Section 15: MDOT Driveway Permits

Rita Sawyer

Subject: FW: Lots 6, 7 & 8 Shared Driveway

From: Fontaine, Anthony [mailto:Anthony.Fontaine@maine.gov]
Sent: Tuesday, May 28, 2019 11:02 AM
To: Greer, Tom
Subject: RE: Lots 6, 7 & 8 Shared Driveway

Permit 26800 (lot 7) is registered for 5 or fewer dwellings; accordingly, this covers the 3 proposed homes and should satisfy the town. I believe you should now have a permit for each driveway that satisfies our requirements as well as the town. If you feel otherwise, let me know.

From: Greer, Tom [mailto:tgreer@walsh-eng.com]
Sent: Tuesday, May 28, 2019 9:27 AM
To: Fontaine, Anthony <Anthony.Fontaine@maine.gov>
Subject: Re: Lots 6, 7 & 8 Shared Driveway

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.
thanks I appreciate your help.

On Tue, May 28, 2019, 9:09 AM Fontaine, Anthony <Anthony.Fontaine@maine.gov> wrote:

> Thanks Tom,
>
> I'll review this week. Was out of the office last week and don't recall the permit details but think I approved each location for 5 or fewer dwellings. If that is the case AND this is corresponds to the location approved the week before, it should be okay. Again, I'll review this week and confirm.
>
> ---
>
> **From:** Tom Greer [mailto:tgreer@walsh-eng.com]
> **Sent:** Monday, May 20, 2019 11:19 AM
> **To:** Fontaine, Anthony <Anthony.Fontaine@maine.gov>
> **Cc:** Nathan Wadsworth <nwadsworth@wadsworthwoodlands.com>; Ralph Austin <rwa@woodedlaw.com>
> **Subject:** FW: Lots 6, 7 & 8 Shared Driveway
>
> **EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.**
> Hi Tony,
> Thanks for following up on lot 8. We had a location in the middle of the lot but it had less than the town required 450 feet. We have added lot 8 to the driveway of lot 7, see attached plan. Does that work for you?
>
> **Tom Greer, PE**
> **Walsh Engineering Associates, Inc.**
> Office: 207.553.9898
> tgreer@walsh-eng.com

Maine Department of Transportation

Janet T. Mills
Governor

Driveway/Entrance Permit

Bruce A. Van Note
Commissioner

Permit Number: 26798 - Entrance ID: 1

OWNER

Name: **NATESELLSREALESTATE, LLC**
Address: **P.O. Box 321**
Cornish, ME 04020
Telephone:

Date Printed: **May 15, 2019**

LOCATION

Route:	**0160X, North Road**
Municipality:	**Parsonsfield**
County:	**York**
Tax Map:	**R8** Lot Number: **37**
Culvert Size:	**15 inches**
Culvert Type:	**plastic**
Culvert Length:	**26 feet**
Date of Permit:	**May 15, 2019**
Approved Entrance Width:	**15 feet**

In accordance with rules promulgated under 23 M.R.S.A., Chapter 13, Subchapter I, Section 704, the Maine Department of Transportation (MaineDOT) approves a permit and grants permission to perform the necessary grading to construct, in accordance with sketch or attached plan, **a Driveway** to **Five or fewer single family dwellings** at a point **1473** feet **East** from **Hussey Road**, subject to the Chapter 299 Highway Driveway and Entrance Rules, standard conditions and special conditions (if any) listed below.

Conditions of Approval:

This Permittee acknowledges and agrees to comply with the Standard Conditions and Approval attached hereto and to any Specific Conditions of Approval shown here.

(G = GPS Location; W = Waiver; S = Special Condition)

G - THE ENTRANCE SHALL BE LOCATED AT GPS COORDINATES: 43.746790N, -70.902900W.

S - In the town of Parsonsfield on the northerly side of Route 160 / North Road, the centerline being approxmately 1473 feet easterly of the centerline of Hussey Road and approximately 36 feet westerly of utility pole 105

S - The culvert shall be HDPE smoothbore plastic pipe Ditching is required, of sufficient length and depth so as to provide gradual water flow into the pipe, leave no standing water on the outlet end of the pipe, and provide sufficient cover over the pipe as recommended by the manufacturer The Property Owner must contact MaineDOT at (207) 324-5322 prior to driveway and culvert installation to arrange for an inspection.

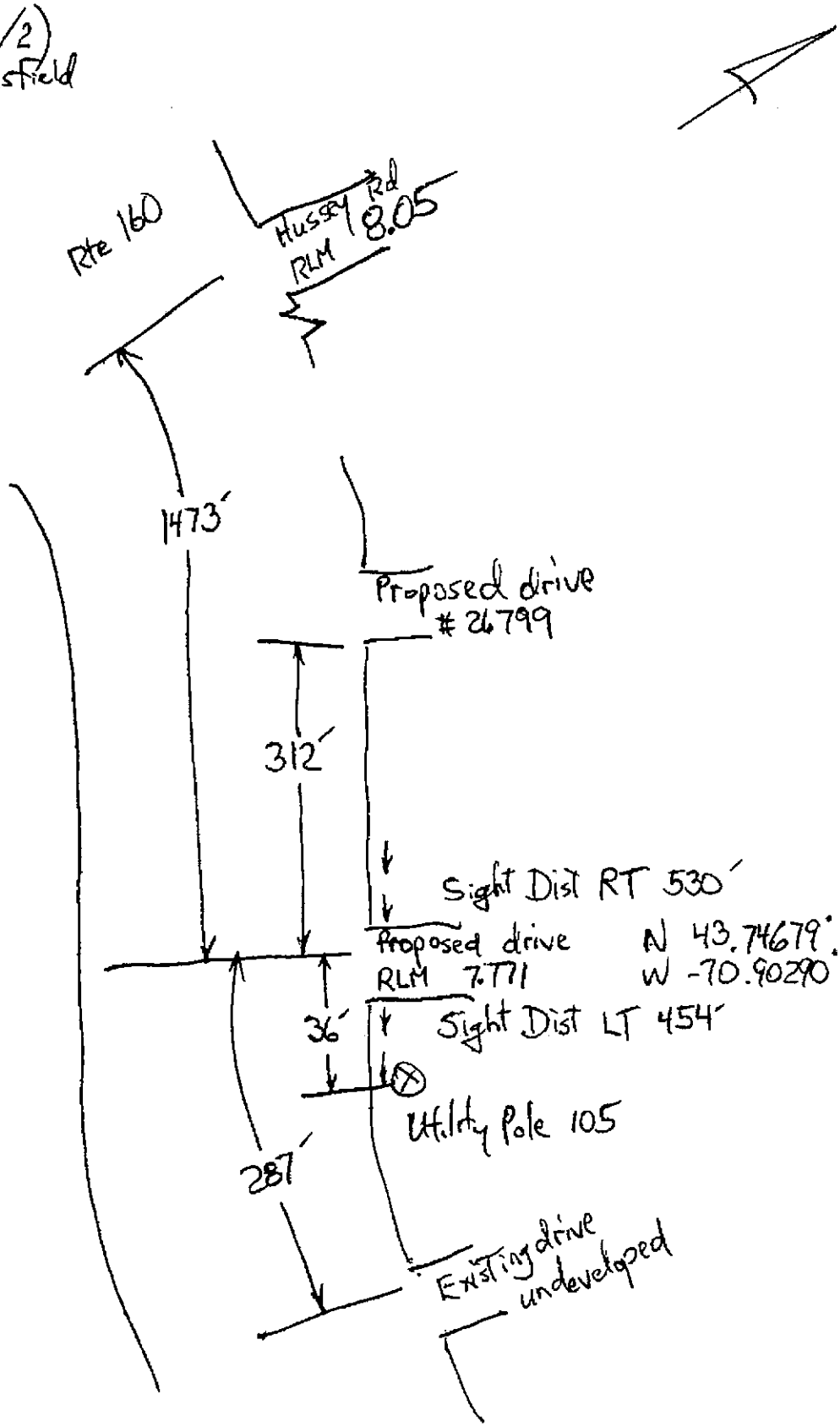
Approved by: Anthony Fontaine Date: 5-15-2019

PRELIM BY _____ DATE _____ PROJ NO _____ FILE NO _____ OF _____
FINAL CHK BY _____ DATE _____ LOCATION _____ SHEET NO _____ OF _____
ITEM NO. _____ SUBJECT _____

26798 (Lt 1/2)
Rte 160, Parsonsfield

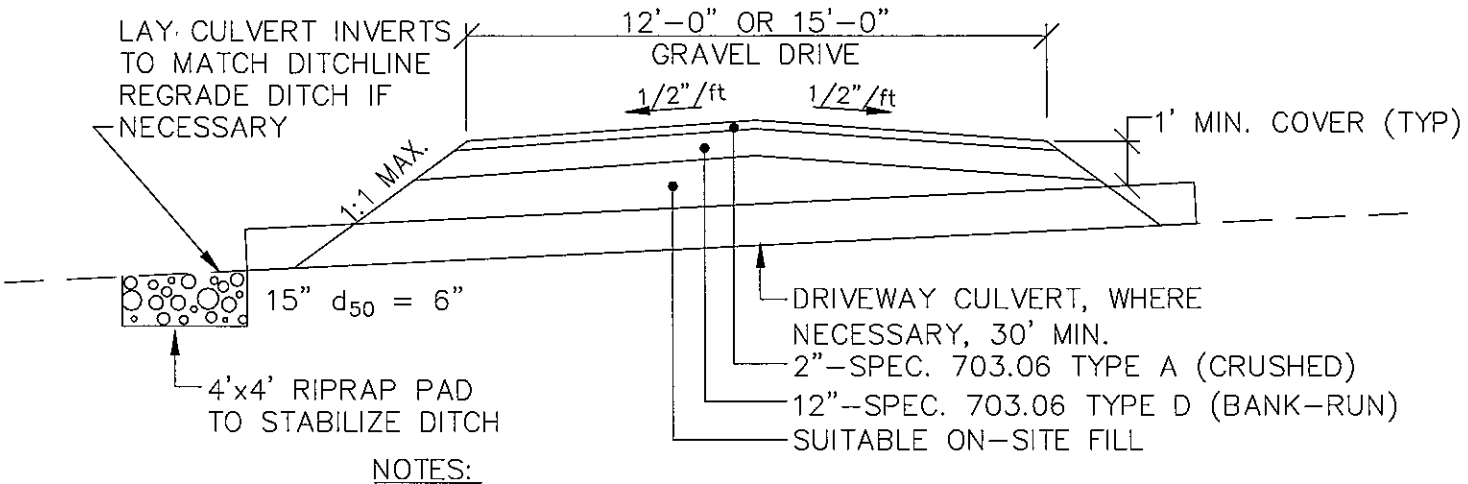
SL 45 mph
Mainline 11
Shldr 3' gravel

5-13-2019
A Fontaine



MaineDOT

MaineDOT



NOTES:

1. SINGLE-FAMILY DRIVEWAY TO BE 12' MIN. WIDTH.
2. COMMON / SHARED DRIVEWAY TO BE 15' MIN. WIDTH.

1 TYPICAL DRIVEWAY W/ CULVERT DETAIL

NOT TO SCALE

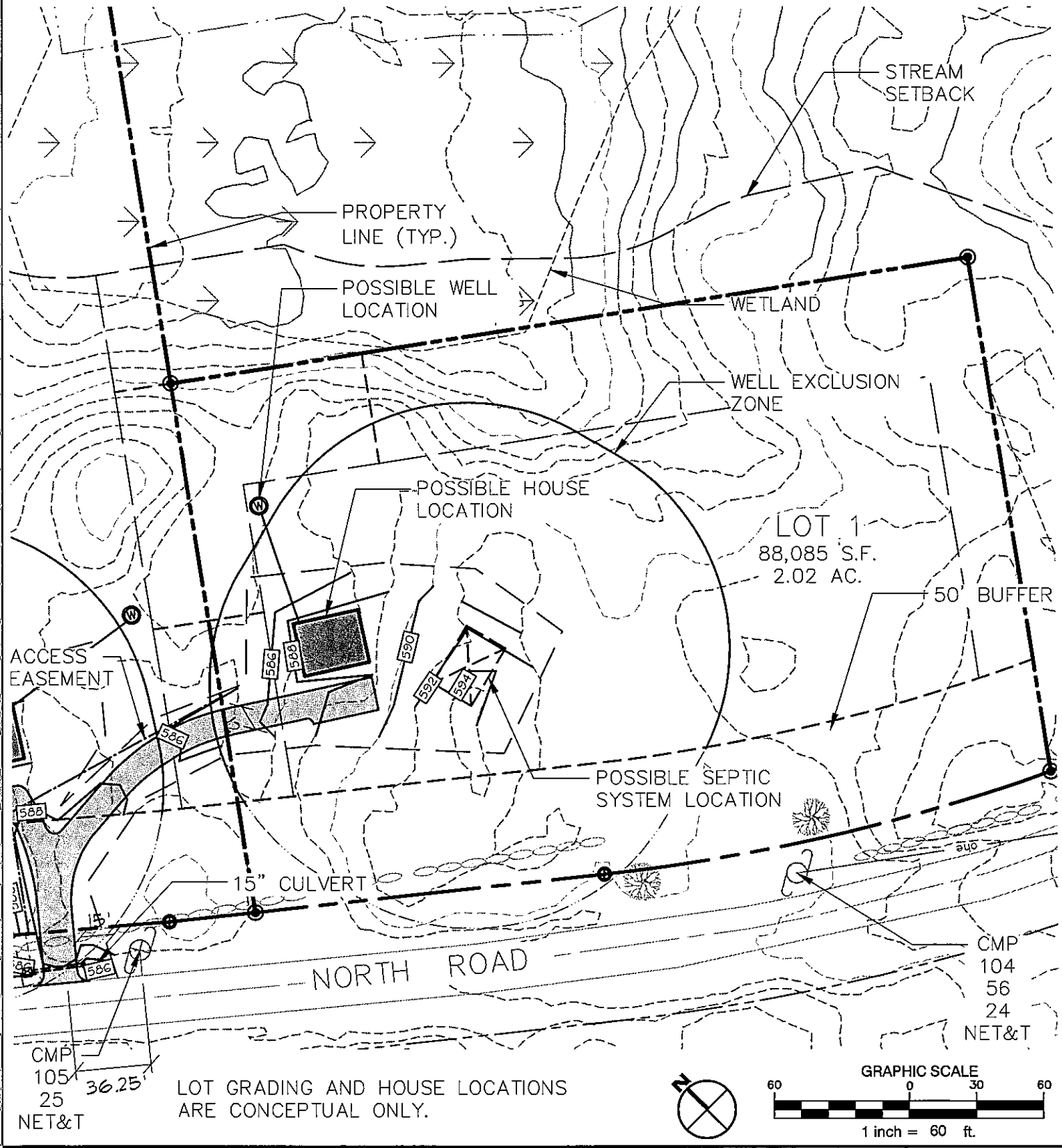
WALSH
ENGINEERING ASSOCIATES, INC.
One Karen Dr., Suite 2A | Westbrook, Maine 04092
ph: 207.553.9898 | www.walsh-eng.com

WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD
PARSONSFIELD, MAINE

Sheet Title: TYPICAL DRIVEWAY

Job No.:	16149
Date:	5/2/19
Scale:	AS SHOWN
Drawn:	JWG
Checked:	TSG



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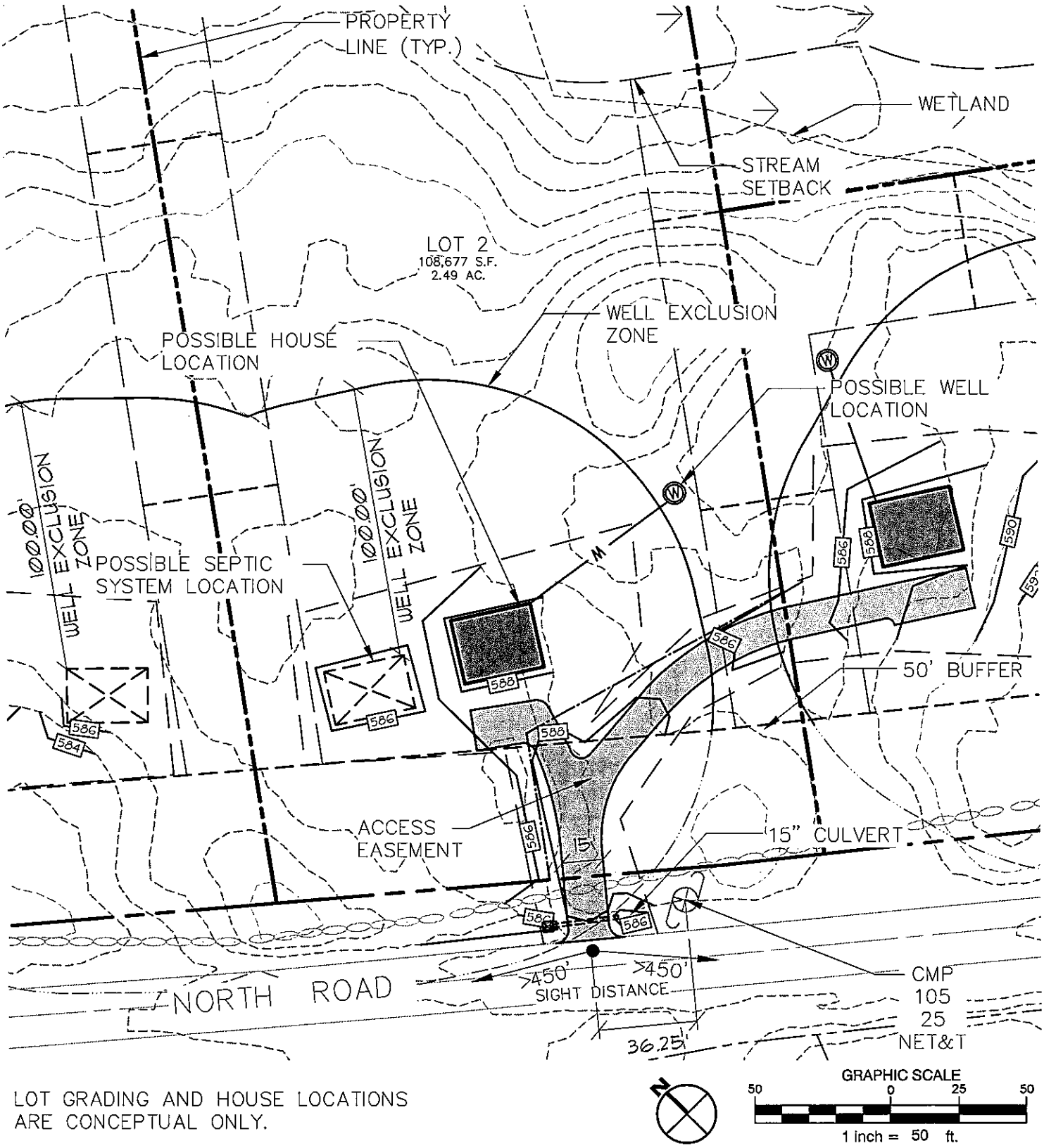
WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD
PARSONSFIELD, MAINE

Sheet Title: **LOT 1**

Job No.:	16149
Date:	5/2/19
Scale:	AS SHOWN
Drawn:	JWG
Checked:	TSG



LOT GRADING AND HOUSE LOCATIONS ARE CONCEPTUAL ONLY.

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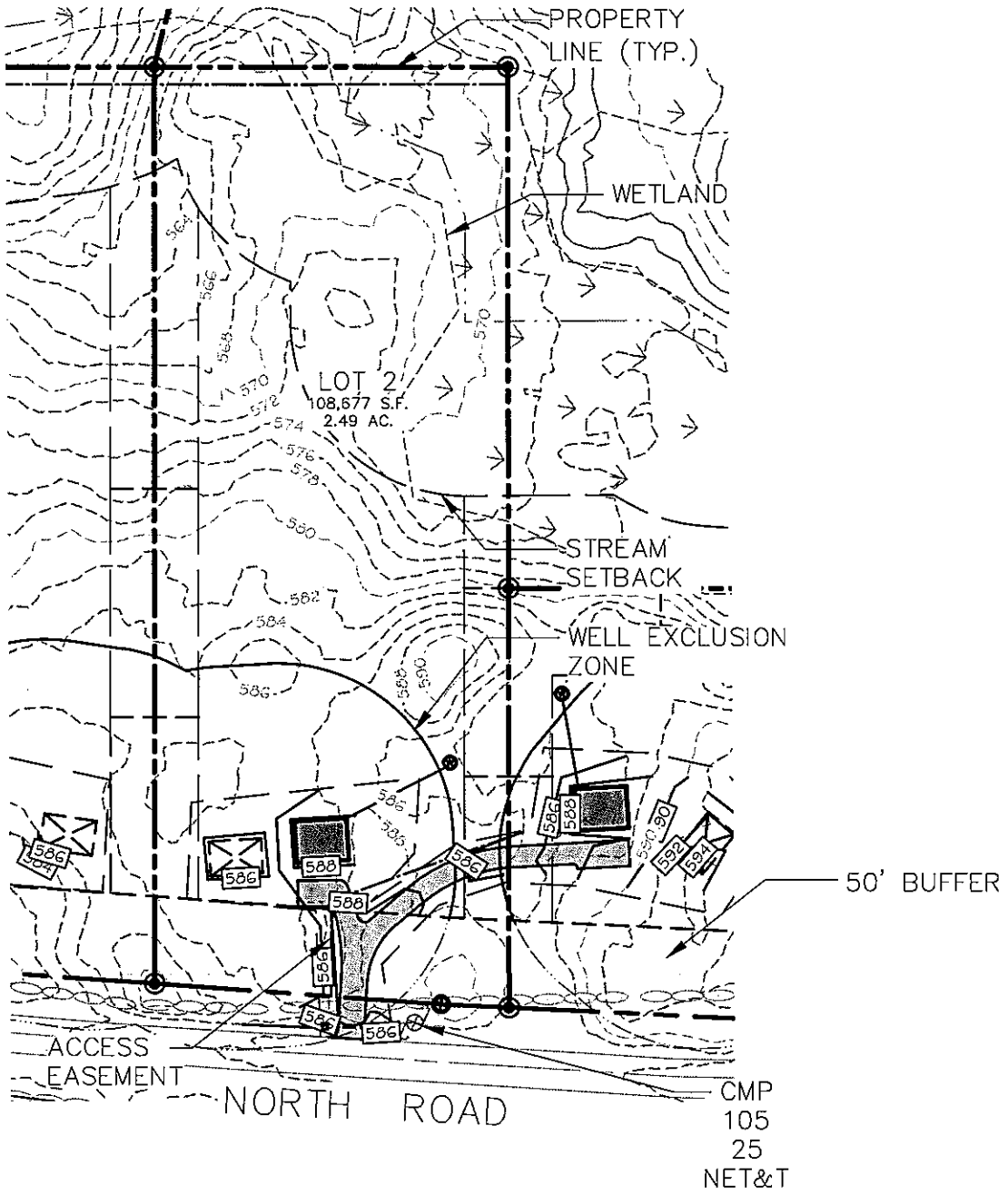
WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD
PARSONSFIELD, MAINE

Sheet Title: **LOT 2**

Job No.:	16149
Date:	5/2/19
Scale:	AS SHOWN
Drawn:	JWG
Checked:	TSG



LOT GRADING AND HOUSE LOCATIONS ARE CONCEPTUAL ONLY.

