

AGENDA

Mansfield Conservation Commission
Wednesday, April 15, 2009
Audrey P. Beck Building
CONFERENCE ROOM B
7:30 PM

1. Call to Order
2. Roll Call
3. Opportunity for Public Comment
4. Minutes
 - a. March 18, 2009
5. New Business
 - a. IWA/PZC Referrals:
 - W1425- Town of Mansfield, Stonemill Rd- Bridge Replacement
 - W1426/PZC #1285- Hallock, East side of Wormwood Hill Rd - 3 lots
 - W1427- Hartley, 72 Crane Hill Road- gazebo
 - W1428- Ponde Place, Hunting Lodge and Northwood Rd - well drilling & testing
 - W1429/PZC-#1157-2- Kleinfelder/Exxon, 4 Corners Remediation
 - b. Notice of EIE: Construction of Two UConn Academic Buildings (see 4/8/09 memo from Director of Planning)
 - c. Rainbarrel/rain garden project
 - d. Other
6. Continuing Business (see 4/8/09 update memo from Director of Planning)
 - a. CL&P "Interstate Reliability Project"
 - b. Proposed UConn Composting Facility
 - c. Ponde Place Environmental Review Team study
 - d. IWA Violation Notice/Pending License Application-W1419-Chernushek, 473 Middle Turnpike
 - e. Natchaug River Basin project (verbal update from chairman)
 - f. Other
7. Communications
 - a. Minutes
 - Open Space (3/17/09)
 - PZC (3/16/09 and 4/6/09-to be handed out at meeting)
 - IWA (3/16/09 and 4/6/09-to be handed out at meeting)
 - b. Other Correspondence
8. Other
9. Future Agendas
10. Adjournment

TOWN OF MANSFIELD
OFFICE OF PLANNING AND DEVELOPMENT

GREGORY J. PADICK, DIRECTOR OF PLANNING

Memo to: Mansfield Conservation Commission
From: Gregory Padick, Director of Planning
Date: 4/8/09
Re: Update on Miscellaneous Issues



1. New IWA Referrals

Included in the April Conservation Commission packet are IWA referrals for a bridge replacement on Stonemill Road; a gazebo on Crane Hill Road; well drilling and testing for the Ponde Place project off of Hunting Lodge Road; a 3 lot subdivision on the east side of Wormwood Hill Road; and a groundwater remediation application at 632 Middle Turnpike (CVS site). Full size copies of the plans for the 3 lot subdivision will be available at the 4/15/09 Conservation Commission meeting. A field trip has been scheduled for 1pm on Wednesday, April 15, 2009.

2. EIE UConn Academic Buildings

A public hearing has been scheduled for May 20th to receive comments on a draft Environmental Impact Evaluation (EIE) for two new academic buildings near the center of UConn Storrs Campus. Portions of the EIE are included in the 4/15/09 meeting packet. I will be reviewing the draft EIE and will forward my comments to the Conservation Commission. No significant impacts are expected.

3. CL&P Interstate Reliability Project

The project has not yet been submitted to the Siting Council.

4. UConn Compost Facility

Groundwork continues and construction is still planned for this summer.

5. Ponde Place Project

The Environmental Review Team is expected any day. Upon receipt, a copy will be forwarded to the Conservation Commission.

6. IWA Violation Notice-Chernushek property, 473 Middle Turnpike.

On 4/6/09, the IWA approved with conditions a license for restoration work and a horse riding area (motion attached). The order was rescinded.

Town of Mansfield
CONSERVATION COMMISSION
Meeting of 18 March 2009
Conference B, Beck Building
DRAFT MINUTES

Members present: Robert Dahn, Peter Drzewiecki, Scott Lehmann, Joan Stevenson. *Members absent:* Quentin Kessel, John Silander, Frank Trainor. *Others present:* Grant Meitzler (Wetlands Agent).

1. The meeting was **called to order** at 7:38p by Vice Chair Robert Dahn.
2. The draft **minutes of the 21 January 09 meeting** were approved as written.
3. **IWA business.**
 - a. Lehmann participated in the **IWA field trip** on 03/16; his report is attached.
 - b. **W1423 (Shafer, Echo Rd.)** A 10 ft x16 ft garden shed is proposed on top of a small knoll. The shed would be quite close to wetlands -- about 45 ft from Echo Lake and 30 ft from a wetland to the S. However, there does not appear to be a satisfactory alternative to the proposed site. Small spills of gasoline or other pollutants would probably be absorbed by the sand-gravel soil rather than washing into the wetlands. No foundation work is involved. The Commission agreed unanimously (motion: Stevenson, Lehmann) that this project is unlikely to have a significant impact on wetlands.
 - c. **W1424 (Whispering Glen LLC, Meadowbrook La.)** A 37-unit condominium development is proposed for the flat portion of a 10-acre site on Meadowbrook La; to the S, the land drops steeply to wetlands and Conantville Brook. The current plan for the sewer connection does not involve crossing wetlands (as indicated in Lehmann's field trip report); instead, the line will run from the SE corner of the developed area down along the property line to a connection with an existing line S of Ledgebrook East. There will be a lot of impermeable surface (roofs, driveways) in this development, and the storm water management system appears under-sized to some Commission members. After some discussion, the Commission agreed unanimously (motion: Dahn, Stevenson) to make the following comments on this proposal:
 - The design of the stormwater management system should be scrutinized to insure that it is up to the task; uncontrolled runoff could erode the steep slope and dump sediment into the wetland and brook below.
 - The erosion potential of the trail providing access to the conservation area could be reduced by running it along the bottom of the slope rather than half-way up.
 - To enhance protection of the wetland and brook, the steep slope should be included in the conservation area.
 - Given the high density of development and the potential for storm-water impacts on the slope and wetlands below, the Commission suggests eliminating those units proposed for construction within the regulated area.

4. Mansfield 2020 Strategic Plan. The Commission has been asked by the Council to comment (by 04/01) on the action plans for the "Historic and Rural Character, Open Space and Working Farms" and "Sustainability and Planning" sections of the Mansfield 2020 Strategic Plan. Unfortunately, the focus of these action plans seems a bit tangential to the concerns of the

Commission. Little or no attention is given to wetland and aquifer protection or to preservation of non-agricultural open space (insofar as it is not agricultural), and that is a concern. Water issues seem to be viewed in terms of providing infrastructure for moving water to consumers rather than protecting sources. The action steps designed to preserve agriculture in Town appear insufficient. Lehmann agreed to write up a comment including such points, to be circulated by e-mail for approval before submission to the Town Manager.

5. Adjourned at 8:42p.

Scott Lehmann, Secretary
18 March 09

Attachment: Report on 16 March IWA Field Trip

W1423 (Shafer, 45 Echo Rd). The applicant wants to construct a 10x16 garden shed to store mowers, garden tools, etc. atop a small knoll S of the house. The knoll falls fairly steeply to Echo L on the W and to a wetland to the S. The shore of the lake is about 45 ft from the proposed site of the shed, the edge of the wetland about 30 ft. In this location, the shed could be moved back a bit from the lake, but there is little that can be done to increase distance from the wetland, short of moving the shed off the knoll (which I would not want to do if it were my property). The proposal does not involve digging a foundation or footings.

Assuming that the applicant takes reasonable precautions to prevent spills of gasoline or other unpleasant material at the site, there is probably little risk of contamination to the wetland or lake.

W1424 (Whispering Glen, 763 Meadowbrook Rd). 37 upscale condominium units are proposed for a deeper-than-wide 10-acre parcel on the S side of Meadowbrook Rd; an existing (unoccupied) house on the property will be demolished. The area proposed for development is flat, but drops off steeply to wetlands and Conantville Brook on the S. Much of this flat area is now an impenetrable jungle of brush, so we could not walk back to its edge; instead, we drove around to where we could look up from below, behind the VNA building. The condominium units will be served by sewer and water lines, so no provision for septic systems or wells need be made, allowing for dense development. The sewer line will have to cross the wetland and brook; the only other aspects of the project with a potential impact on wetlands are storm-water runoff and (possibly) a trail contouring the steep slope. There will be a lot of impermeable surface (roofs, driveways); runoff is to be directed to rain gardens and to a retaining pond at the SE corner of the flat area at the edge of the drop to Conantville Brook for removal of sediment and floating debris before discharge into the brook. The flat area below the development between the brook and the steep slope is designated a conservation area, to which the developer is proposing access via a trail that contours along the steep slope. The development will be shielded from Meadowbrook Rd. and development to the E by landscaping.

Somebody should verify that provisions for handling storm-water are up to the job. To increase protection of the wetlands and brook, the conservation area should extend to the top of the slope, and the projected trail should be routed along the bottom of it rather than halfway up.

APPLICATION FOR PERMIT
 MANSFIELD INLAND WETLANDS AGENCY
 4 SOUTH EAGLEVILLE ROAD, STORRS, CT 06268
 TEL: 860-429-3334 OR 429-3331
 FAX: 860-429-6863

FOR OFFICE USE ONLY

File # W _____
 Fee Paid _____
 Official Date of Receipt _____

Applicants are referred to the Mansfield Inland Wetlands and Watercourses Regulations for complete requirements, and are obligated to follow them. For assistance, please contact Grant Meitzler, Inland Wetlands Agent at the telephone numbers above.

Please print or type or use similar format for computer; attach additional pages as necessary.

Part A - Applicant

Name Town of Mansfield, CT

Mailing Address 4 South Eagleville Rd.

Mansfield, CT Zip 06268

Telephone-Home _____ Telephone-Business 860-429-3332

Title and Brief Description of Project
Replacement of the Stone Mill Road Bridge over the Fearon
River

Location of Project 546' From Stonemill Rd. northern intersection with
CHAFFEEVILLE RD

Intended Start Date _____

Part B - Property Owner (if applicant is the owner, just write "same")

Name Same

Mailing Address _____

Zip _____

Telephone-Home _____ Telephone-Business _____

Owner's written consent to the filing of this application, if owner is not the applicant:

Signature _____ date _____

Applicant's interest in the land: (if other than owner) _____

Part C - Project Description (attach extra pages, if necessary)

1) Describe in detail the proposed activity here or on an attached page. (See guidelines at end of application - page 6.)

Please include a description of all activity or construction or disturbance:

- a) in the wetland/watercourse
- b) in the area *adjacent* to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is *off* your property

See Project Narrative - Attached

2) Describe the amount or area of disturbance (in square feet or cubic yards or acres):

- a) in the wetland/watercourse
- b) in the area *adjacent* to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is off your property.

See Project Narrative - attached

3) Describe the type of materials you are using for the project: _____

See project narrative - attached

- a) include *type* of material used as fill or to be excavated _____
- b) include *volume* of material to be filled or excavated _____

4) Describe measures to be taken to minimize or avoid any adverse impacts on the wetlands and regulated areas (silt fence, staked hay bales or other Erosion and Sedimentation control measures).

See Project narrative - attached

Part D - Site Description

Describe the general character of the land. (Hilly? Flat? Wooded? Well drained? etc.)

See Project narrative - attached

Part E - Alternatives

Have you considered any alternatives to your proposal that would meet your needs and might have less impact on the wetland/watercourse? Please list these alternatives.

See project narrative - attached

Part F - Map/Site Plan (all applications)

1) Attach to the application a map or site plan showing existing conditions and the proposed project in relation to wetland/ watercourses. Scale of map or site plan should be 1" = 40'; if this is not possible, please indicate the scale that you are using. A sketch map may be sufficient for small, minor projects. (See guidelines at end of application - page 6.)

2) Applicant's map date and date of last revision _____

3) Zone Classification Rural Agricultural Residence Zone 90 (RAR-90)

4) Is your property in a flood zone? Yes No Don't Know

Part G - Major Applications Requiring Full Review and a Public Hearing

See Section 6 of the Mansfield Regulations for additional requirements.

Part H - Notice to Abutting Property Owners

1) List the names and addresses of abutting property owners

Name	Address
<u>Project Narrative - Attached</u>	

2) Written Notice to Abutters . You must notify abutting property owners by certified mail, return receipt requested, stating that a wetland application is in progress, and that abutters may contact the Mansfield Inland Wetlands Agent for more information. Include a brief description of your project. Postal receipts of your notice to abutters must accompany your application. (This is not needed for exemptions).

Part I - Additional Notices, if necessary

1) Notice to Windham Water Works is attached. If this application is in the public watershed for the Windham Water Works (WWW), you must notify the WWW of your project within 7 days of sending the application to Mansfield--sending it by certified mail, return receipt requested. Contact the Mansfield Inland Wetlands Agent to find out if you are in this watershed.

- 2) Notice to Adjoining Town. If your property is within 500 feet of an adjoining town, you must also send a copy of the application, on the same day you sent one to Mansfield, to the Inland Wetlands Agency of the adjoining town, by certified mail, return receipt requested.
- 3) The Statewide Reporting Form (attached) shall be part of the application and specified parts must be completed and returned with this application.

Part J - Other Impacts To Adjoining Towns, if applicable

- 1) Will a significant portion of the traffic to the completed project on the site use streets within the adjoining municipality to enter or exit the site? ___ Yes No ___ Don't Know
- 2) Will sewer or water drainage from the project site flow through and impact the sewage or drainage system within the adjoining municipality? ___ Yes No ___ Don't Know
- ~~3) Will water run-off from the improved site impact streets or other municipal or private property within the adjoining municipality? ___ Yes No ___ Don't Know~~

Part K - Additional Information from the Applicant

Set forth (or attach) any other information which would assist the Agency in evaluating your application. (Please provide extra copies of any lengthy documents or reports, and extra copies of maps larger than 8.5" x 11", which are not easily copied.)

Part L - Filing Fee

Submit the appropriate filing fee. (Consult Wetlands Agent for the fee schedule available in the Mansfield Inland Wetlands and Watercourses Regulations.)

___ \$385. ___ \$110. ___ \$60. ___ \$25.

Note: The Agency may require you to provide additional information about the regulated area which is the subject of the application, or about wetlands or watercourses affected by the regulated activity. If the Agency, upon review of your application, finds the activity proposed may involve a "significant activity" as defined in the Regulations, additional information and/or a public hearing may be required.

The undersigned applicant hereby consents to necessary and proper inspections of the above mentioned property by members and agents of the Inland Wetlands Agency, at reasonable times, both before and after the permit in question has been granted by the Agency.

Jan R. Helgeson (Com of PD)

Applicant's Signature

3/24/09

Date

**Application for Inland Wetlands Certification
Stone Mill Road Bridge over the Fenton River
Part C – Project Description**

Stone Mill Road is a narrow road of varying width (approx. 14'6" minimum near the project location) with no sidewalks. It is paved for a short distance at either end but is primarily a gravel road. The project site and surrounding areas are residential and rural.

The existing Stone Mill Road Bridge was originally built in 1930 and later reconstructed in 1964. The bridge consists of two simple spans, with a maximum span length of 33' and a total structure length of 70'. The curb-to-curb roadway width on the structure is 15'1" and it carries two lanes of traffic.

The bridge superstructure consists of steel stringers with corrugated metal pans filled with concrete. The railings are steel posts and rails. The substructure consists of stone masonry and cast-in-place concrete. The foundation type is not known but is believed to be of a spread footing configuration. Bridge stringers exhibit heavy rust at the ends. There is evidence of scour at the pier and abutments. The overall condition of the bridge is poor and the bridge is currently posted for a weight limit of 15 tons.

Construction Sequencing

A detour will be in place during the construction of the proposed bridge. Due to water handling requirements in relation to removal of the existing pier and abutment foundations, staged construction will be required. This construction staging approach is proposed as follows.

The first phase will include diverting flows from the west cell using a non-penetrating cofferdam system (type to be determined by the contractor) which does not require embedment in the streambed. While this dam is in place, the west deck and pier will be removed and the west footings and arch culvert will be installed. Once the west cell of the proposed bridge is completed, the coffer dam configuration will be altered, directing the flows to the newly completed west cell and dewatering areas for the east cell foundation.

As recommended by the Connecticut Department of Public Health, throughout the construction phase of the project, a downstream suspended debris boom in conjunction with an absorbent boom will be installed to catch potential contaminants. All construction equipment (excavators, bulldozers, cranes, etc.) will be serviced, refueled and stored either off site (outside of the watershed boundaries) or at an appropriately designated and prepared impervious servicing area with a secondary containment area. In addition, a fuel spill remediation kit will be kept on-hand at the site. These extra precautionary measures have been implemented due to the site's location within the Windham Water Works public water supply watershed (Mansfield Hollow Reservoir Watershed).

The potential impacts are summarized in the following tables:

Direct Wetland Impacts – Wetland impacts are limited

Description	Area	Volume
Embankment Grading	63 S.F. 0.0014 Ac	-3.5 C.Y.

Impacts to the area adjacent to (within 150 feet) of the wetlands or watercourse:

Description	Area	Volume
Embankment Grading/travelway construction	8432 S.F. 0.193 Ac	246.4 C.Y. [†]

[†]The net change in volume of embankment grading will include Subbase material conforming to section M.02.02 and Rolled Bank Gravel Surface conforming to section M.02.03 of the CTDOT Form 816

Work to remove the existing structure including foundation will require confined instream work. Due to the size of the pier foundation to be removed, channel grading will be required. The grading is expected to normalize the bed elevation to the average elevation as existing. Riprap will be placed in front of the proposed abutments and wingwall faces. This riprap will incorporate a "critter shelf" to allow wildlife passage beneath the bridge. This shelf will remain dry for flows up to the ordinary high water elevation as determined in the field. This riparian shelf will satisfy requirements of the Army Corps of Engineers for the Programmatic General Permit. As a result of the channel grading and structure replacement, the proposed crossing will incorporate an additional 92.5 sq. ft. of effective open area, increasing from 364.2 sq. ft. (existing) to 456.8 sq. ft. (proposed).

The proposed approach work on Stone Mill Road will provide for a roadway transition width of 15'-4" at the matching road to 18'-0" on the bridge and a raise in the profile to accommodate the hydraulic requirements at the bridge. Work at the intersection of Stone Mill Road and Grist Mill Road will consist of full depth reconstruction in the plan of the existing road. The resulting work will consist on approximately 295' of full depth reconstruction.

With the combined improvements of increasing the effective bridge area and increasing the roadway profile, the resulting freeboard (vertical distance between the design water surface elevation and the low point of the roadway edge) for the proposed bridge replacement will be close to two tenths of a foot (2.2"), keeping the roadway dry for the design flood event. This is in contrast to the existing conditions, where the roadway is overtopped by a half of a foot.

It should be noted that the local changes to the bridge crossing do not adversely impact the hydraulics of the immediate upstream and downstream river reaches. There is an average decrease in water surface elevation upstream of the bridge of 0.10-foot. Downstream there is a 0.05' increase in the water surface elevation which propagates back to match existing conditions within 50 feet of the bridge.

Part D – Site Description

The Fenton River is a 16.5-mile river from its headwaters in Willington to its mouth at the Mansfield Hollow Lake. The average slope of the Fenton River is 0.0068 ft/ft, or 35.78 feet per mile. At the bridge, the river is 13.1 miles long and flows perennially with a drainage area of 23.7 sq. mi. Most of the land encompassed by this drainage is vegetative and forested with scattered swampland.

The hydraulic control of this reach of the Fenton River is greatly controlled by the streambed slope of 0.0068 feet/foot. There is an existing overtopping relief at the roadway to the west; during the periods of high flow, the immediate roadway on the west approach would be initially overtopped.

Part E – Alternatives

As part of the type study phase of this design project, several alternate bridge types were investigated to determine the most suited type for replacement. The factors that influenced the selection of the alternates were resulting hydraulics of the waterway, constructability of the proposed bridge in relation to the site conditions, construction cost, environmental impacts of the proposed bridge both during (short term) and after construction (long term) and future maintenance of the structure and aesthetics.

The "no build" alternative, conventionally offered as an option was not included in this case as the most recent bridge inspection report had rated this bridge to be in poor condition.

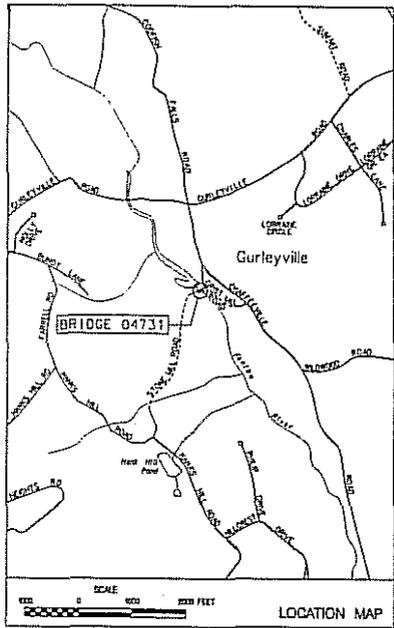
The three alternate structure types were:

1. Single Span Prestressed Concrete Butted Box Beam Bridge
2. Twin Span Precast Concrete Rigid Frame Bridge
3. Twin Span Precast Concrete Arch Bridge

The estimated costs of all three alternates are very similar and there are no significant advantages of using one alternate over the other when it comes to maintenance, durability, and inspectability. Further, when it comes to constructability and environmental considerations, all three alternates should have similar impacts watercourse and wetlands during construction.

