TERRADYN
CONSULTANTS, LLC

Pineland
Cumberland Hall
41 Campus Drive, Suite 101
New Gloucester, ME 04260

Portland
565 Congress Street, Suite 310
Portland, ME 04101

April 6, 2022 Project #21-81

Eric Cousens
Director of Planning & Permitting
City of Auburn
60 Court Street
Auburn, ME 04210

Stable Ridge Apartments- Response to Staff Comments
American Development Group
555 Court Street, Auburn, ME

Dear Eric,

On behalf of American Development Group, Terradyn Consultants, LLC is pleased to submit responses to staff comments and revised drawings for the Stable Ridge Apartments project. The information enclosed was prepared in response to comments provided on March 17, 2022, for the April 12th Planning Board Meeting.

In addition to the response to comments, we are also requesting the proposed Stable Ridge Apartments be reviewed under the requirements of Sec. 60-1277,of Site Plan Ordinance, Sec. 60-45, Sec.60.549, Sec. 60-554 of Multi-Family-Permitted Uses Under Division 14, T-4.2 of the Formed Based Code, instead of the Planned Unit Development standards previously submitted. There have been additional changes to the ordinance since our initial application submission, which allow for the proposed use to qualify under these review standards. We have revised our Standards compliance narrative within our original submission and have attached a revised full site plan submission to this letter.

Comment Responses#

The following response to comments are from the information provided on March 17, 2022. The original comments are in *Italics*:

Comments from John Blais from Staff Review Meeting dated March 17, 2022:

1. *Address items in the water district letter dated February 8th.*

   Comment Response: Our office has been in contact with the Auburn Water and Sewer District. At this time the applicant is aware that a limited service agreement will most likely

be required for the development and that as the building design is finalized that some additional pumps within the buildings will be required to achieve the required pressures. The Auburn Water and Sewer District will work closely with the sprinkler designer during the final design phase of the building interior.

2. *Include a level lip spreader on the outlet of the outfall pipe of the proposed stormwater pond.*

   Comment Response: A level lip spreader has been added to the outfall pipe. Additionally, we have reduced the size of the pipe from the 24" previously shown to a 15" outfall pipe. In reviewing the stormwater calculations, a 12" pipe would be adequate for flows from the soil filter; however, we generally like to specify a 15” minimum diameter because that size is far less likely to clog with debris.

3. *Investigate tie-in with stormwater back to City stormwater on Court Street.*

   Comment Response: Tie-ins back to City stormwater on Court Street would not be feasible. The underdrained soil filter is located at the lowest point of the site, and the outlet pipes would not be able to tie into the elevations required within the city systems.

4. *Verify site distance as actual field measurements from the proposed entrance.*

   Comment Response: William Bray, P.E., met with City staff on-site on 03/29/2022 to review the site distance measurements and confirmed there is adequate sight distance at the proposed entrance of the development.

5. *Investigate relocating entrance alignment with Pinnacle Drive*

   Comment Response: During the initial concept design phase, our office had looked extensively at different configurations of the entrance on the site before choosing the proposed option. Three key components were analyzed

   - Stormwater:
     - The Underdrain soil filter is currently proposed at the lowest point of the proposed developed area. By shifting the access drive to align with Pinnacle Drive, it would result in a portion of our entrance drie to be lower than our stormwater pond. This would not allow for the site to meet the thresholds of treatment in accordance with the City's and DEP regulations.
   - Blasting/ ledge removal:
     - Locating the drive across from Pinnacle Drive is the lowest point of the frontage of the site this would put the intersection at approximately elevation 374; keeping the maximum grade of 3% up the first intersection with the parking area would put that intersection at elevation 380'. The parking lot needs to be a maximum of 2% for ADA standards which would

put the far end of the parking lot at approximately elevation 384, which would result in 11' feet of cut/blasting to install the parking lot base gravel. At the corner of building 3, it would require nearly 20’ of cut/ ledge removal to install the foundations.

- Wetlands:
    - The proposed layout was designed to minimize wetland impacts to the maximum extent practical and keep under 15,000 SF of wetland disturbance. Maine DEP has approved the Tier 1 application for the proposed layout, and a copy of the letter is attached. Shifting the location would result in approximately 20,000 SF of wetland fill.
    -

Attached to this letter is a Figure showing the approximate location of the drive shifted and with

6. *Provide comment on how the proposed entrance will not affect the abutter across the street.*

   Comment Response: The proposed entrance drive has been shifted so that the exiting traffic lane aligns with the abutter across the street. The second turning lane has been eliminated.

7. *Final Stormwater approvals will be coming next week as our key engineer reviewing is out this week.*

   Comment Response: It is our understanding that there are no additional comments for stormwater management.

8. *Is there NRPA approvals associated with this project? if so, a copy will need to be submitted to City as a condition to the approval will be added if not received prior to the planning board meeting.*

   Comment Response: The Maine DEP has accepted the NRPA Tier 1 permit for completeness and will be providing a final decision by May 13, 2022 for the proposed project. A copy of the approval letter is attached. Army Corps approvals are still forthcoming and will be forwarded upon receipt.

9. *Please provide a comment as to why different roads are required. The entrance travel land we typically see a minimum 20' you may be off eliminated the separate 12' entrance because that will become problematic for emergency vehicles.*

   Comment Response: The entrance and exiting lanes are separated by a landscaped island to help visually set the entrance apart. Please see the attached turning figures demonstrating that the City of Auburn Fire trucks can adequately access the proposed entrance.

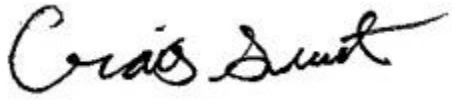
10. *In addition, the length (70') of the crosswalk for the entrance drive is rather long; with the adjacent to the Middle school a high pedestrian, this is a concern.*

    Comment Response: The width of the entrance has been shortened by the removal of the second turning lane. There is a 10' section between the entrance and exit drives that can be used as a relief point for pedestrians.

CLOSURE

We trust that the above responses and attached materials address the comments. Please contact me directly with any additional questions or concerns.

Sincerely,
TERRADYN CONSULTANTS, LLC



Craig Sweet, P.E.

Attachments:
Att. 1 – Alternate analysis of driveway
Att. 2 – NRPA Acceptance
Att. 3 – Revised application package
Att. 4 – Revised Plans

ATTACHMENT 1

Alternate analysis of driveway

BUILDING 1

BUILDING 2

BUILDING 3

BUILDING 4

BUILDING 5

COURT STREET

PINNACLE DRIVE

GRID NORTH

LEGEND

- WETLAND DISTURBANCE AREA APPROXIMATELY 20,000 SF
- BLASTING GREATER THAN 15'
- BLASTING 10'-15'
- BLASTING 5'-10'
- AREA TOO LOW TO DRAIN TO POND

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

DATE: 3/4/2022
P.E.: CRAIG M. SWEET

NO.	DATE	REVISIONS	APP'D BY
1	4/5/2022	REVISED PER CITY STAFF COMMENTS	

565 CONGRESS STREET
SUITE 201
PORTLAND, ME 04102

41 CAMPUS DRIVE
SUITE 301
NEW GLOUCESTER, ME 04260

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Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
STABLE RIDGE APARTMENTS
555 COURT STREET, AUBURN, MAINE

SHEET TITLE:
ALTERNATE ENTRANCE CONCEPT

CLIENT:
AMERICAN DEVELOPMENT GROUP
P.O. BOX 1495
NAPLES, MAINE 04055

DATE:	1/3/2022
SCALE:	1"=30'
DESIGNED:	CMS
JOB NO:	21-81
SHEET	1 OF 1

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ATTACHMENT 2

NRPA Acceptance

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JANET T. MILLS
GOVERNOR

MELANIE LOYZIM
COMMISSIONER

April 1, 2022

Via email only

Craig Sweet
Terradyn Consultants, LLC
41 Campus Drive, Suite 301
New Gloucester ME, 04260
Craig@terradynconsultants.com

RE: AMERICAN DEVELOPMENT GROUP DEP APPLICATION #L-29769-TC-A-N, AUBURN

Dear Mr. Sweet:

Your client's application for a Natural Resources Protection Act permit was received by the Department of Environmental Protection on March 8, 2022. Since the Department did not reach a decision within the 15-day review period, the application was automatically accepted on March 29, 2022. Acceptance of the application does not preclude the Department from requesting additional information during processing. Your client's application has been given the above reference number.

The project will now be examined to determine whether a license can be issued. The statutory deadline for the Department to reach a final decision on your application is May 13, 2022; however, we will do our best to process the application and issue a decision as soon as possible. No construction related to the proposed activities currently under review may be started prior to receiving a final decision from the Department.

Please feel free to contact me at (207) 275-9836 or via email at jessica.sayers@maine.gov if you have any questions regarding this project.

Sincerely,

Jessica Sayers, Project Manager
Bureau of Land Resources

ATTACHMENT 3

Revised Plans

STABLE RIDGE APARTMENTS

555 COURT STREET, AUBURN, MAINE

PREPARED BY:

CIVIL ENGINEER & SURVEYOR:
TERRADYN CONSULTANTS, LLC
41 CAMPUS DR. SUITE 101
NEW GLOUCESTER, MAINE 04260
(207)926-5111

WETLANDS DELINEATION & SOIL SURVEY:
FLY CATCHER, LLC
LOWER FALLS LANDING
106 LAFAYETTE STREET, SUITE 1C
YARMOUTH, MAINE 04096
(207) 217-0959

ARCHITECT:
DIRIGO ARCHITECTURAL ENGINEERING, LLC.
7 COBBLESTONE DRIVE, SUITE 2
TURNER, MAINE 04282

LANDSCAPE ARCHITECT:
BARRY HOSMER P.L.A., A.S.L.A.
196 WHITNEY AVENUE
PORTLAND, MAINE 04102

APPLICANT:
AMERICAN DEVELOPMENT GROUP
P.O.BOX 1495
NAPLES, MAINE 04055

OWNER:
AMERICAN DEVELOPMENT GROUP
P.O.BOX 1495
NAPLES, MAINE 04055

PROJECT PARCEL SITE
CITY OF AUBURN TAX ASSESSOR'S MAP & LOT NUMBERS

MAP	LOT
229	7

APPROVED: CITY OF AUBURN
PLANNING BOARD

_____ DATE

_____

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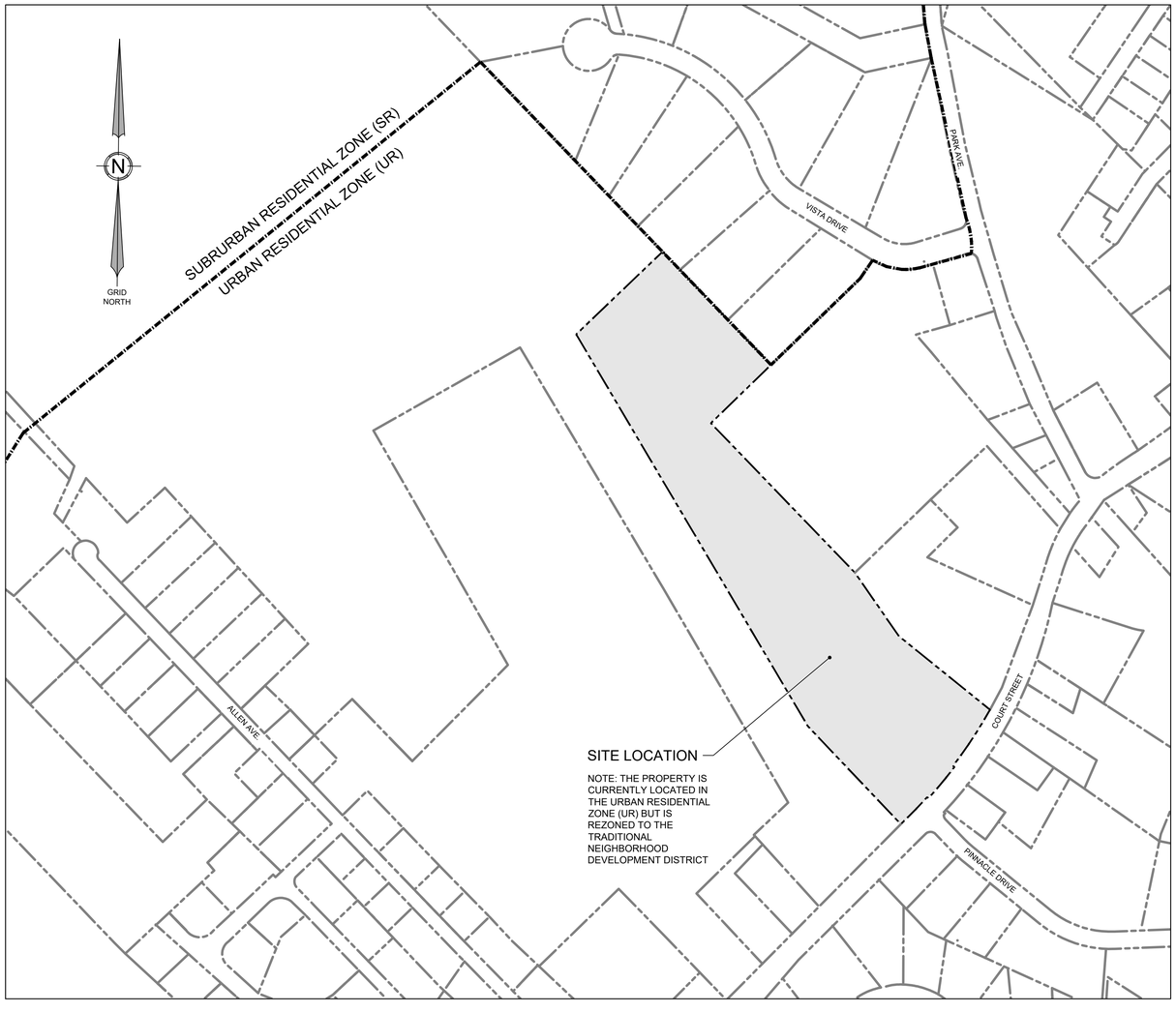

LOCATION MAP
1" = 200'

SHEET INDEX

LEGEND

- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- PROPOSED SETBACK LINE
- EXISTING SETBACK LINE
- EXISTING EASEMENT
- PROPOSED EASEMENT
- ROAD CENTERLINE
- 124 EXISTING MINOR CONTOUR
- 124 EXISTING MAJOR CONTOUR
- 124 PROPOSED CONTOUR
- SD EXISTING STORMDRAIN
- SD PROPOSED STORMDRAIN
- S EXISTING SANITARY SEWER
- S PROPOSED SANITARY SEWER
- W EXISTING WATER LINE
- W PROPOSED WATER LINE
- G PROPOSED GAS LINE
- G EXISTING GAS LINE
- UD EXISTING UNDERDRAIN
- UD PROPOSED UNDERDRAIN
- OHE EXISTING OVERHEAD ELECTRIC & TELEPHONE
- OHE PROPOSED OVERHEAD ELECTRIC & TELEPHONE
- UGE EXISTING UNDERGROUND ELECTRIC & TELEPHONE
- UGE PROPOSED UNDERGROUND ELECTRIC & TELEPHONE
- SD EXISTING EDGE OF PAVEMENT
- SD PROPOSED EDGE OF PAVEMENT
- EXISTING EDGE OF GRAVEL
- PROPOSED EDGE OF GRAVEL
- EXISTING CURB
- PROPOSED CURB
- EDGE OF WATER
- EXISTING TREE LINE
- PROPOSED TREE LINE
- CHAIN LINK FENCE
- PROPOSED FENCE
- EXISTING GUARDRAIL
- PROPOSED GUARDRAIL
- SF SILT FENCE
- TP-A TEST PIT
- EXISTING VALVE
- PROPOSED VALVE
- EXISTING HYDRANT
- PROPOSED HYDRANT
- EXISTING TRANSFORMER
- PROPOSED TRANSFORMER
- EXISTING LIGHT POLE
- PROPOSED LIGHT POLE
- EXISTING UTILITY POLE
- PROPOSED UTILITY POLE
- EXISTING CATCH BASIN
- PROPOSED CATCH BASIN
- EXISTING SEWER MANHOLE
- PROPOSED SEWER MANHOLE
- 30.20 EXISTING SPOT GRADE
- 30.20 PROPOSED SPOT GRADE
- EXISTING SIGN
- PROPOSED SIGN
- EXISTING BUILDING
- PROPOSED BUILDING
- WETLAND AREA
- PROPOSED PAVEMENT
- RIPRAP
- PROPOSED WETLAND ALTERATION AREA
- PROPOSED STORMWATER BUFFER AREA
- LANDSCAPING BUFFER

STATE OF MAINE
CRAIG M. SWEET
No. 15060
LICENSED PROFESSIONAL ENGINEER

DATE: 3/4/2022
P.E.: CRAIG M. SWEET

NO.	DATE	REVISIONS	APP'D BY
1	4/5/2022	REVISED PER CITY STAFF COMMENTS	

TERRADYN CONSULTANTS, LLC
41 CAMPUS DRIVE SUITE 101 NEW GLOUCESTER, ME 04260
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com
565 CONGRESS STREET SUITE 201 PORTLAND, ME 04102

Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT: STABLE RIDGE APARTMENTS
555 COURT STREET, AUBURN, MAINE

SHEET TITLE: COVER/LOCATION MAP

CLIENT: AMERICAN DEVELOPMENT GROUP
P.O. BOX 1495
NAPLES, MAINE 04055

DATE:	1/3/2022
SCALE:	
DESIGNED:	CMS
JOB NO:	21-81
SHEET	C-0.0

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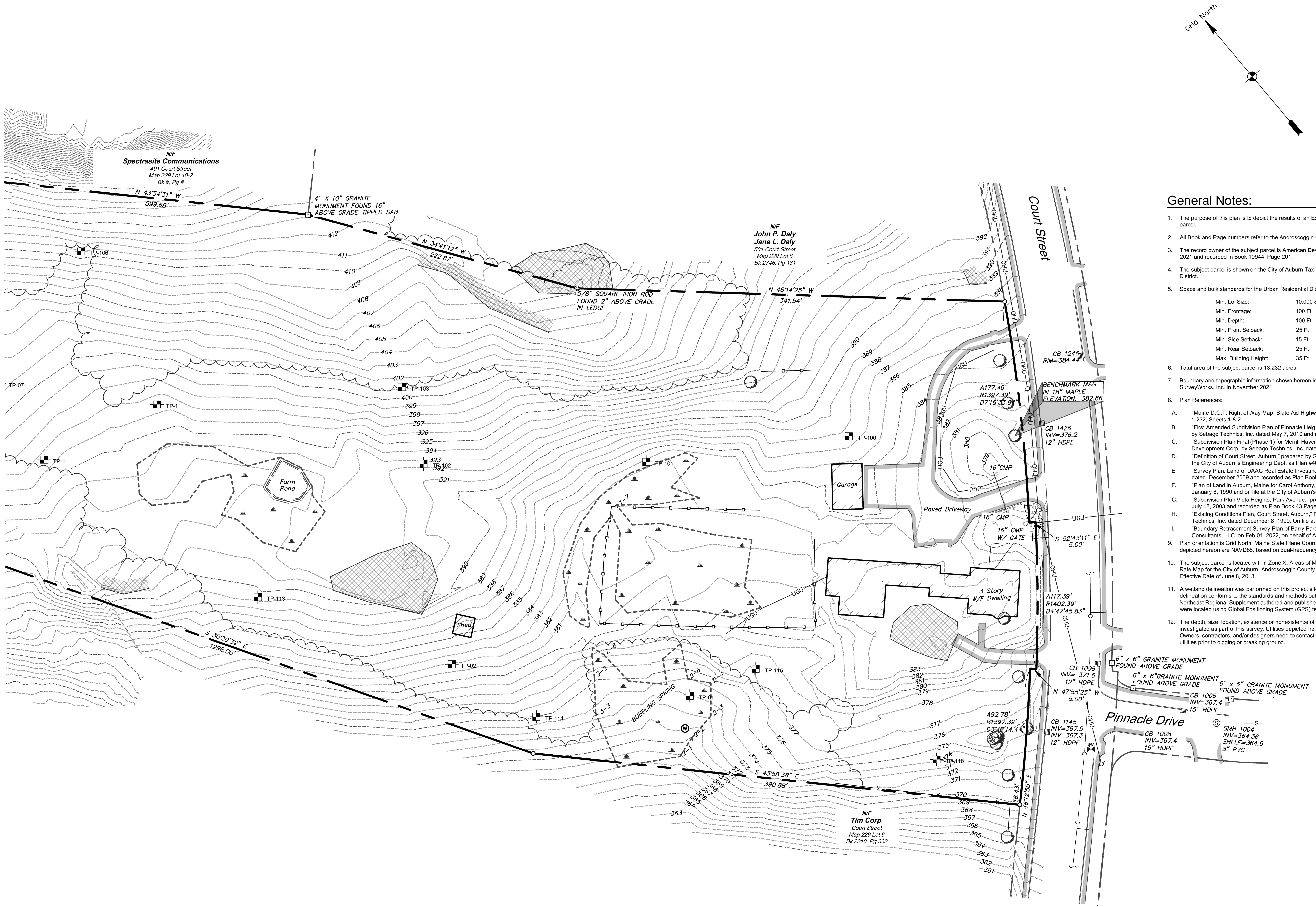
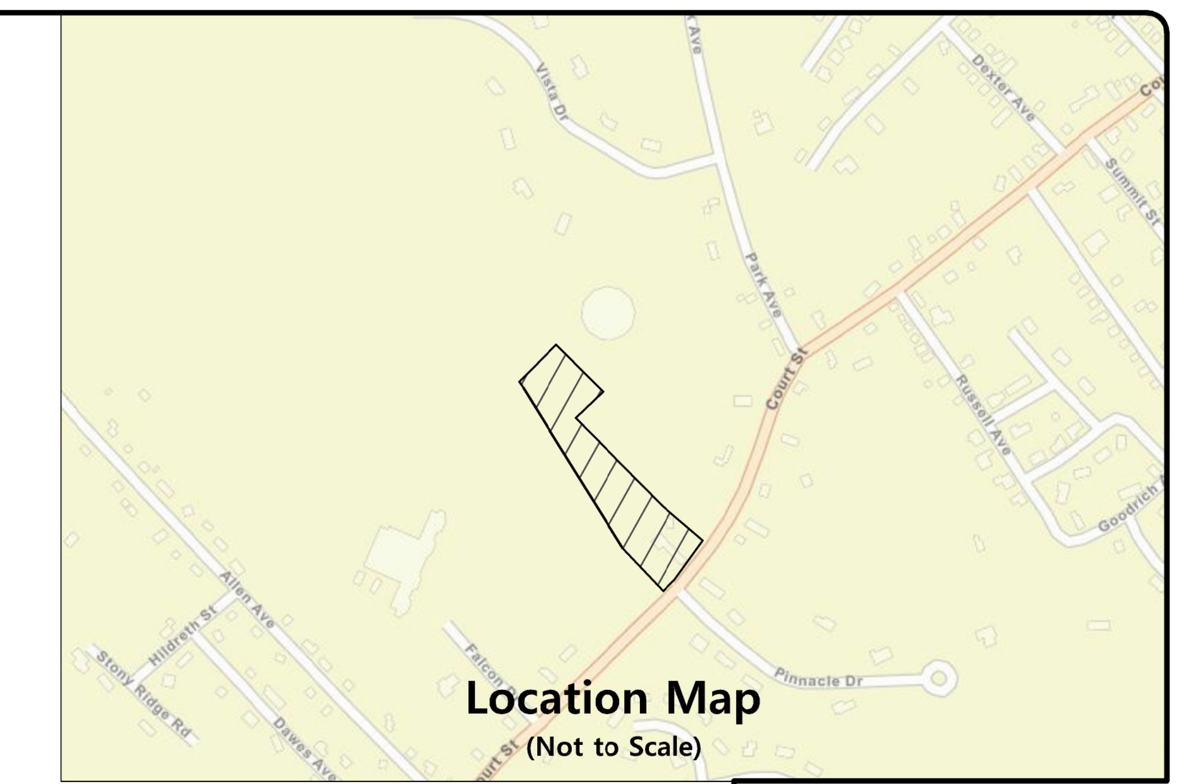




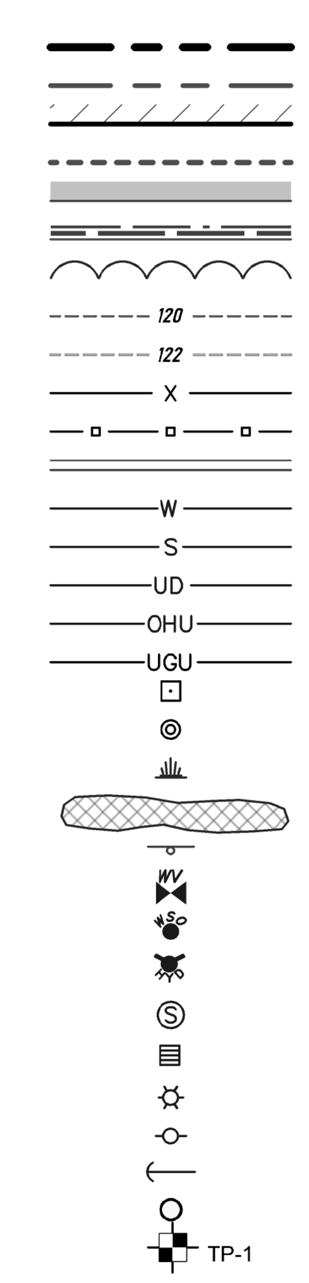
General Notes:

1. The purpose of this plan is to depict the results of an Existing Conditions and Topographic Survey of the subject parcel.
2. All Book and Page numbers refer to the Androscoggin County Registry of Deeds, unless otherwise noted.
3. The record owner of the subject parcel is American Development Group, LLC by a deed dated November 12, 2021 and recorded in Book 10944, Page 201.
4. The subject parcel is shown on the City of Auburn Tax Map 229 as Lot 7 and is located in the Urban Residential District.
5. Space and bulk standards for the Urban Residential District as of the date of this plan are as follows:

Min. Lot Size:	10,000 Sq Ft
Min. Frontage:	100 Ft
Min. Depth:	100 Ft
Min. Front Setback:	25 Ft
Min. Side Setback:	15 Ft
Min. Rear Setback:	25 Ft
Max. Building Height:	35 Ft

6. Total area of the subject parcel is 13.232 acres.
7. Boundary and topographic information shown hereon is based on an on-the-ground survey Performed by SurveyWorks, Inc. in November 2021.
8. Plan References:
   A. "Maine D.O.T. Right of Way Map, State Aid Highway No. 11, Auburn," dated April 1997, D.O.T. File No. 1-232, Sheets 1 & 2.
   B. "First Amended Subdivision Plan of Pinnacle Heights Subdivision," prepared for Sea Watch Properties, LLC by Sebago Technics, Inc. dated May 7, 2010 and recorded as Plan Book 48 Page 70.
   C. "Subdivision Plan Final (Phase 1) for Merrill Haven Subdivision, Fairview Avenue," prepared for Haskell Development Corp. by Sebago Technics, Inc. dated April 27, 1987 and recorded as Plan Book 33 Page 4.
   D. "Definition of Court Street, Auburn," prepared by George H. Barron, Engineer, dated June 27, 1933. On file at the City of Auburn's Engineering Dept. as Plan #466.
   E. "Survey Plan, Land of DAAC Real Estate Investment, Inc." prepared by Kachnovich Land Surveying, Inc. dated December 2009 and recorded as Plan Book 48 Page 25.
   F. "Plan of Land in Auburn, Maine for Carol Anthony, West Auburn Rd," prepared by Clyde B. Hodgkins, dated January 8, 1990 and on file at the City of Auburn's Engineering Department as Plan #344.
   G. "Subdivision Plan Vista Heights, Park Avenue," prepared for B&M Developers by Geo-Systems, last revised July 18, 2003 and recorded as Plan Book 43 Page 53.
   H. "Existing Conditions Plan, Court Street, Auburn," Prepared for Portland Cellular Partnership, by Sebago Technics, Inc. dated December 8, 1999. On file at the City of Auburn's Engineering Dept. as File #1064.
   I. "Boundary Retracement Survey Plan of Barry Parcel" Conducted by SurveyWorks, A Department of Terradyn Consultants, LLC. on Feb 01, 2022, on behalf of American Holding, Inc. To be recorded.
9. Plan orientation is Grid North, Maine State Plane Coordinate System, West Zone 1802-NAD83. Elevations depicted hereon are NAVD88, based on dual-frequency GPS observations.
10. The subject parcel is located within Zone X, Areas of Minimal Flood Hazard, as delineated on the Flood Insurance Rate Map for the City of Auburn, Androscoggin County, Community-Panel Number 23001C0328E, having an Effective Date of June 8, 2013.
11. A wetland delineation was performed on this project site by Flycatcher. on November 30, 2021. This wetlands delineation conforms to the standards and methods outlined in the 1987 Wetland Delineation Manual and Northeast Regional Supplement authored and published by the U.S. Army Corps of Engineers. All Wetland flags were located using Global Positioning System (GPS) technology capable of decimeter accuracy.
12. The depth, size, location, existence or nonexistence of underground utilities and/or structures were not investigated as part of this survey. Utilities depicted hereon may not necessarily represent all existing utilities. Owners, contractors, and/or designers need to contact Dig-Safe Systems, Inc. (call 811) and field verify existing utilities prior to digging or breaking ground.

Legend:



STATE OF MAINE, Androscoggin County, SS
REGISTRY OF DEEDS

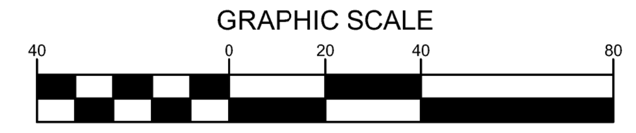
Received ____________________________

At ____ h ____ m ____M and recorded in

Plan Book ________, Page _______

Attest ______________________________
Registrar

GRAPHIC SCALE



(IN FEET)
1 INCH = 40 FT.

Rev. Date	Drawn	Checked	Note
12/16/21	ARM	JCC	Progress Print Issued
02/07/22	ARM	JCC	Issued for Submittals

TERRADYN CONSULTANTS, LLC
41 Campus Dr, Suite 101
New Gloucester, ME 04260
(207) 926-5111
www.terradynconsultants.com

Existing Conditions & Topographic Survey Plan

of

Berry Parcel

555 Court Street
Auburn, Maine

for Owner of Record:

American Holding, Inc.

P.O. Box 1495
Naples, ME 04055

Sheet Size: 24" X 36"

Project #21-4136	
Date:	12/16/21
Scale:	1" = 40'
Sheet No.	1 OF 1

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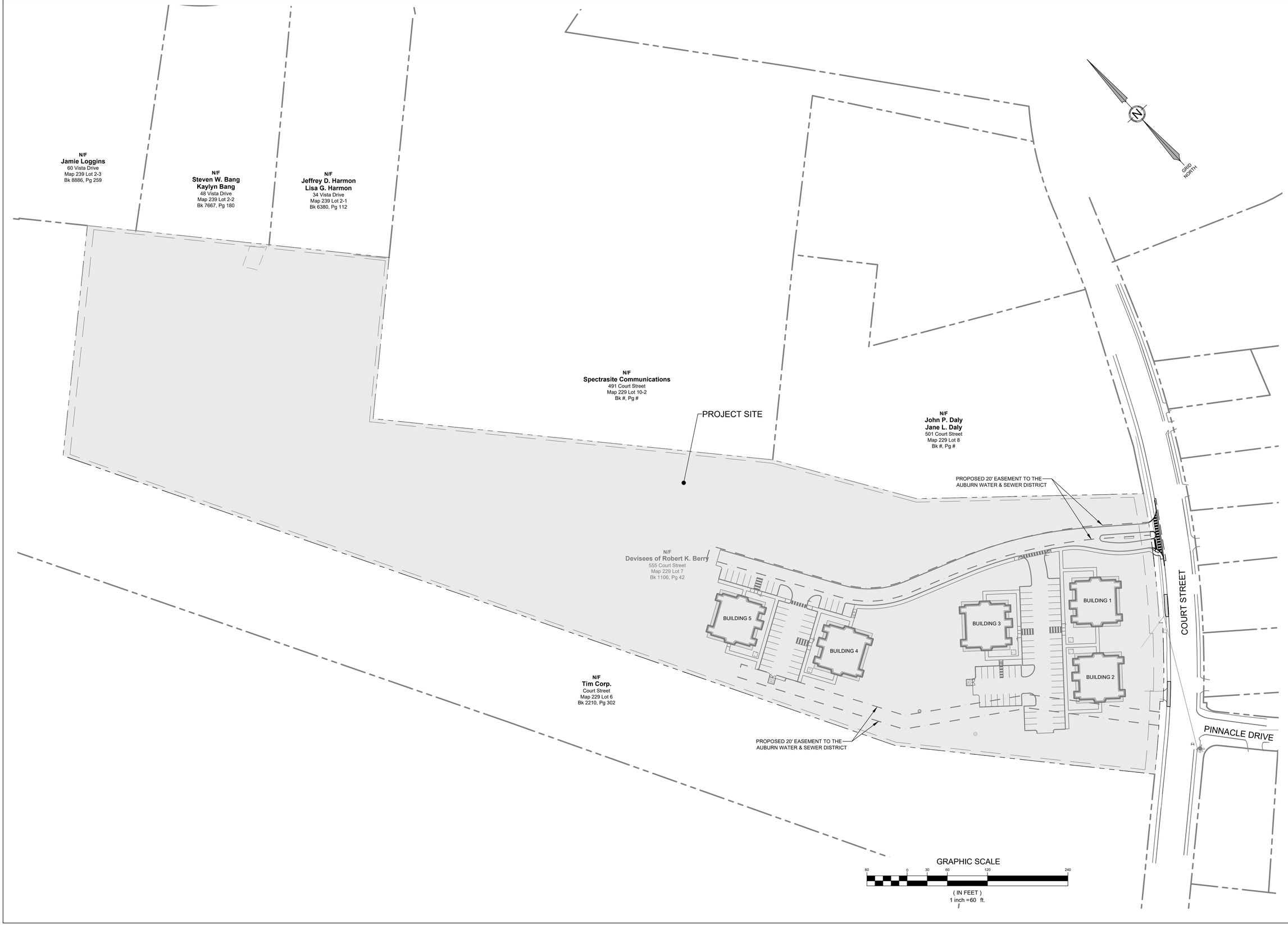

STATE OF MAINE
CRAIG M. SWEET
No. 15060
LICENSED PROFESSIONAL ENGINEER

DATE: 3/4/2022
P.E.: CRAIG M. SWEET

NO.	DATE	REVISIONS	APP'D BY
1	4/5/2022	REVISED PER CITY STAFF COMMENTS	

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Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
STABLE RIDGE APARTMENTS
555 COURT STREET, AUBURN, MAINE

SHEET TITLE:
OVERALL SITE PLAN

CLIENT:
AMERICAN DEVELOPMENT GROUP
PO. BOX 1495
NAPLES, MAINE 04055

DATE:	1/3/2022
SCALE:	1"=60'
DESIGNED:	CMS
JOB NO:	21-81
SHEET	C-1.0

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DEMOLITION NOTES

1. CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIM OR HERSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIM OR HERSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.

2. ALL EXISTING PAVEMENT, UTILITIES AND BUILDINGS TO BE DEMOLISHED AS DELINEATED AND REMOVED FROM SITE IN ACCORDANCE WITH ALL APPLICABLE CITY OF WESTBROOK AND STATE OF MAINE REGULATIONS.

3. ALL DEMOLITION AND WRECKAGE FROM PROJECT SITE TO BE DISPOSED OF AT AN APPROPRIATE LICENSED DISPOSAL SITE.

4. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY UTILITY COMPANIES. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT DIG SAFE (1-888-DIGSAFE) AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES.

5. CONTRACTOR SHALL BE AWARE THAT DIG SAFE ONLY NOTIFIES ITS "MEMBER" UTILITIES ABOUT THE DIG. WHEN NOTIFIED, DIG SAFE WILL ADVISE CONTRACTOR OF MEMBER UTILITIES IN THE AREA. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND CONTACTING NON-MEMBER UTILITIES DIRECTLY. NON-MEMBER UTILITIES MAY INCLUDE TOWN OR CITY WATER AND SEWER DISTRICTS AND SMALL LOCAL UTILITIES, AS WELL AS USG PUBLIC WORKS SYSTEMS.

6. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND IN THE FIELD.

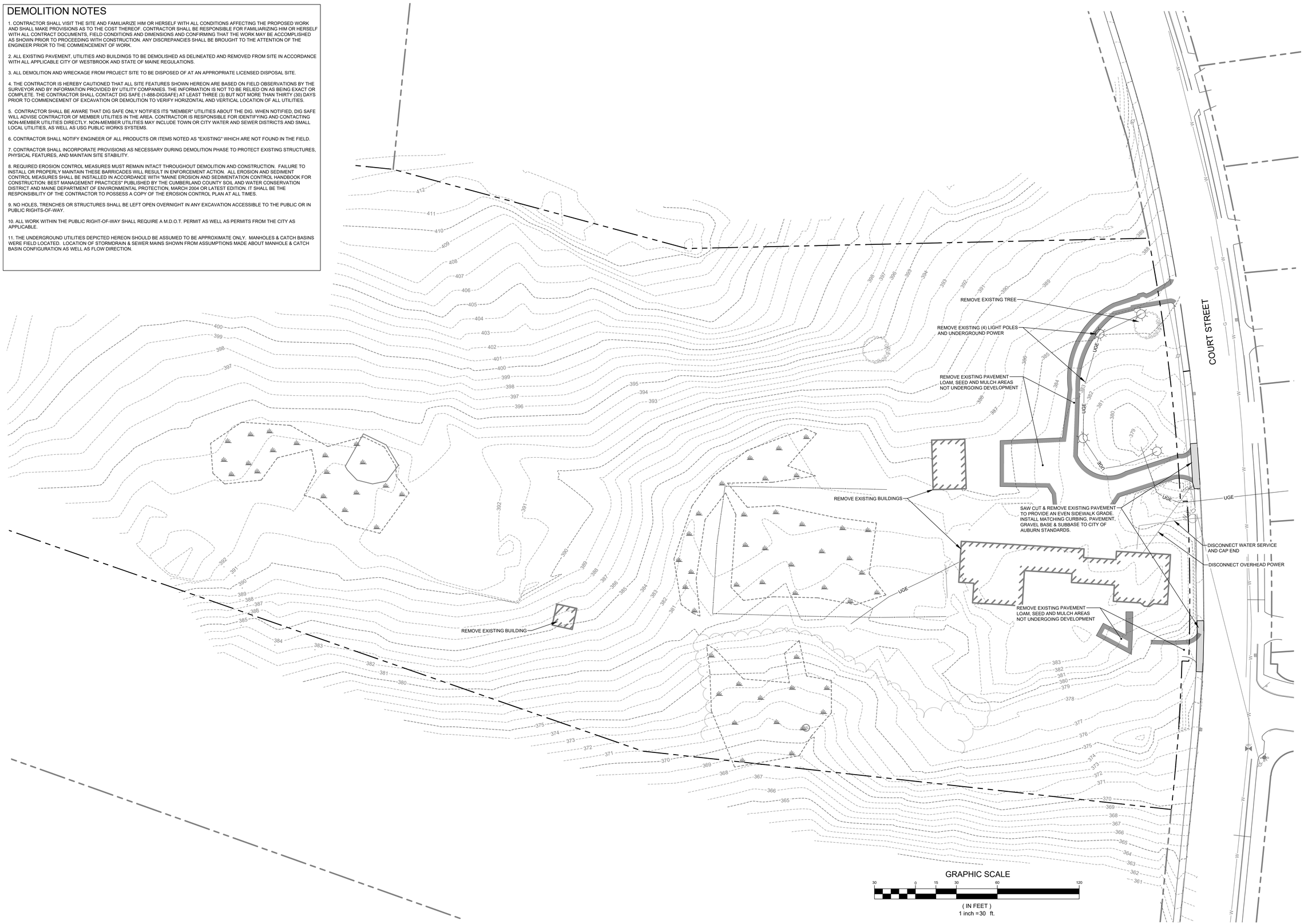
7. CONTRACTOR SHALL INCORPORATE PROVISIONS AS NECESSARY DURING DEMOLITION PHASE TO PROTECT EXISTING STRUCTURES, PHYSICAL FEATURES, AND MAINTAIN SITE STABILITY.

8. REQUIRED EROSION CONTROL MEASURES MUST REMAIN INTACT THROUGHOUT DEMOLITION AND CONSTRUCTION. FAILURE TO INSTALL OR PROPERLY MAINTAIN THESE BARRICADES WILL RESULT IN ENFORCEMENT ACTION. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES" PUBLISHED BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2004 OR LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.

9. NO HOLES, TRENCHES OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN ANY EXCAVATION ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.

10. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL REQUIRE A M.D.O.T. PERMIT AS WELL AS PERMITS FROM THE CITY AS APPLICABLE.

11. THE UNDERGROUND UTILITIES DEPICTED HEREON SHOULD BE ASSUMED TO BE APPROXIMATE ONLY. MANHOLES & CATCH BASINS WERE FIELD LOCATED. LOCATION OF STORMDRAIN & SEWER MAINS SHOWN FROM ASSUMPTIONS MADE ABOUT MANHOLE & CATCH BASIN CONFIGURATION AS WELL AS FLOW DIRECTION.



GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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CRAIG M. SWEET
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DATE: 3/4/2022

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555 COURT STREET, AUBURN, MAINE

SHEET TITLE:
DEMOLITION PLAN

CLIENT:
AMERICAN DEVELOPMENT GROUP
P.O. BOX 1495
NAPLES, MAINE 04055

DATE:	1/3/2022
SCALE:	1"=30'
DESIGNED:	CMS
JOB NO:	21-81
SHEET	C-2.0

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MATCH LINE - SEE SHEET C-3.1

5' SIDE SETBACK

PROPOSED TREE LINE

STABLE DRIVE

SLIP FORM CONCRETE CURB (TYP)

R150'

CB 8

CB 7

CB 6

STOP SIGN

HANDICAP DETECTABLE WARNING PLATE (TYP)

15' RAD. (TYP)

R15'

R1000'

CURB TIP-DOWN

3' RAD. (TYP)

109' R

88' R

CB 3

SAW CUT LINE

CURB TIP-DOWN

CB 1

14' WIDE LANDSCAPED ISLAND W/PROJECT SIGN

CURB TIP-DOWN

R20'

CB 2

STOP SIGN

5' BITUMINOUS SIDEWALK (TYP)

3 STORY BALCONY (TYP)

BUILDING 1
12 UNITS
3 STORY (TYP)

UTILITY ROOM

ROOF DRAIN FILTER STRIP (TYP)

HANDICAP PARKING SIGN (TYP)

SAW CUT & REMOVE EXISTING PAVEMENT TO PROVIDE AN EVEN SIDEWALK GRADE. INSTALL MATCHING CURBING, PAVEMENT, GRAVEL BASE & SUBBASE TO CITY OF AUBURN STANDARDS.

COURT STREET

PROPOSED GUARD RAIL
STA: 2+80 TO STA: 3+70

WETLAND DISTURBANCE
AREA #2=7,161 SF

UTILITY ROOM

BUILDING 3
12 UNITS
3 STORY (TYP)

HANDICAP PARKING SIGN (TYP)

SMH 5

CONCRETE STAIRS

CURB TIP-DOWN AT HANDICAP RAMPS (TYP)

CONCRETE TRANSFORMER PAD (TYP)

CB 4

3' RAD. (TYP)

BUILDING 2
12 UNITS
3 STORY (TYP)

UTILITY ROOM

DUMPSTER ENCLOSURE

UNDERDRAINED FILTER BASIN

SMH 2

CURB TIP-DOWN

SAW CUT & REMOVE EXISTING PAVEMENT TO PROVIDE AN EVEN SIDEWALK GRADE. INSTALL MATCHING CURBING, PAVEMENT, GRAVEL BASE & SUBBASE TO CITY OF AUBURN STANDARDS.

5' SIDEWALK (TYP)

LIGHT POLE (TYP)

SMH 1

DMH 1

SMH 3

CURB TIP-DOWN

SNOW STORAGE AREA

CB 5

CURB TIP-DOWN

PROPOSED TREE LINE

WETLAND DISTURBANCE
AREA #1= 3,517 SF
TOTAL PROJECT IMPACT
=14,885 SF

5' SIDE SETBACK

15' FRONT SETBACK

PINNACLE DRIVE

GRID NORTH

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch =20 ft.

MATCH LINE - SEE SHEET C-3.1

GENERAL NOTES:

1. THE RECORD OWNER OF THE PARCEL IS AMERICAN DEVELOPMENT GROUP, LLC. AS SHOWN IN DEED LOCATED IN ANDROSCOGGIN REGISTRY OF DEEDS BOOK 10944. PAGE 201.

2. THE PROPERTY IS LOCATED AT LOT 9 ON THE CITY OF AUBURN TAX MAP 299 AND IS LOCATED IN TRADITIONAL NEIGHBORHOOD DEVELOPMENT DISTRICT T-4.2.

3. SPACE AND BULK CRITERIA:

NEIGHBORHOOD DEVELOPMENT DISTRICT:
MIN. LOT WIDTH: . . . . 24 FT MIN, 120 FT MAX.
MIN. FRONT SETBACK: . . . 15 FT MIN, 15 FT MAX.
MIN. SIDE SETBACK: . . . 5 FT ,
MIN. REAR SETBACK: . . . 10 FT.
MAX. BUILDING HEIGHT: . . . 3 STORY FT.
MAX. FOOT PRINT FACTOR: . . 70 %

4. TOTAL AREA OF PARCEL: . . . 13.25 Ac.+/-

5. TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON GRID NORTH, MAINE STATE COORDINATE SYSTEM - MAINE WEST ZONE NAD 83.

6. WETLAND INFORMATION SHOWN HEREON IS BASED UPON WETLAND DELINEATION PERFORMED BY FLY CATCHER LLC.

7. SITE ENGINEERING PROVIDED BY CRAIG SWEET, P.E. #15060 OF TERRADYN CONSULTANTS, LLC, WHOSE ADDRESS IS 41 CAMPUS DRIVE, NEW GLOUCESTER, MAINE 04260.

8. THIS PLAN REFERENCES THE STANDARD BOUNDARY SURVEY ENTITLED "BOUNDARY ENTRANCEMENT SURVEY PLAN OF BERRY PARCEL 555 COURT STREET, AUBURN, MAINE FOR OWNER OF RECORD AMERICAN HOLDING, INC. P.O. BOX 1495 NAPLES MAINE 04055" DATED, 2/01/2022, BY TERRADYN LLC. SURVEY DIVISION.

9. PARKING SUMMARY:
REQUIRED: 1 ½ SPACE PER DWELLING UNIT
1.5 x 60 = 90 SPACES

PROVIDED: = 90 SPACES

STATE OF MAINE
CRAIG M. SWEET
No. 15060
LICENSED PROFESSIONAL ENGINEER

DATE: 3/4/2022
P.E.: CRAIG M. SWEET

NO.	DATE	REVISIONS	APP'D BY
1	4/5/2022	REVISED PER CITY STAFF COMMENTS	

TERRADYN CONSULTANTS, LLC
41 CAMPUS DRIVE
SUITE 305
NEW GLOUCESTER, ME 04260
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com
565 CONGRESS STREET
SUITE 201
PORTLAND, ME 04102

Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
STABLE RIDGE APARTMENTS
555 COURT STREET, AUBURN, MAINE

SHEET TITLE:
SITE LAYOUT PLAN

CLIENT:
AMERICAN DEVELOPMENT GROUP
P.O. BOX 1495
NAPLES, MAINE 04055

DATE:	1/3/2022
SCALE:	1"=20'
DESIGNED:	CMS
JOB NO:	21-81
SHEET	C-3.0

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CONSTRUCTION NOTES

1. ALL WORK SHALL CONFORM TO THE APPLICABLE CODES AND ORDINANCES.

2. CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIM OR HERSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIM OR HERSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.

3. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND IN THE FIELD.

4. INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND OWNER'S REQUIREMENTS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.

5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE ENGINEER.

6. CONTRACTOR SHALL CLEAN AND REMOVE DEBRIS AND SEDIMENT DEPOSITED ON PUBLIC STREETS, SIDEWALKS, ADJACENT AREAS, OR OTHER PUBLIC WAYS DUE TO CONSTRUCTION.

7. CONTRACTOR SHALL INCORPORATE PROVISIONS AS NECESSARY IN CONSTRUCTION TO PROTECT EXISTING STRUCTURES, PHYSICAL FEATURES, AND MAINTAIN SITE STABILITY DURING CONSTRUCTION. CONTRACTOR SHALL RESTORE ALL AREAS TO ORIGINAL CONDITION AND AS DIRECTED BY DESIGN DRAWINGS.

8. SITE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO CONSTRUCTION.

9. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES" PUBLISHED BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2016 OR LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.

10. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY UTILITY COMPANIES. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT DIG SAFE (1-888-DIGSAFE) AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES.

11. CONTRACTOR SHALL BE AWARE THAT DIG SAFE ONLY NOTIFIES ITS "MEMBER" UTILITIES ABOUT THE DIG. WHEN NOTIFIED, DIG SAFE WILL ADVISE CONTRACTOR OF MEMBER UTILITIES IN THE AREA. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND CONTACTING NON-MEMBER UTILITIES DIRECTLY. NON-MEMBER UTILITIES MAY INCLUDE TOWN OR CITY WATER AND SEWER DISTRICTS AND SMALL LOCAL UTILITIES, AS WELL AS USG PUBLIC WORKS SYSTEMS.

12. CONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS OF 23 MRSA 3360-A, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE APPROPRIATE UTILITIES TO OBTAIN AUTHORIZATION PRIOR TO RELOCATION OF ANY EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS. IF A UTILITY CONFLICT ARISES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER, THE MUNICIPALITY AND APPROPRIATE UTILITY COMPANY PRIOR TO PROCEEDING WITH ANY RELOCATION.

13. ALL PAVEMENT MARKINGS AND DIRECTIONAL SIGNAGE SHOWN ON THE PLAN SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS.

14. ALL PAVEMENT JOINTS SHALL BE SAWCUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.

15. NO HOLES, TRENCHES OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN ANY EXCAVATION ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.

16. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL REQUIRE A M.D.O.T. PERMIT AS WELL AS PERMITS FROM THE TOWN AS APPLICABLE.

17. THE PROPOSED LIMITS OF CLEARING SHOWN HEREON ARE APPROXIMATE BASED UPON THE PROPOSED LIMITS OF SITE GRADING. THE APPLICANT RESERVES THE RIGHT TO PERFORM NORMAL FOREST MANAGEMENT ACTIVITIES OUTSIDE OF THE CLEARING LIMIT AS SHOWN. TREE REMOVAL OUTSIDE OF THE LIMITS OF CLEARING MAY BE NECESSARY TO REMOVE DEAD OR DYING TREES OR TREE LIMBS. THIS REMOVAL IS DUE TO POTENTIAL SAFETY HAZARDS AND TO PROMOTE PROPER FOREST GROWTH.

18. IMMEDIATELY UPON COMPLETION OF CUTS/FILLS, THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH EROSION CONTROL NOTES AND AS SPECIFIED ON PLANS.

19. THE CONTRACTOR SHALL BE FULLY AND SOLELY RESPONSIBLE FOR THE REMOVAL, REPLACEMENT AND RECTIFICATION OF ALL DAMAGED AND DEFECTIVE MATERIAL AND WORKMANSHIP IN CONNECTION WITH THE CONTRACT WORK. THE CONTRACTOR SHALL REPLACE OR REPAIR AS DIRECTED BY THE OWNER ALL SUCH DAMAGED OR DEFECTIVE MATERIALS WHICH APPEAR WITHIN A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.

20. ALL WORK PERFORMED BY THE GENERAL CONTRACTOR AND/OR TRADE SUBCONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF LOCAL, STATE OR FEDERAL LAWS, AS WELL AS ANY OTHER GOVERNING REQUIREMENTS, WHETHER OR NOT SPECIFIED ON THE DRAWINGS.

21. WHERE THE TERMS "APPROVED EQUAL", "OTHER APPROVED", "EQUAL TO", "ACCEPTABLE" OR OTHER GENERAL QUALIFYING TERMS ARE USED IN THESE NOTES, IT SHALL BE UNDERSTOOD THAT REFERENCE IS MADE TO THE RULING AND JUDGMENT OF TERRADYN CONSULTANTS, LLC.

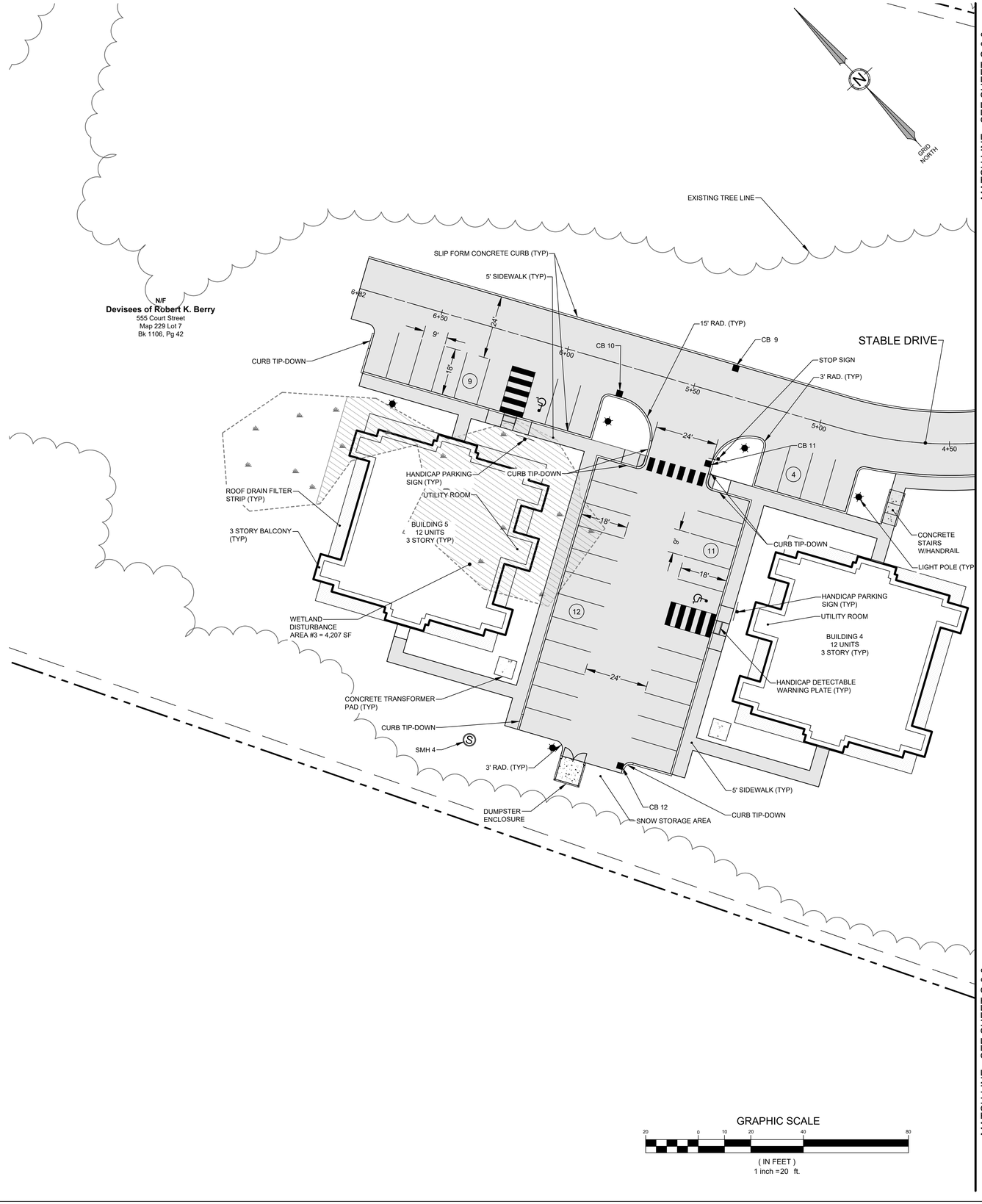
22. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTION FOR THE WORK UNTIL TURNED OVER TO THE OWNER.