GRAPHIC SCALE
50 0 25 50
1 inch = 50 ft.

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WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD
PARSONSFIELD, MAINE

Sheet Title: **LOT 2**

Job No.:	16149
Date:	5/2/19
Scale:	AS SHOWN
Drawn:	JWG
Checked:	TSG

Maine Department of Transportation

Janet T. Mills
Governor

Driveway/Entrance Permit

Bruce A. Van Note
Commissioner

Permit Number: 26799 - Entrance ID: 1

OWNER

Name: **NATESELLSREALESTATE, LLC**
Address: **P.O. Box 321**
Cornish, ME 04020
Telephone:

Date Printed: **May 15, 2019**

LOCATION

Route: **0160X, North Road**
Municipality: **Parsonsfield**
County: **York**
Tax Map: **R8** Lot Number: **37**
Culvert Size: **15 inches**
Culvert Type: **plastic**
Culvert Length: **26 feet**
Date of Permit: **May 15, 2019**
Approved Entrance Width: **15 feet**

In accordance with rules promulgated under 23 M.R.S.A., Chapter 13, Subchapter I, Section 704, the Maine Department of Transportation (MaineDOT) approves a permit and grants permission to perform the necessary grading to construct, in accordance with sketch or attached plan, **a Driveway** to **Five or fewer single family dwellings** at a point **1145** feet **East** from **Hussey Road**, subject to the Chapter 299 Highway Driveway and Entrance Rules, standard conditions and special conditions (if any) listed below.

Conditions of Approval:

This Permittee acknowledges and agrees to comply with the Standard Conditions and Approval attached hereto and to any Specific Conditions of Approval shown here.

(G = GPS Location; W = Waiver; S = Special Condition)

G - THE ENTRANCE SHALL BE LOCATED AT GPS COORDINATES: 43.747560N, -70.904170W.

S - In the town of Parsonsfield on the northerly side of Route 160 / North Road, the centerline being approximately 1145 feet easterly of the centerline of Hussey Road and approximately 55 feet westerly of utility pole 106

S - The culvert shall be HDPE smoothbore plastic pipe. Ditching is required, of sufficient length and depth so as to provide gradual water flow into the pipe, leave no standing water on the outlet end of the pipe, and provide sufficient cover over the pipe as recommended by the manufacturer. The Property Owner must contact MaineDOT at (207) 324-5322 prior to driveway and culvert installation to arrange for an inspection

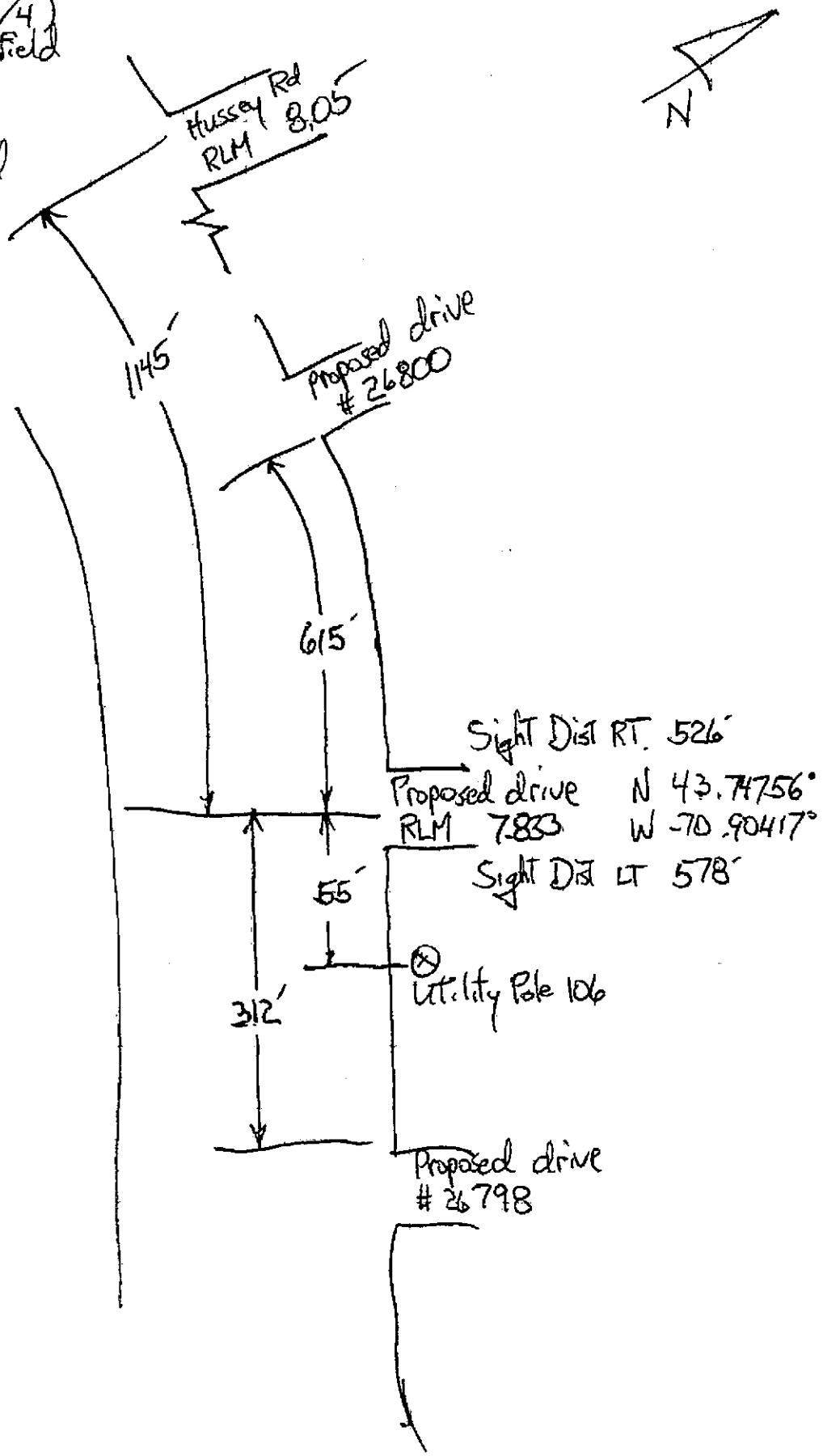
Approved by: Anthony Fontaine Date: 5-16-2019

PRELIM. BY _____ DATE _____ PROJ. NO _____ FILE NO. _____ OF _____
FINAL CHK. BY _____ DATE _____ LOCATION _____ SHEET NO _____ OF _____
ITEM NO _____ SUBJECT _____

26799 (Lot 3/4)
Rte 160, Parsonsfield

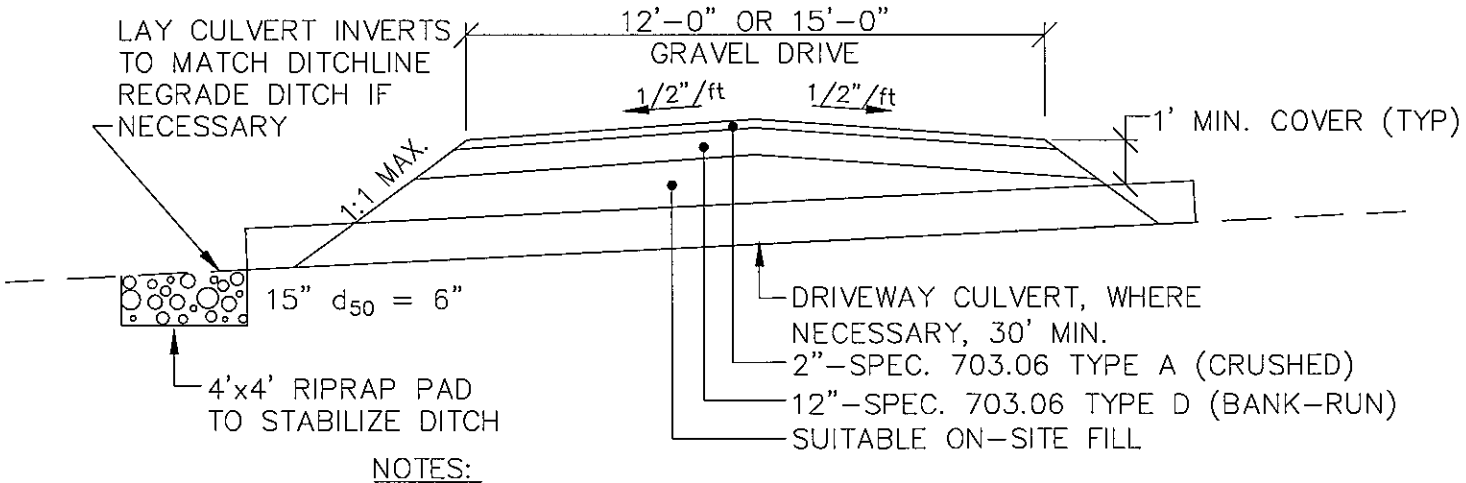
SL 45 mph
Mainline 11'
Shldr 3' gravel

5-13-2019
AFontaine



MaineDOT

MaineDOT



NOTES:

1. SINGLE-FAMILY DRIVEWAY TO BE 12' MIN. WIDTH.
2. COMMON / SHARED DRIVEWAY TO BE 15' MIN. WIDTH.

1 TYPICAL DRIVEWAY W/ CULVERT DETAIL

NOT TO SCALE

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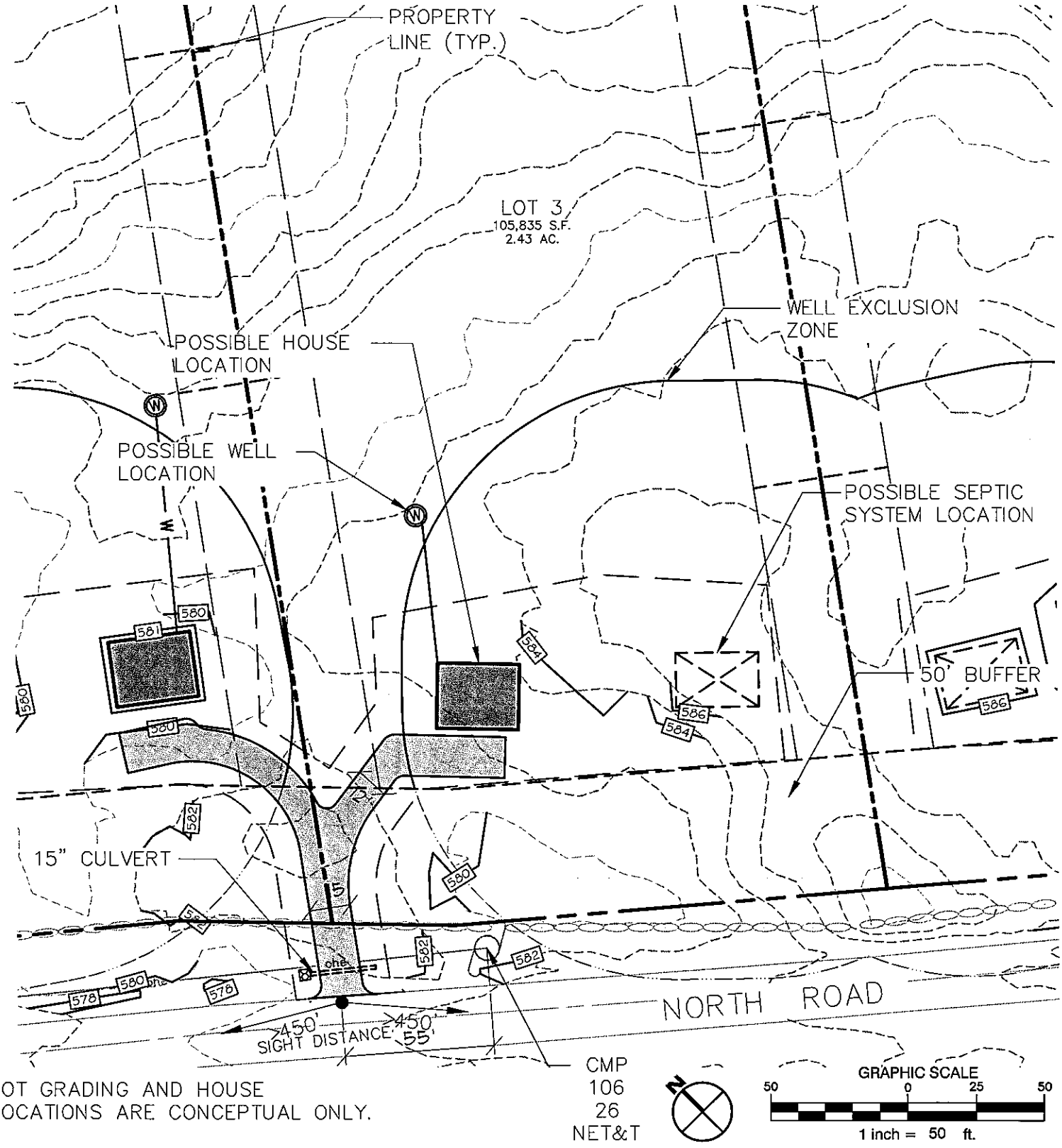
WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD
PARSONSFIELD, MAINE

Sheet Title: TYPICAL DRIVEWAY

Job No.:	16149
Date:	5/2/19
Scale:	AS SHOWN
Drawn:	JWG
Checked:	TSG



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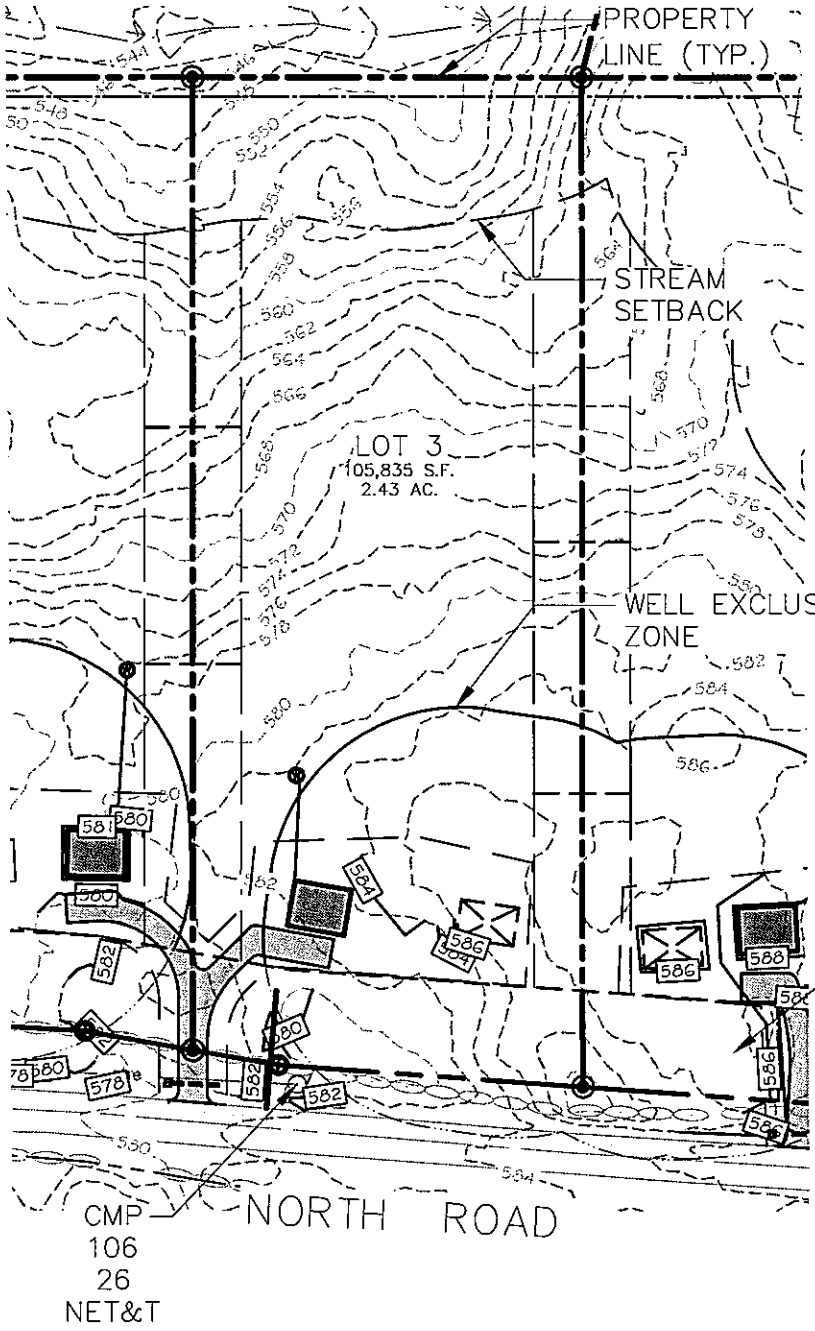
WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD
PARSONSFIELD, MAINE

Sheet Title:
LOT 3

Job No.:	16149
Date:	5/2/19
Scale:	AS SHOWN
Drawn:	JWG
Checked:	TSG



LOT GRADING AND HOUSE LOCATIONS ARE CONCEPTUAL ONLY.

GRAPHIC SCALE
50 0 25 50
1 inch = 50 ft.

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NORTH ROAD & HUSSEY ROAD
PARSONSFIELD, MAINE

Sheet Title:
LOT 3

Job No.:	16149
Date:	5/2/19
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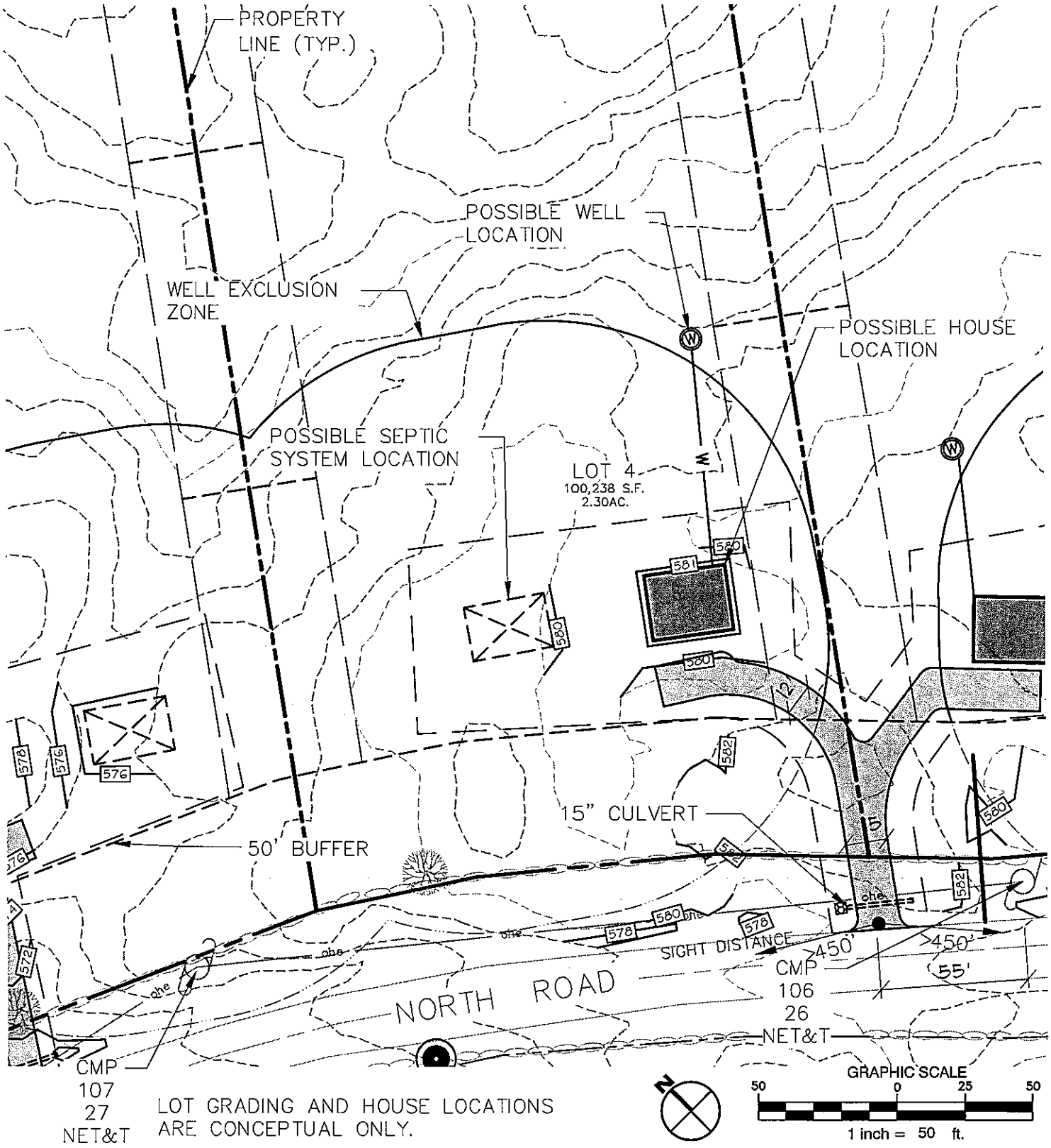
Drawn:	JWG
Checked:	TSG



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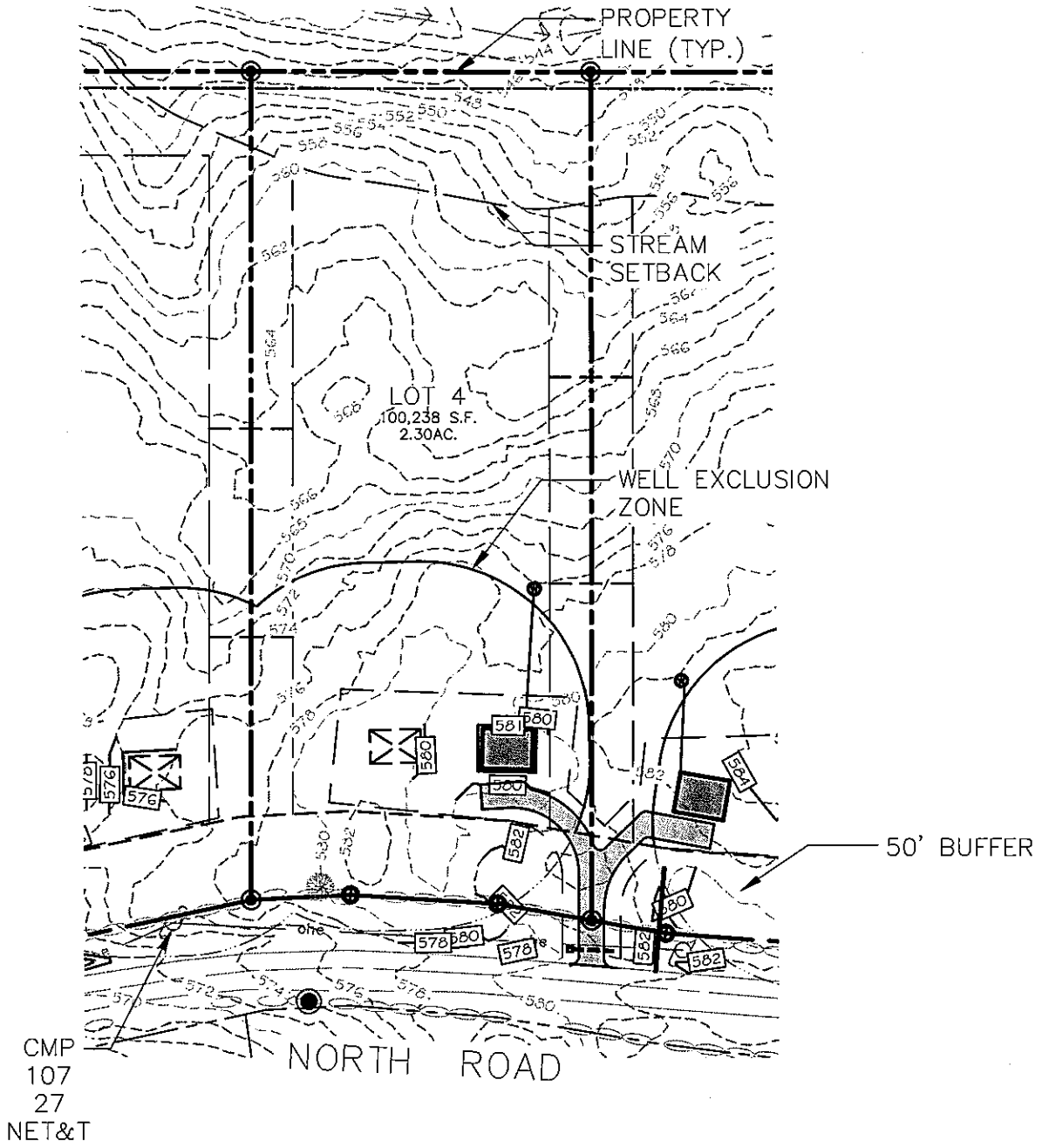
WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD
PARSONSFIELD, MAINE

Sheet Title: **LOT 4**

Job No.:	16149
Date:	5/2/19
Scale:	AS SHOWN
Drawn:	JWG
Checked:	TSG



LOT GRADING AND HOUSE LOCATIONS ARE CONCEPTUAL ONLY.

