.72	0.00
68.00	3.53	0.72	0.00
69.00	3.53	0.72	0.00
70.00	3.53	0.72	0.00
71.00	3.53	0.72	0.00
72.00	3.53	0.72	0.00

Summary for Subcatchment 2PST: Post-Development to SCM #2

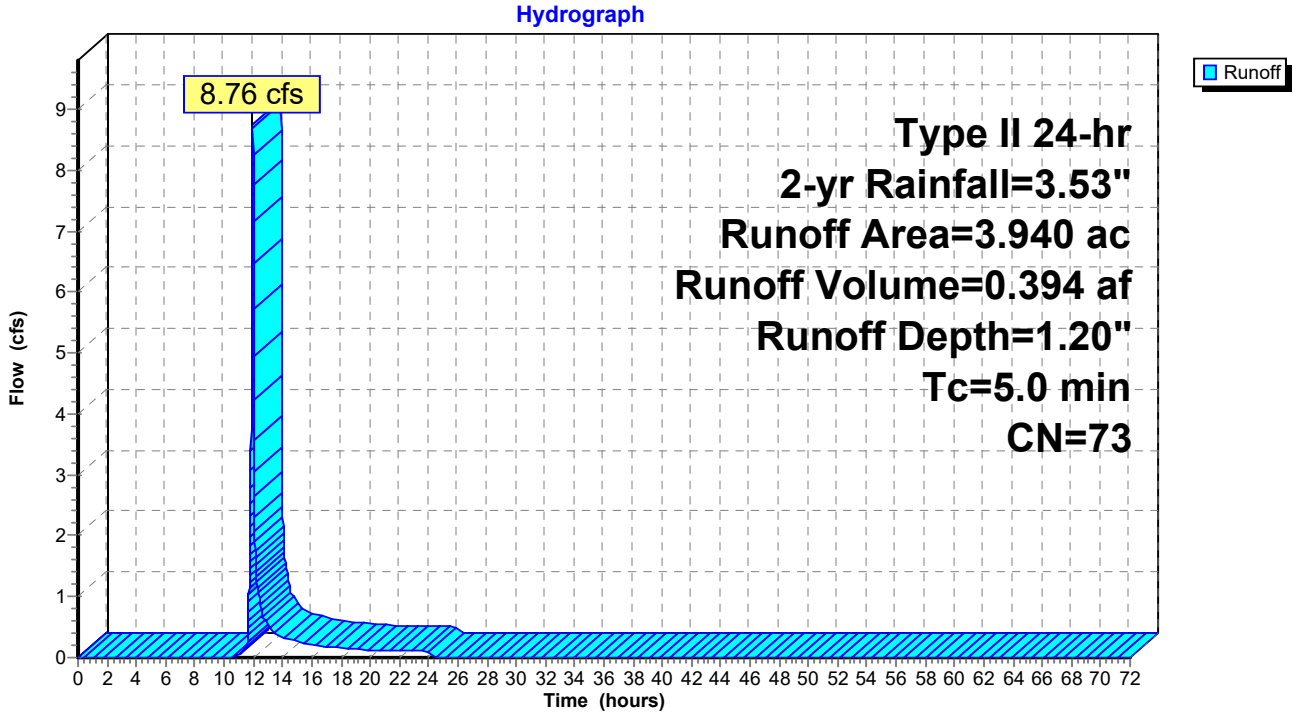
Runoff = 8.76 cfs @ 11.97 hrs, Volume= 0.394 af, Depth= 1.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-yr Rainfall=3.53"

	Area (ac)	CN	Description
*	0.880	98	Proposed Impervious
*	0.020	98	Existing Impervious
	2.290	61	>75% Grass cover, Good, HSG B
	0.750	80	>75% Grass cover, Good, HSG D
	3.940	73	Weighted Average
	3.040		77.16% Pervious Area
	0.900		22.84% Impervious Area

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

Subcatchment 2PST: Post-Development to SCM #2



Hydrograph for Subcatchment 2PST: Post-Development to SCM #2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.08	0.00	0.00
3.00	0.12	0.00	0.00
4.00	0.17	0.00	0.00
5.00	0.22	0.00	0.00
6.00	0.28	0.00	0.00
7.00	0.35	0.00	0.00
8.00	0.42	0.00	0.00
9.00	0.52	0.00	0.00
10.00	0.64	0.00	0.00
11.00	0.83	0.00	**0.04**
12.00	2.34	0.48	**7.78**
13.00	2.73	0.69	0.52
14.00	2.89	0.79	0.32
15.00	3.01	0.87	0.26
16.00	3.11	0.92	0.21
17.00	3.18	0.97	0.18
18.00	3.25	1.02	0.16
19.00	3.31	1.05	0.14
20.00	3.36	1.09	0.12
21.00	3.41	1.12	0.12
22.00	3.45	1.15	0.11
23.00	3.49	1.17	0.11
24.00	**3.53**	**1.20**	0.10
25.00	3.53	1.20	0.00
26.00	3.53	1.20	0.00
27.00	3.53	1.20	0.00
28.00	3.53	1.20	0.00
29.00	3.53	1.20	0.00
30.00	3.53	1.20	0.00
31.00	3.53	1.20	0.00
32.00	3.53	1.20	0.00
33.00	3.53	1.20	0.00
34.00	3.53	1.20	0.00
35.00	3.53	1.20	0.00
36.00	3.53	1.20	0.00
37.00	3.53	1.20	0.00
38.00	3.53	1.20	0.00
39.00	3.53	1.20	0.00
40.00	3.53	1.20	0.00
41.00	3.53	1.20	0.00
42.00	3.53	1.20	0.00
43.00	3.53	1.20	0.00
44.00	3.53	1.20	0.00
45.00	3.53	1.20	0.00
46.00	3.53	1.20	0.00
47.00	3.53	1.20	0.00
48.00	3.53	1.20	0.00
49.00	3.53	1.20	0.00
50.00	3.53	1.20	0.00
51.00	3.53	1.20	0.00
52.00	3.53	1.20	0.00
53.00	3.53	1.20	0.00
54.00	3.53	1.20	0.00
55.00	3.53	1.20	0.00
56.00	3.53	1.20	0.00
57.00	3.53	1.20	0.00
58.00	3.53	1.20	0.00
59.00	3.53	1.20	0.00
60.00	3.53	1.20	0.00
61.00	3.53	1.20	0.00
62.00	3.53	1.20	0.00
63.00	3.53	1.20	0.00
64.00	3.53	1.20	0.00
65.00	3.53	1.20	0.00
66.00	3.53	1.20	0.00
67.00	3.53	1.20	0.00
68.00	3.53	1.20	0.00
69.00	3.53	1.20	0.00
70.00	3.53	1.20	0.00
71.00	3.53	1.20	0.00
72.00	3.53	1.20	0.00

Summary for Subcatchment 2S: Bypass to POI #2

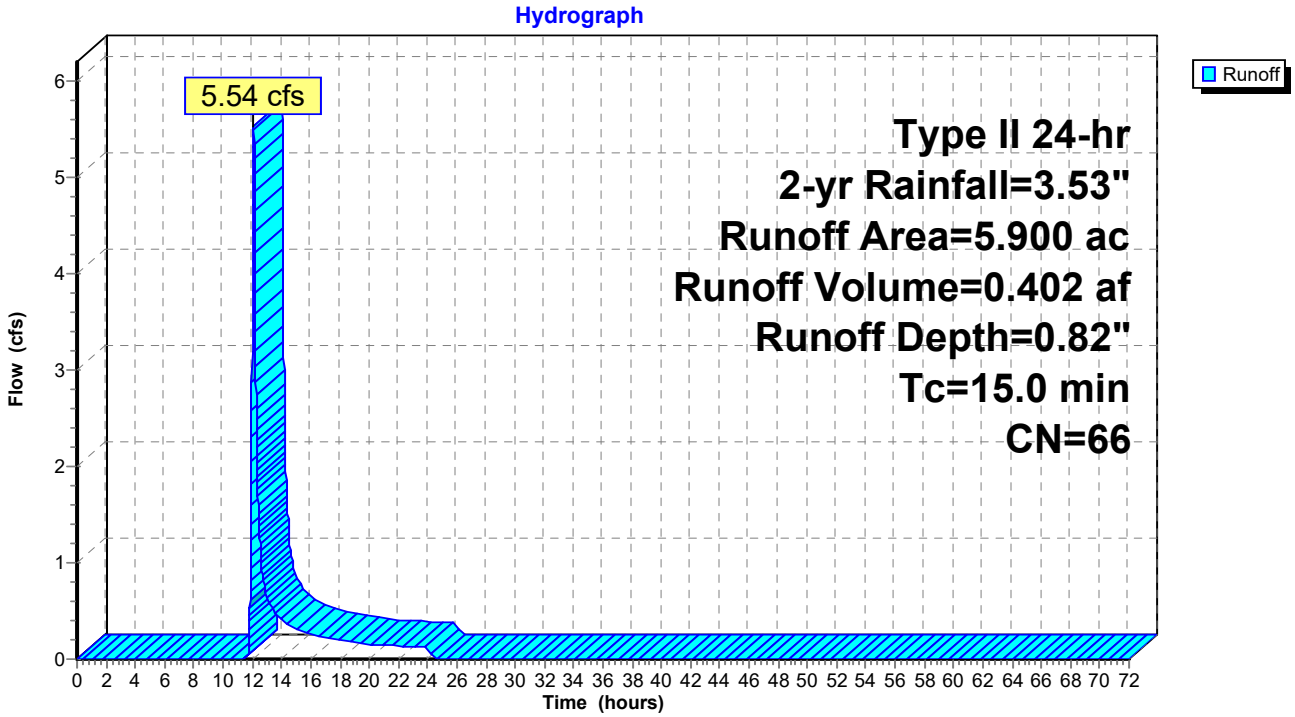
Runoff = 5.54 cfs @ 12.09 hrs, Volume= 0.402 af, Depth= 0.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-yr Rainfall=3.53"

	Area (ac)	CN	Description
*	0.650	98	Existing Impervious
	4.740	61	>75% Grass cover, Good, HSG B
	0.280	80	>75% Grass cover, Good, HSG D
	0.180	55	Woods, Good, HSG B
	0.050	77	Woods, Good, HSG D
	5.900	66	Weighted Average
	5.250		88.98% Pervious Area
	0.650		11.02% Impervious Area

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

Subcatchment 2S: Bypass to POI #2



Hydrograph for Subcatchment 2S: Bypass to POI #2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.08	0.00	0.00
3.00	0.12	0.00	0.00
4.00	0.17	0.00	0.00
5.00	0.22	0.00	0.00
6.00	0.28	0.00	0.00
7.00	0.35	0.00	0.00
8.00	0.42	0.00	0.00
9.00	0.52	0.00	0.00
10.00	0.64	0.00	0.00
11.00	0.83	0.00	0.00
12.00	2.34	0.27	**3.82**
13.00	2.73	0.42	**0.65**
14.00	2.89	0.50	0.40
15.00	3.01	0.55	0.32
16.00	3.11	0.60	0.25
17.00	3.18	0.63	0.22
18.00	3.25	0.67	0.20
19.00	3.31	0.70	0.17
20.00	3.36	0.73	0.15
21.00	3.41	0.75	0.14
22.00	3.45	0.77	0.14
23.00	3.49	0.80	0.13
24.00	**3.53**	**0.82**	0.13
25.00	3.53	0.82	0.00
26.00	3.53	0.82	0.00
27.00	3.53	0.82	0.00
28.00	3.53	0.82	0.00
29.00	3.53	0.82	0.00
30.00	3.53	0.82	0.00
31.00	3.53	0.82	0.00
32.00	3.53	0.82	0.00
33.00	3.53	0.82	0.00
34.00	3.53	0.82	0.00
35.00	3.53	0.82	0.00
36.00	3.53	0.82	0.00
37.00	3.53	0.82	0.00
38.00	3.53	0.82	0.00
39.00	3.53	0.82	0.00
40.00	3.53	0.82	0.00
41.00	3.53	0.82	0.00
42.00	3.53	0.82	0.00
43.00	3.53	0.82	0.00
44.00	3.53	0.82	0.00
45.00	3.53	0.82	0.00
46.00	3.53	0.82	0.00
47.00	3.53	0.82	0.00
48.00	3.53	0.82	0.00
49.00	3.53	0.82	0.00
50.00	3.53	0.82	0.00
51.00	3.53	0.82	0.00
52.00	3.53	0.82	0.00
53.00	3.53	0.82	0.00
54.00	3.53	0.82	0.00
55.00	3.53	0.82	0.00
56.00	3.53	0.82	0.00
57.00	3.53	0.82	0.00
58.00	3.53	0.82	0.00
59.00	3.53	0.82	0.00
60.00	3.53	0.82	0.00
61.00	3.53	0.82	0.00
62.00	3.53	0.82	0.00
63.00	3.53	0.82	0.00
64.00	3.53	0.82	0.00
65.00	3.53	0.82	0.00
66.00	3.53	0.82	0.00
67.00	3.53	0.82	0.00
68.00	3.53	0.82	0.00
69.00	3.53	0.82	0.00
70.00	3.53	0.82	0.00
71.00	3.53	0.82	0.00
72.00	3.53	0.82	0.00

Summary for Subcatchment 3PRE: Pre-Development to POI #3

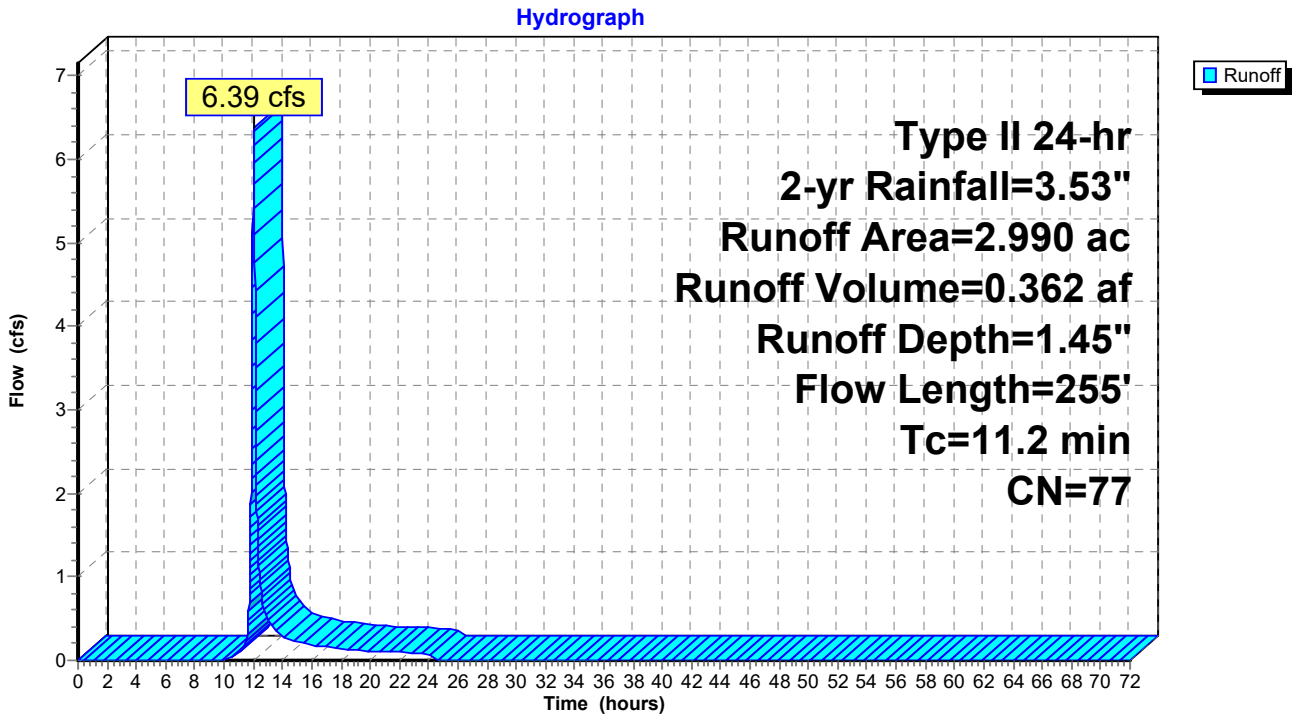
Runoff = 6.39 cfs @ 12.03 hrs, Volume= 0.362 af, Depth= 1.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-yr Rainfall=3.53"

Area (ac)	CN	Description
2.610	77	Woods, Good, HSG D
0.380	80	>75% Grass cover, Good, HSG D
2.990	77	Weighted Average
2.990		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.0360	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.53"
0.5	155	0.0860	4.72		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
11.2	255	Total			

Subcatchment 3PRE: Pre-Development to POI #3



Hydrograph for Subcatchment 3PRE: Pre-Development to POI #3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.08	0.00	0.00
3.00	0.12	0.00	0.00
4.00	0.17	0.00	0.00
5.00	0.22	0.00	0.00
6.00	0.28	0.00	0.00
7.00	0.35	0.00	0.00
8.00	0.42	0.00	0.00
9.00	0.52	0.00	0.00
10.00	0.64	0.00	0.00
11.00	0.83	0.02	0.08
12.00	2.34	0.64	**5.98**
13.00	2.73	0.89	**0.49**
14.00	2.89	1.00	0.29
15.00	3.01	1.08	0.23
16.00	3.11	1.15	0.18
17.00	3.18	1.20	0.16
18.00	3.25	1.25	0.14
19.00	3.31	1.29	0.12
20.00	3.36	1.33	0.10
21.00	3.41	1.36	0.10
22.00	3.45	1.39	0.09
23.00	3.49	1.42	0.09
24.00	**3.53**	**1.45**	0.09
25.00	3.53	1.45	0.00
26.00	3.53	1.45	0.00
27.00	3.53	1.45	0.00
28.00	3.53	1.45	0.00
29.00	3.53	1.45	0.00
30.00	3.53	1.45	0.00
31.00	3.53	1.45	0.00
32.00	3.53	1.45	0.00
33.00	3.53	1.45	0.00
34.00	3.53	1.45	0.00
35.00	3.53	1.45	0.00
36.00	3.53	1.45	0.00
37.00	3.53	1.45	0.00
38.00	3.53	1.45	0.00
39.00	3.53	1.45	0.00
40.00	3.53	1.45	0.00
41.00	3.53	1.45	0.00
42.00	3.53	1.45	0.00
43.00	3.53	1.45	0.00
44.00	3.53	1.45	0.00
45.00	3.53	1.45	0.00
46.00	3.53	1.45	0.00
47.00	3.53	1.45	0.00
48.00	3.53	1.45	0.00
49.00	3.53	1.45	0.00
50.00	3.53	1.45	0.00
51.00	3.53	1.45	0.00
52.00	3.53	1.45	0.00
53.00	3.53	1.45	0.00
54.00	3.53	1.45	0.00
55.00	3.53	1.45	0.00
56.00	3.53	1.45	0.00
57.00	3.53	1.45	0.00
58.00	3.53	1.45	0.00
59.00	3.53	1.45	0.00
60.00	3.53	1.45	0.00
61.00	3.53	1.45	0.00
62.00	3.53	1.45	0.00
63.00	3.53	1.45	0.00
64.00	3.53	1.45	0.00
65.00	3.53	1.45	0.00
66.00	3.53	1.45	0.00
67.00	3.53	1.45	0.00
68.00	3.53	1.45	0.00
69.00	3.53	1.45	0.00
70.00	3.53	1.45	0.00
71.00	3.53	1.45	0.00
72.00	3.53	1.45	0.00

Summary for Subcatchment 3PST: Post-Development to POI #3

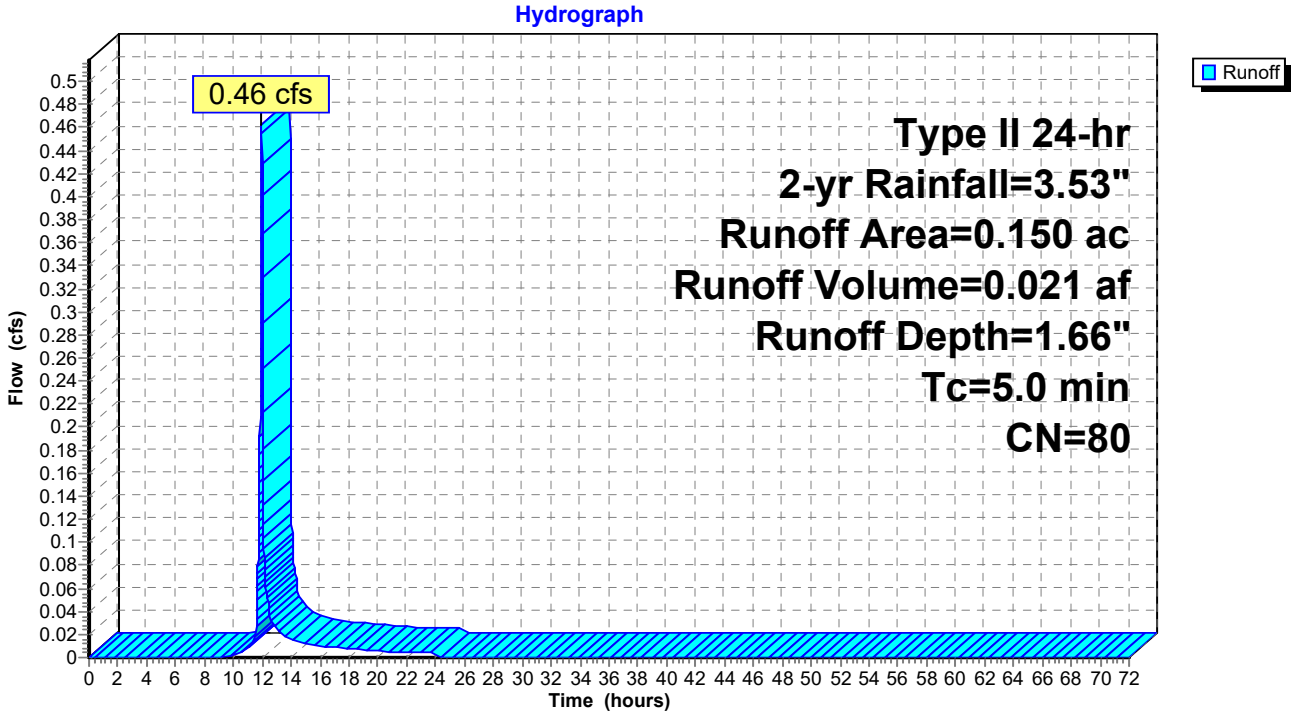
Runoff = 0.46 cfs @ 11.96 hrs, Volume= 0.021 af, Depth= 1.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-yr Rainfall=3.53"

Area (ac)	CN	Description
0.020	98	Paved roads w/curbs & sewers, HSG B
0.130	77	Woods, Good, HSG D
0.150	80	Weighted Average
0.130		86.67% Pervious Area
0.020		13.33% Impervious Area

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

Subcatchment 3PST: Post-Development to POI #3



Hydrograph for Subcatchment 3PST: Post-Development to POI #3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.08	0.00	0.00
3.00	0.12	0.00	0.00
4.00	0.17	0.00	0.00
5.00	0.22	0.00	0.00
6.00	0.28	0.00	0.00
7.00	0.35	0.00	0.00
8.00	0.42	0.00	0.00
9.00	0.52	0.00	0.00
10.00	0.64	0.01	0.00
11.00	0.83	0.04	**0.01**
12.00	2.34	0.78	**0.40**
13.00	2.73	1.05	0.02
14.00	2.89	1.17	0.02
15.00	3.01	1.26	0.01
16.00	3.11	1.33	0.01
17.00	3.18	1.39	0.01
18.00	3.25	1.44	0.01
19.00	3.31	1.49	0.01
20.00	3.36	1.53	0.01
21.00	3.41	1.56	0.01
22.00	3.45	1.60	0.01
23.00	3.49	1.63	0.00
24.00	**3.53**	**1.66**	0.00
25.00	3.53	1.66	0.00
26.00	3.53	1.66	0.00
27.00	3.53	1.66	0.00
28.00	3.53	1.66	0.00
29.00	3.53	1.66	0.00
30.00	3.53	1.66	0.00
31.00	3.53	1.66	0.00
32.00	3.53	1.66	0.00
33.00	3.53	1.66	0.00
34.00	3.53	1.66	0.00
35.00	3.53	1.66	0.00
36.00	3.53	1.66	0.00
37.00	3.53	1.66	0.00
38.00	3.53	1.66	0.00
39.00	3.53	1.66	0.00
40.00	3.53	1.66	0.00
41.00	3.53	1.66	0.00
42.00	3.53	1.66	0.00
43.00	3.53	1.66	0.00
44.00	3.53	1.66	0.00
45.00	3.53	1.66	0.00
46.00	3.53	1.66	0.00
47.00	3.53	1.66	0.00
48.00	3.53	1.66	0.00
49.00	3.53	1.66	0.00
50.00	3.53	1.66	0.00
51.00	3.53	1.66	0.00
52.00	3.53	1.66	0.00
53.00	3.53	1.66	0.00
54.00	3.53	1.66	0.00
55.00	3.53	1.66	0.00
56.00	3.53	1.66	0.00
57.00	3.53	1.66	0.00
58.00	3.53	1.66	0.00
59.00	3.53	1.66	0.00
60.00	3.53	1.66	0.00
61.00	3.53	1.66	0.00
62.00	3.53	1.66	0.00
63.00	3.53	1.66	0.00
64.00	3.53	1.66	0.00
65.00	3.53	1.66	0.00
66.00	3.53	1.66	0.00
67.00	3.53	1.66	0.00
68.00	3.53	1.66	0.00
69.00	3.53	1.66	0.00
70.00	3.53	1.66	0.00
71.00	3.53	1.66	0.00
72.00	3.53	1.66	0.00

Summary for Pond 2P: SCM #2

Inflow Area = 3.940 ac, 22.84% Impervious, Inflow Depth = 1.20" for 2-yr event
Inflow = 8.76 cfs @ 11.97 hrs, Volume= 0.394 af
Outflow = 0.08 cfs @ 24.05 hrs, Volume= 0.320 af, Atten= 99%, Lag= 725.2 min
Primary = 0.08 cfs @ 24.05 hrs, Volume= 0.320 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 715.44' @ 24.05 hrs Surf.Area= 11,088 sf Storage= 13,974 cf

Plug-Flow detention time= 1,614.9 min calculated for 0.320 af (81% of inflow)
Center-of-Mass det. time= 1,531.2 min (2,386.1 - 854.9)

Volume	Invert	Avail.Storage	Storage Description
#1	713.50'	81,212 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

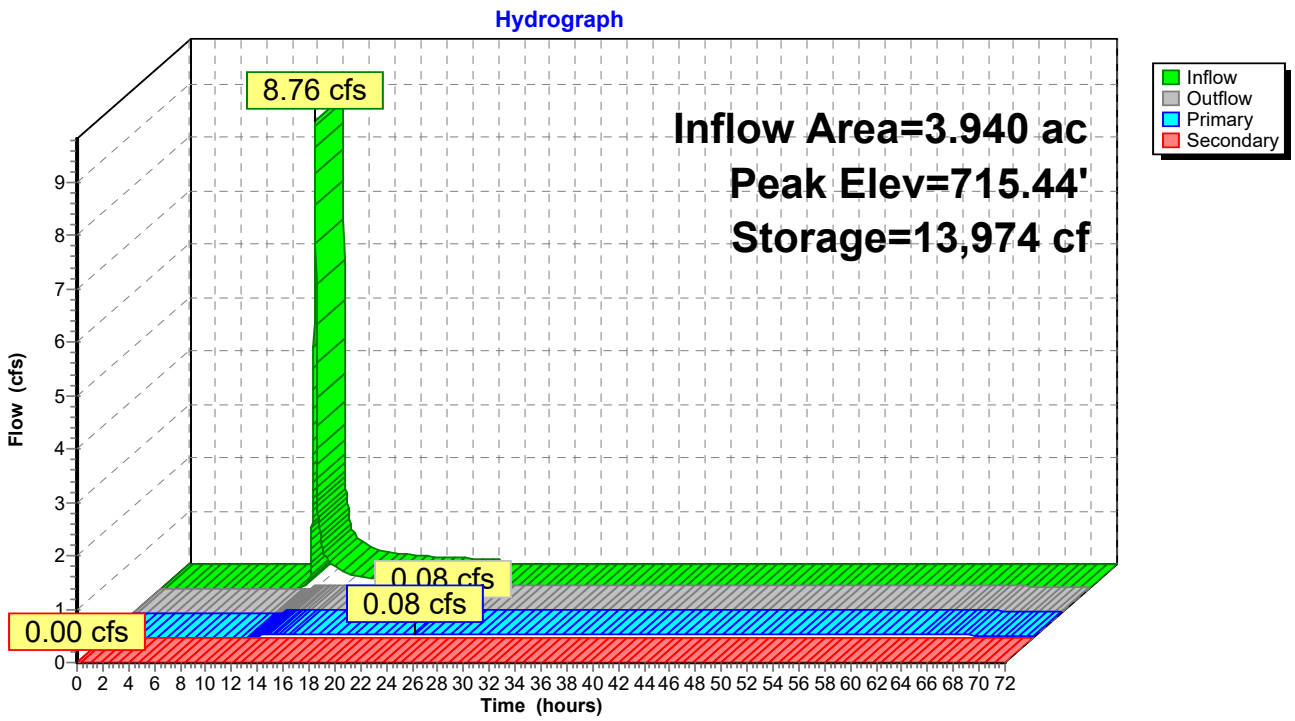
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
713.50	2,258	0	0
714.00	4,670	1,732	1,732
715.00	10,425	7,548	9,280
716.00	11,945	11,185	20,465
717.00	13,515	12,730	33,195
718.00	15,145	14,330	47,525
719.00	16,830	15,988	63,512
720.00	18,570	17,700	81,212

Device	Routing	Invert	Outlet Devices
#1	Primary	711.50'	**24.0" Round Outlet Pipe** L= 40.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 711.50' / 711.30' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf
#2	Device 1	713.50'	**Filter Bed** Head (feet) 0.00 1.00 2.00 3.00 4.00 5.00 Disch. (cfs) 0.000 0.055 0.077 0.098 0.120 0.142
#3	Device 1	715.50'	**4.0" Vert. Orifice** C= 0.600
#4	Device 1	717.50'	**48.0" x 48.0" Horiz. Top of OCS** C= 0.600 Limited to weir flow at low heads
#5	Secondary	718.50'	**20.0' long x 10.0' breadth Emergency Spillway** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

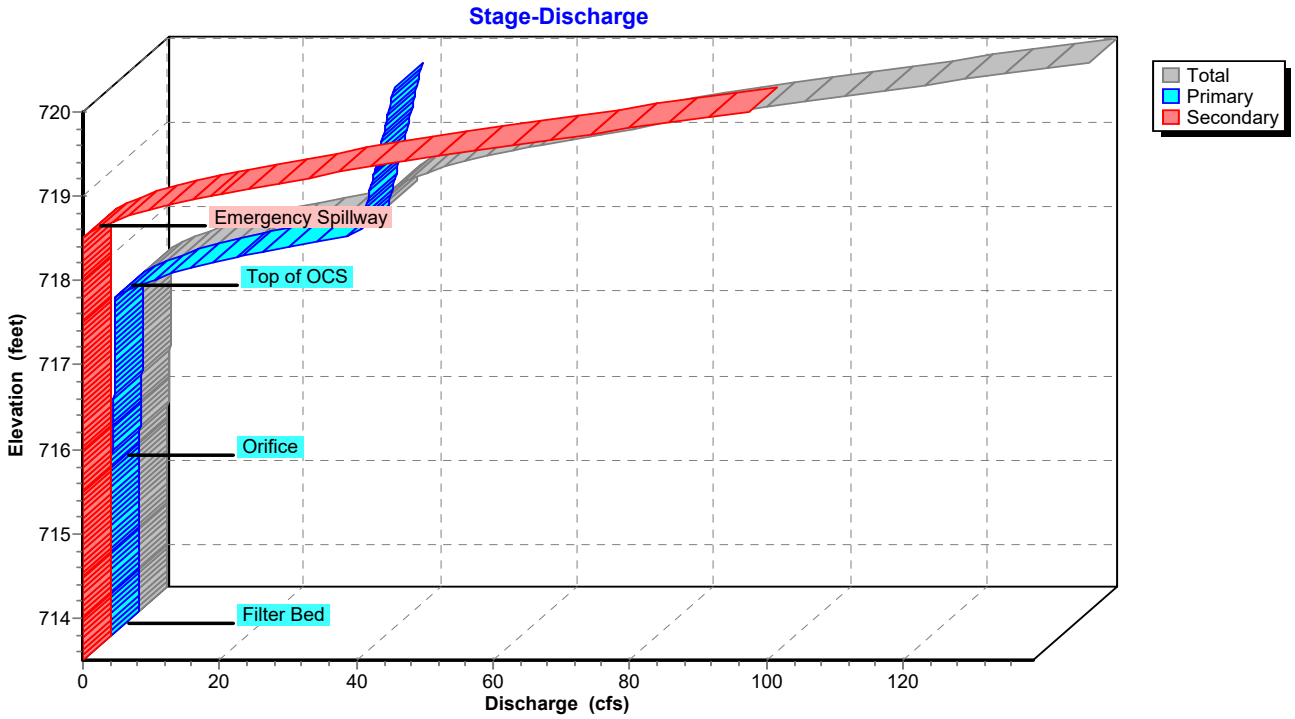
Primary OutFlow Max=0.08 cfs @ 24.05 hrs HW=715.44' (Free Discharge)
└─**1=Outlet Pipe** (Passes 0.08 cfs of 25.92 cfs potential flow)
  ├─**2=Filter Bed** (Custom Controls 0.08 cfs)
  ├─**3=Orifice** (Controls 0.00 cfs)
  └─**4=Top of OCS** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=713.50' (Free Discharge)
└─**5=Emergency Spillway** (Controls 0.00 cfs)

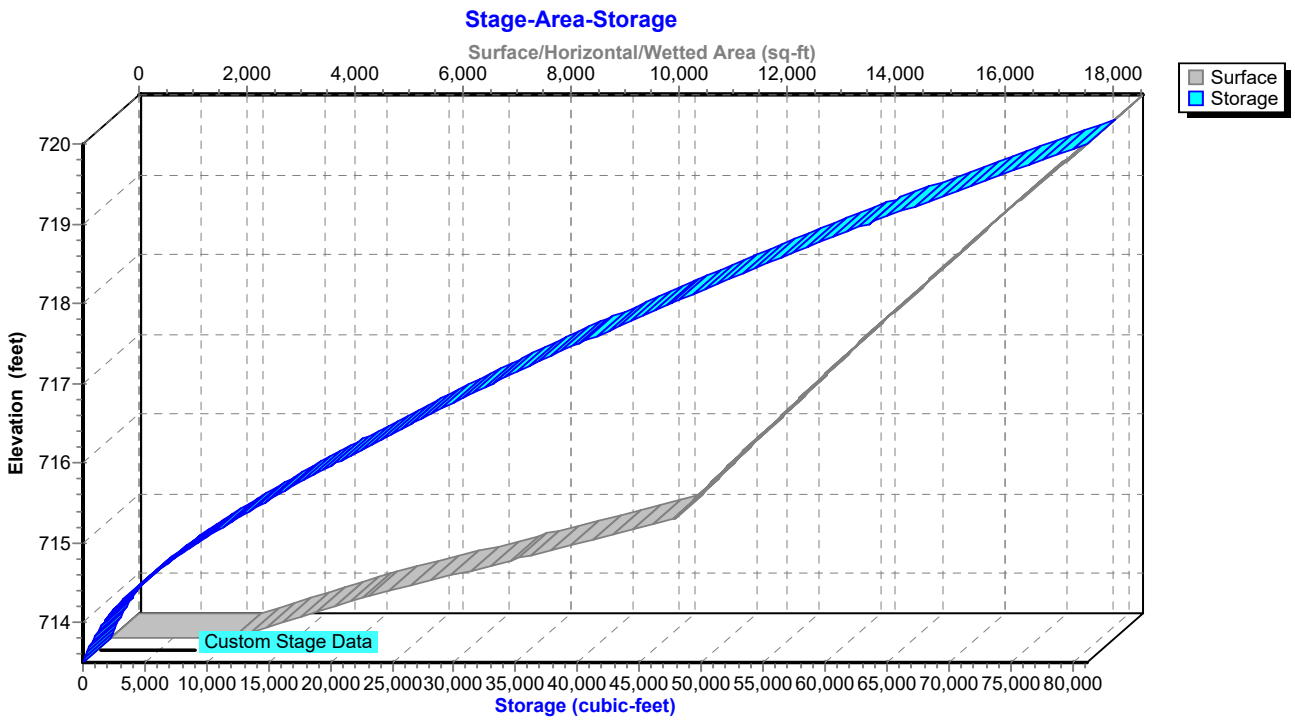
Pond 2P: SCM #2



Pond 2P: SCM #2



Pond 2P: SCM #2


Stage-Area-Storage
Surface/Horizontal/Wetted Area (sq-ft)
0
2,000
4,000
6,000
8,000
10,000
12,000
14,000
16,000
18,000
Surface
Storage
Elevation (feet)
720
719
718
717
716
715
714
Custom Stage Data
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
55,000
60,000
65,000
70,000
75,000
80,000
Storage (cubic-feet)

Hydrograph for Pond 2P: SCM #2

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	713.50	0.00	0.00	**0.00**
2.00	0.00	0	713.50	0.00	0.00	0.00
4.00	0.00	0	713.50	0.00	0.00	0.00
6.00	0.00	0	713.50	0.00	0.00	0.00
8.00	0.00	0	713.50	0.00	0.00	0.00
10.00	**0.00**	0	713.50	0.00	0.00	0.00
12.00	**7.78**	5,291	714.56	0.06	0.06	0.00
14.00	0.32	10,743	715.14	0.07	0.07	0.00
16.00	0.21	12,129	715.27	0.07	0.07	0.00
18.00	0.16	12,934	715.34	0.07	0.07	0.00
20.00	0.12	13,433	715.39	0.07	0.07	0.00
22.00	0.11	13,732	715.41	0.08	0.08	0.00
24.00	0.10	**13,971**	**715.44**	**0.08**	**0.08**	0.00
26.00	0.00	**13,459**	**715.39**	**0.07**	**0.07**	0.00
28.00	0.00	12,926	715.34	0.07	0.07	0.00
30.00	0.00	12,400	715.29	0.07	0.07	0.00
32.00	0.00	11,883	715.25	0.07	0.07	0.00
34.00	0.00	11,372	715.20	0.07	0.07	0.00
36.00	0.00	10,869	715.15	0.07	0.07	0.00
38.00	0.00	10,374	715.10	0.07	0.07	0.00
40.00	0.00	9,886	715.06	0.07	0.07	0.00
42.00	0.00	9,405	715.01	0.07	0.07	0.00
44.00	0.00	8,932	714.97	0.07	0.07	0.00
46.00	0.00	8,466	714.92	0.06	0.06	0.00
48.00	0.00	8,007	714.87	0.06	0.06	0.00
50.00	0.00	7,555	714.83	0.06	0.06	0.00
52.00	0.00	7,112	714.78	0.06	0.06	0.00
54.00	0.00	6,675	714.73	0.06	0.06	0.00
56.00	0.00	6,247	714.68	0.06	0.06	0.00
58.00	0.00	5,826	714.63	0.06	0.06	0.00
60.00	0.00	5,413	714.58	0.06	0.06	0.00
62.00	0.00	5,009	714.53	0.06	0.06	0.00
64.00	0.00	4,613	714.48	0.05	0.05	0.00
66.00	0.00	4,237	714.42	0.05	0.05	0.00
68.00	0.00	3,881	714.37	0.05	0.05	0.00
70.00	0.00	3,545	714.32	0.05	0.05	0.00
72.00	0.00	3,229	714.27	0.04	0.04	0.00

Stage-Discharge for Pond 2P: SCM #2

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
713.50	0.00	0.00	0.00
713.60	0.01	0.01	0.00
713.70	0.01	0.01	0.00
713.80	0.02	0.02	0.00
713.90	0.02	0.02	0.00
714.00	0.03	0.03	0.00
714.10	0.03	0.03	0.00
714.20	0.04	0.04	0.00
714.30	0.04	0.04	0.00
714.40	0.05	0.05	0.00
714.50	0.06	0.06	0.00
714.60	0.06	0.06	0.00
714.70	0.06	0.06	0.00
714.80	0.06	0.06	0.00
714.90	0.06	0.06	0.00
715.00	0.07	0.07	0.00
715.10	0.07	0.07	0.00
715.20	0.07	0.07	0.00
715.30	0.07	0.07	0.00
715.40	0.07	0.07	0.00
715.50	0.08	0.08	0.00
715.60	0.10	0.10	0.00
715.70	0.16	0.16	0.00
715.80	0.24	0.24	0.00
715.90	0.29	0.29	0.00
716.00	0.33	0.33	0.00
716.10	0.37	0.37	0.00
716.20	0.40	0.40	0.00
716.30	0.43	0.43	0.00
716.40	0.46	0.46	0.00
716.50	0.48	0.48	0.00
716.60	0.51	0.51	0.00
716.70	0.53	0.53	0.00
716.80	0.55	0.55	0.00
716.90	0.57	0.57	0.00
717.00	0.59	0.59	0.00
717.10	0.61	0.61	0.00
717.20	0.63	0.63	0.00
717.30	0.65	0.65	0.00
717.40	0.67	0.67	0.00
717.50	0.69	0.69	0.00
717.60	2.36	2.36	0.00
717.70	5.40	5.40	0.00
717.80	9.34	9.34	0.00
717.90	13.99	13.99	0.00
718.00	19.27	19.27	0.00
718.10	25.10	25.10	0.00
718.20	31.45	31.45	0.00
718.30	36.43	36.43	0.00
718.40	36.74	36.74	0.00
718.50	37.05	37.05	0.00
718.60	38.93	37.36	1.57
718.70	42.12	37.67	4.45
718.80	46.27	37.97	8.30
718.90	51.22	38.27	12.95
719.00	57.16	38.57	18.60
719.10	63.96	38.86	25.10
719.20	70.72	39.15	31.57
719.30	77.94	39.45	38.50
719.40	85.58	39.73	45.85
719.50	93.62	40.02	53.60
719.60	102.26	40.31	61.95
719.70	111.31	40.59	70.72
719.80	120.32	40.87	79.45
719.90	129.61	41.15	88.46
720.00	**138.98**	**41.43**	**97.55**

Stage-Area-Storage for Pond 2P: SCM #2

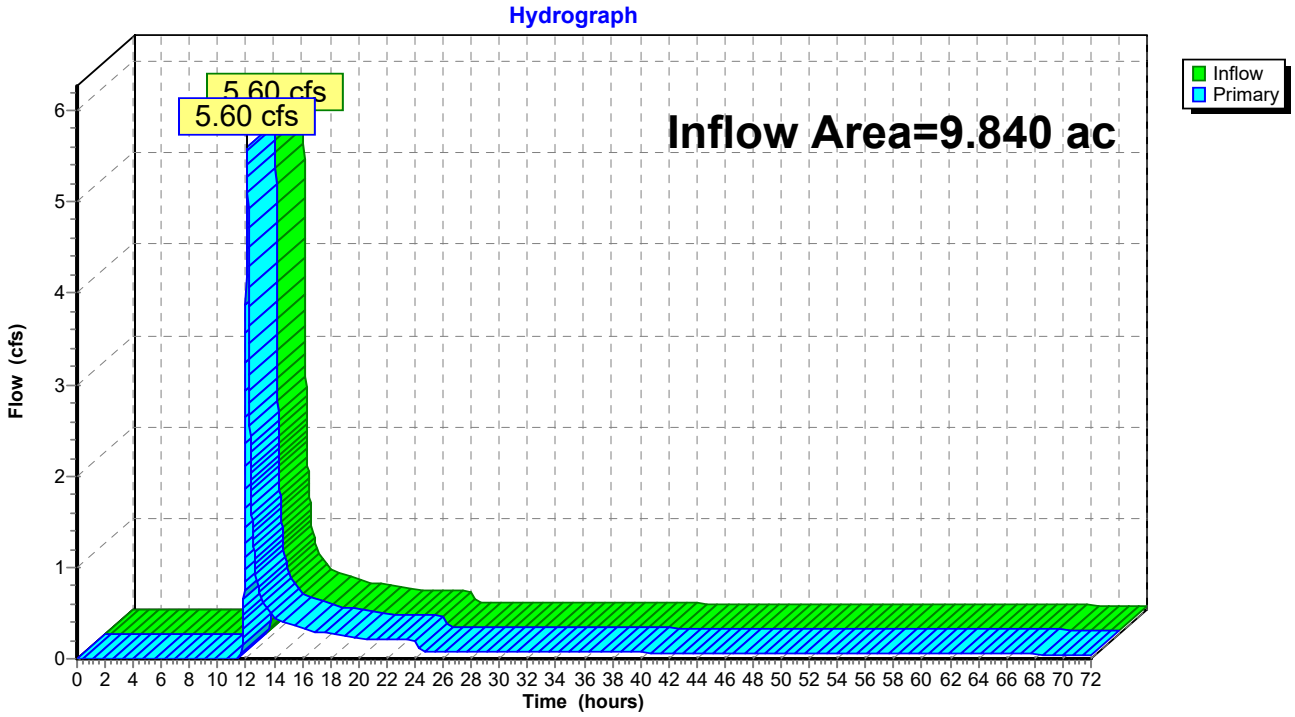
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
713.50	2,258	0
713.60	2,740	250
713.70	3,223	548
713.80	3,705	894
713.90	4,188	1,289
714.00	4,670	1,732
714.10	5,246	2,228
714.20	5,821	2,781
714.30	6,396	3,392
714.40	6,972	4,060
714.50	7,548	4,786
714.60	8,123	5,570
714.70	8,699	6,411
714.80	9,274	7,310
714.90	9,849	8,266
715.00	10,425	9,280
715.10	10,577	10,330
715.20	10,729	11,395
715.30	10,881	12,475
715.40	11,033	13,571
715.50	11,185	14,682
715.60	11,337	15,808
715.70	11,489	16,949
715.80	11,641	18,106
715.90	11,793	19,278
716.00	11,945	20,465
716.10	12,102	21,667
716.20	12,259	22,885
716.30	12,416	24,119
716.40	12,573	25,368
716.50	12,730	26,633
716.60	12,887	27,914
716.70	13,044	29,211
716.80	13,201	30,523
716.90	13,358	31,851
717.00	13,515	33,195
717.10	13,678	34,554
717.20	13,841	35,930
717.30	14,004	37,322
717.40	14,167	38,731
717.50	14,330	40,156
717.60	14,493	41,597
717.70	14,656	43,054
717.80	14,819	44,528
717.90	14,982	46,018
718.00	15,145	47,525
718.10	15,314	49,047
718.20	15,482	50,587
718.30	15,650	52,144
718.40	15,819	53,717
718.50	15,988	55,308
718.60	16,156	56,915
718.70	16,325	58,539
718.80	16,493	60,180
718.90	16,661	61,837
719.00	16,830	63,512
719.10	17,004	65,204
719.20	17,178	66,913
719.30	17,352	68,639
719.40	17,526	70,383
719.50	17,700	72,145
719.60	17,874	73,923
719.70	18,048	75,719
719.80	18,222	77,533
719.90	18,396	79,364
720.00	**18,570**	**81,212**

Summary for Link 2L: Total Post-Development to POI #2

Inflow Area = 9.840 ac, 15.75% Impervious, Inflow Depth > 0.88" for 2-yr event
Inflow = 5.60 cfs @ 12.09 hrs, Volume= 0.721 af
Primary = 5.60 cfs @ 12.09 hrs, Volume= 0.721 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 2L: Total Post-Development to POI #2



Hydrograph for Link 2L: Total Post-Development to POI #2

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	**0.00**	0.00	53.00	0.06	0.00	0.06
1.00	0.00	0.00	0.00	54.00	0.06	0.00	0.06
2.00	0.00	0.00	0.00	55.00	0.06	0.00	0.06
3.00	0.00	0.00	0.00	56.00	0.06	0.00	0.06
4.00	0.00	0.00	0.00	57.00	0.06	0.00	0.06
5.00	0.00	0.00	0.00	58.00	0.06	0.00	0.06
6.00	0.00	0.00	0.00	59.00	0.06	0.00	0.06
7.00	0.00	0.00	0.00	60.00	0.06	0.00	0.06
8.00	0.00	0.00	0.00	61.00	0.06	0.00	0.06
9.00	0.00	0.00	0.00	62.00	0.06	0.00	0.06
10.00	0.00	0.00	0.00	63.00	0.06	0.00	0.06
11.00	0.00	0.00	0.00	64.00	0.05	0.00	0.05
12.00	**3.88**	0.00	**3.88**	65.00	0.05	0.00	0.05
13.00	**0.72**	0.00	**0.72**	66.00	0.05	0.00	0.05
14.00	0.47	0.00	0.47	67.00	0.05	0.00	0.05
15.00	0.39	0.00	0.39	68.00	0.05	0.00	0.05
16.00	0.32	0.00	0.32	69.00	0.05	0.00	0.05
17.00	0.29	0.00	0.29	70.00	0.05	0.00	0.05
18.00	0.27	0.00	0.27	71.00	0.04	0.00	0.04
19.00	0.25	0.00	0.25	72.00	0.04	0.00	0.04
20.00	0.22	0.00	0.22				
21.00	0.22	0.00	0.22				
22.00	0.21	0.00	0.21				
23.00	0.21	0.00	0.21				
24.00	0.20	0.00	0.20				
25.00	0.08	0.00	0.08				
26.00	0.07	0.00	0.07				
27.00	0.07	0.00	0.07				
28.00	0.07	0.00	0.07				
29.00	0.07	0.00	0.07				
30.00	0.07	0.00	0.07				
31.00	0.07	0.00	0.07				
32.00	0.07	0.00	0.07				
33.00	0.07	0.00	0.07				
34.00	0.07	0.00	0.07				
35.00	0.07	0.00	0.07				
36.00	0.07	0.00	0.07				
37.00	0.07	0.00	0.07				
38.00	0.07	0.00	0.07				
39.00	0.07	0.00	0.07				
40.00	0.07	0.00	0.07				
41.00	0.07	0.00	0.07				
42.00	0.07	0.00	0.07				
43.00	0.07	0.00	0.07				
44.00	0.07	0.00	0.07				
45.00	0.06	0.00	0.06				
46.00	0.06	0.00	0.06				
47.00	0.06	0.00	0.06				
48.00	0.06	0.00	0.06				
49.00	0.06	0.00	0.06				
50.00	0.06	0.00	0.06				
51.00	0.06	0.00	0.06				
52.00	0.06	0.00	0.06				

Summary for Subcatchment 2PRE: Pre-Development to POI #2

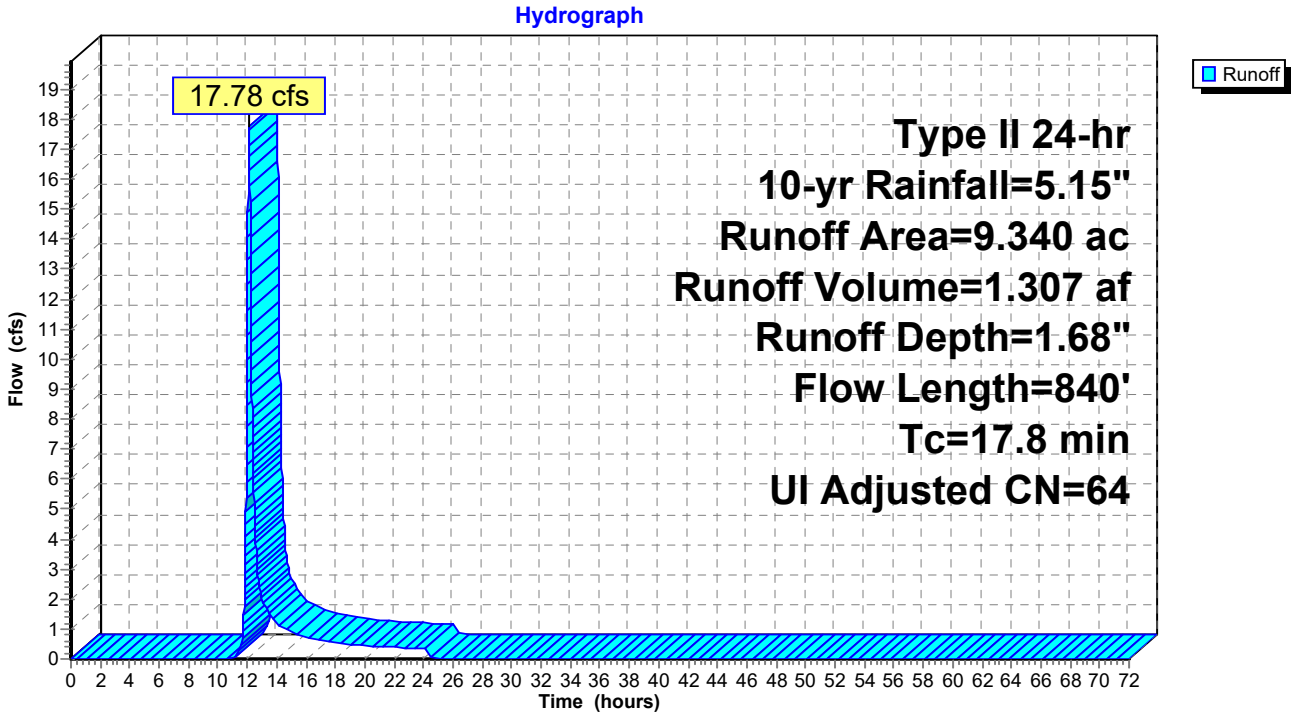
Runoff = 17.78 cfs @ 12.12 hrs, Volume= 1.307 af, Depth= 1.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=5.15"

Area (ac)	CN	Adj	Description
0.590	55		Woods, Good, HSG B
0.700	77		Woods, Good, HSG D
0.750	98		Unconnected roofs, HSG B
0.080	80		>75% Grass cover, Good, HSG D
7.220	61		>75% Grass cover, Good, HSG B
9.340	65	64	Weighted Average, UI Adjusted
8.590			91.97% Pervious Area
0.750			8.03% Impervious Area
0.750			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0250	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.53"
5.4	740	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
17.8	840	Total			

Subcatchment 2PRE: Pre-Development to POI #2



Hydrograph for Subcatchment 2PRE: Pre-Development to POI #2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	53.00	5.15	1.68	0.00
1.00	0.05	0.00	0.00	54.00	5.15	1.68	0.00
2.00	0.11	0.00	0.00	55.00	5.15	1.68	0.00
3.00	0.18	0.00	0.00	56.00	5.15	1.68	0.00
4.00	0.25	0.00	0.00	57.00	5.15	1.68	0.00
5.00	0.32	0.00	0.00	58.00	5.15	1.68	0.00
6.00	0.41	0.00	0.00	59.00	5.15	1.68	0.00
7.00	0.51	0.00	0.00	60.00	5.15	1.68	0.00
8.00	0.62	0.00	0.00	61.00	5.15	1.68	0.00
9.00	0.76	0.00	0.00	62.00	5.15	1.68	0.00
10.00	0.93	0.00	0.00	63.00	5.15	1.68	0.00
11.00	1.21	0.00	0.01	64.00	5.15	1.68	0.00
12.00	3.41	0.66	**11.64**	65.00	5.15	1.68	0.00
13.00	3.98	0.96	**2.04**	66.00	5.15	1.68	0.00
14.00	4.22	1.10	1.19	67.00	5.15	1.68	0.00
15.00	4.40	1.20	0.92	68.00	5.15	1.68	0.00
16.00	4.53	1.29	0.74	69.00	5.15	1.68	0.00
17.00	4.64	1.35	0.64	70.00	5.15	1.68	0.00
18.00	4.74	1.42	0.57	71.00	5.15	1.68	0.00
19.00	4.83	1.47	0.50	72.00	5.15	1.68	0.00
20.00	4.90	1.52	0.43				
21.00	4.97	1.56	0.40				
22.00	5.03	1.60	0.38				
23.00	5.09	1.64	0.37				
24.00	**5.15**	**1.68**	0.36				
25.00	5.15	1.68	0.00				
26.00	5.15	1.68	0.00				
27.00	5.15	1.68	0.00				
28.00	5.15	1.68	0.00				
29.00	5.15	1.68	0.00				
30.00	5.15	1.68	0.00				
31.00	5.15	1.68	0.00				
32.00	5.15	1.68	0.00				
33.00	5.15	1.68	0.00				
34.00	5.15	1.68	0.00				
35.00	5.15	1.68	0.00				
36.00	5.15	1.68	0.00				
37.00	5.15	1.68	0.00				
38.00	5.15	1.68	0.00				
39.00	5.15	1.68	0.00				
40.00	5.15	1.68	0.00				
41.00	5.15	1.68	0.00				
42.00	5.15	1.68	0.00				
43.00	5.15	1.68	0.00				
44.00	5.15	1.68	0.00				
45.00	5.15	1.68	0.00				
46.00	5.15	1.68	0.00				
47.00	5.15	1.68	0.00				
48.00	5.15	1.68	0.00				
49.00	5.15	1.68	0.00				
50.00	5.15	1.68	0.00				
51.00	5.15	1.68	0.00				
52.00	5.15	1.68	0.00				

Summary for Subcatchment 2PST: Post-Development to SCM #2

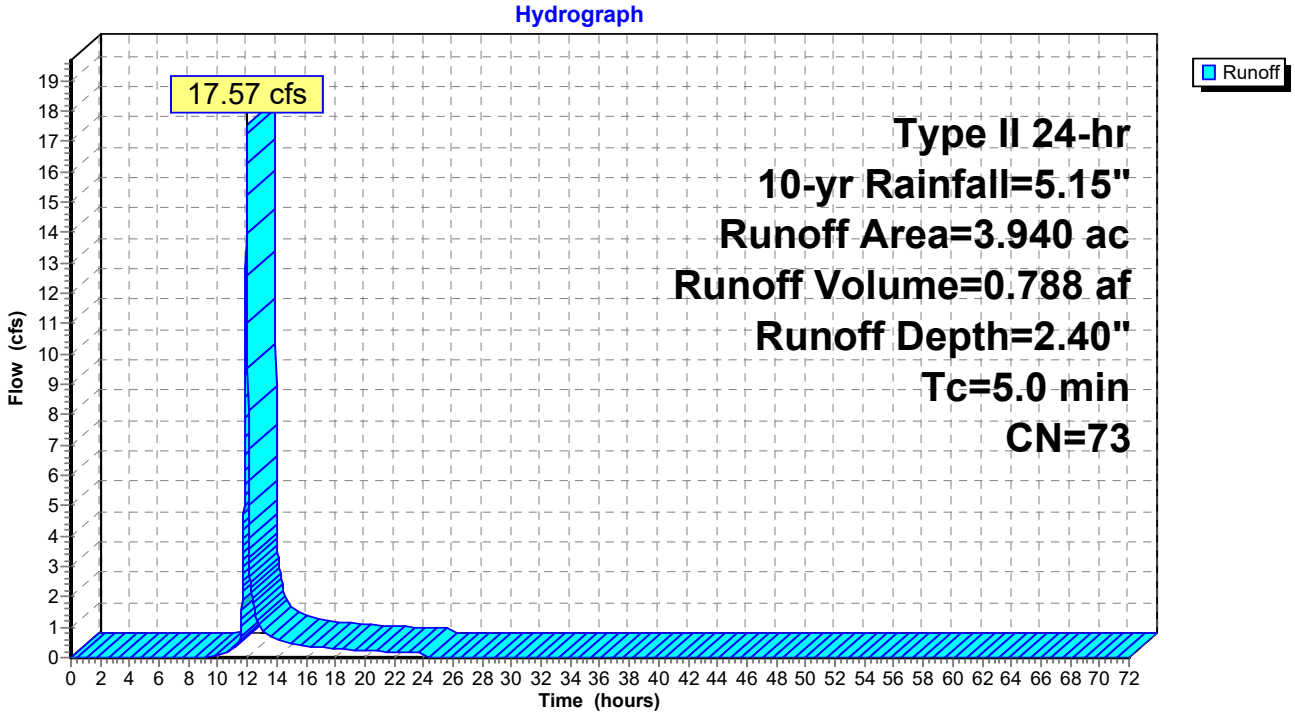
Runoff = 17.57 cfs @ 11.96 hrs, Volume= 0.788 af, Depth= 2.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=5.15"

