AGENDA
Regular Meeting
Mansfield Conservation Commission
Wednesday, March 16, 2016
Audrey P. Beck Building
Conference Room B
7:30 p.m.

1. **Call to Order**

2. **Roll Call**

3. **Opportunity for Public Comment**

4. **Minutes**
   - February 17, 2016 Regular Meeting

5. **New Business**
   a. W1561- H. Raphaelson, Dog Lane, 2 lot subdivision
   b. W1562 & PZC #1284-3- Meadowbrook Gardens Multi-Family Development
   c. W1563-Bicentennial Pond, Aquatic Weed Management and Sediment Removal
   d. Draft Model Conservation Easement

6. **Continuing Business**
   - Biking in Certain Town Parks
   - Enabling Legislation to Create a Local Conservation Fund "Project Green Space"
   - Conservation Easement Monitoring
   - Zoning Regulation Updates/Rewrite
   - Town of Coventry/ Mansfield Control of Fanwort in Eagleville Lake
   - UConn Agronomy Farm Irrigation Project
   - Status of UConn's Hazardous Waste Transfer Station
   - Other

7. **Communications**
   - Minutes
     - Open Space: 2/16/16
     - PZC: 3/7/16
     - IWA: 3/7/16

8. **Other**

9. **Future Agendas**

10. **Adjournment**

Town of Mansfield
CONSERVATION COMMISSION
Meeting of 17 February 2016
Conference B, Audrey P. Beck Building
(draft) MINUTES

Members present: Aline Booth (Alt.), Quentin Kessel, Scott Lehmann, Michael Soares.
Members absent: Joan Buck (Alt.), Robert Dahn, Neil Facchinetti, Grant Meitzler, John Silander.
Others present: John & Beth Hankins, Lon Hultgren, Ken Feathers & Jim Morrow (Open Space Preservation Committee), Jennifer Kaufman (Wetlands Agent).

1. The meeting was **called to order** at 7:33p by Chair Quentin Kessel. Booth was designated a voting member for this meeting.

2. The **draft minutes** of the 20 January 2016 meeting were approved as written.

3. Biking in Town Parks. Mountain biking is now prohibited on trails in Town parks & preserves, save for Schoolhouse Brook Park. John Hankins, who maintains the Nipmuck Trail in Mansfield, would like to see more Town-owned parkland opened to bikes, particularly areas that would enable riders to make extended circuits on connected trails, such as the Wolf Rock area and the Fifty-foot, Coney Rock, & Dorwart complex. In his experience, use helps to maintain trails, and opening additional trails to bikes would increase traffic on them. A policy of generally allowing bikes on town trails would also reduce confusion about where they are or are not permitted. Kaufman added that the Town has no enforcement mechanism for its current policy and might achieve greater compliance by replacing signs prohibiting bikes with signs that make expectations for their use clear (e.g., yield to pedestrians). Lon Hultgren reported that the Town is beginning to work on a Bicycle/Pedestrian Master Plan, which will need to consider and recommend policies for bike use of town trails.

In the free (& nonlinear) discussion that followed, various concerns were voiced and suggestions made:

- Kessel worried about bikes chewing up wet areas. Hultgren noted that all the biking magazines preach against using bikes on soft ground; such good advice, however, is often ignored. John Hankins suggested this be viewed as a maintenance problem, rather than a use problem (e.g., wet areas can be bridged).
- Ken Feathers thought trail infrastructure would need to be upgraded to make bike use sustainable in wet areas, on steep slopes, etc. A survey of trails should be undertaken to determine what work would be needed.
- Kaufman said the Town needs volunteers to monitor and maintain trails. John Hankins was sure that bikers would help with this, if wider use of trails were permitted.
- Kessel wondered about the Town's liability for injuries, if bicycles are allowed on more trails.
- Soares noted that the areas mentioned by John Hankins for wider bike use are not wholly Town-owned. Joshua's Trust may not welcome bikers on its trails at Wolf Rock or Coney Rock, and owners of private land over which the Nipmuck Trail runs may also object. They should be consulted before opening more Town trails to bikes. {The Connecticut Forest and Park Association's 2005 *Connecticut Walk Book East* states (p.xi) that, save where posted for multi-use on DEP property, "use of the Blue-Blazed Hiking Trails by motorized vehicles, bicycles, horses, or other four-footed

animals (except leashed dogs) is not permitted without the express authorization of the property owner."}

- Lehmann expressed misgivings about a more liberal policy, noting that, in his experience, it's rare for bikers to yield to pedestrians on trails in Schoolhouse Brook Park, as they are supposed to, and that renegades have constructed their own extensive trails in the Park with jumps, passages through stone walls, etc.

John & Beth Hankins then left the meeting (at 8:35), Hultgren having had to leave somewhat earlier.

4. Draft Zoning Regulations. Kaufman distributed a memo dated 01/05/16 from Planning Director Linda Painter soliciting comments on draft amendments to the zoning regulations; those regulating connections to the new water supply system and storm-water management were attached. The former limit development of rural residential property in the vicinity to what was previously allowed, regardless of whether tapping into the new Connecticut Water Company pipeline would allow more intensive development. Soares & Feathers suggested that such 'overlay zoning' include low-density areas served by existing water mains, areas in which development will not longer be water-limited once the new water flows.

Booth wondered why the Zoning Focus Group has not been consulted in the process of drafting these amendments. Members of this Group – Greg Padick, Ed Pelletier, and Booth herself, among others – know a lot about zoning in Mansfield and could contribute valuable insights and advice. Kessel asked Kaufman to convey to Painter the Commission's suggestion that she reach out to this Group.

5. Four Corners Sewer Project. The Executive Summary for the EIE on the Four Corners Sewer Project was included in the packet for this meeting, but the Commission did not act on it. {The DEEP comment period closes on 03/18/16; any Commission comments would need to be submitted to the Town Council in time for review at its 03/14/16 meeting.} Kaufman distributed a useful map, identifying properties that will be served by the new sewer lines and assessed for their cost. Kessel noted that assessments levied on undeveloped land, of which there is quite a bit in the 4-corners area, could force owners to develop it (or to sell to others who will do so), an unwelcome consequence. {The August 2015 draft EIE, p.47, takes the position that the sewer project will promote clustered development and that the Town can protect other values in the area through zoning and wetlands regulations (a significant portion of the undeveloped land there is wetlands).}

6. Monitoring Conservation Easements. The Commission's plans for monitoring town-held conservation easements are now on hold. The State's Freedom of Information Commission may classify monitoring of an easement by two members of the Commission a "meeting" of the Commission that requires public notice and is open to the public. Kaufman has asked the Town Attorney to look into this.

7. IWA referrals. Consideration of W1561 (Raphaelson, Dog Lane: 2-lot subdivision) has been pushed back. The field trip originally scheduled for 02/10/16 will be in March, presumably before the Commission's meeting on 03/16/16.

8. Project Greenspace. After some discussion, the Commission decided not – at this time – to urge the Town Council to support legislation proposed by Connecticut Audubon that would permit towns to set up local conservation funds, financed by a conveyance fee on the sale of residential property. This initiative does not appear to be well-organized, there is no website where one can get more information about it, and any enabling legislation will probably go

nowhere in a short legislative session focused on state budget woes.

9. Adjourned at 9:21p. Next meeting: 7:30p, Wednesday, 16 March 2016.

Scott Lehmann, Secretary, 18 February 2016.

Department of Planning and Development

Date: January 27, 2016

To: Mansfield Inland Wetlands Agency

From: Jennifer Kaufman, Inland Wetlands Agent

Subject: Receipt of New Application for Wetlands License
east side of Dog Lane (assessor's parcel id 16.41.23) (IWA File #1561)
H. Raphaelson
Description of work: 2-lot subdivision-Raphaelson Estates

Project Description

The applicants propose to subdivide a 14.75 acre parcel into two single family lots located on the east side of Dog Lane. Except for two foundation drains, all activity will be at least 50 feet from the edge of wetlands.

☐ The project includes work in wetlands.
☒ The project includes work in the 150 foot upland review area.
☒ The project is located in a Public Water Supply Watershed.

Application Fees and Notifications

☒ The applicant has paid the required application fee
☒ The applicant has submitted copies of the notice mailed to neighbors and a list of abutters to be notified. Certified mail receipts must be submitted prior to action on the application.
☒ The applicant has submitted copies of notices provided to the Connecticut DPH and Windham Water Works. Certified mail receipts must be submitted prior to action on the application.
☒ Natural Diversity Database has been checked and state and/or federal listed species or significant natural communities have been identified on the property.

Receipt Motion

_____ MOVES, _____ seconds to receive the application submitted by H. Raphaelson (IWA File #1561) under the Wetlands and Watercourses Regulations of the Town of Mansfield for 2-lot subdivision-Raphaelson Estates on property located on the east side of Dog Lane (assessor's parcel id 16.41.23) as shown on a map dated 1/12/2016 and as described in application submissions, and to refer said application to staff and the Conservation Commission for review and comments.

APPLICATION FOR PERMIT
MANSFIELD INLAND WETLANDS AGENCY
4 SOUTH EAGLEVILLE ROAD, STORRS, CT 06268
860-429-3015x6204 (DIRECT) TEL: 860-429-3330 OR
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 the 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 Howard Raphaelson

Mailing Address 119 Timber Drive

Storrs, CT Zip 06268

Phone 860-429-1340 Email howardar@yahoo.com

Title and Brief Description of Project

Raphaelson Estates-Proposed 2 lot subdivision to develop 2 building lots for single family dwellings.

Location of Project Dog Lane, Storrs/Mansfield

Intended Start Date Fall 2016

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

Name same as applicant

Mailing Address _____

_____ Zip _____

Phone _____ Email _____

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)**
   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

Proposed subdivision to develop two building lots for single family dwellings with on-site septic systems and drilled wells.

a.) No activity in wetlands.

b.) Activity at it's nearest point for proposed Lots 1 & 2 as follows:

	Lot 1	Lot 2
House	108'	63'
Well	162'	141'
Septic System	58'	50'
Foundation Drain	38'	8'
Driveway	104'	58'

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

a.) No disturbance in wetland soils.

b.) Lot #1- 25,600 sq. ft.
Lot #2- 29,450 sq. ft.

3) Describe the type of materials you are using for the project: _____
sand & gravel fill will be used for driveways and septic system areas

a) include ***type*** of material used as fill or to be excavated sand & gravel

b) include ***volume*** of material to be filled or excavated_____
Lot #1- 100 cu. yds. for driveway Lot #2- 80 cu. yds. for driveway
- 150 cu. yds. for septic system - 130 cu. yds. for septic system

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 attached plan for E & S notes along with E & S measures for containing any adverse impacts on the wetlands

Part D - Site Description

Describe the general character of the land. (Hilly? Flat? Wooded? Well drained? etc.)
a gently sloping wooded knoll consisting of well drained soils in the area of the proposed improvements

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.

We did consider crossing the wetlands to access a large upland area south of the building site located on Lot #2 but felt the proposed plan would have less of an impact on wetlands.

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)**

2) Applicant's map date and date of last revision January 12, 2016

3) Zone Classification RAR-90

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) Attach list of abutters, name, and address

2) **Proof of Written Notice to Abutters.** You must notify abutting (neighboring) property owners (any property immediately contiguous with the subject property, including those across the street) 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.*** To generate an abutters list go to http://www.mainstreetmaps.com/CT/Mansfield/

Part I - Additional Notices, if necessary

Notice to Windham Water Works and CT Department of Public Health is attached. If this application is in the public watershed for the Windham Water Works (WWW), you must notify the WWW and the Department of Public Health 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.

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.

The Statewide Reporting Form 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

Application fees shall be in accordance with the current Mansfield Code of Ordinance fee Schedule, pursuant to Section 8-1c of the Connecticut General Statutes. The fee schedule includes provisions for applicant-funded consultant studies and reports. The current fee schedule is available in the Planning and Zoning office.

Note: The Agency may require additional information about the upland review area 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.

Certification

I hereby certify that:

☐ I am familiar with the information contained in this form and that such information is true and correct to the best of my knowledge.

☐ I understand the penalties for obtaining a permit through deception or through inaccurate or misleading information.

Howard A Raphaelson _____ 01/26/2016 _____

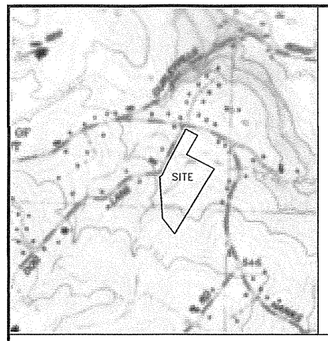
Signature Date

Authorization to Enter Property

The undersigned hereby consent 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 issued by the Agency.