GRAPHIC SCALE
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1 inch = 50 ft.

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WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD
PARSONSFIELD, MAINE

Sheet Title:
LOT 4

Job No.:	16149
Date:	5/2/19
Scale:	AS SHOWN
Drawn:	JWG
Checked:	TSG

Maine Department of Transportation

Paul R. LePage
Governor

Driveway/Entrance Permit

David Bernhardt, P.E,
Commissioner

Permit Number: 25577 - Entrance ID: 1

OWNER

Name: **NATESELLSREALESTATE, LLC**
Address: **P.O. Box 321**
Cornish, ME 04020
Telephone:

Date Printed: **January 25, 2018**

LOCATION

Route:	**0160X, North Road**
Municipality:	**Parsonsfield**
County:	**York**
Tax Map:	**R08** Lot Number: **37**
Culvert Size:	**15 inches**
Culvert Type:	**plastic**
Culvert Length:	**24 feet**
Date of Permit:	**January 25, 2018**
Approved Entrance Width:	**12 feet**

In accordance with rules promulgated under 23 M.R.S.A., Chapter 13, Subchapter I, Section 704, the Maine Department of Transportation (MaineDOT) approves a permit and grants permission to perform the necessary grading to construct, in accordance with sketch or attached plan, **a Driveway** to **Single Family Dwelling** at a point **844** feet **East** from **Hussey Road**, subject to the Chapter 299 Highway Driveway and Entrance Rules, standard conditions and special conditions (if any) listed below.

Conditions of Approval:

This Permittee acknowledges and agrees to comply with the Standard Conditions and Approval attached hereto and to any Specific Conditions of Approval shown here.

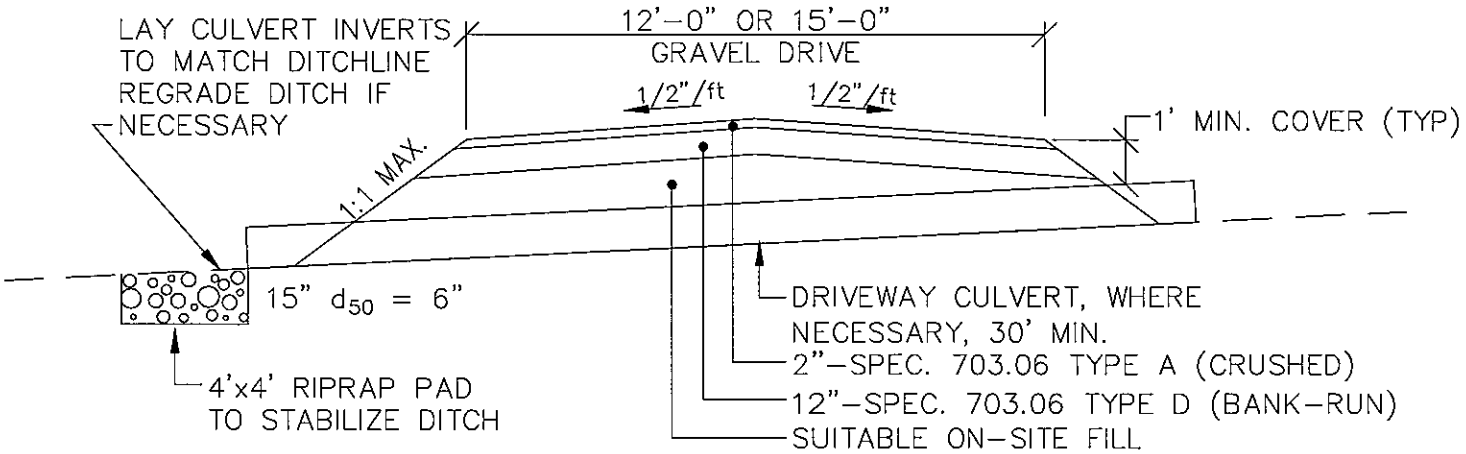
(G = GPS Location; W = Waiver; S = Special Condition)

G - THE ENTRANCE SHALL BE LOCATED AT GPS COORDINATES: 43.747880N, -70.904910W.

S - In the town of Parsonsfield on the northerly side of Route 160 / North Road, the centerline being approximately 844 feet easterly of the centerline of Hussey Road and approximately 70 feet westerly of utility pole 107.

S - The culvert shall be HDPE smoothbore plastic pipe. Ditching on either side of the pipe is likely required but will need to be determined after snow melt. The Property Owner must contact MaineDOT at (207) 324-5322 prior to driveway and culvert installation to discuss ditching requirements and arrange an inspection.

Approved by: Anthony Fontaine Date: 1-25-2018



NOTES:

1. SINGLE-FAMILY DRIVEWAY TO BE 12' MIN. WIDTH.
2. COMMON / SHARED DRIVEWAY TO BE 15' MIN. WIDTH.

1 TYPICAL DRIVEWAY W/ CULVERT DETAIL

NOT TO SCALE

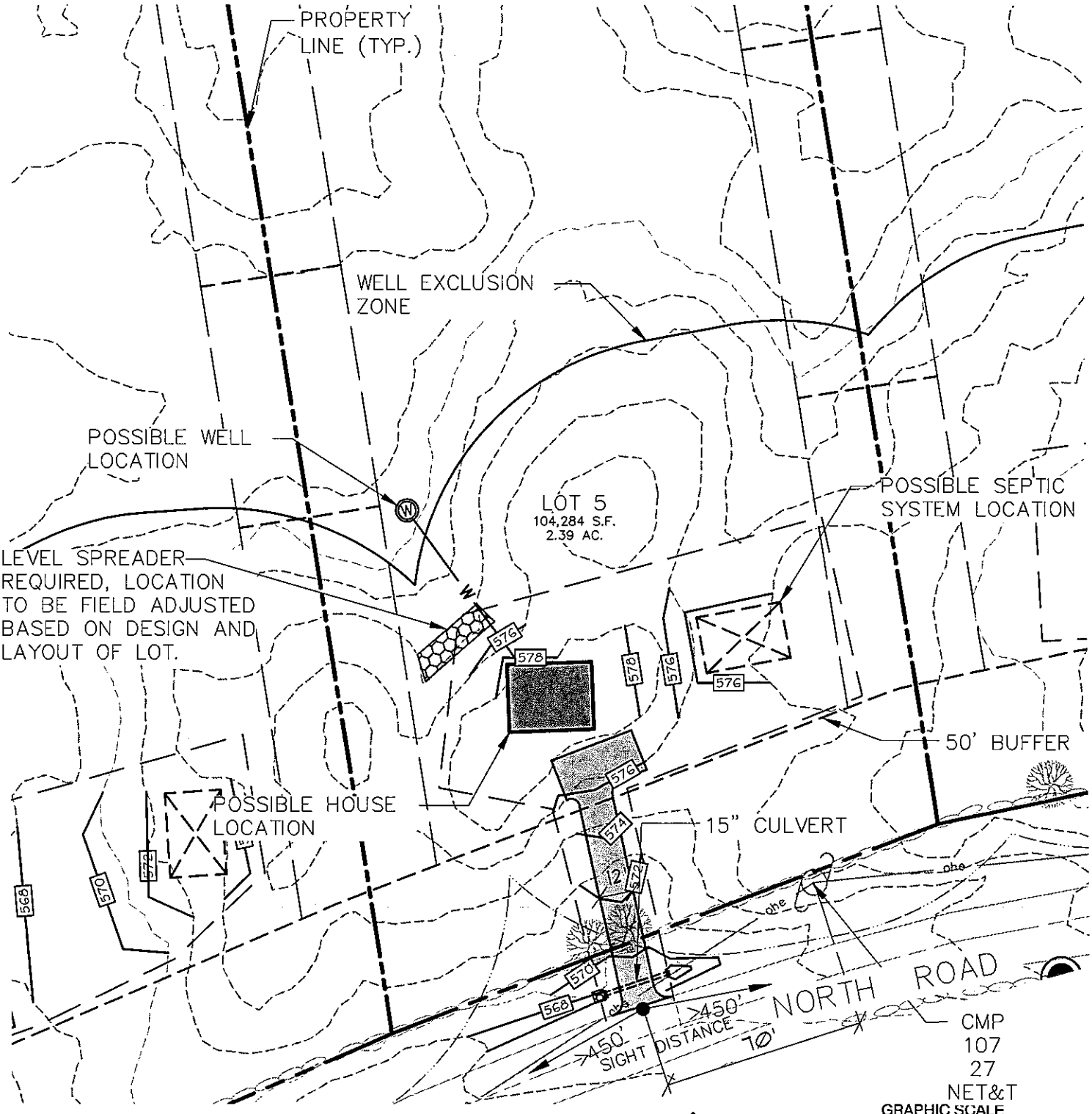
WALSH
ENGINEERING ASSOCIATES, INC.
One Karen Dr., Suite 2A | Westbrook, Maine 04092
ph: 207.553.9898 | www.walsh-eng.com

WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD
PARSONSFIELD, MAINE

Sheet Title: TYPICAL DRIVEWAY

Job No.:	16149
Date:	5/2/19
Scale:	AS SHOWN
Drawn:	JWG
Checked:	TSG



LOT GRADING AND HOUSE LOCATIONS ARE CONCEPTUAL ONLY.

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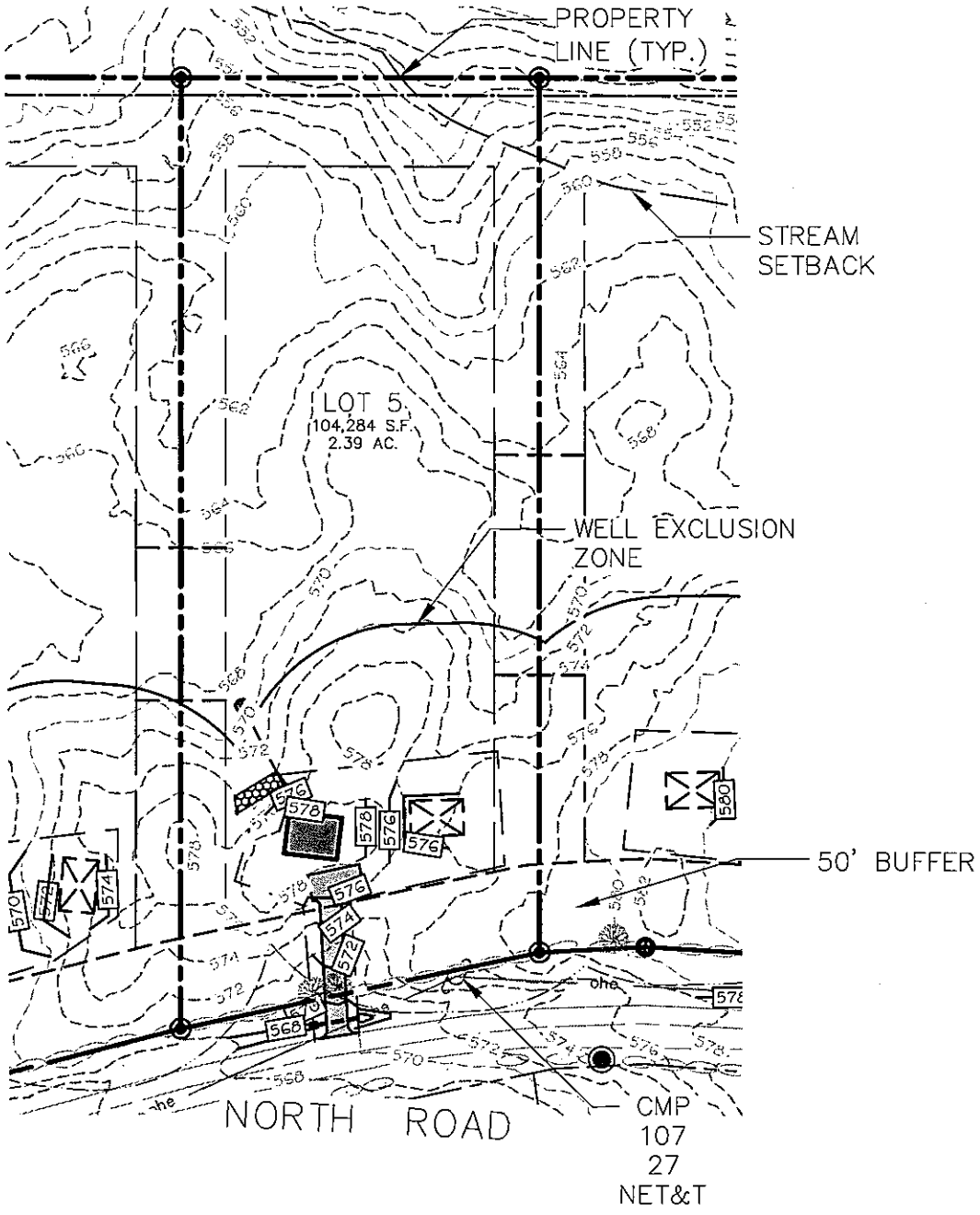
ENGINEERING ASSOCIATES, INC.
One Karen Dr., Suite 2A | Westbrook, Maine 04092
ph: 207.553.9898 | www.walsh-eng.com

WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD
PARSONSFIELD, MAINE

Sheet Title: **LOT 5**

Job No.:	16149
Date:	5/2/19
Scale:	AS SHOWN
Drawn:	JWG
Checked:	TSG



LOT GRADING AND HOUSE LOCATIONS ARE CONCEPTUAL ONLY.

GRAPHIC SCALE
50 0 25 50
1 inch = 50 ft.

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WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD
PARSONSFIELD, MAINE

Sheet Title: **LOT 5**

Job No.:	16149
Date:	5/2/19
Scale:	AS SHOWN
Drawn:	JWG
Checked:	TSG

Maine Department of Transportation

Janet T. Mills
Governor

Driveway/Entrance Permit

Bruce A. Van Note
Commissioner

Permit Number: 26800 - Entrance ID: 1

OWNER

Name: **NATESELLSREALESTATE, LLC**
Address: **P.O. Box 321**
Cornish, ME 04020
Telephone:

Date Printed: **May 16, 2019**

LOCATION

Route:	**0160X, North Road**
Municipality:	**Parsonsfield**
County:	**York**
Tax Map:	**R8** Lot Number: **37**
Culvert Size:	**15 inches**
Culvert Type:	**plastic**
Culvert Length:	**26 feet**
Date of Permit:	**May 16, 2019**
Approved Entrance Width:	**15 feet**

In accordance with rules promulgated under 23 M.R.S.A., Chapter 13, Subchapter I, Section 704, the Maine Department of Transportation (MaineDOT) approves a permit and grants permission to perform the necessary grading to construct, in accordance with sketch or attached plan, **a Driveway** to **Five or fewer single family dwellings** at a point **486** feet **East** from **Hussey Road**, subject to the Chapter 299 Highway Driveway and Entrance Rules, standard conditions and special conditions (if any) listed below.

Conditions of Approval:

This Permittee acknowledges and agrees to comply with the Standard Conditions and Approval attached hereto and to any Specific Conditions of Approval shown here.

(G = GPS Location; W = Waiver; S = Special Condition)

G - THE ENTRANCE SHALL BE LOCATED AT GPS COORDINATES: 43.748180N, -70.905990W.

S - In the town of Parsonsfield on the northerly side of Route 160 / North Road, the centerline being approximately 486 feet easterly of the centerline of Hussey Road and approximately 164 feet westerly of utility pole 108

S - The culvert shall be HDPE smoothbore plastic pipe Ditching is required, of sufficient length and depth so as to provide gradual water flow into the pipe, leave no standing water on the outlet end of the pipe, and provide sufficient cover over the pipe as recommended by the manufacturer The Property Owner must contact MaineDOT at (207) 324-5322 prior to driveway and culvert installation to arrange for an inspection.

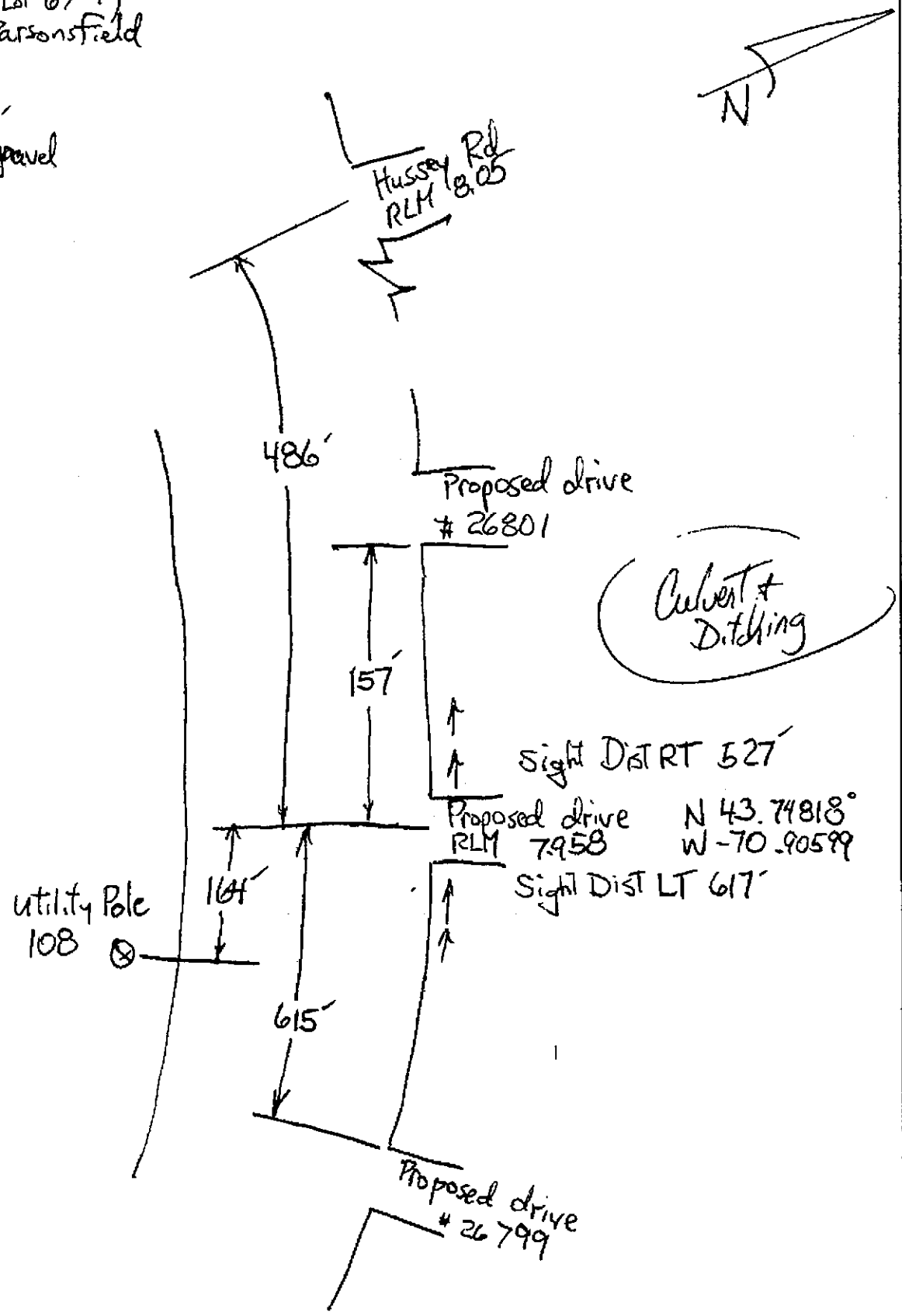
Approved by: Anthony Fontaine Date: 5-16-2019

PRELIM. BY _____ DATE _____ PROJ. NO _____ FILE NO _____ OF _____
FINAL CHK. BY _____ DATE _____ LOCATION _____ SHEET NO. _____ OF _____
ITEM NO. _____ SUBJECT _____

#26800 (Lot 6/7)
Rte 160, Parsonsfield

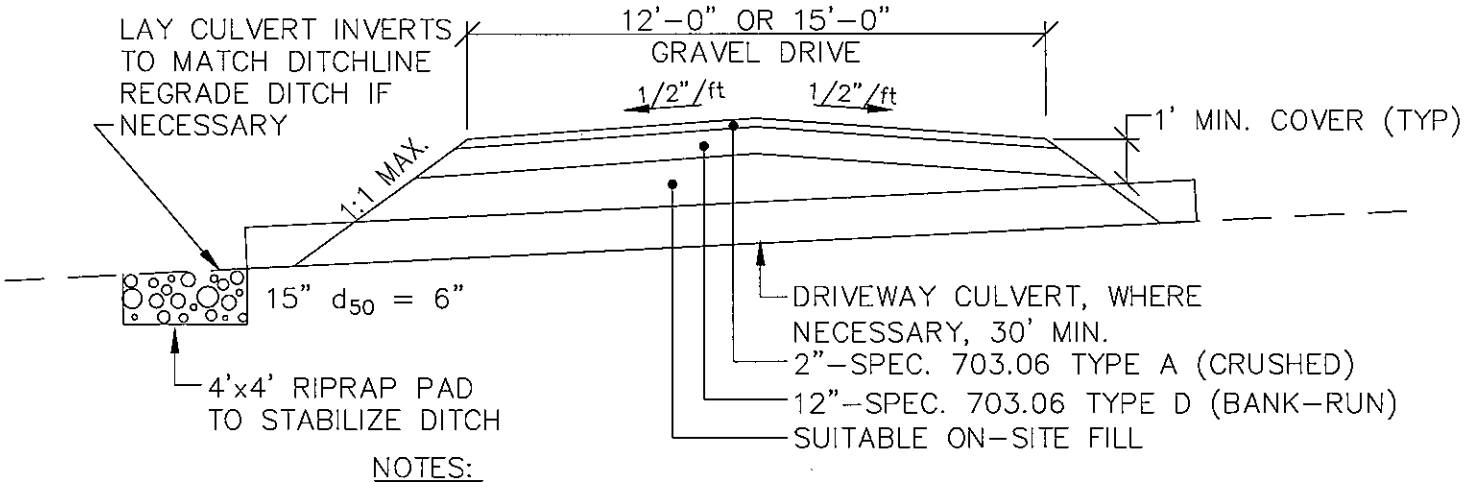
SL 45 mph
Mainline 11'
Shldr 3' gravel

5-13-2019
A Fontaine



MaineDOT

MaineDOT



NOTES:

1. SINGLE-FAMILY DRIVEWAY TO BE 12' MIN. WIDTH.
2. COMMON / SHARED DRIVEWAY TO BE 15' MIN. WIDTH.

1 TYPICAL DRIVEWAY W/ CULVERT DETAIL

NOT TO SCALE

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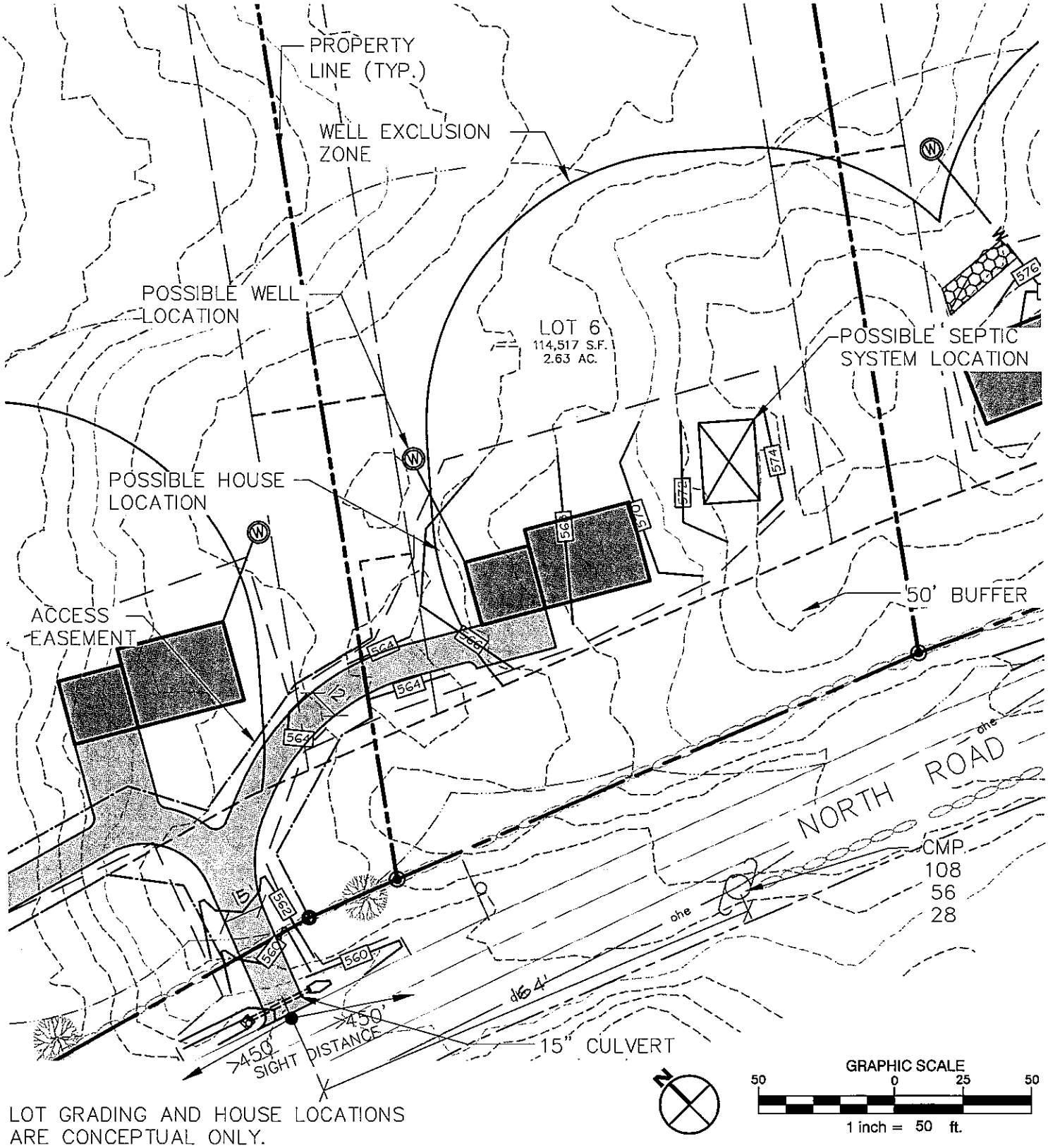
WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD
PARSONSFIELD, MAINE

Sheet Title: TYPICAL DRIVEWAY

Job No.:	16149
Date:	5/2/19
Scale:	AS SHOWN
Drawn:	JWG
Checked:	TSG



LOT GRADING AND HOUSE LOCATIONS ARE CONCEPTUAL ONLY.

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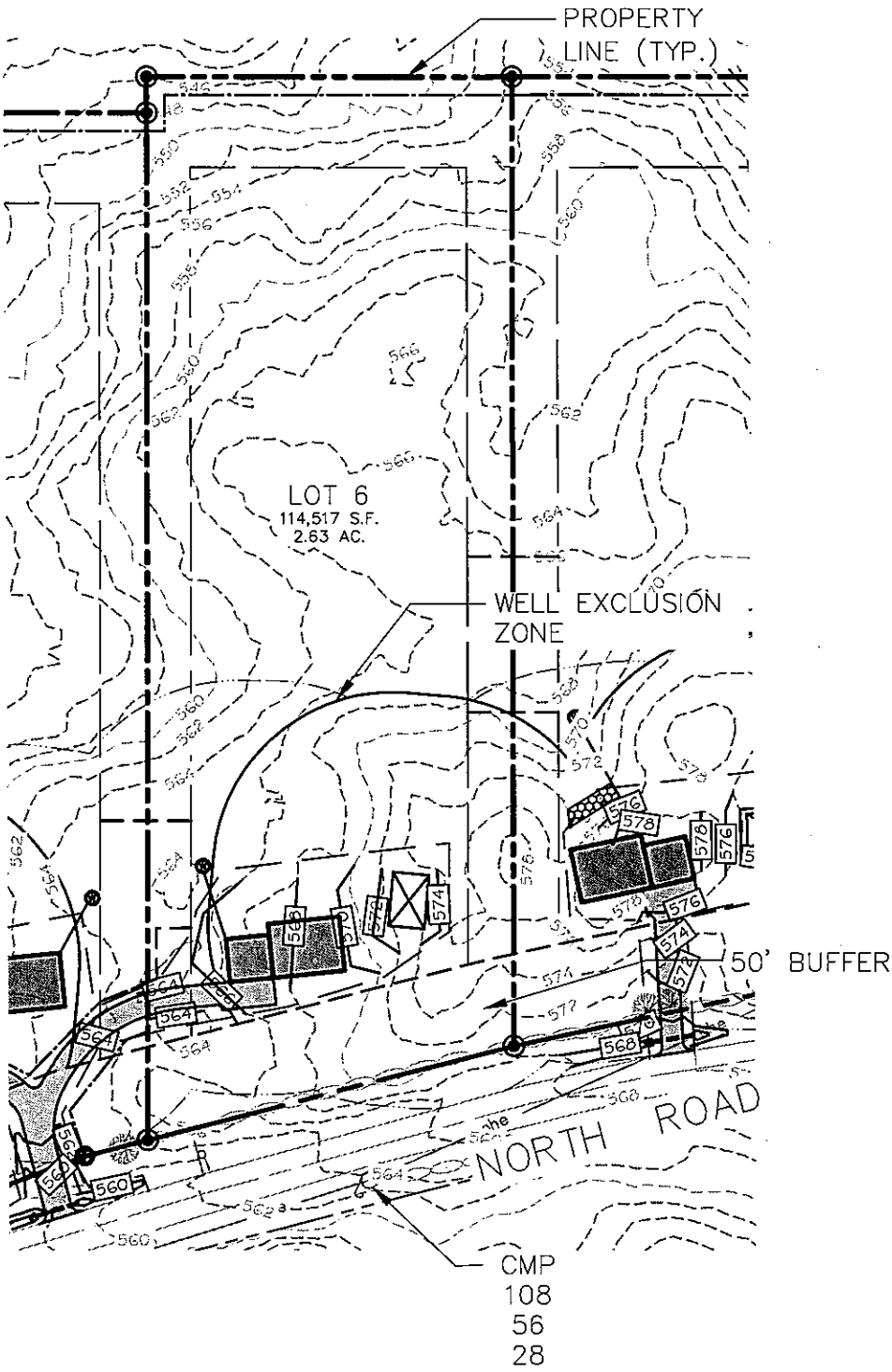
ph: 207.553.9898 | www.walsh-eng.com

WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD
PARSONSFIELD, MAINE

Sheet Title: **LOT 6**

Job No.:	16149
Date:	5/2/19
Scale:	AS SHOWN
Drawn:	JWG
Checked:	TSG



LOT GRADING AND HOUSE LOCATIONS ARE CONCEPTUAL ONLY.

GRAPHIC SCALE
50 0 25 50
1 inch = 50 ft.

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WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD
PARSONSFIELD, MAINE

Sheet Title:
LOT 6

Job No.:	16149
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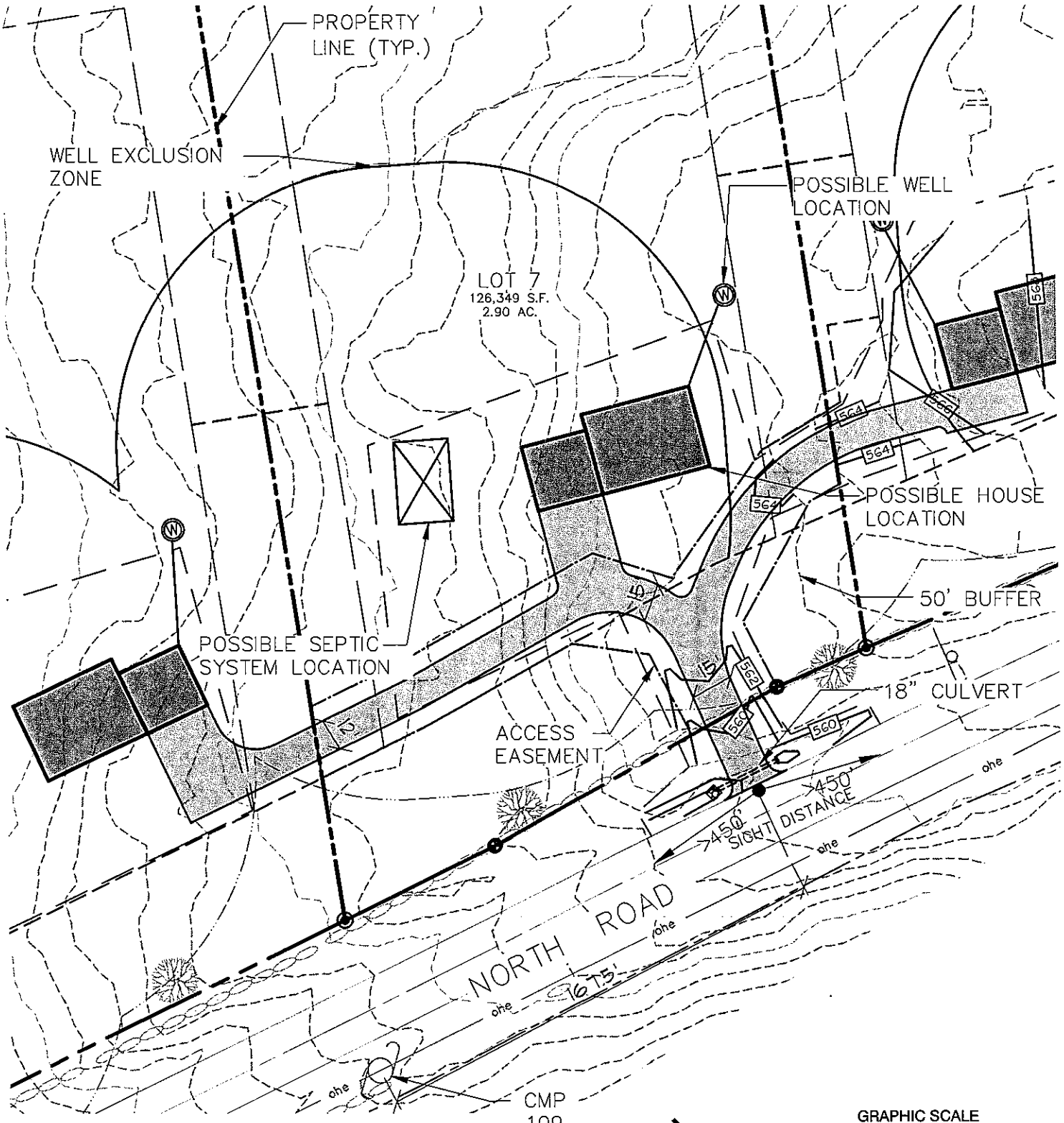

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WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD
PARSONSFIELD, MAINE

Sheet Title: LOT 7

Job No.:	16149
Date:	5/2/19
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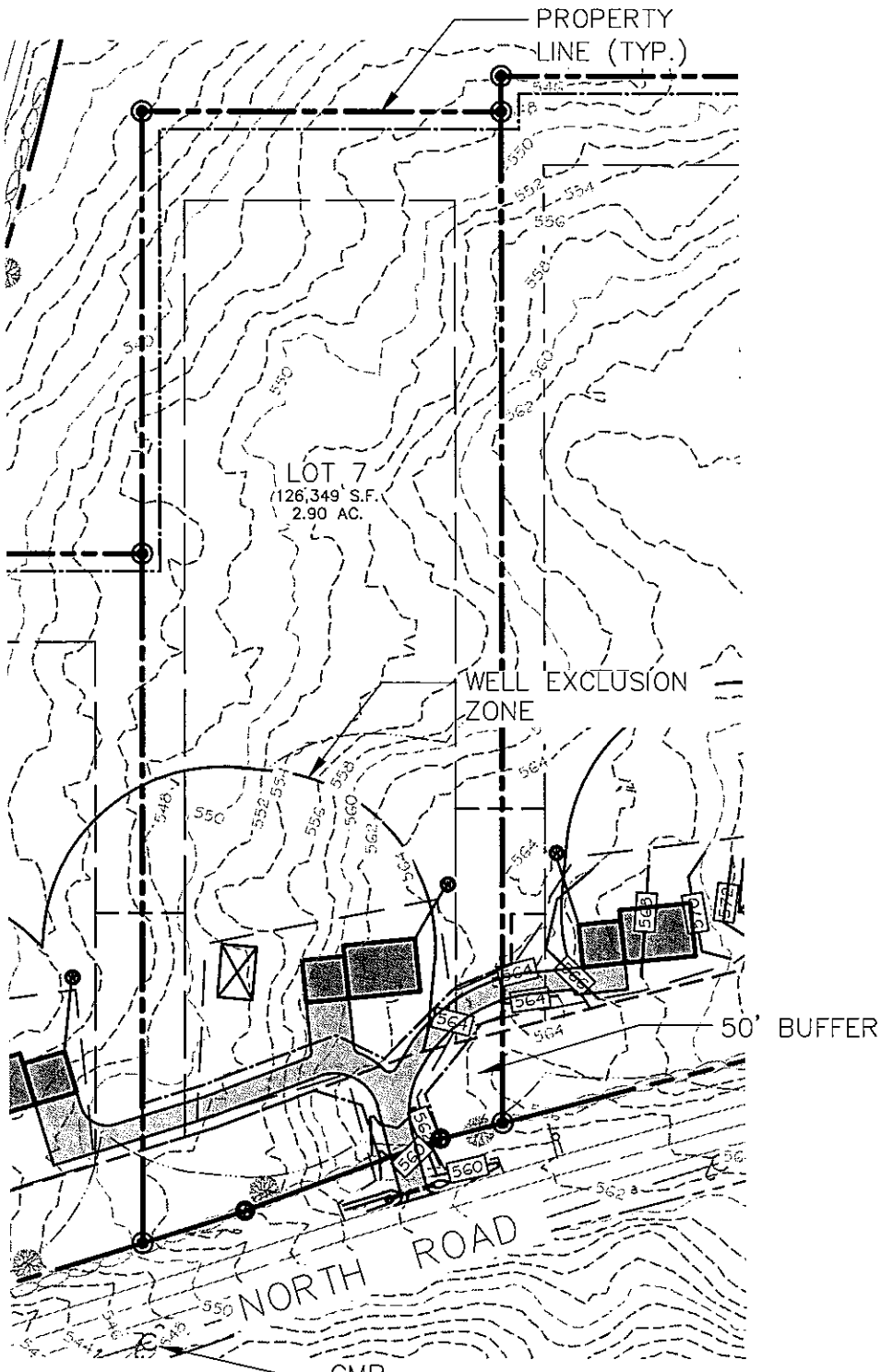

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WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD
PARSONSFIELD, MAINE

Sheet Title:
LOT 7

Job No.:	16149
Date:	5/2/19
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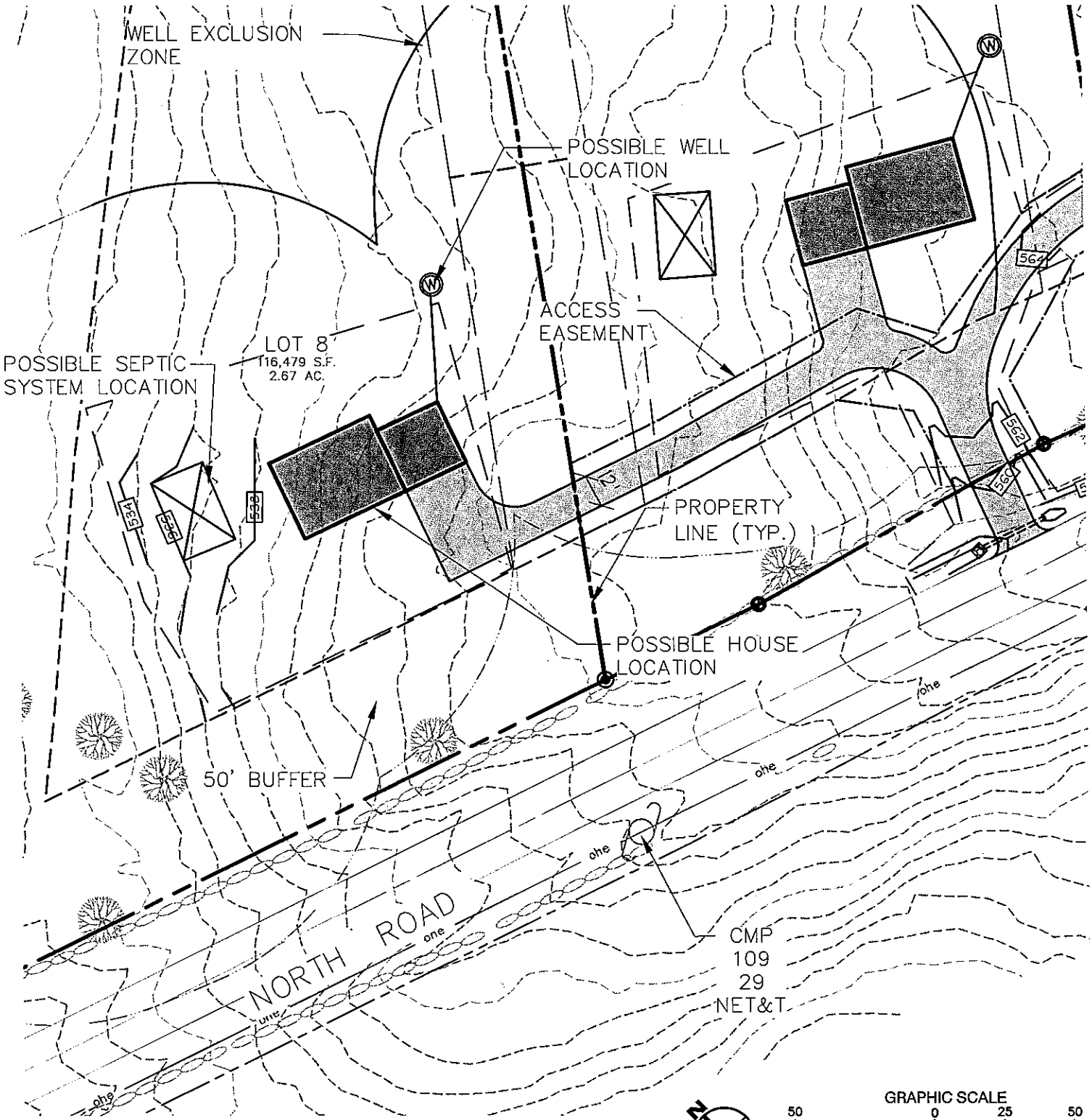

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WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD
PARSONSFIELD, MAINE

Sheet Title:
LOT 8

Job No.:	16149
Date:	5/2/19
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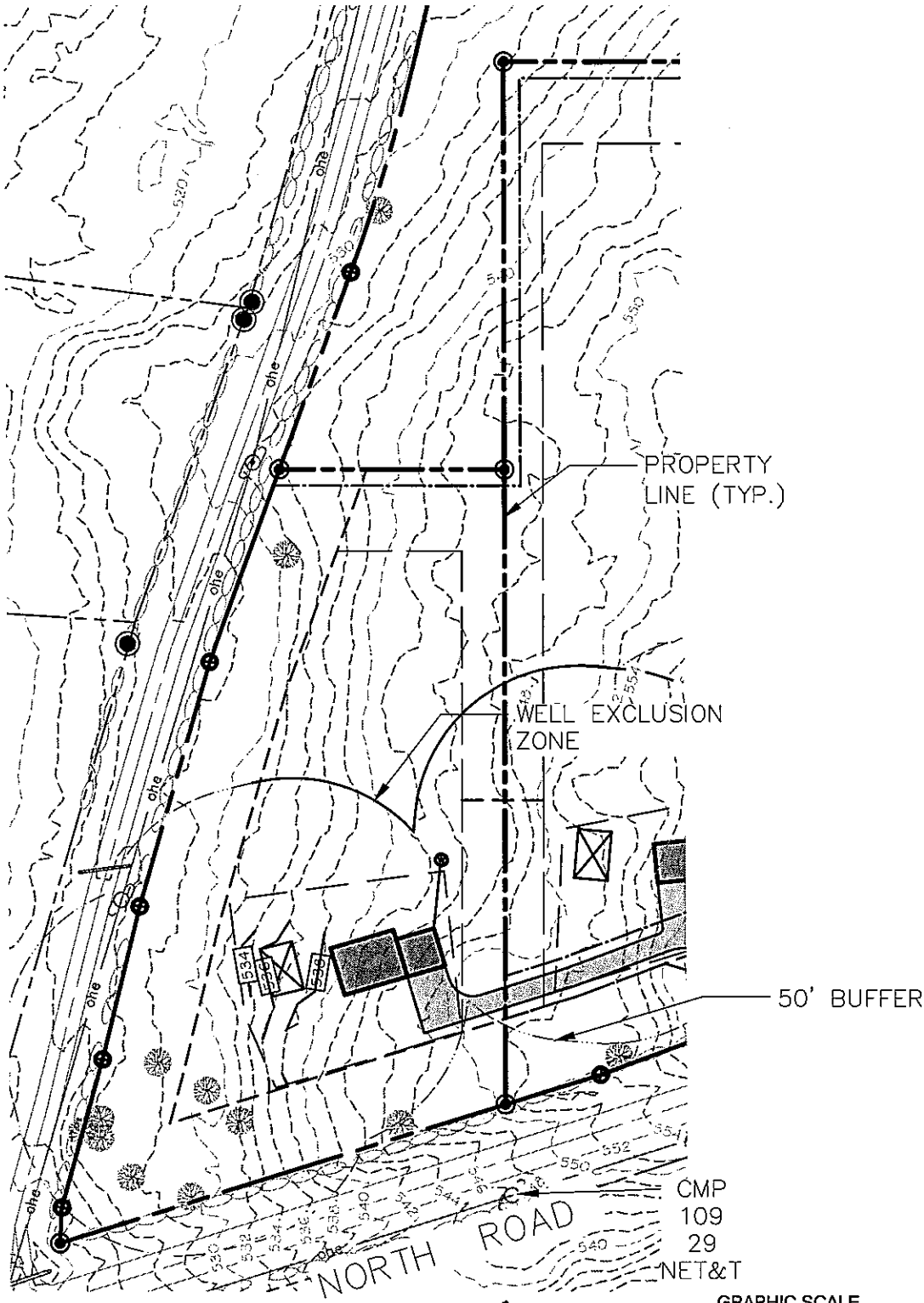

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WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD
PARSONSFIELD, MAINE

Sheet Title:
LOT 8

Job No.:	16149
Date:	5/2/19
Scale:	AS SHOWN
Drawn:	JWG
Checked:	TSG

Section 16: Stormwater Report

Stormwater Management Report
Watson Woods
Parsonsfield, Maine

May 3, 2019

Prepared by:

WALSH

ENGINEERING ASSOCIATES, INC.