	Area (ac)	CN	Description
*	0.880	98	Proposed Impervious
*	0.020	98	Existing Impervious
	2.290	61	>75% Grass cover, Good, HSG B
	0.750	80	>75% Grass cover, Good, HSG D
	3.940	73	Weighted Average
	3.040		77.16% Pervious Area
	0.900		22.84% Impervious Area

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

Subcatchment 2PST: Post-Development to SCM #2



Hydrograph for Subcatchment 2PST: Post-Development to SCM #2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.11	0.00	0.00
3.00	0.18	0.00	0.00
4.00	0.25	0.00	0.00
5.00	0.32	0.00	0.00
6.00	0.41	0.00	0.00
7.00	0.51	0.00	0.00
8.00	0.62	0.00	0.00
9.00	0.76	0.00	0.00
10.00	0.93	0.01	0.07
11.00	1.21	0.05	**0.29**
12.00	3.41	1.12	**15.25**
13.00	3.98	1.51	0.95
14.00	4.22	1.69	0.58
15.00	4.40	1.82	0.47
16.00	4.53	1.92	0.36
17.00	4.64	2.00	0.32
18.00	4.74	2.08	0.29
19.00	4.83	2.15	0.25
20.00	4.90	2.20	0.21
21.00	4.97	2.26	0.20
22.00	5.03	2.31	0.19
23.00	5.09	2.35	0.19
24.00	**5.15**	**2.40**	0.18
25.00	5.15	2.40	0.00
26.00	5.15	2.40	0.00
27.00	5.15	2.40	0.00
28.00	5.15	2.40	0.00
29.00	5.15	2.40	0.00
30.00	5.15	2.40	0.00
31.00	5.15	2.40	0.00
32.00	5.15	2.40	0.00
33.00	5.15	2.40	0.00
34.00	5.15	2.40	0.00
35.00	5.15	2.40	0.00
36.00	5.15	2.40	0.00
37.00	5.15	2.40	0.00
38.00	5.15	2.40	0.00
39.00	5.15	2.40	0.00
40.00	5.15	2.40	0.00
41.00	5.15	2.40	0.00
42.00	5.15	2.40	0.00
43.00	5.15	2.40	0.00
44.00	5.15	2.40	0.00
45.00	5.15	2.40	0.00
46.00	5.15	2.40	0.00
47.00	5.15	2.40	0.00
48.00	5.15	2.40	0.00
49.00	5.15	2.40	0.00
50.00	5.15	2.40	0.00
51.00	5.15	2.40	0.00
52.00	5.15	2.40	0.00
53.00	5.15	2.40	0.00
54.00	5.15	2.40	0.00
55.00	5.15	2.40	0.00
56.00	5.15	2.40	0.00
57.00	5.15	2.40	0.00
58.00	5.15	2.40	0.00
59.00	5.15	2.40	0.00
60.00	5.15	2.40	0.00
61.00	5.15	2.40	0.00
62.00	5.15	2.40	0.00
63.00	5.15	2.40	0.00
64.00	5.15	2.40	0.00
65.00	5.15	2.40	0.00
66.00	5.15	2.40	0.00
67.00	5.15	2.40	0.00
68.00	5.15	2.40	0.00
69.00	5.15	2.40	0.00
70.00	5.15	2.40	0.00
71.00	5.15	2.40	0.00
72.00	5.15	2.40	0.00

Summary for Subcatchment 2S: Bypass to POI #2

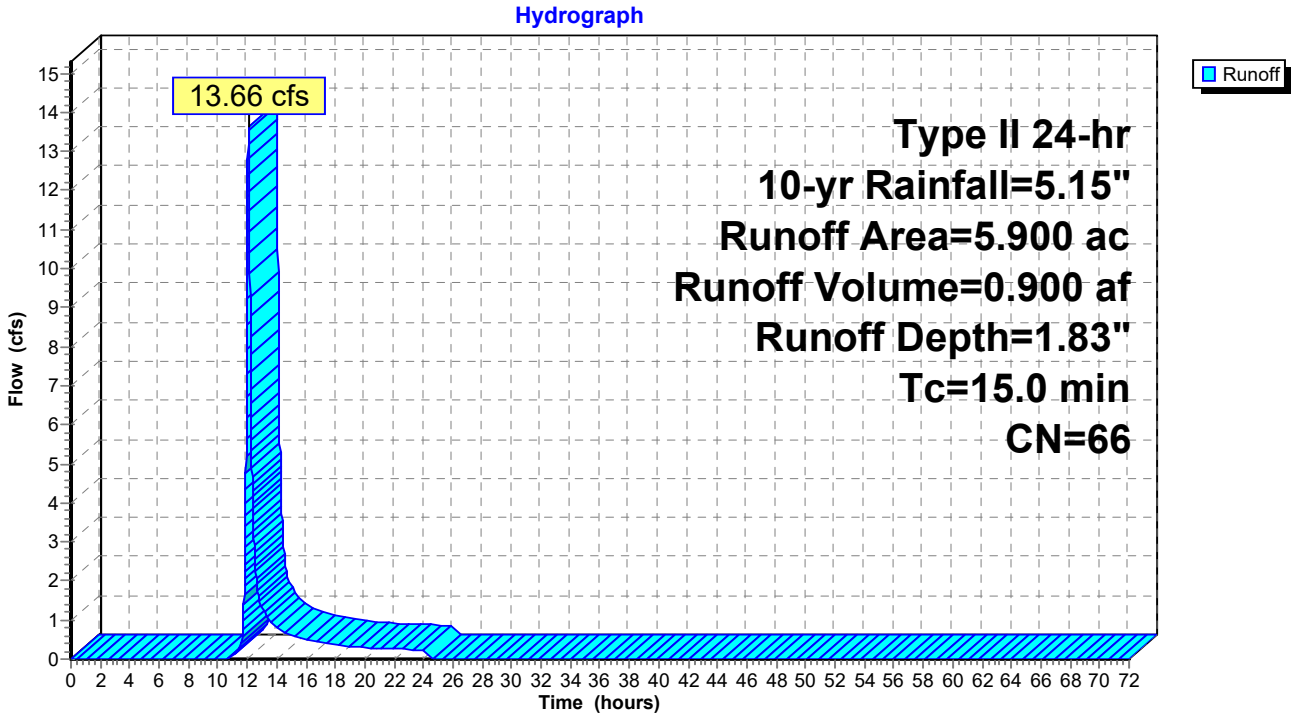
Runoff = 13.66 cfs @ 12.08 hrs, Volume= 0.900 af, Depth= 1.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=5.15"

	Area (ac)	CN	Description
*	0.650	98	Existing Impervious
	4.740	61	>75% Grass cover, Good, HSG B
	0.280	80	>75% Grass cover, Good, HSG D
	0.180	55	Woods, Good, HSG B
	0.050	77	Woods, Good, HSG D
	5.900	66	Weighted Average
	5.250		88.98% Pervious Area
	0.650		11.02% Impervious Area

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

Subcatchment 2S: Bypass to POI #2



Hydrograph for Subcatchment 2S: Bypass to POI #2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.11	0.00	0.00
3.00	0.18	0.00	0.00
4.00	0.25	0.00	0.00
5.00	0.32	0.00	0.00
6.00	0.41	0.00	0.00
7.00	0.51	0.00	0.00
8.00	0.62	0.00	0.00
9.00	0.76	0.00	0.00
10.00	0.93	0.00	0.00
11.00	1.21	0.01	0.07
12.00	3.41	0.75	**10.59**
13.00	3.98	1.07	**1.32**
14.00	4.22	1.22	0.78
15.00	4.40	1.33	0.61
16.00	4.53	1.42	0.48
17.00	4.64	1.49	0.42
18.00	4.74	1.56	0.38
19.00	4.83	1.61	0.33
20.00	4.90	1.66	0.28
21.00	4.97	1.71	0.26
22.00	5.03	1.75	0.25
23.00	5.09	1.79	0.24
24.00	**5.15**	**1.83**	0.23
25.00	5.15	1.83	0.00
26.00	5.15	1.83	0.00
27.00	5.15	1.83	0.00
28.00	5.15	1.83	0.00
29.00	5.15	1.83	0.00
30.00	5.15	1.83	0.00
31.00	5.15	1.83	0.00
32.00	5.15	1.83	0.00
33.00	5.15	1.83	0.00
34.00	5.15	1.83	0.00
35.00	5.15	1.83	0.00
36.00	5.15	1.83	0.00
37.00	5.15	1.83	0.00
38.00	5.15	1.83	0.00
39.00	5.15	1.83	0.00
40.00	5.15	1.83	0.00
41.00	5.15	1.83	0.00
42.00	5.15	1.83	0.00
43.00	5.15	1.83	0.00
44.00	5.15	1.83	0.00
45.00	5.15	1.83	0.00
46.00	5.15	1.83	0.00
47.00	5.15	1.83	0.00
48.00	5.15	1.83	0.00
49.00	5.15	1.83	0.00
50.00	5.15	1.83	0.00
51.00	5.15	1.83	0.00
52.00	5.15	1.83	0.00
53.00	5.15	1.83	0.00
54.00	5.15	1.83	0.00
55.00	5.15	1.83	0.00
56.00	5.15	1.83	0.00
57.00	5.15	1.83	0.00
58.00	5.15	1.83	0.00
59.00	5.15	1.83	0.00
60.00	5.15	1.83	0.00
61.00	5.15	1.83	0.00
62.00	5.15	1.83	0.00
63.00	5.15	1.83	0.00
64.00	5.15	1.83	0.00
65.00	5.15	1.83	0.00
66.00	5.15	1.83	0.00
67.00	5.15	1.83	0.00
68.00	5.15	1.83	0.00
69.00	5.15	1.83	0.00
70.00	5.15	1.83	0.00
71.00	5.15	1.83	0.00
72.00	5.15	1.83	0.00

Summary for Subcatchment 3PRE: Pre-Development to POI #3

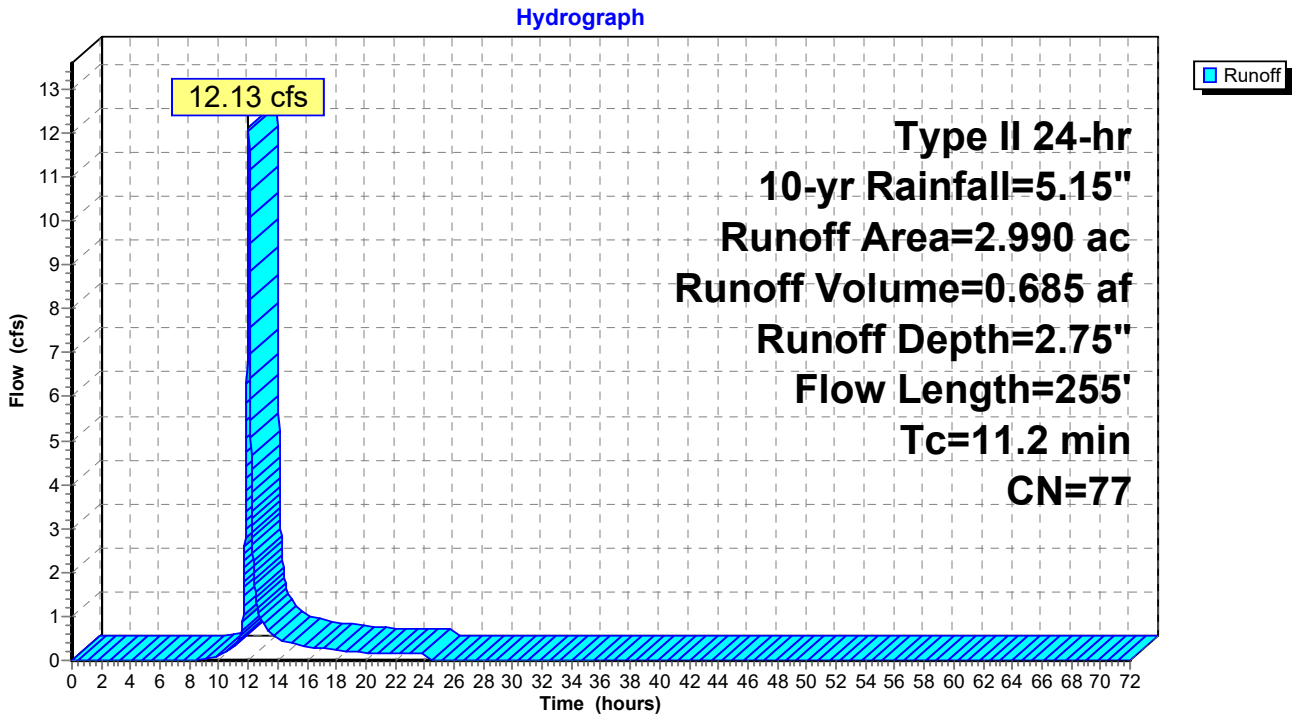
Runoff = 12.13 cfs @ 12.03 hrs, Volume= 0.685 af, Depth= 2.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=5.15"

Area (ac)	CN	Description
2.610	77	Woods, Good, HSG D
0.380	80	>75% Grass cover, Good, HSG D
2.990	77	Weighted Average
2.990		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.0360	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.53"
0.5	155	0.0860	4.72		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
11.2	255	Total			

Subcatchment 3PRE: Pre-Development to POI #3



Hydrograph for Subcatchment 3PRE: Pre-Development to POI #3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.11	0.00	0.00
3.00	0.18	0.00	0.00
4.00	0.25	0.00	0.00
5.00	0.32	0.00	0.00
6.00	0.41	0.00	0.00
7.00	0.51	0.00	0.00
8.00	0.62	0.00	0.00
9.00	0.76	0.01	0.04
10.00	0.93	0.03	0.10
11.00	1.21	0.10	0.29
12.00	3.41	1.37	**11.55**
13.00	3.98	1.79	**0.84**
14.00	4.22	1.99	0.50
15.00	4.40	2.13	0.39
16.00	4.53	2.24	0.31
17.00	4.64	2.33	0.27
18.00	4.74	2.41	0.24
19.00	4.83	2.48	0.20
20.00	4.90	2.54	0.17
21.00	4.97	2.60	0.16
22.00	5.03	2.65	0.16
23.00	5.09	2.70	0.15
24.00	**5.15**	**2.75**	0.15
25.00	5.15	2.75	0.00
26.00	5.15	2.75	0.00
27.00	5.15	2.75	0.00
28.00	5.15	2.75	0.00
29.00	5.15	2.75	0.00
30.00	5.15	2.75	0.00
31.00	5.15	2.75	0.00
32.00	5.15	2.75	0.00
33.00	5.15	2.75	0.00
34.00	5.15	2.75	0.00
35.00	5.15	2.75	0.00
36.00	5.15	2.75	0.00
37.00	5.15	2.75	0.00
38.00	5.15	2.75	0.00
39.00	5.15	2.75	0.00
40.00	5.15	2.75	0.00
41.00	5.15	2.75	0.00
42.00	5.15	2.75	0.00
43.00	5.15	2.75	0.00
44.00	5.15	2.75	0.00
45.00	5.15	2.75	0.00
46.00	5.15	2.75	0.00
47.00	5.15	2.75	0.00
48.00	5.15	2.75	0.00
49.00	5.15	2.75	0.00
50.00	5.15	2.75	0.00
51.00	5.15	2.75	0.00
52.00	5.15	2.75	0.00
53.00	5.15	2.75	0.00
54.00	5.15	2.75	0.00
55.00	5.15	2.75	0.00
56.00	5.15	2.75	0.00
57.00	5.15	2.75	0.00
58.00	5.15	2.75	0.00
59.00	5.15	2.75	0.00
60.00	5.15	2.75	0.00
61.00	5.15	2.75	0.00
62.00	5.15	2.75	0.00
63.00	5.15	2.75	0.00
64.00	5.15	2.75	0.00
65.00	5.15	2.75	0.00
66.00	5.15	2.75	0.00
67.00	5.15	2.75	0.00
68.00	5.15	2.75	0.00
69.00	5.15	2.75	0.00
70.00	5.15	2.75	0.00
71.00	5.15	2.75	0.00
72.00	5.15	2.75	0.00

Summary for Subcatchment 3PST: Post-Development to POI #3

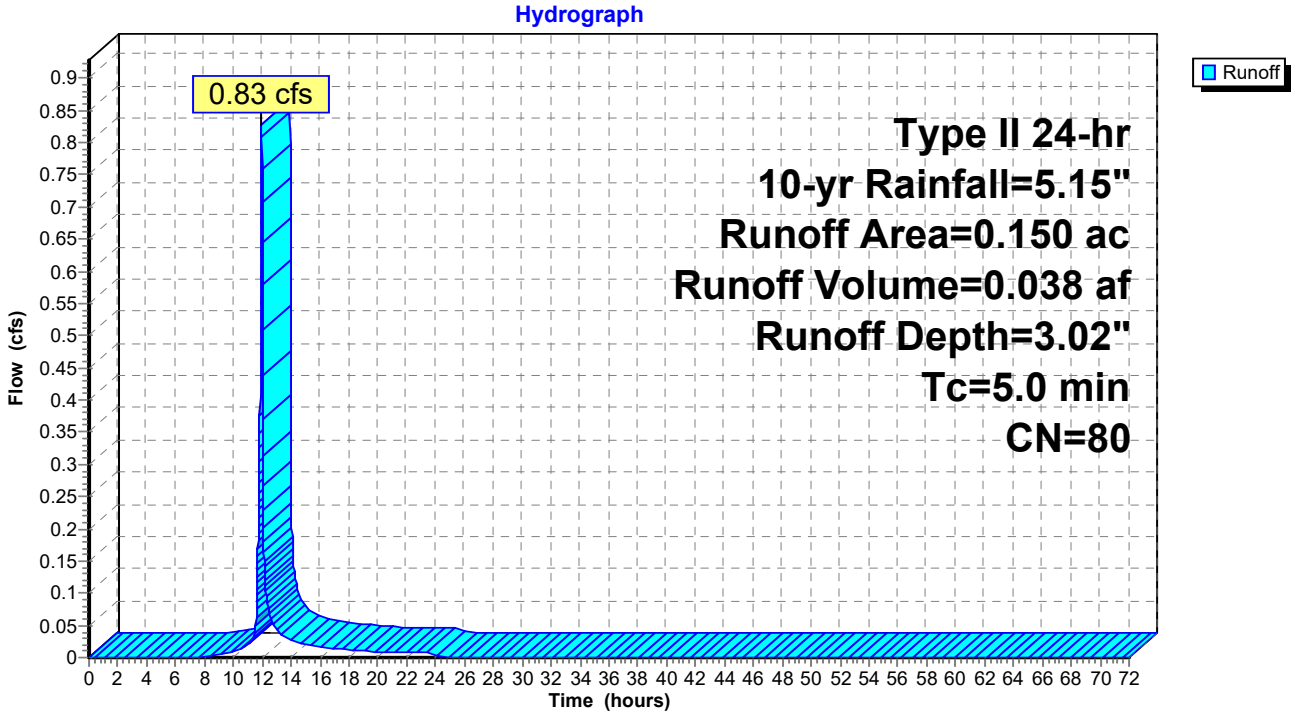
Runoff = 0.83 cfs @ 11.96 hrs, Volume= 0.038 af, Depth= 3.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=5.15"

Area (ac)	CN	Description
0.020	98	Paved roads w/curbs & sewers, HSG B
0.130	77	Woods, Good, HSG D
0.150	80	Weighted Average
0.130		86.67% Pervious Area
0.020		13.33% Impervious Area

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

Subcatchment 3PST: Post-Development to POI #3



Hydrograph for Subcatchment 3PST: Post-Development to POI #3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.11	0.00	0.00
3.00	0.18	0.00	0.00
4.00	0.25	0.00	0.00
5.00	0.32	0.00	0.00
6.00	0.41	0.00	0.00
7.00	0.51	0.00	0.00
8.00	0.62	0.01	0.00
9.00	0.76	0.02	0.00
10.00	0.93	0.06	0.01
11.00	1.21	0.16	**0.02**
12.00	3.41	1.57	**0.71**
13.00	3.98	2.02	0.04
14.00	4.22	2.23	0.03
15.00	4.40	2.37	0.02
16.00	4.53	2.49	0.02
17.00	4.64	2.58	0.01
18.00	4.74	2.67	0.01
19.00	4.83	2.74	0.01
20.00	4.90	2.81	0.01
21.00	4.97	2.87	0.01
22.00	5.03	2.92	0.01
23.00	5.09	2.97	0.01
24.00	**5.15**	**3.02**	0.01
25.00	5.15	3.02	0.00
26.00	5.15	3.02	0.00
27.00	5.15	3.02	0.00
28.00	5.15	3.02	0.00
29.00	5.15	3.02	0.00
30.00	5.15	3.02	0.00
31.00	5.15	3.02	0.00
32.00	5.15	3.02	0.00
33.00	5.15	3.02	0.00
34.00	5.15	3.02	0.00
35.00	5.15	3.02	0.00
36.00	5.15	3.02	0.00
37.00	5.15	3.02	0.00
38.00	5.15	3.02	0.00
39.00	5.15	3.02	0.00
40.00	5.15	3.02	0.00
41.00	5.15	3.02	0.00
42.00	5.15	3.02	0.00
43.00	5.15	3.02	0.00
44.00	5.15	3.02	0.00
45.00	5.15	3.02	0.00
46.00	5.15	3.02	0.00
47.00	5.15	3.02	0.00
48.00	5.15	3.02	0.00
49.00	5.15	3.02	0.00
50.00	5.15	3.02	0.00
51.00	5.15	3.02	0.00
52.00	5.15	3.02	0.00
53.00	5.15	3.02	0.00
54.00	5.15	3.02	0.00
55.00	5.15	3.02	0.00
56.00	5.15	3.02	0.00
57.00	5.15	3.02	0.00
58.00	5.15	3.02	0.00
59.00	5.15	3.02	0.00
60.00	5.15	3.02	0.00
61.00	5.15	3.02	0.00
62.00	5.15	3.02	0.00
63.00	5.15	3.02	0.00
64.00	5.15	3.02	0.00
65.00	5.15	3.02	0.00
66.00	5.15	3.02	0.00
67.00	5.15	3.02	0.00
68.00	5.15	3.02	0.00
69.00	5.15	3.02	0.00
70.00	5.15	3.02	0.00
71.00	5.15	3.02	0.00
72.00	5.15	3.02	0.00

Summary for Pond 2P: SCM #2

Inflow Area = 3.940 ac, 22.84% Impervious, Inflow Depth = 2.40" for 10-yr event
Inflow = 17.57 cfs @ 11.96 hrs, Volume= 0.788 af
Outflow = 0.38 cfs @ 15.80 hrs, Volume= 0.666 af, Atten= 98%, Lag= 230.1 min
Primary = 0.38 cfs @ 15.80 hrs, Volume= 0.666 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 716.16' @ 15.80 hrs Surf.Area= 12,192 sf Storage= 22,360 cf

Plug-Flow detention time= 1,054.4 min calculated for 0.666 af (85% of inflow)
Center-of-Mass det. time= 983.1 min (1,817.5 - 834.3)

Volume	Invert	Avail.Storage	Storage Description
#1	713.50'	81,212 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

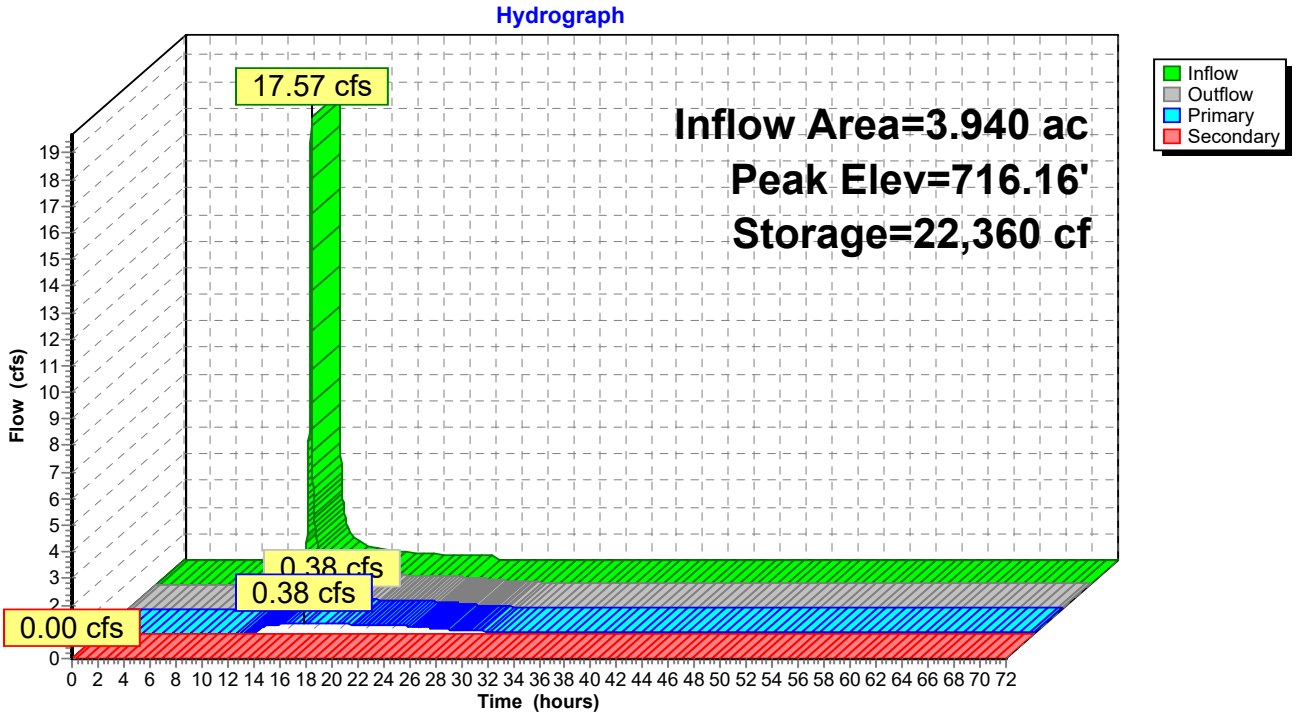
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
713.50	2,258	0	0
714.00	4,670	1,732	1,732
715.00	10,425	7,548	9,280
716.00	11,945	11,185	20,465
717.00	13,515	12,730	33,195
718.00	15,145	14,330	47,525
719.00	16,830	15,988	63,512
720.00	18,570	17,700	81,212

Device	Routing	Invert	Outlet Devices
#1	Primary	711.50'	**24.0" Round Outlet Pipe** L= 40.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 711.50' / 711.30' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf
#2	Device 1	713.50'	**Filter Bed** Head (feet) 0.00 1.00 2.00 3.00 4.00 5.00 Disch. (cfs) 0.000 0.055 0.077 0.098 0.120 0.142
#3	Device 1	715.50'	**4.0" Vert. Orifice** C= 0.600
#4	Device 1	717.50'	**48.0" x 48.0" Horiz. Top of OCS** C= 0.600 Limited to weir flow at low heads
#5	Secondary	718.50'	**20.0' long x 10.0' breadth Emergency Spillway** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

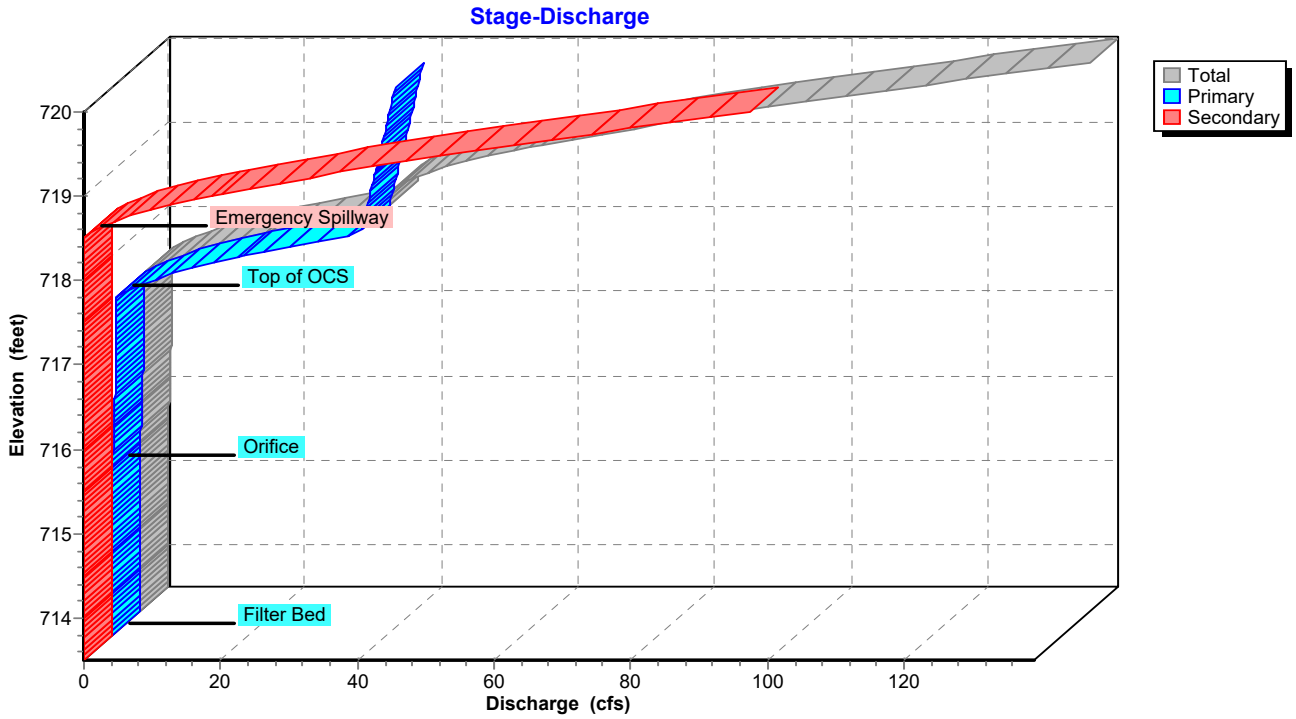
Primary OutFlow Max=0.39 cfs @ 15.80 hrs HW=716.16' (Free Discharge)
└─**1=Outlet Pipe** (Passes 0.39 cfs of 28.93 cfs potential flow)
  ├─**2=Filter Bed** (Custom Controls 0.09 cfs)
  ├─**3=Orifice** (Orifice Controls 0.29 cfs @ 3.37 fps)
  └─**4=Top of OCS** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=713.50' (Free Discharge)
└─**5=Emergency Spillway** (Controls 0.00 cfs)

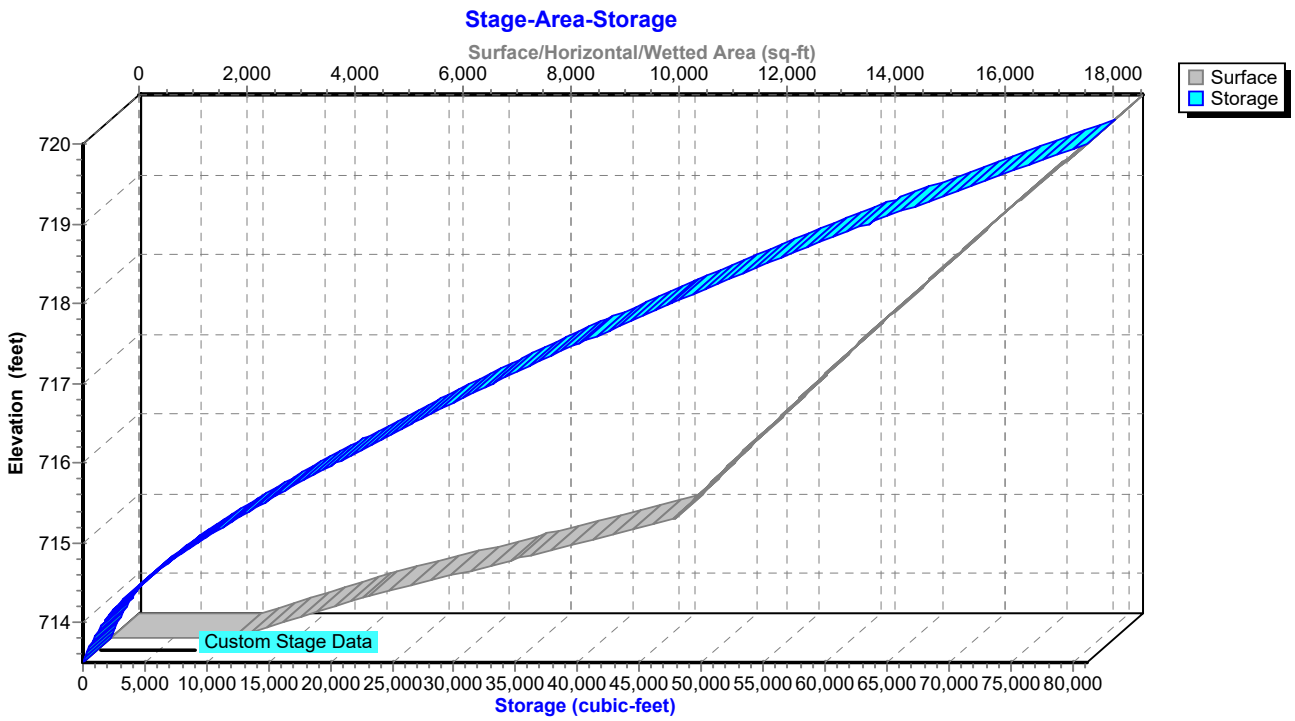
Pond 2P: SCM #2



Pond 2P: SCM #2



Pond 2P: SCM #2


Stage-Area-Storage
Surface/Horizontal/Wetted Area (sq-ft)
0
2,000
4,000
6,000
8,000
10,000
12,000
14,000
16,000
18,000
Surface
Storage
720
719
718
717
716
715
714
Elevation (feet)
Custom Stage Data
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
55,000
60,000
65,000
70,000
75,000
80,000
Storage (cubic-feet)

Hydrograph for Pond 2P: SCM #2

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	713.50	0.00	0.00	**0.00**
2.00	0.00	0	713.50	0.00	0.00	0.00
4.00	0.00	0	713.50	0.00	0.00	0.00
6.00	0.00	0	713.50	0.00	0.00	0.00
8.00	0.00	0	713.50	0.00	0.00	0.00
10.00	**0.07**	112	713.55	0.00	0.00	0.00
12.00	**15.25**	12,849	715.33	0.07	0.07	0.00
14.00	0.58	**21,734**	**716.11**	**0.37**	**0.37**	0.00
16.00	0.36	**22,353**	**716.16**	**0.38**	**0.38**	0.00
18.00	0.29	21,940	716.12	0.37	0.37	0.00
20.00	0.21	21,116	716.05	0.35	0.35	0.00
22.00	0.19	20,149	715.97	0.32	0.32	0.00
24.00	0.18	19,299	715.90	0.29	0.29	0.00
26.00	0.00	17,560	715.75	0.20	0.20	0.00
28.00	0.00	16,379	715.65	0.13	0.13	0.00
30.00	0.00	15,579	715.58	0.09	0.09	0.00
32.00	0.00	14,953	715.52	0.08	0.08	0.00
34.00	0.00	14,396	715.47	0.08	0.08	0.00
36.00	0.00	13,850	715.43	0.08	0.08	0.00
38.00	0.00	13,311	715.38	0.07	0.07	0.00
40.00	0.00	12,780	715.33	0.07	0.07	0.00
42.00	0.00	12,257	715.28	0.07	0.07	0.00
44.00	0.00	11,741	715.23	0.07	0.07	0.00
46.00	0.00	11,233	715.18	0.07	0.07	0.00
48.00	0.00	10,732	715.14	0.07	0.07	0.00
50.00	0.00	10,239	715.09	0.07	0.07	0.00
52.00	0.00	9,753	715.05	0.07	0.07	0.00
54.00	0.00	9,274	715.00	0.07	0.07	0.00
56.00	0.00	8,803	714.95	0.06	0.06	0.00
58.00	0.00	8,338	714.91	0.06	0.06	0.00
60.00	0.00	7,882	714.86	0.06	0.06	0.00
62.00	0.00	7,432	714.81	0.06	0.06	0.00
64.00	0.00	6,990	714.76	0.06	0.06	0.00
66.00	0.00	6,556	714.72	0.06	0.06	0.00
68.00	0.00	6,130	714.67	0.06	0.06	0.00
70.00	0.00	5,711	714.62	0.06	0.06	0.00
72.00	0.00	5,301	714.57	0.06	0.06	0.00

Stage-Discharge for Pond 2P: SCM #2

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
713.50	0.00	0.00	0.00
713.60	0.01	0.01	0.00
713.70	0.01	0.01	0.00
713.80	0.02	0.02	0.00
713.90	0.02	0.02	0.00
714.00	0.03	0.03	0.00
714.10	0.03	0.03	0.00
714.20	0.04	0.04	0.00
714.30	0.04	0.04	0.00
714.40	0.05	0.05	0.00
714.50	0.06	0.06	0.00
714.60	0.06	0.06	0.00
714.70	0.06	0.06	0.00
714.80	0.06	0.06	0.00
714.90	0.06	0.06	0.00
715.00	0.07	0.07	0.00
715.10	0.07	0.07	0.00
715.20	0.07	0.07	0.00
715.30	0.07	0.07	0.00
715.40	0.07	0.07	0.00
715.50	0.08	0.08	0.00
715.60	0.10	0.10	0.00
715.70	0.16	0.16	0.00
715.80	0.24	0.24	0.00
715.90	0.29	0.29	0.00
716.00	0.33	0.33	0.00
716.10	0.37	0.37	0.00
716.20	0.40	0.40	0.00
716.30	0.43	0.43	0.00
716.40	0.46	0.46	0.00
716.50	0.48	0.48	0.00
716.60	0.51	0.51	0.00
716.70	0.53	0.53	0.00
716.80	0.55	0.55	0.00
716.90	0.57	0.57	0.00
717.00	0.59	0.59	0.00
717.10	0.61	0.61	0.00
717.20	0.63	0.63	0.00
717.30	0.65	0.65	0.00
717.40	0.67	0.67	0.00
717.50	0.69	0.69	0.00
717.60	2.36	2.36	0.00
717.70	5.40	5.40	0.00
717.80	9.34	9.34	0.00
717.90	13.99	13.99	0.00
718.00	19.27	19.27	0.00
718.10	25.10	25.10	0.00
718.20	31.45	31.45	0.00
718.30	36.43	36.43	0.00
718.40	36.74	36.74	0.00
718.50	37.05	37.05	0.00
718.60	38.93	37.36	1.57
718.70	42.12	37.67	4.45
718.80	46.27	37.97	8.30
718.90	51.22	38.27	12.95
719.00	57.16	38.57	18.60
719.10	63.96	38.86	25.10
719.20	70.72	39.15	31.57
719.30	77.94	39.45	38.50
719.40	85.58	39.73	45.85
719.50	93.62	40.02	53.60
719.60	102.26	40.31	61.95
719.70	111.31	40.59	70.72
719.80	120.32	40.87	79.45
719.90	129.61	41.15	88.46
720.00	**138.98**	**41.43**	**97.55**

Stage-Area-Storage for Pond 2P: SCM #2

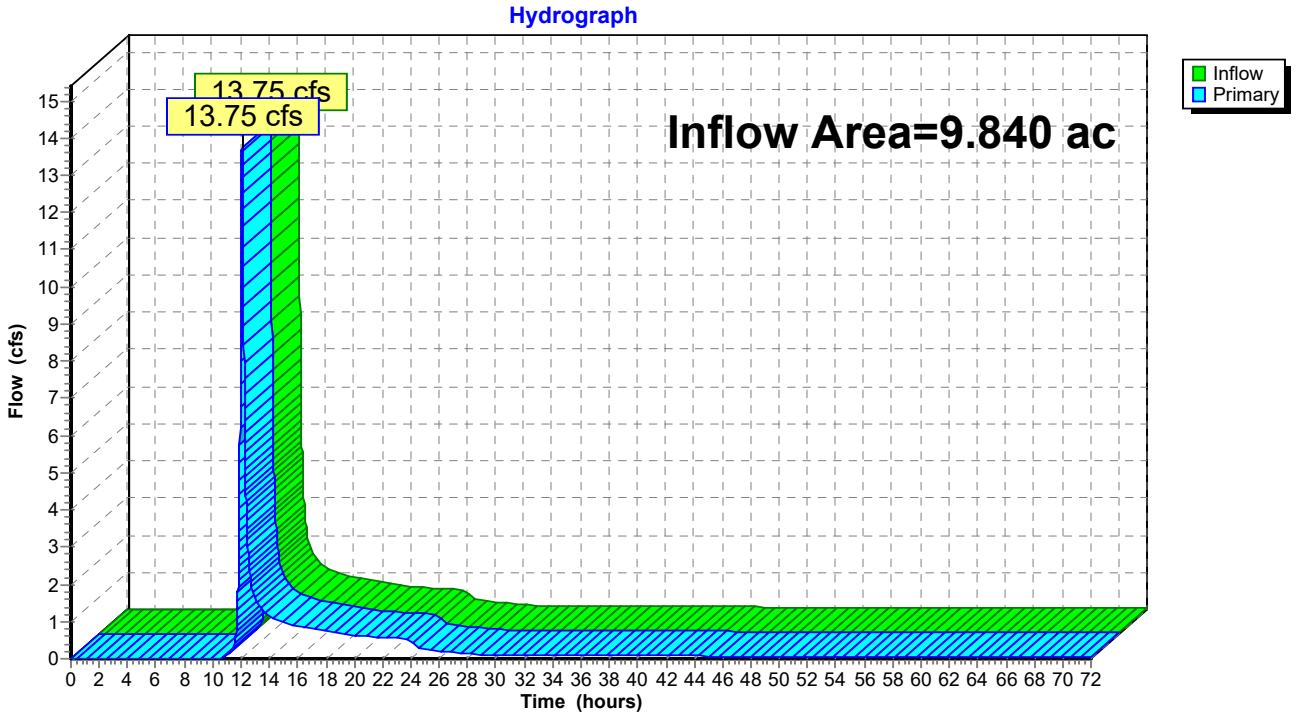
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
713.50	2,258	0
713.60	2,740	250
713.70	3,223	548
713.80	3,705	894
713.90	4,188	1,289
714.00	4,670	1,732
714.10	5,246	2,228
714.20	5,821	2,781
714.30	6,396	3,392
714.40	6,972	4,060
714.50	7,548	4,786
714.60	8,123	5,570
714.70	8,699	6,411
714.80	9,274	7,310
714.90	9,849	8,266
715.00	10,425	9,280
715.10	10,577	10,330
715.20	10,729	11,395
715.30	10,881	12,475
715.40	11,033	13,571
715.50	11,185	14,682
715.60	11,337	15,808
715.70	11,489	16,949
715.80	11,641	18,106
715.90	11,793	19,278
716.00	11,945	20,465
716.10	12,102	21,667
716.20	12,259	22,885
716.30	12,416	24,119
716.40	12,573	25,368
716.50	12,730	26,633
716.60	12,887	27,914
716.70	13,044	29,211
716.80	13,201	30,523
716.90	13,358	31,851
717.00	13,515	33,195
717.10	13,678	34,554
717.20	13,841	35,930
717.30	14,004	37,322
717.40	14,167	38,731
717.50	14,330	40,156
717.60	14,493	41,597
717.70	14,656	43,054
717.80	14,819	44,528
717.90	14,982	46,018
718.00	15,145	47,525
718.10	15,314	49,047
718.20	15,482	50,587
718.30	15,650	52,144
718.40	15,819	53,717
718.50	15,988	55,308
718.60	16,156	56,915
718.70	16,325	58,539
718.80	16,493	60,180
718.90	16,661	61,837
719.00	16,830	63,512
719.10	17,004	65,204
719.20	17,178	66,913
719.30	17,352	68,639
719.40	17,526	70,383
719.50	17,700	72,145
719.60	17,874	73,923
719.70	18,048	75,719
719.80	18,222	77,533
719.90	18,396	79,364
720.00	**18,570**	**81,212**

Summary for Link 2L: Total Post-Development to POI #2

Inflow Area = 9.840 ac, 15.75% Impervious, Inflow Depth > 1.91" for 10-yr event
Inflow = 13.75 cfs @ 12.08 hrs, Volume= 1.566 af
Primary = 13.75 cfs @ 12.08 hrs, Volume= 1.566 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 2L: Total Post-Development to POI #2



Hydrograph for Link 2L: Total Post-Development to POI #2

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	**0.00**	0.00	53.00	0.07	0.00	0.07
1.00	0.00	0.00	0.00	54.00	0.07	0.00	0.07
2.00	0.00	0.00	0.00	55.00	0.07	0.00	0.07
3.00	0.00	0.00	0.00	56.00	0.06	0.00	0.06
4.00	0.00	0.00	0.00	57.00	0.06	0.00	0.06
5.00	0.00	0.00	0.00	58.00	0.06	0.00	0.06
6.00	0.00	0.00	0.00	59.00	0.06	0.00	0.06
7.00	0.00	0.00	0.00	60.00	0.06	0.00	0.06
8.00	0.00	0.00	0.00	61.00	0.06	0.00	0.06
9.00	0.00	0.00	0.00	62.00	0.06	0.00	0.06
10.00	0.00	0.00	0.00	63.00	0.06	0.00	0.06
11.00	0.09	0.00	0.09	64.00	0.06	0.00	0.06
12.00	**10.66**	0.00	**10.66**	65.00	0.06	0.00	0.06
13.00	**1.65**	0.00	**1.65**	66.00	0.06	0.00	0.06
14.00	1.15	0.00	1.15	67.00	0.06	0.00	0.06
15.00	0.99	0.00	0.99	68.00	0.06	0.00	0.06
16.00	0.87	0.00	0.87	69.00	0.06	0.00	0.06
17.00	0.80	0.00	0.80	70.00	0.06	0.00	0.06
18.00	0.75	0.00	0.75	71.00	0.06	0.00	0.06
19.00	0.69	0.00	0.69	72.00	0.06	0.00	0.06
20.00	0.63	0.00	0.63				
21.00	0.60	0.00	0.60				
22.00	0.57	0.00	0.57				
23.00	0.55	0.00	0.55				
24.00	0.52	0.00	0.52				
25.00	0.25	0.00	0.25				
26.00	0.20	0.00	0.20				
27.00	0.16	0.00	0.16				
28.00	0.13	0.00	0.13				
29.00	0.11	0.00	0.11				
30.00	0.09	0.00	0.09				
31.00	0.09	0.00	0.09				
32.00	0.08	0.00	0.08				
33.00	0.08	0.00	0.08				
34.00	0.08	0.00	0.08				
35.00	0.08	0.00	0.08				
36.00	0.08	0.00	0.08				
37.00	0.07	0.00	0.07				
38.00	0.07	0.00	0.07				
39.00	0.07	0.00	0.07				
40.00	0.07	0.00	0.07				
41.00	0.07	0.00	0.07				
42.00	0.07	0.00	0.07				
43.00	0.07	0.00	0.07				
44.00	0.07	0.00	0.07				
45.00	0.07	0.00	0.07				
46.00	0.07	0.00	0.07				
47.00	0.07	0.00	0.07				
48.00	0.07	0.00	0.07				
49.00	0.07	0.00	0.07				
50.00	0.07	0.00	0.07				
51.00	0.07	0.00	0.07				
52.00	0.07	0.00	0.07				

Summary for Subcatchment 2PRE: Pre-Development to POI #2

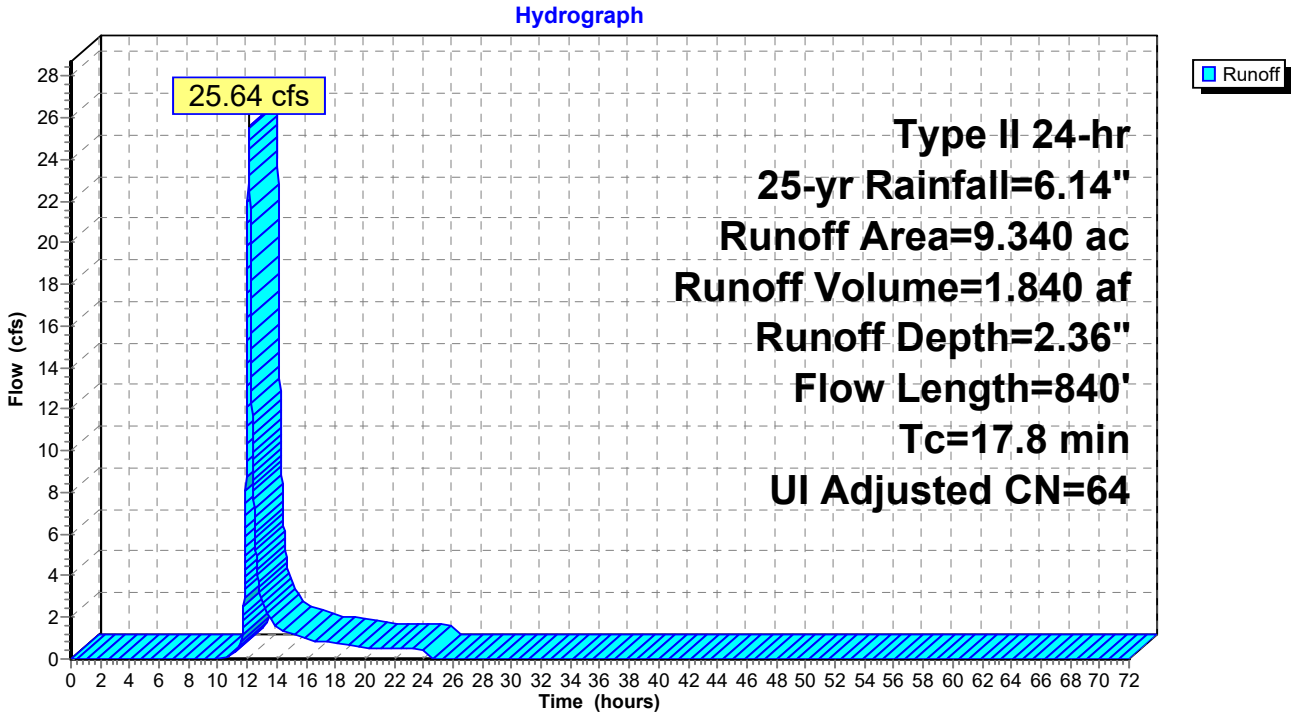
Runoff = 25.64 cfs @ 12.11 hrs, Volume= 1.840 af, Depth= 2.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-yr Rainfall=6.14"

Area (ac)	CN	Adj	Description
0.590	55		Woods, Good, HSG B
0.700	77		Woods, Good, HSG D
0.750	98		Unconnected roofs, HSG B
0.080	80		>75% Grass cover, Good, HSG D
7.220	61		>75% Grass cover, Good, HSG B
9.340	65	64	Weighted Average, UI Adjusted
8.590			91.97% Pervious Area
0.750			8.03% Impervious Area
0.750			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0250	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.53"
5.4	740	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
17.8	840	Total			

Subcatchment 2PRE: Pre-Development to POI #2



Hydrograph for Subcatchment 2PRE: Pre-Development to POI #2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.14	0.00	0.00
3.00	0.21	0.00	0.00
4.00	0.29	0.00	0.00
5.00	0.39	0.00	0.00
6.00	0.49	0.00	0.00
7.00	0.61	0.00	0.00
8.00	0.74	0.00	0.00
9.00	0.90	0.00	0.00
10.00	1.11	0.00	0.00
11.00	1.44	0.02	0.25
12.00	4.07	1.01	**17.60**
13.00	4.74	1.41	**2.74**
14.00	5.03	1.60	1.59
15.00	5.24	1.74	1.22
16.00	5.40	1.85	0.97
17.00	5.54	1.94	0.84
18.00	5.65	2.02	0.75
19.00	5.76	2.09	0.65
20.00	5.85	2.15	0.56
21.00	5.92	2.21	0.52
22.00	6.00	2.26	0.50
23.00	6.07	2.31	0.48
24.00	**6.14**	**2.36**	0.46
25.00	6.14	2.36	0.00
26.00	6.14	2.36	0.00
27.00	6.14	2.36	0.00
28.00	6.14	2.36	0.00
29.00	6.14	2.36	0.00
30.00	6.14	2.36	0.00
31.00	6.14	2.36	0.00
32.00	6.14	2.36	0.00
33.00	6.14	2.36	0.00
34.00	6.14	2.36	0.00
35.00	6.14	2.36	0.00
36.00	6.14	2.36	0.00
37.00	6.14	2.36	0.00
38.00	6.14	2.36	0.00
39.00	6.14	2.36	0.00
40.00	6.14	2.36	0.00
41.00	6.14	2.36	0.00
42.00	6.14	2.36	0.00
43.00	6.14	2.36	0.00
44.00	6.14	2.36	0.00
45.00	6.14	2.36	0.00
46.00	6.14	2.36	0.00
47.00	6.14	2.36	0.00
48.00	6.14	2.36	0.00
49.00	6.14	2.36	0.00
50.00	6.14	2.36	0.00
51.00	6.14	2.36	0.00
52.00	6.14	2.36	0.00
53.00	6.14	2.36	0.00
54.00	6.14	2.36	0.00
55.00	6.14	2.36	0.00
56.00	6.14	2.36	0.00
57.00	6.14	2.36	0.00
58.00	6.14	2.36	0.00
59.00	6.14	2.36	0.00
60.00	6.14	2.36	0.00
61.00	6.14	2.36	0.00
62.00	6.14	2.36	0.00
63.00	6.14	2.36	0.00
64.00	6.14	2.36	0.00
65.00	6.14	2.36	0.00
66.00	6.14	2.36	0.00
67.00	6.14	2.36	0.00
68.00	6.14	2.36	0.00
69.00	6.14	2.36	0.00
70.00	6.14	2.36	0.00
71.00	6.14	2.36	0.00
72.00	6.14	2.36	0.00

Summary for Subcatchment 2PST: Post-Development to SCM #2

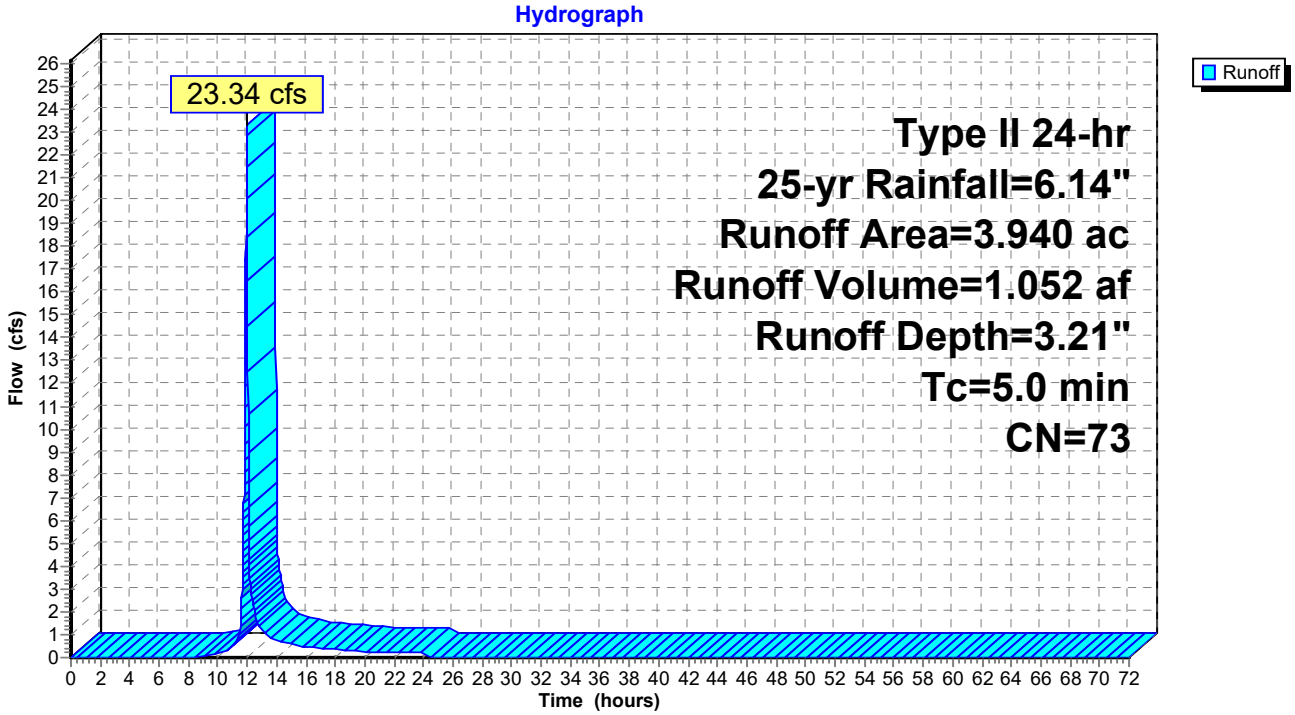
Runoff = 23.34 cfs @ 11.96 hrs, Volume= 1.052 af, Depth= 3.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-yr Rainfall=6.14"

	Area (ac)	CN	Description
*	0.880	98	Proposed Impervious
*	0.020	98	Existing Impervious
	2.290	61	>75% Grass cover, Good, HSG B
	0.750	80	>75% Grass cover, Good, HSG D
	3.940	73	Weighted Average
	3.040		77.16% Pervious Area
	0.900		22.84% Impervious Area

