INLAND WETLANDS COMMISSION

TUESDAY, December 8, 2020

ZOOM Meeting

A) Call to Order & Roll Call

B) Appointment of Alternates

Agenda Item C.a.

Action on Minutes of Previous Meeting

Minutes of November 10, 2020

Agenda Item D.
Citizens Comments on Agenda Items

Agenda Item E.a) 1. Old Applications

WAA20009 Hallet T. Merrick, 0 Plum Road, Assessor's map 85, block 52, lot 12, construction of single family home, septic system and portion of home proposed in 100 foot upland review area, stamped received 4/13/2020, under review pending receipt of additional information.

Agenda Item E.a) 2.Old Applications

WAA20031, Madison Avenue Investments, LLC, 0 Madison Ave. (Assessor's map 103, block 31, lot 6K, subdivision lot 11), driveway and grading for new single family home, stamped received 8/3/2020, under review.

Agenda Item E.a) 3. Old Applications

WAA20033, Madison Avenue Investments, LLC, 0 Madison Ave. (Assessor's map 103, block 31, lot 6R, subdivision lot 18), septic system for new single family home, stamped received 8/12/2020, additional information received, under review.

Agenda Item E.a) 4. Old Applications

WAA20040, Laura Hauser, 31 Center St. (Assessor's map 116, block 30, lot 3A), reconstruction of a single family home in 100-foot upland review area for Little Pond, stamped received by the Town Clerk 9/18/2020 and 10/5/ 2020 by the Wetlands Office, additional information received, under review.

Agenda Item E.a) 5. Old Applications

WAA20043, Gary Rawson, 0 Logee Rd. (Assessor's map 141, block 17, lot E), construction of a new single family home in the 100-foot upland review area for Quaddick Reservoir, stamped received 10/29/ 2020, under review.

Agenda Item E.a) 6. Old Applications

IWA20044, Town of Thompson, W. Thompson Rd (Assessor's maps 48 & 50, blocks 104 & 103, respectively, no lot #), replace existing culver carrying Wheaton Brook under W. Thompson Rd, stamped received 11/2/2020, to be received by statute 11/10/2020.

J & D CIVIL ENGINEERS, LLC

401 Ravenelle Road
N. Grosvenordale, CT 06255
www.jdcivilengineers.com
(860) 923-2920

October 30, 2020

Inland Wetlands Commission
Town Hall
815 Riverside Drive
N. Grosvenordale, CT 06255

Re: Wheaton Brook Culvert Replacement
J & D Job No. 18189

Dear Commission Members:

Attached is an application for a permit to replace the existing culvert carrying Wheaton Brook under West Thompson Road.

Background

A screening inspection was performed by AI Engineers in 2016. They described the culvert as dating to circa 1950. They determined that the culvert may be undersized, and that the road could be overtopped in the event of a large storm. Some hairline cracks were observed in the roof, although the overall condition was satisfactory. The culvert has a natural bottom, filled with stone and sand. The engineers also observed some minor erosion of the embankment.

Hydraulic and Hydrologic Analysis

In 2018 J & D was hired to perform a hydraulic and hydrologic analysis of the culvert and agreed that the culvert was undersized. J & D determined that utilizing a design flow of 195 CFS results in a recommendation of installing a culvert with a 3' high by 12' wide opening. This culvert will have an effective cross sectional area of 36 SF which is more than twice the size of the existing 15 SF opening.

The actual culvert proposed will be a 4' x 12' concrete box and the bottom 1' of the culvert will be buried so that there will be a natural stream bed underneath. The wider opening width will also much more closely match the width of the natural stream channel. The outlet velocity for existing conditions is 9.0 feet per second and the outlet velocity for proposed conditions is 6.6 feet per second. Therefore the stability of the downstream channel bottom will not be adversely affected.

Design

In 2019 J & D was hired to prepare design plans for the new culvert. The existing horizontal and vertical alignment of the roadway are adequate and do not require modification. The majority of West Thompson Road is 22.5 feet wide. However, in the vicinity of the culvert, the road narrows to only 18.5 feet wide. It is very difficult for two large vehicles to pass over the culvert at the same time. Therefore it is logical to widen the road at the time the culvert is replaced. There are no sidewalks present anywhere along West Thompson Road. There is a metal beam guard rail along the culvert that will also be replaced.

On the upstream (west) side of the road, there will be approximately 200 square feet of disturbance within the wetlands. On the downstream (east) side, there will be more work required, and approximately 1200 square feet of wetlands will be disturbed in order to widen the road and install the culvert.

J&D also recommends rerouting 30' of the stream channel on the downstream side of the culvert. It is evident that some recent erosion has caused the stream to change course, and run south adjacent to the road for 30'. In this area, portions of the stream are currently only 4' off the edge of pavement. Once the road is widened, the stream will be too close to the road, and could cause additional erosion or undermining. The original streambed, which is close to perpendicular with the roadway, is still visible. It should be fairly simple to fill in the existing streambed, and return the stream to its original location.

The plan has been reviewed by DEEP Fisheries. They recommended that the bottom of the culvert be lined with existing stream crossing substrates and that a low flow channel be added within the culvert. These recommendations are included in the plans. Erosion and sedimentation issues, including dewatering, will be handled similarly to the Sand Dam Road culvert that was recently replaced and are shown on the detail sheets.

Enclosed are 2 copies of the application and 2 copies of the plans, minus the DOT standard detail sheets (they will be included in the PDF). If you have any questions, or would like any additional information, please do not hesitate to contact us.

Very truly yours,
J & D Civil Engineers

Dennis R. Blanchette

Cc: Marla Butts, Amy St. Onge

for commission use: rev 1/11
application # _____
date received _____

PERMIT APPLICATION

TO CONDUCT A REGULATED ACTIVITY

Town of Thompson

INLAND WETLANDS COMMISSION
815 RIVERSIDE DRIVE
NORTH GROSVENORDALE, CT 06255

Instructions:

All applicants must complete this application for preliminary review. The Commission will notify the applicant of any additional information that may be required and will schedule a public hearing if necessary. In addition to the information supplied herein, the applicant may submit other supporting facts or documents which may assist the Commission in its evaluation of the proposal. In order to streamline the application review process, it is recommended that all applications containing significant impact to the wetlands be submitted to the Thompson Conservation Commission for review prior to submission to the regulatory commissions.

Two (2) copies of the completed application and two (2) copies of all the additional attached documents (site plan, etc.) must be submitted to the Town Clerk. State Statute provides that you may submit an application up to three (3) business days prior to the next regularly scheduled meeting, which means by the close of business hours on the Wednesday before a regular meeting date. The applicant is advised to read Sections 7 and 8 of the Regulations for further information regarding application requirements and procedures. THE APPLICANT IS FURTHER ADVISED THAT A BUFFER/SETBACK OF 100 FEET FROM A WETLAND OR WATERCOURSE IS REQUIRED, AND A BUFFER/SETBACK OF 200 FEET FROM THE TEN (10) ESPECIALLY NOTEWORTHY WETLANDS AND WATERCOURSES IDENTIFIED IN THE *TOWN OF THOMPSON INLAND WETLAND INVENTORY* PREPARED BY NORTHEASTERN CONNECTICUT REGIONAL PLANNING AGENCY 1980 PAGES 9, 14 AND 15 IS REQUIRED. See Section 6 of the Regulations for further information regarding activities.

NO PERMIT SHALL BE TRANSFERRED WITHOUT PERMISSION OF THE AGENCY.

WE MUST HAVE THE FOLLOWING INFORMATION TO PROCESS YOUR APPLICATION:

_ Directions to the property from the Thompson Town Hall
_ Location of Utility Pole nearest your property
*Pole Number *Location of property in reference to Pole (side of street)
_ Locations of proposed house, septic test pits, well and driveway must be staked and labeled on site
(These requirements must be LEGIBLY PRINTED on your MAPS at the time of application, but NOT in the area of the map details. Use outside edge of map for this information. Thank you.)

FAILURE TO HAVE THE ABOVE INFORMATION WILL POSTPONE PROCESSING OF YOUR APPLICATION

FEE SCHEDULE:

(Additional $60.00 fee to State as per Public Act 09-03, Section 396)

- Individual Lot ..... $50 + $60
(Permit Fee Now Includes Mandatory Legal Advertisement Fee of $20. This DOES NOT include Legal Notice fees for Public Hearings, which will be billed separately.)
- Complex Application Fee.....Applicants will be billed for professional review as needed, see regulations booklet Section 18.5

For: Conceptual Approval of Subdivisions use *"Subdivision Review Application"*

Please complete the following application information.

If you need assistance, contact the IWWC business office at 860- 923-1852 Fax 860-923-9897

Date 10/29/20

1) Name of Applicant TOWN OF THOMPSON

Home Address PO BOX 899, N. GROS, CT 06255

Home Tele & Hrs _____ Business Tele & Hrs 860-923-9561

Business Address _____

2) Applicant's interest in the Property: ✓ Owner _____ Other
INLAND WETLANDS APPROVALS CAN BE GRANTED TO PROPERTY OWNER ONLY.
No permit shall be assigned or transferred without written permission of the Commission.

3) Name of Property Owner (if not applicant) _____

Home Address _____

Business Address _____

Home Tele & Hrs _____ Business Tele & Hrs _____

4) Geographical Location of the Property (site plan to include utility pole number nearest property or other identifying landmarks)

Pole # and Location CL&P 1063
Street or Road Location W. THOMPSON RD
Tax Assessor's Map # _____
Block # _____
Lot # that appears on site plan _____
Deed Info : Volume # _____
Page # _____
} N/A

5) The property to be affected by the proposed activity contains:

Soil Types SEE SOIL SCIENTIST REPORT
Wetland Soils ✓ (Swamp_____ Marsh_____ Bog____ Vernal Pool____)
Watercourses ✓ (Lake or Pond____ Stream or River_____ Intermittent Stream_____)
Floodplain Yes / No

6) Purpose and Description of the Activity for which Approval is requested:

a. Give a complete description of the proposed activity REPLACE WHEATON BROOK CULVERT ON W. THOMPSON RD

If the above activity involves deposition or removal of material, what is the quantity? 1100 SF

b. Submit a Site Plan, drawn to scale, with the certification of the preparing Surveyor and/or Engineer including:

- [x] 1-Locus map at approx. 1" = 1000'
- [x] 2-Location of property, with boundaries defined and utility pole # near property and any other identifying landmarks.
- [x] 3-Location of wetlands and /or watercourses. A wetland delineation in the field must be marked with numbered wetlands flags by a certified soil scientist and located on the map/site plan. Site plan shall bear the soil scientist's original signature.
- [x] 4-Soil types on the property.
- [x] 5-Flood Hazard area classification and delineation with base flood elevations.
- [x] 6-(a)Location of the proposed activity (i.e. house, septic, well or other areas to be disturbed).
  (b)Location of perc tests and soil test holes.
  (c)Copy of NDDH approval to construct or repair subsurface sewage disposal system.
- [x] 7-Nature and volume of the material to be placed, removed, or transferred.
- [x] 8-Topographical contours, proposed and existing.
- [ ] N/A 9-Location and supporting data for proposed drainage.
- [x] 10-Date, scale (recommend 1"=40') and North arrow.
- [ ] N/A 11-Subdivisions must be A-2 Surveys and have Certified Soil Scientist's original signature on face sheet.
- [x] 12-Proposed limits of clearing/disturbance and location of stockpiles during construction.
- [x] 13-Location of proposed Erosion and Sedimentation controls and other management practices which may be considered as a condition of issuing a permit for the proposed regulated activity. The erosion and sedimentation control provisions must comply with the most current DEP edition of the *Connecticut Guidelines for Soil Erosion and Sedimentation Control* and be so noted on the plans.
- [x] 14 -Location of proposed Stormwater treatment design on the site plan must comply with the most current CT DEP edition of the *Connecticut Stormwater Quality Manual* and be so noted on the plans. It is strongly recommended that low impact development techniques, stormwater management techniques that are designed to approximate the pre-development site hydrology, be utilized in the stormwater system design wherever practical and possible.
- [ ] N/A 15-Location of proposed mitigation or wetland enhancement measures which may be considered as a condition of issuing a permit for the proposed regulated activity.
- [x] 16-Timing and description of phases of activities, installation of sediment and stormwater control measures and temporary and permanent stabilization methods.

c. Explain whatever measures you propose to lessen or to compensate for the impacts to the wetlands or watercourse(s) USE BEST MANAGEMENT EROSION CONTROL PRACTICES

d. Have any alternatives been considered? YES
If yes, explain why this proposal was chosen MANY STYLES + CONFIGURATIONS OF CULVERTS WERE INVESTIGATED. THIS ONE REQUIRED LEAST AMOUNT OF WETLAND FILLING TO INSTALL

7) Is any portion of this property located within 500' of the boundary of an adjoining municipality? NO

If yes, Applicant is required to give written notice of the application by certified mail, return receipt requested, to the adjacent municipal wetlands agency on the same day of filing this permit application with the Thompson Inland Wetlands & Watercourses Commission. Documentation of notice shall be provided to the Commission.

8) Is any portion of this property located within the watershed of a water company as defined in section 16-1 of the Connecticut General Statutes? NO If yes, the Applicant is required to provide written notice of the application by certified mail, return receipt requested, to the water company on the same day of filing this permit application with the Thompson Inland Wetlands and Watercourses Commission. Documentation of such notice shall be provided to the Commission.

9) Does any portion of this property contain a Natural Diversity Data Base (NDDB) area of concern as defined on the most updated map of Federal and State Listed Species and Significant Natural Communities, for Thompson, Connecticut, prepared by the Connecticut Department of Environmental Protection? NO If yes, the Applicant must contact the CT DEP for information regarding the State or Federal Listed Species of Concern.

10) Names and Addresses of Abutters:

SEE ATTACHED

11) Estimated start date JULY 2021

Estimated date of completion (all disturbed areas are stabilized) AUG 2021

12) The undersigned hereby consents to necessary and proper inspections of the above mentioned property by the Agents of the Town of Thompson Inland Wetlands Commission, at reasonable times, both before and after the approval in question has been granted, including site walks by Commission members and staff for the purpose of understanding existing site conditions, which may be necessary in order to render a decision on this application.

The undersigned swears that the information supplied in this completed application is accurate to the best of her/his knowledge and belief.

ABSOLUTELY NO WORK IS TO BEGIN UNTIL ALL NECESSARY APPROVALS ARE OBTAINED.

I understand by signing this application that it is my responsibility to provide all the information as requested. I understand that the commission is unable to act upon an incomplete application.

Signature of Applicant Date

Consent of Landowner if other than applicant Date

Please attach a written consent by the owner if applicant is not the property owner.

Account Number	Site Address	Owner Name	Owner Address	Owner City	Owner St	Owner Zip
48||103||28A|||	12 COURNOYER RD	LANGER DAVID P + KATHLEEN P	1450 BLAKE RD	CONROE	TX	77304
48||103||28|H||	377 WEST THOMPSON RD	VINCENT NORMAN DAVID + LINA L	377 WEST THOMPSON RD	THOMPSON	CT	06277
48||103||28|I||	385 WEST THOMPSON RD	DURAND PHILIP C + CLAIRE	385 WEST THOMPSON RD	THOMPSON	CT	06277
48||103||28|J||	393 WEST THOMPSON RD	BARRY DANIEL M	393 WEST THOMPSON RD	THOMPSON	CT	06277
48||104||8|A||	0 WEST THOMPSON RD	LAJOIE RYAN M + AMANDA M	14 FIRST ST	N GROSVENORI	CT	06255
48||104||8|||	370 WEST THOMPSON RD	JACKSON TODD B	370 WEST THOMPSON RD	THOMPSON	CT	06277
48||104||9|A||	434 WEST THOMPSON RD	BIESIADECKI FAMILY LIVING TRUS	434 WEST THOMPSON RD	THOMPSON	CT	06277
48||104||9|B||	380 WEST THOMPSON RD	BACON PAULINE M	380 WEST THOMPSON RD	THOMPSON	CT	06277
50||103||30|||	429 WEST THOMPSON RD	DEFILIPPO ROBERT A + BEVERLY	429 WEST THOMPSON RD	THOMPSON	CT	06277

from Thompson Town Clerk's Office, 815 Riverside Dr, ...
to W Thompson Rd, Thompson, CT 06277

7 min (4.2 miles)

via Reardon Rd and W Thompson Rd

Fastest route, the usual traffic

Thompson Town Clerk's Office

815 Riverside Dr, North Grosvenor Dale, CT 06255

- Head southwest on Riverside Dr toward Main St
  0.9 mi
- Turn right onto Blain Rd
  387 ft
- Turn left onto Reardon Rd
  1.5 mi
- Turn right onto W Thompson Rd
  1.8 mi

W Thompson Rd

Thompson, CT 06277

WASHBURN WETLAND CONSULTING LLC

19 Wolf Den Road • Pomfret Center, Connecticut 06259-2022
Telephone (860) 428-8424 • washburnwetland@yahoo.com

December 9, 2018

Daniel Blanchette
J & D Civil Engineers
401 Ravenelle Road
North Grosvenordale, CT 06255

Dear Daniel,

Today, at your request, I conducted a site investigation on both sides of West Thompson Road in Thompson, CT, in the vicinity of the culvert through which Wheaton Brook flows. The purpose of the site investigation was to delineate the wetlands within 50 feet of the existing culvert, in anticipation of culvert replacement.

The subject property is located on an area of nearly level to sloping soils formed in glacial till. References used in the soil identification process included the *Soil Survey of Windham County Connecticut* (U.S.D.A. Soil Conservation Service, December, 1981), Northeast Council of Governments maps and the United States Geological Survey (USGS) map, 1982. The wetlands were delineated using consecutively numbered lengths of blue surveyors' ribbon. There are four series of wetland flags (WF), numbered WF1– WF5, WF6 – WF9, WF10 – WF15 and WF16 – WF19. Please refer to the attached site sketch for further details.

The wetlands in the area of the delineation on the subject property consist of a wooded shrub swamp that borders on both Wheaton Brook. Wheaton Brook is depicted as a perennial stream on the USGS map.

According to Map 14 the *Soil Survey*, the wetlands soils consist of a complex of Ridgebury, Leicester, and Whitman extremely stony fine sandy loams. Throughout the delineated areas, the upland soils consist of Human Transported Material (HTM), formerly known as "fill".

It has been a pleasure working for you on this site. Please feel free to call me if I may be of further assistance.

Sincerely,

Margaret Washburn, M.S.

Margaret Washburn, M.S.
Registered Professional Soil Scientist

Please note: Site sketch is not to scale,

neccog

Legend

- Town
- Buildings 2012
- Parcels
- 10 ft
- 2 ft Contours
- Wetlands
  - Alluvial and Floodplain Soils
  - Poorly Drained and Very Poorly Dra
- Rivers and Streams
- Lakes and Ponds

Notes

Wheaton Brook under West Thompson Road

0.1 0 0.04 0.1 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Hydrologic Analysis of the Wheaton Brook Culvert on West Thompson Road

Job No. 18189

June 28, 2019

Prepared for

The Town of Thompson

815 Riverside Drive, P.O. Box 899

N. Grosvenordale CT 06255

Prepared by

J&D Civil Engineers, LLC

401 Ravenelle Road

N. Grosvenordale CT 06255

Table of Contents

1. Project Narrative

J & D Civil Engineers, LLC has been retained by the Town of Thompson to assist with the design and permitting of a replacement culvert for Wheaton Brook along West Thompson Road. The existing culvert is a reinforced concrete box with an open bottom. The end openings are approximately 3 feet tall and 6 feet wide. The culvert is skewed at an angle of 30 degrees, and therefore the actual cross-sectional area is approximately 15 square feet. The culvert is 26' in total length, and does not have any formal wing walls. By visual inspection it is not possible to determine how deep the culvert extends into grade, or what kind of footing or other foundation is present.

A screening inspection was performed by AI Engineers in 2016. They described the culvert as dating to circa 1950. They determined that the culvert may be undersized, and that the road could be overtopped in the event of a large storm. Some hairline cracks were observed in the roof, although the overall condition was satisfactory. The culvert has a natural bottom, filled with stone and sand. The engineers also observed some minor erosion of the embankment.

The existing horizontal and vertical alignment of the roadway are adequate and do not require modification. The majority of West Thompson Road is 22.5 feet wide. However, in the vicinity of the culvert, the road narrows to only 18.5 feet wide. It is very difficult for two large vehicles to pass over the culvert at the same time. Therefore, the Town is interested in widening the road, as well as replacing the culvert. There are no sidewalks present anywhere along West Thompson Road. There is a metal beam guard rail along the culvert that will also be replaced.

2. Drainage Patterns

Wheaton Brook is fed by a watershed that is roughly 625 acres, or 0.98 square miles. The watershed itself is long and narrow, approximately 2 miles long in the north-south direction, and approximately 0.5 miles in the east-west direction. The brook flows to the south, crossing West Thompson Road and eventually passing by the Putnam Elementary School and joining Little River. The brook does not have a regular, well defined channel, but instead flows through a number of swampy areas. These swampy areas can flood during heavy rain events, providing storage and attenuating stormwater runoff. These existing drainage patterns should not be affected by the proposed improvements.

3. Methodology

J&D recently completed a hydrologic analysis of the watershed using HydroCAD software to estimate the peak flow during the recommended CT DOT 50-year design storm of for a "small" structure. This program models the hydrology of watersheds and stormwater systems based on

the methods developed by the National Resource Conservation Service. The required input data includes the size of the drainage area, the topography of the land, and type of soil, and the type of ground cover. Hydrographs with peak flows are calculated for the watershed using the SCS unit hydrograph method. The rainfall distribution used in the program is the SCS Type III storm recommended for Connecticut. Precipitation amounts were obtained from the most recent (November 2018) NOAA Atlas 14, volume 10, version 2, point precipitation frequency estimates.

4. Soil Types

The National Resource Conservation Service groups soils into four categories according to their capacity for infiltration. Hydrologic Group A consists of sandy soil that are very well drained, with a low potential for runoff even when saturated. Hydrologic Group D soils consist of clay and silt that drain poorly, and have a significant potential for runoff. The soil types shown on the attached drainage area map have been taken from the National Resource Conservation Service website. This watershed has a relatively high ratio of soils in Group D, approximately a third of the entire area. This large percentage of silty soils will cause the estimated peak flow for a rainfall event to be much higher.

5. Results of Analysis

Even when modeled using Group C runoff coefficients for the Group D soils, the hydrologic model generated a 50-year peak design flow for this culvert of 258 cubic feet per second. According to our model, this 50-year storm would overtop West Thompson Road by 7". The model indicates that the existing culvert is only sized to handle a 10 year-storm (134 cfs) with a foot of freeboard and the road should be overtopped by 4" during the 25-year design storm (195 CFS). Since these results do not seem historically reasonable (the road had not overtopped since the culvert was installed) J & D also performed an independent numerical analysis of the watershed using a different hydrologic method. We utilized streamflow regression equations developed by USGS for similar watersheds, and calculated a 50-year storm peak flow of 268 cubic feet per second. Therefore an average 50-year design flow would be 265 CFS.

Based on these two analyses, it is possible to conclude that the existing culvert is severely undersized. However, historical data does not support this conclusion. Several knowledgeable parties, who have resided nearby for many decades, do not recall that the road has ever been overtopped. For example, on October 15, 2005, there was a 50-year storm recorded at the West Thompson Dam, that did not cause flooding of the roadway. Therefore, it is clear that accepted and recommended hydrologic methods are overestimating the flow for each design storm.

