

#### **Townsend Planning Commission Meeting Agenda** February 12th, 2025 @ 7:00 pm **Town Hall and via Conference Call**

#### **7:00** pm – **PC** Meeting

- I. Call to Order
- II. **Opening Ceremonies** 
  - A. Roll Call
  - B. Pledge of Allegiance
  - C. Visitor Acknowledgement
  - D. Additions/Changes to the Agenda

E. Announcements

Planning Commission Meetings will be held both in person and in a virtual format.

Those wishing to attend virtually may do so by accessing the link below. When directed, provide following meeting ID 275 954 985 385 and then the following password m3D20Y69 to enter the meeting. If you choose to access the meeting online click the following link:

#### Join the meeting now

https://teams.microsoft.com/l/meetup-join/19%3ameeting\_ZWUyZjc0YjktZDY0ZC00MDNiLWI0ODktNjBjMTMzOGNiNT M5%40thread.v2/0?context=%7b%22Tid%22%3a%226ce99f30-e19f-43d9-9ac2a0fb215d4c09%22%2c%22Oid%22%3a%22e6950664-993a-4a08-9509-788f17785441%22%7d

Residents will be able to view documents posted to the meeting tab on the Town website at <a href="https://townsend.delaware.gov">https://townsend.delaware.gov</a> or by joining the meeting via computer.

- III. Minutes from the January 16<sup>th</sup>, 2025 Planning Commission meeting to review and approve.
- IV. Discussion, review and possible vote of recommendation of "Walnut Street East" Minor Sub Division Application with supporting documentation.
- V. Review of PLUS (Preliminary Land Use Service) comment letter for Comprehensive (Comp) Plan Maps Amendment and draft a response letter.
- VI. Review and discussion final edits to Code Chapter 24.
- VII. Discussion of March meeting date and agenda.
- VIII. Adjourn



January 14, 2025 C 3083-1

Ms. Julie M. Goodyear, Town Manager Town of Townsend 141 Main Street Townsend, DE 19734

**SUBJECT:** WALNUT STREET – EAST

MINOR SUBDIVISION PLAN SUBMISSION

Dear Ms. Goodyear:

Enclosed for your review are the following plans and supplemental information for the subject site:

- 1. Ten (10) sets of the Land Development Plan;
- 2. Ten (10) sets of the Construction Plans;
- 3. A completed Minor Subdivisions or Land Development Checklist;
- 4. Two (2) copies of the Stormwater Report;
- 5. All submitted materials have been emailed in digital to the Town's inbox.

The review comment, dated November 20, 2024, are noted below in italicized text, and have been addressed, as noted in bold text.

1. The corner of the proposed roadway extension is withing the riparian buffer area (RBA), as per Municipal Code 24.04.080, no structures shall be built within the RBA.

TMC §24.04.080.C states: "Existing natural resources, such as woodlands, individual mature trees, streams and watercourses, drainage channels and important vistas and view-sheds shall be retained. Whenever a development proposal is in conflict with the preservation of such natural features, the Planning Commission may authorize their removal or relocation provided that, in their opinion, there will be no substantial adverse impact upon the overall integrity of the community or property values in the area, and no feasible alternative exists."

The Town is requiring the roadway be extended at an increased width and a turnaround be provided. Planning Commission has reviewed the Sketch plan and made no comment.

C 3083-1 Ms. Julie M. Goodyear, Town Manager January 14, 2025 Page Two

If you should have any questions or comments, please contact our office.

Very truly yours,

Craig M. Lynch, P.E. Project Engineer

Enclosure



# TOWN OF TOWNSEND

141 Main Street Townsend, DE 19734

# APPLICATION FOR SUBDIVISION AND/OR LAND DEVELOPMENT

		LAND DEVELOPMENT	
1.	Applicant		

	Name: Interfaith Community Housing of Delaware INC.								
	Name: michain commany riccong of polarica inter-								
	Address:								
	613 N. Washington St								
	Wilmington, DE 19801								
	Phone: (302 ) 652 - 3991 Fax: ( ) -								
	Email: cbowers@ichde.org								
2.	Name of Subdivision or Development  Interfaith Community Housing Walnut Street - East								
3.	Owner Name: Interfaith Community Housing of Delaware INC.								
	Name.								
	Address:								
	613 N. Washington St								
	Wilmington, DE 19801								
	Phone: (302 ) 652 _ 3991 Fax: ( ) -								
	Email: cbowers@ichde.org								



# TOWN OF TOWNSEND

# 141 Main Street Townsend, DE 19734

4.	Applic	eation Type: Minor Land Development   Minor Subdivision   (Use Checklist Form 1)
		Major Land Development ☐ Major Subdivision ☐ (Use Checklist Form 2)
5.	Prope	rty Information
	a.	Property Address:  0 Walnut Street, Townsend, DE 19734
	b.	Parcel ID: 2500100049
	C.	Total Area (AC): 1.02 Number of Lots: 1 exist 2 proposed
		Existing Zoning: R1A
		Present Use: Vacant lot
		Proposed Use: Two (2) Single family detached houses.
	d.	Water: Public  On-Site  On-Site  On-Site
6.	Plan i	information:
	a.	Title of Plans: Interfaith Community Housing Walnut Street - East
	b.	Number of Sheets: 1 Date of Plans: 03 /26 2024
	c.	Name of Project Preparer: Craig M. Lynch
		Preparer Address:
		200 Continental Drive
		Suite 400
		Newark, DE 19713
		Preparer Phone: 302-323-9377 Preparer Fax:
		Preparer Email: craigl@landmark-se.com

P.O. Box 223 · 141 Main Street · Townsend, DE 19734

Phone (302) 378-8082 · Fax: (302) 378-7099 · www.townsend.delaware.gov · townhall@townsend.delaware.gov



# TOWN OF TOWNSEND

# 141 Main Street Townsend, DE 19734

9. Provide Proof of Ownership in conjunction with this application. (DEED)

10. Fees to be paid per the Townsend Subdivision &	Land Development Fee Schedule:
Required Fee: \$800 Received by To	wn?: No ■ Yes □
Date Received:/ Received by: *Sub	mitted herein
11. Signatures  Craig M. Lynch Digitally signed by Craig M. Lynch Date: 2024.04.16 12:39:53 -04'00'	D 4 04/16/2024
Print Name: Craig M Lynch	Title: Associate
Owner: CAR/How Bowers	Date: 4/16/24 Title: Hessing Development Mya
APPLICATION CH	ECKLIST
(For Town of Townser	nd Use Only)
<ol> <li>This Completed Application For Subdivis Land Development Form</li> <li>Form 1 / Form 2 Checklist</li> </ol>	ion and/or 
3. Copy of Property Deed(s)	
4. Application Fee	-
5. Subdivision and/or Land Development Plant	ans (10 copies)
6. 2 Copies of studies/reports	*

#### **GENERAL CONSTRUCTION NOTES**

- ALL WORK AND MATERIALS WILL BE IN ACCORDANCE WITH THE TOWN OF TOWNSEND STANDARD SPECIFICATIONS AND DETAILS, THE TOWN OF TOWNSEND STANDARD SPECIFICATIONS, DATED AUGUST 2001, AND/OR THE DELDOT STANDARD DETAILS, LATEST REVISION, OR AS MODIFIED BY
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK (2024).
- MATCH PROPOSED PAVING AND CURBING ELEVATIONS TO EXISTING PAVING AND CURBING ELEVATIONS WHEREVER THEY ADJOIN.
- SAW CUT AT THE JUNCTION FOR ALL EXISTING PAVEMENT AND FOR ALL PAVEMENT REMOVAL.
- PLAN LOCATIONS AND DIMENSIONS SHALL BE STRICTLY ADHERED TO, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- ALL RADII AND DIMENSIONS ARE MEASURED TO THE FACE OF CURB, UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-282-8555 A MINIMUM OF 72 HOURS PRIOR
- LANDMARK ENGINEERING, INC. MAKES NO GUARANTEE AS TO THE EXISTENCE OR NON-EXISTENCE LOCATION, DEPTH, SIZE OR CONDITION OF ANY UNDERGROUND UTILITIES SHOWN ON THIS PLAN NOT ACCESSIBLE FROM THE SURFACE OF THE GROUND. EXISTING UTILITIES ARE SHOWN IN ACCORDANCE WITH INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES AT THE TIME THE PLAN WAS PREPARED. THE CONTRACTOR IS TO COORDINATE ALL WORK WITH UTILITY COMPANIES INVOLVED.
- IT IS THE RESPONSIBILITY OF THE OWNER, OR HIS CONTRACTOR, TO VERIFY AND ALLOW FOR THE LOCATION AND DEPTH OF THE UNDERGROUND UTILITIES WITHIN THE WORK AREA SHOWN ON THIS PLAN. THE CONTRACTOR SHALL NOT BEGIN ANY EXCAVATION OR OTHER CONSTRUCTION AROUND OR IMMEDIATELY ADJACENT TO EXISTING UTILITIES WITHOUT NOTIFYING THE UTILITY OWNER(S) AT LEAST SEVENTY-TWO (72) HOURS IN ADVANCE OF THE START OF EXCAVATION OR CONSTRUCTION. TEST PITS FOR UTILITY LOCATIONS MAY OR MAY

PRIOR TO ANY CONSTRUCTION, IT IS RECOMMENDED THE CONTRACTOR EXCAVATE IN THE AREA OF ANY POTENTIAL UTILITY CROSSING TO VERIFY THAT THE UTILITY WILL NOT INTERFERE WITH CONSTRUCTION, IF, AFTER UNCOVERING THE UTILITY, THERE IS ANY QUESTION CONCERNING A POSSIBLE CONFLICT, THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE DONE TO THEM DUE TO HIS NEGLIGENCE SHALL BE IMMEDIATELY AND COMPETENTLY REPAIRED AT HIS EXPENSE.

- EXISTING AERIAL UTILITIES ARE NOT SHOWN.
- ALL NECESSARY PERMITS, LICENSES, BONDS, INSURANCE POLICIES, ETC. REQUIRED BY LOCAL STATE AND/OR FEDERAL LAWS SHALL BE PROVIDED BY THE CONTRACTOR AT HIS OWN
- A. ALL CORRUGATED PLASTIC DRAINAGE PIPE SHALL BE HIGH DENSITY CORRUGATED POLYETHYLENE HAVING A MANNING'S (N) VALUE OF 0.012 (HDPE, N-12) AS MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS, INC. OR APPROVED EQUAL, UNLESS OTHERWISE NOTED. ALL CORRUGATED PLASTIC PIPE SHALL MEET H-20 LOADING SPECIFICATIONS. ALL PIPE LENGTHS INCLUDE FLARED END SECTION (FES) WHEN APPLICABLE
- ALL REINFORCED CONCRETE PIPE SHALL BE CLASS III, UNLESS OTHERWISE NOTED.
- PIPE BEDDING USED FOR THE INSTALLATION OF SANITARY SEWER SHALL MEET THE REQUIREMENTS INCLUDED IN THE TOWN OF TOWNSEND STANDARD SPECIFICATIONS FOR CONSTRUCTION AND AMENDMENTS. OTHERWISE, ALL OTHER PIPE BEDDING SHALL MEET THE
- 3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THERE IS SUFFICIENT COVER ON ALL PIPING DURING CONSTRUCTION TO PREVENT FAILURE OF PIPES.
- ALL SIGNING, TRAFFIC CONTROL AND SAFETY SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR AND SHALL BE SUBJECT TO THE APPROVAL OF THE DIVISION OF HIGHWAYS. ALL TRAFFIC CONTROL SIGNS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
- PAINT STRIPING AND GRAPHICS FOR LONGITUDINAL STRIPING SHALL BE EPOXY RESIN PAINT. LATERAL STRIPING/ SHAPES SHALL BE ALKYD THERMOPLASTIC TAPE/SYMBOL.
- 3. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH DELAWARE STATE FIRE PREVENTION REGULATIONS AND PER THE APPROVED FIRE MARSHAL RECORD TYPE PLAN.
- ALL PROPOSED UNDERGROUND UTILITIES SHALL BE MARKED WITH 6-INCH WIDE (MIN.) METALLIC MARKING TAPE OF APPROPRIATE COLOR AND MESSAGE TO CONFORM TO UTILITY BURIED BENEATH IT AND SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
- 9. 4" PVC PIPE SLEEVES TO BE PROVIDED FOR ALL SIGNS IN SIDEWALK AREAS.
- ALL AREAS NOT COVERED BY PAVING OR BUILDING SHALL RECEIVE 6" MINIMUM OF TOPSOIL, SEED, AND MULCH AS SOON AS FINAL GRADING IS COMPLETE.
- 1. NO DEBRIS SHALL BE BURIED ON SITE.
- 2. DISPOSITION OF ANY EXCESS EXCAVATION AND TOPSOIL TO BE AT THE DISCRETION OF THE
- 23. PROVIDE EROSION CONTROL MATTING ON ALL SLOPES 3:1 OR STEEPER. (AND IN ALL OPEN
- 4. CONCRETE SIDEWALKS SHALL BE 3,000 PSI PORTLAND CEMENT CONCRETE, 4" THICK, ON 4" GRADED AGGREGATE BASE COURSE, UNLESS OTHERWISE NOTED.
- 5. MINIMUM COMPACTION AS DEFINED BY STANDARD PROCTOR MAXIMUM DRY DENSITY ASTM-D1557 SHALL BE:
- **BUILDING SUBGRADE: 95 PERCENT**
- PAVEMENT SUBGRADE: 95 PERCENT SIDEWALK AND LAWN SUBGRADE: 90 PERCENT
- 6. P.C. CONCRETE BUTTRESSES (2500 PSI MIN.) SHALL BE PLACED AT ALL VERTICAL AND HORIZONTAL WATER MAIN BENDS. BUTTRESSÉS SHALL BE PLACED AGAINST UNDISTURBED EARTH AND SHALL BE OF ADEQUATE SIZE TO RESIST THE FORCES DEVELOPED IN THE WATER PIPING. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH ARTESIAN WATER COMPANY STANDARDS.
- . ALL WATER MAIN SHALL HAVE 42-INCH MINIMUM COVER FROM PROPOSED FINISHED GRADE,
- 8. ALL WATER MAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ARTESIAN WATER COMPANY STANDARDS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL INSPECTIONS
- ). SANITARY SEWER SHALL BE CONSTRUCTED IN ACCORDANCE WITH NEW CASTLE COUNTY SPECIAL SERVICES SPECIFICATIONS.
- D. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND STABILIZE EROSION AND SEDIMENT CONTROLS AND STORMWATER MANAGEMENT PRACTICES DURING CONSTRUCTION, INCLUDING AREAS DISTURBED BY UTILITY COMPANIES.
- LANDMARK SCIENCE & ENGINEERING (LSE) MAKES NO GUARANTEE AS TO SUBSURFACE CONDITIONS THAT MAY BE ENCOUNTERED DURING CONSTRUCTION. A GEOTECHNICAL INVESTIGATION (GEO-TECHNICAL ASSOCIATES, DATE) HAS BEEN PERFORMED PRIOR TO PLAN PREPARATION AND RECOMMENDATIONS FROM THIS REPORT HAVE BEEN INCORPORATED INTO THE PLAN SET (OPT SENTENCE - REMOVE IF THIS HASN'T BEEN DONE) VARIATIONS IN CONDITIONS ARE THE RESPONSIBILITY OF THE OWNER, OR HIS CONTRACTOR, INCLUDING BUT NOT LIMITED TO GROUNDWATER, UNSUITABLE MATERIAL, ROCK, BURIED TANKS, ETC. LSE RECOMMENDS A GEOTECHNICAL CONSULTANT BE RETAINED TO EVALUATE AND MONITOR CONDITIONS BEFORE AND DURING CONSTRUCTION SHOULD ADDITIONAL MEASURES BE NECESSARY, SUCH AS UNDERCUTTING, WELL-POINTING, STONE BEDDING UNDER PIPES, TANK REMOVAL, ETC. THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS AND FOLLOW THE RECOMMENDATIONS OF THE ENGINEER AND/OR THE GEOTECHNICAL ENGINEER AND COMPLY WITH ALL APPLICABLE LOCAL, STATE AND/OR FEDERAL LAWS.