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

Subcatchment 2PST: Post-Development to SCM #2



Hydrograph for Subcatchment 2PST: Post-Development to SCM #2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.14	0.00	0.00
3.00	0.21	0.00	0.00
4.00	0.29	0.00	0.00
5.00	0.39	0.00	0.00
6.00	0.49	0.00	0.00
7.00	0.61	0.00	0.00
8.00	0.74	0.00	0.00
9.00	0.90	0.01	0.06
10.00	1.11	0.03	0.16
11.00	1.44	0.11	**0.48**
12.00	4.07	1.58	**20.08**
13.00	4.74	2.08	1.22
14.00	5.03	2.31	0.74
15.00	5.24	2.47	0.59
16.00	5.40	2.60	0.46
17.00	5.54	2.71	0.41
18.00	5.65	2.80	0.36
19.00	5.76	2.89	0.31
20.00	5.85	2.96	0.26
21.00	5.92	3.03	0.25
22.00	6.00	3.09	0.24
23.00	6.07	3.15	0.23
24.00	**6.14**	**3.21**	0.22
25.00	6.14	3.21	0.00
26.00	6.14	3.21	0.00
27.00	6.14	3.21	0.00
28.00	6.14	3.21	0.00
29.00	6.14	3.21	0.00
30.00	6.14	3.21	0.00
31.00	6.14	3.21	0.00
32.00	6.14	3.21	0.00
33.00	6.14	3.21	0.00
34.00	6.14	3.21	0.00
35.00	6.14	3.21	0.00
36.00	6.14	3.21	0.00
37.00	6.14	3.21	0.00
38.00	6.14	3.21	0.00
39.00	6.14	3.21	0.00
40.00	6.14	3.21	0.00
41.00	6.14	3.21	0.00
42.00	6.14	3.21	0.00
43.00	6.14	3.21	0.00
44.00	6.14	3.21	0.00
45.00	6.14	3.21	0.00
46.00	6.14	3.21	0.00
47.00	6.14	3.21	0.00
48.00	6.14	3.21	0.00
49.00	6.14	3.21	0.00
50.00	6.14	3.21	0.00
51.00	6.14	3.21	0.00
52.00	6.14	3.21	0.00
53.00	6.14	3.21	0.00
54.00	6.14	3.21	0.00
55.00	6.14	3.21	0.00
56.00	6.14	3.21	0.00
57.00	6.14	3.21	0.00
58.00	6.14	3.21	0.00
59.00	6.14	3.21	0.00
60.00	6.14	3.21	0.00
61.00	6.14	3.21	0.00
62.00	6.14	3.21	0.00
63.00	6.14	3.21	0.00
64.00	6.14	3.21	0.00
65.00	6.14	3.21	0.00
66.00	6.14	3.21	0.00
67.00	6.14	3.21	0.00
68.00	6.14	3.21	0.00
69.00	6.14	3.21	0.00
70.00	6.14	3.21	0.00
71.00	6.14	3.21	0.00
72.00	6.14	3.21	0.00

Summary for Subcatchment 2S: Bypass to POI #2

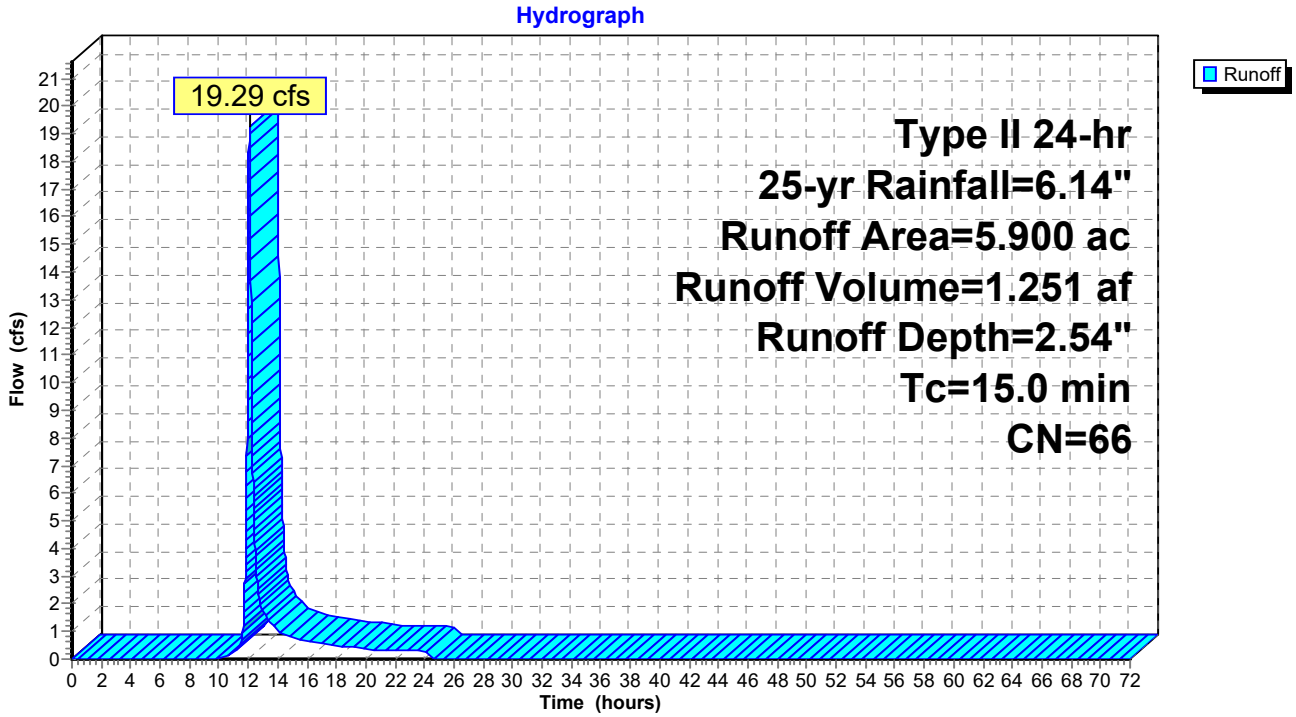
Runoff = 19.29 cfs @ 12.08 hrs, Volume= 1.251 af, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-yr Rainfall=6.14"

	Area (ac)	CN	Description
*	0.650	98	Existing Impervious
	4.740	61	>75% Grass cover, Good, HSG B
	0.280	80	>75% Grass cover, Good, HSG D
	0.180	55	Woods, Good, HSG B
	0.050	77	Woods, Good, HSG D
	5.900	66	Weighted Average
	5.250		88.98% Pervious Area
	0.650		11.02% Impervious Area

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

Subcatchment 2S: Bypass to POI #2



Hydrograph for Subcatchment 2S: Bypass to POI #2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.14	0.00	0.00
3.00	0.21	0.00	0.00
4.00	0.29	0.00	0.00
5.00	0.39	0.00	0.00
6.00	0.49	0.00	0.00
7.00	0.61	0.00	0.00
8.00	0.74	0.00	0.00
9.00	0.90	0.00	0.00
10.00	1.11	0.00	0.02
11.00	1.44	0.03	0.26
12.00	4.07	1.13	**15.38**
13.00	4.74	1.55	**1.75**
14.00	5.03	1.75	1.03
15.00	5.24	1.89	0.80
16.00	5.40	2.01	0.63
17.00	5.54	2.10	0.55
18.00	5.65	2.19	0.49
19.00	5.76	2.26	0.43
20.00	5.85	2.33	0.36
21.00	5.92	2.38	0.34
22.00	6.00	2.44	0.33
23.00	6.07	2.49	0.32
24.00	**6.14**	**2.54**	0.30
25.00	6.14	2.54	0.00
26.00	6.14	2.54	0.00
27.00	6.14	2.54	0.00
28.00	6.14	2.54	0.00
29.00	6.14	2.54	0.00
30.00	6.14	2.54	0.00
31.00	6.14	2.54	0.00
32.00	6.14	2.54	0.00
33.00	6.14	2.54	0.00
34.00	6.14	2.54	0.00
35.00	6.14	2.54	0.00
36.00	6.14	2.54	0.00
37.00	6.14	2.54	0.00
38.00	6.14	2.54	0.00
39.00	6.14	2.54	0.00
40.00	6.14	2.54	0.00
41.00	6.14	2.54	0.00
42.00	6.14	2.54	0.00
43.00	6.14	2.54	0.00
44.00	6.14	2.54	0.00
45.00	6.14	2.54	0.00
46.00	6.14	2.54	0.00
47.00	6.14	2.54	0.00
48.00	6.14	2.54	0.00
49.00	6.14	2.54	0.00
50.00	6.14	2.54	0.00
51.00	6.14	2.54	0.00
52.00	6.14	2.54	0.00
53.00	6.14	2.54	0.00
54.00	6.14	2.54	0.00
55.00	6.14	2.54	0.00
56.00	6.14	2.54	0.00
57.00	6.14	2.54	0.00
58.00	6.14	2.54	0.00
59.00	6.14	2.54	0.00
60.00	6.14	2.54	0.00
61.00	6.14	2.54	0.00
62.00	6.14	2.54	0.00
63.00	6.14	2.54	0.00
64.00	6.14	2.54	0.00
65.00	6.14	2.54	0.00
66.00	6.14	2.54	0.00
67.00	6.14	2.54	0.00
68.00	6.14	2.54	0.00
69.00	6.14	2.54	0.00
70.00	6.14	2.54	0.00
71.00	6.14	2.54	0.00
72.00	6.14	2.54	0.00

Summary for Subcatchment 3PRE: Pre-Development to POI #3

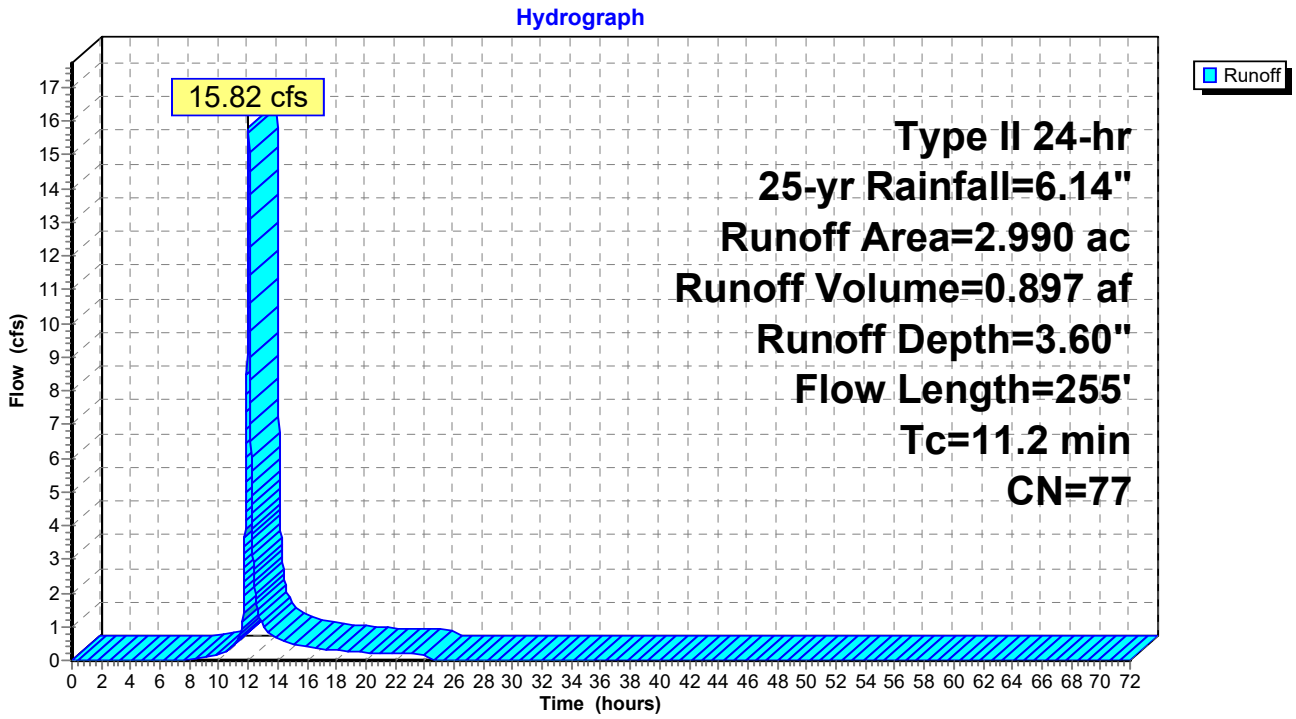
Runoff = 15.82 cfs @ 12.03 hrs, Volume= 0.897 af, Depth= 3.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-yr Rainfall=6.14"

Area (ac)	CN	Description
2.610	77	Woods, Good, HSG D
0.380	80	>75% Grass cover, Good, HSG D
2.990	77	Weighted Average
2.990		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.0360	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.53"
0.5	155	0.0860	4.72		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
11.2	255	Total			

Subcatchment 3PRE: Pre-Development to POI #3



Hydrograph for Subcatchment 3PRE: Pre-Development to POI #3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.14	0.00	0.00
3.00	0.21	0.00	0.00
4.00	0.29	0.00	0.00
5.00	0.39	0.00	0.00
6.00	0.49	0.00	0.00
7.00	0.61	0.00	0.00
8.00	0.74	0.01	0.03
9.00	0.90	0.03	0.09
10.00	1.11	0.08	0.18
11.00	1.44	0.19	0.44
12.00	4.07	1.87	**15.14**
13.00	4.74	2.41	**1.06**
14.00	5.03	2.65	0.63
15.00	5.24	2.83	0.49
16.00	5.40	2.96	0.38
17.00	5.54	3.08	0.33
18.00	5.65	3.18	0.29
19.00	5.76	3.27	0.26
20.00	5.85	3.34	0.22
21.00	5.92	3.41	0.20
22.00	6.00	3.48	0.20
23.00	6.07	3.54	0.19
24.00	**6.14**	**3.60**	0.18
25.00	6.14	3.60	0.00
26.00	6.14	3.60	0.00
27.00	6.14	3.60	0.00
28.00	6.14	3.60	0.00
29.00	6.14	3.60	0.00
30.00	6.14	3.60	0.00
31.00	6.14	3.60	0.00
32.00	6.14	3.60	0.00
33.00	6.14	3.60	0.00
34.00	6.14	3.60	0.00
35.00	6.14	3.60	0.00
36.00	6.14	3.60	0.00
37.00	6.14	3.60	0.00
38.00	6.14	3.60	0.00
39.00	6.14	3.60	0.00
40.00	6.14	3.60	0.00
41.00	6.14	3.60	0.00
42.00	6.14	3.60	0.00
43.00	6.14	3.60	0.00
44.00	6.14	3.60	0.00
45.00	6.14	3.60	0.00
46.00	6.14	3.60	0.00
47.00	6.14	3.60	0.00
48.00	6.14	3.60	0.00
49.00	6.14	3.60	0.00
50.00	6.14	3.60	0.00
51.00	6.14	3.60	0.00
52.00	6.14	3.60	0.00
53.00	6.14	3.60	0.00
54.00	6.14	3.60	0.00
55.00	6.14	3.60	0.00
56.00	6.14	3.60	0.00
57.00	6.14	3.60	0.00
58.00	6.14	3.60	0.00
59.00	6.14	3.60	0.00
60.00	6.14	3.60	0.00
61.00	6.14	3.60	0.00
62.00	6.14	3.60	0.00
63.00	6.14	3.60	0.00
64.00	6.14	3.60	0.00
65.00	6.14	3.60	0.00
66.00	6.14	3.60	0.00
67.00	6.14	3.60	0.00
68.00	6.14	3.60	0.00
69.00	6.14	3.60	0.00
70.00	6.14	3.60	0.00
71.00	6.14	3.60	0.00
72.00	6.14	3.60	0.00

Summary for Subcatchment 3PST: Post-Development to POI #3

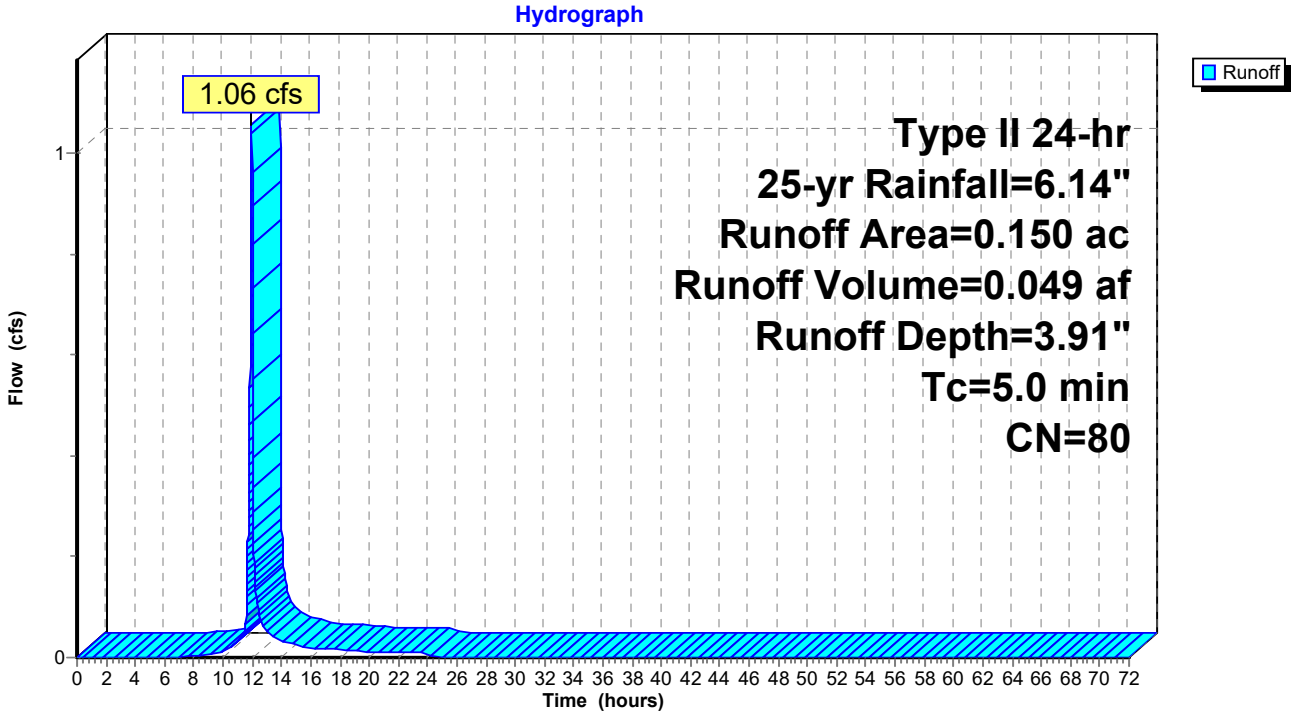
Runoff = 1.06 cfs @ 11.96 hrs, Volume= 0.049 af, Depth= 3.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-yr Rainfall=6.14"

Area (ac)	CN	Description
0.020	98	Paved roads w/curbs & sewers, HSG B
0.130	77	Woods, Good, HSG D
0.150	80	Weighted Average
0.130		86.67% Pervious Area
0.020		13.33% Impervious Area

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

Subcatchment 3PST: Post-Development to POI #3



Hydrograph for Subcatchment 3PST: Post-Development to POI #3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.14	0.00	0.00
3.00	0.21	0.00	0.00
4.00	0.29	0.00	0.00
5.00	0.39	0.00	0.00
6.00	0.49	0.00	0.00
7.00	0.61	0.00	0.00
8.00	0.74	0.02	0.00
9.00	0.90	0.06	0.01
10.00	1.11	0.12	0.01
11.00	1.44	0.26	**0.03**
12.00	4.07	2.10	**0.90**
13.00	4.74	2.67	0.05
14.00	5.03	2.92	0.03
15.00	5.24	3.10	0.02
16.00	5.40	3.25	0.02
17.00	5.54	3.37	0.02
18.00	5.65	3.47	0.02
19.00	5.76	3.56	0.01
20.00	5.85	3.64	0.01
21.00	5.92	3.71	0.01
22.00	6.00	3.78	0.01
23.00	6.07	3.85	0.01
24.00	**6.14**	**3.91**	0.01
25.00	6.14	3.91	0.00
26.00	6.14	3.91	0.00
27.00	6.14	3.91	0.00
28.00	6.14	3.91	0.00
29.00	6.14	3.91	0.00
30.00	6.14	3.91	0.00
31.00	6.14	3.91	0.00
32.00	6.14	3.91	0.00
33.00	6.14	3.91	0.00
34.00	6.14	3.91	0.00
35.00	6.14	3.91	0.00
36.00	6.14	3.91	0.00
37.00	6.14	3.91	0.00
38.00	6.14	3.91	0.00
39.00	6.14	3.91	0.00
40.00	6.14	3.91	0.00
41.00	6.14	3.91	0.00
42.00	6.14	3.91	0.00
43.00	6.14	3.91	0.00
44.00	6.14	3.91	0.00
45.00	6.14	3.91	0.00
46.00	6.14	3.91	0.00
47.00	6.14	3.91	0.00
48.00	6.14	3.91	0.00
49.00	6.14	3.91	0.00
50.00	6.14	3.91	0.00
51.00	6.14	3.91	0.00
52.00	6.14	3.91	0.00
53.00	6.14	3.91	0.00
54.00	6.14	3.91	0.00
55.00	6.14	3.91	0.00
56.00	6.14	3.91	0.00
57.00	6.14	3.91	0.00
58.00	6.14	3.91	0.00
59.00	6.14	3.91	0.00
60.00	6.14	3.91	0.00
61.00	6.14	3.91	0.00
62.00	6.14	3.91	0.00
63.00	6.14	3.91	0.00
64.00	6.14	3.91	0.00
65.00	6.14	3.91	0.00
66.00	6.14	3.91	0.00
67.00	6.14	3.91	0.00
68.00	6.14	3.91	0.00
69.00	6.14	3.91	0.00
70.00	6.14	3.91	0.00
71.00	6.14	3.91	0.00
72.00	6.14	3.91	0.00

Summary for Pond 2P: SCM #2

Inflow Area = 3.940 ac, 22.84% Impervious, Inflow Depth = 3.21" for 25-yr event
Inflow = 23.34 cfs @ 11.96 hrs, Volume= 1.052 af
Outflow = 0.54 cfs @ 15.44 hrs, Volume= 0.913 af, Atten= 98%, Lag= 208.5 min
Primary = 0.54 cfs @ 15.44 hrs, Volume= 0.913 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 716.73' @ 15.44 hrs Surf.Area= 13,089 sf Storage= 29,589 cf

Plug-Flow detention time= 921.5 min calculated for 0.913 af (87% of inflow)
Center-of-Mass det. time= 858.1 min (1,684.1 - 826.0)

Volume	Invert	Avail.Storage	Storage Description
#1	713.50'	81,212 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

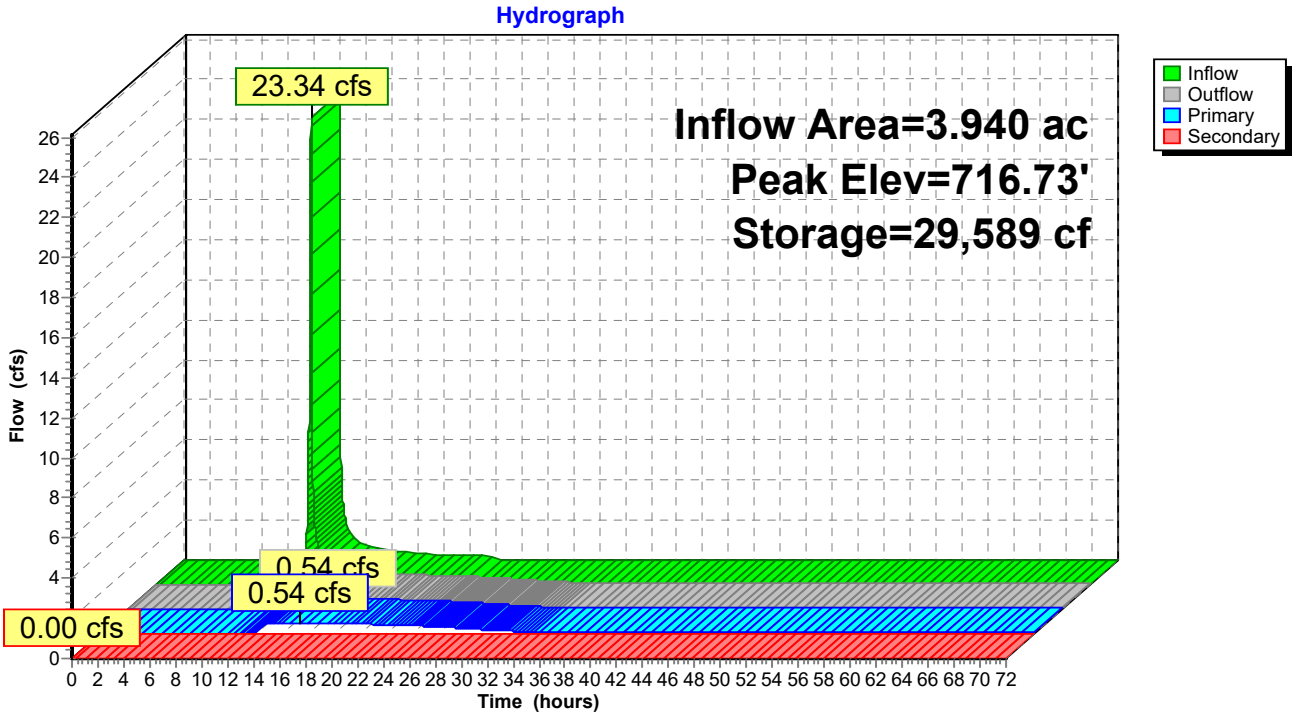
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
713.50	2,258	0	0
714.00	4,670	1,732	1,732
715.00	10,425	7,548	9,280
716.00	11,945	11,185	20,465
717.00	13,515	12,730	33,195
718.00	15,145	14,330	47,525
719.00	16,830	15,988	63,512
720.00	18,570	17,700	81,212

Device	Routing	Invert	Outlet Devices
#1	Primary	711.50'	**24.0" Round Outlet Pipe** L= 40.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 711.50' / 711.30' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf
#2	Device 1	713.50'	**Filter Bed** Head (feet) 0.00 1.00 2.00 3.00 4.00 5.00 Disch. (cfs) 0.000 0.055 0.077 0.098 0.120 0.142
#3	Device 1	715.50'	**4.0" Vert. Orifice** C= 0.600
#4	Device 1	717.50'	**48.0" x 48.0" Horiz. Top of OCS** C= 0.600 Limited to weir flow at low heads
#5	Secondary	718.50'	**20.0' long x 10.0' breadth Emergency Spillway** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

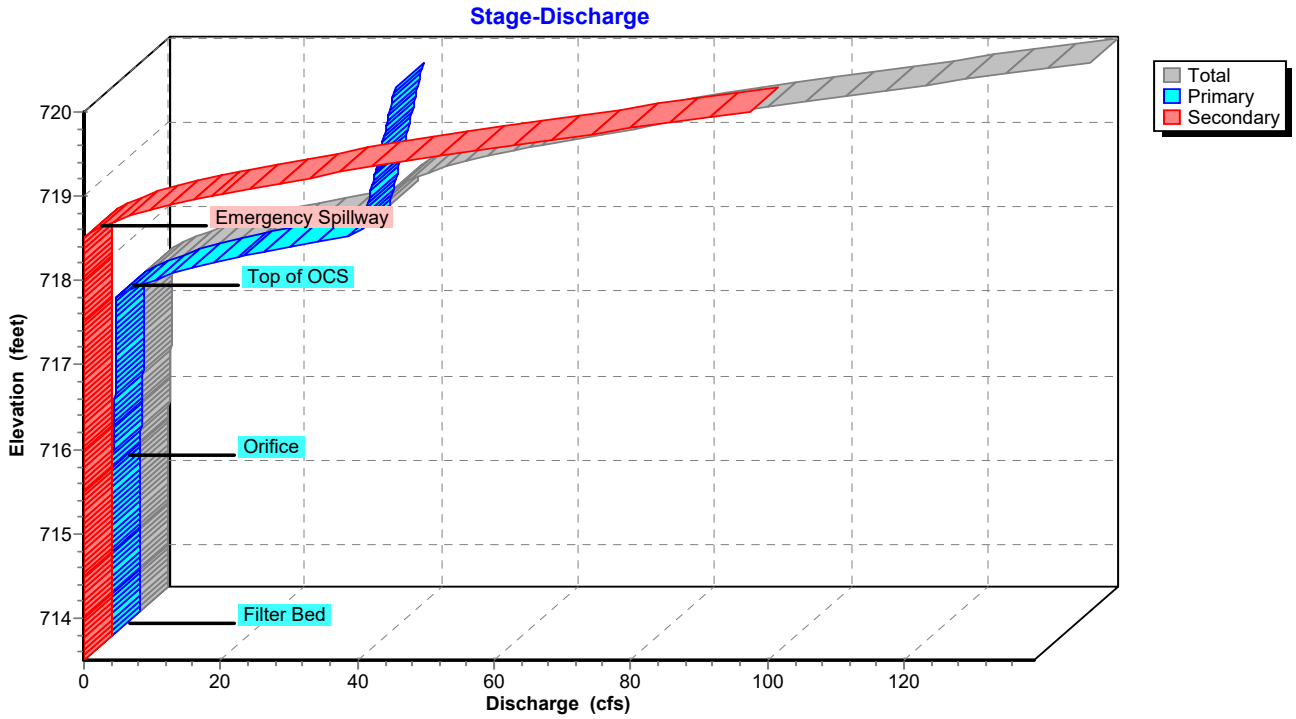
Primary OutFlow Max=0.54 cfs @ 15.44 hrs HW=716.73' (Free Discharge)
└─**1=Outlet Pipe** (Passes 0.54 cfs of 31.11 cfs potential flow)
  ├─**2=Filter Bed** (Custom Controls 0.10 cfs)
  ├─**3=Orifice** (Orifice Controls 0.43 cfs @ 4.96 fps)
  └─**4=Top of OCS** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=713.50' (Free Discharge)
└─**5=Emergency Spillway** (Controls 0.00 cfs)

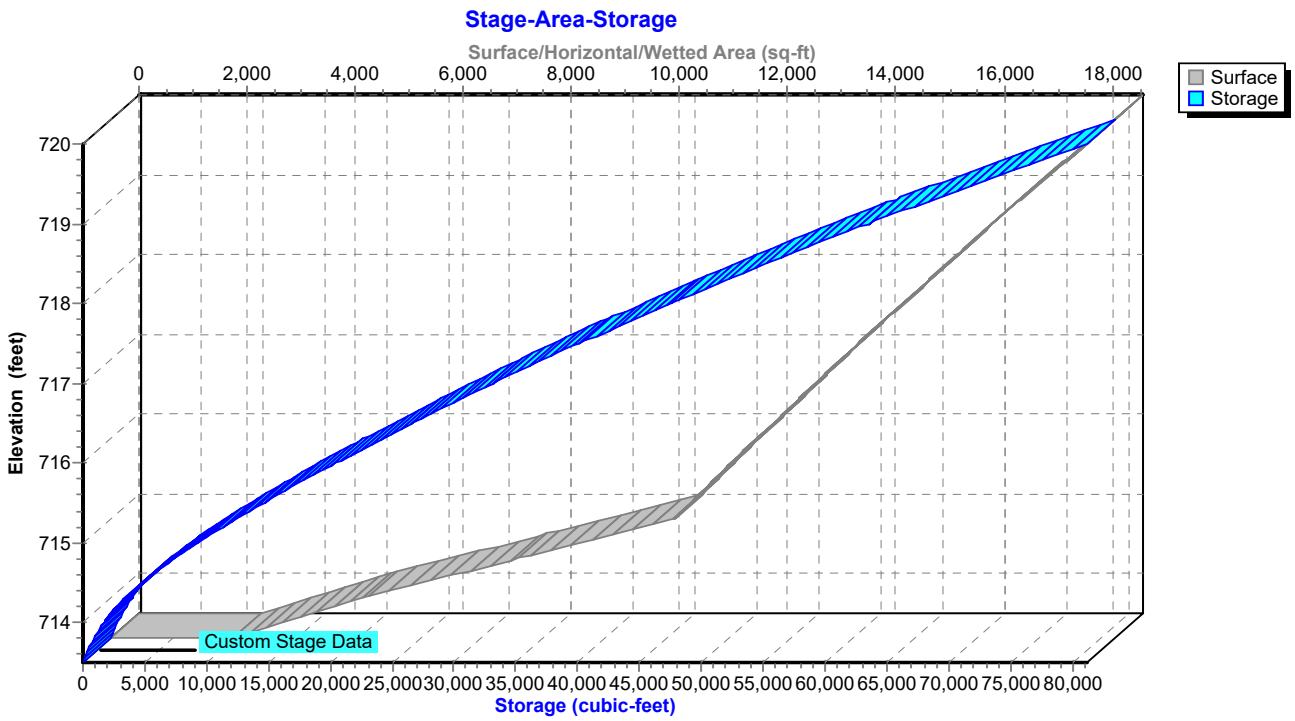
Pond 2P: SCM #2



Pond 2P: SCM #2



Pond 2P: SCM #2


Stage-Area-Storage
Surface/Horizontal/Wetted Area (sq-ft)
0
2,000
4,000
6,000
8,000
10,000
12,000
14,000
16,000
18,000
Surface
Storage
720
719
718
717
716
715
714
Elevation (feet)
Custom Stage Data
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
55,000
60,000
65,000
70,000
75,000
80,000
Storage (cubic-feet)

Hydrograph for Pond 2P: SCM #2

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	713.50	0.00	0.00	**0.00**
2.00	0.00	0	713.50	0.00	0.00	0.00
4.00	0.00	0	713.50	0.00	0.00	0.00
6.00	0.00	0	713.50	0.00	0.00	0.00
8.00	0.00	0	713.50	0.00	0.00	0.00
10.00	**0.16**	421	713.66	0.01	0.01	0.00
12.00	**20.08**	18,314	715.82	0.25	0.25	0.00
14.00	0.74	**29,094**	**716.69**	**0.53**	**0.53**	0.00
16.00	0.46	**29,515**	**716.72**	**0.53**	**0.53**	0.00
18.00	0.36	28,656	716.66	0.52	0.52	0.00
20.00	0.26	27,260	716.55	0.49	0.49	0.00
22.00	0.24	25,641	716.42	0.46	0.46	0.00
24.00	0.22	24,124	716.30	0.43	0.43	0.00
26.00	0.00	21,352	716.07	0.36	0.36	0.00
28.00	0.00	19,057	715.88	0.28	0.28	0.00
30.00	0.00	17,357	715.74	0.19	0.19	0.00
32.00	0.00	16,249	715.64	0.12	0.12	0.00
34.00	0.00	15,484	715.57	0.09	0.09	0.00
36.00	0.00	14,872	715.52	0.08	0.08	0.00
38.00	0.00	14,318	715.47	0.08	0.08	0.00
40.00	0.00	13,773	715.42	0.08	0.08	0.00
42.00	0.00	13,235	715.37	0.07	0.07	0.00
44.00	0.00	12,705	715.32	0.07	0.07	0.00
46.00	0.00	12,183	715.27	0.07	0.07	0.00
48.00	0.00	11,668	715.23	0.07	0.07	0.00
50.00	0.00	11,161	715.18	0.07	0.07	0.00
52.00	0.00	10,661	715.13	0.07	0.07	0.00
54.00	0.00	10,169	715.08	0.07	0.07	0.00
56.00	0.00	9,684	715.04	0.07	0.07	0.00
58.00	0.00	9,206	714.99	0.07	0.07	0.00
60.00	0.00	8,736	714.95	0.06	0.06	0.00
62.00	0.00	8,273	714.90	0.06	0.06	0.00
64.00	0.00	7,817	714.85	0.06	0.06	0.00
66.00	0.00	7,369	714.81	0.06	0.06	0.00
68.00	0.00	6,928	714.76	0.06	0.06	0.00
70.00	0.00	6,495	714.71	0.06	0.06	0.00
72.00	0.00	6,070	714.66	0.06	0.06	0.00

Stage-Discharge for Pond 2P: SCM #2

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
713.50	0.00	0.00	0.00
713.60	0.01	0.01	0.00
713.70	0.01	0.01	0.00
713.80	0.02	0.02	0.00
713.90	0.02	0.02	0.00
714.00	0.03	0.03	0.00
714.10	0.03	0.03	0.00
714.20	0.04	0.04	0.00
714.30	0.04	0.04	0.00
714.40	0.05	0.05	0.00
714.50	0.06	0.06	0.00
714.60	0.06	0.06	0.00
714.70	0.06	0.06	0.00
714.80	0.06	0.06	0.00
714.90	0.06	0.06	0.00
715.00	0.07	0.07	0.00
715.10	0.07	0.07	0.00
715.20	0.07	0.07	0.00
715.30	0.07	0.07	0.00
715.40	0.07	0.07	0.00
715.50	0.08	0.08	0.00
715.60	0.10	0.10	0.00
715.70	0.16	0.16	0.00
715.80	0.24	0.24	0.00
715.90	0.29	0.29	0.00
716.00	0.33	0.33	0.00
716.10	0.37	0.37	0.00
716.20	0.40	0.40	0.00
716.30	0.43	0.43	0.00
716.40	0.46	0.46	0.00
716.50	0.48	0.48	0.00
716.60	0.51	0.51	0.00
716.70	0.53	0.53	0.00
716.80	0.55	0.55	0.00
716.90	0.57	0.57	0.00
717.00	0.59	0.59	0.00
717.10	0.61	0.61	0.00
717.20	0.63	0.63	0.00
717.30	0.65	0.65	0.00
717.40	0.67	0.67	0.00
717.50	0.69	0.69	0.00
717.60	2.36	2.36	0.00
717.70	5.40	5.40	0.00
717.80	9.34	9.34	0.00
717.90	13.99	13.99	0.00
718.00	19.27	19.27	0.00
718.10	25.10	25.10	0.00
718.20	31.45	31.45	0.00
718.30	36.43	36.43	0.00
718.40	36.74	36.74	0.00
718.50	37.05	37.05	0.00
718.60	38.93	37.36	1.57
718.70	42.12	37.67	4.45
718.80	46.27	37.97	8.30
718.90	51.22	38.27	12.95
719.00	57.16	38.57	18.60
719.10	63.96	38.86	25.10
719.20	70.72	39.15	31.57
719.30	77.94	39.45	38.50
719.40	85.58	39.73	45.85
719.50	93.62	40.02	53.60
719.60	102.26	40.31	61.95
719.70	111.31	40.59	70.72
719.80	120.32	40.87	79.45
719.90	129.61	41.15	88.46
720.00	**138.98**	**41.43**	**97.55**

Stage-Area-Storage for Pond 2P: SCM #2

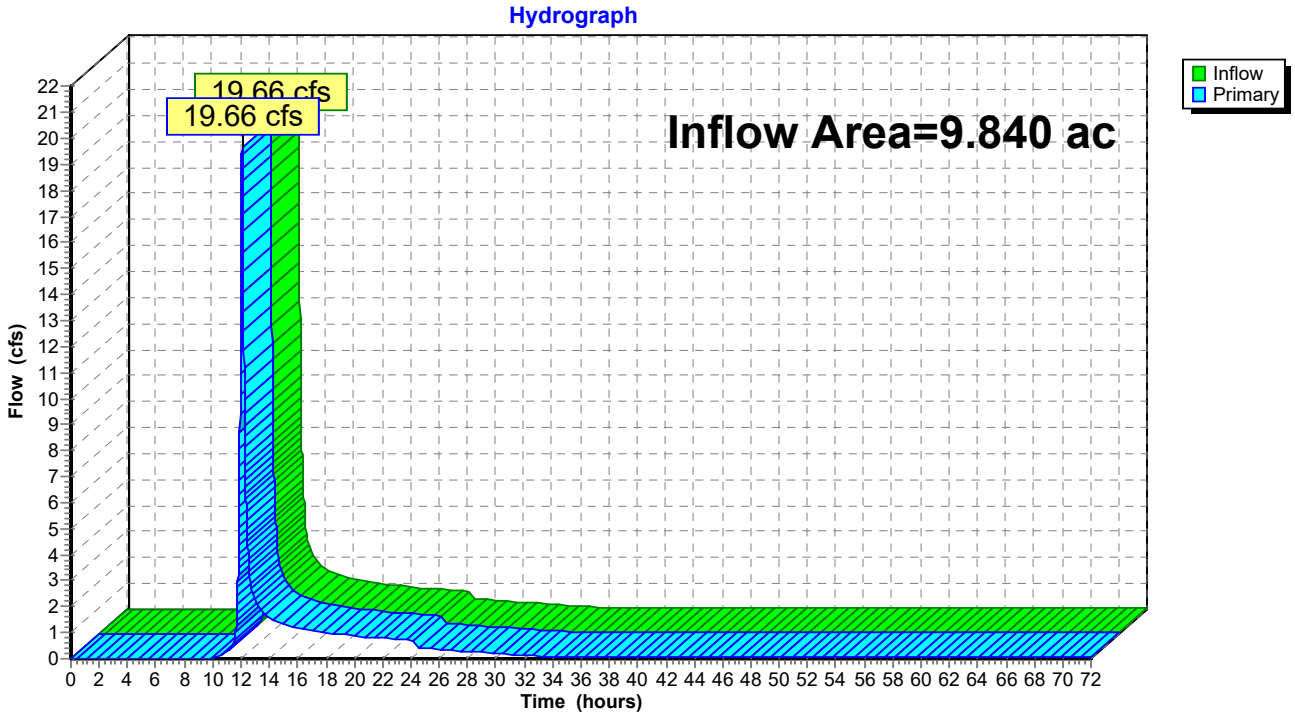
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
713.50	2,258	0
713.60	2,740	250
713.70	3,223	548
713.80	3,705	894
713.90	4,188	1,289
714.00	4,670	1,732
714.10	5,246	2,228
714.20	5,821	2,781
714.30	6,396	3,392
714.40	6,972	4,060
714.50	7,548	4,786
714.60	8,123	5,570
714.70	8,699	6,411
714.80	9,274	7,310
714.90	9,849	8,266
715.00	10,425	9,280
715.10	10,577	10,330
715.20	10,729	11,395
715.30	10,881	12,475
715.40	11,033	13,571
715.50	11,185	14,682
715.60	11,337	15,808
715.70	11,489	16,949
715.80	11,641	18,106
715.90	11,793	19,278
716.00	11,945	20,465
716.10	12,102	21,667
716.20	12,259	22,885
716.30	12,416	24,119
716.40	12,573	25,368
716.50	12,730	26,633
716.60	12,887	27,914
716.70	13,044	29,211
716.80	13,201	30,523
716.90	13,358	31,851
717.00	13,515	33,195
717.10	13,678	34,554
717.20	13,841	35,930
717.30	14,004	37,322
717.40	14,167	38,731
717.50	14,330	40,156
717.60	14,493	41,597
717.70	14,656	43,054
717.80	14,819	44,528
717.90	14,982	46,018
718.00	15,145	47,525
718.10	15,314	49,047
718.20	15,482	50,587
718.30	15,650	52,144
718.40	15,819	53,717
718.50	15,988	55,308
718.60	16,156	56,915
718.70	16,325	58,539
718.80	16,493	60,180
718.90	16,661	61,837
719.00	16,830	63,512
719.10	17,004	65,204
719.20	17,178	66,913
719.30	17,352	68,639
719.40	17,526	70,383
719.50	17,700	72,145
719.60	17,874	73,923
719.70	18,048	75,719
719.80	18,222	77,533
719.90	18,396	79,364
720.00	**18,570**	**81,212**

Summary for Link 2L: Total Post-Development to POI #2

Inflow Area = 9.840 ac, 15.75% Impervious, Inflow Depth > 2.64" for 25-yr event
Inflow = 19.66 cfs @ 12.08 hrs, Volume= 2.164 af
Primary = 19.66 cfs @ 12.08 hrs, Volume= 2.164 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 2L: Total Post-Development to POI #2



Hydrograph for Link 2L: Total Post-Development to POI #2

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	**0.00**	0.00	53.00	0.07	0.00	0.07
1.00	0.00	0.00	0.00	54.00	0.07	0.00	0.07
2.00	0.00	0.00	0.00	55.00	0.07	0.00	0.07
3.00	0.00	0.00	0.00	56.00	0.07	0.00	0.07
4.00	0.00	0.00	0.00	57.00	0.07	0.00	0.07
5.00	0.00	0.00	0.00	58.00	0.07	0.00	0.07
6.00	0.00	0.00	0.00	59.00	0.07	0.00	0.07
7.00	0.00	0.00	0.00	60.00	0.06	0.00	0.06
8.00	0.00	0.00	0.00	61.00	0.06	0.00	0.06
9.00	0.00	0.00	0.00	62.00	0.06	0.00	0.06
10.00	0.02	0.00	0.02	63.00	0.06	0.00	0.06
11.00	0.28	0.00	0.28	64.00	0.06	0.00	0.06
12.00	**15.62**	0.00	**15.62**	65.00	0.06	0.00	0.06
13.00	**2.25**	0.00	**2.25**	66.00	0.06	0.00	0.06
14.00	1.56	0.00	1.56	67.00	0.06	0.00	0.06
15.00	1.34	0.00	1.34	68.00	0.06	0.00	0.06
16.00	1.17	0.00	1.17	69.00	0.06	0.00	0.06
17.00	1.08	0.00	1.08	70.00	0.06	0.00	0.06
18.00	1.01	0.00	1.01	71.00	0.06	0.00	0.06
19.00	0.93	0.00	0.93	72.00	0.06	0.00	0.06
20.00	0.86	0.00	0.86				
21.00	0.82	0.00	0.82				
22.00	0.79	0.00	0.79				
23.00	0.76	0.00	0.76				
24.00	0.73	0.00	0.73				
25.00	0.39	0.00	0.39				
26.00	0.36	0.00	0.36				
27.00	0.32	0.00	0.32				
28.00	0.28	0.00	0.28				
29.00	0.24	0.00	0.24				
30.00	0.19	0.00	0.19				
31.00	0.15	0.00	0.15				
32.00	0.12	0.00	0.12				
33.00	0.11	0.00	0.11				
34.00	0.09	0.00	0.09				
35.00	0.08	0.00	0.08				
36.00	0.08	0.00	0.08				
37.00	0.08	0.00	0.08				
38.00	0.08	0.00	0.08				
39.00	0.08	0.00	0.08				
40.00	0.08	0.00	0.08				
41.00	0.07	0.00	0.07				
42.00	0.07	0.00	0.07				
43.00	0.07	0.00	0.07				
44.00	0.07	0.00	0.07				
45.00	0.07	0.00	0.07				
46.00	0.07	0.00	0.07				
47.00	0.07	0.00	0.07				
48.00	0.07	0.00	0.07				
49.00	0.07	0.00	0.07				
50.00	0.07	0.00	0.07				
51.00	0.07	0.00	0.07				
52.00	0.07	0.00	0.07				

Summary for Subcatchment 2PRE: Pre-Development to POI #2

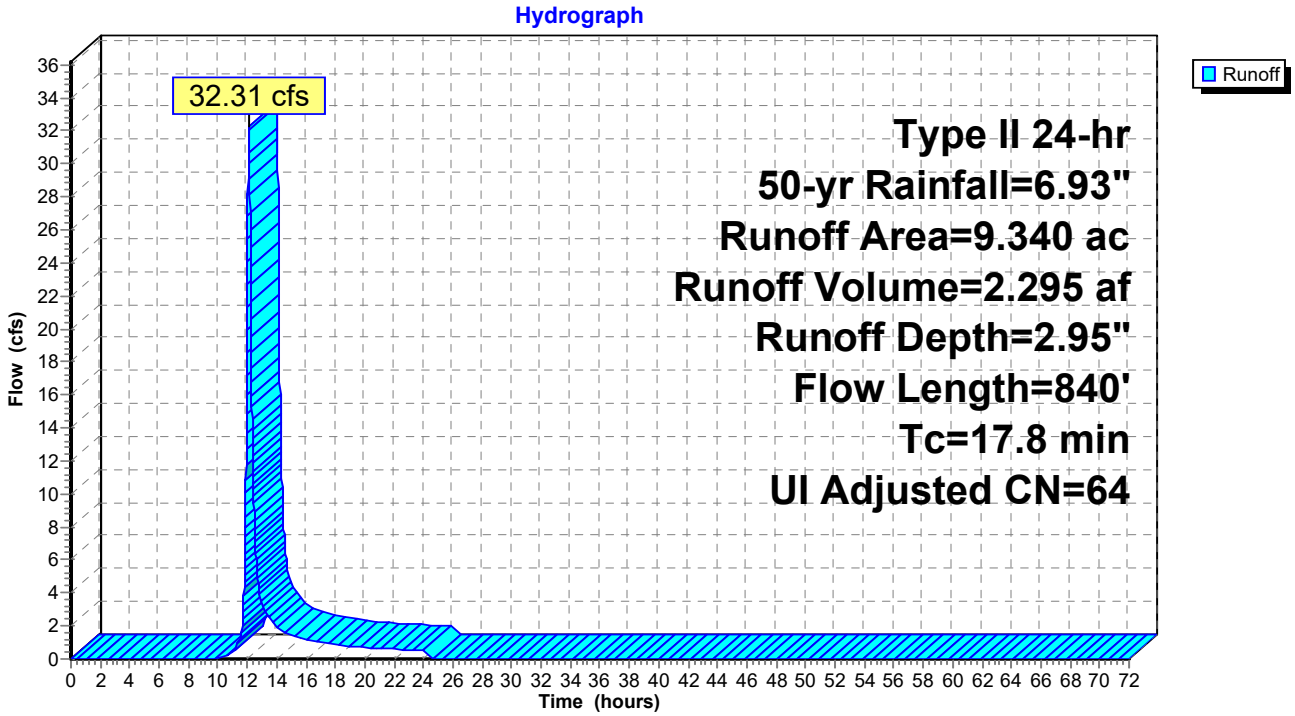
Runoff = 32.31 cfs @ 12.11 hrs, Volume= 2.295 af, Depth= 2.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 50-yr Rainfall=6.93"

Area (ac)	CN	Adj	Description
0.590	55		Woods, Good, HSG B
0.700	77		Woods, Good, HSG D
0.750	98		Unconnected roofs, HSG B
0.080	80		>75% Grass cover, Good, HSG D
7.220	61		>75% Grass cover, Good, HSG B
9.340	65	64	Weighted Average, UI Adjusted
8.590			91.97% Pervious Area
0.750			8.03% Impervious Area
0.750			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0250	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.53"
5.4	740	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
17.8	840	Total			

Subcatchment 2PRE: Pre-Development to POI #2



Hydrograph for Subcatchment 2PRE: Pre-Development to POI #2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.15	0.00	0.00
3.00	0.24	0.00	0.00
4.00	0.33	0.00	0.00
5.00	0.44	0.00	0.00
6.00	0.55	0.00	0.00
7.00	0.69	0.00	0.00
8.00	0.83	0.00	0.00
9.00	1.02	0.00	0.00
10.00	1.25	0.00	0.05
11.00	1.63	0.04	0.49
12.00	4.59	1.32	**22.72**
13.00	5.35	1.81	**3.32**
14.00	5.68	2.04	1.92
15.00	5.91	2.20	1.47
16.00	6.10	2.33	1.17
17.00	6.25	2.44	1.00
18.00	6.38	2.54	0.89
19.00	6.50	2.63	0.78
20.00	6.60	2.70	0.66
21.00	6.69	2.76	0.62
22.00	6.77	2.83	0.59
23.00	6.85	2.89	0.57
24.00	**6.93**	**2.95**	0.55
25.00	6.93	2.95	0.00
26.00	6.93	2.95	0.00
27.00	6.93	2.95	0.00
28.00	6.93	2.95	0.00
29.00	6.93	2.95	0.00
30.00	6.93	2.95	0.00
31.00	6.93	2.95	0.00
32.00	6.93	2.95	0.00
33.00	6.93	2.95	0.00
34.00	6.93	2.95	0.00
35.00	6.93	2.95	0.00
36.00	6.93	2.95	0.00
37.00	6.93	2.95	0.00
38.00	6.93	2.95	0.00
39.00	6.93	2.95	0.00
40.00	6.93	2.95	0.00
41.00	6.93	2.95	0.00
42.00	6.93	2.95	0.00
43.00	6.93	2.95	0.00
44.00	6.93	2.95	0.00
45.00	6.93	2.95	0.00
46.00	6.93	2.95	0.00
47.00	6.93	2.95	0.00
48.00	6.93	2.95	0.00
49.00	6.93	2.95	0.00
50.00	6.93	2.95	0.00
51.00	6.93	2.95	0.00
52.00	6.93	2.95	0.00
53.00	6.93	2.95	0.00
54.00	6.93	2.95	0.00
55.00	6.93	2.95	0.00
56.00	6.93	2.95	0.00
57.00	6.93	2.95	0.00
58.00	6.93	2.95	0.00
59.00	6.93	2.95	0.00
60.00	6.93	2.95	0.00
61.00	6.93	2.95	0.00
62.00	6.93	2.95	0.00
63.00	6.93	2.95	0.00
64.00	6.93	2.95	0.00
65.00	6.93	2.95	0.00
66.00	6.93	2.95	0.00
67.00	6.93	2.95	0.00
68.00	6.93	2.95	0.00
69.00	6.93	2.95	0.00
70.00	6.93	2.95	0.00
71.00	6.93	2.95	0.00
72.00	6.93	2.95	0.00

Summary for Subcatchment 2PST: Post-Development to SCM #2

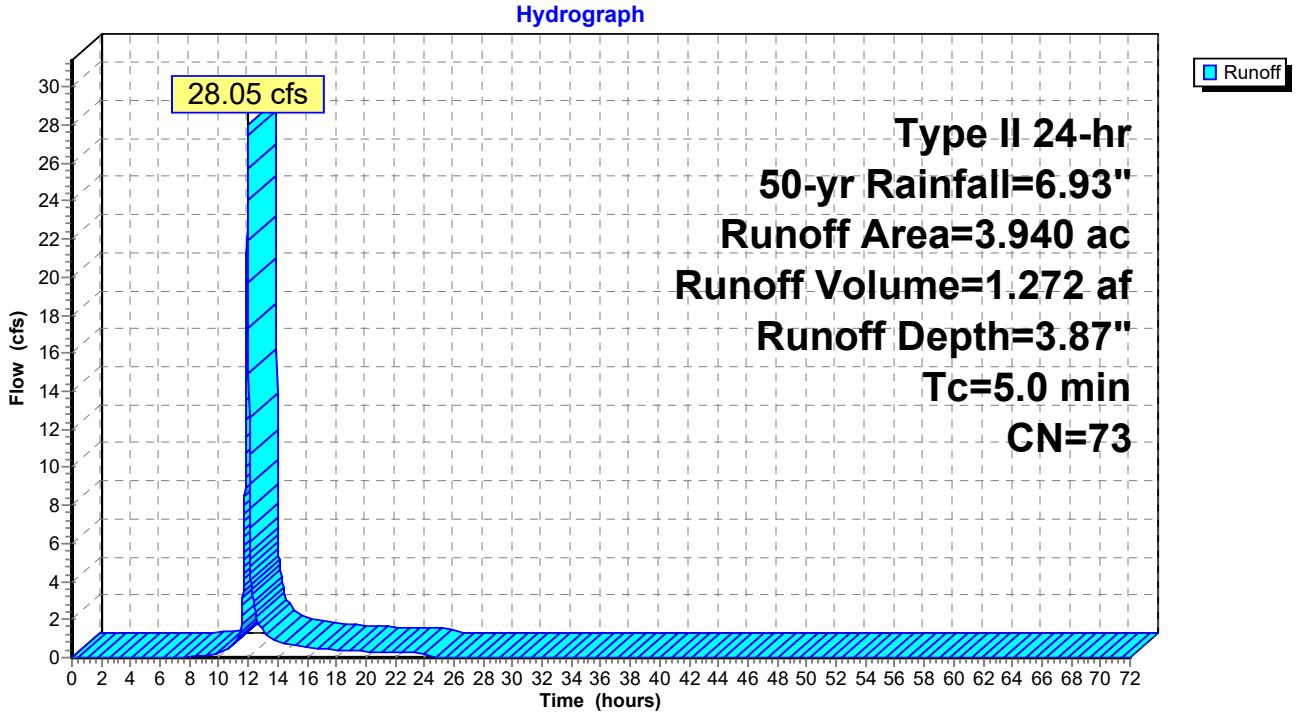
Runoff = 28.05 cfs @ 11.96 hrs, Volume= 1.272 af, Depth= 3.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 50-yr Rainfall=6.93"

	Area (ac)	CN	Description
*	0.880	98	Proposed Impervious
*	0.020	98	Existing Impervious
	2.290	61	>75% Grass cover, Good, HSG B
	0.750	80	>75% Grass cover, Good, HSG D
	3.940	73	Weighted Average
	3.040		77.16% Pervious Area
	0.900		22.84% Impervious Area

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

Subcatchment 2PST: Post-Development to SCM #2



Hydrograph for Subcatchment 2PST: Post-Development to SCM #2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.15	0.00	0.00
3.00	0.24	0.00	0.00
4.00	0.33	0.00	0.00
5.00	0.44	0.00	0.00
6.00	0.55	0.00	0.00
7.00	0.69	0.00	0.00
8.00	0.83	0.00	0.03
9.00	1.02	0.02	0.11
10.00	1.25	0.06	0.24
11.00	1.63	0.17	**0.64**
12.00	4.59	1.97	**24.01**
13.00	5.35	2.56	1.43
14.00	5.68	2.83	0.87
15.00	5.91	3.02	0.69
16.00	6.10	3.17	0.54
17.00	6.25	3.30	0.48
18.00	6.38	3.41	0.42
19.00	6.50	3.51	0.37
20.00	6.60	3.59	0.31
21.00	6.69	3.67	0.29
22.00	6.77	3.74	0.28
23.00	6.85	3.81	0.27
24.00	**6.93**	**3.87**	0.26
25.00	6.93	3.87	0.00
26.00	6.93	3.87	0.00
27.00	6.93	3.87	0.00
28.00	6.93	3.87	0.00
29.00	6.93	3.87	0.00
30.00	6.93	3.87	0.00
31.00	6.93	3.87	0.00
32.00	6.93	3.87	0.00
33.00	6.93	3.87	0.00
34.00	6.93	3.87	0.00
35.00	6.93	3.87	0.00
36.00	6.93	3.87	0.00
37.00	6.93	3.87	0.00
38.00	6.93	3.87	0.00
39.00	6.93	3.87	0.00
40.00	6.93	3.87	0.00
41.00	6.93	3.87	0.00
42.00	6.93	3.87	0.00
43.00	6.93	3.87	0.00
44.00	6.93	3.87	0.00
45.00	6.93	3.87	0.00
46.00	6.93	3.87	0.00
47.00	6.93	3.87	0.00
48.00	6.93	3.87	0.00
49.00	6.93	3.87	0.00
50.00	6.93	3.87	0.00
51.00	6.93	3.87	0.00
52.00	6.93	3.87	0.00
53.00	6.93	3.87	0.00
54.00	6.93	3.87	0.00
55.00	6.93	3.87	0.00
56.00	6.93	3.87	0.00
57.00	6.93	3.87	0.00
58.00	6.93	3.87	0.00
59.00	6.93	3.87	0.00
60.00	6.93	3.87	0.00
61.00	6.93	3.87	0.00
62.00	6.93	3.87	0.00
63.00	6.93	3.87	0.00
64.00	6.93	3.87	0.00
65.00	6.93	3.87	0.00
66.00	6.93	3.87	0.00
67.00	6.93	3.87	0.00
68.00	6.93	3.87	0.00
69.00	6.93	3.87	0.00
70.00	6.93	3.87	0.00
71.00	6.93	3.87	0.00
72.00	6.93	3.87	0.00