In reviewing our model, there are several factors that could be contributing to errors in the analysis. It is possible that the soil types in the field are substantially different than those shown on the NRCS soil maps. It is also possible that the contours taken from the town GIS are inaccurate, and the actual watershed is smaller than in our model. However, the most likely explanation is that the watershed includes significant upstream storage, which is not accounted for in our model. In our model, we had to make assumptions about the average width and depth of Wheaton Brook. In fact, the actual stream has a highly variable cross section, and occasionally flows through wide swampy areas. Additionally, there are many intermittent watercourses that also pass through swamps before reaching the actual brook. These swampy areas would store stormwater and attenuate any peak flows before they reach West Thompson Road. Unfortunately, it is not possible to accurately model the storage of these upstream swamps without a significant field survey effort.

Therefore, it is reasonable given historical evidence, to size the culvert on a design flow lower than the calculated 50-year design storm of 265 CFS. J & D will use a design flow of 195 CFS for the proposed culvert which is equal to the 25-year design storm in the model but it should be recognized that this design flow will actually pass storms much greater than the 25-year storm, more likely at least the 100-year storm.

J & D has determined that utilizing a design flow of 195 CFS results in a recommendation of installing a culvert with a 3' high by 12' wide opening. This culvert will have an effective cross sectional area of 36 SF which is more than twice the size of the existing 15 SF opening. The actual culvert proposed will be a 4' x 12' concrete box and the bottom 1' of the culvert will be buried so that there will be a natural stream bed underneath. The wider opening width will also much more closely match the width of the natural stream channel.

The outlet velocity for existing conditions is 9.0 feet per second and the outlet velocity for proposed conditions is 6.6 feet per second. Therefore the stability of the downstream channel bottom will not be adversely affected.

6. Proposed Construction and Wetland Disturbance

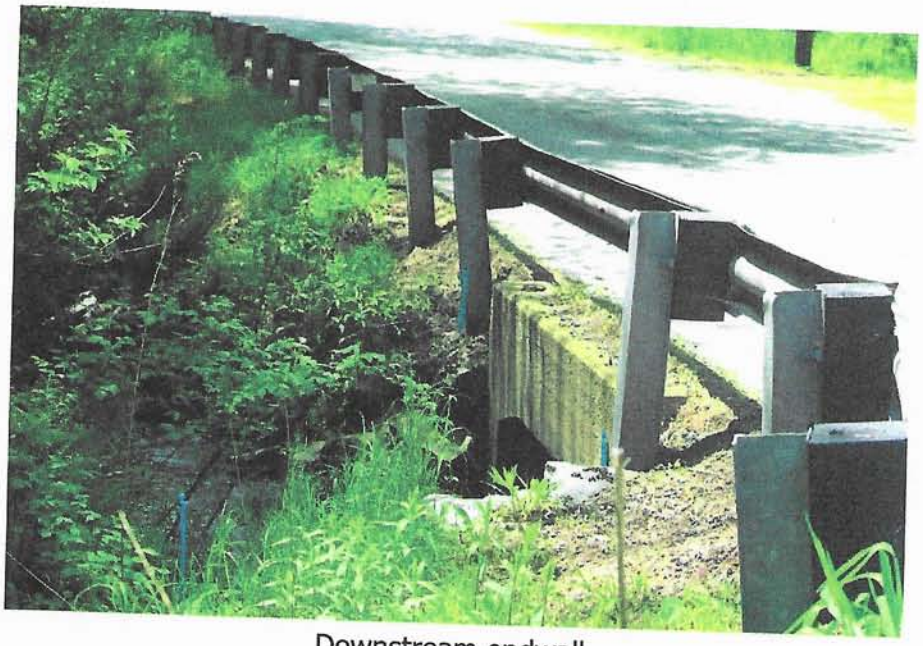
The proposed culvert will require approximately two feet of cover so the road will need to be raised approximately 1' at the low point to provide that cover. The road pavement will also be widened to 24' which is slightly larger than the average road width of 22.5'.

On the upstream (west) side of the road, there will be approximately 200 square feet of disturbance within the wetlands. On the downstream (east) side, there will be more work required, and approximately 1200 square feet of wetlands will be disturbed in order to widen the road and install the culvert.

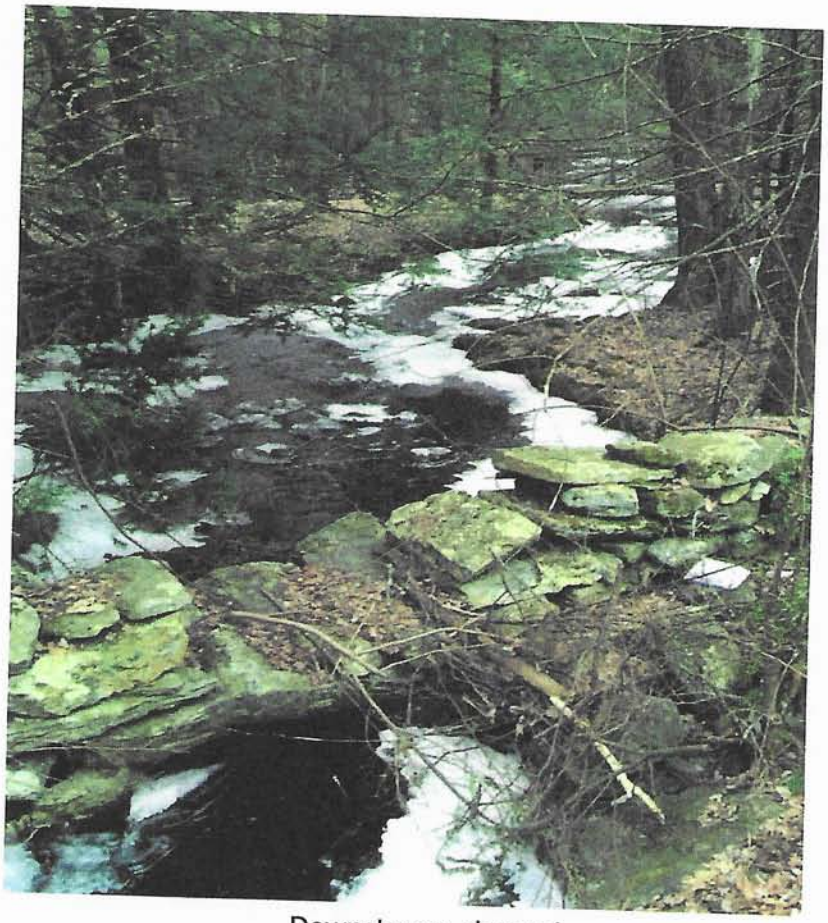
J&D also recommends rerouting 30' of the stream channel on the downstream side of the culvert. It is evident that some recent erosion has caused the stream to change course, and run south adjacent to the road for 30'. In this area, portions of the stream are currently only 4' off the edge of pavement. Once the road is widened, the stream will be too close to the road, and could cause additional erosion or undermining. The original streambed, which is close to perpendicular with the roadway, is still visible. It should be fairly simple to fill in the existing streambed, and return the stream to its original location.

7. Project Area Photographs

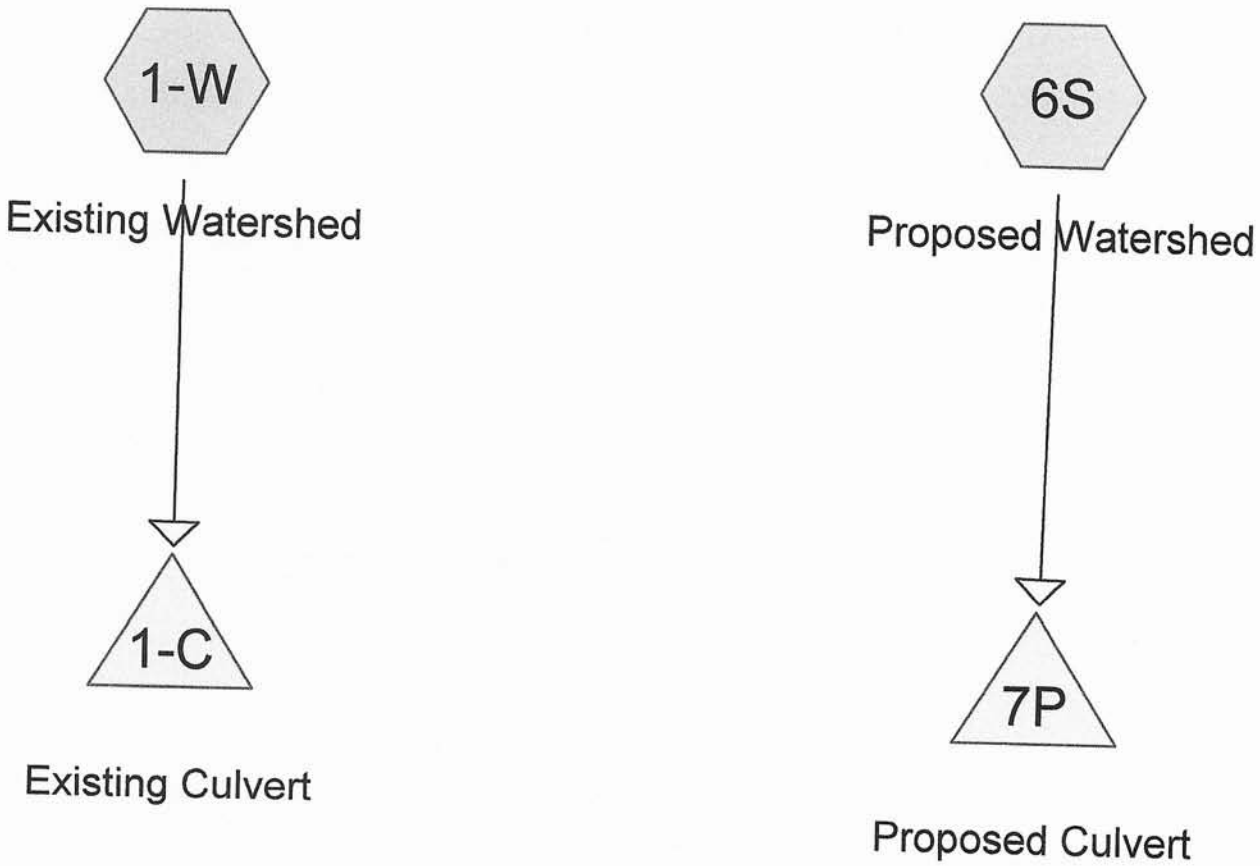
West Thompson Road at Wheaton Brook looking north



Downstream endwall



Downstream channel



Subcat Reach Pond Link

Drainage Diagram for 18189 Wheaton Brook - W Thompson Rd ex and pro

Prepared by {enter your company name here}, Printed 6/28/2019

Summary for Subcatchment 1-W: Existing Watershed

Runoff = 137.37 cfs @ 14.60 hrs, Volume= 58.468 af, Depth= 1.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr CT 10-year Rainfall=4.80"

Area (ac)	CN	Description
81.000	30	Woods, Good, HSG A
231.000	55	Woods, Good, HSG B
84.000	70	Woods, Good, HSG C
229.000	70	Woods, Good, HSG C
625.000	59	Weighted Average
625.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
42.6	300	0.0300	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.41"
39.5	1,450	0.0600	0.61		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
90.7	9,900	0.0080	1.82	54.56	**Channel Flow, brook** Area= 30.0 sf Perim= 32.0' r= 0.94' n= 0.070 Sluggish weedy reaches w/pools
172.8	11,650	Total			

Summary for Subcatchment 6S: Proposed Watershed

Runoff = 137.37 cfs @ 14.60 hrs, Volume= 58.468 af, Depth= 1.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr CT 10-year Rainfall=4.80"

Area (ac)	CN	Description
81.000	30	Woods, Good, HSG A
231.000	55	Woods, Good, HSG B
84.000	70	Woods, Good, HSG C
229.000	70	Woods, Good, HSG C
625.000	59	Weighted Average
625.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
42.6	300	0.0300	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.41"
39.5	1,450	0.0600	0.61		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
90.7	9,900	0.0080	1.82	54.56	**Channel Flow, brook** Area= 30.0 sf Perim= 32.0' r= 0.94' n= 0.070 Sluggish weedy reaches w/pools

172.8 11,650 Total

Summary for Pond 1-C: Existing Culvert

Inflow Area = 625.000 ac, 0.00% Impervious, Inflow Depth = 1.12" for CT 10-year event
Inflow = 137.37 cfs @ 14.60 hrs, Volume= 58.468 af
Outflow = 133.86 cfs @ 14.94 hrs, Volume= 58.488 af, Atten= 3%, Lag= 20.7 min
Primary = 133.86 cfs @ 14.94 hrs, Volume= 58.488 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Starting Elev= 310.00' Surf.Area= 0.020 ac Storage= 0.010 af
Peak Elev= 314.07' @ 14.94 hrs Surf.Area= 1.441 ac Storage= 2.077 af (2.066 af above start)

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 5.4 min (1,042.3 - 1,036.9)

Volume	Invert	Avail.Storage	Storage Description
#1	309.00'	3.663 af	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
309.00	0.003	60.0	0.000	0.000	0.003
310.00	0.020	120.0	0.010	0.010	0.023
311.00	0.120	300.0	0.063	0.073	0.161
312.00	0.310	550.0	0.208	0.281	0.549
313.00	0.870	1,145.0	0.566	0.847	2.392
314.00	1.400	1,450.0	1.125	1.972	3.838
315.00	2.000	1,600.0	1.691	3.663	4.675

Device	Routing	Invert	Outlet Devices
#1	Primary	314.00'	**100.0' long x 25.0' 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
#2	Primary	309.00'	**60.0" W x 36.0" H Box Culvert** L= 25.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 309.00' / 308.90' S= 0.0040 '/' Cc= 0.900 n= 0.030 Stream, clean & straight

Primary OutFlow Max=133.53 cfs @ 14.94 hrs HW=314.07' (Free Discharge)
└**1=Broad-Crested Rectangular Weir** (Weir Controls 5.37 cfs @ 0.73 fps)
└**2=Culvert** (Barrel Controls 128.16 cfs @ 8.54 fps)

Summary for Pond 7P: Proposed Culvert

Inflow Area = 625.000 ac, 0.00% Impervious, Inflow Depth = 1.12" for CT 10-year event
Inflow = 137.37 cfs @ 14.60 hrs, Volume= 58.468 af
Outflow = 137.14 cfs @ 14.67 hrs, Volume= 58.503 af, Atten= 0%, Lag= 4.3 min
Primary = 137.14 cfs @ 14.67 hrs, Volume= 58.503 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs

Starting Elev= 310.00' Surf.Area= 0.020 ac Storage= 0.010 af
Peak Elev= 312.14' @ 14.67 hrs Surf.Area= 0.371 ac Storage= 0.328 af (0.318 af above start)

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.4 min (1,037.3 - 1,036.9)

Volume	Invert	Avail.Storage	Storage Description
#1	309.00'	3.663 af	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
309.00	0.003	60.0	0.000	0.000	0.003
310.00	0.020	120.0	0.010	0.010	0.023
311.00	0.120	300.0	0.063	0.073	0.161
312.00	0.310	550.0	0.208	0.281	0.549
313.00	0.870	1,145.0	0.566	0.847	2.392
314.00	1.400	1,450.0	1.125	1.972	3.838
315.00	2.000	1,600.0	1.691	3.663	4.675

Device	Routing	Invert	Outlet Devices
#1	Primary	315.00'	**100.0' long x 32.0' 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
#2	Primary	309.00'	**120.0" W x 36.0" H Box Culvert** L= 34.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 309.00' / 308.90' S= 0.0029 '/' Cc= 0.900 n= 0.030 Stream, clean & straight

Primary OutFlow Max=137.14 cfs @ 14.67 hrs HW=312.14' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
└—**2=Culvert** (Barrel Controls 137.14 cfs @ 5.83 fps)

Summary for Subcatchment 1-W: Existing Watershed

Runoff = 194.86 cfs @ 14.57 hrs, Volume= 79.559 af, Depth= 1.53"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr CT 25-year Rainfall=5.50"

Area (ac)	CN	Description
81.000	30	Woods, Good, HSG A
231.000	55	Woods, Good, HSG B
84.000	70	Woods, Good, HSG C
229.000	70	Woods, Good, HSG C
625.000	59	Weighted Average
625.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
42.6	300	0.0300	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.41"
39.5	1,450	0.0600	0.61		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
90.7	9,900	0.0080	1.82	54.56	**Channel Flow, brook** Area= 30.0 sf Perim= 32.0' r= 0.94' n= 0.070 Sluggish weedy reaches w/pools
172.8	11,650	Total			

Summary for Subcatchment 6S: Proposed Watershed

Runoff = 194.86 cfs @ 14.57 hrs, Volume= 79.559 af, Depth= 1.53"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr CT 25-year Rainfall=5.50"

Area (ac)	CN	Description
81.000	30	Woods, Good, HSG A
231.000	55	Woods, Good, HSG B
84.000	70	Woods, Good, HSG C
229.000	70	Woods, Good, HSG C
625.000	59	Weighted Average
625.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
42.6	300	0.0300	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.41"
39.5	1,450	0.0600	0.61		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
90.7	9,900	0.0080	1.82	54.56	**Channel Flow, brook** Area= 30.0 sf Perim= 32.0' r= 0.94' n= 0.070 Sluggish weedy reaches w/pools

172.8 11,650 Total

Summary for Pond 1-C: Existing Culvert

Inflow Area = 625.000 ac, 0.00% Impervious, Inflow Depth = 1.53" for CT 25-year event
Inflow = 194.86 cfs @ 14.57 hrs, Volume= 79.559 af
Outflow = 194.63 cfs @ 14.61 hrs, Volume= 79.579 af, Atten= 0%, Lag= 2.3 min
Primary = 194.63 cfs @ 14.61 hrs, Volume= 79.579 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Starting Elev= 310.00' Surf.Area= 0.020 ac Storage= 0.010 af
Peak Elev= 314.36' @ 14.61 hrs Surf.Area= 1.604 ac Storage= 2.512 af (2.501 af above start)

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 6.6 min (1,033.2 - 1,026.6)

Volume	Invert	Avail.Storage	Storage Description
#1	309.00'	3.663 af	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
309.00	0.003	60.0	0.000	0.000	0.003
310.00	0.020	120.0	0.010	0.010	0.023
311.00	0.120	300.0	0.063	0.073	0.161
312.00	0.310	550.0	0.208	0.281	0.549
313.00	0.870	1,145.0	0.566	0.847	2.392
314.00	1.400	1,450.0	1.125	1.972	3.838
315.00	2.000	1,600.0	1.691	3.663	4.675

Device	Routing	Invert	Outlet Devices
#1	Primary	314.00'	**100.0' long x 25.0' 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
#2	Primary	309.00'	**60.0" W x 36.0" H Box Culvert** L= 25.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 309.00' / 308.90' S= 0.0040 '/' Cc= 0.900 n= 0.030 Stream, clean & straight

Primary OutFlow Max=194.48 cfs @ 14.61 hrs HW=314.36' (Free Discharge)
└**1=Broad-Crested Rectangular Weir** (Weir Controls 58.16 cfs @ 1.62 fps)
└**2=Culvert** (Barrel Controls 136.32 cfs @ 9.09 fps)

Summary for Pond 7P: Proposed Culvert

Inflow Area = 625.000 ac, 0.00% Impervious, Inflow Depth = 1.53" for CT 25-year event
Inflow = 194.86 cfs @ 14.57 hrs, Volume= 79.559 af
Outflow = 193.98 cfs @ 14.66 hrs, Volume= 79.594 af, Atten= 0%, Lag= 5.4 min
Primary = 193.98 cfs @ 14.66 hrs, Volume= 79.594 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs

Starting Elev= 310.00' Surf.Area= 0.020 ac Storage= 0.010 af
Peak Elev= 312.92' @ 14.66 hrs Surf.Area= 0.813 ac Storage= 0.778 af (0.767 af above start)

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 1.1 min (1,027.7 - 1,026.6)

Volume	Invert	Avail.Storage	Storage Description
#1	309.00'	3.663 af	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
309.00	0.003	60.0	0.000	0.000	0.003
310.00	0.020	120.0	0.010	0.010	0.023
311.00	0.120	300.0	0.063	0.073	0.161
312.00	0.310	550.0	0.208	0.281	0.549
313.00	0.870	1,145.0	0.566	0.847	2.392
314.00	1.400	1,450.0	1.125	1.972	3.838
315.00	2.000	1,600.0	1.691	3.663	4.675

Device	Routing	Invert	Outlet Devices
#1	Primary	315.00'	**100.0' long x 32.0' 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
#2	Primary	309.00'	**120.0" W x 36.0" H Box Culvert** L= 34.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 309.00' / 308.90' S= 0.0029 '/' Cc= 0.900 n= 0.030 Stream, clean & straight

Primary OutFlow Max=193.98 cfs @ 14.66 hrs HW=312.92' (Free Discharge)
├─**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
└─**2=Culvert** (Barrel Controls 193.98 cfs @ 6.60 fps)

Summary for Subcatchment 1-W: Existing Watershed

Runoff = 258.92 cfs @ 14.41 hrs, Volume= 102.480 af, Depth= 1.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr CT 50-year Rainfall=6.20"

Area (ac)	CN	Description
81.000	30	Woods, Good, HSG A
231.000	55	Woods, Good, HSG B
84.000	70	Woods, Good, HSG C
229.000	70	Woods, Good, HSG C
625.000	59	Weighted Average
625.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
42.6	300	0.0300	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.41"
39.5	1,450	0.0600	0.61		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
90.7	9,900	0.0080	1.82	54.56	**Channel Flow, brook** Area= 30.0 sf Perim= 32.0' r= 0.94' n= 0.070 Sluggish weedy reaches w/pools
172.8	11,650	Total			

Summary for Subcatchment 6S: Proposed Watershed

Runoff = 258.92 cfs @ 14.41 hrs, Volume= 102.480 af, Depth= 1.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr CT 50-year Rainfall=6.20"

Area (ac)	CN	Description
81.000	30	Woods, Good, HSG A
231.000	55	Woods, Good, HSG B
84.000	70	Woods, Good, HSG C
229.000	70	Woods, Good, HSG C
625.000	59	Weighted Average
625.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
42.6	300	0.0300	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.41"
39.5	1,450	0.0600	0.61		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
90.7	9,900	0.0080	1.82	54.56	**Channel Flow, brook** Area= 30.0 sf Perim= 32.0' r= 0.94' n= 0.070 Sluggish weedy reaches w/pools

Starting Elev= 310.00' Surf.Area= 0.020 ac Storage= 0.010 af
Peak Elev= 314.05' @ 14.78 hrs Surf.Area= 1.426 ac Storage= 2.039 af (2.029 af above start)

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 2.3 min (1,020.9 - 1,018.5)

Volume	Invert	Avail.Storage	Storage Description
#1	309.00'	3.663 af	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
309.00	0.003	60.0	0.000	0.000	0.003
310.00	0.020	120.0	0.010	0.010	0.023
311.00	0.120	300.0	0.063	0.073	0.161
312.00	0.310	550.0	0.208	0.281	0.549
313.00	0.870	1,145.0	0.566	0.847	2.392
314.00	1.400	1,450.0	1.125	1.972	3.838
315.00	2.000	1,600.0	1.691	3.663	4.675

Device	Routing	Invert	Outlet Devices
#1	Primary	315.00'	**100.0' long x 32.0' 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
#2	Primary	309.00'	**120.0" W x 36.0" H Box Culvert** L= 34.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 309.00' / 308.90' S= 0.0029 '/' Cc= 0.900 n= 0.030 Stream, clean & straight

Primary OutFlow Max=253.29 cfs @ 14.78 hrs HW=314.05' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
└—**2=Culvert** (Barrel Controls 253.29 cfs @ 8.44 fps)

Janet Blanchette

From:	Murphy, Brian <Brian.Murphy@ct.gov>
Sent:	Friday, April 17, 2020 11:36 AM
To:	Janet Blanchette; 'wetlands@thompsonct. org (wetlands@thompsonct.org)'; Richard Benoit (dpwdirector@thompsonct.org)
Cc:	Sigmund, William; Gephard, Steve; Goclowski, Matthew R
Subject:	FW: Wheaton Brook Culvert replacement - Thompson
Attachments:	18189 Transmittal to Fisheries -Wheaton Brook Culvert 2020-04-13.pdf

Hi Janet,

Per your request, I have had the opportunity to review fisheries resource requirements for the Wheaton Brook culvert replacement in Thompson. It is our understanding that the existing open bottom structure will be replaced with a 4 x 12 ft. concrete box culvert that will be embedded with 1 ft. of natural streambed substrates. Enclosed are my comments.