PROPOSED P.C.C. CURB TYPE 1-6

EXISTING P.C.C. SIDEWALK

PROPOSED P.C.C. SIDEWALK

PROPOSED HANDICAP RAMP

EXISTING BUILDING

PROPOSED BUILDING

PROPOSED CONTOUR

PROPOSED SPOT ELEVATION

PROPOSED BUILDING SETBACK

RIPARIAN BUFFER AREA

WETLANDS

PROPOSED FIRE HYDRANT

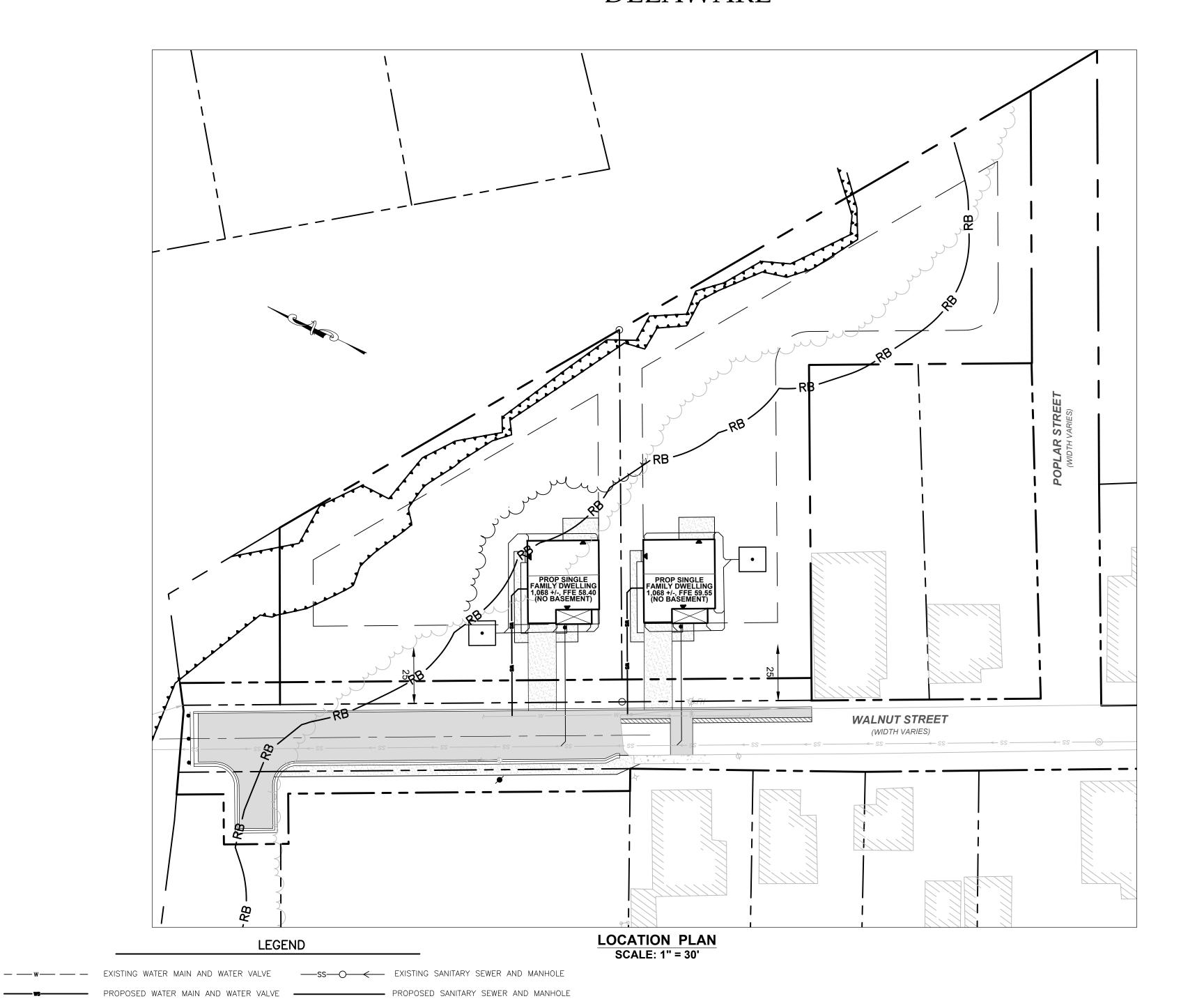
PROPOSED LIMITS OF DISTURBANCE

PROPOSED FULL DEPTH PAVING

# APPLICATION NO. 2024-\_\_\_(S) INDEX PLAN

# INTERFAITH COMMUNITY HOUSING WALNUT STREET EAST

APPOQUINIMINK HUNDRED - NEW CASTLE COUNTY DELAWARE



CERTIFICATION OF PLAN ACCURACY

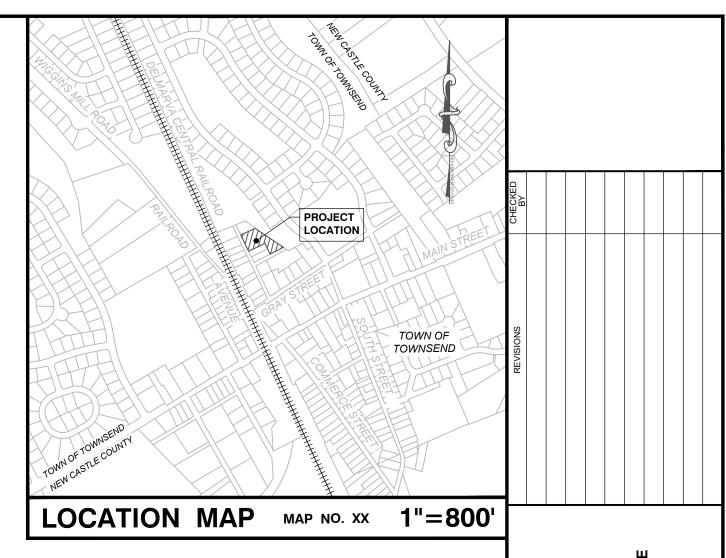
ENGINEER WITH A BACKGROUND IN CIVIL ENGINEERING IN THE STATE OF

DELAWARE AND THAT ALL OF THE INFORMATION ON THIS PLAN IS TRUE AND

CORRECT TO THE ACCURACY REQUIRED BY ACCEPTED SURVEYING STANDARDS

AND PRACTICES AND BY THE TOWN OF TOWNSEND UNIFIED DEVELOPMENT CODE.

, P.E., HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL



**GENERAL DATA** 

TAX PARCEL NUMBERS: 25-001.00-049 2. SOURCE OF TITLE: INSTRUMENT #20230630-0042978

- GROSS AREA: 1.02+/- ACRES NET AREA: 0.965+/- ACRES
- EXISTING ZONING: R1-A (RESIDENTIAL) PROPOSED ZONING: R1-A (RESIDENTIAL)

**BULK AREA RESTRICTIONS** 

STREET YARD SETBACK: SIDE YARD: 10' (25' AGGREGATE) REAR YARD: 10,000 S.F. (0.230 AC) LOT AREA.

5. TOPOGRAPHIC SURVEY:

BUILDING HEIGHT:

A. FIELD SURVEY BY LANDMARK ENGINEERING, INC. JANUARY 2024 THROUGH JUNE 2024

B. DATUM: NAVD 1988

BENCHMARK: SANITARY SEWER MANHOLE LID IN WALNUT STREET

ELEVATION: 63.23 C. PERIMETER PROPERTY CORNER MARKERS:

EXISTING (0)

CERTIFICATION OF OWNERSHIP

OF THE PROPERTY WHICH IS SUBJECT OF THIS PLAN AND THAT THE LAND USE

AUTHORIZE THIS PLAN TO BE RECORDED IN ACCORDANCE WITH THE REGULATIONS

ACTION PROPOSED BY THIS PLAN IS MADE AT MY DIRECTION AND THAT I

OF TOWN OF TOWNSEND UNIFIED DEVELOPMENT CODE.

SIGNATURE

HEREBY CERTIFY THAT I AM THE OWNER

PROPOSED (0) WATER SUPPLY: ARTESIAN WATER COMPANY

WATER SUPPLY IS SUBJECT TO THE APPROVAL OF THE DELAWARE STATE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL AND THE DELAWARE DEPARTMENT OF

7. SANITARY SEWER: GRAVITY - NEW CASTLE COUNTY (PUBLIC)

SEWERAGE IS SUBJECT TO THE APPROVAL OF THE NEW CASTLE COUNTY DEPARTMENT OF SPECIAL SERVICES. AT THE TIME OF APPROVAL OF THIS PLAN, SEWER CAPACITY EXISTED TO ACCOMMODATE THE ANTICIPATED FLOWS GENERATED BY THIS ADDITIONAL DEVELOPMENT. NEW CASTLE COUNTY HAS COMMITTED TO PROVIDE SEWER IN ACCORDANCE WITH THE LAND DEVELOPMENT IMPROVEMENT AGREEMENT FOR THIS DEVELOPMENT. THE OWNER OF THIS PROPERTY, HIS SUCCESSOR OR ASSIGNS, SHALL BE RESPONSIBLE FOR EXTENDING SEWER SERVICE TO EACH LOT SHOWN ON OR CREATED BY THIS PLAN. ESTIMATED

ESTIMATED SEWAGE FLOW GENERATION FOR THIS PROJECT, BASED ON TWO (2) SINGLE FAMILY DETACHED HOUSE UNITS IS (300 GPD / 1 UNIT) X 2 UNITS = 600 GDP.

- 8. DEBRIS DISPOSAL: NO DEBRIS WILL BE BURIED OR DISPOSED OF ON THIS SITE.
- WATER RESOURCE PROTECTION AREAS: THE ENTIRE PROPERTY IS LOCATED WITHIN AN AQUIFER RECHARGE WATER RESOURCE PROTECTION AREA (WRPA). THE SITE IS PARTIALLY LOCATED WITHIN A CLASS "A" WRPA WELLHEAD, AS SHOWN ON THIS PLAN. SEE WRPA MAP FOR NEW CASTLE COUNTY, DE, SHEET 3 OF 3, DATED 1987, LAST REVISED MARCH 2022.
- 10. CRITICAL NATURAL AREAS: THE STATE INVENTORY OF CRITICAL NATURAL AREAS HAS BEEN EXAMINED AND NONE WERE FOUND TO EXIST ON THE SITE.
- 11. WETLANDS: THIS SITE WAS EVALUATED IN ACCORDANCE WITH THE PROCEDURES SET FORTH IN THE 1987 CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (TECHNICAL REPORT Y-87-1), AND SUBSEQUENT PUBLIC NOTICES, TO IDENTIFY THE PRESENCE OF JURISDICTIONAL WETLANDS. WETLANDS WERE FOUND BY OTHERS TO EXIST ON THE SITE, TOTALING IN AREA 3,217± S.F. (0.074± AC.) OF LAND, ARE SHOWN ON THIS PLAN.
- TREE PRESERVATION: THE DEVELOPER SHALL PRESERVE ALL TREES ON THIS SITE EXCEPT WHERE NECESSARY TO CONSTRUCT BUILDINGS, ACCESSWAYS, AND UTILITIES, AND WHERE SELECTIVE THINNING OF EXISTING VEGETATION IS APPROVED. EXISTING PLANT MATERIALS DESIGNATED TO REMAIN ON THIS PLAN, OR THE LANDSCAPE PLAN, SHALL BE PRESERVED AND PROPERLY PROTECTED DURING CONSTRUCTION. IN THE CASE OF UTILITY RIGHTS-OF-WAY AND EASEMENTS, ANY DISTURBED AREAS SHALL BE REPLANTED SO AS TO ACHIEVE A RECURRENCE OF NATURAL VEGETATIVE COVER.
- 13. DRAINAGE, EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT SHALL COMPLY WITH THE TOWN OF TOWNSEND DRAINAGE CODE AND THE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL'S DELAWARE SEDIMENT AND STORMWATER REGULATIONS AND THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK.
- 14. COMPLIANCE WITH THE DELAWARE SEDIMENT AND STORMWATER LAW SHALL BE DEMONSTRATED, PRIOR TO BUILDING PERMIT ISSUANCE, FOR EACH INDIVIDUAL LOT.
- 15. THE TOTAL LAND DISTURBANCE PROPOSED BY THIS PLAN IS 25,575 SQ FT (0.59 AC).