Summary for Subcatchment 2S: Bypass to POI #2

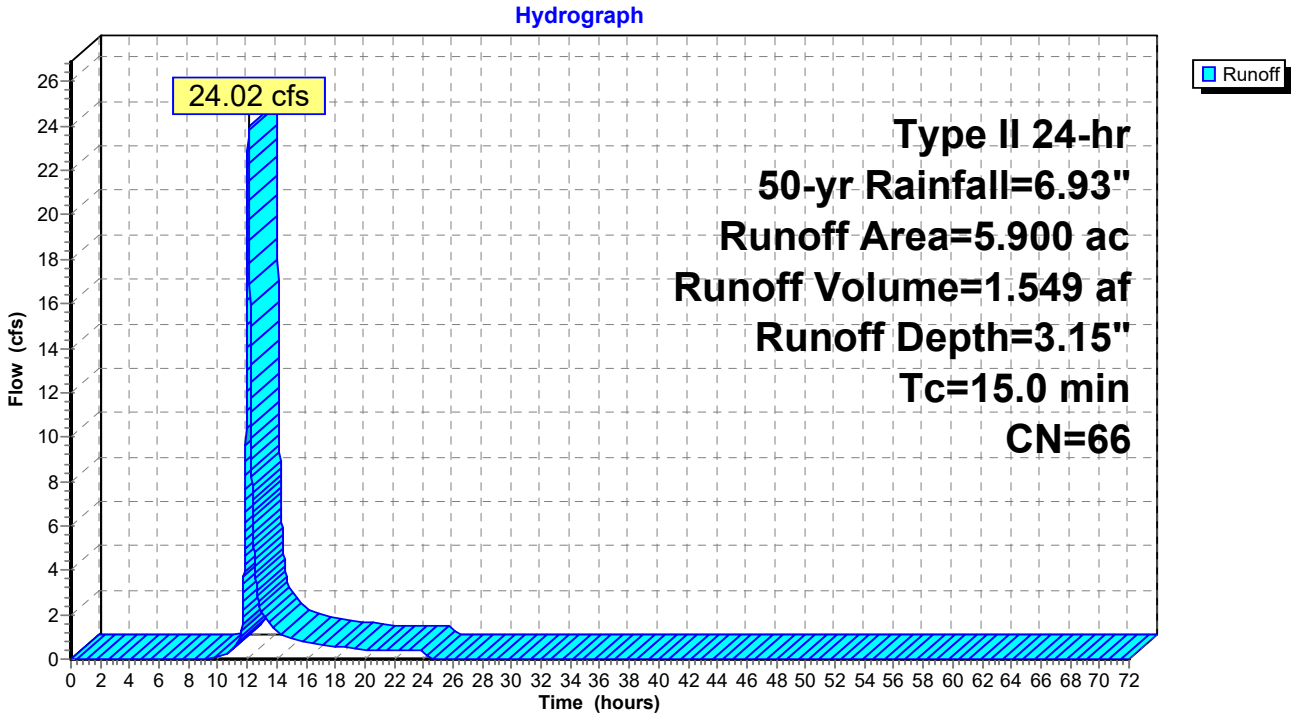
Runoff = 24.02 cfs @ 12.08 hrs, Volume= 1.549 af, Depth= 3.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 50-yr Rainfall=6.93"

	Area (ac)	CN	Description
*	0.650	98	Existing Impervious
	4.740	61	>75% Grass cover, Good, HSG B
	0.280	80	>75% Grass cover, Good, HSG D
	0.180	55	Woods, Good, HSG B
	0.050	77	Woods, Good, HSG D
	5.900	66	Weighted Average
	5.250		88.98% Pervious Area
	0.650		11.02% Impervious Area

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

Subcatchment 2S: Bypass to POI #2



Hydrograph for Subcatchment 2S: Bypass to POI #2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.15	0.00	0.00
3.00	0.24	0.00	0.00
4.00	0.33	0.00	0.00
5.00	0.44	0.00	0.00
6.00	0.55	0.00	0.00
7.00	0.69	0.00	0.00
8.00	0.83	0.00	0.00
9.00	1.02	0.00	0.00
10.00	1.25	0.01	0.09
11.00	1.63	0.06	0.43
12.00	4.59	1.46	**19.43**
13.00	5.35	1.97	**2.11**
14.00	5.68	2.21	1.24
15.00	5.91	2.38	0.96
16.00	6.10	2.51	0.75
17.00	6.25	2.63	0.65
18.00	6.38	2.73	0.58
19.00	6.50	2.82	0.51
20.00	6.60	2.89	0.43
21.00	6.69	2.96	0.40
22.00	6.77	3.03	0.39
23.00	6.85	3.09	0.37
24.00	**6.93**	**3.15**	0.36
25.00	6.93	3.15	0.00
26.00	6.93	3.15	0.00
27.00	6.93	3.15	0.00
28.00	6.93	3.15	0.00
29.00	6.93	3.15	0.00
30.00	6.93	3.15	0.00
31.00	6.93	3.15	0.00
32.00	6.93	3.15	0.00
33.00	6.93	3.15	0.00
34.00	6.93	3.15	0.00
35.00	6.93	3.15	0.00
36.00	6.93	3.15	0.00
37.00	6.93	3.15	0.00
38.00	6.93	3.15	0.00
39.00	6.93	3.15	0.00
40.00	6.93	3.15	0.00
41.00	6.93	3.15	0.00
42.00	6.93	3.15	0.00
43.00	6.93	3.15	0.00
44.00	6.93	3.15	0.00
45.00	6.93	3.15	0.00
46.00	6.93	3.15	0.00
47.00	6.93	3.15	0.00
48.00	6.93	3.15	0.00
49.00	6.93	3.15	0.00
50.00	6.93	3.15	0.00
51.00	6.93	3.15	0.00
52.00	6.93	3.15	0.00
53.00	6.93	3.15	0.00
54.00	6.93	3.15	0.00
55.00	6.93	3.15	0.00
56.00	6.93	3.15	0.00
57.00	6.93	3.15	0.00
58.00	6.93	3.15	0.00
59.00	6.93	3.15	0.00
60.00	6.93	3.15	0.00
61.00	6.93	3.15	0.00
62.00	6.93	3.15	0.00
63.00	6.93	3.15	0.00
64.00	6.93	3.15	0.00
65.00	6.93	3.15	0.00
66.00	6.93	3.15	0.00
67.00	6.93	3.15	0.00
68.00	6.93	3.15	0.00
69.00	6.93	3.15	0.00
70.00	6.93	3.15	0.00
71.00	6.93	3.15	0.00
72.00	6.93	3.15	0.00

Summary for Subcatchment 3PRE: Pre-Development to POI #3

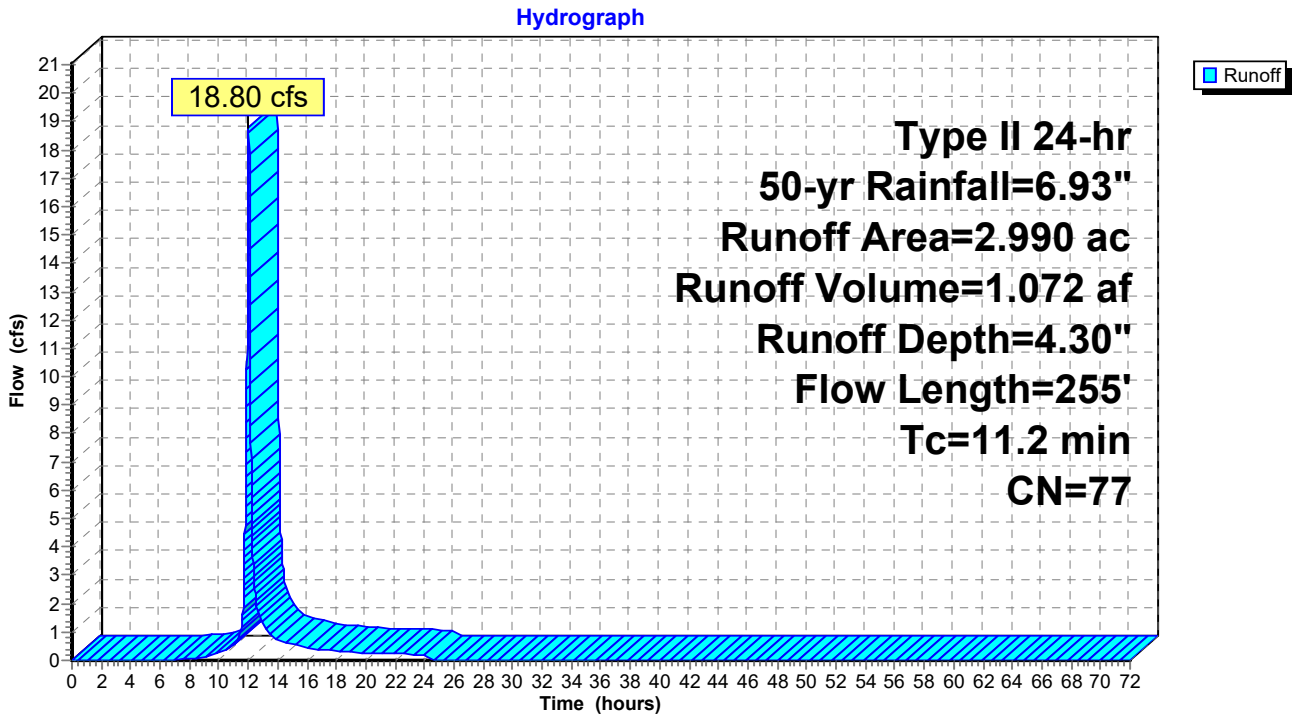
Runoff = 18.80 cfs @ 12.03 hrs, Volume= 1.072 af, Depth= 4.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 50-yr Rainfall=6.93"

Area (ac)	CN	Description
2.610	77	Woods, Good, HSG D
0.380	80	>75% Grass cover, Good, HSG D
2.990	77	Weighted Average
2.990		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.0360	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.53"
0.5	155	0.0860	4.72		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
11.2	255	Total			

Subcatchment 3PRE: Pre-Development to POI #3



Hydrograph for Subcatchment 3PRE: Pre-Development to POI #3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.15	0.00	0.00
3.00	0.24	0.00	0.00
4.00	0.33	0.00	0.00
5.00	0.44	0.00	0.00
6.00	0.55	0.00	0.00
7.00	0.69	0.00	0.02
8.00	0.83	0.02	0.06
9.00	1.02	0.05	0.14
10.00	1.25	0.12	0.24
11.00	1.63	0.26	0.58
12.00	4.59	2.29	**18.05**
13.00	5.35	2.92	**1.24**
14.00	5.68	3.20	0.73
15.00	5.91	3.40	0.57
16.00	6.10	3.57	0.44
17.00	6.25	3.70	0.38
18.00	6.38	3.82	0.34
19.00	6.50	3.92	0.30
20.00	6.60	4.01	0.25
21.00	6.69	4.08	0.23
22.00	6.77	4.16	0.23
23.00	6.85	4.23	0.22
24.00	**6.93**	**4.30**	0.21
25.00	6.93	4.30	0.00
26.00	6.93	4.30	0.00
27.00	6.93	4.30	0.00
28.00	6.93	4.30	0.00
29.00	6.93	4.30	0.00
30.00	6.93	4.30	0.00
31.00	6.93	4.30	0.00
32.00	6.93	4.30	0.00
33.00	6.93	4.30	0.00
34.00	6.93	4.30	0.00
35.00	6.93	4.30	0.00
36.00	6.93	4.30	0.00
37.00	6.93	4.30	0.00
38.00	6.93	4.30	0.00
39.00	6.93	4.30	0.00
40.00	6.93	4.30	0.00
41.00	6.93	4.30	0.00
42.00	6.93	4.30	0.00
43.00	6.93	4.30	0.00
44.00	6.93	4.30	0.00
45.00	6.93	4.30	0.00
46.00	6.93	4.30	0.00
47.00	6.93	4.30	0.00
48.00	6.93	4.30	0.00
49.00	6.93	4.30	0.00
50.00	6.93	4.30	0.00
51.00	6.93	4.30	0.00
52.00	6.93	4.30	0.00
53.00	6.93	4.30	0.00
54.00	6.93	4.30	0.00
55.00	6.93	4.30	0.00
56.00	6.93	4.30	0.00
57.00	6.93	4.30	0.00
58.00	6.93	4.30	0.00
59.00	6.93	4.30	0.00
60.00	6.93	4.30	0.00
61.00	6.93	4.30	0.00
62.00	6.93	4.30	0.00
63.00	6.93	4.30	0.00
64.00	6.93	4.30	0.00
65.00	6.93	4.30	0.00
66.00	6.93	4.30	0.00
67.00	6.93	4.30	0.00
68.00	6.93	4.30	0.00
69.00	6.93	4.30	0.00
70.00	6.93	4.30	0.00
71.00	6.93	4.30	0.00
72.00	6.93	4.30	0.00

Summary for Subcatchment 3PST: Post-Development to POI #3

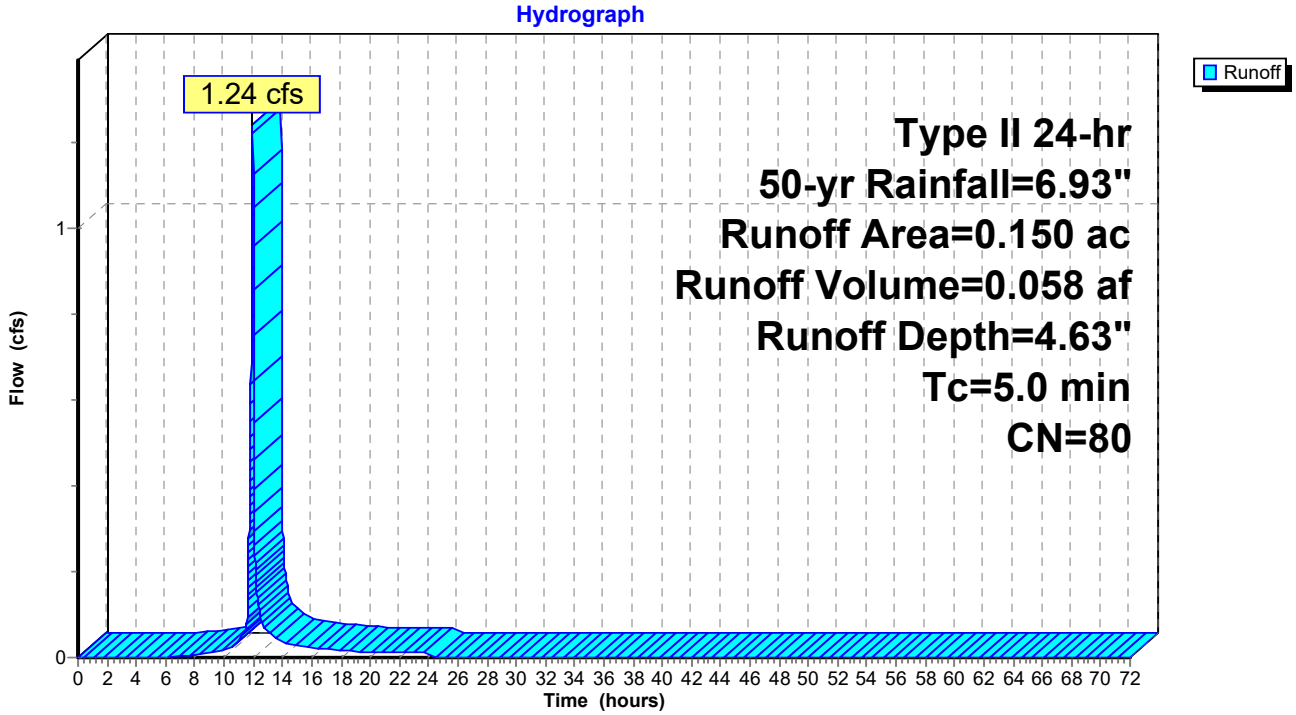
Runoff = 1.24 cfs @ 11.96 hrs, Volume= 0.058 af, Depth= 4.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 50-yr Rainfall=6.93"

Area (ac)	CN	Description
0.020	98	Paved roads w/curbs & sewers, HSG B
0.130	77	Woods, Good, HSG D
0.150	80	Weighted Average
0.130		86.67% Pervious Area
0.020		13.33% Impervious Area

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

Subcatchment 3PST: Post-Development to POI #3



Hydrograph for Subcatchment 3PST: Post-Development to POI #3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.15	0.00	0.00
3.00	0.24	0.00	0.00
4.00	0.33	0.00	0.00
5.00	0.44	0.00	0.00
6.00	0.55	0.00	0.00
7.00	0.69	0.01	0.00
8.00	0.83	0.04	0.00
9.00	1.02	0.09	0.01
10.00	1.25	0.17	0.02
11.00	1.63	0.35	**0.04**
12.00	4.59	2.54	**1.05**
13.00	5.35	3.20	0.06
14.00	5.68	3.50	0.04
15.00	5.91	3.70	0.03
16.00	6.10	3.87	0.02
17.00	6.25	4.01	0.02
18.00	6.38	4.13	0.02
19.00	6.50	4.23	0.02
20.00	6.60	4.32	0.01
21.00	6.69	4.41	0.01
22.00	6.77	4.48	0.01
23.00	6.85	4.56	0.01
24.00	**6.93**	**4.63**	0.01
25.00	6.93	4.63	0.00
26.00	6.93	4.63	0.00
27.00	6.93	4.63	0.00
28.00	6.93	4.63	0.00
29.00	6.93	4.63	0.00
30.00	6.93	4.63	0.00
31.00	6.93	4.63	0.00
32.00	6.93	4.63	0.00
33.00	6.93	4.63	0.00
34.00	6.93	4.63	0.00
35.00	6.93	4.63	0.00
36.00	6.93	4.63	0.00
37.00	6.93	4.63	0.00
38.00	6.93	4.63	0.00
39.00	6.93	4.63	0.00
40.00	6.93	4.63	0.00
41.00	6.93	4.63	0.00
42.00	6.93	4.63	0.00
43.00	6.93	4.63	0.00
44.00	6.93	4.63	0.00
45.00	6.93	4.63	0.00
46.00	6.93	4.63	0.00
47.00	6.93	4.63	0.00
48.00	6.93	4.63	0.00
49.00	6.93	4.63	0.00
50.00	6.93	4.63	0.00
51.00	6.93	4.63	0.00
52.00	6.93	4.63	0.00
53.00	6.93	4.63	0.00
54.00	6.93	4.63	0.00
55.00	6.93	4.63	0.00
56.00	6.93	4.63	0.00
57.00	6.93	4.63	0.00
58.00	6.93	4.63	0.00
59.00	6.93	4.63	0.00
60.00	6.93	4.63	0.00
61.00	6.93	4.63	0.00
62.00	6.93	4.63	0.00
63.00	6.93	4.63	0.00
64.00	6.93	4.63	0.00
65.00	6.93	4.63	0.00
66.00	6.93	4.63	0.00
67.00	6.93	4.63	0.00
68.00	6.93	4.63	0.00
69.00	6.93	4.63	0.00
70.00	6.93	4.63	0.00
71.00	6.93	4.63	0.00
72.00	6.93	4.63	0.00

Summary for Pond 2P: SCM #2

Inflow Area = 3.940 ac, 22.84% Impervious, Inflow Depth = 3.87" for 50-yr event
Inflow = 28.05 cfs @ 11.96 hrs, Volume= 1.272 af
Outflow = 0.64 cfs @ 15.38 hrs, Volume= 1.119 af, Atten= 98%, Lag= 205.0 min
Primary = 0.64 cfs @ 15.38 hrs, Volume= 1.119 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 717.21' @ 15.38 hrs Surf.Area= 13,865 sf Storage= 36,130 cf

Plug-Flow detention time= 878.9 min calculated for 1.118 af (88% of inflow)
Center-of-Mass det. time= 820.1 min (1,640.7 - 820.6)

Volume	Invert	Avail.Storage	Storage Description
#1	713.50'	81,212 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

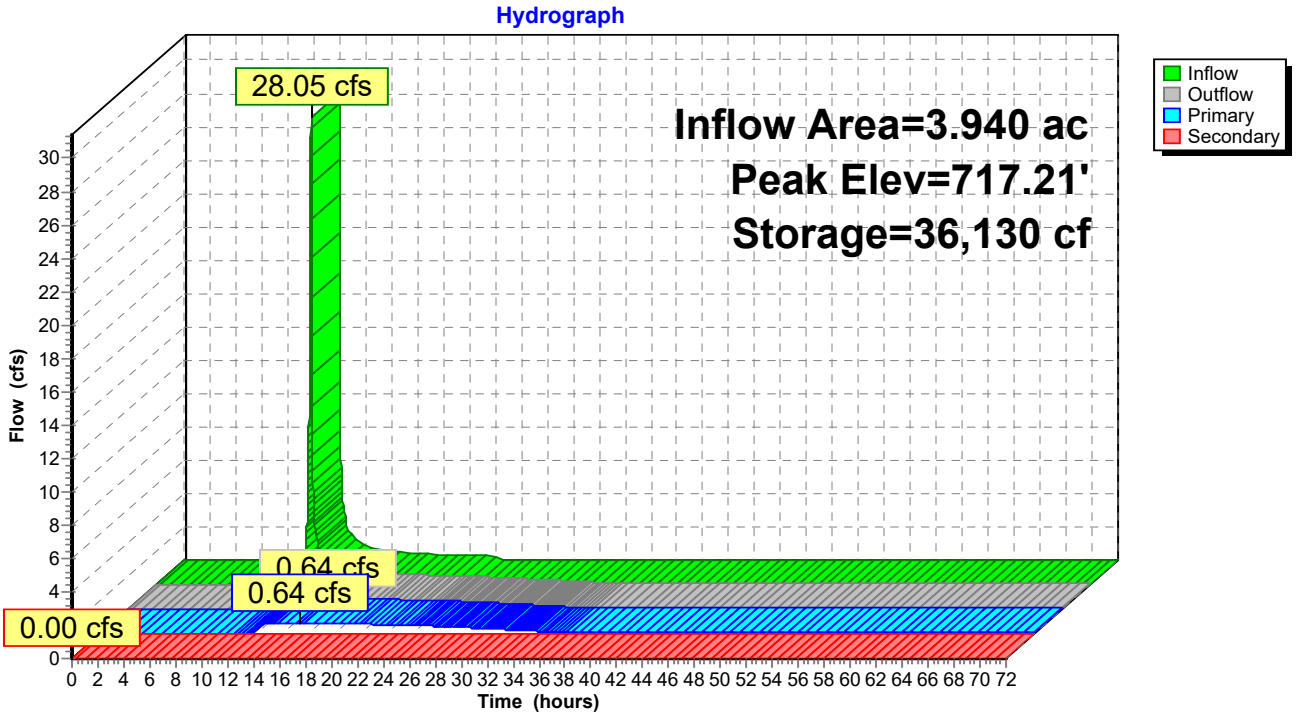
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
713.50	2,258	0	0
714.00	4,670	1,732	1,732
715.00	10,425	7,548	9,280
716.00	11,945	11,185	20,465
717.00	13,515	12,730	33,195
718.00	15,145	14,330	47,525
719.00	16,830	15,988	63,512
720.00	18,570	17,700	81,212

Device	Routing	Invert	Outlet Devices
#1	Primary	711.50'	**24.0" Round Outlet Pipe** L= 40.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 711.50' / 711.30' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf
#2	Device 1	713.50'	**Filter Bed** Head (feet) 0.00 1.00 2.00 3.00 4.00 5.00 Disch. (cfs) 0.000 0.055 0.077 0.098 0.120 0.142
#3	Device 1	715.50'	**4.0" Vert. Orifice** C= 0.600
#4	Device 1	717.50'	**48.0" x 48.0" Horiz. Top of OCS** C= 0.600 Limited to weir flow at low heads
#5	Secondary	718.50'	**20.0' long x 10.0' breadth Emergency Spillway** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

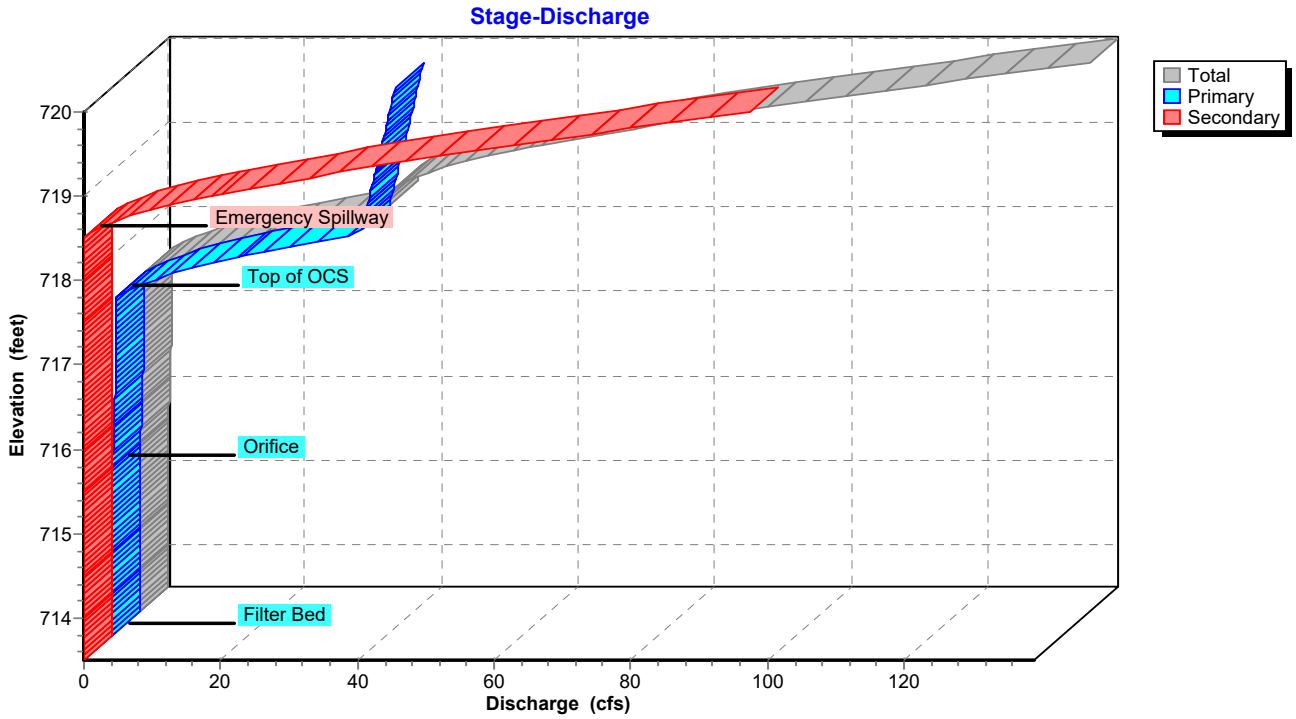
Primary OutFlow Max=0.64 cfs @ 15.38 hrs HW=717.21' (Free Discharge)
└─**1=Outlet Pipe** (Passes 0.64 cfs of 32.84 cfs potential flow)
  ├─**2=Filter Bed** (Custom Controls 0.11 cfs)
  ├─**3=Orifice** (Orifice Controls 0.52 cfs @ 5.99 fps)
  └─**4=Top of OCS** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=713.50' (Free Discharge)
└─**5=Emergency Spillway** (Controls 0.00 cfs)

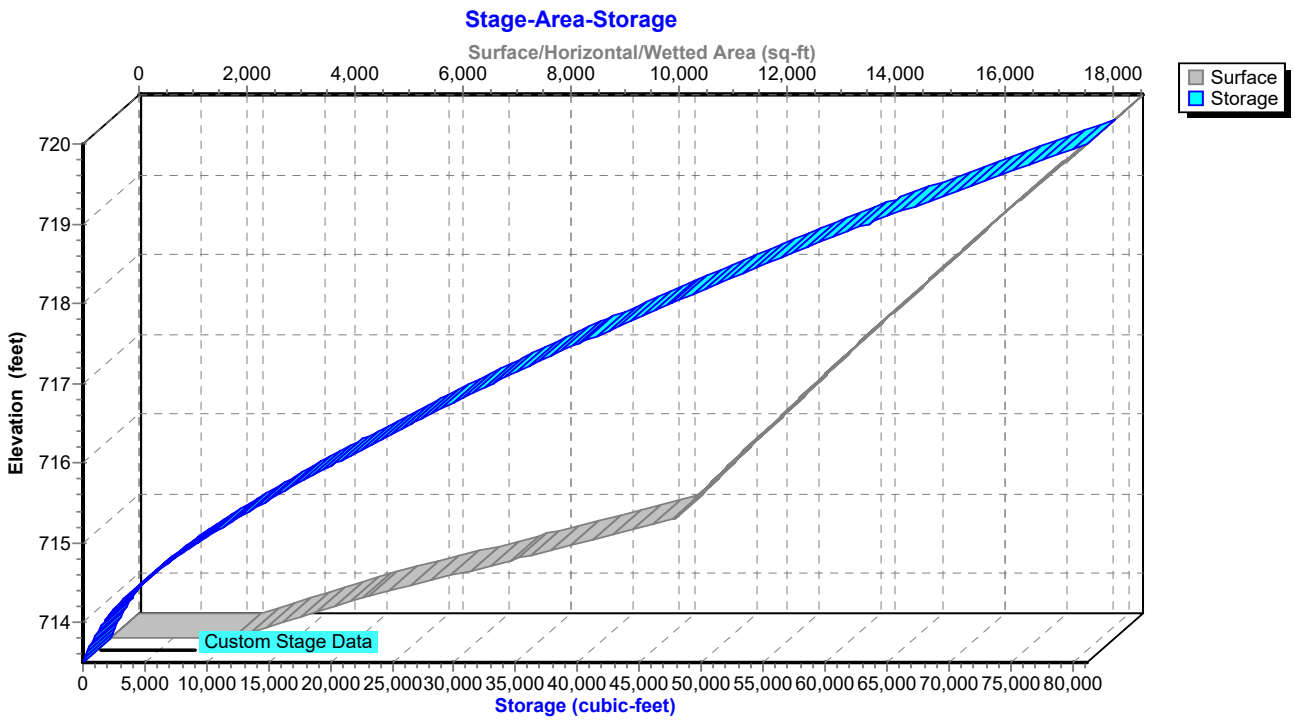
Pond 2P: SCM #2



Pond 2P: SCM #2



Pond 2P: SCM #2


Stage-Area-Storage
Surface/Horizontal/Wetted Area (sq-ft)
0
2,000
4,000
6,000
8,000
10,000
12,000
14,000
16,000
18,000
Surface
Storage
720
719
718
717
716
715
714
Elevation (feet)
Custom Stage Data
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
55,000
60,000
65,000
70,000
75,000
80,000
Storage (cubic-feet)

Hydrograph for Pond 2P: SCM #2

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	713.50	0.00	0.00	**0.00**
2.00	0.00	0	713.50	0.00	0.00	0.00
4.00	0.00	0	713.50	0.00	0.00	0.00
6.00	0.00	0	713.50	0.00	0.00	0.00
8.00	0.03	24	713.51	0.00	0.00	0.00
10.00	**0.24**	787	713.77	0.01	0.01	0.00
12.00	**24.01**	22,977	716.21	0.40	0.40	0.00
14.00	0.87	**35,597**	**717.18**	**0.63**	**0.63**	0.00
16.00	0.54	**36,024**	**717.21**	**0.64**	**0.64**	0.00
18.00	0.42	34,939	717.13	0.62	0.62	0.00
20.00	0.31	33,196	717.00	0.59	0.59	0.00
22.00	0.28	31,152	716.85	0.56	0.56	0.00
24.00	0.26	29,185	716.70	0.53	0.53	0.00
26.00	0.00	25,683	716.42	0.46	0.46	0.00
28.00	0.00	22,608	716.18	0.39	0.39	0.00
30.00	0.00	20,056	715.97	0.32	0.32	0.00
32.00	0.00	18,070	715.80	0.23	0.23	0.00
34.00	0.00	16,706	715.68	0.15	0.15	0.00
36.00	0.00	15,810	715.60	0.10	0.10	0.00
38.00	0.00	15,145	715.54	0.08	0.08	0.00
40.00	0.00	14,575	715.49	0.08	0.08	0.00
42.00	0.00	14,026	715.44	0.08	0.08	0.00
44.00	0.00	13,484	715.39	0.07	0.07	0.00
46.00	0.00	12,951	715.34	0.07	0.07	0.00
48.00	0.00	12,425	715.30	0.07	0.07	0.00
50.00	0.00	11,907	715.25	0.07	0.07	0.00
52.00	0.00	11,396	715.20	0.07	0.07	0.00
54.00	0.00	10,893	715.15	0.07	0.07	0.00
56.00	0.00	10,397	715.11	0.07	0.07	0.00
58.00	0.00	9,909	715.06	0.07	0.07	0.00
60.00	0.00	9,428	715.01	0.07	0.07	0.00
62.00	0.00	8,954	714.97	0.07	0.07	0.00
64.00	0.00	8,488	714.92	0.06	0.06	0.00
66.00	0.00	8,029	714.88	0.06	0.06	0.00
68.00	0.00	7,577	714.83	0.06	0.06	0.00
70.00	0.00	7,133	714.78	0.06	0.06	0.00
72.00	0.00	6,696	714.73	0.06	0.06	0.00

Stage-Discharge for Pond 2P: SCM #2

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
713.50	0.00	0.00	0.00
713.60	0.01	0.01	0.00
713.70	0.01	0.01	0.00
713.80	0.02	0.02	0.00
713.90	0.02	0.02	0.00
714.00	0.03	0.03	0.00
714.10	0.03	0.03	0.00
714.20	0.04	0.04	0.00
714.30	0.04	0.04	0.00
714.40	0.05	0.05	0.00
714.50	0.06	0.06	0.00
714.60	0.06	0.06	0.00
714.70	0.06	0.06	0.00
714.80	0.06	0.06	0.00
714.90	0.06	0.06	0.00
715.00	0.07	0.07	0.00
715.10	0.07	0.07	0.00
715.20	0.07	0.07	0.00
715.30	0.07	0.07	0.00
715.40	0.07	0.07	0.00
715.50	0.08	0.08	0.00
715.60	0.10	0.10	0.00
715.70	0.16	0.16	0.00
715.80	0.24	0.24	0.00
715.90	0.29	0.29	0.00
716.00	0.33	0.33	0.00
716.10	0.37	0.37	0.00
716.20	0.40	0.40	0.00
716.30	0.43	0.43	0.00
716.40	0.46	0.46	0.00
716.50	0.48	0.48	0.00
716.60	0.51	0.51	0.00
716.70	0.53	0.53	0.00
716.80	0.55	0.55	0.00
716.90	0.57	0.57	0.00
717.00	0.59	0.59	0.00
717.10	0.61	0.61	0.00
717.20	0.63	0.63	0.00
717.30	0.65	0.65	0.00
717.40	0.67	0.67	0.00
717.50	0.69	0.69	0.00
717.60	2.36	2.36	0.00
717.70	5.40	5.40	0.00
717.80	9.34	9.34	0.00
717.90	13.99	13.99	0.00
718.00	19.27	19.27	0.00
718.10	25.10	25.10	0.00
718.20	31.45	31.45	0.00
718.30	36.43	36.43	0.00
718.40	36.74	36.74	0.00
718.50	37.05	37.05	0.00
718.60	38.93	37.36	1.57
718.70	42.12	37.67	4.45
718.80	46.27	37.97	8.30
718.90	51.22	38.27	12.95
719.00	57.16	38.57	18.60
719.10	63.96	38.86	25.10
719.20	70.72	39.15	31.57
719.30	77.94	39.45	38.50
719.40	85.58	39.73	45.85
719.50	93.62	40.02	53.60
719.60	102.26	40.31	61.95
719.70	111.31	40.59	70.72
719.80	120.32	40.87	79.45
719.90	129.61	41.15	88.46
720.00	**138.98**	**41.43**	**97.55**

Stage-Area-Storage for Pond 2P: SCM #2

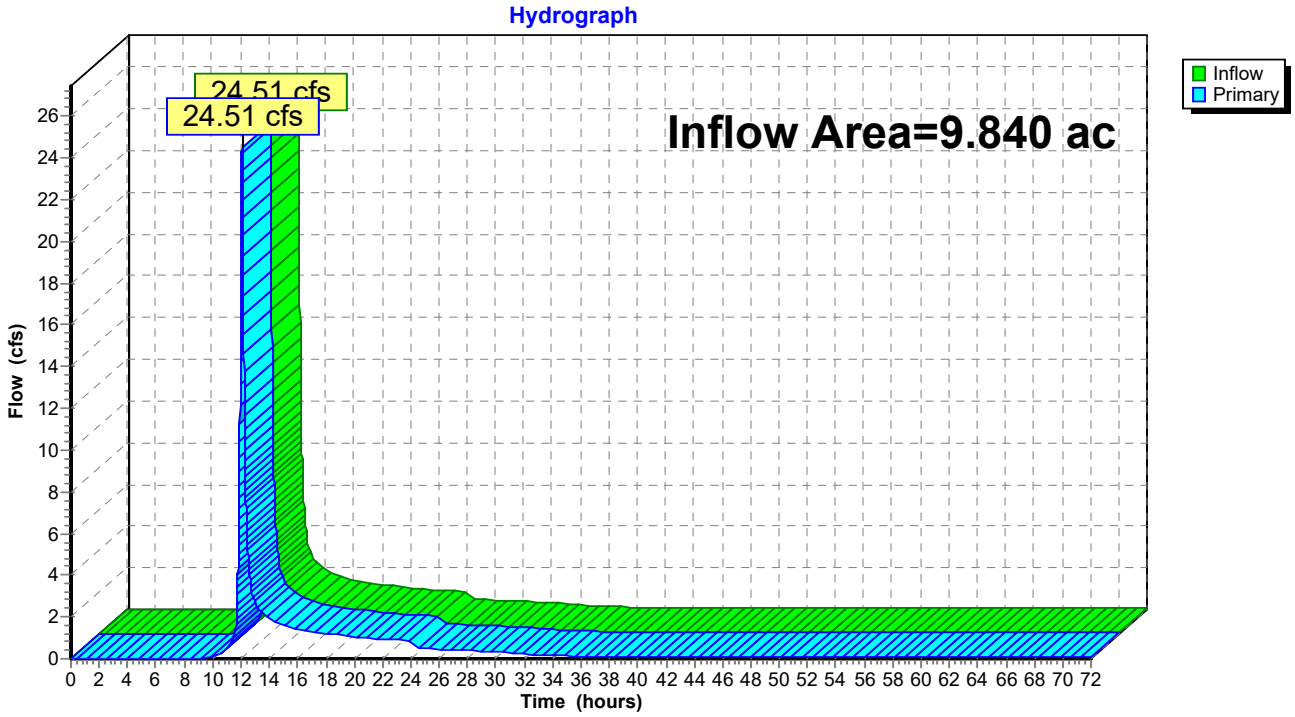
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
713.50	2,258	0
713.60	2,740	250
713.70	3,223	548
713.80	3,705	894
713.90	4,188	1,289
714.00	4,670	1,732
714.10	5,246	2,228
714.20	5,821	2,781
714.30	6,396	3,392
714.40	6,972	4,060
714.50	7,548	4,786
714.60	8,123	5,570
714.70	8,699	6,411
714.80	9,274	7,310
714.90	9,849	8,266
715.00	10,425	9,280
715.10	10,577	10,330
715.20	10,729	11,395
715.30	10,881	12,475
715.40	11,033	13,571
715.50	11,185	14,682
715.60	11,337	15,808
715.70	11,489	16,949
715.80	11,641	18,106
715.90	11,793	19,278
716.00	11,945	20,465
716.10	12,102	21,667
716.20	12,259	22,885
716.30	12,416	24,119
716.40	12,573	25,368
716.50	12,730	26,633
716.60	12,887	27,914
716.70	13,044	29,211
716.80	13,201	30,523
716.90	13,358	31,851
717.00	13,515	33,195
717.10	13,678	34,554
717.20	13,841	35,930
717.30	14,004	37,322
717.40	14,167	38,731
717.50	14,330	40,156
717.60	14,493	41,597
717.70	14,656	43,054
717.80	14,819	44,528
717.90	14,982	46,018
718.00	15,145	47,525
718.10	15,314	49,047
718.20	15,482	50,587
718.30	15,650	52,144
718.40	15,819	53,717
718.50	15,988	55,308
718.60	16,156	56,915
718.70	16,325	58,539
718.80	16,493	60,180
718.90	16,661	61,837
719.00	16,830	63,512
719.10	17,004	65,204
719.20	17,178	66,913
719.30	17,352	68,639
719.40	17,526	70,383
719.50	17,700	72,145
719.60	17,874	73,923
719.70	18,048	75,719
719.80	18,222	77,533
719.90	18,396	79,364
720.00	**18,570**	**81,212**

Summary for Link 2L: Total Post-Development to POI #2

Inflow Area = 9.840 ac, 15.75% Impervious, Inflow Depth > 3.25" for 50-yr event
Inflow = 24.51 cfs @ 12.08 hrs, Volume= 2.667 af
Primary = 24.51 cfs @ 12.08 hrs, Volume= 2.667 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 2L: Total Post-Development to POI #2



Hydrograph for Link 2L: Total Post-Development to POI #2

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	**0.00**	0.00	53.00	0.07	0.00	0.07
1.00	0.00	0.00	0.00	54.00	0.07	0.00	0.07
2.00	0.00	0.00	0.00	55.00	0.07	0.00	0.07
3.00	0.00	0.00	0.00	56.00	0.07	0.00	0.07
4.00	0.00	0.00	0.00	57.00	0.07	0.00	0.07
5.00	0.00	0.00	0.00	58.00	0.07	0.00	0.07
6.00	0.00	0.00	0.00	59.00	0.07	0.00	0.07
7.00	0.00	0.00	0.00	60.00	0.07	0.00	0.07
8.00	0.00	0.00	0.00	61.00	0.07	0.00	0.07
9.00	0.01	0.00	0.01	62.00	0.07	0.00	0.07
10.00	0.11	0.00	0.11	63.00	0.06	0.00	0.06
11.00	0.47	0.00	0.47	64.00	0.06	0.00	0.06
12.00	**19.83**	0.00	**19.83**	65.00	0.06	0.00	0.06
13.00	**2.71**	0.00	**2.71**	66.00	0.06	0.00	0.06
14.00	1.87	0.00	1.87	67.00	0.06	0.00	0.06
15.00	1.59	0.00	1.59	68.00	0.06	0.00	0.06
16.00	1.39	0.00	1.39	69.00	0.06	0.00	0.06
17.00	1.28	0.00	1.28	70.00	0.06	0.00	0.06
18.00	1.20	0.00	1.20	71.00	0.06	0.00	0.06
19.00	1.11	0.00	1.11	72.00	0.06	0.00	0.06
20.00	1.02	0.00	1.02				
21.00	0.98	0.00	0.98				
22.00	0.95	0.00	0.95				
23.00	0.92	0.00	0.92				
24.00	0.89	0.00	0.89				
25.00	0.50	0.00	0.50				
26.00	0.46	0.00	0.46				
27.00	0.43	0.00	0.43				
28.00	0.39	0.00	0.39				
29.00	0.35	0.00	0.35				
30.00	0.32	0.00	0.32				
31.00	0.28	0.00	0.28				
32.00	0.23	0.00	0.23				
33.00	0.19	0.00	0.19				
34.00	0.15	0.00	0.15				
35.00	0.12	0.00	0.12				
36.00	0.10	0.00	0.10				
37.00	0.09	0.00	0.09				
38.00	0.08	0.00	0.08				
39.00	0.08	0.00	0.08				
40.00	0.08	0.00	0.08				
41.00	0.08	0.00	0.08				
42.00	0.08	0.00	0.08				
43.00	0.08	0.00	0.08				
44.00	0.07	0.00	0.07				
45.00	0.07	0.00	0.07				
46.00	0.07	0.00	0.07				
47.00	0.07	0.00	0.07				
48.00	0.07	0.00	0.07				
49.00	0.07	0.00	0.07				
50.00	0.07	0.00	0.07				
51.00	0.07	0.00	0.07				
52.00	0.07	0.00	0.07				

Summary for Subcatchment 2PRE: Pre-Development to POI #2

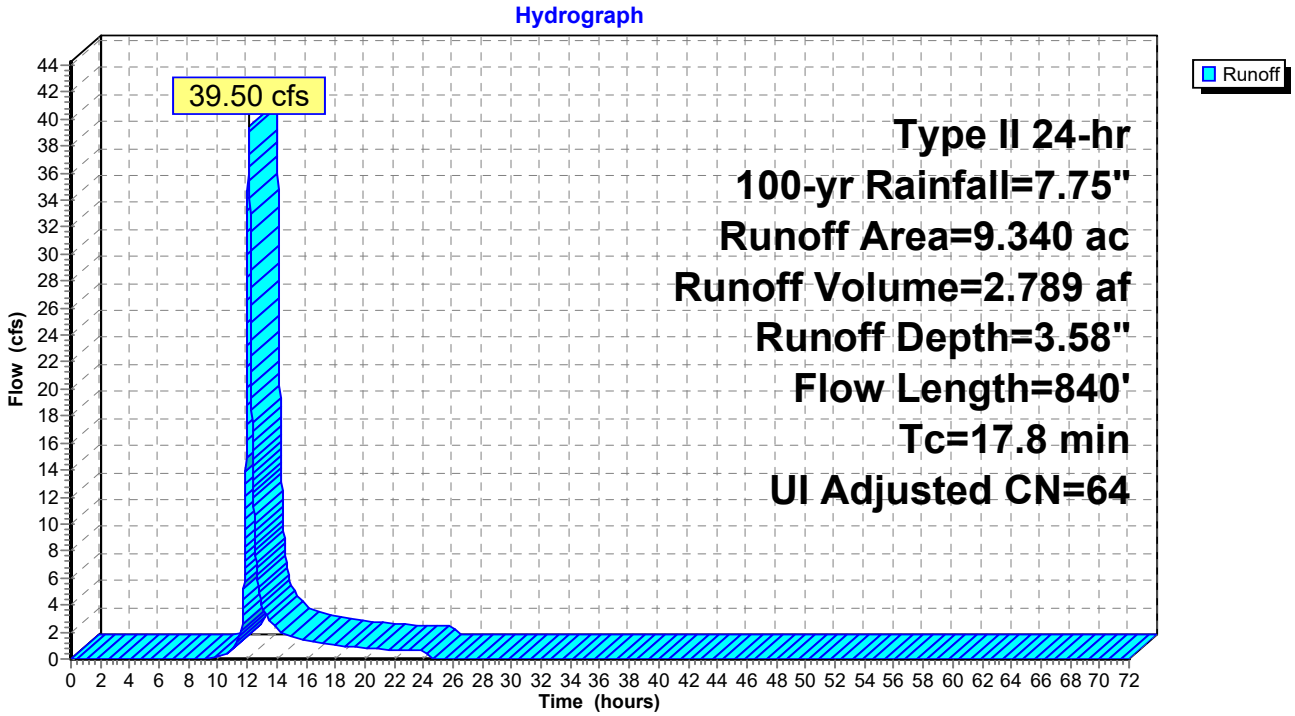
Runoff = 39.50 cfs @ 12.11 hrs, Volume= 2.789 af, Depth= 3.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-yr Rainfall=7.75"

Area (ac)	CN	Adj	Description
0.590	55		Woods, Good, HSG B
0.700	77		Woods, Good, HSG D
0.750	98		Unconnected roofs, HSG B
0.080	80		>75% Grass cover, Good, HSG D
7.220	61		>75% Grass cover, Good, HSG B
9.340	65	64	Weighted Average, UI Adjusted
8.590			91.97% Pervious Area
0.750			8.03% Impervious Area
0.750			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0250	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.53"
5.4	740	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
17.8	840	Total			

Subcatchment 2PRE: Pre-Development to POI #2



Hydrograph for Subcatchment 2PRE: Pre-Development to POI #2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.08	0.00	0.00
2.00	0.17	0.00	0.00
3.00	0.27	0.00	0.00
4.00	0.37	0.00	0.00
5.00	0.49	0.00	0.00
6.00	0.62	0.00	0.00
7.00	0.77	0.00	0.00
8.00	0.93	0.00	0.00
9.00	1.14	0.00	0.00
10.00	1.40	0.01	0.18
11.00	1.82	0.08	0.77
12.00	5.14	1.67	**28.29**
13.00	5.98	2.25	**3.93**
14.00	6.36	2.52	2.26
15.00	6.61	2.71	1.73
16.00	6.82	2.87	1.37
17.00	6.99	2.99	1.17
18.00	7.14	3.11	1.04
19.00	7.27	3.21	0.91
20.00	7.38	3.29	0.77
21.00	7.48	3.37	0.72
22.00	7.57	3.44	0.69
23.00	7.66	3.51	0.67
24.00	**7.75**	**3.58**	0.64
25.00	7.75	3.58	0.00
26.00	7.75	3.58	0.00
27.00	7.75	3.58	0.00
28.00	7.75	3.58	0.00
29.00	7.75	3.58	0.00
30.00	7.75	3.58	0.00
31.00	7.75	3.58	0.00
32.00	7.75	3.58	0.00
33.00	7.75	3.58	0.00
34.00	7.75	3.58	0.00
35.00	7.75	3.58	0.00
36.00	7.75	3.58	0.00
37.00	7.75	3.58	0.00
38.00	7.75	3.58	0.00
39.00	7.75	3.58	0.00
40.00	7.75	3.58	0.00
41.00	7.75	3.58	0.00
42.00	7.75	3.58	0.00
43.00	7.75	3.58	0.00
44.00	7.75	3.58	0.00
45.00	7.75	3.58	0.00
46.00	7.75	3.58	0.00
47.00	7.75	3.58	0.00
48.00	7.75	3.58	0.00
49.00	7.75	3.58	0.00
50.00	7.75	3.58	0.00
51.00	7.75	3.58	0.00
52.00	7.75	3.58	0.00
53.00	7.75	3.58	0.00
54.00	7.75	3.58	0.00
55.00	7.75	3.58	0.00
56.00	7.75	3.58	0.00
57.00	7.75	3.58	0.00
58.00	7.75	3.58	0.00
59.00	7.75	3.58	0.00
60.00	7.75	3.58	0.00
61.00	7.75	3.58	0.00
62.00	7.75	3.58	0.00
63.00	7.75	3.58	0.00
64.00	7.75	3.58	0.00
65.00	7.75	3.58	0.00
66.00	7.75	3.58	0.00
67.00	7.75	3.58	0.00
68.00	7.75	3.58	0.00
69.00	7.75	3.58	0.00
70.00	7.75	3.58	0.00
71.00	7.75	3.58	0.00
72.00	7.75	3.58	0.00

Summary for Subcatchment 2PST: Post-Development to SCM #2

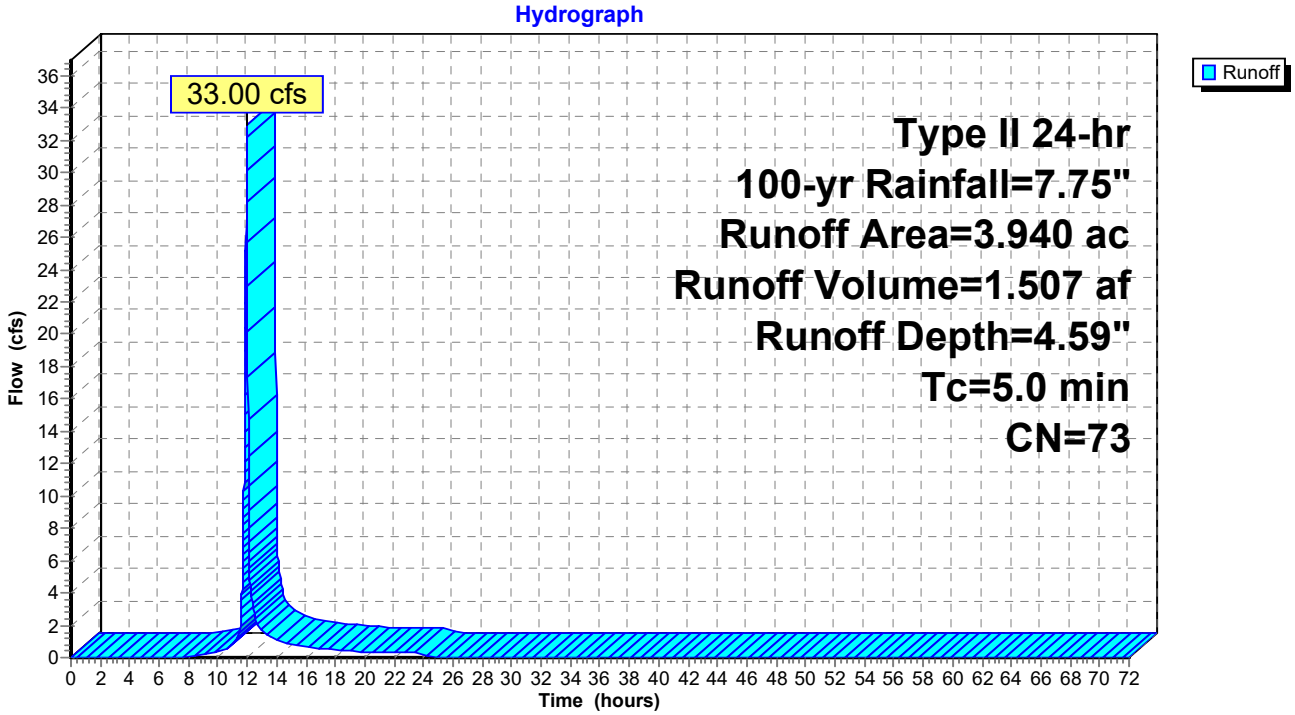
Runoff = 33.00 cfs @ 11.96 hrs, Volume= 1.507 af, Depth= 4.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-yr Rainfall=7.75"

	Area (ac)	CN	Description
*	0.880	98	Proposed Impervious
*	0.020	98	Existing Impervious
	2.290	61	>75% Grass cover, Good, HSG B
	0.750	80	>75% Grass cover, Good, HSG D
	3.940	73	Weighted Average
	3.040		77.16% Pervious Area
	0.900		22.84% Impervious Area

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

Subcatchment 2PST: Post-Development to SCM #2



Hydrograph for Subcatchment 2PST: Post-Development to SCM #2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.08	0.00	0.00
2.00	0.17	0.00	0.00
3.00	0.27	0.00	0.00
4.00	0.37	0.00	0.00
5.00	0.49	0.00	0.00
6.00	0.62	0.00	0.00
7.00	0.77	0.00	0.01
8.00	0.93	0.01	0.06
9.00	1.14	0.04	0.17
10.00	1.40	0.10	0.33
11.00	1.82	0.24	**0.83**
12.00	5.14	2.39	**28.13**
13.00	5.98	3.07	1.66
14.00	6.36	3.39	1.00
15.00	6.61	3.61	0.80
16.00	6.82	3.78	0.62
17.00	6.99	3.93	0.55
18.00	7.14	4.05	0.48
19.00	7.27	4.17	0.42
20.00	7.38	4.26	0.35
21.00	7.48	4.35	0.34
22.00	7.57	4.43	0.32
23.00	7.66	4.51	0.31
24.00	**7.75**	**4.59**	0.30
25.00	7.75	4.59	0.00
26.00	7.75	4.59	0.00
27.00	7.75	4.59	0.00
28.00	7.75	4.59	0.00
29.00	7.75	4.59	0.00
30.00	7.75	4.59	0.00
31.00	7.75	4.59	0.00
32.00	7.75	4.59	0.00
33.00	7.75	4.59	0.00
34.00	7.75	4.59	0.00
35.00	7.75	4.59	0.00
36.00	7.75	4.59	0.00
37.00	7.75	4.59	0.00
38.00	7.75	4.59	0.00
39.00	7.75	4.59	0.00
40.00	7.75	4.59	0.00
41.00	7.75	4.59	0.00
42.00	7.75	4.59	0.00
43.00	7.75	4.59	0.00
44.00	7.75	4.59	0.00
45.00	7.75	4.59	0.00
46.00	7.75	4.59	0.00
47.00	7.75	4.59	0.00
48.00	7.75	4.59	0.00
49.00	7.75	4.59	0.00
50.00	7.75	4.59	0.00
51.00	7.75	4.59	0.00
52.00	7.75	4.59	0.00
53.00	7.75	4.59	0.00
54.00	7.75	4.59	0.00
55.00	7.75	4.59	0.00
56.00	7.75	4.59	0.00
57.00	7.75	4.59	0.00
58.00	7.75	4.59	0.00
59.00	7.75	4.59	0.00
60.00	7.75	4.59	0.00
61.00	7.75	4.59	0.00
62.00	7.75	4.59	0.00
63.00	7.75	4.59	0.00
64.00	7.75	4.59	0.00
65.00	7.75	4.59	0.00
66.00	7.75	4.59	0.00
67.00	7.75	4.59	0.00
68.00	7.75	4.59	0.00
69.00	7.75	4.59	0.00
70.00	7.75	4.59	0.00
71.00	7.75	4.59	0.00
72.00	7.75	4.59	0.00

Summary for Subcatchment 2S: Bypass to POI #2

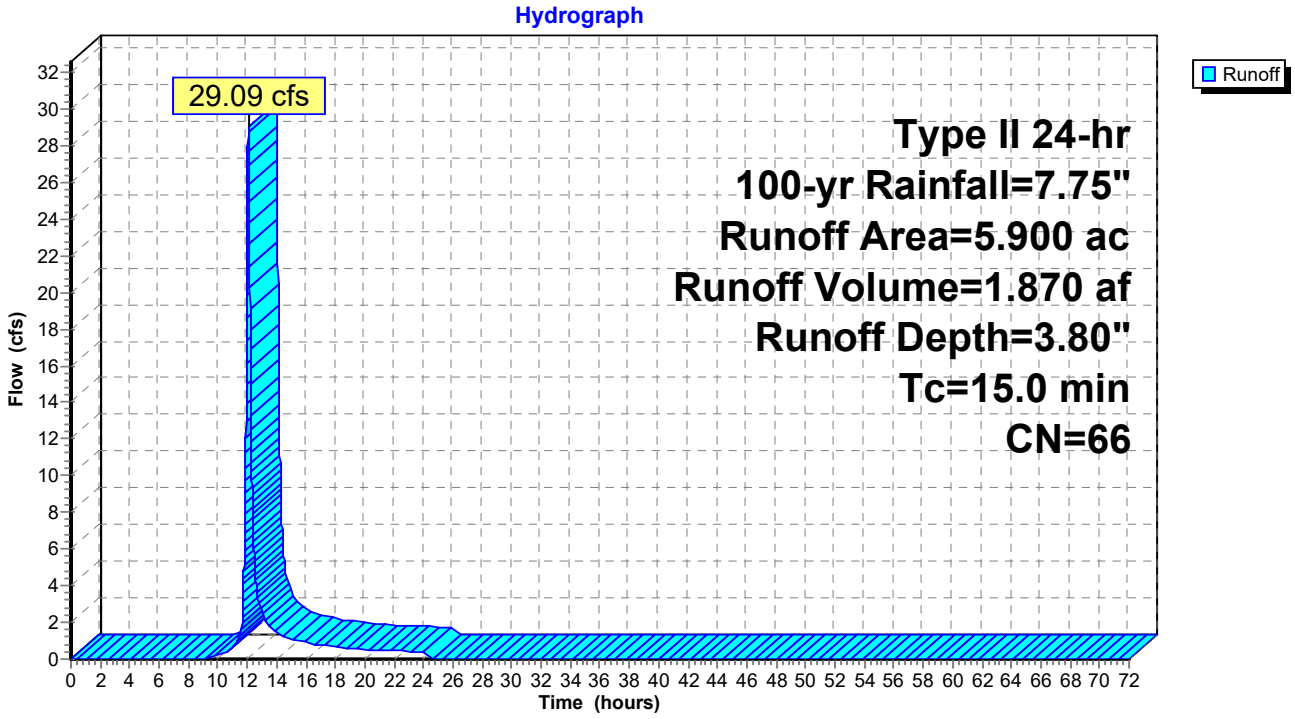
Runoff = 29.09 cfs @ 12.08 hrs, Volume= 1.870 af, Depth= 3.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-yr Rainfall=7.75"