Alternate 3 is recommended consisting of two 36' spandrel-filled precast concrete arches with conventional concrete headwalls, parapets and U-type wingwalls. The proposed foundations are strip footings supported by drilled micropiles. The proposed bridge type provides a suitable hydraulic opening and aesthetically pleasing appearance that is well suited for this site.

PAGE
BREAK



TOWN OF MANSFIELD PLAN

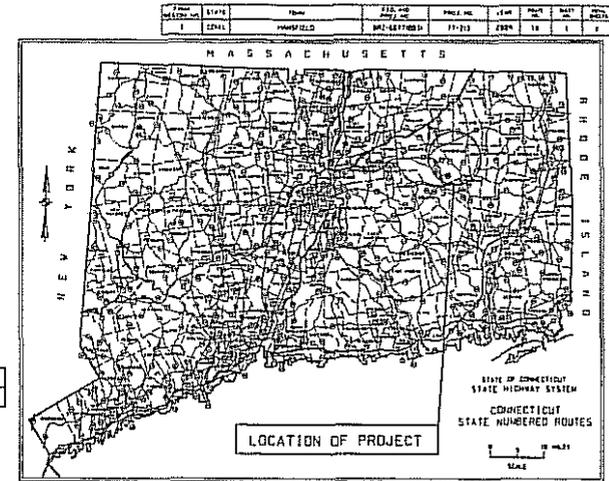
FOR
REPLACEMENT OF BRIDGE NO. 04731
STONE MILL ROAD
OVER FENTON RIVER

CONSTRUCTION STA. 0+25 TO STA. 3+20

TOWN	ROUTE NO.	FEDERAL AID PROJECT NO.	PROJECT NO.	TOTAL LENGTH	DESCRIPTION
MANSFIELD	STONE MILL ROAD	BR2-G077(003)	77-213	295 FT	BRIDGE NO. 04731

DESIGN SCALES:
ROADWAY PLAN 1 INCH = 20 FEET
OTHER SCALES AS NOTED

TO BE MAINTAINED BY THE TOWN OF MANSFIELD



TOWN NO. 77
PROJECT NO. 77-213

STATE OF CONNECTICUT, DEPARTMENT OF TRANSPORTATION 2004 SPECIFICATIONS, FORM NO. 816 INCLUDING SUPPLEMENTAL THERETO, DATED JULY 2008 GOVERN. ALL ELEVATIONS ON THIS PROJECT ARE BASED ON NAVD 88 DATUM. COORDINATES ARE BASED ON NAD 83 DATUM.

CONNECTICUT DEPARTMENT OF TRANSPORTATION,
HIGHWAY DESIGN MANUAL (2003) (REVISED TO DATE)
DESIGN CLASSIFICATION RURAL LOCAL ROAD

LIST OF DRAWINGS

SHEET NO.	TITLE	SHEET NO.	STANDARD SHEETS	FIELD, HIGHWAY ADMINISTRATION APPROVAL DATES
1	TITLE SHEET	401-A	FIGURES FOR GATES ON BRIDGE PARAPET	12/3/05
2	TYPICAL SECTION			
3	ROADWAY PLAN			
4	PROFILE			
5	DETOUR PLAN			
6	CROSS SECTIONS - 1			
7	CROSS SECTIONS - 2			
8	GENERAL PLAN			
9	LAYOUT PLAN, PROFILE AND QUANTITIES			
10	BORING LOGS - 1			
11	BORING LOGS - 2			
12	WATER HANDLING PLAN			
13	FOUNDATION PLAN AND DETAILS			
14	MICROPILE DETAILS			
15	PRECAST REINFORCED CONCRETE ARCH DETAILS			
16	WINGWALL AND PARAPET DETAILS			

ALL UTILITY INFORMATION AND EXISTING DATA SHOWN OR INDICATED IN THE CONTRACT DOCUMENTS ARE COMPILED FROM MAPS AND DATA FURNISHED BY OTHERS. ANY SUCH INFORMATION SHOULD NOT BE CONSTRUED AS ACCURATE OR COMPLETE AND THE CONTRACTOR SHALL VERIFY ALL LOCATIONS PRIOR TO CONSTRUCTION.

NOT FOR CONSTRUCTION
FOR DEP REVIEW ONLY

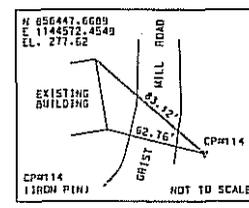
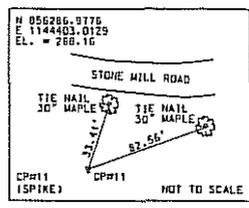
DESIGNED BY: CM2 ASSOCIATES, INC.

SUBMITTED BY: _____ DATE: _____

TOWN OF MANSFIELD _____ DATE: _____

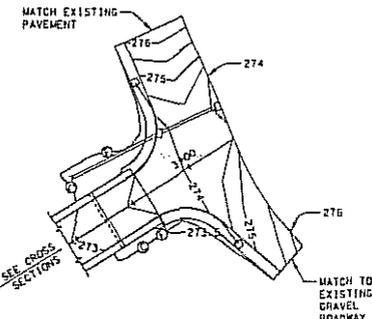
TOWN MANAGER _____ DATE: _____

STANDARD CONVENTIONS	
STONE WALL	=====
RETAINING WALL	=====
WIRE FENCE	-----
CHAIN LINK FENCE	-----
PROPERTY LINE	-----
SLURRY WALL	-----
STONE BRIDGE	-----
CENTERLINE	-----
FULLLINE	-----
DECOLORED TREE	⊗
EXHIBITION TREE	⊙
IRON PIN	⊙
SURVEY MONUMENT	⊙
SMALL HOLE	⊙
CORNER CATCH BASIN	⊙
CLASSIFIED CATCH BASIN	⊙
UTILITY POLE	⊙
SLURRY UTILITY POLE	⊙
LIGHT STAND	⊙
PAVED DRIVEWAY	⊙
PAVE INTERIOR	⊙
GRAVE MARK	⊙
GLASS DRIVEWAY	⊙
MANHOLE	⊙
WELDRING PLANT	⊙



BEGINNING OF PROJECT
MATCH EXISTING ROADWAY
STA. 0+25
N 856312.42
E 1144302.14

END OF PROJECT
STA. 3+19.91
N 856418.76
E 1144571.97



INTERSECTION GRADING PLAN
SCALE 1" = 20'

SCHEDULE OF RIGHTS

- (A) RIGHT TO INSTALL SEDIMENTATION CONTROL SYSTEM REQUIRED
- (B) RIGHT TO INSTALL TEMPORARY COFFERDAM AND TEMPORARY WORK AREA FOR THE PURPOSE OF CONSTRUCTION OF WINGWALL, TEMPORARY COFFERDAM, AND ALL NECESSARY APPEARANCES THERE TO DURING THE REPLACEMENT OF STONE MILL ROAD BRIDGE NO. 04731 REQUIRED.
- (C) RIGHT TO INSTALL TEMPORARY PUMP DISCHARGE BASIN REQUIRED.

LEGEND

- PROPOSED CUT LINE
- PROPOSED FILL LINE
- EXISTING CONTOUR LINE
- SEDIMENTATION CONTROL SYSTEM
- TEMPORARY COFFERDAM, STAGE 1
- TEMPORARY COFFERDAM, STAGE 2
- WETLAND LIMIT

NOTES

1. EXISTING TREES WITHIN THE WORK AREA OVER 8" IN DIAMETER WILL NOT BE REMOVED WITHOUT PRIOR PERMISSION FROM THE TOWN. CONTRACTOR SHALL TAKE PROPER PRECAUTIONS TO PROTECT TREES WHICH ARE TO REMAIN DURING THE COURSE OF THE WORK.
2. ALL AREAS OF DISTURBED EARTH REQUIRE "FURNISHING AND PLACING TOP SOIL" 4" THICK AND "TURF ESTABLISHMENT". SEE TYPICAL SECTIONS.
3. UNCONFINED INSTREAM WORK WITHIN THE FENTON RIVER WILL BE RESTRICTED TO THE PERIOD FROM JUNE 1 TO SEPTEMBER 30, INCLUSIVE.
4. ALL NEW METAL BEAM RAILING SHALL BE PAINTED. COLOR TO BE DETERMINED AND APPROVED BY TOWN.

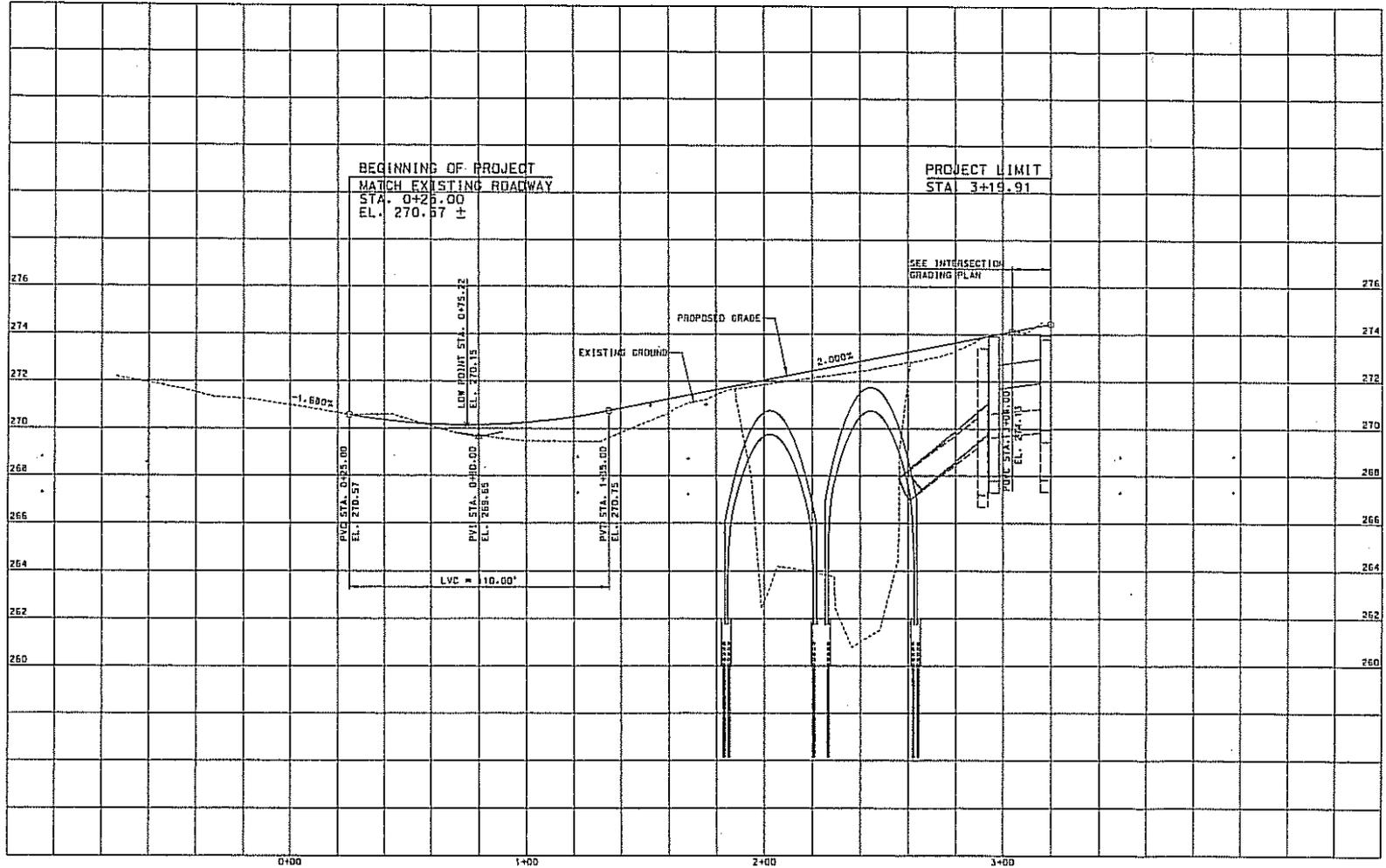
PLAN
SCALE 1" = 20'

CURVE NO. 1	CURVE NO. 2
Δ = 12°21'11.0"	Δ = 26°22'54.9"
R = 660.00'	R = 100.00'
T = 71.43'	T = 23.44'
L = 142.30'	L = 46.05'

DRAWN BY: J. MEESE
 CHECKED BY: J. MEESE
 DATE: 11/14/17
 PROJECT: TOWN OF MANSFIELD
 BRIDGE NO. 04731
 STONE MILL ROAD
 OVER FENTON RIVER

SCALE 1" = 20' 		DESIGNER: J. MEESE CHAPTER: J. MEESE CHECKED BY: J. MEESE DATE CHECKED: 11/14/17	TOWN OF MANSFIELD DESIGNER: GAI ASSOCIATES, INC. APPROVED BY: _____ DATE: _____	PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 04731 STONE MILL ROAD OVER FENTON RIVER	TOWN: MANSFIELD DRAWING TITLE: ROADWAY PLAN	PROJECT NO.: 77-213 DRAWING NO.: HWY-1 SHEET NO.: 3
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PROFILE



02/24/13 PM 2:02:44 StoneMillRoad_Bridge over Fenton RD/310CAD09/StoneMillRoad_Plot/Map3

DESIGNED BY: J. KEENE DRAWN BY: J. KEENE CHECKED BY: J. KEENE DATE CHECKED: 1/28/2013		TOWN OF MANSFIELD		PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 04731 STONE MILL ROAD OVER FENTON RIVER		TOWN: MANSFIELD		PROJECT NO.: 77-213	
HORIZ. SCALE IN FEET: 1" = 40'		VERT. SCALE IN FEET: 1" = 4'		ENGINEER: GAI ASSOCIATES, INC. APPROVED BY: _____ DATE: _____		DRAWING TITLE: PROFILE		DRAWING NO.: PRO-1	
SHEET NO.: _____		HORIZ. SCALE 1" = 40' VERT. SCALE 1" = 4'		CAD FILE: 04731_Plot.dwg PLOTTED: 3/25/2013		SURVEY NO.: _____		4	

APPLICATION FOR PERMIT
 MANSFIELD INLAND WETLANDS AGENCY
 4 SOUTH EAGLEVILLE ROAD, STORRS, CT 06268
 TEL: 860-429-3334 OR 429-3331
 FAX: 860-429-6863

FOR OFFICE USE ONLY
 File # W 1426
 Fee Paid \$ 330.00
 Official Date of Receipt 3-30-09

Applicants are referred to the Mansfield Inland Wetlands and Watercourses Regulations for complete requirements, and are obligated to follow them. For assistance, please contact Grant Meitzler, Inland Wetlands Agent at the telephone numbers above.

Please print or type or use similar format for computer; attach additional pages as necessary.

Part A - Applicant

Name KATHRYN A. HALLOCK

Mailing Address 168 RIVER ROAD

MADISON CT. Zip 06443

Telephone-Home (203) 887-9989 Telephone-Business SAME

Title and Brief Description of Project

SUBDIVISION PREPARED FOR KATHRYN A. HALLOCK

THREE LOT SUBDIVISION

ASSESSOR'S MAP 24 BLOCK 71 PARCEL 6

Location of Project EAST SIDE OF WORMWOOD HILL ROAD

Intended Start Date JUNE 2009

Part B - Property Owner (if applicant is the owner, just write "same")

Name SAME

Mailing Address _____

Zip _____

Telephone-Home _____ Telephone-Business _____

Owner's written consent to the filing of this application, if owner is not the applicant:

Signature Kathryn A. Hallock date 3/29/09

Applicant's interest in the land: (if other than owner) _____

Peter - 742-0340

Part C - Project Description (attach extra pages, if necessary)

1) Describe in detail the proposed activity here or on an attached page. (See guidelines at end of application - page 6.)

Please include a description of all activity or construction or disturbance:

- a) in the wetland/watercourse
- b) in the area **adjacent** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is **off** your property

SEE ATTACHED LETTER DATED 3/29/09 FOR ITEM 1

NO ACTIVITY IN THE WETLAND AREAS.

2) Describe the amount or area of disturbance (in square feet or cubic yards or acres):

- a) in the wetland/watercourse
- b) in the area **adjacent** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is **off** your property

NO ACTIVITY IN THE WETLAND AREA

- b) Lot 1 - 0.41 AC.
- Lot 2 - 0.70 AC.
- Lot 3 - 0.67 AC.

3) Describe the type of materials you are using for the project: SEE ATTACHED LETTER DATED 3/29/09 FOR ITEM 3.

- a) include **type** of material used as fill or to be excavated _____
- b) include **volume** of material to be filled or excavated _____

4) Describe measures to be taken to minimize or avoid any adverse impacts on the wetlands and regulated areas (silt fence, staked hay bales or other Erosion and Sedimentation control measures).

E & S MEASURES AS SHOWN ON SHEET 2 AND AS OUTLINED IN E & S NARRATIVE ON SHEET 3

Part D - Site Description

Describe the general character of the land. (Hilly? Flat? Wooded? Well drained? etc.)

GENERALLY HILLY, MODERATELY WELL DRAINED LIGHTLY WOODED.

Part E - Alternatives

Have you considered any alternatives to your proposal that would meet your needs and might have less impact on the wetland/watercourse? Please list these alternatives.

OTHER ALTERNATIVES WERE CONSIDERED BUT HAD MORE IMPACT.

Part F - Map/Site Plan (all applications)

1) Attach to the application a map or site plan showing **existing conditions** and the **proposed project** in relation to wetland/ watercourses. Scale of map or site plan should be 1" = 40'; if this is not possible, please indicate the scale that you are using. A sketch map may be sufficient for small, minor projects. (See guidelines at end of application – page 6.)

2) Applicant's map date and date of last revision MARCH 20, 2009

3) Zone Classification _____

4) Is your property in a flood zone? Yes No Don't Know

Part G - Major Applications Requiring Full Review and a Public Hearing

See Section 6 of the Mansfield Regulations for additional requirements.

Part H - Notice to Abutting Property Owners

1) List the names and addresses of abutting property owners

Name	Address
<u>SEE ATTACHED MAILING LIST</u>	

2) **Written Notice to Abutters** . You must notify abutting property owners by certified mail, return receipt requested, stating that a wetland application is in progress, and that abutters may contact the Mansfield Inland Wetlands Agent for more information. Include a brief description of your project. Postal receipts of your notice to abutters must accompany your application. (This is not needed for exemptions).

Part I - Additional Notices, if necessary

1) Notice to Windham Water Works is attached. If this application is in the public watershed for the Windham Water Works (WWW), you must notify the WWW of your project within 7 days of sending the application to Mansfield--sending it by certified mail, return receipt requested. Contact the Mansfield Inland Wetlands Agent to find out if you are in this watershed.

- 2) Notice to Adjoining Town. If your property is within 500 feet of an adjoining town, you must also send a copy of the application, on the same day you sent one to Mansfield, to the Inland Wetlands Agency of the adjoining town, by certified mail, return receipt requested.
- 3) The Statewide Reporting Form (attached) shall be part of the application and specified parts must be completed and returned with this application.

Part J - Other Impacts To Adjoining Towns, if applicable

- 1) Will a significant portion of the traffic to the completed project on the site use streets within the adjoining municipality to enter or exit the site? ___ Yes No ___ Don't Know
- 2) Will sewer or water drainage from the project site flow through and impact the sewage or drainage system within the adjoining municipality? ___ Yes No ___ Don't Know
- ~~3) Will water run-off from the improved site impact streets or other municipal or private property within the adjoining municipality? ___ Yes No ___ Don't Know~~

Part K - Additional Information from the Applicant

Set forth (or attach) any other information which would assist the Agency in evaluating your application. (Please provide extra copies of any lengthy documents or reports, and extra copies of maps larger than 8.5" x 11", which are not easily copied.)

Part L - Filing Fee

Submit the appropriate filing fee. (Consult Wetlands Agent for the fee schedule available in the Mansfield Inland Wetlands and Watercourses Regulations.)

___ \$385. ___ \$110. ___ \$60. ___ \$25.

Note: The Agency may require you to provide additional information about the regulated area which is the subject of the application, or about wetlands or watercourses affected by the regulated activity. If the Agency, upon review of your application, finds the activity proposed may involve a "significant activity" as defined in the Regulations, additional information and/or a public hearing may be required.

The undersigned applicant hereby consents to necessary and proper inspections of the above mentioned property by members and agents of the Inland Wetlands Agency, at reasonable times, both before and after the permit in question has been granted by the Agency.