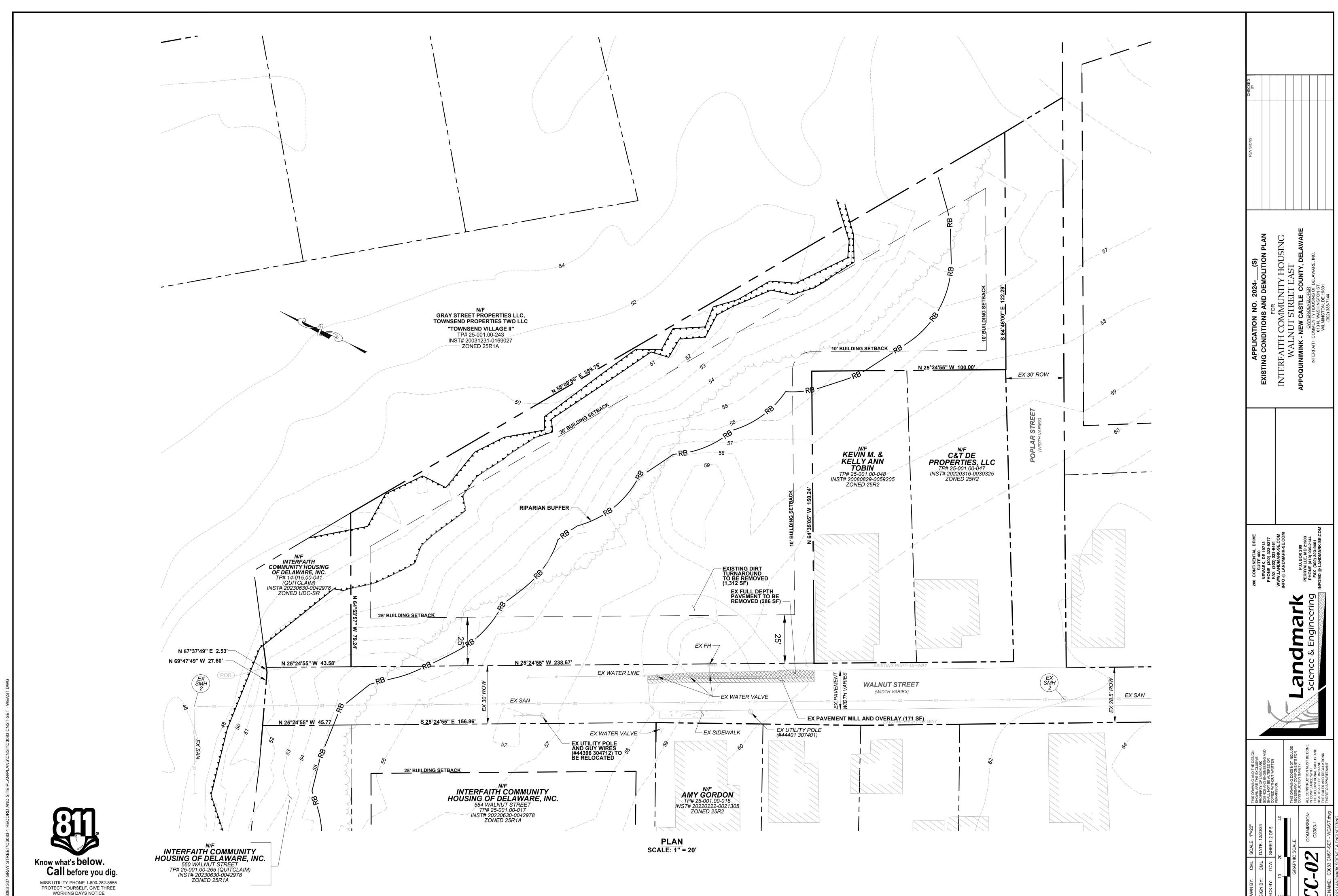


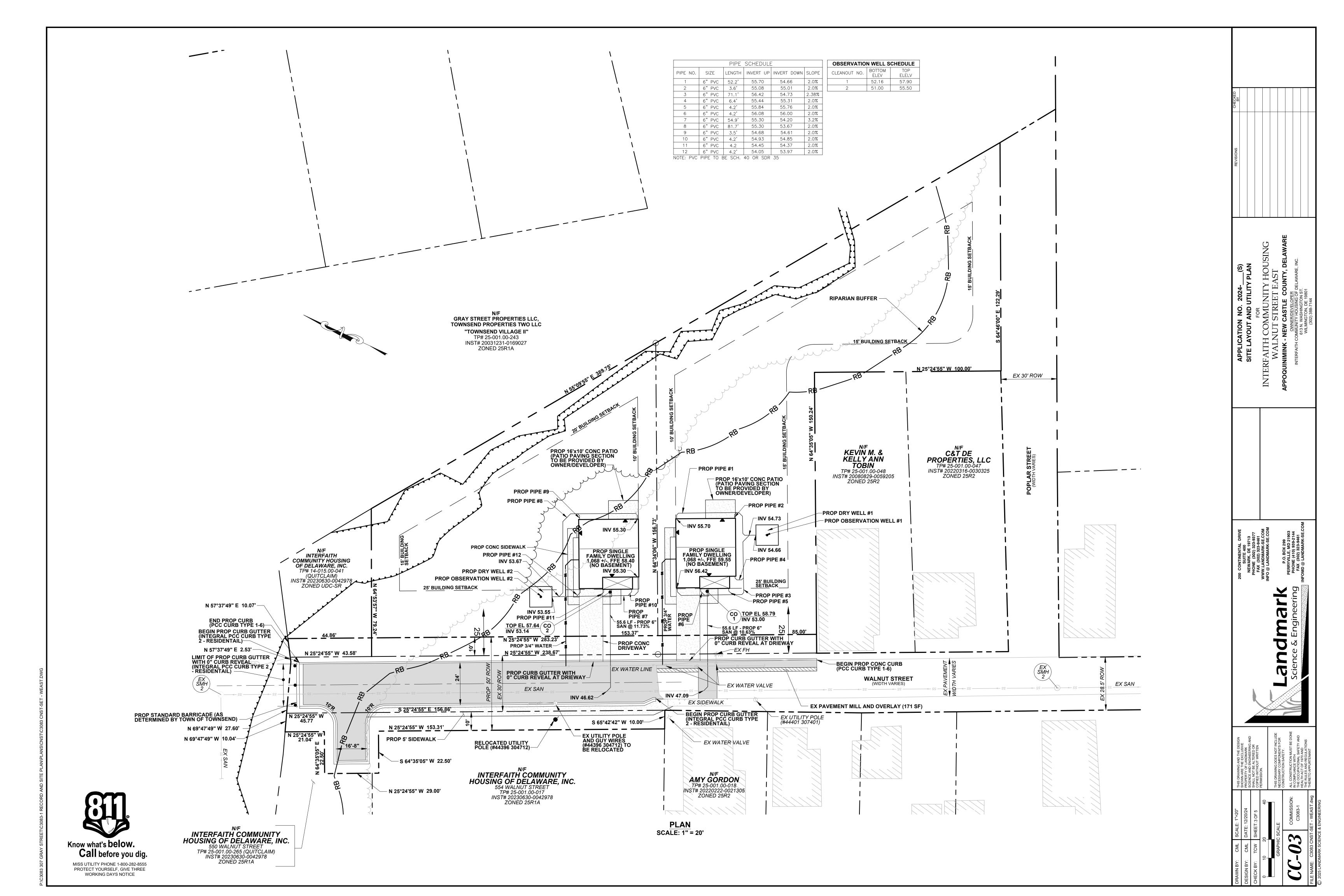
GENERAL MANAGER (MINOR)

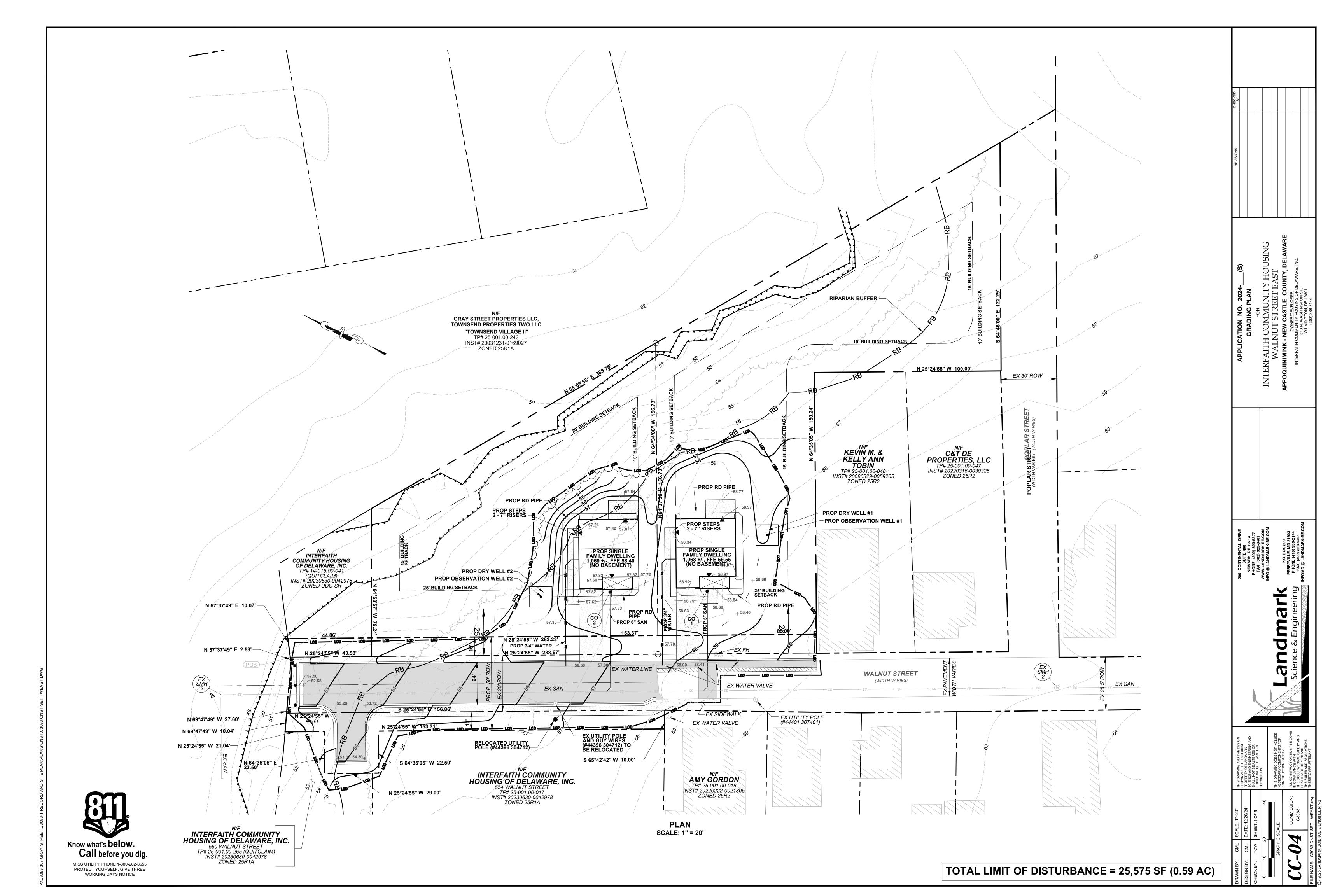
Call before you dig. MISS UTILITY PHONE 1-800-282-8555 PROTECT YOURSELF, GIVE THREE WORKING DAYS NOTICE CERTIFICATION OF PLAN APPROVAL

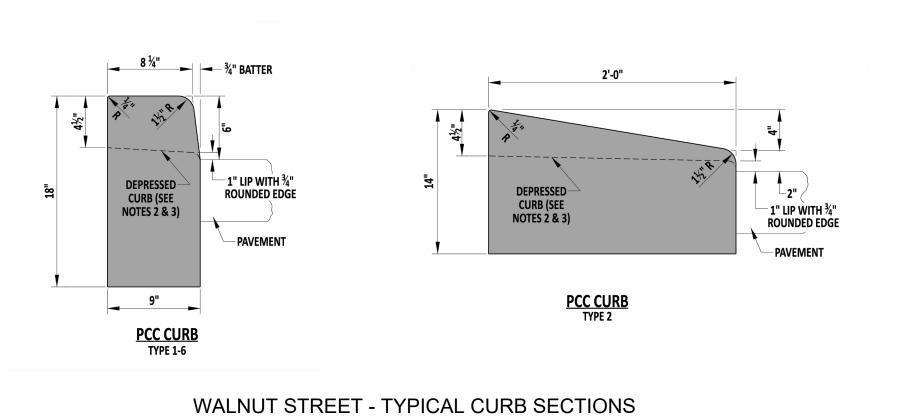
GENERAL MANAGER FOR DEPARTMENT OF LAND USE OF TOWN OF TOWNSEND

FOR COUNTY COUNCIL OF TOWN OF TOWNSEND









NO SCALE

SEE TURNDOWN DETAIL ABOVE WHEN INSTALLING ADJACENT TO P.C.C. CURB CONTRACTOR TO ENSURE TURF ADJACENT TO PATH ON DOWNSTREAM SIDE OF PATH DOES NOT IMPEDE RUNOFF 5' MINIMUM (SEE LAYOUT PLAN) APPLICABLE (SLOPE-SEE NOTE 2) -P.C. CONCRETE, CLASS B 3000 PSI (SEE NOTE 1 BELOW) -GRADED AGGREGATE BASE COURSE (SEE NOTE 1 BELOW) -PROOF ROLLED AND COMPACTED SUBGRADE TO 95% OF ASTM D1557

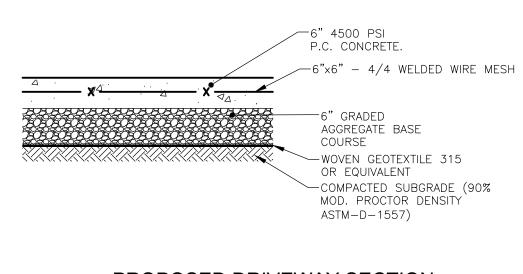
1. STANDARD SIDEWALK SHALL BE 4" THICK PLACED OVER 4" GABC. SIDEWALK FOR AREAS DESIGNATED TO RECEIVE 'HEAVY DUTY' SIDEWALK, AS WELL AS DEPRESSED AND TRANSITION AREAS SHALL BE 6" THICK PLACED OVER 6" GABC.