	Area (ac)	CN	Description
*	0.650	98	Existing Impervious
	4.740	61	>75% Grass cover, Good, HSG B
	0.280	80	>75% Grass cover, Good, HSG D
	0.180	55	Woods, Good, HSG B
	0.050	77	Woods, Good, HSG D
	5.900	66	Weighted Average
	5.250		88.98% Pervious Area
	0.650		11.02% Impervious Area

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

Subcatchment 2S: Bypass to POI #2



Hydrograph for Subcatchment 2S: Bypass to POI #2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.08	0.00	0.00
2.00	0.17	0.00	0.00
3.00	0.27	0.00	0.00
4.00	0.37	0.00	0.00
5.00	0.49	0.00	0.00
6.00	0.62	0.00	0.00
7.00	0.77	0.00	0.00
8.00	0.93	0.00	0.00
9.00	1.14	0.00	0.03
10.00	1.40	0.03	0.18
11.00	1.82	0.11	0.63
12.00	5.14	1.82	**23.80**
13.00	5.98	2.43	**2.48**
14.00	6.36	2.71	1.45
15.00	6.61	2.90	1.12
16.00	6.82	3.06	0.88
17.00	6.99	3.20	0.76
18.00	7.14	3.31	0.68
19.00	7.27	3.42	0.59
20.00	7.38	3.50	0.50
21.00	7.48	3.58	0.47
22.00	7.57	3.66	0.45
23.00	7.66	3.73	0.43
24.00	**7.75**	**3.80**	0.42
25.00	7.75	3.80	0.00
26.00	7.75	3.80	0.00
27.00	7.75	3.80	0.00
28.00	7.75	3.80	0.00
29.00	7.75	3.80	0.00
30.00	7.75	3.80	0.00
31.00	7.75	3.80	0.00
32.00	7.75	3.80	0.00
33.00	7.75	3.80	0.00
34.00	7.75	3.80	0.00
35.00	7.75	3.80	0.00
36.00	7.75	3.80	0.00
37.00	7.75	3.80	0.00
38.00	7.75	3.80	0.00
39.00	7.75	3.80	0.00
40.00	7.75	3.80	0.00
41.00	7.75	3.80	0.00
42.00	7.75	3.80	0.00
43.00	7.75	3.80	0.00
44.00	7.75	3.80	0.00
45.00	7.75	3.80	0.00
46.00	7.75	3.80	0.00
47.00	7.75	3.80	0.00
48.00	7.75	3.80	0.00
49.00	7.75	3.80	0.00
50.00	7.75	3.80	0.00
51.00	7.75	3.80	0.00
52.00	7.75	3.80	0.00
53.00	7.75	3.80	0.00
54.00	7.75	3.80	0.00
55.00	7.75	3.80	0.00
56.00	7.75	3.80	0.00
57.00	7.75	3.80	0.00
58.00	7.75	3.80	0.00
59.00	7.75	3.80	0.00
60.00	7.75	3.80	0.00
61.00	7.75	3.80	0.00
62.00	7.75	3.80	0.00
63.00	7.75	3.80	0.00
64.00	7.75	3.80	0.00
65.00	7.75	3.80	0.00
66.00	7.75	3.80	0.00
67.00	7.75	3.80	0.00
68.00	7.75	3.80	0.00
69.00	7.75	3.80	0.00
70.00	7.75	3.80	0.00
71.00	7.75	3.80	0.00
72.00	7.75	3.80	0.00

Summary for Subcatchment 3PRE: Pre-Development to POI #3

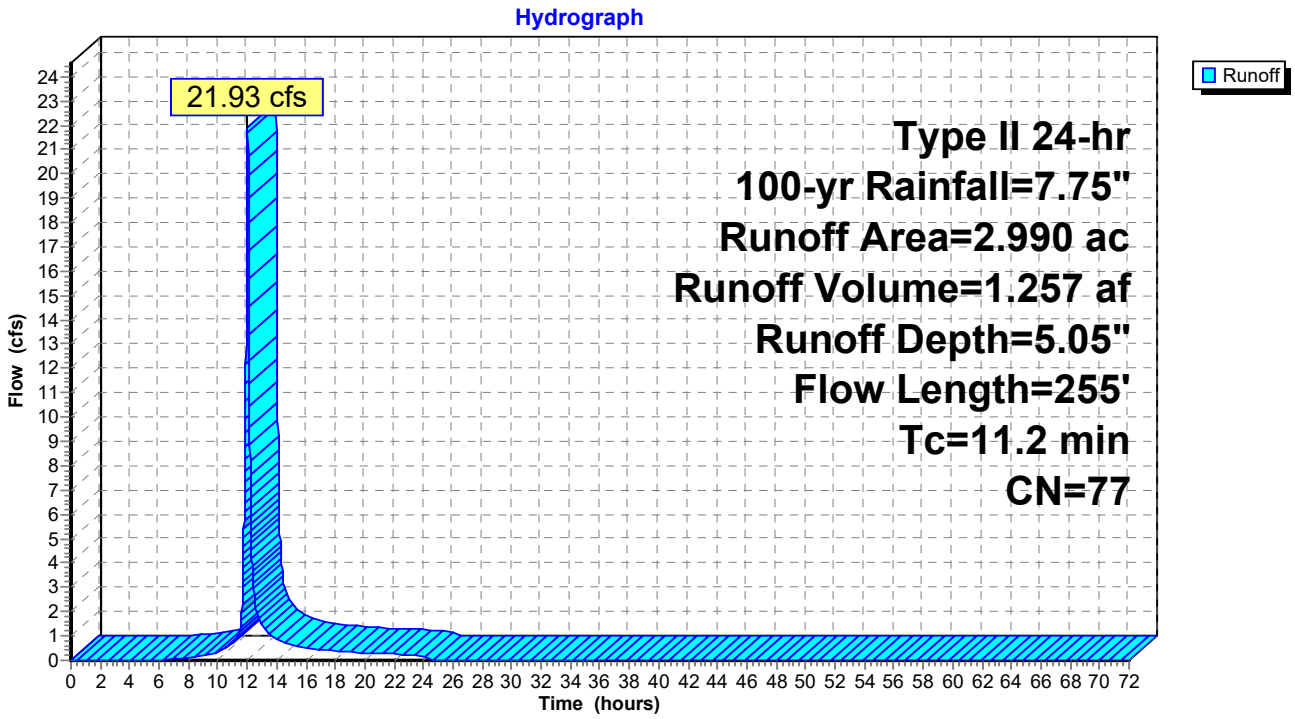
Runoff = 21.93 cfs @ 12.03 hrs, Volume= 1.257 af, Depth= 5.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-yr Rainfall=7.75"

Area (ac)	CN	Description
2.610	77	Woods, Good, HSG D
0.380	80	>75% Grass cover, Good, HSG D
2.990	77	Weighted Average
2.990		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.0360	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.53"
0.5	155	0.0860	4.72		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
11.2	255	Total			

Subcatchment 3PRE: Pre-Development to POI #3



Hydrograph for Subcatchment 3PRE: Pre-Development to POI #3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.08	0.00	0.00
2.00	0.17	0.00	0.00
3.00	0.27	0.00	0.00
4.00	0.37	0.00	0.00
5.00	0.49	0.00	0.00
6.00	0.62	0.00	0.00
7.00	0.77	0.01	0.04
8.00	0.93	0.03	0.09
9.00	1.14	0.08	0.19
10.00	1.40	0.17	0.32
11.00	1.82	0.36	0.72
12.00	5.14	2.74	**21.10**
13.00	5.98	3.46	**1.42**
14.00	6.36	3.79	0.83
15.00	6.61	4.02	0.65
16.00	6.82	4.20	0.51
17.00	6.99	4.36	0.44
18.00	7.14	4.49	0.39
19.00	7.27	4.61	0.34
20.00	7.38	4.71	0.28
21.00	7.48	4.80	0.27
22.00	7.57	4.88	0.26
23.00	7.66	4.97	0.25
24.00	**7.75**	**5.05**	0.24
25.00	7.75	5.05	0.00
26.00	7.75	5.05	0.00
27.00	7.75	5.05	0.00
28.00	7.75	5.05	0.00
29.00	7.75	5.05	0.00
30.00	7.75	5.05	0.00
31.00	7.75	5.05	0.00
32.00	7.75	5.05	0.00
33.00	7.75	5.05	0.00
34.00	7.75	5.05	0.00
35.00	7.75	5.05	0.00
36.00	7.75	5.05	0.00
37.00	7.75	5.05	0.00
38.00	7.75	5.05	0.00
39.00	7.75	5.05	0.00
40.00	7.75	5.05	0.00
41.00	7.75	5.05	0.00
42.00	7.75	5.05	0.00
43.00	7.75	5.05	0.00
44.00	7.75	5.05	0.00
45.00	7.75	5.05	0.00
46.00	7.75	5.05	0.00
47.00	7.75	5.05	0.00
48.00	7.75	5.05	0.00
49.00	7.75	5.05	0.00
50.00	7.75	5.05	0.00
51.00	7.75	5.05	0.00
52.00	7.75	5.05	0.00
53.00	7.75	5.05	0.00
54.00	7.75	5.05	0.00
55.00	7.75	5.05	0.00
56.00	7.75	5.05	0.00
57.00	7.75	5.05	0.00
58.00	7.75	5.05	0.00
59.00	7.75	5.05	0.00
60.00	7.75	5.05	0.00
61.00	7.75	5.05	0.00
62.00	7.75	5.05	0.00
63.00	7.75	5.05	0.00
64.00	7.75	5.05	0.00
65.00	7.75	5.05	0.00
66.00	7.75	5.05	0.00
67.00	7.75	5.05	0.00
68.00	7.75	5.05	0.00
69.00	7.75	5.05	0.00
70.00	7.75	5.05	0.00
71.00	7.75	5.05	0.00
72.00	7.75	5.05	0.00

Summary for Subcatchment 3PST: Post-Development to POI #3

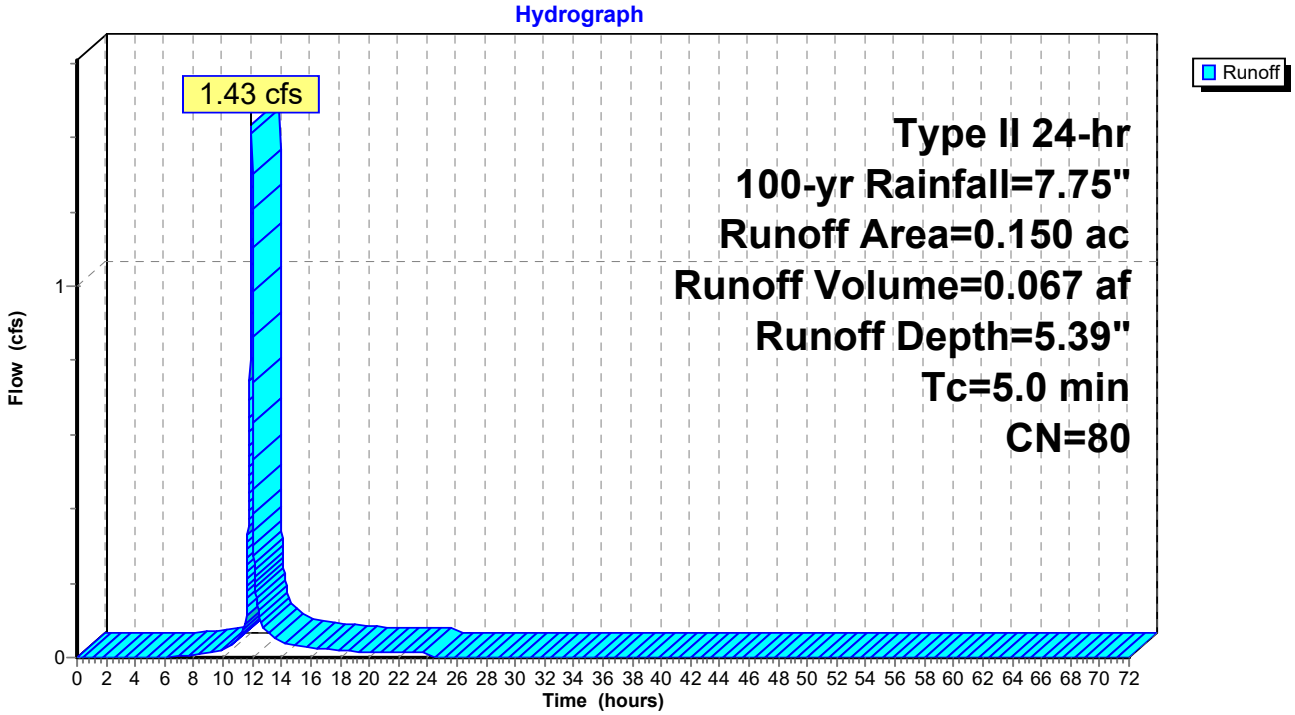
Runoff = 1.43 cfs @ 11.96 hrs, Volume= 0.067 af, Depth= 5.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-yr Rainfall=7.75"

Area (ac)	CN	Description
0.020	98	Paved roads w/curbs & sewers, HSG B
0.130	77	Woods, Good, HSG D
0.150	80	Weighted Average
0.130		86.67% Pervious Area
0.020		13.33% Impervious Area

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

Subcatchment 3PST: Post-Development to POI #3



Hydrograph for Subcatchment 3PST: Post-Development to POI #3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.08	0.00	0.00
2.00	0.17	0.00	0.00
3.00	0.27	0.00	0.00
4.00	0.37	0.00	0.00
5.00	0.49	0.00	0.00
6.00	0.62	0.01	0.00
7.00	0.77	0.03	0.00
8.00	0.93	0.06	0.01
9.00	1.14	0.13	0.01
10.00	1.40	0.24	0.02
11.00	1.82	0.46	**0.05**
12.00	5.14	3.01	**1.21**
13.00	5.98	3.77	0.07
14.00	6.36	4.10	0.04
15.00	6.61	4.34	0.03
16.00	6.82	4.53	0.03
17.00	6.99	4.68	0.02
18.00	7.14	4.82	0.02
19.00	7.27	4.94	0.02
20.00	7.38	5.04	0.01
21.00	7.48	5.14	0.01
22.00	7.57	5.22	0.01
23.00	7.66	5.31	0.01
24.00	**7.75**	**5.39**	0.01
25.00	7.75	5.39	0.00
26.00	7.75	5.39	0.00
27.00	7.75	5.39	0.00
28.00	7.75	5.39	0.00
29.00	7.75	5.39	0.00
30.00	7.75	5.39	0.00
31.00	7.75	5.39	0.00
32.00	7.75	5.39	0.00
33.00	7.75	5.39	0.00
34.00	7.75	5.39	0.00
35.00	7.75	5.39	0.00
36.00	7.75	5.39	0.00
37.00	7.75	5.39	0.00
38.00	7.75	5.39	0.00
39.00	7.75	5.39	0.00
40.00	7.75	5.39	0.00
41.00	7.75	5.39	0.00
42.00	7.75	5.39	0.00
43.00	7.75	5.39	0.00
44.00	7.75	5.39	0.00
45.00	7.75	5.39	0.00
46.00	7.75	5.39	0.00
47.00	7.75	5.39	0.00
48.00	7.75	5.39	0.00
49.00	7.75	5.39	0.00
50.00	7.75	5.39	0.00
51.00	7.75	5.39	0.00
52.00	7.75	5.39	0.00
53.00	7.75	5.39	0.00
54.00	7.75	5.39	0.00
55.00	7.75	5.39	0.00
56.00	7.75	5.39	0.00
57.00	7.75	5.39	0.00
58.00	7.75	5.39	0.00
59.00	7.75	5.39	0.00
60.00	7.75	5.39	0.00
61.00	7.75	5.39	0.00
62.00	7.75	5.39	0.00
63.00	7.75	5.39	0.00
64.00	7.75	5.39	0.00
65.00	7.75	5.39	0.00
66.00	7.75	5.39	0.00
67.00	7.75	5.39	0.00
68.00	7.75	5.39	0.00
69.00	7.75	5.39	0.00
70.00	7.75	5.39	0.00
71.00	7.75	5.39	0.00
72.00	7.75	5.39	0.00

Summary for Pond 2P: SCM #2

Inflow Area = 3.940 ac, 22.84% Impervious, Inflow Depth = 4.59" for 100-yr event
Inflow = 33.00 cfs @ 11.96 hrs, Volume= 1.507 af
Outflow = 1.37 cfs @ 13.35 hrs, Volume= 1.343 af, Atten= 96%, Lag= 83.2 min
Primary = 1.37 cfs @ 13.35 hrs, Volume= 1.343 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 717.55' @ 13.35 hrs Surf.Area= 14,413 sf Storage= 40,885 cf

Plug-Flow detention time= 818.7 min calculated for 1.343 af (89% of inflow)
Center-of-Mass det. time= 764.3 min (1,580.1 - 815.8)

Volume	Invert	Avail.Storage	Storage Description
#1	713.50'	81,212 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

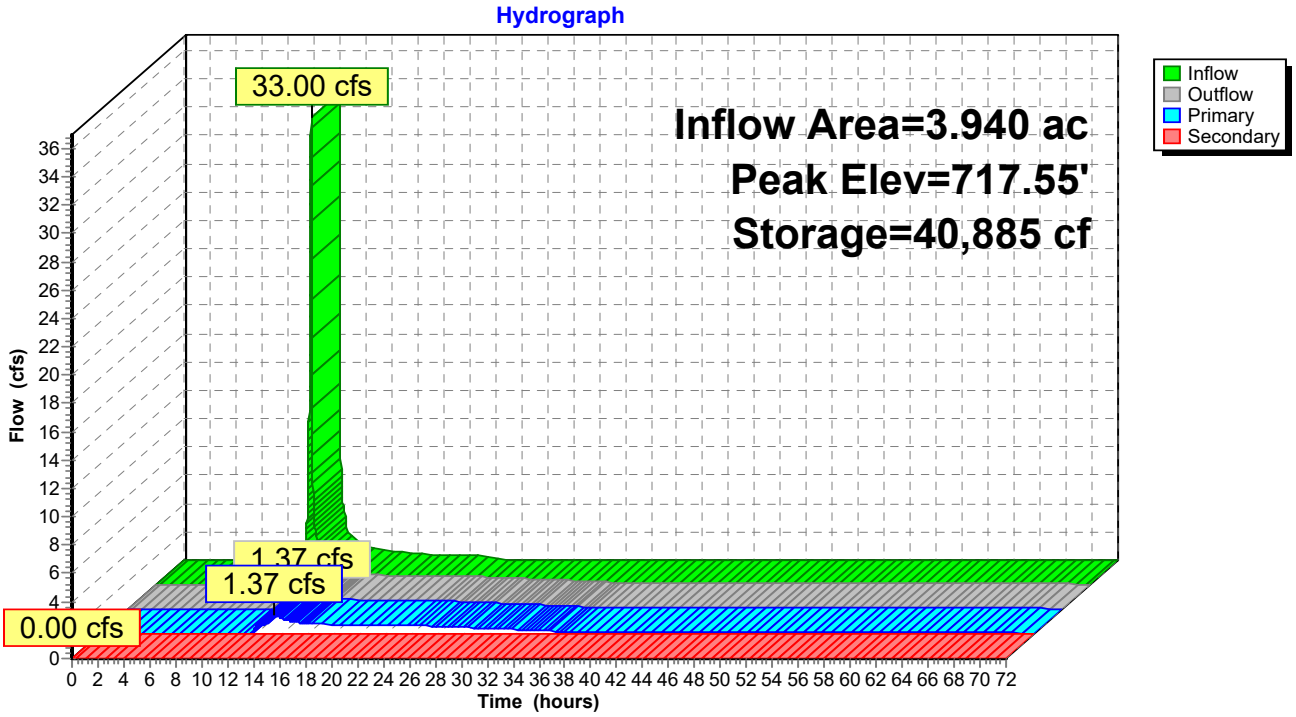
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
713.50	2,258	0	0
714.00	4,670	1,732	1,732
715.00	10,425	7,548	9,280
716.00	11,945	11,185	20,465
717.00	13,515	12,730	33,195
718.00	15,145	14,330	47,525
719.00	16,830	15,988	63,512
720.00	18,570	17,700	81,212

Device	Routing	Invert	Outlet Devices
#1	Primary	711.50'	**24.0" Round Outlet Pipe** L= 40.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 711.50' / 711.30' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf
#2	Device 1	713.50'	**Filter Bed** Head (feet) 0.00 1.00 2.00 3.00 4.00 5.00 Disch. (cfs) 0.000 0.055 0.077 0.098 0.120 0.142
#3	Device 1	715.50'	**4.0" Vert. Orifice** C= 0.600
#4	Device 1	717.50'	**48.0" x 48.0" Horiz. Top of OCS** C= 0.600 Limited to weir flow at low heads
#5	Secondary	718.50'	**20.0' long x 10.0' breadth Emergency Spillway** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

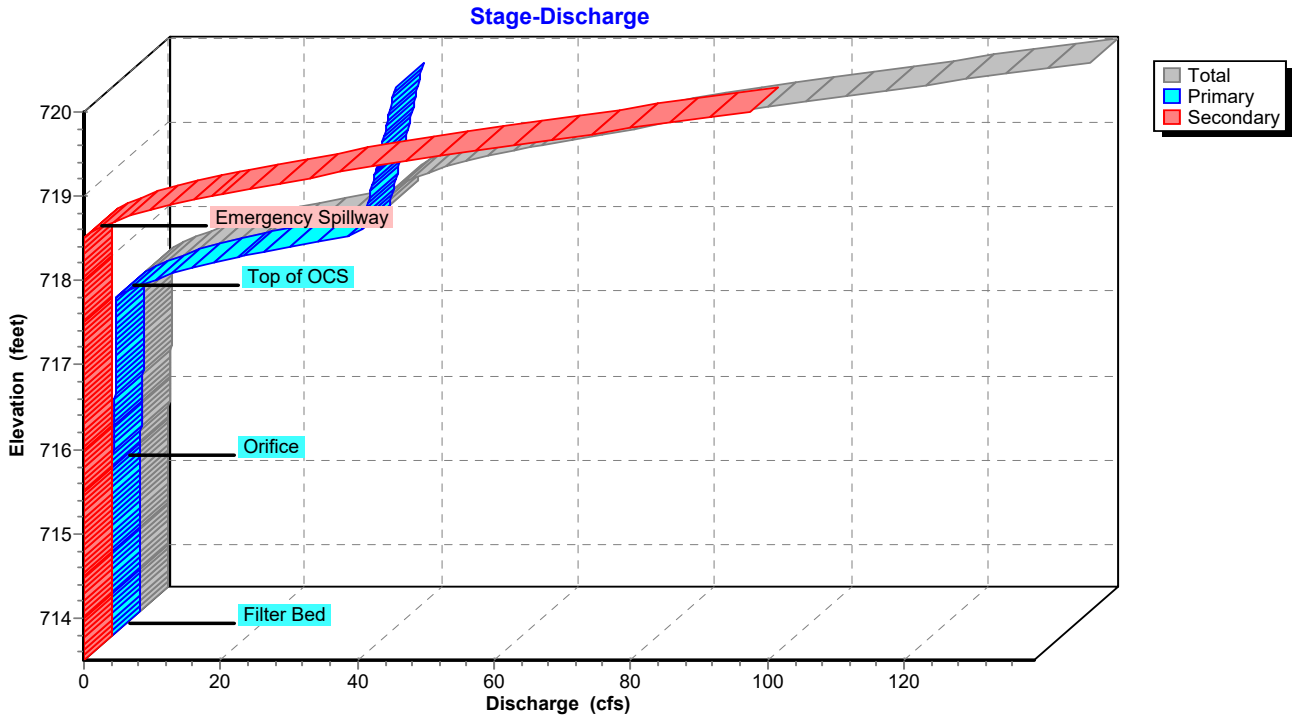
Primary OutFlow Max=1.30 cfs @ 13.35 hrs HW=717.55' (Free Discharge)
└─**1=Outlet Pipe** (Passes 1.30 cfs of 34.00 cfs potential flow)
  ├─**2=Filter Bed** (Custom Controls 0.12 cfs)
  ├─**3=Orifice** (Orifice Controls 0.58 cfs @ 6.61 fps)
  └─**4=Top of OCS** (Weir Controls 0.60 cfs @ 0.74 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=713.50' (Free Discharge)
└─**5=Emergency Spillway** (Controls 0.00 cfs)

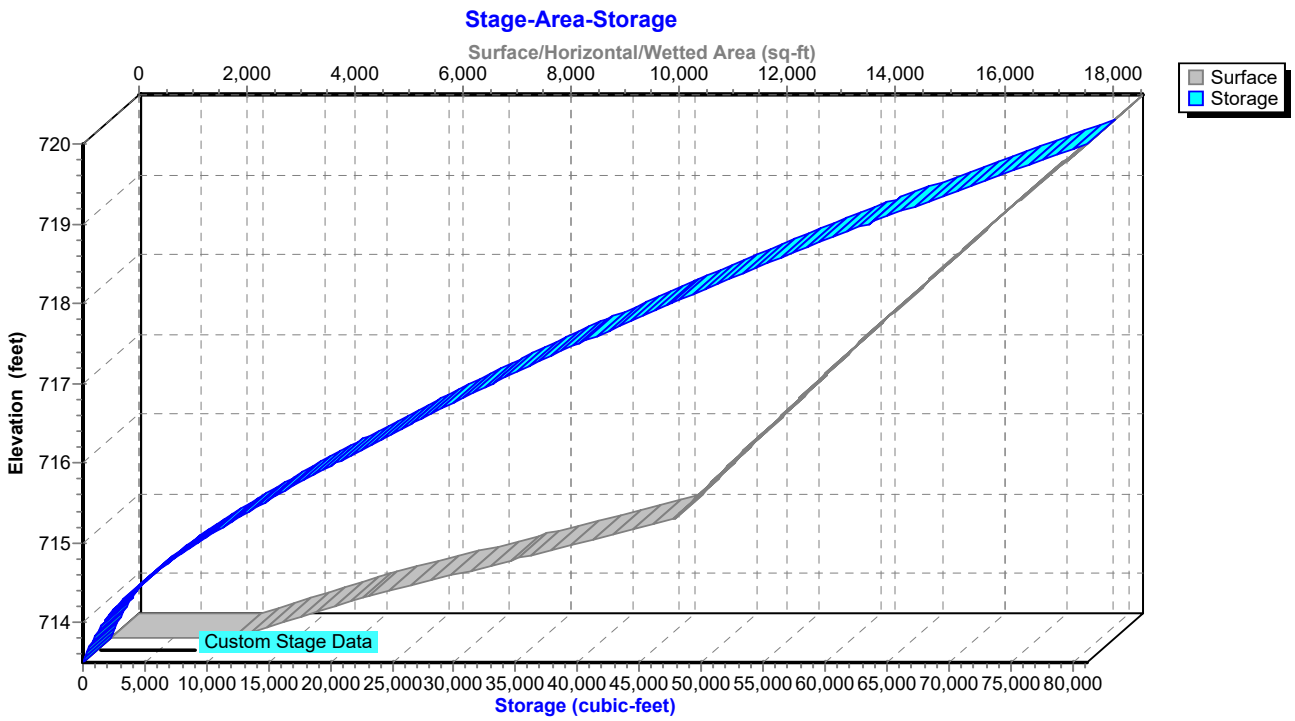
Pond 2P: SCM #2



Pond 2P: SCM #2



Pond 2P: SCM #2


Stage-Area-Storage
Surface/Horizontal/Wetted Area (sq-ft)
0
2,000
4,000
6,000
8,000
10,000
12,000
14,000
16,000
18,000
Surface
Storage
720
719
718
717
716
715
714
Elevation (feet)
Custom Stage Data
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
55,000
60,000
65,000
70,000
75,000
80,000
Storage (cubic-feet)

Hydrograph for Pond 2P: SCM #2

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	713.50	0.00	0.00	**0.00**
2.00	0.00	0	713.50	0.00	0.00	0.00
4.00	0.00	0	713.50	0.00	0.00	0.00
6.00	0.00	0	713.50	0.00	0.00	0.00
8.00	0.06	113	713.55	0.00	0.00	0.00
10.00	**0.33**	1,269	713.89	0.02	0.02	0.00
12.00	**28.13**	**28,055**	**716.61**	**0.51**	**0.51**	0.00
14.00	1.00	**40,686**	**717.54**	**1.10**	**1.10**	0.00
16.00	0.62	40,169	717.50	0.70	0.70	0.00
18.00	0.48	39,196	717.43	0.68	0.68	0.00
20.00	0.35	37,421	717.31	0.65	0.65	0.00
22.00	0.32	35,249	717.15	0.62	0.62	0.00
24.00	0.30	33,114	716.99	0.59	0.59	0.00
26.00	0.00	29,154	716.70	0.53	0.53	0.00
28.00	0.00	25,593	716.42	0.46	0.46	0.00
30.00	0.00	22,532	716.17	0.39	0.39	0.00
32.00	0.00	19,995	715.96	0.31	0.31	0.00
34.00	0.00	18,024	715.79	0.23	0.23	0.00
36.00	0.00	16,677	715.68	0.15	0.15	0.00
38.00	0.00	15,790	715.60	0.10	0.10	0.00
40.00	0.00	15,128	715.54	0.08	0.08	0.00
42.00	0.00	14,560	715.49	0.08	0.08	0.00
44.00	0.00	14,011	715.44	0.08	0.08	0.00
46.00	0.00	13,470	715.39	0.07	0.07	0.00
48.00	0.00	12,937	715.34	0.07	0.07	0.00
50.00	0.00	12,411	715.29	0.07	0.07	0.00
52.00	0.00	11,893	715.25	0.07	0.07	0.00
54.00	0.00	11,383	715.20	0.07	0.07	0.00
56.00	0.00	10,880	715.15	0.07	0.07	0.00
58.00	0.00	10,384	715.11	0.07	0.07	0.00
60.00	0.00	9,896	715.06	0.07	0.07	0.00
62.00	0.00	9,415	715.01	0.07	0.07	0.00
64.00	0.00	8,942	714.97	0.07	0.07	0.00
66.00	0.00	8,475	714.92	0.06	0.06	0.00
68.00	0.00	8,016	714.87	0.06	0.06	0.00
70.00	0.00	7,565	714.83	0.06	0.06	0.00
72.00	0.00	7,121	714.78	0.06	0.06	0.00

Stage-Discharge for Pond 2P: SCM #2

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
713.50	0.00	0.00	0.00
713.60	0.01	0.01	0.00
713.70	0.01	0.01	0.00
713.80	0.02	0.02	0.00
713.90	0.02	0.02	0.00
714.00	0.03	0.03	0.00
714.10	0.03	0.03	0.00
714.20	0.04	0.04	0.00
714.30	0.04	0.04	0.00
714.40	0.05	0.05	0.00
714.50	0.06	0.06	0.00
714.60	0.06	0.06	0.00
714.70	0.06	0.06	0.00
714.80	0.06	0.06	0.00
714.90	0.06	0.06	0.00
715.00	0.07	0.07	0.00
715.10	0.07	0.07	0.00
715.20	0.07	0.07	0.00
715.30	0.07	0.07	0.00
715.40	0.07	0.07	0.00
715.50	0.08	0.08	0.00
715.60	0.10	0.10	0.00
715.70	0.16	0.16	0.00
715.80	0.24	0.24	0.00
715.90	0.29	0.29	0.00
716.00	0.33	0.33	0.00
716.10	0.37	0.37	0.00
716.20	0.40	0.40	0.00
716.30	0.43	0.43	0.00
716.40	0.46	0.46	0.00
716.50	0.48	0.48	0.00
716.60	0.51	0.51	0.00
716.70	0.53	0.53	0.00
716.80	0.55	0.55	0.00
716.90	0.57	0.57	0.00
717.00	0.59	0.59	0.00
717.10	0.61	0.61	0.00
717.20	0.63	0.63	0.00
717.30	0.65	0.65	0.00
717.40	0.67	0.67	0.00
717.50	0.69	0.69	0.00
717.60	2.36	2.36	0.00
717.70	5.40	5.40	0.00
717.80	9.34	9.34	0.00
717.90	13.99	13.99	0.00
718.00	19.27	19.27	0.00
718.10	25.10	25.10	0.00
718.20	31.45	31.45	0.00
718.30	36.43	36.43	0.00
718.40	36.74	36.74	0.00
718.50	37.05	37.05	0.00
718.60	38.93	37.36	1.57
718.70	42.12	37.67	4.45
718.80	46.27	37.97	8.30
718.90	51.22	38.27	12.95
719.00	57.16	38.57	18.60
719.10	63.96	38.86	25.10
719.20	70.72	39.15	31.57
719.30	77.94	39.45	38.50
719.40	85.58	39.73	45.85
719.50	93.62	40.02	53.60
719.60	102.26	40.31	61.95
719.70	111.31	40.59	70.72
719.80	120.32	40.87	79.45
719.90	129.61	41.15	88.46
720.00	**138.98**	**41.43**	**97.55**

Stage-Area-Storage for Pond 2P: SCM #2

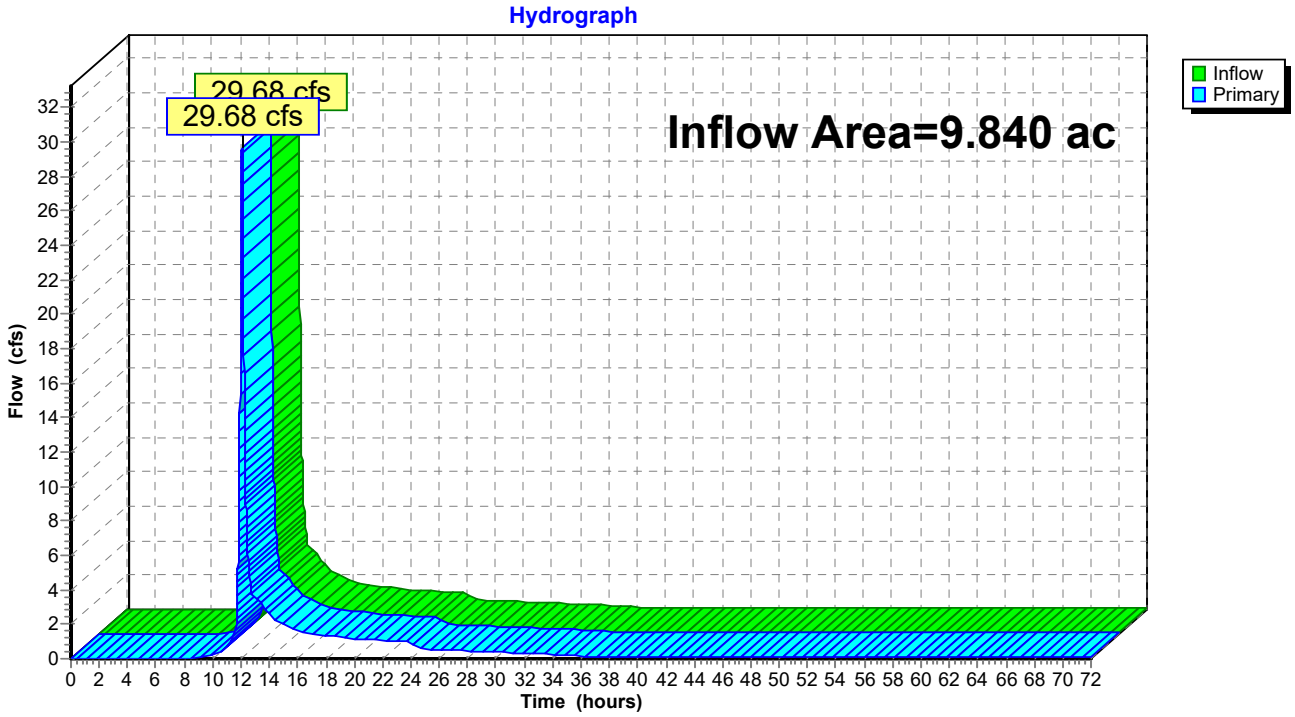
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
713.50	2,258	0
713.60	2,740	250
713.70	3,223	548
713.80	3,705	894
713.90	4,188	1,289
714.00	4,670	1,732
714.10	5,246	2,228
714.20	5,821	2,781
714.30	6,396	3,392
714.40	6,972	4,060
714.50	7,548	4,786
714.60	8,123	5,570
714.70	8,699	6,411
714.80	9,274	7,310
714.90	9,849	8,266
715.00	10,425	9,280
715.10	10,577	10,330
715.20	10,729	11,395
715.30	10,881	12,475
715.40	11,033	13,571
715.50	11,185	14,682
715.60	11,337	15,808
715.70	11,489	16,949
715.80	11,641	18,106
715.90	11,793	19,278
716.00	11,945	20,465
716.10	12,102	21,667
716.20	12,259	22,885
716.30	12,416	24,119
716.40	12,573	25,368
716.50	12,730	26,633
716.60	12,887	27,914
716.70	13,044	29,211
716.80	13,201	30,523
716.90	13,358	31,851
717.00	13,515	33,195
717.10	13,678	34,554
717.20	13,841	35,930
717.30	14,004	37,322
717.40	14,167	38,731
717.50	14,330	40,156
717.60	14,493	41,597
717.70	14,656	43,054
717.80	14,819	44,528
717.90	14,982	46,018
718.00	15,145	47,525
718.10	15,314	49,047
718.20	15,482	50,587
718.30	15,650	52,144
718.40	15,819	53,717
718.50	15,988	55,308
718.60	16,156	56,915
718.70	16,325	58,539
718.80	16,493	60,180
718.90	16,661	61,837
719.00	16,830	63,512
719.10	17,004	65,204
719.20	17,178	66,913
719.30	17,352	68,639
719.40	17,526	70,383
719.50	17,700	72,145
719.60	17,874	73,923
719.70	18,048	75,719
719.80	18,222	77,533
719.90	18,396	79,364
720.00	**18,570**	**81,212**

Summary for Link 2L: Total Post-Development to POI #2

Inflow Area = 9.840 ac, 15.75% Impervious, Inflow Depth > 3.92" for 100-yr event
Inflow = 29.68 cfs @ 12.08 hrs, Volume= 3.213 af
Primary = 29.68 cfs @ 12.08 hrs, Volume= 3.213 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

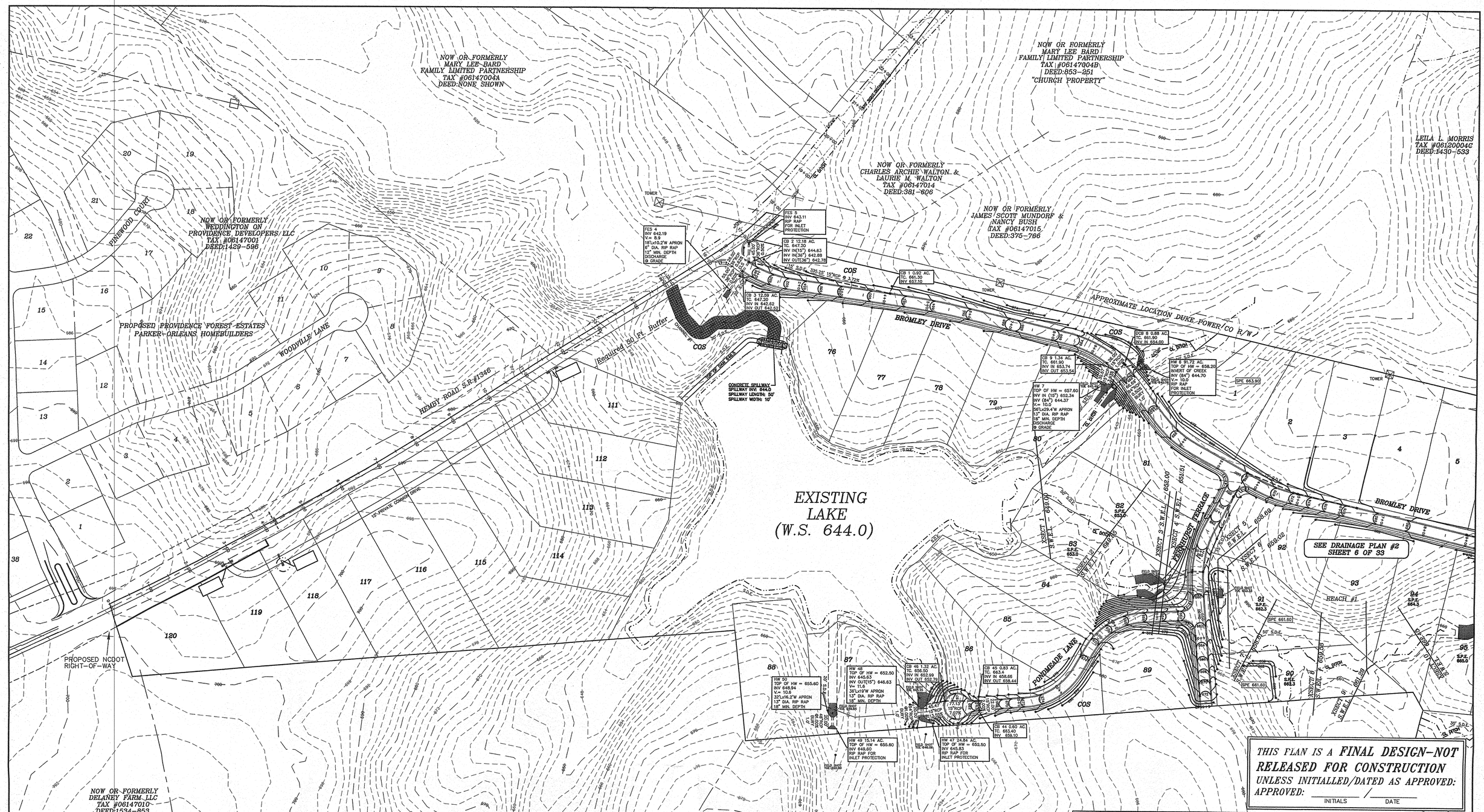
Link 2L: Total Post-Development to POI #2



Hydrograph for Link 2L: Total Post-Development to POI #2

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	**0.00**	0.00	53.00	0.07	0.00	0.07
1.00	0.00	0.00	0.00	54.00	0.07	0.00	0.07
2.00	0.00	0.00	0.00	55.00	0.07	0.00	0.07
3.00	0.00	0.00	0.00	56.00	0.07	0.00	0.07
4.00	0.00	0.00	0.00	57.00	0.07	0.00	0.07
5.00	0.00	0.00	0.00	58.00	0.07	0.00	0.07
6.00	0.00	0.00	0.00	59.00	0.07	0.00	0.07
7.00	0.00	0.00	0.00	60.00	0.07	0.00	0.07
8.00	0.00	0.00	0.00	61.00	0.07	0.00	0.07
9.00	0.04	0.00	0.04	62.00	0.07	0.00	0.07
10.00	0.20	0.00	0.20	63.00	0.07	0.00	0.07
11.00	0.67	0.00	0.67	64.00	0.07	0.00	0.07
12.00	**24.31**	0.00	**24.31**	65.00	0.06	0.00	0.06
13.00	**3.46**	0.00	**3.46**	66.00	0.06	0.00	0.06
14.00	2.55	0.00	2.55	67.00	0.06	0.00	0.06
15.00	1.99	0.00	1.99	68.00	0.06	0.00	0.06
16.00	1.58	0.00	1.58	69.00	0.06	0.00	0.06
17.00	1.45	0.00	1.45	70.00	0.06	0.00	0.06
18.00	1.35	0.00	1.35	71.00	0.06	0.00	0.06
19.00	1.26	0.00	1.26	72.00	0.06	0.00	0.06
20.00	1.15	0.00	1.15				
21.00	1.11	0.00	1.11				
22.00	1.07	0.00	1.07				
23.00	1.04	0.00	1.04				
24.00	1.01	0.00	1.01				
25.00	0.56	0.00	0.56				
26.00	0.53	0.00	0.53				
27.00	0.49	0.00	0.49				
28.00	0.46	0.00	0.46				
29.00	0.43	0.00	0.43				
30.00	0.39	0.00	0.39				
31.00	0.35	0.00	0.35				
32.00	0.31	0.00	0.31				
33.00	0.27	0.00	0.27				
34.00	0.23	0.00	0.23				
35.00	0.19	0.00	0.19				
36.00	0.15	0.00	0.15				
37.00	0.12	0.00	0.12				
38.00	0.10	0.00	0.10				
39.00	0.09	0.00	0.09				
40.00	0.08	0.00	0.08				
41.00	0.08	0.00	0.08				
42.00	0.08	0.00	0.08				
43.00	0.08	0.00	0.08				
44.00	0.08	0.00	0.08				
45.00	0.08	0.00	0.08				
46.00	0.07	0.00	0.07				
47.00	0.07	0.00	0.07				
48.00	0.07	0.00	0.07				
49.00	0.07	0.00	0.07				
50.00	0.07	0.00	0.07				
51.00	0.07	0.00	0.07				
52.00	0.07	0.00	0.07				

APPENDIX E



THIS PLAN IS A **FINAL DESIGN-NOT RELEASED FOR CONSTRUCTION**
UNLESS INITIALLED/DATED AS APPROVED:
APPROVED: _____ / _____
INITIALS DATE

LEGEND

- CB – CATCH BASIN
- DCB – DOUBLE CATCH BASIN
- DI – DROP INLET
- DDI – DOUBLE DROP INLET
- MH – MANHOLE
- FES – FLARED END SECTION
- INV – INVERT
- TC– TOP OF CURB
- L–HW – L SHAPED HEADWALL
- SDE – STORM DRAINAGE EASEMENT
- (XXX.X AC) DRAINAGE BASIN TO EACH STRUCTURE
- SPE – 100 YR. + 1 STORM WATER PROTECTION ELEVATION
- S.W.E.L. – 100 YR STORM WATER ELEVATION LINE

NOTE:

HEADWALLS 6 AND 7 ARE TO BE DESIGNED BY A PROFESSIONAL ENGINEER. DESIGN IS TO BE SUBMITTED FOR APPROVAL PRIOR TO CONSTRUCTION.

NO.	DATE	REVISION	BY
1	06/20/06	PER TOWN OF WEDDINGTON REDLINES	RAS

SHEET TITLE

DRAINAGE PLAN #1

PROJECT

BROMLEY

TOWN OF WEDDINGTON, UNION COUNTY, NC
FOR: PACE/DOWD PROPERTIES LTD.

PROJECT NO.

SCALE 1"=100'

DATE 05/26/06

DRAWN BY RAS

CHECKED BY MAH

DRAWING NO. 184-56

SHT 5 OF 33 SHTS

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Planning ◦ Surveying ◦ Engineering
730 Windsor Oak Court (28270) P.O. Box 7007 (28241)
Charlotte, North Carolina
704.556.1990 704.556.0505(fax)

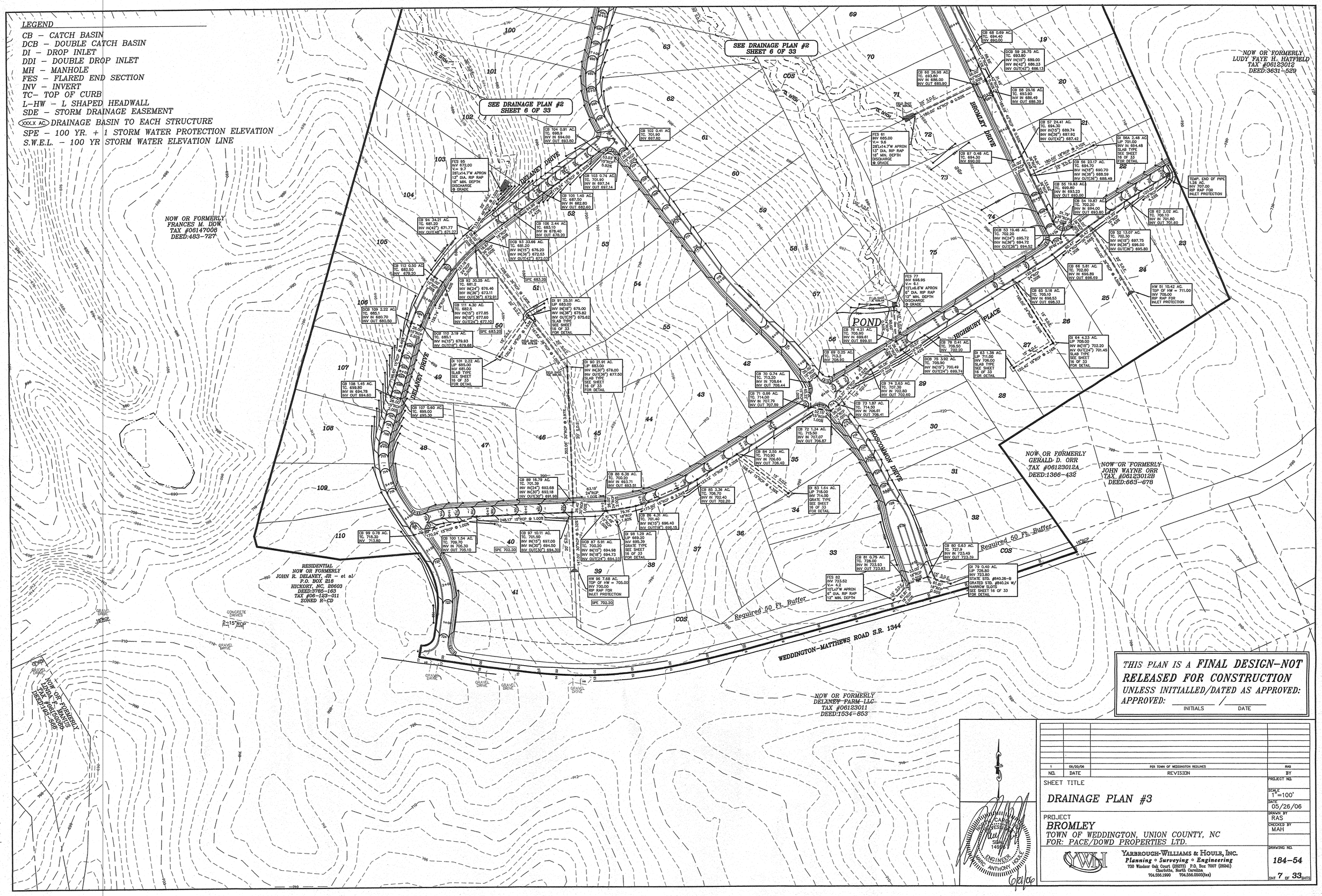
CARL A. YARBROUGH SEAL 8808 ENGINEER MARC ANTHONY HOULE 6/21/06

P:\PACE\COXROAD-DELANEY-BARD-062105\CONSTRUCTION\DRAINAGE.dwg, 6/21/2006 12:14:23 PM, DavidC

P:\PACE\COXROAD-DELANEY-BARD-062105\CONSTRUCTION\DRAINAGE.dwg, 6/21/2006 12:14:15 PM, DavidC

LEGEND

CB – CATCH BASIN
DCB – DOUBLE CATCH BASIN
DI – DROP INLET
DDI – DOUBLE DROP INLET
MH – MANHOLE
FES – FLARED END SECTION
INV – INVERT
TC– TOP OF CURB
L–HW – L SHAPED HEADWALL
SDE – STORM DRAINAGE EASEMENT
(XXX.X AC) DRAINAGE BASIN TO EACH STRUCTURE
SPE – 100 YR. + 1 STORM WATER PROTECTION ELEVATION
S.W.E.L. – 100 YR STORM WATER ELEVATION LINE



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APPROVED: _____ / _____
INITIALS DATE

NO.	DATE	REVISION	BY
1	06/20/06	PER TOWN OF WEDDINGTON REDLINES	RAS

SHEET TITLE
DRAINAGE PLAN #3

PROJECT
BROMLEY
TOWN OF WEDDINGTON, UNION COUNTY, NC
FOR: PACE/DOWD PROPERTIES LTD.

PROJECT NO.
SCALE 1"=100'
DATE 05/26/06
DRAWN BY RAS
CHECKED BY MAH
DRAWING NO. 184-54
SHT 7 OF 33 SHTS

YARBROUGH-WILLIAMS & HOULE, INC.
Planning ○ Surveying ○ Engineering
730 Windsor Oak Court (28273) P.O. Box 7007 (28241)
Charlotte, North Carolina
704.556.1990 704.556.0505(fax)

P:\PACE\COXROAD-DELANEY-BARD-062105\CONSTRUCTION\DRAINAGE.dwg, 6/21/2006 12:14:03 PM, Davi&C

LEGEND

CB – CATCH BASIN
DCB – DOUBLE CATCH BASIN
DI – DROP INLET
DDI – DOUBLE DROP INLET
MH – MANHOLE
FES – FLARED END SECTION
INV – INVERT
TC– TOP OF CURB
L–HW – L SHAPED HEADWALL
SDE – STORM DRAINAGE EASEMENT
(XXX.X AC) DRAINAGE BASIN TO EACH STRUCTURE

NOW OR FORMERLY
MARY LEE BARD
FAMILY LIMITED PARTNERSHIP
TAX #06147004A
DEED:NONE SHOWN

NOW OR FORMERLY
MARY LEE BARD
FAMILY LIMITED PARTNERSHIP
TAX #06147004B
DEED:653–251
"CHURCH PROPERTY"

NOW OR FORMERLY
CHARLES ARCHIE WALTON &
LAURIE M. WALTON
TAX #06147014
DEED:381–606

NOW OR FORMERLY
JAMES SCOTT MUNDORF &
NANCY BUSH
TAX #06147015
DEED:375–766

NOW OR FORMERLY
WEDDINGTON ON
PROVIDENCE DEVELOPERS, LLC
TAX #06147001
DEED:1429–596

PINEWOOD COURT

PROPOSED PROVIDENCE FOREST ESTATES
PARKER–ORLEANS HOMEBUILDERS

WOODVILLE LANE

HEMBY ROAD S.R.#1348

Required 50 ft. Buffer

Common Open Space – 1.49 AC.

APPROXIMATE LOCATION DUKE POWER CO. R/W

BROMLEY DRIVE

EXISTING
LAKE

PERNICHURST TERRACE

SEE DRAINAGE AREA PLAN #2
SHEET 9 OF 33

10' PRIVATE COMMON DRIVE

PROPOSED NCDOT
RIGHT–OF–WAY

NOW OR FORMERLY
DELANEY FARM, LLC
TAX #06147010
DEED:1534–853

NOW OR FORMERLY
DONALD M. PATTERSON
TAX #06147009
DEED:665–660

NOW OR FORMERLY
FRANCES M. DOW
TAX #06147008
DEED:483–727

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APPROVED: _____ / _____
INITIALS DATE

NO.	DATE	REVISION	BY
1	06/20/06	PER TOWN OF WEDDINGTON REDLINES	RAS

SHEET TITLE
DRAINAGE AREA PLAN #1

PROJECT
BROMLEY
TOWN OF WEDDINGTON, UNION COUNTY, NC
FOR: PACE/DOWD PROPERTIES LTD.