23. THE GENERAL CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DRAWINGS ON SITE DURING ALL PHASES OF CONSTRUCTION FOR USE OF ALL TRADES.

24. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ANY CHANGES AND DEVIATION OF APPROVED PLANS NOT AUTHORIZED BY THE ARCHITECT/ENGINEER AND/OR CLIENT/OWNER.

25. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. ANY MODIFICATION TO SUIT FIELD DIMENSION AND CONDITION SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ANY WORK.

26. BEFORE THE FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL REMOVE ALL EQUIPMENT AND MATERIALS, REPAIR OR REPLACE PRIVATE OR PUBLIC PROPERTY WHICH MAY HAVE BEEN DAMAGED OR DESTROYED DURING CONSTRUCTION, CLEAN THE AREAS WITHIN AND ADJACENT TO THE PROJECT WHICH HAVE BEEN OBSTRUCTED BY HIS/HER OPERATIONS, AND LEAVE THE PROJECT AREA NEAT AND PRESENTABLE.



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch =20 ft.

STATE OF MAINE
CRAIG M. SWEET
No. 15060
LICENSED PROFESSIONAL ENGINEER

DATE: 3/4/2022
P.E.: CRAIG M. SWEET

NO.	DATE	REVISIONS	APP'D BY
1	4/5/2022	REVISED PER CITY STAFF COMMENTS	

555 CONGRESS STREET
SUITE 201
PORTLAND, ME 04102

41 CAMPUS DRIVE
SUITE 201
NEW GLOUCESTER, ME 04260

OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com

TERRADYN CONSULTANTS, LLC

Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
STABLE RIDGE APARTMENTS
555 COURT STREET, AUBURN, MAINE

SHEET TITLE:
SITE LAYOUT PLAN

CLIENT:
AMERICAN DEVELOPMENT GROUP
P.O. BOX 1495
NAPLES, MAINE 04055

DATE:	1/3/2022
SCALE:	1"=20'
DESIGNED:	CMS
JOB NO:	21-81
SHEET	C-3.1

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MATCH LINE - SEE SHEET C-4.1

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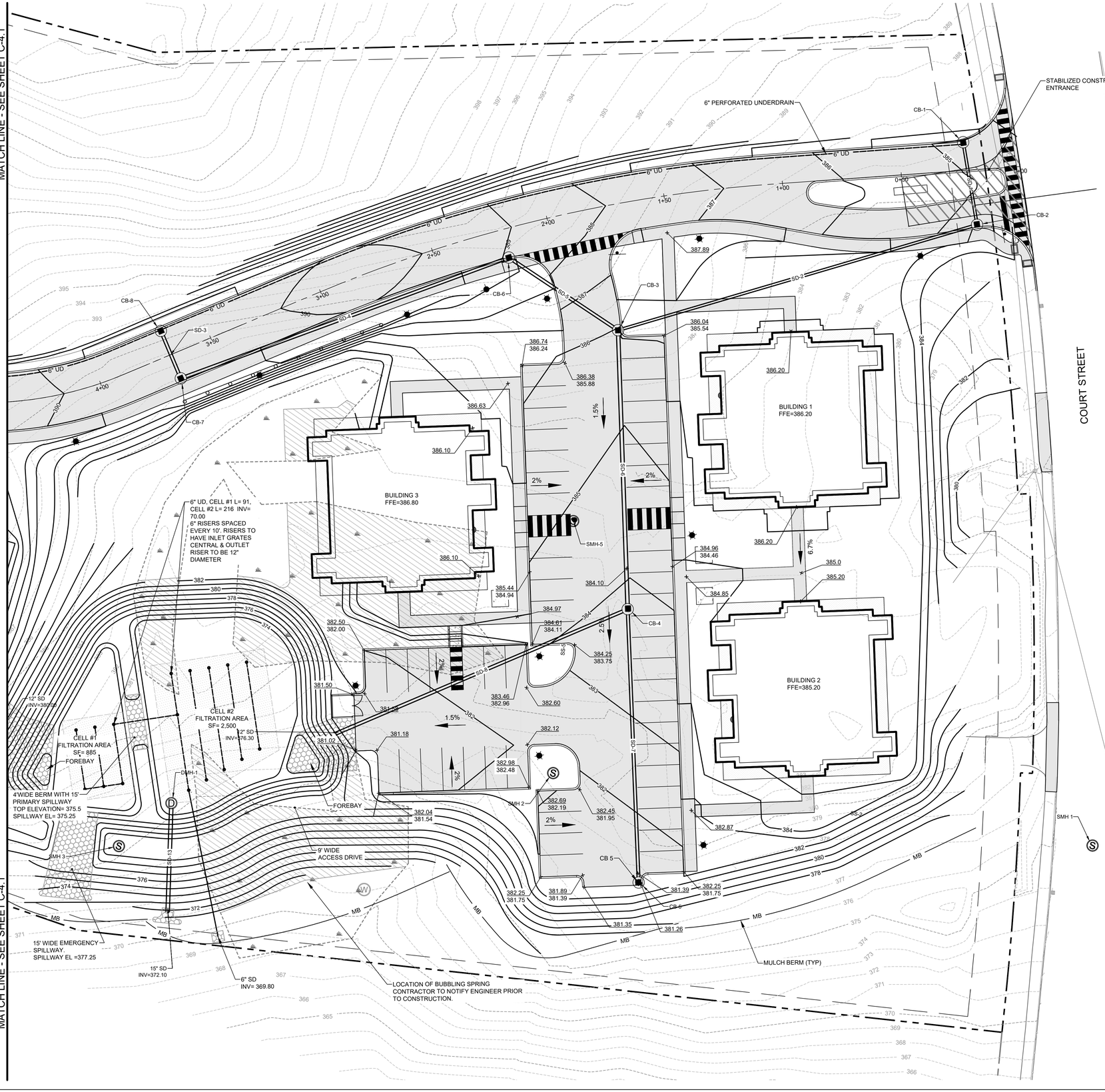

STORM DRAIN & SEWER STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CB-1	384.64		381.00 (SD-1)	48"
CB-2	384.60	380.60 (SD-1)	380.50 (SD-2)	48"
CB-3	385.95	380.33 (SD-2) 380.33 (SD-5)	377.50 (SD-6)	48"
CB-4	383.80	376.80 (SD-6)	376.80 (SD-7) 376.80 (SD-8)	48"
CB-5	381.26	375.55 (SD-7)		48"
CB-6	388.85	381.88 (SD-4)	381.88 (SD-5)	48"
CB-7	389.11	384.75 (SD-3)	384.75 (SD-4)	48"
CB-8	389.11		385.30 (SD-3)	48"
CB-9	393.40		389.30 (SD-10)	48"
CB-10	394.09	390.28 (SD-9)		48"
CB-11	393.40	389.50 (SD-10) 389.50 (SD-11)	389.50 (SD-9)	48"
CB-12	392.18	388.18 (SD-12)	388.18 (SD-11)	48"
DMH-1	375.49		372.50 (SD-13)	48"
SMH-4	391.50	386.83 (SS-4)		48"
SMH-5	386.08		380.22 (SS-5)	48"
SMH-EX	371.70		364.46 (SS-1)	48"
SMH 1	373.50	365.00 (SS-1)	365.10 (SS-2)	48"
SMH 2	383.50	371.23 (SS-2) 378.33 (SS-5)	371.33 (SS-3)	48"
SMH 3	373.72	372.10 (SS-3)	372.20 (SS-4)	48"

STORM DRAIN & SEWER PIPE DATA

NAME	SIZE	LENGTH	SLOPE
SD-1	12"	31'	1.29%
SD-2	12"	153'	0.11%
SD-3	12"	18'	3.12%
SD-4	12"	143'	2.01%
SD-5	12"	51'	3.04%
SD-6	15"	113'	0.62%
SD-7	12"	111'	1.13%
SD-8	12"	131'	0.38%
SD-9	12"	39'	2.00%
SD-10	12"	34'	-0.59%
SD-11	12"	116'	1.14%
SD-12	12"	123'	6.64%
SD-13	15"	44'	0.92%
SS-1	8"	115'	-0.47%
SS-2	8"	224'	-2.73%
SS-3	8"	181'	-0.43%
SS-4	8"	247'	-5.93%
SS-5	8"	102'	1.85%

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch =20 ft.

STATE OF MAINE
CRAIG M. SWEET
No. 15060
REGISTERED PROFESSIONAL ENGINEER
LICENSED

DATE: 3/4/2022
P.E.: CRAIG M. SWEET

NO.	DATE	REVISIONS	APP'D BY
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www.terradynconsultants.com
565 CONGRESS STREET SUITE 201 PORTLAND, ME 04102
Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
STABLE RIDGE APARTMENTS
555 COURT STREET, AUBURN, MAINE

SHEET TITLE:
GRADING & EROSION CONTROL PLAN

CLIENT:
AMERICAN DEVELOPMENT GROUP
P.O. BOX 1495
NAPLES, MAINE 04055

DATE:	1/3/2022
SCALE:	1"=20'
DESIGNED:	CMS
JOB NO:	21-81
SHEET	C-4.0

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SITE GRADING NOTES:

1. SITE GRADING SHOWN ON THIS PLAN IS BASED ON BUILDING FOOTPRINTS AS PROVIDED BY OWNER.
2. THE CONTRACTOR AND/OR OWNER SHALL CONTACT THE DESIGN ENGINEER TO REVIEW ANY CHANGES TO THE ROADWAY GRADES, BUILDING FOOTPRINTS OR FLOOR ELEVATIONS (FFE, BFE AND GFE) BEFORE PROCEEDING WITH CONSTRUCTION.
3. FINE GRADE ALL UNPAVED CONSTRUCTION AREAS TO PROVIDE SMOOTH, EVEN SURFACES CONFORMING TO SLOPE GRADIENTS NOTED BELOW. REMOVE ALL VISIBLE ROCK AND DEBRIS PRIOR TO FINE GRADING.
4. AT GRASSED OR LANDSCAPED AREAS, PROVIDE A MINIMUM OF 6 INCHES FROM FINISH GRADE OUTSIDE OF STRUCTURES TO FINISH FLOOR ELEVATION, OR TO BASEMENT FLOOR ELEVATION FOR DAYLIGHT BASEMENTS.
5. PROVIDE A MINIMUM SLOPE OF 6 INCHES IN 10 FEET (5%) AWAY FROM STRUCTURES IN GRASSED AND LANDSCAPED AREAS, EXCEPT AS RESTRICTED BY WALKWAYS, DRAINAGE FEATURES OR OTHER SITE CONDITIONS.
6. PROVIDE A MINIMUM SLOPE OF 6 INCHES IN 25 FEET (2%) IN ALL OTHER UNPAVED AREAS.
7. FINE GRADE ALL UNPAVED AREAS TO SLOPE CONTINUOUSLY AT THE ABOVE GRADIENTS TO LOWER ELEVATIONS, DRAINAGE SWALES, OR DRAINAGE STRUCTURES.
8. FOR ACCESS AND MAINTENANCE AROUND BUILDINGS, PROVIDE AN AREA AT LEAST 4 FEET WIDE WITH A GRADIENT NO STEEPER THAN 1 IN 10 (10%), EXCEPT WHERE GRADES SLOPE FROM UPPER TO LOWER BUILDING FLOOR LEVELS AS SHOWN ON GRADING PLAN.
9. PROVIDE A MINIMUM SLOPE OF ¼" PER FOOT (2%) FOR AT LEAST 5 FEET AWAY FROM BUILDINGS IN PAVED AREAS.
10. WALKWAY GRADIENTS SHALL NOT BE STEEPER THAN 1 IN 20 (5%).
11. DRIVEWAY GRADIENTS SHALL NOT BE LESS 1 % OR STEEPER THAN 8%. CHANGE OF LONGITUDINAL GRADE SHALL NOT EXCEED 8% OVER A LENGTH OF 6 FEET.
12. PROVIDE ½" LIP FROM GARAGE FLOOR ELEVATIONS TO ADJACENT DRIVEWAY PAVEMENT GRADE.
13. PERIMETER FOUNDATION DRAINS ARE REQUIRED ON ALL STRUCTURES AS DIRECTED BY OWNER. PROVIDE GRAVITY DRAINAGE FOR ALL FOUNDATION DRAIN OUTLETS. OUTLETS MUST NOT PERMIT BACKFLOW INTO FOUNDATION DRAINS.

HOUSEKEEPING NOTES:

1. SPILL PREVENTION. CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS ON SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER, AND APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING AND IMPLEMENTATION.

2. GROUNDWATER PROTECTION. DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS.

3. FUGITIVE SEDIMENT AND DUST. ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL.

4. DEBRIS AND OTHER MATERIALS. LITTER, CONSTRUCTION DEBRIS, AND CHEMICALS EXPOSED TO STORMWATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

5. TRENCH OR FOUNDATION DE-WATERING. TRENCH DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER MUST BE REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, AND MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE DEPARTMENT.

6. NON-STORMWATER DISCHARGES. IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES.

7. ADDITIONAL REQUIREMENTS. ADDITIONAL REQUIREMENTS MAY BE APPLIED ON A SITE-SPECIFIC BASIS.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch =20 ft.

STORM DRAIN & SEWER STRUCTURE DATA

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SD-8	12"	131'	0.38%
SD-9	12"	39'	2.00%
SD-10	12"	34'	-0.59%
SD-11	12"	116'	1.14%
SD-12	12"	123'	6.64%
SD-13	24"	44'	0.92%
SS-1	8"	115'	-0.47%
SS-2	8"	224'	-2.73%
SS-3	8"	181'	-0.43%
SS-4	8"	247'	-5.93%
SS-5	8"	102'	1.85%

STATE OF MAINE
CRAIG M. SWEET
No. 15060
LICENSED PROFESSIONAL ENGINEER

DATE: 3/4/2022
P.E.: CRAIG M. SWEET

NO.	DATE	REVISIONS	APP'D BY
1	4/5/2022	REVISED PER CITY STAFF COMMENTS	

TERRADYN CONSULTANTS, LLC
41 CAMPUS DRIVE, SUITE 301, NEW GLOUCESTER, ME 04260
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com
565 CONGRESS STREET, SUITE 201, PORTLAND, ME 04102

Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT: STABLE RIDGE APARTMENTS
555 COURT STREET, AUBURN, MAINE

SHEET TITLE: GRADING & EROSION CONTROL PLAN

CLIENT: AMERICAN DEVELOPMENT GROUP
P.O. BOX 1485
NAPLES, MAINE 04055

DATE:	1/3/2022
SCALE:	1"=20'
DESIGNED:	CMS
JOB NO:	21-81
SHEET	C-4.1

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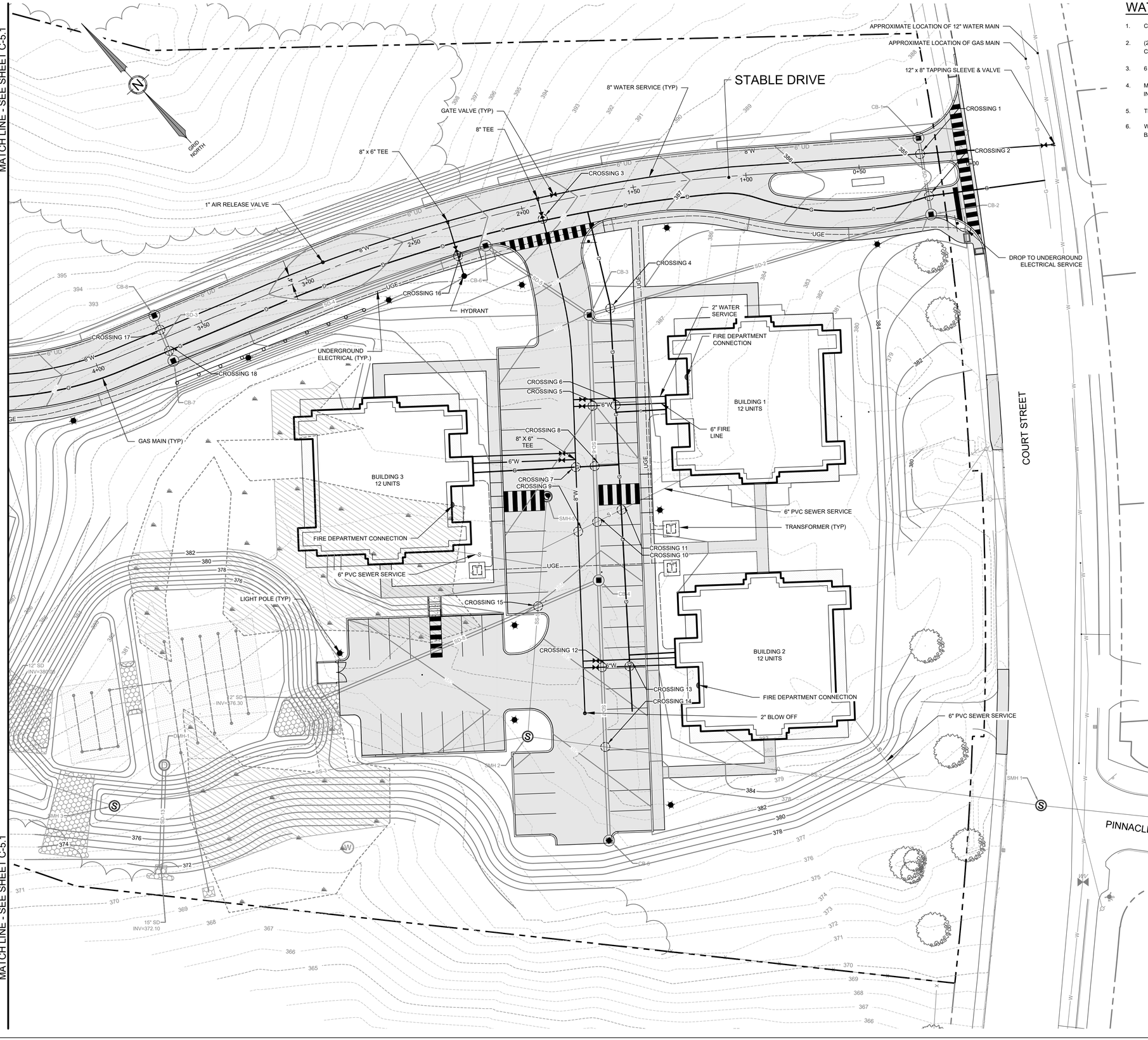

WATER MAIN CONSTRUCTION NOTES:

1. CURB STOPS LOCATED WITHIN PAVED AREAS SHALL BE IN A VALVE BOX TO SECTION.
2. (2) LAYERS OF RIGID INSULATION BETWEEN SERVICE(S) AND CULVERT (TYPICAL ALL CROSSINGS).
3. 6 FEET OF COVER ON ALL WATER MAINS & SERVICES (TYP)
4. MINIMUM 12" SEPARATION BETWEEN STORM DRAIN AND WATER MAIN. INSTALL 2" RIGID FOAM INSULATION ABOVE WATER MAIN (TYP).
5. TESTABLE DCVA ON ALL FIRE SERVICES BEFORE RISER PIPE (TYP)
6. WATERMAIN LOCATION AND BENDS SHOWN ARE APPROXIMATE, CONTRACTOR SHALL PLACE BASED ON FIELD CONDITIONS.

STORM DRAIN & SEWER STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CB-1	384.65		381.00 (SD-1)	48"
CB-2	384.60	380.60 (SD-1)	380.50 (SD-2)	48"
CB-3	385.95	380.33 (SD-2) 380.33 (SD-5)	377.50 (SD-6)	48"
CB-4	383.80	376.80 (SD-6)	376.80 (SD-7) 376.80 (SD-8)	48"
CB-5	381.26	375.55 (SD-7)		48"
CB-6	388.85	381.88 (SD-4)	381.88 (SD-5)	48"
CB-7	389.11	384.75 (SD-3)	384.75 (SD-4)	48"
CB-8	389.11		385.30 (SD-3)	48"
CB-9	393.40		389.30 (SD-10)	48"
CB-10	394.09	390.28 (SD-9)		48"
CB-11	393.40	389.50 (SD-10) 389.50 (SD-11)	389.50 (SD-9)	48"
CB-12	392.18	388.18 (SD-12)	388.18 (SD-11)	48"
DMH-1	375.49		372.50 (SD-13)	48"
SMH-4	391.50	386.83 (SS-4)		48"
SMH-5	386.08		380.22 (SS-5)	48"
SMH-EX	371.70		364.46 (SS-1)	48"
SMH 1	373.50	365.00 (SS-1)	365.10 (SS-2)	48"
SMH 2	383.50	371.23 (SS-2) 378.33 (SS-5)	371.33 (SS-3)	48"
SMH 3	373.72	372.10 (SS-3)	372.20 (SS-4)	48"

STORM DRAIN & SEWER PIPE DATA

NAME	SIZE	LENGTH	SLOPE
SD-1	12"	30'	1.32%
SD-2	12"	153'	0.11%
SD-3	12"	18'	3.12%
SD-4	12"	143'	2.01%
SD-5	12"	51'	3.04%
SD-6	15"	113'	0.62%
SD-7	12"	111'	1.13%
SD-8	12"	131'	0.38%
SD-9	12"	39'	2.00%
SD-10	12"	34'	-0.59%
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SS-4	8"	247'	-5.93%
SS-5	8"	102'	1.85%

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LICENSED PROFESSIONAL ENGINEER

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SUITE 301
PORTLAND, ME 04102

41 CAMPUS DRIVE
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PROJECT:
STABLE RIDGE APARTMENTS
555 COURT STREET, AUBURN, MAINE

SHEET TITLE:
UTILITY PLAN

CLIENT:
AMERICAN DEVELOPMENT GROUP
P.O. BOX 1495
NAPLES, MAINE 04055

DATE:	1/3/2022
SCALE:	1"=20'
DESIGNED:	CMS
JOB NO:	21-81
SHEET	C-5.0

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CB-4	383.80	376.80 (SD-6)	376.80 (SD-7) 376.80 (SD-8)	48"
CB-5	381.26	375.55 (SD-7)		48"
CB-6	388.85	381.88 (SD-4)	381.88 (SD-5)	48"
CB-7	389.11	384.75 (SD-3)	384.75 (SD-4)	48"
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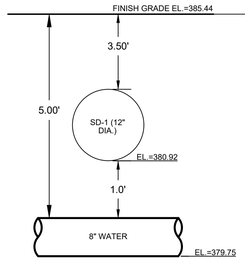

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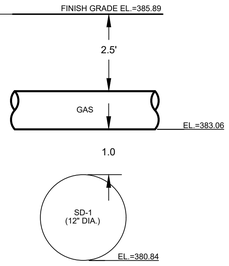

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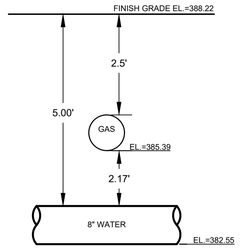

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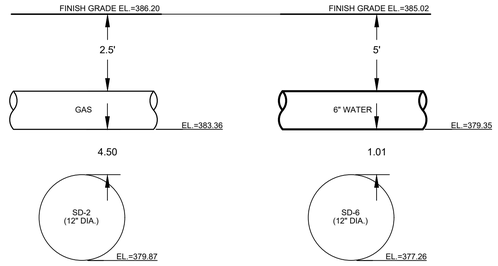

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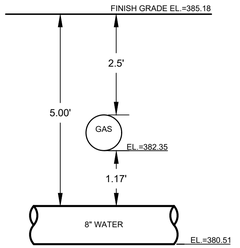

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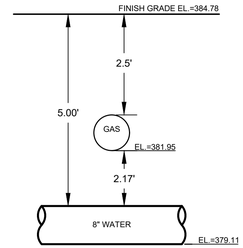

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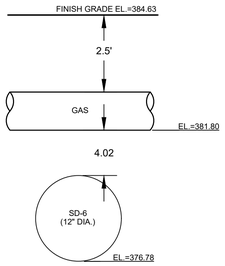

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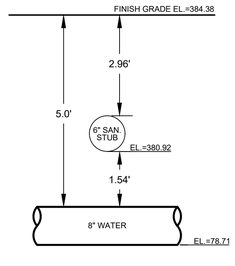

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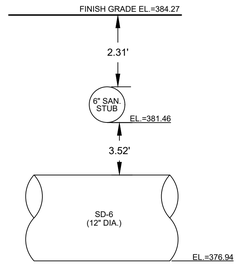

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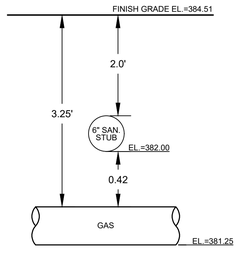

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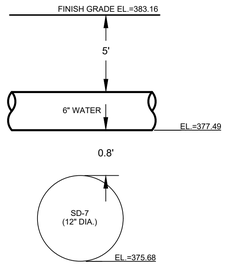

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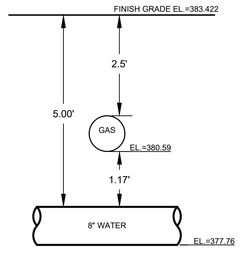

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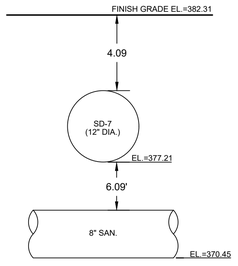

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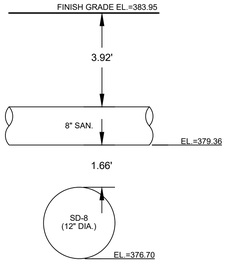

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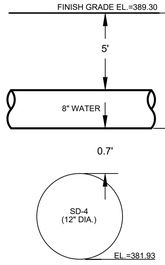

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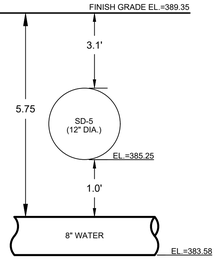

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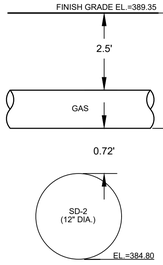

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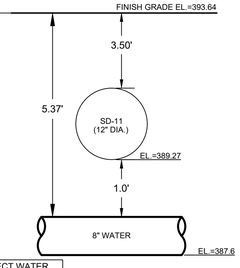

DEFLECT WATER LINE TO MAINTAIN 1.0' OF CLEARANCE FROM STORM DRAIN

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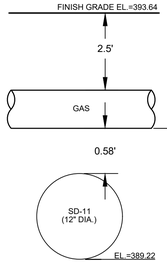

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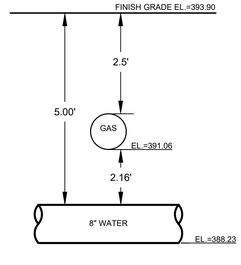

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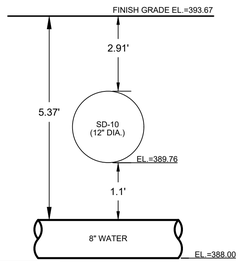

DEFLECT WATER LINE TO MAINTAIN 1.0' OF CLEARANCE FROM STORM DRAIN

CROSSING 22
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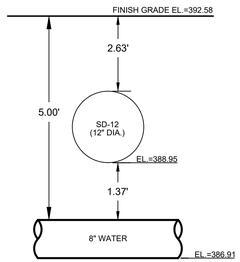

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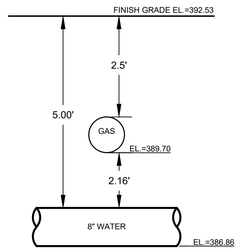

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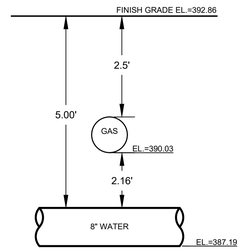

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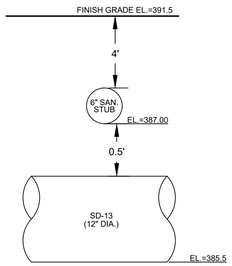

CROSSING 26
NOT TO SCALE

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch =20 ft.

STATE OF MAINE
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PROJECT:
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555 COURT STREET, AUBURN, MAINE

SHEET TITLE:
UTILITY CROSSING DIAGRAMS

CLIENT:
AMERICAN DEVELOPMENT GROUP
PO. BOX 1495
NAPLES, MAINE 04055

DATE:	1/3/2022
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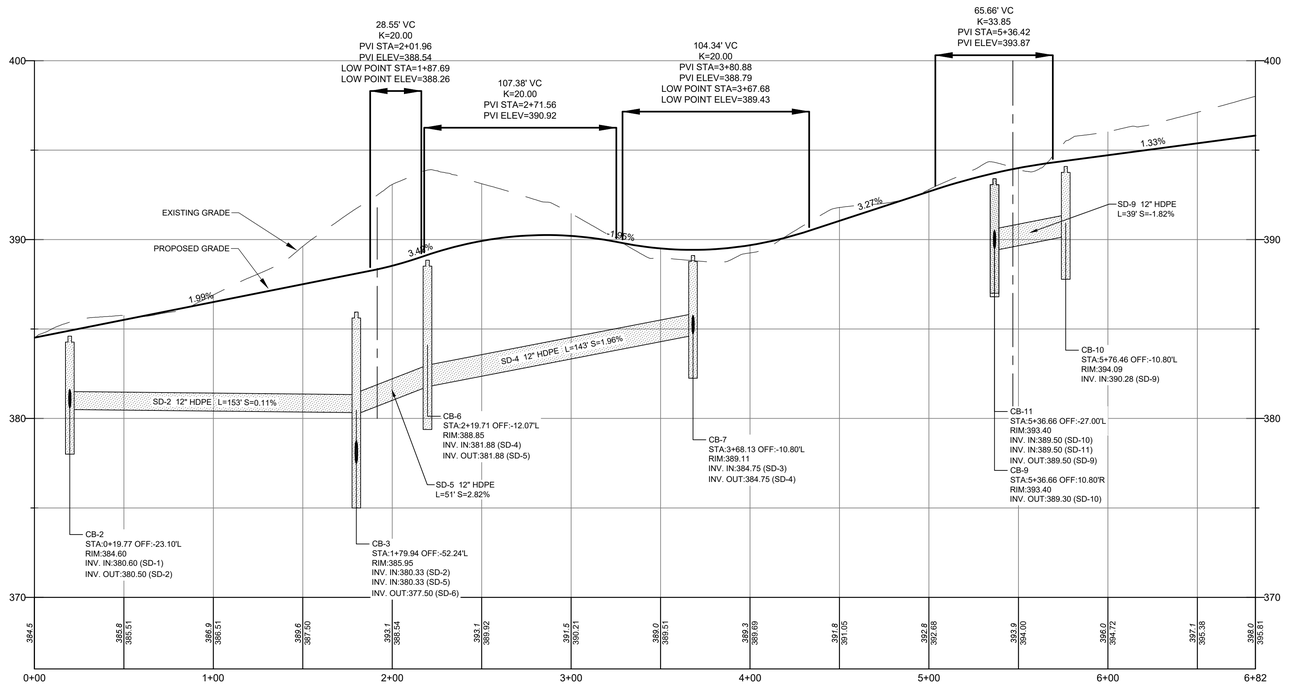
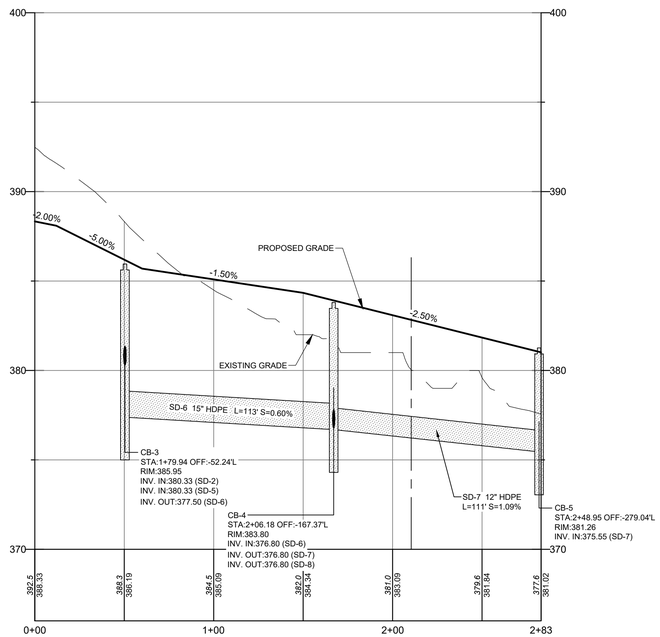


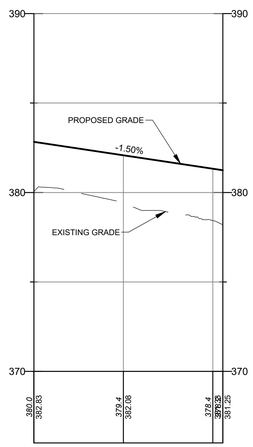
PROFILE OF OF MAIN DRIVEWAY

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



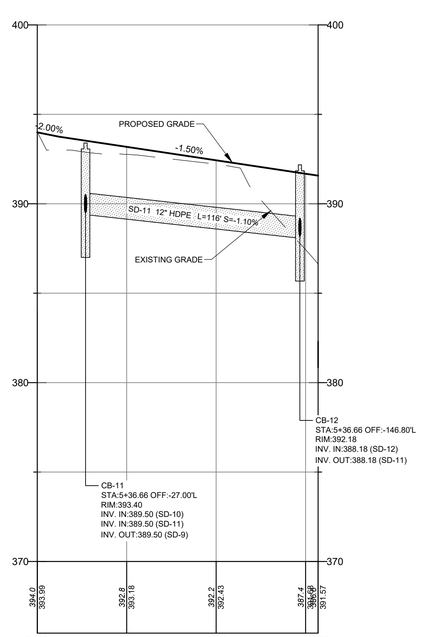
PROFILE OF OF PARKING LOT 1

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



PROFILE OF OF PARKING LOT 1B

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



PROFILE OF OF PARKING LOT 2

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

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41 CAMPUS DRIVE
SUITE 301
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PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
STABLE RIDGE APARTMENTS
555 COURT STREET, AUBURN, MAINE

SHEET TITLE:
PROFILE SHEET

CLIENT:
AMERICAN DEVELOPMENT GROUP
P.O. BOX 1495
NAPLES, MAINE 04055

DATE:	1/3/2022
SCALE:	1"=40'
DESIGNED:	CMS
JOB NO:	21-81

SHEET
C-6.0

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EROSION AND SEDIMENT CONTROL PLAN

PRE-CONSTRUCTION PHASE
A PERSON WHO CONDUCTS, OR CAUSES TO BE CONDUCTED, AN ACTIVITY THAT INVOLVES FILLING, DISPLACING OR EXPOSING SOIL OR OTHER EARTHEN MATERIALS SHALL TAKE MEASURES TO PREVENT UNREASONABLE EROSION OF SOIL OR SEDIMENT BEYOND THE PROJECT SITE OR INTO A PROTECTED NATURAL RESOURCE AS DEFINED IN 38 MRSA § 480-B. EROSION CONTROL MEASURES MUST BE IN PLACE BEFORE THE ACTIVITY BEGINS. MEASURES MUST REMAIN IN PLACE AND FUNCTIONAL UNTIL THE SITE IS PERMANENTLY STABILIZED. ADEQUATE AND TIMELY TEMPORARY AND PERMANENT STABILIZATION MEASURES MUST BE TAKEN. THE SITE MUST BE MAINTAINED TO PREVENT UNREASONABLE EROSION AND SEDIMENTATION. MINIMIZE DISTURBED AREAS AND PROTECT NATURAL DOWNGRADIENT BUFFER AREAS TO THE EXTENT PRACTICABLE.

BMP CONSTRUCTION PHASE
A. SEDIMENT BARRIERS. PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, PROPERLY INSTALL SEDIMENT BARRIERS AT THE EDGE OF ANY DOWNGRADIENT DISTURBED AREA AND ADJACENT TO ANY DRAINAGE CHANNELS WITHIN THE PROPOSED DISTURBED AREA. MAINTAIN THE SEDIMENT BARRIERS UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED.

B. CONSTRUCTION ENTRANCE: PRIOR TO ANY CLEARING OR GRUBBING, A CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT THE INTERSECTION WITH THE PROPOSED ACCESS DRIVE AND THE EXISTING ROADWAY TO AVOID TRACKING OF MUD, DUST AND DEBRIS FROM THE SITE.

C. RIPRAP: SINCE RIPRAP IS USED WHERE EROSION POTENTIAL IS HIGH, CONSTRUCTION MUST BE SEQUENCED SO THAT THE RIPRAP IS PUT IN PLACE WITH THE MINIMUM DELAY. DISTURBANCE OF AREAS WHERE RIPRAP IS TO BE PLACED SHOULD BE UNDERTAKEN ONLY WHEN FINAL PREPARATION AND PLACEMENT OF THE RIPRAP CAN FOLLOW IMMEDIATELY BEHIND THE INITIAL DISTURBANCE. WHERE RIPRAP IS USED FOR OUTLET PROTECTION, THE RIPRAP SHOULD BE PLACED BEFORE OR IN CONJUNCTION WITH THE CONSTRUCTION OF THE PIPE OR CHANNEL SO THAT IT IS IN PLACE WHEN THE PIPE OR CHANNEL BEGINS TO OPERATE. MAINTAIN TEMPORARY RIPRAP, SUCH AS TEMPORARY CHECK DAMS UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED.

D. TEMPORARY STABILIZATION. STABILIZE WITH TEMPORARY SEEDING, MULCH, OR OTHER NON-ERODABLE COVER ANY EXPOSED SOILS THAT WILL REMAIN UNWORKED FOR MORE THAN 14 DAYS EXCEPT, STABILIZE AREAS WITHIN 100 FEET OF A WETLAND OR WATERBODY WITHIN 7 DAYS OR PRIOR TO A PREDICTED STORM EVENT, WHICHEVER COMES FIRST. IF HAY OR STRAW MULCH IS USED, THE APPLICATION RATE MUST BE 2 BALES (70-90 POUNDS) PER 1000 SF OR 1.5 TO 2 TONS (90-100 BALES) PER ACRE TO COVER 75 TO 90% OF THE GROUND SURFACE. HAY MULCH MUST BE KEPT MOIST OR ANCHORED TO PREVENT WIND BLOWING. AN EROSION CONTROL BLANKET OR MAT SHALL BE USED AT THE BASE OF GRASSED WATERWAYS, STEEP SLOPES (15% OR GREATER) AND ON ANY DISTURBED SOIL WITHIN 100 FEET OF LAKES, STREAMS AND WETLANDS. GRADING SHALL BE PLANNED SO AS TO MINIMIZE THE LENGTH OF TIME BETWEEN INITIAL SOIL EXPOSURE AND FINAL GRADING. ON LARGE PROJECTS THIS SHOULD BE ACCOMPLISHED BY PHASING THE OPERATION AND COMPLETING THE FIRST PHASE UP TO FINAL GRADING AND SEEDING BEFORE STARTING THE SECOND PHASE, AND SO ON.

E. VEGETATED WATERWAY. UPON FINAL GRADING, THE DISTURBED AREAS SHALL BE IMMEDIATELY SEEDED TO PERMANENT VEGETATION AND MULCHED AND WILL NOT BE USED AS OUTLETS UNTIL A DENSE, VIGOROUS VEGETATIVE COVER HAS BEEN OBTAINED. ONCE SOIL IS EXPOSED FOR WATERWAY CONSTRUCTION, IT SHOULD BE IMMEDIATELY SHAPED, GRADED AND STABILIZED. VEGETATED WATERWAYS NEED TO BE STABILIZED EARLY DURING THE GROWING SEASON (PRIOR TO SEPTEMBER 15). IF FINAL SEEDING OF WATERWAYS IS DELAYED PAST SEPTEMBER 15, EMERGENCY PROVISIONS SUCH AS SOD OR RIPRAP MAY BE REQUIRED TO STABILIZE THE CHANNEL. WATERWAYS SHOULD BE FULLY STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.

PERMANENT STABILIZATION DEFINED
A. SEEDED AREAS. FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS AN 90% COVER OF THE DISTURBED AREA WITH MATURE, HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.

B. SODDED AREAS. FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THE COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE-OFF.

C. PERMANENT MULCH. FOR MULCHED AREAS, PERMANENT MULCHING MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL. EROSION CONTROL MIX MAY BE USED AS MULCH FOR PERMANENT STABILIZATION ACCORDING TO THE APPROVED APPLICATION RATES AND LIMITATIONS.

D. RIPRAP. FOR AREAS STABILIZED WITH RIPRAP, PERMANENT STABILIZATION MEANS THAT SLOPES STABILIZED WITH RIPRAP HAVE AN APPROPRIATE BACKING OF A WELL-GRADED GRAVEL OR APPROVED GEOTEXTILE TO PREVENT SOIL MOVEMENT FROM BEHIND THE RIPRAP. STONE MUST BE SIZED APPROPRIATELY. IT IS RECOMMENDED THAT ANGULAR STONE BE USED.

E. AGRICULTURAL USE. FOR CONSTRUCTION PROJECTS ON LAND USED FOR AGRICULTURAL PURPOSES (E.G., PIPELINES ACROSS CROP LAND), PERMANENT STABILIZATION MAY BE ACCOMPLISHED BY RETURNING THE DISTURBED LAND TO AGRICULTURAL USE.

F. PAVED AREAS. FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE COMPACTED GRAVEL SUBBASE IS COMPLETED.

G. DITCHES, CHANNELS, AND SWALES. FOR OPEN CHANNELS, PERMANENT STABILIZATION MEANS THE CHANNEL IS STABILIZED WITH MATURE VEGETATION AT LEAST THREE INCHES IN HEIGHT, WITH WELL-GRADED RIPRAP, OR WITH ANOTHER NON-EROSIVE LINING CAPABLE OF WITHSTANDING THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHOUT RELIANCE ON CHECK DAMS TO SLOW FLOW. THERE MUST BE NO EVIDENCE OF SLUMPING OF THE LINING, UNDERCUTTING OF THE BANKS, OR DOWN-CUTTING OF THE CHANNEL.

GENERAL CONSTRUCTION PHASE
THE FOLLOWING EROSION CONTROL MEASURES SHALL BE FOLLOWED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION OF THIS PROJECT:

A. ALL TOPSOIL SHALL BE COLLECTED, STOCKPILED, SEEDED WITH RYE AT 3 POUNDS/1,000 SF AND MULCHED, AND REUSED AS REQUIRED. SILT FENCING SHALL BE PLACED DOWN GRADIENT FROM THE STOCKPILED LOAM. STOCKPILE TO BE LOCATED BY DESIGNATION OF THE OWNER AND INSPECTING ENGINEER.

B. THE INSPECTING ENGINEER AT HIS/HER DISCRETION, MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES AND/OR SUPPLEMENTAL VEGETATIVE PROVISIONS TO MAINTAIN STABILITY OF EARTHWORKS AND FINISH GRADED AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY SUPPLEMENTAL MEASURES AS DIRECTED BY THE INSPECTING ENGINEER. FAILURE TO COMPLY WITH THE ENGINEER'S DIRECTIONS WILL RESULT IN DISCONTINUATION OF CONSTRUCTION ACTIVITIES.

C. EROSION CONTROL MESH SHALL BE APPLIED IN ACCORDANCE WITH THE PLANS OVER ALL FINISH SEEDED AREAS AS SPECIFIED ON THE DESIGN PLANS.

D. ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN UNTIL THEY ARE ADEQUATELY STABILIZED.

E. ALL EROSION, AND SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.

F. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIALS.

G. AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 INCHES PRIOR TO PLACEMENT OF TOPSOIL.

H. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC., SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.

I. ALL FILLS SHALL BE PLACED AND COMPACTED IN LAYERS NOT TO EXCEED 8 INCHES IN THICKNESS.

J. EXCEPT FOR APPROVED LANDFILLS OR NON-STRUCTURAL FILLS, FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, ROCKS, LOGS, STUMPS, BUILDING DEBRIS AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY LIFTS.

K. FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILL SLOPES OR STRUCTURAL FILLS.

L. FILL SHALL NOT BE PLACED ON A FROZEN FOUNDATION.

M. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED APPROPRIATELY.

N. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.

O. REMOVE ANY TEMPORARY CONTROL MEASURES, SUCH AS SILT FENCE, WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED. REMOVE ANY ACCUMULATED SEDIMENTS AND STABILIZE.

PERMANENT VEGETATION
PERMANENT VEGETATIVE COVER SHOULD BE ESTABLISHED ON DISTURBED AREAS WHERE PERMANENT, LONG LIVED VEGETATIVE COVER IS NEEDED TO STABILIZE THE SOIL, TO REDUCE DAMAGES FROM SEDIMENT AND RUNOFF, AND TO ENHANCE THE ENVIRONMENT.

SEEDBED PREPARATION
A. GRADE AS FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE.

B. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TESTS SUCH AS THOSE OFFERED BY THE UNIVERSITY OF MAINE SOIL TESTING LABORATORY. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL COOPERATIVE EXTENSION SERVICE OFFICE. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 POUNDS PER ACRE OR 18.4 POUNDS PER 1,000 SQUARE FEET USING 10-20-20 (N-P2O5-K2O) OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT
A RATE OF 3 TONS PER ACRE (138 LB. PER 1,000 SQ. FT.).

C. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OPERATION SHOULD BE ON THE GENERAL CONTOUR, CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY OR SILTY SOILS AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.D. REMOVE FROM THE SURFACE ALL STONES 2 INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, CONCRETE, CLODS, LUMPS OR OTHER UNSUITABLE MATERIAL.

E. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED; THE AREA MUST BE TILLED AND FIRMED AS ABOVE.

F. PERMANENT SEEDING SHOULD BE MADE 45 DAYS PRIOR TO THE FIRST KILLING FROST OR AS A DORMANT SEEDING WITH MULCH AFTER THE FIRST KILLING FROST AND BEFORE SNOWFALL. WHEN CROWN VETCH IS SEEDED IN LATER SUMMER, AT LEAST 35% OF THE SEED SHOULD BE HARD SEED (UNSCARIFIED). IF SEEDING CANNOT BE DONE WITHIN THE SEEDING DATES, MULCH ACCORDING TO THE TEMPORARY MULCHING BMP AND OVERWINTER STABILIZATION AND CONSTRUCTION TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.

G. FOLLOWING SEED BED PREPARTATION, SWALE AREAS, FILL AREAS AND BACK SLOPES SHALL BE SEEDED AT A RATE OF 3 LBS./1,000 S.F. WITH A MIXTURE OF 35% CREEPING RED FESCUE, 6% RED TOP, 24% KENTUCKY BLUEGRASS, 10% PERENNIAL RYEGRASS, 20% ANNUAL RYEGRASS AND 5% WHITE DUTCH CLOVER.

I. AREAS WHICH HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED SHALL BE MULCHED IMMEDIATELY FOLLOWING SEEDING.

J. AREAS WHICH CANNOT BE SEEDED WITHIN THE GROWING SEASON SHALL BE MULCHED FOR OVER-WINTER PROTECTION AND THE AREA SHOULD BE SEEDED AT THE BEGINNING OF THE GROWING SEASON.

WINTER CONSTRUCTION PHASE
IF AN AREA IS NOT STABILIZED WITH TEMPORARY OR PERMANENT MEASURES BY NOVEMBER 15, THEN THE SITE MUST BE PROTECTED WITH ADDITIONAL STABILIZATION MEASURES.

A. PERMANENT STABILIZATION CONSISTS OF AT LEAST 90% VEGETATION, PAVEMENT/GRAVEL BASE OR RIPRAP.

B. DO NOT EXPOSE SLOPES OR LEAVE SLOPES EXPOSED OVER THE WINTER OR FOR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS FULLY PROTECTED WITH MULCH.

C. APPLY HAY MULCH AT TWICE THE STANDARD RATE (150 LBS. PER 1,000 SF). THE MULCH MUST BE THICK ENOUGH SUCH THAT THE GROUND SURFACE WILL NOT BE VISIBLE AND MUST BE ANCHORED.

D. USE MULCH AND MULCH NETTING OR AN EROSION CONTROL MULCH BLANKET OR ALL SLOPES GREATER THAN 8 % OR OTHER AREAS EXPOSED TO DIRECT WIND.

E. INSTALL AN EROSION CONTROL BLANKET IN ALL DRAINAGEWAYS (BOTTOM AND SIDES) WITH A SLOPE GREATER THAN 3 %.

F. SEE THE VEGETATION MEASURES FOR MORE INFORMATION ON SEEDING DATES AND TYPES.

G. WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SO THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.

H. AN AREA WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE MUST BE PROTECTED WITH A DOUBLE ROW OF SEDIMENT BARRIER.

I. TEMPORARY MULCH MUST BE APPLIED WITHIN 7 DAYS OF SOIL EXPOSURE OR PRIOR TO ANY STORM EVENT, BUT AFTER EVERY WORKDAY IN AREAS WITHIN 100 FEET FROM A PROTECTED NATURAL RESOURCE.

J. AREAS THAT HAVE BEEN BROUGHT TO FINAL GRADE MUST BE PERMANENTLY MULCHED THAT SAME DAY.

K. IF SNOWFALL IS GREATER THAN 1 INCH (FRESH OR CUMULATIVE), THE SNOW SHALL BE REMOVED FROM THE AREAS DUE TO BE SEEDED AND MULCHED.

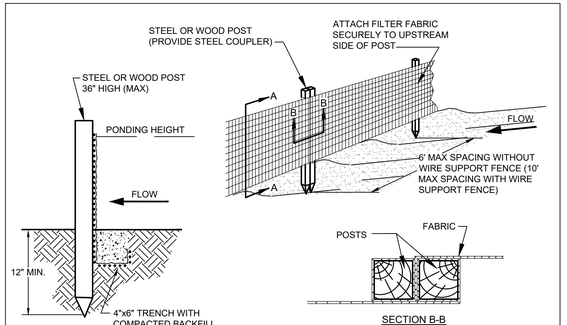
L. LOAM SHALL BE FREE OF FROZEN CLUMPS BEFORE IT IS APPLIED.

M. ALL VEGETATED DITCH LINES THAT HAVE NOT BEEN STABILIZED BY NOVEMBER 1, OR WILL BE WORKED DURING THE WINTER CONSTRUCTION PERIOD, MUST BE STABILIZED WITH AN APPROPRIATE STONE LINING BACKED BY AN APPROPRIATE GRAVEL BED OR GEOTEXTILE UNLESS SPECIFICALLY RELEASED FROM THIS STANDARD BY THE DEPARTMENT.

MAINTENANCE AND INSPECTION PHASE
A. MINIMUM EROSION CONTROL MEASURES WILL NEED TO BE IMPLEMENTED AND THE APPLICANT WILL BE RESPONSIBLE TO MAINTAIN ALL COMPONENTS OF THE EROSION CONTROL PLAN UNTIL THE SITE IS FULLY STABILIZED. HOWEVER, BASED ON SITE AND WEATHER CONDITIONS DURING CONSTRUCTION, ADDITIONAL EROSION CONTROL MEASURES MAY NEED TO BE IMPLEMENTED. ALL AREAS OF INSTABILITY AND EROSION MUST BE REPAIRED IMMEDIATELY DURING CONSTRUCTION AND NEED TO BE MAINTAINED UNTIL THE SITE IS FULLY STABILIZED OR VEGETATION IS ESTABLISHED. A CONSTRUCTION LOG MUST BE MAINTAINED FOR THE EROSION AND SEDIMENTATION CONTROL INSPECTIONS AND MAINTENANCE

B. A LOG (REPORT) MUST BE KEPT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF THE PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, AND MAJOR OBSERVATIONS RELATING TO OPERATION OF EROSION AND SEDIMENTATION CONTROLS AND POLLUTION PREVENTION MEASURES. MAJOR OBSERVATIONS MUST INCLUDE: BMPS THAT NEED TO BE MAINTAINED; LOCATION(S) OF BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION; AND LOCATION(S) WHERE ADDITIONAL BMPS ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION. FOLLOW-UP TO CORRECT DEFICIENCIES OR ENHANCE CONTROLS MUST ALSO BE INDICATED IN THE LOG AND DATED, INCLUDING WHAT ACTION WAS TAKEN AND WHEN.

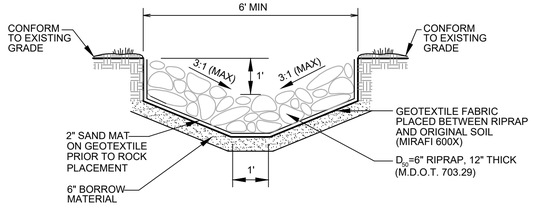
DEWATERING
A DEWATERING PLAN IS NEEDED TO ADDRESS EXCAVATION DE-WATERING FOLLOWING HEAVY RAINFALL EVENTS OR WHERE THE EXCAVATION MAY INTERCEPT THE GROUNDWATER TABLE DURING CONSTRUCTION. THE COLLECTED WATER NEEDS TREATMENT AND A DISCHARGE POINT THAT WILL NOT CAUSE DOWNGRADIENT EROSION AND OFFSITE SEDIMENTATION OR WITHIN A RESOURCE.



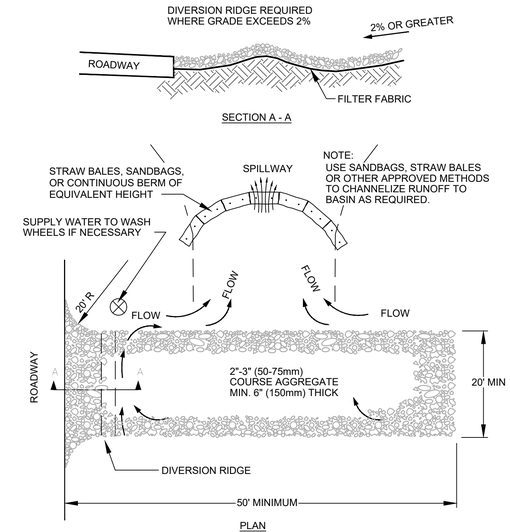
SECTION A-A

SECTION B-B

SILT FENCE
NOT TO SCALE



RIPRAP SWALE
NOT TO SCALE



SECTION A - A

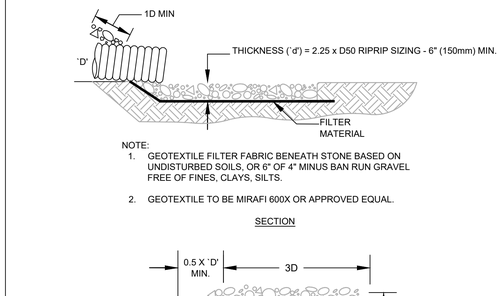
PLAN

NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.

2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.

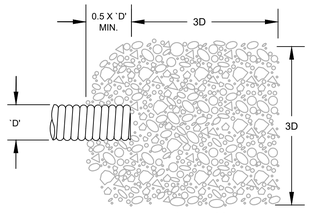
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



NOTE:
1. GEOTEXTILE FILTER FABRIC BENEATH STONE BASED ON UNDISTURBED SOILS, OR 6" OF 4" MINUS BAN RUN GRAVEL FREE OF FINES, CLAYS, SILTS.
2. GEOTEXTILE TO BE MIRAFI 600X OR APPROVED EQUAL.