Fisheries Resources

The Fisheries Division has not inventoried the fisheries community of Wheaton Brook. Based upon a review of onsite wetland habitat upstream of the crossing and more defined stream channel morphometry downstream, the watercourse may be expected to support fish species such as Blacknose Dace, Redfin Pickerel, Golden Shiner and Tessellated Darter. Fish community diversity most likely increases near its downstream confluence with the Little River. Fish collection samples within the Little River near the confluence with Wheaton Brook indicate a very diverse fluvial fish community that includes coldwater species such as wild Brook Trout and Brown Trout.

Recommendations

1. Current conditions underneath the crossing provide for upstream fish passage. The proposed replacement box culvert will ensure upstream fish passage and help maintain existing natural instream habitat features. Please salvage and stockpile existing stream crossing substrates for placement back into the box culvert. It is recommended to design a flow channel within the culvert to help enhance passage conditions during low flows. I recommend incorporating an approximate 4 ft. wide by 6 inch deep low flow channel through the culvert centerline.

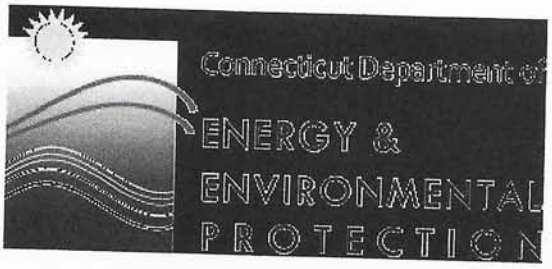
2. It is critical that proper erosion and sedimentation controls be installed and maintained throughout the duration of this project. Care should be exercised so as not to increase turbidity levels. As a best management practice, any instream work within Wheaton Brook should be restricted to the period from June 1 to September 30, inclusive. A June 1 through September 30 timeframe can be utilized as an effective mitigation measure for construction related disturbances due to the following reasons: (1) timeframe will serve to protect the spawning, egg incubation, and fry development of resident fishes, (2) timeframe does not interfere with seasonal migratory behaviors, and (3) timeframe coincides with historic low rainfall levels in Connecticut a period in which instream construction activities such as dewatering, excavation, trenching, and cofferdam placement are most effective.

Thanks much for sending along this project for our review. Let me know if you have any questions.

Brian D. Murphy,

Senior Fisheries Habitat Biologist
Fisheries Division
Habitat Conservation and Enhancement Program
Eastern District Headquarters
209 Hebron Road
Marlborough, CT

P: 860.424-4142 brian.murphy@ct.gov



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Conserving, improving and protecting our natural resources and environment;
Ensuring a clean, affordable, reliable, and sustainable energy supply.

From: Janet Blanchette <janet@jdcivilengineers.com>
Sent: Monday, April 13, 2020 3:00 PM
To: Murphy, Brian <Brian.Murphy@ct.gov>
Cc: 'wetlands@thompsonct. org (wetlands@thompsonct.org)' <wetlands@thompsonct.org>; Richard Benoit (dpwdirector@thompsonct.org) <dpwdirector@thompsonct.org>
Subject: Wheaton Brook Culvert replacement - Thompson

Good Afternoon Brian,

J & D is working with the town on this project and prepared preliminary plans. Project information is attached. We are soliciting your comments prior to proceeding with final design. We believe that the new structure proposed, which has more than twice the opening area and width of the existing structure, complies with the design standards recommended in your Inland Fisheries Division Stream Crossing Guidelines. Please contact me if you have any questions or comments.

Janet J. Blanchette, PE

J & D Civil Engineers, LLC
401 Ravenelle Road
North Grosvenordale, CT 06255
860-923-2920

www.jdcivilengineers.com

WHEATON BROOK CULVERT REPLACEMENT PLANS

WEST THOMPSON ROAD - THOMPSON, CT

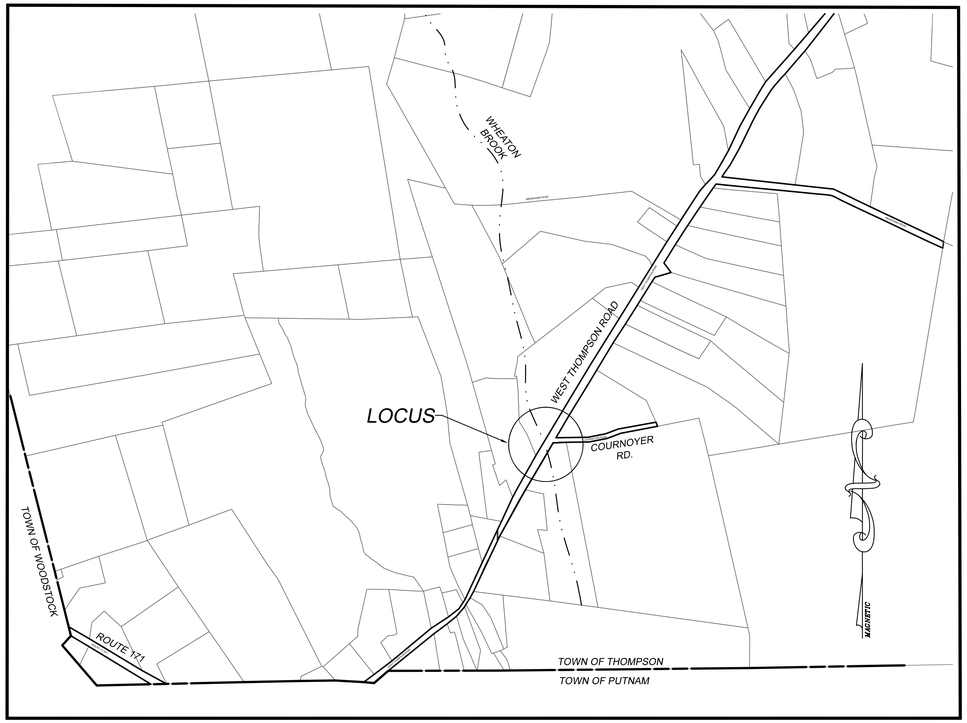
PREPARED FOR

TOWN OF THOMPSON

DATE: NOVEMBER 4, 2020

JOB NO: 18189

TABLE OF CONTENTS



LOCATION MAP

1" = 500'

J&D CIVIL ENGINEERS, LLC

401 RAVENELLE ROAD
N. GROSVENORDALE, CT 06255
860-923-2920
WWW.JDCIVILENGINEERS.COM

APPROVED
INLAND WETLANDS COMMISSION

CHAIRMAN DATE

SURVEY NOTES:

1. THIS MAP HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARD FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT " AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.

THE SURVEY TYPE IS TOPOGRAPHIC, PERFORMED IN DECEMBER 2018 AND APRIL 2020, AND IS INTENDED TO BE USED FOR THE DESIGN OF A CULVERT.

PROPERTY LINES DO NOT EXPRESS A BOUNDARY OPINION.

HORIZONTAL ACCURACY: CLASS B
VERTICAL ACCURACY: CLASS T-2

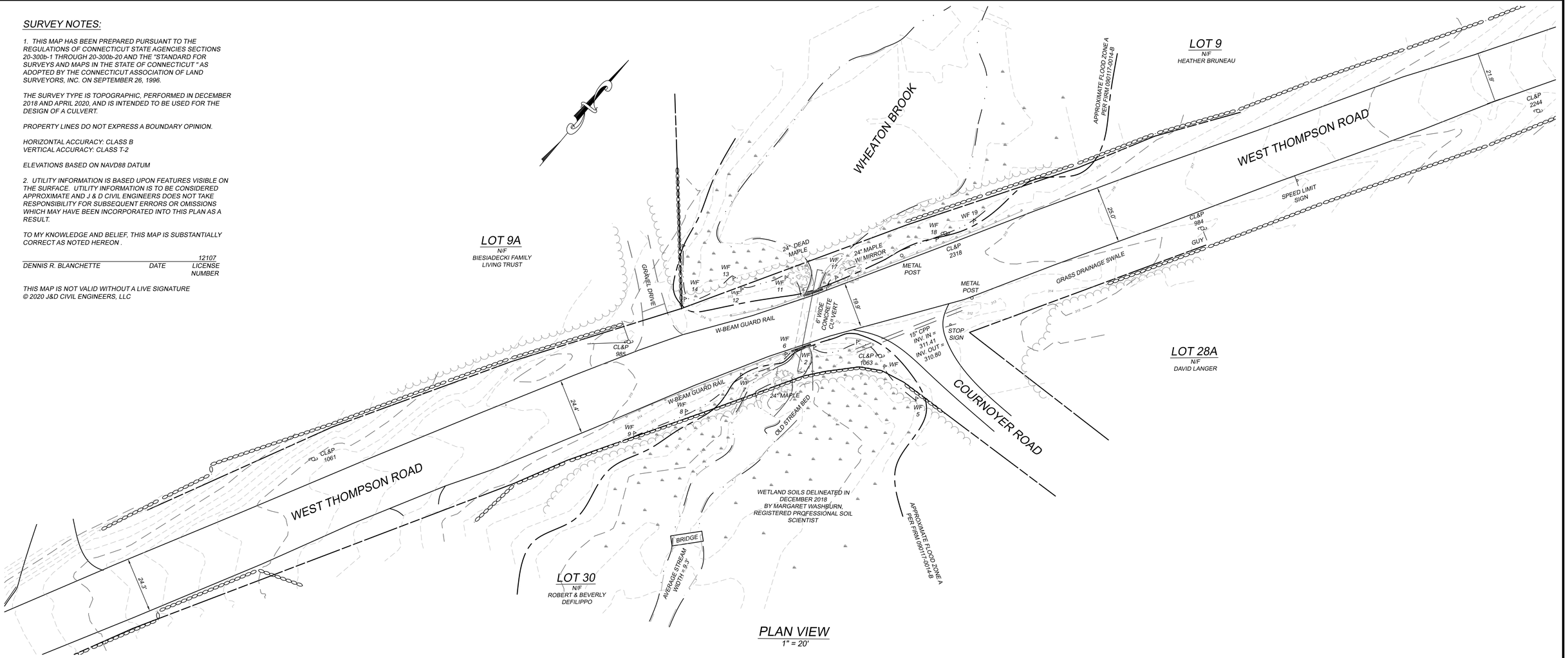
ELEVATIONS BASED ON NAVD88 DATUM

2. UTILITY INFORMATION IS BASED UPON FEATURES VISIBLE ON THE SURFACE. UTILITY INFORMATION IS TO BE CONSIDERED APPROXIMATE AND J & D CIVIL ENGINEERS DOES NOT TAKE RESPONSIBILITY FOR SUBSEQUENT ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS PLAN AS A RESULT.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON .

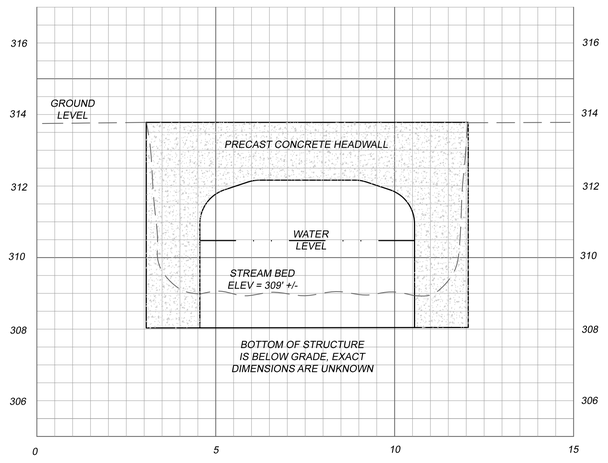
		12107
DENNIS R. BLANCHETTE	DATE	LICENSE NUMBER

THIS MAP IS NOT VALID WITHOUT A LIVE SIGNATURE

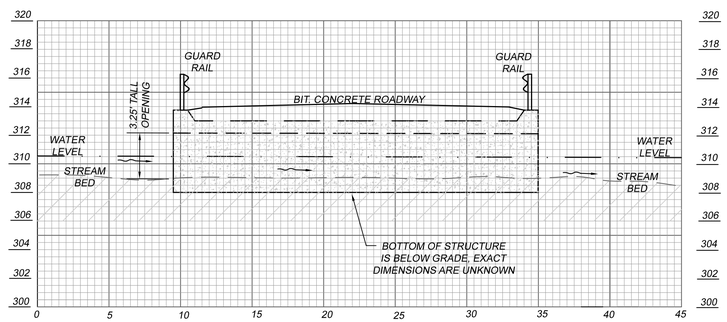


WETLAND SOILS DELINEATED IN DECEMBER 2018 BY MARGARET WASHBURN, REGISTERED PROFESSIONAL SOIL SCIENTIST

PLAN VIEW
1" = 20'



EXISTING CULVERT END SECTION
1" = 2'



EXISTING CULVERT CROSS SECTION A-A
1" = 5'

LEGEND

- FLOOD ZONE A
- PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EDGE OF WETLANDS
- EDGE OF WATER
- GUARD RAIL
- STONEWALL
- UTILITIES
- TREELINE
- WETLAND SOILS
- UTILITY POLE

EXISTING CONDITIONS PLAN
WHEATON BROOK CULVERT
PREPARED FOR
TOWN OF THOMPSON
WEST THOMPSON ROAD - THOMPSON, CT

J&D CIVIL ENGINEERS, LLC
401 RAVENELLE ROAD
N. GROSVENORDALE, CT 06255
860-923-2920

DESIGNED: DDB
CHECKED: JJB
REVISIONS:

JOB NO: 18189
DATE: NOVEMBER 4, 2020
SCALE: AS NOTED
SHEET: 2 OF 14

SURVEY NOTES:

1. THIS MAP HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARD FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT " AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.

THE SURVEY TYPE IS TOPOGRAPHIC, PERFORMED IN DECEMBER 2018, AND APRIL 2020 AND IS INTENDED TO BE USED FOR THE DESIGN OF A CULVERT.

PROPERTY LINES DO NOT EXPRESS A BOUNDARY OPINION.

HORIZONTAL ACCURACY: CLASS B
VERTICAL ACCURACY: CLASS T-2

ELEVATIONS BASED ON NAVD88 DATUM

2. UTILITY INFORMATION IS BASED UPON FEATURES VISIBLE ON THE SURFACE. UTILITY INFORMATION IS TO BE CONSIDERED APPROXIMATE AND J & D CIVIL ENGINEERS DOES NOT TAKE RESPONSIBILITY FOR SUBSEQUENT ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS PLAN AS A RESULT.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON .

DENNIS R. BLANCHETTE	DATE	12107 LICENSE NUMBER

THIS MAP IS NOT VALID WITHOUT A LIVE SIGNATURE

LOT 9A
N/F
BIESIADECKI FAMILY LIVING TRUST

LOT 9
N/F
HEATHER M BRUNEAU

LOT 30
N/F
ROBERT & BEVERLY DEFILIPPO

WEST THOMPSON ROAD

COURNOYER ROAD

WHEATONS BROOK

COFFERDAM

PROPOSED METAL BEAM RAIL R-B 350

SILT SOCK

REMOVE TREE

REMOVE EXISTING GUARDRAIL

PROPOSED WINGWALLS 6' x 1' (TYP.)

PROPOSED 12' X 4' PRECAST BOX CONCRETE CULVERT

CENTER STATION 5+69.40

LOW POINT STA 5+44

4' X 6' MODIFIED RIPRAP LEAKOFF

4' MODIFIED RIPRAP LEAKOFF SWALE

PAVED APRON

TYPE I END ANCHORAGE

LIMIT OF DISURBANCE

TRAFFIC CONES (TYP)

TYPE III BARRICADES

REMOVE EX PIPE

SILT SOCK IN EXISTING DRAINAGE SWALE

65'-15" CPP
INV. IN = 311.0
INV. OUT = 310.5

RELOCATE STOP SIGN

REPAVE 50'± COURNOYER ROAD

MAINTAIN ONE LANE TRAFFIC TO COURNOYER ROAD AT ALL TIMES. DO NOT STAGE OR STOCKPILE MATERIALS OR EQUIPMENT

MAINTAIN ONE LANE TRAFFIC TO DRIVEWAY AT ALL TIMES. DO NOT STAGE OR STOCKPILE MATERIALS OR EQUIPMENT

LIMIT OF CONSTRUCTION STATION 4+50

REMOVE 24' OF EXISTING STONE WALL

MODIFIED RIIPRAP

DIRECT STREAM BACK TO ORIGINAL CHANNEL

TEMPORARY CONSTRUCTION EASEMENT 25' WIDE

PUMPED WATER FILTER BAG

TYPE III BARRICADES STA 4+00 +/-

PC=4+33.00

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

LEGEND

- PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- 246 PROPOSED CONTOUR LINE
- EDGE OF WETLANDS
- EDGE OF WATER
- PROPOSED GUARD RAIL
- EXISTING GUARD RAIL
- STONEWALL
- UTILITIES
- TREELINE
- WETLAND SOILS
- UTILITY POLE
- SILT SOCK
- LIMIT OF DISTURBANCE

ROADWAY AND EROSION CONTROL PLAN
WHEATON BROOK CULVERT
PREPARED FOR
TOWN OF THOMPSON
WEST THOMPSON ROAD - THOMPSON, CT

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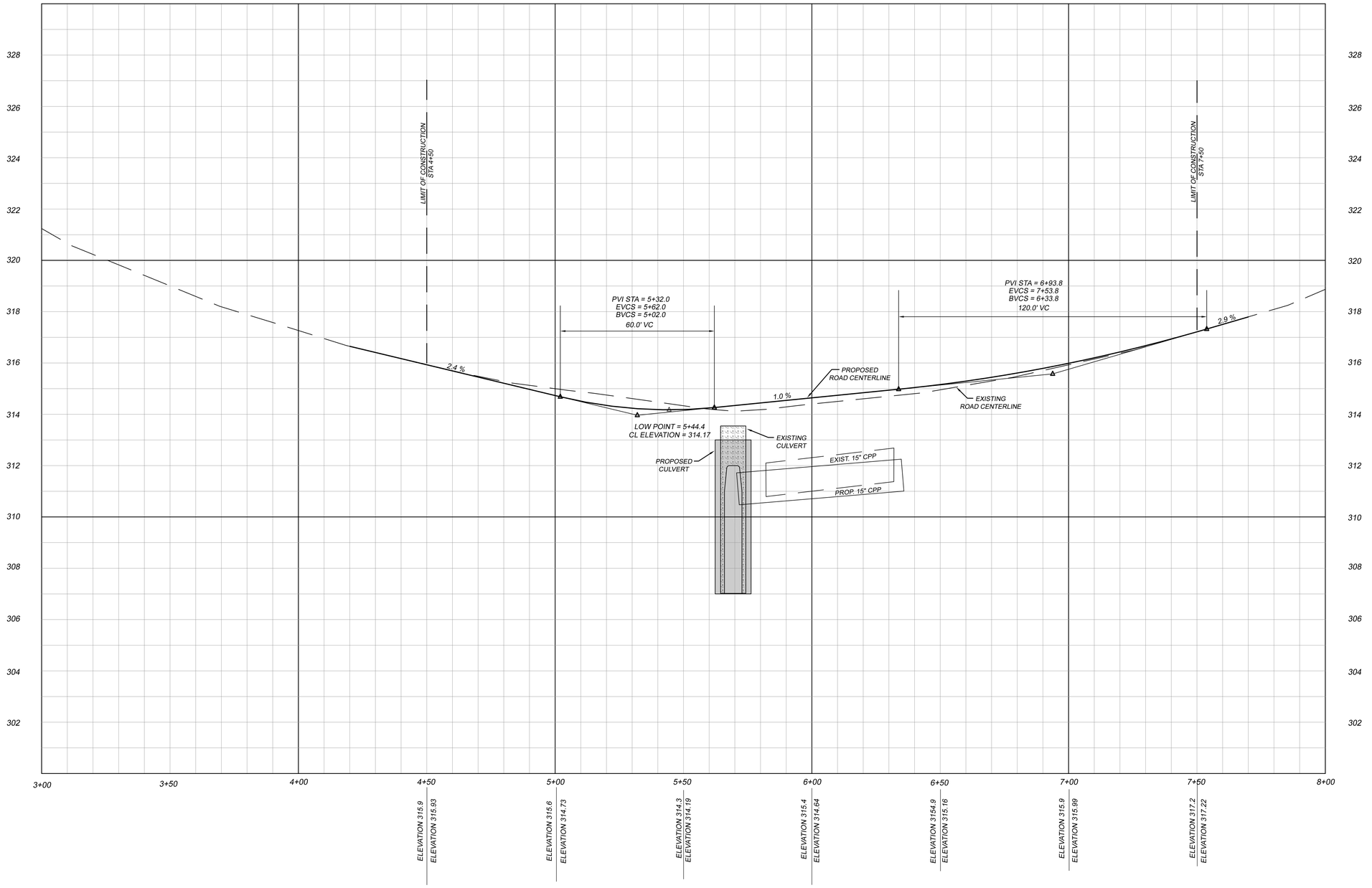
SCALE: 1" = 10'
SHEET: 3 OF 14



ROAD PROFILE

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 2'

ROADWAY PROFILE
WHEATON BROOK CULVERT
PREPARED FOR
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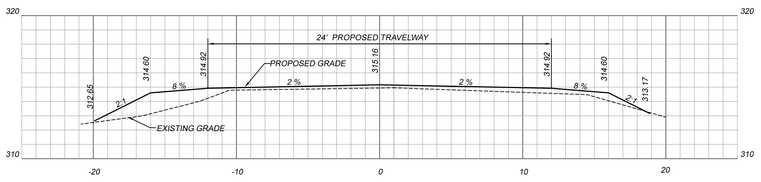
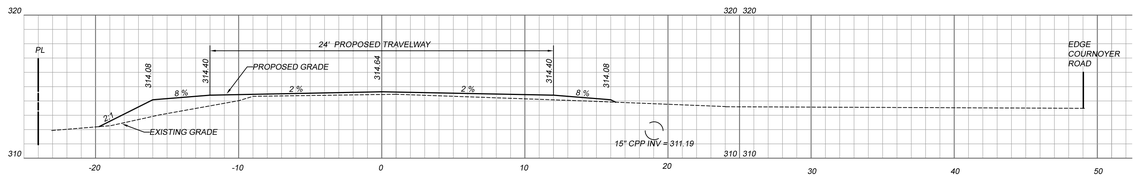
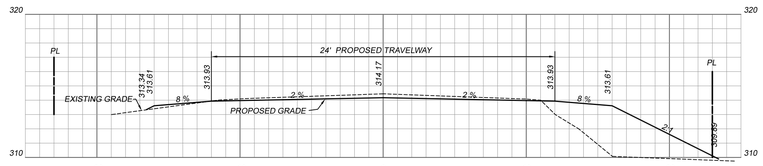
SCALE: AS NOTED	SHEET: 4 OF 14