WALSH
ENGINEERING ASSOCIATES, INC.

STORMWATER MANAGEMENT REPORT
WATSON WOODS
PARSONSFIELD, MAINE

May 3, 2019

Project Description:

This project, located at the corner of Hussey Road and Route 160, is the division of one (1), 55.76-acre lot into eight (8) single-family residential lots, 8.66 acres of common open space, and 28.06 acres of remaining land, retained by the owner. The lots average 2.38 acres. The lots are accessed from North Road. No roads will be created with this subdivision.

Surface Water:

The watershed consists of 116 acres. About half of that is on neighboring properties. The watershed has been divided into three (3) subcatchments for analysis.

Subcatchment #1 is along North Road from the start of the proposed lot #1 to the 24" culvert that crosses Hussey Road. This culvert is the first Point of Analysis (POA).

Subcatchment #2 is to the north of subcatchment #1 and covers the middle of proposed lots #6-8 and runs 280 feet along Hussey Road. It discharges at the 15" culvert that crosses Hussey Road. This culvert is POA #2.

Subcatchment #3 is the majority of the site and neighboring lots. The offsite area is wooded. The onsite area was recently logged and has been left to revegetate. This area drains to a 30" culvert that crosses Hussey Road. This culvert is POA #3.

Flooding:

The project is not located within the 100-year flood plain, as shown on the attached FEMA Flood Insurance Rate Map Community Panel 230154 0015 B.

Groundcover, Topography and Soils:

The site consists of Skerry, Brayton, and Becket soils. All three fall into the hydrologic soil group C. The ground cover onsite is naturally being revegetated from being logged. The watershed is the western side of an unnamed hill. The hill slopes from elevation 780 to elevation 518 at Hussey Road.

Alteration of Natural Drainage Ways and Land Cover:

The development of the lots will not alter the natural drainage ways for the site. There is a buffer along the front of the lots that treats stormwater from the project. The natural swale and wetlands down the middle of the site will remain in their existing conditions and will not be impacted. No wetland impacts are anticipated.

Methodology:

HydroCAD version 10.0 developed by HydroCAD Software Solutions LLC of Chocurua, NH is used to model the hydrology and hydraulics of the site and design the hydraulics of stormwater management measures and facilities.

Peak flows for the 2-year (3.3"), 10-year (4.9"), and 25-year (6.2") storm events in a 24-hour period are analyzed for pre- and post-developed conditions. Precipitation values used in the model are taken from the manual: *CHAPTER 500: STORMWATER MANAGEMENT, Appendix H*. The rainfall values used are for York County, Maine.

Times of concentration methods include TR-55 sheet flow and shallow concentrated flow. Runoff curve numbers are selected from Tables 2-2a and 2-2c of the SCS TR-55 manual, which are included in the HydroCAD software. Watershed subcatchments are as delineated on Drawing D1.0 for pre-developed and post-developed conditions. Modeling assumptions made for each subcatchment, culvert, and Best Management Practice (BMP) with the site in its pre- and post-developed conditions are summarized in the HydroCAD reports attached as **Appendices B and C**.

Proposed BMPs:

Standard erosion and sediment control will be used during the development of the lots. No other BMPs are required for this project. A level spreader will be utilized on Lot 5 to control the peak rate of runoff from the site.

Water Quantity:

The development of this project will not have a significant impact on the peak rate of runoff from the site. See Table 1 for POA runoff values. See attached HydroCAD model for clarification.

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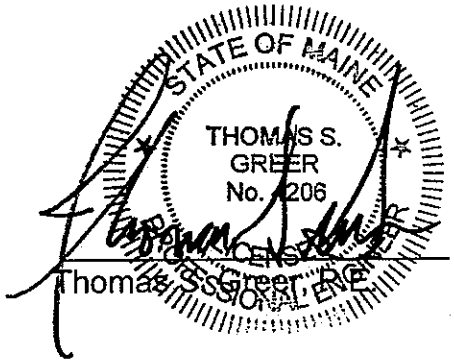
TABLE 1

POINT OF ANALYSIS	*PEAK RATE OF RUNOFF (CFS)*					
	2-YR	*10-YR*	*25-YR*	*2-YR*	*10-YR*	*25-YR*
	PRE-DEVELOPMENT CONDITIONS			**POST-DEVELOPMENT CONDITIONS**		
POA # 1	3.81	8.06	11.81	3.16	7.21	10.68
POA # 2	2.13	4.79	6.66	2.13	4.68	6.57
POA # 3	25.89	67.48	106.57	25.83	67.30	106.29

Conclusion:

The HydroCAD model predicts that peak stormwater runoff rates at the points of analyses will be reduced compared to the existing conditions. Therefore, this project will not have a significant impact on adjacent properties or receiving waters.



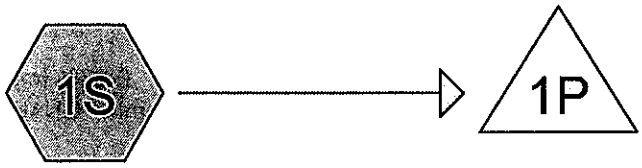
APPENDIX H. 24-hour duration rainfalls for various return periods

COUNTY	Storm Type	1-YR	2-YR	5-YR	10-YR	25-YR	50-YR	100-YR	500-YR
ANDROSCOGGIN	III	2.5	3.0	3.7	4.3	5.4	6.4	7.6	11.1
AROOSTOOK C (Presque Isle Area)	II	1.9	2.3	2.8	3.2	3.9	4.6	5.3	7.6
AROOSTOOK N (Fort Kent Area)	II	1.9	2.2	2.7	3.1	3.7	4.3	5.0	7.0
AROOSTOOK S (Houlton Area)	II	2.1	2.5	3.0	3.4	4.1	4.7	5.4	7.5
CUMBERLAND NW (Bridgton Area)	III	2.5	3.0	3.7	4.3	5.4	6.3	7.5	10.9
CUMBERLAND SE (N Windham Area)	III	2.6	3.1	3.9	4.6	5.8	6.9	8.1	12.1
FRANKLIN	II	2.0	2.4	2.9	3.4	4.2	4.9	5.7	8.2
HANCOCK	III	2.5	2.9	3.6	4.2	5.2	6.1	7.2	10.5
KENNEBEC	III	2.4	2.8	3.5	4.2	5.2	6.1	7.2	10.6
KNOX	III	2.6	3.2	3.9	4.6	5.7	6.7	7.9	11.5
LINCOLN	III	2.5	3.1	3.8	4.5	5.5	6.5	7.6	11.1
OXFORD E (Rumford Area)	II[1]	2.3	2.7	3.3	3.9	4.8	5.7	6.7	9.7
OXFORD W (Gilead Area)	II	2.2	2.7	3.4	4.0	4.9	5.8	6.9	10.1
PENOBSCOT N (Millinocket Area)	II	2.2	2.6	3.2	3.8	4.7	5.6	6.5	9.5
PENOBSCOT S (Hudson Area)	II	2.3	2.7	3.4	3.9	4.9	5.7	6.7	9.7
PISCATAQUIS N (Chesuncook Area)	II	2.0	2.4	2.9	3.4	4.2	5.0	5.8	8.5
PISCATAQUIS S (Monson Area)	II	2.2	2.7	3.3	3.9	4.8	5.7	6.8	10.0
SAGADAHOC	III	2.6	3.2	3.9	4.6	5.7	6.7	7.8	11.4
SOMERSET N (Pittston Farm Area)	II	2.0	2.3	2.8	3.3	4.0	4.7	5.4	7.8
SOMERSET S (Solon Area)	II	2.3	2.7	3.4	3.9	4.9	5.7	6.7	9.8
WALDO	III	2.4	2.9	3.6	4.2	5.2	6.1	7.2	10.5
WASHINGTON	III	2.5	2.8	3.4	3.9	4.8	5.5	6.4	9.0
YORK	III	2.6	3.3	4.1	4.9	6.2	7.3	8.7	13.2

1 Use Type III rainfall for the towns of Brownfield, Buckfield, Denmark, Hartford, Hebron, Hiram, Oxford, and Porter.

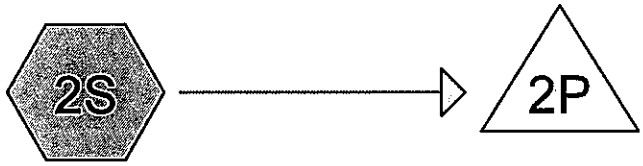
Source: Data extracted by the Maine Department of Environmental Protection from the Northeast Regional Climate Center website (http://precip.eas.cornell.edu), Extreme Precipitation Tables. Data from this website was obtained from the National Oceanic and Atmospheric Administration's Regional Climate Center Program.
June 2014

EXISTING CONDITIONS



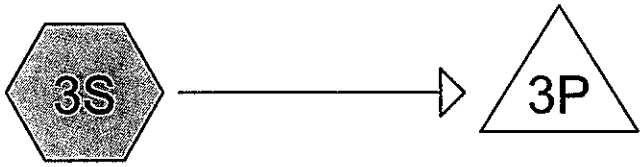
SOUTH SIDE ALONG NORTH ROAD

CULVERT AT HUSSEY ROAD, POA 1



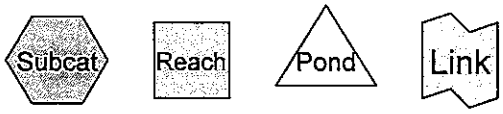
AREA OF LOT 7+, ALONG HUSSEY ROAD

CULVERT AT HUSSEY ROAD 15", POA 2



CENTRAL SITE PLUS OFF SITE

CULVERT AT HUSSEY ROAD 32", POA 3



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: SOUTH SIDE ALONG Runoff Area=223,131 sf 10.11% Impervious Runoff Depth>1.05"
Flow Length=878' Tc=29.4 min CN=75 Runoff=3.81 cfs 0.449 af

Subcatchment 2S: AREA OF LOT 7+, Runoff Area=140,510 sf 1.49% Impervious Runoff Depth>0.89"
Flow Length=875' Tc=25.1 min CN=72 Runoff=2.13 cfs 0.240 af

Subcatchment 3S: CENTRAL SITE PLUS Runoff Area=4,720,717 sf 0.63% Impervious Runoff Depth>0.68"
Flow Length=3,775' Tc=88.1 min CN=68 Runoff=26.52 cfs 6.107 af

Pond 1P: CULVERT AT HUSSEY ROAD, POA 1 Peak Elev=515.34' Storage=79 cf Inflow=3.81 cfs 0.449 af
24.0" Round Culvert n=0.013 L=60.0' S=0.0383 '/' Outflow=3.81 cfs 0.449 af

Pond 2P: CULVERT AT HUSSEY ROAD 15", Peak Elev=524.93' Storage=84 cf Inflow=2.13 cfs 0.240 af
15.0" Round Culvert n=0.013 L=30.0' S=0.0133 '/' Outflow=2.13 cfs 0.240 af

Pond 3P: CULVERT AT HUSSEY ROAD 32", Peak Elev=520.72' Storage=8,332 cf Inflow=26.52 cfs 6.107 af
Outflow=25.89 cfs 6.079 af

Total Runoff Area = 116.721 ac Runoff Volume = 6.797 af Average Runoff Depth = 0.70"
98.93% Pervious = 115.473 ac 1.07% Impervious = 1.248 ac

Summary for Subcatchment 1S: SOUTH SIDE ALONG NORTH ROAD

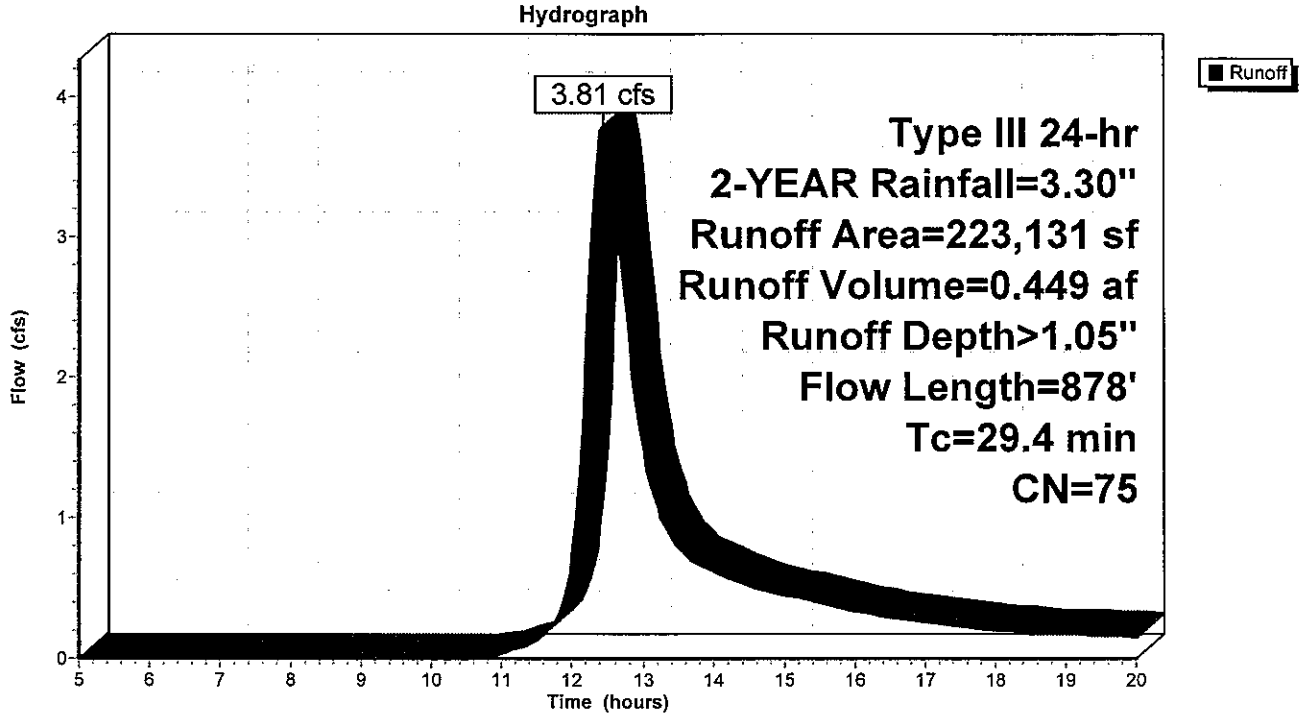
Runoff = 3.81 cfs @ 12.44 hrs, Volume= 0.449 af, Depth> 1.05"

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=3.30"

	Area (sf)	CN	Description
*	22,558	98	Paved road, HSG C
*	200,573	72	Woods, HSG C
	223,131	75	Weighted Average
	200,573		89.89% Pervious Area
	22,558		10.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.1	100	0.0800	0.08		**Sheet Flow, WEST IN WOODS** Woods: Dense underbrush n= 0.800 P2= 3.30"
2.7	157	0.0380	0.97		**Shallow Concentrated Flow, IN WOODS** Woodland Kv= 5.0 fps
4.2	391	0.0970	1.56		**Shallow Concentrated Flow, IN WOODS** Woodland Kv= 5.0 fps
1.4	230	0.0350	2.81		**Shallow Concentrated Flow, IN ROAD DITCH** Grassed Waterway Kv= 15.0 fps
29.4	878	Total			

Subcatchment 1S: SOUTH SIDE ALONG NORTH ROAD



Summary for Subcatchment 2S: AREA OF LOT 7+, ALONG HUSSEY ROAD

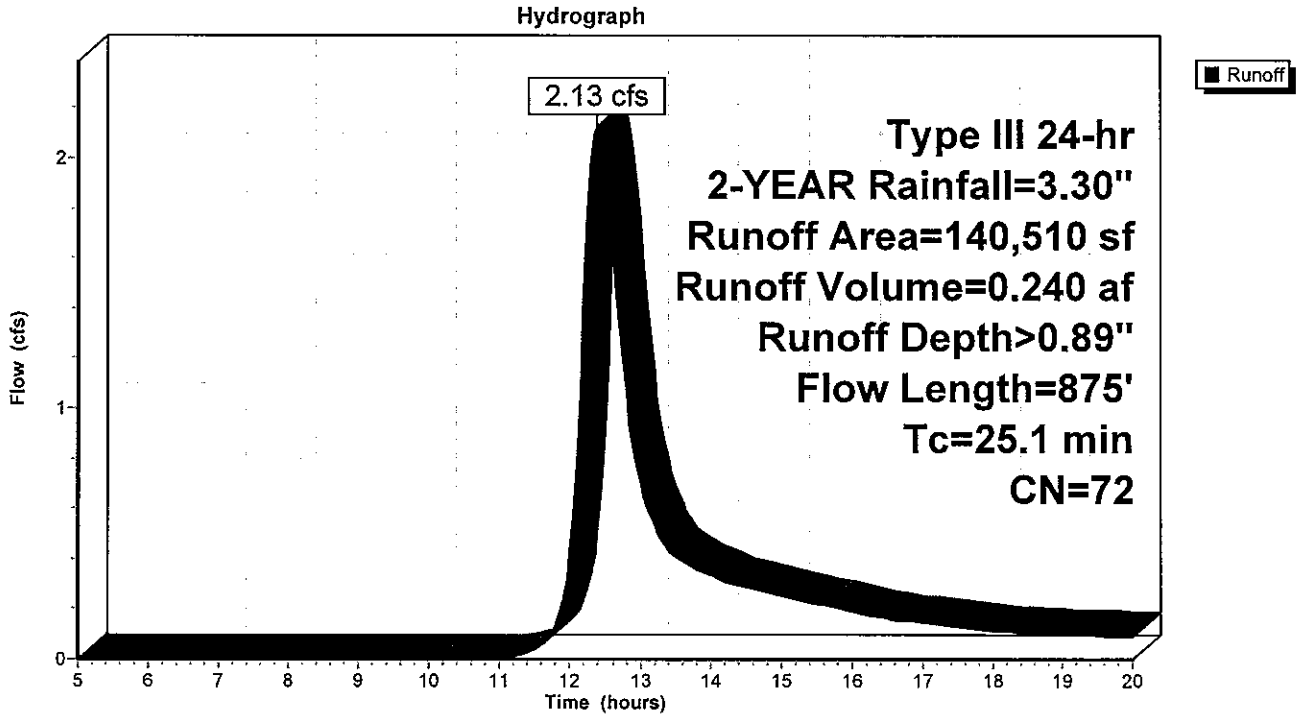
Runoff = 2.13 cfs @ 12.39 hrs, Volume= 0.240 af, Depth> 0.89"

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=3.30"

	Area (sf)	CN	Description
*	2,095	98	Paved road, HSG C
*	138,415	72	Woods, HSG C
	140,510	72	Weighted Average
	138,415		98.51% Pervious Area
	2,095		1.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	100	0.0500	0.11		**Sheet Flow, NORTH IN WOODS** Woods: Light underbrush n= 0.400 P2= 3.30"
8.2	625	0.0640	1.26		**Shallow Concentrated Flow, NORTH WEST THROUGH WOOD** Woodland Kv= 5.0 fps
2.2	150	0.0130	1.14		**Shallow Concentrated Flow, SOUTH WEST IN ROAD DITCH** Nearly Bare & Untilled Kv= 10.0 fps
25.1	875	Total			

Subcatchment 2S: AREA OF LOT 7+, ALONG HUSSEY ROAD



Summary for Subcatchment 3S: CENTRAL SITE PLUS OFF SITE

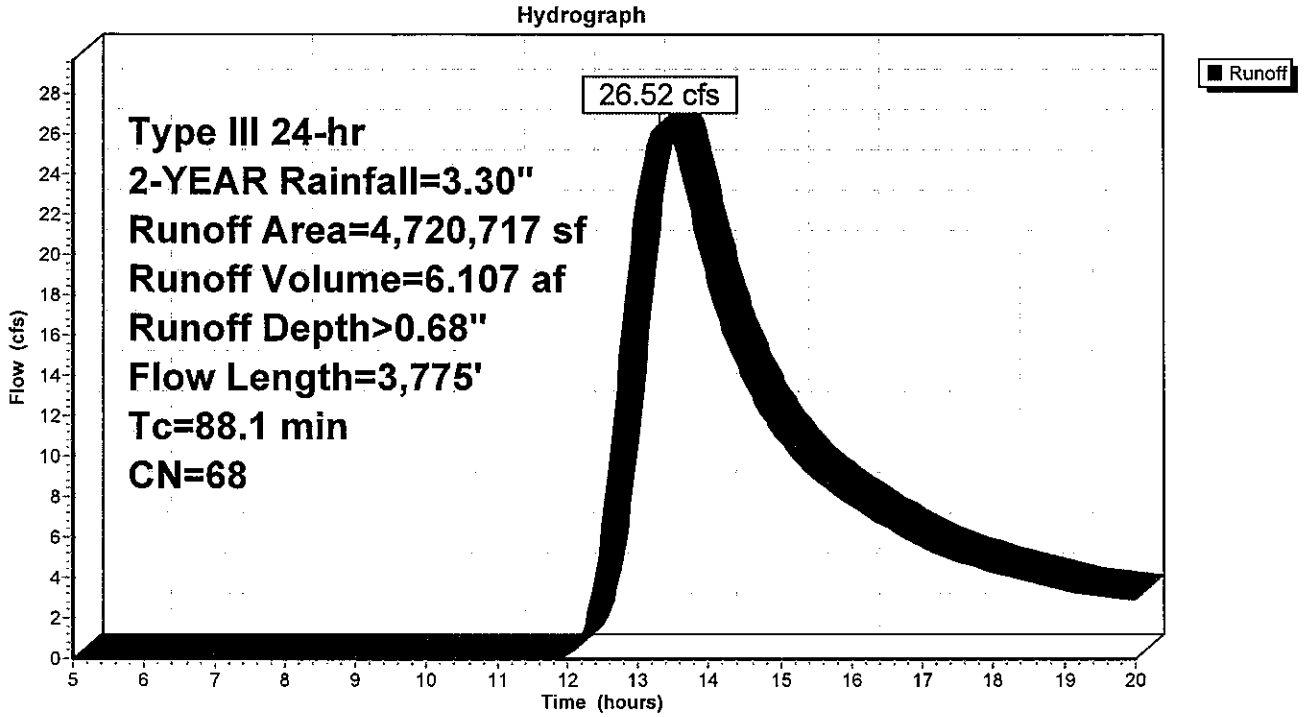
Runoff = 26.52 cfs @ 13.32 hrs, Volume= 6.107 af, Depth> 0.68"