SECTION



HARD ANGULAR ROCK
D50 SELECTION PER
CHART

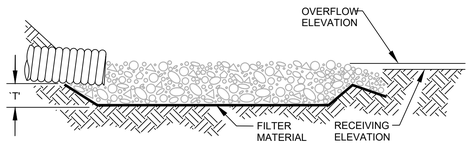
PLAN

PIPE INLET PROTECTION SIZING TABLE

PIPE SIZE (IN)	RIRAP SIZING (D50)	LENGTH (FT)	WIDTH (FT)
6	3	2.0	1.5
12	5	3.5	3.0
15	6	4.5	3.75
18	8	5.25	4.5
24	10	7.0	6.0
30	12	8.75	7.5
36	14	10.5	9.0

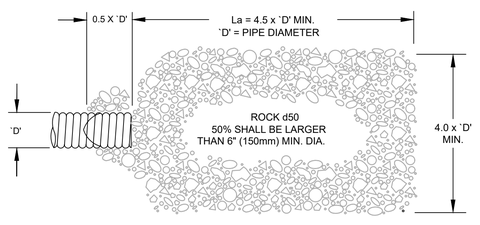
NOTES:
1. IN DEFINED CHANNELS, APRON SHALL EXTEND FULL WIDTH OF BOTTOM AND ONE FOOT ABOVE MAX. HEADWATER OR UP TO BANK FULL, WHICHEVER IS LESS.

PIPE INLET PROTECTION



THICKNESS (`T') = 2.25 x D50 RIPRAP SIZING - 6" (150mm) MIN.

SECTION



PLAN

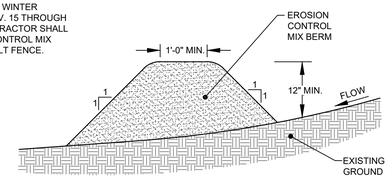
PIPE OUTLET PROTECTION SIZING TABLE

PIPE SIZE (IN)	RIP RAP SIZING (D50)	LENGTH (FT)	WIDTH (FT)
6	3	2.5	2.0
12	5	5.0	4.0
15	6	6.25	5.0
18	8	7.5	6.0
24	10	10.0	8.0
30	12	13.0	10.0
36	14	15.0	12.0

NOTES:
1. `La' = LENGTH OF APRON. DISTANCE `La' SHALL BE OF SUFFICIENT LENGTH TO DISSIPATE ENERGY.
2. APRON SHALL BE SET AT A ZERO GRADE AND ALIGNED STRAIGHT.
3. FILTER MATERIAL SHALL BE FILTER FABRIC (MIRAFI 600X OR APPROVED EQUAL) OR 6" (150mm) THICK MINIMUM GRADED GRAVEL LAYER.

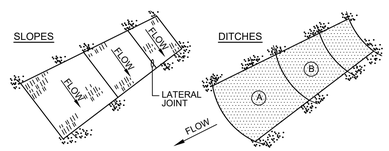
PIPE OUTLET PROTECTION
NOT TO SCALE

NOTE:
DURING PERIODS OF WINTER CONSTRUCTION (NOV. 15 THROUGH APRIL 15), THE CONTRACTOR SHALL INSTALL EROSION CONTROL MIX BERMS IN LIEU OF SILT FENCE.



EROSION CONTROL MIX:
EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES & MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH. THE MIX COMPOSITION SHALL MEET THE FOLLOWING STANDARDS:
- THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 80% - 100% DRY WEIGHT BASIS
- PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN AND A MINIMUM OF 70%, MAXIMUM OF 85% PASSING A 0.75" SCREEN
- THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED
- LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.
- SOLUBLE SALTS CONTENT SHALL BE < 4.0 mmhos/cm.
- ph SHALL FALL BETWEEN 5.0 - 8.0.

EROSION CONTROL MIX BERM
NOT TO SCALE



NOTES:
1. BURY THE TOP END OF THE MESH MATERIAL IN A 6" TRENCH AND BACKFILL AND TAMP TRENCHING SECURE END WITH STAPLES AT 6" SPACING, 4" DOWN FROM EXPOSED END.
2. FLOW DIRECTION JOINTS TO HAVE UPPER END OF LOWER STRIP BURIED WITH UPPER LAYERS OVERLAPPED 4" AND STAPLED. OVERLAP B OVER A.
3. LATERAL JOINTS TO HAVE 4" OVERLAP OF STRIPS. STAPLE 18" ON CENTER.
4. STAPLE OUTSIDE LATERAL EDGE 2' ON CENTER.
5. WIRE STAPLES TO BE MIN. OF #11 WIRE, 6" LONG & 1-1/2" WIDE.
6. USE NORTH AMERICAN GREEN DS 150 (OR APPROVED EQUAL) ON SLOPES BETWEEN 4:1-2:1. USE NORTH AMERICAN GREEN VMAX SC250 PERMANENT TURF REINFORCEMENT MAT (OR APPROVED EQUAL) ON SLOPES 2:1 AND STEEPER..

EROSION CONTROL BLANKET
NOT TO SCALE

CRAIG M. SWEET
No. 15060
REGISTERED PROFESSIONAL ENGINEER
STATE OF MAINE

DATE: 3/4/2022
P.E.: CRAIG M. SWEET

NO.	DATE	REVISIONS	APP'D BY
1	4/5/2022	REVISED PER CITY STAFF COMMENTS	

TERRADYN CONSULTANTS, LLC
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565 CONGRESS STREET
SUITE 201
PORTLAND, ME 04102

Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
STABLE RIDGE APARTMENTS
555 COURT STREET, AUBURN, MAINE

SHEET TITLE:
EROSION CONTROL NOTES & DETAILS

CLIENT:
AMERICAN DEVELOPMENT GROUP
P.O. BOX 1495
NAPLES, MAINE 04055

DATE:	1/3/2022
SCALE:	AS NOTED
DESIGNED:	CMS
JOB NO:	21-81
SHEET	C-7.0

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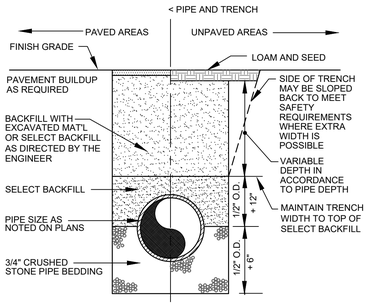
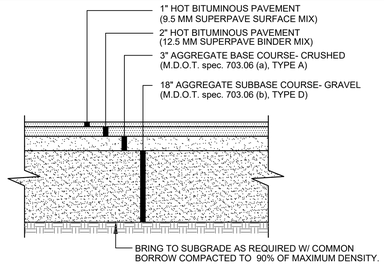


TYPICAL TRENCH SECTION

NOT TO SCALE

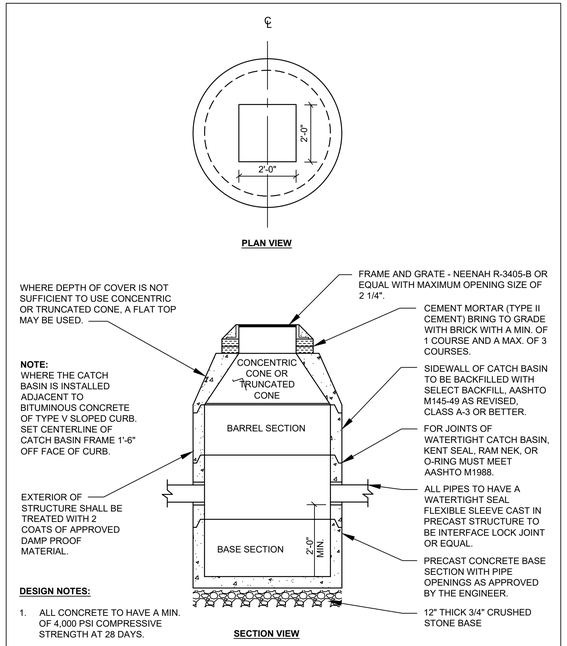


NOTES:

1. COMPACT GRAVEL SUBBASE COURSE TO 92% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.
2. CONTRACTOR SHALL SET GRADE STAKES MARKING SUBBASE AND FINISH GRADE ELEVATIONS FOR CONSTRUCTION REFERENCE.

PARKING AREA PAVEMENT SECTION

NOT TO SCALE



NOTE:
WHERE THE CATCH BASIN IS INSTALLED ADJACENT TO BITUMINOUS CONCRETE OF TYPE V SLOPED CURB. SET CENTERLINE OF CATCH BASIN FRAME 1'-6" OFF FACE OF CURB.

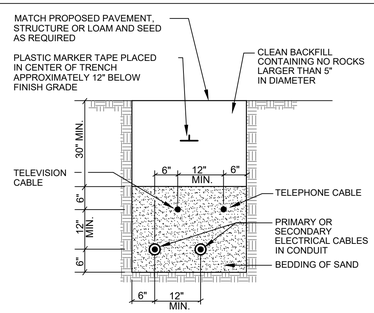
DESIGN NOTES:

1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.12 IN SQ./LF..

NOTE:
CASCADE GRATES SHALL BE INSTALLED ON GRADIENT OF GUTTER IF PROFILE GRADE EXCEEDS 5% GRATES SHALL BE DEPRESSED 2" BELOW NORMAL GUTTER GRADE UNLESS THIS DEPRESSION INTERFERES WITH TRAFFIC. PARALLEL BAR GRATES SHALL BE INSTALLED ON A LEVEL GRADIENT.

TYPICAL CATCH BASIN

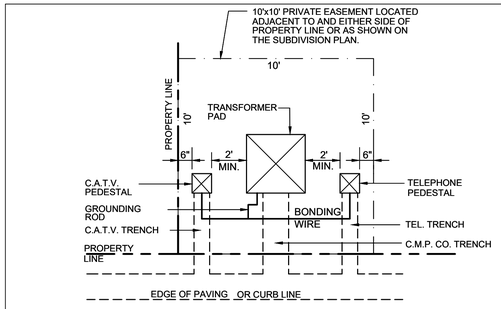
NOT TO SCALE



CABLES TO BE ENCASED IN SCHEDULE 40 PVC CONDUIT WHEN RUN BENEATH PAVED AREAS.

TYPICAL UNDERGROUND CABLE INSTALLATION

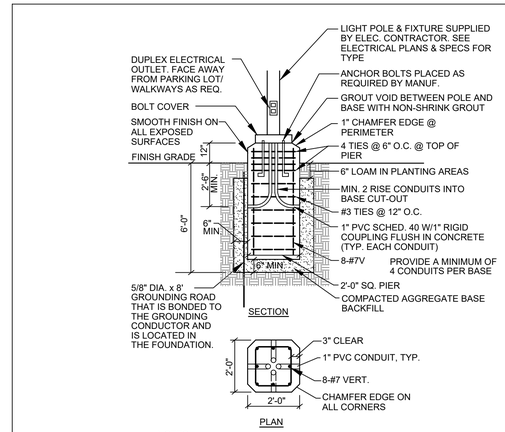
NOT TO SCALE



NOTE:
TRANSFORMER PAD AND COVER TO BE FIBERGLASS MEETING CENTRAL MAINE POWER SPECIFICATIONS.

TRANSFORMER DETAIL

NOT TO SCALE

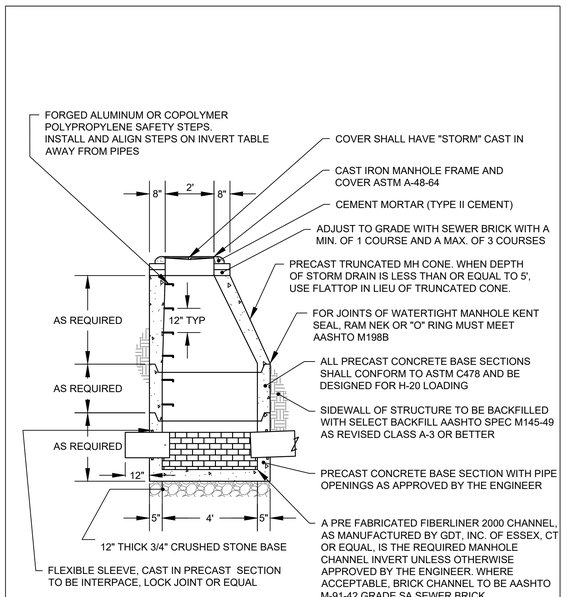


NOTES:

1. CONCRETE f'c=4000 psi.
2. REINF. STEEL GRADE 60 NEW BARS.
3. CONCRETE 3/4" AGG., 6 +/- 1% ENTRAINED AIR.
4. PROVIDE 2 COATS BITUMINOUS DAMPROOFING FOR ALL CONCRETE BELOW GRADE.
5. INSTALL BASE 3'-0" ABOVE FINISH GRADE IN LOCATIONS WHERE POLES ARE IN PARKING LOT PAVEMENT.
6. BID ALT.- CONTRACTOR MAY SUBSTITUTE PRECAST CONCRETE LIGHT POLE BASE EQUAL TO ABOVE SPEC.

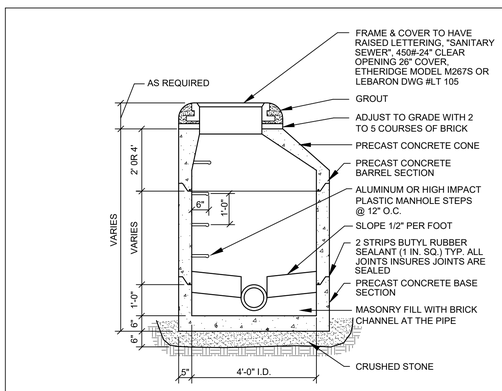
LIGHT POLE BASE

NOT TO SCALE



4' DIAMETER PRECAST STORM DRAIN MANHOLE

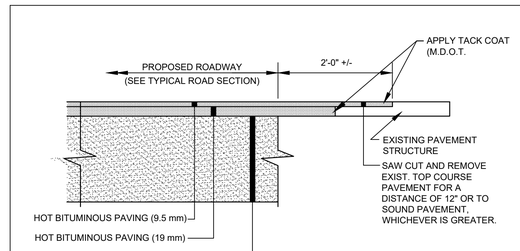
NOT TO SCALE



NOTE: PIPE CONNECTIONS SHALL BE WATERTIGHT FLEXIBLE BOOT CONNECTORS PROVIDES LEAKPROOF CONNECTION

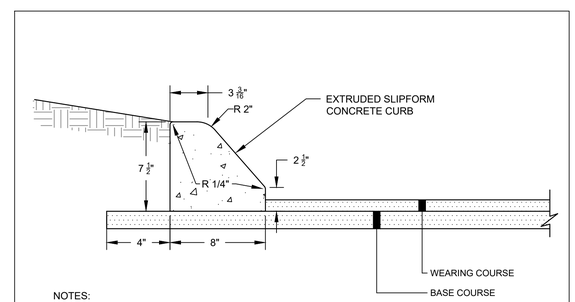
PRECAST SEWER MANHOLE

NOT TO SCALE



TYPICAL PAVEMENT JOINT

NOT TO SCALE

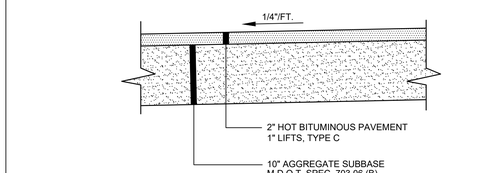


NOTES:

1. APPLY EPOXY BETWEEN BINDER PAVEMENT AND CURB
2. 1" TO 2" SLUMP
3. 5% TO 7% AIR ENTRAINMENT
4. 4,000 PSI CONCRETE WITH FIBER REINFORCEMENT

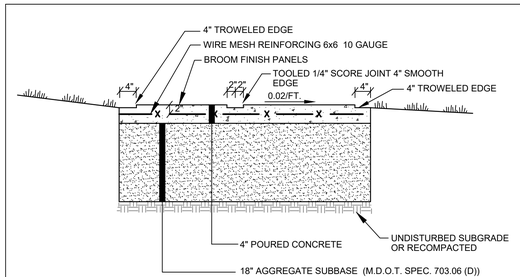
SLOPED SLIPFORM CONCRETE CURB DETAIL

NOT TO SCALE



BITUMINOUS SIDEWALK

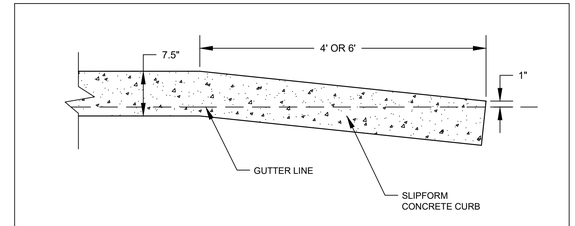
NOT TO SCALE



NOTE:
1. INSTALL 5'-0" SQUARE AREA BY 4' DEEP OF FROST-FREE MATERIAL BELOW ALL HANDICAP RAMPS AND ENTRY POINTS AT BUILDING.
2. PROVIDE CONTRACTION CONTROL JOINTS EVERY 6' OR AS DIRECTED BY ENGINEER

CONCRETE SIDEWALK

NOT TO SCALE



SLIPFORM CURB TIPDOWN DETAIL

NOT TO SCALE

CRAIG M. SWEET
No. 15060
STATE OF MAINE
REGISTERED PROFESSIONAL ENGINEER

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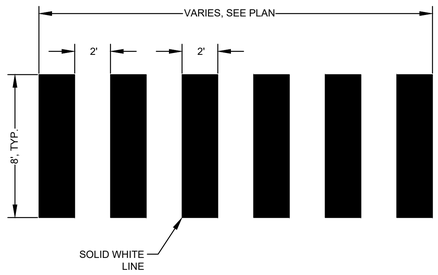
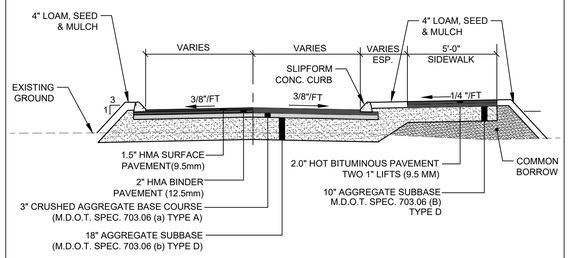


CROSSWALK STRIPING DETAIL

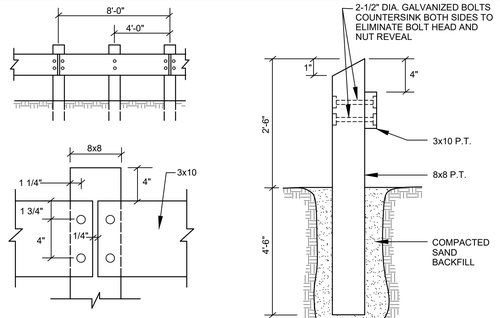
NOT TO SCALE



NOTES:
1. ALL CONSTRUCTION MATERIALS AND METHODS SHALL ADHERE TO ARTICLE 11 OF THE CITY OF SACO SUBDIVISION ORDINANCE AND MAINEDOT STANDARD SPECIFICATIONS.

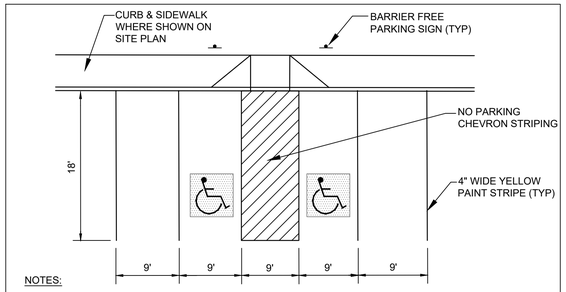
TYPICAL ROAD SECTION

NOT TO SCALE



PRESSURE TREATED WOODEN GUARDRAIL

NOT TO SCALE

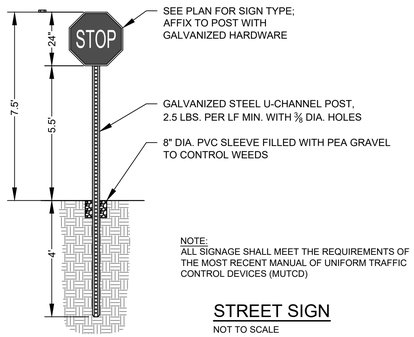


NOTES:

1. SEE SITE PLAN FOR NUMBER AND LOCATION OF BARRIER FREE PARKING SPACES.
2. BARRIER FREE GRAPHIC SYMBOL (PAINTED WHITE) TO BE CENTERED IN PARKING STALL. SYMBOL TO BE PAINTED ON BLUE NON-SKID BACKGROUND.

TYPICAL PARKING STALL DIMENSIONS

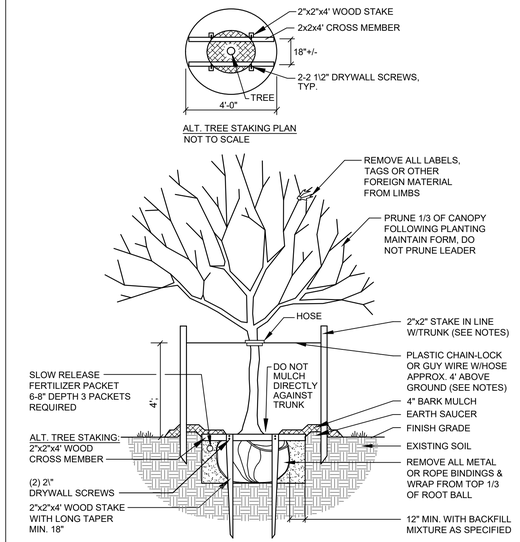
NOT TO SCALE



NOTE:
ALL SIGNAGE SHALL MEET THE REQUIREMENTS OF THE MOST RECENT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)

STREET SIGN

NOT TO SCALE

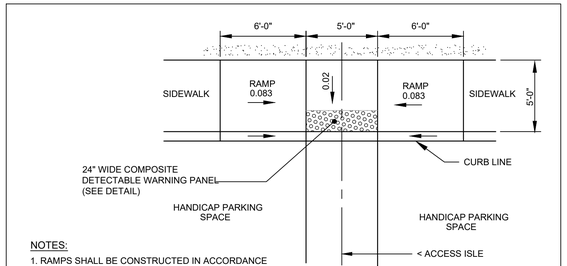


ALT. TREE STAKING PLAN
NOT TO SCALE

NOTES:
INSTALL STAKES AND GUYS TO TREES IF THE FOLLOWING APPLY:
1. THE TREE IS OF SUBSTANTIAL SIZE.
2. THE PLANTING LOCATION IS EXTREMELY WINDY, AS ON OPEN UNDEVELOPED SITES.
3. THE PLANTING LOCATION IS COMPRISED OF SAND OR OTHER LOOSE TEXTURED SOILS.
4. IF STAKES AND GUYS ARE REQUIRED, REMOVE AFTER ONE YEAR TIME.

DECIDUOUS TREES 2" TO 4" CALIPER

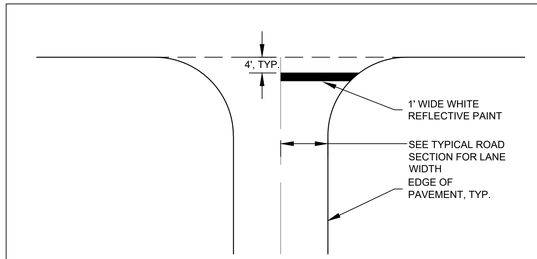
NOT TO SCALE



NOTES:
1. RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA).
2. ALL RAMPS SHALL HAVE DETECTABLE WARNINGS THE FULL DEPTH AND WIDTH OF THE RAMP PER SECTION 4.29 OF THE ADA.
3. A TACTILE WARNING STRIP IS REQUIRED WHERE RAMP ABUTS AN AREA USED BY VEHICLES.

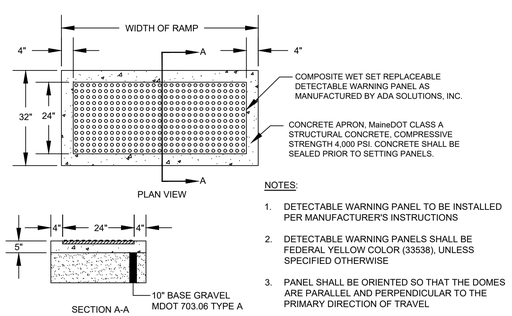
HANDICAP RAMP

NOT TO SCALE



STOP BAR DETAIL

NOT TO SCALE

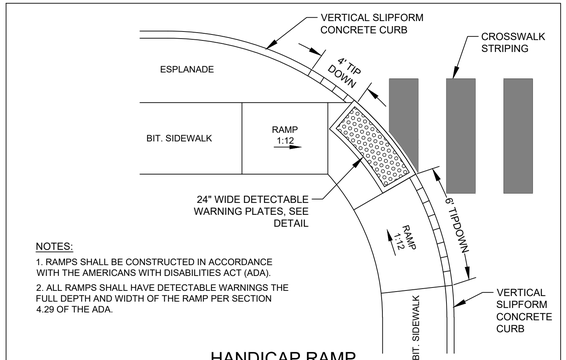


NOTES:

1. DETECTABLE WARNING PANEL TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS
2. DETECTABLE WARNING PANELS SHALL BE FEDERAL YELLOW COLOR (33538), UNLESS SPECIFIED OTHERWISE
3. PANEL SHALL BE ORIENTED SO THAT THE DOMES ARE PARALLEL AND PERPENDICULAR TO THE PRIMARY DIRECTION OF TRAVEL

COMPOSITE DETECTABLE WARNING PANEL DETAIL

NOT TO SCALE



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HANDICAP RAMP

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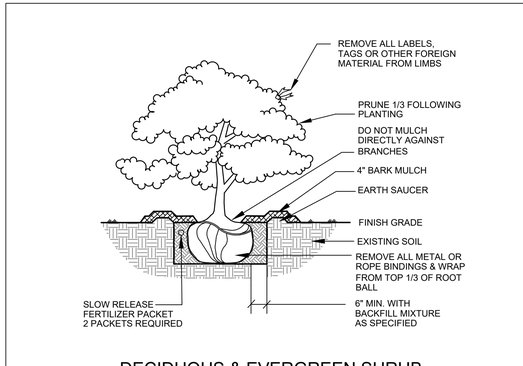

DECIDUOUS & EVERGREEN SHRUB

NOT TO SCALE

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No. 15060
STATE OF MAINE
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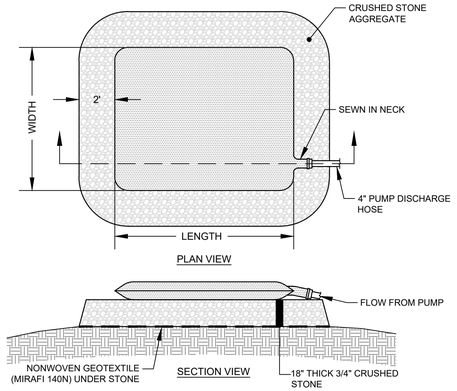
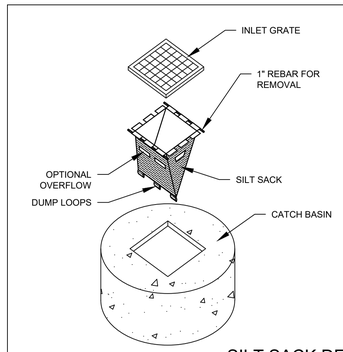


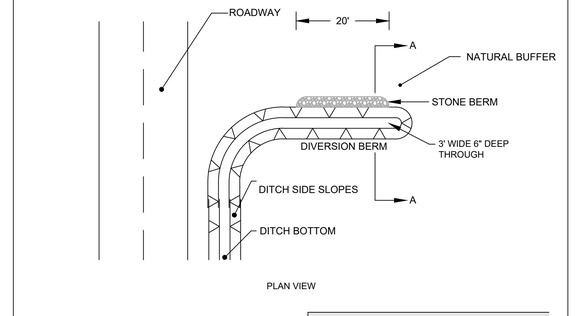
NOTES:
1. DIRTBAG BY ACF ENVIRONMENTAL
2. SEAMS MUST BE HIGH STRENGTH DOUBLE STITCHED "J" SEAMS.
3. CONSTRUCTION DEWATERING OF TURBID WATER SHALL BE PUMPED THROUGH A DIRTBAG AND RELEASED THROUGH A VEGETATED BUFFER AT LEAST 50' UPSTREAM OF WETLAND AREAS.
4. THE LOCATION OF THE DIRTBAG SHALL BE DETERMINED BY THE CONTRACTOR, BUT SHALL IT SHALL NOT BE SITED IN CRITICAL AREAS, SUCH AS WETLANDS.

DIRTBAG DETAIL
NOT TO SCALE



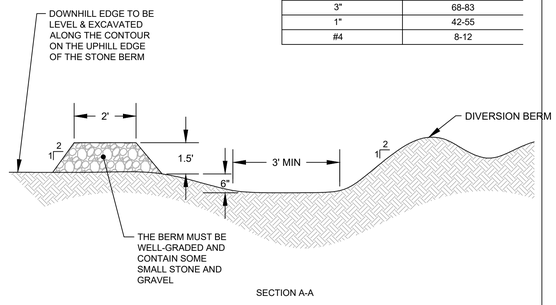
NOTES:
1. SILT SACKS TO BE INSTALLED IN ALL CATCH BASINS RECEIVING RUNOFF FROM DISTURBED AREA
2. SILT SACK TO BE MAINTAINED UNTIL TRIBUTARY ARE IS FULLY STABILIZED

SILT SACK DETAIL
NOT TO SCALE



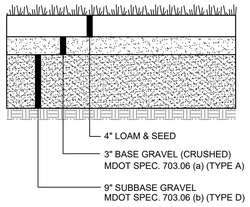
PLAN VIEW

BERM STONE SIZE	
SIEVE DESIGNATION	% BY WEIGHT PASSING SQUARE MESH SIEVES
12"	100
6"	84-100
3"	68-83
1"	42-55
#4	8-12

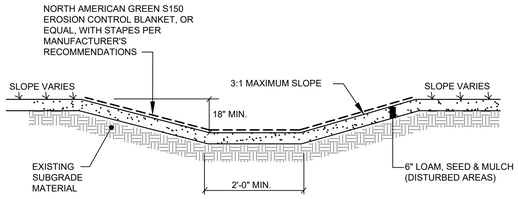


SECTION A-A

TYPICAL LEVEL LIP SPREADER
NOT TO SCALE

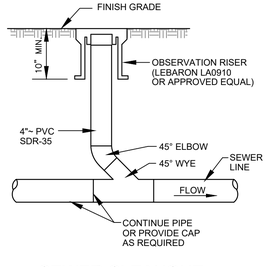


TYPICAL STORMWATER CONTROL AREA ACCESS CROSS-SECTION
NOT TO SCALE

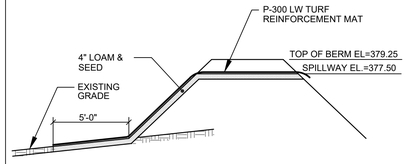


NOTE: REFER TO GRADING PLAN FOR DITCH WIDTH AND SIDE SLOPES

GRASSED SWALE
NOT TO SCALE

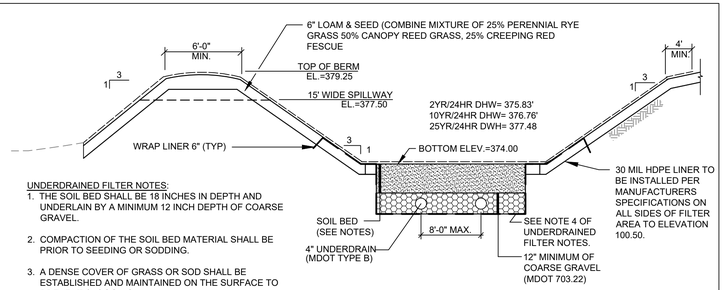


SEWER CLEANOUT
NOT TO SCALE



EMBANKMENT CONSTRUCTION
1. CONSTRUCTION OF COMMON BORROW MATERIAL MEETING M.D.O.T. SPECIFICATION 703.
2. PLACE BORROW MATERIAL IN 12" LIFTS COMPACTED TO 95% OF MAXIMUM DRY DENSITY.
3. INSTALL RIPRAP AND EROSION CONTROL MESH WHERE SPECIFIED ON PLANS
4. LOAM, SEED, AND STABILIZE IN ACCORDANCE WITH SEDIMENTATION AND EROSION CONTROL PLAN.

SPILLWAY SECTION - FILTER BASIN
NOT TO SCALE



UNDERDRAINED FILTER NOTES:
1. THE SOIL BED SHALL BE 18 INCHES IN DEPTH AND UNDERLAIN BY A MINIMUM 12 INCH DEPTH OF COARSE GRAVEL.
2. COMPACTION OF THE SOIL BED MATERIAL SHALL BE PRIOR TO SEEDING OR SODDING.
3. A DENSE COVER OF GRASS OR SOD SHALL BE ESTABLISHED AND MAINTAINED ON THE SURFACE TO PREVENT CLOGGING.
4. PLACE NON WOVEN GEOTEXTILE FABRIC (MIRIFI S600 OR APPROVED EQUAL) ON ALL SIDES AND BOTTOM OF SOIL & GRAVEL FILTER AREA.
5. SOIL FILTER BED SHALL MEET THE SPECIFICATIONS SHOWN IN SOIL FILTER MEDIA TABLE.

FILTER BASIN
NOT TO SCALE

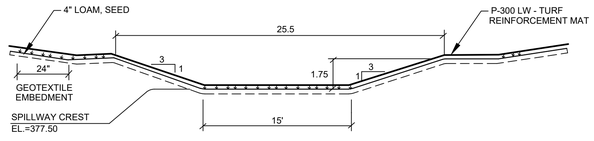
CONSTRUCTION PHASE NOTES:

Construction Sequence: The soil filter media and vegetation must not be installed until the area that drains to the filter has been permanently stabilized with pavement or other structure, 90% vegetation cover, or other permanent stabilization unless the runoff from the contributing drainage area is diverted around the filter until stabilization is completed.

Compaction of Soil Filter: Filter soil media and underdrain bedding material must be compacted to between 90% and 92% standard proctor. The bed should be installed in at least 2 lifts of 9 inches to prevent pockets of loose media.

Construction Oversight: Inspection by a professional engineer will occur at a minimum:
- After the preliminary construction of the filter grades and once the underdrain pipes are installed but not backfilled,
- After the drainage layer is constructed and prior to the installation of the filter media,
- After the filter media has been installed and seeded. Bio-retention cells must be stabilized per the provided planting scheme and density for the canopy coverage of 30 and 50%.
- After one year to inspect health of the vegetation and make corrections, and
- All the material used for the construction of the filter basin must be confirmed as suitable by the design engineer. Testing must be done by a certified laboratory to show that they are passing DEP specifications.

Testing and Submittals: The contractor shall identify the location of the source of each component of the filter media. All results of field and laboratory testing shall be submitted to the project engineer for confirmation. The contractor shall:
- Select samples for sampling of each type of material to be blended for the mixed filter media and samples of the underdrain bedding material. Samples must be a composite of three different locations (grabs) from the stockpile or pit face. Sample size required will be determined by the testing laboratory.
- Perform a sieve analysis conforming to STM C136 (Standard Test Method for Sieve Analysis of fine and Course Aggregates 1996A) on each type of the sample material. The resulting soil filter media mixture must have 8% to 12% by weight passing the #200 sieve, a clay content of less than 2% (determined hydrometer grain size analysis) and have 10% dry weight of organic matter.
- Perform a permeability test on the soil filter media mixture conforming to ASTM D2434 with the mixture compacted to 90-92% of maximum dry density based on ASTM D698.



SPILLWAY CROSS-SECTION - FILTER BASIN
NOT TO SCALE

SOIL FILTER MEDIA TABLE		
FILTER MEDIA	MIXTURE BY VOLUME	SPECIFICATION
SAND	50%-55%	MEDOT SPEC. 703.01 FINE AGGREGATE FOR CONCRETE
TOPSOIL	20%-30%	LOAMY SAND TOPSOIL WITH MINIMAL CLAY CONTENT AND BETWEEN 15-25% FINES PASSING THE #200 SIEVE.
MULCH	20%-30%	MODERATELY FINE, SHREDDED BARK OR WOOD FIBER MULCH WITH LESS THAN 5% PASSING THE #200 SIEVE

GRASSED UNDERDRAINED SOIL FILTER BASIN DETAILS
NOT TO SCALE

STATE OF MAINE
CRAIG M. SWEET
No. 15060
LICENSED PROFESSIONAL ENGINEER

DATE: 3/4/2022
P.E.: CRAIG M. SWEET

NO.	DATE	REVISIONS	APP'D BY
1	4/5/2022	REVISED PER CITY STAFF COMMENTS	

565 CONGRESS STREET
SUITE 201
PORTLAND, ME 04102

41 CAMPUS DRIVE
SUITE 201
NEW GLOUCESTER, ME 04260

OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com

TERRADYN CONSULTANTS, LLC
Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
STABLE RIDGE APARTMENTS
555 COURT STREET, AUBURN, MAINE

SHEET TITLE:
STORMWATER DETAILS & NOTES

CLIENT:
AMERICAN DEVELOPMENT GROUP
P.O. BOX 1495
NAPLES, MAINE 04055

DATE:	1/3/2022
SCALE:	AS NOTED
DESIGNED:	CMS
JOB NO:	21-81
SHEET	C-7.3

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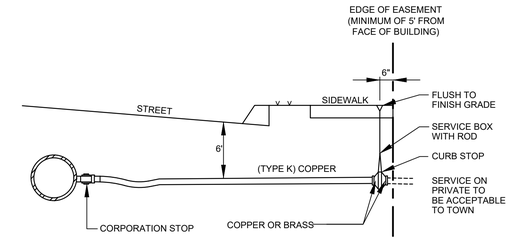
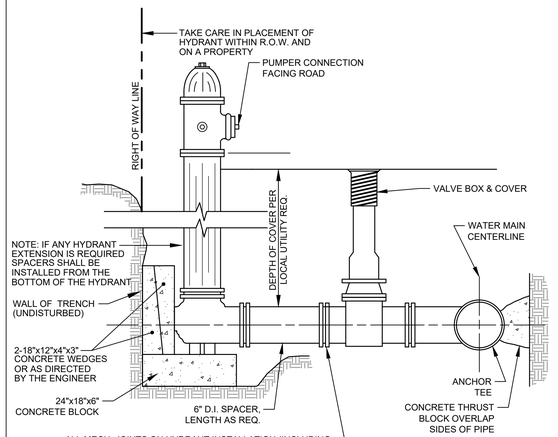


TYPICAL WATER SERVICE CONNECTION

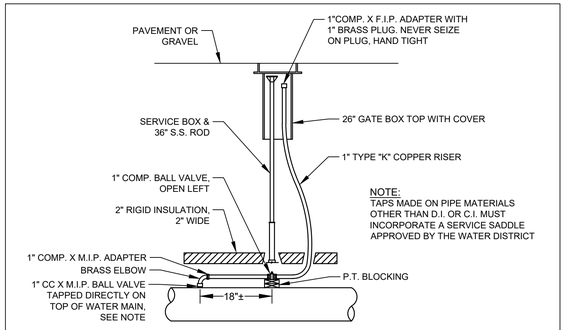
NOT TO SCALE



NOTES:
1. ALL MATERIALS SHALL CONFORM TO THE KENNEBUNK, KENNEBUNKPORT & WELLS WATER DISTRICT REQUIREMENTS
2. HYDRANT SHALL BE OPEN RIGHT
3. ALL FITTINGS SHALL BE WRAPPED IN POLYETHYLENE

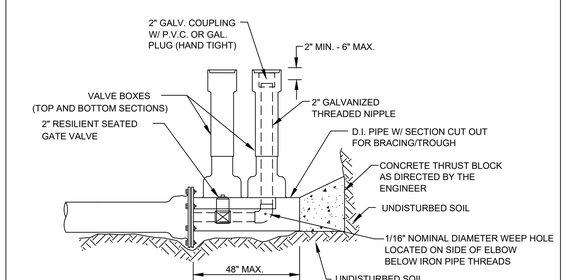
TYP. HYDRANT INSTALLATION

NOT TO SCALE



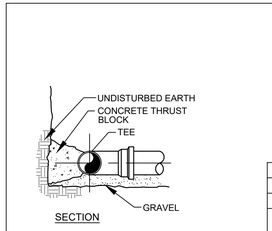
AIR RELEASE DETAIL

NOT TO SCALE



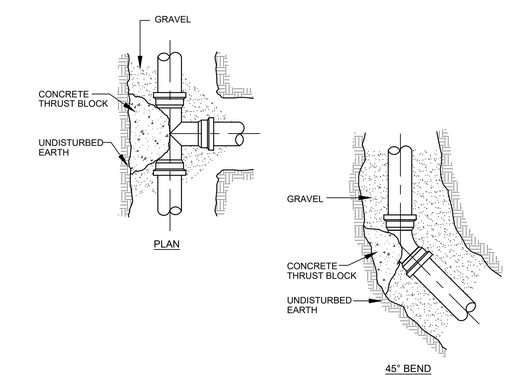
STANDARD 2" BLOW OFF

NOT TO SCALE



SECTION

CONCRETE THRUST BLOCK SIZE REQUIREMENTS				
		SQ. FT. OF BEARING ON UNDISTURBED SOIL		
FITTINGS		90° BENDS	45° BENDS	TEES AND PLUGS
PIPE SIZE	6"	4.0	2.0	3.0
	8"	8.0	4.0	6.0
	12"	15	10	10



TEE & BEND DETAIL

NOT TO SCALE

STATE OF MAINE
CRAIG M. SWEET
No. 15060
PROFESSIONAL ENGINEER
LICENSED
DATE: 3/4/2022
P.E.: CRAIG M. SWEET

NO.	DATE	REVISIONS	APP'D BY
1	4/5/2022	REVISED PER CITY STAFF COMMENTS	

565 CONGRESS STREET
SUITE 301
PORTLAND, ME 04102

41 CAMPUS DRIVE
SUITE 301
NEW GLOUCESTER, ME 04260

OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com

TERRADYN CONSULTANTS, LLC
Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
STABLE RIDGE APARTMENTS
555 COURT STREET, AUBURN, MAINE

SHEET TITLE:
WATER SERVICE DETAILS

CLIENT:
AMERICAN DEVELOPMENT GROUP
P.O. BOX 1495
NAPLES, MAINE 04055

DATE:	1/3/2022
SCALE:	AS NOTED
DESIGNED:	CMS
JOB NO:	21-81
SHEET	C-7.4

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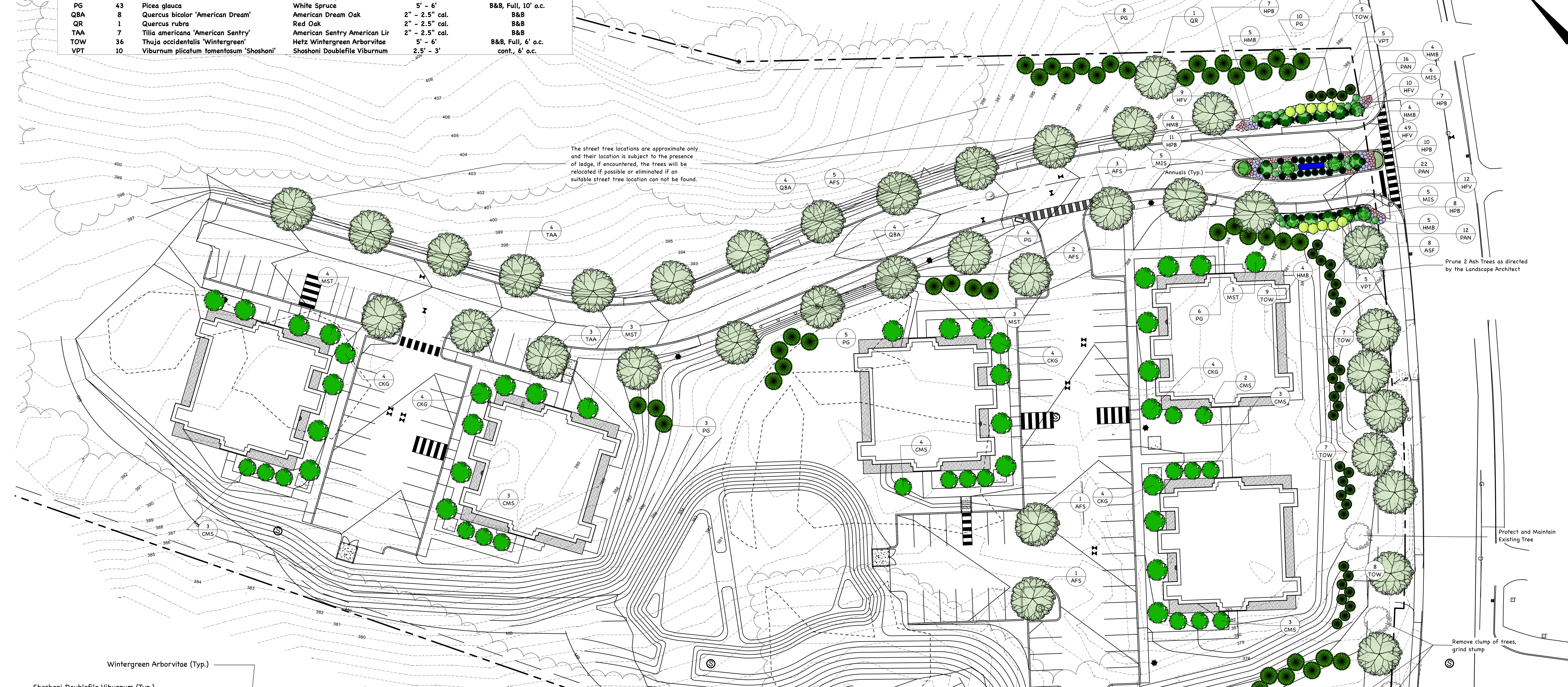
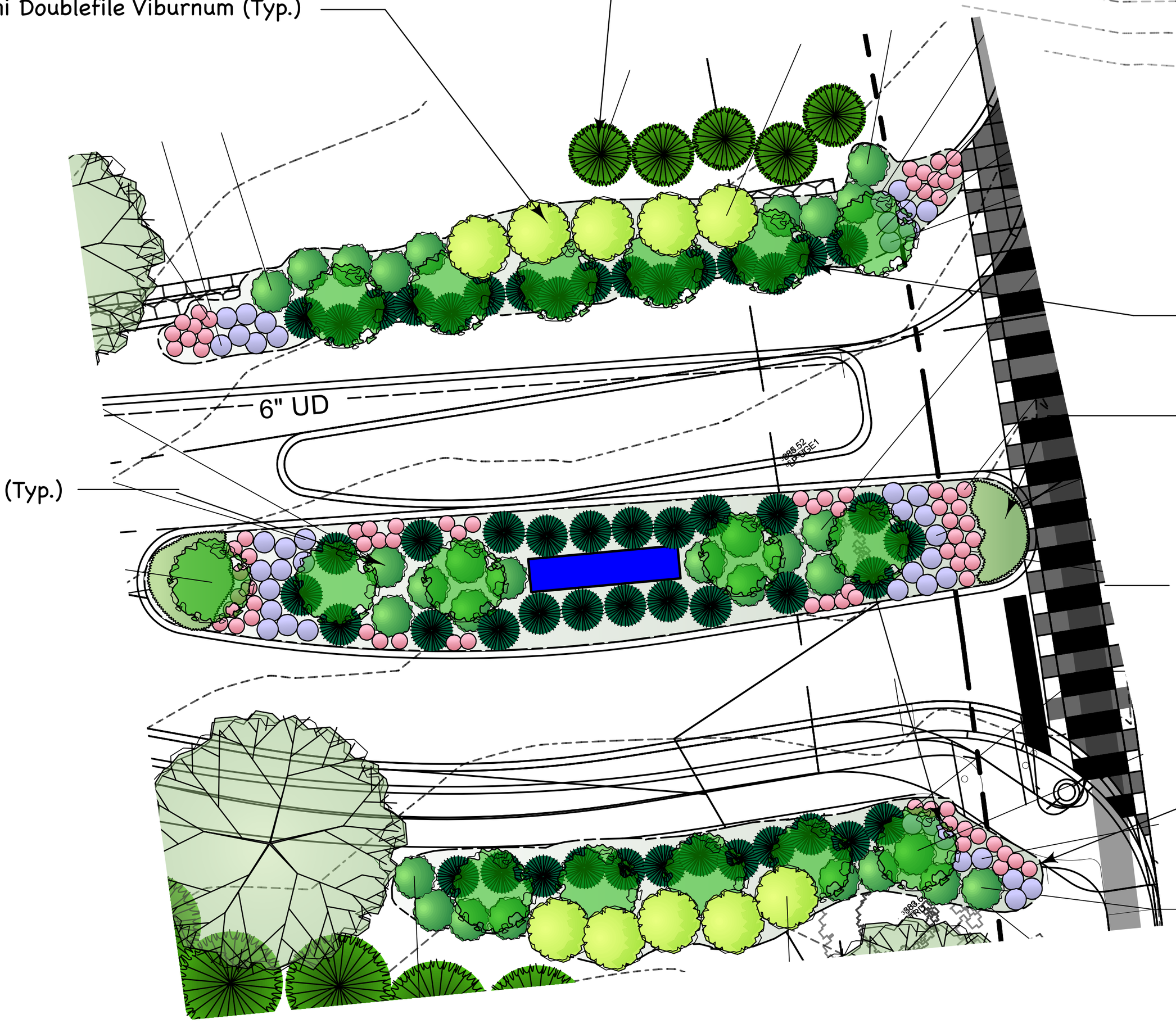
Plant Species List

ID	Qty	Botanical Name	Common Name	Scheduled Size	Remarks
AFS	12	Acer x freemanii 'Sienna Glen'	Sienna Glen Maple	2" - 2.5" cal.	B&B
ASF	8	Acer saccharum 'Fall Fiesta'	Fall Fiesta Sugar Maple	2" - 2.5" cal.	B&B
CKG	20	Cornus kousa 'Galilean'	Galilean Japanese Dogwood	2" - 2.5" cal.	B&B
CMS	18	Cornus mas 'Saffron Sentinel'	Saffron Sentinel Cornelian Ch	2" - 2.5" cal.	B&B
HFV	80	Hemerocallis x 'Funny Valentine'	Funny ValentineDaylily	1 gal.	18" o.c.
HMB	30	Hydrangea macrophylla 'Bloomstruck'	Bloomstruck Lacecap Hydrang	18" - 24"	Cont., 4' o.c.
HPB	43	Hemerocallis x 'Pandora's Box'	Pandora's Box Daylily	1 gal.	24" o.c.
MIS	16	Malus x 'Ivory Spear'	Ivory Spear Crabapple	2.5" - 3" cal.	B&B, Rightroot Understock
MST	13	Malus x 'Sutyzam'	Sugar Tyme Crabapple	2.5" - 3" cal.	B&B, Rightroot Understock
PAN	50	Picea abies 'Nidiformis'	Bird's Nest Spruce	18" - 24"	cont/, 4' o.c.
PG	43	Picea glauca	White Spruce	5' - 6'	B&B, Full, 10' o.c.
QBA	8	Quercus bicolor 'American Dream'	American Dream Oak	2" - 2.5" cal.	B&B
QR	1	Quercus rubra	Red Oak	2" - 2.5" cal.	B&B
TAA	7	Tilia americana 'American Sentry'	American Sentry American Lir	2" - 2.5" cal.	B&B
TOW	36	Thuja occidentalis 'Wintergreen'	Hetz Wintergreen Arborvitae	5' - 6'	B&B, Full, 6' o.c.
VPT	10	Viburnum plicatum tomentosum 'Shoshoni'	Shoshoni Doublefile Viburnum	2.5' - 3'	cont., 6' o.c.





See Landscape Plan Above for Plant Quantities and Plant Species List

1 Entrance Detail
Scale: 1" = 20'

10' 0 40' 80' 120'
Scale: 1" = 40'

This drawing is for Planning Board purposes only and not for construction

This plan shall not be modified without written permission from Barry J. Hosmer - Landscape Architect. Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to Barry J. Hosmer - Landscape Architect.
File Name: 555 Court Street, Auburn Landscape 3/2/22.vwx

Barry J. Hosmer ASLA
Landscape Architecture Land Planning

DATE:	
P.E.:	

NO.	DATE	REVISIONS	APP'D BY	CS
A	04/05/2022	REVISION PER STAFF COMMENTS		

TERRADYN CONSULTANTS, LLC
41 CAMPUS DRIVE
SUITE 301
NEW GLOUCESTER, ME 04260
565 CONGRESS STREET
SUITE 201
PORTLAND, ME 04102
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com

PERMIT DRAWING NOT FOR CONSTRUCTION

PROJECT:
SUBDIVISION PLAN
555 COURT STREET, AUBURN, MAINE
SHEET TITLE:
LANDSCAPE PLAN
CLIENT:
AMERICAN DEVELOPMENT GROUP

DATE:	3/2/2022
SCALE:	1"=40'
DESIGNED:	
JOB NO:	21-81
SHEET	L-1.0

ATTACHMENT 4

Revised application package

TERRADYN
CONSULTANTS, LLC

Pineland
Cumberland Hall
41 Campus Drive, Suite 101
New Gloucester, ME 04260

Portland
565 Congress Street, Suite 310
Portland, ME 04101

April 6, 2022 Project #21-81

Eric Cousens
Director of Planning & Permitting
City of Auburn
60 Court Street
Auburn, ME 04210

Stable Ridge Apartments- Response to Staff Comments
American Development Group
555 Court Street, Auburn, ME

Dear Eric,

On behalf of American Development Group, Terradyn Consultants, LLC is pleased to submit responses to staff comments and revised drawings for the Stable Ridge Apartments project. The information enclosed was prepared in response to comments provided on March 17, 2022, for the April 12th Planning Board Meeting.

In addition to the response to comments, we are also requesting the proposed Stable Ridge Apartments be reviewed under the Site Plan Special Exemption standards instead of the Planned Unit Development standards previously submitted. There have been additional changes to the ordinance since our initial application submission, which allow for the proposed use to qualify under these review standards. We have revised our Standards compliance narrative within our original submission and have attached a revised full site plan submission to this letter.

Comment Responses#

The following response to comments are from the information provided on March 17, 2022. The original comments are in *Italics*:

Comments from John Blais from Staff Review Meeting dated March 17, 2022:

1. *Address items in the water district letter dated February 8th.*

   Comment Response: Our office has been in contact with the Auburn Water and Sewer District. At this time the applicant is aware that a limited service agreement will most likely be required for the development and that as the building design is finalized that some additional pumps within the buildings will be required to achieve the required pressures.

PROPOSED PROJECT

The Stable Ridge Apartments project features 5 twelve-unit apartment buildings along with the associated parking, landscaping, lighting and stormwater areas. The apartment buildings are all three stories tall. Each unit will contain two bedrooms. Each ground-floor apartment contains an outdoor patio area while each 2nd & 3rd floor unit includes a balcony. The buildings were designed by Dirigo Architectural Engineering, LLC.

Schematic Layout: A significant effort was made to fit the buildings into the existing site without creating an excessive amount of blasting while limiting wetland fills to less than 15,000 SF. The buildings are clustered around the two flattest areas of the site. Buildings 1-3 are located closest to Court Street and the Building 4 & 5 cluster is set back approximately 600' away from the road. Due to grading constraints, each grouping of buildings need to be at or near the same finish floor elevation. Buildings 1 & 2 are set approximately 60' back from the Court Street right of way because they're several feet higher than the street. A landscaping buffer was designed by Barry Hosmer, Landscape Architect as part of his overall landscaping design. The landscaping proposed to be located along the streetscape will soften the elevation difference. buildings were oriented to provide each unit with a southerly view.