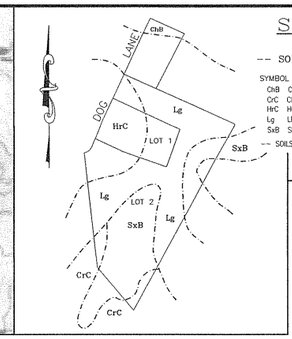
Howard A Raphaelson _____ 01/26/2016 _____

Signature Date



LOCATION MAP

SCALE : 1" = 1000'



SOIL MAP

SCALE : 1" = 400'

-- SOILS LEGEND --

SYMBOL	DESCRIPTION
ChB	CHARLTON STONY FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES
CrC	CHARLTON VERY STONY FINE SANDY LOAM, 3 TO 15 PERCENT SLOPES
HrC	HOLLIS VERY ROCKY FINE SANDY LOAM, 3 TO 15 PERCENT SLOPES
Lg	LEICESTER-RIDGEBURY-WHITMAN VERY STONY COMPLEX
SxB	SUTTON VERY STONY FINE SANDY LOAM, 3 TO 15 PERCENT SLOPES

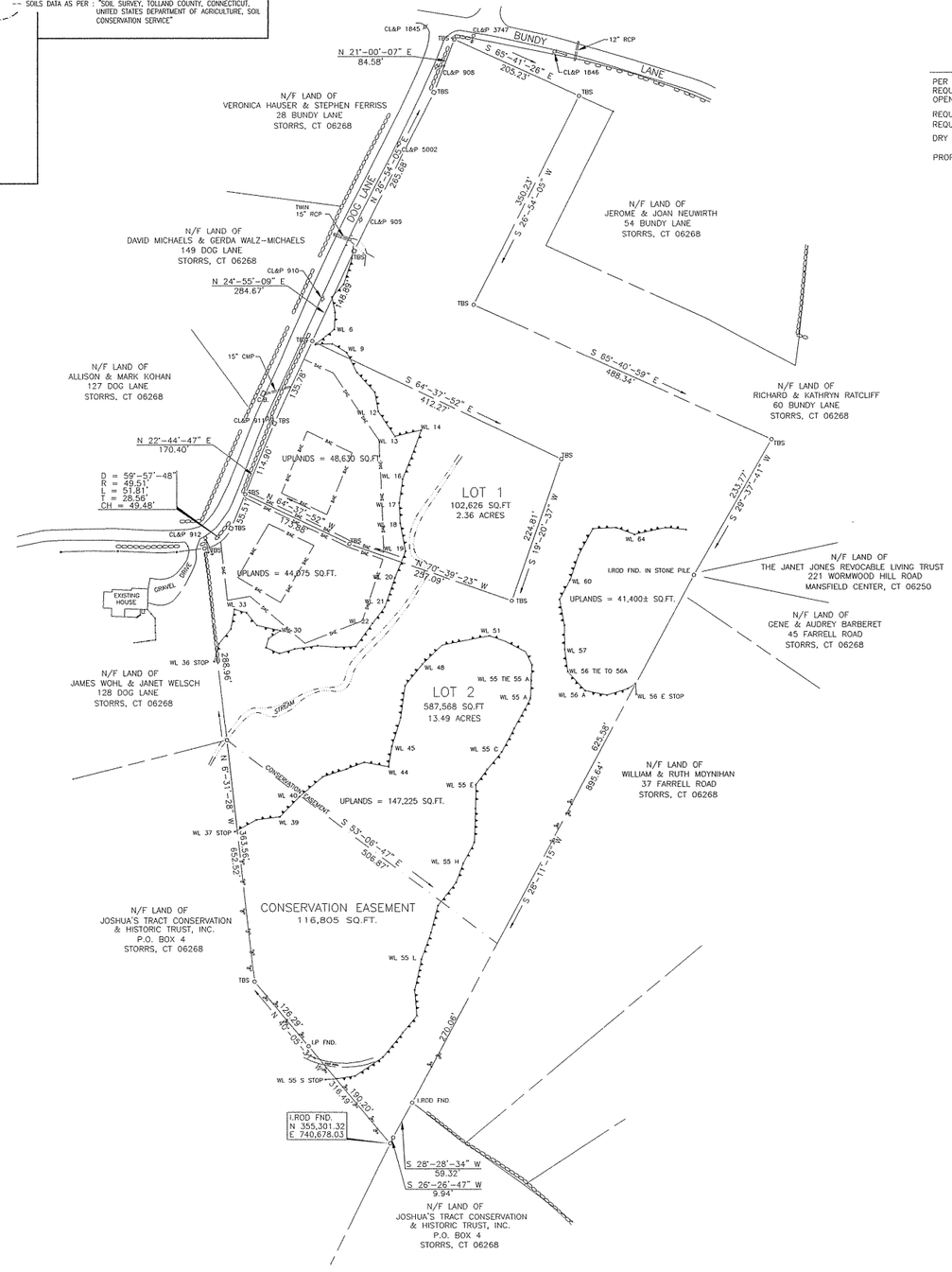
-- SOILS DATA AS PER : "SOIL SURVEY, TOLLAND COUNTY, CONNECTICUT, UNITED STATES DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE"

REFERENCE MADE TO THE FOLLOWING MAPS:

1.) "AS-BUILT PLAN PREPARED FOR WILLIAM ZAVISTOSKI DOG LANE MANSFIELD, CONNECTICUT SCALE: 1" = 20' DATE: JUNE 16, 1998 DRAWN BY: SDK CHECKED BY: SAF SHEET 1 OF 1 FILIP ASSOCIATES 1875 STORRS ROAD, MANSFIELD, CT."

2.) "PLAN PREPARED FOR AUDREY & GENE BARBERET NO. 45 FARRELL ROAD STORRS, CONN. PLOT PLAN SCALE 1" = 20' DRN. R.M. DATE 7-24-84 TRD. D.C.K. FILE NO. 831137 SHEET NO 1 OF 1" PREPARED BY MEEHAN ASSOCIATES.

3.) "BOUNDARY SURVEY PREPARED FOR UCONN FOUNDATION, INC. DOG LANE & BUNDY LANE STORRS, CONNECTICUT SCALE: 1" = 40' DATE: JANUARY 6, 2012 DATUM ENGINEERING & SURVEYING, LLC 132 CONANTVILLE ROAD, MANSFIELD CENTER, CT. 06250 JOB NO. 211064".



200 100 0 100 300

SCALE : 1" = 100'

TOTAL PARCEL AREA 15.84 ACRES

AREA WITH OVER 15 PERCENT SLOPES – NONE
TOTAL AREA OF WETLANDS – 408,834 SQ.FT.±
PERCENT OF WETLANDS – 59.2%

OPEN SPACE DEDICATION

PER SECTION 13.1.1 – COMMISSION SHALL HAVE THE RIGHT TO REQUIRE UP TO 15% OF THE LAND TO BE SUBDIVIDED DEDICATED AS OPEN SPACE, CONSERVATION, PARK OR PLAYGROUND.

REQUIRED OPEN SPACE = 690,194 SQ.FT. x 15% = 103,529 SQ.FT.
REQUIRED DRY LAND WITHIN OPEN SPACE = 103,529 SQ.FT. x 40.8% = 42,240 SQ.FT.

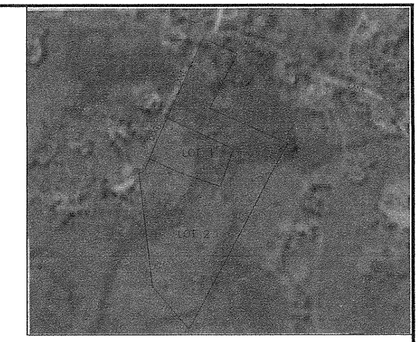
DRY LAND WITHIN PROPOSED CONSERVATION EASEMENT = 82,580 SQ.FT.

PROPOSED CONSERVATION EASEMENT 2.45 ACRES (106,801 SQ.FT.)

ZONING TABLE

	REQUIRED	LOT 1	LOT 2
LOT AREA:	90,000 S.F.	102,626 S.F.	587,568 S.F.
LOT FRONTAGE:	200'	250.68'	606.47'
BUILDABLE AREA:	40,000 S.F.	48,630 S.F.	44,075 S.F.*

*IN AREA OF PROPOSED HOUSE



AERIAL PHOTO

SCALE: 1" = 400'

BOUNDARY NOTES:

1.) STREETLINE ALONG DOG LANE (LOCAL ROAD PER ARTICLE III SECTION G.3 OF THE ZONING REGULATIONS) WAS ESTABLISHED 25 FEET FROM THE CENTERLINE OF THE EXISTING TRAVELLED WAY PER ARTICLE VIII SECTION 9 (HIGHWAY CLEARANCE SETBACKS) OF THE ZONING REGULATIONS.

2.) THE SUBJECT PROPERTY CONTAINS 15.84 ACRES.

NOTES:

1.) ALL PROPOSED LOTS CONTAIN 40,000 SQUARE FEET OF SUITABLE LAND FOR BUILDING AS DEFINED IN ARTICLE VIII, SECTION B.6 OF THE MANSFIELD ZONING REGULATIONS.

2.) UNDERGROUND UTILITIES

A. ALL WIRED UTILITY LINES SERVING STRUCTURES ON NEW LOTS SHALL BE INSTALLED UNDERGROUND. UTILITY LINES SHALL BE INSTALLED IN A SUITABLE CONDUIT SYSTEM UNLESS THE RESPONSIBLE UTILITY COMPANY DETERMINES THAT DIRECT BURIAL IS MORE APPROPRIATE.

B. UPON APPROVAL BY THE RESPONSIBLE UTILITY COMPANY, PLANS SHALL BE SUBMITTED TO DEPICT THE LOCATION OF ALL UNDERGROUND UTILITY EASEMENT AREAS.

3.) PURSUANT TO SUBDIVISION REGULATION PROVISIONS, (PARTICULARLY SECTIONS 7.4a, 7.5, AND 7.6) AND ZONING REGULATION PROVISIONS (PARTICULARLY ARTICLE VIII, SECTION B.5 AND B.6) THIS ACTION SPECIFICALLY APPROVES PROPOSED LOT AREAS AND THE DEPICTED BUILDING ENVELOPES, INCLUDING SETBACK WAIVERS FOR LOTS 1 & 2. UNLESS THE COMMISSION SPECIFICALLY AUTHORIZES REVISIONS, THE DEPICTED BUILDING ENVELOPES SHALL SERVE AS THE SETBACK LINES FOR ALL FUTURE STRUCTURES AND SITE IMPROVEMENTS, PURSUANT TO ARTICLE VIII OF THE ZONING REGULATIONS. THIS REQUIREMENT SHALL BE NOTED ON THE LAND RECORDS.

4.) PROPERTY LINE TO SERVE AS DEVELOPMENT AREA ENVELOPE LINE (DAE) EXCEPT WHERE DENOTED OTHERWISE ON LOTS.

APPROVED BY THE TOWN OF MANSFIELD INLAND WETLAND AGENCY

CHAIRMAN DATE

APPROVED BY THE MANSFIELD PLANNING AND ZONING COMMISSION

CHAIRMAN DATE

APPROVED BY THE DIRECTOR OF HEALTH

DIRECTOR DATE

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR DATE

--- LEGEND ---

PROPERTY LINE	
ABUTTER'S PROPERTY LINE	
BUILDING AREA ENVELOPE	BAE BAE
DEVELOPMENT AREA ENVELOPE	DAE DAE
EXISTING ROAD	
LIMIT OF WETLANDS	
CONSERVATION EASEMENT	
STONE WALL	
UTILITY POLE	
VIRGINA RAIL FENCE REMAINS	
IRON ROD TO BE SET	T.B.S.
IRON ROD FOUND	I.ROD FND.
MONUMENT TO BE SET	T.B.S.

THE WETLAND SOILS ON THIS SITE WERE IDENTIFIED IN THE FIELD USING THE CRITERIA REQUIRED BY CONNECTICUT P.A. 72-155 AS AMENDED BY CONN. P.A. 73-571, CONN. P.A. 87-338 AND P.A. 87-533. THE BOUNDARIES OF THESE SOILS AND OF IDENTIFIED WATERCOURSES ARE ACCURATELY REPRESENTED ON THIS PLAN.

JOHN P. IANNI DATE

THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS 20-300b-1 THRU 20-300b-20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES – "MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. IT IS A SUBDIVISION MAP BASED ON A DEPENDENT RESURVEY CONFORMING TO HORIZONTAL ACCURACY CLASS "A-2". THE PROPOSED PROPERTY LINES BETWEEN LOTS BEING AN ORIGINAL SURVEY. THIS SURVEY AND MAP IS INTENDED TO ENABLE DETERMINATION OF COMPLIANCE OR NON-COMPLIANCE WITH APPLICABLE MUNICIPAL OR STATUTORY REQUIREMENTS.

TO THE BEST OF MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

EDWARD PELLETIER, L.S. #14203

ANY ORIGINAL OR DUPLICATE OF THIS MAP IS NOT VALID UNLESS IT BEARS THE EMBOSSED SEAL OF THE SURVEYOR WHOSE REGISTRATION NUMBER AND SIGNATURE APPEAR ABOVE. NO OTHER CERTIFICATION OR WARRANTY IS EXPRESSED OR IMPLIED.

BOUNDARY PLAN
FOR
SUBDIVISION
ENTITLED
RAPHAELSON ESTATES

DOG LANE
STORRS, CONNECTICUT

OWNER & SUBDIVIDER
HOWARD A. & ALICE K. RAPHAELSON
119 TIMBER DRIVE
STORRS, CONNECTICUT 06268

SCALE : 1" = 100' DATE: JANUARY 12, 2016

SHEET 1 OF 2

ENGINEERING & SURVEYING, LLC

132 CONANTVILLE ROAD
MANSFIELD CENTER, CT 06250
TEL (860)456-1357 FAX (860)456-1840

JOB NO.: 214044

CHECKED BY:_____ CORRECTIONS BY:_____

--- HOUSE SITE DEVELOPMENT ---

- THE FOLLOWING PROCEDURES FOR THE DEVELOPMENT OF THESE LOTS ARE RECOMMENDED:

1. THE LIMITS OF DISTURBANCE SHALL BE ESTABLISHED IN THE FIELD FOR THE PROPOSED RESIDENTIAL STRUCTURE. DISTURBANCE LIMITS OF 25–35 FEET BEYOND THE PHYSICAL DIMENSIONS OF THE STRUCTURE AND RELATED APPURTENANCES IS RECOMMENDED.
2. DRIVEWAY SHOULDERS SHOULD BE STABILIZED IMMEDIATELY UPON COMPLETION OF ROUGH GRADING. SHOULDER SEED BED PREPARATION SHOULD BE USED TO ENTRAP ANY SEDIMENT GENERATED FROM EXPOSED SOIL SURFACES. DRIVEWAY ROADBEDS SHALL BE STABILIZED WITH COMPACTED ROAD AGGREGATES AS SOON AS POSSIBLE.
3. TOPSOIL AND EXCAVATED SUBSOIL FROM THE FOUNDATION AREA SHOULD BE STOCKPILED WITHIN THE AREA OF DISTURBANCE IF NOT USED FOR ONSITE REGRADING. EACH STOCKPILE MUST BE ADEQUATELY RINGED WITH SEDIMENT CONTROL MATERIALS(i.e., HAY–BALES AND/OR SILT FENCE).
4. ANY ADDITIONAL STOCKPILING OF LUMBER AND BUILDING MATERIALS SHOULD ALSO BE CONFINED TO THE AREA OF DISTURBANCE. SIMILARLY, VEHICULAR MOVEMENT SHALL BE DIRECTED TO ESTABLISHED PARKING AREAS. DEVELOPMENT OF SEWAGE DISPOSAL LEACHING AREAS SHOULD BE STAGED TO FOLLOW HOUSE SITE PREPARATION. ONLY THE PRIMARY LEACHING SYSTEM NEED BE CLEARED OF EXISTING VEGETATION IN COORDINATION WITH THE APPROVED SEPTIC SYSTEM DESIGN. RESERVE AREA SHALL REMAIN UNDISTURBED IF SITE CONDITIONS PERMIT.
5. ONCE THE PROPOSED STRUCTURE IS ENCLOSED, ALL EFFORTS SHOULD BE MADE TO COMPLETE ON SITE IMPROVEMENTS SUCH AS WELL, FOOTING DRAIN, SEPTIC SYSTEM, DRIVEWAY, ETC.. THEREAFTER, ALL RAW SOIL AREAS SURROUNDING THE HOME SITE SHALL BE FINE GRADED AND MULCHED.

--- GENERAL NOTES ---

EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY EXCAVATION OR DISTURBANCE OF EXISTING GROUND.