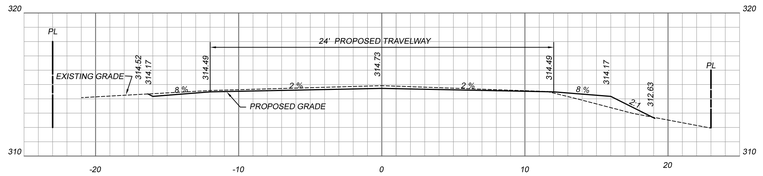
6+50



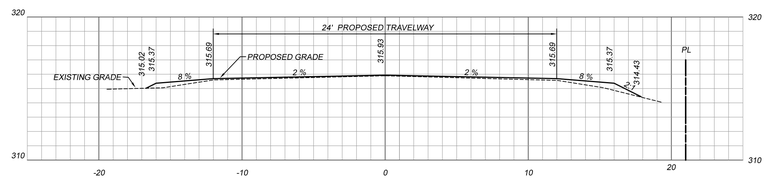
6+15 (COURNOYER ROAD)



5+44.4 (LOW POINT)

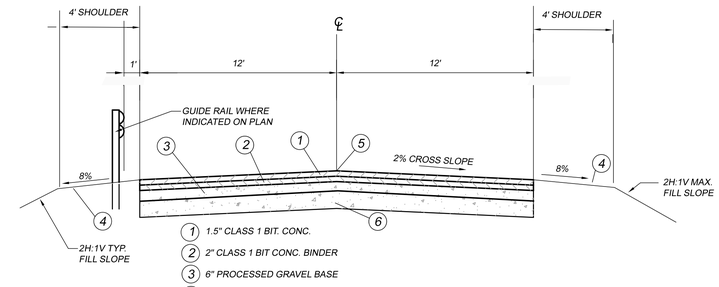


5+00



4+50

CROSS SECTIONS
1" = 5'



TYPICAL ROAD SECTION
NOT TO SCALE

ROADWAY CROSS SECTIONS
WHEATON BROOK CULVERT
PREPARED FOR
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WEST THOMPSON ROAD - THOMPSON, CT

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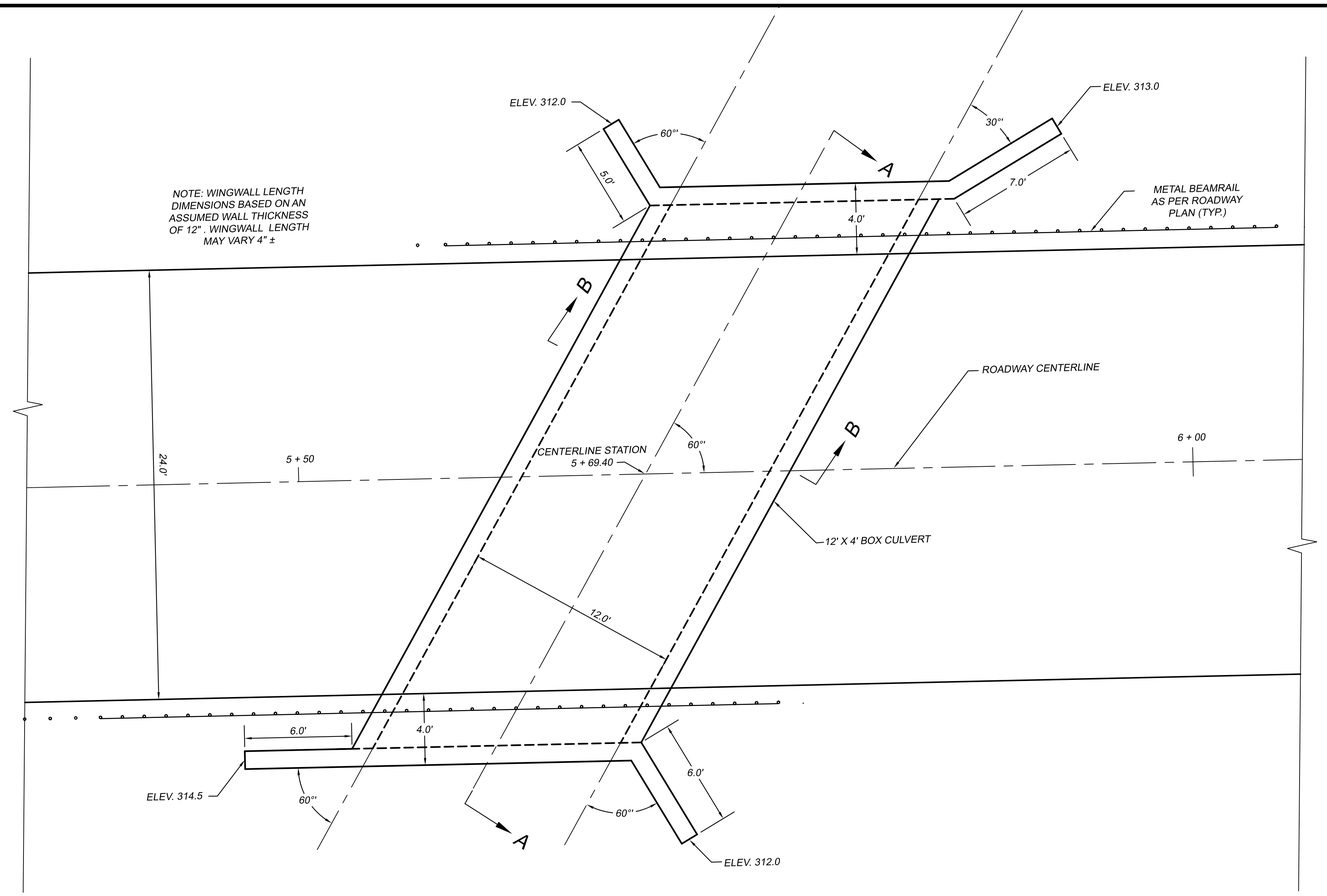
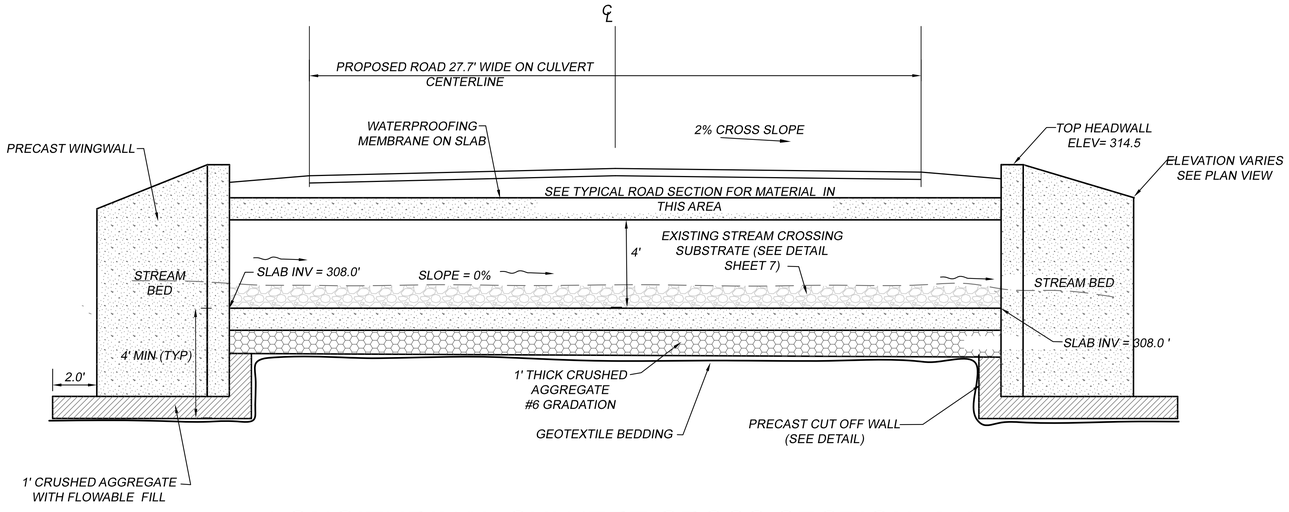


PROPOSED CULVERT PLAN VIEW

1" = 4'



LONGITUDINAL CULVERT CROSS SECTION A-A

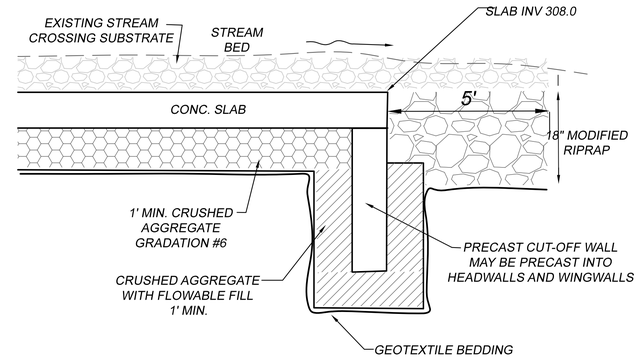
1" = 4'

SOIL & GEOTECHNICAL NOTES
SIEVE ANALYSIS - NATIVE MATERIAL
JULY 30, 2019 BY SOIL TECHNOLOGY ASSOCIATES

US STANDARD SIEVE SIZE	SAMPLE
1.5	92.3
3/4"	89.5
3/8"	78.3
#4	65.9
#8	53.8
#16	42.8
#30	32.0
#50	17.9
#100	8.6
#200	2.3

% RETAINED ON NO. 4 SIEVE: 34

SOIL CLASSIFICATION: SW "WITH GRAVEL" (ASTM D-2487)



PRECAST CUTOFF WALL

NTS

CULVERT PLAN & SECTIONS
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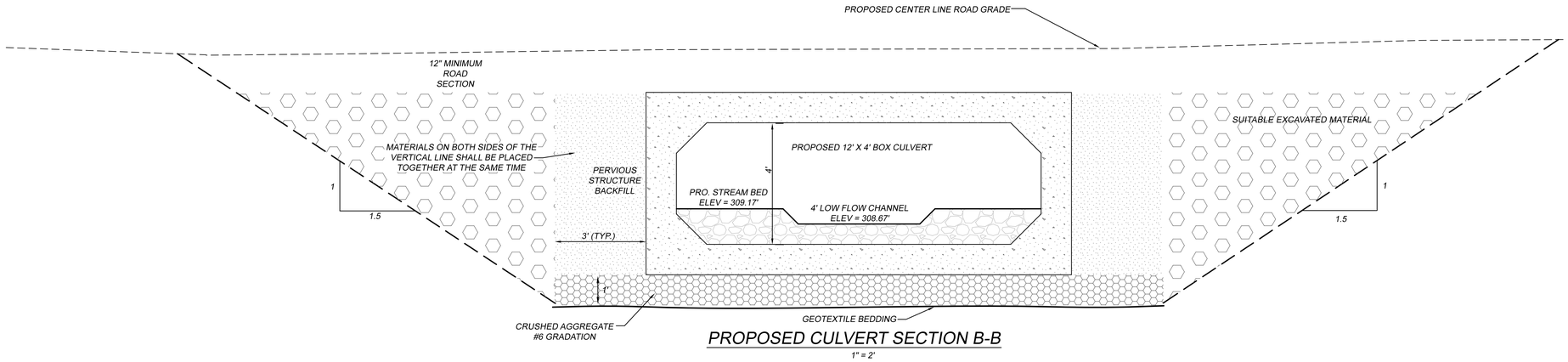
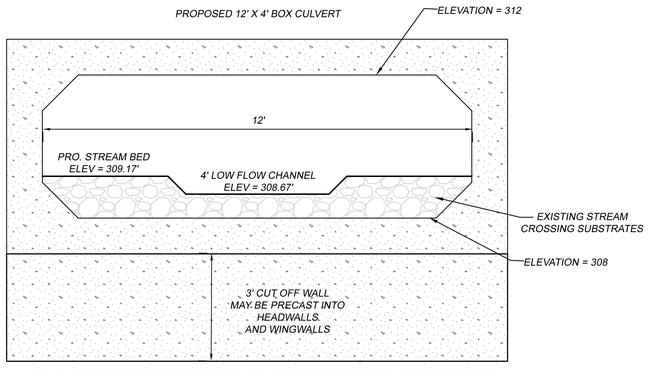


PROPOSED CULVERT SECTION B-B

1" = 2'

CONSTRUCTION NOTES:

1. REINFORCEMENT IN BOX CULVERT AND CUT OFF WALL NOT SHOWN FOR CLARITY.
2. IF WEEPHOLES ARE REQUIRED, USE 4" DIA. PIPE AND PREFABRICATED STRUCTURAL DRAIN.
3. THE LENGTH OF EACH CULVERT SEGMENT SHALL BE DETERMINED BY THE CONTRACTOR. IF STAGED CONSTRUCTION IS EMPLOYED, THE PRECAST BOX CULVERT SEGMENT LENGTH MUST BE COMPATIBLE WITH STAGING REQUIREMENTS.
4. PRECAST CUT-OFF WALLS AND WINGWALLS SHALL BE PLACED ON A LEVELING BED OF CRUSHED MATERIAL MEETING THE REQUIREMENT OF MATERIAL DESIGNATION XXXX, XXX A PRIMARY SIZE DESIGNATION OF X. AFTER PLACING AND LEVELING THE PRECAST UNITS, THE AREAS BENEATH, IN FRONT AND BEHINDTHE UNITS SHALL BE GROUTED WITH CONTROLLED LOW STRENGTH MATERIAL MEETING THE REQUIREMENTS OF SECTION XXX.
5. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1".



PLACEMENT OF NATIVE STREAMBED MATERIAL

1" = 2'

CULVERT DETAILS
WHEATON BROOK CULVERT
PREPARED FOR
TOWN OF THOMPSON
WEST THOMPSON ROAD - THOMPSON, CT

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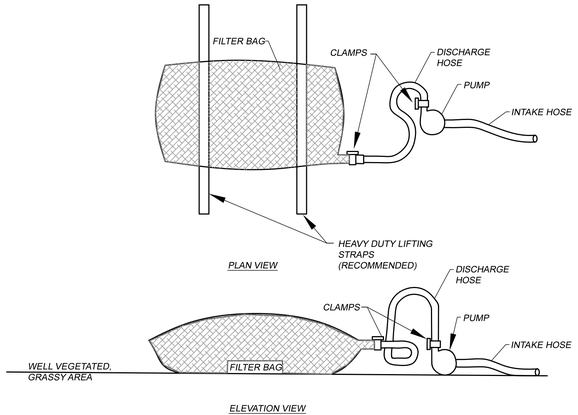


PUMPED WATER FILTER BAG
N.T.S.

NOTES:
LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MIN. STANDARD
AVG. WIDE STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.

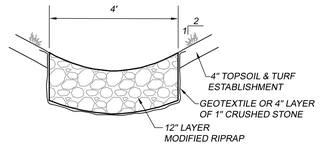
BAGS SHALL BE LOCATED IN WELL VEGETATED (GRASSY) AREAS, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE IS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACE ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAD TO REDUCE SLOPE STEEPNESS.

NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS, WITHIN 50' OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

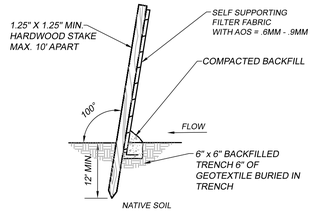
THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

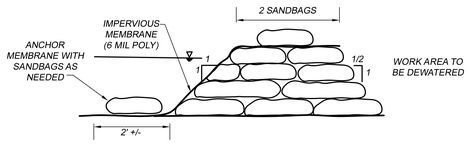
FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.



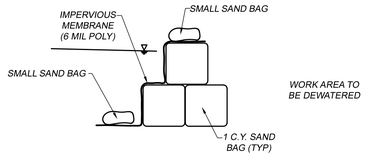
RIPRAP LEAKOFF SWALE
NOT TO SCALE



SILT FENCE INSTALLATION
NOT TO SCALE



TYPICAL SMALL BAG INSTALLATION

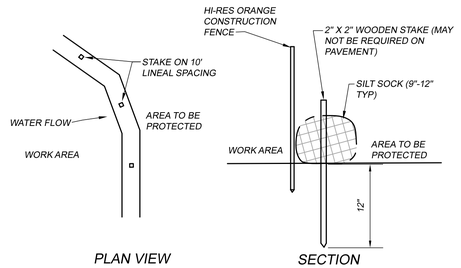


TYPICAL LARGE BAG (1 C.Y.) INSTALLATION

INSTALLATION NOTES:

1. THE UPSTREAM COFFERDAM IS INSTALLED FIRST. REMOVE LARGE ROCKS ON STREAMBED THAT WOULD INTERFERE WITH SEAL. THICK MIL POLY SHEETING IS LAID ALONG THE STREAMBED BEFORE THE SANDBAGS ARE PLACED.
2. THE EXCESS PLASTIC IS THEN FOLDED OVER THE SANDBAGS IN THE UPSTREAM DIRECTION AND ANOTHER LAYER OF SANDBAGS IS PLACED ON THE PLASTIC TO HELP SEAL THE DAM FROM INFILTRATION. THE PLASTIC IS THEN EXTENDED ALONG THE STREAM BOTTOM AS FAR UPSTREAM AS PRACTICABLE TO INCREASE THE FLOW LENGTH OF THE SUBSURFACE FLOW. THIS HELPS PREVENT FLOW FROM GOING BENEATH THE SANDBAG COFFERDAM.
3. WHEN INDUSTRIAL SANDBAGS ARE USED, ADDITIONAL SMALL SANDBAGS MAY BE PLACED IN BETWEEN THE LARGE SANDBAGS TO HELP SEAL THE WORK AREA.
4. ONCE THE UPSTREAM COFFERDAM IS SECURED, THE CONTRACTOR WILL BEGIN DIVERTING UPSTREAM FLOWS AROUND THE COFFERDAM AREA USING A BYPASS PUMP. THIS WATER WILL BE DISCHARGED DIRECTLY INTO THE FILTER BAG.
5. THE DOWNSTREAM COFFERDAM WILL THEN BE INSTALLED IN THE SAME MANNER AS THE UPSTREAM COFFERDAM. THE DOWNSTREAM COFFERDAM ACTS AS A SAFEGUARD AGAINST A FAILURE OF THE UPSTREAM COFFERDAM AND TO CONTROL DOWNSTREAM BACKWATER SITUATIONS.
6. CONTRACTOR MAY USE JERSEY BARRIERS OR PRECAST CONCRETE BLOCKS IN LIEU OF SANDBAGS.

COFFER DAM DETAIL
NOT TO SCALE



NOTES

1. SILT SOCK MANUFACTURER SHALL BE SILT SOXX OR ENGINEER APPROVED EQUAL
2. ALL MATERIAL TO MEET MANUFACTURER'S SPECIFICATIONS
3. SEDIMENT SILT SOCK TO BE FILLED WITH LEAF COMPOST AND/OR WOODY MULCH PER MANUFACTURER'S REQUIREMENTS.
4. FOLLOWING CONSTRUCTION AND SITE STABILIZATION, COMPOST MATERIAL SHALL BE REMOVED OR DISPERSED ON SITE, AS APPROVED BY THE ENGINEER.

SILT SOCK DETAIL
NOT TO SCALE

GENERAL CONSTRUCTION NOTES:

LOCATIONS OF UNDERGROUND UTILITIES HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. THE CONTRACTOR SHALL NOTIFY CALL BEFORE YOU DIG AND FIELD VERIFY THE LOCATION, DEPTH AND ALIGNMENT OF ALL EXISTING PIPES, CABLES, ETC.

CONSTRUCTION SHALL BE IN CONFORMANCE WITH CONNDOT FORM 818 UNLESS OTHERWISE NOTED ON THE PLANS. UTILITY INSTALLATION SHALL BE IN CONFORMANCE WITH THE APPROPRIATE UTILITY COMPANY.

THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION WITH EACH UTILITY AND ALL COSTS ASSOCIATED WITH THE PROTECTION OF EXISTING FACILITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN IN SERVICE ALL EXISTING PIPING UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

TYPICAL DETAILS SHOWN ARE TO ILLUSTRATE THE ENGINEER'S INTENT AND ARE NOT PRESENTED AS A SOLUTION TO ALL CONSTRUCTION PROBLEMS ENCOUNTERED IN THE FIELD. THE CONTRACTOR MAY SUBMIT PROPOSALS FOR ALTERNATE METHODS TO SUIT FIELD CONDITIONS.

ALL TRENCHING SHALL BE DONE IN COMPLIANCE WITH OSHA REGULATIONS AND THE INSTALLATION REQUIREMENTS OF THE PIPE MANUFACTURER. THE OSHA CLASSIFICATION FOR SOILS AT THIS SITE IS "C" WHICH REQUIRES ALL EXCAVATIONS IN EXCESS OF 5' TO BE SHORED OR CUT BACK TO A SLOPE OF 1.5 HORIZONTAL TO 1.0 VERTICAL. IF SHORING IS REQUIRED, IT MUST BE DESIGNED BY A LICENSED CT PROFESSIONAL ENGINEER.

BENCHMARKS WILL BE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR IN LAYING OUT THE PROJECT. ANY DISCREPANCIES BETWEEN FIELD MEASUREMENTS AND THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.

THE CONTRACTOR SHALL PROTECT BENCHMARKS, PROPERTY CORNERS AND SURVEY MONUMENTS FROM DAMAGE OR DISPLACEMENT. ANY SUCH ITEMS WHICH NEED TO BE REPLACED SHALL BE AT THE CONTRACTOR'S EXPENSE.

SOIL EROSION CONTROL PLAN

THE PURPOSE OF THIS PROJECT IS TO REPLACE THE WHEATON BROOK CULVERT ON WEST THOMPSON ROAD AND RECONSTURCT APPROXIMATELY 300' OF ROAD. THE GOAL OF THE EROSION CONTROL PLAN IS TO PROHIBIT ANY ERODED SEDIMENT OR SEDIMENT LADEN RUNOFF FROM ENTERING WHEATON BROOK OR ADJACENT WETLANDS. THE SITE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL DEVICES AS NEEDED, BEYOND WHAT IS INDICATED ON THE PLAN, SUCH AS HAYBALES, SILT SOCK, STONE CHECK DAMS ETC, TO ENSURE THAT NO SEDIMENT ERODES FROM THE SITE.