YARBROUGH-WILLIAMS & HOULE, INC.
Planning ◇ Surveying ◇ Engineering
700 Windsor Oak Court Charlotte NC 28273
704.556.1990 704.556.0505(fax)

PROJECT NO.
SCALE 1"=100'
DATE 05/26/06
DRAWN BY RAS
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DRAWING NO. 184–53
SHT 8 OF 33 SHTS

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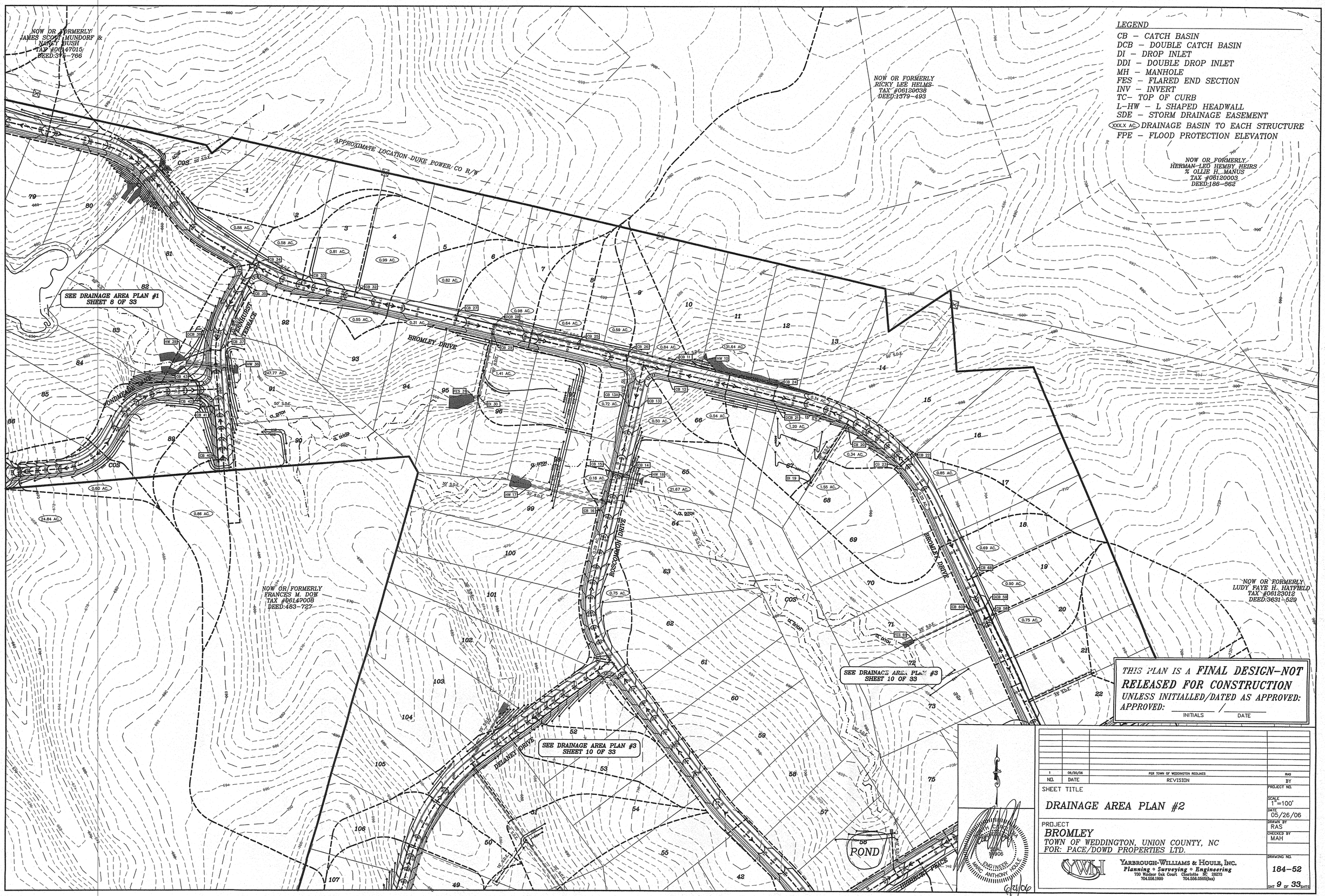

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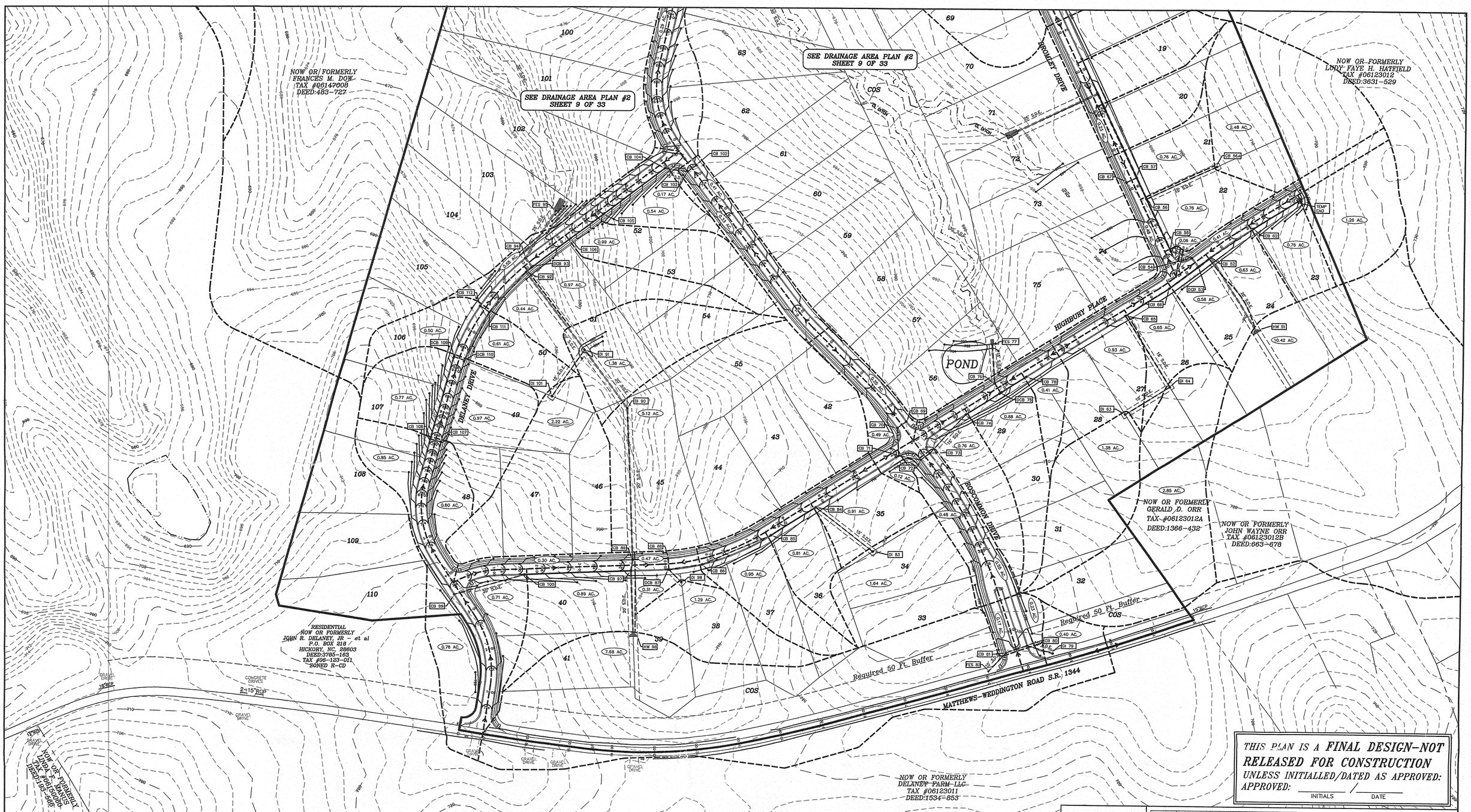

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APPROVED: _____ / _____
INITIALS DATE

NO.	DATE	REVISION	BY
1	06/20/06	PER TOWN OF WEDDINGTON REQUIRES	RAS

SHEET TITLE
DRAINAGE AREA PLAN #3

PROJECT
BROMLEY
TOWN OF WEDDINGTON, UNION COUNTY, NC
FOR: PACE/DOWD PROPERTIES LTD.

YARBROUGH-WILLIAMS & HOULE, INC.
Planning ◦ Surveying ◦ Engineering
7930 Windsor Oak Court Charlotte NC 28270
704.556.1990 704.556.0505(fax)

PROJECT NO.
SCALE 1"=100'
DATE 05/26/06
DRAWN BY RAS
CHECKED BY MAH
DRAWING NO. 184-51
SHT 10 OF 33 SHTS

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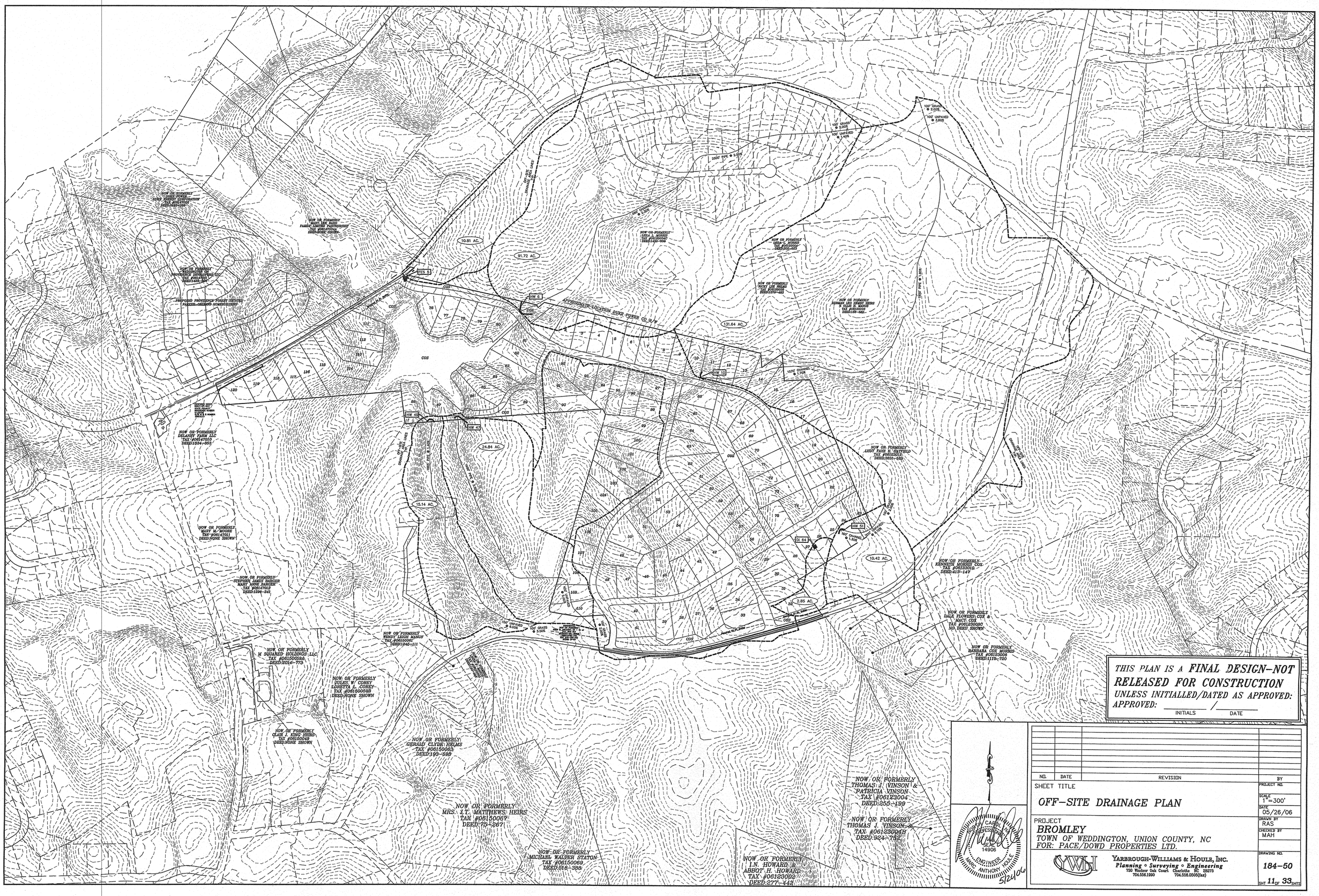

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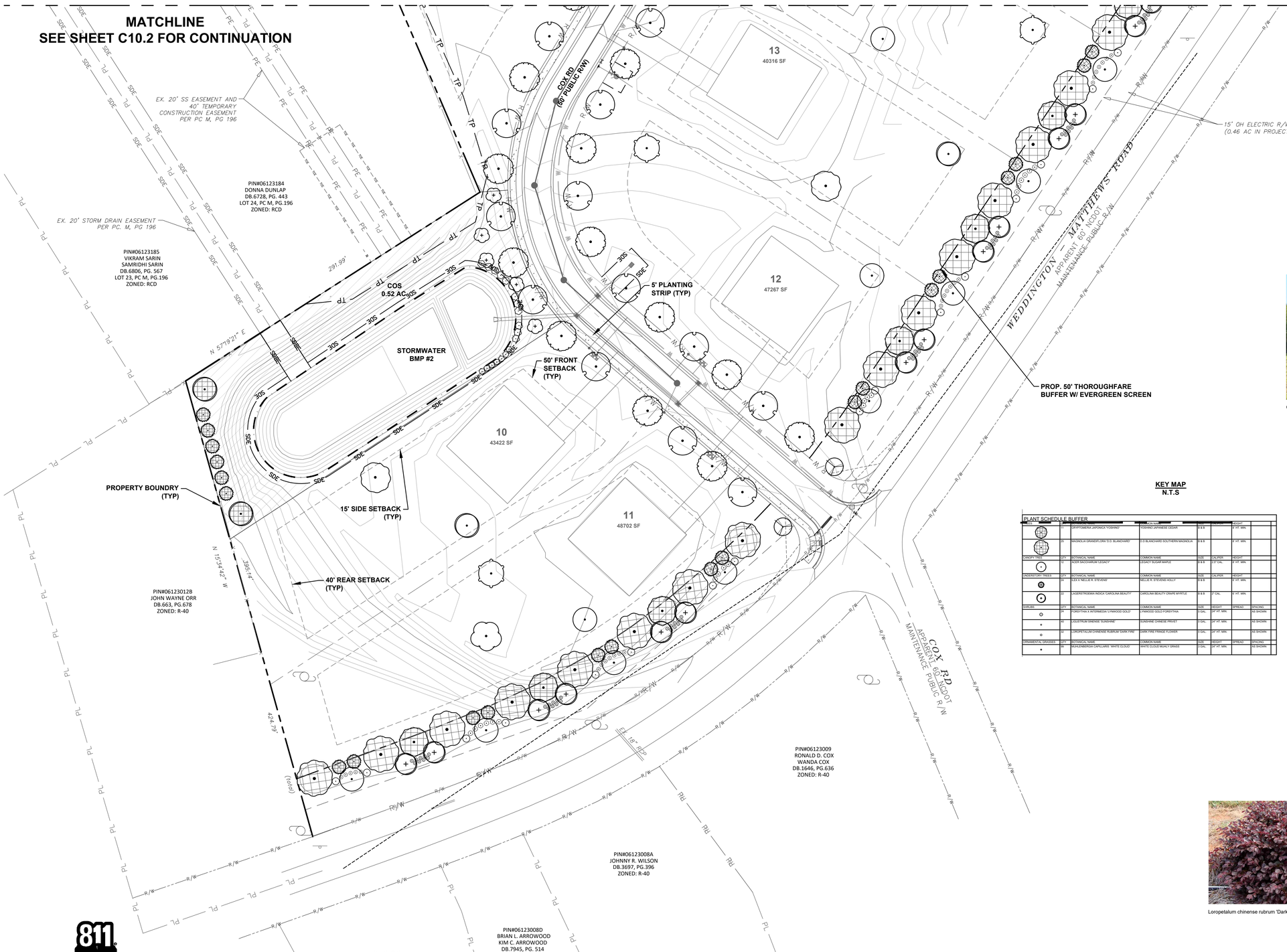
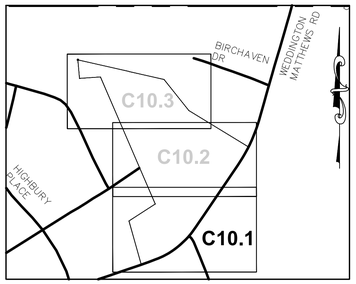
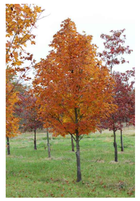




KEY MAP
N.T.S

Cryptomeria japonica 'Yoshino'

Magnolia grandiflora 'D.D. Blanchard'


Acer saccharum 'Legacy'

Ilex x 'Nellie R. Stevens'

Lagerstroemia indica 'Carolina Beauty'

Forsythia x intermedia 'Lynwood Gold'

Ligustrum sinense 'Sunshine'

Loropetalum chinense rubrum 'Dark Fire'

Muhlenbergia capillaris 'White Cloud'

PLANT SCHEDULE BUFFER

CANOPY TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CALIPER	HEIGHT	
	21	CRYPTOMERIA JAPONICA 'YOSHINO'	YOSHINO JAPANESE CEDAR	B & B		6' HT. MIN.	
	23	MAGNOLIA GRANDIFLORA 'D.D. BLANCHARD'	D.D BLANCHARD SOUTHERN MAGNOLIA	B & B		8' HT. MIN.	
CANOPY TREE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CALIPER	HEIGHT	
	21	ACER SACCHARUM 'LEGACY'	LEGACY SUGAR MAPLE	B & B	2.5" CAL.	8' HT. MIN.	
UNDERSTORY TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CALIPER	HEIGHT	
	27	ILEX X 'NELLIE R. STEVENS'	NELLIE R. STEVENS HOLLY	B & B		6' HT. MIN.	
	22	LAGERSTROEMIA INDICA 'CAROLINA BEAUTY'	CAROLINA BEAUTY CRAPE MYRTLE	B & B	2" CAL.	8' HT. MIN.	
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	HEIGHT	SPREAD	SPACING
	24	FORSYTHIA X INTERMEDIA 'LYNWOOD GOLD'	LYNWOOD GOLD FORSYTHIA	5 GAL.	24" HT. MIN.		AS SHOWN
	40	LIGUSTRUM SINENSE 'SUNSHINE'	SUNSHINE CHINESE PRIVET	5 GAL.	24" HT. MIN.		AS SHOWN
	32	LOROPETALUM CHINENSE RUBRUM 'DARK FIRE'	DARK FIRE FRINGE FLOWER	5 GAL.	24" HT. MIN.		AS SHOWN
ORNAMENTAL GRASSES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	HEIGHT	SPREAD	SPACING
	38	MUHLENBERGIA CAPILLARIS 'WHITE CLOUD'	WHITE CLOUD MUHLY GRASS	1 GAL.	24" HT. MIN.		AS SHOWN

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

40' 20' 0 40' 80'
1"=40'

REV.NO.	DESCRIPTIONS	DATE

REVISIONS

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www.mckimcreed.com

Toll Brothers
AMERICA'S LUXURY HOME BUILDER®

LUNA SUBDIVISION
WEDDINGTON, UNION COUNTY
NORTH CAROLINA

LANDSCAPE PLAN - ENLARGED

DATE:	AUGUST 2023
MCE PROJ. #	02741-0010
DRAWN	BBJ
DESIGNED	BBJ
CHECKED	TMM
PROJ. MGR.	TMM

SCALE
HORIZONTAL: 1" = 40'
VERTICAL: N/A

C10.1
DRAWING NUMBER
REVISION

STATUS: **PRELIMINARY DRAWING NOT FOR CONSTRUCTION**

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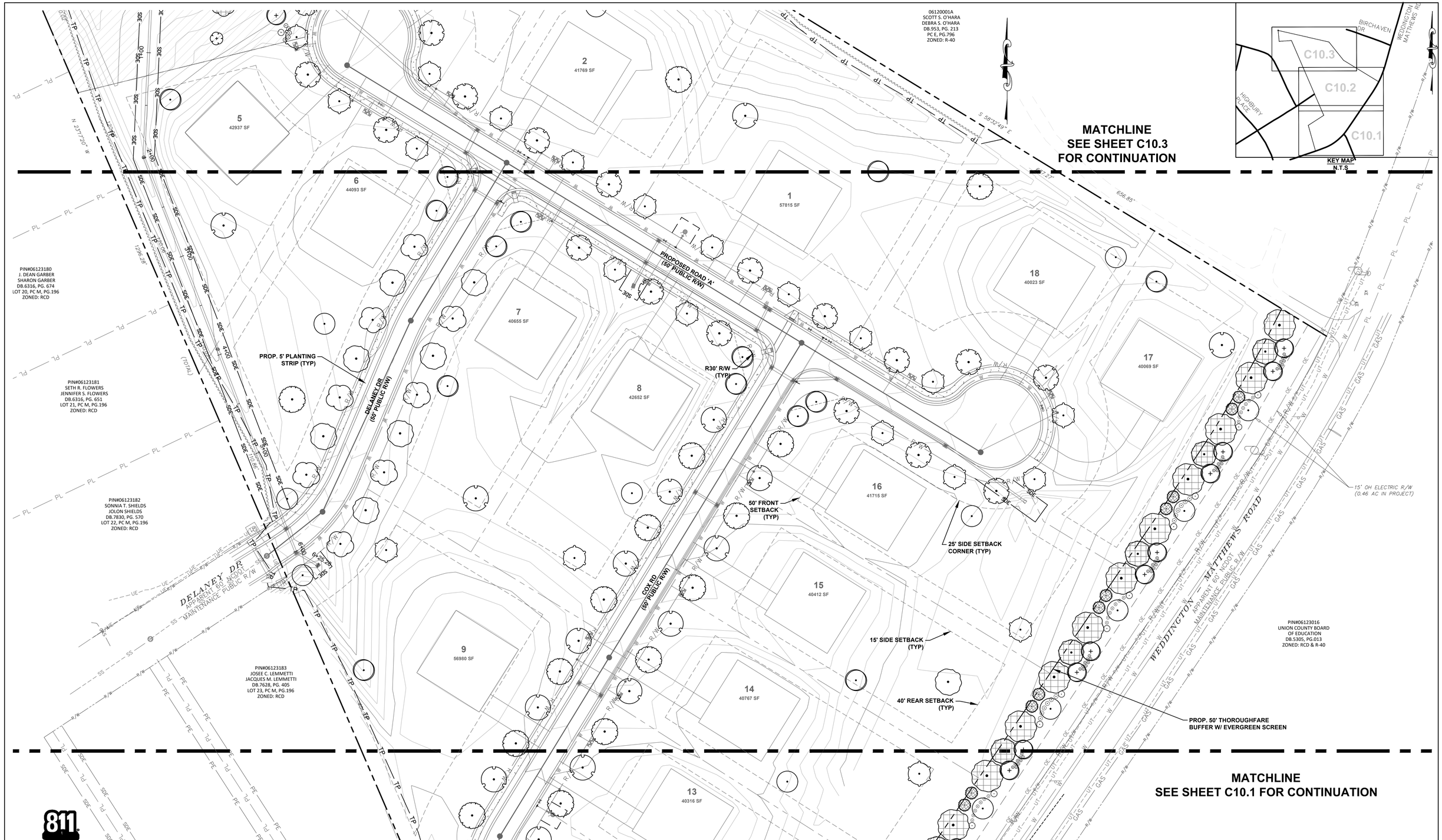

Know what's below.
Call before you dig.

1"=40' 40' 20' 0 40' 80'

REV.NO.	DESCRIPTIONS	DATE

REVISIONS

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LUNA SUBDIVISION
WEDDINGTON, UNION COUNTY
NORTH CAROLINA

LANDSCAPE PLAN - ENLARGED

DATE:	AUGUST 2023
MCE PROJ. #	02741-0010
DRAWN	--
DESIGNED	DESIGNER
CHECKED	TMM
PROJ. MGR.	TMM

SCALE
HORIZONTAL: 1" = 40'
VERTICAL: N/A

C10.2
DRAWING NUMBER

REVISION

STATUS: PRELIMINARY DRAWING NOT FOR CONSTRUCTION

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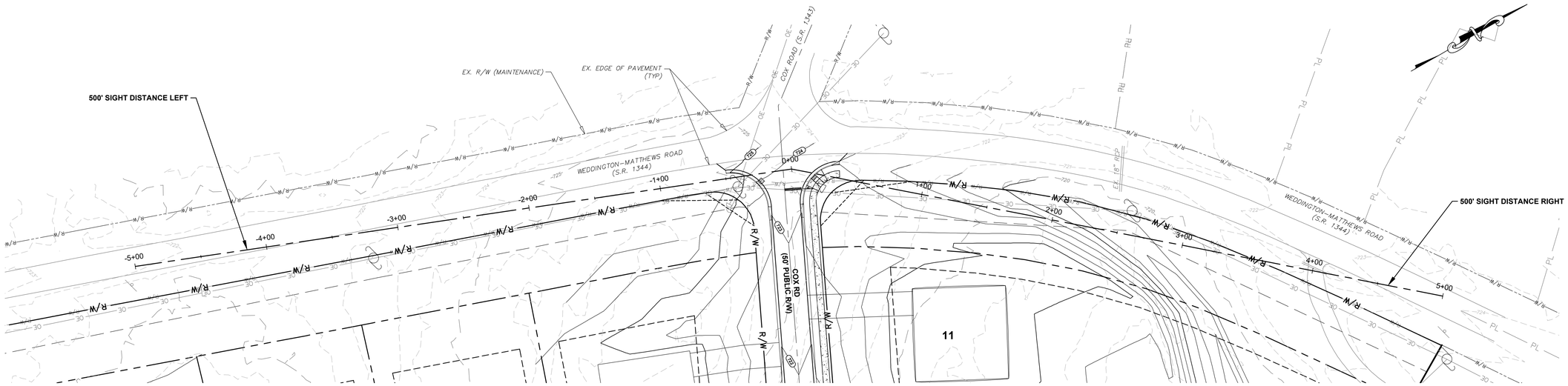

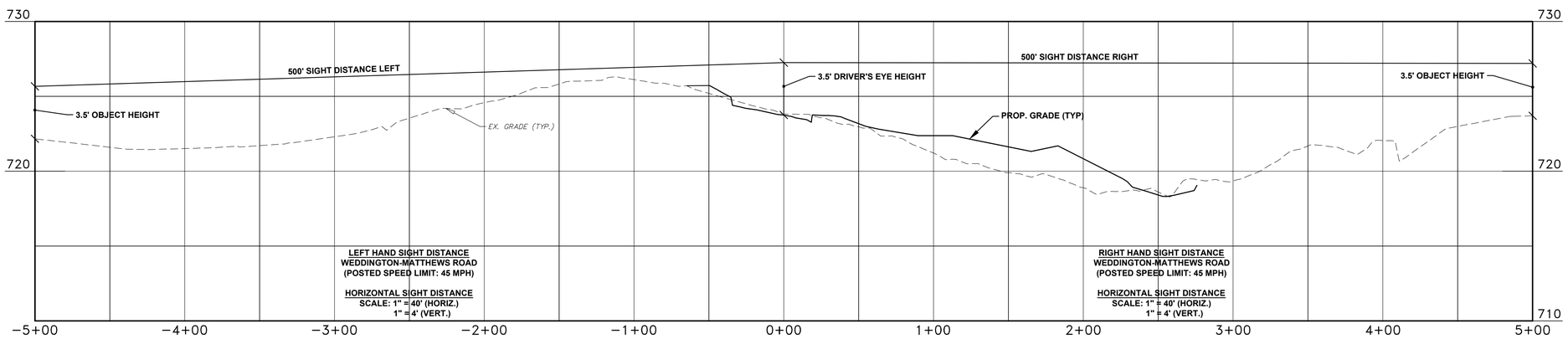

1"=40' (HORIZ.)
40' 0 40' 80'
4' 0 4' 8'
1"=4' (VERT.)

REV.NO.	DESCRIPTIONS	DATE

REVISIONS

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NORTH CAROLINA

SIGHT DISTANCE PLAN AND PROFILE

DATE:	AUGUST 2023
MCE PROJ. #	02741-0010
DRAWN	JLM
DESIGNED	JLM
CHECKED	TMM
PROJ. MGR.	TMM

SCALE
HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'

C9.3
DRAWING NUMBER

REVISION

STATUS: PRELIMINARY DRAWING NOT FOR CONSTRUCTION

TO:	Town Council
FROM:	Robert G. Tefft, CNU-A, Town Planner
DATE:	November 13, 2023
SUBJECT:	Application by Provident Land Services, Inc. requesting Conditional Zoning approval for the development of a 38-lot conventional subdivision generally located on the north side of Lochaven Road approximately 320 feet west of Hidden Haven Trail.

APPLICATION INFORMATION:

SUBMITTAL DATE:	August 24, 2023
APPLICANT:	Kristin Dillard, Provident Land Services, Inc.
PROPERTY LOCATION:	0 Lochaven Road
PARCEL ID#:	06153016 and 06153054A
ACREAGE:	+/- 62.04 acres
EXISTING LAND USE:	Traditional Residential and Conservation Residential
PROPOSED LAND USE:	Traditional Residential
EXISTING ZONING:	R-40 Single-Family District (R-40) and Residential-Conservation District (R-CD)
PROPOSED ZONING:	R-40 Single-Family District (R-40)

PROPOSAL:

The applicant is proposing the development of a 38-lot conventional subdivision to be known as Beckingham. As proposed, the subdivision would have one means of ingress/egress from an access point on the north side of Lochaven Drive; however, there is also a proposed stub out towards an existing developed residential property along the northwest side of the subject property that may be an option for ingress/egress in the future. In addition, the request also includes the rezoning of the 60.621 acre parcel (06153016) from R-CD to R-40, consistent with the balance of the overall development site.

Development Standards.

Pursuant to Unified Development Ordinance (UDO) Sections D-703(B)(3) and (6), Conditional Zoning (CZ) districts are zoning districts in which the development and use of the property is subject to the rules, regulations, and conditions imposed as part of the legislative decision creating the district and applying the CZ district, and the agreed upon site-specific development requirements, to the particular property. All the property specific standards and conditions (typically including a site plan) are incorporated into the zoning district regulations. Furthermore, the Town Council has the authority to increase, tighten, add, vary, modify, or waive specific conditions or standards as a part of the CZ process.

While there are several Development Standards proposed as a part of this development proposal, none of these would constitute a change to the Development Standards already set forth in the UDO. That said, the proposed subdivision does require that a specific standard be waived, which is not included in the proposed Development Standards. The UDO requires that any subdivision with more than 15 lots shall provide two means of ingress/egress, and the proposal only include one means of ingress/egress. This standard is discussed in further detail later in this staff report.

RELATION TO THE UNIFIED DEVELOPMENT ORDINANCE:

UDO Section D-607(C), Conditional Rezoning.

As required by UDO Section D-607(C)(5), the applicant held their required Community Meeting on Tuesday, September 12, 2023, at 6:00 pm. The applicant has provided a Community Meeting Report which has been attached to this staff report and posted on the Town's website.

The Town Council is tentatively scheduled to hold a public hearing regarding this application on Monday, November 13, 2023, at 7:00 pm. As previously noted, the CZ process allows the developer and the town to ask for conditions which could include special exceptions to rules or additional improvements. The town and the developer must agree on a condition for it to become a part of an approval.

UDO Section D-703(D), Permitted Uses (by zoning district).

Pursuant to Table 1, Permitted Uses, as contained within UDO Section D-703(D), Traditional Residential Development (> 6 Lots) is specifically listed as a permissible use within the R-40, subject to CZ approval.

UDO Section D-703(E), Lot and Building Standards Table.

Pursuant to Table 2, Lot and Building Standards, as contained within UDO Section D-703(E), all development within the R-40 is required to meet certain standards. The following table identifies those standards, as well as how the subject development proposal complies:

Lot and Building Standards		Standard	Proposed
Minimum Lot Size		40,000 sq. ft.	40,000 sq. ft.
Minimum Lot Width		120'	120'
Minimum Setbacks	Front	50'	50'
	Side	15'	15'
	Corner	25'	25'

	Rear	40’	40’
Maximum Height		35’	35’ [1]
Maximum Floor Area Ratio		N/A	N/A

[1] *It is noted that the applicant has not indicated a maximum height; however, they have also not proposed any deviation from the otherwise applicable standard of 35’.*

UDO Section D-917A, Specific Requirements for All Residential Development.

UDO Section D-917A, establishes numerous rules for how residential development is intended to occur within the Town. These rules include, but are not limited to, the location of house sites, easements, the requirement of lots to abut public roads, street design and layout, cul-de-sacs, open space, buffering, and tree requirements. While not all these rules are appropriate to be included at this stage of the development process, there are many that must be considered.

UDO Section D-917A(A)

Side lot lines shall be substantially at right angles or radial to street lines, and double frontage lots are to be avoided wherever possible.

The lots proposed with the subdivision are generally consistent with this provision. As such, positive findings of compliance can be made.

UDO Section D-917A(F)(1)

All subdivision lots shall abut public roads.

All lots within the subdivision will abut a private road within the subdivision without need of an access easement. The use of private roads in-lieu of public roads is allowable pursuant to UDO Section D-917(G). As such, positive findings of compliance can be made.

UDO Section D-917A(G)

New residential neighborhoods may be developed with private roads and gatehouses are permitted in accordance with the following standards:

UDO Section D-917A(G)(1)

With the exception of the placement of the gate and/or guardhouse in a private street, any private road shall be built to state standards and shall meet all applicable minimum right-of-way, pavement, and construction standards for public roads as established by the state department of transportation.

The development proposal includes three private roads upon which all proposed lots shall be located along with a gated entry from Lochaven Road. All proposed private roads are proposed to be constructed to NCDOT standards.

UDO Section D-917A(J)(1)

Permanent dead-end streets shall not provide sole access to more than 16 dwelling units or 1,200 linear feet, whichever is less.

There are two cul-de-sacs within the proposed development, one on each end of Darby Glen Drive, which will provide access no more than ten lots in total. Additionally, Darby Glen Drive is approximately 520

linear feet in total length. As such, positive findings of compliance can be made.

UDO Section D-917A(J)(2)

When cul-de-sacs end in the vicinity of an adjacent undeveloped property capable of being developed in the future, a right-of-way or easement shall be shown on the final plan to enable the street to be extended when the adjoining property is developed.

While there are no undeveloped parcels adjacent to the proposed subdivision, there is a large (19.259 acre) parcel along the northwest side of the subject parcel with a single-family home. The proposal includes a proposed stub out to this property should it be redeveloped.

UDO Section D-917A(K)(5)

Two points of ingress and egress onto an adjoining public road from subdivision containing more than 15 lots is required.

As the subdivision consists of 38 lots, two points of ingress/egress are required; however, the applicant is proposing only one point of ingress/egress. It is noted that Lochaven Road is the road upon which the proposed subdivision has frontage, and this frontage is only approximately 600 feet in length. While it is theoretically possible to provide two points of access within this distance, there is likely very little benefit that this would provide as all the traffic would still need to be carried by Lochaven Road. Additionally, if a second ingress/egress point was to be provided, the easternmost of these points would likely be inappropriately located to an existing intersection on the south side of Lochaven Road. Thus, to require two points of ingress/egress for this project does not appear warranted.

UDO Section D-917A(K)(6)

Developable lots shall be accessed from interior streets, rather than from roads bordering the tract.

All 38 of the proposed lots will be accessed via one of the three internal streets within the neighborhood. As such, positive findings of compliance can be made.

UDO Section D-917A(O)(1)(b)

Where the side or rear yards of lots may be oriented toward existing thoroughfare roads, a buffer at least 100 feet wide of existing woodland providing adequate visual screening throughout the year is required. The buffer width may be reduced to 50 feet if plantings are installed to include year-round screening.

The development proposal includes the provision of a 50-foot thoroughfare buffer with evergreen screen in compliance with the allowable reduction provided. As such, positive findings of compliance can be made.

UDO Section D-917A(P)

Any major subdivision shall be required to provide that a minimum of ten percent of the gross area of the subdivision, exclusive of any required minimum buffers along thoroughfares, consists of common open space.

The 62.04-acre site requires 6.2 acres of open space. The plot plan denotes that 10.27 acres of open space are to be provided and will be located within several areas of the development. As such, positive findings of compliance can be made.

UDO Section D-917D, Supplemental Requirements for Certain Uses.

UDO Section D-917D, establishes supplements requirements for certain uses; however, not for all uses that are specifically listed in the UDO, including conventional residential development. As such, this Section is not applicable.

UDO Section D-918, General Requirements.

The various provisions set forth in UDO Section D-918, including, but not limited to visibility at intersections, lighting, screening, and landscaping, fences and walls, signs, and off-street parking and loading, as applicable, shall be reviewed for compliance as part of the Construction Permit. It is noted, however, that there are no immediate concerns regarding compliance with these provisions.

UDO Appendix 5, Architectural Standards.

It is noted that many of the standards established in Appendix 5 are intended more for the engagement of pedestrians with retail storefronts and are not applicable to this development proposal.

RELATION TO THE CODE OF ORDINANCES:

Appendix C, Traffic Impact Analysis.

Pursuant to Sec. II (A) (1), a Traffic Impact Analysis (TIA) is required for any CZ which is expected to create 50 or more peak hour vehicle trips or 500 or more daily vehicle trips. As the proposal consists of only 38 single-family homes, this threshold is not being met and the provision of a TIA is not required.

LAND USE PLAN CONSISTENCY:

Land Use Goals:

Goal 3: Minimize the visual effect of development from surrounding properties and roadways.

The development proposal includes the provision of a perimeter landscape buffer in compliance with the UDO that will, at minimum, meet the standards established within the UDO. As such, the development proposal meets the above Goal.

Goal 4: To maintain the Town's strong single-family residential character.

As the development proposal involves the creation of a new 38-lot single-family residential neighborhood, the development proposal will meet the above Goal.

Land Use Policies:

Policy 5: Ensure that development is consistent with the Town's quality and aesthetic values, thereby protecting property values.

The applicant has included, in their proposed Development Standards, specific building materials and building details that are to be incorporated into the architecture of all homes.

These standards are in keeping with the Town's established quality and aesthetic values; therefore, the development proposal meets the above Policy.

Policy 11: Ensure that land uses abutting residential development are compatible with the scale, intensity, and overall character of existing and planned neighborhoods.

The land uses abutting the subject property are as follows:

North	Single-Family Homes
South	Single-Family Homes
East	Single-Family Homes
West	Single-Family Homes

There are no compatibility concerns between the proposed development and the surrounding single-family homes and neighborhoods. Further, the proposed lot sizes are generally consistent with those found in the adjacent Lochaven, and Stratford on Providence subdivisions. As such, the development proposal will meet the Policy.

Policy 12: Consider land use descriptions shown in Exhibit 1 and the Future Land Use Map shown in Exhibit 2 in making zoning and development decisions.

Land Use	***Description***
Traditional Residential	*This category applies to areas where most of the lots and parcels are less than six acres in area. Most of this area is platted and is, or will be, zoned for 40,000 square foot lots at a density of approximately one dwelling unit per acre, in accordance with the Town's current Residential (R-40, R-40D, R-60, R-80, RE and RCD conventional) zoning districts.*
Conservation Residential	*This category applies to the areas within the Town that are currently zoned RCD or are six acres or greater in area. Some of this area has not been developed while some of the area is currently a conventional or conservation subdivision. Conventional subdivisions shall have minimum lot sizes of 40,000 square feet, plus be subject to a 10% open space requirement. Conservation subdivisions shall be subject to a conditional zoning permit and allow for smaller lot sizes yet retain a density of approximately one dwelling unit per 40,000 square feet.*
Neighborhood Business	*Existing commercially zoned (MX, B-1(CD) or B-2(CD)) parcels that lie in the vicinity of the "Town Center" or near the intersection of New Town Road and NC 16. This area is intended for neighborhood scale businesses that serve the needs of Weddington residents. All new commercial development will be in the Town Center and is subject to additional requirements found in the Downtown Overlay District.*

The subject parcels consist of both the Conservation Residential and Traditional Residential Land Use designations. Given the proposed zoning for the subject parcels, the Traditional

Residential designation would be the more consistent and most appropriate moving forward. As such, the development proposal meets the above Policy.

Public Facilities and Services Goals:

Goal 2: To ensure that all existing and future developments in Weddington are served by adequate water and sewage disposal facilities.

Potable water is intended to be provided to the development proposal via Union County Water, while sewage will be accommodated via septic fields on the individual lots. Accordingly, there are no expected concerns for the proposed development.

Community Design and Image Goals:

Goal 1: To maintain and enhance the Town's aesthetic qualities and physical character.

The applicant has included, in their proposed Development Standards, specific building materials and building details that are to be incorporated into the architecture of all homes. These standards are in keeping with the Town's established quality and aesthetic values; therefore, the development proposal meets the above Policy.

Based upon the above, staff provides the following Land Use Plan Consistency Statement for consideration:

The development proposal will be consistent with those uses surrounding the subject parcels, as well as being in keeping with the Town's established aesthetic values, and single-family residential character. Accordingly, the development proposal has been found to be generally consistent with the Goals and Policies of the adopted Land Use Plan and positive findings can be made in support of this development proposal.

RECOMMENDATION:

At its meeting of October 23, 2023, the Planning Board recommended approval of the Conditional Zoning request for the development of the 38-lot conventional subdivision.

Staff also recommends approval of the Conditional Zoning request for the development of the 38-lot conventional subdivision.

ATTACHMENTS:
Application
Sketch Plan
Zoning Map
Community Meeting Report

DocuSign Envelope ID: E3617BE7-6774-4C88-8A27-4611B9FAB8E1

TOWN OF WEDDINGTON

Conditional Zoning Application

This application is required for all conditional zoning applications. Completed applications along with all associated submittal requirements, must be submitted via the Town's Self-Service Permitting Portal.

No application shall be considered complete unless accompanied by the application fee in the amount of $1,650.00.

It is the responsibility of the applicant to submit complete and correct information. Incomplete or incorrect information may invalidate your application. The applicant, by filing this application, agrees to comply with all applicable requirements of the Unified Development Ordinance.

APPLICANT INFORMATION

Name: Provident Land Services, Inc.

Mailing Address: 6707 Fairview Road, Suite B, Charlotte, NC 28210

Phone Number: 704-201-5149 Email: kldillard@providentdev.com

PROPERTY OWNER INFORMATION *(if different from applicant)*

Name: Hedrick Family c/o Philip Scott Hedrick

Mailing Address: 130 Martingale Ln, Wilmington, NC 28409

Phone Number: 910-524-9112 Email: shedrick@hedricklaw.com

SUBJECT PROPERTY INFORMATION

Location: North of Lochaven Rd & South of Oxfordshire Rd

Parcel Number: 06153016 & 06153054A

Existing Zoning: R-CD & R-40

Use of Property: Single Family Residential

DocuSign Envelope ID: E3617BE7-6774-4C88-8A27-4611B9FAB8E1

application has been deemed complete and ready for submission to the Planning Board. The Planning Board, by majority vote, may shorten or waive the time provided for receipt for a completed application. The Planning Board shall have 30 days from the date that the application is presented to it to review the application and to act. If such period expires without action taken by the Planning Board, the application shall then be transferred to the Town Council without a Planning Board recommendation.

Public Hearing Required
Prior to deciding on rezoning a piece of property to a Conditional Zoning District, the Town Council shall have held a public hearing. Notice of such public hearing shall have been given as prescribed in Section D-602 of the Unified Development Ordinance.

Action by Town Council
Conditional Zoning District decisions are a legislative process and shall consider applicable adopted land use plans for the area and other adopted land use policy documents and/or ordinances. A statement analyzing the reasonableness of the proposed rezoning shall be prepared for each application and evaluated by the Town Council. Once the public hearing has been held, the Town Council shall act on the petition. The Town Council shall have the authority to:

a. Approve the application as submitted.

b. Deny approval of the application.

c. Approve application with modifications that are agreed to by the applicant.

d. Submit the application to the Planning Board for further study. The Planning Board shall have up to 31 days from the date of such submission to make a report to the Town Council. If no report is issued, the Town Council can take final action on the petition. The Town Council reserves the right to schedule and advertise a new public hearing based on the Planning Board's report.

CERTIFICATION

I HEREBY CERTIFY that all the information provided for this application and all attachments is true and correct to the best of my knowledge. I further certify that I am familiar with all applicable requirements of the Weddington Unified Development Ordinance concerning this proposal, and I acknowledge that any violation of such will be grounds for revoking any approvals or permits granted or issued by the Town of Weddington.

Kristin Dillard	8/24/2023
Applicant	Date
See attached Joinder Agreement	
Property Owner	Date

DocuSign Envelope ID: E3617BE7-6774-4C88-8A27-4611B9FAB8E1

Conditional Zoning Application
Parcels 06153016 & 06153054A
Owner / Seller Joinder Agreement

Philip Scott Hedrick

Philip Scott Hedrick

Date: 8/24/2023 | 1:05 PM PDT

Catharine D. Hedrick

Catharine D. Hedrick

Date: 8/24/2023 | 1:35 PM PDT

Edward Watson Hedrick

Edward Watson Hedrick

Date: 8/24/2023 | 5:49 PM EDT

Patricia P. Hedrick

Patricia P. Hedrick

Date: 8/24/2023 | 1:55 PM PDT

Elaine Hedrick Ashley

Date: 8/24/2023 | 6:12 PM PDT

William C. Ashley

Date: 8/24/2023 | 1:34 PM PDT

Lochaven Sellers

Philip Scott Hedrick
130 Martingale Lane, Wilmington, NC 28409
(910) 524-9112
shedrick@hedricklaw.com

Catharine D. Hedrick
130 Martingale Lane, Wilmington, NC 28409
910-619-3613
catharinehedrick@gmail.com

Edward Watson Hedrick
3414 Foxcroft Road, Charlotte, N.C. 28211
704-345-8804
edward.hedrick@gmail.com

Patricia P. Hedrick
3414 Foxcroft Road, Charlotte, N.C. 28211
980-428-3992
hedrickpatricia@gmail.com

Elaine Hedrick Ashley
4208 Cabarrus Court E., Greensboro, NC 27407
336-906-6772
eashley@hillevans.com

William C. Ashley
4208 Cabarrus Court E., Greensboro, NC 27407
336-455-3514
billashley61653@gmail.com

Lochaven RD - Parcels 06153016 & 06153054A
Proposed Principal Use

A luxury community that will be gated with private streets and will feature 42 large estate-sized custom homesites on approximately 62 acres. The community will include interior landscaped bench seating areas and passive trails along the creek for residents to enjoy. All homesites will exceed the minimum size of 40,000 square feet, and homes will be site-placed by a select group of well-established and highly respected custom builders for maximum conservation of trees and the natural landscape of the land. All homes will be built in accordance with strict Architectural Guidelines to ensure cohesiveness throughout the community.

Lochaven RD - Parcels 06153016 & 06153054A
Adjoining Properties

Diane H. Ellis & Hendrick H. Ellis
Tax ID: 06153156

Uwensuyi Fidelis Edosomwan & Margaret Edosomwan
Tax ID: 06153169

Gary Palmer & Pamela Palmer
Tax ID: 06153171

Christopher M. Granelli & Yohanne Hancock Granelli
Tax ID: 06153172

Jack Daniel George II & Linda Gail George
Tax ID: 06153173

KBB Developers Inc.
Tax ID: 06153175

KBB Developers Inc.
Tax ID: 06153207

Partha Sengupta & Meenakshi Sengupta
Tax ID: 06153208

Donna M. Williams & Phillip R. Williams
Tax ID: 0615188

Taishen Siao ** new owner-purchased in 2021
Tax ID: 06153187

Jonathan Joseph & Delaina Joseph
Tax ID: 06153206

Amy Guear & Todd J. Guear
Tax ID: 06153205

Thomas Davis & Kelly Davis
Tax ID: 06153201

David S. Strubbe & Olga B. Strubbe
Tax ID: 06153049

Phyllis McDonnell & Robert McDonnell
Tax ID: 6153052

Richa V. Purohit & Mohit Purohit
Tax ID: 06153053

Sergey Dzhuga & Oksana Yaroshik
Tax ID: 06153054

Paul W. Mead & Susan K. Mead
Tax ID: 06153121A

Jeff Sherrie & Bonnie Sherrie
Tax ID: 06153110

Kevin A. McDade & Suzanne McDade
Tax ID: 06153104

Erica L. Owens & Sandy Thomas Houston
Tax ID: 06153103

Joseph R. Hudson & Sandra F. Hudson
Tax ID: 06153015A

Jumper Drive Revocable Trust I
Tax ID: 06153015

Yevgeniy Zholobovskiy & Irina Alyamkina
Tax ID: 06153152

John W. Galich Jr & Laurel Galich
Tax ID: 06153153

Zachary D. Jackson & Jennifer P. Jackson
Tax ID: 06153154

Daniel J. Garvey & Sherry P. Garvey
Tax ID: 06153155

U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT

Action Id. **SAW-2021-01476** County: **Union** U.S.G.S. Quad: **NC-Weddington**

NOTIFICATION OF JURISDICTIONAL DETERMINATION

Requestor: **Pulte Group**
Matt Kearns
Address: **11121 Carmel Commons Boulevard, Suite 450**
Charlotte, NC 28226
Telephone Number: **704-972-7389**
E-mail: **matt.kearns@pultegroup.com**

Size (acres) **60**
Nearest Waterway **Mundys Run**
USGS HUC **03050103**
Nearest Town **Waxhaw**
River Basin **Santee**
Coordinates Latitude: **35.00384**
Longitude: **-80.75417**

Location description: **The review area is located on the Lochaven Road; approximately 0.1 miles west of the intersection of Lochaven Road and Hidden Haven Trail. PIN: 06153016. Reference review area description shown in the Jurisdictional Determination Request package entitled "Figure 1, Site Vicinity Map" and dated 06/01/21.**

Indicate Which of the Following Apply:

A. Preliminary Determination

☒ There appear to be **waters, including wetlands** on the above described project area/property, that may be subject to Section 404 of the Clean Water Act (CWA)(33 USC § 1344) and/or Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403). The **waters, including wetlands** have been delineated, and the delineation has been verified by the Corps to be sufficiently accurate and reliable. The approximate boundaries of these waters are shown on the enclosed delineation map dated **6/1/2021**. Therefore this preliminary jurisdiction determination may be used in the permit evaluation process, including determining compensatory mitigation. For purposes of computation of impacts, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of a preliminary JD will treat all waters and wetlands that would be affected in any way by the permitted activity on the site as if they are jurisdictional waters of the U.S. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331). However, you may request an approved JD, which is an appealable action, by contacting the Corps district for further instruction.

☐ There appear to be **waters, including wetlands** on the above described project area/property, that may be subject to Section 404 of the Clean Water Act (CWA)(33 USC § 1344) and/or Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403). However, since the **waters, including wetlands** have not been properly delineated, this preliminary jurisdiction determination may not be used in the permit evaluation process. Without a verified wetland delineation, this preliminary determination is merely an effective presumption of CWA/RHA jurisdiction over all of the **waters, including wetlands** at the project area, which is not sufficiently accurate and reliable to support an enforceable permit decision. We recommend that you have the **waters, including wetlands** on your project area/property delineated. As the Corps may not be able to accomplish this wetland delineation in a timely manner, you may wish to obtain a consultant to conduct a delineation that can be verified by the Corps.

B. Approved Determination

☐ There are Navigable Waters of the United States within the above described project area/property subject to the permit requirements of Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403) and Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

☐ There are **waters, including wetlands**on the above described project area/property subject to the permit requirements of Section 404 of the Clean Water Act (CWA) (33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

☐ We recommend you have the **waters, including wetlands** on your project area/property delineated. As the Corps may not be able to accomplish this wetland delineation in a timely manner, you may wish to obtain a consultant to conduct a delineation that can be verified by the Corps.

SAW-2021-01476

☐ The **waters, including wetlands** on your project area/property have been delineated and the delineation has been verified by the Corps. The approximate boundaries of these waters are shown on the enclosed delineation map dated **DATE**. We strongly suggest you have this delineation surveyed. Upon completion, this survey should be reviewed and verified by the Corps. Once verified, this survey will provide an accurate depiction of all areas subject to CWA jurisdiction on your property which, provided there is no change in the law or our published regulations, may be relied upon for a period not to exceed five years.

☐ The **waters, including wetlands** have been delineated and surveyed and are accurately depicted on the plat signed by the Corps Regulatory Official identified below on **DATE**. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

☐ There are no waters of the U.S., to include wetlands, present on the above described project area/property which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

☐ The property is located in one of the 20 Coastal Counties subject to regulation under the Coastal Area Management Act (CAMA). You should contact the Division of Coastal Management in **Morehead City, NC, at (252) 808-2808** to determine their requirements.

Placement of dredged or fill material within waters of the US, including wetlands, without a Department of the Army permit may constitute a violation of Section 301 of the Clean Water Act (33 USC § 1311). Placement of dredged or fill material, construction or placement of structures, or work within navigable waters of the United States without a Department of the Army permit may constitute a violation of Sections 9 and/or 10 of the Rivers and Harbors Act (33 USC § 401 and/or 403). If you have any questions regarding this determination and/or the Corps regulatory program, please contact **Bryan Roden-Reynolds at 704-510-1440 or bryan.roden-reynolds@usace.army.mil**.

C. Basis For Determination: Basis For Determination: See the preliminary jurisdictional determination form dated 07/13/2021.

D. Remarks: None

E. Attention USDA Program Participants

This delineation/determination has been conducted to identify the limits of Corps' Clean Water Act jurisdiction for the particular site identified in this request. The delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA Program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

F. Appeals Information (This information applies only to approved jurisdictional determinations as indicated in B. above)

If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the following address:

US Army Corps of Engineers
South Atlantic Division
Attn: Mr. Philip A. Shannin
Administrative Appeal Review Officer
60 Forsyth Street SW, Floor M9
Atlanta, Georgia 30303-8803
AND
PHILIP.A.SHANNIN@USACE.ARMY.MIL

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by **Not applicable**.
It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this correspondence.

Corps Regulatory Official: _____ _____ Bryan Roden-Reynolds 2021.07.13 19:26:55 -04'00'

SAW-2021-01476
Date of JD: **07/13/2021** Expiration Date of JD: **Not applicable**

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete our Customer Satisfaction Survey, located online at https://regulatory.ops.usace.army.mil/customer-service-survey/.

Copy Furnished:

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the Customer Satisfaction Survey located at http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0

Copy furnished:

Agent:	**Wetlands and Waters, Inc.**
	Perry Isner
Address:	**328 East Broad Street, Suite D**
	Statesville, NC 28677
Telephone Number:	**704-773-4239**
E-mail:	**perryisner@wetlands-waters.com**

Property Owner:	**N/A**
	Scott Hedrick
Address:	**130 Martingale Lane**
	Wilmington, NC 28409
Telephone Number:	**910-524-9112**
E-mail:	**shedrick@hedricklaw.com**

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: **Pulte Group**, **Matt Kearns**	File Number: **SAW-2021-01476**	Date: **07/13/2021**

Attached is:		See Section below
☐	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
☐	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
☐	PERMIT DENIAL	C
☐	APPROVED JURISDICTIONAL DETERMINATION	D
☒	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at or http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx or the Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the district engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact: **District Engineer, Wilmington Regulatory Division** **Attn: Bryan Roden-Reynolds** **Charlotte Regulatory Office** **U.S Army Corps of Engineers** **8430 University Executive Park Drive, Suite 615** **Charlotte, North Carolina 28262**	If you only have questions regarding the appeal process you may also contact: MR. PHILIP A. SHANNIN ADMINISTRATIVE APPEAL REVIEW OFFICER CESAD-PDS-O 60 FORSYTH STREET SOUTHWEST, FLOOR M9 ATLANTA, GEORGIA 30303-8803 PHONE: (404) 562-5136; FAX (404) 562-5138 EMAIL: PHILIP.A.SHANNIN@USACE.ARMY.MIL

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation, and will have the opportunity to participate in all site investigations.

_____ Signature of appellant or agent.	Date:	Telephone number:

For appeals on Initial Proffered Permits send this form to:

District Engineer, Wilmington Regulatory Division, Attn: Bryan Roden-Reynolds, 69 Darlington Avenue, Wilmington, North Carolina 28403

For Permit denials, Proffered Permits and Approved Jurisdictional Determinations send this form to:

Division Engineer, Commander, U.S. Army Engineer Division, South Atlantic, Attn: Mr. Philip Shannin, Administrative Appeal Officer, CESAD-PDO, 60 Forsyth Street, Room 10M15, Atlanta, Georgia 30303-8801
Phone: (404) 562-5137

PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. **REPORT COMPLETION DATE FOR PJD:** 07/13/2021

B. **NAME AND ADDRESS OF PERSON REQUESTING PJD:** Pulte Group, Matt Kearns, 11121 Carmel Commons Boulevard, Suite 450, Charlotte, NC 28226

C. **DISTRICT OFFICE, FILE NAME, AND NUMBER:** Wilmington District, Haven Estates, SAW-2021-01476

D. **PROJECT LOCATION(S) AND BACKGROUND INFORMATION:** The review area is located on the Lochaven Road; approximately 0.1 miles west of the intersection of Lochaven Road and Hidden Haven Trail. PIN: 06153016. Reference review area description shown in the Jurisdictional Determination Request package entitled "Figure 1, Site Vicinity Map" and dated 06/01/21.

(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: NC County: Union City: Waxhaw
Center coordinates of site (lat/long in degree decimal format): Latitude: 35.00384 Longitude: -80.75417

Universal Transverse Mercator:

Name of nearest waterbody: Mundys Run

E. **REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

☒Office (Desk) Determination. Date: 07/13/21

☐Field Determination. Date(s):

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION

Site Number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resources in review area (acreage and linear feet, if applicable	Type of aquatic resources (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
SEE ATTAHCED TABLE					

1. The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.
2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre- construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of

jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply) Checked items are included in the administrative record and are appropriately cited:

☒Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
Map: **Figures 1-7**

☒Data sheets prepared/submitted by or on behalf of the PJD requestor. Datasheets:

☒Office concurs with data sheets/delineation report.