EXCAVATIONS WHICH MUST BE DEWATERED WILL BE PUMPED INTO AN EXCAVATED STILLING BASIN SURROUNDED WITH SILT FENCING.

AND CONSTRUCTION WILL NOT BE DISCARDED ON THE SITE.
DEBRIS AND OTHER WASTE GENERATED FROM EQUIPMENT MAINTENANCE IN THE EVENT OF CONFLICT BETWEEN THESE PLANS AND OTHER REGULATIONS, THE MORE STRINGENT SHALL APPLY.

A. SEED BED PREPARATION: FINE GRADE AND RAKE SOIL SURFACE TO REMOVE STONES LARGER THAN 2" DIAMETER. INSTALL NEEDED EROSION CONTROL DEVICES SUCH AS SURFACE WATER DIVERSIONS. APPLY LIMESTONE AT A MINIMUM RATE OF 2 TONS PER ACRE OR 90 LBS PER 1000 SQUARE FEET.
FERTILIZE WITH 10–10–10 AT A RATE OF 300 LBS. PER ACRE OR 7.5 LBS. PER 1000 SQUARE FEET. WORK LIME AND FERTILIZER INTO SOIL UNIFORMLY TO A DEPTH OF 4" WITH A WISK, SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT FOLLOWING THE CONTOUR LINES.

B. SEED APPLICATION: APPLY GRASS SEED MIXTURE BY HAND, CYCLONE SEEDER OR HYDROSEEDER. INCREASE SEED MIXTURE BY 10 PERCENT IF HYDROSEEDING. LIGHTLY DRAG OR ROLL THE SEEDED SURFACE TO COVER SEED. SEED SHALL CONSIST OF A MIXTURE OF KENTUCKY BLUEGRASS (0.45 LBS/1000 SQ.FT.), CREEPING RED FESCUE (0.45 LBS./1000 SQ.FT.), AND PERENNIAL RYEGRASS (0.10 LBS./1000 SQ.FT.). SEEDING OF PERMANENT GRASS SEED SHALL BE DONE BETWEEN APRIL 15 THROUGH JUNE 15 AND AUGUST 15 THROUGH SEPTEMBER 15. IN THE EVENT SEEDING CANNOT BE COMPLETED DURING THE ABOVE DATES, A TEMPORARY GRASS SEED CONSISTING OF 1.0 LBS./1000 SQ.FT. OF ANNUAL RYE GRASS SHALL BE APPLIED. MOISTURE CONDITIONS SHALL BE SUPPLEMENTED FOR TEMPORARY SEEDING BETWEEN JUNE 15 AND AUGUST 15.

C. MULCHING: IMMEDIATELY FOLLOWING SEEDING, MULCH THE SEEDED SURFACE, WITH STRAW OR HAY AT A RATE OF 1.5 TO 2 TONS PER ACRE

WHERE SLOPES EXCEED 10 PERCENT, SPREAD MULCH BY HAND OR MULCH BLOWER. PUNCH MULCH INTO SOIL SURFACE WITH TRACK MACHINE OR DISH HARROW SET STRAIGHT UP. MULCH MATERIAL SHOULD BE "SET" INTO SOIL SURFACE APPROXIMATELY 2–3 INCHES.

--- PLAN IMPLEMENTATION ---

DURING CONSTRUCTION IT SHALL BE THE RESPONSIBILITY OF HOWARD RAPHAELSON (860–429–1340) TO INSURE THE IMPLEMENTATION OF THIS EROSION & SEDIMENTATION CONTROL PLAN. THIS RESPONSIBILITY INCLUDES INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE SITE OF THE REQUIREMENTS AND OBJECTIVES OF THIS PLAN, AND NOTIFYING THE WETLAND AGENT OF ANY TRANSFER OF THIS RESPONSIBILITY AND FOR CONVEYING A COPY OF THE EROSION AND SEDIMENT PLAN IF AND WHEN TITLE OF THE LAND IS TRANSFERRED.

EDWARD PELLETIER, L.S. #14203

TEST HOLE DATA

TEST HOLES OBSERVED BY EHHD ON NOVEMBER 18, 2015

–TEST HOLE #1 (UNSUITABLE)
0"– 9" TOPSOIL
9"–18" MOTTLED SILT LOAM
18"–61" COMPACT MOTTLED GREY CLAY
ROOTS TO 17"
MOTTLING AT 9"
NO WATER
NO LEDGE

–TEST HOLE #2
0"–10" TOPSOIL
10"–19" BROWN SILT LOAM
19"–71" GREY MOTTLED GLACIAL TILL
ROOTS TO 24"
MOTTLING AT 19"
NO WATER
NO LEDGE

–TEST HOLE #3
0"– 8" TOPSOIL
8"–20" OB FINE SANDY LOAM
20"–64" MOTTLED SANDY LOAM TILL W/GRAVEL, COBBLES, STONES, BOULDERS
ROOTS TO 25"
MOTTLING AT 20"
NO WATER
NO LEDGE

–TEST HOLE #4
0"– 6" TOPSOIL
6"–24" GRAVELLY OB FINE SANDY LOAM
24"–74" MOTTLED SANDY LOAM TILL W/GRAVEL, COBBLES, STONES
ROOTS TO 26"
MOTTLING AT 24"
NO WATER
NO LEDGE

–TEST HOLE #5
0"– 4" TOPSOIL
4"–25" GRAVELLY OB FINE SANDY LOAM
25"–77" MOTTLED SANDY LOAM TILL W/COBBLES, STONES, BOULDERS
ROOTS TO 28"
MOTTLING AT 25"
NO WATER
NO LEDGE

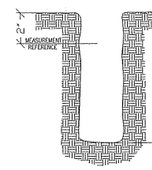
–TEST HOLE #6
0"– 5" TOPSOIL
5"–27" GRAVELLY OB FINE SANDY LOAM
27"–64" MOTTLED SANDY LOAM TILL W/COBBLES, STONES, BOULDERS
ROOTS TO 29"
MOTTLING AT 27"
NO WATER
NO LEDGE

–TEST HOLE #7
0"– 4" TOPSOIL
4"–26" GRAVELLY OB FINE SANDY LOAM
26"–63" MOTTLED SANDY LOAM TILL W/COBBLES, STONES
ROOTS TO 25"
MOTTLING AT 20"
NO WATER
NO LEDGE

PERCOLATION TEST #1

CONDUCTED BY DATUM ENGINEERING & SURVEYING, LLC. ON NOV. 21, 2015

PRESOAKED AT 3:25 P.M (11–20–15)



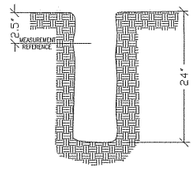
TIME	READING
8:37	8"
8:42	9–1/2"
8:47	10"
8:52	10–1/2"
8:57	11–1/2"
9:02	12"
9:07	12–1/2"
9:12	13"
9:17	13–1/2"
9:22	14"
9:27	14–1/2"
9:32	15"

CALCULATED PERCOLATION RATE: 10 MIN/IN

PERCOLATION TEST #1A

CONDUCTED BY DATUM ENGINEERING & SURVEYING, LLC. ON NOV. 21, 2015

PRESOAKED AT 3:20 P.M (11–20–15)



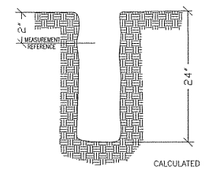
TIME	READING
8:34	7–1/2"
8:39	11"
8:44	13"
8:49	15–1/2"
8:54	16–1/2"
8:59	18"
9:04	19–1/2"
9:09	DRY
9:09	8"
9:14	9–1/2"
9:19	10–1/2"
9:24	12–1/2"
9:29	13–1/2"
9:34	14–1/2"
9:39	16"
9:44	16–1/2"
9:49	17"

CALCULATED PERCOLATION RATE: 10 MIN/IN

PERCOLATION TEST #2

CONDUCTED BY DATUM ENGINEERING & SURVEYING, LLC. ON NOV. 21, 2015

PRESOAKED AT 3:35 P.M (11–20–15)

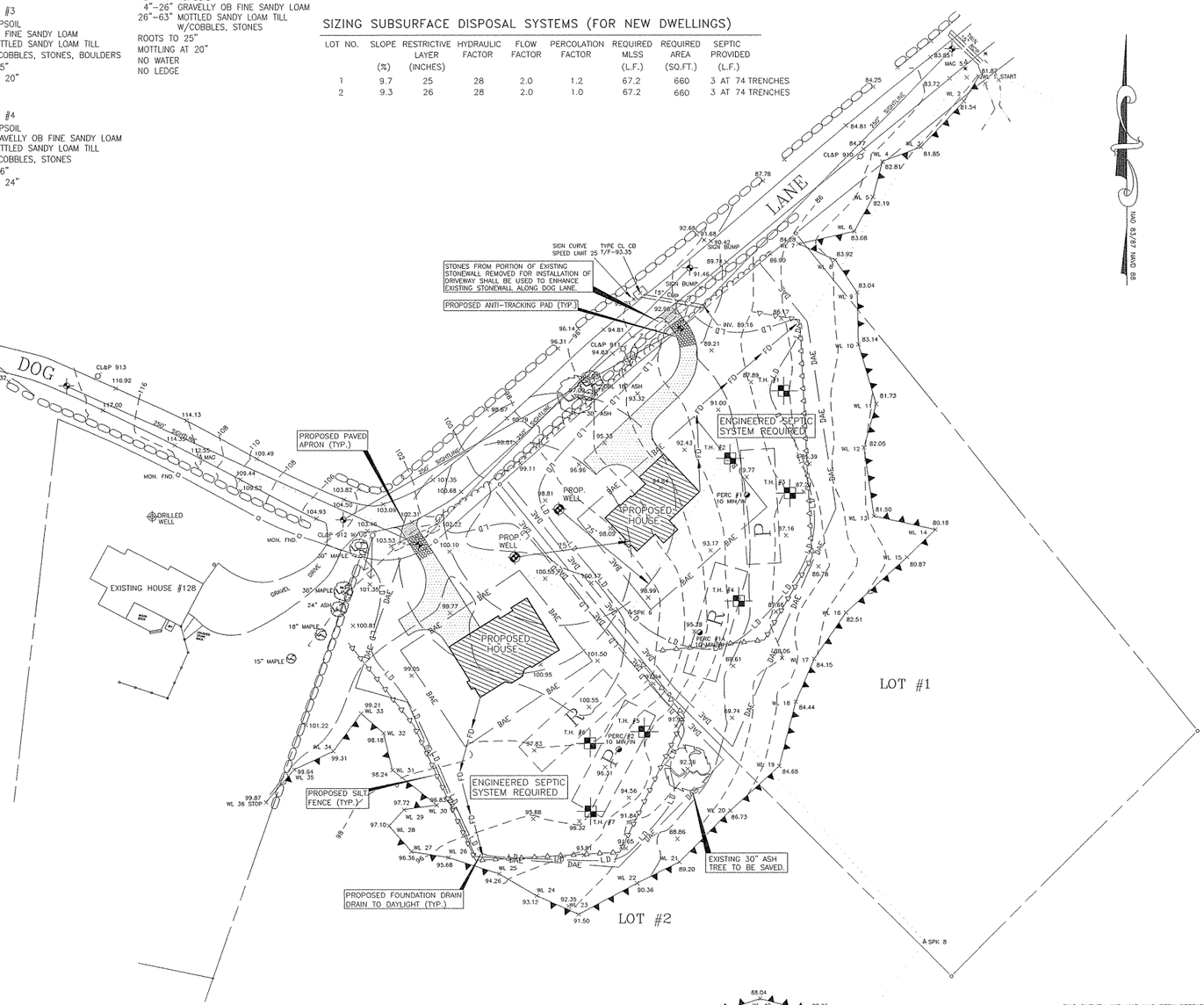


TIME	READING
8:41	6–1/2"
8:46	9"
8:51	11"
8:56	12"
9:01	13"
9:06	14–1/2"
9:11	15–1/2"
9:16	16–1/2"
9:21	17"
9:26	17–1/2"
9:31	18"

CALCULATED PERCOLATION RATE: 10 MIN/IN

SIZING SUBSURFACE DISPOSAL SYSTEMS (FOR NEW DWELLINGS)

LOT NO.	SLOPE (%)	RESTRICTIVE LAYER (INCHES)	HYDRAULIC FACTOR	FLOW FACTOR	PERCOLATION FACTOR	REQUIRED MLSS (L.F.)	REQUIRED AREA (SQ.FT.)	SEPTIC PROVIDED (L.F.)
1	9.7	25	28	2.0	1.2	67.2	660	3 AT 74 TRENCHES
2	9.3	26	28	2.0	1.0	67.2	660	3 AT 74 TRENCHES



THE WETLAND SOILS ON THIS SITE WERE IDENTIFIED IN THE FIELD USING THE CRITERIA REQUIRED BY CONNECTICUT P.A. 72–155 AS AMENDED BY CONN. P.A. 73–571, CONN. P.A. 87–338 AND P.A. 87–533. THE BOUNDARIES OF THESE SOILS AND OF IDENTIFIED WATERCOURSES ARE ACCURATELY REPRESENTED ON THIS PLAN.

JOHN P. IANNI — DATE

80 40 0 40 120
SCALE : 1" = 40'

NOTES:

1.) THE DEPICTED SEPTIC SYSTEMS ARE SIZED FOR FOUR BEDROOM DWELLINGS.

2.) SOLAR ACCESS: PROPOSED HOUSES HAVE BEEN DEPICTED TO MAXIMIZE SOLAR HEAT GAIN AND MINIMIZING SOLAR HEAT LOSS AS SPECIFIED IN SECTION 4.6 OF THE TOWN OF MANSFIELD SUBDIVISION REGULATIONS.

2A.) RESIDENTIAL SITE PLAN DESIGNS SHALL INCORPORATE AT LEAST ONE OF THE FOLLOWING PASSIVE SOLAR AND OTHER ALTERNATIVE ENERGY TECHNOLOGIES:
a.) GARAGE POSITIONED ON THE NORTH OR WEST SIDE
b.) KITCHEN ON THE EAST SIDE
c.) PREDOMINATE DAYTIME LIVING SPACE WITH SOUTHERN EXPOSURE
d.) SOUTHERLY FACING BUILDING EAVES EXTENDED SO AS TO REDUCE SUMMER SUNLIT HEAT FROM ENTERING WINDOWS.
e.) GEOTHERMAL OR OTHER ACTIVE ALTERNATIVE ENERGY SOURCE.

3.) IT IS CERTIFIED WITH THE ACKNOWLEDGMENT BELOW, THAT THE DIMENSIONAL LOT REQUIREMENTS OF ARTICLE VIII, SECTION A OF THE TOWN OF MANSFIELD ZONING REGULATIONS HAVE BEEN MET.