Parking: The plan features 90 parking spaces including four handicapped accessible spaces. This number equals the amount stipulated by the zoning ordinance where it's written that 1.5 spaces are required per unit.

Access: The development will be accessed via a new private driveway, Stable Ridge Drive. The access will be 24' wide, paved, lined with slip-form concrete curbing and will have a 5' wide sidewalk along the south side. The entrance will feature three lanes: an inbound lane, an outbound lane dedicated to right turns and an outbound lane dedicated to left turns. The sight distance exceeds 350' in both directions which far exceeds the 200' requirement. A Traffic Analysis was prepared by William Bray, P.E. of Barton & Loguidice that shows that the project does not cause a significant impact to Court Street.

Utilities: The complex will be served by public water, sewer, natural gas and underground power. The Court Street right of way contains a 12" Water mine, a natural gas line and above ground power lines. The nearest sanitary sewer line is located in Pinnacle Drive.

A new 8" watermain will be constructed into the site that will provide water service and fire protection to the building sprinkler systems. A new fire hydrant is proposed just beyond the intersection of the entrance drive and the first parking lot. The Pinnacle Drive gravity sewer line will be extended into Court Street where a new manhole will be installed. A gravity sewer system is proposed on the down-gradient side of the apartment complex that will connect to the new manhole. Gas & electrical service will make connection directly to the adjacent lines.

Stormwater Management: The project meets current City and MDEP requirements for both stormwater quantity and quality control. Most of the development will drain to a new underdrained filter basin that will be located between the two building clusters. The stormwater pond will filter the stormwater runoff and help to control the peak rate of runoff as it leaves the site. The

apartment building roofs will drain to over-sized filter strips that will be located along the building edge. A full stormwater report is attached.

Snow Removal: We have designated snow removal areas through the project site. The primary access drive will be plowed as a street. Snow storage areas are located off the end of each parking area.

Landscaping & Lighting: Barry Hosmer, RLA prepared the landscaping plan. That plan features a significant amount of landscaping, both along the entrance driveway and throughout the pedestrian and parking areas. Fully cut off, architectural light fixtures will be used throughout the project.

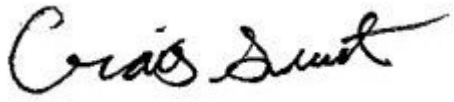
Signage: The applicant is proposing to construct a sign in the landscaped island that is proposed at the intersection with Court Street.

CLOSING

The project has been designed to meet the review standards of the City of Auburn's Zoning and Land Use Code. Narratives describing how these criteria and standards are met is attached to the Development Review Application. Please do not hesitate to reach out if you have any questions or require additional information. My email address is craig@terradynconsultants.com, and my direct number is 207-370-2776.

Sincerely,

TERRADYN CONSULTANTS, LLC



Craig Sweet, P.E.
Project Engineer

Enc.

LIST OF ATTACHMENTS

Attachment 1	Application Form & Checklist
Attachment 2	Current Deeds
Attachment 3	Standards Compliance Narratives
Attachment 4	Stormwater Management Report
Attachment 5	Utility Correspondence
Attachment 6	Financial Capacity
Attachment 7	Cost Estimate
Attachment 8	Traffic Study
Attachment 9	Turning Figure
Attachment 10	Building Plans

DRAWING INDEX

C-0.0	Cover Sheet & Location Map
S-1.0	Boundary Survey
C-1.0	Overall Site Plan
C-2.0	Demolition Plan
C-3.0	Site Layout Plan
C-3.1	Site Layout Plan
C-4.0	Grading Plan & Erosion Control Plan
C-4.1	Grading Plan & Erosion Control Plan
C-5.0	Utility Plan
C-5.1	Utility Plan
C-5.2	Utility Crossing Diagrams
C-6.0	Access Drive Profiles
C-7.0	Details & Notes
C-7.1	Details & Notes
C-7.2	Erosion Control Details and Notes
C-7.3	Stormwater Details and Notes
C-7.4	Water Service Details
PH-1.0	Photometric Plan
L-1.0	Landscaping Plan

Attachment 1

Application Form

City of Auburn, Maine
Economic & Community Development
Michael Chammings, Director
60 Court Street | Auburn, Maine 04210
www.auburnmaine.gov | 207.333.6601

Development Review Application

PROJECT NAME: Stable Ridge Appartments

PROPOSED DEVELOPMENT ADDRESS: 555 Court Street

PARCEL ID #: 229007000

REVIEW TYPE:
Site Plan □ **Site Plan Amendment** □
Subdivision ☒ **Subdivision Amendment** □

PROJECT DESCRIPTION: Please see attached cover letter

CONTACT INFORMATION:

Applicant American Development Group	**Property Owner** Same as Applicant
Name: Jessica Klimek	**Name:**
Address: P.O. Box 1495	**Address:**
City / State Naples, ME	**City / State**
Zip Code 04055	**Zip Code**
Work #:	**Work #:**
Cell #: 207-240-3965	**Cell #:**
Fax #:	**Fax #:**
Home #:	**Home #:**
Email: Jessica Klimek@ahi@gmail.com	**Email:**

Project Representative	**Other professional representatives for the project (surveyors, engineers, etc.),**
Name: Terradyn Consultants, LLC ATTN Craig Sweet PE	**Name:**
Address: 41 Campus Drive , Suite 301	**Address:**
City / State New Gloucester	**City / State**
Zip Code 04260	**Zip Code**
Work #: 207-926-511	**Work #:**
Cell #: 207-370-2776	**Cell #:**
Fax #:	**Fax #:**
Home #:	**Home #:**
Email: craig@terradynconsultants.com	**Email:**

PROJECT DATA

The following information is required where applicable, in order complete the application

IMPERVIOUS SURFACE AREA/RATIO

Existing Total Impervious Area	11,782	sq. ft.
Proposed Total Paved Area	53,500	sq. ft.
Proposed Total Impervious Area	75794	sq. ft.
Proposed Impervious Net Change	64,012	sq. ft.
Impervious surface ratio existing	2	% of lot area
Impervious surface ratio proposed	13	% of lot area

BUILDING AREA/LOT COVERAGE

Existing Building Footprint	5,745	sq. ft.
Proposed Building Footprint	22,295	sq. ft.
Proposed Building Footprint Net change	16,550	sq. ft.
Existing Total Building Floor Area		sq. ft.
Proposed Total Building Floor Area		sq. ft.
Proposed Building Floor Area Net Change		sq. ft
New Building	yes	(yes or no)
Building Area/Lot coverage existing	1	% of lot area
Building Area/Lot coverage proposed	3.86	% of lot area

ZONING

Existing	UR
Proposed, if applicable	PUDR/ T4.2

LAND USE

Existing	Residential
Proposed	Residential

RESIDENTIAL, IF APPLICABLE

Existing Number of Residential Units	1
Proposed Number of Residential Units	60
Subdivision, Proposed Number of Lots	

PARKING SPACES

Existing Number of Parking Spaces	n/a
Proposed Number of Parking Spaces	90
Number of Handicapped Parking Spaces	4
Proposed Total Parking Spaces	90

ESTIMATED COST OF PROJECT: $7,154,000

DELEGATED REVIEW AUTHORITY CHECKLIST

SITE LOCATION OF DEVELOPMENT AND STORMWATER MANAGEMENT

Existing Impervious Area	11,782	sq. ft.
Proposed Disturbed Area	130,680	sq. ft.
Proposed Impervious Area	75,794	sq. ft.

1. ***If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with MDEP.***
2. ***If the proposed impervious area is greater than one acre including any impervious area crated since 11/16/05, then the applicant shall apply for a MDEP Stormwater Management Permit, Chapter 500, with the City.***
3. ***If total impervious area (including structures, pavement, etc) is greater than 3 acres since 1971 but less than 7 acres, then the applicant shall apply for a Site Location of Development Permit with the City. If more than 7 acres then the application shall be made to MDEP unless determined otherwise.***
4. ***If the development is a subdivision of more than 20 acres but less than 100 acres then the applicant shall apply for a Site Location of Development Permit with the City. If more than 100 acres then the application shall be made to MDEP unless determined otherwise.***

TRAFFIC ESTIMATE

Total traffic estimated in the peak hour-existing (Since July 1, 1997) _____ passenger car equivalents (PCE)

Total traffic estimated in the peak hour-proposed (Since July 1, 1997) 27 passenger car equivalents (PCE)

If the proposed increase in traffic exceeds 100 one-way trips in the peak hour then a traffic movement permit will be required.

Zoning Summary

1. Property is located in the t4.2 zoning district.
2. Parcel Area: 13.25 acres / 577,170 square feet(sf).

Regulations	Required/Allowed	Provided
Min Lot Area	n/a	n/a
Street Frontage	n/a	n/a
Min Front Yard	5'min 15'max	7.5'
Min Rear Yard	10ft	10ft
Min Side Yard	5ft	5ft
Max. Building Height	3 story	3 story
Use Designation		
Parking Requirement	1 space/ per 90 square feet of floor area	90
Total Parking:		
Overlay zoning districts (if any):		
Urban impaired stream watershed?	YES/NO If yes, watershed name no	

DEVELOPMENT REVIEW APPLICATION SUBMISSION

Submissions shall include fifteen (15) complete packets containing the following materials:

1. 5 Full size plans and 10 smaller (no larger than 11" x 17") plans containing the information found in the attached sample plan checklist.
2. Application form that is completed and signed by the property owner or designated representative. (NOTE: All applications will be reviewed by staff and any incomplete application will not be accepted until all deficiencies are corrected.
3. Cover letter stating the nature of the project.
4. All written submittals including evidence of right, title and interest.
5. Copy of the checklist completed for the proposal listing the material contained in the submitted application.

Refer to the application checklist for a detailed list of submittal requirements.

To view the City of Auburn Zoning Ordinance, go to:
www.auburnmaine.gov under City Departments / Planning, Permitting & Code / Subdivisions / Land Use /Zoning Ordinance

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, I certify that the City's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

This application is for development review only; a Performance Guarantee, Inspection Fee, Building Permit Application and other associated fees and permits will be required prior to construction.

Signature of Applicant:	Date:
	3/4/22

City of Auburn, Maine
Economic & Community Development
Michael Chammings, Director
60 Court Street | Auburn, Maine 04210
www.auburnmaine.gov | 207.333.6601

Development Review Checklist

The following information is required where applicable to be submitted for an application to be complete

PROJECT NAME: Stable Ridge Appartments
PROPOSED DEVELOPMENT ADDRESS: 555 Court Street
PARCEL #:

Required Information		*Check when Submitted*		*Applicable Ordinance*
Site Plan		*Applicant*	*Staff*	
	Owner's Names/Address	x		
	Names of Development	x		
	Professionally Prepared Plan	x		
	Tax Map or Street/Parcel Number	x		
	Zoning of Property	x		
	Distance to Property Lines	x		
	Boundaries of Abutting land	x		
	Show Setbacks, Yards and Buffers	x		
	Airport Area of Influence	n/a		
	Parking Space Calcs	x		
	Drive Openings/Locations	x		
	Subdivision Restrictions	n/a		
	Proposed Use	x		
	PB/BOA/Other Restrictions	n/a		
	Fire Department Review			
	Open Space/Lot Coverage	x		

Required Information		*Check when Submitted*		*Applicable Ordinance*
Landscape Plan		***Applicant***	***Staff***	
	Greenspace Requirements	x		
	Setbacks to Parking	x		
	Buffer Requirements	x		
	Street Tree Requirements	x		
	Screened Dumpsters	x		
	Additional Design Guidelines			
	Planting Schedule	x		
Stormwater & Erosion Control Plan		***Applicant***	***Staff***	
	Compliance w/ chapter 500	x		
	Show Existing Surface Drainage	x		
	Direction of Flow	x		
	Location of Catch Basins, etc.	x		
	Drainage Calculations	x		
	Erosion Control Measures	x		
	Maine Construction General Permit	x		
	Bonding and Inspection Fees	x		
	Post-Construction Stormwater Plan	x		
	Inspection/monitoring requirements	x		
Lighting Plan		***Applicant***	***Staff***	
	Full cut-off fixtures	x		
	Meets Parking Lot Requirements	x		
Traffic Information		***Applicant***	***Staff***	
	Access Management	x		
	Signage	x		
	PCE - Trips in Peak Hour	x		

Required Information		*Check when Submitted*		*Applicable Ordinance*
	Vehicular Movements	x		
	Safety Concerns			
	Pedestrian Circulation	x		
	Police Traffic			
	Engineering Traffic	x		
Utility Plan		***Applicant***	***Staff***	
	Water	x		
	Adequacy of Water Supply	x		
	Water main extension agreement	x		
	Sewer	x		
	Available city capacity	x		
	Electric	x		
	Natural Gas	x		
	Cable/Phone	x		
Natural Resources		***Applicant***	***Staff***	
	Shoreland Zone	n/a		
	Flood Plain	x		
	Wetlands or Streams	x		
	Urban Impaired Stream	n/a		
	Phosphorus Check	na/		
	Aquifer/Groundwater Protection	n/a		
	Applicable State Permits	x		
	Lake Auburn Watershed	n/a		
	Taylor Pond Watershed	n/a		
Right, Title or Interest		***Applicant***	***Staff***	
	Verify	x		
	Document Existing Easements, Covenants, etc.	x		

Required Information		*Check when Submitted*		*Applicable Ordinance*
Technical & Financial Capacity		***Applicant***	***Staff***	
	Cost Est./Financial Capacity	x		
	Performance Guarantee			
State Subdivision Law		***Applicant***	***Staff***	
	Verify/Check	n/a		
	Covenants/Deed Restrictions	n/a		
	Offers of Conveyance to City	n/a		
	Association Documents	n/a		
	Location of Proposed Streets & Sidewalks	n/a		
	Proposed Lot Lines, etc.	n/a		
	Data to Determine Lots, etc.	n/a		
	Subdivision Lots/Blocks	n/a		
	Specified Dedication of Land	n/a		
Additional Subdivision Standards		***Applicant***	***Staff***	
	Mobile Home Parks	n/a		
	PUD	x		
A JPEG or PDF of the proposed site plan		***Applicant***	***Staff***	
Final sets of the approved plans shall be submitted digitally to the City, on a CD or DVD, in AutoCAD format R 14 or greater, along with PDF images of the plans for archiving				

Attachment 2

Current Deed

Warranty Deed

DLN: 1002140171835

Brent A. Berry of Poland, Androscoggin County, Maine, for consideration paid, grants to **American Development Group LLC** a Maine Limited Liability Company with a mailing address of P.O. Box 1495, Naples, Cumberland County, Maine 04055, with **Warranty Covenants**, a certain lot or parcel of land, with any buildings thereon, situated in Auburn, Androscoggin County, Maine, bounded and described as follows:

Beginning on the northerly line of Upper Court Street at a point one hundred twenty-five (125) feet westerly from the dividing line between the Morse and Merrill farms;

Thence running northwesterly to the southerly corner of the reservoir lot, so-called, conveyed by Simon M. Merrill to the Auburn Water Commissioners;

Thence running North twenty-seven and one half degrees West (N 27½° W) by the westerly line of said reservoir lot six hundred (600) feet to the westerly corner of the same;

Thence North sixty-two and one half degrees East (N 62½° E) on the northerly line of said reservoir lot two hundred fifty (250) feet to the old line between the Morse and Merrill Farms at a stone wall;

Thence running North twenty-seven and one half degrees (N 27½° W) on said old line and by said stone wall to an angle in said wall at a point about one hundred and sixty-three (163) rods and seven (7) links from Upper Court Street;

Thence continuing the same course to the southwesterly line of the spring lot, so-called, as surveyed and laid out by J.W. Maxwell for the said Simon M. Merrill in 1901, which line is marked by a line of spotted trees;

Thence South forty-eight and one half degrees West (S 48½° W) by said line of spotted trees marking the southeasterly line of said spring lot to the southerly corner of said lot;

Thence North forty-seven degrees West (N 47° W) twenty five (25) rods by the southwesterly line of said spring lot marked by the line of spotted trees to a stake opposite the spring;

Thence North forty-two degrees West (N 42° W) by the line of said spring lot as marked, forty-two (42) rods to the northerly line of the said Simon M. Merrill land and land now or formerly of one Joseph Sawyer;

Thence South fifty-one degrees West (S 51° W) forty-four (44) rods by land of said Sawyer to Taylor Brook;

Thence following said Brook down stream to land of one Walton;

Thence southeasterly by lands of said Walton and of Enos H. Stevens sixty-three (63) rods and twenty-two (22) links to land now or formerly of D.W. Jones;

Thence North forty-nine and one half degrees East (N 49½° E) forty-four and three fifths (44 3/5) rods by land of said D.W. Jones to an angle in said Jones line;

Thence South twenty-seven and three fourths degrees East (S 27¾° E) about one hundred fifty-three (153) rods and twenty (20) links on the line of said Jones land and land now or formerly of one Geo. A. Jones to the northerly line of Upper Court Street; thence easterly by said line of Upper Court Street to the point of beginning.

Excepting and reserving from the above described premises the following parcels which have been deeded out:

A. To Helen Elizabeth Hayden by warranty deed dated April 8, 1955 and recorded in Book 717, Page 491.

B. To the Inhabitants of the City of Auburn dated August 16, 1955 and recorded in Book 739, Page 222.

C. To William G. Hatch by warranty deeds dated October 4, 1963 and recorded in Book 903, Page 110 and Book 903, Page 111, but reserving to a prior grantor a 20' right-of-way to be used jointly by the said grantor and the said Hatch, reference to said deeds for a description of said right-of-way.

D. To Helen Elizabeth Hayden by warranty deed dated June 28, 1972 and recorded in Book 1055, Page 747.

E. To C. Winslow Hayden by warranty deed dated April 30, 1974 and recorded in Book 1100, Page 261.

This deed however is subject to a certain covenant running with the land in respect to any future damage resulting to said land from leakage of water from the reservoir of said Water District situated on Merrill Hill adjoining the land hereby conveyed, made between the said Albert L. Merrill and said Helen M. Merrill with the Auburn Water District a quasi-municipal corporation existing in said Auburn, dated July 2, 1940 and duly recorded in said Registry in Book 509, Page 420, and the covenants hereinafter contained are to be construed accordingly.

Also hereby conveying all rights, easements, privileges and appurtenances to the premises hereinabove described.

Being the same premises described in a deed from Brent A. Berry, Personal Representative of the Estate of Robert K. Berry to Brent A. Berry dated June 1, 2021 recorded in said Registry in Book 10764, Page 99.

In Witness Whereof, the Grantor has set his hand and seal on this 12th day of November, 2021.

Witness

Brent A. Berry

State of Maine
Androscoggin, SS.

November 12, 2021

Then personally appeared the above-named **Brent A. Berry** and acknowledged the foregoing instrument to be his free act and deed.

Before me,

K. Alexander Visbaras, Attorney-At-Law

:odh: H:\Clients\American Development Group LLC\Deed

Maine Real Estate Transfer Tax Paid
TINA M. CHOUINARD, REGISTER
ANDROSCOGGIN COUNTY MAINE E-RECORDED

Attachment 3

Standards Compliance Narratives

TERRADYN CONSULTANTS, LLC

Pineland
Cumberland Hall
41 Campus Drive, Suite 101
New Gloucester, ME 04260

Portland
565 Congress Street, Suite 201
Portland, ME 04101

March 2022 Project# 21-81

COMPLIANCE WITH CITY OF AUBURN ZONING AND LAND USE CODE

555 Court Street, Auburn, Maine

The following information describes how the proposed project, located at 555 Court Street in Auburn, Maine, complies with Chapter 60 of the City of Auburns Zoning Ordinance.

1. *Will not result in undue water, air or noise pollution*

   The proposed project is a residential Planned Unit Development for residential apartments and is not expected to result in any undue water, air or noise pollution.

2. *Has sufficient water available for the reasonably foreseeable needs of the subdivision;*

   Please see the attached letter from the Auburn Water and Sewer District stating that they have capacity to serve the proposed project.

3. *Will not cause an unreasonable burden on the existing water supply, if one is to be utilized;*

   The proposed project will not cause an unreasonable burden to the existing water supply. Please see the attached letter from the Auburn Water and Sewer District stating that they have capacity to serve the proposed project.

4. *Will not cause unreasonable soil erosion or reduction in capacity of the land to hold water so that a dangerous or unhealthy condition may result;*

   The proposed project will not cause unreasonable soil erosion or a reduction in the of the land to hold water. Erosion and sediment controls are shown on the attached plans and a stormwater management report has been prepared demonstrating that post development runoff will not exceed predevelopment conditions.

5. *Will not cause unreasonable highway or public road congestion or unsafe conditions with respect to the use of the highways or public roads existing or proposed;*

The project will not cause unreasonable highway or public congestion or unsafe conditions, Barton & Loguidice has prepared a Traffic study for the proposed development which is attached to this section.

6. *Will provide for adequate sewage waste disposal;*

   The proposed development will be serviced by the Auburn Water and Sewer district please see the attached letter confirming capacity to serve the proposed development.

7. *Will not cause an unreasonable burden on the ability of a municipality to dispose of solid waste and sewage if municipal services are to be utilized*

   The applicant will contract with a private waste hauler to dispose of solid waste at a licensed facility. Please see the attached letter from the Auburn Water and Sewer district confirming capacity to serve the proposed development.

8. *Will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites or areas and irreplaceable natural areas;*

   The proposed development will not have an adverse effect on the scenic or natural beauty of the area. The proposed development is located within the Traditional Downtown Neighborhood District and has been designed in the location in the location of an existing single-family residence, and barn. The proposed development has a robust landscaping plan that will help enhance the beauty of the area and screen the new development.

9. *In conformance with a duly adopted subdivision regulation or ordinance, comprehensive plan, development plan, or land use plan, if any;*

   The proposed development has been designed in conformance with all applicable regulations.

10. *Is funded by a subdivider has adequate financial and technical capacity to meet the standards;*

    The applicant has adequate funding to complete the project, please see that attached letter from First National Bank.

    The Development team for Stable Ridge consists of Khristopher Klimek (Partner), Barbara Klimek (Partner), Jessica Klimek (Partner) and Bradley Klimek (Partner). Together, we bring a strong background of Southern and Central Maine construction, development, and business to this project. The Klimek family are founders and co-owners of multiple Maine-based companies including

American Development Group LLC, American Holdings Inc., DMM Corporation and American Meat and Seafood. Together the Klimek family has been instrumental in several major Southern and Central Maine real estate development projects including the Gritty's Building, Auburn's very first Rite Aid and The Blackhorse Tavern Restaurant in Bridgeton. We are all Maine residents, living in both the Auburn and Naples/Bridgeton areas. Jessica Klimek, a 41-year resident of Auburn, has taken on the lead role for the Stable Ridge project and is committed to creating a high-quality product with a true "Welcome Home" feel for her hometown community.

The Applicant has assembled a highly qualified team of professionals to plan, permit and develop construction documents for the project. The team services will be provided by the following companies:

CONSULTANT TEAM

Civil Engineer	Craig Sweet, P.E. Terradyn Consultants, LLC 41 Campus Drive, Suite 301 New Gloucester, ME 04260 (207) 370-2776
Surveyor	Jim Courbron, P.L.S. Terradyn Consultants, LLC 41 Campus Drive, Suite 301 New Gloucester, ME 04260 (207) 926-5111
Architect	David L. Berry Dirigo Architectural 7 Cobblestone Way, Suite 2 Turner, ME 04282 (207) 225-3040
Landscape Architect	Barry J. Hosmer P.L.A., A.S.L.A. 196 Whitney Avenue Portland, ME 04102 (207) 874-0248
Wetland Scientists	Wetland Delineation: Rodney D. Kelshaw L.S.S. Flycatcher LLC 106 Lafayette Street, Suite 1C Yarmouth, ME 04096

Traffic Study	William Bray, P.E. Barton & Loguidice, LLC 383 US Route 1, Suite 2A Scarborough, ME 04074

The team of consultants retained by the Developer has expertise and experience in the design of similar projects. Resumes of key personnel for the development team can be provided upon request.

11. *Will not adversely affect the character of the surrounding neighborhood and will not tend to depreciate the value of property adjoining the neighboring property under application;*

    The proposed project will not adversely impact the surrounding area. The residential development will replace an existing structure in need of repairs, and seeks to enhance the surrounding area.

12. *Has provisions for on-site landscaping that are adequate to screen neighboring properties from unsightly features of the development;*

    A robust landscaping plan has been prepared for the proposed development, please see the plan within the attached plan set. Dumpster areas will be fenced and screened.

13. *Will not create a fire hazard and has provided adequate access to the site for emergence vehicles:*

    Adequate access has been provided for emergency vehicles, please see the attached turning figures which demonstrate that the City of Auburns Fire truck can safely access and maneuver within the site.

14. *Will not, alone or in conjunction with existing activities adversely affect the quality or quantity of groundwater;*

    The proposed project will not adversely impact the quality or quantity of groundwater. The project will utilize public water and sewer.

15. *Does not have long-term cumulative effects on the proposed subdivision that will unreasonably increase a great pond phosphorus concentration during the construction phase and life of the proposed subdivision.*

    The proposed project is not located within a great pond watershed. a

Attachment 4

Stormwater Management Report

TERRADYN
CONSULTANTS, LLC

Pineland
Cumberland Hall
41 Campus Drive, Suite 301
New Gloucester, ME 04260

Portland
565 Congress Street, Suite 201
Portland, ME 04101

Stable Ridge Apartments
Auburn, Maine

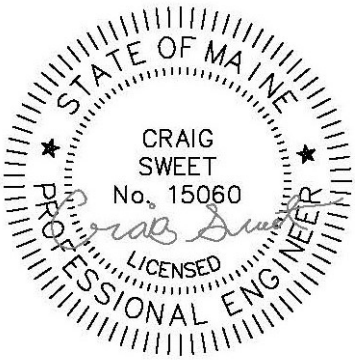
STORMWATER MANAGEMENT REPORT

PREPARED FOR:

AMERICAN DEVELOPMENT GROUP
P.O. BOX 1495
NAPLES, MAINE 04055

PREPARED BY:

TERRADYN CONSULTANTS LLC
41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, MAINE 04260



March 2022

The following Stormwater Management Plan has been prepared to evaluate stormwater runoff and erosion control for the proposed 60 unit apartment complex to be located at 555 Court Street in Auburn, Maine.

Site Calculations

Total Property Area	13.26 Ac (+/-)
Total Project Impervious Area	1.74 Ac
Total Landscaped Area	1.24 Ac
Total Developed Area	2.98 Ac

Existing Conditions

The development parcel is located on the west side of Court Street at 555 Court Street, just north of the Pinnacle Drive/Court Street intersection. The property contains a single family home that is located adjacent to the road. The remainder of the property is undeveloped.

The property generally slopes to the south between an average grade of 10%-15%. The existing home and back yard have been leveled off. The entire site drains to the Court Street drainage system. Most of the property first drains to the property to the south where a swale along the north side of the middle school directs runoff to a stormwater pond that ultimately flows to the street system. The property is located within the Androscoggin River watershed. Copies of the U.S.G.S. Quadrangle Map and an Aerial Map are attached to this submittal.

Flooding

The development area is not located within an area of flood hazard according to the Federal Insurance Rate Map 23001C0328E. See attached map.

Modeling Assumptions

The onsite stormwater facilities were sized utilizing the USDA Soil Conservation Service (SCS) TR-20 Runoff Simulation Model, as contained in the HydroCAD computer software program (Version 9.0). Runoff curve numbers were determined for each direct watershed by measuring the area of each hydrologic soil group within each type of land cover. Weighted curve numbers were then calculated using curve numbers for various cover types and hydrologic soil groups, assuming “good” conditions as defined in U.S Soil Conservation Service (SCS) publications. Times of concentration and travel times were determined from site topographic maps in accordance with SCS procedures. A maximum length of 150 feet was used for sheet flow.

All of the watersheds’ peak runoff rates were analyzed for the 2, 10, and 25-year frequency, 24-hour duration storm events. A Type III rainfall distribution was applied to these storms. The rainfall amounts for Androscoggin County are as follows:

Storm Frequency Precipitation (in./24 hr)	
2-year	3.0
10-year	4.3
25-year	5.4

Onsite Soils

The soils were determined from the NRCS Web Soil Mapper. All onsite soils are hydrologic group D soils due to shallow bedrock. See attached NRCS Soils Map.

Water Quantity (Flooding Standard)

The following table summarizes the results of stormwater calculations for the design storm events for the project areas. Calculations and computer modeling sheets are provided with this report.

Table 1 - Stormwater Runoff Summary Table
Pre-Development vs. Post-Development

Study Point #	2Yr/24Hr (cfs)		10Yr/24Hr (cfs)		25Yr/24Hr (cfs)	
	Pre	Post	Pre	Post	Pre	Post
1	2.62	0.48	4.90	0.90	6.93	1.27
2	7.47	5.12	13.94	12.09	19.76	19.15
3	3.63	3.63	7.17	7.17	10.42	10.42

As the above result table shows, the post-development flow rates for the 2, 10 and 25-year/24 hour design storm events do not exceed the pre-development conditions.

Basic Standards

A site-specific Erosion & Sedimentation Control Plan has been developed for the project. Means and methods to control erosion and sedimentation during and after construction are detailed in the erosion control plan narrative and construction details, which are included directly on the project drawings for ease of reference during construction.
Requirements for inspection and maintenance of the stormwater management system are provided in the stormwater management system inspection and maintenance plan.
Housekeeping requirements are included in the Erosion & Sediment Control Narrative located on the project drawings as well as in the attached document.

General Standards

The General Standard requires that a project's stormwater management system includes measures that will provide pollutant removal from runoff and mitigate for the

increased frequency of channels erosive flows due to runoff from smaller storms and potential temperature impacts.
Best Management Practices (BMPs) will be implemented to reduce the impacts of site development on downstream water quality. BMP sizing calculations are shown below.

Water Quality (BMP Standard)

The water quality requirements will be met with the construction of a filter basin and roof drain filter strips

New Impervious Area: The project will result in the creation of approximately 75,688 SF of impervious area. The pond will treat approximately 52,400 SF & the roof drain filter strips will capture approximately 4,460 SF each. The proposed BMPs will result in the treatment of approximately 74,700 SF of the impervious area resulting in a treatment percentage of (74,700/75,688) x 100%= 98.6%.

Percentage of Treatment of the Impervious Area =98.6% (95% req'd)

Project Developed Area: The project will result in the creation of approximately 130,150 SF of developed area. The proposed BMPs will result in the treatment of approximately 106,860 SF of the developed area resulting in a treatment percentage of (106,860/130,150) x 100%= 82.1%.

Percentage of Treatment of the Developed Area = 82.1% (80% required)

Housekeeping and Maintenance & Inspection guidelines are attached to this report.

BMP Sizing

Roof Dripline Filter Bed

We propose to provide treatment & stormwater control for the roof runoff for each of the proposed apartment buildings. The bed is required to provide volume for 5.4" of runoff from the contributing area and store it within a reservoir bed. The bed sizing is as follows:

Area of Watershed: = 4,460 SF
Treatment Volume Required: Area x runoff depth: 4,460 SF x 5.4/12 FT = 2,007 CF
Bed Sizing:
Porosity = 40% Bed Length = 340' Bed Width = 5' Bed Depth = 3.0
Available Volume= 340' x 5' x 2.5' x 0.40 = 2,040 CF.

The design is adequate since the available volume exceeds the required volume. The filter strips far exceed standard water quality sizing criteria.

FILTER BASIN SIZING

WATERSHED IMPERVIOUS AREA=	52400	SF
WATERSHED LANDSCAPED AREA=	32160	SF
REQUIRED WQV=	5439	CF
PROVIDED WQV=	6324	CF
MINIMUM BOTTOM AREA=	3263	SF

AREA TO CELL #2

WATERSHED IMPERVIOUS AREA=	38200	SF
WATERSHED LANDSCAPED AREA=	27160	SF
MINIMUM BOTTOM AREA=	2453	SF

AREA TO CELL #1

WATERSHED IMPERVIOUS AREA=	14200	SF
WATERSHED LANDSCAPED AREA=	5000	SF
MINIMUM BOTTOM AREA=	810	SF

Cell #1

STAGE (FT)	AREA (SF)	STORAGE (CF)
374	1588	0
375	1946	1767
375.5	2134	2787

Cell #2

STAGE (FT)	AREA (SF)	STORAGE (CF)
374	4450	0
375	4975	4713
375.5	5244	7267

Total Pond

STAGE (FT)	AREA (SF)	STORAGE (CF)
374	6038	0
375	6921	6560
375.5	7378	10202
375.51	7378	10202
376	8570	14189
377	9294	22623
378	10000	31942

Forebay 1 Required Volume: 49CF

STAGE (FT)	AREA (SF)	STORAGE (CF)
374	48	0
375	113	81
375.5	156	148

Forebay 2 Required Volume: 18

STAGE (FT)	AREA (SF)	STORAGE (CF)
374	141	0
375	257	199
375.5	324	344

The required water quality volume was calculated by multiplying the impervious area by 1.0” and the landscaped area by 0.4”.

Summary

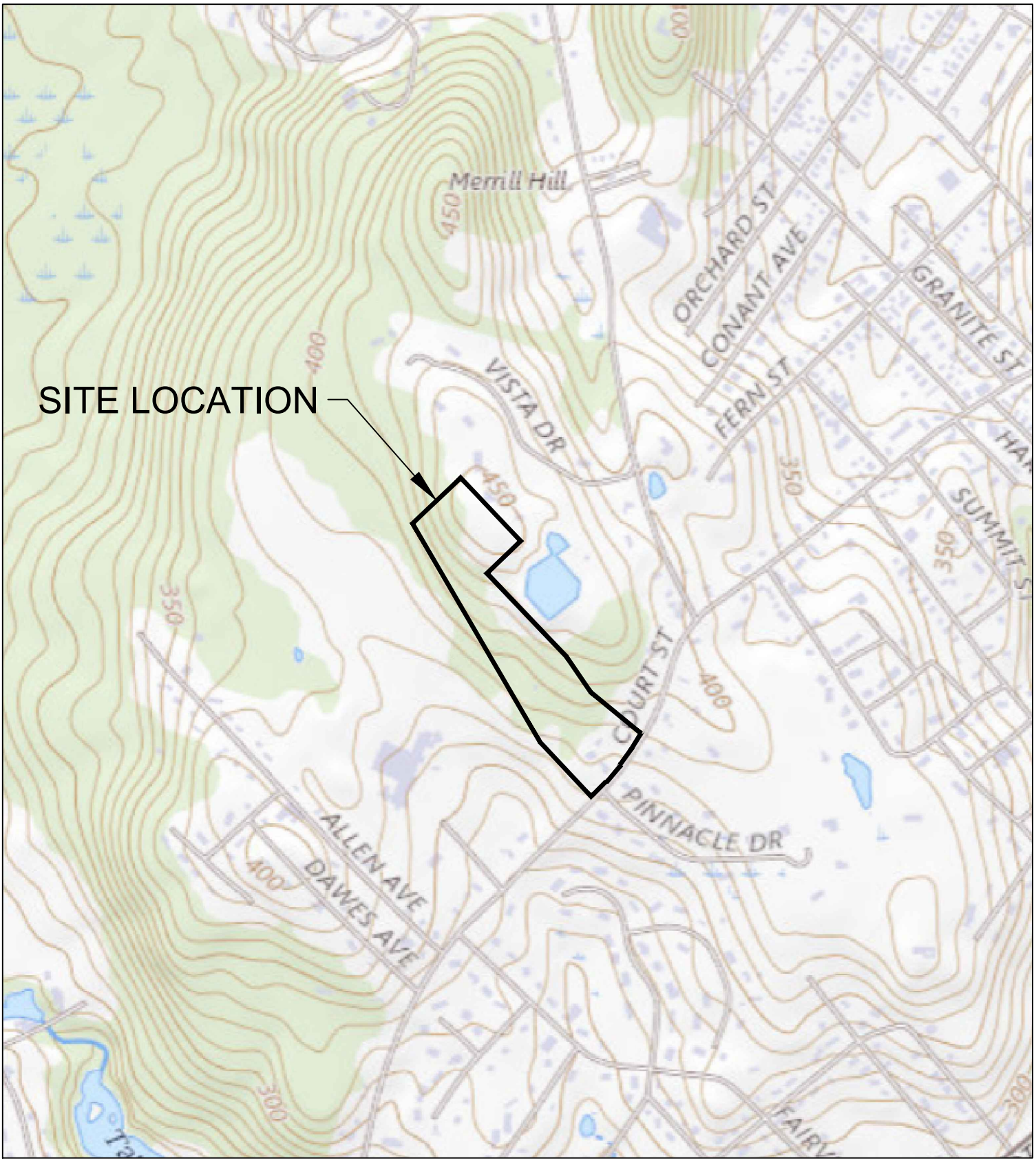
Based on the results of this evaluation, the proposed stormwater design is not expected to cause flooding, erosion, or other significant adverse effects downstream of the site.

Appendices

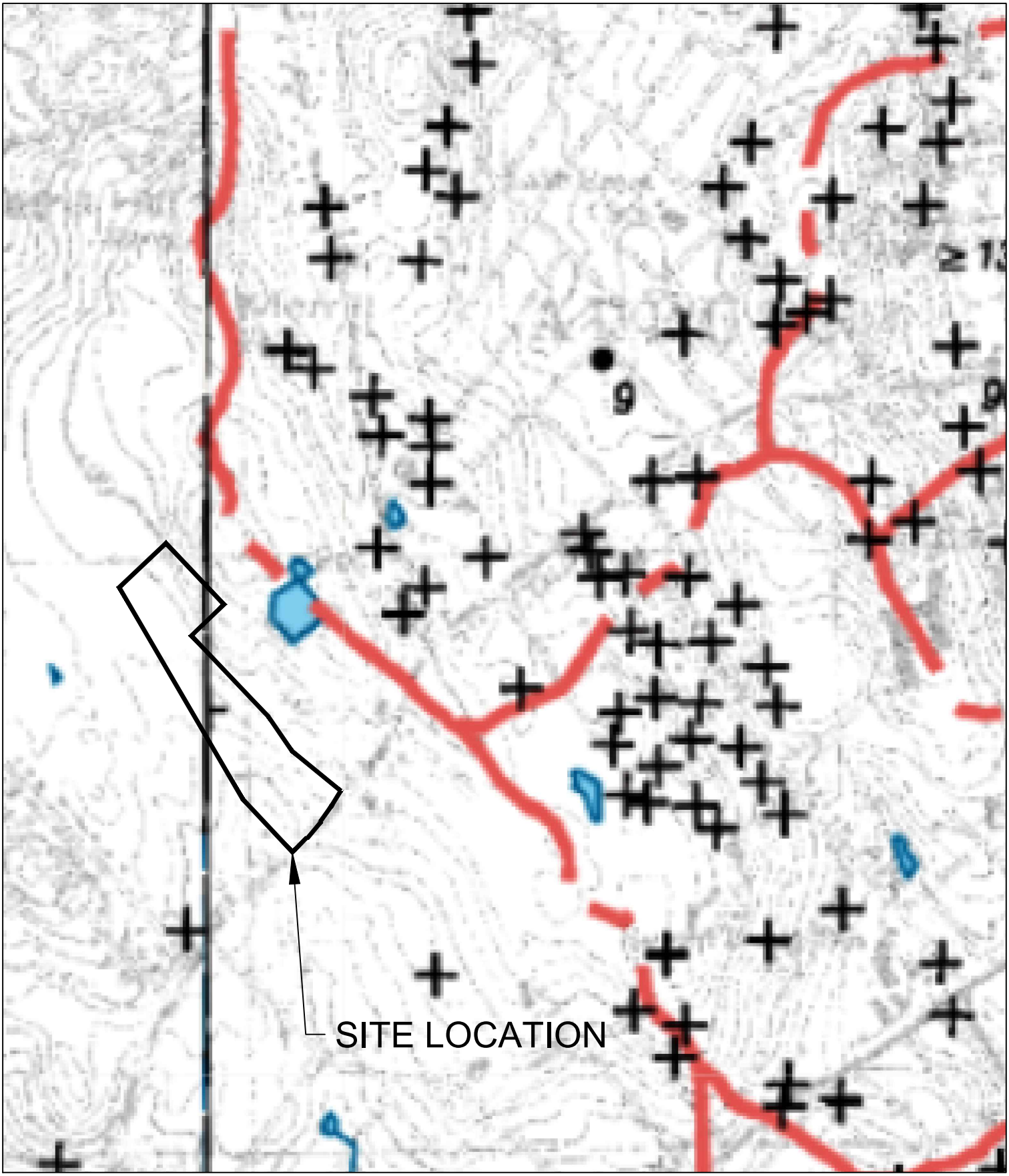
1- Existing Conditions Figures
2- Stormwater Infrastructure Inspection & Maintenance Manual
3- Erosion and Sediment Control Inspection & Maintenance Plan
4 – Watershed Maps
5 – Pre-Development HydroCAD Model
6 – Post-Development HydroCAD Model

APPENDIX 1

EXISTING CONDITIONS FIGURES



USGS QUADRANGLE MAP	TERRADYN CONSULTANTS, LLC	PROJECT NO. 21-81	SHEET 1
PROJECT: 555 COURT ST AUBURN, ME	PINELAND 41 CAMPUS DRIVE, SUITE 101 NEW GLOUCESTER, ME 04260	DATE 01/04/2022	OF 1
PREPARED FOR: AMERICAN DEVELOPEMENT GROUP	PORTLAND 565 CONGRESS STREET, SUITE 201 PORTLAND, ME 04101	SCALE 1"=700'	
	207.926.5111 • info@terradynconsultants.com • www.terradynconsultants.com		



AQUIFER MAP

PROJECT:
555 COURT ST
AUBURN, ME

PREPARED FOR:
AMERICAN DEVELOPEMENT GROUP

TERRADYN CONSULTANTS, LLC

PINELAND
41 CAMPUS DRIVE, SUITE 101
NEW GLOUCESTER, ME 04260

PORTLAND
565 CONGRESS STREET, SUITE 201
PORTLAND, ME 04101

207.926.5111 • info@terradynconsultants.com • www.terradynconsultants.com

PROJECT NO.	SHEET
21-81	1
DATE	OF
01/04/2022	1
SCALE	
1"=700'	

FEMA MAP

PROJECT:
555 COURT ST
AUBURN, ME

PREPARED FOR:
AMERICAN DEVELOPEMENT GROUP

TERRADYN CONSULTANTS, LLC

PINELAND
41 CAMPUS DRIVE, SUITE 101
NEW GLOUCESTER, ME 04260

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207.926.5111 • info@terradynconsultants.com • www.terradynconsultants.com

PROJECT NO.	SHEET
21-81	1
DATE	OF
01/04/2022	1
SCALE	
1"=700'	

APPENDIX 2

STORMWATER INFRASTRUCTURE INSPECTION & MAINTENANCE MANUAL

TERRADYN CONSULTANTS, LLC

Pineland
Cumberland Hall
41 Campus Drive, Suite 101
New Gloucester, ME 04260

Portland
565 Congress Street, Suite 201
Portland, ME 04101

555 COURT STREET AUBURN, MAINE

STORMWATER MANAGEMENT SYSTEM INSPECTION & MAINTENANCE PLAN

Project Owner/Developer: American Development `Group
P.O. Box 1495
Naples, Maine 04055

Responsible Party: Owner

Prepared By: Craig Sweet, P.E.
Terradyn Consultants, LLC
41 Campus Drive, Suite 301
New Gloucester, ME 04260
(207) 926-5111

INTRODUCTION:

Regular inspection and maintenance of the entire stormwater management system is crucial to the long-term effectiveness of the system. The responsible party must provide regular inspection and maintenance of all permanent erosion control measures and stormwater management structures, establish any contract services required to implement the program, and keep records and a maintenance log book of inspection and maintenance activities. At a minimum, the inspection and maintenance activities outlined herein should be performed at the recommended intervals.

All measures must be maintained in effective operating condition. A person with knowledge of erosion and sedimentation practices, stormwater management, and the standards and conditions of all local, state and federal permits for the project shall conduct the inspections. The following areas, facilities, and measures must be inspected and identified deficiencies must be corrected.

INSPECTION TASKS

1. Inspect **vegetated areas**, particularly slopes and embankments, early in the growing season or after heavy rains to identify active or potential erosion problems. Replant bare areas or

areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows.

2. Inspect **ditches, swales and other open stormwater channels** in the spring, in late fall, and after heavy rains to remove any obstructions to flow, remove accumulated sediments and debris, to control vegetated growth that could obstruct flow, and to repair any erosion of the ditch lining. Vegetated ditches must be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity. Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable. If the ditch has a riprap lining, replace riprap on areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged. The channel must receive adequate routine maintenance to maintain capacity and prevent or correct any erosion of the channel's bottom or sideslopes.

3. Inspect **culverts** in the spring, in late fall, and after heavy rains to remove any obstructions to flow; remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit; and to repair any erosion damage at the culvert's inlet and outlet.

4. Inspect and clean out **catch basins**. Clean-out must include the removal and legal disposal of any accumulated sediments and debris at the bottom of the basin, at any inlet grates, at any inflow channels to the basin, and at any pipes between basins. If the basin outlet is designed to trap floatable materials, then remove the floating debris and any floating oils (using oil-absorptive pads).

5. Inspect **grassed underdrained soil filter** semi-annually and following major storm events. Debris and sediment buildup shall be removed from the forebay and basin as needed. Mowing of grassed basin can occur semi-annually to a height of no less than 6-inches. Any bare area or erosion rills shall be repaired with new filter media or sandy loam then seeded and mulched. Maintaining good grass cover will minimize clogging with fine sediments and if ponding exceeds 48 hours, the top of the filter bed must be rototilled to reestablish the soil's filtration capacity.

DOCUMENTATION

Keep a log (report) summarizing inspections, maintenance, and any corrective actions taken. The log must include the date on which each inspection or maintenance task was performed, a description of the inspection findings or maintenance completed, and the name of the inspector or maintenance personnel performing the task. If a maintenance task requires the clean-out of any sediments or debris, indicate where the sediment and debris was disposed after removal. The log must be made accessible to Department of Environmental Protection staff and a copy provided to the Department upon request. The permittee shall retain a copy of the log for a period of at least five years from the completion of permanent stabilization.

The log attached at the end of this plan is from the *Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual for Designers and Engineers (May 2016)*. The log may be used or adapted for this project.

ATTACHMENTS:
Stormwater Management Facilities Inspection & Maintenance Log

Stormwater Management Facilities
Inspection & Maintenance Log
555 Court Street

General Information:		
Inspected by:	Date:	Weather:
Reason for Inspection: (Regular Inspection) (Major Rain Event)		

BMP	Conditions Observed	Repairs Needed?
1. Vegetated Areas		
2. Ditches, Swales, Open Channels		
3. Culverts		
4. Catch Basins		
5. Grassed Underdrained Soil Filter		
A. Grass cover		
B. Drainage		
C. Sediment buildup		
D. Outlet structures		

Detailed Repair Notes:

BMP Type	Date	Description of Repairs & Sediment Disposal

Notes:

1. If a maintenance task requires the clean-out of any sediments or debris, indicate where the sediment and debris was disposed after removal. A copy of this log shall be retained for a period of at least five years from the completion of permanent stabilization. The log must be made accessible to Department of Environmental Protection staff and a copy provided to the Department upon request.
2. After five years a recertification inspection is required by Maine DEP.

APPENDIX 3

EROSION & SEDIMENT CONTROL INSPECTION MANUAL

TERRADYN CONSULTANTS, LLC

Pineland
Cumberland Hall
41 Campus Drive, Suite 101
New Gloucester, ME 04260

Portland
565 Congress Street, Suite 201
Portland, ME 04101

555 COURT STREET
AUBURN, MAINE
EROSION & SEDIMENTATION CONTROL
INSPECTION & MAINTENANCE PLAN
CONSTRUCTION PHASE

Project Owner/Developer: American Development `Group
P.O. Box 1495
Naples, Maine 04055

Responsible Party: Owner or General Contractor
TBD

Prepared By: Craig Sweet, P.E.
Terradyn Consultants, LLC
41 Campus Drive, Suite 301
New Gloucester, ME 04260
(207) 926-5111

INTRODUCTION:

Anyone who conducts or directs an activity that involves exposing, filling or displacing soil or other earthen materials must take appropriate measures to prevent erosion and the loss of sediment beyond the project site or into a sensitive resource.

Erosion and sediment control measures should be in place before the activity begins and should remain functional until the site is permanently stabilized. All measures should remain effective until all areas are permanently stabilized. Any disturbed area should be regularly inspected until the site is fully stabilized with either 90% grass cover or a permanent impervious surface such as pavement.

The following information describes the Inspection, Maintenance and Documentation necessary during construction to comply with the State of Maine Stormwater Management Law.

INSPECTION

Inspect disturbed and impervious areas, erosion control measures, materials storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. Inspect these

areas at least once a week as well as before and within 24 hours after a storm event (rainfall), and prior to completing permanent stabilization measures. For the purposes of this plan, a storm event is rainfall greater than 0.5 inches in a 24 hour period.

The person conducting inspections shall have knowledge of erosion and sedimentation practices, stormwater management, and the standards and conditions of all local, state and federal permits for the project.

MAINTENANCE AND CORRECTIVE ACTION

If best management practices (BMPs) need to be repaired, the repair work should be initiated upon discovery of the problem but no later than the end of the next workday. If additional BMPs or significant repair of BMPs are necessary, implementation must be completed within 7 calendar days and prior to any storm event (rainfall). All measures must be maintained in effective operating condition until areas are permanently stabilized.

DOCUMENTATION

Keep a log (report) summarizing the inspections and any corrective actions taken. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, materials storage areas, and vehicles access points to the parcel. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and location(s) where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken.

The log attached at the end of this plan is from the *Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual for Designers and Engineers (May 2016)*. The log may be used or adapted for this project.

Documentation must be retained for a minimum of three years after permanent stabilization has been achieved on the site and must be made accessible to the Maine Department of Environmental Protection upon request.