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=3.30"

	Area (sf)	CN	Description
*	29,709	98	Paved roads, HSG C
*	4,691,008	68	Woods, HSG C
	4,720,717	68	Weighted Average
	4,691,008		99.37% Pervious Area
	29,709		0.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.6	150	0.0660	0.08		**Sheet Flow, SOUTH WEST THROUGH WOODS** Woods: Dense underbrush n= 0.800 P2= 3.30"
52.7	1,580	0.0400	0.50		**Shallow Concentrated Flow, WEST THROUGH WOODS** Forest w/Heavy Litter Kv= 2.5 fps
3.8	2,045	0.0420	9.03	162.47	**Trap/Vee/Rect Channel Flow, NORTH WEST IN STREAM** Bot.W=5.00' D=2.00' Z= 2.0 '/' Top.W=13.00' n= 0.040 Winding stream, pools & shoals
88.1	3,775	Total			

Subcatchment 3S: CENTRAL SITE PLUS OFF SITE



Summary for Pond 1P: CULVERT AT HUSSEY ROAD, POA 1

Inflow Area = 5.122 ac, 10.11% Impervious, Inflow Depth > 1.05" for 2-YEAR event
Inflow = 3.81 cfs @ 12.44 hrs, Volume= 0.449 af
Outflow = 3.81 cfs @ 12.44 hrs, Volume= 0.449 af, Atten= 0%, Lag= 0.2 min
Primary = 3.81 cfs @ 12.44 hrs, Volume= 0.449 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 515.34' @ 12.44 hrs Surf.Area= 92 sf Storage= 79 cf

Plug-Flow detention time= 0.9 min calculated for 0.447 af (100% of inflow)
Center-of-Mass det. time= 0.4 min (832.8 - 832.3)

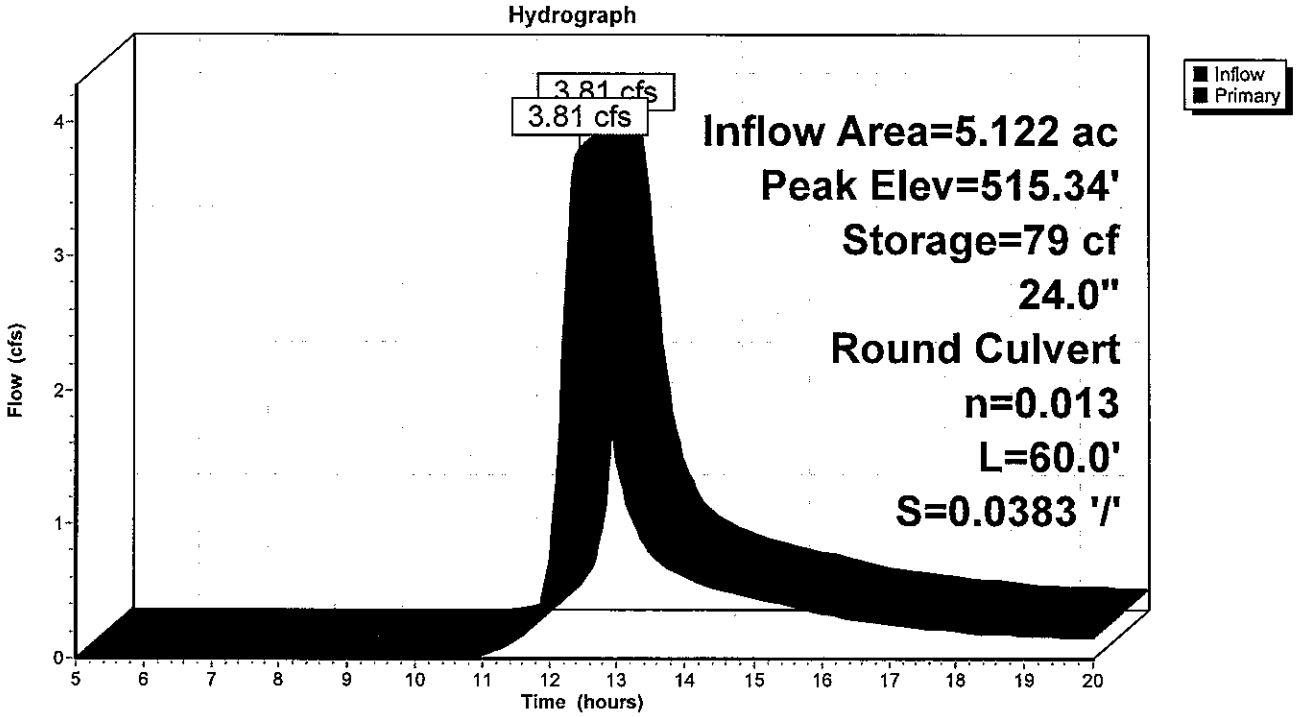
Volume	Invert	Avail.Storage	Storage Description
#1	514.00'	520 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
514.00	25	0	0
516.00	125	150	150
518.00	245	370	520

Device	Routing	Invert	Outlet Devices
#1	Primary	514.40'	**24.0" Round Culvert** L= 60.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 514.40' / 512.10' S= 0.0383 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=3.80 cfs @ 12.44 hrs HW=515.34' (Free Discharge)
└**1=Culvert** (Inlet Controls 3.80 cfs @ 2.61 fps)

Pond 1P: CULVERT AT HUSSEY ROAD, POA 1



Summary for Pond 2P: CULVERT AT HUSSEY ROAD 15", POA 2

Inflow Area = 3.226 ac, 1.49% Impervious, Inflow Depth > 0.89" for 2-YEAR event
Inflow = 2.13 cfs @ 12.39 hrs, Volume= 0.240 af
Outflow = 2.13 cfs @ 12.40 hrs, Volume= 0.240 af, Atten= 0%, Lag= 0.7 min
Primary = 2.13 cfs @ 12.40 hrs, Volume= 0.240 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 524.93' @ 12.40 hrs Surf.Area= 155 sf Storage= 84 cf

Plug-Flow detention time= 1.0 min calculated for 0.239 af (100% of inflow)
Center-of-Mass det. time= 0.6 min (836.7 - 836.1)

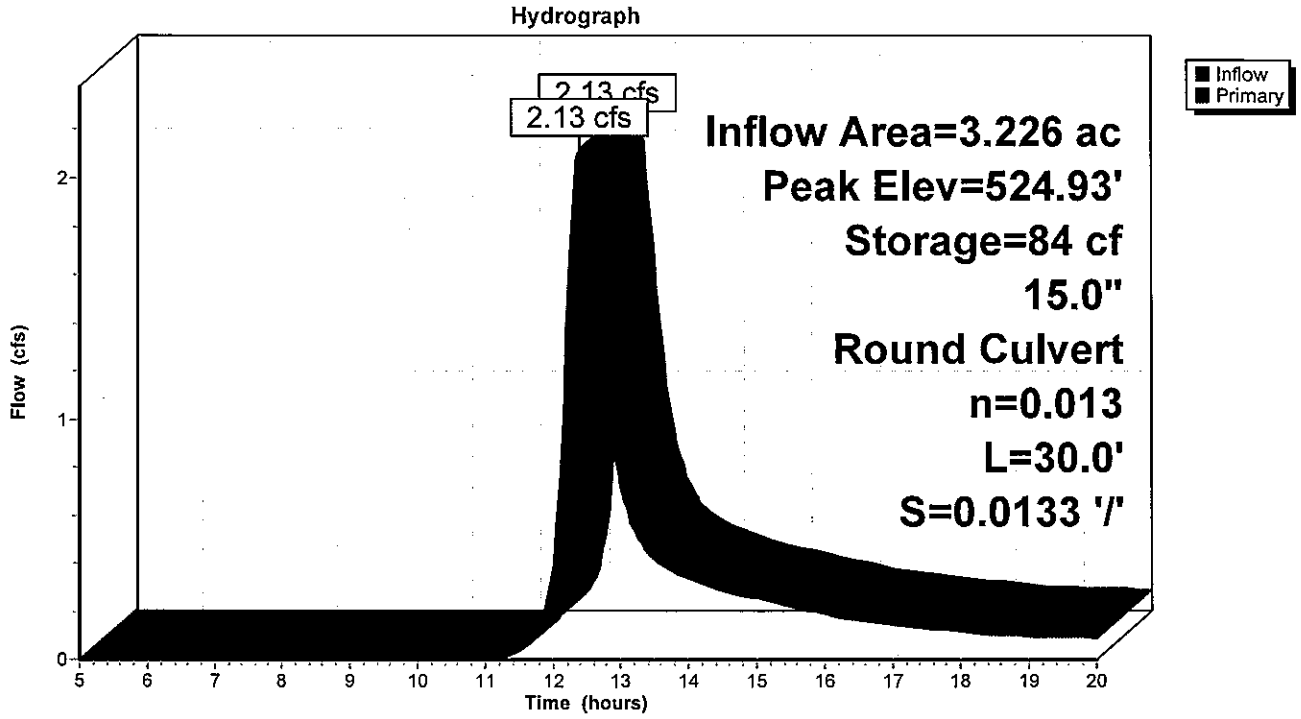
Volume	Invert	Avail.Storage	Storage Description
#1	524.00'	3,549 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
524.00	25	0	0
526.00	304	329	329
528.00	2,916	3,220	3,549

Device	Routing	Invert	Outlet Devices
#1	Primary	524.10'	**15.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 524.10' / 523.70' S= 0.0133 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=2.12 cfs @ 12.40 hrs HW=524.93' (Free Discharge)
1=Culvert (Inlet Controls 2.12 cfs @ 2.45 fps)

Pond 2P: CULVERT AT HUSSEY ROAD 15", POA 2



Summary for Pond 3P: CULVERT AT HUSSEY ROAD 32", POA 3

Inflow Area = 108.373 ac, 0.63% Impervious, Inflow Depth > 0.68" for 2-YEAR event
Inflow = 26.52 cfs @ 13.32 hrs, Volume= 6.107 af
Outflow = 25.89 cfs @ 13.47 hrs, Volume= 6.079 af, Atten= 2%, Lag= 9.3 min
Primary = 25.89 cfs @ 13.47 hrs, Volume= 6.079 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 520.72' @ 13.47 hrs Surf.Area= 5,216 sf Storage= 8,332 cf

Plug-Flow detention time= 5.2 min calculated for 6.079 af (100% of inflow)
Center-of-Mass det. time= 3.7 min (895.8 - 892.0)

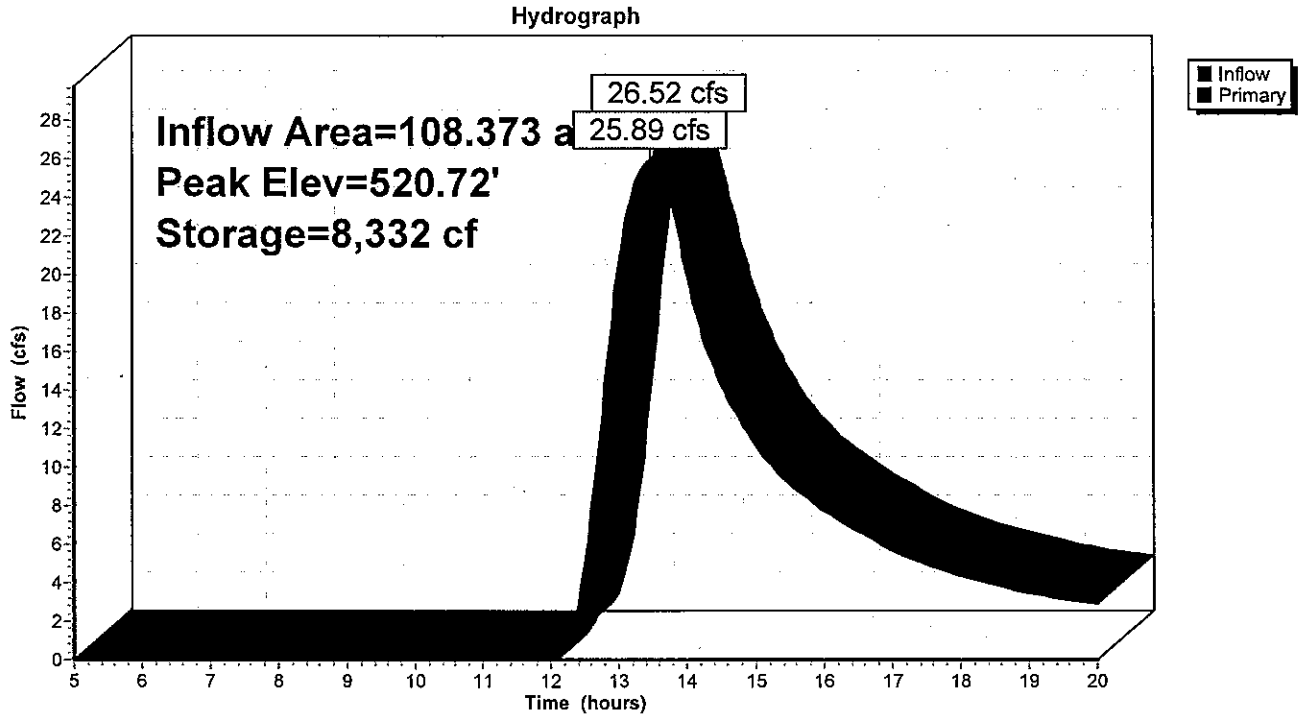
Volume	Invert	Avail.Storage	Storage Description
#1	517.50'	66,975 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
517.50	450	0	0
518.00	925	344	344
520.00	3,810	4,735	5,079
522.00	7,710	11,520	16,599
524.00	12,683	20,393	36,992
526.00	17,300	29,983	66,975

Device	Routing	Invert	Outlet Devices
#1	Primary	517.90'	**32.0" Round Culvert** L= 31.0' Ke= 0.900 Inlet / Outlet Invert= 517.90' / 517.30' S= 0.0194 '/' Cc= 0.900 n= 0.010, Flow Area= 5.59 sf
#2	Primary	522.00'	**10.0' long x 16.0' 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) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=25.88 cfs @ 13.47 hrs HW=520.72' (Free Discharge)
└**1=Culvert** (Inlet Controls 25.88 cfs @ 4.63 fps)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 3P: CULVERT AT HUSSEY ROAD 32", POA 3



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: SOUTH SIDE ALONG Runoff Area=223,131 sf 10.11% Impervious Runoff Depth>2.18"
Flow Length=878' Tc=29.4 min CN=75 Runoff=8.06 cfs 0.929 af

Subcatchment2S: AREA OF LOT 7+, Runoff Area=140,510 sf 1.49% Impervious Runoff Depth>1.94"
Flow Length=875' Tc=25.1 min CN=72 Runoff=4.83 cfs 0.522 af

Subcatchment3S: CENTRAL SITE PLUS Runoff Area=4,720,717 sf 0.63% Impervious Runoff Depth>1.60"
Flow Length=3,775' Tc=88.1 min CN=68 Runoff=67.94 cfs 14.425 af

Pond 1P: CULVERT AT HUSSEY ROAD, POA 1 Peak Elev=515.87' Storage=134 cf Inflow=8.06 cfs 0.929 af
24.0" Round Culvert n=0.013 L=60.0' S=0.0383 '/' Outflow=8.06 cfs 0.929 af

Pond 2P: CULVERT AT HUSSEY ROAD 15", Peak Elev=525.78' Storage=265 cf Inflow=4.83 cfs 0.522 af
15.0" Round Culvert n=0.013 L=30.0' S=0.0133 '/' Outflow=4.79 cfs 0.522 af

Pond 3P: CULVERT AT HUSSEY ROAD Peak Elev=523.00' Storage=25,539 cf Inflow=67.94 cfs 14.425 af
Outflow=67.48 cfs 14.383 af

Total Runoff Area = 116.721 ac Runoff Volume = 15.877 af Average Runoff Depth = 1.63"
98.93% Pervious = 115.473 ac 1.07% Impervious = 1.248 ac

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: SOUTH SIDE ALONG Runoff Area=223,131 sf 10.11% Impervious Runoff Depth>3.20"
Flow Length=878' Tc=29.4 min CN=75 Runoff=11.82 cfs 1.364 af

Subcatchment2S: AREA OF LOT 7+, Runoff Area=140,510 sf 1.49% Impervious Runoff Depth>2.91"
Flow Length=875' Tc=25.1 min CN=72 Runoff=7.28 cfs 0.783 af

Subcatchment3S: CENTRAL SITE PLUS Runoff Area=4,720,717 sf 0.63% Impervious Runoff Depth>2.48"
Flow Length=3,775' Tc=88.1 min CN=68 Runoff=107.26 cfs 22.391 af

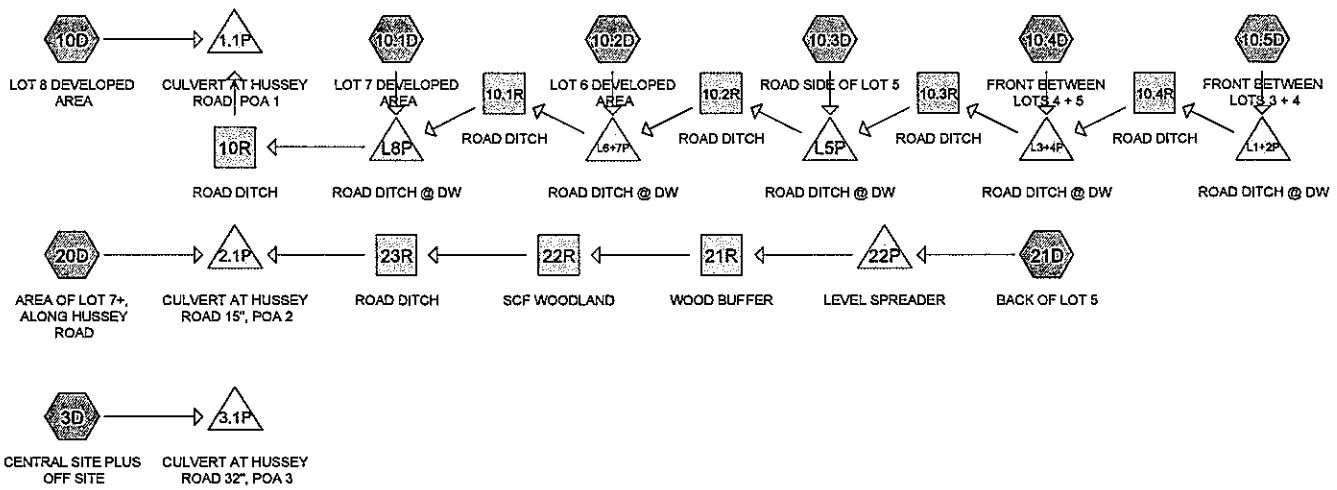
Pond 1P: CULVERT AT HUSSEY ROAD, POA Peak Elev=516.37' Storage=200 cf Inflow=11.82 cfs 1.364 af
24.0" Round Culvert n=0.013 L=60.0' S=0.0383 '/' Outflow=11.81 cfs 1.363 af

Pond 2P: CULVERT AT HUSSEY ROAD 15", Peak Elev=526.76' Storage=942 cf Inflow=7.28 cfs 0.783 af
15.0" Round Culvert n=0.013 L=30.0' S=0.0133 '/' Outflow=6.66 cfs 0.783 af

Pond 3P: CULVERT AT HUSSEY ROAD Peak Elev=523.76' Storage=34,015 cf Inflow=107.26 cfs 22.391 af
Outflow=106.57 cfs 22.335 af

Total Runoff Area = 116.721 ac Runoff Volume = 24.538 af Average Runoff Depth = 2.52"
98.93% Pervious = 115.473 ac 1.07% Impervious = 1.248 ac

DEVELOPED
CONDITIONS



Subcat Reach Pond Link

Routing Diagram for 16149 EX DEV 050219
Prepared by Walsh Engineering Associates, Inc., Printed 5/3/2019

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment3D: CENTRAL SITE PLUS Runoff Area=4,708,093 sf 0.79% Impervious Runoff Depth>0.68"
Flow Length=3,775' Tc=88.1 min CN=68 Runoff=26.44 cfs 6.091 af

Subcatchment10.1D: LOT 7 DEVELOPED Runoff Area=17,600 sf 15.05% Impervious Runoff Depth>1.23"
Flow Length=135' Tc=21.4 min CN=78 Runoff=0.41 cfs 0.042 af

Subcatchment10.2D: LOT 6 DEVELOPED Runoff Area=39,406 sf 13.07% Impervious Runoff Depth>1.18"
Flow Length=312' Tc=15.1 min CN=77 Runoff=0.99 cfs 0.089 af

Subcatchment10.3D: ROAD SIDE OF LOT Runoff Area=36,777 sf 12.09% Impervious Runoff Depth>1.18"
Flow Length=223' Tc=15.2 min CN=77 Runoff=0.93 cfs 0.083 af

Subcatchment10.4D: FRONT BETWEEN Runoff Area=13,940 sf 22.87% Impervious Runoff Depth>1.37"
Flow Length=180' Tc=7.8 min CN=80 Runoff=0.51 cfs 0.036 af

Subcatchment10.5D: FRONT BETWEEN Runoff Area=29,490 sf 17.37% Impervious Runoff Depth>1.17"
Flow Length=380' Tc=19.5 min CN=77 Runoff=0.67 cfs 0.066 af

Subcatchment10D: LOT 8 DEVELOPED Runoff Area=98,423 sf 9.25% Impervious Runoff Depth>1.10"
Flow Length=1,135' Tc=48.8 min CN=76 Runoff=1.38 cfs 0.207 af

Subcatchment20D: AREA OF LOT 7+, Runoff Area=136,683 sf 1.53% Impervious Runoff Depth>0.95"
Flow Length=875' Tc=27.3 min CN=73 Runoff=2.13 cfs 0.247 af

Subcatchment21D: BACK OF LOT 5 Runoff Area=3,938 sf 22.55% Impervious Runoff Depth>1.30"
Tc=6.0 min CN=79 Runoff=0.15 cfs 0.010 af

Reach 10.1R: ROAD DITCH Avg. Flow Depth=0.12' Max Vel=2.98 fps Inflow=1.99 cfs 0.110 af
n=0.035 L=140.0' S=0.0929 '/' Capacity=381.91 cfs Outflow=1.97 cfs 0.110 af