CONSTRUCTION SEQUENCE

1. A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH THE CONTRACTOR, HIGHWAY DEPARTMENT, ENGINEER AND WETLANDS AGENT.
2. INSTALLATION OF SEDIMENT CONTROL BARRIERS AS SHOWN ON THE PLAN.
3. REMOVE EXISTING GUIDE RAIL.
4. REVIEW THE INSTALLATION NOTES FOR THE PUMPED WATER FILTER BAG AND THE SAND BAG COFFER DAM DETAILS.
5. INSTALL THE FILTER BAG WHERE SHOWN ON THE PLANS.
6. INSTALL THE UPSTREAM COFFERDAM AROUND THE INLET LOCATION OF THE TEMPORARY BYPASS CULVERT FIRST AS PER THE DETAIL.
7. ONCE THE UPSTREAM COFFERDAM IS SECURED, BEGIN PUMPING THE EXCAVATION AREA FOR THE TEMPORARY BYPASS CULVERT. PUMP INTO TO THE FILTER BAG IF SEDIMENT IF FLOWING DOWNSTREAM.
8. EXCAVATE WITHIN THE ROAD FOR THE TEMPORARY BYPASS CULVERT AND INSTALL FROM UPSTREAM TO DOWNSTREAM.
9. THE TEMPORARY BYPASS CULVERT WILL ALLOW FOR CONTINUOUS RIVER FLOW DURING CONSTRUCTION.
10. AFTER THE TEMPORARY BYPASS CULVERT IS INSTALLED THE UPSTREAM COFFERDAM SHALL BE SLOWLY AND CAREFULLY REMOVED FROM THE TEMPORARY CULVERT AND REINSTALLED FOR THE PERMANENT CULVERT.
11. INSTALL DOWNSTREAM COFFERDAM FOR THE PERMANENT CULVERT AND BEGIN PUMPING TO FILTER BAG.
12. MONITOR THE FLOW TO MAKE SURE THAT IT IS FREE FROM SEDIMENT PRIOR TO IT ENTERING THE BROOK DOWNSTREAM. IF SEDIMENT IS OBSERVED, STOP THE PUMPING OPERATIONS AND INSTALL AN ADDITIONAL PUMPING SETTLING BASIN COMPRISED OF HAYBALES AND NON-WOVEN GEOTEXTILE AS PER CHAPTER 5-13 OF THE 2002 CT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.
13. CONTINUE PUMPING AS NEEDED DURING THE CONSTRUCTION OF THE REPLACEMENT CULVERT UNTIL REMOVAL OF COFFERDAM IS HAS BEGUN.
14. REMOVE EXISTING BRIDGE.
15. INSTALL NEW PRECAST CONCRETE CULVERT.
16. REMOVE COFFERDAMS.
17. BLOCK INLET OF TEMPORARY BYPASS CULVERT AND REMOVE FROM DOWNSTREAM TO UPSTREAM. PLACE AND COMPACT SUBGRADE MATERIAL.
18. PLACE AND COMPACT SUBGRADE MATERIAL
19. PLACE AND COMPACT SUBBASE AND BASE
20. PAVE ROAD
21. HYDROSEED AND HAY COVER OVER DISTURBED AREAS
22. INSTALL GUIDE RAIL
23. COMPLETE SITE STABILIZATION AND REMOVE EROSION CONTROL

OPERATIONS AND MAINTENANCE

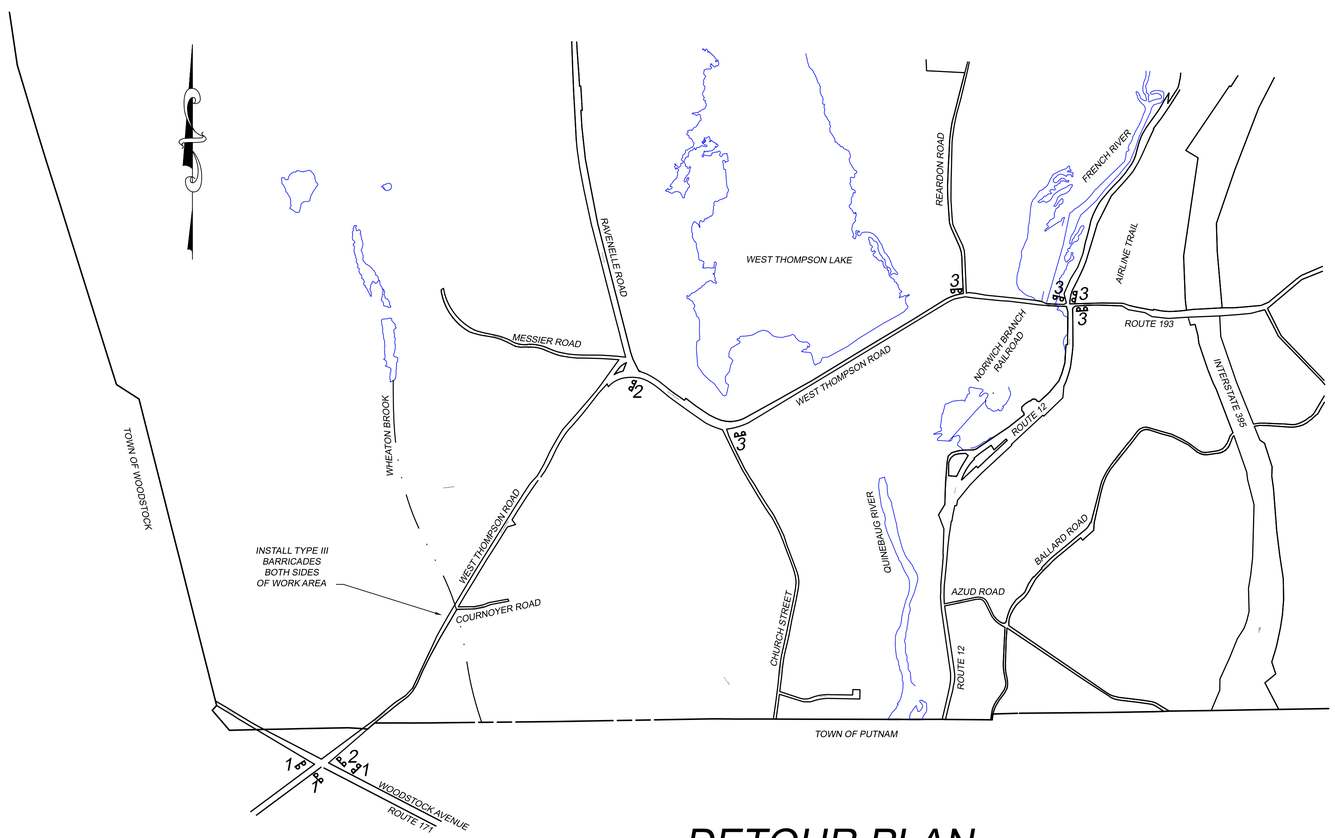
1. ALL PROPOSED WORK SHALL CONFORM TO "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" BY THE CONNECTICUT COUNCIL OF SOIL AND WATER CONSERVATION AND TOWN REGULATIONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE GOALS OF THIS EROSION CONTROL PLAN ARE MET BY WHATEVER MEANS ARE NECESSARY. THE CONTRACTOR SHALL PLAN ALL LAND DISTURBING ACTIVITIES IN A MANNER AS TO MINIMIZE THE EXTENT OF DISTURBED AREAS.
3. DAILY INSPECTIONS SHALL BE MADE OF EROSION AND SEDIMENT CONTROL MEASURES TO INSURE EFFECTIVENESS AND IMMEDIATE CORRECTIVE ACTION SHALL BE TAKEN IF FAILURE OCCURS. ADDITIONAL EROSION CONTROL MEASURES BEYOND WHAT IS SHOWN ON THE PLAN MAY BE NECESSARY.
4. EROSION AND SEDIMENT CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE BEEN STABILIZED AND VEGETATIVE COVER HAS BEEN ESTABLISHED.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION AND MAINTENANCE OF THIS EROSION AND SEDIMENT CONTROL PLAN.

EROSION AND SEDIMENT CONTROL CONSTRUCTION DETAILS
WHEATON BROOK CULVERT
PREPARED FOR
TOWN OF THOMPSON
WEST THOMPSON ROAD - THOMPSON, CT

J&D CIVIL ENGINEERS, LLC
401 RAVENELLE ROAD
N. GROSVENORDALE, CT 06255
860-923-2920

DESIGNED: DDB
CHECKED: JJB
REVISIONS:

JOB NO: 18189
DATE: NOVEMBER 4, 2020
SCALE: AS NOTED
SHEET: 8 OF 14



DETOUR PLAN
1" = 1000'

1
(PROVIDE 3 SIGNS)

WEST THOMPSON
ROAD CLOSED
2500' AHEAD
LOCAL TRAFFIC ONLY

80-9928

2
(PROVIDE 2 SIGNS)

ROAD CLOSED
TO
THRU TRAFFIC

80-9081

SILVER BACKGROUND
WITH TYPE 1 SHEETING

3
(PROVIDE 5 SIGNS)

WEST THOMPSON
ROAD CLOSED
PAST RAVENELLE RD
LOCAL TRAFFIC ONLY

80-9928

DETOUR NOTES:

1. INSTALL SIGNS AS PER CT DOT AND THE MANUAL OF UNIFORM TRAFFIC DEVICES.
2. INSTALL SIGNS WITHIN ROAD R.O.W. AND NOT ON PRIVATE PROPERTY.
3. SIGNS SHALL BE INSTALLED NO SOONER THAN TWO DAYS PRIOR TO ACTUAL ROAD CLOSING AND INSTALLATION OF BARRIERS.
4. THE SIGNS SHALL BE REMOVED IMMEDIATELY FOLLOWING REMOVAL OF BARRIERS. SIGNS SHALL BECOME THE PROPERTY OF THE TOWN OF THOMPSON AND SHALL BE DELIVERED TO THE HIGHWAY DEPARTMENT ON BUCKLEY HILL ROAD.
5. SEE SPECIFICATIONS. ROAD CLOSING SHALL BE LIMITED TO 14 DAYS.

ROAD CLOSURE & SIGNAGE
WHEATON BROOK CULVERT
PREPARED FOR
TOWN OF THOMPSON
WEST THOMPSON ROAD - THOMPSON, CT

J&D CIVIL ENGINEERS, LLC
401 RAVENELLE ROAD
N. GROSVENORDALE, CT 06255
860-923-2920

DESIGNED: JJB
CHECKED: DDB

REVISIONS:

JOB NO: 18189
DATE: NOVEMBER 4, 2020
SCALE: 1" = 1000'
SHEET: 9 OF 14

Agenda Item E.a) 7. Old Applications

WAA20045, James Fogarty, 0 Brickyard Rd. (Assessor's map 38. block 87, lot 6), construction of a driveway in the 100-foot upland review area for a new single family home, stamped receive by the Town Clerk 11/3/2020, issued 12/3/2020, legal notice to be published 12/11/2020, appeal period ends 12/25/2020.

Agenda Item E.b) New Applications - None

E.c) 1. Applications Received After Agenda was Published

F.a) Permit Extensions / Changes

IWA20022 (includes **VIOL20042** NOV issued for exceeding scope of permit), Marc Baer, 1227 Thompson Rd., Assessor's map 116, block 24, lot 10, construct house, well, septic system, driveway and associated grading, request to authorize modifications to approved plans.

Good Morning Marla,

I am attaching PDFs of the revised site plan for Mr. Baer, as well as a complete retaining wall as built. There were no revisions made to Sheet 2 of the site plans, so we are only submitting Sheet 1. We are having some technical difficulties with our plotter, it will take me a few more days to submit hard copies.

In addition to the maps, I would also like to provide the following metrics regarding the shoreline and the retaining wall:

Back in November 2019, our surveyor John took survey measurements every 30' along shoreline, in an attempt to estimate the location of the high water mark. This is an approximate boundary, some of his points were up to 4 inches higher or lower, but we can estimate an elevation of around 153.5' as the high water mark of Little Pond (on an assumed datum). This is usually considered to be the property line for a waterfront property.

The newly constructed boulder retaining wall is 230' long. Approximately 35' of the wall was built behind the high water mark, which caused the property to shrink by around 150 square feet. Approximately 195' of the wall was built over the high water mark, which caused the property to increase by around 350 square feet. Therefore in total, the property gained around 200 square feet of area, and the lake lost an equivalent area. At the worst point, the wall is about 5' over the property line and into the lake, but on average the entire wall is only 0.85 feet into the lake.

It is very unfortunate that portions of the wall were constructed over the line. J&D made many attempts to instruct the owner and contractor to follow the site plans exactly, and to take extreme care to avoid disturbing the lake. We take no responsibility for any errors made by the contractor, with the exception of the granite stairs at the water – I forgot to include those on the original site plans, which was my mistake. I should mention that the contractor believes our data to be incorrect, and supposedly he will be submitting photos from during construction that prove nothing was built beyond the high water mark.

Despite the many difficulties with this project, I would also like to state that the existing shoreline and lakebed in this area was already very rocky, and did not contain many aquatic plants. Therefore I do not anticipate any permanent impacts to the environment, with regards to water quality or flora and fauna habitat. Lastly, despite the many valid concerns by the citizens and commission members, I hope that there will not be any substantial delays in construction. It is in everyone's best interests to finish the rough grading and stabilize all slopes as quickly as possible, to minimize any chances of erosion or other pollution.

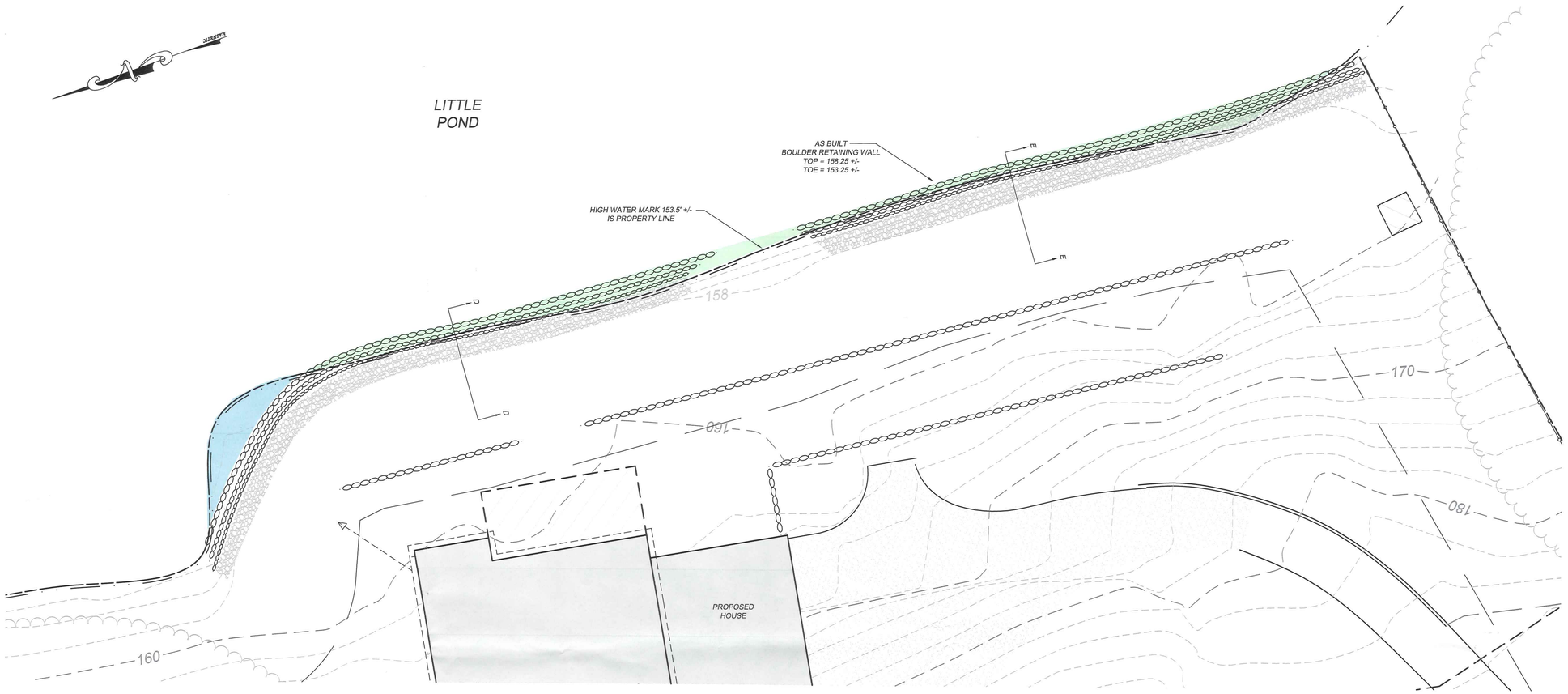
Sincerely,

Daniel Blanchette, PE

J&D Civil Engineers, LLC
401 Ravenelle Road
N. Grosvenordale, CT 06255
www.jdcivilengineers.com
860-923-2920

19216 Baer - Site Plan REV 2020-11-16.pdf (997 KB)

19216 Baer - Retaining Wall As Built 2020-11-14.pdf (499 KB)



SURVEY NOTES:

1. THIS MAP HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARD FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT " AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.

SURVEY TYPE: GENERAL LOCATION (RETAINING WALL AS BUILT) PERFORMED ON NOVEMBER 14, 2020.

ACCURACY: CLASS B, CLASS T2

PROPERTY LINES DO NOT EXPRESS A BOUNDARY OPINION.

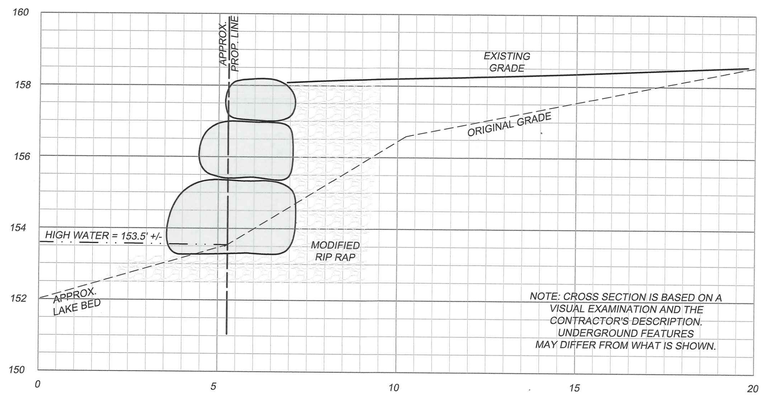
2. TEST PIT AND PERC TEST LOCATIONS HAVE BEEN COMPILED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS. THIS INFORMATION IS TO BE CONSIDERED APPROXIMATE AND J & D CIVIL ENGINEERS DOES NOT TAKE RESPONSIBILITY FOR SUBSEQUENT ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS PLAN AS A RESULT.

3. REFERENCE PLAN: "PROPERTY SURVEY PLAN DEPICTING LAND OF ANNE P. BAER AND PAUL A. BAER, 1217 AND 1227 THOMPSON ROAD, THOMPSON CT." PREPARED BY CME ASSOCIATES, INC. DATE SEPT 27, 2005. SCALE 1" = 40'. ON FILE AS MAP 1516,

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

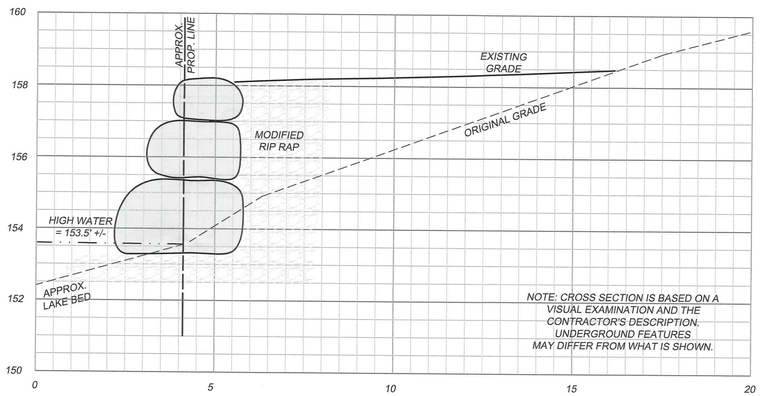
DENNIS R. BLANCHETTE — DATE 11/23/20 — LICENSE 16107

THIS MAP IS NOT VALID WITHOUT A LIVE SIGNATURE



BOULDER WALL CROSS SECTION D-D

1" = 2'



BOULDER WALL CROSS SECTION E-E

1" = 2'

LEGEND

- BUILDING SETBACK LINE
- PROPERTY LINE
- EXISTING CONTOUR LINE
- 246 PROPOSED CONTOUR LINE
- EDGE OF WATER
- UPLAND REVIEW AREA
- EROSION CONTROL DEVICES
- TEST PIT
- LEACHING TRENCH
- STONEWALL
- UTILITIES
- TREELINE

RETAINING WALL AS BUILT SURVEY

PREPARED FOR

MARC BAER

1227 THOMPSON ROAD - THOMPSON, CT

MAP 116 BLOCK 24 LOT 10

J&D CIVIL ENGINEERS, LLC
401 RAVENELLE ROAD
N. GROSVENORDALE, CT 06255
860-923-2920

STATE OF CONNECTICUT DANIEL D. BLANCHETTE 31338 LICENSED PROFESSIONAL ENGINEER

DESIGNED: DDB
CHECKED: DRB

REVISIONS:

JOB NO: 19216
SCALE: 1" = 10'

DATE: NOV 14, 2020
SHEET: 1 OF 1

IWA2000022 Conditions #1

TEST PIT RESULTS

OBSERVED BY: SHERRY MCGANN
DATE: DECEMBER 16, 2019

PIT NO. 1

0 - 8"	TOPSOIL
8 - 46"	RB/YB FINE SANDY LOAM
46 - 102"	RED COARSE SAND AND GRAVEL W/ COBBLES

MOTTLING: N/A
RESTRICTIVE: N/A
LEDGE: N/A
WATER: N/A
ROOTS: 46"

PIT NO. 2

0 - 4"	TOPSOIL
4 - 75"	MEDIUM COARSE SAND AND GRAVEL W/ COBBLES

MOTTLING: 66"
RESTRICTIVE: N/A
LEDGE: N/A
WATER: 75"
ROOTS: 41"

SOUTH END OF TEST PIT DISTURBED, CONTAINS GRAVELLY FILL

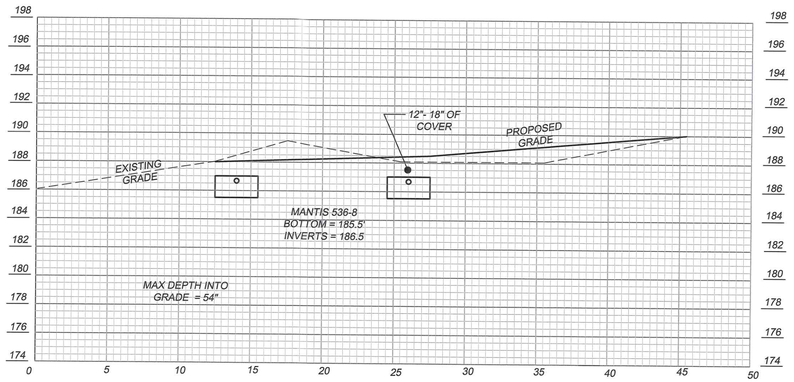
PERC.TEST RESULTS

OBSERVED BY: SHERRY MCGANN
DATE: DECEMBER 16, 2019

HOLE A - NEAR TP 1

TIME	READING
11:02	6.50"
11:07	9.00"
11:12	9.75"
11:17	10.25"
11:27	11.25"
11:37	12.25"
11:47	13.25"

DEPTH: 48"
RATE: 10 MIN/IN



LEACHING FIELD CROSS SECTION A-A

1" = 5'

SURVEY NOTES:

1. THIS MAP HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARD FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT " AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.

THE SURVEY TYPE IS TOPOGRAPHIC, PERFORMED IN NOVEMBER 2019 AND UPDATED IN NOVEMBER 2020, AND IS INTENDED TO BE USED FOR THE DESIGN OF AN ENGINEERED SEPTIC SYSTEM.