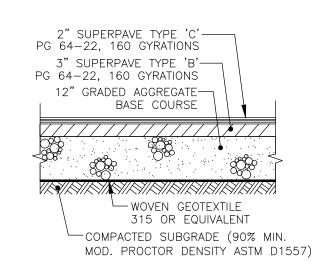
- 2. SIDEWALK TO BE CONSTRUCTED AT GRADE. CROSS-SLOPE OF SIDEWALK SHALL BE 1.5% (1% MIN. AND 2% MAX.) IN ORDER TO ASSURE POSITIVE DRAINAGE.
- 3. SIDEWALK SHALL BE MARKING INTO RECTANGULAR SLABS 5' LONG BY SCORING, 1/2" MINIMUM, WITH APPROVED EDGING TOOLS. THE SURFACE EDGES OF EACH SLAB SHALL BE ROUNDED TO 1/4" RADIUS.
- 4. EXPANSION JOINTS SHALL EXTEND FROM THE SURFACE TO THE FOUNDATION AND MUST BE AT RIGHT ANGLES TO THE SIDEWALK SURFACE. A 1/2" EXPANSION JOINT SHALL PLACED ACROSS THE WALK EVERY 20'. EXPANSION MATERIAL SHALL ALSO BE PLACED LONGITUDINALLY ALONG ONE SIDE WHEN SIDEWALK IS PLACED BETWEEN CURBS, PAVEMENTS, OR ANY FIXED STRUCTURES.
- 5. CONCRETE SIDEWALKS SHALL BE CONSTRUCTED IN CONFORMANCE WITH SECTION 705 OF THE STANDARD SPECIFICATIONS MANUAL.

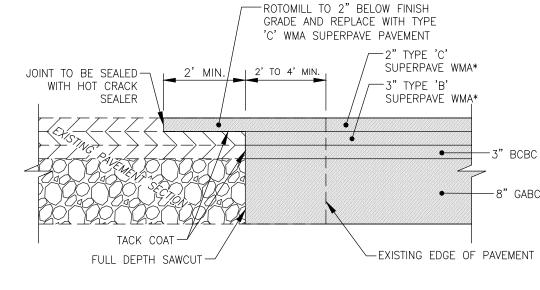
# SIDEWALK DETAIL

(REFER TO LANDSCAPE ARCHITECT PLANS FOR MATERIAL SELECTION)

N.T.S.