4.) ALL PROPOSED LOTS CONTAIN 40,000 SQUARE FEET OF SUITABLE LAND FOR BUILDING AS DEFINED IN ARTICLE VIII, SECTION B.6 OF THE MANSFIELD ZONING REGULATIONS.

5.) ALL STUMP BURIAL HOLES ON INDIVIDUAL LOTS SHALL COMPLY WITH THE STATE OF CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION SOLID WASTE REGULATIONS.

6.) UNDERGROUND UTILITIES

6A. ALL WIRED UTILITY LINES SERVING STRUCTURES ON NEW LOTS SHALL BE INSTALLED UNDERGROUND. UTILITY LINES SHALL BE INSTALLED IN A SUITABLE CONDUIT SYSTEM UNLESS THE RESPONSIBLE UTILITY COMPANY DETERMINES THAT DIRECT BURIAL IS MORE APPROPRIATE;

6B. UPON APPROVAL BY THE RESPONSIBLE UTILITY COMPANY, PLANS SHALL BE SUBMITTED TO DEPICT THE LOCATION OF ALL UNDERGROUND UTILITY EASEMENT AREAS;

6C. ALL UNDER PAVEMENT CONDUITS SHALL BE INSTALLED PRIOR TO THE PAVING OF ANY STREETS OR DRIVEWAYS.

7.) UNLESS REVISIONS ARE SPECIFICALLY AUTHORIZED BY THE COMMISSION, THE BUILDING AREA ENVELOPE AS DEPICTED ON THESE FINAL PLANS SHALL SERVE AS THE SETBACK LINES FOR ALL FUTURE STRUCTURES AND SITE IMPROVEMENTS, PURSUANT TO ART. VIII OF THE ZONING REGULATIONS.

8.) PORTIONS OF THE DEPICTED BUILDING ENVELOPES ARE WITHIN AREAS REGULATED BY THE INLAND WETLAND AGENCY. ANY LAND DISTURBANCES WITHIN THESE AREAS THAT ARE NOT INCLUDED ON THE PLANS APPROVED BY THE INLAND WETLAND AGENCY MAY REQUIRE SUBSEQUENT APPROVAL BY THE AGENCY.

9.) ALL LOTS REQUIRE THE REMOVAL OR FILLING OF LESS THAN 500 CUBIC YARDS OF MATERIAL FOR THE CONSTRUCTION OF THE PROPOSED HOUSE AND DRIVEWAY AND LESS THAN 300 CUBIC YARDS FOR THE SEPTIC FILL.

10.) A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF CONNECTICUT SHALL DESIGN ON–SITE SUBSURFACE DISPOSAL SYSTEMS FOR ALL LOTS IN THIS SUBDIVISION.

11.) FOUNDATION DRAIN OUTLETS WITHIN 25 FEET OF PROPOSED SEPTIC SYSTEMS SHALL BE CONSTRUCTED OF SOLID PVC ASTM D 1785/ ASTM D 2665 (OR EQUAL) WITH RUBBER GASKET JOINTS.

12.) NO LOTS MAY BE SOLD UNTIL SUBDIVISION WORK IS COMPLETED AND APPROVED OR FULLY BONDED TO THE SATISFACTION OF THE MANSFIELD PLANNING AND ZONING COMMISSION.

13.) DURING HOUSE CONSTRUCTION EFFORTS SHALL BE MADE TO RETAIN AND PRESERVE EXISTING STONE WALLS. ANY STONE WALLS REMOVED DURING CONSTRUCTION SHALL BE RECONSTRUCTED ALONG BOUNDARY LINES AND/OR ENHANCE ADJACENT SEGMENTS OF EXISTING STONE WALLS.

14.) DRIVEWAY SIGHT LINES MEET OR EXCEED 250 FEET FOR ALL LOTS. NO PROPOSED DRIVEWAY SLOPES EXCEED 15 PERCENT.

15.) ALL SIGNIFICANT TREES PURSUANT TO SECTION 6.5.j.3 OF THE MANSFIELD SUBDIVISION REGULATIONS HAVE BEEN IDENTIFIED BASED ON A FIELD INSPECTION BY A LANDSCAPE ARCHITECT. ALL SIGNIFICANT TREES DEPICTED HEREON, NOT NOTED TO BE REMOVED, SHALL BE PROTECTED DURING ANY NEARBY CONSTRUCTION. PROTECTION SHALL CONSIST OF A 4 FOOT HIGH ORANGE KNITTED POLYETHYLENE BARRIER FENCE WITH POSTS PROVIDING A MINIMUM 10 FOOT RADIUS AROUND THE BASE UNTIL COMPLETION OF CONSTRUCTION ACTIVITIES.

16.) DEVELOPMENT OF INDIVIDUAL HOUSE SITES SHOULD CONSIDER LOW IMPACT DESIGNS PRACTICES FOR STORM WATER MANAGEMENT TO MINIMIZE DISTURBANCE, PRESERVE NATURAL FEATURES, REDUCE IMPERVIOUS COVER, FACILITATE INFILTRATION OPPORTUNITIES AND PRESERVATION OF STONE WALLS.

APPROVED BY THE TOWN OF MANSFIELD INLAND WETLAND AGENCY

CHAIRMAN — DATE

APPROVED BY THE MANSFIELD PLANNING AND ZONING COMMISSION

CHAIRMAN — DATE

APPROVED BY THE DIRECTOR OF HEALTH

DIRECTOR — DATE

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR — DATE

--- LEGEND ---

--- EXISTING ---	--- PROPOSED ---
	PROPERTY LINE
	STONEWALL
	TEST HOLE
	EASEMENT LINE
493.79	SPOT ELEVATION
	CONTOUR 550
	WELL
	LIMIT OF WETLANDS
	PERCOLATION TEST
	FOUNDATION DRAIN FD
	SILT FENCE
	DEVELOPMENT AREA ENVELOPE DAE
	BUILDING AREA ENVELOPE BAE
	UNDERGROUND UTILITIES UTL
	LIMITS OF DISTURBANCE L.D

SITE DEVELOPMENT PLAN
FOR
SUBDIVISION
ENTITLED
RAPHAELSON ESTATES

DOG LANE
STORRS, CONNECTICUT
OWNER & SUBDIVIDER
HOWARD A. & ALICE K. RAPHAELSON
119 TIMBER DRIVE
STORRS, CONNECTICUT 06268

SCALE : 1" = 40' DATE: JANUARY 12, 2016

THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS 20–300b–1 THRU 20–300b–20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES – "MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. IT IS A SUBDIVISION MAP BASED ON AN ORIGINAL SURVEY CONFORMING TO HORIZONTAL ACCURACY CLASS A–2 AND TOPOGRAPHIC SURVEY ACCURACY CLASS T–3. THIS SURVEY AND MAP IS INTENDED TO BE USED FOR THE CREATION OF PROPOSED PROPERTY LINES AND TO ENABLE DETERMINATION OF COMPLIANCE OR NON–COMPLIANCE WITH APPLICABLE MUNICIPAL OR STATUTORY REQUIREMENTS.

TO THE BEST OF MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

EDWARD PELLETIER, R.L.S. 14203

ANY ORIGINAL OR DUPLICATE OF THIS MAP IS NOT VALID UNLESS IT BEARS THE EMBOSSED SEAL OF THE SURVEYOR WHOSE REGISTRATION NUMBER AND SIGNATURE APPEAR ABOVE. NO OTHER CERTIFICATION OR WARRANTY IS EXPRESSED OR IMPLIED.

SHEET 2 OF 2

DATUM
ENGINEERING & SURVEYING, LLC
132 CONANTVILLE ROAD
MANSFIELD CENTER, CT 06250
TEL (860)456–1357 FAX (860)456–1840

JOB NO.: 214044

CHECKED BY:_____ CORRECTIONS BY:_____

APPLICATION FOR PERMIT
MANSFIELD INLAND WETLANDS AGENCY
4 SOUTH EAGLEVILLE ROAD, STORRS, CT 06268
860-429-3015x6204 (DIRECT) TEL: 860-429-3330 OR
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 the 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 Uniglobe Investment, LLC

Mailing Address 73 Meadowbrook Lane

Mansfield Center, CT Zip 06250

Phone Scott Garrett 203-260-5325 Email scott.garrett13@gmail.com

Title and Brief Description of Project

Meadowbrook Gardens

Develop an additional 36 dwelling units associated with the Whispering Glen project.

Location of Project 91 & 93 Meadowbrook Lane

Intended Start Date Spring 2016

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

Name same as applicant

Mailing Address _____

_____ Zip _____

Phone _____ Email _____

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)**
   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) No proposed activity in wetlands

b) Proposed driveway and parking - 54' at its closest point
Proposed multifamily dwellings - 112' at its closest point
Proposed storm drainage system - 16' at its outlet from retention/ recharge basin
Proposed underground utilities - 67' at its closest point

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

a) No activity in wetlands

b) 1.5 acres within 150' of wetland soils

3) Describe the type of materials you are using for the project: Construction of driveway and parking areas will be using gravel from existing site and process gravel for base before paving.

a) include ***type*** of material used as fill or to be excavated gravel/ process gravel

b) include ***volume*** of material to be filled or excavated Site will be graded using on site material (sand & gravel). Excess topsoil will be removed from site - approximately 1700 cu. yds.

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 attached plans for detailed erosion and sedimentation measures to be installed and maintained until site is stabilized.

Part D - Site Description

Describe the general character of the land. (Hilly? Flat? Wooded? Well drained? etc.)
See attached report from Connecticut Ecosystems LLC for site characteristics.

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.

We moved the proposed buildings northerly to provide a greater distance from the brook southerly of this site. Original layout was 30' closer to the brook. We believe the submitted proposal is less impact on wetland/ watercourse.

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)**

2) Applicant's map date and date of last revision January 8, 2016

3) Zone Classification DMR (pending zone change application)

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) Attach list of abutters, name, and address

2) **Proof of Written Notice to Abutters.** You must notify abutting (neighboring) property owners (any property immediately contiguous with the subject property, including those across the street) 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.*** To generate an abutters list go to http://www.mainstreetmaps.com/CT/Mansfield/

Part I - Additional Notices, if necessary

Notice to Windham Water Works and CT Department of Public Health is attached. If this application is in the public watershed for the Windham Water Works (WWW), you must notify the WWW and the Department of Public Health 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.

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.

The Statewide Reporting Form 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?_X_ 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 _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

Application fees shall be in accordance with the current Mansfield Code of Ordinance fee Schedule, pursuant to Section 8-1c of the Connecticut General Statutes. The fee schedule includes provisions for applicant-funded consultant studies and reports. The current fee schedule is available in the Planning and Zoning office.

Note: The Agency may require additional information about the upland review area 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.

Certification

I hereby certify that:

- I am familiar with the information contained in this form and that such information is true and correct to the best of my knowledge.
- I understand the penalties for obtaining a permit through deception or through inaccurate or misleading information.

_____ _____

Signature Date

Authorization to Enter Property

The undersigned hereby consent 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 issued by the Agency.

_____ _____

Signature Date

Connecticut Ecosystems LLC

• Wetland Delineation • Wetland & Aquatic Evaluation • Mitigation
• Natural Resource Inventory • Permit Assistance • Expert Testimony

ON-SITE SOIL INVESTIGATION REPORT

Project Name & Location
91 & 93 Meadowbrook Lane
Mansfield, CT

CE Job No.: 14-27
Field Investigation Date(s): 12/8/2014
Field Investigation Method(s):
☒ Spade & Auger
☐ Backhoe & Test Pits

Report Prepared For:
Development Solutions, LLC
33 East Town Street
Norwich, CT 06360

Field Conditions:
Weather: Sunny 40° F
Recent Precipitation: average
Soil Moisture: average
Snow Depth: ---
Frost Depth: ---

Purpose of Investigation:
☒ Wetland Delineation/Flagging
☐ Sketch Wetland Boundaries on Base Map (No Flagging)
☐ High Intensity Soil Mapping by Soil Scientist
☒ Medium Intensity Soil Mapping from SCS Soil Survey Maps

Wetland Boundary Marker Series: CE 1-1→1-34
Intermittent Watercourse Marker Series: ---

Wetland Notes:
- **Type(s)**: Deciduous wooded swamp
- **Hydroperiod(s)**: Seasonally saturated
- **Soil Parent Material(s)**: Glacial till
- **Drainage Class(es)**: Poorly drained
- **Slope**: Gentle

38 Westland Avenue • West Hartford, CT 06107
Phone (860) 561-8598 • Fax (860) 561-0223 • email ecosys@comcast.net

CONNECTICUT ECOSYSTEMS LLC
ON-SITE SOIL INVESTIGATION REPORT (CONTINUED)

Project Name & Location: 91 & 93 Meadowbrook Lane Mansfield, CT
Project #: 14-27

SOIL MAP UNITS

Soil symbols used below and on the accompanying Wetland Sketch Map correspond to those in the National Cooperative Soil Survey.

WETLAND SOIL SERIES

Ridgebury, Leicester and Whitman Complex (3)

This complex consists of poorly drained Ridgebury and Leicester soils, and very poorly drained Whitman soils, described separately below. The complex consists of about 35 percent Ridgebury soils, 30 percent Leicester soils, 20 percent Whitman soils, and 15 percent other soils.

Ridgebury Series

The Ridgebury series consists of deep, poorly and somewhat poorly drained soils formed in a coarse-loamy mantle underlain by firm, compact glacial till on uplands. They are nearly level to moderately steep soils on till plains, low ridges and drumloidal landforms. The soils formed in acid glacial till derived mainly from schist, gneiss or granite.

Typically these soils have a black sandy loam surface layer 6 inches thick. The mottled subsoil from 6 to 16 inches is olive gray sandy loam. The mottled substratum from 16 to 60 inches is a light olive brown and olive, very firm and brittle gravelly sandy loam.

The seasonal high water table is within 0 to 18 inches of the surface from late fall through spring. Surface runoff is slow to medium. Permeability is moderate to moderately rapid in the surface layer and subsoil and slow or very slow in the dense substratum. A perched, fluctuating water table above the dense till saturates the solum to or near the surface for 7 to 9 months of the year.

Leicester Series

The Leicester series consists of deep, poorly drained loamy soils formed in friable glacial till on uplands. They are nearly level to gently sloping soils in drainage ways and low lying positions on till covered uplands. The soils formed in acid glacial till derived mainly from schist, gneiss or granite.

Typically, these soils have a surface layer of black fine sandy loam 6 inches thick. The subsoil from 6 to 23 inches is grayish brown, mottled fine sandy loam. The substratum from 26 to 60 inches or more is dark yellowish brown, mottled, friable, gravelly fine sandy loam.