PROPERTY LINES DO NOT EXPRESS A BOUNDARY OPINION.

2. TEST PIT AND PERC TEST LOCATIONS HAVE BEEN COMPILED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS. THIS INFORMATION IS TO BE CONSIDERED APPROXIMATE AND J & D CIVIL ENGINEERS DOES NOT TAKE RESPONSIBILITY FOR SUBSEQUENT ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS PLAN AS A RESULT.

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TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON .

DENNIS R. BLANCHETTE — DATE — LICENSE 12107

THIS MAP IS NOT VALID WITHOUT A LIVE SIGNATURE

SEPTIC SYSTEM DESIGN CRITERIA

NUMBER OF BEDROOMS: 5

SEPTIC TANK: 1500 GALLON

PERC RATE: 10 MINS/INCH

MOTTLING: N/A; LEDGE: N/A; WATER: N/A; RESTRICTIVE: N/A; SLOPE: 3%

LEACHING AREA REQUIRED: 660 SQUARE FEET

MLSS REQUIRED = N/A

LEACHING AREA PROVIDED: 60' OF MANTIS 536-8 = 660 SQUARE FEET

LSS PROVIDED = 30'

SPECIFICATIONS

SEPTIC SYSTEM INSTALLATION SHALL BE IN ACCORDANCE WITH THE "CONNECTICUT PUBLIC HEALTH CODE REGULATIONS AND TECHNICAL STANDARDS FOR SUBSURFACE SEWAGE DISPOSAL SYSTEMS".

THE BUILDING, SEPTIC SYSTEM, AND WELL SHALL BE ACCURATELY STAKED IN THE FIELD BY A LICENSED SURVEYOR OR ENGINEER PRIOR TO CONSTRUCTION.

ALL PRECAST STRUCTURES SUCH AS SEPTIC TANKS AND DISTRIBUTION BOXES SHALL BE SET LEVEL ON SIX INCHES OF COMPACTED GRAVEL BASE.

SEPTIC TANK: TWO-COMPARTMENT TANK WITH OUTLET FILTER. INSTALL RISERS OVER TANK CLEANOUTS IF COVER OVER TANK EXCEEDS 1'.

DISTRIBUTION BOXES: 6 HOLE D-BOX WITH BAFFLE

HOUSE, EFFLUENT AND "TIGHT PIPE" FOR DRAIN OUTLETS: 4" PVC SCHEDULE 40, ASTM D 1785 OR ASTM D 2665 WITH RUBBER COMPRESSION GASKET ASTM D 3139 OR SOLVENT WELD COUPLINGS.

DISTRIBUTION SYSTEM: ELJEN MANTIS 536-8

POLYLOK PIPE SEAL AS MANUFACTURED BY SUPERIOR SEPTIC TANKS (OR EQUAL) SHALL BE USED TO SEAL SEPTIC TANK AND D-BOX INLETS AND OUTLETS.

BOTTOM OF TRENCHES TO BE LEVEL.

TOPSOIL SHALL BE STRIPPED IN AREA OF LEACH FIELD AND THE SUBSOIL SCARIFIED PRIOR TO PLACEMENT OF SELECT SEPTIC FILL.

ALL SELECT FILL SHALL BE CLEAN BANK RUN GRAVEL, MEETING THE FOLLOWING REQUIREMENTS OF THE CT DEPT. OF PUBLIC HEALTH.:

MAX. PERCENT GRAVEL (PLUS NO. 4 SIEVE MATERIAL) - 45%

GRADATION ON FILL LESS GRAVEL:

SIEVE	DRY PERCENT PASSING	WET PERCENT PASSING
NO. 4	100	100
NO.10	70-100	70-100
NO. 40	10-75	10-50*
NO. 100	0-5	0-20
NO. 200	0-2.5	0-5

* PERCENT PASSING THE #40 SIEVE CAN BE INCREASED TO NO GREATER THAN 75% IF THE PERCENT PASSING THE #100 SIEVE DOES NOT EXCEED 10% AND THE #200 SIEVE DOES NOT EXCEED 5%.

SELECT FILL MUST PERC AT A RATE EQUAL TO OR FASTER THAN THE UNDERLYING SOIL.

SELECT FILL MATERIAL SHALL EXTEND A MINIMUM OF 10' BEYOND THE LOWEST TRENCH BEFORE TAPERING OFF.

THIS DESIGN IS BASED ON TEST PIT INFORMATION RECORDED BY NDDH. J & D HAS MADE NO INDEPENDENT INVESTIGATION OF SOIL CONDITIONS. THE CONTRACTOR IS ADVISED TO PERFORM SUFFICIENT SITE INVESTIGATION TO DETERMINE CONSTRUCTABILITY OF THE DESIGN PRIOR TO BIDDING OR COMMENCING WORK.

EROSION AND SEDIMENT CONTROL NOTES:

1. THE PROPOSED ACTIVITY ON THE SITE WILL CONSIST OF THE CONSTRUCTION OF A SINGLE FAMILY HOUSE, WELL, SEPTIC SYSTEM AND DRIVEWAY.

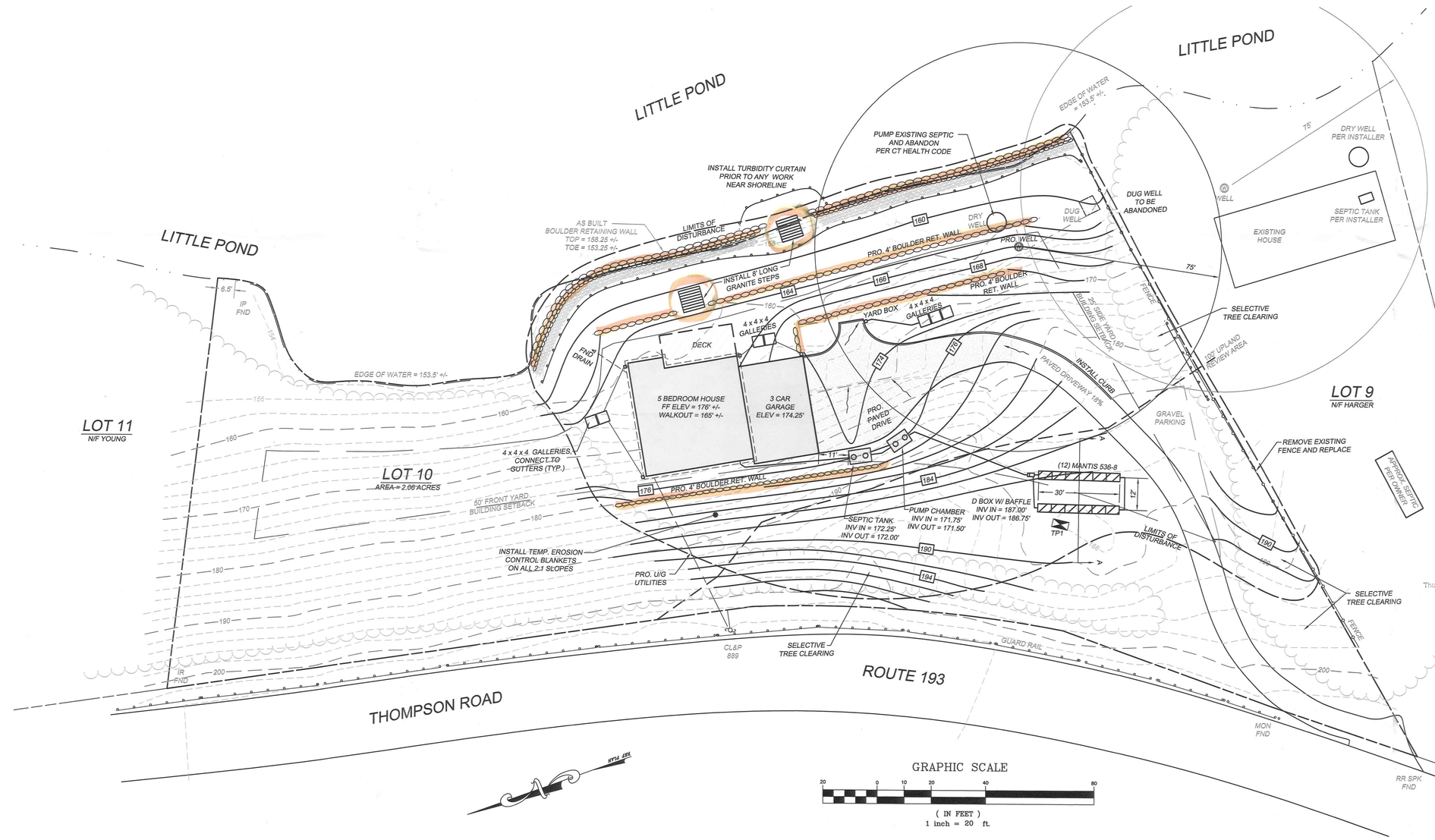
2. EROSION CONTROL DEVICES MUST BE INSTALLED WHERE INDICATED ON THIS SHEET PRIOR TO THE START OF CONSTRUCTION.

3. DISTURBED AREAS SHALL BE KEPT TO A MINIMUM AND SEEDED OR STABILIZED WITH TEMPORARY MULCH AS SOON AS FINAL GRADES HAVE BEEN ATTAINED.

4. THE OWNER OF RECORD SHALL DESIGNATE THE ON SITE ENVIRONMENTAL AGENT RESPONSIBLE FOR REGULARLY CHECKING THE CONDITION OF THE EROSION CONTROL DEVICES AND REMOVING ACCUMULATED SEDIMENT.

FLOOD ZONE

THE PROPERTY ABUTS FLOOD ZONE A, (NO ELEVATION) PER FLOOD MAP 090117 0010B, DATED 11-1-84. THE FLOOD ZONE IS APPROXIMATELY THE HIGH WATER LINE OF THE POND.



LEGEND

- BUILDING SETBACK LINE
- PROPERTY LINE
- EXISTING CONTOUR LINE
- 248 PROPOSED CONTOUR LINE
- EDGE OF WATER
- UPLAND REVIEW AREA
- EROSION CONTROL DEVICES
- TEST PIT
- LEACHING TRENCH
- STONEWALL
- UTILITIES
- TREELINE

SITE DEVELOPMENT PLAN

PREPARED FOR

MARC BAER

1227 THOMPSON ROAD - THOMPSON, CT

MAP 116 BLOCK 24 LOT 10

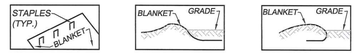
J&D CIVIL ENGINEERS, LLC
401 RAVENELLE ROAD
N. GROSVENORDALE, CT 06255
860-923-2920

STATE OF CONNECTICUT — DANIEL D. BLANCHETTE — 31338 LICENSED PROFESSIONAL ENGINEER

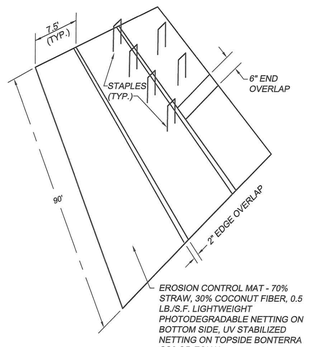
DESIGNED: DDB CHECKED: DRB	REVISIONS: 2020-08-08 NDDH COMMENTS 2020-09-01 WETLANDS COMMENTS 2020-11-16 RET. WALLS
JOB NO: 19216	DATE: JUNE 15, 2020
SCALE: 1" = 20'	SHEET: 1 OF 2

NDDH FILE #20000144

IW# 200222 Modification request



ANCHORING METHOD 'A' | ANCHORING METHOD 'B' | ANCHORING METHOD 'C'



EROSION CONTROL MAT - 70% STRAW, 30% COCONUT FIBER, 0.5 LB./S.F. LIGHTWEIGHT PHOTODEGRADABLE NETTING ON BOTTOM SIDE, UV STABILIZED NETTING ON TOPSIDE BONTERRA CS2 OR EQUAL.

INSTALLATION NOTES ON SLOPES:

-GRADE AND SMOOTH SLOPE. APPLY FERTILIZER ADD SEED PRIOR TO INSTALLING BLANKETS UNLESS USED AS TEMPORARY SEASONAL COVER.

-ANCHOR BLANKETS AT TOP OF SLOPE. USE ANCHORING METHOD "A" FOR 4:1 SLOPES, "B" FOR 3:1 SLOPES AND "C" FOR 2:1 AND STEEPER SLOPES.

-UNROLL BLANKETS IN DIRECTION OF WATER FLOW. PLACE BLANKETS LOOSELY AND IN FULL CONTACT WITH THE SOIL.

-OVERLAP BLANKET EDGES APPROXIMATELY 2" AND STAPLE. NOTE: INSTALL BLANKETS SO EDGE OVERLAPS ARE SHINGLED AWAY FROM PREVAILING WIND.

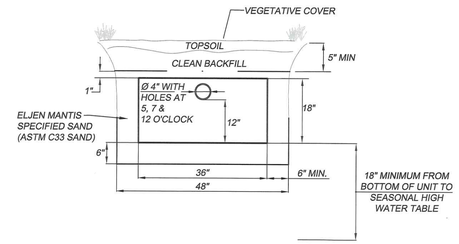
-OVERLAP BLANKET ENDS 6", UPPER BLANKET OVER LOWER BLANKET, AND STAPLE USING FIVE STAPLES (ANCHOR "A").

-CUT EXCESS BLANKET WITH SCISSORS AND ANCHOR AT END OF SLOPE. USE ANCHORING METHOD "A" FOR 4:1 SLOPES AND "B" FOR SLOPES 3:1 OR STEEPER.

EROSION CONTROL BLANKET DETAIL
N.T.S.

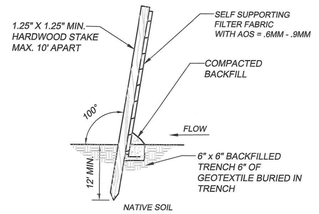
GENERAL CONSTRUCTION SEQUENCE

1. CONSTRUCT REVETMENT ALONG SHORELINE (SEE ABOVE).
2. PERFORM ROUGH CUTS AND FILLS ACROSS SITE.
3. DRILL WELL.
4. EXCAVATE FOUNDATION HOLE AND POUR FOUNDATION.
5. BACKFILL FOUNDATION.
6. CONSTRUCT RETAINING WALLS, STARTING NEAR WATER AND WORKING UPHILL.
7. INSTALL SEPTIC SYSTEM.
8. CONNECT UTILITIES (ELECTRIC, WATER, SEWER).
9. PERFORM FINE GRADING, INSTALL EROSION CONTROL BLANKET WHERE APPROPRIATE, AND LOAM AND SEED ALL DISTURBED AREAS.
10. PAVE DRIVEWAY
11. REMOVE EROSION CONTROL ONCE SLOPES ARE STABILIZED.

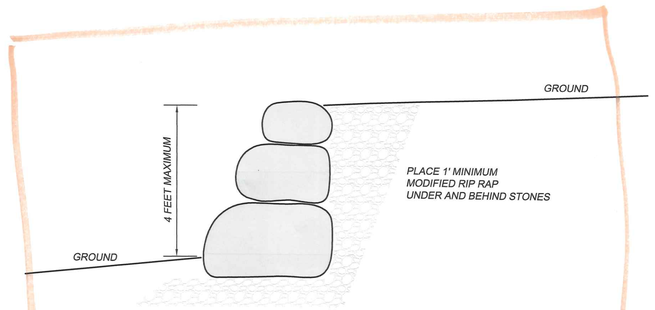


NOTE: VENTING REQUIRED WHEN MORE THAN 18" OF COVER AS MEASURED FROM THE TOP OF THE UNIT TO FINISHED GRADE.

MANTIS 536-8 CROSS SECTION
NOT TO SCALE



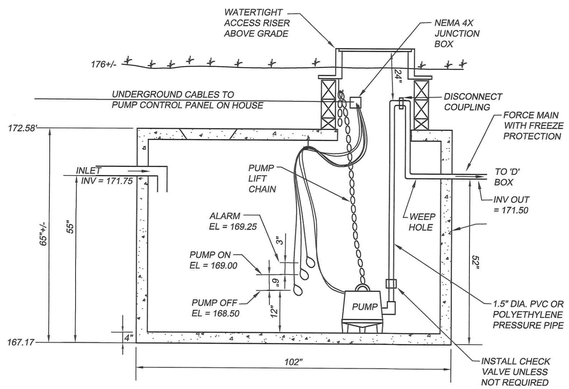
SILT FENCE INSTALLATION
NOT TO SCALE



BOULDER RETAINING WALL DETAIL
NOT TO SCALE

PUMP AND PUMP CHAMBER SPECIFICATIONS:

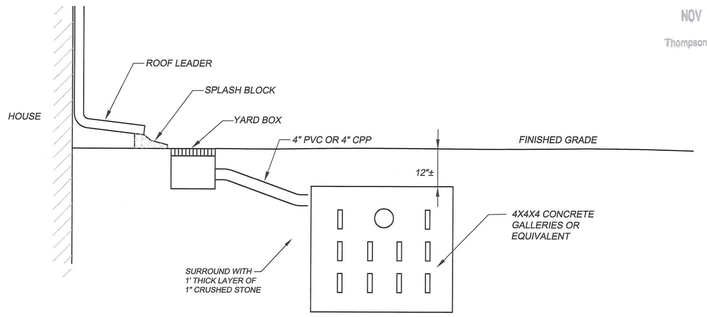
1. PUMP SHALL BE LITTLE GIANT 9EC OR EQUAL SUBMERSIBLE EFFLUENT PUMP.
2. PUMP SOLIDS HANDLING CAPABILITY IS 3/4".
3. DISCHARGE AND FORCE MAIN SHALL BE 1.5" IN DIAMETER.
4. ALL EXPOSED HARDWARE SHALL BE STAINLESS STEEL.
5. THE PUMP SHALL BE INSTALLED WITH A FLEXIBLE HOSE AND LIFTING CHAIN SO THAT THE PUMP CAN BE REMOVED WITHOUT HAVING TO DRAIN OR ENTER CHAMBER.
6. THE 1000 GALLON PRECAST CONCRETE PUMP CHAMBER SHALL BE WATERTIGHT AS MANUFACTURED BY JOLLEY PRECAST OR EQUAL, HEAVY DUTY CONSTRUCTION. THE ACCESS MANHOLES SHALL EXTEND 12" ABOVE FINISHED GRADE.
7. FLOATS TO CONTROL PUMP ON, PUMP OFF, AND ALARM SHALL BE INSTALLED IN ACCORDANCE TO THE MANUFACTURERS SPECIFICATIONS.
8. ALL CONTROLS SHALL BE ENCLOSED IN A NEMA 1 CONTROL PANEL WHICH SHALL BE INSTALLED INSIDE THE HOUSE.
9. AN AUDIO AND / OR VISUAL HIGH WATER ALARM SHALL BE INSTALLED IN THE HOUSE.
10. ALL MATERIALS, HARDWARE, AND EQUIPMENT SHALL MEET ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES.
11. INVERTS SHOWN ARE BASED ON THE PUMP AND TANK SPECIFIED.
12. PUMP OFF LEVEL IS BASED ON AN ASSUMED MIN. LIQUID LEVEL OF 12".
13. INVERTS SPECIFIED WILL PROVIDE THE FOLLOWING FOR A 5 BEDROOM HOUSE WITH A DESIGN FLOW OF 660 GPD:
    - DOSING VOLUME: 129 GALLONS
    - DOSING FREQUENCY: 4-5 TIMES PER DAY
    - EMERGENCY STORAGE ABOVE ALARM LEVEL: 650 GALLONS
14. MANTIS RECOMMENDS A MAXIMUM DOSING VOLUME OF 15 GALLONS PER UNIT, FOR A TOTAL MAXIMUM DOSING VOLUME OF 180 GALLONS



1000 GALLON PUMP CHAMBER
N.T.S.

STORM WATER MANAGEMENT:

1. DUE TO THE STEEP TOPOGRAPHY AND PROXIMITY TO THE POND, THE MAJORITY OF STORM WATER FROM IMPERVIOUS SURFACES SHALL BE CAPTURED AND INFILTRATED.
2. STORM WATER INFILTRATION DEVICES ARE SHOWN AS EXAMPLES ONLY. THE OWNER AND CONTRACTOR MAY SUBSTITUTE ALTERNATIVE METHODS OF INFILTRATION.
3. RUNOFF FROM THE DRIVEWAY SHALL BE DIRECTED TO A STORM WATER INFILTRATION SYSTEM WITH AT LEAST 1000 GALLONS OF STORAGE.
4. RUNOFF FROM THE ROOF SHALL BE DIRECTED TO A STORM WATER INFILTRATION SYSTEM WITH AT LEAST 1000 GALLONS OF STORAGE.
5. OUTLETS FOR OVER FLOW SHALL BE INCLUDED IN EACH SYSTEM.
6. ALTERNATIVE METHODS OF INFILTRATION MAY INCLUDE BUT ARE NOT LIMITED TO: RAIN GARDENS, CULTECH CONTACTORS, CULTECH RECHARGERS, INFILTRATOR QUICK4S, ETC.
7. NO ELEVATIONS HAVE BEEN PROVIDED, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE APPROPRIATE ELEVATIONS FOR GRAVITY FLOW.



ROOF DRAIN INFILTRATION DETAIL
NOT TO SCALE

NOTES AND DETAILS
PREPARED FOR
MARC BAER
1227 THOMPSON ROAD - THOMPSON, CT
MAP 116 BLOCK 24 LOT 10

J&D CIVIL ENGINEERS, LLC
401 RAVENELLE ROAD
N. GROSVENORDALE, CT 06255
860-923-2920

STATE OF CONNECTICUT · DANIEL D. BLANCHETTE · 21398 · LICENSED PROFESSIONAL ENGINEER

DESIGNED: DDB
CHECKED: DRB

REVISIONS:
2020-09-01 WETLANDS
2020-11-16 RET. WALLS

JOB NO: 19216 | DATE: JUNE 15, 2020
SCALE: 1" = 20' | SHEET: 2 OF 2

IWA 20022 Modification Request

Agenda Item G.a. Violations & Pending Enforcement Actions

Cease & Restore Order VIOL20003 Scott Josey, 637 East Thompson Road, Assessor's map 154, block 5, lot 14: filling of wetlands and work within 100-foot upland review area, issued 3/5/2020, hearing and decision 3/10/2020 soil scientist report submitted 5/10/2020 approved, and to be work completed by 9/15/2020.

Agenda Item G.b. Violations & Pending Enforcement Actions

VIOL20013, Adrianne Martin and Joseph Fagan, 208 Linehouse Rd, Assessor’s map 36, block 70, lot 4, clearcutting of trees and earth moving work in 100-foot upland review area, Notice of Violation issued 5/14/2020 7/14/2020 granted extension to 10/1/2020 for completion of work.

Agenda Item G.c. Violations & Pending Enforcement Actions

VIOL20033, Jennifer Burlingame & Robert Lemieux, Jr., 480 Quaddick Town Farm Rd., Assessor's map 158, block 20, lot 8K, filling / earthmoving within 100-foot upland review area and possibly within delineated wetlands. Notice of Violation issued 8/6/2020 to cease any further earthmoving work and by August 20, 2020 provide an explanation for the earth moving work and the reason why an approval was not sought prior to the initiation of work within 100 feet of delineated wetlands.