Rebecca A. Hallock
Applicant's Signature

3/29/09
Date



CONSULTING ENGINEERS
LAND SURVEYORS • LAND PLANNERS
2179 BOSTON TPKE • COVENTRY, CT 06238
PHONE (860) 742-0340
FAX (860) 742-0355

51

March 29, 2009

Mansfield Inland Wetlands Agency
4 South Eagleville Road
Storrs, CT 06268

Dear Members:

Kathryn A. Hallock is seeking approval to subdivide 10.6 acres to form three building lots. The applicant is requesting approval to perform work within the 150 foot regulated area under Section 5 of the Regulations.

Part C (per guidelines)

1. Lot 1 - construction of a new house, drilled well, pumped footing drain outlet, gravel surface driveway, associated excavation, land clearing and grading. Lot 2 - construction of a well, septic system, driveway (part gravel, part paved surface), footing drain outlet, associated excavation, filling, grading and land clearing. Lot 3 - construction of new house, septic system, footing drain outlet, associated excavation, filling, grading and land clearing. The closest distance to a wetland that this work will occur is 55 ft. No work is proposed within a wetland or watercourse area.
2. The area of disturbance in the regulated area are as follows: Lot 1 - 0.41 ac., Lot 2- 0.70 ac. Lot 3- 0.67 ac. No work is proposed within the wetland or watercourse area. The following types and volumes of material are proposed to be filled or excavated with in the regulated area of each lot. The proposed development of Lot 1 will require the excavation of approximately 200 cubic yards of on-site material from the house foundation and the placement of approximately 30 cubic yards of process gravel for the driveway. The proposed development of Lot 2 will require the placement of approximately 75 cubic yards of select sand septic fill, 40 cubic yards of common fill for the driveway and house and 160 cubic yards of processed gravel for the driveway. The proposed development of Lot 3 will require the excavation of approximately 30 cubic yards of on-site material for the house foundation, the placement of approximately 100 cubic yards of select sand fill for the septic system and 100 cubic yards of common fill for the house.
3. The area of activity drains toward the wetlands.
4. Other alternative areas were considered. Single driveways and other house locations were reviewed. Because of the location of the wetland areas, the proposed design was chosen because it creates the least amount of disturbance.

2.

5. The work for the common driveway construction is scheduled to be completed during the summer of 2009. The schedule of work for the individual lot development is not known at this time. Standard construction methods for residential site development will be used. The work will be completed with standard excavating equipment (excavator, backhoe, bulldozer, dump trucks etc.).
6. The wetlands will be protected by rows of silt fence and/or hay bales . A complete E & S Narrative is located on sheet 3.
7. We have no knowledge of a previous wetlands application.

Sincerely,



Andrew Bushnell, P.E.

/ph



CONSULTING ENGINEERS
 LAND SURVEYORS • LAND PLANNERS
 2179 BOSTON TPKE • COVENTRY, CT 06238
 PHONE (860) 742-0340
 FAX (860) 742-0355

March 30, 2009

Mansfield Inland Wetland Agency, Planning and Zoning Commission
 c/o Greg Padick, Town Planner
 4 South Eagleville Road
 Storrs, Ct. 06268

Re: Subdivision of Kathryn A. Hallock

Kathryn A. Hallock is proposing to subdivide 10.6 acres on the east side of Wormwood Hill Road to create three building lots. Reduced copies of the proposal are attached.

Soil test holes were dug in the areas of the proposed septic systems and plans have been submitted to the Eastern Highlands Health District for review. Since both applications are being submitted together, notification has been sent to the Windham Water Works by certified mail.

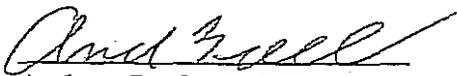
The IWA is being asked to review activities within the regulated area on all three lots. The proposed activity for each lot is outlined in a letter to the Mansfield Inland Wetlands Agency dated March 29, 2009 regarding Part C of the guidelines. All BAE and DAE areas were placed a minimum of 50 feet from the wetland areas. The plans include erosion control requirements to minimize any effects on the wetlands.

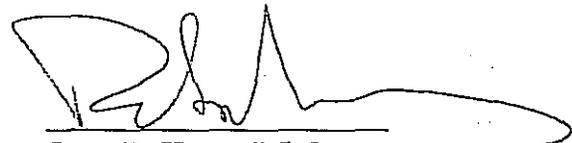
The plans being submitted are also the yield plans. Each lot exceeds the minimum lot frontage of 200 feet and lot area of 90,000 square feet. The applicant is asking that the proposed lot configuration be approved under Section 7.5 and 7.6 for a reduction or waiver of building setback lines and the depicted building area envelopes. Specifically, the rear and side setbacks for Lot 1, side yard setback for Lot 2 and the side yard setback for Lot 3. The building line setbacks from all existing abutters meet the traditional requirements.

The applicant is proposing the use of a common driveway for Lots 1 and 2. We believe that the Commission's approval of using the common driveway allows for less grading and existing tree removal along Wormwood Hill Road.

The applicant is also proposing the use of conservation easements. They include a 60 foot wide easement along Wormwood Hill Road and 35 foot wide easements along the north and south boundary of the subdivision. Draft deeds of the conservation easement, common driveway and utilities easement and road conveyance have been submitted with the application.

Sincerely,


 Andrew Bushnell, P.E.


 Peter R. Henry, L.L.S.

/ph

PAGE
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APPLICATION FOR PERMIT
MANSFIELD INLAND WETLANDS AGENCY
4 SOUTH EAGLEVILLE ROAD, STORRS, CT 06268
TEL: 860-429-3334 OR 429-3331
FAX: 860-429-6863

FOR OFFICE USE ONLY
File # W 1427
Fee Paid \$155
Official Date of Receipt 3-30-09

Applicants are referred to the Mansfield Inland Wetlands and Watercourses Regulations for complete requirements, and are obligated to follow them. For assistance, please contact Grant Meitzler, Inland Wetlands Agent at the telephone numbers above.

Please print or type or use similar format for computer; attach additional pages as necessary.

Part A - Applicant

Name Tim and Kathy Hartley

Mailing Address 72 Crane Hill Rd.

Storrs Mansfield, Ct Zip 06268

Telephone-Home 860-450-1030 Telephone-Business 860-423-0921

Title and Brief Description of Project

10 foot octagonal gazebo; 11 foot circle 3
inches deep crushed stone

Location of Project side yard

Intended Start Date done

Part B - Property Owner (if applicant is the owner, just write "same")

Name same

Mailing Address _____

_____ Zip _____

Telephone-Home _____ Telephone-Business _____

Owner's written consent to the filing of this application, if owner is not the applicant:

Signature _____ date _____

Applicant's interest in the land: (if other than owner) _____

Part C - Project Description (attach extra pages, if necessary)

- 1) Describe in detail the proposed activity here or on an attached page. (See guidelines at end of application – page 6.)

Please include a description of all activity or construction or disturbance:

- a) in the wetland/watercourse
 b) in the area **adjacent** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is **off** your property

A 10 foot octagonal gazebo was put together from a kit. A 3-inch layer of crushed stone was placed in an 11-foot circle where the gazebo was to be placed.

- 2) Describe the amount or area of disturbance (in square feet or cubic yards or acres):

- a) in the wetland/watercourse
 b) in the area **adjacent** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is **off** your property

about 95 square feet

- 3) Describe the type of materials you are using for the project:

crushed stone; pressure treated lumber

- a) include **type** of material used as fill or to be excavated crushed stone
 b) include **volume** of material to be filled or excavated mostly on top of the soil; a small amount dug out to make level.

- 4) Describe measures to be taken to minimize or avoid any adverse impacts on the wetlands and regulated areas (silt fence, staked hay bales or other Erosion and Sedimentation control measures).

no sawing done on site; pieces nailed together
 stone brought by wheelbarrow from driveway

Part D - Site Description

Describe the general character of the land. (Hilly? Flat? Wooded? Well drained? etc.)

mostly flat; small hill nearby. well-drained

Part E - Alternatives

Have you considered any alternatives to your proposal that would meet your needs and might have less impact on the wetland/watercourse? Please list these alternatives.

I don't think the garage will have any
impact on the wetlands

Part F - Map/Site Plan (all applications) *already submitted*

1) Attach to the application a map or site plan showing **existing conditions** and the **proposed project** in relation to wetland/ watercourses. Scale of map or site plan should be 1" = 40'; if this is not possible, please indicate the scale that you are using. A sketch map may be sufficient for small, minor projects. **(See guidelines at end of application – page 6.)**

2) Applicant's map date and date of last revision _____

3) Zone Classification _____

4) Is your property in a flood zone? Yes No Don't Know

Part G - Major Applications Requiring Full Review and a Public Hearing

See Section 6 of the Mansfield Regulations for additional requirements.

Part H - Notice to Abutting Property Owners *N/A*

1) List the names and addresses of abutting property owners

Name	Address

2) **Written Notice to Abutters** . You must notify abutting property owners by certified mail, return receipt requested, stating that a wetland application is in progress, and that abutters may contact the Mansfield Inland Wetlands Agent for more information. Include a brief description of your project. **Postal receipts of your notice to abutters must accompany your application.** (This is not needed for exemptions).

N/A

Part I - Additional Notices, if necessary

1) Notice to Windham Water Works is attached. If this application is in the public watershed for the Windham Water Works (WWW), you must notify the WWW of your project within 7 days of sending the application to Mansfield--sending it by certified mail, return receipt requested. Contact the Mansfield Inland Wetlands Agent to find out if you are in this watershed.

N/A

- 2) Notice to Adjoining Town. If your property is within 500 feet of an adjoining town, you must also send a copy of the application, on the same day you sent one to Mansfield, to the Inland Wetlands Agency of the adjoining town, by certified mail, return receipt requested.
- 3) The Statewide Reporting Form (attached) shall be part of the application and specified parts must be completed and returned with this application.

Part J - Other Impacts To Adjoining Towns, if applicable

1) Will a significant portion of the traffic to the completed project on the site use streets within the adjoining municipality to enter or exit the site? ___ Yes ___ No ___ Don't Know

N/A 2) Will sewer or water drainage from the project site flow through and impact the sewage or drainage system within the adjoining municipality? ___ Yes ___ No ___ Don't Know

~~3) Will water run-off from the improved site impact streets or other municipal or private property within the adjoining municipality? ___ Yes ___ No ___ Don't Know~~

Part K - Additional Information from the Applicant

Set forth (or attach) any other information which would assist the Agency in evaluating your application. (Please provide extra copies of any lengthy documents or reports, and extra copies of maps larger than 8.5" x 11", which are not easily copied.)

Part L - Filing Fee

Submit the appropriate filing fee. (Consult Wetlands Agent for the fee schedule available in the Mansfield Inland Wetlands and Watercourses Regulations.)

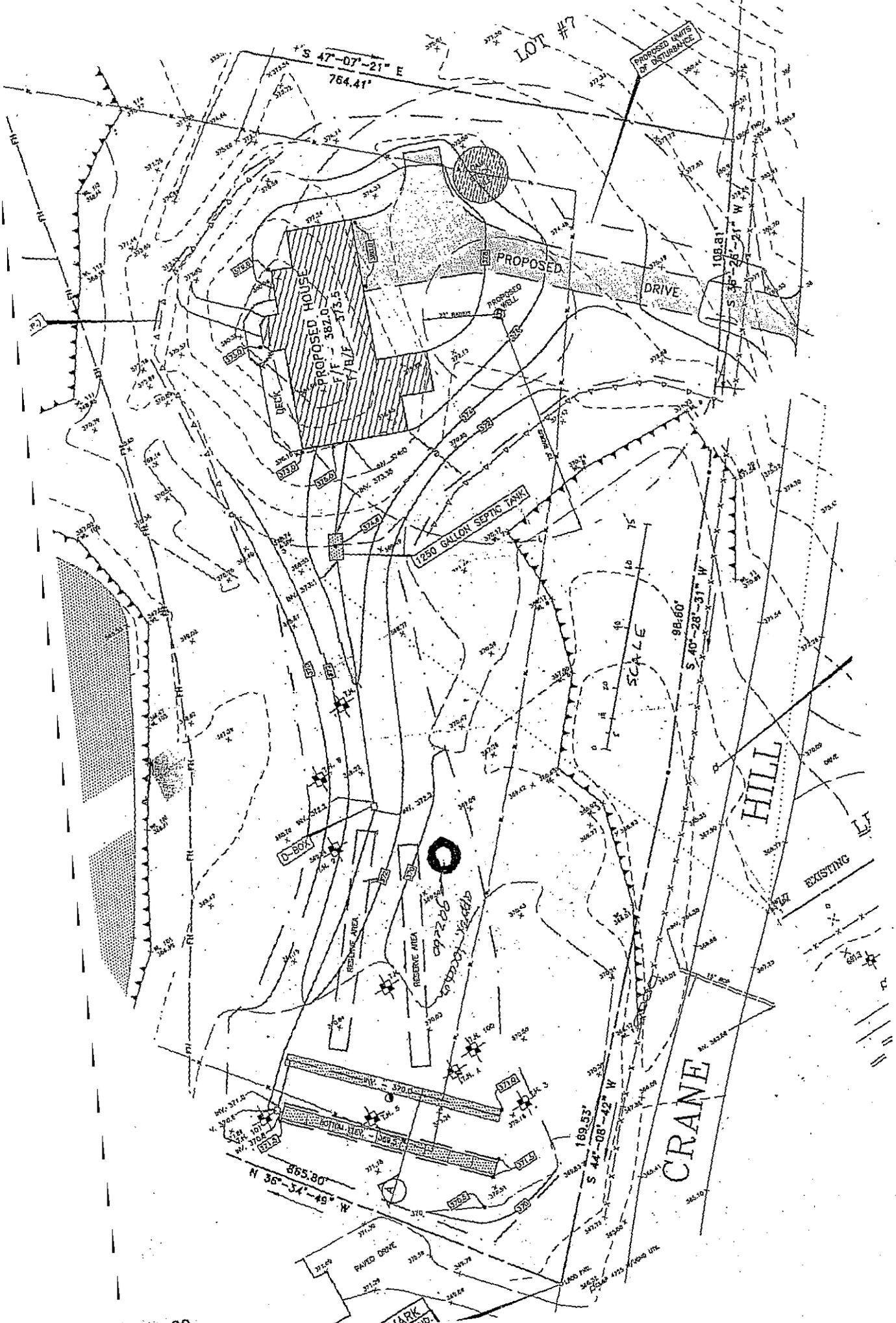
___ \$385. ___ \$110. ___ \$60. ___ \$25. \$55.00

Note: The Agency may require you to provide additional information about the regulated area which is the subject of the application, or about wetlands or watercourses affected by the regulated activity. If the Agency, upon review of your application, finds the activity proposed may involve a "significant activity" as defined in the Regulations, additional information and/or a public hearing may be required.

The undersigned applicant hereby consents to necessary and proper inspections of the above mentioned property by members and agents of the Inland Wetlands Agency, at reasonable times, both before and after the permit in question has been granted by the Agency.

Kermy J. Hawley
Applicant's Signature

3/18/09
Date



PAGE
BREAK

APPLICATION FOR PERMIT
MANSFIELD INLAND WETLANDS AGENCY
4 SOUTH EAGLEVILLE ROAD, STORRS, CT 06268
TEL: 860-429-3334 OR 429-3331
FAX: 860-429-6863

FOR OFFICE USE ONLY
 File # W 1428
 Fee Paid \$155
 Official Date of Receipt 4-1-09

Applicants are referred to the Mansfield Inland Wetlands and Watercourses Regulations for complete requirements, and are obligated to follow them. For assistance, please contact Grant Meitzler, Inland Wetlands Agent at the telephone numbers above.

Please print or type or use similar format for computer; attach additional pages as necessary.

Part A - Applicant

Name Ponde Place LLC

Mailing Address 96 East Main St. Suite 202

Avon CT Zip 06001

Telephone-Home _____ Telephone-Business (860) 677-5555

Title and Brief Description of Project

Ponde Place - Phase 1 Well Drilling and testing

Location of Project Hunting Lodge Road and Northwood Road

Intended Start Date Spring 2009

Part B - Property Owner (if applicant is the owner, just write "same")

Name The Keystone Companies, LLC

Mailing Address (same as applicant)

Zip _____

Telephone-Home _____ Telephone-Business _____

Owner's written consent to the filing of this application, if owner is not the applicant:

Signature (same as applicant) date _____

Applicant's interest in the land: (if other than owner) _____

Part C - Project Description (attach extra pages, if necessary)

- 1) Describe in detail the proposed activity here or on an attached page. (See guidelines at end of application - page 8.)

Please include a description of all activity or construction or disturbance:

- a) in the wetland/watercourse
 b) in the area adjacent to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is off your property

1) Installation and testing of water supply wells.

a) There will be no activity within wetlands or watercourse

b) There will be minimal activity adjacent to wetlands. This will include minor clearing, grading and filling to create an access path for the well drilling equipment.

- 2) Describe the amount or area of disturbance (in square feet or cubic yards or acres):

- a) in the wetland/watercourse
 b) in the area adjacent to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is off your property

2a) 0 acres.

2b) .2 acres

- 3) Describe the type of materials you are using for the project.

clean fill for access path

- a) include type of material used as fill or to be excavated gravel/stone
 b) include volume of material to be filled or excavated

< 50 cu excavation/fill within the regulated area.

- 4) Describe measures to be taken to minimize or avoid any adverse impacts on the wetlands and regulated areas (silt fence, staked hay bales or other Erosion and Sedimentation control measures).

minimize disturbance just adequate for equipment access. Silt fence, haybales, stone as needed for SF+SC measures.

Part D - Site Description

Describe the general character of the land. (Hilly? Flat? Wooded? Well drained? etc.)

Moderately wooded and somewhat hilly. Well drained except for limited areas.

Part E - Alternatives

Have you considered any alternatives to your proposal that would meet your needs and might have less impact on the wetland/watercourse? Please list these alternatives.

Other access points were considered but would have a
greater wetland impact.

Part F - Map/Site Plan (all applications)

1) Attach to the application a map or site plan showing **existing conditions** and the **proposed project** in relation to wetland/ watercourses. Scale of map or site plan should be 1" = 40'; if this is not possible, please indicate the scale that you are using. A sketch map may be sufficient for small, minor projects. (See guidelines at end of application - page 6.)

- 2) Applicant's map date and date of last revision UT-5 03-31-2009
- 3) Zone Classification RAR-90 changed to DMR
- 4) Is your property in a flood zone? Yes No Don't Know

Part G - Major Applications Requiring Full Review and a Public Hearing

See Section 6 of the Mansfield Regulations for additional requirements.

Part H - Notice to Abutting Property Owners

1) List the names and addresses of abutting property owners

Name	Address
<u>See attached list.</u>	

2) **Written Notice to Abutters**. You must notify abutting property owners by certified mail, return receipt requested, stating that a wetland application is in progress, and that abutters may contact the Mansfield Inland Wetlands Agent for more information. Include a brief description of your project. **Postal receipts of your notice to abutters must accompany your application.** (This is not needed for exemptions).

Part I - Additional Notices, if necessary

1) Notice to Windham Water Works is attached. If this application is in the public watershed for the Windham Water Works (WWW), you must notify the WWW of your project within 7 days of sending the application to Mansfield—sending it by certified mail, return receipt requested. Contact the Mansfield Inland Wetlands Agent to find out if you are in this watershed.

- 2) Notice to Adjoining Town. If your property is within 500 feet of an adjoining town, you must also send a copy of the application, on the same day you sent one to Mansfield, to the Inland Wetlands Agency of the adjoining town, by certified mail, return receipt requested.
- 3) The Statewide Reporting Form (attached) shall be part of the application and specified parts must be completed and returned with this application.

Part J - Other Impacts To Adjoining Towns, if applicable

- 1) Will a significant portion of the traffic to the completed project on the site use streets within the adjoining municipality to enter or exit the site? ___ Yes No ___ Don't Know
- 2) Will sewer or water drainage from the project site flow through and impact the sewage or drainage system within the adjoining municipality? ___ Yes No ___ Don't Know
- 3) Will water run-off from the improved site impact streets or other municipal or private property within the adjoining municipality? ___ Yes No ___ Don't Know

Part K - Additional Information from the Applicant

Set forth (or attach) any other information which would assist the Agency in evaluating your application. (Please provide extra copies of any lengthy documents or reports, and extra copies of maps larger than 8.5" x 11", which are not easily copied.)

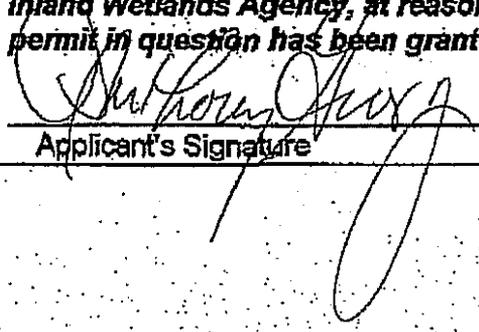
Part L - Filing Fee

Submit the appropriate filing fee. (Consult Wetlands Agent for the fee schedule available in the Mansfield Inland Wetlands and Watercourses Regulations.)