Leicester soils are poorly drained. The seasonal high water table is within 0 to 18 inches of the surface from late fall through spring. Surface runoff is slow. Permeability is moderate or moderately rapid in the surface layer and subsoil and moderately rapid to rapid in the substratum.

Whitman Series

The Whitman series consists of very poorly drained soils formed in a coarse-loamy mantle underlain by firm, compact glacial till on uplands. They occur in drainageways, at the base of hills and ridges, and in depressions. These soils formed in acid glacial till derived mainly from schist and gneiss. They are characterized by a dense, very firm hardpan at a depth of 22-60 inches.

UPLAND (NON-WETLAND) SOIL SERIES

Canton-Charlton Complex (60)

This complex consists of well drained Canton fine sandy loam and well drained Charlton fine sandy loam, described separately below. The complex consists of about 45 percent Canton, 40 percent Charlton, and 15 percent other soils.

Canton Series

The Canton series consists of deep, well drained soils formed in a coarse-loamy mantle underlain by sandy glacial till on uplands. They are nearly level to very steep soils on till plains and hills. The soils formed in acid glacial till derived mainly from schist, gneiss or granite.

Typically, these soils have a surface layer of very dark grayish brown fine sandy loam 2 inches thick. The subsoil from 2 to 23 inches is yellowish brown fine sandy loam, gravelly fine sandy loam and gravelly sandy loam. The substratum from 23 to 60 inches is pale brown gravelly loamy sand.

The water table is commonly at a depth of more than 6 feet. Surface runoff is medium to rapid. Permeability is moderate or moderately rapid in the surface layer and subsoil and rapid in the substratum.

Charlton Series

The Charlton series consists of gently sloping, well drained soils and range from nonstony to extremely stony. Charlton soils occur on the landscape on broad hilltops, ridge tops, and glacial till plains. They formed in glacial till parent material derived mainly from schist and gneiss. Unlike the Paxton soils, which occur on the same landscape, the Charlton soils are not characterized by a dense hardpan.

Typically, the solum is 8 inches thick, dark brown fine sandy loam. The yellowish brown subsoil is 18 inches thick, and the substratum is grayish brown gravelly fine sandy loam to a depth of 60 inches.

CONNECTICUT ECOSYSTEMS LLC
ON-SITE SOIL INVESTIGATION REPORT (CONTINUED)

Project Name & Location: 91 & 93 Meadowbrook Lane Mansfield, CT
Project #: 14-27

Permeability in Charlton soils is moderate or moderately rapid. The soil has a high available water capacity, and runoff is medium.

Gloucester Series (59)

Gloucester soils are somewhat excessively drained, and developed in very friable, coarse-textured glacial till derived mainly from granite and some gneiss. The sand content is high.

The wetlands were field delineated in accordance with the standards of the National Cooperative Soil Survey and the definition of wetlands as found in the Connecticut General Statutes, Chapter 440, Section 22A-38. The investigation was conducted and reviewed by a Registered Soil Scientist.

Respectfully submitted,

Connecticut Ecosystems LLC

Edward M. Pawlak
Registered Soil Scientist
Certified Professional Wetland Scientist

File c:\soils2014\14-27.doc

Soil Map—State of Connecticut
(91 & 93 Meadowbrook Lane Mansfield, CT)

Map Scale: 1:1,610 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
Survey Area Data: Version 13, Oct 28, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 28, 2011—May 12, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

State of Connecticut (CT600)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	1.7	24.0%
59D	Gloucester gravelly sandy loam, 15 to 35 percent slopes, extremely stony	2.5	36.9%
60B	Canton and Charlton soils, 3 to 8 percent slopes	2.6	37.3%
306	Udorthents-Urban land complex	0.1	1.8%
Totals for Area of Interest		**6.9**	**100.0%**

APPLICATION REFERRAL
Mansfield Planning and Zoning Commission

TO:

- ☒ Public Works Dept. (c/o Asst. Town Engineer)
- ☐ Health Officer (c/o R. Miller, EHHD)
- ☒ Design Review Panel
- ☐ Committee on Needs of Persons with Disabilities
- ☒ Fire Marshal
- ☒ Traffic Authority
- ☐ Recreation Advisory Committee
- ☒ Open Space Preservation Committee
- ☐ Parks Advisory Committee
- ☐ Town Council
- ☒ Conservation Commission
- ☐ Agricultural Committee
- ☐ Sustainability Committee

The Planning and Zoning Commission has received a Special Permit Application and will consider the application at a Public Hearing/regular meeting on **May 2, 2016**. Please review the application and reply with any comments to the Planning Office before **March 31, 2016**. For more information, please contact the Planning Office at 429-3330.

APPLICATION INFORMATION

Applicant: Uniglobe Investment, LLC

Owner: Uniglobe Investment, LLC

Agent(s): Datum Engineering & Surveying, LLC

Proposed Use: 36 Residential Apartments, PZC File, 1284-3

Location: 91 & 93 Meadowbrook Lane

Zone Classification: DMR (Design Multiple Residence)

Other Pertinent Information:

- See the following link to view all plans related to this project: http://www.mansfieldct.gov/content/1904/1932/14344.aspx
- Full size plans available for your use in the Planning and Zoning Office

Signed: Jessie L. Richard **Date:** 2/29/16

SPECIAL PERMIT APPLICATION
(see Article V, Section B of the Zoning Regulations)

Mansfield Planning and Zoning Commission

File #_____
Date _____

1. **Name of development** (where applicable) Meadowbrook Gardens

2. **Proposed use** of the property is multifamily development for 36 dwelling units in accordance with Sec.(s) I.1 of Article VII (Permitted Use provisions) of the Zoning Regulations

3. **Address/location** of subject property 91 & 93 Meadowbrook Lane

   Assessor's Map 38 Block 101 Lot(s) 4 & 5 Vol. 774 Page 530

4. **Zone** of subject property R20 **Acreage** of subject property 4.6

5. **Acreage of adjacent land in same ownership** (if any) 9.1

6. **APPLICANT** Uniglobe Investment, LLC _____
   (please **PRINT**) Signature
   Street Address 73 Meadowbrook Lane Telephone 203-260-5325 - Scott Garrett
   Town Mansfield Center, CT Zip Code 06250

   Interest in property: Owner X Optionee_____ Lessee_____ Other_____

   (If "Other", please explain)_____

7. **OWNER OF RECORD:** same as applicant _____
   (please **PRINT**) Signature
   (**OR** attached Purchase Contract _____ **OR** attached letter consenting to application _____)
   Street Address _____ Telephone _____
   Town _____ Zip Code _____

8. **AGENTS** (if any) representing the applicant who may be directly contacted regarding this application:

   Name Robert Magi Telephone 203-692-5222
   Address 73 Meadowbrook Lane, Mansfield Center, CT Zip Code 06250
   Involvement (legal, engineering, surveying, etc.) Project Manager

   Name Edward Pelletier Telephone 860-456-1357
   Address 132 Conantville Road, Mansfield Center, CT Zip Code 06250
   Involvement (legal, engineering, surveying, etc.) Surveyor
   Datum Engineering & Surveying, LLC

(over)

Posted 2/2007

9. The following items have been submitted as part of this application:

__X__ Application fee in the amount of $_____

__X__ Statement of Use further describing the nature and intensity of the proposed use, the extent of proposed site improvements and other important aspects of the proposal. To assist the Commission with its review, applicants are encouraged to be as detailed as possible and to include information justifying the proposed special permit with respect to the approval criteria contained or referenced in Article V, Section B.5.

__X__ Site plan (6 copies) as per Article V, Section B.3.d

__X__ Site plan checklist including any waiver requests

__X__ Sanitation report as per Article V, Section B.3.e - PendingWillimantic Sewer Dept. Approval

__X__ Acknowledgement that certified notice will be sent to neighboring property-owners, as per the provisions of Article V, Section B.3.c (use Neighborhood Notification Form).

__N/A__ As applicable for projects within the watershed of the Willimantic Reservoir, acknowledgement that certified notice will be sent to the Windham Water Works, as per the provisions of Article III, Section l.

__N/A__ As applicable for projects within State designated aquifer protection areas, acknowledgment that the Commissioner of Public Health will be notified as per the provisions of Article III, Section l. The State Department of Public Health's on line form (www.dph.state.ct.us/BRS/Water/Source_Protection/PA0653.htm) shall be used with a copy of the submittal delivered to the Planning Office.

__X__ Other information (see Article V, Section B.3.g). Please list items submitted (if any):
Project Statement of Use
Traffic Study Letter Only-No attachments

10. **ALL APPLICATIONS, INCLUDING MAPS AND OTHER SUBMISSIONS, MUST COMPLY WITH ALL APPLICABLE SECTIONS OF THE ZONING REGULATIONS, INCLUDING, BUT NOT LIMITED TO:**

Art. X, Sec. E,	Flood Hazard Areas, Areas Subject to Flooding
Art. V, Sec. B,	Special Permit Requirements (includes procedure, application requirements, approval criteria, additional conditions and safeguards, conditions of approval, violations of approval, and revisions)
Art. VI, Sec. A,	Prohibited Uses
Art. VI, Sec. B,	Performance Standards
Art. VI, Sec. C,	Bonding
Art. VII,	Permitted Uses
Art. VIII,	Dimensional Requirements/Floor Area Requirements
Art. X, Sec. A,	Special Regulations for Designed Development Districts
Art. X, Sec. C,	Signs
Art. X, Sec. D,	Parking and Loading
Art. X, Sec. H,	Regulations regarding filling and removal of materials
Art. X, Sec. S,	Architectural and Design Standards

MAP CHECKLIST

FOR USE WITH SITE PLAN OR SPECIAL PERMIT APPLICATIONS

(To be submitted by applicant with other application materials)

PZC File #_____
Date_____

Name of Development Meadowbrook Gardens

Applicant Uniglobe Investment, LLC

This checklist is designed to assist applicants as well as the PZC and staff. It is not intended as a substitute for, nor does it contain all of, the information and requirements in the Zoning Regulations and other applicable Town Ordinances and requirements. It is important to note that the Zoning Regulations allow the PZC to waive certain site plan requirements for minor applications where the information is not needed to determine compliance with the Regulations. It is recommended that the Mansfield Director of Planning be contacted if an applicant intends to seek a waiver of certain site plan requirements or if any questions arise. **Any requested waivers must be identified on this checklist.**

Unless waived by the Planning & Zoning Commission, submitted site plans shall include the following information (for more complete and specific descriptions of site plan requirements, see Article V, Section A.3.d of the Zoning Regulations):

	Included	Not Included	Waiver Requested* (see p. 3)
1. Title block: Applicant and owner's name, scale, date & all revision dates	X		
2. Original signature/seal of surveyor, landscape architect and/or engineer responsible. Unless waived, survey to be to A-2 standards	will be provided		
3. Location map at 1"=1,000' scale (see Art. V. Sec. A.3.d.4 for more details)	X		
4. Property lines, sq. footage, setback lines, N. arrow, zone(s)	X		
5. Edges of adjacent street, utility poles & underground lines, stone walls, fences, roadside features	X		
6. Names/addresses of abutting property owners, including those across street (for Special Permit property owners, within 500 ft. of site)	X		
7. Existing & proposed buildings, structures, signs, floor plans, buildings on adjacent land that may be affected	X		
8. Existing & proposed contours, quantity of material to be added or removed	X		

(con't.)

	Included	Not Included	Waiver Requested* (see p. 3)
9. Watercourses, wetlands, flood hazard areas, aquifers	X		
10. Exposed ledge, areas shallow to bedrock	X		
11A. Waste disposal, water supply facilities	X		
11B. Test pit & percolation test locations & findings	X		
(include test dates)	X		
12A. Existing & proposed drainage facilities, roadways, bridges, pedestrian ways, utilities (including construction details)	X		
12B. Existing & proposed easements, rights-to-drain	X		
12C. Proposed sediment & erosion controls	X		
13A. Existing & proposed offstreet parking & loading areas, fire access lanes	X		
13B. Outside storage & refuse areas, fuel & chemical storage tanks	X		
14. Existing & proposed fencing, walls, landscaping (including plant size & type, historic features)	X		
15. Existing & proposed outdoor illumination (including method & intensity of lighting)	X		
16. Existing & proposed outdoor recreation features, with construction details for any recreation improvements	Community Building in Whispering Glen Phase I X		
17. Other information (see Art. V, Sections A.3.g, B.3.g)			

Note: For non-exempt applications subject to Sand and Gravel regulations (Art. X, Sec. H), additional special application provisions must be met.

Datum Engineering & Surveying, LLC
Edward Pelletier, L.S.
(PRINT)Name of individual completing this form

Signature

Date

(con't.)

Explanation of Waiver Requests

Please identify by number the information item(s) for which a waiver has been requested and explain why the information is not necessary to review the proposed development with respect to applicable approval criteria. (If questions arise regarding waiver requests, please consult with the Director of Planning at 429-3330 or the Zoning Agent at 429-3341.)

Art. X. Section A.5.f - Distance between buildings from 50' to 30'. This allows the project to maintain 100' from Meadowbrook Lane and keep southerly building away from the slope down to the brook. By allowing this waiver we can maintain integrity of the existing wooded slope. The buildings being closer together without sacrificing emergency vehicle access.

MEADOWBROOK GARDENS

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91 & 93 Meadowbrook Lane, Mansfield, Connecticut

Town of Mansfield Planning and Zoning Commission

PROJECT STATEMENT OF USE

January 25, 2016

Project Applicant:
Uniglobe Investment LLC

Uniglobe Investment LLC is proposing to construct four buildings consisting of a total of 36 units having one and two bedrooms and a Cape Cod style architecture. The project consists of two parcels known as 91 and 93 Meadowbrook Lane which has two existing single family dwellings and one mobile home containing 4.6 acres. The existing structures will be demolished as part of this project.

The proposed Design Multiple Residence (DMR) multifamily use is identical to the existing DMR zone to the east presently owned by this applicant. The proposed plan provides enhanced landscaping along Meadowbrook Lane as a buffer to the R-20 zone to the north across from Meadowbrook Lane.

The proposal is consistent with the Town's Plan of Development in that:

1. Proposes increased residential density in a zone that has a medium to high density.

2. The site has immediate access to public water and sewer.

3. The site is located on a collector street affording vehicular accessibility.

4. The site abuts a similarly zoned land (DMR).

5. The proposal provides preservation of the onsite watercourse and associated wetlands.

6. The site is near town recreation facilities.

7. The site is near existing commercial and retail establishments.

8. The proposal provides 20% Affordable Housing units.

9. The proposal incorporates Best Management Practices (BMP) for storm water management.

In addition, the location, size, character and suitability of the proposal, is in general, compatible with Article I - Intent and Purpose, of the Town's Zoning Regulations.