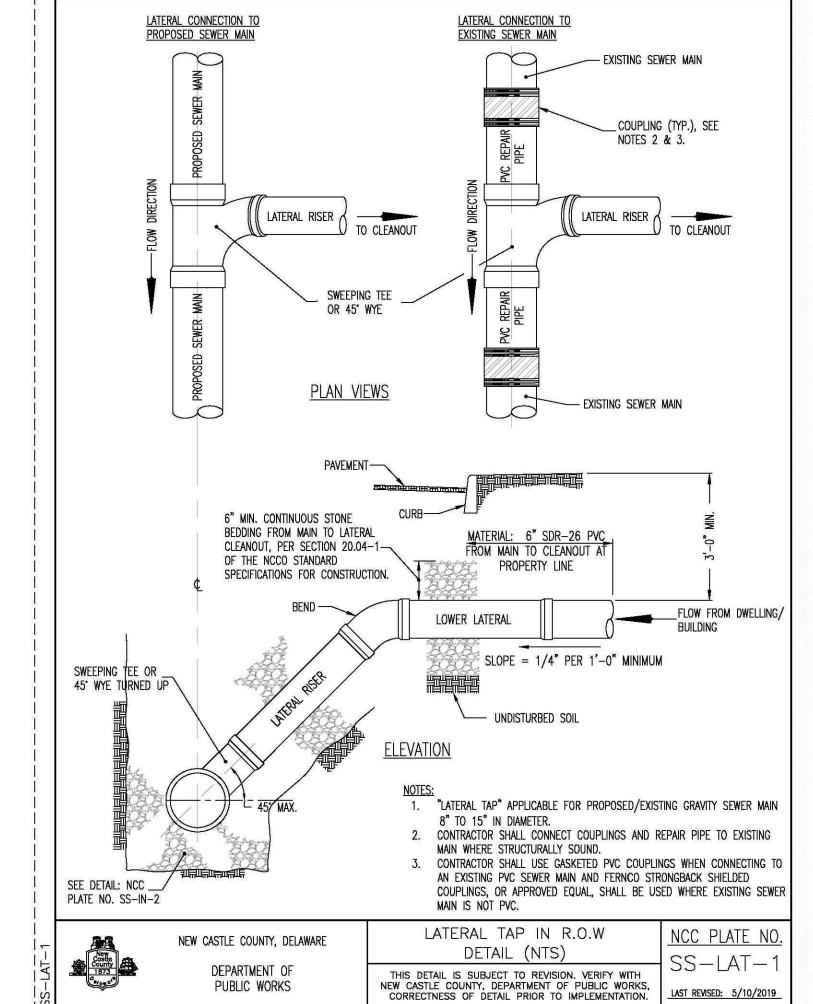


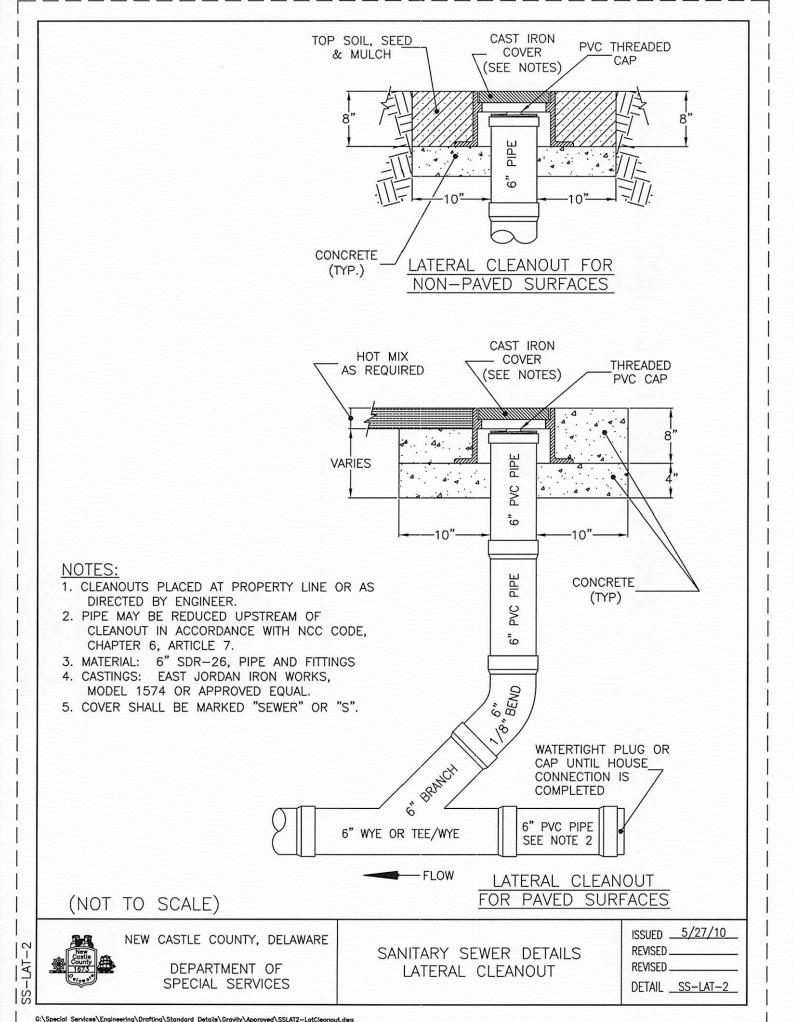


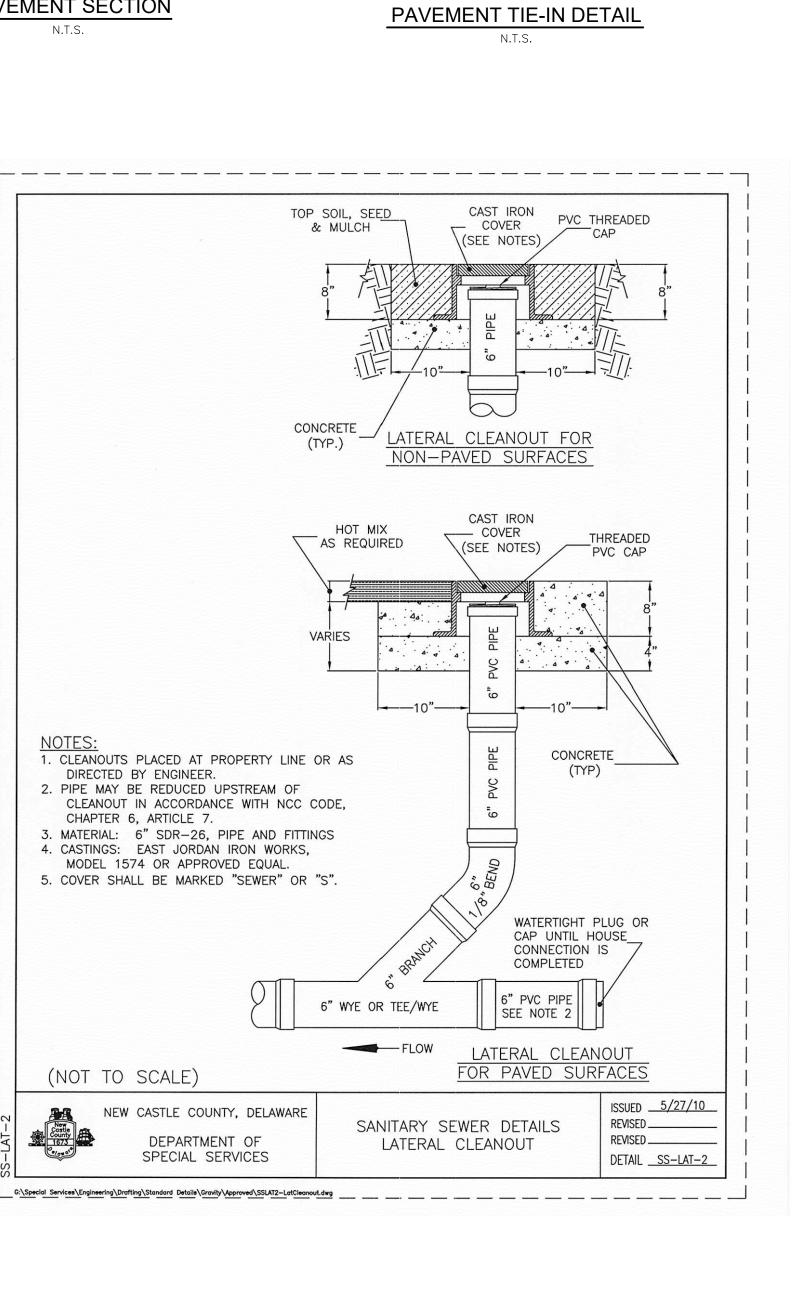


PROPOSED DRIVEWAY SECTION NO SCALE

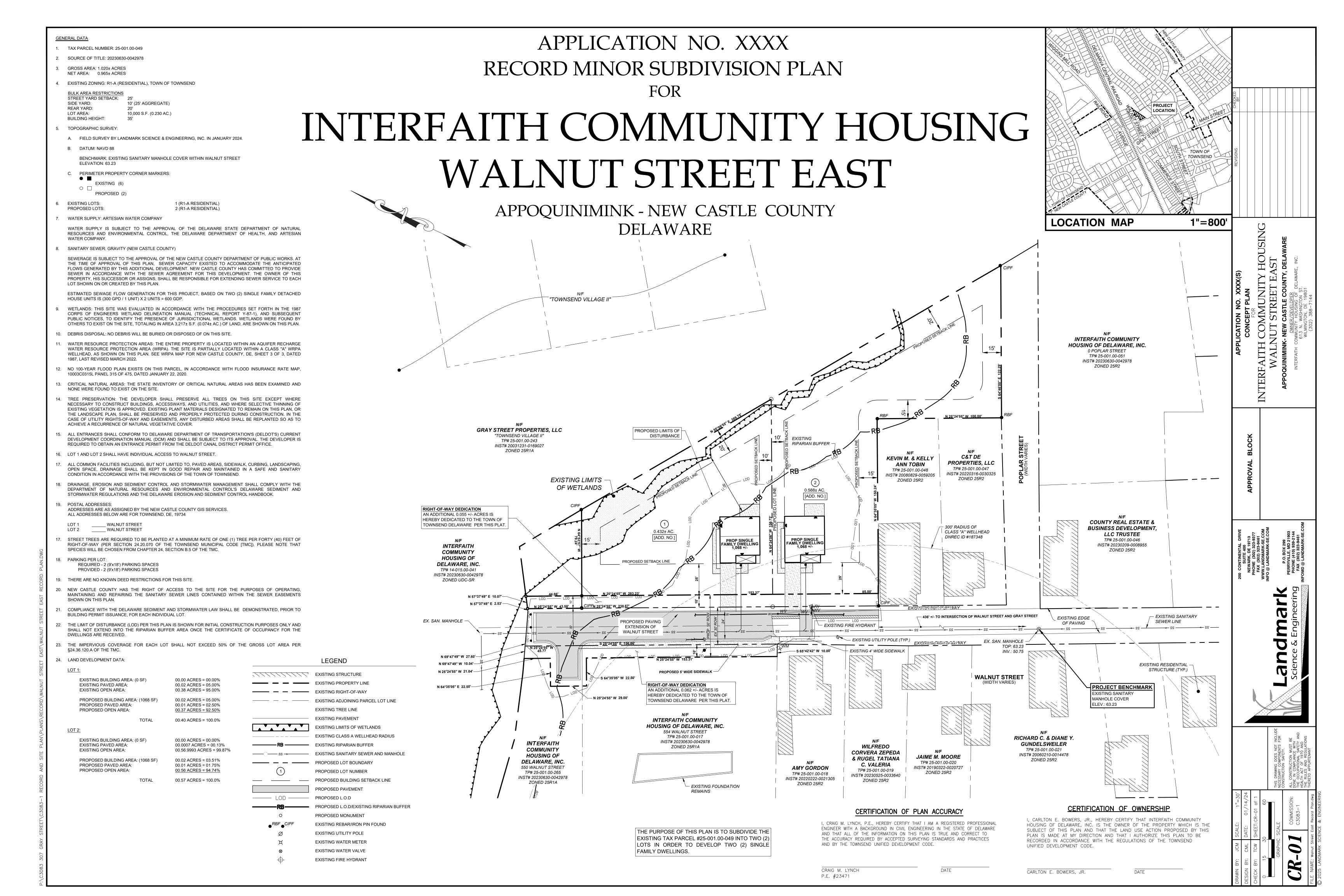
**HEAVY DUTY** PAVEMENT SECTION

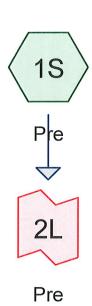




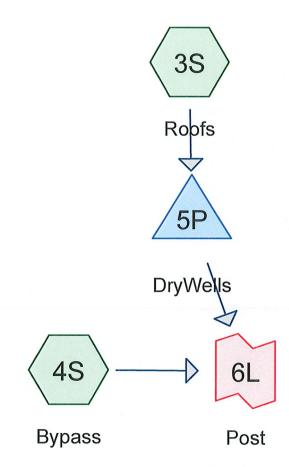


THIS DR SHOWN PROPEF SCIENCI SHALL N COPIED PERMIS:

















Routing Diagram for Walnut East
Prepared by Landmark Engineering, Printed 1/14/2025
HydroCAD® 10.20-6a s/n 04214 © 2024 HydroCAD Software Solutions LLC

#### **Walnut East**

NOAA 24-hr C 1-YR (RPv) Rainfall=2.70"

Prepared by Landmark Engineering
HydroCAD® 10.20-6a s/n 04214 © 2024 HydroCAD Software Solutions LLC

Printed 1/14/2025

Page 2

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Pre Runoff Area=44,435 sf 6.00% Impervious Runoff Depth=0.77"

Flow Length=200' Tc=9.9 min CN=75 Runoff=0.83 cfs 0.065 af

Link 2L: Pre Inflow=0.83 cfs 0.065 af

Primary=0.83 cfs 0.065 af

Subcatchment 3S: Roofs Runoff Area=2,135 sf 100.00% Impervious Runoff Depth=2.47"

Tc=6.0 min CN=98 Runoff=0.14 cfs 0.010 af

Subcatchment4S: Bypass Runoff Area=42,299 sf 7.96% Impervious Runoff Depth=0.72"

Flow Length=225' Tc=9.9 min CN=74 Runoff=0.73 cfs 0.059 af

Pond 5P: DryWells Peak Elev=3.01' Storage=318 cf Inflow=0.14 cfs 0.010 af

Outflow=0.01 cfs 0.003 af

Link 6L: Post Inflow=0.73 cfs 0.061 af

Primary=0.73 cfs 0.061 af

Total Runoff Area = 2.040 ac Runoff Volume = 0.134 af Average Runoff Depth = 0.79" 90.81% Pervious = 1.853 ac 9.19% Impervious = 0.188 ac HydroCAD® 10.20-6a s/n 04214 © 2024 HydroCAD Software Solutions LLC

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#### **Summary for Subcatchment 1S: Pre**

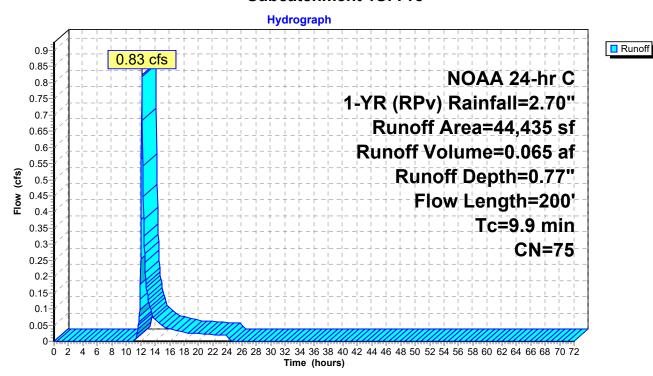
Runoff = 0.83 cfs @ 12.19 hrs, Volume= 0.065 af, Depth= 0.77"

Routed to Link 2L: Pre

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs NOAA 24-hr C 1-YR (RPv) Rainfall=2.70"

	Area (sf)	CN [	N Description								
	20,554										
	1,527	98 V	Vater Surfa	ace, HSG C							
	21,214	74 >	75% Gras	s cover, Go	ood, HSG C						
	1,140	98 F	Paved park	ing, HSG C							
	44,435	75 \	Veighted A	verage							
	41,768	ç	94.00% Per	vious Area							
	2,667	6	6.00% Impe	ervious Are	a						
Tc	Length	Slope	Velocity	Capacity	Description						
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)							
9.0	100	0.0250	0.19		Sheet Flow,						
					Grass: Short n= 0.150 P2= 3.20"						
0.9	100	0.0650	1.78		Shallow Concentrated Flow,						
					Short Grass Pasture Kv= 7.0 fps						
9.9	200	Total									

#### Subcatchment 1S: Pre



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# Summary for Link 2L: Pre

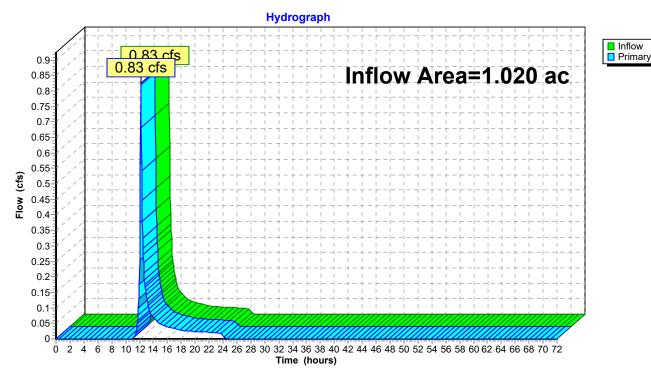
6.00% Impervious, Inflow Depth = 0.77" for 1-YR (RPv) event Inflow Area = 1.020 ac,

Inflow 0.83 cfs @ 12.19 hrs, Volume= 0.065 af

0.83 cfs @ 12.19 hrs, Volume= 0.065 af, Atten= 0%, Lag= 0.0 min Primary

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

#### Link 2L: Pre



#### De 10.20-0a 3/11 042 14 @ 2024 Hydrochd Coltware Colditoris ELC

Runoff = 0.14 cfs @ 12.13 hrs, Volume= 0.010 af, Depth= 2.47"

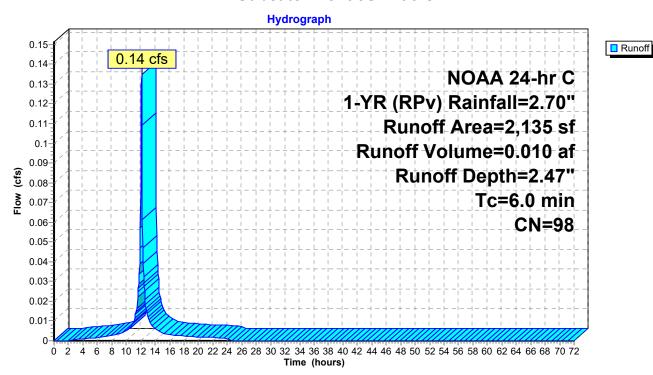
Routed to Pond 5P: DryWells

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs NOAA 24-hr C 1-YR (RPv) Rainfall=2.70"

A	rea (sf)	CN E	Description							
	2,135	98 F	Roofs, HSG C							
	2,135	1	100.00% Impervious Area							
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description					
6.0					Direct Entry,					

**Summary for Subcatchment 3S: Roofs** 

#### **Subcatchment 3S: Roofs**



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# **Summary for Subcatchment 4S: Bypass**

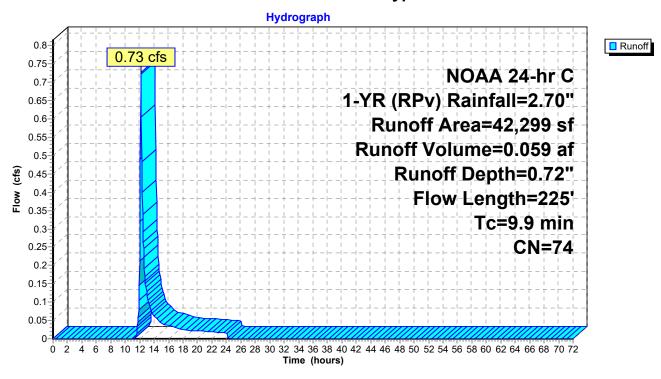
Runoff = 0.73 cfs @ 12.19 hrs, Volume= 0.059 af, Depth= 0.72"

Routed to Link 6L : Post

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs NOAA 24-hr C 1-YR (RPv) Rainfall=2.70"

	Α	rea (sf)	CN [	Description								
		18,238	70 V	Woods, Good, HSG C								
		1,527	98 V	Vater Surfa	ce, HSG C							
		20,694	74 >	75% Grass	s cover, Go	od, HSG C						
		1,840	98 F	Paved park	ing, HSG C							
		42,299	74 \	Veighted A	verage							
		38,932			vious Area							
		3,367	7	.96% Impe	ervious Area	3						
		,		·								
	Tc	Length	Slope	Velocity	Capacity	Description						
(	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	·						
-	9.0	100	0.0250	0.19		Sheet Flow,						
						Grass: Short n= 0.150 P2= 3.20"						
	0.2	15	0.0300	1.21		Shallow Concentrated Flow,						
						Short Grass Pasture Kv= 7.0 fps						
	0.5	100	0.0300	3.52		Shallow Concentrated Flow,						
						Paved Kv= 20.3 fps						
	0.2	10	0.0150	0.86		Shallow Concentrated Flow,						
						Short Grass Pasture Kv= 7.0 fps						
· <del></del>	9.9	225	Total									

# **Subcatchment 4S: Bypass**



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## **Summary for Pond 5P: DryWells**

Inflow Area = 0.049 ac,100.00% Impervious, Inflow Depth = 2.47" for 1-YR (RPv) event

Inflow = 0.14 cfs @ 12.13 hrs, Volume= 0.010 af

Outflow = 0.01 cfs @ 13.00 hrs, Volume= 0.003 af, Atten= 90%, Lag= 52.5 min

Primary = 0.01 cfs @ 13.00 hrs, Volume= 0.003 af

Routed to Link 6L: Post

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 3.01' @ 13.00 hrs Surf.Area= 264 sf Storage= 318 cf

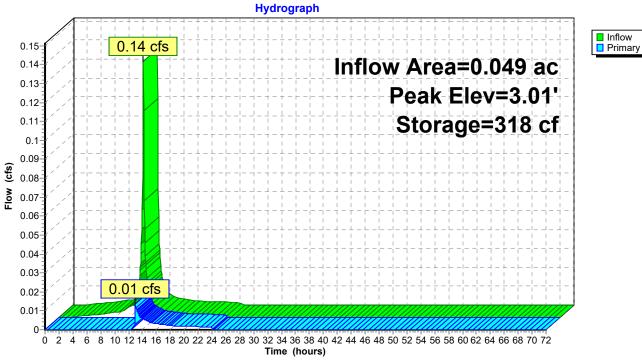
Plug-Flow detention time= 432.0 min calculated for 0.003 af (28% of inflow)