Reach 10.2R: ROAD DITCH Avg. Flow Depth=0.13' Max Vel=1.74 fps Inflow=1.27 cfs 0.071 af
n=0.035 L=310.0' S=0.0287 '/' Capacity=212.36 cfs Outflow=1.24 cfs 0.071 af

Reach 10.3R: ROAD DITCH Avg. Flow Depth=0.09' Max Vel=1.41 fps Inflow=0.66 cfs 0.034 af
n=0.035 L=286.0' S=0.0311 '/' Capacity=221.09 cfs Outflow=0.65 cfs 0.034 af

Reach 10.4R: ROAD DITCH Avg. Flow Depth=0.09' Max Vel=1.20 fps Inflow=0.57 cfs 0.026 af
n=0.035 L=300.0' S=0.0230 '/' Capacity=190.07 cfs Outflow=0.55 cfs 0.026 af

Reach 10R: ROAD DITCH Avg. Flow Depth=0.13' Max Vel=3.22 fps Inflow=2.27 cfs 0.120 af
n=0.035 L=72.0' S=0.0958 '/' Capacity=334.91 cfs Outflow=2.26 cfs 0.120 af

Reach 21R: WOOD BUFFER Avg. Flow Depth=0.03' Max Vel=0.07 fps Inflow=0.16 cfs 0.007 af
n=0.800 L=50.0' S=0.1200 '/' Capacity=1.35 cfs Outflow=0.06 cfs 0.007 af

Reach 22R: SCF WOODLAND Avg. Flow Depth=0.02' Max Vel=0.30 fps Inflow=0.06 cfs 0.007 af
n=0.100 L=596.0' S=0.0671 '/' Capacity=29.12 cfs Outflow=0.03 cfs 0.007 af

Reach 23R: ROAD DITCH Avg. Flow Depth=0.01' Max Vel=0.79 fps Inflow=0.03 cfs 0.007 af
n=0.022 L=150.0' S=0.0260 '/' Capacity=215.22 cfs Outflow=0.03 cfs 0.007 af

Pond 1.1P: CULVERT AT HUSSEY ROAD, POA Peak Elev=515.25' Storage=70 cf Inflow=3.14 cfs 0.328 af
24.0" Round Culvert n=0.013 L=60.0' S=0.0383 '/' Outflow=3.14 cfs 0.327 af

Pond 2.1P: CULVERT AT HUSSEY ROAD 15", Peak Elev=524.93' Storage=84 cf Inflow=2.13 cfs 0.254 af
15.0" Round Culvert n=0.013 L=30.0' S=0.0133 '/' Outflow=2.13 cfs 0.254 af

Pond 3.1P: CULVERT AT HUSSEY ROAD Peak Elev=520.71' Storage=8,293 cf Inflow=26.44 cfs 6.091 af
Outflow=25.83 cfs 6.062 af

Pond 22P: LEVEL SPREADER Peak Elev=574.02' Storage=107 cf Inflow=0.15 cfs 0.010 af
Outflow=0.16 cfs 0.007 af

Pond L1+2P: ROAD DITCH @ DW Peak Elev=585.50' Storage=11 cf Inflow=0.67 cfs 0.066 af
Discarded=0.10 cfs 0.040 af Primary=0.57 cfs 0.026 af Outflow=0.67 cfs 0.066 af

Pond L3+4P: ROAD DITCH @ DW Peak Elev=577.54' Storage=21 cf Inflow=0.76 cfs 0.063 af
Discarded=0.10 cfs 0.029 af Primary=0.66 cfs 0.034 af Outflow=0.76 cfs 0.063 af

Pond L5P: ROAD DITCH @ DW Peak Elev=567.79' Storage=30 cf Inflow=1.37 cfs 0.117 af
Discarded=0.10 cfs 0.046 af Primary=1.27 cfs 0.071 af Outflow=1.37 cfs 0.117 af

Pond L6+7P: ROAD DITCH @ DW Peak Elev=558.92' Storage=86 cf Inflow=2.09 cfs 0.159 af
Discarded=0.10 cfs 0.049 af Primary=1.99 cfs 0.110 af Outflow=2.09 cfs 0.159 af

Pond L8P: ROAD DITCH @ DW Peak Elev=544.79' Storage=8 cf Inflow=2.37 cfs 0.152 af
Discarded=0.10 cfs 0.032 af Primary=2.27 cfs 0.120 af Outflow=2.37 cfs 0.152 af

Total Runoff Area = 116.721 ac Runoff Volume = 6.870 af Average Runoff Depth = 0.71"
98.62% Pervious = 115.115 ac 1.38% Impervious = 1.606 ac

Summary for Subcatchment 3D: CENTRAL SITE PLUS OFF SITE

Runoff = 26.44 cfs @ 13.32 hrs, Volume= 6.091 af, Depth> 0.68"

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=3.30"

	Area (sf)	CN	Description
*	29,709	98	Paved roads, HSG C
*	4,659,503	68	Woods, HSG C
*	7,598	98	Roofs & Driveways, HSG C
	11,283	74	>75% Grass cover, Good, HSG C
	4,708,093	68	Weighted Average
	4,670,786		99.21% Pervious Area
	37,307		0.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.6	150	0.0660	0.08		**Sheet Flow, SOUTH WEST THROUGH WOODS** Woods: Dense underbrush n= 0.800 P2= 3.30"
52.7	1,580	0.0400	0.50		**Shallow Concentrated Flow, WEST THROUGH WOODS** Forest w/Heavy Litter Kv= 2.5 fps
3.8	2,045	0.0420	9.03	162.47	**Trap/Vee/Rect Channel Flow, NORTH WEST IN STREAM** Bot.W=5.00' D=2.00' Z= 2.0 '/' Top.W=13.00' n= 0.040 Winding stream, pools & shoals
88.1	3,775	Total			

Summary for Subcatchment 10.1D: LOT 7 DEVELOPED AREA

Runoff = 0.41 cfs @ 12.31 hrs, Volume= 0.042 af, Depth> 1.23"

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=3.30"

	Area (sf)	CN	Description
*	1,761	98	Existing Paved roads, HSG C
	1,382	96	Gravel surface, HSG C
*	10,480	72	Woods, HSG C
*	888	98	Roofs, HSG C
	3,089	74	>75% Grass cover, Good, HSG C
	17,600	78	Weighted Average
	14,951		84.95% Pervious Area
	2,649		15.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	85	0.0150	0.07		**Sheet Flow, WEST IN WOODS** Woods: Light underbrush n= 0.400 P2= 3.30"
0.6	50	0.0100	1.50		**Shallow Concentrated Flow, DW DITCH** Grassed Waterway Kv= 15.0 fps
21.4	135	Total			

Summary for Subcatchment 10.2D: LOT 6 DEVELOPED AREA

Runoff = 0.99 cfs @ 12.22 hrs, Volume= 0.089 af, Depth> 1.18"

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=3.30"

	Area (sf)	CN	Description
*	3,661	98	Existing Paved roads, HSG C
	2,156	96	Gravel surface, HSG C
*	27,701	72	Woods, HSG C
*	1,488	98	Roofs, HSG C
	4,400	74	>75% Grass cover, Good, HSG C
	39,406	77	Weighted Average
	34,257		86.93% Pervious Area
	5,149		13.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	100	0.0800	0.14		**Sheet Flow, IN WOODS** Woods: Light underbrush n= 0.400 P2= 3.30"
3.0	212	0.0280	1.17		**Shallow Concentrated Flow, ROAD DITCH** Short Grass Pasture Kv= 7.0 fps
15.1	312	Total			

Summary for Subcatchment 10.3D: ROAD SIDE OF LOT 5

Runoff = 0.93 cfs @ 12.22 hrs, Volume= 0.083 af, Depth> 1.18"

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=3.30"

	Area (sf)	CN	Description
*	3,269	98	Existing Paved roads, HSG C
	1,948	96	Gravel surface, HSG C
*	24,846	72	Woods, HSG C
*	1,176	98	Roofs, HSG C
	5,538	74	>75% Grass cover, Good, HSG C
	36,777	77	Weighted Average
	32,332		87.91% Pervious Area
	4,445		12.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	100	0.0600	0.12		**Sheet Flow, WEST IN WOODS** Woods: Light underbrush n= 0.400 P2= 3.30"
1.6	123	0.0325	1.26		**Shallow Concentrated Flow, ROAD DITCH** Short Grass Pasture Kv= 7.0 fps
15.2	223	Total			

Summary for Subcatchment 10.4D: FRONT BETWEEN LOTS 4 + 5

Runoff = 0.51 cfs @ 12.12 hrs, Volume= 0.036 af, Depth> 1.37"

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=3.30"

	Area (sf)	CN	Description
*	3,188	98	Existing Paved road, HSG C
	883	96	Gravel surface, HSG C
*	8,832	72	Woods, HSG C
	1,037	74	>75% Grass cover, Good, HSG C
	13,940	80	Weighted Average
	10,752		77.13% Pervious Area
	3,188		22.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	30	0.0800	0.11		**Sheet Flow, WEST IN WOODS** Woods: Light underbrush n= 0.400 P2= 3.30"
3.2	150	0.0240	0.77		**Shallow Concentrated Flow, IN WOODS** Woodland Kv= 5.0 fps
7.8	180	Total			

Summary for Subcatchment 10.5D: FRONT BETWEEN LOTS 3 + 4

Runoff = 0.67 cfs @ 12.29 hrs, Volume= 0.066 af, Depth> 1.17"

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=3.30"

	Area (sf)	CN	Description
*	5,121	98	Paved road, HSG C
*	22,925	72	Woods, HSG C
	611	96	Gravel surface, HSG C
	833	74	>75% Grass cover, Good, HSG C
	29,490	77	Weighted Average
	24,369		82.63% Pervious Area
	5,121		17.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.9	100	0.0350	0.10		**Sheet Flow, WEST IN WOODS** Woods: Light underbrush n= 0.400 P2= 3.30"
2.6	280	0.0323	1.80		**Shallow Concentrated Flow, TO ROAD DITCH** Nearly Bare & Untilled Kv= 10.0 fps
19.5	380	Total			

Summary for Subcatchment 10D: LOT 8 DEVELOPED AREA

Runoff = 1.38 cfs @ 12.71 hrs, Volume= 0.207 af, Depth> 1.10"

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 2-YEAR Rainfall=3.30"

	Area (sf)	CN	Description
*	5,557	98	Existing Paved roads, HSG C
	2,265	96	Gravel surface, HSG C
*	59,479	72	Woods, HSG C
*	3,552	98	Roofs, HSG C
	27,570	74	>75% Grass cover, Good, HSG C
	98,423	76	Weighted Average
	89,314		90.75% Pervious Area
	9,109		9.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.6	150	0.0660	0.08		**Sheet Flow, WEST IN WOODS** Woods: Dense underbrush n= 0.800 P2= 3.30"
13.1	755	0.0370	0.96		**Shallow Concentrated Flow, IN WOODS** Woodland Kv= 5.0 fps
4.1	230	0.0350	0.94		**Shallow Concentrated Flow, ROAD DITCH** Woodland Kv= 5.0 fps
48.8	1,135	Total			

Summary for Subcatchment 20D: AREA OF LOT 7+, ALONG HUSSEY ROAD

Runoff = 2.13 cfs @ 12.42 hrs, Volume= 0.247 af, Depth> 0.95"

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=3.30"

	Area (sf)	CN	Description
*	2,095	98	Paved road, HSG C
*	124,158	72	Woods, HSG C
	10,430	74	>75% Grass cover, Good, HSG C
	136,683	73	Weighted Average
	134,588		98.47% Pervious Area
	2,095		1.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.4	100	0.0440	0.11		**Sheet Flow, NORTH IN WOODS** Woods: Light underbrush n= 0.400 P2= 3.30"
8.8	625	0.0560	1.18		**Shallow Concentrated Flow, NORTH WEST THROUGH WOOD** Woodland Kv= 5.0 fps
3.1	150	0.0130	0.80		**Shallow Concentrated Flow, SOUTH WEST IN ROAD DITCH** Short Grass Pasture Kv= 7.0 fps
27.3	875	Total			

Summary for Subcatchment 21D: BACK OF LOT 5

Runoff = 0.15 cfs @ 12.10 hrs, Volume= 0.010 af, Depth> 1.30"

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=3.30"

	Area (sf)	CN	Description
*	888	98	Roofs & Driveways, HSG C
	3,050	74	>75% Grass cover, Good, HSG C
	3,938	79	Weighted Average
	3,050		77.45% Pervious Area
	888		22.55% Impervious Area

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

Summary for Reach 10.1R: ROAD DITCH

Inflow Area = 2.746 ac, 14.97% Impervious, Inflow Depth > 0.48" for 2-YEAR event
Inflow = 1.99 cfs @ 12.32 hrs, Volume= 0.110 af
Outflow = 1.97 cfs @ 12.35 hrs, Volume= 0.110 af, Atten= 1%, Lag= 1.7 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.98 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 1.11 fps, Avg. Travel Time= 2.1 min

Peak Storage= 93 cf @ 12.33 hrs
Average Depth at Peak Storage= 0.12'
Bank-Full Depth= 2.00' Flow Area= 26.0 sf, Capacity= 381.91 cfs

5.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 4.0 '/' Top Width= 21.00'
Length= 140.0' Slope= 0.0929 '/'
Inlet Invert= 557.00', Outlet Invert= 544.00'

‡

Summary for Reach 10.2R: ROAD DITCH

Inflow Area = 1.841 ac, 15.90% Impervious, Inflow Depth > 0.46" for 2-YEAR event
Inflow = 1.27 cfs @ 12.26 hrs, Volume= 0.071 af
Outflow = 1.24 cfs @ 12.35 hrs, Volume= 0.071 af, Atten= 2%, Lag= 5.8 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.74 fps, Min. Travel Time= 3.0 min
Avg. Velocity = 0.63 fps, Avg. Travel Time= 8.3 min

Peak Storage= 222 cf @ 12.30 hrs
Average Depth at Peak Storage= 0.13'
Bank-Full Depth= 2.00' Flow Area= 26.0 sf, Capacity= 212.36 cfs

5.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 4.0 '/' Top Width= 21.00'
Length= 310.0' Slope= 0.0287 '/'
Inlet Invert= 566.90', Outlet Invert= 558.00'

‡

Summary for Reach 10.3R: ROAD DITCH

Inflow Area = 0.997 ac, 19.13% Impervious, Inflow Depth > 0.41" for 2-YEAR event
Inflow = 0.66 cfs @ 12.39 hrs, Volume= 0.034 af
Outflow = 0.65 cfs @ 12.48 hrs, Volume= 0.034 af, Atten= 2%, Lag= 5.5 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.41 fps, Min. Travel Time= 3.4 min
Avg. Velocity = 0.60 fps, Avg. Travel Time= 7.9 min

Peak Storage= 132 cf @ 12.42 hrs
Average Depth at Peak Storage= 0.09'
Bank-Full Depth= 2.00' Flow Area= 26.0 sf, Capacity= 221.09 cfs

5.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 4.0 '/' Top Width= 21.00'
Length= 286.0' Slope= 0.0311 '/'
Inlet Invert= 576.90', Outlet Invert= 568.00'

‡

Summary for Reach 10.4R: ROAD DITCH

Inflow Area = 0.677 ac, 17.37% Impervious, Inflow Depth > 0.47" for 2-YEAR event
Inflow = 0.57 cfs @ 12.29 hrs, Volume= 0.026 af
Outflow = 0.55 cfs @ 12.41 hrs, Volume= 0.026 af, Atten= 4%, Lag= 7.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.20 fps, Min. Travel Time= 4.2 min
Avg. Velocity = 0.52 fps, Avg. Travel Time= 9.7 min

Peak Storage= 137 cf @ 12.34 hrs
Average Depth at Peak Storage= 0.09'
Bank-Full Depth= 2.00' Flow Area= 26.0 sf, Capacity= 190.07 cfs

5.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 4.0 '/' Top Width= 21.00'
Length= 300.0' Slope= 0.0230 '/'
Inlet Invert= 584.90', Outlet Invert= 578.00'

‡

Summary for Reach 10R: ROAD DITCH

Inflow Area = 3.150 ac, 14.98% Impervious, Inflow Depth > 0.46" for 2-YEAR event
Inflow = 2.27 cfs @ 12.34 hrs, Volume= 0.120 af
Outflow = 2.26 cfs @ 12.36 hrs, Volume= 0.120 af, Atten= 0%, Lag= 0.7 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.22 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.14 fps, Avg. Travel Time= 1.1 min

Peak Storage= 51 cf @ 12.35 hrs
Average Depth at Peak Storage= 0.13'
Bank-Full Depth= 2.00' Flow Area= 22.0 sf, Capacity= 334.91 cfs

5.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 3.0 '/' Top Width= 17.00'
Length= 72.0' Slope= 0.0958 '/'
Inlet Invert= 524.90', Outlet Invert= 518.00'

‡

Summary for Reach 21R: WOOD BUFFER

Inflow Area = 0.090 ac, 22.55% Impervious, Inflow Depth > 0.98" for 2-YEAR event
Inflow = 0.16 cfs @ 12.15 hrs, Volume= 0.007 af
Outflow = 0.06 cfs @ 12.55 hrs, Volume= 0.007 af, Atten= 61%, Lag= 24.1 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.07 fps, Min. Travel Time= 12.7 min
Avg. Velocity = 0.03 fps, Avg. Travel Time= 28.3 min

Peak Storage= 50 cf @ 12.32 hrs
Average Depth at Peak Storage= 0.03'
Bank-Full Depth= 0.20' Flow Area= 6.4 sf, Capacity= 1.35 cfs

30.00' x 0.20' deep channel, n= 0.800 Sheet flow: Woods+dense brush
Side Slope Z-value= 10.0 '/' Top Width= 34.00'
Length= 50.0' Slope= 0.1200 '/'
Inlet Invert= 574.00', Outlet Invert= 568.00'

‡

Summary for Reach 22R: SCF WOODLAND

Inflow Area = 0.090 ac, 22.55% Impervious, Inflow Depth > 0.95" for 2-YEAR event
Inflow = 0.06 cfs @ 12.55 hrs, Volume= 0.007 af
Outflow = 0.03 cfs @ 13.46 hrs, Volume= 0.007 af, Atten= 48%, Lag= 54.7 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.30 fps, Min. Travel Time= 32.9 min
Avg. Velocity = 0.20 fps, Avg. Travel Time= 49.5 min

Peak Storage= 67 cf @ 12.91 hrs
Average Depth at Peak Storage= 0.02'
Bank-Full Depth= 1.00' Flow Area= 10.0 sf, Capacity= 29.12 cfs

5.00' x 1.00' deep channel, n= 0.100 Heavy timber, flow below branches
Side Slope Z-value= 5.0 '/' Top Width= 15.00'
Length= 596.0' Slope= 0.0671 '/'
Inlet Invert= 568.00', Outlet Invert= 528.00'

‡

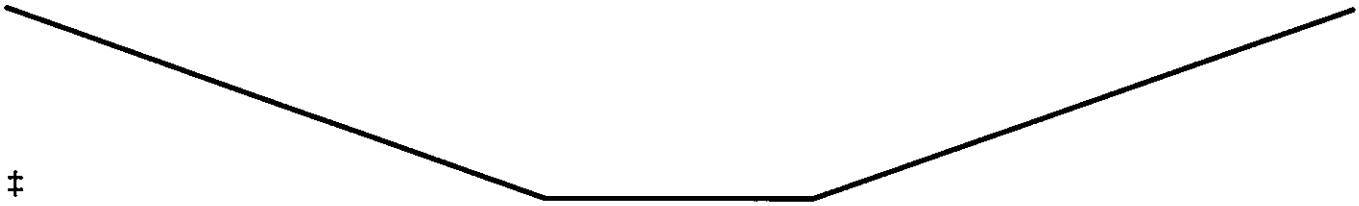
Summary for Reach 23R: ROAD DITCH

Inflow Area = 0.090 ac, 22.55% Impervious, Inflow Depth > 0.89" for 2-YEAR event
Inflow = 0.03 cfs @ 13.46 hrs, Volume= 0.007 af
Outflow = 0.03 cfs @ 13.57 hrs, Volume= 0.007 af, Atten= 1%, Lag= 6.8 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.79 fps, Min. Travel Time= 3.2 min
Avg. Velocity = 0.79 fps, Avg. Travel Time= 3.2 min

Peak Storage= 6 cf @ 13.52 hrs
Average Depth at Peak Storage= 0.01'
Bank-Full Depth= 2.00' Flow Area= 18.0 sf, Capacity= 215.22 cfs

3.00' x 2.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 15.00'
Length= 150.0' Slope= 0.0260 '/'
Inlet Invert= 528.00', Outlet Invert= 524.10'



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Summary for Pond 1.1P: CULVERT AT HUSSEY ROAD, POA 1

Inflow Area = 5.409 ac, 12.59% Impervious, Inflow Depth > 0.73" for 2-YEAR event
Inflow = 3.14 cfs @ 12.42 hrs, Volume= 0.328 af
Outflow = 3.14 cfs @ 12.42 hrs, Volume= 0.327 af, Atten= 0%, Lag= 0.2 min
Primary = 3.14 cfs @ 12.42 hrs, Volume= 0.327 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 515.25' @ 12.42 hrs Surf.Area= 87 sf Storage= 70 cf

Plug-Flow detention time= 1.0 min calculated for 0.326 af (100% of inflow)
Center-of-Mass det. time= 0.5 min (811.7 - 811.2)

Volume	Invert	Avail.Storage	Storage Description
#1	514.00'	520 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
514.00	25	0	0
516.00	125	150	150
518.00	245	370	520

Device	Routing	Invert	Outlet Devices
#1	Primary	514.40'	**24.0" Round Culvert** L= 60.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 514.40' / 512.10' S= 0.0383 '/' Cc= 0.900

n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=3.13 cfs @ 12.42 hrs HW=515.25' (Free Discharge)
└**1=Culvert** (Inlet Controls 3.13 cfs @ 2.47 fps)

Summary for Pond 2.1P: CULVERT AT HUSSEY ROAD 15", POA 2

Inflow Area = 3.228 ac, 2.12% Impervious, Inflow Depth > 0.94" for 2-YEAR event
Inflow = 2.13 cfs @ 12.42 hrs, Volume= 0.254 af
Outflow = 2.13 cfs @ 12.43 hrs, Volume= 0.254 af, Atten= 0%, Lag= 0.6 min
Primary = 2.13 cfs @ 12.43 hrs, Volume= 0.254 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 524.93' @ 12.43 hrs Surf.Area= 155 sf Storage= 84 cf

Plug-Flow detention time= 1.0 min calculated for 0.253 af (100% of inflow)
Center-of-Mass det. time= 0.6 min (838.4 - 837.7)

Volume	Invert	Avail.Storage	Storage Description
#1	524.00'	3,549 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
524.00	25	0	0
526.00	304	329	329
528.00	2,916	3,220	3,549

Device	Routing	Invert	Outlet Devices
#1	Primary	524.10'	**15.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 524.10' / 523.70' S= 0.0133 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=2.12 cfs @ 12.43 hrs HW=524.93' (Free Discharge)
└**1=Culvert** (Inlet Controls 2.12 cfs @ 2.45 fps)

Summary for Pond 3.1P: CULVERT AT HUSSEY ROAD 32", POA 3

Inflow Area = 108.083 ac, 0.79% Impervious, Inflow Depth > 0.68" for 2-YEAR event
Inflow = 26.44 cfs @ 13.32 hrs, Volume= 6.091 af
Outflow = 25.83 cfs @ 13.47 hrs, Volume= 6.062 af, Atten= 2%, Lag= 9.3 min
Primary = 25.83 cfs @ 13.47 hrs, Volume= 6.062 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 520.71' @ 13.47 hrs Surf.Area= 5,201 sf Storage= 8,293 cf