The location of the proposal on a collector street in a residential area and its size of units is in harmony with the orderly development of the Town and compatible with other existing uses abutting the property to the east.

The proposal calls for a New England Cape Cod style architecture with abundant landscaping in order to provide the appearance of an established community immediately after construction. This also provides enhanced stabilization of the site after construction. The soils on the site (Merrimac and Jaffrey) being well drained sands and gravel with no bedrock near the surface requiring no basting. The materials on the site are ideal for driveway and parking area subbase. Process gravel will be brought in for the final base prior to paving.

As part of this proposal, the applicant has offered a 50 foot side yard setback to the east for driveway and parking abutting the R-20 zone. The intent is to leave as much of the existing vegetation in that setback area to provide an excellent buffer to the wetlands. Along the south side the property slopes down to the brook, the slope is remaining undisturbed to maintain a buffer between the proposed development and wetlands. This project is proposed to be built as a community with a 100 foot yard setback from Meadowbrook Lane and heavily landscaped providing an enhanced street scape minimizing visual and noise buffer reducing neighborhood impacts.

This proposal also seeks to reduce the separation distance between buildings from 50 feet to 30 feet minimum, in accordance with Article X.A.5.f. This request for reduction would allow the southerly building to be located farther to the north maintaining the existing slope and vegetation adjacent to the brook. 30 feet between buildings is usually sufficient for emergency vehicles.

Maintaining a separation between buildings creates more of a community effect rather than the complex effect several large buildings with multiple units would have and still allow for some density of units. The Cape Cod style architecture, with the individuality of separate structures, creates a village effect which will further be enhanced by the landscaping.

Mitigation of Impacts:

Traffic:
A traffic study has been prepared by F. A. Hesketh & Associates, Inc., dated August 14, 2015 and submitted as part of this application. The previous study has determined the Levels of Services will be very good and that no off site roadway improvements were recommended although a condition of approval requires a walk way to be constructed to Sunny Acres which is presently under design.

Buffer/Landscaping:
A landscape plan has been prepared and submitted with this application to provide visual screening from Meadowbrook Lane along with interior plantings to provide excellent ground cover and screening for residents.

Storm water:
Storm water treatment has been designed to maximize ground water recharge using the well drained soils by the use of dry wells for all the roof leaders providing for a 100 year storm event. Likewise, collection of storm water from driveway and parking areas is directed to galleries and/or retention basins to allow for water treatment and recharge again to accommodate a 100 year storm event. A storm water management plan has been provided, see Erosion, Sedimentation & Maintenance Plan (sheet 6 of 9).

Wetlands/Environmental Impact:
Impacts to the onsite and offsite wetlands are mitigated by maintaining the vegetated area along the west and south side of the project adjacent to the wetlands along with design of the storm water system to handle a 100 year storm event.

Sewer and Water:
The proposed project will be served by public water and sewer system. Water for domestic and fire protection will be provided from the existing 16 inch water main located along Meadowbrook Lane. Sewer from this project to be connected to the existing sewer manhole located on the Whispering Glen project to the east.

Neighborhood Impact:
The setback from Meadowbrook Lane, landscaping buffer proposed between Meadowbrook Lane and site improvements along with the wetland belt and vegetation to the west and south provide excellent visual screening. The residential nature of the proposed development is consistent with the existing uses.

Open/Recreation Space:
Large area to the south, 100 foot front yard setback and the 50 foot setback to the west provide excellent open space and visual buffers and some passive recreation opportunities. In addition, there are off-site town recreation facilities within walking distance of this site to the west.

DESIGN STATEMENT
DRAINAGE CALCULATIONS
&
HYDRAULIC ANALYSIS

UNIGLOBE INVESTMENTS, LLC

91 & 93 MEADOWBROOK LANE
MANSFIELD CONNECTICUT

Civil Engineering Services, LLC
203 Boston Hill Road
Andover CT 06232

February 5, 2016

UNIGLOBE INVESTMENTS, LLC

91 & 93 MEADOWBROOK LANE
MANSFIELD CONNECTICUT

OVERVIEW & SITE LOCATION

The project proposed entails the development of a modest residential development on a 4.6 acre parcel on the south side of Meadowbrook Lane in Mansfield, Connecticut adjacent the previously approved Whispering Glen development. The proposed development will consist of four new buildings, three of which will contain five units each of housing, one which will contain three units. The units will be a mixture of one-bedroom units and two-bedroom units with a total of 60 bedrooms in the development.

Access to the development will be by way of a 95' long boulevard from Meadowbrook Lane, and an additional access road from the Whispering Glenn development.

The parcel on which this development is proposed is currently in an (R-20) Residential 20 Zone. This application will include a request for a zone change to a Planned Residential Zone.

GEOGRAPHY

The subject site is located on a relatively flat sandy area, with a gentle 4-5% slope from east to west and which also drains to the south through an existing well-defined gulley along the eastern property line. The far west and south side of the site is bound by an un-named brook which empties into the Conantville Brook about 250' east of the subject parcel. The Conantville Brook in turn empties into Sawmill Brook just south of the Eastbrook Mall, and Sawmill Brook continues on to the south and meets the Natchaug River at the north end of Phillip Lauter Park in Willimantic.

According to the Natural Resources Conservation Service Web Soil Survey, the soils on the site are primarily Gloucester gravelly sandy loam on steeps slopes, and Canton and Charleton soils on 3 to 8% slopes, which are typified as well-drained, sandy and gravelly sandy loams, with moderately high to high transmissivity, and greater than 80 inches to restrictive features. These soils belong to Hydrologic Soil Group B.

EXISTING CONDITIONS / PROPOSED CONDITIONS

Most of the property to be affected by the proposed development has been previously cleared and is relatively open sandy ground. There currently exists on the parcel a wood-framed residential building, a mobile home and a number of out buildings. The proposed plan calls for an eighteen–unit development with a total of 60 bedrooms, and paved parking for 77 vehicles. Obviously, the amount of impervious coverage on the site will increase dramatically.

The stormwater management plan that we have designed will mitigate the effects of that change by utilizing the hydrologic qualities of the underlying soils in conjunction with a network of drywells and catch basins to absorb what would typically be a significant increase in stormwater run-off from the site. By breaking up the drainage areas into small enough segments, and routing the stormwater into drywells that provide both storage volume and surface interface area with surrounding soils, we are able to provide a system capable of handling any storm event up to a 50-year storm without allowing any run-off from the developed portion of the site.

In the event that the stormwater system fails to contain a storm event, and there is run-off from the site, that run-off will be routed to one of two stabilized areas: one at the northwest corner of the project near the entrance road, and one at the southeast corner of the project where stormwater run-off from the site currently discharges to the existing stream.

DRAINAGE

As this is a residential development, the Mansfield Public Works Standards require that we design the driveway, roadway and general drainage system to meet requirements for a 10-year storm intensity. We have met those requirements and beyond.

Driveway area drainage consists of seven catch basins only, and five of those catch basins are in sag locations. Peak discharge of run-off from the drainage areas contributing to the catch basins was determined using both Rational and the SCS hydrograph methods of determination. The Rational Method was used initially because the peak discharge from that method is typically a bit more conservative (greater peak) than the SCS Method. The results of the Rational Method calculations were used to examine how much stormwater bypass we could expect from the two catch basins not in a sag configuration, and to determine the maximum expected peak flows to the catch basins in located in sags. In all instances we determined that the basins would perform satisfactorily for 10 and 25-year storm events. Drainage calculations are contained in Appendix A.

In the event that flows were to exceed those anticipated, overflow from the proposed drainage system would run to areas adjacent to established streams or channels and any negative impact would be minimized.

HYDROLOGY

The point of interest in our comparison of present conditions to post-development stormwater conditions is the point on the southeast corner of the property where the un-named brook leaves the site. Since the brook is the receptor for all existing stormwater run-off from the site, and will remain the receptor under improved conditions, it is a logical point at which to measure the impact of the development on the site.

The stormwater management plan for the proposed design utilizes a series of drywells and lawn drains in small defined areas to capture roof run-off and stormwater and introduce it to the ground in small segments rather than gathering it in a large detention or retention area. In fact, we feel the design before the Commission will result in a significant decrease in stormwater run-off from the site and will help recharge the groundwater that eventually feeds the un-named brook.

We used the Hydraflow Hydrographs Extension for AutoCAD program to model existing conditions and proposed storm sewers and to analyze the capacity of the system for the 2-year, 10-year, 25-year, and 50-year storm events. Models were constructed utilizing SCS run-off hydrographs to generate stormwater volumes, and drywells were modeled as small ponds with a specified exfiltration rate.

The following assumptions and parameters were used as input data in our Hydraflow model of existing conditions:

A curve number (CN) of 61 was used for open space, lawns and parks (existing conditions) in hydrologic soil group B; CN of 98 was used for impervious areas (only 0.10 acre under existing conditions); existing time of concentration was calculated to be 29.9 minutes based in large part on an overland flow distance of 150 feet on slopes of 4.7%, and a manning's coefficient of 0.40 (lawn area), and a time in brook of about 8 minutes.

As mentioned above, the proposed stormwater design is based on the theory that we can capture all the stormwater from impervious areas and introduce it to a very permeable subsoil for groundwater recharge. That being the case, the stormwater run-off expected from the site under the proposed conditions would be constrained to run-off from those areas outside of the area "captured" by curbing and the proposed recharge system.

For the proposed conditions model we used a CN of 65 with the assumption that the area that would still be contributing to off-site run-off would generally be on the steeper slopes surrounding the development. We also reduced the time of concentration for proposed conditions to 15 minutes realizing that the run-off from the most remote areas

of the site would be intercepted on site. A comparison of the calculated run-off from the site under existing conditions and proposed conditions follows:

STORM EVENT	EXISTING COND.	DEVELOPED COND.
2-YR	1.3 cfs	1.1 cfs
10-YR	4.5 cfs	3.2 cfs
25-YR	6.2 cfs	4.3 cfs
50-YR	8.0 cfs	5.5 cfs

Before starting our hydrographic model of the site, we conducted soil testing on the site. We excavated four large pits on the site, physically examined the soils, and had Materials Testing, Inc. (MTI), take in-situ samples of the material to conduct permeability testing on the material. We found the majority of the material to be med to coarse sand, and sand and gravel, with one exception being in the lower, southern end of test pit #2 where the material was much finer, siltier. The test results from MTI indicated a permeability rate of 10.5 ft./day for the sample taken from the bottom test hole #2 (which we feel was not a particularly representative sample of the site as a whole), and ranged from 68.7 ft./day to 106.2 ft./day in the other three pits, and an overall average of the test results was about 65 ft./day. A copy of the MTI test data is included in Appendix B.

In modeling the proposed run-off capture and disposal plan for the on-site drainage, we modeled a yard drain (with integral 6'x 6' drywell) as a pond with an incremental storage volume and an incremental rate of discharge related to depth of water in the well. Our calculations show that the storage volume of a 6'x6' drywell with 2' of stone around it will provide about 290 cubic feet of storage over the 6 foot depth, and in increments of 48.4 cubic feet per foot elevation. We then calculated the wetted surface area provided at the interface with the stone and, based on an assumed exfiltration rate of 60 feet per day, determined an initial exfiltration rate of about 0.10 cfs for one foot of depth, with an incremental increase of about 0.02 cfs per foot depth. We ran more than 30 hydrographs to determine the appropriate size areas of capture and to ensure some factor of safety.

Because there are so many small drainage areas, and variations in the percentages of impervious surfaces associated with the areas, we have simplified the smaller areas by treating the areas as if they were entirely impermeable surfaces. In doing so, we have found that a 6'x6' drywell (with 2' of stone) will accommodate approximately 3300 sf having a run-off coefficient of CN=98. If we change our permeability factor to 30 ft./day, we can still accommodate a 10-year storm event, but slightly overtops in a 25-year event. Only two drainage areas feeding drywells are greater than 3300 sf, and those areas (DW#12 and DW#13) are connected by a level perforated pipe to two other drywells (DW9 and DW#14) so that the average area for each of the drywells is less than 3300 sf.

Drywell volume calculations and a typical hydrograph for an impervious area of 3300 sf are included in Appendix C.

SCHEDULE OF DIMENSIONAL REQUIREMENTS
ZONE R-20 DMR

	REQUIRED/ALLOWED	PROVIDED
MINIMUM LOT AREA:	5 ACRES	14.89 ACRES
MINIMUM LOT FRONTAGE:	300'	772.57'
MAXIMUM BUILDING HEIGHT:	40'	33'
MAXIMUM BUILDING COVERAGE:	25%	9.9%
*UNIT DENSITY: (5000 SF/UNIT)	86	86

*SEE ART. X.4.A.4.D REQUIRING SPECIAL DIMENSIONAL EXCEPTIONS BY THE COMMISSION

AFFORDABLE HOUSING UNITS (20%) – ART. X SEC. 6.K
TWO BEDROOM UNITS – 1200 SQ.FT. LIVABLE AREA OR LESS

UNITS IN 2-FAMILY DWELLINGS	–	0
MULTI FAMILY DWELLINGS	18	18
ACCESSIBLE HOUSING UNITS	4 MIN.	4

NOTE: THE DEVELOPER WILL COORDINATE WITH THE MANSFIELD HOUSING AUTHORITY AND OTHER STATE AND REGIONAL AGENCIES THAT PROMOTE AFFORDABLE HOUSING OPPORTUNIES TO MARKET THE AFFORDABLE UNITS TO LOW AND MODERATE INCOME FAMILIES.