Center-of-Mass det. time= 240.4 min (1,001.8 - 761.4)

Volume	I	nvert	vert Avail.Storaç		Storage D	escription		
#1 0.0		0.00'	00' 370 cf		Custom Stage Data (Prismatic)Listed below (Recalc) 924 cf Overall x 40.0% Voids			
Elevation (feet)		Sur	Surf.Area (sq-ft)		.Store c-feet)	Cum.Store (cubic-feet)		
0.0	00		264		0	0		
3.0	00		264		792	792		
3.5	50	264			132	924		
Device	Routir	ng	Invert	Outle	et Devices			
#1	Prima	ry	3.00'	Head 2.50 Coef	d (feet) 0.2 3.00 3.50 . (English)	0 0.40 0.60 4.00 4.50 5 2.34 2.50 2	70ad-Crested Rectangular Weir 0.80 1.00 1.20 1.40 1.60 1.80 2.00 5.00 5.50 .70 2.68 2.68 2.66 2.65 2.65 2.65 2.74 2.79 2.88	

Primary OutFlow Max=0.01 cfs @ 13.00 hrs HW=3.01' TW=0.00' (Dynamic Tailwater) 1=Broad-Crested Rectangular Weir (Weir Controls 0.01 cfs @ 0.19 fps)

# Pond 5P: DryWells





## **Summary for Link 6L: Post**

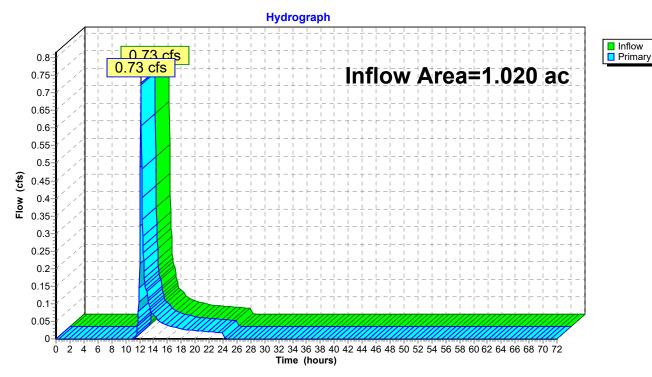
Inflow Area = 1.020 ac, 12.38% Impervious, Inflow Depth = 0.72" for 1-YR (RPv) event

Inflow = 0.73 cfs @ 12.19 hrs, Volume= 0.061 af

Primary = 0.73 cfs @ 12.19 hrs, Volume= 0.061 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

#### Link 6L: Post



#### **Walnut East**

NOAA 24-hr C 10 yr (Cv) Rainfall=4.80"

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Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Pre Runoff Area=44,435 sf 6.00% Impervious Runoff Depth=2.29"

Flow Length=200' Tc=9.9 min CN=75 Runoff=2.59 cfs 0.195 af

Link 2L: Pre Inflow=2.59 cfs 0.195 af

Primary=2.59 cfs 0.195 af

Subcatchment 3S: Roofs Runoff Area=2,135 sf 100.00% Impervious Runoff Depth=4.56"

Tc=6.0 min CN=98 Runoff=0.24 cfs 0.019 af

Subcatchment4S: Bypass Runoff Area=42,299 sf 7.96% Impervious Runoff Depth=2.21"

Flow Length=225' Tc=9.9 min CN=74 Runoff=2.38 cfs 0.178 af

Pond 5P: DryWells Peak Elev=3.05' Storage=322 cf Inflow=0.24 cfs 0.019 af

Outflow=0.28 cfs 0.011 af

Link 6L: Post Inflow=2.63 cfs 0.190 af

Primary=2.63 cfs 0.190 af

Total Runoff Area = 2.040 ac Runoff Volume = 0.392 af Average Runoff Depth = 2.30" 90.81% Pervious = 1.853 ac 9.19% Impervious = 0.188 ac

#### **Summary for Subcatchment 1S: Pre**

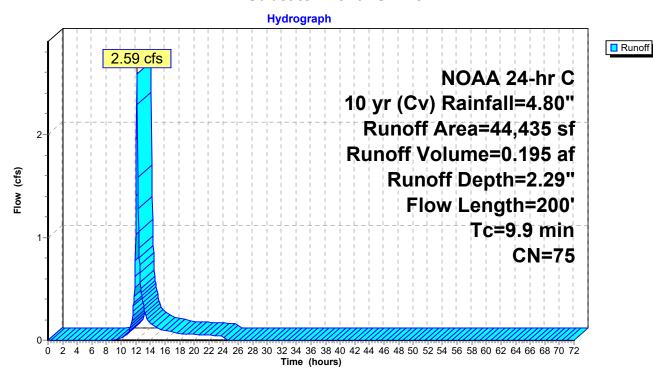
Runoff = 2.59 cfs @ 12.18 hrs, Volume= 0.195 af, Depth= 2.29"

Routed to Link 2L: Pre

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs NOAA 24-hr C 10 yr (Cv) Rainfall=4.80"

	Α	rea (sf)	CN [	Description									
		20,554		Woods/grass comb., Good, HSG C									
		1,527	98 \	Vater Surfa	ace, HSG C								
		21,214	74 >	>75% Gras	s cover, Go	ood, HSG C							
		1,140	98 F	Paved park	ing, HSG C								
		44,435	75 \	Veighted A	verage								
		41,768	Ç	94.00% Per	vious Area								
		2,667	6	6.00% Impe	ervious Area	a							
	Tc	Length	Slope	Velocity	Capacity	Description							
(n	nin)	(feet)	(ft/ft)	(ft/sec)	(cfs)								
	9.0	100	0.0250	0.19		Sheet Flow,							
						Grass: Short n= 0.150 P2= 3.20"							
	0.9	100	0.0650	1.78		Shallow Concentrated Flow,							
						Short Grass Pasture Kv= 7.0 fps							
	9.9	200	Total										

#### **Subcatchment 1S: Pre**



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#### Summary for Link 2L: Pre

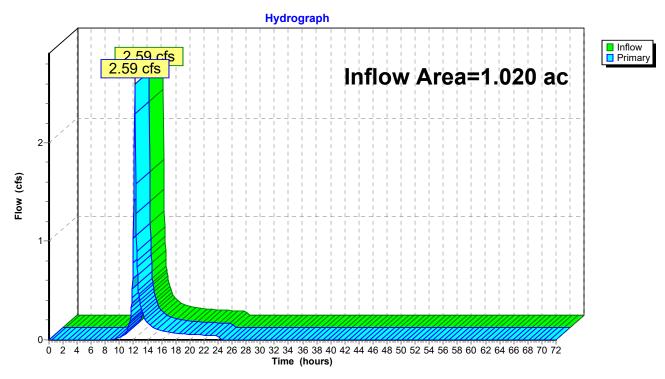
Inflow Area = 1.020 ac, 6.00% Impervious, Inflow Depth = 2.29" for 10 yr (Cv) event

Inflow = 2.59 cfs @ 12.18 hrs, Volume= 0.195 af

Primary = 2.59 cfs @ 12.18 hrs, Volume= 0.195 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

#### Link 2L: Pre



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#### **Summary for Subcatchment 3S: Roofs**

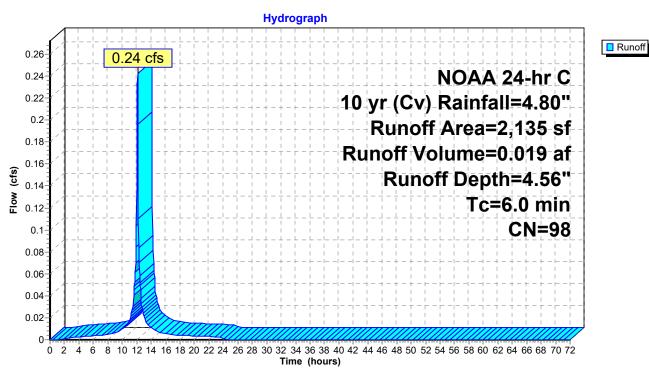
Runoff = 0.24 cfs @ 12.13 hrs, Volume= 0.019 af, Depth= 4.56"

Routed to Pond 5P: DryWells

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs NOAA 24-hr C 10 yr (Cv) Rainfall=4.80"

	Α	rea (sf)	CN	Description							
		2,135	98	Roofs, HSG C							
		2,135		100.00% Impervious Area							
	Tc	Length		Velocity		Description					
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)						
	6.0					Direct Entry.					

#### **Subcatchment 3S: Roofs**



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# **Summary for Subcatchment 4S: Bypass**

Runoff = 2.38 cfs @ 12.18 hrs, Volume= 0.178 af, Depth= 2.21"

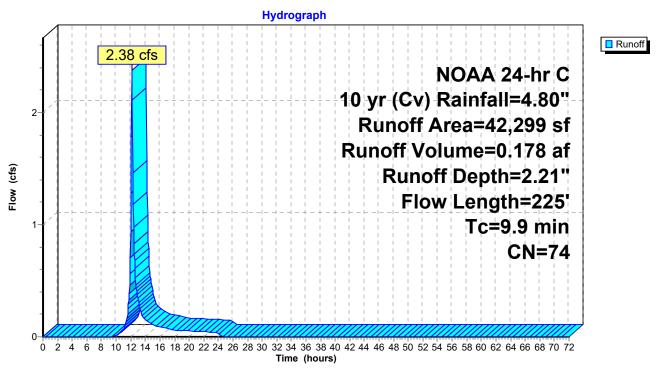
Routed to Link 6L : Post

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs NOAA 24-hr C 10 yr (Cv) Rainfall=4.80"

	Α	rea (sf)	CN [	Description								
		18,238	70 V	Woods, Good, HSG C								
		1,527	98 V	Vater Surfa	ce, HSG C							
		20,694	74 >	75% Grass	s cover, Go	od, HSG C						
		1,840	98 F	Paved park	ing, HSG C							
		42,299	74 \	Veighted A	verage							
		38,932			vious Area							
		3,367	7	.96% Impe	ervious Area	3						
		,		·								
	Tc	Length	Slope	Velocity	Capacity	Description						
(	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	·						
-	9.0	100	0.0250	0.19		Sheet Flow,						
						Grass: Short n= 0.150 P2= 3.20"						
	0.2	15	0.0300	1.21		Shallow Concentrated Flow,						
						Short Grass Pasture Kv= 7.0 fps						
	0.5	100	0.0300	3.52		Shallow Concentrated Flow,						
						Paved Kv= 20.3 fps						
	0.2	10	0.0150	0.86		Shallow Concentrated Flow,						
						Short Grass Pasture Kv= 7.0 fps						
· <del></del>	9.9	225	Total									

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# **Subcatchment 4S: Bypass**



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## **Summary for Pond 5P: DryWells**

Inflow Area = 0.049 ac,100.00% Impervious, Inflow Depth = 4.56" for 10 yr (Cv) event

Inflow = 0.24 cfs @ 12.13 hrs, Volume= 0.019 af

Outflow = 0.28 cfs @ 12.15 hrs, Volume= 0.011 af, Atten= 0%, Lag= 1.2 min

Primary = 0.28 cfs @ 12.15 hrs, Volume= 0.011 af

Routed to Link 6L: Post

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 3.05' @ 12.15 hrs Surf.Area= 264 sf Storage= 322 cf

Plug-Flow detention time= 215.5 min calculated for 0.011 af (61% of inflow)

Center-of-Mass det. time= 104.3 min (853.9 - 749.6)

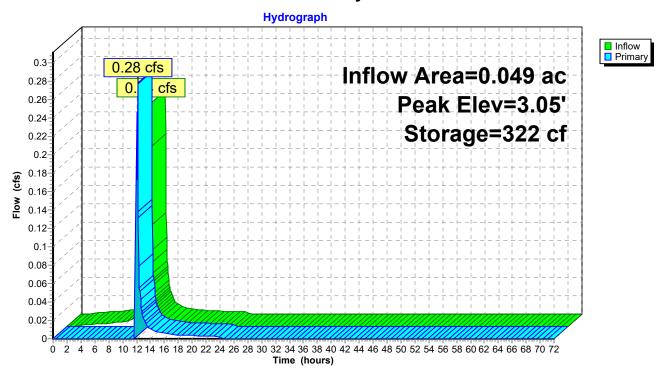
Volume		nvert	Avail.Sto	rage :	Storage D	escription			
#1		0.00'	37			Stage Data (Ferall x 40.0%	Prismatic)Listed below (Recalc)  Voids		
Elevation (feet)		Surf.Area (sq-ft)		Inc.Store (cubic-feet)		Cum.Store (cubic-feet)			
0.0			264	(CUDIC-	0	0	•		
3.0		264			792	792			
3.5		264			132	924			
Device	Routi	ng	Invert	Outlet	Devices				
#1 Prin		ıry	3.00'	10.0' long x 5.0' breadth Broad-Crested Rectangular Weir					
							0.80 1.00 1.20 1.40 1.60 1.80 2.00		
				2.50	3.00 3.50	4.00 4.50	5.00 5.50		
				Coef.	(English)	2.34 2.50 2	2.70 2.68 2.68 2.66 2.65 2.65 2.65		
				2.65	2.67 2.66	2.68 2.70	2.74 2.79 2.88		

Primary OutFlow Max=0.27 cfs @ 12.15 hrs HW=3.05' TW=0.00' (Dynamic Tailwater) 1=Broad-Crested Rectangular Weir (Weir Controls 0.27 cfs @ 0.53 fps)

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# Pond 5P: DryWells



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# **Summary for Link 6L: Post**