☐Office does not concur with data sheets/delineation report. Rationale:_____

☐Data sheets prepared by the Corps:_____

☐Corps navigable waters' study:

☐U.S. Geological Survey Hydrologic Atlas:

☐USGS NHD data:

☐USGS 8 and 12 digit HUC maps:

☒U.S. Geological Survey map(s). Cite scale & quad name: **Figure 4, USGS Topo Quad (7.5-minute quadrangle Weddington, NC)**

☒Natural Resources Conservation Service Soil Survey. Citation: **Figure 5, Soil Survey (Web Soil Survey of Mecklenburg County)**

☒National wetlands inventory map(s). Cite name: **Figure 6, National Wetland Inventory (USFWS NWI Mapper)**

☐State/local wetland inventory map(s):_____

☒FEMA/FIRM maps: **Figure 7, FEMA Mapping (National Flood Hazard Layer)**

☐100-year Floodplain Elevation is:_____ (National Geodetic Vertical Datum of 1929)

☒Photographs: ☒ Aerial (Name & Date): **Figure 1, Site Vicinity Map (Dated 06/01/21) and Figure 3, County GIS (Dated 06/01/21)**

or ☒ Other (Name & Date): **Photographs 1-24)**

☐Previous determination(s). File no. and date of response letter:_____

☒Other information (please specify): **Figure 2, Approximate Depiction of Aquatic Resources (06/01/21)**

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Bryan Roden-Reynolds
2021.07.13 19:26:33
-04'00'

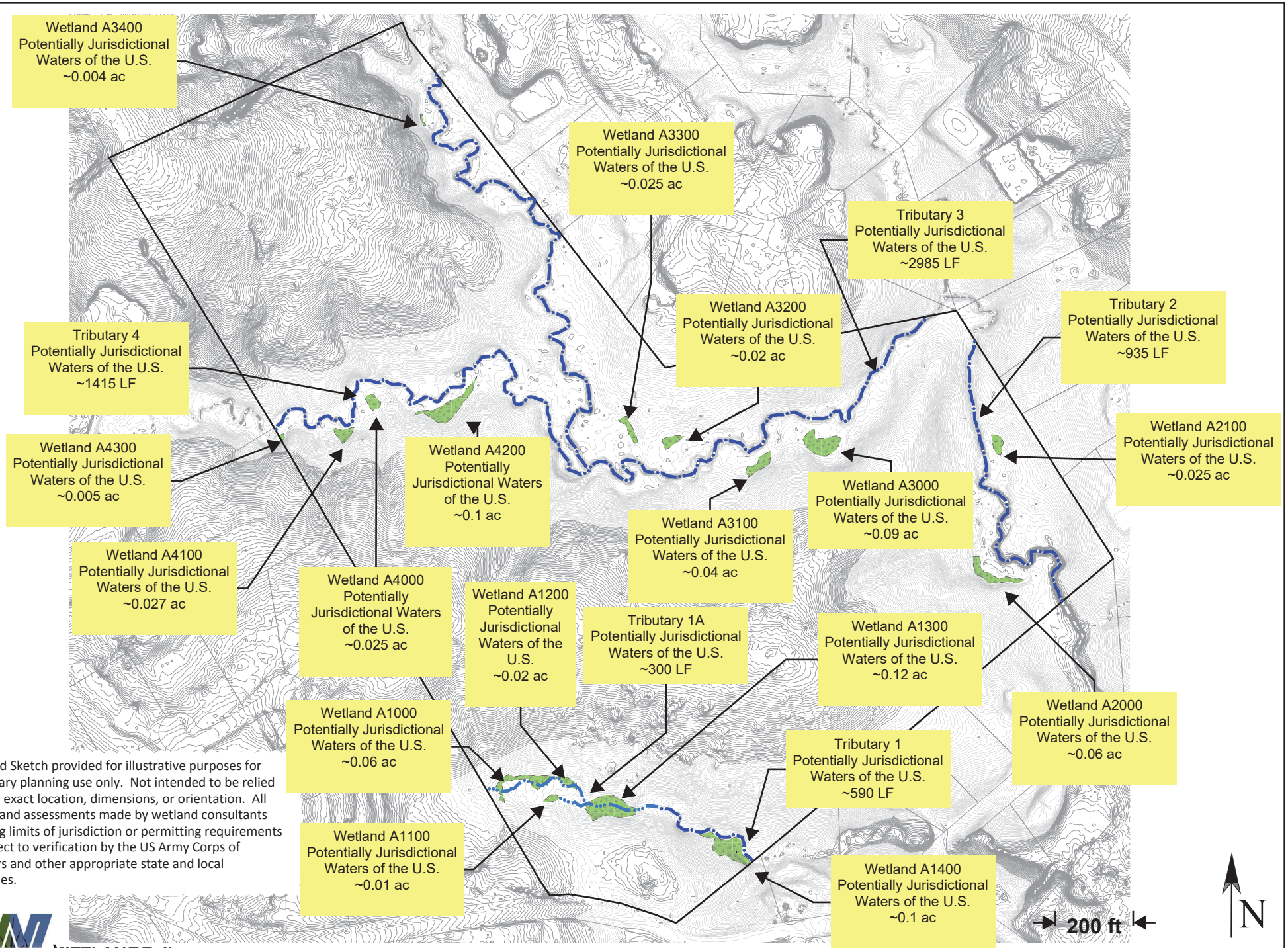
Signature and date of Regulatory staff member completing PJD
07/13/2021

Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is

impracticable)[1]

[1] Districts may establish timeframes for requester to return signed PJD forms. If the requester does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

Feature	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resources in review area (acreage and linear feet, if applicable	Type of aquatic resources (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
Wetland A1000	35.00230500	-80.75510100	0.06 acre	Wetland	404
Wetland A1100	35.00218200	-80.75462900	0.01 acre	Wetland	404
Wetland A1200	35.00214700	-80.75514400	0.02 acre	Wetland	404
Wetland A1300	35.00234000	-80.75470400	0.12 acre	Wetland	404
Wetland A1400	35.00181300	-80.75409300	0.1 acre	Wetland	404
Wetland A2000	35.00373800	-80.75130300	0.06 acre	Wetland	404
Wetland A2100	35.00462000	-80.75082000	0.025 acre	Wetland	404
Wetland A3000	35.00447000	-80.75276000	0.09 acre	Wetland	404
Wetland A3100	35.00453700	-80.75278400	0.04 acre	Wetland	404
Wetland A3200	35.00449300	-80.75394300	0.02 acre	Wetland	404
Wetland A3300	35.00444900	-80.75436100	0.025 acre	Wetland	404
Wetland A3400	35.00659400	-80.75609900	0.004 acre	Wetland	404
Wetland A4000	35.00469600	-80.75651700	0.025 acre	Wetland	404
Wetland A4100	35.00442000	-80.75663000	0.027 acre	Wetland	404
Wetland A4200	34.98677000	-80.76665000	0.1 acre	Wetland	404
Wetland A4300	34.98677000	-80.76665000	0.005 acre	Wetland	404
Tributary 1	35.00201100	-80.75454300	590 linear feet	Non-wetland	404
Tributary 1A	35.00216900	-80.75533700	300 linear feet	Non-wetland	404
Tributary 2	35.00489300	-80.75143200	935 linear feet	Non-wetland	404
Tributary 3	35.00463000	-80.75261000	2985 linear feet	Non-wetland	404
Tributary 4	35.00487600	-80.75651700	1415 linear feet	Non-wetland	404



*Wetland Sketch provided for illustrative purposes for preliminary planning use only. Not intended to be relied upon for exact location, dimensions, or orientation. All findings and assessments made by wetland consultants regarding limits of jurisdiction or permitting requirements are subject to verification by the US Army Corps of Engineers and other appropriate state and local authorities.

WETLANDS & WATERS, INC.

Figure 2: Approximate Depiction of Aquatic Resources

Owner / Developer	Pulte			Project Name:	Haven Estates
City / Town:	Weddington	County: Union	State: NC	Tax PIN(s):	06153016
Coordinates (Lat/Long):	35.00384 / -80.75417	AID / ORM:	n/a	Scale: graphic	Date: 06/01/21

BECKINGHAM

LOCATED IN

TOWN OF WEDDINGTON, NORTH CAROLINA

VICINITY MAP
NOT TO SCALE

SITE DATA:

TAX PARCELS:	06153016 & 06153054A
TOTAL ACREAGE:	APPROX. +/- 62.45 ACRES
LOCHAVEN ROAD ACREAGE:	APPROX. +/- 0.41 ACRES
REMAINING ACREAGE:	APPROX. +/- 62.04 ACRES
LOCATION:	TOWN OF WEDDINGTON, NORTH CAROLINA
COUNTY:	UNION COUNTY, NORTH CAROLINA
ZONING:	
EXISTING:	R-CD & R-40
PROPOSED:	R-40 (CZ)
LAND USE:	
EXISTING:	VACANT
PROPOSED:	SINGLE FAMILY
WATERSHED:	CATAWBA RIVER BASIN
TOTAL POTENTIAL LOTS:	+/- 38 LOTS
PROPOSED DENSITY:	+/- 0.61 DU/AC*
OPEN SPACE:	
REQUIRED:	+/- 6.20 ACRES (10%) MINIMUM*
PROVIDED:	+/- 10.27 ACRES (16.5%)

*NOTE: DENSITY AND OPEN SPACE CALCULATIONS BASED ON REMAINING ACREAGE (APPROX. +/- 62.04 ACRES).

LOT STANDARDS:

MINIMUM LOT AREA:	40,000 S.F.
MINIMUM LOT WIDTH:	120'
SETBACKS:	
FRONT SETBACK:	50'
SIDE SETBACK:	15'
SIDE CORNER SETBACK:	25'
REAR SETBACK:	40'

General Notes
1. Base information provided by DRAFT "ALTA/NSPS Land Title Survey" provided by ESP Associates, Inc. dated 07/27/2021 and Union County GIS Data and should be verified for accuracy.
2. All site plan, zoning, and wetland information utilized in the preparation of this plan is considered to be preliminary in nature and subject to change and final verification.
3. Public water to be extended to the site.
4. Draft - Do not rely on this document.

Floodplain Information
Floodplain information obtained from FEMA FIRM Panel 3710447600J effective date of study 10/16/2008.

Stream/Wetland Information
Stream/Wetland information is based on preliminary information provided by "Wetland Survey PID# 06153016 & 06153054A" provided by ESP Associates, Inc. dated 10/14/2021 and Union County GIS data. For purposes of preparation of this Preliminary Conditional Zoning Plan, any potential wetland areas and stream features depicted on the plan are considered to be preliminary in nature and approximate in location. The Preliminary Conditional Zoning Plan will need to be revised once all agencies approved on-site wetland/stream and appropriate jurisdictional boundaries are surveyed and verified with acceptable levels of accuracy- unit loss may occur.

Access Points/Driveways/Streets
1. Proposed project site entrance locations are considered preliminary in nature and need to be verified for adequate sight distance.
2. All roadway and street systems are considered to be preliminary and will need to be verified for sufficiency to satisfy or exceed minimum requirements established in the Town of Weddington UDO and applicable standards identified by NCDOT. Street connections are conceptual and may be subject to change based on agency input and review.

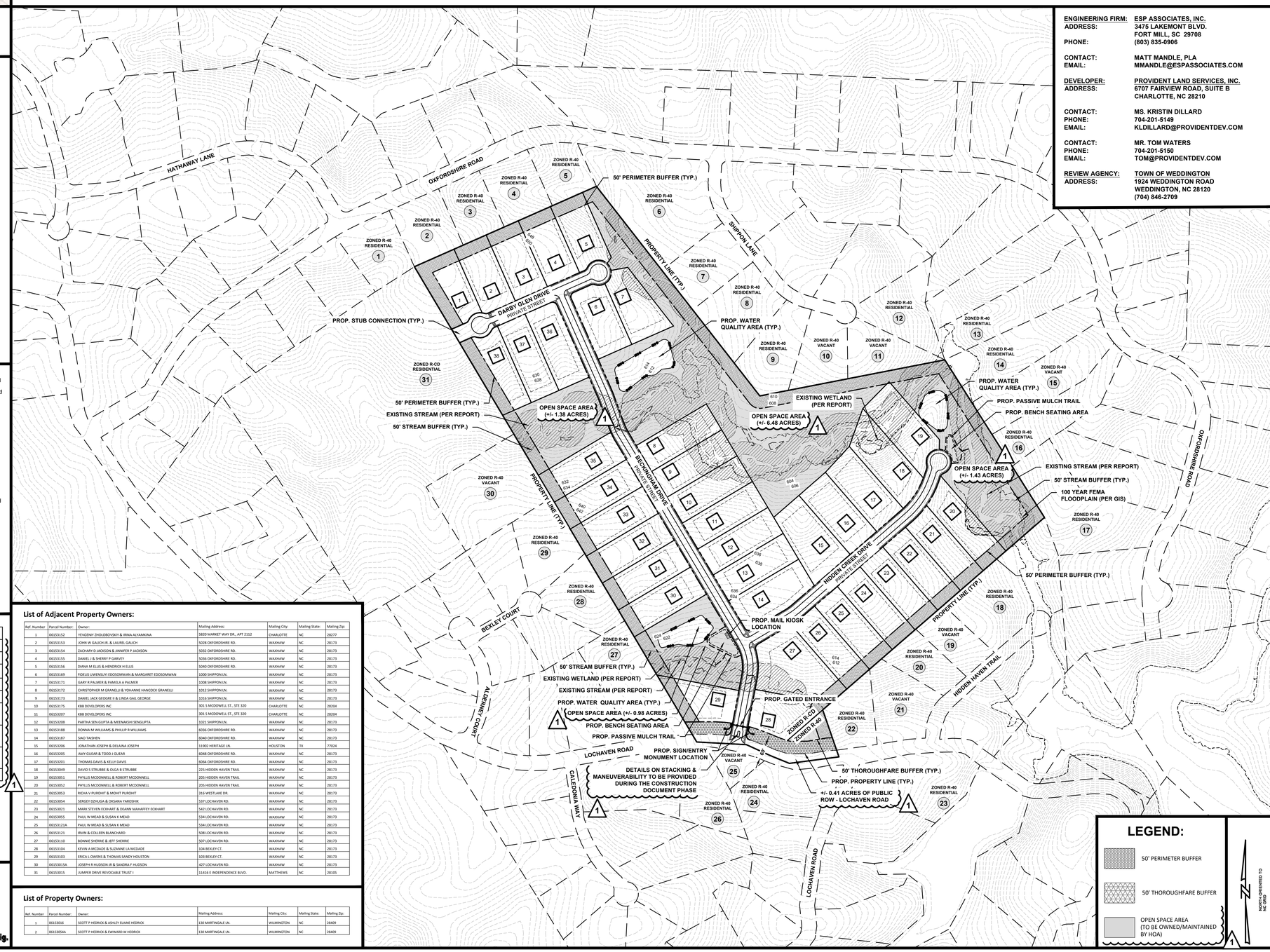
Open Space /Tree Save
Open Space and Tree Save areas are conceptual and preliminary. The exact location of these areas may change as the client finalizes decisions regarding final layout, product allocation, and as other spatially dependent project components such as stormwater areas, wetland areas, utility features, and buffers, (as applicable) for this project are better defined.

Potential Stormwater Quality Areas
Location of proposed stormwater areas are conceptual and preliminary and still need to be determined. The exact size and location of these areas will change as the client finalizes decisions regarding final layout, product allocation, and as other proposed changes to the project are better defined. Layout and unit count subject to change based on final design of stormwater areas.

Public Information
ESP Associates is not responsible for plan deficiencies created by incorrect, incomplete, missing or outdated information derived from public sources such as GIS, Planning and Zoning departments.

INDEX OF SHEETS

SHEET NO.	SHEET NAME	ORIGINAL DATE	REVISED DATE
1 of 8	COVER SHEET	09/08/2023	10/12/2023
2 of 8	DETAILS SHEET	09/08/2023	10/12/2023
3 of 8	PRELIMINARY SEPTIC LOCATION PLAN	09/08/2023	10/12/2023
4 of 8	PRELIMINARY LANDSCAPE PLAN	09/08/2023	10/12/2023
5 of 8	CONCEPTUAL OVERALL GRADING & STORM DRAINAGE PLAN	10/12/2023	---
6 of 8	CONCEPTUAL GRADING & STORM DRAINAGE PLAN (SHEET 1 OF 2)	10/12/2023	---
7 of 8	CONCEPTUAL GRADING & STORM DRAINAGE PLAN (SHEET 2 OF 2)	10/12/2023	---
8 of 8	CONCEPTUAL SCM DRAINAGE PLAN	10/12/2023	---



List of Adjacent Property Owners:

Ref. Number:	Parcel Number:	Owner:	Mailing Address:	Mailing City:	Mailing State:	Mailing Zip:
1	06153152	YEVGENIY ZHOLDBOVSKIY & IRINA ALYAKHKINA	5820 MARKET WAY DR., APT 2112	CHARLOTTE	NC	28277
2	06153153	JOHN W GAUCH JR. & LAUREL GAUCH	5028 OXFORDSHIRE RD.	WAXHAW	NC	28173
3	06153154	ZACHARY D JACKSON & JENNIFER P JACKSON	5012 OXFORDSHIRE RD.	WAXHAW	NC	28173
4	06153155	DANIEL J & SHERRY P GARVEY	5036 OXFORDSHIRE RD.	WAXHAW	NC	28173
5	06153156	DIANA M ELLIS & HENDRICK H ELLIS	5040 OXFORDSHIRE RD.	WAXHAW	NC	28173
6	06153169	FIDELIS UWENSUYI EDOSOMWAN & MARGARET EDOSOMWAN	1000 SHIPPON LN.	WAXHAW	NC	28173
7	06153171	GARY R PALMER & PAMELA A PALMER	1008 SHIPPON LN.	WAXHAW	NC	28173
8	06153172	CHRISTOPHER M GRANELLI & YOHANNE HANCOCK GRANELLI	1012 SHIPPON LN.	WAXHAW	NC	28173
9	06153173	DANIEL JACK GEOGER Jr & LINDA GAIL GEORGE	1016 SHIPPON LN.	WAXHAW	NC	28173
10	06153175	KBB DEVELOPERS INC	301 S MCDOWELL ST., STE 320	CHARLOTTE	NC	28204
11	06153207	KBB DEVELOPERS INC	301 S MCDOWELL ST., STE 320	CHARLOTTE	NC	28204
12	06153208	PARTHA SEN GUPTA & MEENAKSHI SENGUPTA	1021 SHIPPON LN.	WAXHAW	NC	28173
13	06153188	DONNA M WILLIAMS & PHILLIP R WILLIAMS	6036 OXFORDSHIRE RD.	WAXHAW	NC	28173
14	06153187	GAO TAISHEN	6040 OXFORDSHIRE RD.	WAXHAW	NC	28173
15	06153206	JONATHAN JOSEPH & DELAINA JOSEPH	11902 HERITAGE LN.	HOUSTON	TX	77024
16	06153205	AMY GUEAR & TODD J GUEAR	6048 OXFORDSHIRE RD.	WAXHAW	NC	28173
17	06153201	THOMAS DAVIS & KELLY DAVIS	6064 OXFORDSHIRE RD.	WAXHAW	NC	28173
18	06153049	DAVID S STRUBBE & OLGA B STRUBBE	225 HIDDEN HAVEN TRAIL	WAXHAW	NC	28173
19	06153051	PHYLLIS MCDONNELL & ROBERT MCDONNELL	205 HIDDEN HAVEN TRAIL	WAXHAW	NC	28173
20	06153052	PHYLLIS MCDONNELL & ROBERT MCDONNELL	205 HIDDEN HAVEN TRAIL	WAXHAW	NC	28173
21	06153053	RICHA V PUROHIT & MOHIT PUROHIT	316 WESTLAKE DR.	WAXHAW	NC	28173
22	06153054	SERGEY DZHUGA & ORSANA YAROSHIK	537 LOCHAVEN RD.	WAXHAW	NC	28173
23	06153021	MARK STEVEN ECKHART & DEANN MAHAFFEY ECKHART	542 LOCHAVEN RD.	WAXHAW	NC	28173
24	06153055	PAUL W MEAD & SUSAN K MEAD	534 LOCHAVEN RD.	WAXHAW	NC	28173
25	06153121A	PAUL W MEAD & SUSAN K MEAD	534 LOCHAVEN RD.	WAXHAW	NC	28173
26	06153121	IRVIN & COLLEEN BLANCHARD	508 LOCHAVEN RD.	WAXHAW	NC	28173
27	06153110	BONNIE SHERRIE & JEFF SHERRIE	507 LOCHAVEN RD.	WAXHAW	NC	28173
28	06153104	KEVIN A MCDADE & SUZANNE LA MCDADE	104 BEKLEY CT.	WAXHAW	NC	28173
29	06153103	ERICA L OWENS & THOMAS SANDY HOUSTON	103 BEKLEY CT.	WAXHAW	NC	28173
30	06153015A	JOSEPH R HUDSON JR & SANDRA F HUDSON	427 LOCHAVEN RD.	WAXHAW	NC	28173
31	06153015	JUMPER DRIVE REVOCABLE TRUST I	11416 E INDEPENDENCE BLVD.	MATTHEWS	NC	28105

List of Property Owners:

Ref. Number	Parcel Number:	Owner:	Mailing Address:	Mailing City:	Mailing State:	Mailing Zip:
1	06153016	SCOTT P HEDRICK & ASHLEY ELAINE HEDRICK	130 MARTINGALE LN.	WILMINGTON	NC	28409
2	06153054A	SCOTT P HEDRICK & EWWARD W HEDRICK	130 MARTINGALE LN.	WILMINGTON	NC	28409

GRAPHIC SCALE
200' 0 100' 200' 400' 800'
(IN FEET)
1 inch = 200 ft.

Know what's below. Call before you dig.

ENGINEERING FIRM: ESP ASSOCIATES, INC.
ADDRESS: 3475 LAKEMONT BLVD. FORT MILL, SC 29708
PHONE: (803) 835-0906
CONTACT: MATT MANDLE, PLA
EMAIL: MMANDLE@ESPASSOCIATES.COM

DEVELOPER: PROVIDENT LAND SERVICES, INC.
ADDRESS: 6707 FAIRVIEW ROAD, SUITE B CHARLOTTE, NC 28210
CONTACT: MS. KRISTIN DILLARD
PHONE: 704-201-5149
EMAIL: KLDILLARD@PROVIDENTDEV.COM
CONTACT: MR. TOM WATERS
PHONE: 704-201-5150
EMAIL: TOM@PROVIDENTDEV.COM

REVIEW AGENCY: TOWN OF WEDDINGTON
ADDRESS: 1924 WEDDINGTON ROAD WEDDINGTON, NC 28120 (704) 846-2709

ESP Associates, Inc.
P.O. Box 7030
Charlotte, NC 28241
3475 Lakemont Blvd.
Fort Mill, SC 29708
704-583-4949 (NC)
803-802-2440 (SC)
www.espassociates.com

PRELIMINARY NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY
1	10/12/2023	REVISED PER STAFF COMMENTS	EL

CONDITIONAL ZONING PLAN
COVER SHEET (1 OF 8)

BECKINGHAM

PROVIDENT LAND SERVICES, INC.

TOWN OF WEDDINGTON, NC

PROJECT INFORMATION	
PROJECT MANAGER:	MM
DESIGNED BY:	EL
DRAWN BY:	EL
PROJECT NUMBER:	23-00757
ORIGINAL DATE:	09/08/2023

SHEET: **1 OF 8**

U:\2023 Projects (L\23-00757 - Beckingham (Provident)\Submittals Working Drawings\2023-09-XX_2nd Conditional Zoning Submittal\Sheets\LPH3-COVR.dwg, Cover, elong

Development Standards:

Site Development Data:

--**Acreage**: ± 62.04 acres

--**Tax Parcel #**: 06153016 & 06153054A

--**Existing Zoning:** R-CD & R-40

--**Proposed Zoning:** R-40 (CZ)

--**Existing Uses:** Vacant

--**Proposed Uses:** Up to 38 single-family detached dwelling units as allowed by right and under prescribed conditions in the R-40 (CZ) zoning district as further described in Section 2 below.

1. General Provisions:

a. Site Location. These Development Standards form a part of the Rezoning Plan associated with the Rezoning Petition filed by Provident Land Services, Inc. ("Petitioner") to accommodate the development of up to thirty-eight (38) single-family detached dwelling units as generally depicted on the Rezoning Plan. The proposed development will be on an approximately 62.04 acre site located on Lochaven Road (the "Site").

b. Zoning Districts/Ordinance. Development of the Site will be governed by the Rezoning Plan as well as the applicable provisions of the Town of Weddington Land Unified Development Ordinance (the "Ordinance"). Unless the Rezoning Plan establishes more stringent standards, the regulations established under the Ordinance for the R-40 (CZ) zoning classification shall govern.

c. Graphics and Alterations. The schematic depictions lots, sidewalks, structures and buildings, building elevations, driveways, streets and other development matters and site elements (collectively the "Development/Site Elements") set forth on the Rezoning Plan should be reviewed in conjunction with the provisions of these Development Standards. The layout, locations, sizes, and formulations of the Development/Site Elements depicted on the Rezoning Plan are graphic representations of the Development/Site elements proposed. Changes to the Rezoning Plan not anticipated by the Rezoning Plan will be reviewed and approved as allowed by Section D-607(C)(10) of the Ordinance.

Since the project has not undergone the design development and construction phases, it is intended that this Rezoning Plan provide for flexibility in allowing some alterations or modifications from the graphic representations of the Development/Site Elements. Therefore, there may be instances where minor modifications will be allowed per Section D-607(C)(10)(b) of the Ordinance. These instances would include changes to graphics if they are minor and don't materially change the overall design intent depicted on the Rezoning Plan.

The Town Planner/Zoning Administrator will determine if such minor modifications are allowed and if it is determined that the alteration does not meet the criteria described above, the Petitioner shall then follow Section D-607(C)(10)(a) of the Ordinance; in each instance, however, subject to the Petitioner's appeal rights set forth in the Ordinance.

2. Permitted Uses:

The Site may be developed with up to thirty-eight (38) single-family residential units.

3. Access and Transportation:

I. Proposed Access.

a. Access to the Site will be from Lochaven Road as generally depicted on the Rezoning Plan.

b. The placement and configuration of the vehicular access points are subject to any minor modifications required to accommodate final site development and construction plans and to any adjustments required for approval by the Town of Weddington and/or NCDOT in accordance with applicable published standards.

c. The overall street network is conceptual in nature and may be adjusted during the permitting process subject to the standards and approvals of NCDOT and the Town of Weddington as applicable.

II. Standards, Phasing and Other Provisions.

a. Weddington and NCDOT Standards. All of the foregoing public roadway improvements will be subject to the standards and criteria of the Town of Weddington and/or NCDOT (as it relates to the roadway improvements within their respective road system authority). It is understood that such improvements may be undertaken by the Petitioner on its own or in conjunction with other development or roadway projects taking place within the area, by way of a private/public partnership effort or other public sector project support.

b. **Substantial Completion.** Reference to "substantial completion" for certain improvements as set forth above shall mean completion of the roadway improvements in accordance with the applicable standards. Provided however, in the event certain non-essential roadway improvements (as reasonably determined by the Town of Weddington) are not completed at the time that the Petitioner seeks to obtain a certificate of occupancy for building(s) on the Site in connection with related development phasing described above, then the Town of Weddington will instruct applicable authorities and/or departments to allow the issuance of certificates of occupancy for the applicable buildings, and in such event the Petitioner may be asked to post a letter of credit or a bond for any improvements not in place at the time such a certificate of occupancy is issued to secure completion of the applicable improvements.

4. Architectural Standards:

a. The building materials used on the principal buildings constructed on Site will be a combination of portions of the following: brick, stone, precast stone, precast concrete, synthetic stone, cementitious fiber board, cementitious fiber shake, stucco, decorative block and/or wood.

b. Vinyl or Aluminum shall not be used as a primary siding material however it may be used on windows, soffits, fascia and/or similar roof overhang elements, handrails/railings, and/or other miscellaneous trim elements.

c. The proposed roofing materials will be architectural shingles, slate, tile and/or metal.

d. All residential units shall include side load or center court drive three car garages as a minimum with the following garage door treatments

i. windows and/or a vent detail above the garage door,

ii. a minimum of two siding materials on the façade, and

iii. windows

5. Streetscape, Setbacks, Buffers, and Yards:

a. A fifty (50) foot perimeter buffer shall be provided to support the overall character of the community as generally depicted on the Rezoning Plan. Grading and clearing within the fifty (50) foot buffer is permitted subject to approval by applicable regulatory agencies and contingent upon replanting, as needed.

b. Fifty (50) foot buffers will be installed where natural landscape does not provide sufficient screening for adjoining existing homes and along Lochaven Road frontage per section D-917A(O) of the Unified Development Ordinance. The buffer will be enhanced with evergreen plantings, such as Nellie Stevens, Burford Holly, Ligustrum or similar approved evergreen species.

c. A minimum fifteen (15) foot side yard and twenty-five (25) foot corner side yard shall be provided.

d. Due to topographic constraints and existing features on the site, the minimum block length of 334' may be exceeded as generally depicted on the Rezoning Plan.

e. Street trees shall be provided on each side of the street spaced forty (40) feet on center or based on tree species in compliance with Section D-917A(Q)(1)(b).

6. Environmental Features and Open Space:

a. The Site shall comply with the minimum Stormwater and Water Quality requirements as set forth in the Unified Development Ordinance.

b. The location of the proposed stormwater areas are conceptual in nature and the exact size and location of these areas are subject to change depending upon final layout, product allocation, and/or other site plan elements. The overall layout and unit count may be altered as a result of final stormwater locations.

c. The Site shall comply with the minimum Open Space and Tree Save requirements as set forth in Section D-917A(P) and (Q) of the Unified Development Ordinance. Required stream and wetland buffers may count towards open space. The Open Space and Tree Save areas generally depicted on the Rezoning Plan are conceptual in nature and subject to change depending upon final layout, product allocation, and other spatially dependent project components such as but not limited to stormwater areas, wetland areas, utilities, and buffers (as applicable).

d. The Petitioner shall provide third party inspection of site development construction activities to occur after each ½" (or greater) rainfall event.

7. Amendments to the Rezoning Plan:

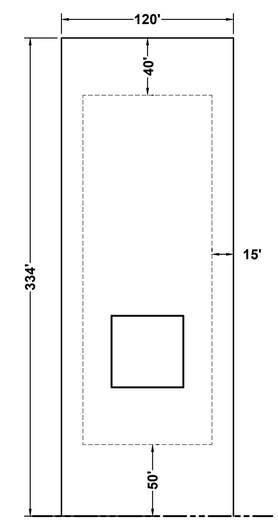
ii. Future amendments to the Rezoning Plan (which includes these Development Standards) may be applied for by the then Owner or Owners of the applicable portion of the Site affected by such amendment in accordance with the provisions of the Ordinance.

8. Binding Effect of the Rezoning Application:

a. If this Rezoning Petition is approved, all conditions applicable to the development of the Site imposed under the Rezoning Plan will, unless amended in the manner provided under the Ordinance, be binding upon and insure to the benefit of the Petitioner and subsequent owners of the Site and their respective

Typical Lot Detail:

NOT TO SCALE



PRIVATE STREET

120' x 334' Lot

Setbacks
Front: 50'
Side: 15'
Corner Side: 25'
Rear: 40'

ESP Associates, Inc.
P.O. Box 7030
Charlotte, NC 28241
3475 Lakemont Blvd.
Fort Mill, SC 29708
704-583-4949 (NC)
803-802-2440 (SC)
www.espassociates.com

PRELIMINARY NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY
1	10/12/2023	REVISED PER STAFF COMMENTS	EL

CONDITIONAL ZONING PLAN
DETAILS SHEET (2 OF 8)

BECKINGHAM

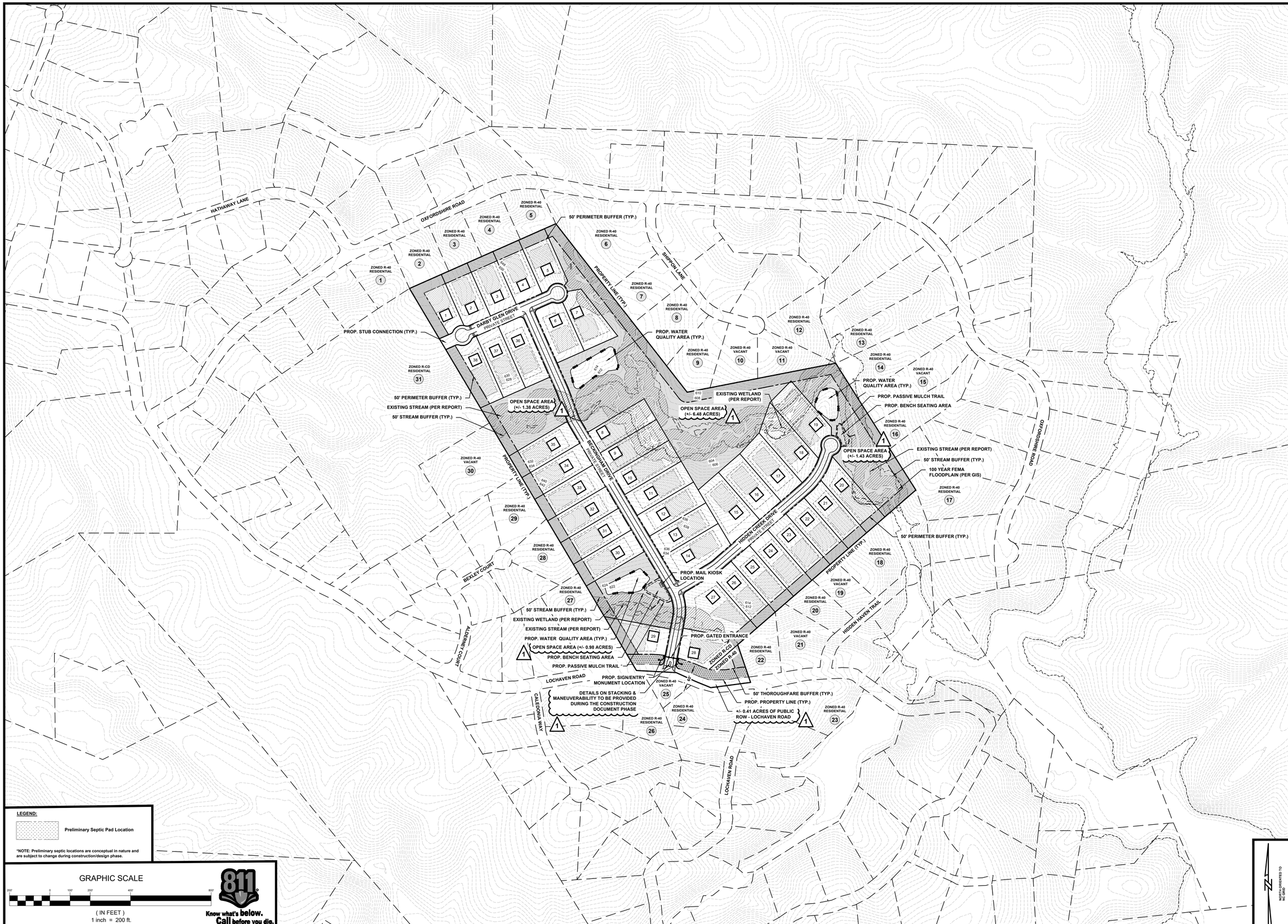
TOWN OF WEDDINGTON, NC

PROVIDENT LAND SERVICES, INC.

PROJECT INFORMATION	
PROJECT MANAGER:	MM
DESIGNED BY:	EL
DRAWN BY:	EL
PROJECT NUMBER:	23-00757
ORIGINAL DATE:	09/08/2023

SHEET:
2 OF 8

U:\2023 Projects (LU23-00757 - Beckingham (Provident)\Submittals Working Drawings\2023-09-XX_2nd Conditional Zoning Submittal\Sheets\JP43-DATA.dwg, Details, 4xorg



LEGEND:

Preliminary Septic Pad Location

*NOTE: Preliminary septic locations are conceptual in nature and are subject to change during construction/design phase.

GRAPHIC SCALE

200' 0 100' 200' 400' 800'

(IN FEET)
1 inch = 200 ft.

Know what's below. Call before you dig.

NORTH ORIENTED TO NAD83

ESP Associates, Inc.
P.O. Box 7030
Charlotte, NC 28241
Suite A, Kannapolis Pkwy
Fort Mill, SC 29708
704-583-4949 (NC)
803-802-2440 (SC)
www.espassociates.com

PRELIMINARY NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY
1	10/12/2023	REVISED PER STAFF COMMENTS	EL

CONDITIONAL ZONING PLAN
PRELIMINARY SEPTIC LOCATION PLAN (3 OF 8)

BECKINGHAM

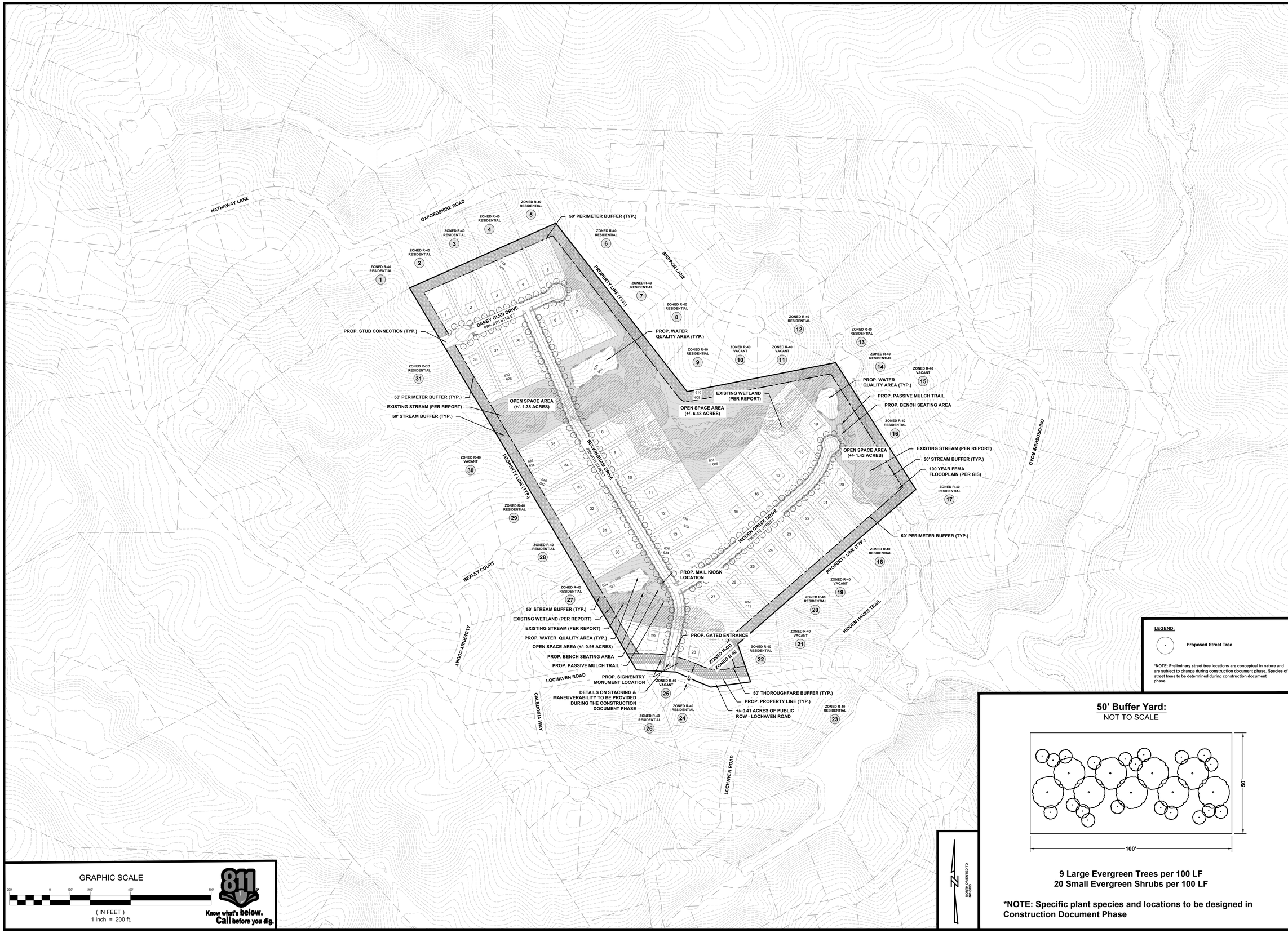
TOWN OF WEDDINGTON, NC

PROVIDENT LAND SERVICES, INC.

PROJECT INFORMATION	
PROJECT MANAGER:	MM
DESIGNED BY:	EL
DRAWN BY:	EL
PROJECT NUMBER:	23-00757
ORIGINAL DATE:	09/08/2023

SHEET:
3 OF 8

U:\2023 Projects (L)\23-00757 - Beckingham (Provident)\Submittals Working Drawings\2023-09-XX_2nd Conditional Zoning Submittal\Sheets\JP43-SEPTIC.dwg, Septic, elong



LEGEND:

Proposed Street Tree

*NOTE: Preliminary street tree locations are conceptual in nature and are subject to change during construction document phase. Species of street trees to be determined during construction document phase.

50' Buffer Yard:

NOT TO SCALE

9 Large Evergreen Trees per 100 LF
20 Small Evergreen Shrubs per 100 LF

***NOTE: Specific plant species and locations to be designed in Construction Document Phase**

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PRELIMINARY NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY
1	10/12/2023	REVISED PER STAFF COMMENTS	EL

CONDITIONAL ZONING PLAN
PRELIMINARY LANDSCAPE PLAN (4 OF 8)

BECKINGHAM

PROVIDENT LAND SERVICES, INC.

TOWN OF WEDDINGTON, NC

PROJECT INFORMATION	
PROJECT MANAGER:	MM
DESIGNED BY:	EL
DRAWN BY:	EL
PROJECT NUMBER:	23-00757
ORIGINAL DATE:	09/08/2023

SHEET:
4 OF 8

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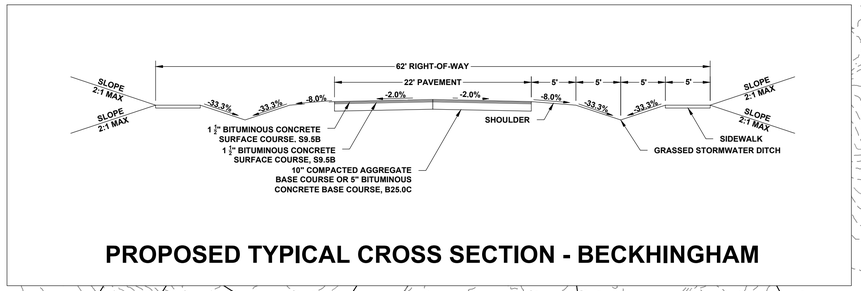
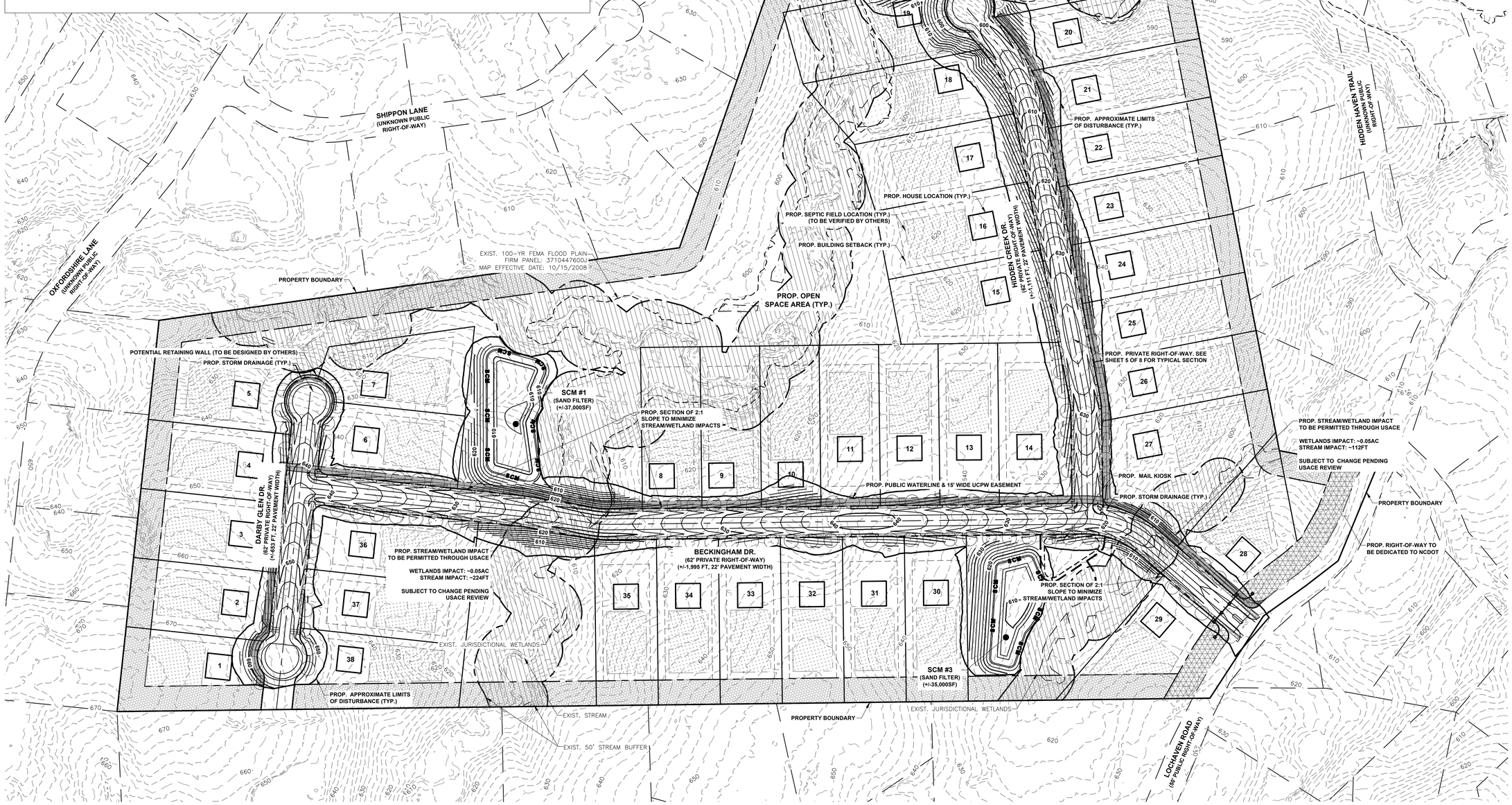


PROPOSED TYPICAL CROSS SECTION - BECKHINGHAM



NOT A FINAL DESIGN

NORTH ORIENTED TO NC GRID (NAD 1983/2011)

GRAPHIC SCALE

100' 0 50' 100' 200' 400'

(IN FEET)
1 INCH = 100 FT.

CONCEPTUAL DESIGN ONLY - SUBJECT TO CHANGE

EXISTING CONDITIONS NOTES:

1. THIS MAP IS NOT INTENDED TO BE A BOUNDARY SURVEY.
2. EXISTING TOPOGRAPHICAL DATA OBTAINED FROM STATE OF NORTH CAROLINA LIDAR & GIS BASE DATA, NOT VERIFIED BY ESP.

EROSION CONTROL NOTES:

1. DOUBLE SILT FENCING SHALL BE INSTALLED ON DOWNSTREAM SIDES OF DRAINAGE AREAS.
2. FLOCCULANT LOGS MAY BE USED IN SWALES, AS REQUIRED.

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3475 Lakeside Drive
Fort Mill, SC 29708
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803-802-2440 (SC)
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PRELIMINARY NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY

CONCEPTUAL OVERALL GRADING & STORM DRAINAGE PLAN

BECKINGHAM

TOWN OF WEDDINGTON, NORTH CAROLINA

PROVIDENT LAND SERVICES

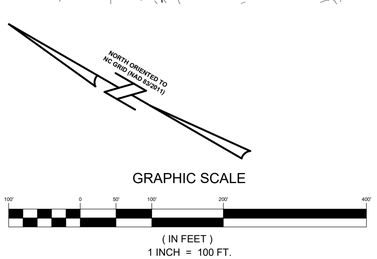
PROJECT INFORMATION	
PROJECT MANAGER:	MRR
DESIGNED BY:	JHP
DRAWN BY:	JHP
PROJECT NUMBER:	23-00757
ORIGINAL DATE:	10/13/2023

SHEET: **5 OF 8**

V:\23-00757 - Beckingham (Pulte)_23-00757\Sheets\23-00757-GRAD OVERALL.dwg, 5 OF 8, hpauley

MATCHLINE - SEE SHEET 7 OF 8

NOT A FINAL DESIGN



CONCEPTUAL DESIGN ONLY - SUBJECT TO CHANGE

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2. EXISTING TOPOGRAPHICAL DATA OBTAINED FROM STATE OF NORTH CAROLINA LIDAR & GIS BASE DATA, NOT VERIFIED BY ESP.

GRADING NOTES:

3. PROPOSED PRIVATE STREET DESIGN AND VERTICAL PROFILES TO BE PROVIDED DURING CONSTRUCTION DOCUMENT PHASE.
4. STORM WATER CONTROL MEASURE DESIGN TO BE PROVIDED DURING CONSTRUCTION DOCUMENT PHASE.
5. TREE PROTECTION FENCING TO BE CALLED OUT DURING CONSTRUCTION DOCUMENT PHASE
6. AREAS AND TYPES SHOWN ARE FOR CONCEPTUAL PURPOSES ONLY AND SUBJECT TO CHANGE.

EROSION CONTROL NOTES:

7. DOUBLE SILT FENCING SHALL BE INSTALLED ON DOWNSTREAM SIDES OF DRAINAGE AREAS.
8. FLOCCULANT LOGS MAY BE USED IN SWALES, AS REQUIRED.

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803-802-2440 (SC)
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PRELIMINARY NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY

CONCEPTUAL GRADING & STORM DRAINAGE PLAN - SHEET 1 OF 2

BECKINGHAM

TOWN OF WEDDINGTON, NORTH CAROLINA

PROVIDENT LAND SERVICES

PROJECT INFORMATION	
PROJECT MANAGER:	MRR
DESIGNED BY:	JHP
DRAWN BY:	JHP
PROJECT NUMBER:	23-00757
ORIGINAL DATE:	10/13/2023

SHEET:
6 OF 8

V:\23-00757 - Beckingham (Pulte)_23-00757\Sheets\23-00757-GRAD.dwg, 6 OF 8, hpauley

EXISTING CONDITIONS NOTES:

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GRADING NOTES:

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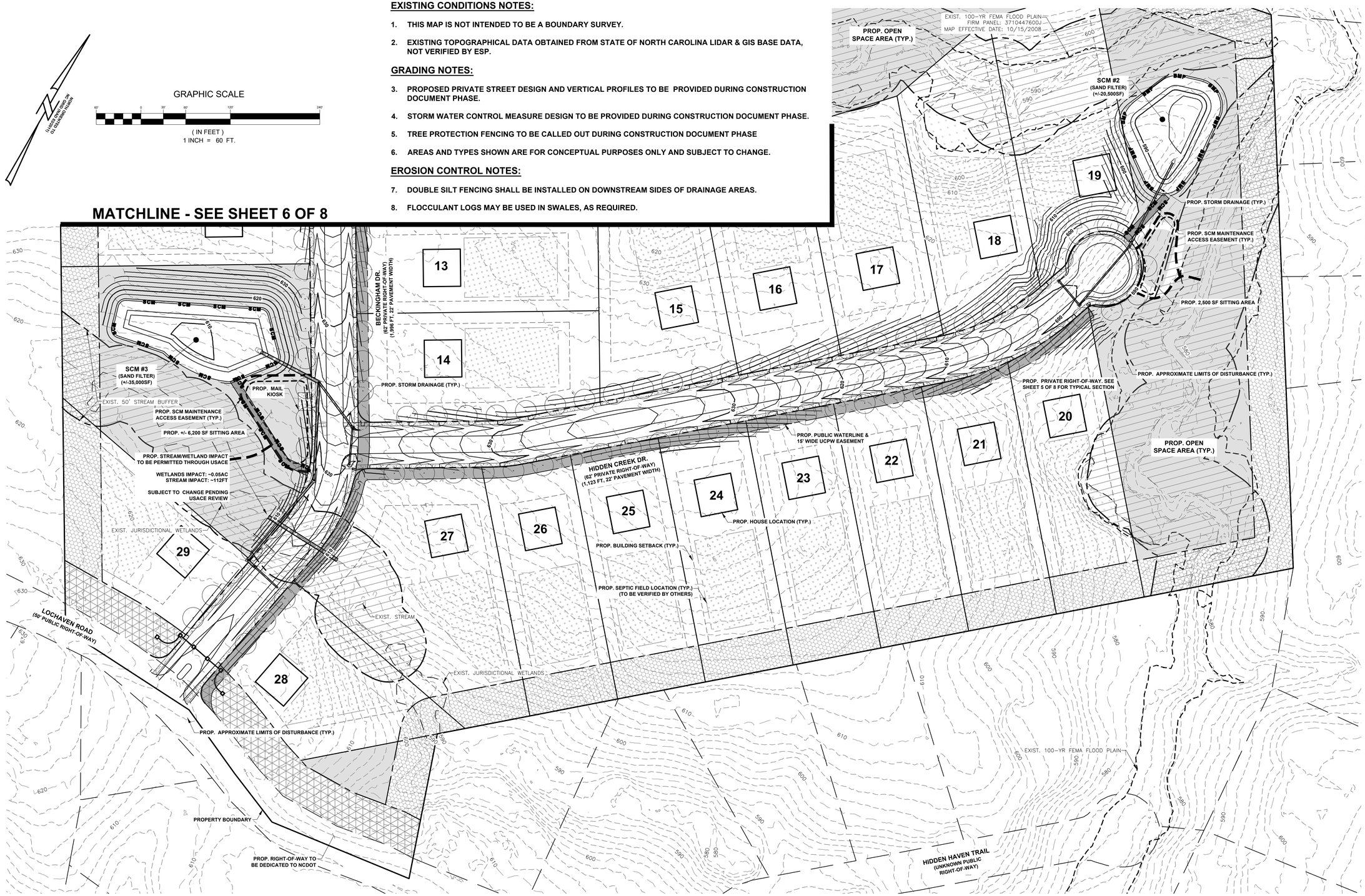
EROSION CONTROL NOTES:

7. DOUBLE SILT FENCING SHALL BE INSTALLED ON DOWNSTREAM SIDES OF DRAINAGE AREAS.
8. FLOCCULANT LOGS MAY BE USED IN SWALES, AS REQUIRED.



CONCEPTUAL DESIGN ONLY - SUBJECT TO CHANGE

NOT A FINAL DESIGN

PRELIMINARY NOT FOR CONSTRUCTION

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Charlotte, NC 28241
3475 Lakeside Drive
Fort Mill, SC 29708
704-583-4949 (NC)
803-802-2440 (SC)
www.espassociates.com

NO.	DATE	REVISION	BY

CONCEPTUAL GRADING & STORM DRAINAGE PLAN - SHEET 2 OF 2

BECKINGHAM

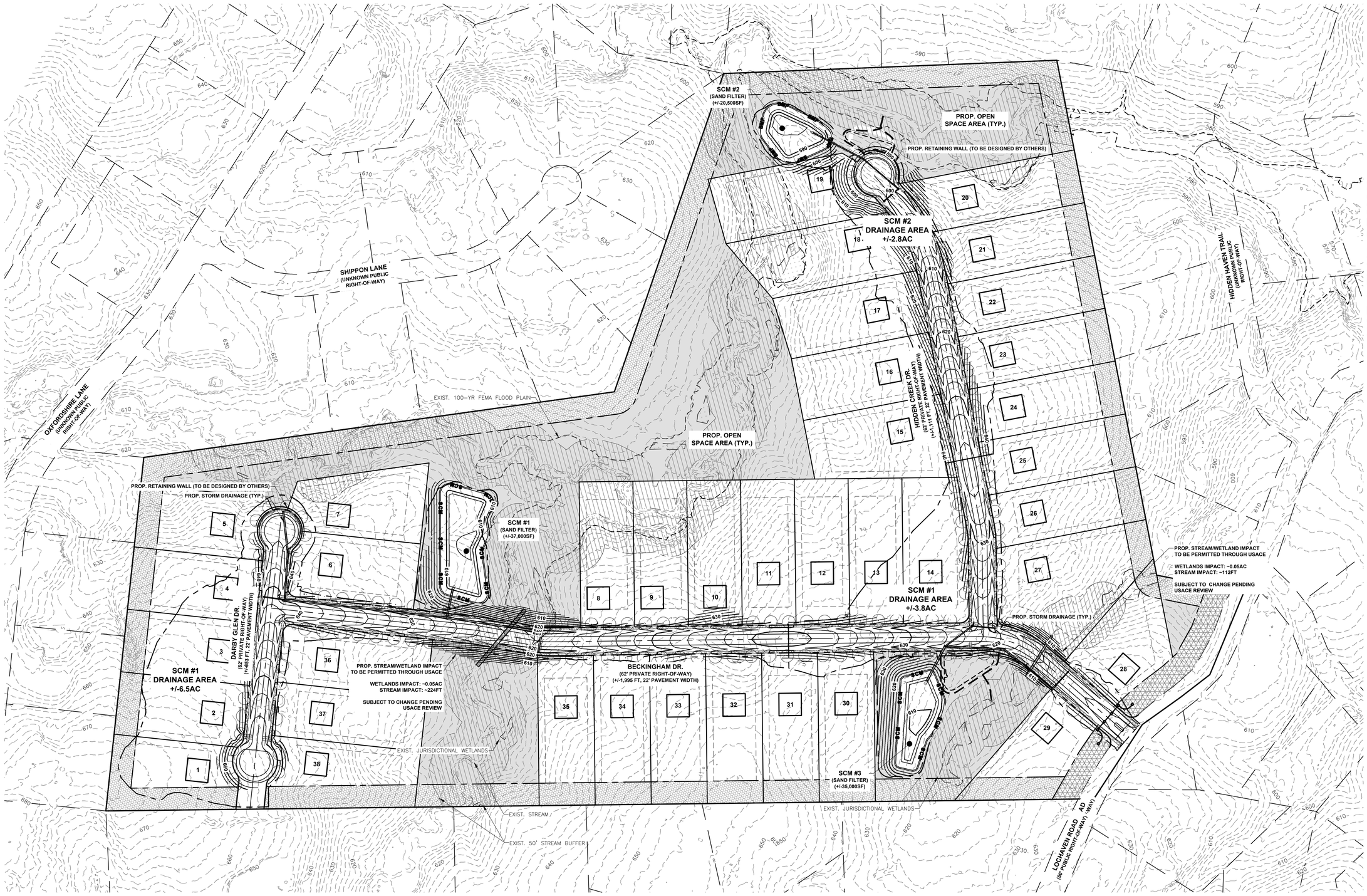
TOWN OF WEDDINGTON, NORTH CAROLINA

PROVIDENT LAND SERVICES

PROJECT INFORMATION	
PROJECT MANAGER:	MRR
DESIGNED BY:	JHP
DRAWN BY:	JHP
PROJECT NUMBER:	23-00757
ORIGINAL DATE:	10/13/2023

SHEET: 7 OF 8

V:\23-00757 - Beckingham (Public)_23-00757\Sheets\23-00757-GRAD.dwg, 7 OF 8, hpauley



NOT A FINAL DESIGN

NORTH ORIENTED TO NC GRID NAD 83(2011)

GRAPHIC SCALE

100' 0 50' 100' 200' 400'

(IN FEET)
1 INCH = 100 FT.

CONCEPTUAL DESIGN ONLY - SUBJECT TO CHANGE

EXISTING CONDITIONS NOTES:

1. THIS MAP IS NOT INTENDED TO BE A BOUNDARY SURVEY.
2. EXISTING TOPOGRAPHICAL DATA OBTAINED FROM STATE OF NORTH CAROLINA LIDAR & GIS BASE DATA, NOT VERIFIED BY ESP.