UNIT DENSITY CALCULATION (ART.X.A.5.B)
TOTAL SITE AREA = 14.89 ACRES (648,302 SQ.FT.)
AREA OF SLOPES > 15% = 1.97 ACRES (85,085 SQ.FT.)
AREA OF WETLANDS = 2.89 ACRES (125,828 SQ.FT.)
641,302 – 85,085 – 125,828 = 430,389 SQ.FT.
430,389 SQ.FT./5000SF/UNIT = 86.07 UNITS

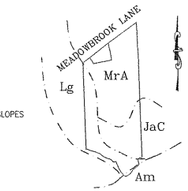
PARKING–MEADOWBROOK GARDENS–(ART X.A.5.B)
PARKING REQUIRED (36 UNITS x 2 SPACES/UNIT) = 72
REGULAR PARKING SPACES PROVIDED – 73
HANDICAP PARKING SPACES PROVIDED – 4
TOTAL PARKING SPACES PROVIDED – 77

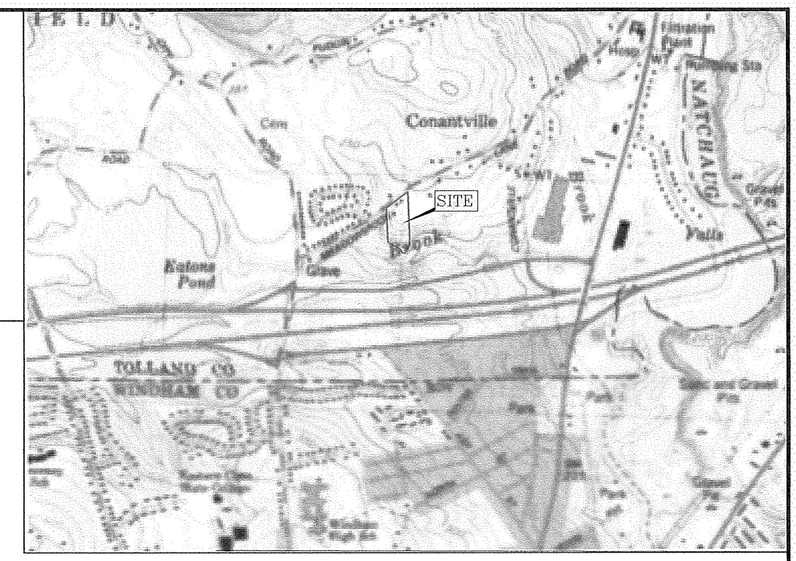
SOIL MAP
SCALE : 1" = 400'

-- SOILS LEGEND --

SYMBOL	DESCRIPTION
Am	ALLUVIAL LAND
JaC	JAFFREY GRAVELLY SANDY LOAM AND LOAMY SAND, 3 TO 15 PERCENT SLOPES
Lg	LEICESTER–RIDGEBURY–WHITMAN VERY STONY COMPLEX
MrA	MERRIMAC FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES

-- SOILS DATA AS PER : "SOIL SURVEY, TOLLAND COUNTY, CONNECTICUT, UNITED STATES DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE"





LOCATION MAP
SCALE : 1" = 1000'

MEADOWBROOK GARDENS

91–93 MEADOWBROOK LANE
MANSFIELD CENTER, CONNECTICUT 06250

OWNER & APPLICANT
UNIGLOBE INVESTMENT, LLC
73 MEADOWBROOK LANE
MANSFIELD CENTER, CT 06250

JANUARY 8, 2016

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APPROVED BY THE TOWN OF MANSFIELD INLAND WETLAND AGENCY

CHAIRMAN DATE

APPROVED BY THE MANSFIELD PLANNING AND ZONING COMMISSION

CHAIRMAN DATE

APPROVED BY THE DIRECTOR OF HEALTH

DIRECTOR DATE

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR DATE

DATUM ENGINEERING & SURVEYING, LLC
132 CONANTVILLE ROAD
MANSFIELD CENTER, CONNECTICUT 06250

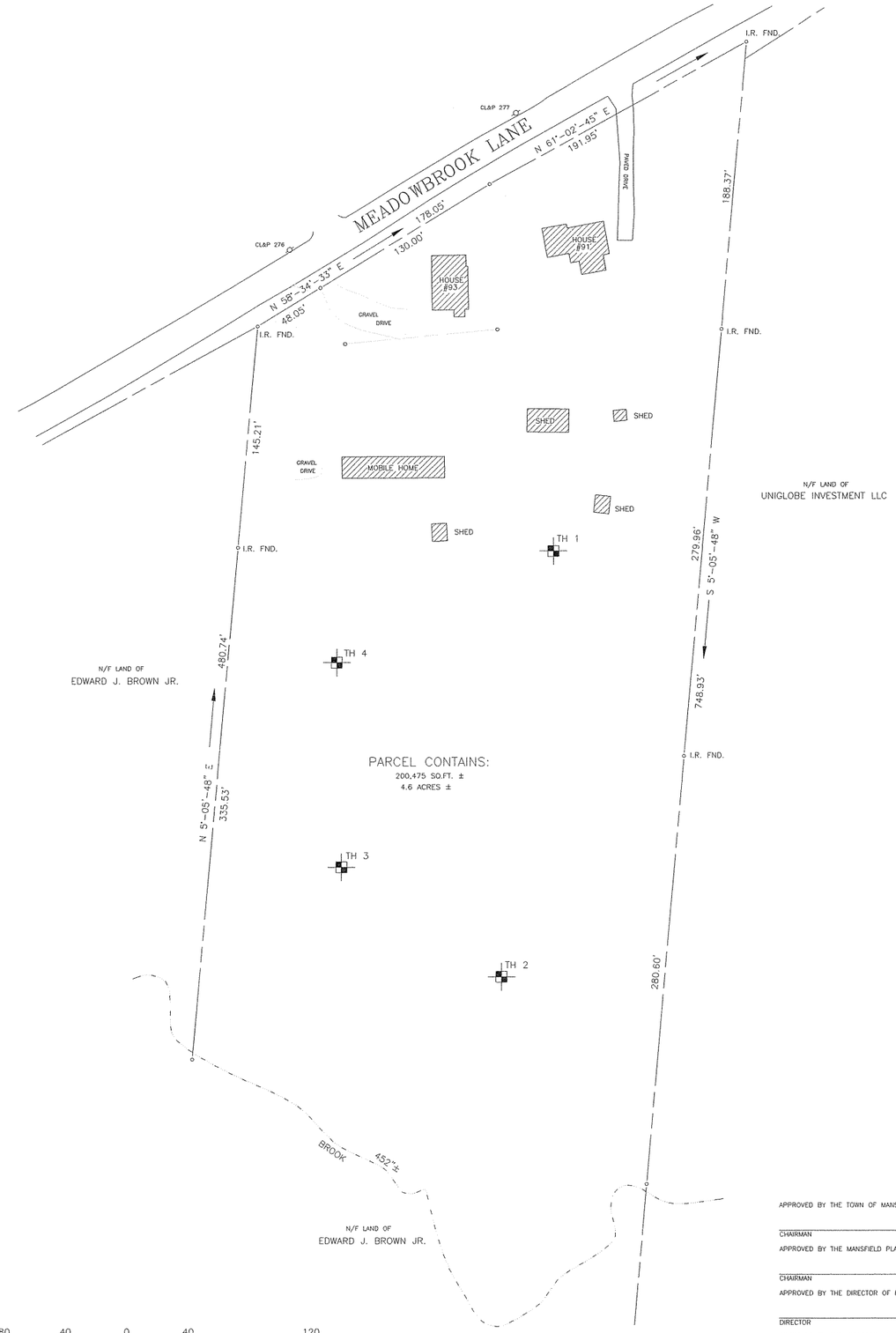
GERALD HARDISTY, P.E.
203 BOSTON HILL ROAD
ANDOVER, CONNECTICUT 06232

JOHN ALEXOPOULOS, ASLA
16 STORRS HEIGHTS ROAD
STORRS, CONNECTICUT 06268

JOB NO. 215049
SHEET 1 OF 10

MAP REFERENCE:

"PROPERTY SURVEY OF 91 & 93 MEADOWBROOK LANE MANSFIELD, CT PREPARED FOR JACK YANG" SHEET NO. 1 OF 1 SCALE 1"=40' JANUARY 8, 2015 PROJECT NO. 14-079 PREPARED BY J DEMPSEY ASSOCIATES PROFESSIONAL LAND SURVEYORS 76 BRAINARD ST. NEW LONDON, CT.



TEST HOLE DATA

OBSERVED BY GERRY HARDISTY, P.E. ON 12/30/15

TEST HOLE 1
- 0- 5" TOPSOIL
- 5-12" BROWN FINE SANDY LOAM
- 12-22" LT. BROWN FINE SAND W/3" BAND AT BOTTOM
- 22-36" YELLOW/BROWN MED SAND
- 36-57" REDDISH COARSE SAND & GRAVEL
- 57-77" YELLOW/BROWN MED/COARSE SAND VERY DISTINCT LAYERS

TEST HOLE 2
- 0-20" DARK BROWN FINE SANDY LOAM
- 20-44" TAN VERY FINE SILTY SAND
- 44-60" LAYERS OF FINE SAND & VERY FINE SAND STRIPPED ORANGE AND GRAY
- 60-84" COARSE AND VERY COARSE SAND & GRAVEL
- NOTE: LAYER OF VERY FINE SAND IN A SLOPE GETTING DEEPER TOWARDS THE EAST, BETTER MATERIAL ON THE WEST END.

TEST HOLE 3
- COARSE SAND AND GRAVEL TOP TO BOTTOM

TEST HOLE 4
- 0-24" TRACE TOPSOIL TO DARK BROWN FINE SANDY LOAM
- 24-46" REDDISH/BROWN FINE SAND TO SILT
- 46-60" VERY COARSE SAND & GRAVEL
- 60-72" CLEAN MED-COARSE SAND

LEGEND

PROPERTY LINE	
ABUTTER PROPERTY LINE	
EDGE PAVEMENT	
EDGE GRAVEL	
IRON ROD FOUND	I.R. FND. o
UTILITY POLE	CL&P 276
TEST HOLE	

80 40 0 40 120

SCALE : 1" = 40'

APPROVED BY THE TOWN OF MANSFIELD INLAND WETLAND AGENCY

CHAIRMAN DATE

APPROVED BY THE MANSFIELD PLANNING AND ZONING COMMISSION

CHAIRMAN DATE

APPROVED BY THE DIRECTOR OF HEALTH

DIRECTOR DATE

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR DATE

THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS 20-300b-1 THRU 20-300b-20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES - "MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. IT IS AN IMPROVEMENT LOCATION MAP BASED ON A DEPENDENT RESURVEY CONFORMING TO HORIZONTAL ACCURACY CLASS "A-2". THIS SURVEY AND MAP IS INTENDED TO ENABLE DETERMINATION OF COMPLIANCE OR NON-COMPLIANCE WITH APPLICABLE MUNICIPAL OR STATUTORY REQUIREMENTS.

TO THE BEST OF MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

EDWARD PELLETIER, L.S. #14203

ANY ORIGINAL OR DUPLICATE OF THIS MAP IS NOT VALID UNLESS IT BEARS THE EMBOSSED SEAL OF THE SURVEYOR WHOSE REGISTRATION NUMBER AND SIGNATURE APPEAR ABOVE. NO OTHER CERTIFICATION OR WARRANTY IS EXPRESSED OR IMPLIED.

BOUNDARY SURVEY

PREPARED FOR

UNIGLOBE INVESTMENT, LLC.

91 & 93 MEADOWBROOK LANE
MANSFIELD, CONNECTICUT

SCALE: 1" = 40' DATE: JANUARY 7, 2016

SHEET 2 OF 10

DATUM
ENGINEERING & SURVEYING, LLC
132 CONANTVILLE ROAD
MANSFIELD CENTER, CT 06250
TEL (860)456-1357 FAX (860)456-1840

CHECKED BY:_____ CORRECTIONS BY:_____

EXISTING BUILDING

EXISTING BUILDING

WHISPERING GLEN – PHASE I

MEADOWBROOK LANE

748.93'

480.74'

145.21'

EXISTING HOUSE #91 TO BE DEMOLISHED

EXISTING HOUSE #93 TO BE DEMOLISHED

EXISTING OUT BUILDINGS TO BE DEMOLISHED.

EXISTING TRAILER TO BE RELOCATED (SEE NOTE)

EXISTING OUT-BUILDINGS TO BE DEMOLISHED.

150' REGULATED AREA

50'

100'

NOTES:

1.) ALL DEMOLITION MATERIAL WILL BE PLACED IN DUMPSTERS AND HAULED WAY BY WILLI-WASTE OR OTHER LICENSED COMPANY.

2.) EXISTING TRAILER WILL BE RELOCATED IN VACINITY OF HOUSE KNOWN AS 91 MEADOWBROOK LANE. TRAILER WILL SERVE AS A TEMPORARY CONSTRUCTION TRAILER UNTIL PROJECT IS COMPLETED. UPON REMOVAL OF TRAILER LOAM WILL BE SPREAD OVER DISTURBED AREAS, RAKED, SEEDED AND MULCHED.

SCALE : 1" = 20'

APPROVED BY THE TOWN OF MANSFIELD INLAND WETLAND AGENCY

CHAIRMAN DATE

APPROVED BY THE MANSFIELD PLANNING AND ZONING COMMISSION

CHAIRMAN DATE

APPROVED BY THE DIRECTOR OF HEALTH

DIRECTOR DATE

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR DATE

DEMOLITION PLAN

PREPARED FOR

UNIGLOBE INVESTMENTS, LLC

91 & 93 MEADOWBROOK LANE
MANSFIELD CENTER, CONNECTICUT

SCALE: 1" = 20' DATE: OCTOBER 12, 2015

SHEET 3 OF 10

DATUM ENGINEERING & SURVEYING, LLC

132 CONANTVILLE ROAD
MANSFIELD CENTER, CT 06250
TEL (860)456-1357 FAX (860)456-1840

JOB NO. 215049

CHECKED BY:..... CORRECTIONS BY:.....

EXISTING BUILDING

EXISTING BUILDING

WHISPERING GLEN – PHASE I

748.93'

I.ROD FND.

MEADOWBROOK LANE

EXISTING HOUSE #91 TO BE DEMOLISHED

EXISTING HOUSE #93 TO BE DEMOLISHED

EXISTING OUT BUILDINGS TO BE DEMOLISHED.

EXISTING TRAILER TO BE RELOCATED (SEE NOTE)

EXISTING OUT-BUILDINGS TO BE DEMOLISHED.