___ \$385. ___ \$110. ___ \$60. ___ \$25.

Note: The Agency may require you to provide additional information about the regulated area which is the subject of the application, or about wetlands or watercourses affected by the regulated activity. If the Agency, upon review of your application, finds the activity proposed may involve a "significant activity" as defined in the Regulations, additional information and/or a public hearing may be required.

The undersigned applicant hereby consents to necessary and proper inspections of the above mentioned property by members and agents of the Inland Wetlands Agency, at reasonable times, both before and after the permit in question has been granted by the Agency.


4/01/09

 Applicant's Signature Date

PAGE
BREAK

**APPLICATION FOR PERMIT
 MANSFIELD INLAND WETLANDS AGENCY
 4 SOUTH EAGLEVILLE ROAD, STORRS, CT 06268
 TEL: 860-429-3334 OR 429-3331
 FAX: 860-429-6863**

FOR OFFICE USE ONLY
 File # w1429
 Fee Paid 4365
 Official Date of Receipt 4-2-09

Applicants are referred to the Mansfield Inland Wetlands and Watercourses Regulations for complete requirements, and are obligated to follow them. For assistance, please contact Grant Meitzler, Inland Wetlands Agent at the telephone numbers above.

Please print or type or use similar format for computer; attach additional pages as necessary.

Part A - Applicant

Name Brian McCann, Kleinfelder, Inc.

Mailing Address 99 Lamberton Road, Ste 201

Windsor, CT Zip 06095

Telephone-Home (860) 614-9612 Telephone-Business (860) 683-4200 ext135

Title and Brief Description of Project

Application is being made for approval of the installation and operation of a groundwater extraction and treatment system.

Location of Project 632 Middle Turnpike

Intended Start Date July 1, 2009

Part B - Property Owner (if applicant is the owner, just write "same")

Name Larry Nirenberg, Merchant Mansfield, LLC

Mailing Address 1 Hartford Blvd

East Windsor, CT Zip 06088

Telephone-Home _____ Telephone-Business (860) 623-5252

Owner's written consent to the filing of this application, if owner is not the applicant:

Signature [Signature] date 4/1/09

Applicant's interest in the land: (if other than owner) Environmental Consultant for Former Owner, ExxonMobil Corporation

Part C - Project Description (attach extra pages, if necessary)

1) Describe in detail the proposed activity here or on an attached page. (See guidelines at end of application – page 6.)

Please include a description of all activity or construction or disturbance:

- a) **in** the wetland/watercourse
- b) **in** the area **adjacent** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is **off** your property

Refer to Project Narrative

2) Describe the amount or area of disturbance (in square feet or cubic yards or acres):

- a) **in** the wetland/watercourse
- b) **in** the area **adjacent** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is **off** your property

3) Describe the type of materials you are using for the project: N/A

- a) include **type** of material used as fill or to be excavated N/A
- b) include **volume** of material to be filled or excavated N/A

4) Describe measures to be taken to minimize or avoid any adverse impacts on the wetlands and regulated areas (silt fence, staked hay bales or other Erosion and Sedimentation control measures).

Refer to project narrative

Part D - Site Description

Describe the general character of the land. (Hilly? Flat? Wooded? Well drained? etc.)

N/A

Part E - Alternatives

Have you considered any alternatives to your proposal that would meet your needs and might have less impact on the wetland/watercourse? Please list these alternatives.

See project narrative

Part F - Map/Site Plan (all applications)

1) Attach to the application a map or site plan showing **existing conditions** and the **proposed project** in relation to wetland/ watercourses. Scale of map or site plan should be 1" = 40'; if this is not possible, please indicate the scale that you are using. A sketch map may be sufficient for small, minor projects. (See guidelines at end of application – page 6.)

2) Applicant's map date and date of last revision Multiple, refer to project narrative

3) Zone Classification PB3

4) Is your property in a flood zone? Yes x No Don't Know

Part G - Major Applications Requiring Full Review and a Public Hearing

See Section 6 of the Mansfield Regulations for additional requirements.

Part H - Notice to Abutting Property Owners

1) List the names and addresses of abutting property owners

Name	Address
<u>Refer to Project Narrative</u>	

2) **Written Notice to Abutters** . You must notify abutting property owners by certified mail, return receipt requested, stating that a wetland application is in progress, and that abutters may contact the Mansfield Inland Wetlands Agent for more information. Include a brief description of your project. **Postal receipts of your notice to abutters must accompany your application.** (This is not needed for exemptions).

Part I - Additional Notices, if necessary

1) Notice to Windham Water Works is attached. If this application is in the public watershed for the Windham Water Works (WWW), you must notify the WWW of your project within 7 days of sending the application to Mansfield—sending it by certified mail, return receipt requested. Contact the Mansfield Inland Wetlands Agent to find out if you are in this watershed.

2) Notice to Adjoining Town. If your property is within 500 feet of an adjoining town, you must also send a copy of the application, on the same day you sent one to Mansfield, to

the Inland Wetlands Agency of the adjoining town, by certified mail, return receipt requested.

- 3) The Statewide Reporting Form (attached) shall be part of the application and specified parts must be completed and returned with this application.

Part J - Other Impacts To Adjoining Towns, if applicable

- 1) Will a significant portion of the traffic to the completed project on the site use streets within the adjoining municipality to enter or exit the site? ___ Yes X No ___ Don't Know
- 2) Will sewer or water drainage from the project site flow through and impact the sewage or drainage system within the adjoining municipality? ___ Yes X No ___ Don't Know
- 3) Will water run-off from the improved site impact streets or other municipal or private property within the adjoining municipality? ___ Yes X No ___ Don't Know

Part K - Additional Information from the Applicant

Set forth (or attach) any other information which would assist the Agency in evaluating your application. (Please provide extra copies of any lengthy documents or reports, and extra copies of maps larger than 8.5" x 11", which are not easily copied.)

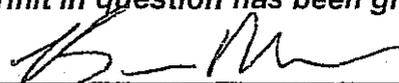
Part L - Filing Fee

Submit the appropriate filing fee. (Consult Wetlands Agent for the fee schedule available in the Mansfield Inland Wetlands and Watercourses Regulations.)

X \$365. YES \$110. \$60. ___ \$25.

Note: The Agency may require you to provide additional information about the regulated area which is the subject of the application, or about wetlands or watercourses affected by the regulated activity. If the Agency, upon review of your application, finds the activity proposed may involve a "significant activity" as defined in the Regulations, additional information and/or a public hearing may be required.

The undersigned applicant hereby consents to necessary and proper inspections of the above mentioned property by members and agents of the Inland Wetlands Agency, at reasonable times, both before and after the permit in question has been granted by the Agency.


Applicant's Signature

4/1/09
Date



99 Lambertson Road,
Suite 201
Windsor, CT 06095

p| 860.683.4200
f| 860.683.4206
kleinfelder.com

April 1, 2009

Mr. Grant Meitzler
Inland Wetlands Agent/Asst. Town Engineer
Town of Mansfield
Audrey P. Beck Municipal Building
4 South Eagleville Road
Mansfield, Connecticut 06268

**Re: Application for Permit
Remedial Action Plan Project Narrative
Former Exxon RAS No. 3-5795
632 Middle Turnpike
Mansfield, Connecticut**

Dear Mr. Meitzler:

Kleinfelder, on behalf of Exxon Mobil Corporation (ExxonMobil), is submitting this Groundwater Remediation Project Narrative to supplement the Town of Mansfield Inland Wetlands Agency Application for Permit. The Application for Permit is being submitted to request approval from the Town of Mansfield's Inland Wetlands Agency to allow the discharge of treated groundwater from an environmental remediation system at 632 Middle Turnpike (the "Property").

Project Background

The Property is being investigated and remediated according to the terms and requirements of a Connecticut Department of Environmental Protection (CTDEP) Consent Order No. WC 5052 (Attachment 1). Consent Order No. Order 5052 was issued on March 25, 1992 as a result of findings by the Commissioner of the CTDEP, which are listed in Sections A.1 through A.5 of said Order. Additionally, Order 5052 outlines requirements placed on ExxonMobil in Section B, which includes a requirement to remediate of soil and groundwater to the satisfaction of the Commissioner of the CTDEP.

In July 2008, Kleinfelder submitted a Remedial Action Plan (RAP) to the CTDEP for review and approval. The RAP outlined the existing environmental conditions at the Property, and proposed a groundwater extraction and treatment (GE&T) system be installed and operated at the Property, followed by natural attenuation monitoring. The CTDEP approved the RAP in correspondence dated October 3, 2008 (Attachment 2).

As required under Consent Order 5052 and as recommended in Connecticut General Statutes (CGS) Section 22a-133x subsection (g), Kleinfelder provided public notification of the proposed initiation of remediation activities at the Property. In order to fulfill the public notice requirements, a public notice was prepared and published in the Hartford Courant legal section on October 7, 2008. Additionally, remedial notification letters were prepared and mailed

to property owners abutting the subject property. Copies of these communications are attached (Attachment 3).

Groundwater Extraction and Treatment Remediation

Groundwater extraction is a remedial technique typically utilized in the early stages of remediation at sites where groundwater is impacted by hydrocarbons from a release of petroleum products or impacted by chlorinated solvents. This technique is primarily utilized to contain and control plumes of dissolved compounds and liquid phase product. A groundwater extraction and treatment system operates by actively pumping groundwater from the aquifer through a series of recovery wells. Extracted groundwater from the recovery wells is piped back to the remediation system compound, where it is treated initially through air-stripping (a process of volatilizing contaminants from the dissolved aqueous phase to vapor phase). Upon completion of air-stripping, groundwater is further polished by granular activate carbon (GAC) to remove trace contaminant remnants prior to discharge from the system. Based on the current impact to groundwater and the aquifer characteristics, Kleinfelder anticipates that the remediation system will operate for approximately seven years.

Natural Attenuation

Natural attenuation, also known as passive bioremediation, intrinsic bioremediation, or intrinsic remediation, is a non-intrusive remedial approach that relies on natural processes to degrade and dissipate petroleum constituents in soil and groundwater. Some of the processes involved in the natural attenuation of petroleum products include aerobic and anaerobic biodegradation, dispersion, volatilization, adsorption and dilution. In general, for petroleum hydrocarbons, biodegradation is the most important natural attenuation mechanism as it is the only natural process that results in an actual reduction of the mass of petroleum constituents. Petroleum hydrocarbon constituents are generally biodegradable, regardless of their molecular weight, as long as indigenous microorganisms have an adequate supply of nutrients, and toxic substances do not inhibit biological activity.

Alternative Remedial or Discharge Options

Kleinfelder evaluated several options prior to proposing groundwater extraction and treatment as the preferred remedial strategy. Two type of *insitu* remediation included chemical oxidation and ozone sparge. Kleinfelder completed pilot testing to evaluate if the underlying consolidated layer, which consists of a silty glacial till, would accommodate injections of oxidants to treat petroleum impact. The results of the pilot test revealed that oxidants could not be introduced to the glacial till due to the tight nature of the formation. The results of the pilot test were also presented to the CTDEP in the July 2008 RAP.

Additionally, current Connecticut state law allows for two options for the discharge of remediation wastewater; 1) to a sanitary sewer or, 2) to a surface water body. As no sanitary sewer line extends within the vicinity of the subject property, Kleinfelder has proposed utilizing the CTDOT stormwater sewer line which runs along Route 44 to the west, and eventually discharges to an intermittent stream to the north. The discharge will be permitted and monitored through the CTDEP.

Project Overview

Several permits are anticipated requirements to complete the installation and operation of the GE&T system. These permits include:

- Mansfield Inland Wetlands Agency– Inland Wetlands Permit
- Town of Mansfield – Site Plan Approval
- Town of Mansfield – Building permit
- Town of Mansfield – Electric permit
- CTDOT – Encroachment permit
- CTDEP – Temporary Authorization to Discharge Remediation Wastewater
- CTDEP – National Pollution Discharge Elimination System (NPDES) permit

At the time of the submittal of the Application for Permit to the Mansfield Inland Wetlands Agency, Kleinfelder has completed the preliminary engineering design of the components required to extract and treat the groundwater. A site plan depicting the proposed remediation system infrastructure, remediation shed location, and existing features are depicted on Plate 1. A site plan depicting the CTOT conveyance piping and discharge location is presented as Plate 2. A preliminary Process and Instrumentation Diagram (P&ID) of the recovery, treatment, and discharge equipment train and contaminant removal calculations is presented as Plates 3 and 4. An area map depicting the path of the discharge conveyance, from the on-site stormwater sewer connection to the remediation system to the Willimantic River, is presented as Plate 5.

Based on the aquifer pump test pilot study and the petroleum contaminant load in the recovered groundwater, Kleinfelder has designed the remediation system to be capable of treating up to 50 gallons per minute (gpm) of groundwater to concentrations below laboratory detection limits. While the system has been designed to accommodate a higher flow rate, actual sustained treatment and discharge rates are anticipated to be significantly lower than 50 gpm. Per CTDEP directive, discharges from the remediation system may initially be authorized under a CTDEP Temporary Authorization to Discharge Remediation Wastewater Permit, until the NPDES permit can be approved. In order to complete permitting with the CTDEP, Kleinfelder requires an approval of the project from the Mansfield Inland Wetlands Agency.

Former Exxon RAS No. 3-5795
Mansfield, Connecticut

Kleinfelder

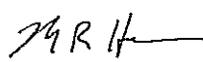
April 2009

If you have further questions, please do not hesitate to contact either of the undersigned at
(860) 683-4200.

Very truly yours,
Kleinfelder

 Date: 2009.04.01
14:09:41 -04'00'

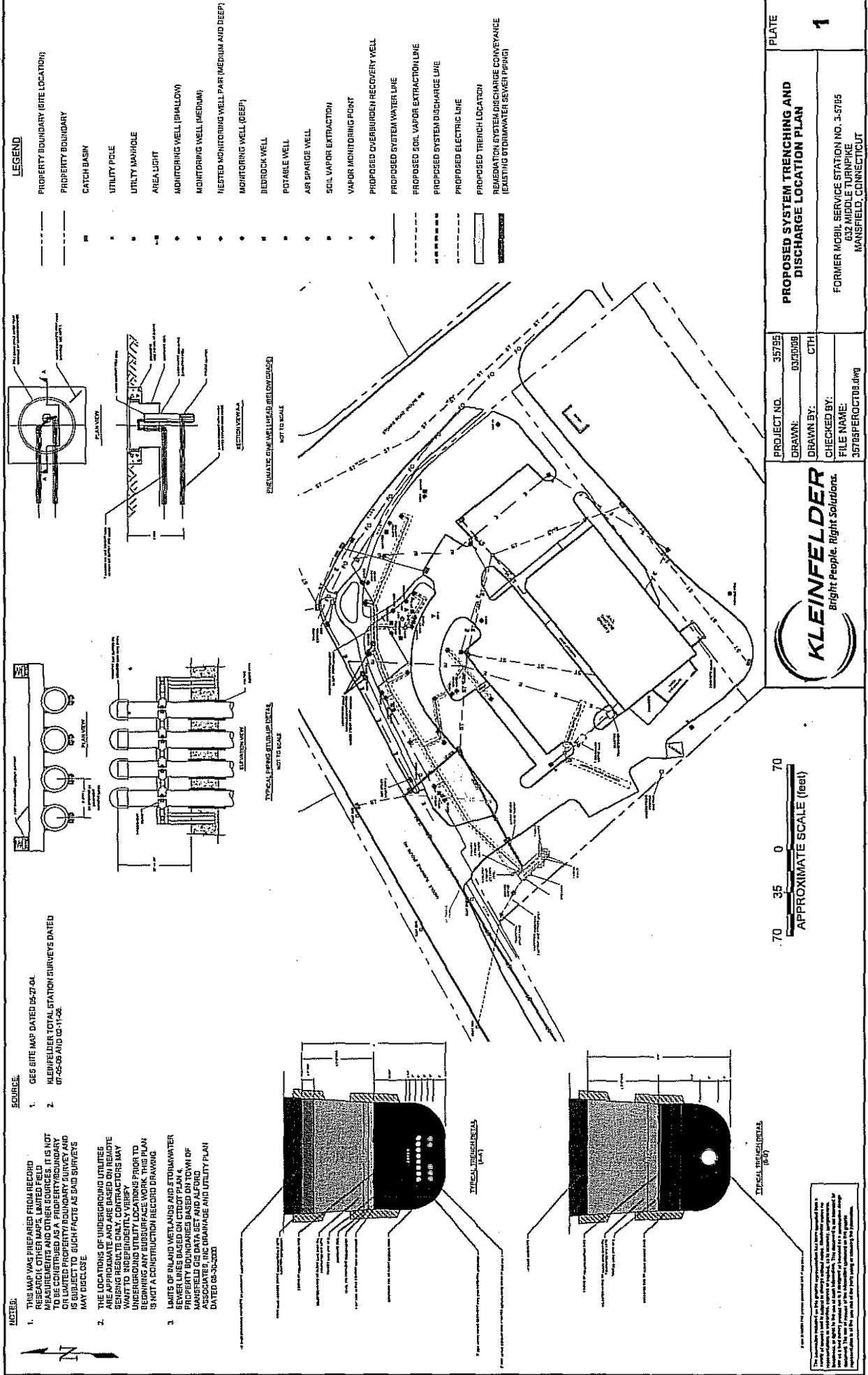
Brian J. McCann
Senior Project Geologist

 Date:
2009.04.01
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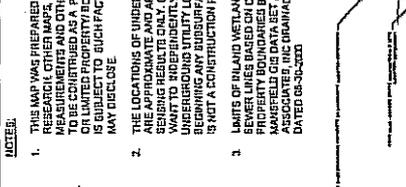
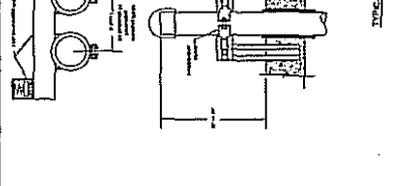
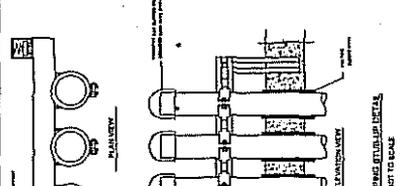
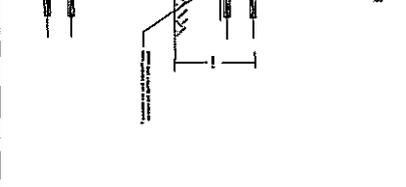
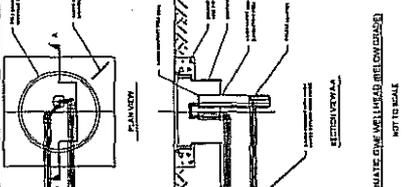
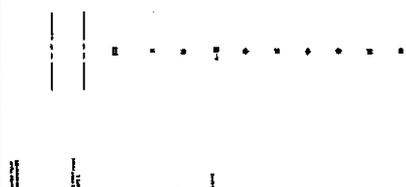
Mark Habedank
Project Manager

Enclosure

C: Mary Caruso, ExxonMobil Corporation c/o Quantum Management Group, Inc.
Jessica Garbus, CTDEP



- LEGEND**
- PROPERTY BOUNDARY (SITE LOCATION)
 - PROPERTY BOUNDARY
 - CATCHEN BASIN
 - UTILITY POLE
 - UTILITY MANHOLE
 - AREA LIGHT
 - MONITORING WELL (SHALLOW)
 - MONITORING WELL (MEDIUM)
 - NESTED MONITORING WELL PAIR (MEDIUM AND DEEP)
 - MONITORING WELL (DEEP)
 - BEDROCK WELL
 - POTABLE WELL
 - AIR SPARGE WELL
 - SOIL VAPOR EXTRACTION
 - VAPOR MONITORING POINT
 - PROPOSED OVERBURDEN RECOVERY WELL
 - PROPOSED SYSTEM WATER LINE
 - PROPOSED SOIL VAPOR EXTRACTION LINE
 - PROPOSED SYSTEM DISCHARGE LINE
 - PROPOSED ELECTRIC LINE
 - PROPOSED TRENCH LOCATION
 - RENOVATION SYSTEM DISCHARGE CONVEYANCE (EXISTING STORMWATER SEWER PIPING)



NOTE:

- THIS MAP WAS PREPARED FROM RECORD RESEARCH; OTHER MAPS, LIMITED FIELD RESEARCH AND OTHER SURVEYS. IT IS NOT TO BE CONSIDERED AS A FINAL SURVEY OR LIMITED PROPERTY BOUNDARY SURVEY AND IS SUBJECT TO SUCH FACTS AS SAID SURVEYS MAY DISCLOSE.
- THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND ARE BASED ON REMOTE SENSING RESULTS ONLY. CONTRACTORS MAY WANT TO INDEPENDENTLY VERIFY THE LOCATION OF UTILITIES PRIOR TO BEGINNING ANY SUBSURFACE WORK. THIS PLAN IS NOT A CONSTRUCTION RECORD DRAWING.
- LIMITS OF INLAND WELLS AND STORMWATER COLLECTION SYSTEMS ARE BASED ON TOWN OF MANSFIELD GIS DATA SET AND ALFORD ASSOCIATED, INC. DRAINAGE AND UTILITY PLAN DATED 08-20-2022.