REFERENCES

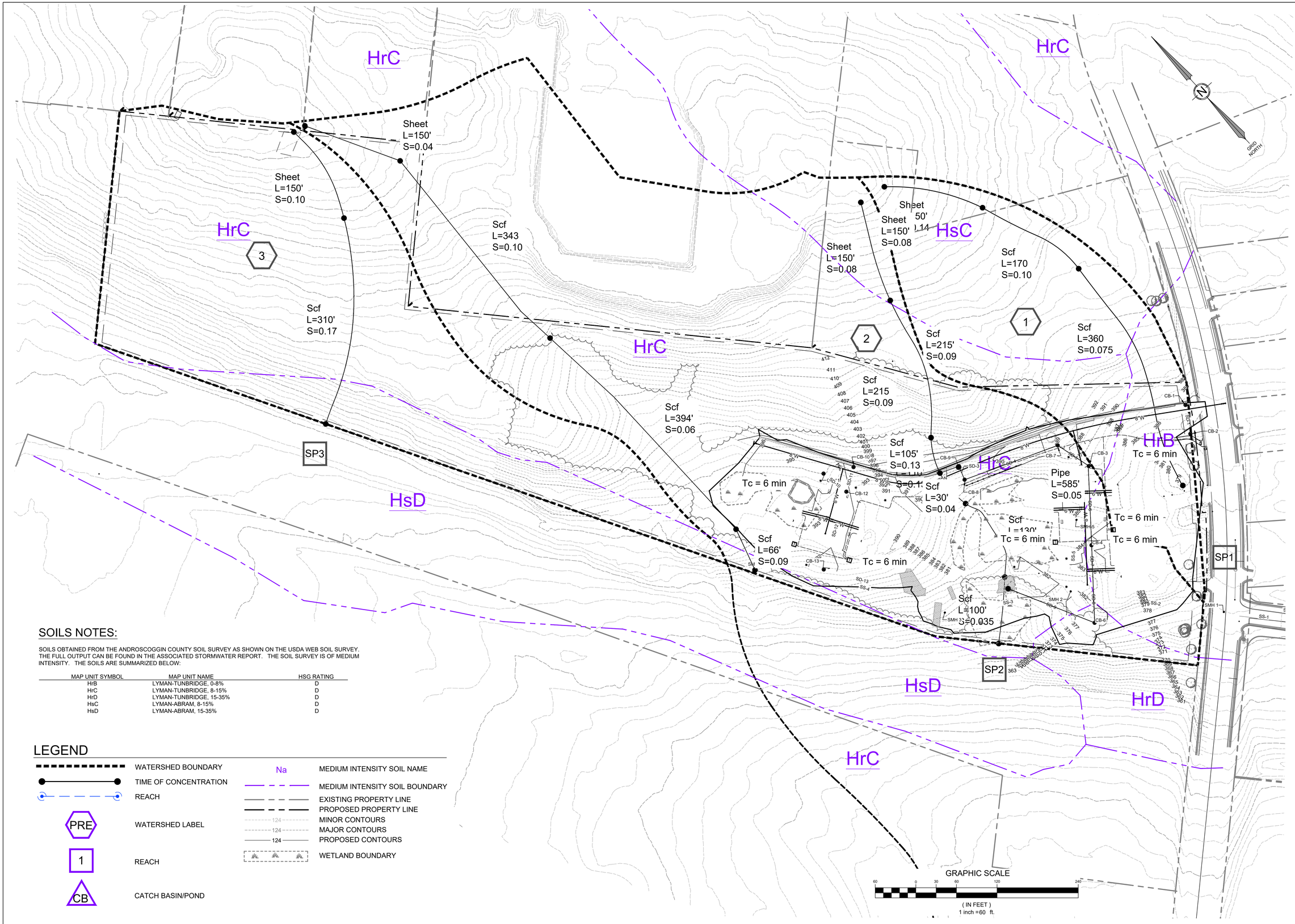
Approved Drawings:
C-4.0 & C-4.1 Grading, Drainage & Erosion Control Plan
C-6.2 Erosion Control Notes & Details

Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual for Designers and Engineers (May 2016), Maine Department of Environmental Protection

Maine Erosion and Sediment Control Practices Field Guide for Contractors, Maine Department of Environmental Protection

APPENDIX 4

WATERSHED MAPS



SOILS NOTES:

SOILS OBTAINED FROM THE ANDROSCOGGIN COUNTY SOIL SURVEY AS SHOWN ON THE USDA WEB SOIL SURVEY. THE FULL OUTPUT CAN BE FOUND IN THE ASSOCIATED STORMWATER REPORT. THE SOIL SURVEY IS OF MEDIUM INTENSITY. THE SOILS ARE SUMMARIZED BELOW:

MAP UNIT SYMBOL	MAP UNIT NAME	HSG RATING
HrB	LYMAN-TUNBRIDGE, 0-8%	D
HrC	LYMAN-TUNBRIDGE, 8-15%	D
HrD	LYMAN-TUNBRIDGE, 15-35%	D
HsC	LYMAN-ABRAM, 8-15%	D
HsD	LYMAN-ABRAM, 15-35%	D

LEGEND

- WATERSHED BOUNDARY
- TIME OF CONCENTRATION
- REACH
- PRE — WATERSHED LABEL
- 1 — REACH
- CB — CATCH BASIN/POND
- Na — MEDIUM INTENSITY SOIL NAME
- MEDIUM INTENSITY SOIL BOUNDARY
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- 124 — MINOR CONTOURS
- 124 — MAJOR CONTOURS
- 124 — PROPOSED CONTOURS
- WETLAND BOUNDARY

DATE:
P.E.:

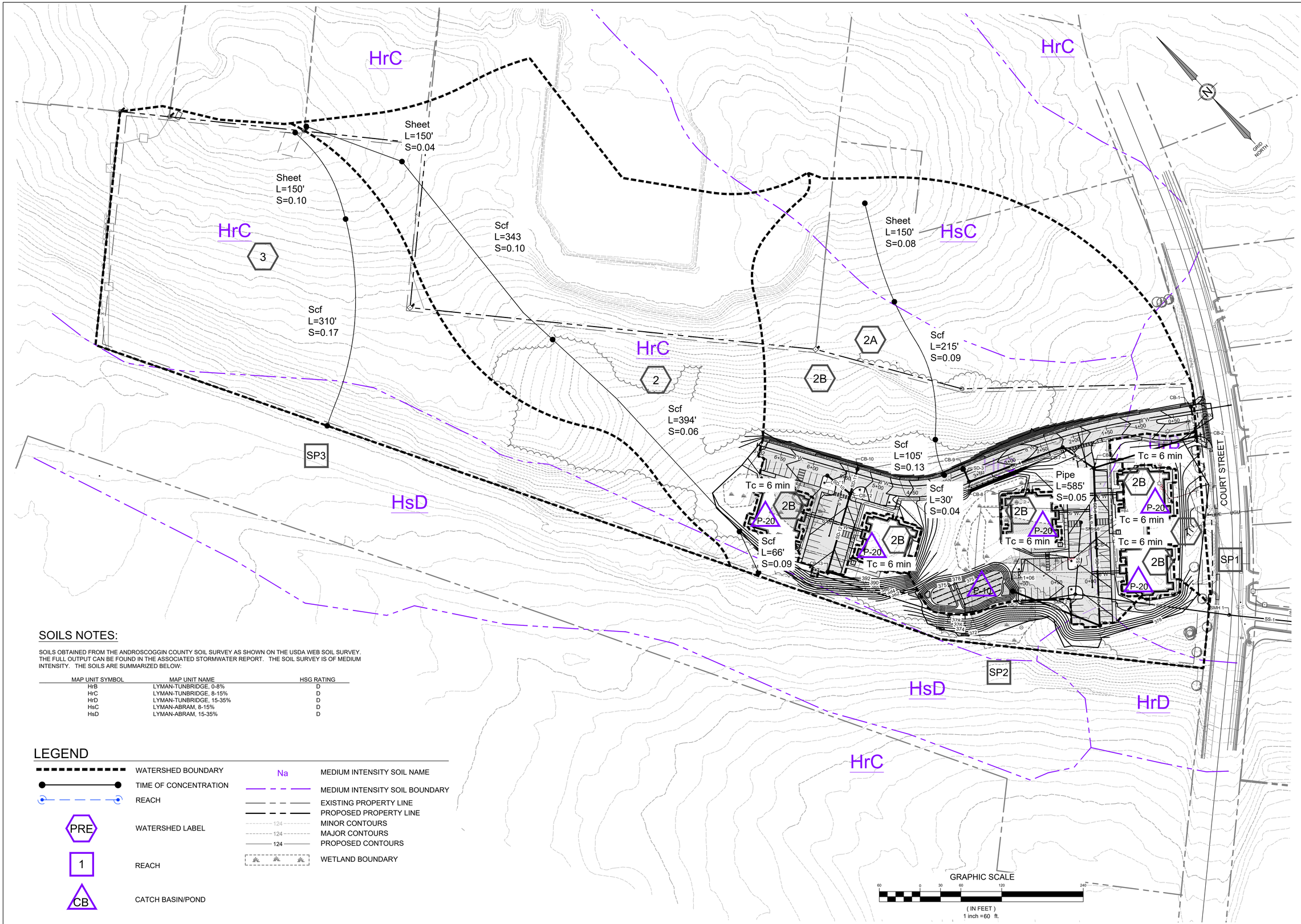
NO.	DATE	REVISIONS	APP'D BY

TERRADYN CONSULTANTS, LLC
41 CAMPUS DRIVE, SUITE 201, NEW GLOUCESTER, ME 04260
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com
565 CONGRESS STREET, SUITE 201, PORTLAND, ME 04102
Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT: SUBDIVISION PLAN
555 COURT STREET, AUBURN, MAINE
SHEET TITLE: PRE-DEVELOPMENT WATERSHED MAP
CLIENT: AMERICAN DEVELOPMENT GROUP

DATE:	1/3/2022
SCALE:	1"=60'
DESIGNED:	
JOB NO:	21-80
SHEET	SWP-1.0



SOILS NOTES:

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MAP UNIT SYMBOL	MAP UNIT NAME	HSG RATING
HrB	LYMAN-TUNBRIDGE, 0-8%	D
HrC	LYMAN-TUNBRIDGE, 8-15%	D
HrD	LYMAN-TUNBRIDGE, 15-35%	D
HsC	LYMAN-ABRAM, 8-15%	D
HsD	LYMAN-ABRAM, 15-35%	D

LEGEND

- WATERSHED BOUNDARY
- TIME OF CONCENTRATION
- REACH
- PRE — WATERSHED LABEL
- 1 — REACH
- CB — CATCH BASIN/POND
- Na — MEDIUM INTENSITY SOIL NAME
- MEDIUM INTENSITY SOIL BOUNDARY
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- PROPOSED PROPERTY LINE
- 124 — MINOR CONTOURS
- 124 — MAJOR CONTOURS
- 124 — PROPOSED CONTOURS
- WETLAND BOUNDARY

DATE:
P.E.:

NO.	DATE	REVISIONS	APP'D BY

TERRADYN CONSULTANTS, LLC
Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting
565 CONGRESS STREET SUITE 201 PORTLAND, ME 04102
41 CAMPUS DRIVE SUITE 101 NEW GLOUCESTER, ME 04260
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT: SUBDIVISION PLAN
555 COURT STREET, AUBURN, MAINE

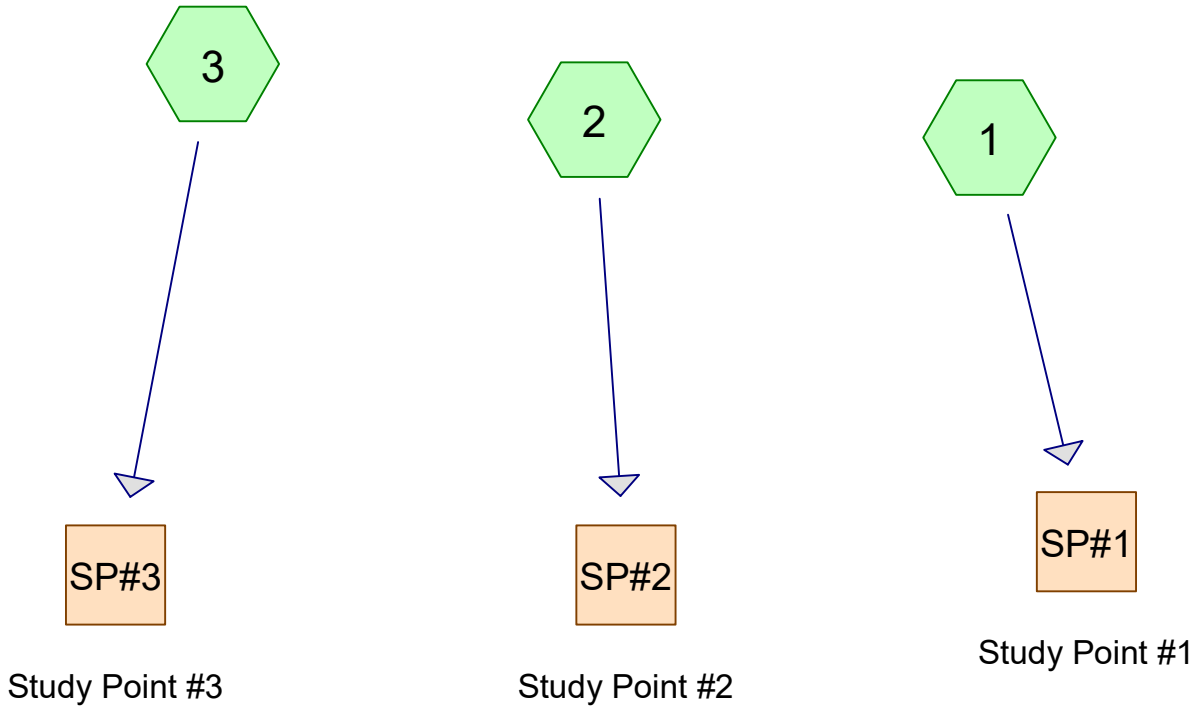
SHEET TITLE: POST-DEVELOPMENT WATERSHED MAP

CLIENT: AMERICAN DEVELOPMENT GROUP

DATE:	1/3/2022
SCALE:	1"=60'
DESIGNED:	
JOB NO:	21-80
SHEET	SWP-1.0

APPENDIX 5

PRE-DEVELOPMENT HYDROCAD MODEL



Subcat Reach Pond Link

Routing Diagram for 21-81 Pre
Prepared by Terradyn Consultangs, LLC, Printed 3/4/2022

Summary for Subcatchment 1:

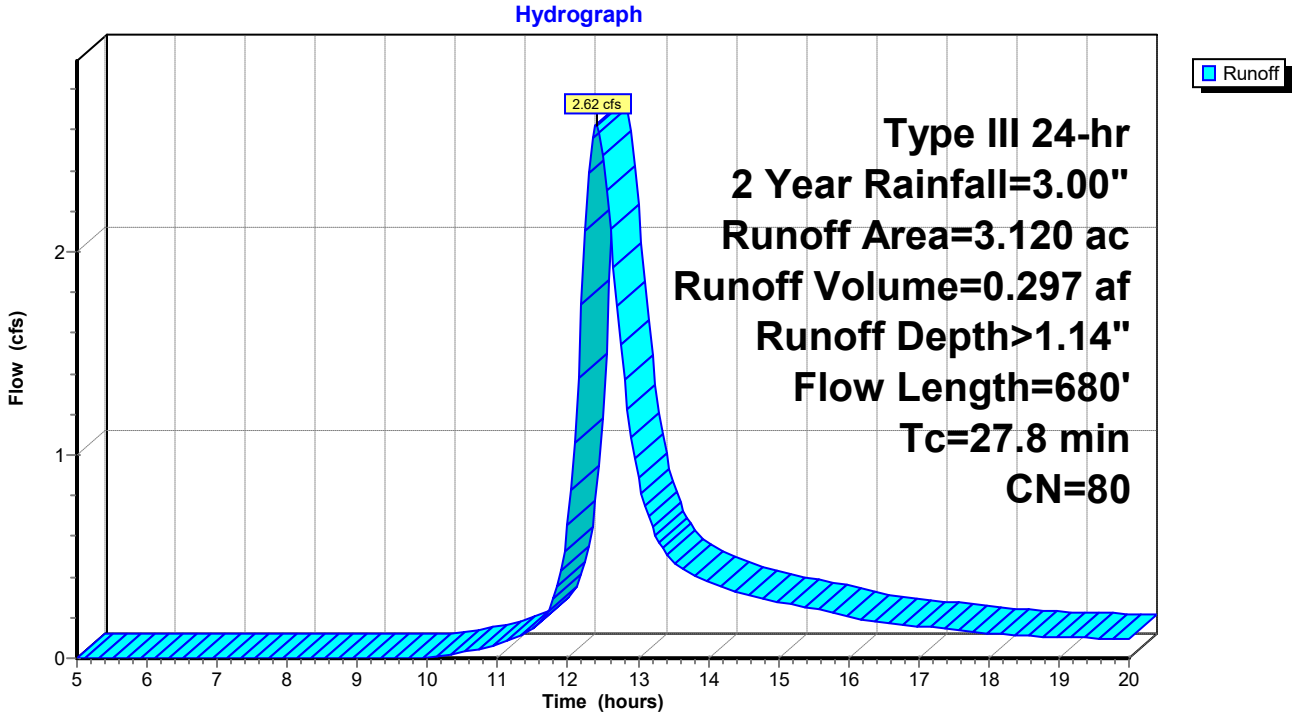
Runoff = 2.62 cfs @ 12.41 hrs, Volume= 0.297 af, Depth> 1.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 Year Rainfall=3.00"

	Area (ac)	CN	Description
*	0.160	98	Lot Impervious
	2.000	80	>75% Grass cover, Good, HSG D
	0.960	77	Woods, Good, HSG D
	3.120	80	Weighted Average
	2.960		94.87% Pervious Area
	0.160		5.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.5	150	0.1400	0.10		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"
1.8	170	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.5	360	0.0750	4.11		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
27.8	680	Total			

Subcatchment 1:



Summary for Subcatchment 2:

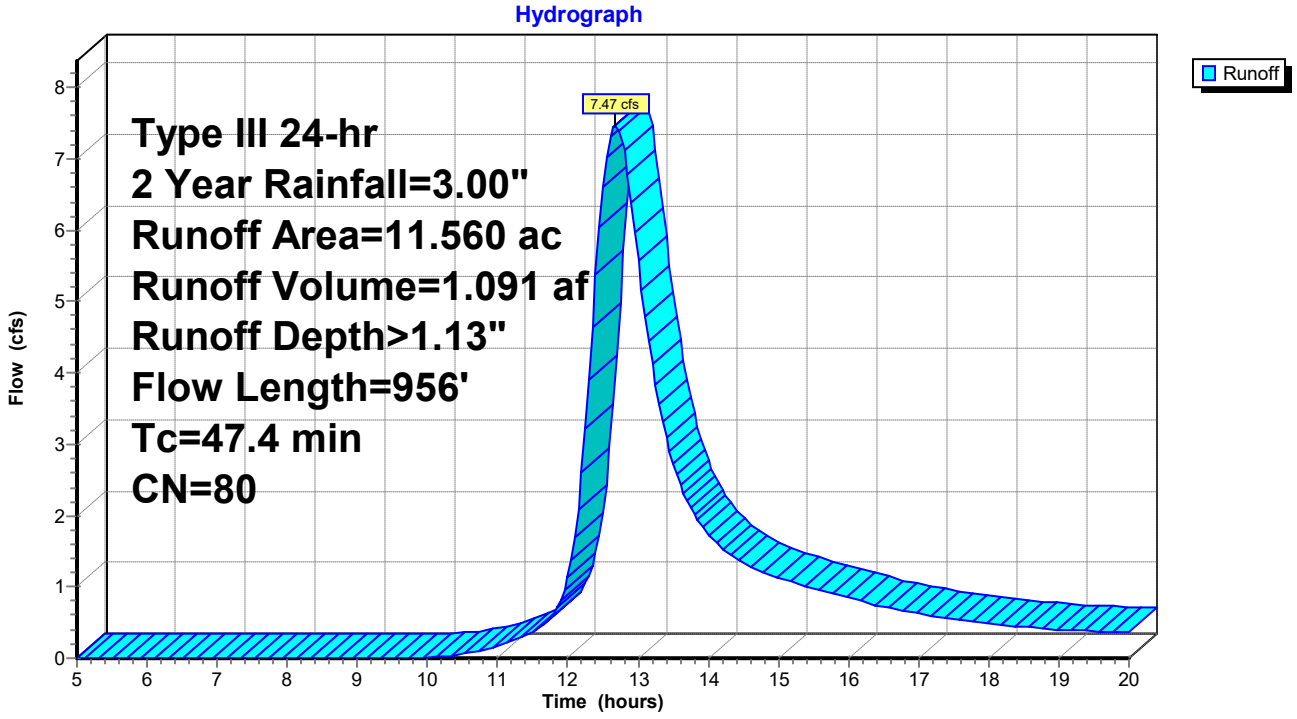
Runoff = 7.47 cfs @ 12.68 hrs, Volume= 1.091 af, Depth> 1.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 Year Rainfall=3.00"

	Area (ac)	CN	Description
*	1.450	98	Lot Impervious (Water Tower)
	1.000	80	>75% Grass cover, Good, HSG D
	9.110	77	Woods, Good, HSG D
	11.560	80	Weighted Average
	10.110		87.46% Pervious Area
	1.450		12.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
39.3	150	0.0430	0.06		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"
3.6	343	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.5	463	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
47.4	956	Total			

Subcatchment 2:



Summary for Subcatchment 3:

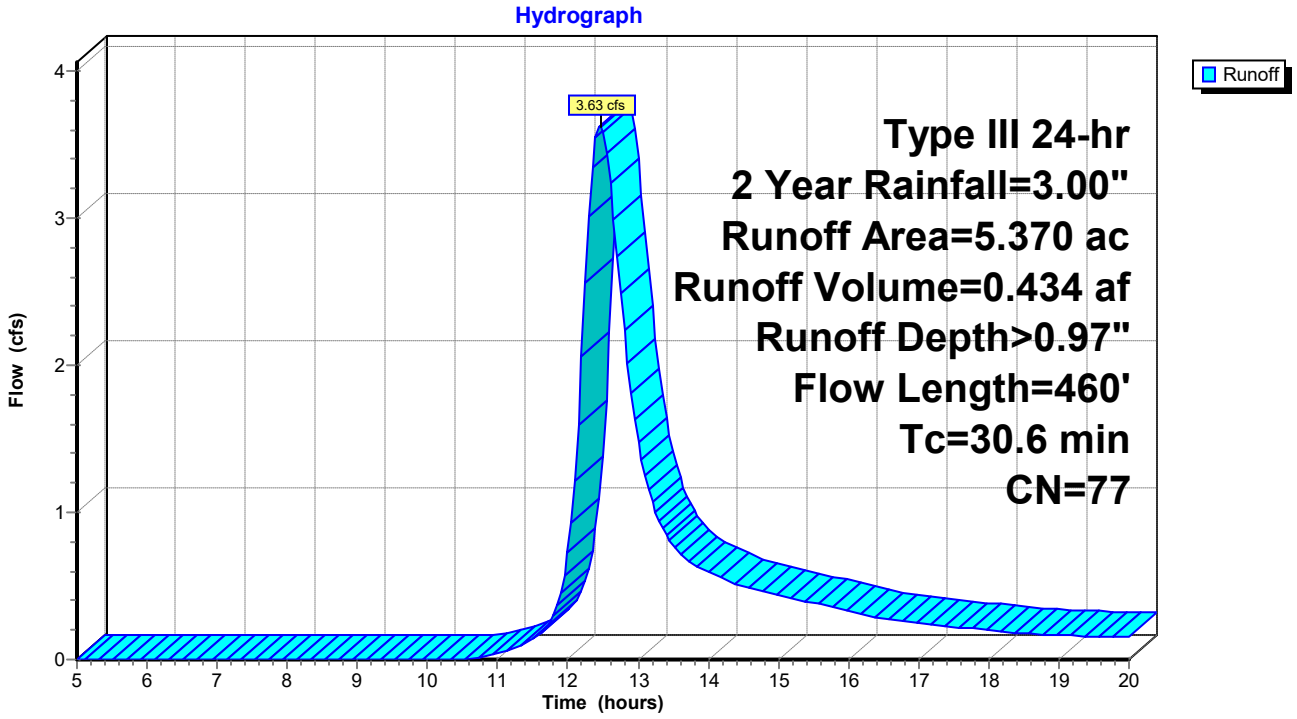
Runoff = 3.63 cfs @ 12.46 hrs, Volume= 0.434 af, Depth> 0.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 Year Rainfall=3.00"

Area (ac)	CN	Description
5.370	77	Woods, Good, HSG D
5.370		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.1	150	0.1000	0.09		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"
2.5	310	0.1700	2.06		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
30.6	460	Total			

Subcatchment 3:

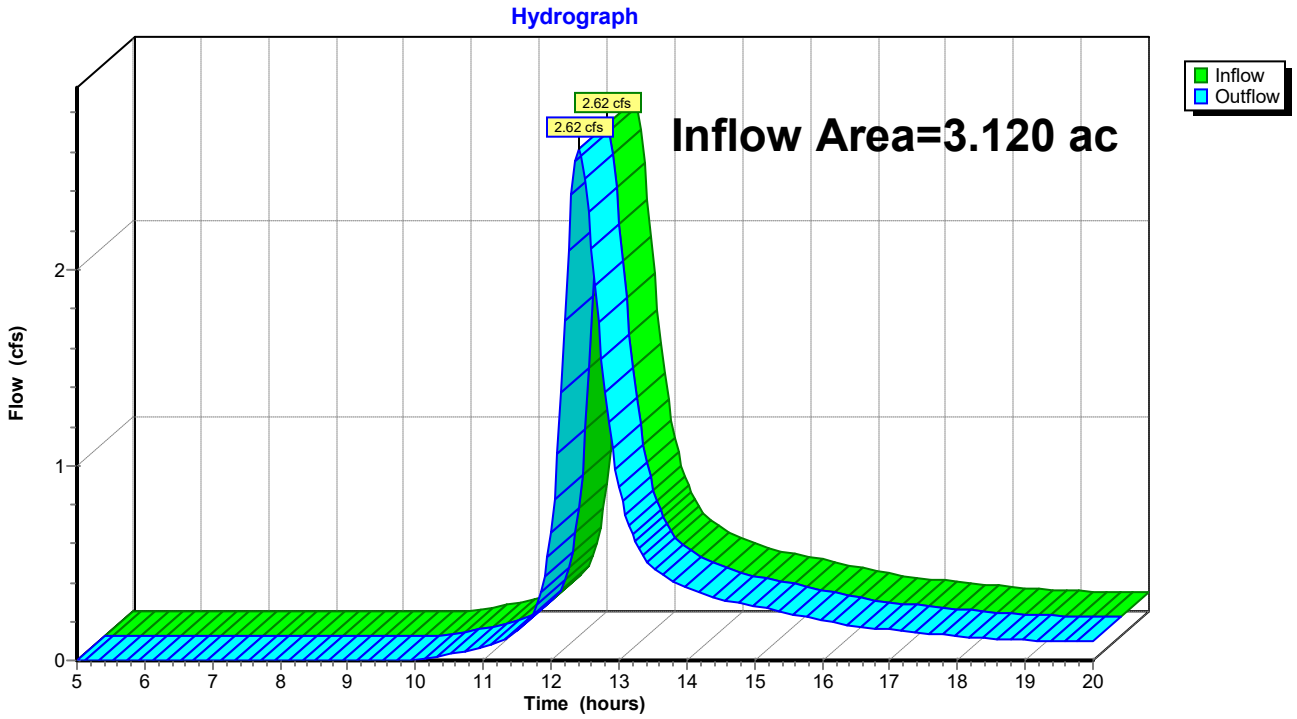


Summary for Reach SP#1: Study Point #1

Inflow Area = 3.120 ac, 5.13% Impervious, Inflow Depth > 1.14" for 2 Year event
Inflow = 2.62 cfs @ 12.41 hrs, Volume= 0.297 af
Outflow = 2.62 cfs @ 12.41 hrs, Volume= 0.297 af, Atten= 0%, Lag= 0.0 min

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

Reach SP#1: Study Point #1

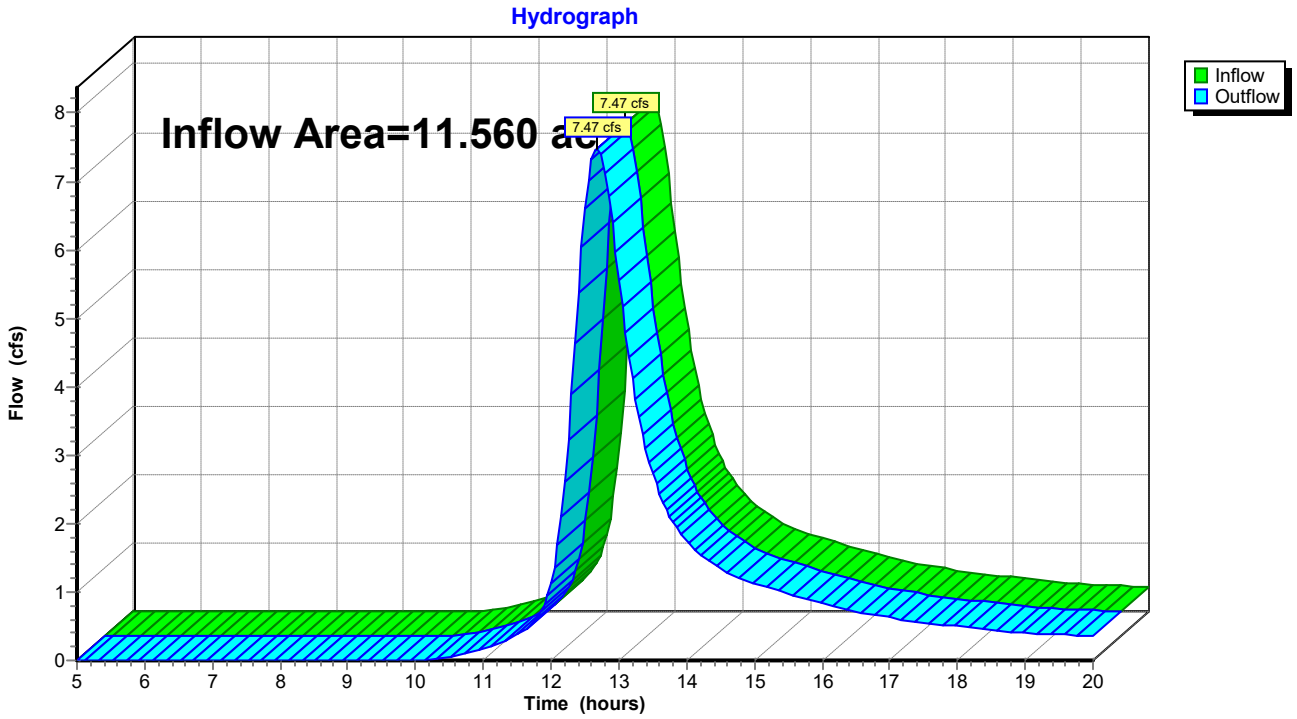


Summary for Reach SP#2: Study Point #2

Inflow Area = 11.560 ac, 12.54% Impervious, Inflow Depth > 1.13" for 2 Year event
Inflow = 7.47 cfs @ 12.68 hrs, Volume= 1.091 af
Outflow = 7.47 cfs @ 12.68 hrs, Volume= 1.091 af, Atten= 0%, Lag= 0.0 min

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

Reach SP#2: Study Point #2

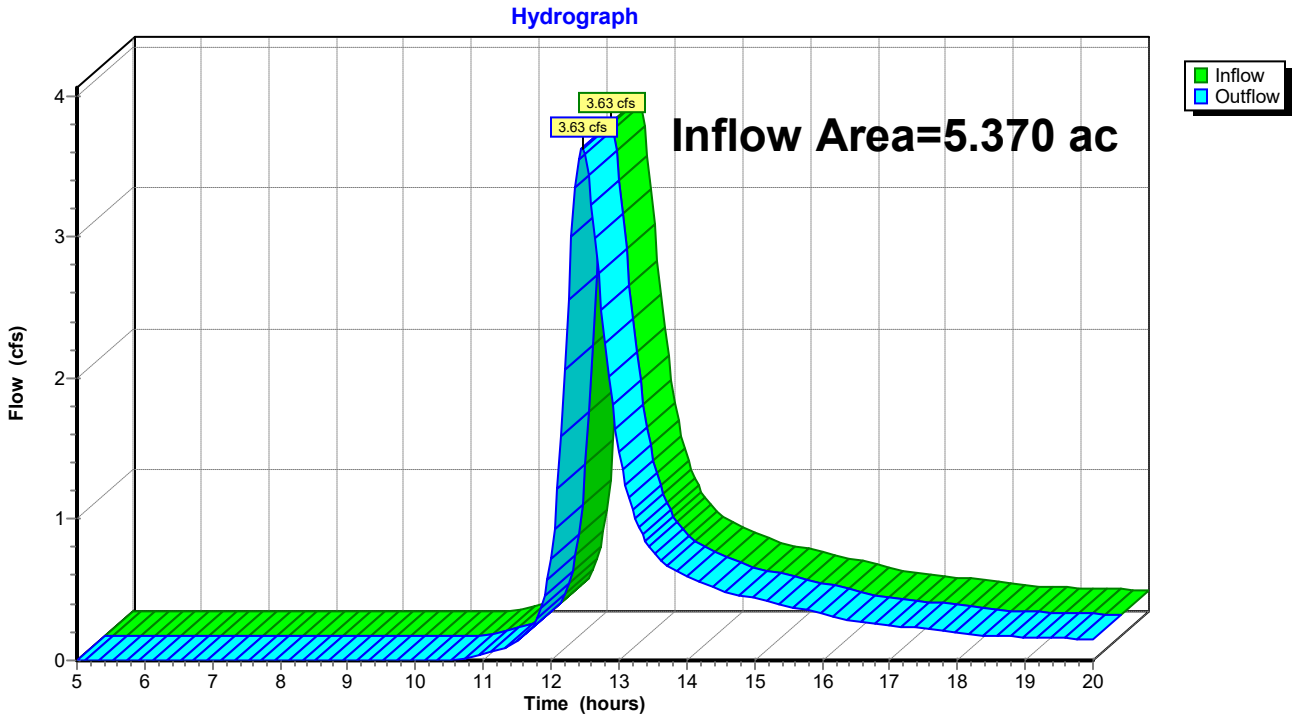


Summary for Reach SP#3: Study Point #3

Inflow Area = 5.370 ac, 0.00% Impervious, Inflow Depth > 0.97" for 2 Year event
Inflow = 3.63 cfs @ 12.46 hrs, Volume= 0.434 af
Outflow = 3.63 cfs @ 12.46 hrs, Volume= 0.434 af, Atten= 0%, Lag= 0.0 min

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

Reach SP#3: Study Point #3



Summary for Subcatchment 1:

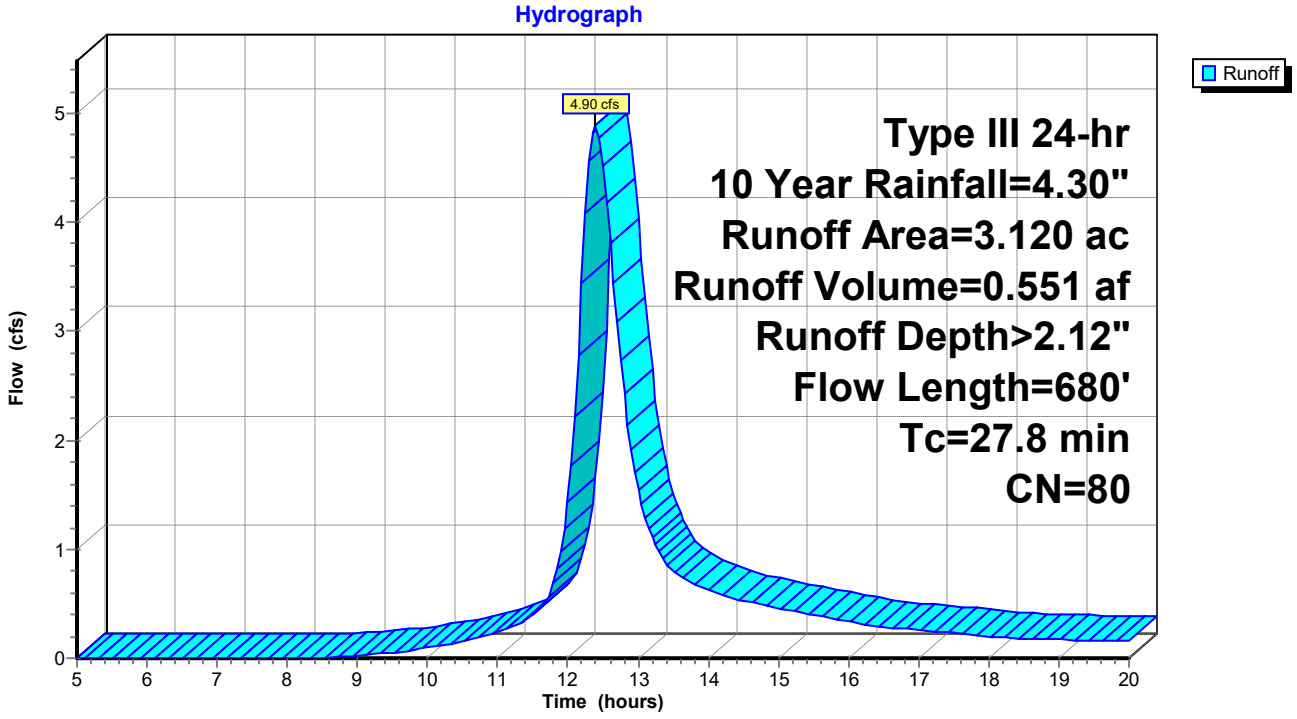
Runoff = 4.90 cfs @ 12.39 hrs, Volume= 0.551 af, Depth> 2.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Rainfall=4.30"

	Area (ac)	CN	Description
*	0.160	98	Lot Impervious
	2.000	80	>75% Grass cover, Good, HSG D
	0.960	77	Woods, Good, HSG D
	3.120	80	Weighted Average
	2.960		94.87% Pervious Area
	0.160		5.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.5	150	0.1400	0.10		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"
1.8	170	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.5	360	0.0750	4.11		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
27.8	680	Total			

Subcatchment 1:



Summary for Subcatchment 2:

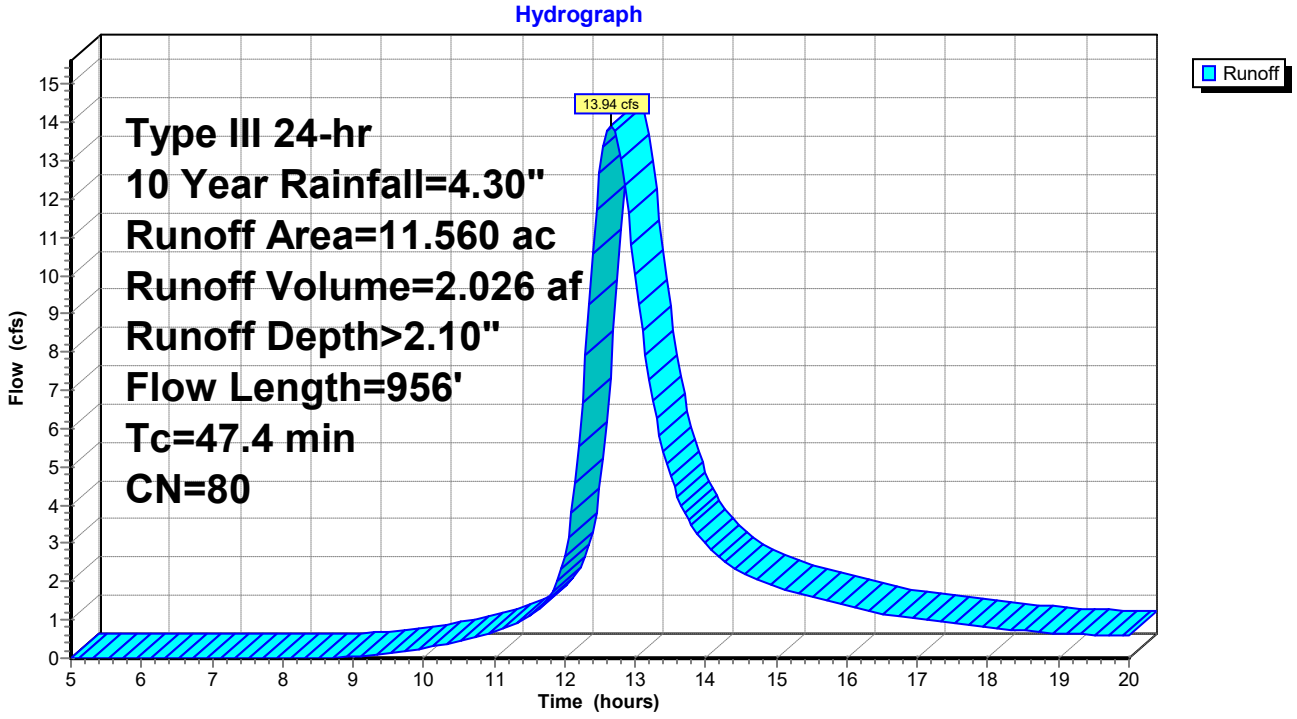
Runoff = 13.94 cfs @ 12.66 hrs, Volume= 2.026 af, Depth> 2.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Rainfall=4.30"

	Area (ac)	CN	Description
*	1.450	98	Lot Impervious (Water Tower)
	1.000	80	>75% Grass cover, Good, HSG D
	9.110	77	Woods, Good, HSG D
	11.560	80	Weighted Average
	10.110		87.46% Pervious Area
	1.450		12.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
39.3	150	0.0430	0.06		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"
3.6	343	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.5	463	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
47.4	956	Total			

Subcatchment 2:



Summary for Subcatchment 3:

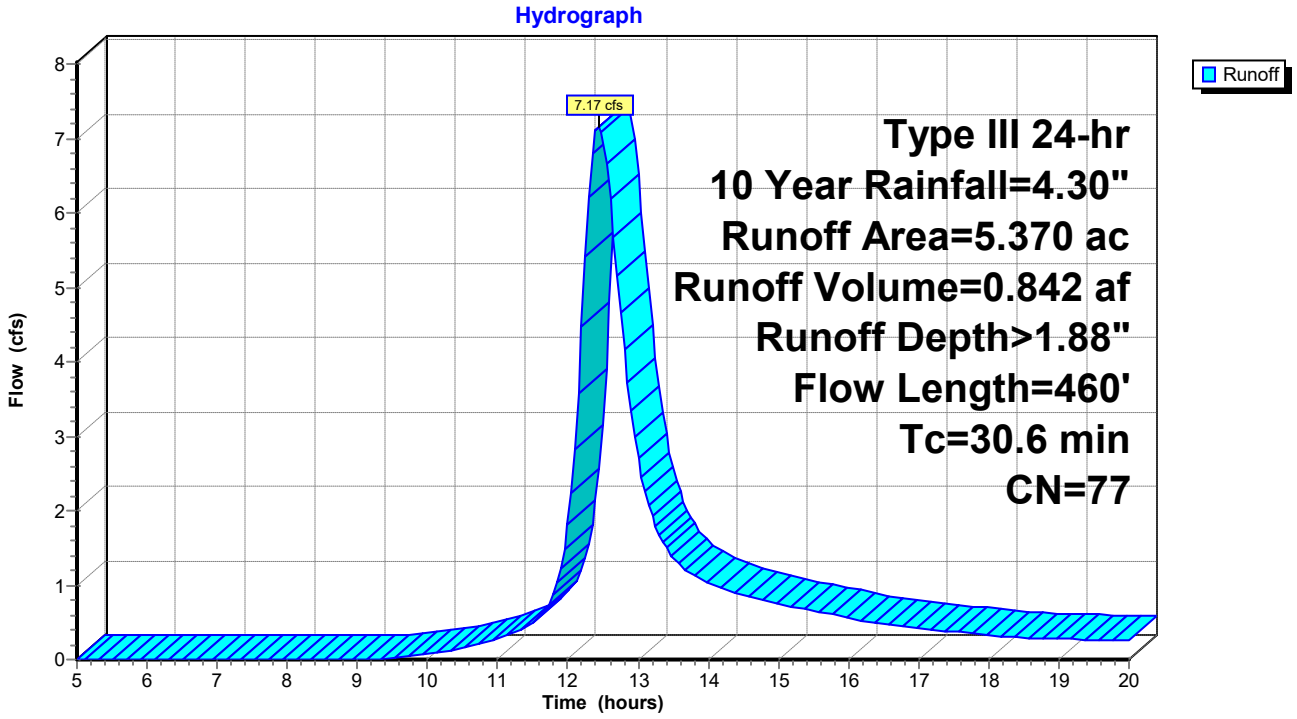
Runoff = 7.17 cfs @ 12.44 hrs, Volume= 0.842 af, Depth> 1.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Rainfall=4.30"

Area (ac)	CN	Description
5.370	77	Woods, Good, HSG D
5.370		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.1	150	0.1000	0.09		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"
2.5	310	0.1700	2.06		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
30.6	460	Total			

Subcatchment 3:

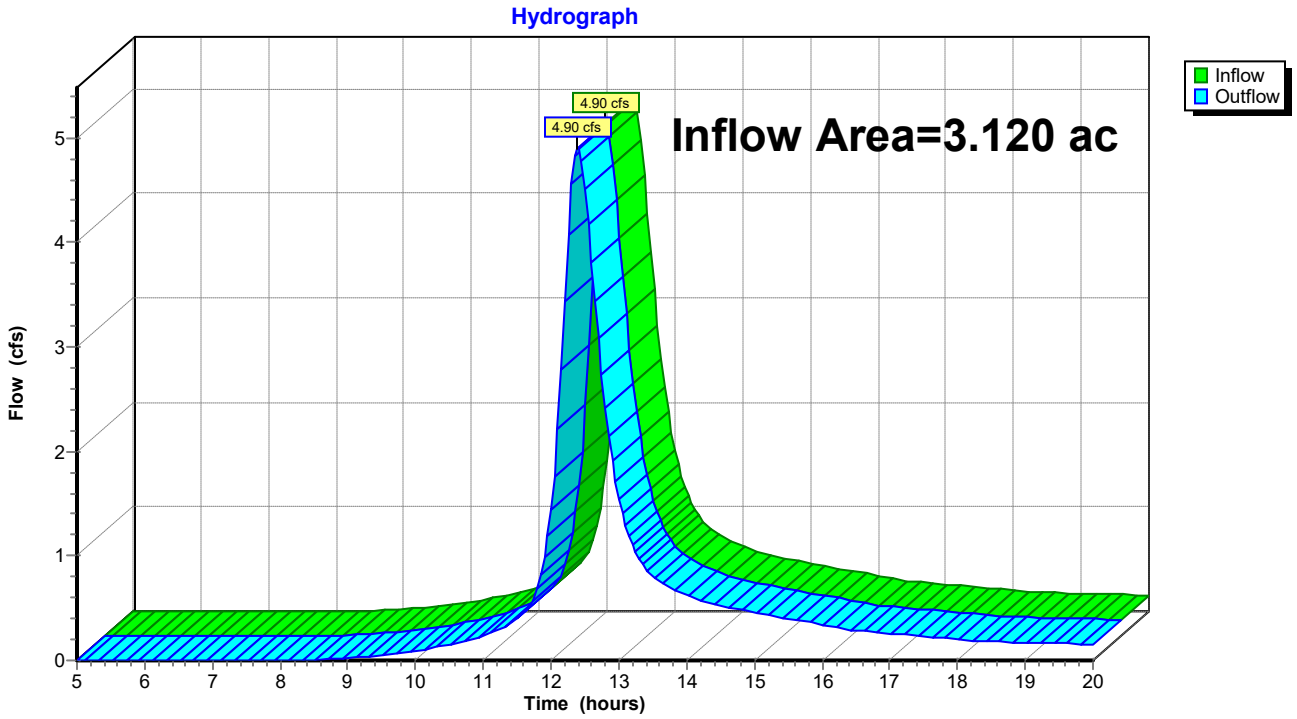


Summary for Reach SP#1: Study Point #1

Inflow Area = 3.120 ac, 5.13% Impervious, Inflow Depth > 2.12" for 10 Year event
Inflow = 4.90 cfs @ 12.39 hrs, Volume= 0.551 af
Outflow = 4.90 cfs @ 12.39 hrs, Volume= 0.551 af, Atten= 0%, Lag= 0.0 min

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

Reach SP#1: Study Point #1

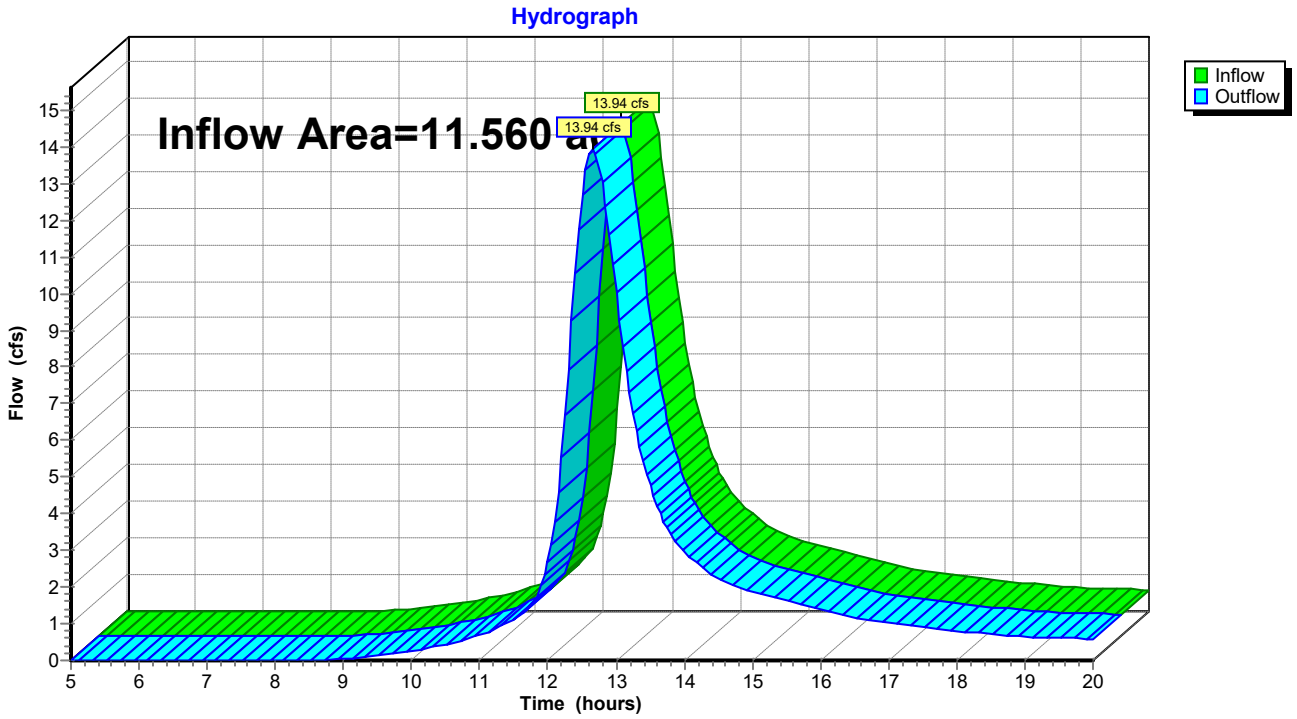


Summary for Reach SP#2: Study Point #2

Inflow Area = 11.560 ac, 12.54% Impervious, Inflow Depth > 2.10" for 10 Year event
Inflow = 13.94 cfs @ 12.66 hrs, Volume= 2.026 af
Outflow = 13.94 cfs @ 12.66 hrs, Volume= 2.026 af, Atten= 0%, Lag= 0.0 min

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

Reach SP#2: Study Point #2

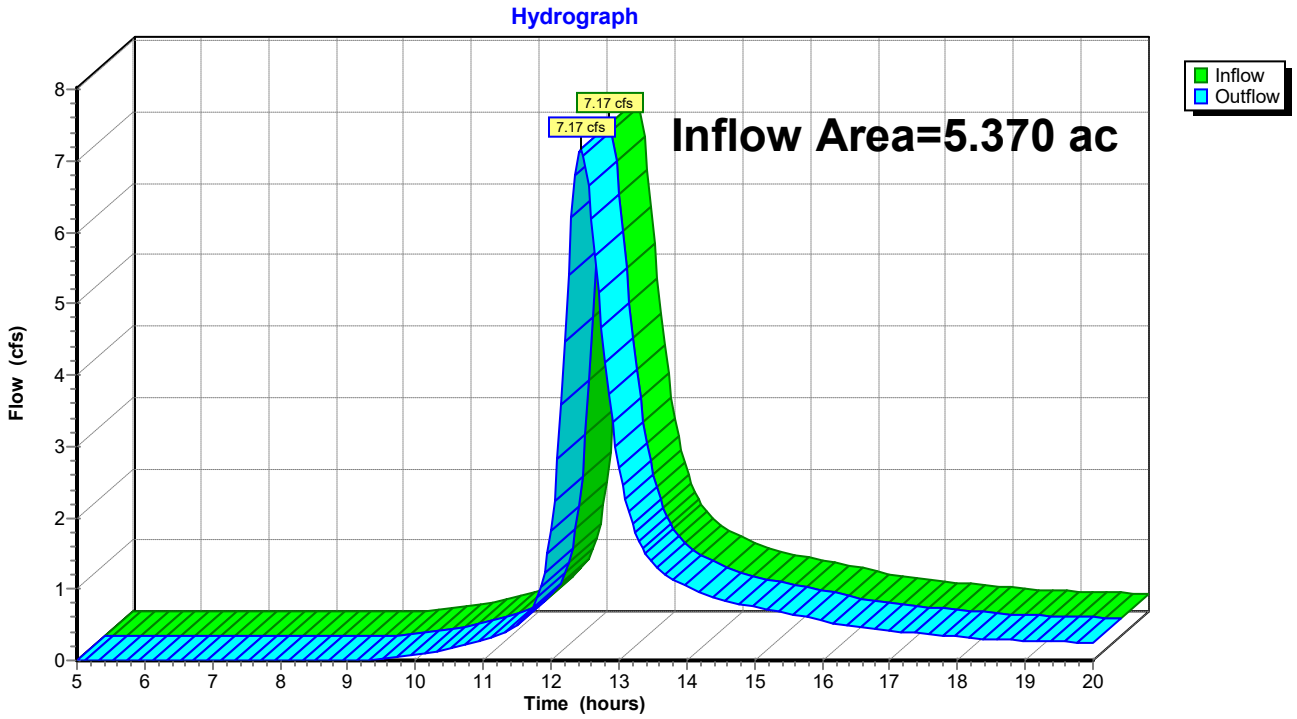


Summary for Reach SP#3: Study Point #3

Inflow Area = 5.370 ac, 0.00% Impervious, Inflow Depth > 1.88" for 10 Year event
Inflow = 7.17 cfs @ 12.44 hrs, Volume= 0.842 af
Outflow = 7.17 cfs @ 12.44 hrs, Volume= 0.842 af, Atten= 0%, Lag= 0.0 min

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

Reach SP#3: Study Point #3



Summary for Subcatchment 1:

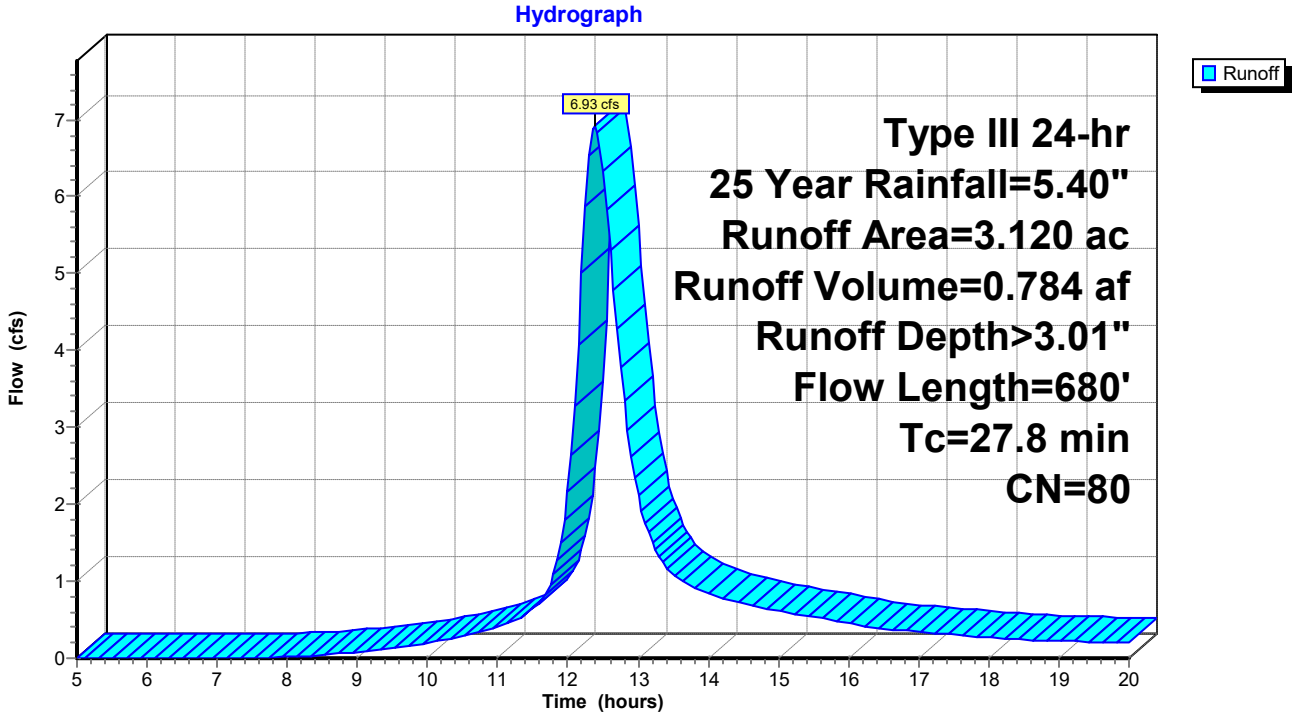
Runoff = 6.93 cfs @ 12.39 hrs, Volume= 0.784 af, Depth> 3.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 Year Rainfall=5.40"

	Area (ac)	CN	Description
*	0.160	98	Lot Impervious
	2.000	80	>75% Grass cover, Good, HSG D
	0.960	77	Woods, Good, HSG D
	3.120	80	Weighted Average
	2.960		94.87% Pervious Area
	0.160		5.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.5	150	0.1400	0.10		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"
1.8	170	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.5	360	0.0750	4.11		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
27.8	680	Total			

Subcatchment 1:



Summary for Subcatchment 2:

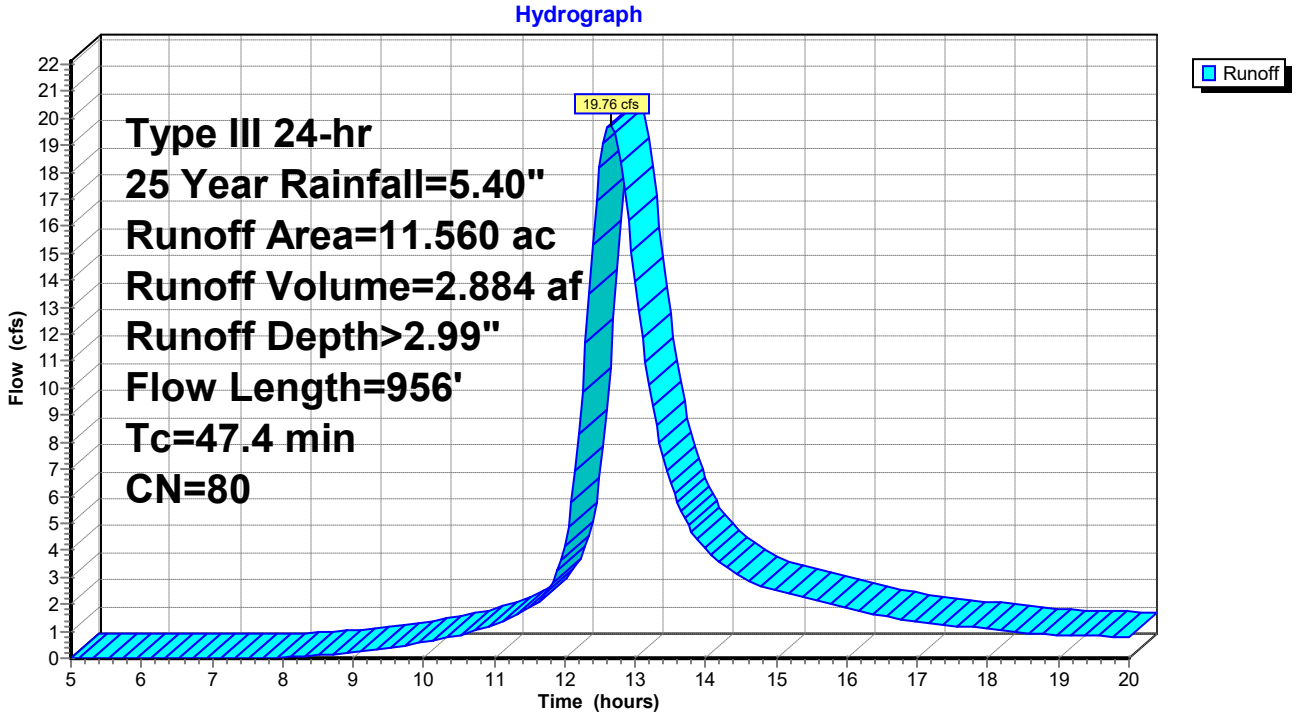
Runoff = 19.76 cfs @ 12.65 hrs, Volume= 2.884 af, Depth> 2.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 Year Rainfall=5.40"