BASIN SIZING NOTES:

3. ALL SCMS WILL BE SIZED/DESIGNED FOR 25 YEAR FLOWS.

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P.O. Box 7030
Charlotte, NC 28241
3475 Lakeside Drive
Fort Mill, SC 29708
704-583-4949 (NC)
803-802-2440 (SC)
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PRELIMINARY
NOT FOR
CONSTRUCTION

NO.	DATE	REVISION	BY

CONCEPTUAL SCM DRAINAGE PLAN

BECKINGHAM

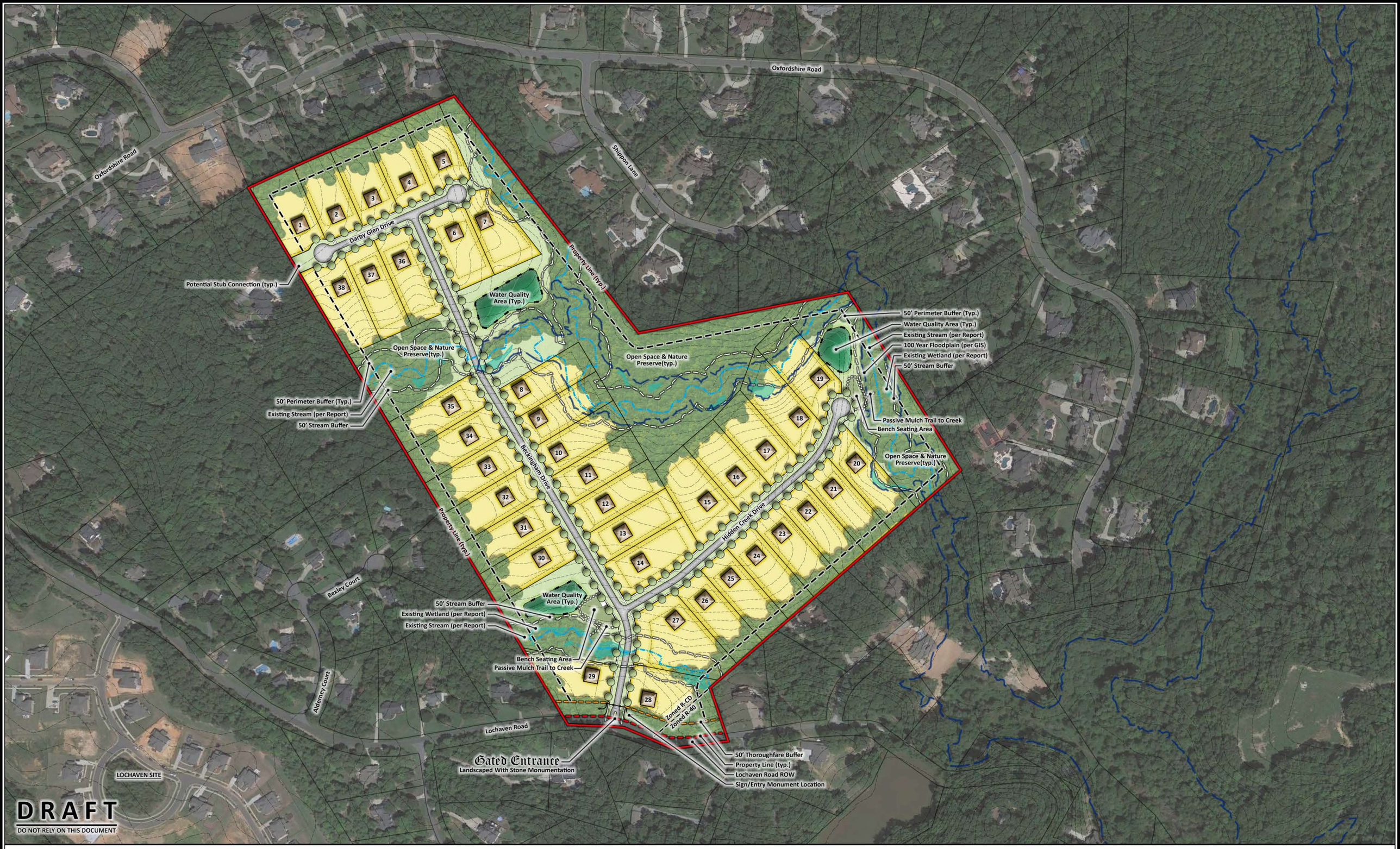
TOWN OF WEDDINGTON, NORTH CAROLINA

PROVIDENT LAND SERVICES

PROJECT INFORMATION	
PROJECT MANAGER:	MRR
DESIGNED BY:	JHP
DRAWN BY:	JHP
PROJECT NUMBER:	23-0075T
ORIGINAL DATE:	10/13/2023

SHEET:
8 OF 8

V:\23-0075T - Beckingham (Pulte)_23-0075T\Sheets\23-0075T-DA MAP.dwg, 8 OF 8, hpauley



ESP Associates, Inc.
P.O. Box 7030
Charlotte, NC 28241
803.802.2440
www.espassociates.com

NORTH

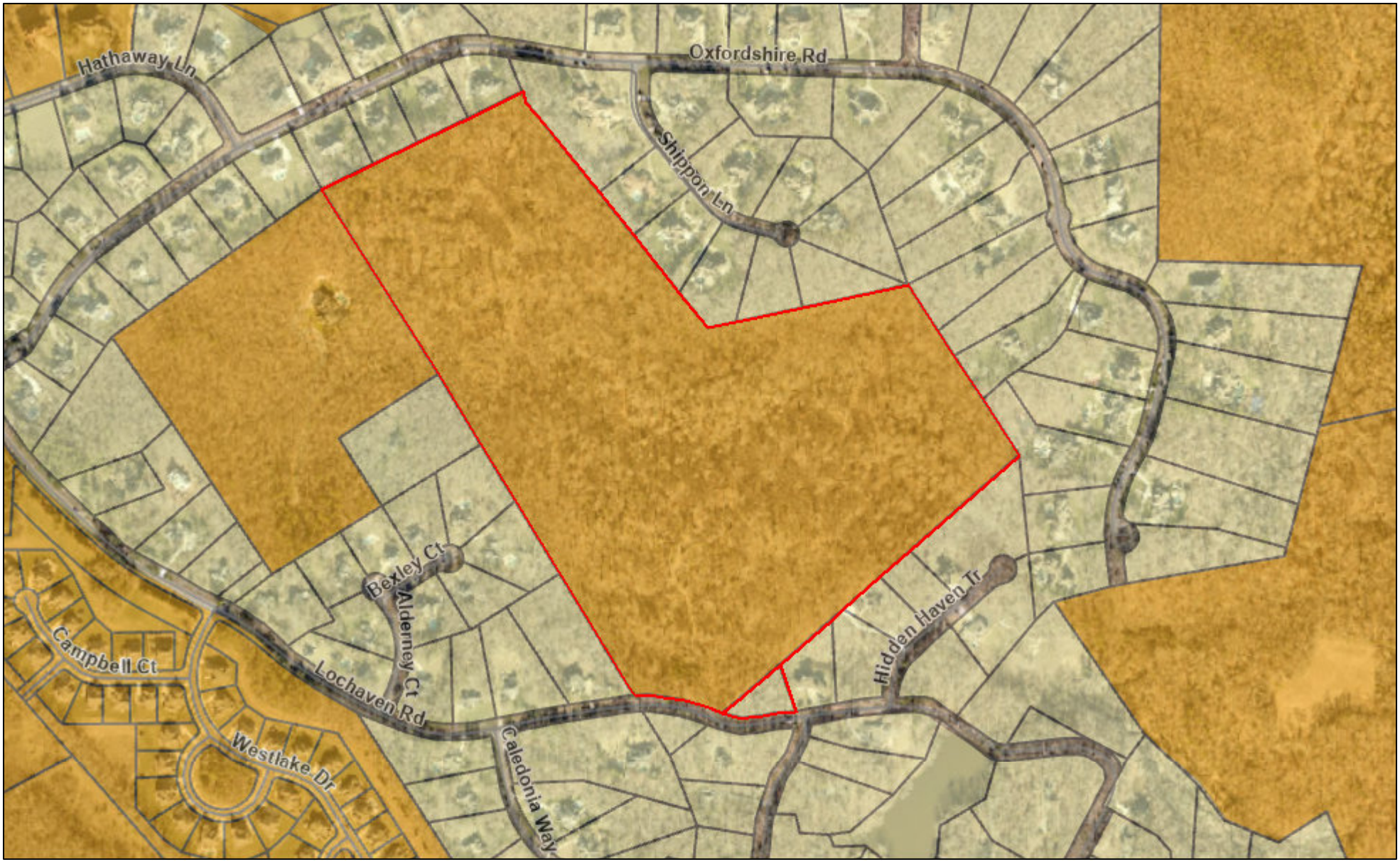
Beckingham

Illustrative

ESP Job #23-00757 October 12, 2023

PROVIDENT LAND SERVICES
6707 Fairview Road, Ste B
Charlotte, NC 28210

BECKINGHAM ZONING MAP



October 17, 2023

Weddington Zoning

- B1 (CD)
- B2 (CD)
- ED
- MX
- R-40
- R-40D
- R-60
- R-80
- R-CD
- RE
- Conditional Zoning
- Downtown Overlay

1:7,330

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

COMMUNITY MEETING REPORT FOR BECKINGHAM COMMUNITY

Petitioner: Provident Land Services, Inc.

Property: +/- 61.299 acres along Lochaven Road

This Community Meeting Report is being filed with the City of Weddington Planning Department pursuant to the Requirements of the Town of Weddington Unified Development Ordinance (UDO).

PERSONS & ORGANIZATIONS CONTACTED WITH DATES & EXPLANATIONS OF HOW CONTACTED:

The required Community Meeting was held on Tuesday, September 12th, 2023. The Town of Weddington mailed a written notice of the date, time, and details of the Community Meeting, as required by the Ordinance.

TIME & DATE OF MEETING

The Community Meeting required by the Ordinance was held Tuesday, September 12th, 2023, at 6:00 PM at the Weddington Town Hall, 1924 Weddington Road, Weddington, North Carolina 28104.

PERSONS IN ATTENDANCE AT MEETING:

The list of attendees from the required Community Meeting is attached as **Exhibit A.** The Petitioner's representatives at the required Community Meeting were Tom Waters and Kristin Dillard with Provident Land Services, and Emily Long and Cole Powell of ESP Associates. Also at the meeting was Karen Dewey, Town Clerk for the Town of Weddington.

SUMMARY OF ISSUES DISCUSSED AT THE MEETING:

I. Overview of Petitioner's Presentation & Introduction of Development Plan.

Kristin Dillard welcomed the participants to the meeting & introduced members of the Petitioner's team, including Tom Waters from Provident Land and Emily Long & Cole Powell from ESP Associates.

Tom Waters led participants through the PowerPoint presentation and provided the following information during the presentation:

Tom provided an overview of Provident Land Services, as well as our civil engineering team from ESP Associates and mentioned our current custom builder, AR Homes. Tom also reviewed several past developments that Provident Land has been involved with.

Tom discussed the location of the 61.299+/- acres along Lochaven Road and explained that we are working with the current owners who have held this legacy property for 60 years to shepherd their land through the Conditional Zoning Process. The current zoning is R-CD & R-40 and we will be following the process for R-CD (CZ) Conditional Zoning for this land under the Town's new UDO requirements. Tom then provided an overview of the Conditional Zoning process & timing.

The proposed use will be a gated, upscale community with private streets to allow up to 42 large, estate-sized homes with 40,000 square foot lots as a minimum. The proposed density is .68 per

acre and the community will have passive trails and bench seating that will follow the creek line. These homes will be septic sewer with county water.

Tom further explained that we will have 2-3 high end custom builders and to ensure maximum retention of trees and nature, all homes will be individually site placed by the builder, as opposed to a mass graded site.

Tom explained that the community will have an environmentally friendly bar ditch design street system to control storm water runoff, as the storm water will filter through the ground, rather than a traditional curb & gutter community which tends to push the storm water down the streets. All storm water runoff will be detained within various ponds within the property.

The community will also include a 50' perimeter buffer around the entire development, as well as three detention ponds. These proposed sand filter ponds will further control runoff and will allow runoff to slowly dissipate naturally as rainwater leaves the site.

Along with the gated entrance with turnaround, the community will have upgraded streetlights & street signs.

Tom explained that we also intend to extend the existing 12" waterline from Westlake Drive to our community entrance approximately 1700 feet. This will allow pressurized water nearby and could be a benefit to neighboring properties who wish to tie into the county water, as well as for any needed water pressure to assist the fire department as needed.

Tom discussed the upgraded environmentally friendly septic systems that will be used by our builders that allow up to a 50% reduction of space, as compared to conventional septic systems. This will result in a greater reduction of footprint and land disturbance.

Finally, Tom explained that there will be an architectural review board for the community with strict architectural guidelines and provided examples of some of the AR Homes elevations that will be used. Some of these include side load or courtyard entry only homes, brick, natural & precast stone, stucco, cedar shake, cementitious fiber board, fiber shake, architectural shingles, slate, tile and/or metal.

Tom's presentation concluded and he opened the meeting for any questions or comments.

II. Summary of Questions / Comments / Responses:

Question: There are areas on the site, particularly near the stream, that don't percolate well and will not accommodate a septic system. How will this be handled?

Answer: It was explained that all the soil will be tested to confirm its ability to percolate before building a septic system.

Question: There is only one ingress and egress point on Lochaven Road. Are there plans for a second access point?

Answer: The Beckingham site will not be able to provide another access point. The site is surrounded by fully developed properties and only has frontage along Lochaven Road.

Question: Can we add sidewalks on Lochaven Road?

Answer: We will follow NCDOT standards along Lochaven Road in front of our property.

Question: Lochaven Road is narrow, and the edges are crumbling. Can the road be widened?

Answer: We will reach out to NCDOT for any assistance they can provide. NCDOT is currently looking into widening Providence Road to four lanes that will prohibit any left turns from Lochaven onto Providence Road.

Question: It is nearly impossible to turn right from Lochaven Road onto Providence Road. Can something be done to improve that condition?

Answer: We will discuss the situation with NCDOT to see if they will allow some narrow asphalt additions within the existing ROW along both sides of Lochaven that might improve the right turning movements at the intersection.

Question: There is a blind curve along Lochaven Road. Can that condition be improved to allow for increased safety?

Answer: We will discuss the situation with NCDOT to see if they will allow some additional asphalt within the existing ROW to potentially soften that curve and also allow us to remove vegetation that is impairing the ability to see around the curve.

General Comment: We need to keep the traffic moving slowly on Lochaven Road. There are a lot of people who walk along the road and there are children who bike along Lochaven Road.

Question: Why is the county waterline being extended to the property?

Answer: The project will be extending the 12" Union County waterline approximately 1700 feet to provide public water to the Beckingham residents. We are not planning to drill wells and the future residents will need access to clean water. Also helps with water pressure for any Fire Department needs in the future in this area.

Question: Why did Pulte end up pulling out of this deal?

Answer: We are not aware of the details regarding what happened with the previous petitioner.

Question: How is this project different than the Pulte project?

Answer: The homes within Beckingham will be individually site placed to help us preserve as many of the trees and natural areas as possible. The previous petitioner was considering to develop building pads, which would result in more grading activity and more clearing of the existing trees. We are also proposing a bar ditch road section, which is better environmentally than the curb and gutter road section the previous petitioner was proposing.

Question: How long would this whole process take?

Answer: Approximately 3-5 years starting after the approval for the entire neighborhood to be finished.

General Comment: The residents have major concerns regarding the condition of Lochaven Road.

Answer: NCDOT has a routine maintenance of Lochaven Road scheduled for 2024. We will reach out to NCDOT to get a better understanding of what they are planning to do, and what we can do to help improve the situation.

Question: Are the roads inside the subdivision going to be private and turned over to an HOA?

Answer: Yes, the road will be built to NCDOT and Town standards and maintained by the HOA.

Question: What is the purpose of the panel block septic system?

Answer: The panel block septic system offers a 50% reduction of space and land disturbance. This septic system will allow for more vegetation to remain on site.

Question: Are there plans for the development to have an exit onto Providence Road?

Answer: No, it is not possible since most all of the surrounding properties have been developed and homes built.

Question: Are the water quality areas going to be wet ponds?
Answer: No, at this time we are planning to use sand filters. These areas would not be permanently wet.
General Concern: Some residents express concerns about the runoff from the site going into their property and making flooding on their land worse.
Answer: It was explained that the water quality areas would be designed to capture rainwater on site and release it at the same rate as predevelopment, in accordance with state water quality and detention design requirements.
General Concern: A few residents would like to see an increased buffer around the perimeter of the community.
Answer: It was explained that due to the creek, there are buffer limitations. Additionally, increasing the buffer will impact the ability to site place homes & septic systems for minimal environmental impact on lots.

Tom Waters reminded attendees to add their names to the sign in sheet for any updates.
The meeting concluded at approximately 7:15 pm

cc: Robert Tefft, Town of Weddington Planner
Karen Dewey, Town Clerk, Town of Weddington
Amelia Helms, P.E., NCDOT
Emily Long & Cole Powell, ESP Associates

UPDATES TO BECKINGHAM SITE PLAN BASED ON COMMENTS & CONCERNS FROM THE COMMUNITY MEETING HELD ON SEPTEMBER 12, 2023.

The following changes & commitments from the Petitioner will be made a part of the official Planning Board & Town Council submittal.

1. Petitioner will reduce the total number of homesites for Beckingham from 42 down to 40 total homesites. We will observe the 50-foot buffer as shown on the plan. Due to the constraints of the property within the creek system, we are unable to make the buffer any wider than 50 feet. The additional width on some lots will enable us to better site place the homes and the septic systems for the least impacts on each lot.

2. Petitioner will increase storm water detention ponds on property from a 10-year storm event to a 25-year storm event to improve site conditions and prevent additional runoff.

3. Petitioner will work with NCDOT to add 5-+/- total feet of asphalt within the existing right of way on each side of Lochaven Road at Providence Road to allow for a wider ingress and egress and turning conditions at this intersection. NCDOT has preliminarily approved these improvements for the benefit of the intersection. The petitioner is committing to these improvements based on NCDOT final approval and a positive petition for Beckingham. Said improvements would be done at the time Beckingham is developed.

4. Petitioner will work with NCDOT to soften the blind curve condition with additional asphalt within the ROW that exists along Lochaven Road before Oxfordshire Road to increase visibility and site distance along this stretch of Lochaven Road. The petitioner will also help to remove vegetation within this curve for improved sight conditions. Petitioner has obtained permission from the landowner at this blind corner, to remove said vegetation. This will improve sight and safety conditions for vehicles and foot traffic. NCDOT has preliminarily approved these improvements for the benefit of this sharp curve. The petitioner is committing to these improvements based on NCDOT final approval and a positive petition for Beckingham. Said improvements would be done at the time Beckingham is developed.

5. Petitioner will work with NCDOT to confirm timing & scope for the current road widening project that is scheduled to begin in 2024 at the Lochaven Road intersection, as well as any road repairs & improvements that will be made by NCDOT along Lochaven Road.

EXHIBIT A

SIGN IN SHEET
FOR FUTURE NOTIFICATIONS & INFORMATION ON BECKINGHAM

Community Informational Meeting
Tuesday, September 12th 2023
6:00 PM

	NAME(S)	EMAIL	ADDRESS	PHONE (OPTIONAL)
1	Harry Chilcot	[illegible]	—	
2	JACK PLYLER	jack.plyler@gmail.com	1015 ~~EG~~ATE LN	
3	Ivan & Kami Merritt	kenyagymnast@yahoo.com	700 Lochaven Rd	
4	James & Josette Moore	jklmoore58@twc.com	725 Lochaven	
5	Wolfgang Bertram	w_bertram@yahoo.com	663 Lochaven	
6	LIZ HORTON	ECOBLE@ATT.NET	5017 WOODVIEW LN	
7	Kevin McDade	kevmcdade@gmail.com	104 Bexley Ct.	
8	Steve McArdle	smcdc@outlook.com	762 Lochaven Rd	
9	Mike Waller	mikeRwaller@gmail.com	606 Lochaven Rd	

SIGN IN SHEET
FOR FUTURE NOTIFICATIONS & INFORMATION ON BECKINGHAM

Community Informational Meeting
Tuesday, September 12th 2023
6:00 PM

	NAME(S)	EMAIL	ADDRESS	PHONE (OPTIONAL)
10	Sherri McGirt	smcgirt@windstream.net	302 Caledonia Way	704-807-2986
11	Gary Palmer	Gary.Palmer@PalmerCustomBuilders.com	1008 Shippon Lane	704.2015257
12	John GALICH	john4344@earthlink.net	5020 Oxfordshire	704 846 4236
13	Cheryl + Brian Thumm	Cheryl.hibbert@usa.Net	405 Lochaven Rd	616-389-7520
14	Tom Smith	~~[illegible]~~ tjsdg7680@gmail.com	1840 Tanglebrier Ct	7048778825
15	Mike Defiore	Mdac356@gmail.com	757 Lochaven Rd	650 516 6503
16	DAVE STRUBBE		225 Hidden Haven	
17	Christopher Neve	christophernever@ymail.com	110 CHATSESTONE CT	919-672-2539
18	Chris Granelli	cmg@alturagroup.net	1012 Shippon	

SIGN IN SHEET
FOR FUTURE NOTIFICATIONS & INFORMATION ON BECKINGHAM

Community Informational Meeting
Tuesday, September 12th 2023
6:00 PM

	NAME(S)	EMAIL	ADDRESS	PHONE (OPTIONAL)
19	Phil Williams	philw6036@gmail.com	Oxfordshire-Rd	
20	Bill Deter		Waybridge Way	
21	Jay Moffat.	DMOFFAT215@GMAIL.com.	LOCHAVEN.	
22	Tracy Stor	tlsjaj@msn.com	Poo Place	
23	Dmitriy Ioffe	dioffe68@gmail.com	633 Lochaven Rd	
24	Nicole Ioffe	nrioffe@gmail.com	633	✓
25	Colleen Blanard	cw24933k@gmail.com	Lochaven Rd.	
26				
27				

MEMORANDUM

TO:	Mayor and Town Council
FROM:	Karen Dewey, Town Administrator/Clerk
DATE:	November 13, 2023
SUBJECT:	Union County Library Foundation Grant

Included in the packet is the draft of a Capital Project Grant Agreement for your review and discussion. For consideration is a dollar amount to grant to the Union County Library Foundation (UCLF) for the capital campaign for the Southwest Regional Library. This capital grant does not involve recurring payments to the UCLF, but a single contribution amount paid at one time or divided over multiple fiscal years with the possibility of a naming opportunity in the Southwest Regional Library, depending on the amount. All funding provided by the Town would go to the capital campaign for the Southwest Regional Library to enhance interior furnishings, develop the basic print and nonprint collections, and augment interior and exterior programming spaces making this library an exceptional place of learning and opportunity for our community.

Council may choose to consider approval of the grant application from the Union County Library Foundation Board, a dollar amount to be granted, and execution of the grant agreement.

Attached: Draft Grant Agreement
Capital Campaign Naming Opportunities
UCLF Case for Support

Our Library. Our Future.

A capital campaign to support our newest Union County Library.

CAPITAL CAMPAIGN
NAMING OPPORTUNITIES

Naming Opportunity	Size of Gift
LITERARY CHAMPION	
Children's Early Literacy Center*	$250,000
BIBLIOPHILE	
Customizable Package	$150,000
STEAM Lab & Equipment	$150,000
PUBLISHER	
Adult Reading Room*	$100,000
Large Meeting Room*	$100,000
Children's Programming Room	$100,000
Outdoor Patio*	$100,000
STEAM Lab	$100,000
EDITOR	
Children's Reading Nook (4)	$75,000
Outdoor Children's Space (2)	$75,000
Teen Lounge	$75,000
AUTHOR	
Story Time Alcove	$50,000
Personal Study Room (4)	$50,000
Sensory Garden Sponsor (2)	$50,000
Outdoor Storywalk	$50,000

Naming Opportunity	Size of Gift
ILLUSTRATOR	
IT/WiFi Sponsor (2)	$25,000
STEAM Technology Equipment (2) (Science, Technology, Engineering, Arts and Math)	$25,000
LIBRARIAN	
Collection Sponsor (9 available, 1 named)*	$10,000
Study Café	$10,000
PATRON	
Study/Reading Stations and Computer Station (24 available, 2 named)*	$5,000
READER	
Outdoor Tables, Benches, Chairs (19 available, 1 named)*	$2,500
Storywalk Reading Stations (19 available, 1 named)*	$2,500
Material Displays (6)	$2,500
Teen Gaming Nook	$2,500
LIBRARY LOVER	
Donations of any amount are appreciated. Gifts up to $2,499 will be recognized without a denomination attached.	

*named space

All naming rights are subject to approval by the Union County Board of Commissioners.

UNIONCOUNTY LIBRARY FOUNDATION

info@UClibraryfoundation.org
UCLibraryFoundation.org

Our Library. Our Future.

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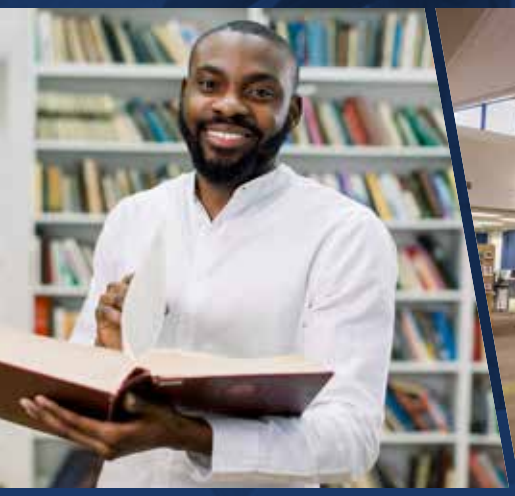

sponsored by the

UNIONCOUNTY
LIBRARY FOUNDATION

A New Chapter for Union County

Announcing our Southwest Regional Library

For more than three centuries, libraries have been essential institutions in America. We believe today, more than ever, libraries play a crucial role in a community – in *our* community.

That's why the Union County Library Foundation is excited to support our third Union County regional library with a projected opening in the spring of 2024.

Southwest Regional Library will serve the communities of Marvin, Mineral Springs, Waxhaw, Weddington, Wesley Chapel, and beyond. It will be a place to learn, grow, and gather. A place where people of all ages, backgrounds, ethnicities, and socioeconomic means can come together. A place where people can find the resources and the support they need to succeed. A place where imaginations are sparked, curiosity is encouraged, and friendships are formed.

Our new library is where, after a season of social isolation and time apart, *we can rediscover what it means to connect to community.*

This is our library. *This is our future.*

The Union County Library Foundation

Champions of our libraries and our patrons

Established in 1988, the Union County Library Foundation, Inc. is the capital fundraising support group for Union County Libraries and, as such, is overseeing the *Our Library, Our Future* campaign. As a 501(c)(3) charitable organization, we are chartered to receive, hold, invest, and expend funds for the purpose of purchasing, building, or improving facilities designed to enhance library services for Union County residents.

The Need

A library for our future

Currently, the only physical library in the southwest part of Union County is the well-loved and bustling Waxhaw Library in historic downtown Waxhaw. With just 2,900 square feet and a maximum building occupancy of 50, not enough space exists for our large array of library services to adequately occur. The library does not have ample parking or usable outdoor areas to comfortably and safely accommodate our growing number of patrons. While the staff does a wonderful job creatively utilizing its existing space, they are drastically limited by such a small building, which does not allow for multi-age programming, community gathering areas, or an enhanced collection.

OUR GOAL: $1.5 MILLION

The Solution

A campaign to enhance our new library

The new 20,000-square-foot Southwest Regional Library will incorporate the Waxhaw Library and expand access to services in one of the most rapidly growing regions of NC. With funds from the 2016 bond building the physical location, the $1.5M capital campaign will fund the books, critical amenities, technology, and programming spaces to make this library an exceptional place of learning and opportunity for our community.

70,000+ residents in Southwest Union County located within **15 minutes** of the library

A New Chapter for Union County

Announcing our Southwest Regional Library

For more than three centuries, libraries have been essential institutions in America. We believe today, more than ever, libraries play an crucial role in a community – in *our* community.

That's why the Union County Library Foundation is excited to support our third Union County regional library with a projected opening of mid-winter 2022.

Southwest Regional Library will serve the communities of Marvin, Mineral Springs, Waxhaw, Weddington, Wesley Chapel, and beyond. It will be a place to learn, grow, and gather. A place where people of all ages, backgrounds, ethnicities, and socioeconomic means can come together. A place where people can find the resources and the support they need to succeed. A place where imaginations are sparked, curiosity is encouraged, and friendships are formed.

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The Plan

A library for us all

Our Library, Our Future will allow us to create spaces in our new library that are as inspiring as the learning taking place inside them. From toddlers participating in storytime to school-age children needing homework help, from STEAM programs for teenagers and adults to social clubs for our senior citizens, ***a library truly benefits us all.***

A library for our **Children and Youth**

Children's Storytime Area, Programming Space, and Reading Nooks

From dedicated program spaces to cozy reading nooks scattered throughout, our children's areas facilitate meaningful interaction between children and caregivers and provide activities for kids of all ages and abilities.

Teen Lounge

The Teen Lounge is a safe space where teens can be themselves without fear of judgment, explore new experiences, collaborate on school projects, and work on college or job applications for their next step in life.

Core Programs

- storytimes that incorporate reading, writing, singing, and playing
- homework and school curriculum assistance
- summer learning
- early literacy
- inclusive programs (with bilingual elements, ASL interpreters, and sensory-friendly activities)

A library for our **Adults**

We're facilitating lifelong learning, supporting formal education, enhancing the quality of life, and expanding cultural and recreational opportunities for students of the surrounding colleges and universities and for adults of all ages.

Core Programs

- job and resume assistance
- author and artist talks
- art shows and classes
- book signings and book clubs
- writers' workshops

A library for our **Community**

We're developing spaces and programs where history is celebrated, community is strengthened, and learning is empowered.

STEAM Lab (Science, Technology, Engineering, the Arts, and Mathematics)

The STEAM Lab is an equalizer through its technology and equipment fit to serve community members of all abilities. From job-search assistance to robotics and coding, from memory aid devices to large-print keyboards, the STEAM lab is where creativity can flourish.

Community Rooms

Our spacious study rooms and large meeting room are the perfect spaces for companies, nonprofits, clubs, and other groups to meet.

Outdoor Reflection Area

Our outdoor reflection area provides a creative space for outdoor learning, reading, and gathering – and eventually will become a place for outdoor programming, activities, and events.

A library for our **Future**

We're empowering our community to step boldly into the future through…

Bridging the Technology Gap

Our "Teens Teach Technology" program bridges the generational divide between older adults and teens as they work together to learn how to use digital platforms and about internet safety.

Providing Digital Access

Our library cards not only provide access to our print books but to eBooks, eAudiobooks, films, newspapers, magazines, and scholarly journals as well.

In Their Own Words

What does a library mean to you?

Innovation and Progress

"I am enthusiastic about the expansion of the Library's STEAM Services to all Union County Library locations via mobile makerspaces, working with teens in the community to create an engaging space where all Union County teens feel welcome, and developing a mobile Library app to assist with self-service and/or contact free options."

Stephanie Johnson, UCL Teen and Technology Librarian

Knowledge and Access

"Libraries, like community colleges, are transformative. They provide access to knowledge, which has the capacity to change lives. Opportunities for partnership will have a collective impact on increasing access and success for the community we serve."

Dr. Makena Stewart, Associate Vice President for Student Success, South Piedmont Community College

Community and Belonging

"In Weddington we want our residents to feel a sense of belonging. Our new regional library allows us to continue this mission through a collaborative partnership, providing educational opportunities, and expanding our community building efforts outside of our town."

Elizabeth Callis, Mayor, Weddington

Janice Propst, Mayor Pro-Tem, Weddington

Creativity and Inclusivity

"The Library has become the standard bearer in arts appreciation in Union County by opening its doors, inclusively, to public arts edutainment (education + entertainment) opportunities for all the citizens of Union County."

Ryan Cureton, Founder and CEO of Amun Ra Arts Foundation

Will you help?

Be a part of our story.

We need your support to create the best possible library for our community. An investment in Southwest Regional Library is an inspired investment in Union County. **Write your name in our book today.**

info@UCLibraryFoundation.org
UCLibraryFoundation.org

UNIONCOUNTY
LIBRARY FOUNDATION

316 East Windsor Street
Monroe, NC 28112
info@UClibraryfoundation.org
UCLibraryFoundation.org

*The Union County Library Foundation, Inc. is a tax-exempt public 501(c)(3) charitable organization. All contributions are fully tax deductible to the extent of the law. EIN:#56-1601255

CAPITAL IMPROVMENT GRANT AGREEMENT FOR

Union County Library Foundation

This Capital Improvement Grant Agreement (the "Grant Agreement") entered into on this _____ of _____, 20____ by and between TOWN OF WEDDINGTON, a North Carolina municipal corporation ("Town"), and the following Grantee, Union County Library Foundation, a North Carolina non-profit corporation ("Grantee").

WHEREAS, Town is authorized, pursuant to NCGS §160A Article 18 to provide recreational facilities and programs for the benefit of the public; and

WHEREAS, Town is authorized, pursuant to §160A- 20.1 to contract with and appropriate money to Grantee in order to carry out the public purpose of providing parks and recreation facilities, education and programming for the benefit the citizens of Weddington; and

WHEREAS, Grantee was established in 1988 and serves as the capital fundraising group for Union County Libraries and is chartered to receive, hold, invest, and expend funds for the purpose of purchasing, building, or improving facilities designed to enhance library services for Union County residents; and

WHEREAS, the Grantee seeks funding for books, critical amenities, technology and programming spaces for the new Southwest Regional; and

WHEREAS, Grantee has applied to the Town for a Capital Improvement Grant for the Project for the Town's fiscal year 2023-2024 by completing the Capital Improvement Grant Application attached hereto and incorporated herein as **Exhibit A**;

WHEREAS, the Town has reviewed Grantee's grant Application and awards to Grantee a grant award subject to the terms and conditions set forth below.

NOW THEREFORE, in consideration of the foregoing recitals, of mutual promises of the Parties and of other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Town and Grantee agree as follows:

1. Grant Award. The Town hereby grants to Grantee a Facilities Grant for fiscal year 2024 in the amount of **up to $XXXXX**.

2. Use of Grant Awards. Grant Awards are to be used by Grantee solely for the Project as more particularly described in the Construction Plans and Grant Application submitted by Grantee, attached hereto as **Exhibit A** and incorporated herein by reference.

3. Funding Period. Each funding period for the Grant Award begins on July 1 and terminates on June 30 (the "Annual Funding Period").

4. Payment of Grant Award. The Town will distribute the Grant Funds to Grantee in the form of a one time payment/3 payments of $X.XX

5. Town Not Responsible for Funding Shortfalls**.** The Town shall not be liable nor responsible for funding shortfalls nor Project deficits. The Town Contribution to the Project shall not exceed $xxxxx unless the Town agrees otherwise in writing.

6. Accounting of Funds. Grantee shall submit to the Town a full and accurate accounting summarizing all expenditures for the Project along with all funding sources on or before the 20th day of each month for the previous month (example: May 20th report will summarize through April 30) during the Funding Period. Additionally, Grantee shall submit a Final Report to the Town no later than 60 days after receiving a certificate of occupancy for the Project that summarizes all expenditures made and all funding sources contributed to the project. Grantee shall retain and keep safe financial and other records that corroborate the information contained in the Final Report (invoices, receipts, pay vouchers, etc.) for a period of no less than three years. The Town shall have the authority to review these financial records from time to time.

7. Material Failure to Perform. The Town shall have no obligation to pay the Grant Award or any remaining portion thereof should Grantee fail to provide required financial reporting or should Grantee materially fail to comply with Exhibit A including but not limited to a material failure to meet budget projections and/or programming goals. In the event of such material failure, Grantee shall return the full amount of the Annual Grant Award already paid to Town.

8. Operation Deficits. The Town shall not be responsible for nor liable for deficits of Grantee.

9. Consideration of Future Funding. Upon annual application by Grantee and upon material compliance with a prior year's Application, the Town may consider future Grant awards.

10. Indemnification. Grantee assumes sole responsibility and liability, and will defend, indemnify, and hold Town harmless from and against all liabilities, fines, suits, claims, demands, actions, injuries, damages, judgments, costs, expenses, penalties or losses of any kind or nature whatsoever (including without limitation for damage to real or personal property, and/or or injury or death to a person) (collectively, the "Liabilities") caused by, arising out of, or in any manner related to Project, including from intentional or negligent acts by Grantee or its agents,

DRAFT

employees, licensees, contractors, patrons, guests, invitees, customers and other visitors, or the public; provided, however, that Grantee shall not be liable to Town for liabilities arising from or directly related to Town's gross negligence or willful misconduct. Grantee waives all claims against Town for liabilities arising from or related to the Project, except for claims arising from or directly related to Town's gross negligence or willful misconduct. Grantee's indemnity obligations pursuant to this Section shall survive the termination or expiration of this Agreement.

11. Insurance. Grantee will procure and maintain a builder's risk policy or policies of insurance adequately covering the replacement cost of the Project, and any liability which may arise out of, or by virtue of, the development and construction of the Project including without limitation by Grantee or its agents, employees, licensees, and contractors. Without limiting the foregoing, Grantee will at all times maintain (i) comprehensive general liability insurance (including premises-operations, contractual liability and completed operations coverage, if listed as separate coverage parts) with per occurrence limits and aggregate limits (including any excess or umbrella coverage) of not less than $1,000,000 and $3,000,000, respectively, (ii) such workers' compensation and other employers' liability insurance as may be required by the jurisdiction in which Grantee is doing business. All such insurance policies will name both Grantee and Town as "named insureds" so as to create the same liability on the part of insurer as though separate policies had been written for Grantee and Town.

    Grantee will provide Town with copies of all insurance policies and renewals of insurance policies required under this Agreement. All policies will contain endorsements providing that they will not be cancelled, reduced in amount or coverage, or otherwise modified by the insurance carrier, without at least thirty (30) days' prior written notice to Town. Town will be entitled to participate in the settlement or adjustment of any losses covered by such policies.

    Each of Grantee and Town (in such case, the "Injured Party") hereby waives any claim it might have against the other party to the extent that the Injured Party suffers loss or damage which is caused by the other party, but which is covered by the Injured Party's insurance policies required herein. Each of Grantee and Town will obtain from its insurance carrier a provision acknowledging this waiver and agreeing that such insurance carrier will not be subrogated to the rights of the Injured Party to the extent that these rights have been waived.

12. Notices: Whenever this Agreement requires either party to give notice to the other, such notice will be given in writing and delivered in person (including by commercial courier service), mailed via the United States Postal Service, by certified or registered mail, return receipt requested, or via confirmed email to the party at the address set forth below, or at such other address designated by like written notice:

    Town of Weddington
    1924 Weddington Road

DRAFT

Weddington, NC 28104
Attention: Town Administrator

Union County Library Foundation
316 East Windsor Street
Monroe, NC 28112
Attention: _____

13. Severability and Duration. If any provision of this Agreement is deemed or declared illegal, unenforceable or invalid, such provision will be read out of this Agreement, and will not affect the validity of any other provision or give rise to any cause of action of the parties against the other, and the remainder of this Agreement will be valid and enforced to the fullest extent permitted by law.

14. Waiver. Any waiver at any given time of any term or condition of this Agreement, or the failure to take action with respect to any breach of any such term or condition, will not be deemed to be a waiver of the term or condition with regard to any subsequent breach of the term or condition, or of any other term or condition of the Agreement.

15. Modifications. This Agreement may be modified, altered or amended only by written agreement executed by Town and Grantee.

16. Governing Law**.** This Agreement shall be governed in all respects, including as to validity, interpretation and effect, by the internal laws of the state of North Carolina, without giving effect to the conflict of laws and rules thereof. The language in all parts of this Agreement will be, in all cases, construed according to its fair meaning and not strictly for or against Town or Grantee.

17. Waiver of Jury Trial. The Parties waive trial by jury in any action, proceeding or counterclaim brought by or against the other with respect to any matter arising out of or in connection with this Agreement.

18. Relationship. The parties agree that neither any provision of this Agreement nor any act of the parties shall be deemed to create any joint venture relationship or other partnership agreement between Grantee and Town.

19. Time of the Essence. Time is of the essence for each of the provisions of this Agreement.

20. Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original but all of which counterparts collectively shall constitute one Agreement. Signatures may be exchanged by copy, or with original signatures to follow. Each party shall be bound by its own copied signature and shall accept the copied signature of the other party.

21. Performance of Government Function. Nothing contained in this Agreement shall be deemed or construed to estop, limit, or impair Town from exercising or performing any regulatory, legislative, governmental or other powers or functions.

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IN WITNESS WHEREOF, the parties have executed this Agreement under seal in Weddington, North Carolina, as of the Effective Date.

Union County Library Foundation

_____

Signature of Authorized Representative Date

_____

Federal Identification #

Town of Weddington

_____

Signature of Authorized Representative Date

This instrument has been preaudited in the manner required by the Local Government Budget and Fiscal Control Act.

_____

Signature of Authorized Finance Officer Date

By:_____

[Mayor]

Date:_____

By:_____

[Grantee Executive Director]

Date:_____

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WEDDINGTON
General Fund
BALANCE SHEET
AS OF: 10/31/23

		2024	2023
Assets			
10-1120-000	SOUTH STATE CHECKING ACCOUNT	468,414.11	520,440.38
10-1120-001	TRINITY MONEY MARKET	0.00	0.00
10-1120-002	CITIZENS SOUTH CD'S	0.00	0.00
10-1130-000	BB&T/TRUIST CHECKING	725,347.02	653,198.99
10-1130-001	BB&T/TRUIST MONEY MARKET	770,401.08	1,255,891.35
10-1140-000	WACHOVIA	0.00	0.00
10-1170-000	NC CASH MGMT TRUST	3,857,084.92	3,790,285.88
10-1205-000	A/R OTHER	0.00	0.00
10-1210-000	A/R SOLID WASTE FEES	1,086,727.31	61,871.47
10-1211-001	A/R PROPERTY TAX	1,235,934.70	23,888.25
10-1212-001	A/R PROPERTY TAX - 1ST YEAR PRIOR	18,116.30	4,455.90
10-1212-002	A/R PROPERTY TAX - NEXT 8 PRIOR YRS	9,319.98	5,291.01
10-1213-000	A/R PROPERTY TAX INTEREST RECEIVABL	1,235.55	1,486.54
10-1214-000	PREPAID ASSETS	0.00	23,907.81
10-1215-000	A/R INTERGOVT-LOCAL OPTION SALES TX	0.00	111,908.26
10-1216-000	A/R INTERGOVT - MOTOR VEHICLE TAXES	0.00	11,618.53
10-1217-000	A/R INTERGOVT	0.00	0.00
10-1232-000	SALES TAX RECEIVABLE	670.89	670.89
10-1240-000	INVESTMENT INCOME RECEIVABLE	0.00	0.00
10-1610-001	FIXED ASSETS - LAND & BUILDINGS	2,513,697.44	2,513,697.44
10-1610-002	FIXED ASSETS - FURNITURE & FIXTURES	9,651.96	9,651.96
10-1610-003	FIXED ASSETS - EQUIPMENT	17,747.14	17,747.14
10-1610-004	FIXED ASSETS - INFRASTRUCTURE	26,851.00	26,851.00
10-1610-005	FIXED ASSETS - COMPUTERS	9,539.00	9,539.00
10-1610-006	FIXED ASSETS - COMPUTER SOFTWARE	182,994.00	182,994.00
	Total Assets	10,933,732.40	9,225,395.80
Liabilities & Fund Balance			
10-2110-000	ACCOUNTS PAYABLE	0.00	29,438.46
10-2115-000	ACCOUNTS PAYABLE ACCRUAL	0.00	22,806.00
10-2116-000	CUSTOMER REFUNDS	5,849.32	1,470.45
10-2120-000	BOND DEPOSIT PAYABLE	75,002.25	75,002.25
10-2151-000	FICA TAXES PAYABLE	0.00	0.00
10-2152-000	FEDERAL TAXES PAYABLE	0.00	0.00
10-2153-000	STATE W/H TAXES PAYABLE	0.00	0.00
10-2154-001	NC RETIREMENT PAYABLE	0.00	0.00
10-2155-000	HEALTH INSURANCE PAYABLE	1,306.00-	0.00
10-2156-000	LIFE INSURANCE PAYABLE	16.64-	0.00
10-2157-000	401K PAYABLE	0.00	0.00
10-2200-000	ENCUMBRANCES	0.00	0.00
10-2210-000	RESERVE FOR ENCUMBRANCES	0.00	0.00
10-2605-000	DEFERRED REVENUES- TAX INTEREST	1,235.55	1,486.54
10-2610-000	DEFERRED REVENUE SOLID WASTE FEES	1,086,727.31	61,871.47
10-2620-000	DEFERRED REVENUE - DELQ TAXES	18,116.30	4,455.90
10-2625-000	DEFERRED REVENUE - CURR YR TAX	1,235,934.70	23,888.25
10-2630-000	DEFERRED REVENUE-NEXT 8	9,319.98	5,291.01
	Total Liabilities	2,430,862.77	225,710.33
10-2640-001	FUND BALANCE - UNASSIGNED	3,830,524.96	3,830,524.96
10-2640-002	FUND BALANCE - RESERVE WATER/SEWER	0.00	0.00
10-2640-003	FUND BALANCE-ASSIGNED	820,000.00	820,000.00
10-2640-004	FUND BALANCE-INVEST IN FIXED ASSETS	2,760,480.54	2,760,480.54

		2024	2023
10-2640-005	CURRENT YEAR EQUITY YTD	0.00	0.00
	Total	7,411,005.50	7,411,005.50
	Revenue	811,993.66	4,247,854.73
	Less Expenses	1,308,809.50	2,659,174.76
	Net	496,815.84-	1,588,679.97
	Total Fund Balance	6,914,189.66	8,999,685.47
	Total Liabilities & Fund Balance	9,345,052.43	9,225,395.80

WEDDINGTON

Statement of Revenue and Expenditures - Standard

11/08/2023
04:52 PM

Revenue Account Range: *First to Last*
Expend Account Range: *First to Last*
Print Zero YTD Activity: *No*
Include Non-Anticipated: *Yes*
Include Non-Budget: *No*
Year To Date As Of: *10/31/23*
Current Period: *10/01/23 to 10/31/23*
Prior Year: *10/01/22 to 10/31/22*

Revenue Account	Description	Prior Yr Rev	Anticipated	Curr Rev	YTD Rev	Excess/Deficit	% Real
10-3101-110	AD VALOREM TAX - CURRENT	27,685.45	1,395,000.00	193,468.85	195,321.84	1,199,678.16 -	14
10-3102-110	AD VALOREM TAX - 1ST PRIOR YR	782.40	9,500.00	2,861.09	5,749.63	3,750.37 -	61
10-3103-110	AD VALOREM TAX - NEXT 8 YRS PRIOR	0.00	575.00	6.38	192.46	382.54 -	33
10-3110-121	AD VALOREM TAX - MOTOR VEH CURRENT	24,609.02	123,750.00	25,535.35	37,915.22	85,834.78 -	31
10-3115-180	TAX INTEREST	48.33	2,250.00	110.51	361.64	1,888.36 -	16
10-3120-000	SOLID WASTE FEE REVENUES	0.00	1,125,000.00	153,748.62	164,728.12	960,271.88 -	15
10-3231-220	LOCAL OPTION SALES TAX REV - ART 39	57,278.92	615,000.00	0.00	121,833.47	493,166.53 -	20
10-3322-220	BEER & WINE TAX	0.00	50,000.00	0.00	0.00	50,000.00 -	0
10-3324-220	UTILITY FRANCHISE TAX	0.00	475,000.00	0.00	107,375.12	367,624.88 -	23
10-3340-400	ZONING & PERMIT FEES	2,965.00	10,000.00	2,747.50	13,612.50	3,612.50	136
10-3350-400	SUBDIVISION FEES	3,600.00	10,000.00	880.00	4,951.25	5,048.75 -	50
10-3360-400	STORMWATER EROSION CONTROL FEES	0.00	5,000.00	0.00	0.00	5,000.00 -	0
10-3830-891	MISCELLANEOUS REVENUES	980.63	5,000.00	75,100.00	76,962.95	71,962.95	***
10-3831-491	INVESTMENT INCOME	10,647.97	85,000.00	19,932.20	82,989.46	2,010.54 -	98
	General Fund Revenue Totals	**128,597.72**	**3,911,075.00**	**474,390.50**	**811,993.66**	**3,099,081.34 -**	**20**

Expenditure Account	Description	Prior Yr Expd	Budgeted	Current Expd	YTD Expended	Unexpended	% Expd
10-4110-000	GENERAL GOVERNMENT	0.00	0.00	0.00	0.00	0.00	0
10-4110-110	SOLID WASTE	0.00	0.00	0.00	0.00	0.00	0
10-4110-115	SOLID WASTE	0.00	1,065,000.00	86,724.10	343,266.22	721,733.78	32
10-4110-120	FIRE	0.00	0.00	0.00	0.00	0.00	0
10-4110-126	FIRE DEPT SUBSIDIES	68,121.08	841,975.00	70,164.67	280,658.68	561,316.32	33
10-4110-127	FIRE DEPARTMENT BLDG/MAINTENANCE	0.00	10,000.00	0.00	0.00	10,000.00	0
10-4110-150	POLICE	0.00	0.00	0.00	0.00	0.00	0
10-4110-155	POLICE PROTECTION	83,961.23	347,750.00	88,138.47	176,276.94	171,473.06	51

WEDDINGTON
Statement of Revenue and Expenditures

11/08/2023
04:52 PM

Expenditure Account	Description	Prior Yr Expd	Budgeted	Current Expd	YTD Expended	Unexpended	% Expd
10-4110-160	EVENT PUBLIC SAFETY	0.00	2,500.00	0.00	0.00	2,500.00	0
10-4110-180	GOVERNING BOARD	0.00	0.00	0.00	0.00	0.00	0
10-4110-190	LEGAL	0.00	0.00	0.00	0.00	0.00	0
10-4110-192	ATTORNEY FEES - GENERAL	16,125.00	67,500.00	5,000.00	15,000.00	52,500.00	22
10-4110-193	ATTORNEY FEES - LITIGATION	0.00	5,000.00	0.00	0.00	5,000.00	0
10-4110-320	OTHER GENERAL GOVERNMENT	0.00	0.00	0.00	0.00	0.00	0
10-4110-330	ELECTION EXPENSE	0.00	15,000.00	0.00	0.00	15,000.00	0
10-4110-340	PUBLICATIONS	0.00	10,000.00	0.00	0.00	10,000.00	0
10-4110-342	HOLIDAY/TREE LIGHTING	0.00	7,587.50	1,726.11	1,726.11	5,861.39	23
10-4110-343	SPRING EVENT	0.00	7,087.50	0.00	0.00	7,087.50	0
10-4110-344	OTHER COMMUNITY EVENTS	0.00	51,500.00	0.00	2,028.18	49,471.82	4
10-4110-499	OTHER	0.00	500,000.00	0.00	0.00	500,000.00	0
	4110 GENERAL GOVERNMENT	**168,207.31**	**2,930,900.00**	**251,753.35**	**818,956.13**	**2,111,943.87**	**28**
10-4120-000	ADMINISTRATIVE	0.00	0.00	0.00	0.00	0.00	0
10-4120-120	SALARIES & EMPLOYEE BENEFITS	0.00	0.00	0.00	0.00	0.00	0
10-4120-121	SALARIES - ADMINISTRATOR/CLERK	4,315.85	66,325.00	5,416.66	21,666.64	44,658.36	33
10-4120-123	SALARIES - TAX COLLECTOR	3,911.23	56,625.00	4,237.03	17,663.79	38,961.21	31
10-4120-124	SALARIES - FINANCE OFFICER	696.60	19,225.00	731.40	5,095.42	14,129.58	26
10-4120-125	SALARIES - MAYOR & TOWN COUNCIL	2,100.00	25,200.00	2,100.00	8,400.00	16,800.00	33
10-4120-181	FICA EXPENSE	843.31	15,000.00	955.13	4,041.20	10,958.80	27
10-4120-182	EMPLOYEE RETIREMENT	1,661.88	23,000.00	2,027.28	8,259.41	14,740.59	36
10-4120-183	EMPLOYEE INSURANCE	1,215.00	15,250.00	1,292.00	5,168.00	10,082.00	34
10-4120-184	EMPLOYEE LIFE INSURANCE	18.56	200.00	16.64	66.56	133.44	33
10-4120-185	EMPLOYEE S-T DISABILITY	13.50	175.00	14.00	56.00	119.00	32
10-4120-190	PROFESSIONAL SERVICES	0.00	0.00	0.00	0.00	0.00	0
10-4120-191	AUDIT FEES	0.00	9,000.00	0.00	0.00	9,000.00	0
10-4120-193	CONTRACT LABOR	0.00	143,800.00	9,547.32	46,978.19	96,821.81	33

WEDDINGTON
Statement of Revenue and Expenditures

11/08/2023
04:52 PM

Expenditure Account	Description	Prior Yr Expd	Budgeted	Current Expd	YTD Expended	Unexpended	% Expd
10-4120-200	OTHER ADMINISTRATIVE	0.00	0.00	0.00	0.00	0.00	0
10-4120-205	OFFICE SUPPLIES - ADMIN	477.90	9,500.00	238.04	1,399.85	8,100.15	15
10-4120-210	PLANNING CONFERENCE	2,100.00	3,500.00	0.00	0.00	3,500.00	0
10-4120-321	TELEPHONE - ADMIN	136.31	2,000.00	136.43	409.14	1,590.86	20
10-4120-325	POSTAGE - ADMIN	0.00	2,500.00	639.86	939.86	1,560.14	38
10-4120-331	UTILITIES - ADMIN	139.20	5,000.00	348.55	898.77	4,101.23	18
10-4120-351	REPAIRS & MAINTENANCE - BUILDING	0.00	29,500.00	16,345.56	20,455.56	9,044.44	69
10-4120-352	REPAIRS & MAINTENANCE - EQUIPMENT	4,174.57	75,000.00	2,896.07	14,998.16	60,001.84	20
10-4120-354	REPAIRS & MAINTENANCE - GROUNDS	4,440.00	72,250.00	6,595.00	20,076.00	52,174.00	28
10-4120-355	REPAIRS & MAINTENANCE - PEST CONTRL	473.36	1,500.00	473.36	1,013.36	486.64	68
10-4120-356	REPAIRS & MAINTENANCE - CUSTODIAL	615.17	7,000.00	500.00	1,800.00	5,200.00	26
10-4120-370	ADVERTISING - ADMIN	32.30	500.00	0.00	215.77	284.23	43
10-4120-397	TAX LISTING & TAX COLLECTION FEES	0.00	500.00	0.00	0.00	500.00	0
10-4120-400	ADMINISTRATIVE:TRAINING	560.00	8,000.00	210.88	881.19	7,118.81	11
10-4120-410	ADMINISTRATIVE:TRAVEL	1,016.86	4,500.00	140.89	1,727.64	2,772.36	38
10-4120-450	INSURANCE	0.00	20,000.00	0.00	19,600.93	399.07	98
10-4120-491	DUES & SUBSCRIPTIONS	0.00	23,500.00	13,475.00	15,724.00	7,776.00	67
10-4120-498	GIFTS & AWARDS	142.87	2,000.00	136.38	222.14	1,777.86	11
10-4120-499	MISCELLANEOUS	944.60	80,000.00	995.45	31,109.43	48,890.57	39
	4120 ADMINISTRATIVE	**30,029.07**	**720,550.00**	**69,468.93**	**248,867.01**	**471,682.99**	**35**
10-4130-000	ECONOMIC & PHYSICAL DEVELOPMENT	0.00	0.00	0.00	0.00	0.00	0
10-4130-120	SALARIES & EMPLOYEE BENEFITS	0.00	0.00	0.00	0.00	0.00	0
10-4130-121	SALARIES - ZONING ADMINISTRATOR	6,875.00	88,625.00	3,622.68	13,616.28	75,008.72	15
10-4130-123	SALARIES - ADMINISTRATIVE ASSISTANT	1,464.75	26,975.00	1,597.93	6,481.04	20,493.96	24
10-4130-124	SALARIES - PLANNING BOARD	250.00	5,150.00	250.00	850.00	4,300.00	16
10-4130-125	SALARIES - SIGN REMOVAL	252.00	6,575.00	274.05	1,228.50	5,346.50	19
10-4130-181	FICA EXPENSE - P&Z	521.80	11,000.00	439.49	1,696.57	9,303.43	15

WEDDINGTON
Statement of Revenue and Expenditures

11/08/2023
04:52 PM

Expenditure Account	Description	Prior Yr Expd	Budgeted	Current Expd	YTD Expended	Unexpended	% Expd
10-4130-182	EMPLOYEE RETIREMENT - P&Z	1,045.00	18,000.00	579.63	2,178.61	15,821.39	12
10-4130-183	EMPLOYEE INSURANCE	1,017.00	15,250.00	0.00	212.00 -	15,462.00	1 -
10-4130-184	EMPLOYEE LIFE INSURANCE	26.56	375.00	0.00	9.92	365.08	3
10-4130-185	EMPLOYEE S-T DISABILITY	13.50	175.00	0.00	0.00	175.00	0
10-4130-190	CONTRACTED SERVICES	0.00	0.00	0.00	0.00	0.00	0
10-4130-192	CONSULTING STORMWATER CONTROL	11,510.02	95,000.00	3,981.70	13,573.41	81,426.59	14
10-4130-193	CONSULTING	1,841.88	50,000.00	2,627.50	20,678.50	29,321.50	41
10-4130-194	CONSULTING - COG	0.00	7,500.00	0.00	0.00	7,500.00	0
10-4130-200	OTHER PLANNING	0.00	0.00	0.00	0.00	0.00	0
10-4130-201	OFFICE SUPPLIES - PLANNING & ZONING	279.29	7,500.00	225.22	1,167.11	6,332.89	16
10-4130-202	ZONING SPECIFIC OFFICE SUPPLIES	0.00	2,500.00	0.00	0.00	2,500.00	0
10-4130-215	HISTORIC PRESERVATION	0.00	250.00	0.00	0.00	250.00	0
10-4130-220	INFRASTRUCTURE	0.00	281,000.00	0.00	177,000.00	104,000.00	63
10-4130-321	TELEPHONE - PLANNING & ZONING	136.30	2,000.00	136.44	409.17	1,590.83	20
10-4130-325	POSTAGE - PLANNING & ZONING	0.00	2,500.00	639.85	939.85	1,560.15	38
10-4130-331	UTILITIES - PLANNING & ZONING	691.04	5,000.00	373.15	1,153.63	3,846.37	23
10-4130-370	ADVERTISING - PLANNING & ZONING	0.00	500.00	0.00	215.77	284.23	43
	4130 ECONOMIC & PHYSICAL DEVELOPMEN	**25,924.14**	**625,875.00**	**14,747.64**	**240,986.36**	**384,888.64**	**38**
	General Fund Expenditure Totals	**224,160.52**	**4,277,325.00**	**335,969.92**	**1,308,809.50**	**2,968,515.50**	**31**

10 General Fund	Prior	Current	YTD
Revenues:	128,597.72	474,390.50	811,993.66
Expenditures:	224,160.52	335,969.92	1,308,809.50
Net Income:	95,562.80 -	138,420.58	496,815.84 -

WEDDINGTON

Statement of Revenue and Expenditures

11/08/2023
04:52 PM

Grand Totals	Prior	Current	YTD
Revenues:	128,597.72	474,390.50	811,993.66
Expenditures:	224,160.52	335,969.92	1,308,809.50
Net Income:	95,562.80 -	138,420.58	496,815.84 -

TOWN OF
W E D D I N G T O N
MEMORANDUM

TO: Mayor and Town Council

FROM: Kim Woods, Tax Collector

DATE: November 13, 2023

SUBJECT: **Report–Sept2023 REVISED**

Transactions:	
2023 Real Property Levy	$1,413,905.01
2023 Personal Property Levy	$8702.99
Solid Waste Levy	$1,189,320.00
Late List Penalties	$349.02
Balance Adjustments	$(39.15)
Overpayments 2023 Lockbox	$(1414.01)
Taxes Collected:	
As of September 30, 2023; the following taxes remain Outstanding:	
2012	$254.18
2013	$273.97
2014	$244.09
2015	$601.73
2016	$421.78
2017	$670.94
2018	$552.01
2019	$1290.63
2020	$1124.03
2021	$4697.17
2022	$21,788.01
2023 Prepay	$(1852.99)
2023	$2,612,277.02
Total Outstanding:	$2,642,342.57

TOWN OF
W E D D I N G T O N
MEMORANDUM

TO: Mayor and Town Council

FROM: Kim Woods, Tax Collector

DATE: November 13, 2023

SUBJECT: **Tax Report–October2023**

Transactions:	
2023 Utility Tax Charges	$12,970.62
Refunds	$272.28
Balance Adjustments	$(549.66)
Overpayment	$(18.14)
Taxes Collected:	
2021	$(1.44)
2022	$(2971.47)
2023	$(351,187.27)
As of October 31, 2023; the following taxes remain Outstanding:	
2013	$273.97
2014	$244.09
2015	$601.73
2016	$421.78
2017	$670.94
2018	$552.01
2019	$1290.63
2020	$1124.03
2021	$4695.73
2022	$18,816.54
2023 Prepay	$(1593.78)
2023	$2,273,759.82
Total Outstanding:	$2,300,857.49