Plug-Flow detention time= 5.2 min calculated for 6.062 af (100% of inflow)
Center-of-Mass det. time= 3.7 min (895.8 - 892.0)

Volume	Invert	Avail.Storage	Storage Description
#1	517.50'	66,975 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
517.50	450	0	0
518.00	925	344	344
520.00	3,810	4,735	5,079
522.00	7,710	11,520	16,599
524.00	12,683	20,393	36,992
526.00	17,300	29,983	66,975

Device	Routing	Invert	Outlet Devices
#1	Primary	517.90'	**32.0" Round Culvert** L= 31.0' Ke= 0.900 Inlet / Outlet Invert= 517.90' / 517.30' S= 0.0194 '/' Cc= 0.900 n= 0.010, Flow Area= 5.59 sf
#2	Primary	522.00'	**10.0' long x 16.0' 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) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=25.81 cfs @ 13.47 hrs HW=520.71' (Free Discharge)
└**1=Culvert** (Inlet Controls 25.81 cfs @ 4.62 fps)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 22P: LEVEL SPREADER

Inflow Area = 0.090 ac, 22.55% Impervious, Inflow Depth > 1.30" for 2-YEAR event
Inflow = 0.15 cfs @ 12.10 hrs, Volume= 0.010 af
Outflow = 0.16 cfs @ 12.15 hrs, Volume= 0.007 af, Atten= 0%, Lag= 3.0 min
Primary = 0.16 cfs @ 12.15 hrs, Volume= 0.007 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 574.02' @ 12.15 hrs Surf.Area= 151 sf Storage= 107 cf

Plug-Flow detention time= 94.1 min calculated for 0.007 af (75% of inflow)
Center-of-Mass det. time= 32.7 min (837.7 - 804.9)

Volume	Invert	Avail.Storage	Storage Description
#1	573.00'	290 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
573.00	60	0	0
574.00	150	105	105
575.00	220	185	290

Device	Routing	Invert	Outlet Devices
#1	Primary	574.00'	**30.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66

2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=0.14 cfs @ 12.15 hrs HW=574.02' (Free Discharge)
└**1=Broad-Crested Rectangular Weir** (Weir Controls 0.14 cfs @ 0.30 fps)

Summary for Pond L1+2P: ROAD DITCH @ DW

Inflow Area = 0.677 ac, 17.37% Impervious, Inflow Depth > 1.17" for 2-YEAR event
Inflow = 0.67 cfs @ 12.29 hrs, Volume= 0.066 af
Outflow = 0.67 cfs @ 12.29 hrs, Volume= 0.066 af, Atten= 0%, Lag= 0.3 min
Discarded = 0.10 cfs @ 11.85 hrs, Volume= 0.040 af
Primary = 0.57 cfs @ 12.29 hrs, Volume= 0.026 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 585.50' @ 12.29 hrs Surf.Area= 32 sf Storage= 11 cf

Plug-Flow detention time= 0.2 min calculated for 0.066 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (820.3 - 820.1)

Volume	Invert	Avail.Storage	Storage Description
#1	585.00'	488 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
585.00	10	0	0
586.00	55	33	33
588.00	400	455	488

Device	Routing	Invert	Outlet Devices
#1	Primary	585.00'	**12.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 585.00' / 584.90' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Primary	587.50'	**10.0' 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
#3	Discarded	585.00'	**0.10 cfs Exfiltration at all elevations**

Discarded OutFlow Max=0.10 cfs @ 11.85 hrs HW=585.04' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=0.57 cfs @ 12.29 hrs HW=585.50' (Free Discharge)
├**1=Culvert** (Barrel Controls 0.57 cfs @ 2.14 fps)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond L3+4P: ROAD DITCH @ DW

Inflow Area = 0.997 ac, 19.13% Impervious, Inflow Depth > 0.75" for 2-YEAR event
Inflow = 0.76 cfs @ 12.38 hrs, Volume= 0.063 af
Outflow = 0.76 cfs @ 12.39 hrs, Volume= 0.063 af, Atten= 0%, Lag= 0.4 min
Discarded = 0.10 cfs @ 11.80 hrs, Volume= 0.029 af
Primary = 0.66 cfs @ 12.39 hrs, Volume= 0.034 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 577.54' @ 12.39 hrs Surf.Area= 47 sf Storage= 21 cf

Plug-Flow detention time= 0.4 min calculated for 0.063 af (100% of inflow)
Center-of-Mass det. time= 0.4 min (784.8 - 784.4)

Volume	Invert	Avail.Storage	Storage Description
#1	577.00'	307 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
577.00	30	0	0
578.00	61	46	46
580.00	100	161	207
580.50	300	100	307

Device	Routing	Invert	Outlet Devices
#1	Primary	577.00'	**12.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 577.00' / 576.90' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Primary	580.00'	**10.0' 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
#3	Discarded	577.00'	**0.10 cfs Exfiltration at all elevations**

Discarded OutFlow Max=0.10 cfs @ 11.80 hrs HW=577.04' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=0.66 cfs @ 12.39 hrs HW=577.54' (Free Discharge)
├**1=Culvert** (Barrel Controls 0.66 cfs @ 2.22 fps)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond L5P: ROAD DITCH @ DW

Inflow Area = 1.841 ac, 15.90% Impervious, Inflow Depth > 0.76" for 2-YEAR event
Inflow = 1.37 cfs @ 12.25 hrs, Volume= 0.117 af
Outflow = 1.37 cfs @ 12.26 hrs, Volume= 0.117 af, Atten= 0%, Lag= 0.3 min
Discarded = 0.10 cfs @ 11.75 hrs, Volume= 0.046 af
Primary = 1.27 cfs @ 12.26 hrs, Volume= 0.071 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 567.79' @ 12.26 hrs Surf.Area= 46 sf Storage= 30 cf

Plug-Flow detention time= 0.3 min calculated for 0.117 af (100% of inflow)
Center-of-Mass det. time= 0.3 min (798.9 - 798.5)

Volume	Invert	Avail.Storage	Storage Description
#1	567.00'	361 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
567.00	30	0	0
568.00	50	40	40
570.00	137	187	227
570.50	400	134	361

Device	Routing	Invert	Outlet Devices
#1	Primary	567.00'	**12.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 567.00' / 566.90' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Primary	570.00'	**10.0' 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
#3	Discarded	567.00'	**0.10 cfs Exfiltration at all elevations**

Discarded OutFlow Max=0.10 cfs @ 11.75 hrs HW=567.04' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=1.27 cfs @ 12.26 hrs HW=567.78' (Free Discharge)
├**1=Culvert** (Barrel Controls 1.27 cfs @ 2.64 fps)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond L6+7P: ROAD DITCH @ DW

Inflow Area = 2.746 ac, 14.97% Impervious, Inflow Depth > 0.70" for 2-YEAR event
Inflow = 2.09 cfs @ 12.31 hrs, Volume= 0.159 af
Outflow = 2.09 cfs @ 12.32 hrs, Volume= 0.159 af, Atten= 0%, Lag= 0.7 min
Discarded = 0.10 cfs @ 11.75 hrs, Volume= 0.049 af
Primary = 1.99 cfs @ 12.32 hrs, Volume= 0.110 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 558.92' @ 12.32 hrs Surf.Area= 162 sf Storage= 86 cf

Plug-Flow detention time= 0.6 min calculated for 0.159 af (100% of inflow)
Center-of-Mass det. time= 0.5 min (790.6 - 790.1)

Volume	Invert	Avail.Storage	Storage Description
#1	558.00'	681 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
558.00	25	0	0
560.00	325	350	350
560.50	1,000	331	681

Device	Routing	Invert	Outlet Devices
#1	Primary	558.00'	**15.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 558.00' / 557.90' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#2	Primary	560.00'	**10.0' 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
#3	Discarded	558.00'	**0.10 cfs Exfiltration at all elevations**

Discarded OutFlow Max=0.10 cfs @ 11.75 hrs HW=558.05' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=1.97 cfs @ 12.32 hrs HW=558.91' (Free Discharge)
├**1=Culvert** (Barrel Controls 1.97 cfs @ 2.87 fps)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond L8P: ROAD DITCH @ DW

Inflow Area = 3.150 ac, 14.98% Impervious, Inflow Depth > 0.58" for 2-YEAR event
Inflow = 2.37 cfs @ 12.34 hrs, Volume= 0.152 af
Outflow = 2.37 cfs @ 12.34 hrs, Volume= 0.152 af, Atten= 0%, Lag= 0.1 min
Discarded = 0.10 cfs @ 11.90 hrs, Volume= 0.032 af
Primary = 2.27 cfs @ 12.34 hrs, Volume= 0.120 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 544.79' @ 12.34 hrs Surf.Area= 15 sf Storage= 8 cf

Plug-Flow detention time= 0.1 min calculated for 0.152 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (771.8 - 771.7)

Volume	Invert	Avail.Storage	Storage Description
#1	544.00'	690 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
544.00	5	0	0
546.00	30	35	35
548.00	300	330	365
548.50	1,000	325	690

Device	Routing	Invert	Outlet Devices
#1	Primary	544.00'	**18.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 544.00' / 543.50' S= 0.0167 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Primary	548.00'	**10.0' 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
#3	Discarded	544.00'	**0.10 cfs Exfiltration at all elevations**

Discarded OutFlow Max=0.10 cfs @ 11.90 hrs HW=544.11' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=2.26 cfs @ 12.34 hrs HW=544.79' (Free Discharge)
├**1=Culvert** (Inlet Controls 2.26 cfs @ 2.39 fps)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment3D: CENTRAL SITE PLUS Runoff Area=4,708,093 sf 0.79% Impervious Runoff Depth>1.60"
Flow Length=3,775' Tc=88.1 min CN=68 Runoff=67.76 cfs 14.387 af

Subcatchment10.1D: LOT 7 DEVELOPED Runoff Area=17,600 sf 15.05% Impervious Runoff Depth>2.43"
Flow Length=135' Tc=21.4 min CN=78 Runoff=0.81 cfs 0.082 af

Subcatchment10.2D: LOT 6 DEVELOPED Runoff Area=39,406 sf 13.07% Impervious Runoff Depth>2.35"
Flow Length=312' Tc=15.1 min CN=77 Runoff=2.02 cfs 0.177 af

Subcatchment10.3D: ROAD SIDE OF LOT Runoff Area=36,777 sf 12.09% Impervious Runoff Depth>2.35"
Flow Length=223' Tc=15.2 min CN=77 Runoff=1.88 cfs 0.166 af

Subcatchment10.4D: FRONT BETWEEN Runoff Area=13,940 sf 22.87% Impervious Runoff Depth>2.62"
Flow Length=180' Tc=7.8 min CN=80 Runoff=0.98 cfs 0.070 af

Subcatchment10.5D: FRONT BETWEEN Runoff Area=29,490 sf 17.37% Impervious Runoff Depth>2.35"
Flow Length=380' Tc=19.5 min CN=77 Runoff=1.37 cfs 0.133 af

Subcatchment10D: LOT 8 DEVELOPED Runoff Area=98,423 sf 9.25% Impervious Runoff Depth>2.24"
Flow Length=1,135' Tc=48.8 min CN=76 Runoff=2.87 cfs 0.422 af

Subcatchment20D: AREA OF LOT 7+, Runoff Area=136,683 sf 1.53% Impervious Runoff Depth>2.02"
Flow Length=875' Tc=27.3 min CN=73 Runoff=4.72 cfs 0.528 af

Subcatchment21D: BACK OF LOT 5 Runoff Area=3,938 sf 22.55% Impervious Runoff Depth>2.53"
Tc=6.0 min CN=79 Runoff=0.28 cfs 0.019 af

Reach 10.1R: ROAD DITCH Avg. Flow Depth=0.20' Max Vel=4.04 fps Inflow=4.73 cfs 0.301 af
n=0.035 L=140.0' S=0.0929 '/' Capacity=381.91 cfs Outflow=4.66 cfs 0.301 af

Reach 10.2R: ROAD DITCH Avg. Flow Depth=0.22' Max Vel=2.37 fps Inflow=3.08 cfs 0.194 af
n=0.035 L=310.0' S=0.0287 '/' Capacity=212.36 cfs Outflow=3.06 cfs 0.194 af

Reach 10.3R: ROAD DITCH Avg. Flow Depth=0.15' Max Vel=1.93 fps Inflow=1.58 cfs 0.095 af
n=0.035 L=286.0' S=0.0311 '/' Capacity=221.09 cfs Outflow=1.56 cfs 0.095 af

Reach 10.4R: ROAD DITCH Avg. Flow Depth=0.14' Max Vel=1.61 fps Inflow=1.26 cfs 0.072 af
n=0.035 L=300.0' S=0.0230 '/' Capacity=190.07 cfs Outflow=1.24 cfs 0.072 af

Reach 10R: ROAD DITCH Avg. Flow Depth=0.22' Max Vel=4.37 fps Inflow=5.36 cfs 0.331 af
n=0.035 L=72.0' S=0.0958 '/' Capacity=334.91 cfs Outflow=5.35 cfs 0.331 af

Reach 21R: WOOD BUFFER Avg. Flow Depth=0.07' Max Vel=0.11 fps Inflow=0.29 cfs 0.017 af
n=0.800 L=50.0' S=0.1200 '/' Capacity=1.35 cfs Outflow=0.22 cfs 0.016 af

Reach 22R: SCF WOODLAND Avg. Flow Depth=0.05' Max Vel=0.50 fps Inflow=0.22 cfs 0.016 af
n=0.100 L=596.0' S=0.0671 '/' Capacity=29.12 cfs Outflow=0.13 cfs 0.016 af

Reach 23R: ROAD DITCH Avg. Flow Depth=0.04' Max Vel=1.18 fps Inflow=0.13 cfs 0.016 af
n=0.022 L=150.0' S=0.0260 '/' Capacity=215.22 cfs Outflow=0.13 cfs 0.016 af

Pond 1.1P: CULVERT AT HUSSEY ROAD, Peak Elev=515.77' Storage=122 cf Inflow=7.18 cfs 0.753 af
24.0" Round Culvert n=0.013 L=60.0' S=0.0383 '/' Outflow=7.19 cfs 0.753 af

Pond 2.1P: CULVERT AT HUSSEY ROAD 15", Peak Elev=525.73' Storage=253 cf Inflow=4.72 cfs 0.544 af
15.0" Round Culvert n=0.013 L=30.0' S=0.0133 '/' Outflow=4.68 cfs 0.543 af

Pond 3.1P: CULVERT AT HUSSEY ROAD Peak Elev=522.99' Storage=25,498 cf Inflow=67.76 cfs 14.387 af
Outflow=67.30 cfs 14.344 af

Pond 22P: LEVEL SPREADER Peak Elev=574.02' Storage=109 cf Inflow=0.28 cfs 0.019 af
Outflow=0.29 cfs 0.017 af

Pond L1+2P: ROAD DITCH @ DW Peak Elev=585.78' Storage=22 cf Inflow=1.37 cfs 0.133 af
Discarded=0.10 cfs 0.061 af Primary=1.26 cfs 0.072 af Outflow=1.36 cfs 0.133 af

Pond L3+4P: ROAD DITCH @ DW Peak Elev=577.90' Storage=40 cf Inflow=1.68 cfs 0.142 af
Discarded=0.10 cfs 0.046 af Primary=1.58 cfs 0.095 af Outflow=1.68 cfs 0.142 af

Pond L5P: ROAD DITCH @ DW Peak Elev=568.58' Storage=76 cf Inflow=3.19 cfs 0.261 af
Discarded=0.10 cfs 0.068 af Primary=3.08 cfs 0.194 af Outflow=3.18 cfs 0.261 af

Pond L6+7P: ROAD DITCH @ DW Peak Elev=559.75' Storage=274 cf Inflow=4.84 cfs 0.371 af
Discarded=0.10 cfs 0.070 af Primary=4.73 cfs 0.301 af Outflow=4.83 cfs 0.371 af

Pond L8P: ROAD DITCH @ DW Peak Elev=545.38' Storage=19 cf Inflow=5.48 cfs 0.383 af
Discarded=0.10 cfs 0.051 af Primary=5.36 cfs 0.331 af Outflow=5.46 cfs 0.383 af

Total Runoff Area = 116.721 ac Runoff Volume = 15.984 af Average Runoff Depth = 1.64"
98.62% Pervious = 115.115 ac 1.38% Impervious = 1.606 ac

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment3D: CENTRAL SITE PLUS Runoff Area=4,708,093 sf 0.79% Impervious Runoff Depth>2.48"
Flow Length=3,775' Tc=88.1 min CN=68 Runoff=106.98 cfs 22.331 af

Subcatchment10.1D: LOT 7 DEVELOPED Runoff Area=17,600 sf 15.05% Impervious Runoff Depth>3.50"
Flow Length=135' Tc=21.4 min CN=78 Runoff=1.16 cfs 0.118 af

Subcatchment10.2D: LOT 6 DEVELOPED Runoff Area=39,406 sf 13.07% Impervious Runoff Depth>3.41"
Flow Length=312' Tc=15.1 min CN=77 Runoff=2.91 cfs 0.257 af

Subcatchment10.3D: ROAD SIDE OF LOT Runoff Area=36,777 sf 12.09% Impervious Runoff Depth>3.41"
Flow Length=223' Tc=15.2 min CN=77 Runoff=2.71 cfs 0.240 af

Subcatchment10.4D: FRONT BETWEEN Runoff Area=13,940 sf 22.87% Impervious Runoff Depth>3.71"
Flow Length=180' Tc=7.8 min CN=80 Runoff=1.37 cfs 0.099 af

Subcatchment10.5D: FRONT BETWEEN Runoff Area=29,490 sf 17.37% Impervious Runoff Depth>3.40"
Flow Length=380' Tc=19.5 min CN=77 Runoff=1.97 cfs 0.192 af

Subcatchment10D: LOT 8 DEVELOPED Runoff Area=98,423 sf 9.25% Impervious Runoff Depth>3.27"
Flow Length=1,135' Tc=48.8 min CN=76 Runoff=4.17 cfs 0.616 af

Subcatchment20D: AREA OF LOT 7+, Runoff Area=136,683 sf 1.53% Impervious Runoff Depth>3.01"
Flow Length=875' Tc=27.3 min CN=73 Runoff=7.04 cfs 0.786 af

Subcatchment21D: BACK OF LOT 5 Runoff Area=3,938 sf 22.55% Impervious Runoff Depth>3.62"
Tc=6.0 min CN=79 Runoff=0.40 cfs 0.027 af

Reach 10.1R: ROAD DITCH Avg. Flow Depth=0.25' Max Vel=4.62 fps Inflow=7.10 cfs 0.491 af
n=0.035 L=140.0' S=0.0929 '/' Capacity=381.91 cfs Outflow=6.97 cfs 0.491 af

Reach 10.2R: ROAD DITCH Avg. Flow Depth=0.28' Max Vel=2.71 fps Inflow=4.61 cfs 0.318 af
n=0.035 L=310.0' S=0.0287 '/' Capacity=212.36 cfs Outflow=4.55 cfs 0.318 af

Reach 10.3R: ROAD DITCH Avg. Flow Depth=0.18' Max Vel=2.22 fps Inflow=2.36 cfs 0.159 af
n=0.035 L=286.0' S=0.0311 '/' Capacity=221.09 cfs Outflow=2.33 cfs 0.159 af

Reach 10.4R: ROAD DITCH Avg. Flow Depth=0.17' Max Vel=1.86 fps Inflow=1.87 cfs 0.118 af
n=0.035 L=300.0' S=0.0230 '/' Capacity=190.07 cfs Outflow=1.84 cfs 0.118 af

Reach 10R: ROAD DITCH Avg. Flow Depth=0.27' Max Vel=5.04 fps Inflow=8.04 cfs 0.544 af
n=0.035 L=72.0' S=0.0958 '/' Capacity=334.91 cfs Outflow=8.04 cfs 0.544 af

Reach 21R: WOOD BUFFER Avg. Flow Depth=0.09' Max Vel=0.12 fps Inflow=0.40 cfs 0.025 af
n=0.800 L=50.0' S=0.1200 '/' Capacity=1.35 cfs Outflow=0.33 cfs 0.024 af

Reach 22R: SCF WOODLAND Avg. Flow Depth=0.07' Max Vel=0.61 fps Inflow=0.33 cfs 0.024 af
n=0.100 L=596.0' S=0.0671 '/' Capacity=29.12 cfs Outflow=0.22 cfs 0.024 af

Reach 23R: ROAD DITCH Avg. Flow Depth=0.05' Max Vel=1.44 fps Inflow=0.22 cfs 0.024 af
n=0.022 L=150.0' S=0.0260 '/' Capacity=215.22 cfs Outflow=0.22 cfs 0.024 af

Pond 1.1P: CULVERT AT HUSSEY ROAD, Peak Elev=516.18' Storage=173 cf Inflow=10.60 cfs 1.160 af
24.0" Round Culvert n=0.013 L=60.0' S=0.0383 '/' Outflow=10.59 cfs 1.159 af

Pond 2.1P: CULVERT AT HUSSEY ROAD 15", Peak Elev=526.71' Storage=871 cf Inflow=7.07 cfs 0.810 af
15.0" Round Culvert n=0.013 L=30.0' S=0.0133 '/' Outflow=6.57 cfs 0.809 af

Pond 3.1P: CULVERT AT HUSSEY Peak Elev=523.75' Storage=33,955 cf Inflow=106.98 cfs 22.331 af
Outflow=106.29 cfs 22.275 af

Pond 22P: LEVEL SPREADER Peak Elev=574.03' Storage=110 cf Inflow=0.40 cfs 0.027 af
Outflow=0.40 cfs 0.025 af

Pond L1+2P: ROAD DITCH @ DW Peak Elev=586.01' Storage=33 cf Inflow=1.97 cfs 0.192 af
Discarded=0.10 cfs 0.074 af Primary=1.87 cfs 0.118 af Outflow=1.97 cfs 0.192 af

Pond L3+4P: ROAD DITCH @ DW Peak Elev=578.22' Storage=59 cf Inflow=2.46 cfs 0.217 af
Discarded=0.10 cfs 0.059 af Primary=2.36 cfs 0.159 af Outflow=2.46 cfs 0.217 af

Pond L5P: ROAD DITCH @ DW Peak Elev=569.88' Storage=211 cf Inflow=4.80 cfs 0.398 af
Discarded=0.10 cfs 0.081 af Primary=4.61 cfs 0.318 af Outflow=4.71 cfs 0.398 af

Pond L6+7P: ROAD DITCH @ DW Peak Elev=560.14' Storage=411 cf Inflow=7.11 cfs 0.574 af
Discarded=0.10 cfs 0.083 af Primary=7.10 cfs 0.491 af Outflow=7.20 cfs 0.574 af

Pond L8P: ROAD DITCH @ DW Peak Elev=546.18' Storage=43 cf Inflow=8.13 cfs 0.609 af
Discarded=0.10 cfs 0.065 af Primary=8.04 cfs 0.544 af Outflow=8.14 cfs 0.609 af

Total Runoff Area = 116.721 ac Runoff Volume = 24.665 af Average Runoff Depth = 2.54"
98.62% Pervious = 115.115 ac 1.38% Impervious = 1.606 ac