SOURCE:

- GIS SITE MAP DATED 05-27-04
- KLEINFELDER TOTAL STATION SURVEYS DATED 07-25-05 AND 02-17-08

SCALE:

70 35 0 70
APPROXIMATE SCALE (feet)

PROJECT NO.: 35795
DRAWN BY: DYP/DOB
CHECKED BY: CTH
FILE NAME: 35795PERFECT08.dwg

FORMER MOBIL SERVICE STATION NO. 3-5795
632 MIDDLE TURNPIKE
MANSFIELD, CONNECTICUT

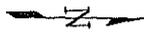
PROPOSED SYSTEM TRENCHING AND DISCHARGE LOCATION PLAN

PLATE 1

KLEINFELDER
Bright People. Right Solutions.

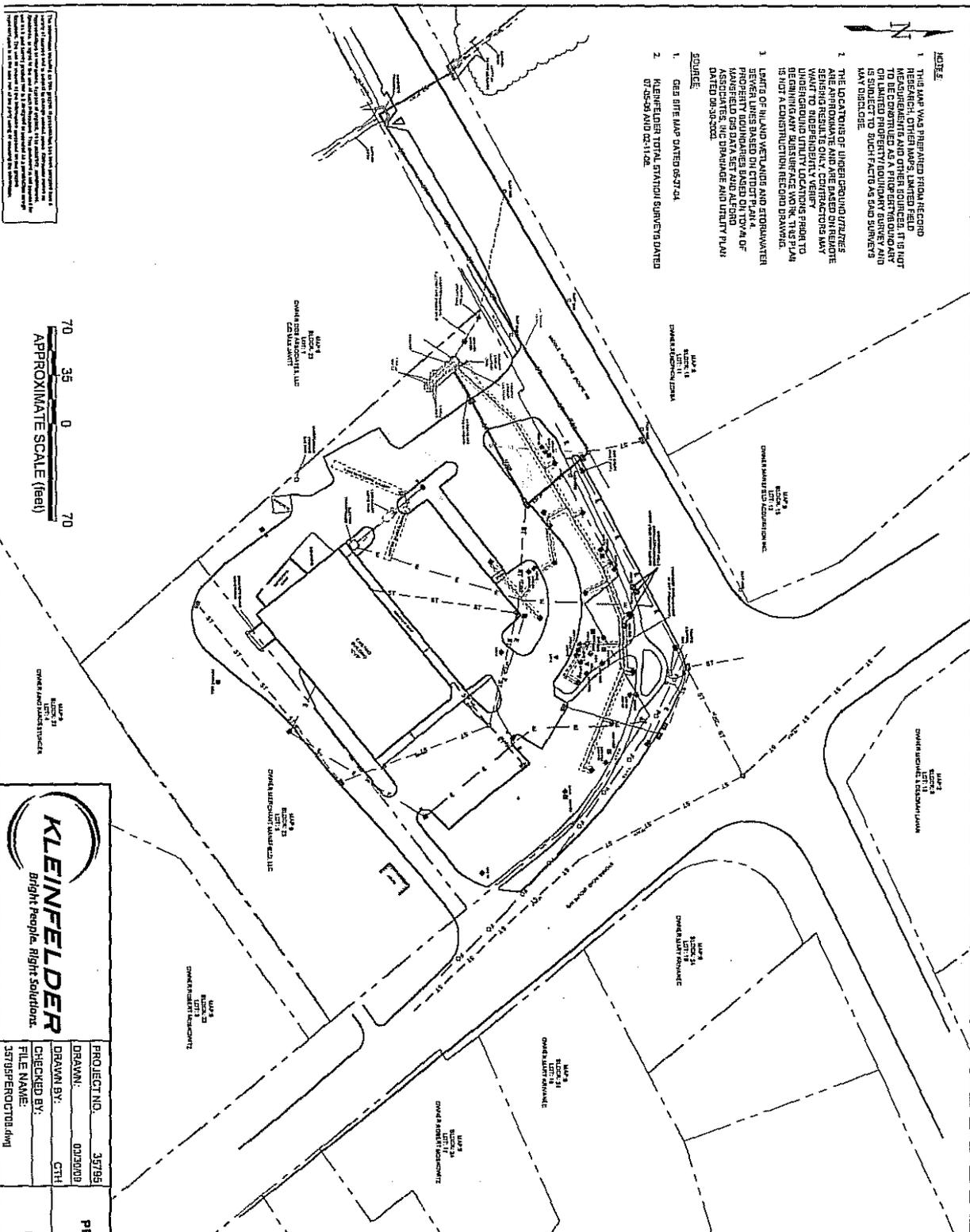
FOR THE RECORD THIS PLAN WAS PREPARED BY ALFORD ASSOCIATED, INC. ON BEHALF OF KLEINFELDER ENGINEERING, INC. THE INFORMATION CONTAINED HEREIN IS THE PROPERTY OF KLEINFELDER ENGINEERING, INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF KLEINFELDER ENGINEERING, INC. THE INFORMATION CONTAINED HEREIN IS NOT TO BE USED FOR ANY PURPOSE OTHER THAN THAT AUTHORIZED BY KLEINFELDER ENGINEERING, INC. THE INFORMATION CONTAINED HEREIN IS NOT TO BE USED FOR ANY PURPOSE OTHER THAN THAT AUTHORIZED BY KLEINFELDER ENGINEERING, INC.

DATE: 08-20-2022



- NOTE:**
1. THIS MAP WAS PREPARED FROM RECORD MEASUREMENTS OF THE LIMITED FIELD SURVEY. IT IS NOT TO BE CONSIDERED AS A FURTHER BOUNDARY SURVEY AND IS SUBJECT TO SUCH FACTS AS SAND SURVEYS MAY DISCLOSE.
 2. THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND ARE BASED ON REMOTE SURVEYS. ONLY CONTRACTORS MAY UNDEGROUND UTILITY LOCATIONS PRIOR TO BEGINNING ANY UNDERGROUND WORK. THIS PLAN IS NOT A CONSTRUCTION RECORD DRAWING.
 3. LIMITS OF IN AND OUTLANDS AND SUBSEQUENT SEWER LINES BASED ON CLOT PLAN 4. PROPERTY BOUNDARIES BASED ON TOWN OF MANSFIELD DATA SET AND ALTHOUGH PROPERTY BOUNDARIES AND UTILITY PLAN DATED 08/25/2008.

- SOURCE:**
1. GDS SITE MAP DATED 06/27/24
 2. REINFFELDER TOTAL STATION SURVEYS DATED 07/25/08 AND 08/11/08



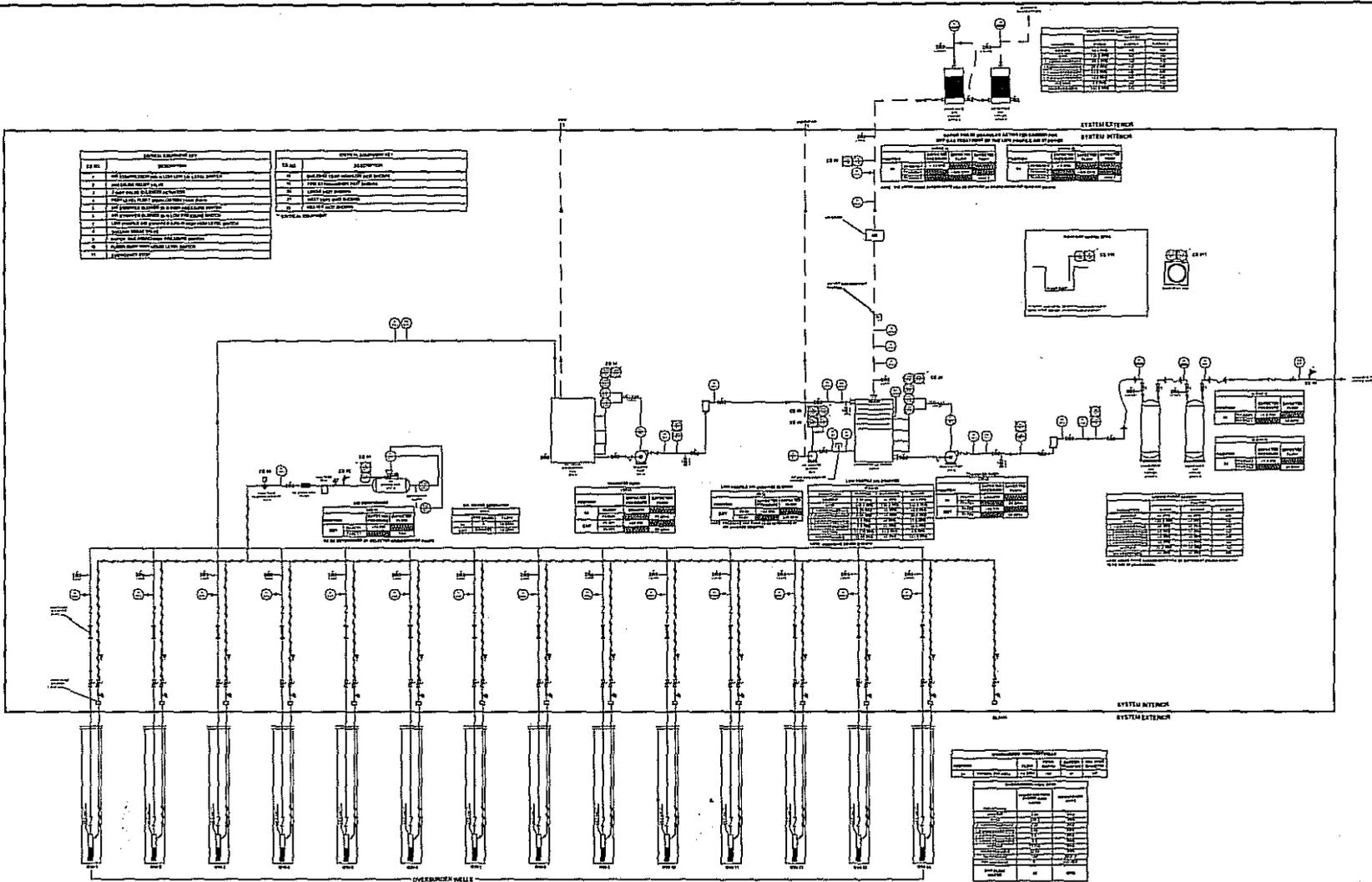
- LEGEND**
- PROPERTY BOUNDARY (SITE LOCATION)
 - PROPERTY BOUNDARY
 - CATCH BASIN
 - UTILITY POLE
 - UTILITY MANHOLE
 - AREA LIGHT
 - MONITORING WELL (SHALLOW)
 - MONITORING WELL (MEDIUM)
 - NESTED MONITORING WELL (PUMP MEDIUM AND DEEP)
 - MONITORING WELL (DEEP)
 - BENCH MARK
 - PORTABLE WELL
 - AIR SPARGE WELL
 - SOIL VAPOR EXTRACTION
 - VAPOR MONITORING POINT
 - PROPOSED OVERBURDEN RECOVERY WELL
 - PROPOSED SYSTEM WATER LINE
 - PROPOSED SOIL VAPOR EXTRACTION LINE
 - PROPOSED VENTILATION DISCHARGE LINE
 - PROPOSED ELECTRIC LINE
 - PROPOSED TRENCH LOCATION
 - RELOCATION BY OTHER DISCHARGE CONVEYANCE (EXISTING FROM WATER SEWER (PUMP))

Bright People. Right Solutions.

PROJECT NO. 35795 DRAWN BY: 02/28/09 CHECKED BY: CTH FILE NAME: 35795R10C10D08.dwg	PROPOSED SYSTEM TRENCHING AND DISCHARGE LOCATION PLAN FORMER MDR. SERVICE STATION NO. 3.5795 MANSFIELD, CONNECTICUT
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PLATE 2

This information is provided for your information only. It is not intended to be used as a substitute for professional engineering or other services. The user of this information is responsible for its use. The user of this information is responsible for its use. The user of this information is responsible for its use.



EQ. NO.	EQUIPMENT	EQ. NO.	EQUIPMENT
1	STORAGE TANK	10	VALVE
2	VALVE	11	VALVE
3	VALVE	12	VALVE
4	VALVE	13	VALVE
5	VALVE	14	VALVE
6	VALVE	15	VALVE
7	VALVE	16	VALVE
8	VALVE	17	VALVE
9	VALVE	18	VALVE

NO.	DESCRIPTION	UNIT	GRADE
1
2
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NO.	DESCRIPTION	UNIT	GRADE
1
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10

The information included on this graphic representation has been prepared from a range of sources and is subject to change without notice. Equipment names are not intended to represent, suggest or imply, in any manner, manufacturer, brand, or origin for the use of such equipment. This document is not intended to be used as a final survey product nor is it designed or intended to be a construction permit application. The use or reuse of the information contained on this graphic representation is at the user's risk of the party using or reusing the information.



PROJECT NO. 35795
 DRAWN: 03/30/09
 DRAWN BY: GTH
 CHECKED BY:
 FILE NAME:
 35795PEROCT08.dwg

SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM
 FORMER MOBIL SERVICE STATION NO. 3-5795
 632 MIDDLE TURNPIKE
 MANSFIELD, CONNECTICUT

PLATE
3



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



STATE OF CONNECTICUT
V.
EXXON COMPANY, U.S.A.

ORDER

- A. The Commissioner of Environmental Protection ("the Commissioner") finds:
1. Exxon Company, U.S.A. ("Respondent") is a corporation which is the owner of property located at 632 Middle Turnpike in Mansfield, Connecticut ("the site,") more fully described in a deed which is recorded at page 601 of volume 105 of the Mansfield land records and described as Lot #2, Block 23 on map #9 in the Mansfield Tax Assessor's office.
 2. Respondent owned, operated, and was responsible for maintaining an underground gasoline storage tank facility at the site.
 3. Respondent operated three (3) automotive service bays at the site, with floor drains located in each bay that discharged wastewaters to the site.
 4. Soil and groundwater on the site are polluted with components of gasoline.
 5. By virtue of the above, Respondent has polluted the waters of the State and has created or is maintaining a facility or condition which reasonably can be expected to create a source of pollution to the waters of the State and is the owner of land from which a potential source of pollution emanates.
- B. The Commissioner, acting under Sections 22a-6, 22a-424, 22a-427, 22a-432, and 22a-433 of the Connecticut General Statutes, orders Respondent as follows:
1. a. On or before March 31, 1992, Respondent shall retain one or more qualified consultants acceptable to the Commissioner to prepare the documents and implement or oversee the actions required by this order and shall, by that date, notify the Commissioner in writing of the identity of such consultants. Respondent shall retain one or more qualified consultants acceptable to the Commissioner until this order is fully complied with, and, within ten days of retaining any consultant other than the one originally identified under this paragraph, Respondent shall notify the Commissioner in writing of the identity of such other consultant. Respondent shall submit to the Commissioner a description of a consultant's education, experience and training which is relevant to the work required by this order within ten days after a request for such a description. Nothing in this paragraph shall preclude the Commissioner from finding a previously acceptable consultant unacceptable.

Phone:

165 Capitol Avenue • Hartford, Connecticut 06106

An Equal Opportunity Employer

- b. On or before April 30, 1992, Respondent shall submit for the Commissioner's review and written approval a scope of study for an investigation of the activities described above in paragraphs 2 through 4 and the potential impact of such activities on the environment both on-site and off-site, including but not limited to the existing and potential extent and degree of soil, ground water and surface water pollution. Such scope of study shall include at least the proposed location and depths of soil borings and ground water monitor wells and soil and surface water sampling, a proposed sampling and analytical program including at least the parameters to be tested, proposed sampling and analytical methods, and quality assurance and quality control procedures, and a schedule for conducting the investigation.
- c. If the investigation carried out under an approved scope of study does not fully characterize the extent and degree of soil, surface water and ground water pollution to the satisfaction of the Commissioner, additional investigation shall be performed in accordance with a supplemental plan and schedule approved in writing by the Commissioner. Unless otherwise specified in writing by the Commissioner, the supplemental plan and schedule shall be submitted for the Commissioner's review and written approval on or before thirty days after notice from the Commissioner to the Respondent that they are required.
- d. Respondent shall perform the investigation and other actions specified in the approved scope of study and in any approved supplemental plan(s) in accordance with the approved schedule(s). Respondent shall notify the Commissioner of the date and time of installation of monitoring wells and of each soil and water sampling event at least five full business days prior to such installation or sampling.
- e. Except as may be provided in the investigation schedule approved by the Commissioner, on or before thirty days after the approved date for completion of the investigation, Respondent shall submit for the Commissioner's review and written approval a comprehensive and thorough report which describes in detail the investigation performed; identifies the location of all waste discharges on site; defines the existing and potential extent and degree of soil, surface water and ground water pollution which is on, is emanating from or has emanated from the site; and evaluates the alternatives for remedial actions to abate such pollution, proposes a preferred alternative with supporting justification therefor, and proposes a detailed program and schedule to perform the preferred remedial actions. Such report shall also include but not be limited to a soil, surface water and ground water monitoring program to determine the degree to which the approved remedial actions have been effective, and a schedule for performing the approved monitoring program.

- f. Unless another deadline is specified in writing by the Commissioner, on or before sixty days after approval of the report described in the preceding paragraph, Respondent shall submit for the Commissioner's review and written approval contract plans and specifications for the approved remedial actions and shall submit applications for all permits required for such actions. Respondent shall use best efforts to obtain all required permits.
 - g. Respondent shall perform the approved remedial actions in accordance with the approved schedule(s), and within fifteen days of completing such actions, shall certify to the Commissioner in writing that the actions have been completed as approved.
 - h. Respondent shall perform the approved monitoring program to determine the effectiveness of the remedial actions in accordance with the approved schedule(s). If the approved remedial actions do not result in the prevention and abatement of soil, surface water and ground water pollution to the satisfaction of the Commissioner, additional remedial actions and measures for monitoring and reporting on the effectiveness of those actions shall be performed in accordance with a supplemental plan and schedule approved in writing by the Commissioner. Unless otherwise specified in writing by the Commissioner, the supplemental plan and schedule shall be submitted for the Commissioner's review and written approval on or before thirty days after notice from the Commissioner to the Respondent that they are required.
 - i. On a schedule established by the Commissioner or, if no such schedule is established, on a quarterly basis beginning no later than ninety days after initiation of the approved remedial actions or, as applicable, supplemental remedial actions, Respondent shall submit for the Commissioner's review and written approval a report describing the results to date of the monitoring program to determine the effectiveness of the remedial actions.
2. Full Compliance. Respondent shall not be considered in full compliance with this order until all actions required by this order have been completed as approved and to the satisfaction of the Commissioner, and all soil, surface water and ground water pollution which is on, is emanating from or emanated from Respondent's property and their sources have been abated to the satisfaction of the Commissioner.
 3. Sample Analysis. All sample analysis which is required by this order and all reporting of such sample analysis shall be done by a laboratory certified by the Connecticut Department of Health Services for such analyses, and the value of each parameter shall be reported to the maximum level of precision and accuracy possible.

4. Approvals. Respondent shall use best efforts to submit to the Commissioner all documents required by this order in a complete and approvable form. If the Commissioner notifies the Respondent that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and Respondent shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within thirty days of the Commissioner's notice of deficiencies. In approving any document or other action under this order, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this order. Nothing in this paragraph shall excuse noncompliance or delay.
5. Definitions. As used in this order, "Commissioner" means the Commissioner or an agent of the Commissioner.
6. Dates. The date of submission to the Commissioner of any document required by this order shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this order, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally delivered or the date three days after it is mailed by the Commissioner, whichever is earlier. Except as otherwise specified in this order, the word "day" as used in this order means calendar day. Any document or action which is required by this order to be submitted or performed by a date which falls on a Saturday, Sunday or legal holiday shall be submitted or performed on or before the following business day.
7. Notification of noncompliance. In the event that Respondent becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this order or any document required hereunder, Respondent shall immediately notify the Commissioner and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. In so notifying the Commissioner, Respondent shall state in writing the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and Respondent shall comply with any dates which may be approved in writing by the Commissioner. Notification by Respondent shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing.

8. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this order shall be signed by a responsible corporate officer of the Respondent and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments and certify that based on reasonable investigation, including my inquiry of those individuals immediately responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief, and I understand that any false statement made in this document or its attachments may be punishable as a criminal offense."
9. Noncompliance. Failure to comply with this order may subject Respondent to an injunction and penalties under Chapters 439 and 446k of the Connecticut General Statutes.
10. False statements. Any false statement in any information submitted pursuant to this order may be punishable as a criminal offense under Section 22a-438 or 22a-131a of the Connecticut General Statutes or, in accordance with Section 22a-6, under Section 53a-157 of the Connecticut General Statutes.
11. Notice of transfer; liability of Respondent and others. Until Respondent has fully complied with this order, Respondent shall notify the Commissioner in writing no later than fifteen days after transferring all or any portion of the operations which are the subject of this order, the site or the business, or obtaining a new mailing or location address. Respondent's obligations under this order shall not be affected by the passage of title to any property to any other person or municipality. Any future owner of the site may be subject to the issuance of an order from the Commissioner. The terms of this order shall apply to and be binding upon Respondent's successors and assigns, as provided by law.
12. Commissioner's powers. Nothing in this order shall affect the Commissioner's authority to institute any proceeding to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law, including but not limited to violations of any permit issued by the Commissioner. If at any time the Commissioner determines that the actions taken by Respondent pursuant to this order have not fully characterized the extent and degree of pollution or have not successfully abated or prevented pollution, the Commissioner may institute any proceeding to require Respondent to undertake further investigation or further action to prevent or abate pollution.
13. Respondent's obligations under law. Nothing in this order shall relieve Respondent of other obligations under applicable federal, state and, to the extent local law is consistent with the requirements of this order, local law.

14. No assurance by Commissioner. No provision of this order and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by Respondent pursuant to this order will result in compliance or prevent or abate pollution.
15. Notice to Commissioner of changes. Within fifteen days of the date Respondent becomes aware of a change in any information submitted to the Commissioner under this order, or that any such information was inaccurate or misleading or that any relevant information was omitted, Respondent shall submit the correct or omitted information to the Commissioner.
16. Submission of documents. Any document required to be submitted to the Commissioner under this order shall, unless otherwise specified in writing by the Commissioner, be directed to:

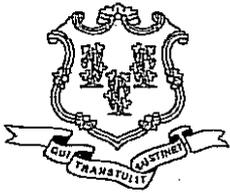
Mr. Robert Robinson
Department of Environmental Protection
Water Management Bureau
122 Washington Street
Hartford, Connecticut 06106

Issued as an order of the Commissioner of Environmental Protection.

March 25, 1972
Date


Timothy R. E. Keeney
Commissioner

ORDER NO. WC 5052
DEP/WPC 078-041
TOWN OF MANSFIELD
LAND RECORDS



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

October 3, 2008



APPROVAL

Ms. Mary Caruso
Quantum Management Group, Inc.
3705 Quakerbridge Road, Suite 102
Hamilton, New Jersey 08619

RE: Former Exxon RAS No. 3-5795
632 Middle Turnpike
Mansfield, Connecticut

Dear Ms. Caruso:

The Remediation Division of the Bureau of Water Protection and Land Reuse has reviewed the remedial action plan titled "Remedial Action Plan, Former Exxon RAS No. 3-5795, 632 Middle Turnpike, Mansfield, CT," dated June 2008 and amending correspondence dated September 26, 2008. The remedial action plan and the amending correspondence were prepared on behalf of ExxonMobile Oil Corporation by Kleinfelder, Windsor, CT. The report was submitted in conjunction with Order # WC 5052.

The report proposes the implementation of a groundwater extraction and treatment system to address dissolved-phase petroleum and metals impact to the aquifer. Surfactant-enhanced and/or vacuum extraction will be evaluated after approximately one year of operation. A supplemental RAP will be submitted for review and approval if either of these technologies is determined to be significantly effective.

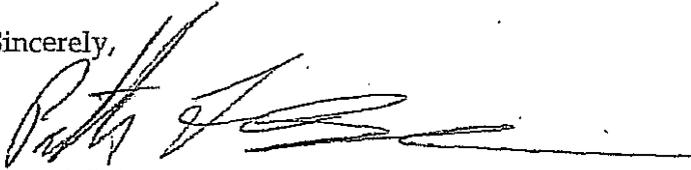
The above referenced remedial action plan is hereby approved.

Nothing in this approval shall affect the Commissioner's authority to institute any proceeding, or take any action to prevent or abate pollution, to recover costs and natural resource damages, and to impose penalties for violations of law. If at any time the Commissioner determines that the approved actions have not fully characterized the extent and degree of pollution or have not successfully abated or prevented pollution, the Commissioner may institute any proceeding, or take any action to require further investigation or further action to prevent or abate pollution. This approval relates only to pollution or contamination identified in the above referenced proposal.

In addition, nothing in this approval shall relieve any person of his or her obligations under applicable federal, state and local law.

If you have any questions pertaining to this matter, please contact Jessica Garbus of my staff at (860) 424-3849.

Sincerely,



Patrick F. Bowe
Director
Remediation Division
Bureau of Water Protection and Land Reuse

FFB:JLG

c: Brian McCann, Kleinfelder, 99 Lambertson Road, Suite 201, Windsor, CT 06095
Mark Habedank, Kleinfelder, 99 Lambertson Road, Suite 201, Windsor, CT 06095

Sent Certified Mail
Return Receipt Requested

2. Notice of EIE for Construction of Two Academic Buildings

Municipality where proposed project will be located: Storrs, CT

Address of Project Location: Fairfield Way

Project Description: The University of Connecticut plans to construct a 136,000 square foot LEED Silver certified classroom and academic offices building at the location of the former UConn Co-op and a 60,000 square foot LEED Silver certified classroom building at the location of the former Pharmacy Building.

Project Map: See Site Location Map.

Comments for this EIE will be accepted until the close of business on:

May 21, 2009 (4:30 PM)

The public can view a copy of this EIE at:

University of Connecticut, Office of Environmental Policy
Mansfield Town Hall (Clerk's Office)
Mansfield Public Library

There is a public hearing scheduled for this EIE on:

Date: May 20, 2009

Time: 7:00 p.m.

Place: UConn Bishop Center
One Bishop Circle
Storrs, CT 06269-4056

Entrance is off of 195, see: Directions to Bishop Center

Notes: Doors open at 6:30 pm. The hearing will conclude at the end of the public comments.

Send your comments about this EIE to:

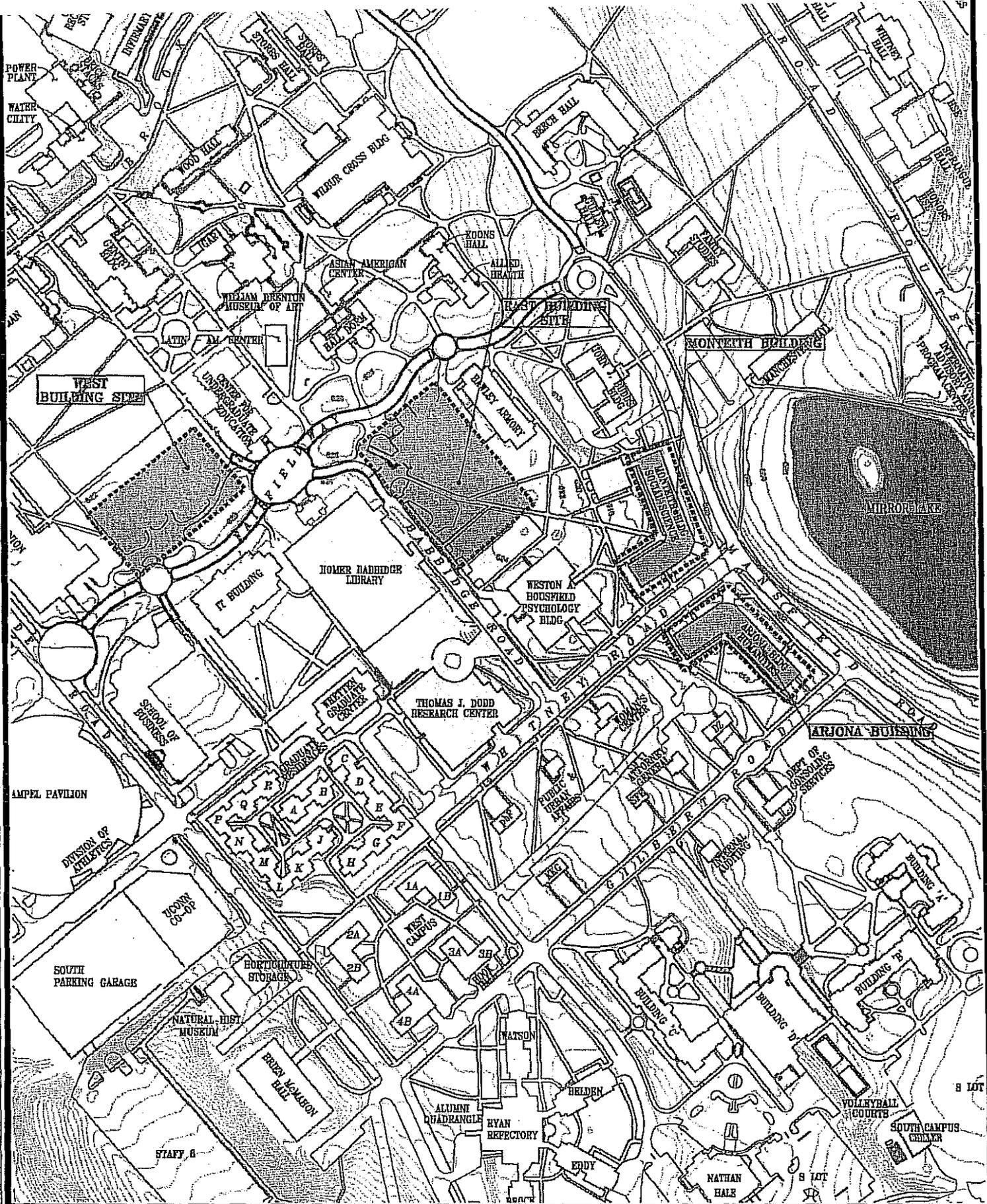
Name: Paul E. Ferri, Environmental Compliance Analyst
Agency: University of Connecticut, Office of Environmental Policy
Address: 31 LeDoyt Road, U-Box 3055, Storrs, Connecticut
06269-3055

Fax: (860) 486-5477
Email: paul.ferri@uconn.edu

If you have questions about the public hearing, or where you can review this EIE, or similar matters, please contact Paul Ferri at:

Phone: (860) 486-9295
Email: paul.ferri@uconn.edu

Drawing: H-1958-08/09A/UC-ALL UTILITIES-FIGURE-1-2.DWG Layout Table SW-11V



Printed by DESKTOP On this date: Mon, 2009 March 30 - 2:10pm

 MILONE & MACBROOM Engineering, Landscape Architecture and Environmental Science 99 Realty Drive Cheshire, Connecticut 06410 (203) 271-1773 Fax (203) 272-9733 www.miloneandmacbroom.com	Environmental Impact Evaluation Construction of Two Academic Classroom/Departmental Buildings		LOCATION: University of Connecticut Storrs, Connecticut	
	NMI #: 1958-08 DWC: UC-ALL UTILITIES LSH:	University Topography Site Location Map		DATE: March 2009 SCALE: N.T.S.

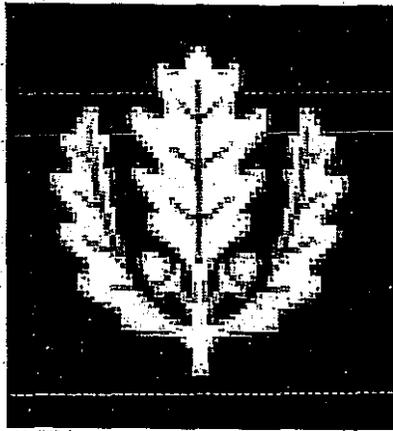
DRAFT ENVIRONMENTAL IMPACT EVALUATION

CONSTRUCTION OF TWO ACADEMIC CLASSROOM/
DEPARTMENTAL BUILDINGS

UNIVERSITY OF CONNECTICUT
STORRS, CONNECTICUT

MMI #1958-08-1

April 2009



Prepared for:

University of Connecticut
31 Ledoyt Road
Storrs, Connecticut 06269

Prepared by:

MILONE & MACBROOM, INC.
99 Realty Drive
Cheshire, Connecticut 06410
(203) 271-1773
www.miloneandmacbroom.com

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EXECUTIVE SUMMARY

The University of Connecticut (the University) is in the process of executing its *2006 Campus Master Plan Update* via the UConn 2000 Capital Program, much of which involves new construction and renovation of academic and research facilities. As part of this effort, the University is undertaking a project that involves the design and construction of two new buildings that will house the five social sciences departments associated with the College of Liberal Arts and Sciences (CLAS) as well as general purpose classrooms to replace program activities located in the Henry Ruthven Monteith (Monteith) and Jamie Homero Arjona (Arjona) buildings located on the main campus in Storrs, Connecticut.

The University has retained Milone & MacBroom, Inc. to complete an Environmental Impact Evaluation (EIE) for the construction of the new buildings. The format and content of this EIE are based upon the requirements of the Connecticut Environmental Policy Act (CEPA), Sections 22a-1 through 22a-1h of the Connecticut General Statutes (CGS), and Sections 22a-1 through 22a-1a-12 of the Regulations of Connecticut State Agencies (RCSA). State funds will be used for the design, construction, and renovation of the existing and proposed facilities, thus triggering the CEPA process.

This EIE establishes the purpose and need for the project, assesses alternatives, evaluates the existing environment conditions, and analyzes potential adverse impacts to the environment. In addition, the EIE identifies mitigation opportunities for any adverse impacts and identifies likely construction and operational permitting requirements for the project.

Based on the strategic goals and the fundamental characteristics identified within the *Campus Master Plan*, the primary goals and objectives for the proposed project are to:

- Provide approximately 190,000 square feet of new classroom and departmental office building space
- Maintain the function of the outdated Arjona and Monteith buildings and provide future expansion space
- Construct high performance, sustainable buildings that are integrated with the University's educational mission and master plan
- Meet the academic needs of the departments to be relocated to the new Social Sciences and Humanities buildings and provide efficient transition for their relocation
- Maintain proximity to the academic core (i.e., Babbidge Library, Center of Undergraduate Education, and Student Union)
- Maintain proximity to Fairfield Way and implement the southern segment of Academic Way
- Promote gathering places for the University community
- Develop a project that is consistent with the 2007 Water and Wastewater Master Plan, Eagleville Brook Total Maximum Daily Load Analysis, and Water Conservation Plan
- Achieve reasonable construction and long-term operating costs.

Alternatives Analysis

Guidelines established through the *Campus Master Plan*, academic requirements, and preliminary design reports were used to develop a series of goals and objectives for this project. Several alternatives were developed during this process. Apart from the "No Action" or "No Build" alternative, several alternative on-campus locations and several different building configurations were considered for the new Social Sciences and Humanities buildings. Alternatives were measured against the identified project purpose, goals, and objectives presented herein.

The preferred alternative calls for the construction of two new Leadership in Energy and Environmental Design (LEED®) certified classroom and faculty department office buildings, and maintains use for the Arjona and Monteith buildings. The new buildings consist of approximately 190,000 gross square feet. The East Building will provide 130,000 square feet of faculty, laboratory, and classroom space. The West Building will provide 60,000 square feet of general purpose classroom space.

Limited renovation of the Arjona and Monteith buildings will provide the University with needed swing space for future campus improvement programs. Swing space is building space that is used for substitute space while existing space is being renovated or reconstructed. The long-term use for Arjona and Monteith has not been determined. The proposed building configuration will create strong definition along the upper and lower sections of Fairfield Way, maintain connection of Fairfield Way, allow for future expansion of the Psychology building, and meet departmental needs. Furthermore, the preferred alternative will accomplish the goals and objectives set forth by the *Campus Master Plan* as well as the project-specific goals and objectives.

Environmental Impact and Mitigation Opportunity Analysis

Existing environmental conditions were assessed at the project site to help determine whether the project would adversely impact the environment. Table ES-1 presents the project's environmental impact and mitigation opportunity analysis.

**TABLE ES-1
Environmental Impact and Mitigation Opportunity Analysis**

Resource Category	Proposed Impact	Proposed Mitigation
Land Use and Zoning/Long-range State and Local Planning	→ None	→ None
Socioeconomics	→ None	→ None
Community Facilities and Services	→ None	→ None
Aesthetic/Visual Resources	→ Short-term aesthetic impacts while buildings are being constructed and/or renovated.	→ Buildings will be designed in conformance with University architectural design policies. → Limited renovation of Arjona and Monteith buildings will improve aesthetics.
Utilities and Services	→ Future buildings will increase electrical, drinking water, wastewater, steam, and chilled water demands.	→ Proposed utility connections will be coordinated with appropriate campus utility managers, as necessary, prior to construction. → Meters will be installed at each building to monitor water consumption. → Water and energy conservation measures will be incorporated into the new building designs. → The proposed project will not result in increases in peak rates of runoff over existing conditions for storms up to and including the 100-year storm for any subdrainage basin within the project site. → LEED silver certification design parameters will be applied for stormwater treatment, water conservation, and energy conservation. → Postdevelopment stormwater treatment practices and maintenance requirements will be implemented to address stormwater quantity and quality that are consistent with the <i>DEP's 2004 Stormwater Quality Manual</i> guidelines.
Cultural Resources	→ None	→ None
Traffic and Parking	→ Temporary construction-related traffic. → Existing Homer Babbidge Library access road and seven handicap spaces fall within the East Building footprint.	→ Appropriate traffic management techniques during construction will be incorporated into the final project plans and specifications. → Relocate access road and reconfigure handicap spaces around proposed building.
Water Resources	→ Short-term land disturbances related to construction.	→ The stormwater management plan has been designed such that the proposed project will not result in increases in peak rates of runoff over existing conditions for storms up to and including the 100-year storm for any subdrainage basin within the project site. → A greenroof system is proposed to partially offset impervious surface increases. → Appropriate sediment and erosion control devices will be incorporated as specified on the plans and in accordance with the <i>2002 CT Guidelines for Soil Erosion and Sediment Control</i> .
Flood Hazard Potential	→ None	→ None

Resource Category	Proposed Impact	Proposed Mitigation
Biological Resources	→ None	→ None
Topography, Geology, and Soils	→ None	→ None
Air Quality	→ Short-term impacts associated with construction activities.	<ul style="list-style-type: none"> → Construction best management practices will be undertaken to limit dust impacts. → Excessive construction equipment idling will be prohibited, and air pollution control devices (e.g., particulate filters) and clean fuels will be used during project construction where appropriate.
Noise	→ Short-term impacts associated with construction activities.	<ul style="list-style-type: none"> → The project will conform to Connecticut noise regulations. → Construction will be limited to daylight hours. → Construction equipment will be properly maintained. → Advance notification will be provided to nearby receptors if construction activities are anticipated to produce temporary excessive noise levels.
Solid Waste and Hazardous Materials	<ul style="list-style-type: none"> → Construction of the project will result in one-time generation of minimal amounts of construction-related waste. 	<ul style="list-style-type: none"> → Storage of fluids associated with construction equipment and vehicles will be in accordance with applicable regulations. → The campuswide recycling program will be implemented at proposed buildings. → Recycled content materials will be used in the new building construction. → Recycling opportunities will be explored for construction wastes. → Handling and disposal of removal waste will be conducted in accordance with applicable solid waste regulations.

Overall, this project will cause some minor unavoidable adverse and cumulative environmental impacts as a result of increases to utility and energy consumption as well as impacts associated with the construction phase of the project. The project offsets these impacts by providing appropriate mitigation measures as identified in Table ES-1.

Table ES-2 presents a list of potential construction and operational permits that would likely be required as part of this project.

TABLE ES-2
List of Potentially Required Construction and Operational Permits

Permit/Approval	Reviewing Authority	Typical Permit Processing Schedule
Flood Management Certification	Department of Environmental Protection	6 months
General Permit for Stormwater and Dewatering Wastewaters from Construction Activities	Department of Environmental Protection	1 month
Wastewater Discharge Permit	Department of Environmental Protection	3 months
General Permit for Hydrostatic Testing Wastewater	Department of Environmental Protection	1 month
General Permit for Miscellaneous Discharges of Sewer Compatible Wastewater	Department of Environmental Protection	1 month
Certificate of Operation	Department of Transportation	1 month
Site Plan Sign-Off	Department of Public Health	1 month

existing plumbing fixtures at both buildings are intended to provide enhancement to the University.

This project is not anticipated to negatively impact the aesthetics currently found within the center of campus, along Route 195, and around Mirror Lake. Rather, it is anticipated to serve as an enhancement to the aesthetic character of the surrounding areas.