Agenda Item H Other Business

a) Status of Revisions to Plan of Conservation & Development

Agenda Item I Reports

1 Budget & Expenditures

2 Wetlands Agent Report

Agenda Item J

Correspondence

ECCD ltr 10-29-2020 forwarding 19-20 annual report

&

Connecticut Wildlife Magazine Sept-Oct

EASTERN CONNECTICUT CONSERVATION DISTRICT, INC.

238 West Town Street
Norwich, CT 06360-2111
860-319-8806

139 Wolf Den Road
Brooklyn, CT 06234
860-774-9600

www.ConserveCT.org/eastern

October 27, 2020

George T. O'Neil, III, Chair, Inland Wetlands Commission
Town of Thompson
P.O. Box 899
North Grosvenordale, CT 06255

Dear Mr. Thomas:

On behalf of the Eastern Connecticut Conservation District, Inc., I am writing to request Thompson's annual support in the amount of $1,000.00 in your next budget. Attached are a copy of our 2019-20 Annual Report and current year operating budget.

As highlighted in our Annual Report, ECCD responded to over many inquiries from municipalities and residents within our 36-town District. These services are not covered by contracted services. In order to continue many of our technical assistance and educational outreach programs, we are required to seek additional sources of funding.

ECCD works in eastern CT from the Massachusetts border to the coastal towns along Long Island Sound. ECCD's primary focus is to improve water quality by reducing nonpoint source pollution. Improving water quality generally improves our drinking water and local waterbodies for swimming, fishing and recreation. Additionally, the work we do improves the water quality of the beaches and coastal embayments in southeast Connecticut, which is important for summer recreation and shellfishing.

Support from Thompson would serve to enhance the number of people we can provide continuing natural resource conservation services for throughout eastern Connecticut. Awareness and action continue to grow, as more and more people strive to practice sound conservation measures for their towns and properties.

We encourage you to read through our Annual Report and visit our website at www.ConcserveCT.org/eastern to learn more about our non-profit organization.

If you have any questions or require any additional documentation, please contact our Office Manager, Francine Brodeur, at 860-319-8806 or at Francine.eccd@comcast.net. Thank you for your consideration of our request.

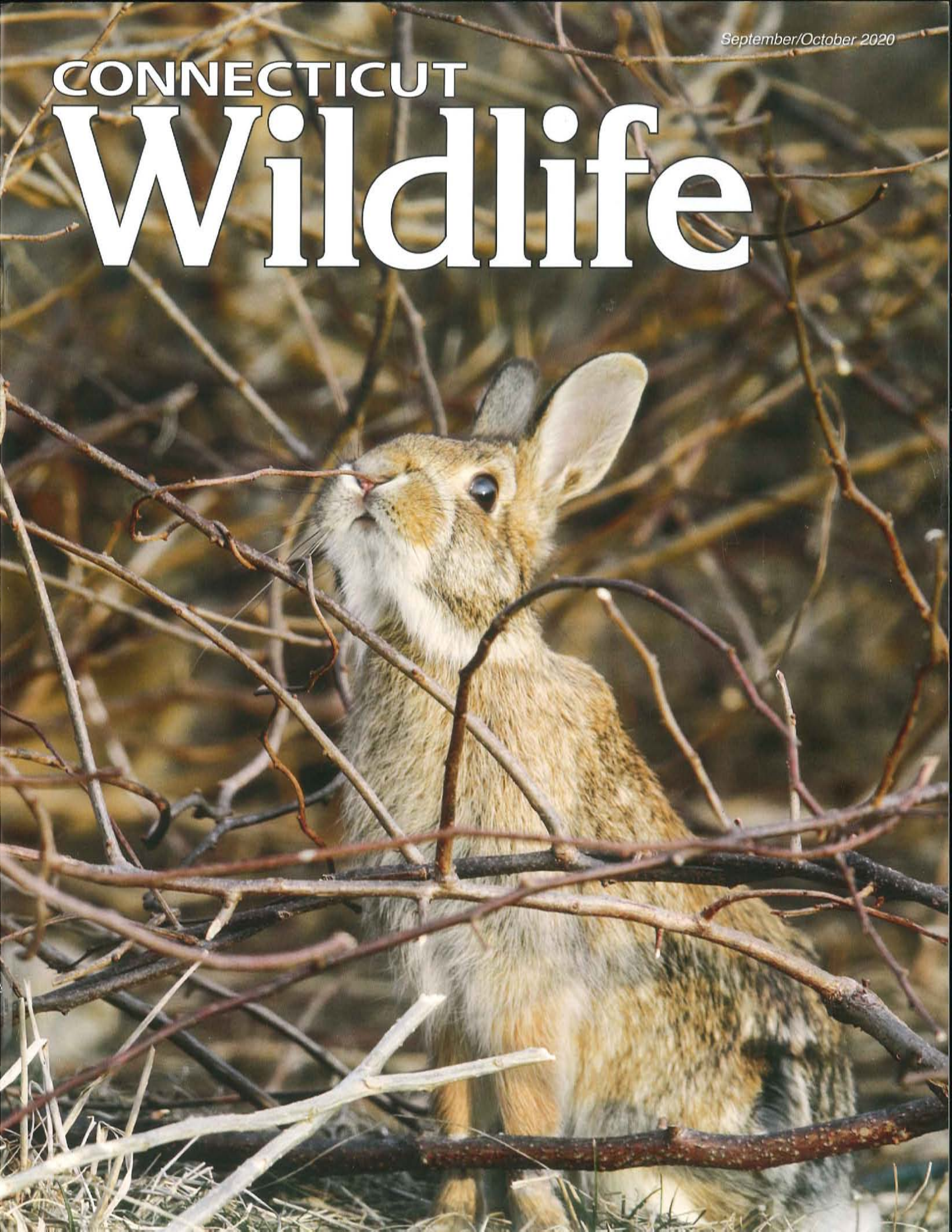
Sincerely,

William A. Jorsz
Chair

Enc.: 1 packet

September/October 2020

CONNECTICUT Wildlife



Agenda Item K

Signing of Mylars

Subdivision Plan prepared for Gloria and James Fogarty, Kapitulic Road, Thompson, CT (see Conceptual Subdivision Approval SUB20039 approved 10/13/2020).

FOGARTY LAND SUBDIVISION

KAPITULIK ROAD, THOMPSON, CONNECTICUT

DATED: SEPTEMBER 2, 2020

REVISED: SEPT 30, 2020 TO UPDATE ZONING TABLES

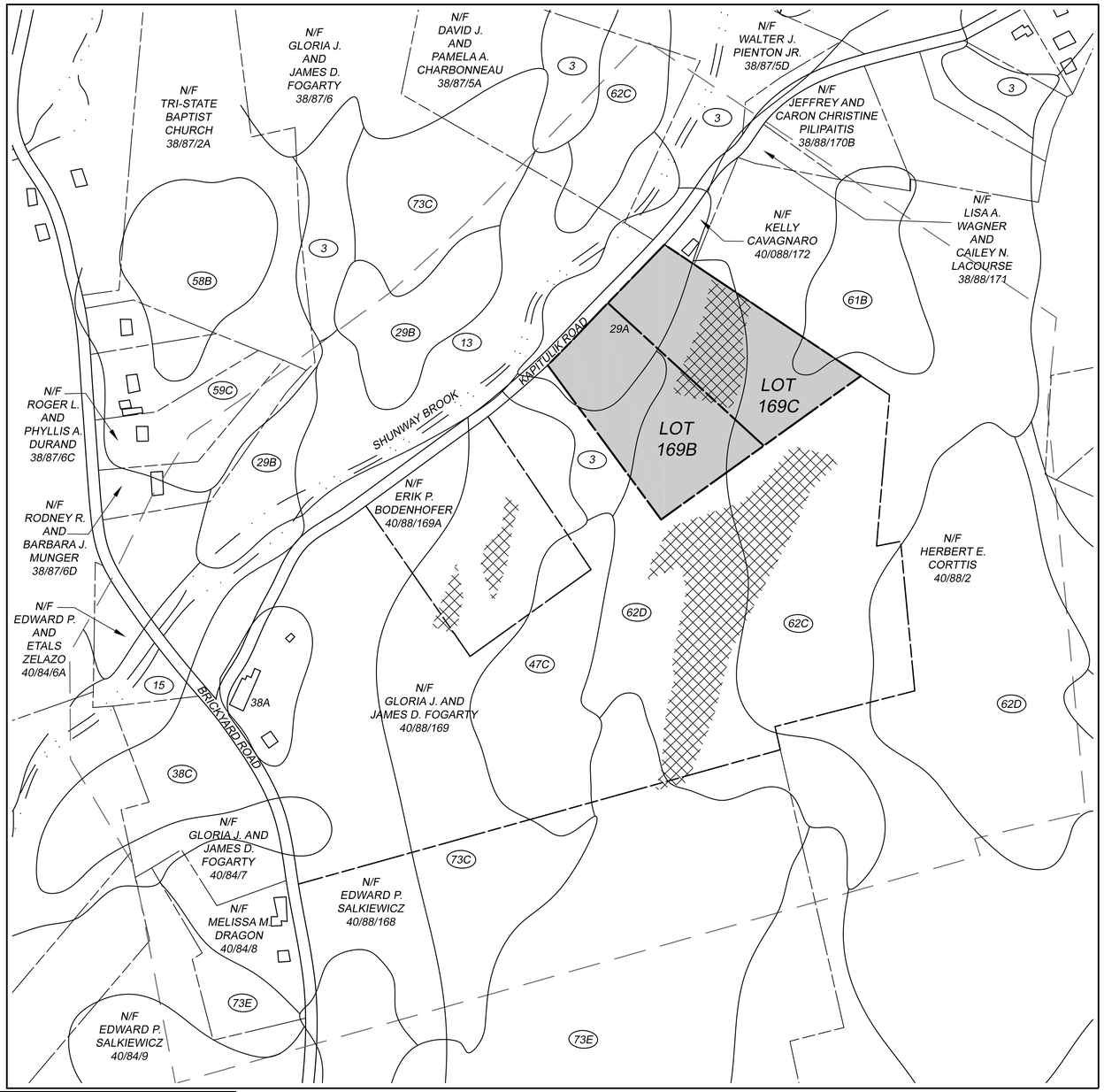
INDEX OF DRAWINGS

SOIL TYPES TABLE

SYMBOL	NAME
3	RIDGEBURY, LEICESTER, AND WHITMAN SOILS, 0 TO 8 PERCENT SLOPES EXTREMELY STONY
13	WALPOLE SANDY LOAM, 0 TO 3 PERCENT SLOPES
15	SCARBORO MUCK, 0 TO 3 PERCENT SLOPES
29A	AGAWAM FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES
29B	AGAWAM FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES
38A	HINCKLEY LOAMY SAND, 0 TO 3 PERCENT SLOPES
38C	HINCKLEY LOAMY SAND, 3 TO 15 PERCENT SLOPES
47C	WOODBRIDGE FINE SANDY LOAM, 3 TO 15 PERCENT SLOPES EXTREMELY STONY
58B	GLOUCESTER GRAVELLY SANDY LOAM, 3 TO 8 PERCENT SLOPES VERY STONY
59C	GLOUCESTER GRAVELLY SANDY LOAM, 3 TO 15 PERCENT SLOPES EXTREMELY STONY
62C	CANTON AND CHARLTON FINE SANDY LOAMS, 3 TO 15 PERCENT SLOPES EXTREMELY STONY
61B	CANTON AND CHARLTON FINE SANDY LOAMS, 0 TO 8 PERCENT SLOPES VERY STONY
62D	CANTON AND CHARLTON FINE SANDY LOAMS, 15 TO 35 PERCENT SLOPES EXTREMELY STONY
73C	CHARLTON-CHATFIELD COMPLEX, 0 TO 15 PERCENT SLOPES VERY ROCKY
73E	CHARLTON-CHATFIELD COMPLEX, 15 TO 45 PERCENT SLOPES VERY ROCKY

LEGEND

- SOILS
- XX — SOIL TYPE
- 500' OFFSET
- PROPERTY LINES
- SLOPES > 25%



DATA COMPILATION MAP

1" = 200'

OWNER AND APPLICANT

GLORIA & JAMES FOGARTY

ZONING REQUIREMENTS

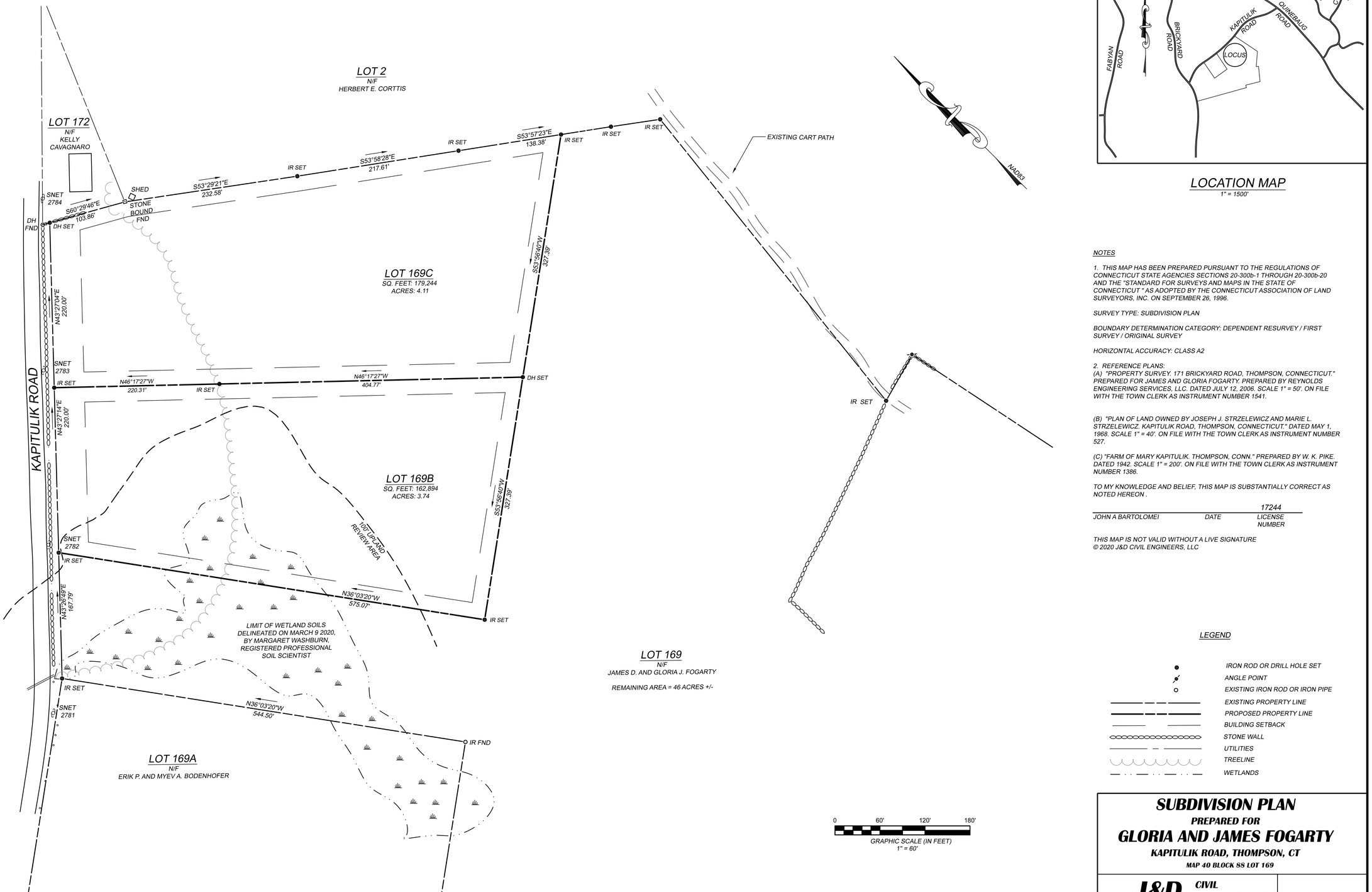
RURAL RESIDENTIAL AGRICULTURAL DISTRICT

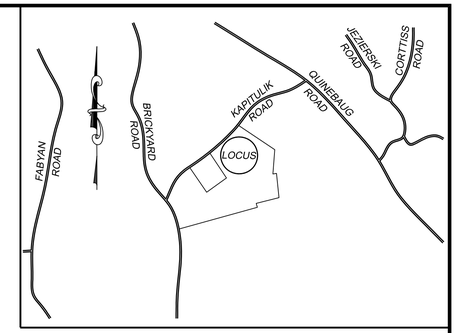
	REQUIRED	LOT 169B	LOT 169C	LOT 169
LOT AREA	40,000 SF	162,894 SF	179,244 SF	2,350,000 SF
LOT FRONTAGE	150'	220'	220'	1,500' +/-
STREET LINE SETBACK	40'	140'	85'	EXISTING
SIDE LINE SETBACK	20'	75'	60'	EXISTING
REAR LINE SETBACK	20'	> 400'	> 400'	EXISTING
NET BUILDABLE AREA	40,000 SF	> 43,000 SF	> 48,000 SF	> 2,000,000 SF
MAX IMPERVIOUS SURFACE	50%	3%	3%	< 1%

J & D CIVIL ENGINEERS, LLC

401 RAVENELLE ROAD
THOMPSON, CT 06255
P: 860-923-2920
E: OFFICE@JDCIVILENGINEERS.COM

TOWN OF THOMPSON	APPROVED	APPROVED
RECEIVED FOR RECORDING	PLANNING AND ZONING COMMISSION	INLAND WETLANDS COMMISSION
TOWN CLERK DATE TIME MAP #	CHAIRMAN DATE	CHAIRMAN DATE





LOCATION MAP
1" = 1500'

NOTES

1. THIS MAP HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARD FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT " AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.

SURVEY TYPE: SUBDIVISION PLAN

BOUNDARY DETERMINATION CATEGORY: DEPENDENT RESURVEY / FIRST SURVEY / ORIGINAL SURVEY

HORIZONTAL ACCURACY: CLASS A2

2. REFERENCE PLANS:
(A) "PROPERTY SURVEY. 171 BRICKYARD ROAD, THOMPSON, CONNECTICUT." PREPARED FOR JAMES AND GLORIA FOGARTY. PREPARED BY REYNOLDS ENGINEERING SERVICES, LLC. DATED JULY 12, 2006. SCALE 1" = 50'. ON FILE WITH THE TOWN CLERK AS INSTRUMENT NUMBER 1541.

(B) "PLAN OF LAND OWNED BY JOSEPH J. STRZELEWICZ AND MARIE L. STRZELEWICZ. KAPITULIK ROAD, THOMPSON, CONNECTICUT." DATED MAY 1, 1968. SCALE 1" = 40'. ON FILE WITH THE TOWN CLERK AS INSTRUMENT NUMBER 527.

(C) "FARM OF MARY KAPITULIK. THOMPSON, CONN." PREPARED BY W. K. PIKE. DATED 1942. SCALE 1" = 200'. ON FILE WITH THE TOWN CLERK AS INSTRUMENT NUMBER 1386.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON .

JOHN A BARTOLOMEI	DATE	17244 LICENSE NUMBER

THIS MAP IS NOT VALID WITHOUT A LIVE SIGNATURE

LEGEND

- IRON ROD OR DRILL HOLE SET
- ANGLE POINT
- EXISTING IRON ROD OR IRON PIPE
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- BUILDING SETBACK
- STONE WALL
- UTILITIES
- TREELINE
- WETLANDS

0 60' 120' 180'
GRAPHIC SCALE (IN FEET)
1" = 60'

TOWN OF THOMPSON RECEIVED FOR RECORDING	APPROVED PLANNING AND ZONING COMMISSION	APPROVED INLAND WETLANDS COMMISSION
TOWN CLERK DATE TIME MAP #	CHAIRMAN DATE	CHAIRMAN DATE

ZONING INFORMATION:

ZONE RRAD
MINIMUM LOT AREA 40,000 S.F.
MINIMUM FRONTAGE 150'
MINIMUM FRONT YARD 40'
MINIMUM SIDE YARD 20'
MINIMUM REAR YARD 20'

PROPERTY OWNER
JAMES D. AND GLORIA J. FOGARTY

REFERENCE DEED
THOMPSON LAND RECORDS
VOL. 305 PG. 47

ASSESSORS REFERENCE
MAP 40 BLOCK 88 LOT 169

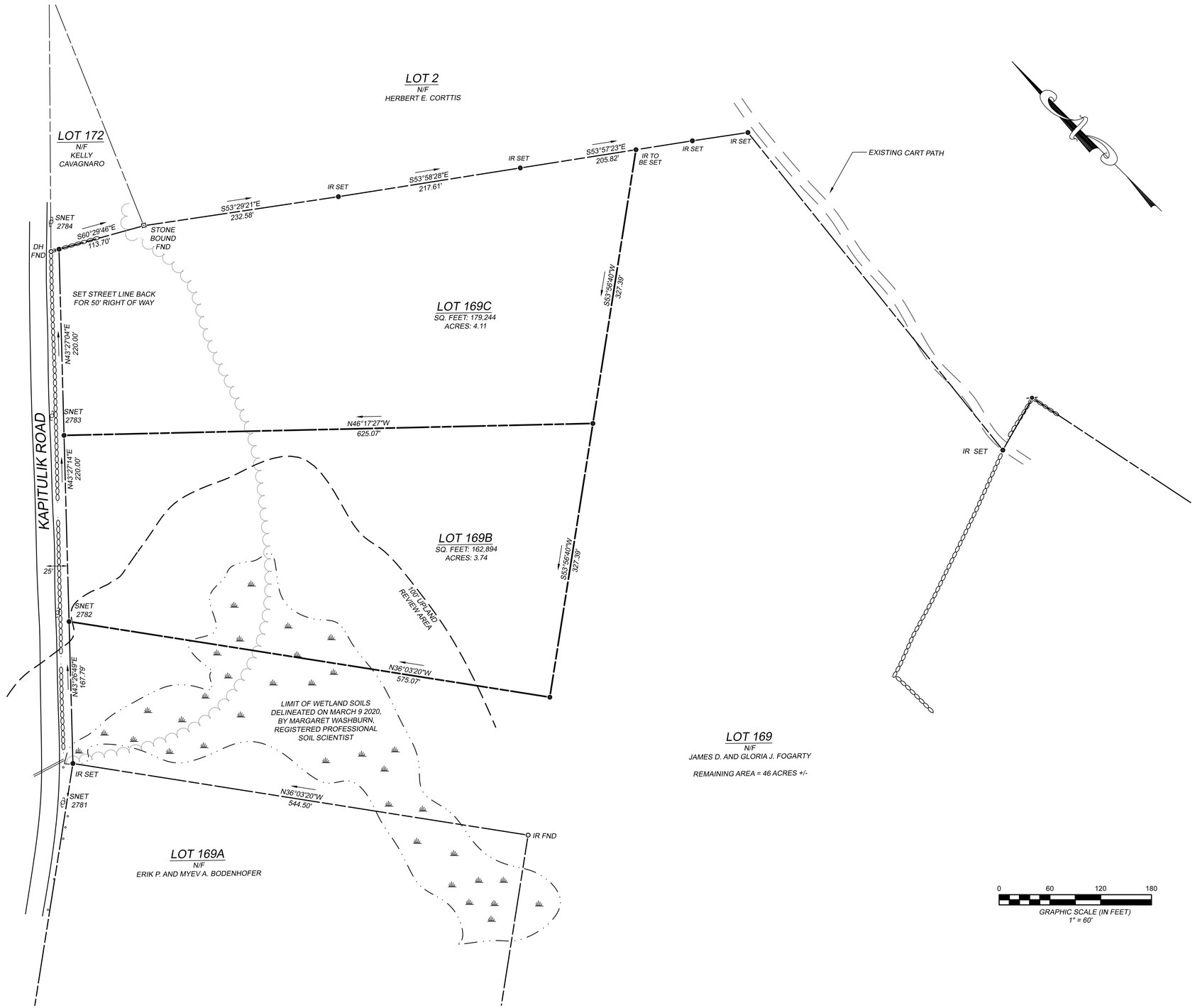
FLOOD ZONE NOTE

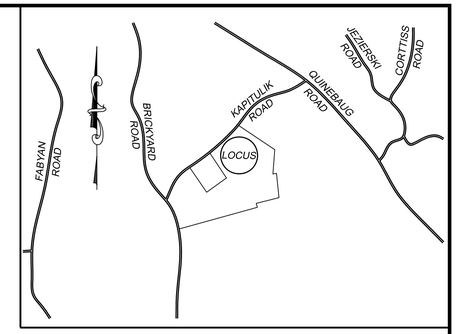
PROPERTY IS NOT WITHIN 100 YEAR FLOOD ZONE PER FIRM MAP 0901170002B DATED: NOVEMBER 1, 1984.