	Area (ac)	CN	Description
*	1.450	98	Lot Impervious (Water Tower)
	1.000	80	>75% Grass cover, Good, HSG D
	9.110	77	Woods, Good, HSG D
	11.560	80	Weighted Average
	10.110		87.46% Pervious Area
	1.450		12.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
39.3	150	0.0430	0.06		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"
3.6	343	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.5	463	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
47.4	956	Total			

Subcatchment 2:



Summary for Subcatchment 3:

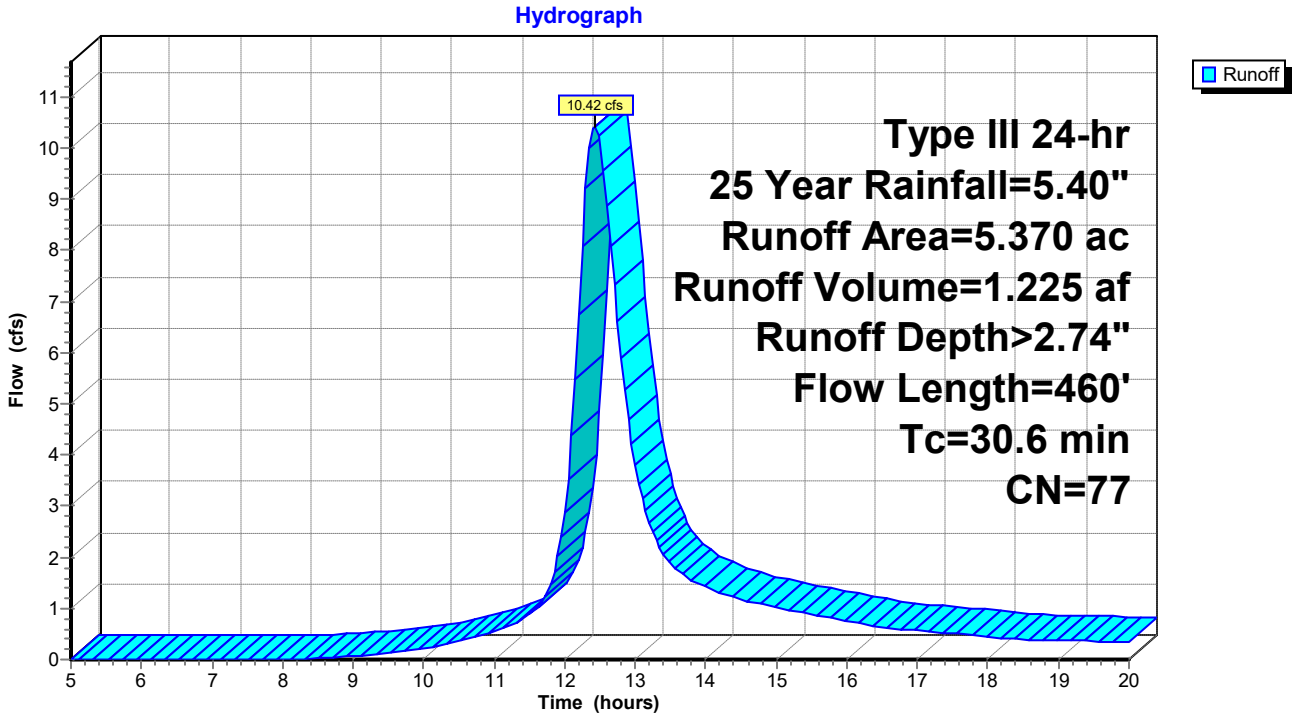
Runoff = 10.42 cfs @ 12.43 hrs, Volume= 1.225 af, Depth> 2.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 Year Rainfall=5.40"

Area (ac)	CN	Description
5.370	77	Woods, Good, HSG D
5.370		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.1	150	0.1000	0.09		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"
2.5	310	0.1700	2.06		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
30.6	460	Total			

Subcatchment 3:

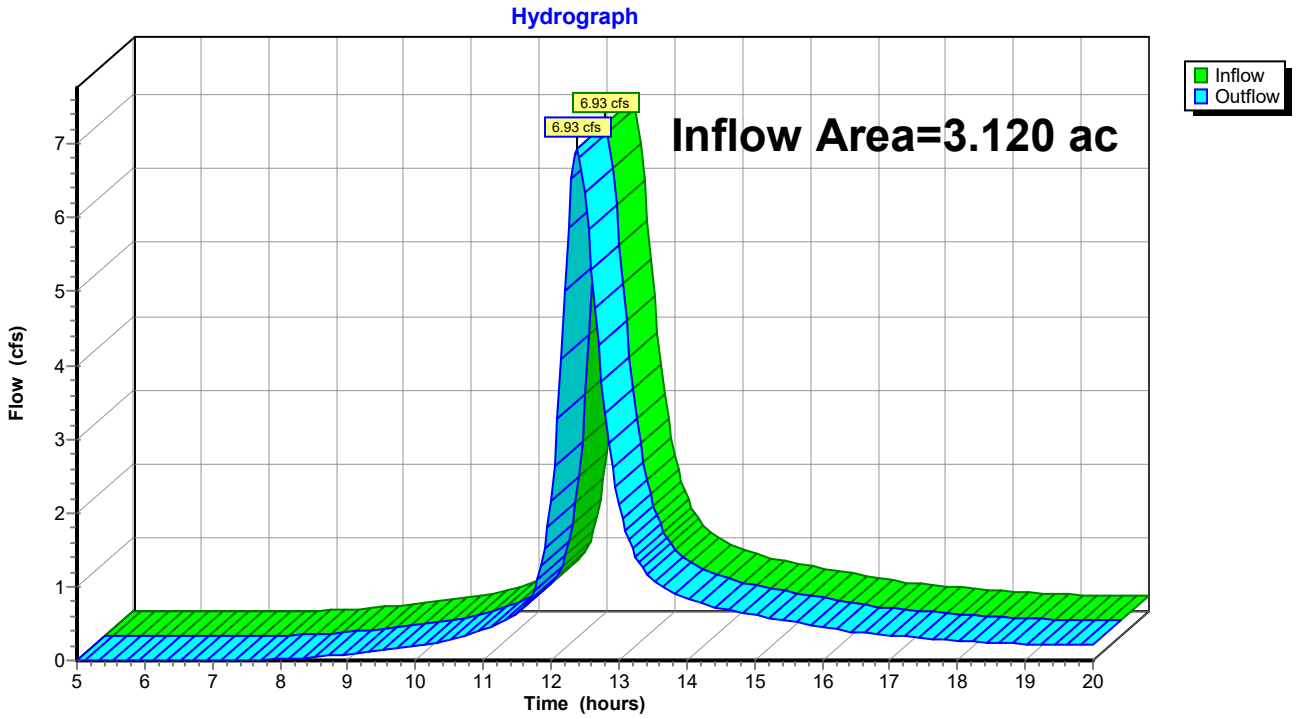


Summary for Reach SP#1: Study Point #1

Inflow Area = 3.120 ac, 5.13% Impervious, Inflow Depth > 3.01" for 25 Year event
Inflow = 6.93 cfs @ 12.39 hrs, Volume= 0.784 af
Outflow = 6.93 cfs @ 12.39 hrs, Volume= 0.784 af, Atten= 0%, Lag= 0.0 min

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

Reach SP#1: Study Point #1

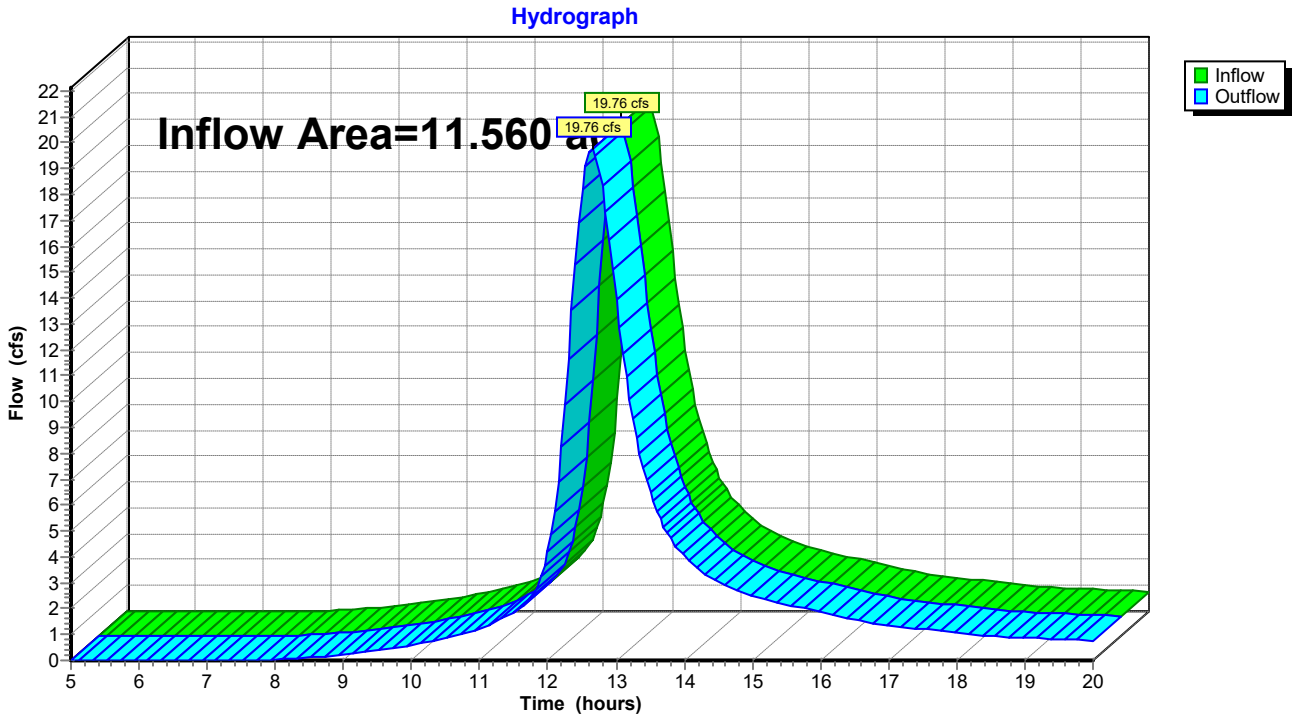


Summary for Reach SP#2: Study Point #2

Inflow Area = 11.560 ac, 12.54% Impervious, Inflow Depth > 2.99" for 25 Year event
Inflow = 19.76 cfs @ 12.65 hrs, Volume= 2.884 af
Outflow = 19.76 cfs @ 12.65 hrs, Volume= 2.884 af, Atten= 0%, Lag= 0.0 min

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

Reach SP#2: Study Point #2

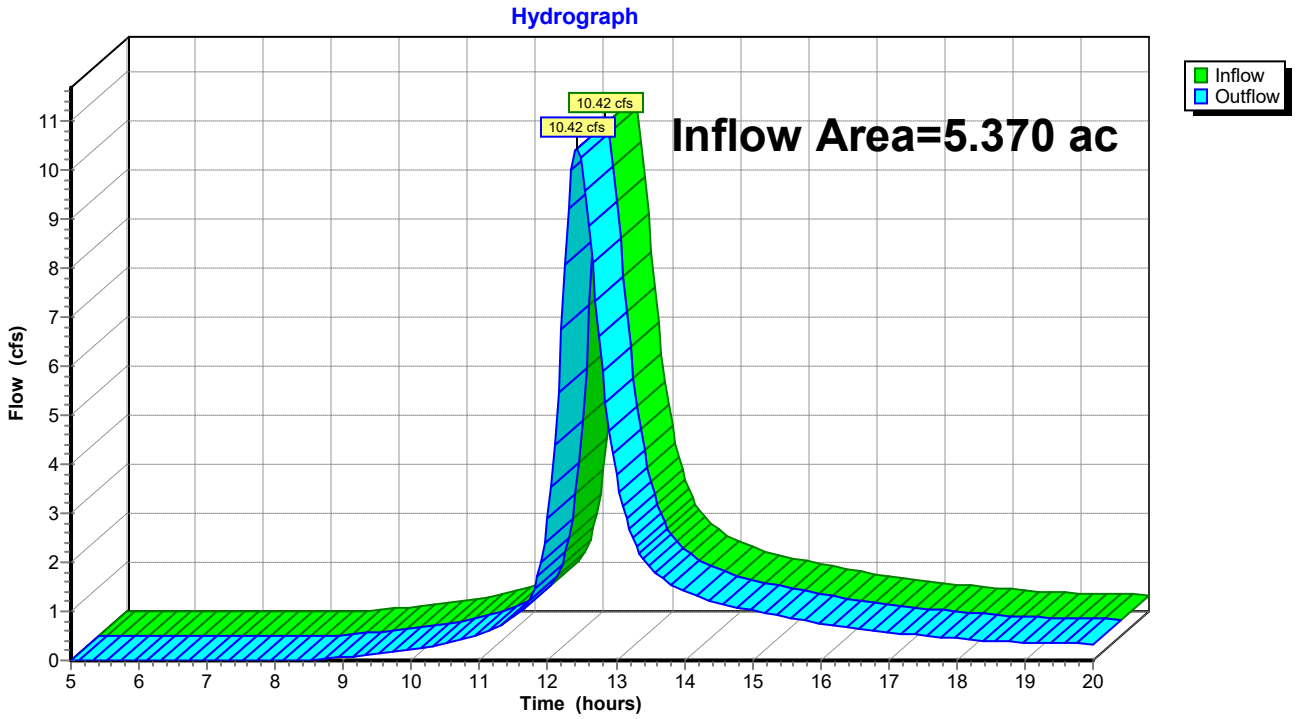


Summary for Reach SP#3: Study Point #3

Inflow Area = 5.370 ac, 0.00% Impervious, Inflow Depth > 2.74" for 25 Year event
Inflow = 10.42 cfs @ 12.43 hrs, Volume= 1.225 af
Outflow = 10.42 cfs @ 12.43 hrs, Volume= 1.225 af, Atten= 0%, Lag= 0.0 min

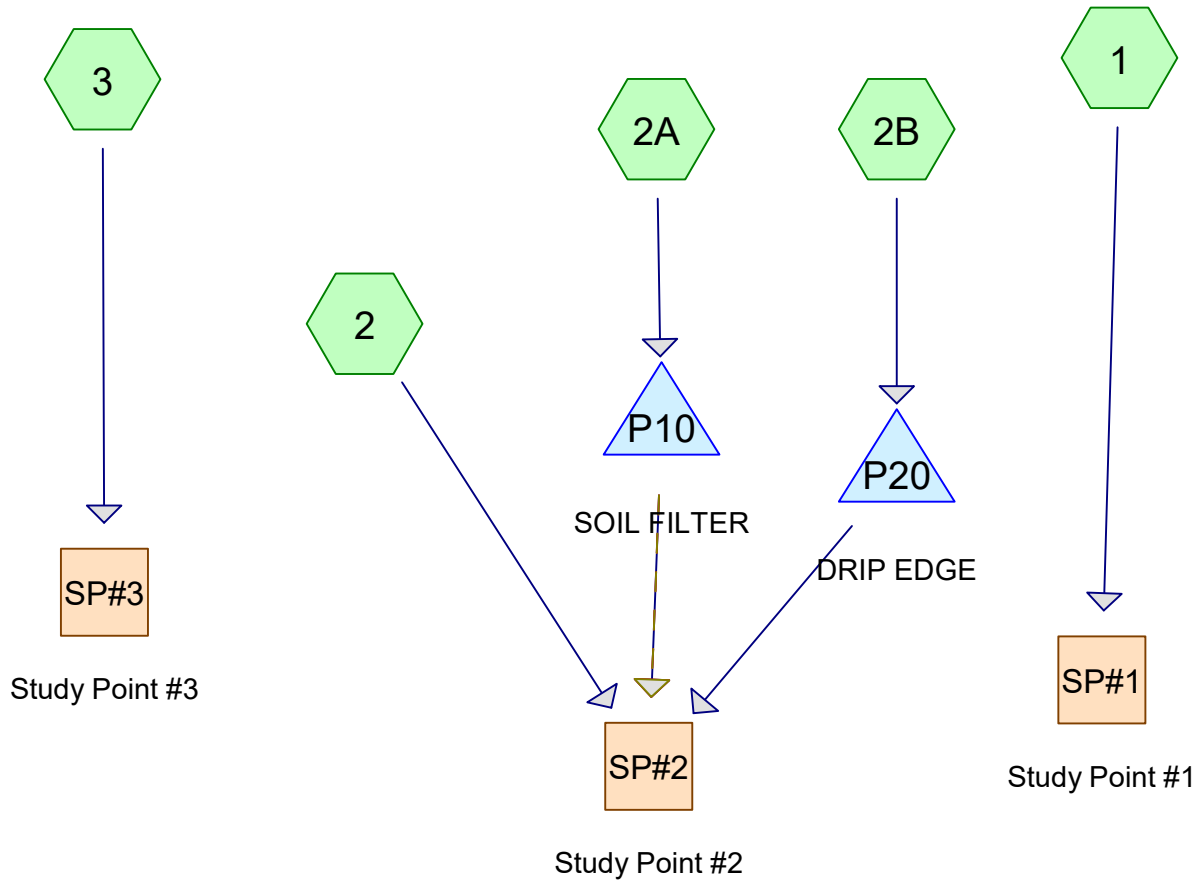
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach SP#3: Study Point #3



APPENDIX 6

POST-DEVELOPMENT HYDROCAD MODEL



Subcat Reach Pond Link

Routing Diagram for 21-81 Post
Prepared by Terradyn Consultangs, LLC, Printed 3/4/2022

Summary for Subcatchment 1:

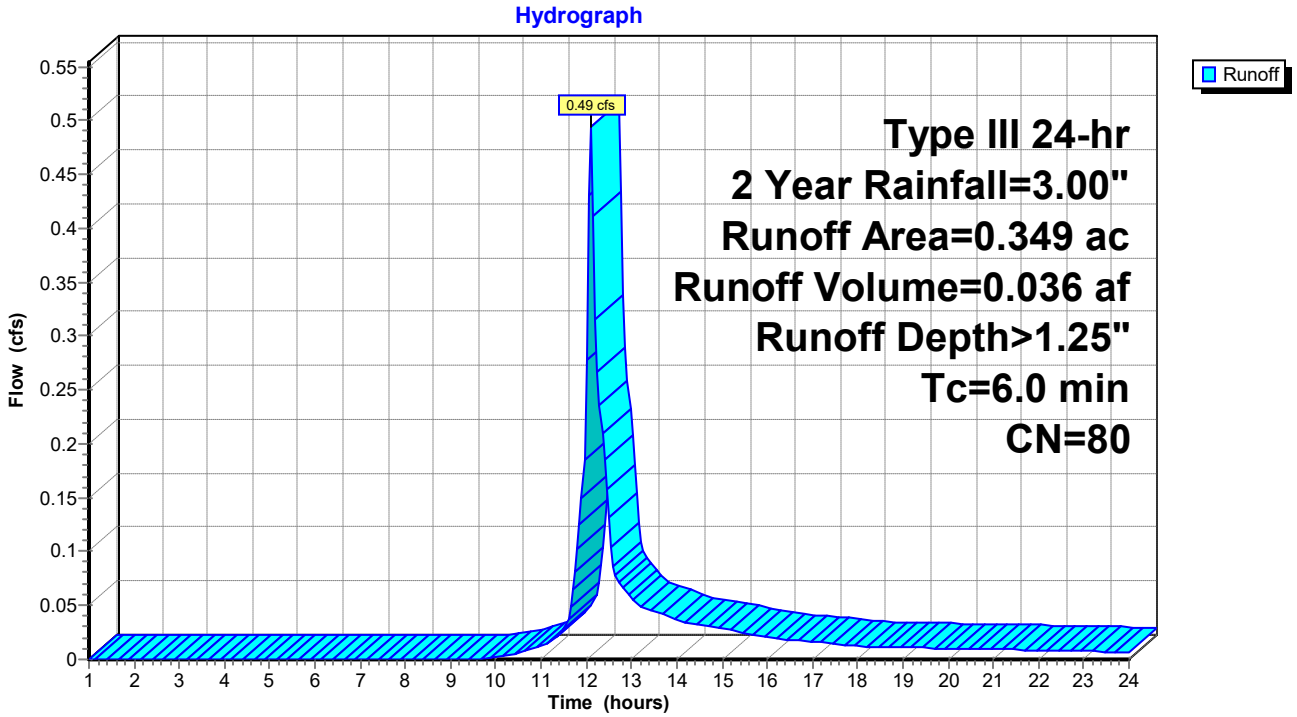
Runoff = 0.49 cfs @ 12.10 hrs, Volume= 0.036 af, Depth> 1.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 Year Rainfall=3.00"

Area (ac)	CN	Description
0.349	80	>75% Grass cover, Good, HSG D
0.349		100.00% Pervious Area

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

Subcatchment 1:



Summary for Subcatchment 2:

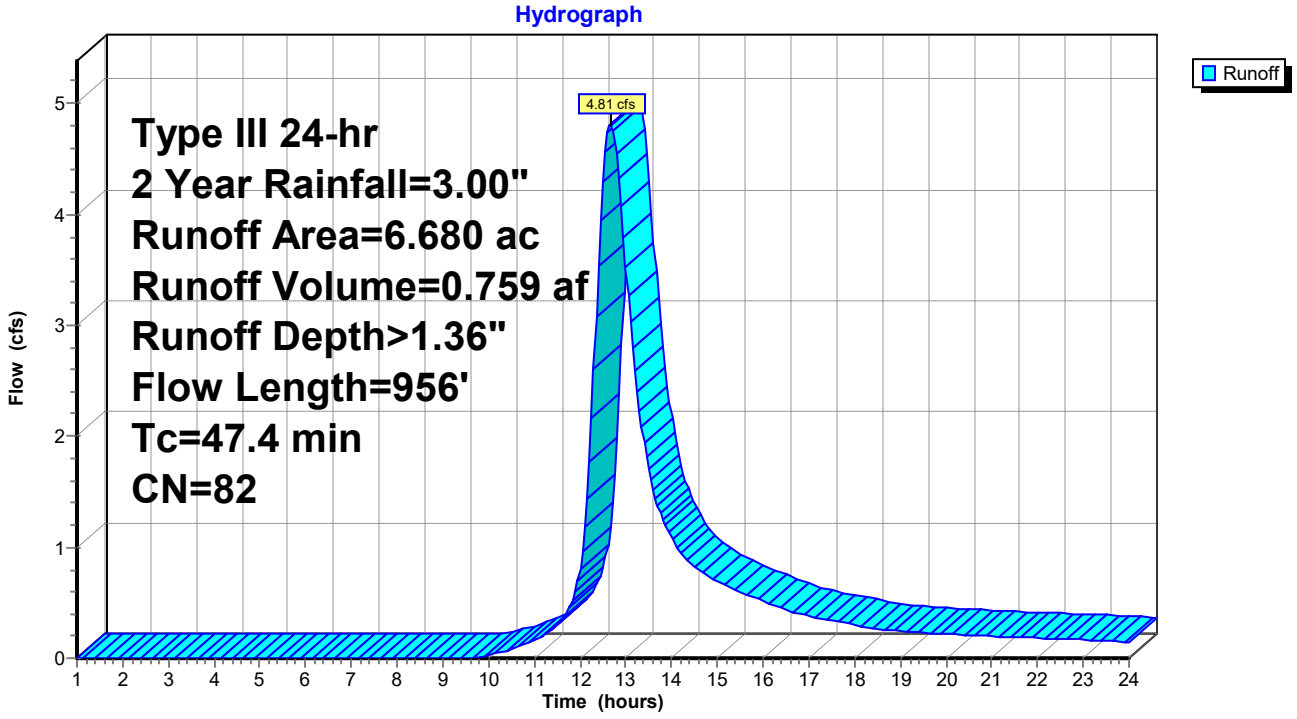
Runoff = 4.81 cfs @ 12.67 hrs, Volume= 0.759 af, Depth> 1.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 Year Rainfall=3.00"

	Area (ac)	CN	Description
*	1.300	98	Lot Impervious (Water Tower)
	1.700	80	>75% Grass cover, Good, HSG D
	3.680	77	Woods, Good, HSG D
	6.680	82	Weighted Average
	5.380		80.54% Pervious Area
	1.300		19.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
39.3	150	0.0430	0.06		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"
3.6	343	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.5	463	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
47.4	956	Total			

Subcatchment 2:



Summary for Subcatchment 2A:

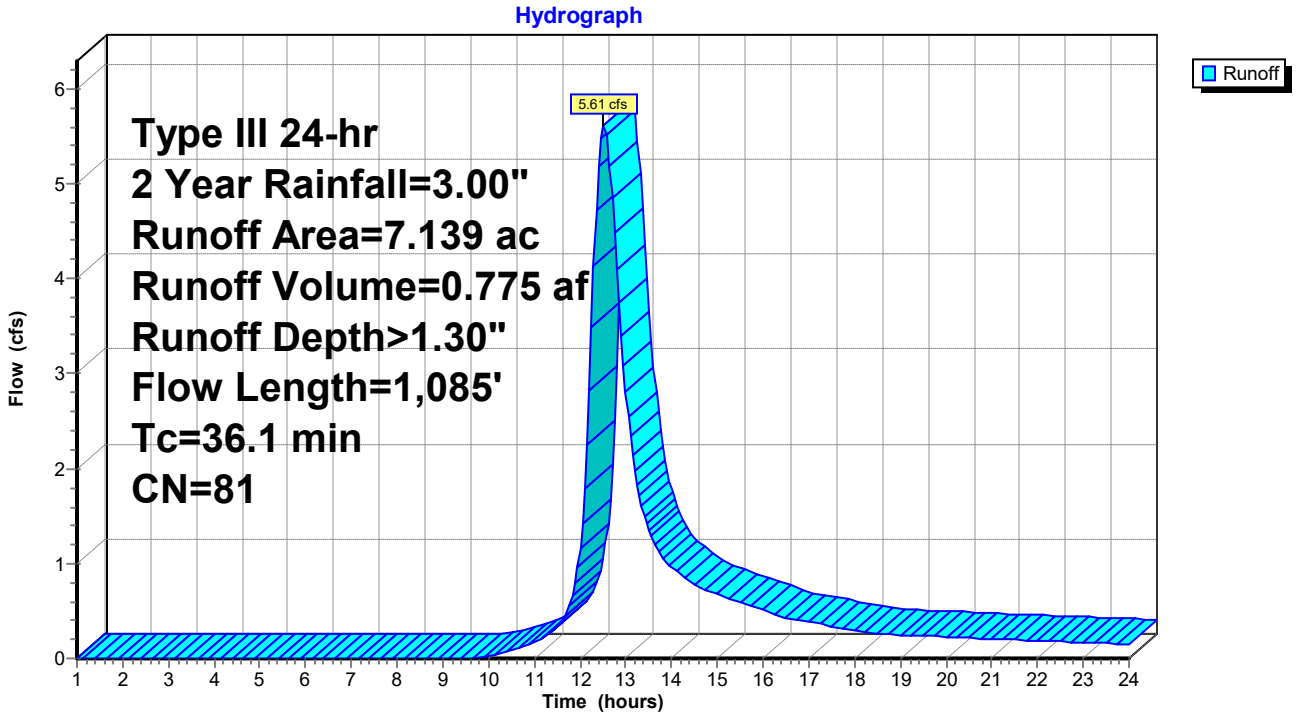
Runoff = 5.61 cfs @ 12.52 hrs, Volume= 0.775 af, Depth> 1.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 Year Rainfall=3.00"

	Area (ac)	CN	Description
*	1.203	98	Access Drive and Parking
	0.738	80	>75% Grass cover, Good, HSG D
	5.098	77	Woods, Good, HSG D
*	0.100	98	water tower
	7.139	81	Weighted Average
	5.836		81.75% Pervious Area
	1.303		18.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.7	150	0.0800	0.08		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"
2.4	215	0.0900	1.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.3	105	0.1300	5.41		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.1	30	0.0350	3.80		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.6	585	0.0050	3.72	4.57	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
36.1	1,085	Total			

Subcatchment 2A:



Summary for Subcatchment 2B:

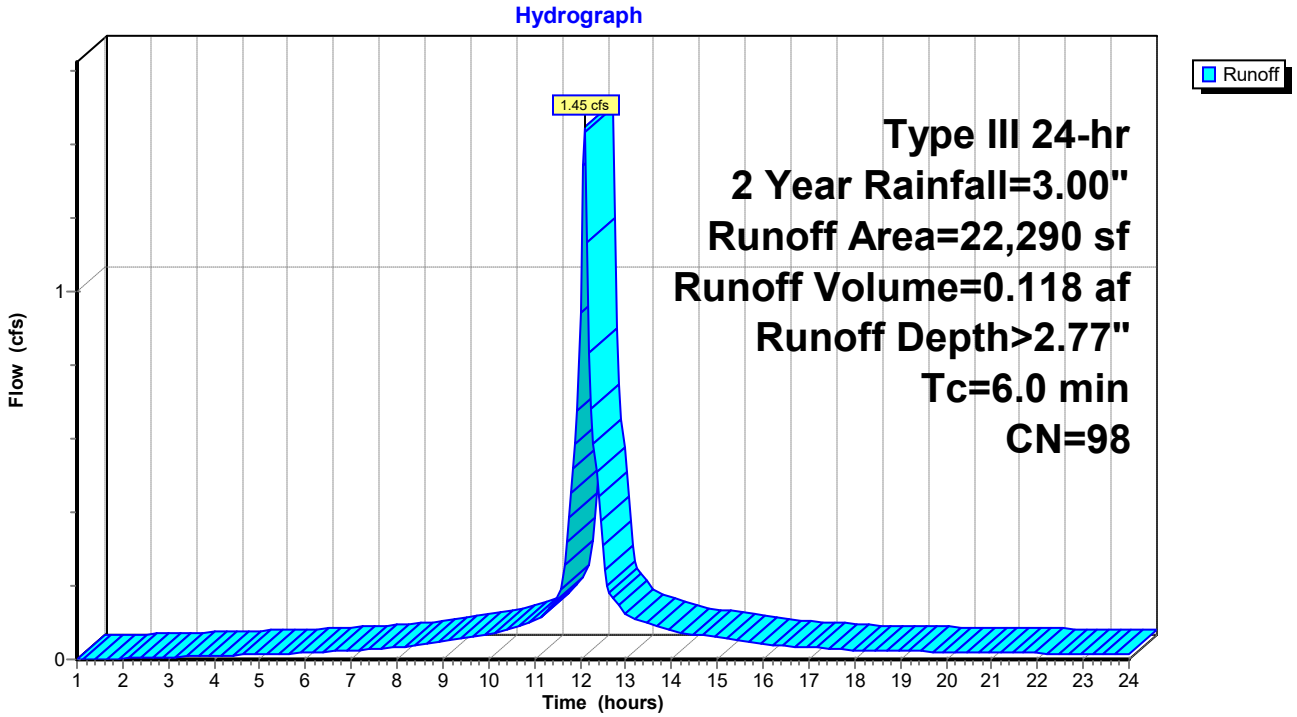
Runoff = 1.45 cfs @ 12.09 hrs, Volume= 0.118 af, Depth> 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 Year Rainfall=3.00"

	Area (sf)	CN	Description
*	22,290	98	Buildings
	22,290		100.00% Impervious Area

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

Subcatchment 2B:



Summary for Subcatchment 3:

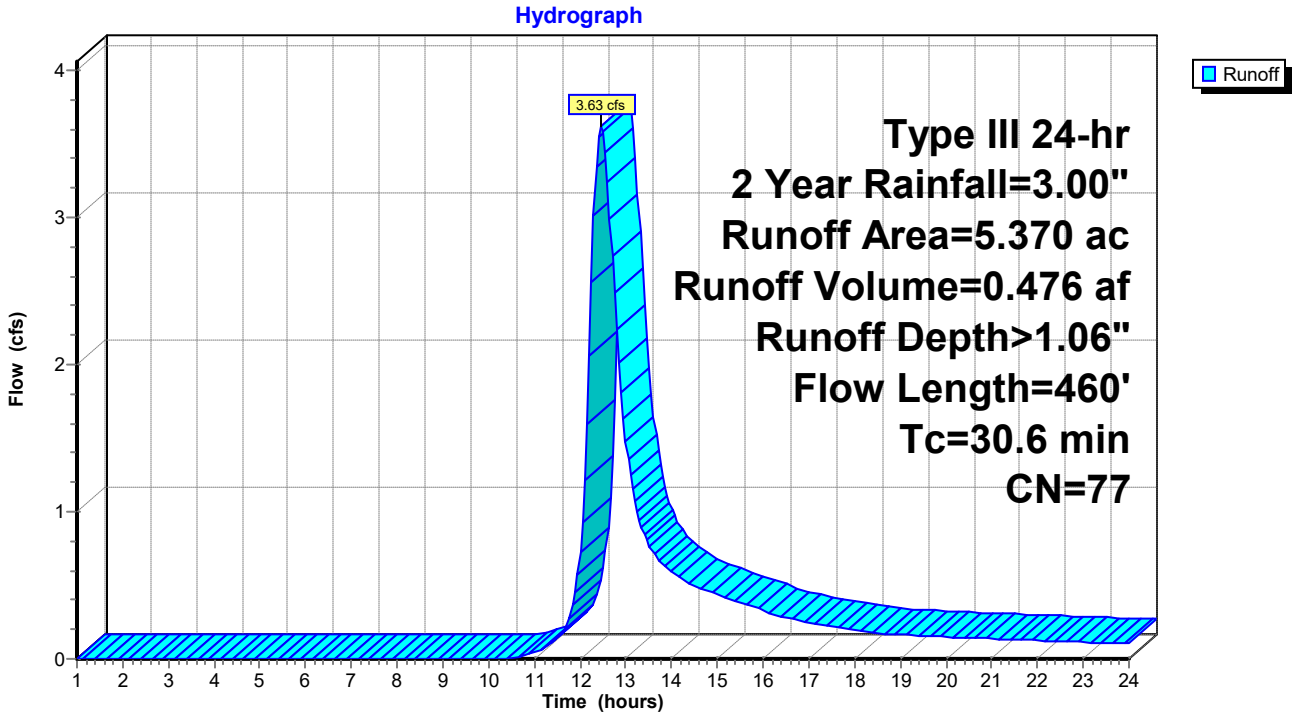
Runoff = 3.63 cfs @ 12.46 hrs, Volume= 0.476 af, Depth> 1.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 Year Rainfall=3.00"

	Area (ac)	CN	Description
*	0.000	98	Lot Impervious
	0.000	80	>75% Grass cover, Good, HSG D
	5.370	77	Woods, Good, HSG D
	5.370	77	Weighted Average
	5.370		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.1	150	0.1000	0.09		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"
2.5	310	0.1700	2.06		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
30.6	460	Total			

Subcatchment 3:

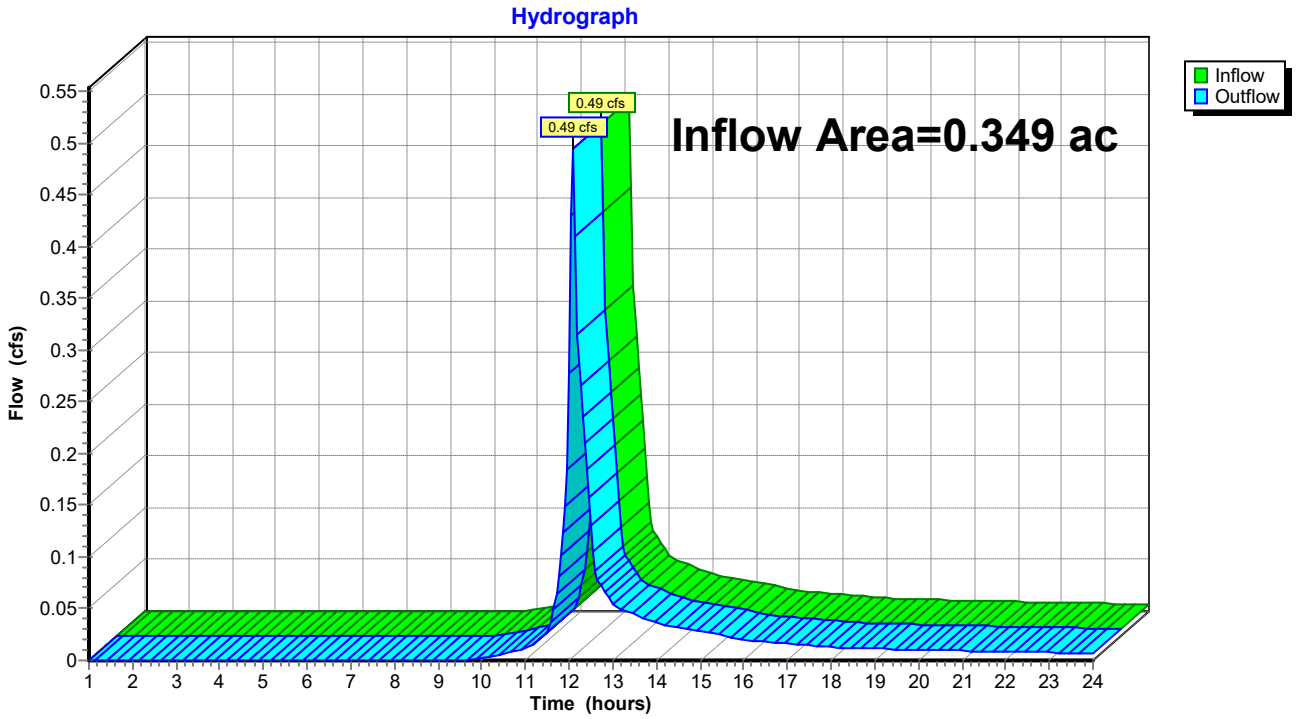


Summary for Reach SP#1: Study Point #1

Inflow Area = 0.349 ac, 0.00% Impervious, Inflow Depth > 1.25" for 2 Year event
Inflow = 0.49 cfs @ 12.10 hrs, Volume= 0.036 af
Outflow = 0.49 cfs @ 12.10 hrs, Volume= 0.036 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach SP#1: Study Point #1

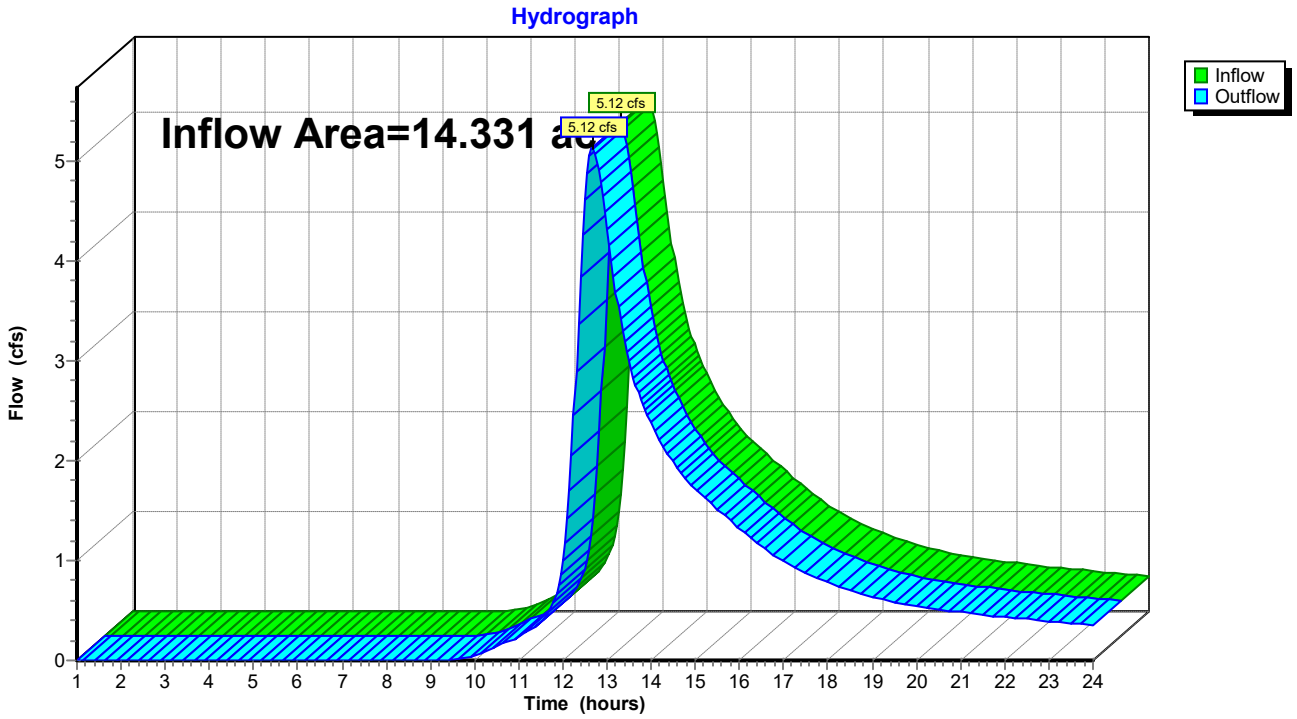


Summary for Reach SP#2: Study Point #2

Inflow Area = 14.331 ac, 21.73% Impervious, Inflow Depth > 1.11" for 2 Year event
Inflow = 5.12 cfs @ 12.67 hrs, Volume= 1.326 af
Outflow = 5.12 cfs @ 12.67 hrs, Volume= 1.326 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach SP#2: Study Point #2

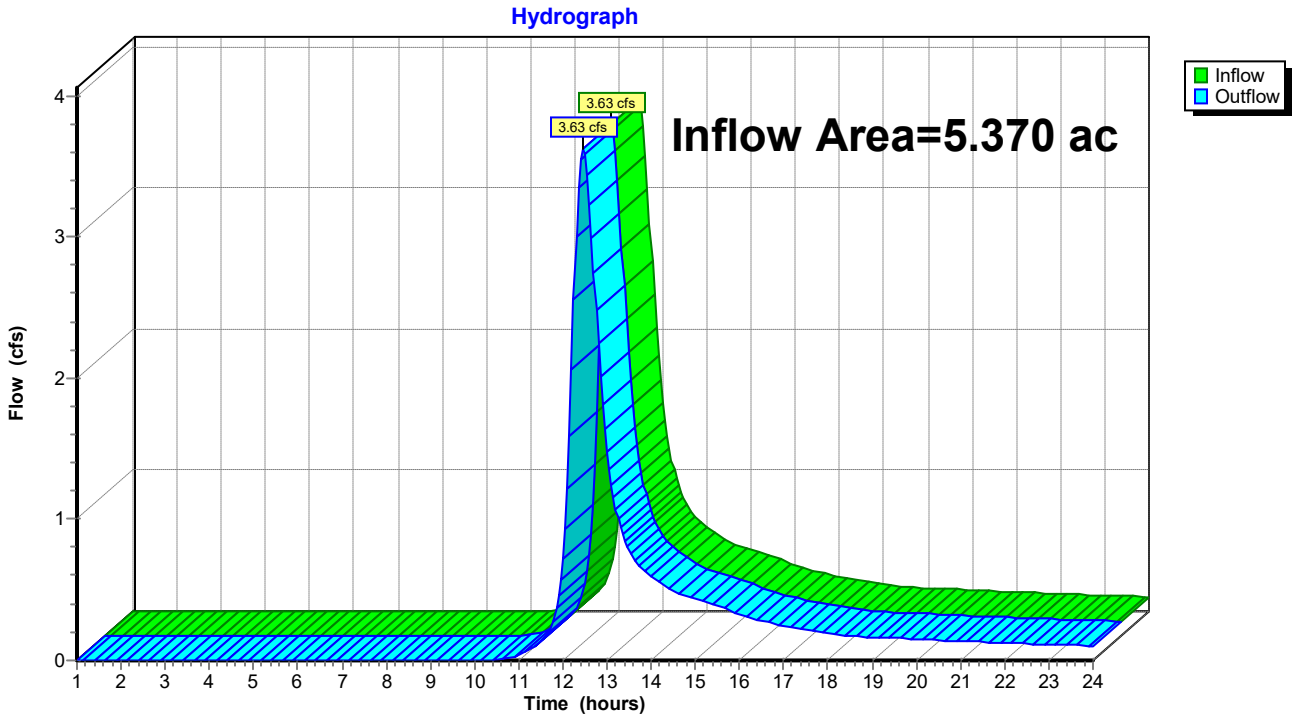


Summary for Reach SP#3: Study Point #3

Inflow Area = 5.370 ac, 0.00% Impervious, Inflow Depth > 1.06" for 2 Year event
Inflow = 3.63 cfs @ 12.46 hrs, Volume= 0.476 af
Outflow = 3.63 cfs @ 12.46 hrs, Volume= 0.476 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach SP#3: Study Point #3



Summary for Pond P10: SOIL FILTER

Inflow Area = 7.139 ac, 18.25% Impervious, Inflow Depth > 1.30" for 2 Year event
Inflow = 5.61 cfs @ 12.52 hrs, Volume= 0.775 af
Outflow = 1.12 cfs @ 13.73 hrs, Volume= 0.477 af, Atten= 80%, Lag= 72.7 min
Primary = 1.01 cfs @ 13.73 hrs, Volume= 0.364 af
Secondary = 0.11 cfs @ 13.73 hrs, Volume= 0.113 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 375.83' @ 13.73 hrs Surf.Area= 8,463 sf Storage= 16,876 cf

Plug-Flow detention time= 232.6 min calculated for 0.477 af (62% of inflow)
Center-of-Mass det. time= 124.7 min (990.4 - 865.8)

Volume	Invert	Avail.Storage	Storage Description
#1	371.49'	47,436 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

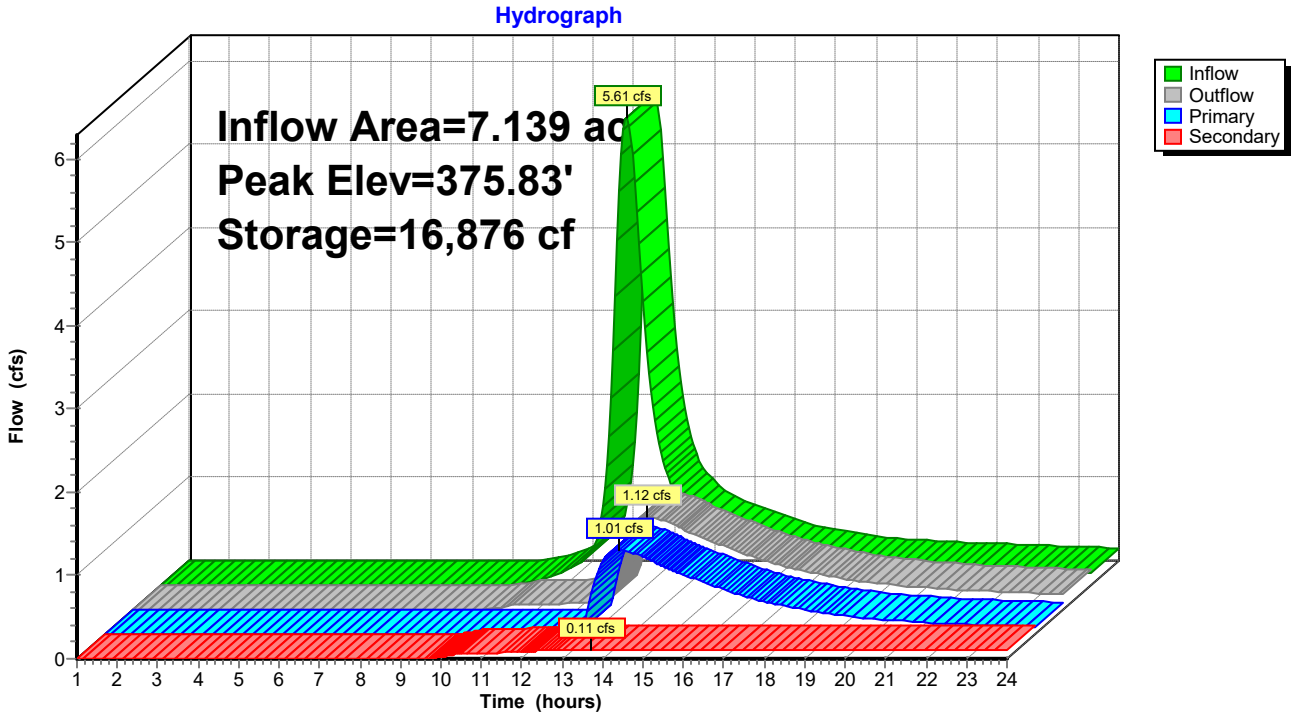
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
371.49	3,000	0.0	0	0
371.50	3,400	40.0	13	13
373.99	3,400	40.0	3,386	3,399
374.00	4,000	100.0	37	3,436
374.50	7,500	100.0	2,875	6,311
375.00	7,800	100.0	3,825	10,136
376.00	8,600	100.0	8,200	18,336
377.00	9,300	100.0	8,950	27,286
378.00	10,050	100.0	9,675	36,961
379.00	10,900	100.0	10,475	47,436

Device	Routing	Invert	Outlet Devices
#1	Secondary	368.00'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	370.00'	**4.0" Round Underdrain** L= 100.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 370.00' / 368.00' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 0.09 sf
#3	Device 2	371.49'	**2.400 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 370.00'
#4	Primary	373.00'	**15.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 373.00' / 372.00' S= 0.0250 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf
#5	Device 4	375.25'	**0.7' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)
#6	Device 5	374.50'	**24.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 374.50' / 374.50' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#7	Primary	377.50'	**15.0' long x 10.0' breadth Broad-Crested Rectangular Weir** 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=1.01 cfs @ 13.73 hrs HW=375.83' (Free Discharge)
└─**4=Culvert** (Passes 1.01 cfs of 6.93 cfs potential flow)
└─**5=Sharp-Crested Vee/Trap Weir** (Weir Controls 1.01 cfs @ 2.49 fps)
└─**6=Culvert** (Passes 1.01 cfs of 5.11 cfs potential flow)
└─**7=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.11 cfs @ 13.73 hrs HW=375.83' (Free Discharge)
└─**1=Orifice/Grate** (Orifice Controls 0.11 cfs @ 13.43 fps)
└─**2=Underdrain** (Passes 0.11 cfs of 0.53 cfs potential flow)
└─**3=Exfiltration** (Passes 0.11 cfs of 1.11 cfs potential flow)

Pond P10: SOIL FILTER



Summary for Pond P20: DRIP EDGE

Inflow Area = 0.512 ac,100.00% Impervious, Inflow Depth > 2.77" for 2 Year event
Inflow = 1.45 cfs @ 12.09 hrs, Volume= 0.118 af
Outflow = 0.22 cfs @ 12.58 hrs, Volume= 0.090 af, Atten= 85%, Lag= 29.6 min
Primary = 0.22 cfs @ 12.58 hrs, Volume= 0.090 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 373.85' @ 12.58 hrs Surf.Area= 0.195 ac Storage= 0.068 af

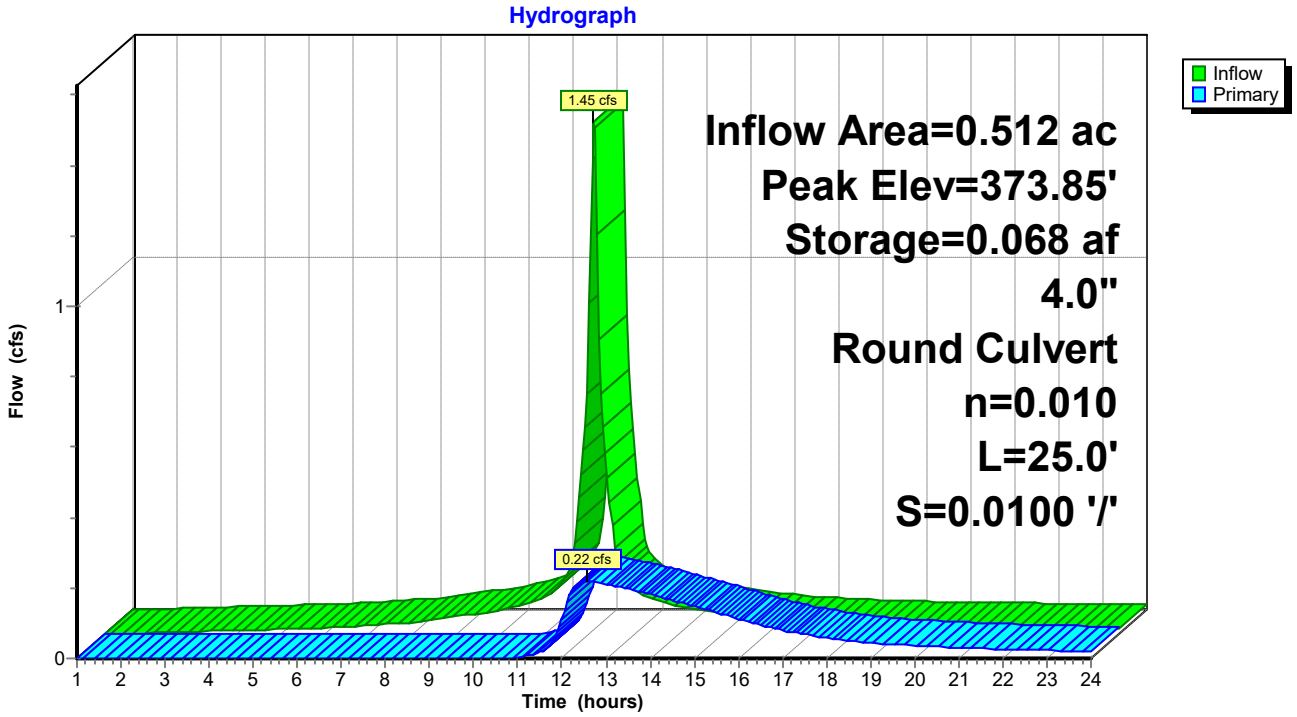
Plug-Flow detention time= 252.0 min calculated for 0.090 af (76% of inflow)
Center-of-Mass det. time= 169.3 min (926.6 - 757.3)

Volume	Invert	Avail.Storage	Storage Description
#1	373.00'	0.232 af	**5.00'W x 1,700.00'L x 3.00'H Prismatoid** 0.585 af Overall - 0.004 af Embedded = 0.581 af x 40.0% Voids
#2	373.25'	0.003 af	**4.0" Round Pipe Storage** Inside #1 L= 1,699.0' 0.004 af Overall - 0.2" Wall Thickness = 0.003 af
#3	373.25'	0.000 af	**4.0" Round Pipe Storage** Inside #1 L= 80.0' S= 0.0100 '/' 0.000 af Overall - 0.2" Wall Thickness = 0.000 af
		0.236 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	373.25'	**4.0" Round Culvert** L= 25.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 373.25' / 373.00' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf

Primary OutFlow Max=0.22 cfs @ 12.58 hrs HW=373.85' (Free Discharge)
1=Culvert (Inlet Controls 0.22 cfs @ 2.50 fps)

Pond P20: DRIP EDGE



Summary for Subcatchment 1:

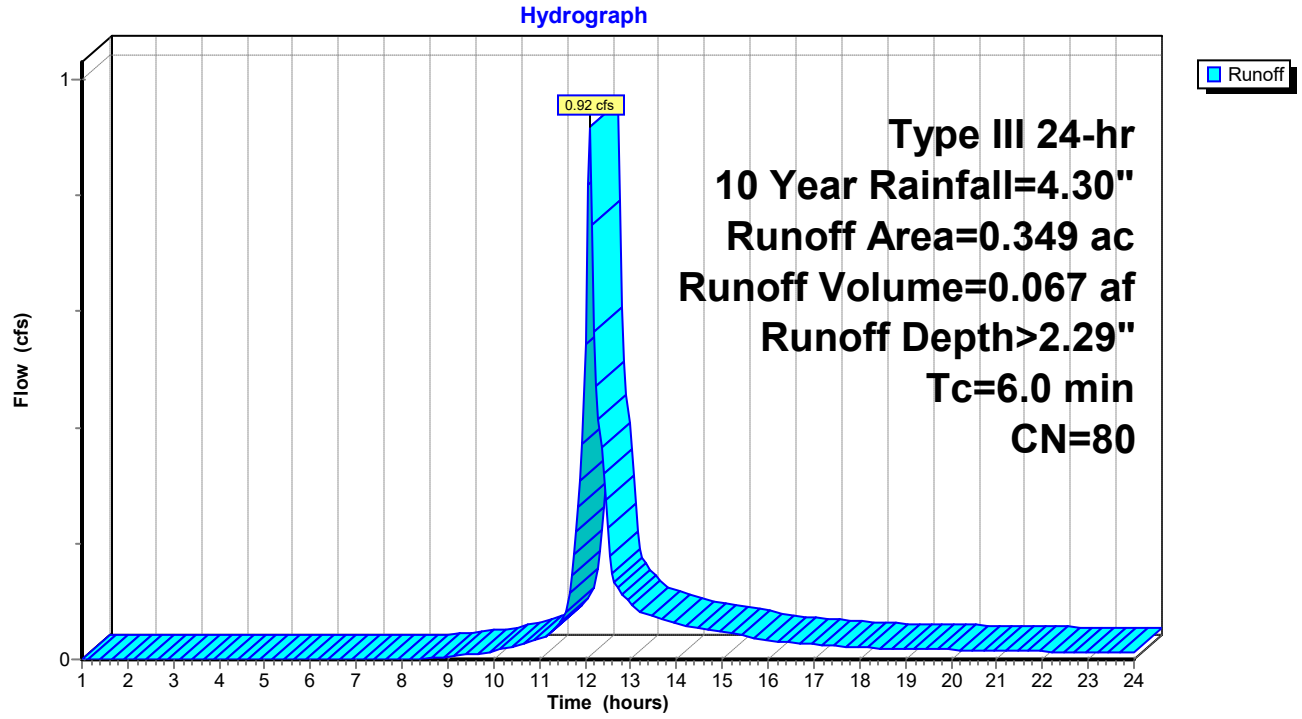
Runoff = 0.92 cfs @ 12.09 hrs, Volume= 0.067 af, Depth> 2.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Rainfall=4.30"

Area (ac)	CN	Description
0.349	80	>75% Grass cover, Good, HSG D
0.349		100.00% Pervious Area

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

Subcatchment 1:



Summary for Subcatchment 2:

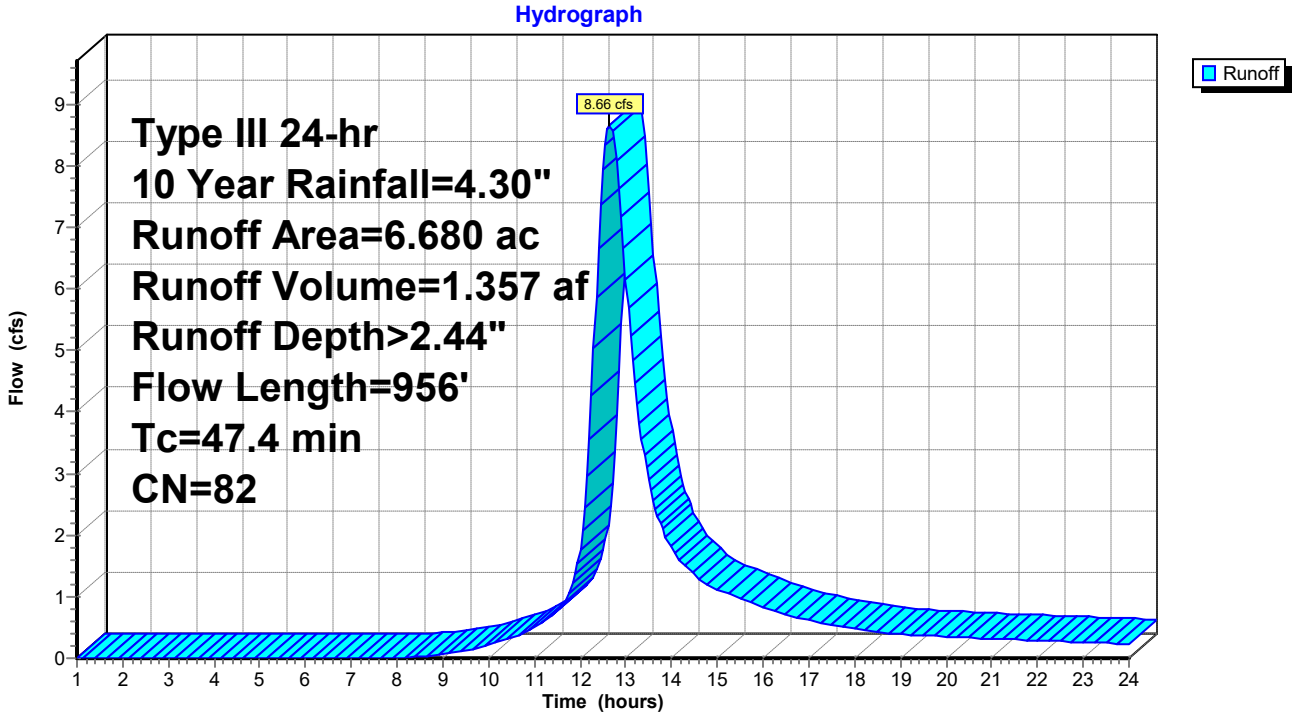
Runoff = 8.66 cfs @ 12.65 hrs, Volume= 1.357 af, Depth> 2.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Rainfall=4.30"

	Area (ac)	CN	Description
*	1.300	98	Lot Impervious (Water Tower)
	1.700	80	>75% Grass cover, Good, HSG D
	3.680	77	Woods, Good, HSG D
	6.680	82	Weighted Average
	5.380		80.54% Pervious Area
	1.300		19.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
39.3	150	0.0430	0.06		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"
3.6	343	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.5	463	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
47.4	956	Total			

Subcatchment 2:



Summary for Subcatchment 2A:

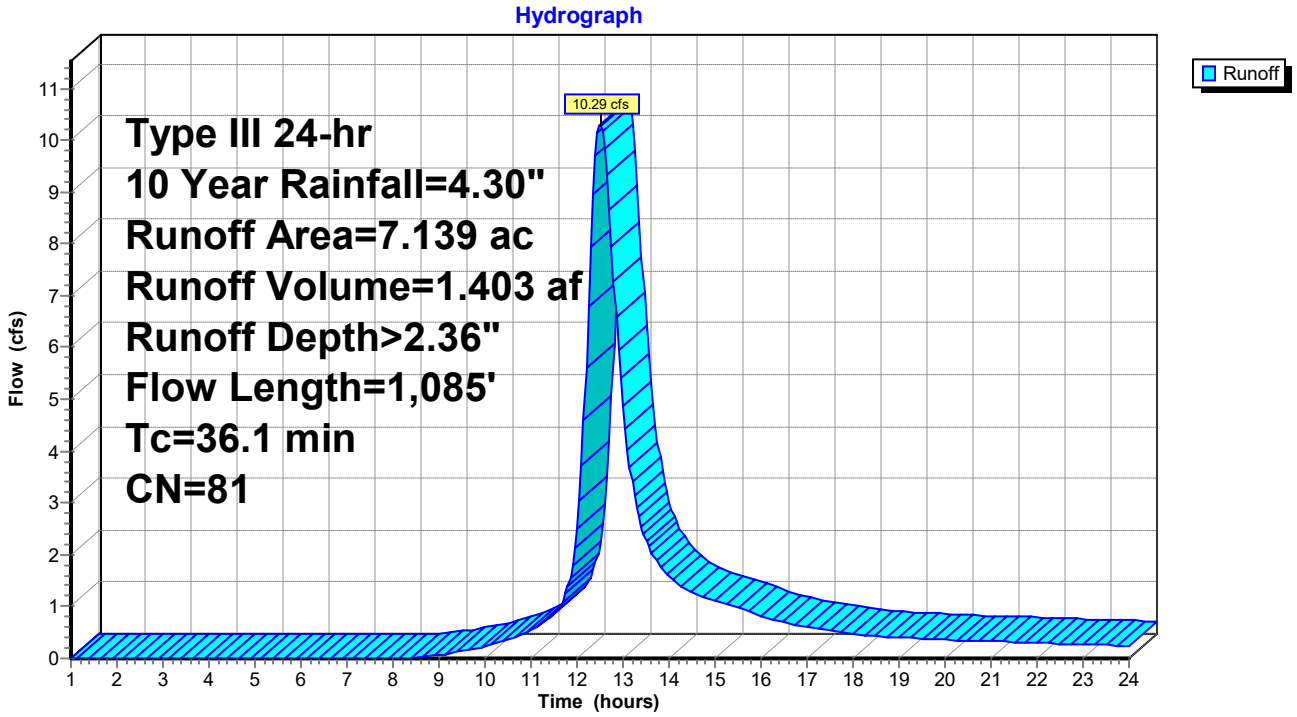
Runoff = 10.29 cfs @ 12.50 hrs, Volume= 1.403 af, Depth> 2.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Rainfall=4.30"

	Area (ac)	CN	Description
*	1.203	98	Access Drive and Parking
	0.738	80	>75% Grass cover, Good, HSG D
	5.098	77	Woods, Good, HSG D
*	0.100	98	water tower
	7.139	81	Weighted Average
	5.836		81.75% Pervious Area
	1.303		18.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.7	150	0.0800	0.08		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"
2.4	215	0.0900	1.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.3	105	0.1300	5.41		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.1	30	0.0350	3.80		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.6	585	0.0050	3.72	4.57	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
36.1	1,085	Total			

Subcatchment 2A:



Summary for Subcatchment 2B:

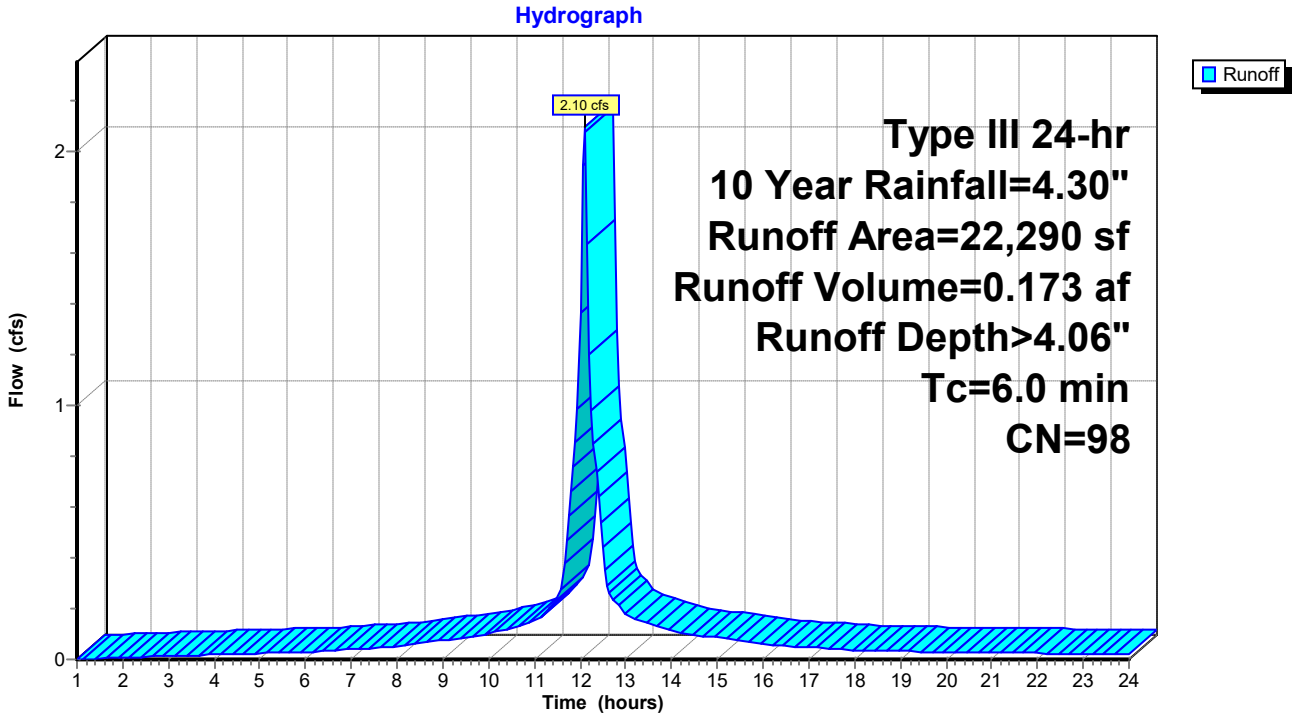
Runoff = 2.10 cfs @ 12.09 hrs, Volume= 0.173 af, Depth> 4.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Rainfall=4.30"

	Area (sf)	CN	Description
*	22,290	98	Buildings
	22,290		100.00% Impervious Area

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

Subcatchment 2B:



Summary for Subcatchment 3:

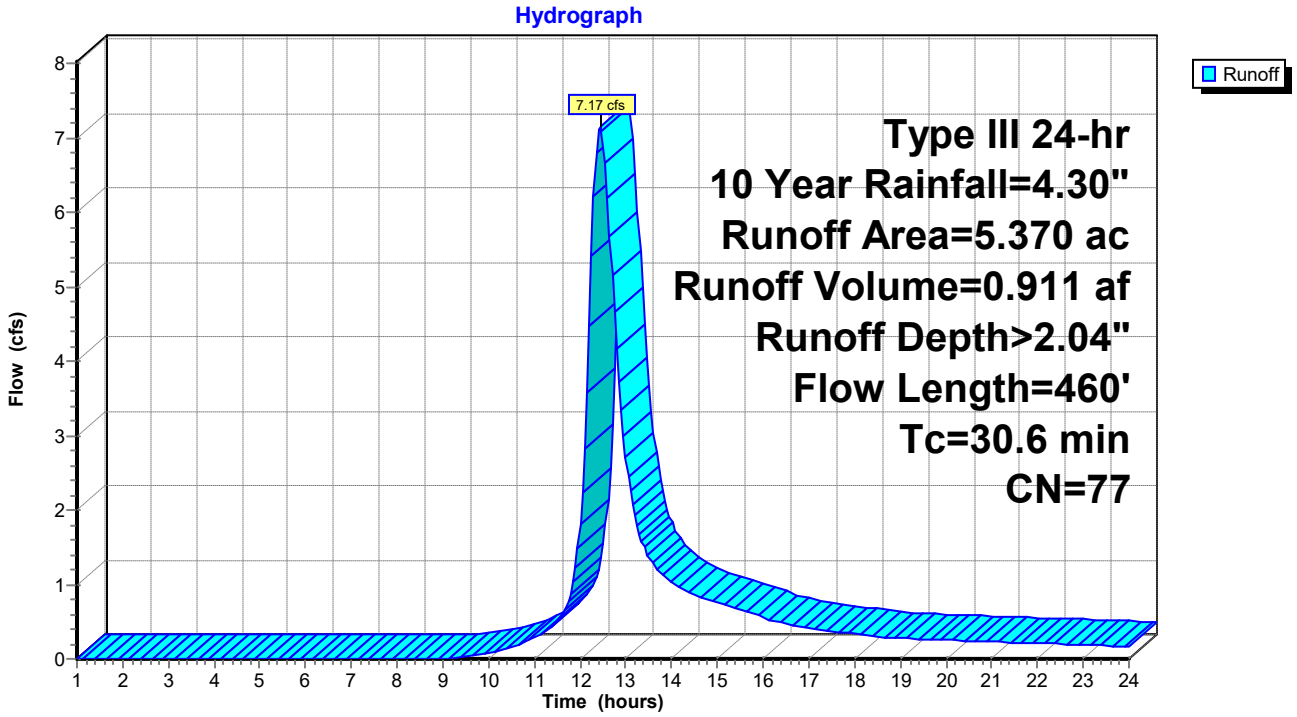
Runoff = 7.17 cfs @ 12.44 hrs, Volume= 0.911 af, Depth> 2.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Rainfall=4.30"

	Area (ac)	CN	Description
*	0.000	98	Lot Impervious
	0.000	80	>75% Grass cover, Good, HSG D
	5.370	77	Woods, Good, HSG D
	5.370	77	Weighted Average
	5.370		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.1	150	0.1000	0.09		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"
2.5	310	0.1700	2.06		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
30.6	460	Total			

Subcatchment 3:

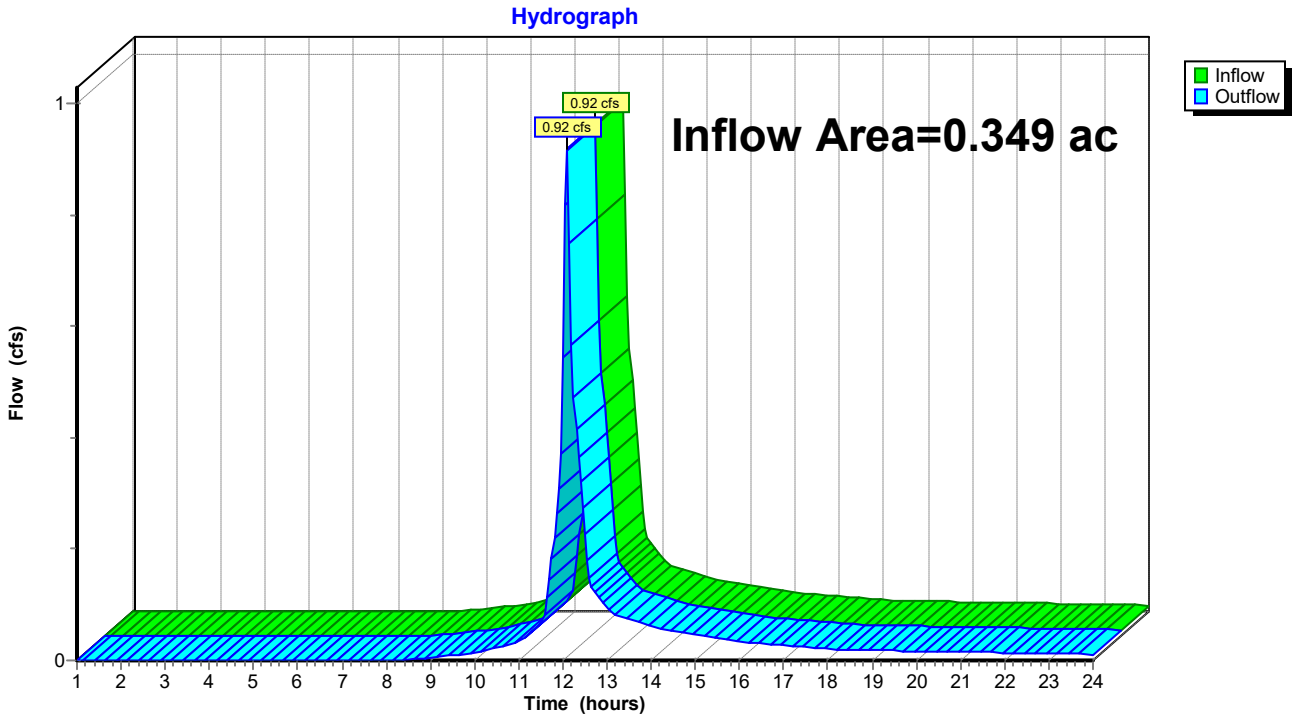


Summary for Reach SP#1: Study Point #1

Inflow Area = 0.349 ac, 0.00% Impervious, Inflow Depth > 2.29" for 10 Year event
Inflow = 0.92 cfs @ 12.09 hrs, Volume= 0.067 af
Outflow = 0.92 cfs @ 12.09 hrs, Volume= 0.067 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach SP#1: Study Point #1

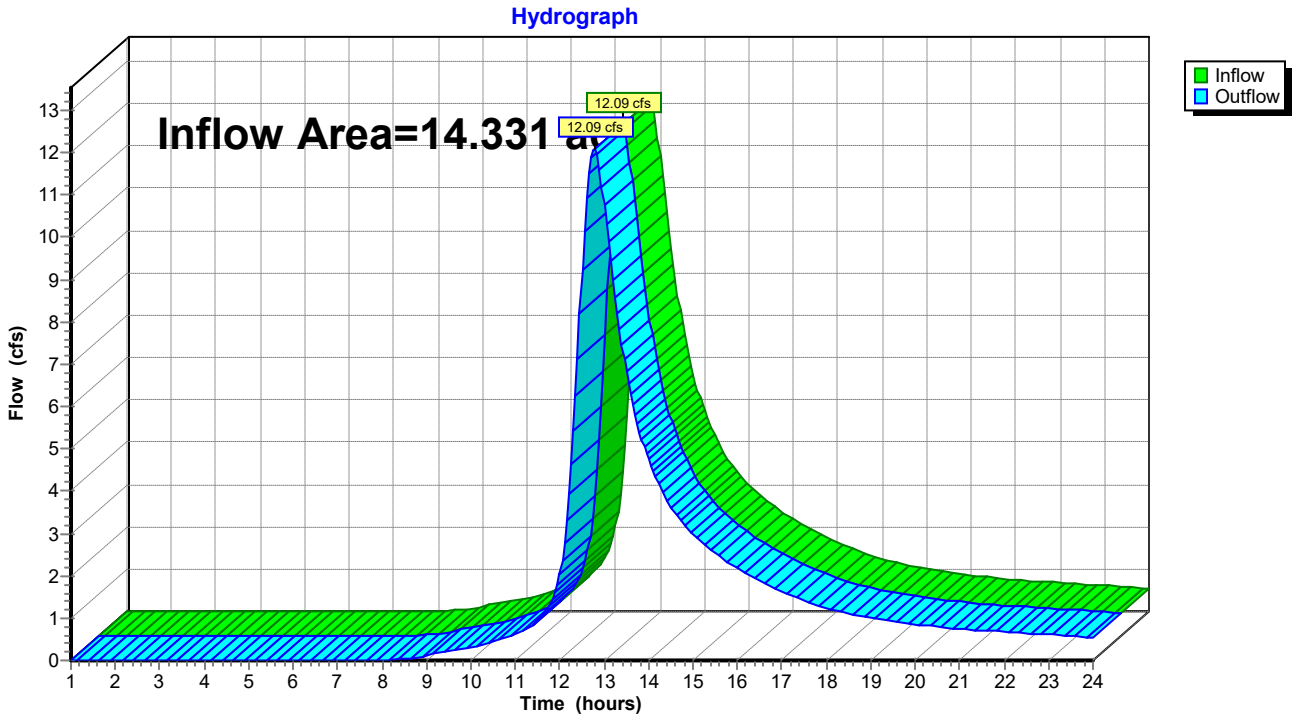


Summary for Reach SP#2: Study Point #2

Inflow Area = 14.331 ac, 21.73% Impervious, Inflow Depth > 2.17" for 10 Year event
Inflow = 12.09 cfs @ 12.77 hrs, Volume= 2.592 af
Outflow = 12.09 cfs @ 12.77 hrs, Volume= 2.592 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach SP#2: Study Point #2

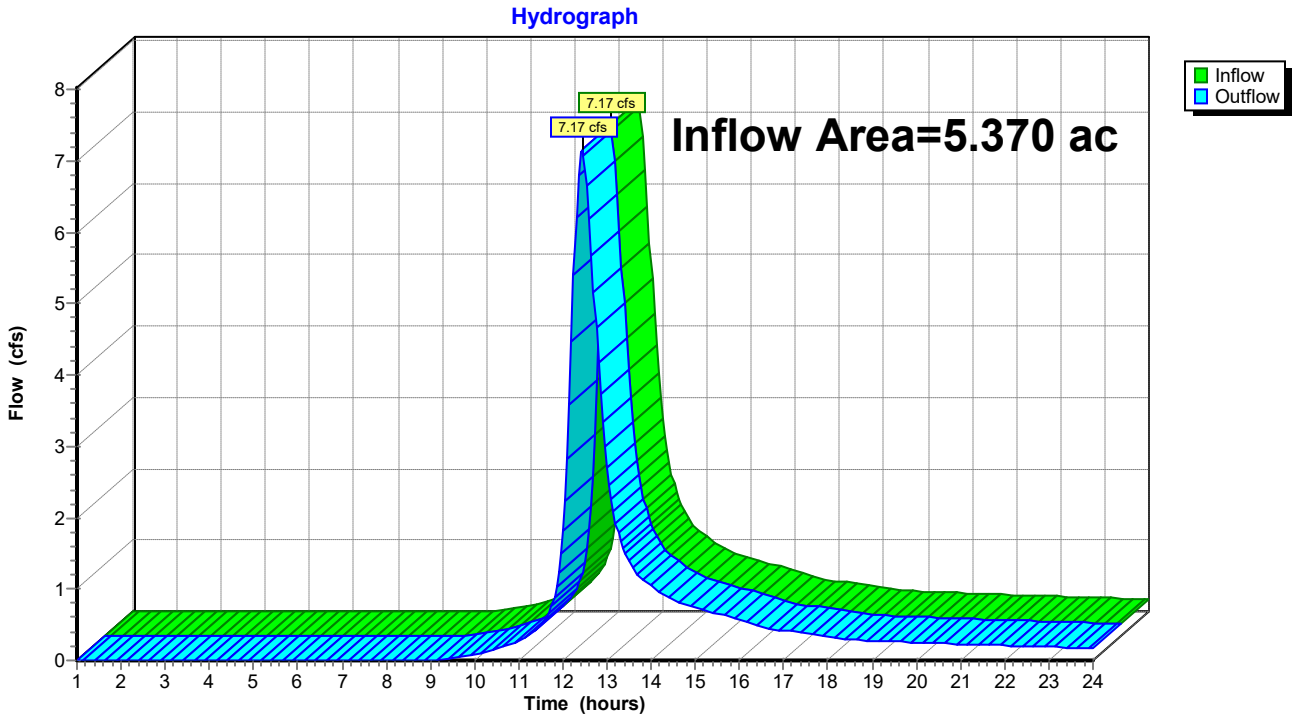


Summary for Reach SP#3: Study Point #3

Inflow Area = 5.370 ac, 0.00% Impervious, Inflow Depth > 2.04" for 10 Year event
Inflow = 7.17 cfs @ 12.44 hrs, Volume= 0.911 af
Outflow = 7.17 cfs @ 12.44 hrs, Volume= 0.911 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach SP#3: Study Point #3



Summary for Pond P10: SOIL FILTER

Inflow Area = 7.139 ac, 18.25% Impervious, Inflow Depth > 2.36" for 10 Year event
Inflow = 10.29 cfs @ 12.50 hrs, Volume= 1.403 af
Outflow = 4.35 cfs @ 13.06 hrs, Volume= 1.091 af, Atten= 58%, Lag= 33.4 min
Primary = 4.24 cfs @ 13.06 hrs, Volume= 0.966 af
Secondary = 0.11 cfs @ 13.06 hrs, Volume= 0.125 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 376.76' @ 13.06 hrs Surf.Area= 9,130 sf Storage= 25,045 cf

Plug-Flow detention time= 158.6 min calculated for 1.089 af (78% of inflow)
Center-of-Mass det. time= 79.9 min (928.9 - 849.0)

Volume	Invert	Avail.Storage	Storage Description
#1	371.49'	47,436 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

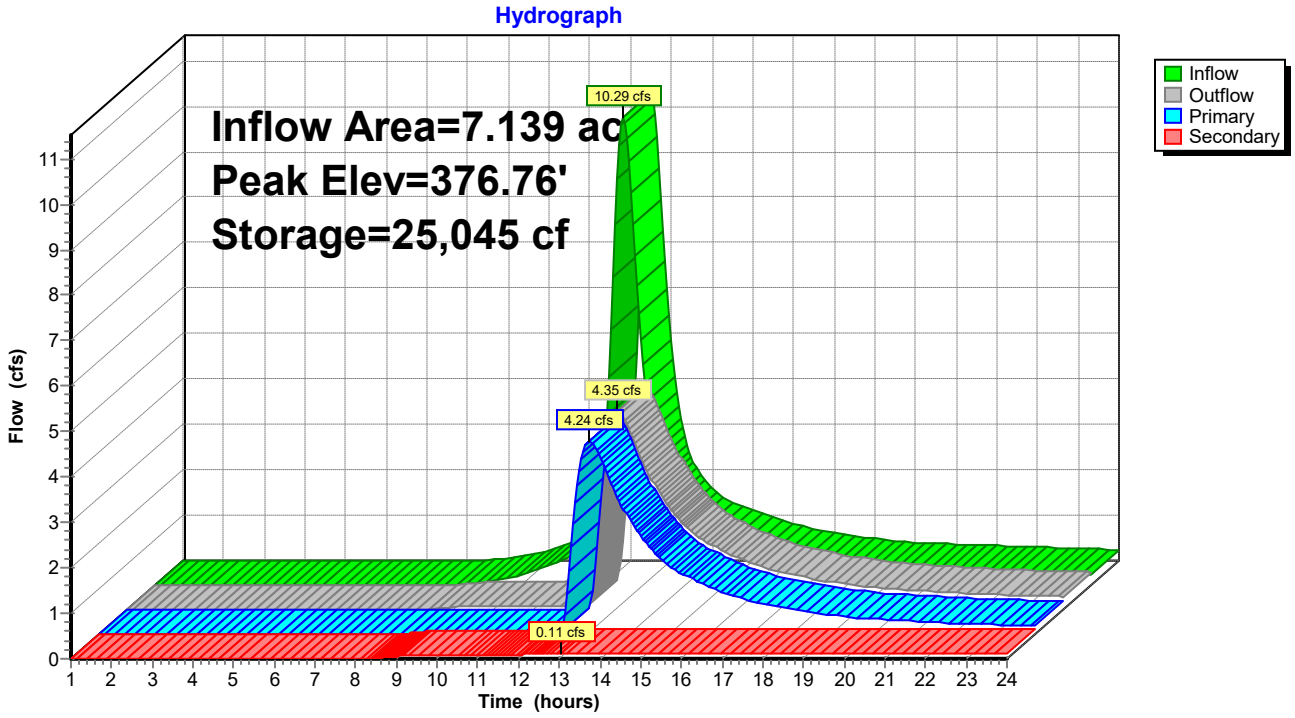
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
371.49	3,000	0.0	0	0
371.50	3,400	40.0	13	13
373.99	3,400	40.0	3,386	3,399
374.00	4,000	100.0	37	3,436
374.50	7,500	100.0	2,875	6,311
375.00	7,800	100.0	3,825	10,136
376.00	8,600	100.0	8,200	18,336
377.00	9,300	100.0	8,950	27,286
378.00	10,050	100.0	9,675	36,961
379.00	10,900	100.0	10,475	47,436

Device	Routing	Invert	Outlet Devices
#1	Secondary	368.00'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	370.00'	**4.0" Round Underdrain** L= 100.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 370.00' / 368.00' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 0.09 sf
#3	Device 2	371.49'	**2.400 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 370.00'
#4	Primary	373.00'	**15.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 373.00' / 372.00' S= 0.0250 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf
#5	Device 4	375.25'	**0.7' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)
#6	Device 5	374.50'	**24.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 374.50' / 374.50' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#7	Primary	377.50'	**15.0' long x 10.0' breadth Broad-Crested Rectangular Weir** 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=4.24 cfs @ 13.06 hrs HW=376.76' (Free Discharge)
- **4=Culvert** (Passes 4.24 cfs of 8.25 cfs potential flow)
  - **5=Sharp-Crested Vee/Trap Weir** (Weir Controls 4.24 cfs @ 4.02 fps)
    - **6=Culvert** (Passes 4.24 cfs of 12.13 cfs potential flow)
- **7=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.11 cfs @ 13.06 hrs HW=376.76' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.11 cfs @ 14.21 fps)
  - **2=Underdrain** (Passes 0.11 cfs of 0.56 cfs potential flow)
    - **3=Exfiltration** (Passes 0.11 cfs of 1.32 cfs potential flow)

Pond P10: SOIL FILTER



Summary for Pond P20: DRIP EDGE

Inflow Area = 0.512 ac,100.00% Impervious, Inflow Depth > 4.06" for 10 Year event
Inflow = 2.10 cfs @ 12.09 hrs, Volume= 0.173 af
Outflow = 0.29 cfs @ 12.60 hrs, Volume= 0.143 af, Atten= 86%, Lag= 30.9 min
Primary = 0.29 cfs @ 12.60 hrs, Volume= 0.143 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 374.20' @ 12.60 hrs Surf.Area= 0.195 ac Storage= 0.096 af

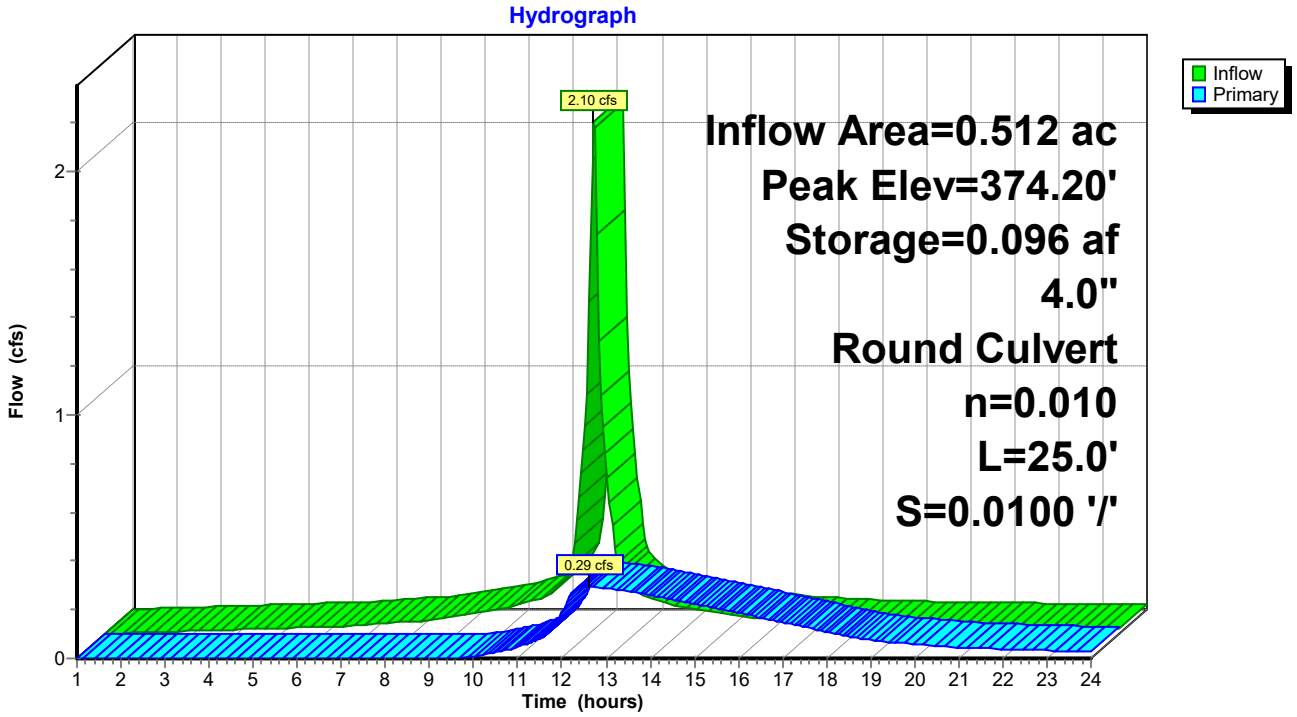
Plug-Flow detention time= 243.5 min calculated for 0.143 af (83% of inflow)
Center-of-Mass det. time= 173.9 min (924.1 - 750.2)

Volume	Invert	Avail.Storage	Storage Description
#1	373.00'	0.232 af	**5.00'W x 1,700.00'L x 3.00'H Prismatoid** 0.585 af Overall - 0.004 af Embedded = 0.581 af x 40.0% Voids
#2	373.25'	0.003 af	**4.0" Round Pipe Storage** Inside #1 L= 1,699.0' 0.004 af Overall - 0.2" Wall Thickness = 0.003 af
#3	373.25'	0.000 af	**4.0" Round Pipe Storage** Inside #1 L= 80.0' S= 0.0100 '/' 0.000 af Overall - 0.2" Wall Thickness = 0.000 af
		0.236 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	373.25'	**4.0" Round Culvert** L= 25.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 373.25' / 373.00' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf

Primary OutFlow Max=0.29 cfs @ 12.60 hrs HW=374.20' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 0.29 cfs @ 3.37 fps)

Pond P20: DRIP EDGE



Summary for Subcatchment 1:

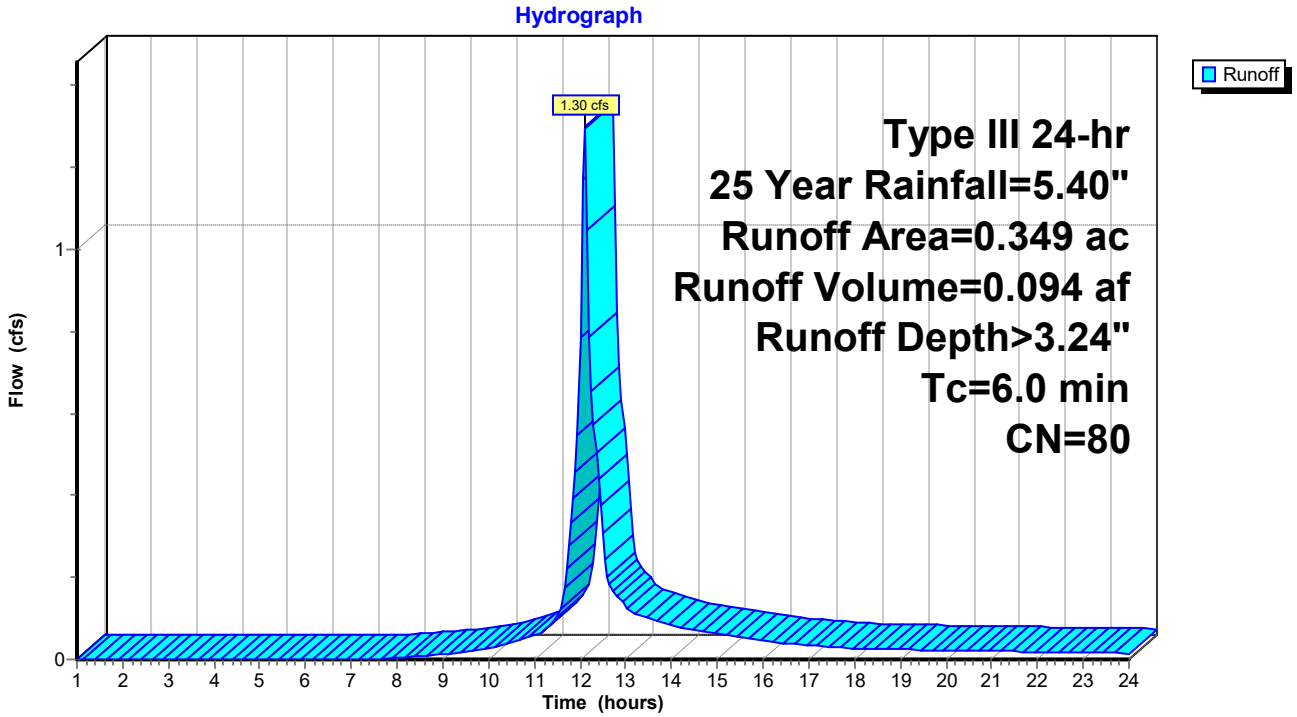
Runoff = 1.30 cfs @ 12.09 hrs, Volume= 0.094 af, Depth> 3.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 Year Rainfall=5.40"

Area (ac)	CN	Description
0.349	80	>75% Grass cover, Good, HSG D
0.349		100.00% Pervious Area

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

Subcatchment 1:



Summary for Subcatchment 2:

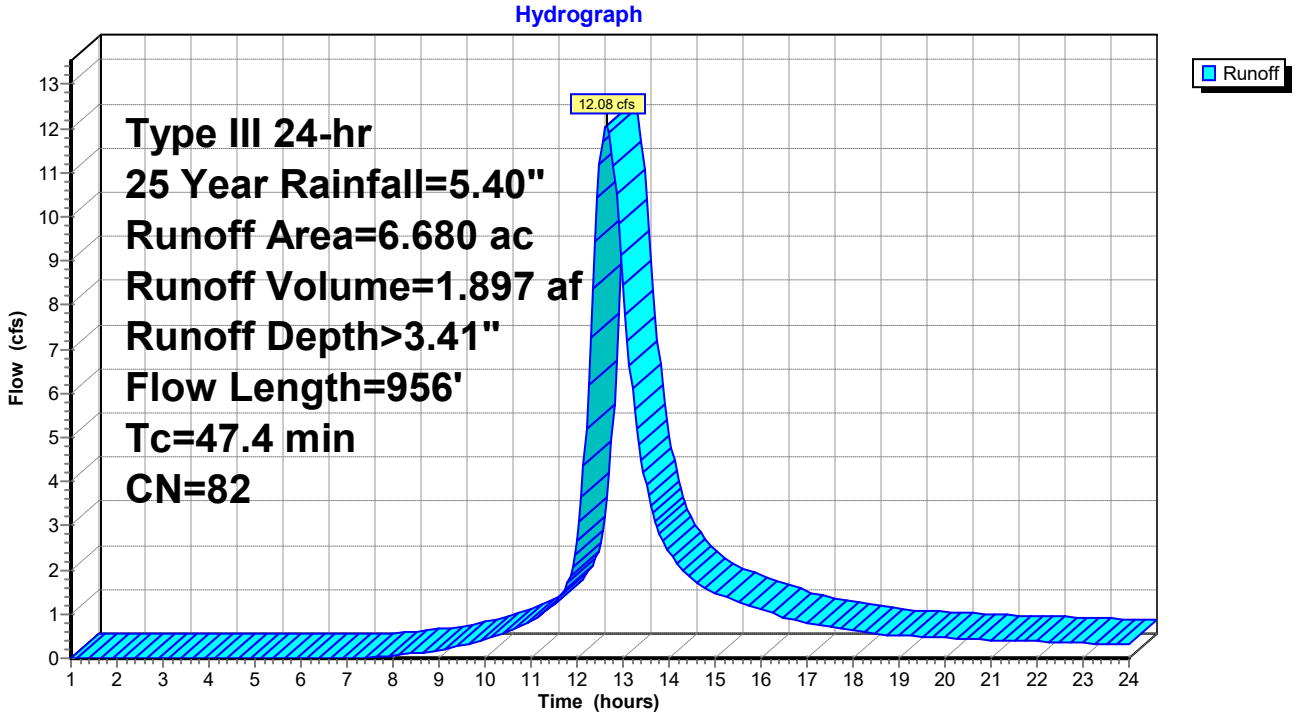
Runoff = 12.08 cfs @ 12.64 hrs, Volume= 1.897 af, Depth> 3.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 Year Rainfall=5.40"

	Area (ac)	CN	Description
*	1.300	98	Lot Impervious (Water Tower)
	1.700	80	>75% Grass cover, Good, HSG D
	3.680	77	Woods, Good, HSG D
	6.680	82	Weighted Average
	5.380		80.54% Pervious Area
	1.300		19.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
39.3	150	0.0430	0.06		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"
3.6	343	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.5	463	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
47.4	956	Total			

Subcatchment 2:



Summary for Subcatchment 2A:

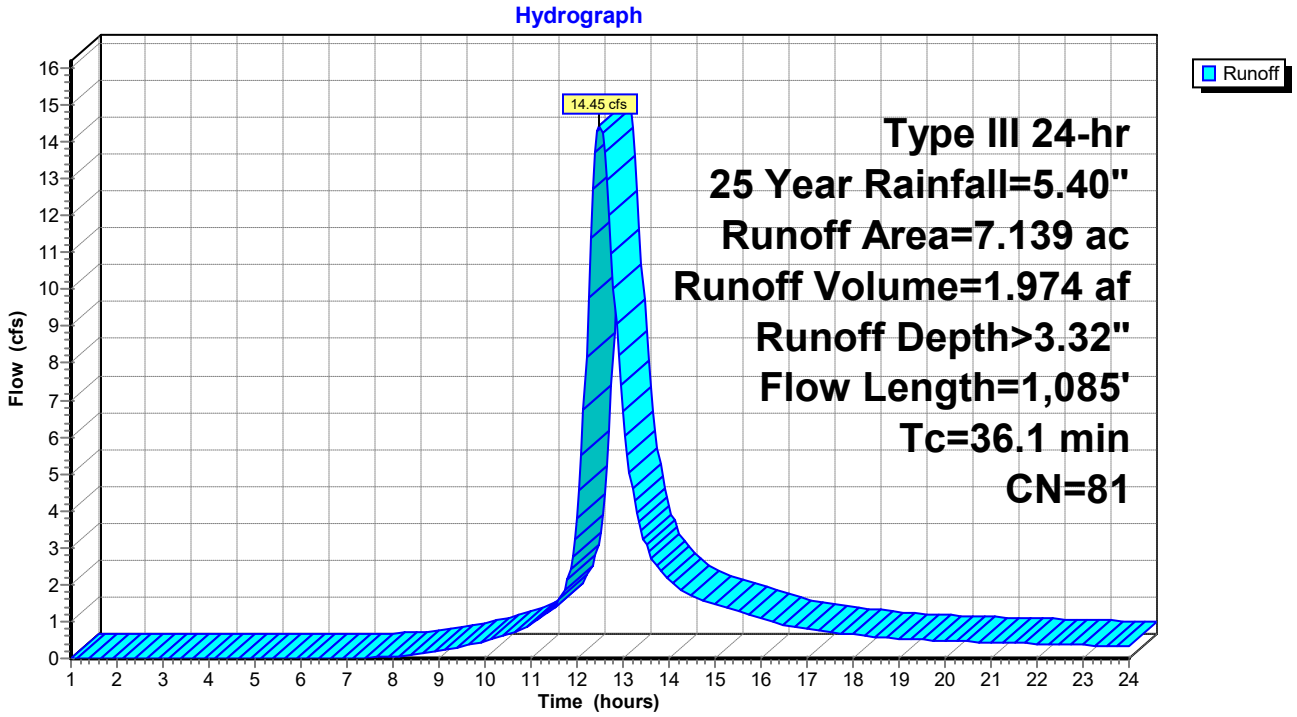
Runoff = 14.45 cfs @ 12.50 hrs, Volume= 1.974 af, Depth> 3.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 Year Rainfall=5.40"

	Area (ac)	CN	Description
*	1.203	98	Access Drive and Parking
	0.738	80	>75% Grass cover, Good, HSG D
	5.098	77	Woods, Good, HSG D
*	0.100	98	water tower
	7.139	81	Weighted Average
	5.836		81.75% Pervious Area
	1.303		18.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.7	150	0.0800	0.08		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"
2.4	215	0.0900	1.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.3	105	0.1300	5.41		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.1	30	0.0350	3.80		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.6	585	0.0050	3.72	4.57	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
36.1	1,085	Total			

Subcatchment 2A:



Summary for Subcatchment 2B:

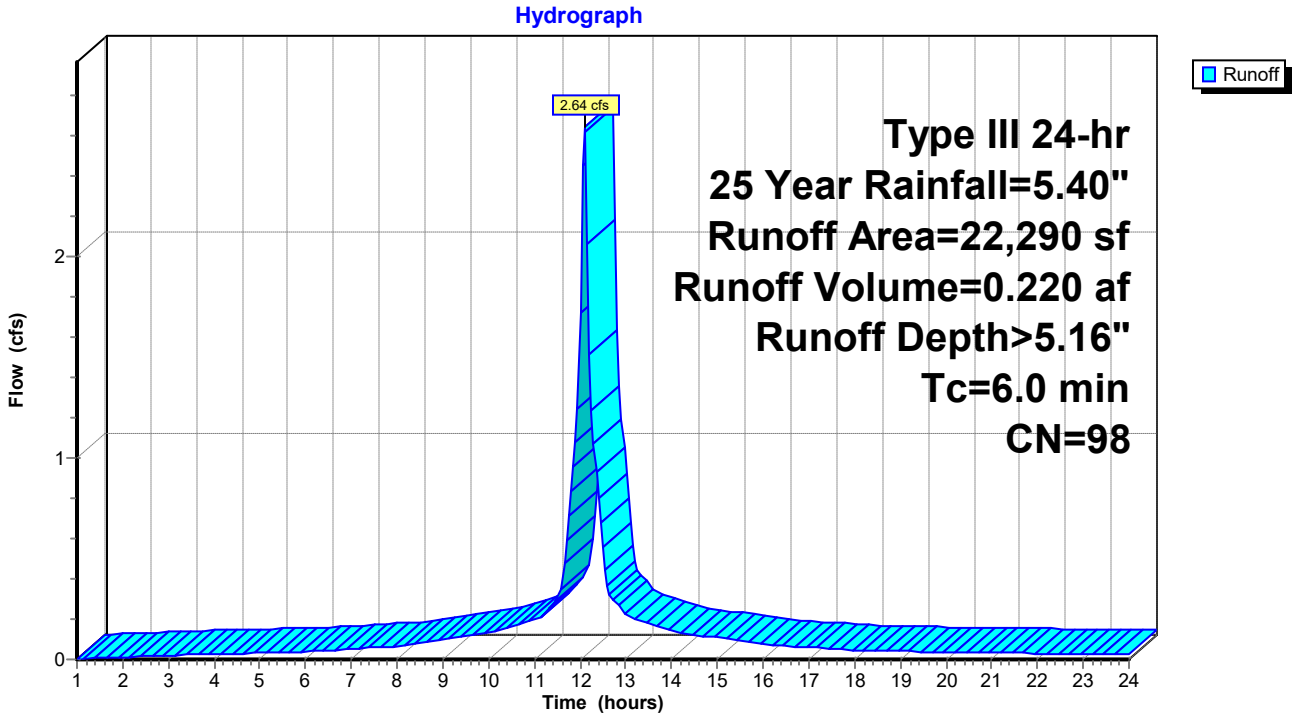
Runoff = 2.64 cfs @ 12.09 hrs, Volume= 0.220 af, Depth> 5.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 Year Rainfall=5.40"

	Area (sf)	CN	Description
*	22,290	98	Buildings
	22,290		100.00% Impervious Area

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

Subcatchment 2B:



Summary for Subcatchment 3:

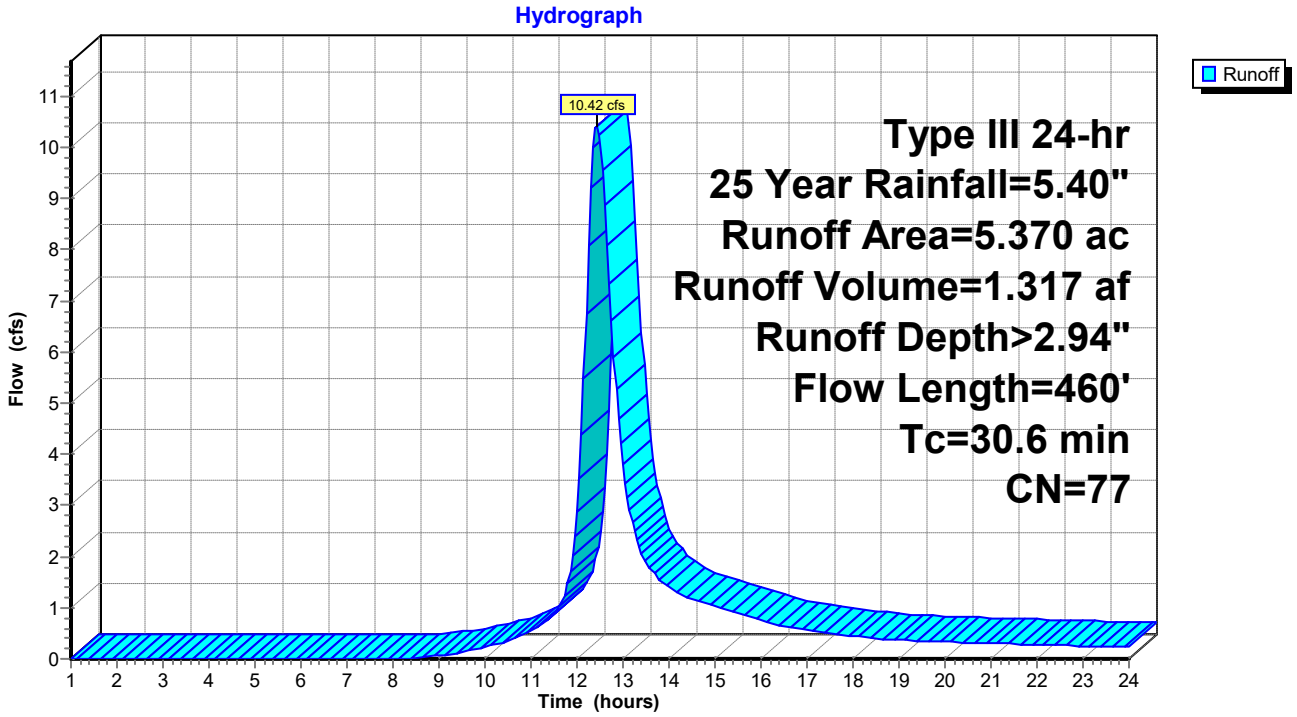
Runoff = 10.42 cfs @ 12.43 hrs, Volume= 1.317 af, Depth> 2.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 Year Rainfall=5.40"

	Area (ac)	CN	Description
*	0.000	98	Lot Impervious
	0.000	80	>75% Grass cover, Good, HSG D
	5.370	77	Woods, Good, HSG D
	5.370	77	Weighted Average
	5.370		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.1	150	0.1000	0.09		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"
2.5	310	0.1700	2.06		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
30.6	460	Total			

Subcatchment 3:

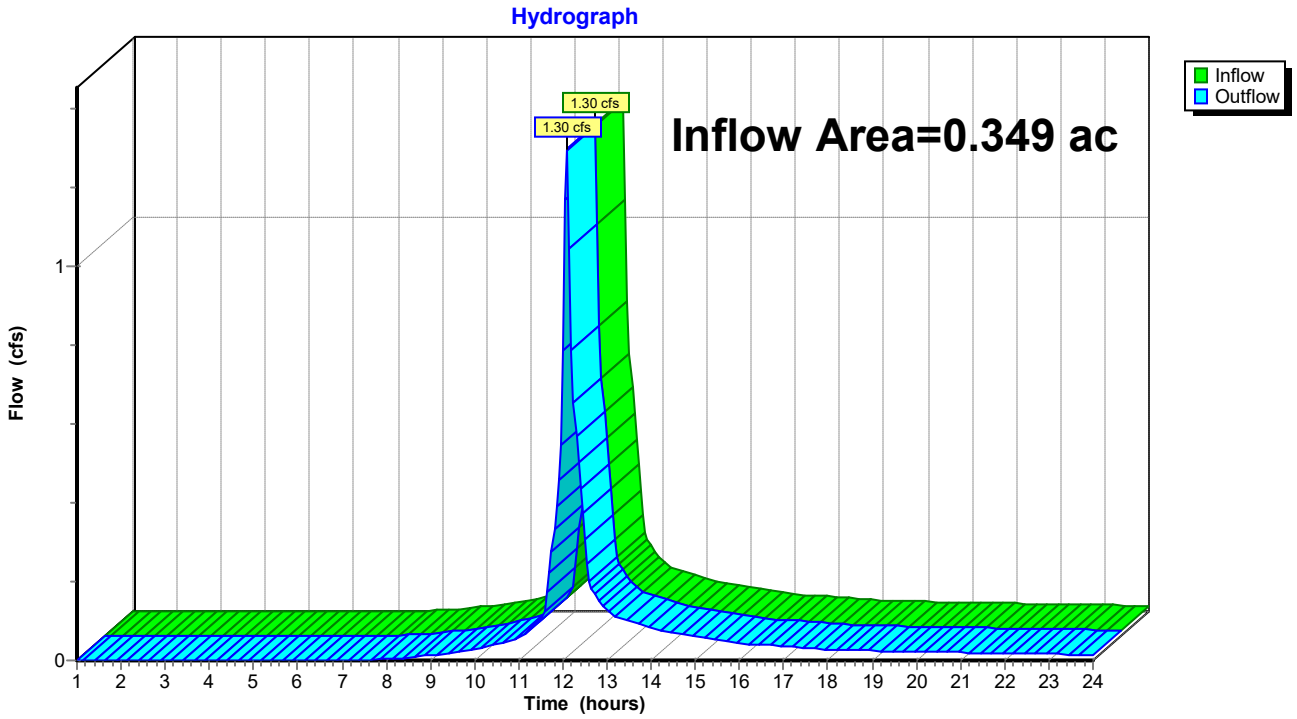


Summary for Reach SP#1: Study Point #1

Inflow Area = 0.349 ac, 0.00% Impervious, Inflow Depth > 3.24" for 25 Year event
Inflow = 1.30 cfs @ 12.09 hrs, Volume= 0.094 af
Outflow = 1.30 cfs @ 12.09 hrs, Volume= 0.094 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach SP#1: Study Point #1

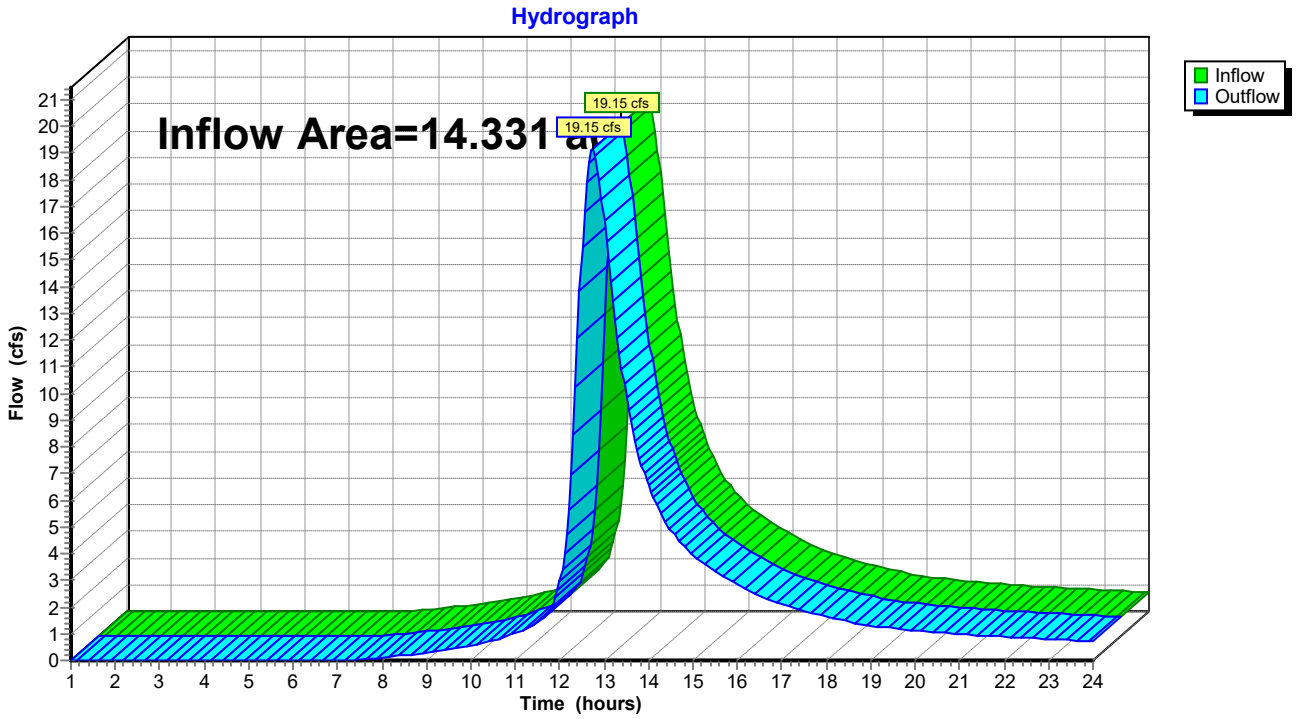


Summary for Reach SP#2: Study Point #2

Inflow Area = 14.331 ac, 21.73% Impervious, Inflow Depth > 3.13" for 25 Year event
Inflow = 19.15 cfs @ 12.74 hrs, Volume= 3.738 af
Outflow = 19.15 cfs @ 12.74 hrs, Volume= 3.738 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach SP#2: Study Point #2

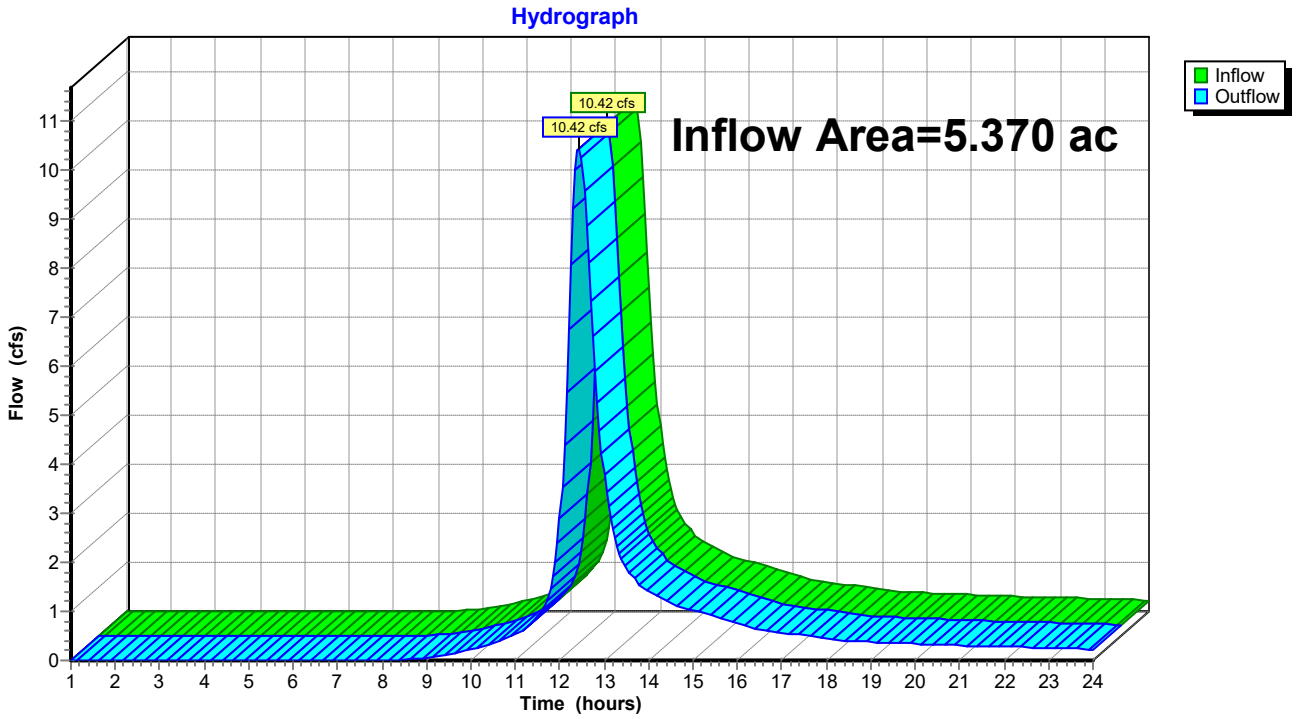


Summary for Reach SP#3: Study Point #3

Inflow Area = 5.370 ac, 0.00% Impervious, Inflow Depth > 2.94" for 25 Year event
Inflow = 10.42 cfs @ 12.43 hrs, Volume= 1.317 af
Outflow = 10.42 cfs @ 12.43 hrs, Volume= 1.317 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach SP#3: Study Point #3



Summary for Pond P10: SOIL FILTER

Inflow Area = 7.139 ac, 18.25% Impervious, Inflow Depth > 3.32" for 25 Year event
Inflow = 14.45 cfs @ 12.50 hrs, Volume= 1.974 af
Outflow = 7.76 cfs @ 12.93 hrs, Volume= 1.652 af, Atten= 46%, Lag= 25.8 min
Primary = 7.65 cfs @ 12.93 hrs, Volume= 1.519 af
Secondary = 0.12 cfs @ 12.93 hrs, Volume= 0.133 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 377.48' @ 12.93 hrs Surf.Area= 9,662 sf Storage= 31,857 cf

Plug-Flow detention time= 132.4 min calculated for 1.652 af (84% of inflow)
Center-of-Mass det. time= 67.1 min (906.6 - 839.5)

Volume	Invert	Avail.Storage	Storage Description
#1	371.49'	47,436 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

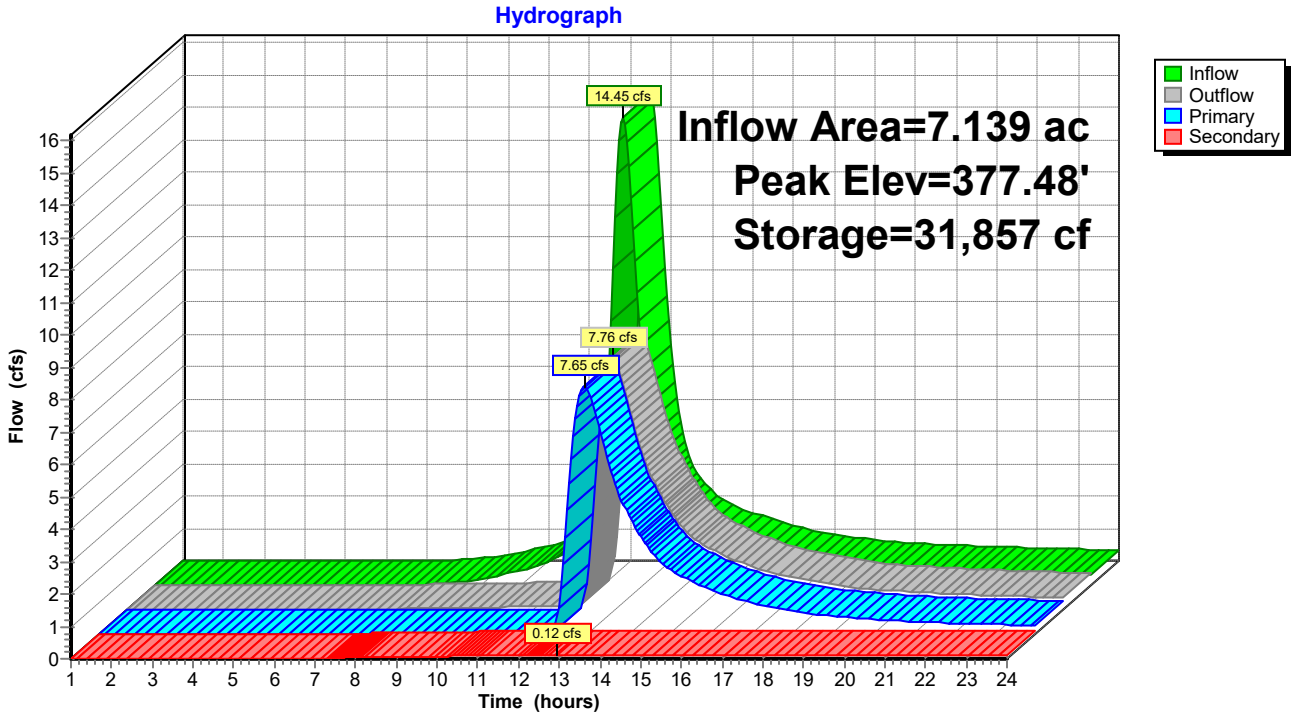
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
371.49	3,000	0.0	0	0
371.50	3,400	40.0	13	13
373.99	3,400	40.0	3,386	3,399
374.00	4,000	100.0	37	3,436
374.50	7,500	100.0	2,875	6,311
375.00	7,800	100.0	3,825	10,136
376.00	8,600	100.0	8,200	18,336
377.00	9,300	100.0	8,950	27,286
378.00	10,050	100.0	9,675	36,961
379.00	10,900	100.0	10,475	47,436

Device	Routing	Invert	Outlet Devices
#1	Secondary	368.00'	**1.2" Vert. Orifice/Grate** C= 0.600
#2	Device 1	370.00'	**4.0" Round Underdrain** L= 100.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 370.00' / 368.00' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 0.09 sf
#3	Device 2	371.49'	**2.400 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 370.00'
#4	Primary	373.00'	**15.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 373.00' / 372.00' S= 0.0250 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf
#5	Device 4	375.25'	**0.7' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)
#6	Device 5	374.50'	**24.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 374.50' / 374.50' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#7	Primary	377.50'	**15.0' long x 10.0' breadth Broad-Crested Rectangular Weir** 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=7.64 cfs @ 12.93 hrs HW=377.48' (Free Discharge)
- **4=Culvert** (Passes 7.64 cfs of 9.16 cfs potential flow)
  - **5=Sharp-Crested Vee/Trap Weir** (Weir Controls 7.64 cfs @ 4.89 fps)
    - **6=Culvert** (Passes 7.64 cfs of 16.81 cfs potential flow)
- **7=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.12 cfs @ 12.93 hrs HW=377.48' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.12 cfs @ 14.79 fps)
  - **2=Underdrain** (Passes 0.12 cfs of 0.59 cfs potential flow)
    - **3=Exfiltration** (Passes 0.12 cfs of 1.50 cfs potential flow)

Pond P10: SOIL FILTER



Summary for Pond P20: DRIP EDGE

Inflow Area = 0.512 ac,100.00% Impervious, Inflow Depth > 5.16" for 25 Year event
Inflow = 2.64 cfs @ 12.09 hrs, Volume= 0.220 af
Outflow = 0.34 cfs @ 12.62 hrs, Volume= 0.189 af, Atten= 87%, Lag= 32.3 min
Primary = 0.34 cfs @ 12.62 hrs, Volume= 0.189 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 374.49' @ 12.62 hrs Surf.Area= 0.195 ac Storage= 0.118 af

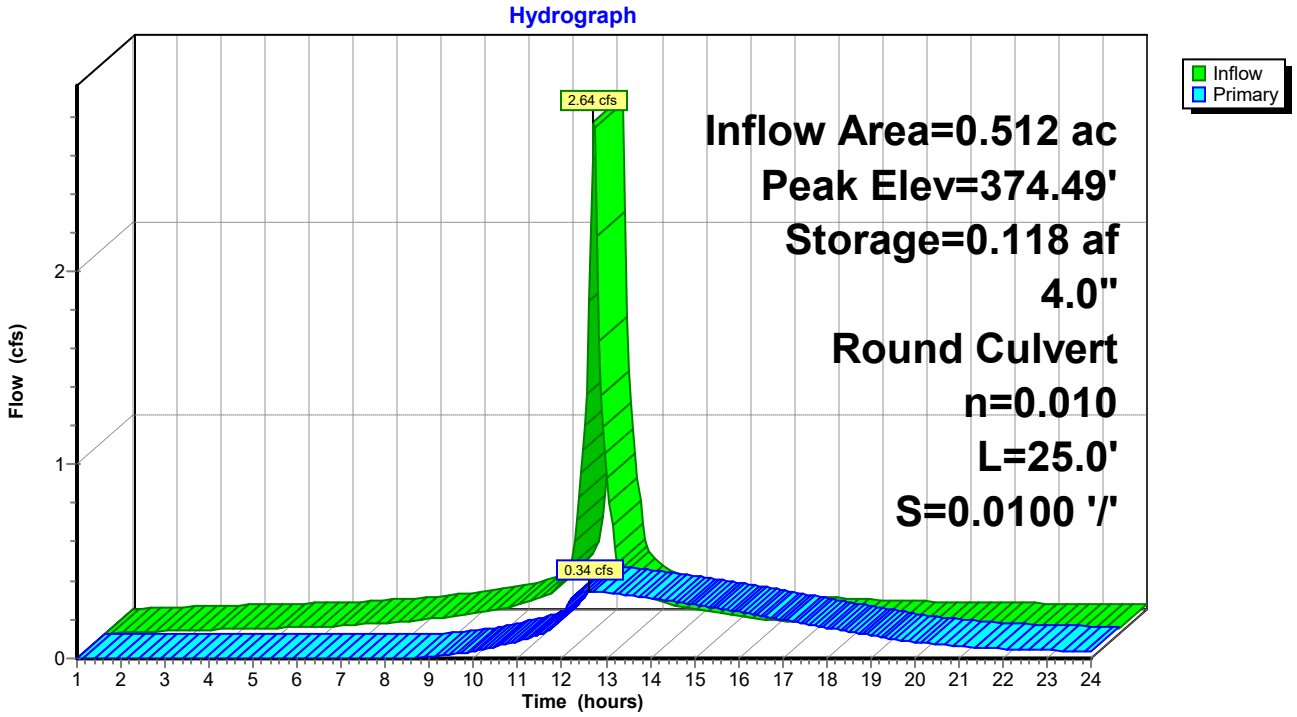
Plug-Flow detention time= 241.9 min calculated for 0.188 af (86% of inflow)
Center-of-Mass det. time= 179.6 min (926.0 - 746.4)

Volume	Invert	Avail.Storage	Storage Description
#1	373.00'	0.232 af	**5.00'W x 1,700.00'L x 3.00'H Prismatoid** 0.585 af Overall - 0.004 af Embedded = 0.581 af x 40.0% Voids
#2	373.25'	0.003 af	**4.0" Round Pipe Storage** Inside #1 L= 1,699.0' 0.004 af Overall - 0.2" Wall Thickness = 0.003 af
#3	373.25'	0.000 af	**4.0" Round Pipe Storage** Inside #1 L= 80.0' S= 0.0100 '/' 0.000 af Overall - 0.2" Wall Thickness = 0.000 af
		0.236 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	373.25'	**4.0" Round Culvert** L= 25.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 373.25' / 373.00' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf

Primary OutFlow Max=0.34 cfs @ 12.62 hrs HW=374.49' (Free Discharge)
1=Culvert (Inlet Controls 0.34 cfs @ 3.94 fps)

Pond P20: DRIP EDGE



Attachment 5

Utility Correspondence

Auburn Water and Sewer Districts

MEMO

To: Eric Cousens, John Blais, Craig Sweet

From: Michael Broadbent, Assistant Water and Sewer Superintendent

CC: Sid Hazelton, Tanya Johnson

Date: February 8, 2022

Re: 555 Court Street

The District has reviewed a utility plan prepared by Terradyn Consultants for a proposed development at 555 Court Street, in Auburn Maine.

Water;
This lot is currently served by the Water District, see the attached utility map and service record for the existing service. The existing service will have to abandoned at the main at the owner's expense. There is a proposed 8" connection to the District's main in Court Street. Because the proposed 8" main will be supplying multiple buildings with individual meters, the District feels it is in everyone's best interest that the District own all of the common water mains after they're installed. This means that the mains must be installed to our specifications and we will need a utility easement onto the private property. All of the proposed mains and connecting services must be pressure tested and sampled for the presence of bacteria prior to the activation of the mains. We do require that main materials be purchased through the District to ensure they meet our specifications.

Sewer;
This lot is not currently served by the District. The plans propose connection to the dead-end sewer main that currently sits on Pinnacle Drive. As with the water mains the sewer main has the potential to serve multiple connections and must be publicly owned by the District. So, it will have to be installed per our specifications and a utility easement given for the location.

Capacity;
The District has sufficient water and sewer capacity to serve this development. However, we are concerned with the water pressure at this location. I had the pressure tested at the corner of Pinnacle and Court Street today. There was 30 psi of static pressure. More extensive hydrant tests should be completed and compared to the proposed plans to determine if adequate pressure is available. It may be determined that we need to sign a limited-service agreement with the owner and they will have to install booster pumps to supply adequate pressure to the residence. The same maybe needed for the fire protection systems.

Attachment 6

Financial Capacity

First National Bank

223 Main Street
P.O. Box 940
Damariscotta, ME 04543
Phone: 207.563.3195 Ext: 2030
Fax: 207.563.3356
Email: todd.savage@thefirst.com

March 2, 2022

City of Auburn
60 Court Street
Auburn, Maine 04210

Re: Klimek / American Development Group LLC

To Whom It May Concern:

Please accept this letter as confirmation that the Klimek's / American Development Group LLC has the financial ability to proceed with their proposed Sixty (60) unit apartment project located at 555 Court Street in Auburn, Maine. First National Bank is excited to work with them on this project.

Sincerely,

Todd L. Savage
Senior Vice President
Senior Regional Commercial Loan Officer

Attachment 7

Cost Estimate

Schedule of Values

NAME: American Development Group DEVELOPMENT: Stable Ridge	3/1/2022
ADDRESS: 555 Court Street - Auburn	
DESCRIPTION	COST
SITEWORK	$ 985,000.00
FOUNDATION AND CONCRETE	$ 225,000.00
BUILDING MATERIALS	$ 2,000,000.00
MILLWORK - CABINETS & FINISHES	$ 200,000.00
FINISH CARPENTRY	$ 125,000.00
ROUGH CARPENTRY - FRAMING & DECKS	$ 400,000.00
SIDING MATERIAL & LABOR	$ 125,000.00
ROOFING	$ 40,000.00
PLUMBING / HEAT / AC / VENTS	$ 900,000.00
ELECTRICAL	$ 400,000.00
SPRINKLER SYSTEMS	$ 150,000.00
INSULATION	$ 140,000.00
DRYWALL	$ 425,000.00
PAINTING	$ 150,000.00
APPLIANCES	$ 250,000.00
FLOORING	$ 250,000.00
LAND	$ 280,000.00
GENERAL CONDITIONS SOFT COST	$ 100,000.00
PROFIT & OVERHEAD	$ 300,000.00
SUBTOTAL	$ 7,145,000.00

ADDITIONAL COSTS - INFLATION & SOFTCOSTS TO CARRY

Attachment 8

Traffic Study

Barton & Loguidice

Traffic Assessment

Date: February 22, 2022

To: Jeff Amos, P.E., President, Terradyn Consultants, LLC

From: William Bray, P.E.
Senior Traffic Engineer
Barton & Loguidice, LLC.

Re: 555 Court Street Apartment Complex, Auburn, Maine

~~~~~~

Introduction

The American Development Group is proposing development of a 60-unit residential apartment complex at 555 Court Street in the City of Auburn. (Refer to Figure 1 below for location of proposed project.)

The purpose of this traffic assessment is to evaluate and measure the level of impact on traffic operations and safety resulting with the development of the proposed project. Site generated trip projections are provided for "key" peak hour time periods throughout a typical week; road safety conditions were determined based upon a review of MaineDOT's latest road safety data and intersection sight distance was field reviewed and measured to ensure safe and acceptable sight distance is provided at the proposed site driveway intersection with Court Street.

Figure 1 Proposed Development Site


~~~~~~

Site Trip Generation

Daily and peak hour trip generation was determined for the proposed project based upon trip tables presented in the tenth edition of the Institute of Transportation Engineers (ITE) "**TRIP GENERATION**" handbook. The ITE publication provides numerous land use categories and the average volume of trips generated by each category.

Site trip estimates for the 555 Court Street Residential Apartment Project; are based upon LUC #221 – Multifamily Housing (Mid-Rise); which is described in the ITE publication as: multi-family housing including apartments, townhouses, and/or condominiums located within the same building with at least three other dwelling units and that have between three and ten levels. Calculation of the total number of trips generated per each corresponding time period are summarized below in Table 1.1.

Trip Generation - Court St. Subdivision
555 Court St., Auburn ME

Table 1.1
ITE Trip Generation Calculations

Land Use	Multifamily Housing (Mid-Rise) - LUC 221					
Time Period	**Size # of units**	**Trip Generation Rate (Trips Per Unit)**	**Trips Generated**	**Distribution Entering / Exiting**	**Enter**	**Exit**
Weekday	60	5.44	327	50% / 50%	164	163
AM Weekday Peak Hour (Street)	60	0.36	22	26% / 74%	6	16
PM Weekday Peak Hour (Street)	60	0.44	27	61% / 39%	16	11
AM Weekday Peak Hour (Generator)	60	0.32	20	27% / 73%	5	15
PM Weekday Peak Hour (Generator)	60	0.41	25	60% / 40%	15	10
Saturday	60	4.91	295	50% / 50%	148	147
Saturday Peak Hour	60	0.44	27	49% / 51%	13	14
Sunday	60	4.09	246	50% / 50%	123	123
Sunday Peak Hour	60	0.39	24	62% / 38%	15	9

Notes:
1. ***For the purpose of the trip generation calculation, any calculated partial trips were rounded up to the next whole number.***

As presented in the preceding table, this development will generally be a low trip generator; creating a maximum of 27 PM peak hour trips.

Vehicle Sight Distance

The Maine Department of Transportation's Highway Entrance and Driveway Rules require the following sight distances for a non-mobility roadway:

B&L

Sight Distance Standards

Speed Limit	Sight Distance
25 mph	**200 feet**
30	250
35	305
40	360
45	425
50	495

The section of Court Street fronting the proposed residential apartment development is presently posted at 25mph, which requires an unobstructed sight distance of 200-feet. MaineDOT's Rules and Regulations require sight distance to be measured in accordance with the following procedures: *"Sight distance is measured to and from the point on the centerline of the proposed access that is located 10-feet from the edge of traveled way. The height of the hypothetical person's view is considered to be 3½ feet above the pavement and the height of the object being viewed is considered to be 4¼ feet above the pavement."*

Our field measurements looking both left and right from the proposed site driveway entrance directionally onto Court Street indicate existing sight distances are in excess of the requirements based on a posted speed of 25mph. Looking to the left from the site entrance we measured a sight distance in excess of 350 ft. and a similar measurement of 350-feet was recorded to right.

Existing Road Safety Conditions

The Maine Department of Transportation's (MaineDOT) Accident Records Section provided the latest three-year (2018 through 2020) crash data for the section of Court Street between Park Avenue and Fairview Avenue, a distance of approximately 0.40 miles. Their report is presented as follows:

2018 -2020 Traffic Accident Summary

Location	Total Crashes	Critical Rate Factor
1. Court Street @ Park Avenue	14	0.71
2. Court Street @ Falcon Drive	1	0.18
3. Court Street btw. Falcon Drive and Fairview Avenue	5	0.26

The MaineDOT considers any roadway intersection or segment a high crash location if both of the following criteria are met:

- ***8 or more accidents***
- ***A Critical Rate Factor greater than 1.00***

As the data presented in the chart shows; there are no reported high crash locations within the defined study area.

Summary

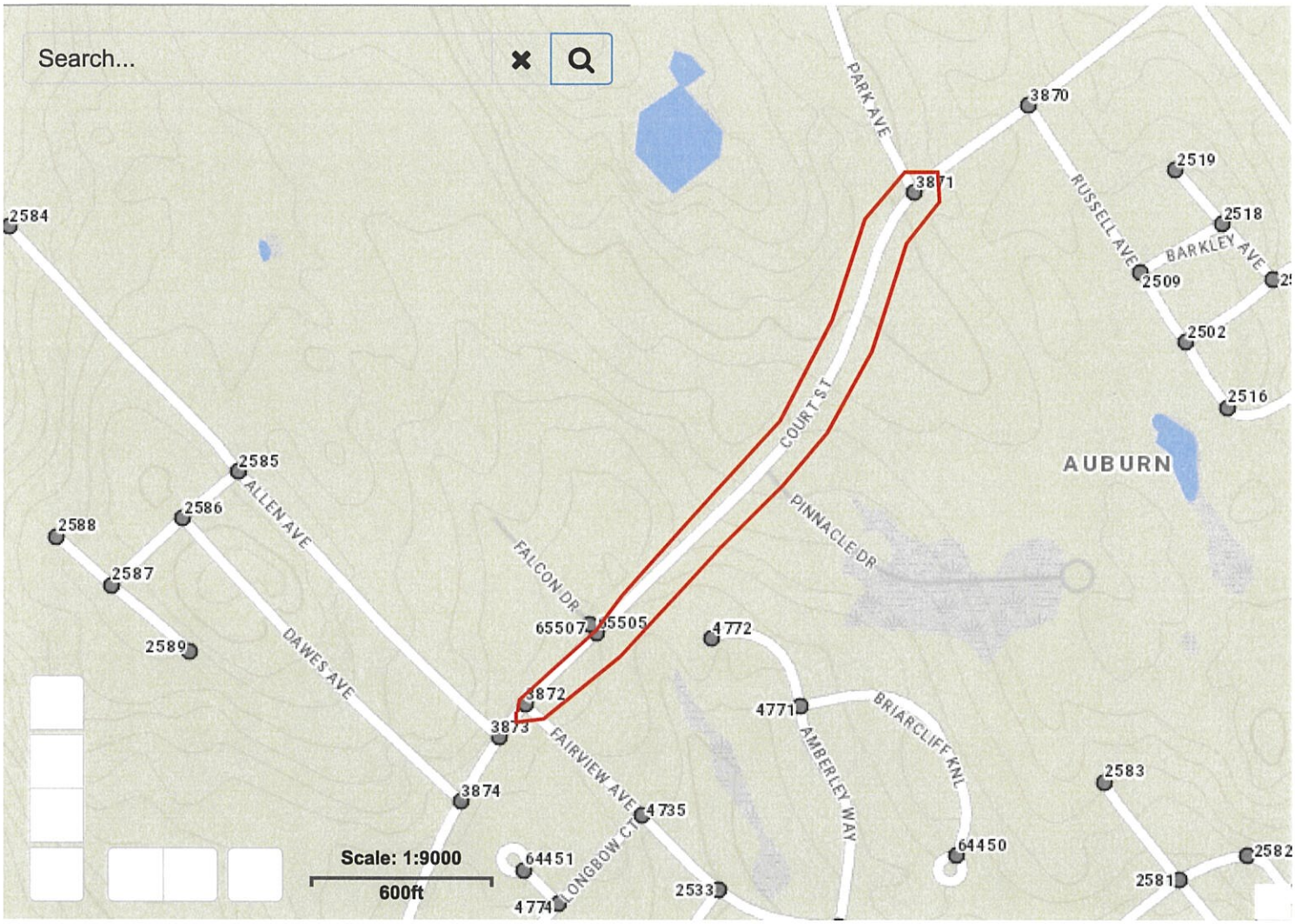
- The expected trip generation for the proposed development is estimated to be 327 weekday daily trips, 295 Saturday trips and a lower volume of 246 daily trips on Sunday. The project generates a total of 22 trips during the weekday AM peak hour and 27 trips during the weekday PM and Saturday peak hours.

- A review of Maine DOT Crash data available for the latest three-year period (2018 – 2020) for the section of Court Street between Fairview and Park Avenues, a distance of approximately 0.40 miles revealed no high crash locations (HCL's).

- Vehicle sightlines measured in both directions from the proposed apartment entrance approach at Court Street meets and exceeds, by a considerable distance, the non-mobility highway sight distance standard (200-feet) for a posted speed limit of 25mph.

APPENDIX

Appendix A - Maine DOT Crash Data


Search...
PARK AVE
3870
3871
2519
2518
RUSSELL AVE
BARKLEY AVE
2509
2502
2516
2584
COURT ST
AUBURN
2585
ALLEN AVE
2586
2588
2587
2589
DAWES AVE
PINNACLE DR
FALCON DR
65507
65505
4772
3872
3873
4771
AMBERLEY WAY
BRIARCLIFF KNL
FAIRVIEW AVE
3874
4735
2583
64450
2582
2581
64451
LONGBOW CT
2533
4774
Scale: 1:9000
600ft

Maine Department Of Transportation - Office of Safety, Crash Records Section

Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

☑ **Crash Summary I** ☐ **Section Detail** ☑ **Crash Summary II** ☐ **1320 Public** ☐ **1320 Private** ☐ **1320 Summary**

REPORT DESCRIPTION

Auburn
Court St. from Park Ave. to Fairview Ave.

REPORT PARAMETERS

Year 2018, Start Month 1 through Year 2020 End Month: 12

Route: **0110079** Start Node: **3871** Start Offset: **0** ☐ **Exclude First Node**
End Node: **3872** End Offset: **0** ☐ **Exclude Last Node**

Crash Summary I

Nodes

Node	Route - MP	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
3872	0110079 - 1.17	Int of COURT ST FAIRVIEW AV	2	0	0	0	0	0	0	0.0	4.803	0.00 Statewide Crash Rate:	0.40 0.16	0.00
3871	0110079 - 0.77	Int of COURT ST PARK AV	9	14	0	0	1	3	10	28.6	4.942	0.94 Statewide Crash Rate:	1.32 0.77	0.71
65505	0110079 - 1.11	Int of COURT ST FALCON DR	2	1	0	0	0	0	1	0.0	4.768	0.07 Statewide Crash Rate:	0.40 0.16	0.00
Study Years:	3.00	**NODE TOTALS:**		15	0	0	1	3	11	26.7	14.513	0.34	0.59	0.58

Crash Summary I

Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
3871	65505	3121567	0 - 0.34	0110079 - 0.77	0.34	2	5	0	0	0	2	3	40.0	0.01569	106.25	401.76	0.00
Int of COURT ST PARK AV				RD INV 01 10079											Statewide Crash Rate: 231.65		
65505	3872	3129777	0 - 0.06	0110079 - 1.11	0.06	2	0	0	0	0	0	0	0.0	0.00276	0.00	602.08	0.00
Int of COURT ST FALCON DR				RD INV 01 10079											Statewide Crash Rate: 231.65		
Study Years: 3.00				**Section Totals:**	0.40		5	0	0	0	2	3	40.0	0.01845	90.35	389.28	0.23
				Grand Totals:	0.40		20	0	0	1	5	14	30.0	0.01845	361.39	539.83	0.67

Attachment 9

Turning Figures

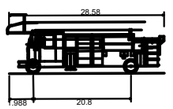
N/F
John P. Daly
Jane L. Daly
501 Court Street
Map 229 Lot 8
Bk #, Pg #

N/F
isees of Robert K. Berry
555 Court Street
Map 229 Lot 7
Bk 1106, Pg 42

COURT STREET

GRID NORTH

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch =40 ft.



E-ONE Fire Auburn	
Overall Length	28.580ft
Overall Width	8.167ft
Overall Body Height	9.175ft
Min Body Ground Clearance	0.666ft
Track Width	6.880ft
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	35.000ft

DATE: 3/4/2022
P.E.: CRAIG M. SWEET

NO.	DATE	REVISIONS	APP'D BY
1	4/5/2022	REVISED PER CITY STAFF COMMENTS	

565 CONGRESS STREET
SUITE 201
PORTLAND, ME 04102

41 CAMPUS DRIVE
SUITE 301
NEW GLOUCESTER, ME 04260

OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com

TERRADYN CONSULTANTS, LLC

Civil Engineering | Land Planning | Stormwater Design | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
STABLE RIDGE APARTMENTS
555 COURT STREET, AUBURN, MAINE

SHEET TITLE:
TURNING FIGURES

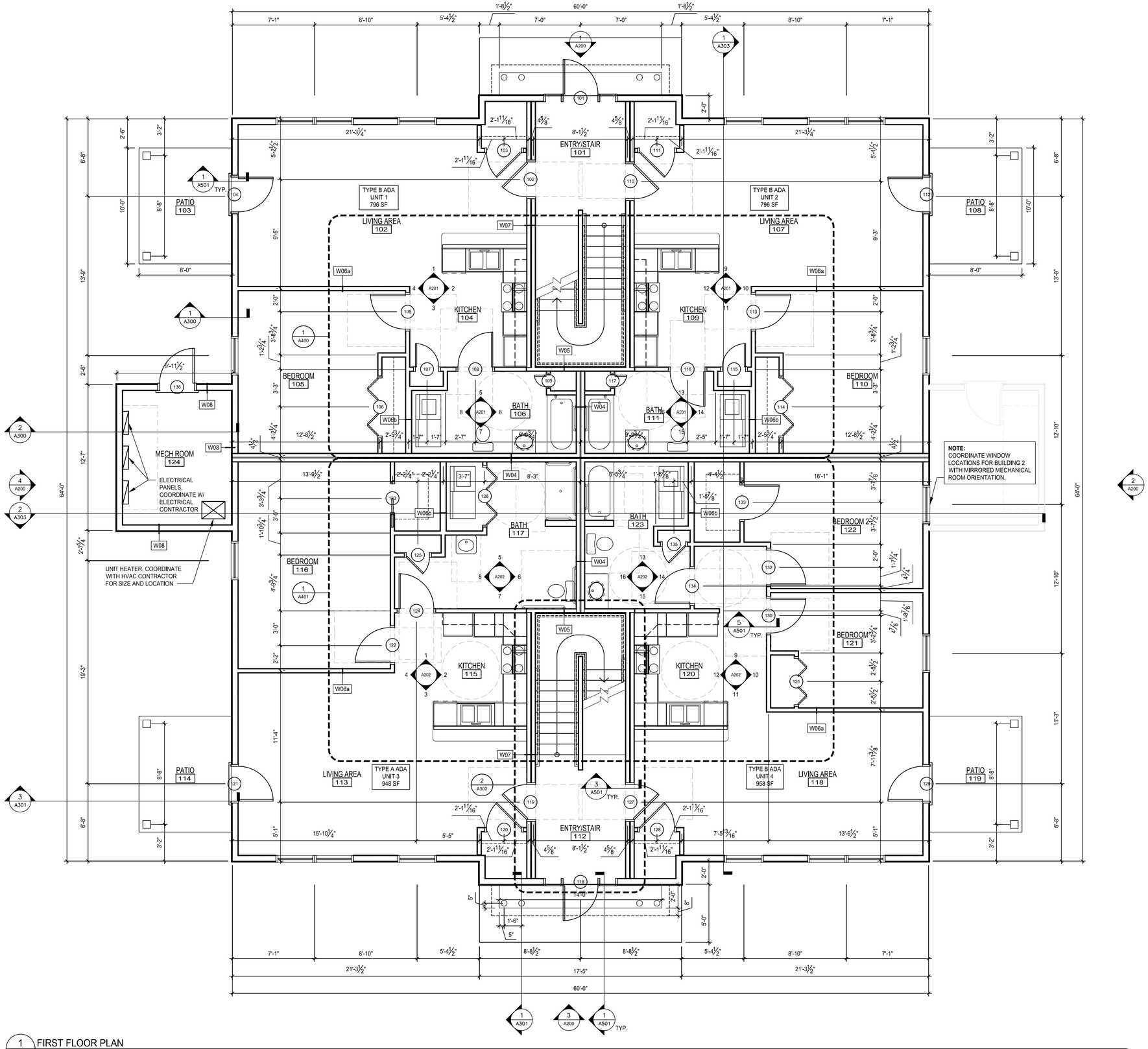
CLIENT:
AMERICAN DEVELOPMENT GROUP
PO. BOX 1495
NAPLES, MAINE 04055

DATE:	1/3/2022
SCALE:	1"=40'
DESIGNED:	CMS
JOB NO:	21-81
SHEET	FIG 1

C:\JOD\Terradyn Consultants\Project Folders - Documents\2021 Jobs\21-81 555 Court Street\CAD\Permitting\21-81 B.dwg

Attachment 10

Building Plans



1 A100 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

Grand View Court

555 Court St.
FOR
American Development Group
411 Hempstead Turnpike Suite 200 West Hempstead, NY 11552

DIRIGO ARCHITECTURAL
ENGINEERING • CONSTRUCTION MANAGEMENT
7 COBBLESTONE WAY, SUITE 2
TURNER, MAINE 04282
PH: (207) 225-3040
WS: DIRIGOAE.COM

SIGNED COPY OF DRAWING ON FILE AT DIRIGO A/E OFFICE

DRAFT

NOT FOR CONSTRUCTION

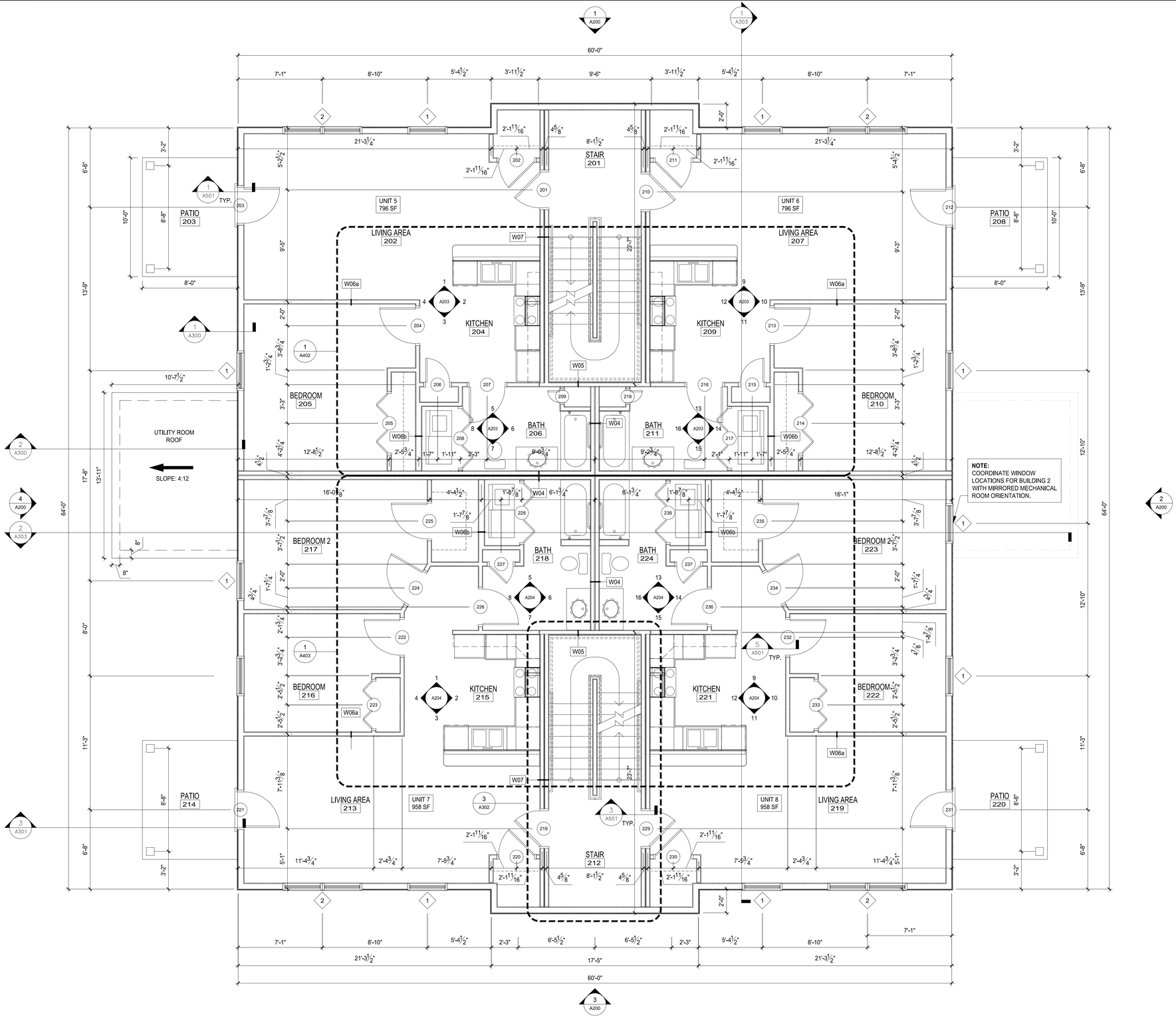
FIRST FLOOR PLAN

REV.	DATE	DESCRIPTION
0	1/3/22	ISSUED FOR 25% REVIEW

DRAWN BY: DLB & CJL | CHECKED BY: TWP

SCALE: AS NOTED
DATE: 12/19/21
PROJECT: 21-046

SHEET NO.
A100



1 A101 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"

GRAND VIEW COURT
555 Court St.
FOR
American Development Group
411 Hempstead Turnpike Suite 200 West Hempstead, NY 11552

DIRIGO ARCHITECTURAL
ENGINEERING • CONSTRUCTION MANAGEMENT
7 COBBLESTONE WAY, SUITE 2
TURNER, MAINE 04282
PH: (207) 225-3040
WS: DIRIGOAE.COM

SIGNED COPY OF DRAWING ON FILE AT DIRIGO A/E OFFICE

DRAFT

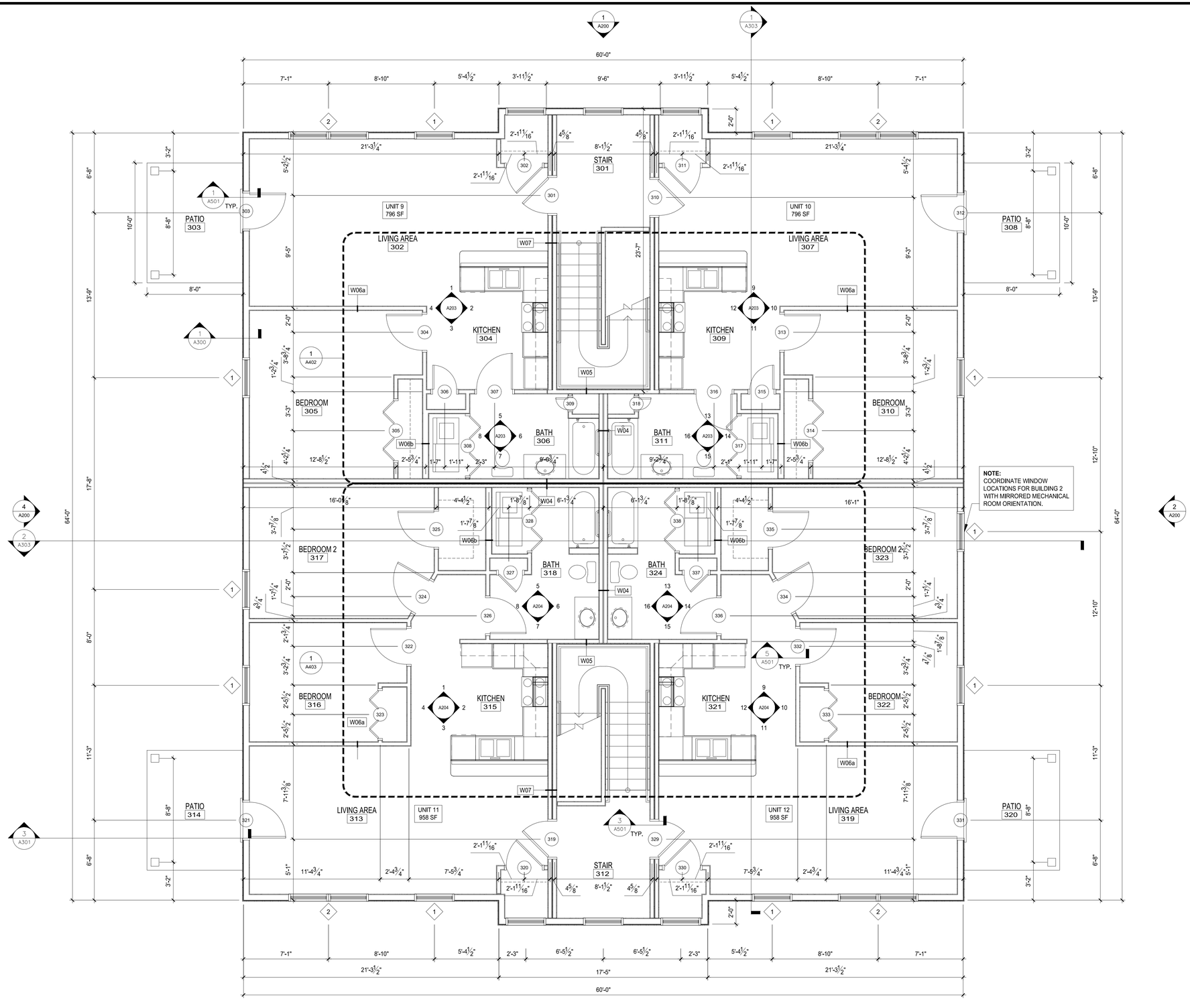
NOT FOR CONSTRUCTION

SECOND FLOOR PLAN

REV.	DATE	DESCRIPTION
0	1/3/22	ISSUED FOR 25% REVIEW

DRAWN BY: DLB & CJL | CHECKED BY: TWP

SCALE: AS NOTED
DATE: 12/19/21
PROJECT: 21-046
SHEET NO.
A101



1 A102 THIRD FLOOR PLAN
SCALE: 1/4" = 1'-0"

GRAND VIEW COURT

555 Court St.

FOR

American Development Group

411 Hempstead Turnpike Suite 200 West Hempstead, NY 11552

DIRIGO ARCHITECTURAL
ENGINEERING • CONSTRUCTION MANAGEMENT
7 COBBLESTONE WAY, SUITE 2
TURNER, MAINE 04282
PH: (207) 225-3040
WS: DIRIGOAE.COM

SIGNED COPY OF DRAWING ON FILE AT DIRIGO A/E OFFICE

STATE OF MAINE
THOMAS W. PERKINS
No. 11710
LICENSED PROFESSIONAL ENGINEER

9/9/20

THIRD FLOOR PLAN

REV.	DATE	DESCRIPTION
0	7/28/20	ISSUED FOR PERMIT
1	9/9/20	RE: ISSUED FOR PERMIT
2	6/9/21	SUPPLEMENTAL INSTRUCTION #1

DRAWN BY: DLB & CJL | CHECKED BY: TWP

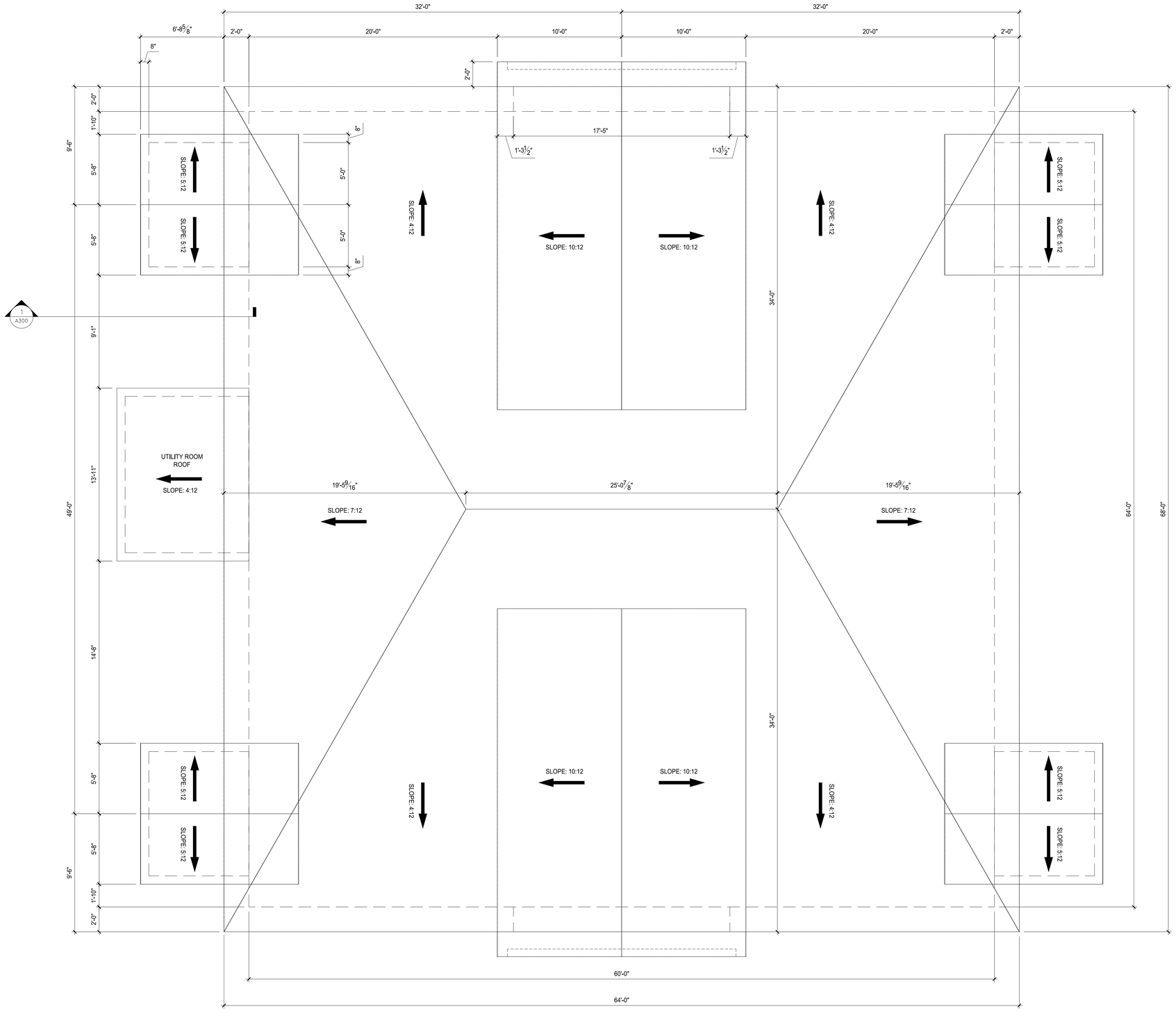
SCALE: AS NOTED

DATE: 12/19/21

PROJECT: 21-046

SHEET NO.

A102



1 A103 ROOF PLAN
SCALE: 1/4" = 1'-0"

GRAND VIEW COURT
555 Court St.
FOR
American Development Group
411 Hempstead Turnpike Suite 200 West Hempstead, NY 11552

DIRIGO ARCHITECTURAL
ENGINEERING • CONSTRUCTION MANAGEMENT
7 COBBLESTONE WAY, SUITE 2
TURNER, MAINE 04282
PH: (207) 225-3040
WS: DIRIGOAE.COM

SIGNED COPY OF DRAWING ON FILE AT DIRIGO A/E OFFICE

DRAFT

NOT FOR CONSTRUCTION

ROOF PLAN

REV	DATE	DESCRIPTION
0	1/3/22	ISSUED FOR 25% REVIEW

DRAWN BY: DLB & CJL | CHECKED BY: TWP

SCALE:	AS NOTED
DATE:	12/19/21
PROJECT:	21-046

SHEET NO.

A103

1 A200 NORTH ELEVATION
SCALE: 1/8" = 1'-0"

2 A200 EAST ELEVATION
SCALE: 1/8" = 1'-0"

3 A200 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"

4 A200 WEST ELEVATION
SCALE: 1/8" = 1'-0"

GRAND VIEW COURT

555 Court St.
FOR
American Development Group
411 Hempstead Turnpike Suite 200 West Hempstead, NY 11552

DIRIGO ARCHITECTURAL
ENGINEERING • CONSTRUCTION MANAGEMENT
7 COBBLESTONE WAY, SUITE 2
TURNER, MAINE 04282
PH: (207) 225-3040
WS: DIRIGOAE.COM

SIGNED COPY OF DRAWING ON FILE AT DIRIGO A/E OFFICE

DRAFT

NOT FOR CONSTRUCTION

EXTERIOR ELEVATIONS

REV.	DATE	DESCRIPTION
0	1/3/22	ISSUED FOR 25% REVIEW

DRAWN BY: DLB & CJL | CHECKED BY: TWP

SCALE: AS NOTED
DATE: 12/19/21
PROJECT: 21-046

SHEET NO.
A200