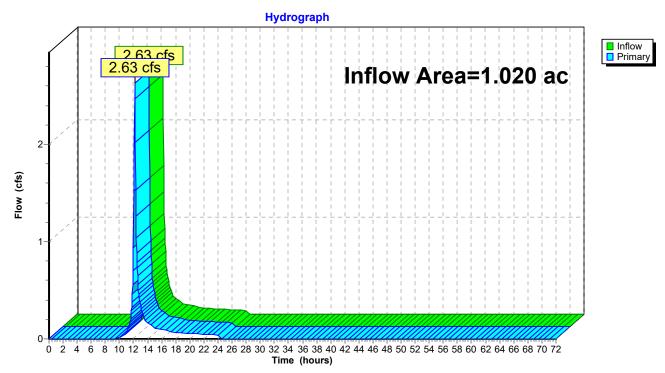
Inflow Area = 1.020 ac, 12.38% Impervious, Inflow Depth = 2.23" for 10 yr (Cv) event

Inflow = 2.63 cfs @ 12.17 hrs, Volume= 0.190 af

Primary = 2.63 cfs @ 12.17 hrs, Volume= 0.190 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

#### Link 6L: Post



#### **Walnut East**

NOAA 24-hr C 100 yr (Fv) Rainfall=8.00"

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Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Pre Runoff Area=44,435 sf 6.00% Impervious Runoff Depth=5.04"

Flow Length=200' Tc=9.9 min CN=75 Runoff=5.68 cfs 0.429 af

Link 2L: Pre Inflow=5.68 cfs 0.429 af

Primary=5.68 cfs 0.429 af

Subcatchment 3S: Roofs Runoff Area=2,135 sf 100.00% Impervious Runoff Depth=7.76"

Tc=6.0 min CN=98 Runoff=0.41 cfs 0.032 af

Subcatchment4S: Bypass Runoff Area=42,299 sf 7.96% Impervious Runoff Depth=4.93"

Flow Length=225' Tc=9.9 min CN=74 Runoff=5.29 cfs 0.399 af

Pond 5P: DryWells Peak Elev=3.07' Storage=324 cf Inflow=0.41 cfs 0.032 af

Outflow=0.41 cfs 0.024 af

Link 6L: Post Inflow=5.66 cfs 0.423 af

Primary=5.66 cfs 0.423 af

Total Runoff Area = 2.040 ac Runoff Volume = 0.859 af Average Runoff Depth = 5.05" 90.81% Pervious = 1.853 ac 9.19% Impervious = 0.188 ac HydroCAD® 10.20-6a s/n 04214 © 2024 HydroCAD Software Solutions LLC

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#### **Summary for Subcatchment 1S: Pre**

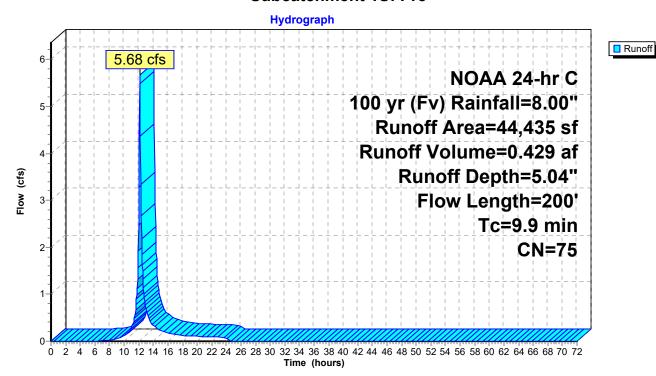
Runoff = 5.68 cfs @ 12.17 hrs, Volume= 0.429 af, Depth= 5.04"

Routed to Link 2L: Pre

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs NOAA 24-hr C 100 yr (Fv) Rainfall=8.00"

 Α	rea (sf)	CN [	CN Description					
	20,554		72 Woods/grass comb., Good, HSG C					
	1,527	98 \	Water Surface, HSG C					
	21,214	74 >	>75% Grass cover, Good, HSG C					
	1,140	98 F	Paved parking, HSG C					
	44,435	5 75 Weighted Average						
41,768 94.00% Pervious Area								
	2,667	6.00% Impervious Area						
Tc	Length	Slope	Velocity	Capacity	Description			
 (min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
9.0	100	0.0250	0.19		Sheet Flow,			
					Grass: Short n= 0.150 P2= 3.20"			
0.9	100	0.0650	1.78		Shallow Concentrated Flow,			
					Short Grass Pasture Kv= 7.0 fps			
 9.9	200	Total		·				

#### **Subcatchment 1S: Pre**



# Summary for Link 2L: Pre

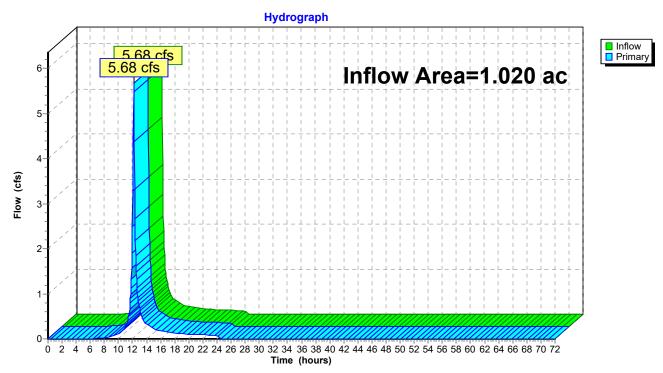
Inflow Area = 1.020 ac, 6.00% Impervious, Inflow Depth = 5.04" for 100 yr (Fv) event

Inflow = 5.68 cfs @ 12.17 hrs, Volume= 0.429 af

Primary = 5.68 cfs @ 12.17 hrs, Volume= 0.429 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

#### Link 2L: Pre



Runoff

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Runoff = 0.41 cfs @ 12.13 hrs, Volume= 0.032 af, Depth= 7.76"

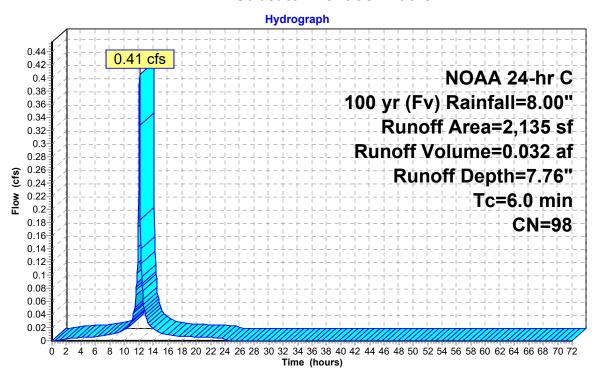
Routed to Pond 5P: DryWells

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs NOAA 24-hr C 100 yr (Fv) Rainfall=8.00"

A	rea (sf)	CN [	Description					
	2,135	98 F	Roofs, HSG C					
	2,135	,	100.00% Impervious Area					
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description			
6.0					Direct Entry,			

**Summary for Subcatchment 3S: Roofs** 

#### **Subcatchment 3S: Roofs**



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# **Summary for Subcatchment 4S: Bypass**

Runoff = 5.29 cfs @ 12.17 hrs, Volume= 0.399 af, Depth= 4.93"

Routed to Link 6L : Post

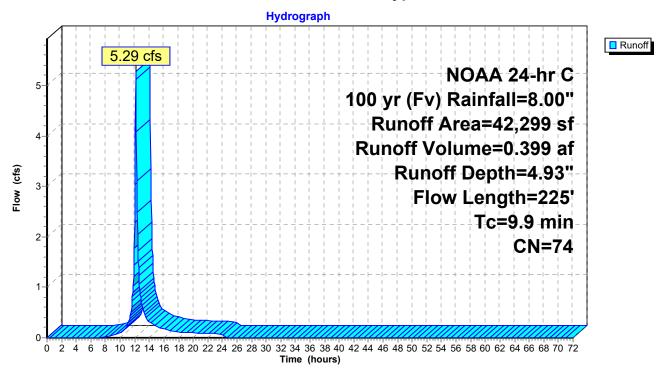
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs NOAA 24-hr C 100 yr (Fv) Rainfall=8.00"

 А	rea (sf)	CN [	Description					
	18,238	70 V	Woods, Good, HSG C					
	1,527	98 V	Water Surface, HSG C					
	20,694	74 >	>75% Grass cover, Good, HSG C					
	1,840	98 F	Paved parking, HSG C					
	42,299	74 \	Weighted Average					
	38,932		92.04% Pervious Area					
	3,367	7	7.96% Impervious Area					
	,		'					
Tc	Length	Slope	Velocity	Capacity	Description			
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	·			
9.0	100	0.0250	0.19		Sheet Flow,			
					Grass: Short n= 0.150 P2= 3.20"			
0.2	15	0.0300	1.21		Shallow Concentrated Flow,			
					Short Grass Pasture Kv= 7.0 fps			
0.5	100	0.0300	3.52		Shallow Concentrated Flow,			
					Paved Kv= 20.3 fps			
0.2	10	0.0150	0.86		Shallow Concentrated Flow,			
					Short Grass Pasture Kv= 7.0 fps			
9.9	225	Total						

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#### **Subcatchment 4S: Bypass**



Prepared by Landmark Engineering

Printed 1/14/2025

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### **Summary for Pond 5P: DryWells**

Inflow Area = 0.049 ac,100.00% Impervious, Inflow Depth = 7.76" for 100 yr (Fv) event

Inflow = 0.41 cfs @ 12.13 hrs, Volume= 0.032 af

Outflow = 0.41 cfs @ 12.13 hrs, Volume= 0.024 af, Atten= 0%, Lag= 0.3 min

Primary = 0.41 cfs @ 12.13 hrs, Volume= 0.024 af

Routed to Link 6L: Post

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 3.07' @ 12.13 hrs Surf.Area= 264 sf Storage= 324 cf

Plug-Flow detention time= 164.7 min calculated for 0.024 af (77% of inflow)

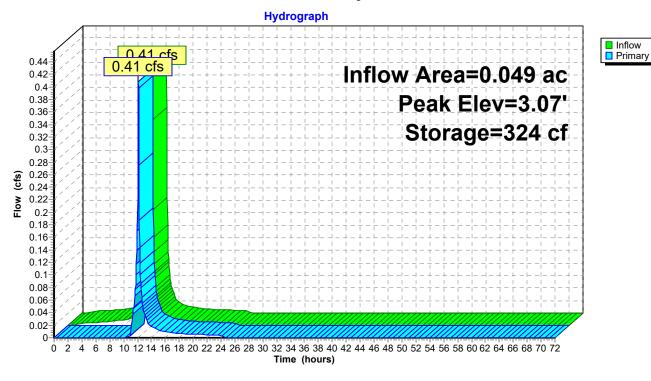
Center-of-Mass det. time= 78.5 min ( 820.3 - 741.8 )

Volume	I	nvert	Avail.Sto	rage	Storage D	Description	
#1		0.00'	3	70 cf		Stage Data (P verall x 40.0%	<b>Prismatic)</b> Listed below (Recalc) Voids
Elevation	on	Su	rf.Area	Inc.	Store	Cum.Store	
(fee	et)		(sq-ft)	(cubic	c-feet)	(cubic-feet)	
0.0	00		264		0	0	
3.0	00	264		792	792		
3.5	50		264		132	924	
Device	Routir	ng	Invert	Outle	et Devices		
#1	Prima	ry	3.00'	10.0'	long x 5	.0' breadth Bi	road-Crested Rectangular Weir
				Head	d (feet) 0.2	20 0.40 0.60	0.80 1.00 1.20 1.40 1.60 1.80 2.00
				2.50	3.00 3.50	0 4.00 4.50	5.00 5.50
				Coef	. (English)	2.34 2.50 2	.70 2.68 2.68 2.66 2.65 2.65 2.65
				2.65	2.67 2.60	6 2.68 2.70 2	2.74 2.79 2.88

Primary OutFlow Max=0.39 cfs @ 12.13 hrs HW=3.07' TW=0.00' (Dynamic Tailwater) 1=Broad-Crested Rectangular Weir (Weir Controls 0.39 cfs @ 0.60 fps)

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### Pond 5P: DryWells



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### Summary for Link 6L: Post

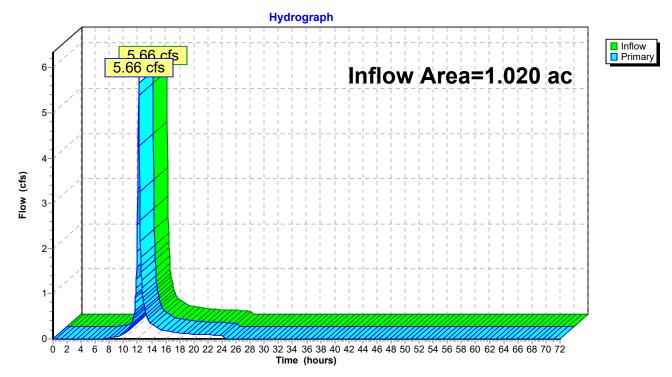
Inflow Area = 1.020 ac, 12.38% Impervious, Inflow Depth = 4.98" for 100 yr (Fv) event

Inflow = 5.66 cfs @ 12.17 hrs, Volume= 0.423 af

Primary = 5.66 cfs @ 12.17 hrs, Volume= 0.423 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

#### Link 6L: Post



### TOWN OF TOWNSEND

141 Main Street Townsend, DE 19734

# MINOR SUBDIVISION OR LAND DEVELOPMENT CHECKLIST

<u>Note:</u> This checklist is for the purpose of review only. It is the applicant's responsibility to comply with the Town's ordinance. Incomplete applications will be returned. The official review begins only with a <u>complete</u> application submission.