3.5 Public Utilities and Services

The utility systems on campus include both public and private utilities. Public utilities include natural gas and electricity (13.8 kV). Private utilities are those owned and operated by the University and include steam, chilled water, drinking water, sewer, storm sewers, electricity (4,800 volt and below), telephone, and cable television. The existing utilities are shown in Figure 3-7. Existing utilities are described below.

3.5.1 Water Supply

The University owns and operates a water supply and distribution system that serves the Storrs campus as well as areas within the town of Mansfield. Water is supplied to the main campus by stratified drift wells located along the Willimantic and Fenton Rivers. Level A aquifer mapping has been completed for the two wellfields. The recharge areas do not extend to the portion of the main campus where the new East and West Buildings will be located.

Academic and nonresidential domestic use for the students, faculty, and other related staff that utilize the campus facilities each day make up the second largest water use category at UConn. Total domestic usage for the academic and other nonresidential buildings is 94 million gallons per year, representing 19 percent of the total water use.

The University has implemented a strong water conservation plan for all new construction activities including such measures as reducing the demand by replacing old water and steam lines; construction of new buildings with low flow toilets, showerheads, and faucets; and water consumption efficient heating and cooling systems. Many of these water conservation measures are being incorporated in the East and West Buildings as well as the contemplated renovation of the Arjona and Monteith buildings.

The Arjona and Monteith buildings are already served by the University's potable water supply system and separate steam system. Potable water to the East and West Building sites will be provided from existing water mains located nearby. Since the proposed pipeline connections for the two proposed buildings will occur along paved accessways and previously disturbed land, the direct environmental impact is expected to be negligible.

Domestic water will be provided to the proposed East Building from the northwest corner of the site. Domestic water risers will be located throughout the building. Steam-fired domestic water heat exchangers will be provided within the basement of the building. Domestic water will be provided to the West Building from the northeast corner of the building. Domestic water risers will be located throughout the building. Steam-fired domestic water heaters will be provided within the basement of the building. Water meters will be installed at both the East and West Buildings.

The two proposed buildings will be equipped with water efficient toilets, faucets, and showerheads. High efficiency toilets (HETs) utilize 1.28 gallons per flush as compared to a traditional 1.6 gallon per flush toilet. High efficiency urinals (HEUs) utilize 0.5 gallons per flush as compared to a traditional 1.0 gallon per flush urinal. Low flow lavatory faucets will also be used in the kitchen and lavatory areas. Proposed lavatory faucet flow controls will generate flow rates between 0.5 and 1.0 gallons per minute (gpm) while proposed kitchen faucets will generate a flow rate of 1.5 gpm.

Proposed renovation measures within the Arjona and Monteith buildings include upgrading existing plumbing fixtures such as toilets, urinals, faucets, and showerheads with high efficiency fixtures.

Metered water consumption data for existing classroom/departmental buildings was reviewed. The average water usage within a typical classroom/departmental building similar to the proposed East and West Buildings is 2,000 gallons per day per building. The existing Arjona and Monteith buildings with few water conservation measures are believed to use approximately 3,000 gallons per day per building. Neither building is directly metered. As part of the renovations to the Arjona and Monteith buildings, the existing toilets, faucets, and showerheads will be upgraded to more water efficient fixtures. These upgrades are anticipated to lower the average water usage within these buildings by approximately 1,000 gallons per day per building resulting in a 2,000 gallon per day reduction in water use. In addition, if the Arjona and Monteith buildings are renovated, each building will also be metered.

Applying these rule-of-thumb estimates of 2,000 gpd per new or renovated building and 3,000 gpd per older building, one could conclude that the present potable water demand for Arjona and Monteith (total of 6,000 gpd) would be replaced by a total water demand on the order of 8,000 gpd for the two renovated buildings and the two new buildings. In reality, a net increase of 2,000 gpd will not occur because the proposed new buildings will accommodate some relocated uses that currently occur in the Arjona and Monteith buildings. Likewise, the Arjona and Monteith buildings are anticipated to be used as "swing space" for other existing uses on campus. Limited renovations to Arjona and Monteith will include water saving plumbing fixtures where applicable. As such, the overall consumptive water use by students and faculty on the entire campus will be unaffected by the redistribution of students among the renovated Arjona and Monteith buildings and the new East and West Buildings.

With regard to nonpotable water usage, the added demand placed on the water supply system for heating at the proposed East and West Buildings will be largely offset by increased efficiencies that are being realized throughout the steam system, including reduction of steam losses.

3.5.2 Sanitary Sewer

The University wastewater system includes the Water Pollution Control Facility (WPCF) at the main campus, collection system pump stations, and collection system piping. The current service area for the wastewater collection system includes the main campus, the Depot campus, and nonuniversity properties immediately surrounding the campuses. The WPCF design capacity is 3.0 million gallons per day (mgd) (average flow) and 7.0 mgd (peak flow). Average flow to the WPCF is approximately 1.2 mgd. The wastewater collection system is served by a number of pump stations, including 22 stations that serve the main and Depot campuses. A gravity pipeline conveys the treated wastewater to the Willimantic River.

The proposed buildings will be served by the University's sewer collection system. The West Building will be serviced by a lateral located at the northwest corner of the site. The East Building will be serviced by a lateral located at the northwest corner of the site. Sanitary, waste, and vent piping will be provided to drain all fixtures by gravity means to the building sanitary service. Fixtures will be Americans with Disabilities Act (ADA) compliant as required, or designed to meet federal, state, and local health code requirements. Plumbing fixtures will be of commercial grade flush valve type with wall-mounted closets and urinals or as directed by the University, complete with all required appurtenances. Lavatories will have metering type faucets in public spaces. All plumbing fixtures will meet current University water conservation requirements.

As indicated in the preceding discussion and assuming sanitary wastewater generation to be approximately equivalent to water consumption, total project flows from the proposed

project will be on the order of 2,000 gallons per day per building or less. Some of this flow is currently generated by the Arjona and Monteith buildings. The WPCF has more than enough treatment capacity to support the addition of the proposed East and West Buildings. The combined flows from the East and West Building sites and the Arjona and Monteith buildings can be collected and treated with the existing sewage facilities without negative impact.

3.5.3 Storm Sewer

Stormwater runoff is comprised of excess precipitation that flows over the ground surface and impervious areas to storm drains or watercourses. Its quality will reflect the land uses and surfaces it contacts. The Conservation and Development Policies Plan for Connecticut recognizes the expanding significance of nonpoint pollution sources in water quality concerns. In rebuilding or expanding urban infrastructure, the Plan recommends incorporating appropriate stormwater management technologies to minimize adverse impacts of runoff on surface or ground waters. For new development, the Plan promotes the design and engineering approaches to stormwater handling that minimize the amount of impervious cover and incorporation of nonstructural design features and management techniques to renovate runoff.

The Department of Environmental Protection's (DEP's) Inland Waters Resource Division routinely recommends controls designed to remove sediment and oil or grease typically found in runoff from parking and driving areas. Potential controls include gross particle separators, deep sump catch basins with oil and grease traps, and/or sedimentation basins. The DEP recommends that any catch basins installed in conjunction with paving have deep sumps to trap sediments and hoods to trap oil and grease. If more than one acre of pavement drains to a common discharge point, the DEP recommends installation of a gross particle separator. Provisions for periodic maintenance are recommended by the DEP.

The project is situated along the drainage divide between the Willimantic River Basin (No. 3100) and the Fenton River Basin (No. 3207) of the Willimantic and Natchaug Regional Basins, respectively. The West Building site has several catch basins that collect and direct stormwater into the Eagleville Brook basin, a subwatershed of the Willimantic River Basin.

The East Building site currently drains to both the Eagleville Brook subwatershed and the Fenton River Basin. The northwest portion of the East Building site drains to a series of catch basins that are directed into the Eagleville Brook watershed. The central and southern portions of the East Building site are collected in a series of catch basins that drain southeast into Mirror Lake, a small impoundment located within the Roberts Brook basin, a subwatershed of the Fenton River Basin. The Arjona and Monteith sites drain east into Mirror Lake and the Roberts Brook basin.

The CTDEP has developed a Total Maximum Daily Load (TMDL) for Eagleville Brook. A full discussion of the Eagleville Brook TMDL is presented in Section 3.8.2. It is important that the University find ways of reducing impervious cover and improving stormwater management on the main campus. The Eagleville Brook TMDL has identified that the upper portion of the Eagleville Brook watershed (in which the main campus is located) has an impervious cover of approximately 27 percent. This exceeds the targeted TMDL impervious cover of 12 percent and, therefore, new buildings must include measures that reduce impervious cover.

The two fundamental storm drainage needs for the project site are to (1) avoid or minimize downstream water quality impacts by treating stormwater prior to discharge; and (2) no net increase in peak rate of runoff. Specific concepts are to control pollutants at their sources, plan for both frequent and rare storm events, avoid unnecessary impervious cover, and use multiple treatment practices to reduce pollution loadings and concentrations. Concepts for reducing peak rates of runoff include underground detention systems and vegetated detention basins.

The University's campuswide drainage master plan calls for the renovation of stormwater to standards set by the DEP and the Environmental Protection Agency (EPA), including stormwater management standards specified in section 25-68h-3 of the Regulations of Connecticut State Agencies. Control measures include provisions to trap suspended solids, oil/grease, and other materials associated with runoff from roadways, parking lots, roofs, and other impervious surfaces. The plan will govern the control of impacts associated with the volume of stormwater discharged from developed sites on campus.

The East Building utilizes both stormwater and subsurface (e.g., underslab) drainage systems. The East Building roof consists of impervious PVC, which will collect and direct the stormwater into bioswales. Water from the 15,000 square foot northern portion of the building roof will be directed to the north bioswale, and water from the 11,800 square foot southern portion of the building roof will be directed to the south bioswale. The northern bioswale will be discharged slowly to an existing stormwater sewer pipe that drains into the Eagleville Brook watershed. The southern bioswale will have an overflow to an underground detention tank to accommodate larger storm events. This tank will discharge slowly into a stormwater pipe that discharges into Mirror Lake and the Fenton River Basin. None of the stormwater is planned to be reused on site. The underslab drainage water from the East Building is designed to be pumped directly into the storm sewers.

The West Building will only require stormwater drainage systems. The foundation will be a waterproofed thickened slab so there is no underslab drainage water. The West Building has two roof heights. The lower roof is a green roof and will retain much of the stormwater during an average storm. The upper roof will consist of impervious PVC. All stormwater from both roofs will be directed to a large bioswale sized to accommodate the two-year storm. The bioswale will have an overflow to an underground detention tank which has been sized for the 100-year storm event. This tank will be discharged slowly to an existing stormwater sewer pipe that drains into the Eagleville Brook watershed. None of the stormwater is planned to be reused on site.

The University is currently evaluating two alternatives, one of which collects the underslab drainage water for use as greywater to flush toilets in the East Building and the other which uses the collected underslab drainage water for irrigation water at the Student Union quadrangle. Since these are expensive alternatives, the University has not yet decided to accept either of them.

The greenroof system will include construction of a watertight roof system that will accommodate the installation of a perennial garden or lawn on the roof. The greenroof garden will increase absorption of water and filtering of pollutants from stormwater runoff and, most importantly, reduces impervious cover.

The greenroof garden is typically planted with alpine type plants and those plants that can retain a certain amount of moisture within their leaves or bulbs. Plant selection will be limited to those species that are known to flourish in areas of high heat, drought, wind, direct sun, and temperature extremes and should be particularly adaptable to the sometimes harsh conditions of a greenroof. Plant species typically used include coneflower, coreopsis, black-eyed Susan, sedum, grass, and goldenrod. Some greenroofs are planted with lawn that can be maintained and often require irrigation to maintain the lawn during harsh conditions such as drought. Excess stormwater collected within the detention basins could be reused to irrigate the greenroof.

It is not feasible to construct a greenroof system on top of the existing Arjona and Monteith buildings. Neither building has the structural support capacity required for installation of a greenroof garden. Major structural modifications would be required to achieve a greenroof, and the associated costs have not been deemed prudent or feasible by the University. Stormwater from the Arjona and Monteith building roofs will continue to be directed into roof drains and discharged into the gravity stormwater sewer system located beneath Mansfield Road. The stormwater from these buildings is eventually discharged into Mirror Lake and the Roberts Brook subwatershed.

Chilled water will be provided from the campus system through a heat plate exchanger. The chilled water will provide cooling for all HVAC and process loads. A chilled water pumping system will distribute chilled water throughout each of the proposed buildings. Combined chilled water demands from the proposed buildings are estimated to be on the order of 400 to 600 tons.

The existing Arjona and Monteith Buildings are currently served by the University's steam system, and no future upgrades to this system are anticipated. These buildings are not serviced by a chilled water system.

The two new buildings will increase steam usage; however, the University steam system has the capacity to support the new buildings without causing impacts to its steam system. No additional consumption rates of steam will be required for the possible renovation of the Arjona and Monteith buildings.

3.5.6 Analysis of Impact

Based on the information and analysis in the foregoing narrative, the existing systems coupled with proposed extensions for water, sanitary sewer, storm drainage, electric, natural gas, telephone, cable, and steam services will be sufficient to serve the proposed project without causing significant environmental impact.

Projected water demands and sewage generation are not expected to be measurably greater than those which currently exist due to improvements and replacement of inefficient systems. Overall, the additional draw on utility services to supply this project will be minimal in comparison to available capacities.

The Eagleville Brook TMDL has identified the upper portion of the Eagleville Brook watershed, including the main campus, as having an impervious cover of approximately 27 percent. This impervious cover significantly exceeds the targeted TMDL impervious cover

of 12 percent. The use of a green roof at the West Building sites will not increase the impervious cover within the Eagleville Brook watershed and will actually improve water quality by filtering out stormwater runoff pollutants. Another improved stormwater management strategy being implemented to address the TMDL is detention of excess runoff from the greenroof in the underground detention system. The use of the detention system will provide a no net peak rate of runoff from the East and West Buildings.

To help improve water quality and conserve water, the University will implement a stormwater collection system for both the East and West Buildings. In addition, proposed underground detention systems will provide a no net peak rate of runoff increase through the 100-year storm event within the Eagleville Brook watershed. This advanced collection system is not intended to negatively impact the University's existing storm sewer system and will help protect Eagleville Brook, a locally important surface water resource. No significant modifications to the storm sewer system are proposed for the Arjona and Monteith building renovations.

No impact to the University's electrical service and consumption is anticipated by the proposed project.

No impact to the University's natural gas service line and consumption is anticipated by the proposed project.

The proposed project is not anticipated to have a negative impact on the University's existing telephone and cable services.

3.6 Cultural Resources

A portion of the Storrs campus has been included in a National Register Historic District, encompassing sections of both sides of Route 195. The historic district includes 47 structures. The historic district boundary extends west of the Hawley Armory and onto a portion of the proposed East Building site. The Arjona building is listed as a

noncontributing structure within the historic district. Neither the West Building site nor the Monteith building is located within the historic district.

The Connecticut Commission on Culture and Tourism was contacted during the scoping process of the project. A letter from the commission outlining their comments regarding the project is attached as Appendix B. Their office has determined that the proposed project appears to have no adverse effect on cultural resources on the condition that the proposed new construction is designed in a manner that is reasonably compatible with the scale and character of the historic district. The University will continue to work with the Commission during the final design phase of the project areas to help maintain the integrity of the historic district.

3.7 Traffic and Parking

Figure 3-8 identifies roadways serving the University and the project sites. Interstate 84 along with State Route 195 are the principal routes to the University. Intrastate and interstate access occurs along U.S. Route 44 (north of the Storrs campus) and U.S. Route 6 (south of the Storrs campus). Locally, access into and out of the campus is primarily from Route 195, with secondary access through North Eagleville Road and South Eagleville Road.

inherently it follows that significant new traffic will not be generated as a result of the proposed activities.

3.8 Water Resources

3.8.1 Surface Water Resources

The town of Mansfield is located within the Thames Major Basin (No. 3) system. The project sites are situated along the drainage divide between the Willimantic River Basin (No. 3100) and the Fenton River Basin (No. 3207) of the Willimantic and Natchaug Regional Basins, respectively. Figure 3-9 illustrates the drainage basin divides in proximity to the project areas.

The Thames Major Basin drains over 1,471 square miles, including portions of Massachusetts and Rhode Island. The Natchaug Regional Basin drains approximately 176 square miles. The Willimantic Regional Basin drainage area drains approximately 226 square miles.

The West Building site is located entirely within the Willimantic River Basin. The East Building site is split by a subregional watershed divide. The northwest corner of the site is within the Willimantic Basin while the remaining area lies within the Fenton River Basin. The Arjona and Monteith buildings are located entirely within the Fenton River Basin.

The West Building site and the northeast corner of the East Building site are located within a locally important watershed basin known as the Eagleville Brook basin. The Eagleville Brook watershed has a CTDEP established Total Maximum Daily Load (TMDL) requirement. The TMDL requirement is applied to impaired waters of the state to improve water quality.

No watercourses and/or wetlands are located on the West Building site, East Building site, and/or the Arjona and Monteith building sites. Mirror Lake is located approximately 240 feet east of the Arjona and Monteith building sites. Mirror Lake drains into Roberts Brook.

Surface water quality may be influenced by both point and nonpoint sources of pollution. Point sources are well defined, discrete locations such as sewage treatment plant discharges or combined sewer overflows. Nonpoint sources of pollution include storm drainage, surface runoff, erosion, and leachate from broader areas and human activities.

The State of Connecticut has set forth a policy for the management of water quality through its Water Quality Standards wherein criteria and a classification system are applied to all surface water and ground water resources in the state. These classifications establish designated uses for surface and ground water resources and identify the criteria necessary to support those uses. Criteria have been established with respect to desirable use, antidegradation, allowable types of discharges, waste assimilation, and a variety of physical and chemical constituents.

The Willimantic River, located west of the project area, has been classified as a Bc surface water resource. The Willimantic River presently supports recreational use as well as fish and wildlife habitat but is not an active drinking water supply. Eagleville Brook, a tributary to the Willimantic River, is classified as a B/A surface water. The B/A surface water classification means that Eagleville Brook is not meeting the goal of a Class A Water Quality Criteria and attainment of Class A designated uses.

Roberts Brook, a tributary to the Fenton River, is classified as an AA surface water resource and supports the designated uses associated with that classification. The Fenton River has been classified as a B/AA surface water resource. Surface waters designated Class B/AA may not presently meet Class AA water quality criteria or support the designated uses. The goal for such surface water is to meet Class AA criteria and

maintain the designated uses. The Fenton River presently supports recreational use and provides fish and wildlife habitat.

3.8.2 Eagleville Brook TMDL Analysis

In February 2007, the CTDEP completed a Total Maximum Daily Load (TMDL) Analysis on Eagleville Brook, a tributary to the Willimantic River. TMDLs are required by the state when a surface waterbody has become impaired by pollutants for which technology-based controls are insufficient to achieve water quality standards. The TMDL represents the maximum loading that a waterbody can receive without exceeding water quality criteria that have been adopted into the Water Quality Standards.

It has been determined through biological monitoring that aquatic life use goals are not being met in Eagleville Brook. The TMDL analysis determined that the probable cause of the aquatic life impairments is a complex array of pollutants transported by stormwater. The TMDL target for Eagleville Brook is maintenance of an impervious cover of 12 percent within the watershed. The 12 percent threshold represents the level of imperviousness below which the brook is capable of supporting a macroinvertebrate community that meets aquatic life use goals in Connecticut Water Quality Standards. Wasteload allocation and load allocation factors were also applied to Eagleville Brook, and a new target of impervious cover of 11 percent was set. The lower percentage was targeted in order to reduce pollutant loads and restore hydrologic and biological integrity of the watershed as a whole.

The percent impervious cover on the UConn campus already exceeds the established Eagleville Brook watershed thresholds. Any future development activities that have the potential to increase impervious cover should be constructed and operated to limit the effect of stormwater from impervious cover on the aquatic life in Eagleville Brook. The Eagleville Brook TMDL Implementation Plan sets forth an adaptive management strategy for meeting water quality standards. The strategy includes the following:

- Reduce impervious cover where practical
- Disconnect impervious cover from the surface waterbody
- Minimize additional disturbance to maintain existing natural buffering capacity
- Install engineered best management practices to reduce the impact of impervious cover on receiving water hydrology and water quality.

The proposed project reduces the impervious cover within the Eagleville Brook watershed by 0.25 acres due to the incorporation of natural stormwater drainage into both the East and West Buildings and greenroof technology into the West Building design. This greenroof design is being implemented to minimize impacts to Eagleville Brook. During large storm events or when the greenroof garden has reached complete saturation, the excess stormwater from all the roofs from both buildings will be directed first into large bioswales that will recharge the ground water. Any overflow from the West Building bioswale, which is sized to accommodate the two-year storm event, will be directed into an underground detention chamber, which will discharge slowly into an existing stormwater sewer pipe located beneath the Main Student Union quadrangle, eventually discharging into the Eagleville Brook watershed. The 15,000 square foot impervious roof of the northern wing of the East Building will drain to the northern bioswale of the East Building. This bioswale will contain enough volume to control larger storm events up to the 100-year storm. The total capacity of the bioswales plus underground detention systems is sized to accept the 100-year storm for both buildings.