SUBDIVISION PLAN
PREPARED FOR
GLORIA AND JAMES FOGARTY
KAPITULIK ROAD, THOMPSON, CT
MAP 40 BLOCK 88 LOT 169

J&D CIVIL ENGINEERS, LLC
401 RAVENELLE ROAD
N. GROSVENORDALE, CT 06255
860-923-2920

DESIGNED: APS CHECKED: DDB	REVISIONS: 2020-11-04 SET IRS
JOB NO: 20101	DATE: SEPTEMBER 2, 2020
SCALE: 1" = 60'	SHEET: 2 OF 4





LOCATION MAP

1" = 1500'

NOTES

1. THIS MAP HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARD FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT " AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.

SURVEY TYPE: BOUNDARY SURVEY

BOUNDARY DETERMINATION CATEGORY: DEPENDANT RESURVEY

HORIZONTAL ACCURACY: CLASS A2

2. REFERENCE PLANS:
(A) "PROPERTY SURVEY. 171 BRICKYARD ROAD, THOMPSON, CONNECTICUT." PREPARED FOR JAMES AND GLORIA FOGARTY, PREPARED BY REYNOLDS ENGINEERING SERVICES, LLC. DATED JULY 12, 2006. SCALE 1" = 50'. ON FILE WITH THE TOWN CLERK AS INSTRUMENT NUMBER 1541.

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(C) "FARM OF MARY KAPITULIK. THOMPSON, CONN." PREPARED BY W. K. PIKE. DATED 1942. SCALE 1" = 200'. ON FILE WITH THE TOWN CLERK AS INSTRUMENT NUMBER 1386.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON .

JOHN A BARTOLOMEI DATE LICENSE NUMBER

THIS MAP IS NOT VALID WITHOUT A LIVE SIGNATURE

LEGEND

- IRON ROD TO BE SET
- ANGLE POINT
- EXISTING IRON ROD OR IRON PIPE
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- BUILDING SETBACK
- WETLAND BUFFER
- STONE WALL
- UTILITIES
- TREELINE
- WETLANDS

0 60 120 180

GRAPHIC SCALE (IN FEET)
1" = 60'

TOWN OF THOMPSON RECEIVED FOR RECORDING	APPROVED PLANNING AND ZONING COMMISSION	APPROVED INLAND WETLANDS COMMISSION
TOWN CLERK DATE TIME MAP #	CHAIRMAN DATE	CHAIRMAN DATE

ZONING INFORMATION:

ZONE RRAD
MINIMUM LOT AREA 40,000 S.F.
MINIMUM FRONTAGE 150'
MINIMUM FRONT YARD 40'
MINIMUM SIDE YARD 20'
MINIMUM REAR YARD 20'

PROPERTY OWNER
JAMES D. AND GLORIA J. FOGARTY

REFERENCE DEED
THOMPSON LAND RECORDS
VOL. 305 PG. 47

ASSESSORS REFERENCE
MAP 40 BLOCK 88 LOT 169

FLOOD ZONE NOTE

PROPERTY IS NOT WITHIN 100 YEAR FLOOD ZONE PER FIRM MAP 0901170002B DATED: NOVEMBER 1, 1984.

3 LOT SUBDIVISION SURVEY

PREPARED FOR

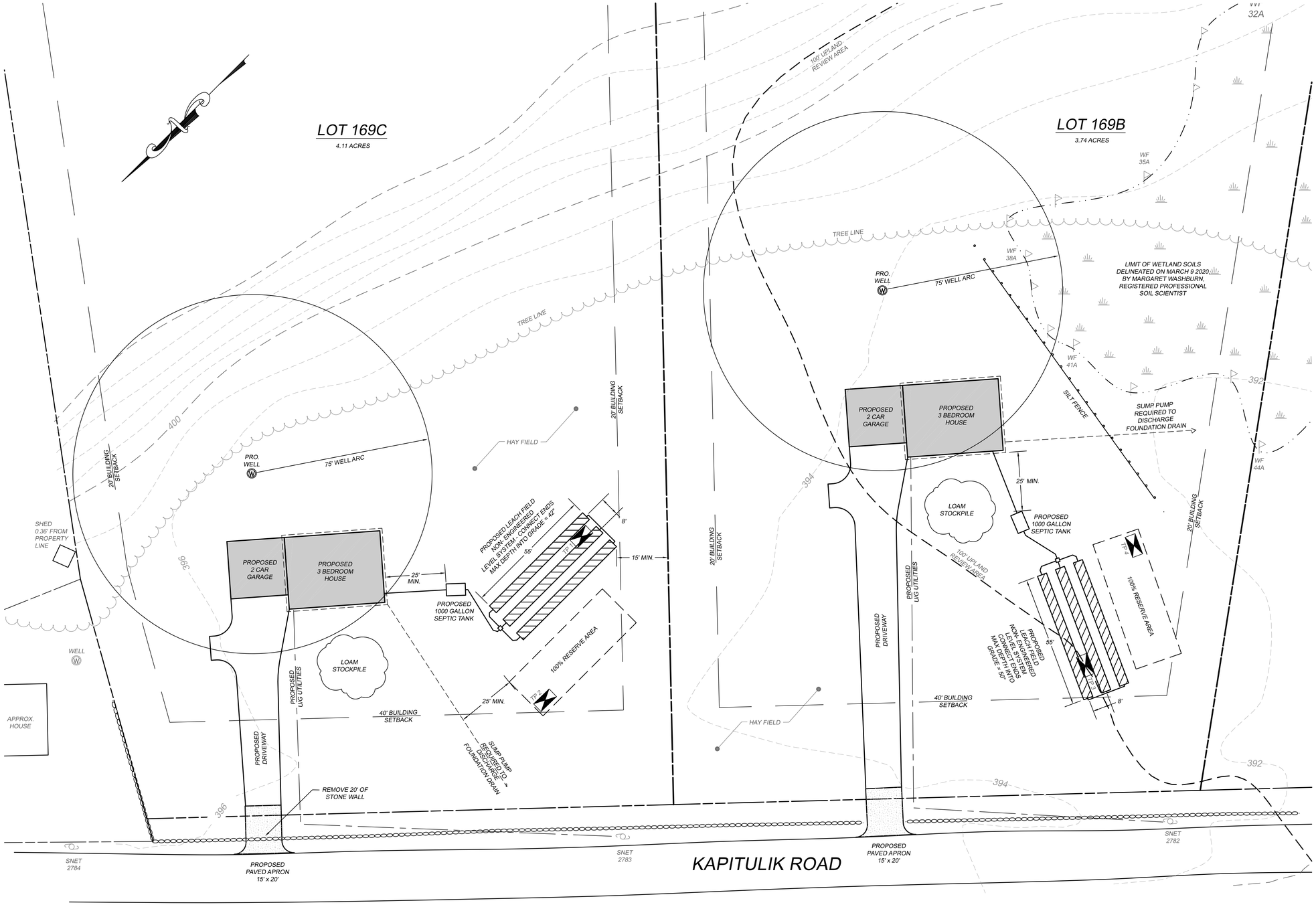
GLORIA AND JAMES FOGARTY

KAPITULIK ROAD, THOMPSON, CT

MAP 40 BLOCK 88 LOT 169

J&D CIVIL ENGINEERS, LLC
401 RAVENELLE ROAD
N. GROSVENORDALE, CT 06255
860-923-2920

DESIGNED: APS CHECKED: DDB	REVISIONS:
JOB NO: 20101	DATE: SEPTEMBER 2, 2020
SCALE: 1" = 60"	SHEET: 2 OF 4



SURVEY NOTES:

1. THIS MAP HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARD FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT " AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.

THE SURVEY TYPE IS TOPOGRAPHIC, PERFORMED ON MARCH 9, 2020, AND IS INTENDED TO BE USED FOR THE DESIGN OF AN ENGINEERED SEPTIC SYSTEM.

PROPERTY LINES DO NOT EXPRESS A BOUNDARY OPINION.

2. TEST PIT AND PERC TEST LOCATIONS HAVE BEEN COMPILED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS. THIS INFORMATION IS TO BE CONSIDERED APPROXIMATE AND J & D CIVIL ENGINEERS DOES NOT TAKE RESPONSIBILITY FOR SUBSEQUENT ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS PLAN AS A RESULT.

3. REFERENCE PLANS:

(A) "PROPERTY SURVEY. 171 BRICKYARD ROAD, THOMPSON, CONNECTICUT." PREPARED FOR JAMES AND GLORIA FOGARTY. PREPARED BY REYNOLDS ENGINEERING SERVICES, LLC. DATED JULY 12, 2006. SCALE 1" = 50'. ON FILE WITH THE TOWN CLERK AS INSTRUMENT NUMBER 1541.

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TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

DENNIS R. BLANCHETTE *DATE* *12107 LICENSE NUMBER*

THIS MAP IS NOT VALID WITHOUT A LIVE SIGNATURE

LEGEND

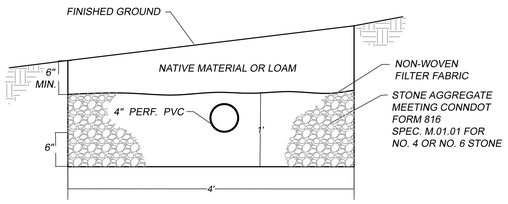
- *BUILDING SETBACK LINE*
- *PROPERTY LINE*
- *MAJOR CONTOUR LINE*
- *MINOR CONTOUR LINE*
- *EDGE OF WETLANDS*
- *WETLAND BUFFER/UPLAND REVIEW AREA*
- *EROSION CONTROL DEVICES*
- *TEST PIT*
- *LEACHING TRENCH*
- *STONEWALL*
- *UTILITIES*
- *TREELINE*

TOWN OF THOMPSON *RECEIVED FOR RECORDING*	*APPROVED* *PLANNING AND ZONING COMMISSION*	*APPROVED* *INLAND WETLANDS COMMISSION*
TOWN CLERK DATE TIME MAP #	*CHAIRMAN DATE*	*CHAIRMAN DATE*

SITE DEVELOPMENT PLAN
PREPARED FOR
GLORIA AND JAMES FOGARTY
KAPITULIK ROAD, THOMPSON, CT
MAP 40 BLOCK 88 LOT 169

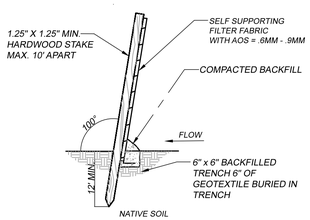
J&D CIVIL ENGINEERS, LLC
401 RAVENELLE ROAD
N. GROSVENORDALE, CT 06255
860-923-2920

DESIGNED: DDB **CHECKED: JJB**	**REVISIONS:** 2020-09-30 BLDG SETBACKS
JOB NO: 20101	**DATE: SEPTEMBER 2, 2020**
SCALE: 1" = 20'	**SHEET: 3 OF 4**



LEACHING TRENCH DETAIL

N.T.S.



SILT FENCE INSTALLATION

NOT TO SCALE

TEST PIT RESULTS

OBSERVED BY: SHERRY MCGANN
DATE: AUGUST 6, 2020

PIT NO. 1

0 -12"	TOPSOIL
12 - 21"	ORANGE BROWN GRAVELLY SANDY LOAM
21 - 92"	GRAVELLY MEDIUM COARSE SAND W/ COBBLES

MOTTLING: N/A
RESTRICTIVE: N/A
LEDGE: N/A
WATER: N/A

PIT NO. 2

0 - 10"	TOPSOIL
10 - 20"	ORANGE BROWN GRAVELLY SANDY LOAM
20 - 90"	GRAVELLY COBBLY MEDIUM COARSE SAND W/ STONES

MOTTLING: N/A
RESTRICTIVE: N/A
LEDGE: N/A
WATER: N/A

PIT NO. 3

0 - 12"	TOPSOIL
12 - 23"	GRAVELLY ORANGE BROWN SANDY LOAM
23 - 101"	GRAVELLY COBBLY MEDIUM COARSE SAND W/ STONES

MOTTLING: N/A
RESTRICTIVE: N/A
LEDGE: N/A
WATER: N/A

PIT NO. 4

0 - 11"	TOPSOIL
11 - 22"	ORANGE BROWN GRAVELLY SANDY LOAM
22 - 98"	GRAVELLY COBBLY MEDIUM COARSE SAND W/ STONES

MOTTLING: N/A
RESTRICTIVE: N/A
LEDGE: N/A
WATER: N/A

PERC.TEST RESULTS

OBSERVED BY: SHERRY MCGANN
DATE: AUGUST 6, 2020

HOLE A - NEAR TP 1

TIME	READING
11:00	4.50
11:03	9.50
11:06	13.50
11:09	14.75
11:12	15.75
11:15	17.25
11:18	18.25
11: 21	19.25
11:23	20.25
11:26	21.00 DRY

DEPTH: 23"
RATE: 4.0 MIN/IN

HOLE B - NEAR TP 3

TIME	READING
10:22	6.25
10:25	13.50
10:28	16.00
10:31	17.75
10:34	18.75
10:38	19.75
10:41	21.50
10:44	22.25 DRY

DEPTH: 23"
RATE: 4.0 MIN/IN

SEPTIC SYSTEM DESIGN CRITERIA - LOT 169B

ENGINEERED PLAN NOT REQUIRED

USE TEST PITS 3 AND 4, PERC HOLE B

PERC RATE: 4 MINS/INCH

NUMBER OF BEDROOMS: 3

SEPTIC TANK: 1000 GALLON

LEACHING AREA REQUIRED: 475 SF

LEACHING AREA PROVIDED: (3) 55' TRENCHES AT 3 SF/LF = 495 SF

MOTTLING: N/A, LEDGE: N/A, WATER: N/A, SLOPE: 1%

MLSS (PRIMARY) = N/A

LSS PROVIDED = 55'

SPECIFICATIONS

SEPTIC SYSTEM INSTALLATION SHALL BE IN ACCORDANCE WITH THE "CONNECTICUT PUBLIC HEALTH CODE REGULATIONS AND TECHNICAL STANDARDS FOR SUBSURFACE SEWAGE DISPOSAL SYSTEMS".

SEPTIC TANK: JOLLEY PRECAST, INC. OR EQUAL TWO-COMPARTMENT TANK WITH OUTLET FILTER. INSTALL RISERS OVER TANK CLEANOUTS IF COVER OVER TANK EXCEEDS 1'.

DISTRIBUTION BOXES: JOLLEY OR EQUAL 4 HOLE D-BOXES

HOUSE, EFFLUENT AND "TIGHT PIPE" FOR DRAIN OUTLETS: 4" PVC SCHEDULE 40, ASTM D 1785 OR ASTM D 2665 WITH RUBBER COMPRESSION GASKET ASTM D 3139 OR SOLVENT WELD COUPLINGS.

DISTRIBUTION PIPE: 4" PVC PERFORATED, LAID AT 2" PER 100'

POLYLOK PIPE SEAL AS MANUFACTURED BY SUPERIOR SEPTIC TANKS (OR EQUAL) SHALL BE USED TO SEAL SEPTIC TANK AND D-BOX INLETS AND OUTLETS.

BOTTOM OF TRENCHES TO BE LEVEL.

TOPSOIL SHALL BE STRIPPED IN AREA OF LEACH FIELD AND THE SUBSOIL SCARIFIED PRIOR TO PLACEMENT OF SELECT SEPTIC FILL.

ALL FILL SHALL BE CLEAN BANK RUN GRAVEL, MEETING THE FOLLOWING REQUIREMENTS OF THE CT DEPT. OF PUBLIC HEALTH.:
MAX. PERCENT GRAVEL (PLUS NO. 4 SIEVE MATERIAL) - 45%
GRADATION ON FILL LESS GRAVEL:

SIEVE	WET PERCENT PASSING	DRY PERCENT PASSING
NO. 4	100	100
NO.10	70-100	70-100
NO. 40	10-50*	10-75
NO. 100	0-20	0-5
NO. 200	0-5	0-2.5

*PERCENT PASSING THE #40 SIEVE CAN BE INCREASED TO NO GREATER THAN 75% IF THE PERCENT PASSING THE #100 SIEVE DOES NOT EXCEED 10% AND THE #200 SIEVE DOES NOT EXCEED 5%.

FILL MUST PERC AT A RATE EQUAL TO OR FASTER THAN THE UNDERLYING SOIL.

THIS DESIGN IS BASED ON TEST PIT INFORMATION RECORDED BY NDDH. J & D HAS MADE NO INDEPENDENT INVESTIGATION OF SOIL CONDITIONS. THE CONTRACTOR IS ADVISED TO PERFORM SUFFICIENT SITE INVESTIGATION TO DETERMINE CONSTRUCTABILITY OF THE DESIGN PRIOR TO BIDDING OR COMMENCING WORK.

SEPTIC SYSTEM DESIGN CRITERIA - LOT 169C

ENGINEERED PLAN NOT REQUIRED

USE TEST PITS 1 AND 2, PERC HOLE A

PERC RATE: 4 MINS/INCH

NUMBER OF BEDROOMS: 3

SEPTIC TANK: 1000 GALLON

LEACHING AREA REQUIRED: 475 SF

LEACHING AREA PROVIDED: (3) 55' TRENCHES AT 3 SF/LF = 495 SF

MOTTLING: N/A, LEDGE: N/A, WATER: N/A, SLOPE: 1%

MLSS (PRIMARY) = N/A

LSS PROVIDED = 55'

SPECIFICATIONS

SEPTIC SYSTEM INSTALLATION SHALL BE IN ACCORDANCE WITH THE "CONNECTICUT PUBLIC HEALTH CODE REGULATIONS AND TECHNICAL STANDARDS FOR SUBSURFACE SEWAGE DISPOSAL SYSTEMS".

SEPTIC TANK: JOLLEY PRECAST, INC. OR EQUAL TWO-COMPARTMENT TANK WITH OUTLET FILTER. INSTALL RISERS OVER TANK CLEANOUTS IF COVER OVER TANK EXCEEDS 1'.

DISTRIBUTION BOXES: JOLLEY OR EQUAL 4 HOLE D-BOXES

HOUSE, EFFLUENT AND "TIGHT PIPE" FOR DRAIN OUTLETS: 4" PVC SCHEDULE 40, ASTM D 1785 OR ASTM D 2665 WITH RUBBER COMPRESSION GASKET ASTM D 3139 OR SOLVENT WELD COUPLINGS.

DISTRIBUTION PIPE: 4" PVC PERFORATED, LAID AT 2" PER 100'

POLYLOK PIPE SEAL AS MANUFACTURED BY SUPERIOR SEPTIC TANKS (OR EQUAL) SHALL BE USED TO SEAL SEPTIC TANK AND D-BOX INLETS AND OUTLETS.

BOTTOM OF TRENCHES TO BE LEVEL.

TOPSOIL SHALL BE STRIPPED IN AREA OF LEACH FIELD AND THE SUBSOIL SCARIFIED PRIOR TO PLACEMENT OF SELECT SEPTIC FILL.

ALL FILL SHALL BE CLEAN BANK RUN GRAVEL, MEETING THE FOLLOWING REQUIREMENTS OF THE CT DEPT. OF PUBLIC HEALTH.:
MAX. PERCENT GRAVEL (PLUS NO. 4 SIEVE MATERIAL) - 45%
GRADATION ON FILL LESS GRAVEL:

SIEVE	WET PERCENT PASSING	DRY PERCENT PASSING
NO. 4	100	100
NO.10	70-100	70-100
NO. 40	10-50*	10-75
NO. 100	0-20	0-5
NO. 200	0-5	0-2.5

*PERCENT PASSING THE #40 SIEVE CAN BE INCREASED TO NO GREATER THAN 75% IF THE PERCENT PASSING THE #100 SIEVE DOES NOT EXCEED 10% AND THE #200 SIEVE DOES NOT EXCEED 5%.

FILL MUST PERC AT A RATE EQUAL TO OR FASTER THAN THE UNDERLYING SOIL.

THIS DESIGN IS BASED ON TEST PIT INFORMATION RECORDED BY NDDH. J & D HAS MADE NO INDEPENDENT INVESTIGATION OF SOIL CONDITIONS. THE CONTRACTOR IS ADVISED TO PERFORM SUFFICIENT SITE INVESTIGATION TO DETERMINE CONSTRUCTABILITY OF THE DESIGN PRIOR TO BIDDING OR COMMENCING WORK.

EROSION AND SEDIMENT CONTROL NOTES:

1. THE PROPOSED ACTIVITY ON THE SITE WILL CONSIST OF THE CONSTRUCTION OF TWO SINGLE FAMILY HOUSES, INCLUDING WELLS, SEPTIC SYSTEMS, AND DRIVEWAYS.

2. EROSION CONTROL DEVICES MUST BE INSTALLED WHERE INDICATED ON THIS SHEET PRIOR TO THE START OF CONSTRUCTION.

3. DISTURBED AREAS SHALL BE KEPT TO A MINIMUM AND SEEDED OR STABILIZED WITH TEMPORARY MULCH AS SOON AS FINAL GRADES HAVE BEEN ATTAINED.

4. THE OWNER OF RECORD SHALL DESIGNATE THE ON SITE ENVIRONMENTAL AGENT RESPONSIBLE FOR REGULARLY CHECKING THE CONDITION OF THE EROSION CONTROL DEVICES AND REMOVING ACCUMULATED SEDIMENT.

TOWN OF THOMPSON RECEIVED FOR RECORDING	APPROVED PLANNING AND ZONING COMMISSION	APPROVED INLAND WETLANDS COMMISSION
TOWN CLERK DATE TIME MAP #	CHAIRMAN DATE	CHAIRMAN DATE

NOTES AND DETAILS
PREPARED FOR
GLORIA AND JAMES FOGARTY
KAPITULIK ROAD, THOMPSON, CT
MAP 40 BLOCK 88 LOT 169

J&D CIVIL ENGINEERS, LLC
401 RAVENELLE ROAD
N. GROSVENORDALE, CT 06255
860-923-2920

DESIGNED: DDB
CHECKED: JJB
REVISIONS:

JOB NO: 20101 | DATE: SEPTEMBER 2, 2020
SCALE: AS NOTED | SHEET: 4 OF 4

Agenda Item L
Comments by Commissioners

Agenda Item M
Adjournment