A.	Completed Subdivision and/or Land Development Application	X
В.	10 copies of subdivision and/or land development plans	
C.	2 copies of studies/reports  Stormwater	<u> </u>
D.	Electronic copies of Items A, B & C above.	X
E.	Single check for Filing Fee, Initial Engineering and Plan Review Escrow	<u>X</u>
F.	Per Chapter 24 of the Zoning and Unified Development Code, submission subdivision or land development must contain the following information (applicable):	

		YES	NO	NA
1.	Name of the subdivision or development.	Х		
2.	Name and address of the owner and applicant.	Х		
3.	Name and address of the engineer or surveyor who prepared the plan.	Х		
4.	Written and graphic scale, not exceeding 1" = 50'.	Х		
5.	Sheet size of either 24" x 36" or 24" x 42".	Х		
6.	North arrow.	Х		
7.	Plan legend.	Х		
8.	Date of the original plan and all subsequent revision dates.	Х		
9.	Sheet number, if multiple sheets are used.	Х		

# TOWN OF TOWNSEND

### 141 Main Street Townsend, DE 19734

<ol> <li>A location map with a scale of no less than 1" = 500' indica adjacent streets.</li> <li>Certification of plan accuracy by engineer/surveyor.</li> <li>Certification of ownership.</li> <li>Certification of plan approval.</li> <li>Tax parcel numbers.</li> <li>Zoning district of the subject tract.</li> <li>Source of title.</li> <li>Survey datum and local benchmark.</li> <li>Total site gross and net acreage.</li> <li>Name of water supplier and the note "Water supply is subject to State Department of Natural Resources and Environmental Corand the Delaware Department of Health."</li> <li>Sanitary sewage disposal method.</li> <li>Number of existing and proposed lots or dwelling units.</li> <li>Lot numbers for all existing and proposed lots.</li> <li>Existing and proposed nonresidential gross floor area.</li> <li>Location of existing and proposed building and structures.</li> <li>The name, right-of-way width and cartway width of all adjoin streets.</li> <li>Tie-in distances from subject property to the nearest strintersection.</li> <li>Location of front, side, and rear yard setbacks and all required but yards.</li> <li>Location of required off-street parking spaces and number existing and proposed spaces.</li> <li>Location of off-street loading areas.</li> <li>Location of all existing and proposed site accesses and driveways</li> <li>Location and design of all proposed off-street parking areas, indicating proposed traffic circulation patterns.</li> <li>Existing and proposed building coverage.</li> <li>Existing and proposed impervious coverage.</li> <li>Name and address, tax parcel numbers and zoning of all adjoin</li> </ol>	Y	ES	NO	NA
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35. Name and address, tax parcel numbers and zoning of all adjoin	;	х		
		Х		
property owners.	ljoining	x		

# TOWN OF TOWNSEND

### 141 Main Street Townsend, DE 19734

		YES	NO	NA
36.	Location of any water bodies and watercourses.	Х		
37.	Location of any floodplains, including FEMA map panel number.			Х
38.	Location of any wetlands areas delineated during a time of seasonal			
	high ground water tables. If no wetlands present on site, a letter of nonexistence for wetlands is required.	X		
39.	Location and identification of any historic structures.			х
40.	Location of all significant natural or manmade structures.	Х		
41.	Existing and proposed deed restrictions, easements or protective covenants.	х		
42.	Grading plan indicating existing contours (at two-foot intervals), proposed grading, spot elevations and finished floor elevations and top and bottom of wall elevations for any retaining walls over two feet.	х		
43.	Limit of existing tree masses and location, size and species of all individual trees over six-inch caliper.			Х
44.	A limit of disturbance line.	Х		
45.	A soil erosion and sediment control plan.	Х		
46.	Stormwater management plan.	Х		
47.	Solid waste management plan.			Х
48.	Landscape plan.			Х
49.	A listing of all existing nonconforming buildings, uses or structures.			Х

### **KENT COUNTY:**

- **F.** The Regional Planning Commission may establish reasonable additional requirements in conjunction with the site plan approval to protect adjoining uses, including, but not limited to, those which may be imposed by the Levy Court under this article. These requirements may include, but are not limited to, measures related to:
  - (1) Utilities;
  - (2) Drainage, landscaping and maintenance thereof;
  - (3) Lighting;
  - (4) Signs and advertising devices;
  - (5) Screening;
  - (6) Accessways;
  - (7) Curb cuts;
  - (8) Traffic control;
  - (9) Height and setback of buildings;
  - (10) The length of time for which the conditional use can be granted; and
  - (11) The amount of space (e.g., square footage) that can be approved for the conditional use.
- **G.** Following a recommendation by the Commission, the site plan shall be forwarded for the Levy Court, with the appropriate documentation from the Commission's staff, the DAC, and the Commission for its review and approval.
- **H.** Following a recommendation by the Regional Planning Commission, the site plan shall be forwarded to the Levy Court, with the appropriate documentation from the Commission's staff, the DAC and the Regional Planning Commission for its review and approval.
- I. Before approving any proposed conditional use site plan, the Levy Court shall hold a public hearing thereon, notice of said hearing to be accomplished by publication in a newspaper as prescribed above in Subsection C(2).
- J. The Levy Court shall review the site plan for compliance with the requirements if this chapter, Chapter 205, Zoning, and the Comprehensive Plan. Following the public hearing, the Commission shall tentatively approve, disapprove, or conditionally approve the plan subject to specific changes or conditions. Any comments or conditions related to the plan shall be returned to the applicant, with other copies retained in the files of the Commission. The grounds of disapproval of any application shall be stated upon the records of the Commission, and a copy of such statement shall be furnished to the applicant. Any approval or disapproval, after its recordation by the Commission, may be appealed to the Levy Court within 30 days.

- K. The Levy Court may attach additional conditions in the approval of any conditional use site plan as deemed necessary to protect the health, safety, and general welfare of the citizens of Kent County. Such conditions may include, but are not limited to:
  - (1) No outside signs or advertising structures except professional or directional signs;
  - (2) Limitation of signs as to size, type, color, location or illumination;
  - (3) Amount, direction and location of outdoor lighting;
  - (4) Amount and location of off-street parking and loading space;
  - (5) Cleaning or painting;
  - (6) Construction and materials;
  - (7) Connected with or disconnected from other buildings;
  - (8) Exits or entrances, doors and windows;
  - (9) Paving, shrubbery, landscaping or ornamental or screening fences, walls or hedges;
  - (10) Time of day or night for operation;
  - (11) No structural changes;
  - (12) Control or elimination of smoke, dust, gas, noise or vibration caused by machinery;
  - (13) Requirements for termination of a use based on lapse of time or such other conditions as the Levy Court may specify;
  - (14) Number of vehicles;
  - (15) Numbers and types of products;
  - (16) Limitation of expansions; and
  - (17) Such other conditions as are necessary to protect the health, safety, and general welfare of the citizens of Kent County.

### **TOWN OF SMYRNA**

14. Conditional uses, general guides and standards. The purpose of the "conditional use" procedure is to provide for certain uses which cannot be well-adjusted to their environment in particular locations with full protection offered to surrounding properties by rigid application of the district regulations.

These uses either have unusual characteristics or are generally of a public or semipublic character and are essential and desirable for the general convenience and welfare but, because of the nature of the use, the importance or relationship to the comprehensive plan and possible impact, not only on neighboring properties, but on a large section of the town, require the exercise of planning judgment on location and site plan.

A "conditional use" should be approved by the mayor and council after compliance with the applicable section of this code concerning public hearings and only if it is found that the location is appropriate and not in conflict with the comprehensive plan, that the public health, safety, morals and general welfare will not be adversely affected, that necessary safeguards will be provided for the protection of surrounding property, persons and neighborhood values and, further provided that the additional standards of this article are complied with. Unless otherwise specified in this article or specified as a condition of approval, the height limits, yard spaces, lot area, sign and parking requirements shall be the same as for other uses in the district in which the conditional use is located.

### CITY OF MILFORD

#### § 230-47. - Application and approval procedures.

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- A. Conditional Use Site Plans shall follow the procedures for application and review outlined in Article X Site Plan Review of this Chapter.
- B. Conditional Use Major Subdivisions shall follow the procedures for application and review outlined in Chapter 200, Subdivision of Land
- C. Standalone Conditional Use applications that do not require site plan review or major subdivision review shall be subject to the following procedures:
- (1) A conditional use application and documents, as specified by the Planning Department, shall be prepared by the applicant and submitted in accordance with the submission schedule as determined by the Planning Director, along with the appropriate fees, as specified in Section 230-57.
- (2) A public hearing on the conditional use shall be conducted by the Planning Commission. The Planning Commission shall review the application and shall recommend to City Council approval of the application with or without conditions, denial of the application, or table the application. The conditional use shall be reviewed based on the requirements set forth in the zoning ordinance. In case of an unfavorable recommendation for denial by the Planning Commission, such application shall not be approved except by a favorable vote of 3/4 of the City Council.
- (3) No hearing shall be held by the Commission until notice of time and place thereof has been provided to the applicant, property owners within 200 feet of the subject property, and to such other interested parties as may be determined by the Planning Director at least 10 days before the date of said hearing. Notice shall be provided as follows:
  - (a) The Planning Department shall notify by mail all property owners within 200 feet of the extreme limits of the subject parcel as their names appear in the City or County tax record at least 10 days prior to the hearing.
  - (b) The Planning Department shall provide notice to the general public of the public hearing before the Planning Commission by publishing the date, time, place and nature of the hearing at least 15 days before the hearing in a newspaper of general circulation in the City and posting the same information in City Hall and on the City website.
  - (c) The Planning Department will also post a notice outlining the date, time, place, and nature of the hearing in a conspicuous location on the property. The published and posted notices shall contain reference to the time and place within the City where text, maps and plans for the proposal may be examined.
- (4) City Council shall review the application and shall approve the application with or without conditions, deny the application, or table the application. The conditional use shall be reviewed based on the requirements set forth in the zoning ordinance.

[Ord. No. 2022-06, 1-24-2022; Ord. No. 2023-28, § 4, 8-14-2023]

#### § 230-48. - Criteria for evaluation.

The following criteria shall be used as a guide in evaluating a proposed conditional use:

- A. The presence of adjoining similar uses.
- B. An adjoining district in which the use is permitted.
- C. There is a need for the use in the area proposed as established by the Comprehensive Plan.
- D. There is sufficient area to screen the conditional use from adjacent different uses.
- E. The use will not detract from permitted uses in the district.
- F. Sufficient safeguards, such as traffic control, parking, screening and setbacks, can be implemented to remove potential adverse influences on adjoining uses.

### **GEORGETOWN**

	Conditions	to approval.
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The following conditions may be attached to approvals by the Board of Adjustment:

- **A.** Where, in these regulations, special exceptions are permitted, provided that they are approved by the Board, and where the Board is authorized to decide appeals or approve certain uses, and where the Board is authorized to approve variances, such approval, decision or authorization shall be limited by such conditions as the case may require, including the imposition of any of the following specifications:
  - (1) Amount and location of off-street parking and loading space.
  - (2) Amount, direction and location of outdoor lighting.
  - (3) Cleaning or painting.
  - (4) Connected or disconnected with other buildings.
  - (5) Construction and materials.
  - (6) Control or elimination of smoke, dust, gas, noise or vibration caused by operations.
  - (7) Exits or entrances, doors and windows.
  - (8) Gable roof or other type.
  - (9) Limitations of signs as to size, type, color, location or illuminations.
  - (10) No outside signs or advertising structures except professional or directional signs.
  - (11) No store fronts.
  - (12) No structural changes.
  - (13) Paving, shrubbery, landscaping or ornamental or screening fences, walls or hedges.
  - (14) Requirements for termination of a use based on lapse of time or such other conditions as the Board may specify.
  - (15) Time of day or night for operating.
  - (16) Such other conditions as are necessary.

### **SUSSEX COUNTY**

		5-8 <b>3.19A <mark>Conditio</mark></b> 5-14-2024 by Ord. No							
The	follo	wing <mark>uses</mark> may be per	mitted as <mark>conditional use</mark>	s when approved in accor	dance with Article <b>XXIV</b>	of this chapter:			
Reta	ail ma	arijuana store, subject	to the requirements of §	115-194.7					
Spec	§ 115-83.20 <b>Special use exceptions.</b> Special use exceptions may be permitted by the Board of Adjustment and in accordance with the provisions of Article <b>XXVII</b> of this chapter, and may include:								
A.	Exce	eptions to parking and	l loading requirements, as	follows:					
	(1) Off-street parking areas, adjacent to or at a reasonable distance from the premises on which parking areas are requi by the parking regulations of Article XXII, where practical difficulties, including the acquisition of property, or und hardships are encountered in locating such parking areas on the premises and where the purpose of these regulations relieve congestion in the streets would be best served by permitting such parking off the premises.								
	(2)		of the parking and loadin nnecessary the full provisi			cter or use of the building			
	(3)	3) Waiver or reduction of loading space requirements where adequate community loading facilities are provided.							
	(4) Waiver or reduction of loading space requirements for uses which contain less than 10,000 square feet of floo where construction of existing buildings, problems of access or size of lot make impractical the provision of reloading space.					•			
B. Temporary and conditional permits for a period not to exceed five years, such period to be det following uses: [Added 10-22-2019 by Ord. No. 2684]				ich period to be determi	ermined by the Board, for the				
(1) Use of a manufactured-home-type structure for any business, commercial or industrial use when administratively by the Director or his or her designee.						use when not approved			
	§ 115-83.21 <b>Permitted signs.</b> See Article <b>XXI</b> , § <b>115-159.5</b> for signs permitted in the C-3 District and other regulations relating to signs.								
□ A.	§ 115-83.22 Height, area and bulk requirements.  A. Minimum lot sizes. Minimum lot sizes shall be as follows:								
	Us	e	Minimum area**	Maximum area** (square feet)	Width* (feet)	Depth (feet)			
	Oth		One acre		75	100			
	*		ronting on a numbered r		al Highway Map for Suss	ex County of 1964, as re-			