The southern wing of the East Building lies within the Mirror Lake and Fenton River Basin watershed. The 11,800 square foot impervious roof of this wing drains to the south bioswale of the East Building, which is sized to accommodate the two-year storm event. An overflow from this bioswale will lead to an underground detention chamber, which will discharge slowly to an existing stormwater pipe that discharges into Mirror Lake and the Fenton River Basin. The total capacity of the bioswale plus the underground detention systems is sized to accept the 100-year storm.

3.8.3 Ground Water Resources

The University's drinking water supply aquifers are priority resources within the Willimantic River and Fenton River Wellfield Protection Zone for protection of the wellfield and its associated recharge areas. The Willimantic Wellfield, located north of Route 44 and west of Route 32, is comprised of four stratified drift wells. The Fenton River Wellfield is comprised of four stratified drift wells located north of Gurleyville Road. Aquifer protection areas have been mapped for both wellfields and have been approved by the Department of Environmental Protection.

Ground water beneath the project areas has been designated as class GA and GAA. The ground water beneath the West Building site and the western portion of the East Building site is designated as GA. The remaining areas of the East Building site and Arjona and Monteith buildings are designated as GAA. Class GAA ground waters are classified as those that are or may be used for public supplies of water suitable for drinking without treatment, contribute to a public drinking water supply well, or are in areas designated to be a future water supply. Designated uses of Class GAA ground water include existing or potential untreated public drinking water supply or base flow for hydraulically connected surface waterbodies.

The western portion of the site is designated as GA. Class GA ground waters are classified as those that are or may be suitable for direct human consumption without need of treatment. Only effluents containing substances of natural origin or materials that easily biodegrade in the soil system and pose no threat to untreated drinking water may be permitted. It should be noted that there are no private water supply wells located near or within the project areas.

There are no watercourses and/or wetlands in the area of the East and West Building sites and/or within the Arjona and Monteith building footprints and, therefore, no direct

impacts to watercourses or wetland resources are anticipated to occur. The proposed construction will implement measures that will protect nearby watercourses and wetlands. These include underground stormwater detention to reduce peak rate of runoff, greenroof gardens to treat the first flush of runoff from stormwater, and reuse of stormwater for future irrigation and fire suppression.

3.8.4 Analysis of Impact

Significant environmental impacts to water resources in the project area are not expected to occur as a result of the proposed project. The following points are noted:

- No watercourses and or wetlands are located in the immediate project area and, therefore, no direct impacts will occur.
- Indirect impacts associated with stormwater runoff to water resources can occur. However, state-of-the-art stormwater best management practices are proposed for managing nonpoint source pollution. Given the proposed stormwater management, the magnitude of the project, and the distance from sensitive receptors, the proposed project is not anticipated to have a significant impact on the quality of nearby surface waters or ground water.
- The proposed project reduces the impervious coverage within the Eagleville Brook watershed by 0.25 acres by incorporation of greenroof technology.

3.9 Flood Hazard Potential

The project areas are located outside of flood hazard areas as delineated on the Federal Emergency Management Agency's (FEMA's) Flood Insurance Rate Map. Therefore, no associated impacts are anticipated to occur.

4.0 IMPACT ANALYSIS SUMMARY

This section summarizes the unavoidable adverse impacts associated with the proposed project, the irreversible and irretrievable commitment of resources that will occur, and the potential mitigation measures to reduce impacts associated with the construction and operational phases of the project.

4.1 Unavoidable Adverse Environmental Impacts

Unavoidable adverse impacts as a result of the proposed project include increases in utility and energy consumption as well as temporary impacts associated with the construction phase of the project. Mitigation measures identified to offset impacts are presented in Section 4.4.

- Air Quality: Construction activities may result in short-term impacts on ambient air quality due to direct emissions from construction equipment and fugitive dust emissions. These impacts are temporary and will affect only the immediate vicinity of the construction sites and their access routes. Emissions from project-related construction equipment and trucks are expected to be insignificant with respect to compliance with the National Ambient Air Quality Standards (NAAQSs).
- Noise: Heavy construction equipment associated with site development may result in temporary increases in noise levels in the immediate area of construction.
- Utilities and Services: The proposed project will result in an increase in utility usage on the Storrs campus. Utilities including potable water, wastewater, electrical, chilled water, and steam will increase as a result of the two new buildings. Adequate capacity is available to meet the needs of the proposed project without an adverse effect on other facilities on campus.

- Parking: Seven existing handicap parking spaces located east of the Homer Babbidge Library fall within the footprint of the East Building. The University will be required to replace this parking on the East Building site.
- Solid Waste and Recycling: Construction of the project will result in the one-time generation of a minimal amount of construction-related debris and waste because most of the construction is occurring on areas with no existing structures. Universitywide recycling efforts will offset any additional long-term generation of solid waste, which is anticipated to be minor since the proposed project will result in the centralization of existing facilities.
- Ecological Resources: The proposed project will result in the loss of lawn areas that currently provide very low quality wildlife habitat.
- Energy: The proposed project is likely to result in an increase in campuswide energy consumption, especially in electrical demand as well as chilled and steamed water for the new buildings. However, the project will incorporate state-of-the-art energy-saving features and will result in additional energy conservation compared to existing facilities on campus.

4.2 Irreversible and Irrecoverable Commitment of Resources

The implementation of this project will consume nonrenewable resources during the construction and ongoing operation (i.e., construction supplies, fuel, etc). Since these resources cannot be reused, they are considered to be irreversibly and irretrievably committed. Similarly, disposal of construction debris and wastes at a landfill and/or solid waste disposal facility will take up capacity in such facilities that is irreversible and irretrievable. The proposed project will result in a small incremental increase in utility consumption on the Storrs campus. Finally, the irreversible and irretrievable expenditure

of approximately \$95 million is expected for the construction of two academic classroom/departmental buildings.

4.3 Cumulative Impacts

Connecticut Environmental Policy Act (CEPA) regulations require that the sponsoring agency for a project consider the cumulative impacts of its action. Cumulative impacts are those that result from the incremental impact of the proposed action when added to other past, present, or reasonably foreseeable future actions. Potential cumulative impacts associated with the proposed project include the following:

- Long-Range Planning: The proposed project is consistent with state, regional, local, and University planning efforts. As such, it is anticipated to have a beneficial cumulative impact on existing planning efforts.
- Utilities and Services: Like all new development, the proposed project will result in an additional demand for utilities and services. Utilities including potable water, wastewater, electrical, chilled water, and steam will increase as a result of the two new buildings. As such, adequate utility capacity exists to accommodate the foreseeable development on campus.
- Stormwater Hydrology: The potential increases in postdevelopment peak discharge of stormwater runoff will be mitigated through the use of on-site detention. Peak storm flows from the project site could potentially coincide with the peak discharge of natural or man-made detention facilities downstream in the watershed, resulting in increases in peak flows at critical downstream locations such as culverts and areas prone to flooding. The potential downstream impacts will be offset by proper design of the stormwater detention facilities for the proposed project.

- Impervious Cover: While the project represents a cumulative impact relative to site development in combination with other construction projects on campus, the project represents less than a two percent increase in the approximately 11.5 million square feet of existing building area that is presently on the Storrs campus. Given the total land area and density at the University, this cumulative impact is not considered significant, particularly in light of the mitigative measures proposed relative to greenroof technology and stormwater management. The proposed project reduces the impervious coverage within the Eagleville Brook watershed by approximately 0.25 acres by incorporating stormwater management strategies identified in the *2007 Eagleville Brook TMDL Analysis Report*.
- Water Quality: The proposed project includes measures for protecting surface water in nearby watercourses (e.g., Eagleville Brook) and wetlands: The new roof design of the West Building will include the implementation of a greenroof garden that will filter pollutants associated with runoff as well as absorb stormwater runoff. Excess stormwater from the two new buildings will be directed into bioswales and into underground detention galleries for additional flood attenuation and filtering of suspended solids.
- Traffic and Parking: The proposed project will not result in any measurable increase in traffic generation or parking demand on campus.
- Solid Waste and Recycling: Because the proposed project will primarily result in a relocation of the existing departmental space, only a small increase in solid waste generation is anticipated. Universitywide recycling efforts are expected to offset any additional generation of solid waste. The proposed project combined with other construction projects on campus will result in ongoing generation of construction-related debris and wastes, which will be recycled or hauled off site to an approved facility.

**TOWN OF MANSFIELD
OFFICE OF PLANNING AND DEVELOPMENT**

GREGORY J. PADICK, DIRECTOR OF PLANNING

Memo to: Mansfield Conservation Commission
From: Gregory Padick, Director of Planning
Date: 4/8/09
Re: Update on Miscellaneous Issues



1. New IWA Referrals

Included in the April Conservation Commission packet are IWA referrals for a bridge replacement on Stonemill Road; a gazebo on Crane Hill Road; well drilling and testing for the Ponde Place project off of Hunting Lodge Road; a 3 lot subdivision on the east side of Wormwood Hill Road; and a groundwater remediation application at 632 Middle Turnpike (CVS site). Full size copies of the plans for the 3 lot subdivision will be available at the 4/15/09 Conservation Commission meeting. A field trip has been scheduled for 1pm on Wednesday, April 15, 2009.

2. EIE UConn Academic Buildings

A public hearing has been scheduled for May 20th to receive comments on a draft Environmental Impact Evaluation (EIE) for two new academic buildings near the center of UConn Storrs Campus. Portions of the EIE are included in the 4/15/09 meeting packet. I will be reviewing the draft EIE and will forward my comments to the Conservation Commission. No significant impacts are expected.

3. CL&P Interstate Reliability Project

The project has not yet been submitted to the Siting Council.

4. UConn Compost Facility

Groundwork continues and construction is still planned for this summer.

5. Ponde Place Project

The Environmental Review Team is expected any day. Upon receipt, a copy will be forwarded to the Conservation Commission.

6. IWA Violation Notice-Chernushek property, 473 Middle Turnpike.

On 4/6/09, the IWA approved with conditions a license for restoration work and a horse riding area (motion attached). The order was rescinded.

PAGE
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**TOWN OF MANSFIELD
INLAND WETLAND AGENCY**

AUDREY P. BECK BUILDING
FOUR SOUTH EAGLEVILL ROAD
STORRS, CT 06268
(860) 429-3330

April 8, 2009

Henry Chernushek
473 Middle Turnpike
Storrs, CT 06268

COPY

Re: Mansfield's IWA approval
IWA file #1419

Dear Mr. Chernushek,

At a meeting held on 4/6/09, the Mansfield Inland Wetlands Agency adopted the following motion:

"to grant an Inland Wetlands License under Section 5 of the Wetlands and Watercourses Regulations of the Town of Mansfield to **Henry M. Chernushek** (file no. W1419), for clear cutting in wetlands and regulated areas within 150 feet of wetlands, as shown on plans dated January 2, 2009 and received at the January 5, 2009 meeting of the Wetlands Agency, and as described in other application submissions including a 2/25/09 Attachment #1 and 2/26/09 Attachment #2, both drawn by Grant Meitzler, Wetlands Agent. This action is based on the application submissions, consideration of applicable regulations, information observed on field trips to the site on December 10, 2008 and January 12, 2009, and information presented in public hearing sessions held on February 2, 2009 and March 2, 2009.

Based on the above considerations, the Agency hereby finds this project will not cause significant impact, provided the following conditions are met:

1. Work is to be done according to the applicant's plan, submitted to staff on January 2, 2009 and received at the January 5, 2009 meeting, with the following modifications, which shall be attached to and made a part of the plan:
 - A. A second row of silt fence shall be installed along the downstream edge of "crossing #4", as shown on the 1/02/2009 plan.
 - B. The indicated 10-foot wide grassed separation area (#9 on the 1/02/09 plan) between the riding area (#6 on the 1/02/09 plan) and the sediment pond (#7) and the garden (#8) shall be increased to 25 feet. This increase will allow the flat riding area to be raised about two feet and lessen the volume of excavation.
 - C. Disturbed areas downstream of "crossing #4" and upstream of "crossing #5" shall be finish-graded and seeded by April 30, 2009. The 25 foot wide grassed areas between the sediment pond (#7) and garden (#8) shall be finish-graded and seeded by April 30, 2009. These are areas directly adjacent to wetlands and most in need of stabilization. Adequacy of seeding is to be assessed by the Chairman and the Wetlands Agent. The applicant is directed to local seed suppliers and/or the Natural Resources Conservation Service who can provide specific manufacturers recommendations for type of seed and recommended planting instructions.
 - D. Stumps shall be moved to the area marked #14 on the January 2, 2009 plan.
 - E. A 6-inch diameter pipe shall be added under "crossing #5" on the January 2, 2009 plan.
 - F. Minor changes are recommended to the rectangular shape of the riding area (#6) to reduce disturbance due to excavation. Any such change is to be approved by the Wetlands Agent prior to that change being made.

2. It is understood that areas that were clear cut are not intended for general pasture use. Unless a change in use is specifically authorized by the Inland Wetlands Agency, the applicant shall restrict animal use to the approved riding area (#6).
3. Work is to start and continue on or before April 15, 2009 and is to be completed by July 1, 2009. The Wetlands Agent is to make regular inspections of this site and to regularly report to the Wetlands Agency until the July 1, 2009 completion date.
4. The applicant is to be provided with a report entitled "A Guide to Composting Horse Manure" and strongly encouraged to follow those guidelines to minimize wetlands impact.
5. All erosion and sedimentation controls shall be in place prior to construction and maintained during construction and removed when disturbed areas are completely stabilized. Particular care should be taken to control erosion on the steep slope between the house/barn area and the garden/wetlands area below.

This approval is valid for a period of five years (until April 6, 2014), unless additional time is requested by the applicant and granted by the Inland Wetlands Agency. The applicant shall notify the Wetlands Agent before any work begins, and all work shall be completed within one year. Any extension of the activity period shall come before this Agency for further review and comment."

This letter constitutes your license.

If you have any questions regarding this action, please call the Planning Office at 429-3330.

Very truly yours,



Katherine K. Holt, Secretary
Mansfield Inland Wetlands Agency

MINUTES

MANSFIELD PLANNING AND ZONING COMMISSION Regular Meeting, Monday, March 16, 2009 Council Chambers, Audrey P. Beck Municipal Building

Members present: R. Favretti (Chairman), B. Gardner, J. Goodwin, R. Hall, K. Holt, P. Kochenburger,
P. Plante, B. Pociask, B. Ryan
Alternates present: M. Beal, G. Lewis
Alternates absent: L. Lombard

Chairman Favretti called the special meeting to order at 7:19 p.m. If needed, alternates will act in the following order: Beal and then Lewis. Hall and Kochenburger noted for the record that they listened to the tapes of the 3-2-09 meeting.

Zoning Agent's Report:

Items were noted.

Old Business:

1. Proposed Special Permit Modification, 1559 Stafford Road, Valley View LLC., File #105

Item tabled pending action on associated regulation revision.

2. Review of Land Uses/Potential Zoning Violations: Hall Property, Old Mansfield Hollow Road

Members discussed items in the draft letter to Hall written by the Zoning Agent. The following changes were suggested: change the deadline for the removal of equipment to May 15; change the wording in the first paragraph to reflect that the order is from the Town of Mansfield rather than from the zoning agent; that the actual pieces of antique farm equipment allowed to remain on the site be specified. The Commission then agreed by consensus that Hirsch should send the letter to Hall; with proposed changes. It was also agreed that the issue of construction and antique farm equipment should be reviewed by the Regulatory Review Committee in order to be better prepared for similar cases in the future.

3. Proposed Easement for Highway purposes, Conantville and Meadowbrook Roads

Holt MOVED, Gardner seconded, that the Planning and Zoning Commission notify the Town Council that, pursuant to Section 8-24 of the Connecticut General Statutes, the Commission has reviewed the proposed easement for highway purposes on property of Alice Kolega, 129 Conantville Road, as depicted on a July 24, 2008 map, revised to November 20, 2008, as prepared by Datum Engineer and Surveying, LLC, and has determined that the subject easement promotes public safety and Plan of Conservation and Development goals and objectives. Therefore, the Commission recommends that the proposed easement be accepted by the Town Council. MOTION PASSED UNANIMOUSLY.

Public Hearing:

Proposed Zoning Regulation Amendment, Valley View, LLC., File #1281

Chairman Favretti opened the Public Hearing at 7:34 p.m. Members present were Favretti, Gardner, Goodwin, Hall, Holt, Kochenburger, Plante, Pociask, Ryan, and alternates Beal and Lewis. Padick read the legal notice as it appeared in the Chronicle on March 3 and March 11, 2009. Padick noted a 3-12-09 memo from himself and stated that due to a notification error, the Public Hearing needs to be continued until the April 20, 2009 meeting to allow adequate time for review and comment on the application by WINCOG and the Town of Coventry. Padick added that the applicant is aware of the notification delay and offered, if needed, a time extension. Kochenburger MOVED, Holt seconded, to continue the Public Hearing on April 20, 2009. MOTION PASSED UNANIMOUSLY.

Old Business Continued:

4. Town Council/Town Manager Referral: Mansfield 2020: A Unified Vision/Housing and Sustainability and Planning Vision Points and Action Steps

Padick reviewed the action steps distributed to members in the packet, noting that the Town Council would like responses by April 1st. By consensus, the commission agreed to pass them on to the Town Council as presented.

5. Special Permit Application, Proposed Efficiency Unit to an existing Single Family Home, 447 Browns Rd., Brenckle o/a File #1282

Item tabled, awaiting 4/6/09 Public Hearing.

6. Application, 4-Lot Subdivision, Hanks Hill & Farrell Rds., Clark Estates Subdivision, File #1280

Item tabled, awaiting 4/6/09 Public Hearing.

7. Application to Amend the Zoning Map, Whispering Glen, LLC, 73 Meadowbrook Lane, File #1283

Item tabled, awaiting 5/4/09 Public Hearing.

8. Special Permit Application for a Proposed 37 Unit Multi-Family Development, Whispering Glen, LLC, 73 Meadowbrook Lane, File #1284

Item tabled, awaiting 5/4/09 Public Hearing.

9. Potential Re-Zoning of the "Industrial Park" zone on Pleasant Valley Road and Mansfield Avenue.

Item tabled, awaiting the reschedule of meeting with primary property owner.

Reports of Officers and Committees:

Favretti noted the next Regulatory Review Committee meeting is set for 3/24/09 at 1 p.m.

Communications and Bills:

Items 2 & 6 were specifically noted.

Responding to a question from Plante about the first building of the Downtown Partnership proposed on Dog Lane, Padick said that the plans have changed and the building will be merged with other buildings in Phase 1. The changed plans will be presented to the PZC for review, perhaps within a month or two.

Adjournment:

Favretti declared the meeting adjourned at 7:54 p.m.

Respectfully submitted,

Katherine K. Holt, Secretary

MINUTES
MANSFIELD INLAND WETLANDS AGENCY
Special Meeting
Monday, March 16, 2009
Council Chambers, Audrey P. Beck Municipal Building

Members present: R. Favretti (Chairman), B. Gardner, J. Goodwin, R. Hall, K. Holt, P. Kochenburger,
P. Plante, B. Pociask, B. Ryan
Alternates present: M. Beal, G. Lewis
Alternates absent: L. Lombard
Staff present: G. Meitzler (Wetlands Agent)

Chairman Favretti called the special meeting to order at 7:01 p.m. If needed, alternates will act in the following order: Beal and then Lewis. Hall and Kochenburger noted for the record that they had listened to the tapes of the 3-2-09 meeting.

Old Business:

W1419-Chernushek, 473 Middle Turnpike

Wetlands Agent Meitzler referred the Agency to his 3-12-09 memo. Gardner questioned if the stumps referenced in his memo are existing stumps or if the Agency will be allowing more tree cutting on the property. Favretti expressed concern with stumps remaining on the site. Pociask questioned if the April 15th deadline noted in item 1c of Meitzler's memo was unrealistic for the applicant to achieve. After discussion, Holt agreed to work with staff to draft an approval motion incorporating the items listed in Meitzler's 3-12-09 memo as conditions of approval.

W1419-Chernushek, 473 Middle Turnpike

Favretti noted that the Violation Order will continue in place until April 6, 2009.

Communications:

Coventry Referral re: St. Paul's Collegiate Church, 18 Jones Crossing Road

No action was deemed necessary by the Agency.

Adjournment:

The meeting was adjourned at 7:18 p.m.

Respectfully submitted,

Katherine K. Holt, Secretary

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