150' REGULATED AREA

145.21

480.74'

NOTES:

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LEGEND

EXISTING		PROPOSED
	PROPERTY LINE	
	NEW TREE LINE	
	TREE LINE	
	STONEWALL	
	WATER LINE	
	UTILITY POLE	
493.79	SPOT ELEVATION	
	CONTOUR	550
	LIMIT OF WETLANDS	
	STORM DRAINAGE PIPE	
	TREE TO BE REMOVED	12" OAK(R)

40 20 0 20 60

SCALE : 1" = 20'

APPROVED BY THE TOWN OF MANSFIELD INLAND WETLAND AGENCY

CHAIRMAN DATE

APPROVED BY THE MANSFIELD PLANNING AND ZONING COMMISSION

CHAIRMAN DATE

APPROVED BY THE DIRECTOR OF HEALTH

DIRECTOR DATE

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR DATE

DEMOLITION PLAN

PREPARED FOR

UNIGLOBE INVESTMENTS, LLC

91 & 93 MEADOWBROOK LANE

MANSFIELD CENTER, CONNECTICUT

SCALE: 1" = 20' DATE: JANUARY 8, 2016

SHEET 4 OF 10

DATUM ENGINEERING & SURVEYING, LLC

132 CONANTVILLE ROAD

MANSFIELD CENTER, CT 06250

TEL (860)456-1357 FAX (860)456-1840

JOB NO. 215049

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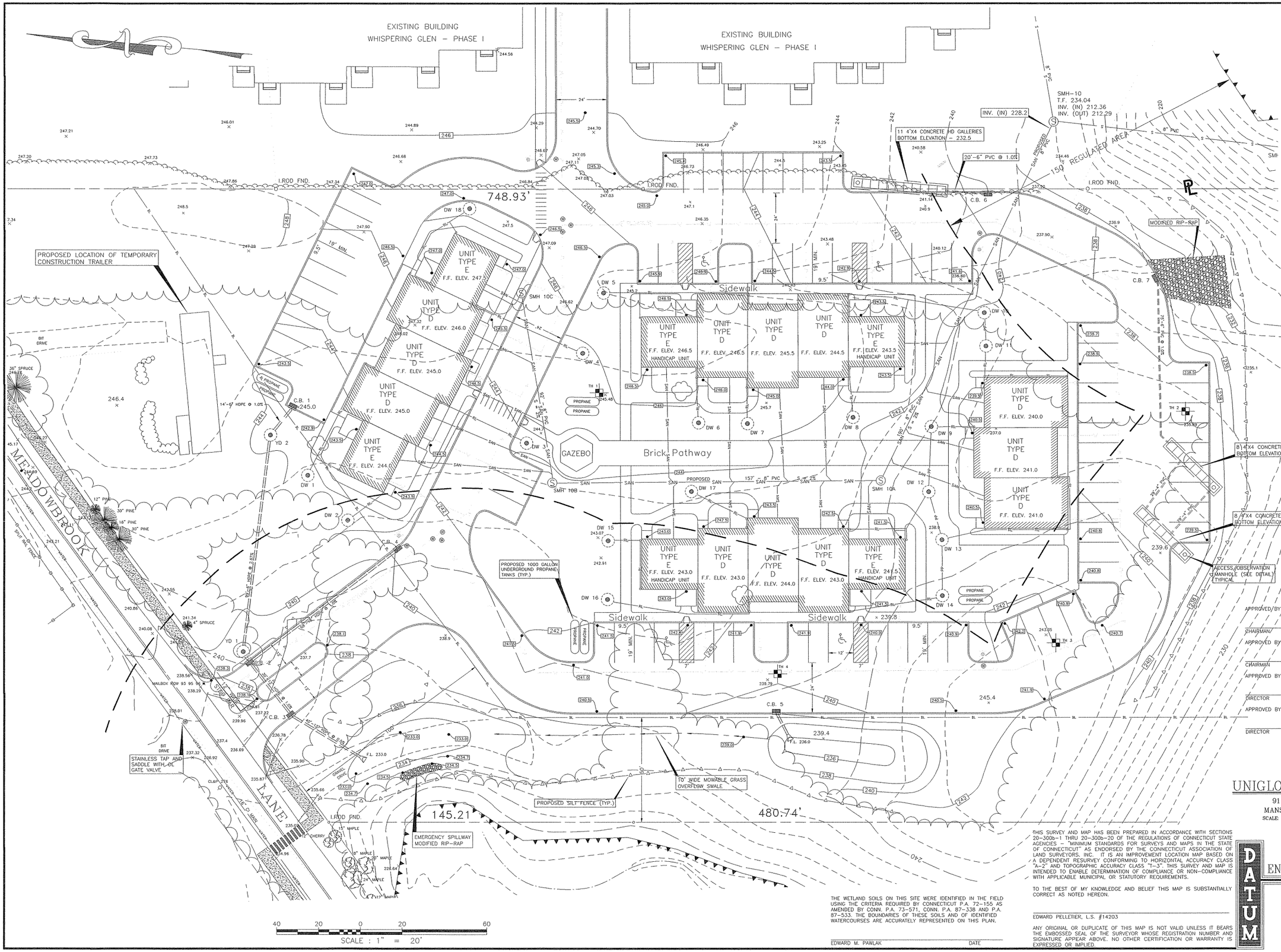

--- LEGEND ---

- PROPERTY LINE
- EXISTING TREE LINE
- NEW TREE LINE
- TEST HOLE
- 2' CONTOUR INTERVAL
- 10' CONTOUR INTERVAL
- PROPOSED CONTOUR
- EXISTING SPOT GRADE
- PROPOSED SPOT GRADE
- WETLAND SOIL LIMITS
- BUILDING LINE
- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING SEWER LINE
- PROPOSED SEWER LINE
- PROPOSED HYDRANT
- PROPOSED VALVE
- PROPOSED CATCH BASIN
- STORM DRAINAGE PIPE (15" HDPE)
- PROPOSED DRAINAGE PIPE (6" PERF.)
- PROPOSED DRAINAGE PIPE (4" SOLID)
- PROPOSED DRY WELL
- PROPOSED WATER SERVICE SHUTOFF VALVE
- PROPOSED BITUMINOUS CURBING
- PROPOSED SILT FENCE

APPROVED BY THE TOWN OF MANSFIELD INLAND WETLAND AGENCY

CHAIRMAN / DATE

APPROVED BY THE MANSFIELD PLANNING AND ZONING COMMISSION

CHAIRMAN DATE

APPROVED BY THE DIRECTOR OF HEALTH

DIRECTOR DATE

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR DATE

SITE PLAN

PREPARED FOR

UNIGLOBE INVESTMENT LLC

91 & 93 MEADOWBROOK LANE
MANSFIELD CENTER, CONNECTICUT

SCALE 1" = 20' DATE: JANUARY 8, 2016

THE WETLAND SOILS ON THIS SITE WERE IDENTIFIED IN THE FIELD USING THE CRITERIA REQUIRED BY CONNECTICUT P.A. 72-155 AS AMENDED BY CONN. P.A. 73-571, CONN. P.A. 87-338 AND P.A. 87-533. THE BOUNDARIES OF THESE SOILS AND OF IDENTIFIED WATERCOURSES ARE ACCURATELY REPRESENTED ON THIS PLAN.

EDWARD M. PAWLAK DATE

THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS 20-300b-1 THRU 20-300b-20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES – "MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. IT IS AN IMPROVEMENT LOCATION MAP BASED ON A DEPENDENT RESURVEY CONFORMING TO HORIZONTAL ACCURACY CLASS "A-2" AND TOPOGRAPHIC ACCURACY CLASS "T-3". THIS SURVEY AND MAP IS INTENDED TO ENABLE DETERMINATION OF COMPLIANCE OR NON-COMPLIANCE WITH APPLICABLE MUNICIPAL OR STATUTORY REQUIREMENTS.

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EDWARD PELLETIER, L.S. #14203

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SHEET 5 OF 10

DATUM
ENGINEERING & SURVEYING, LLC
132 CONANTVILLE ROAD
MANSFIELD CENTER, CT 06250
TEL (860)456-1357 FAX (860)456-1840

JOB NO. 215049

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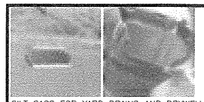
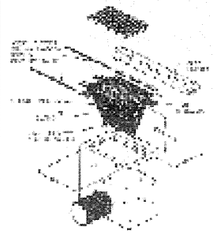
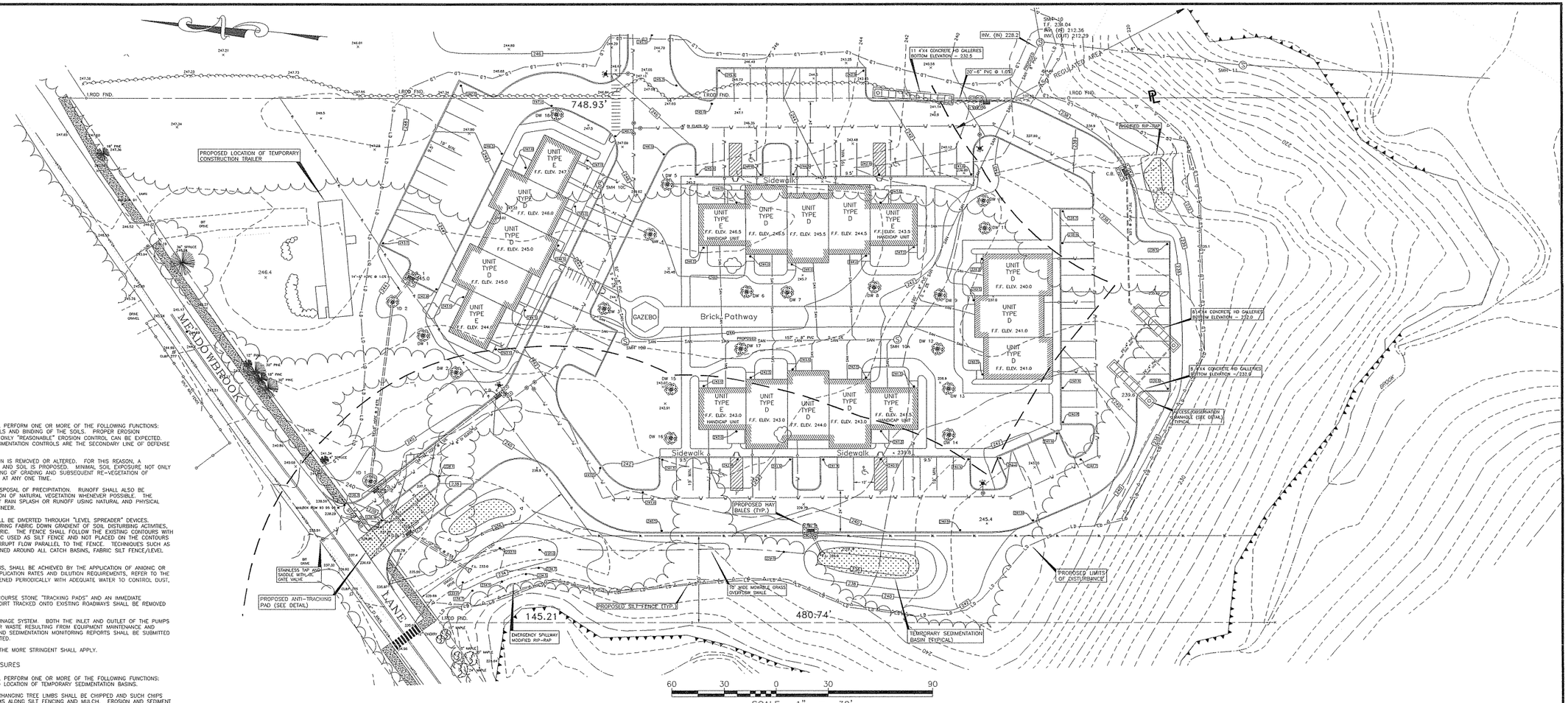


SILT SACS FOR YARD DRAINS AND DRYWELLS
BMP SUPPLIES (WWW.BMPSUPPLIES.COM) OR EQUAL



SILT SACS FOR CATCH BASINS
TERRAFIX GEOSYNTHETICS INC.
(WWW.TERRAFIXGEO.COM) OR EQUAL



I. GENERAL EROSION AND SEDIMENTATION CONTROL NOTES

THIS CONSTRUCTION PLAN PROPOSES EROSION CONTROL MEASURES WHICH WILL PERFORM ONE OR MORE OF THE FOLLOWING FUNCTIONS: MINIMIZATION OF SOIL EXPOSURE, CONTROL OF RUNOFF, SHIELDING OF THE SOILS AND BINDING OF THE SOILS. PROPER EROSION MANAGEMENT WILL MINIMIZE THE EROSION, BUT IT MUST BE UNDERSTOOD THAT ONLY "REASONABLE" EROSION CONTROL CAN BE EXPECTED. THUS, EVEN WITH THE BEST PLAN, SOME EROSION MUST BE ANTICIPATED. SEDIMENTATION CONTROLS ARE THE SECONDARY LINE OF DEFENSE ON THE CONSTRUCTION SITE.

WATER GENERATED SEDIMENT IS A SERIOUS PROBLEM WHEN NATURAL VEGETATION IS REMOVED OR ALTERED. FOR THIS REASON, A RECOMMENDATION FOR MINIMAL SITE DISTURBANCE TO THE EXISTING VEGETATION AND SOIL IS PROPOSED. MINIMAL SOIL EXPOSURE NOT ONLY ENTAILS DEMARCATING SITE DISTURBANCE LIMITS, BUT ALSO INVOLVES THE STAGING OF GRADING AND SUBSEQUENT RE-VEGETATION OF DISTURBED AREAS, SO THAT THE LEAST AMOUNT OF SOIL SURFACE IS EXPOSED AT ANY ONE TIME.

RUNOFF SHALL BE CONTROLLED BY THE INTERCEPTION, DIVERSION AND SAFE DISPOSAL OF PRECIPITATION. RUNOFF SHALL ALSO BE CONTROLLED BY THE STAGING OF CONSTRUCTION ACTIVITY AND THE PRESERVATION OF NATURAL VEGETATION WHENEVER POSSIBLE. THE BINDING OF SOIL PARTICLES TO MAKE THEM LESS SUSCEPTIBLE TO REMOVAL BY RAIN SPLASH OR RUNOFF USING NATURAL AND PHYSICAL "BINDERS" (MULCH AND FABRICS) MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.

TO PREVENT SEDIMENT FROM LEAVING THE SITE, TURBID SURFACE RUNOFF SHALL BE DIVERTED THROUGH "LEVEL SPREADER" DEVICES. TEMPORARY LEVEL SPREADER DEVICES SHALL BE CREATED BY PLACING ENGINEERING FABRIC DOWN GRADIENT OF SOIL DISTURBING ACTIVITIES. THUS FLOW WILL BE DISPERSED OVER A WIDE AREA AND FILTERED BY THE FABRIC. THE FENCE SHALL FOLLOW THE EXISTING CONTOURS WITH ENDS OF THE FENCE TURNED UPHILL TO PREVENT END CUTTING. FILTER FABRIC USED AS SILT FENCE AND NOT PLACED ON THE CONTOURS SHOULD HAVE "WINGS" AT INTERVALS OF NO GREATER THAN 100 FEET TO INTERRUPT FLOW PARALLEL TO THE FENCE. TECHNIQUES SUCH AS "WINGED" FABRIC SILT FENCE, CHECK DAMS, HAY BALES INSTALLED AND MAINTAINED AROUND ALL CATCH BASINS, FABRIC SILT FENCE/LEVEL SPREADERS AND SEDIMENTATION PONDS MAY BE USED.

DUST CONTROL, IF DETERMINED TO BE REQUIRED DURING THE DAILY INSPECTIONS, SHALL BE ACHIEVED BY THE APPLICATION OF ANIONIC OR CATIONIC ASPHALT EMULSIONS, LATEX EMULSION, OR RESIN IN WATER. FOR APPLICATION RATES AND DILUTION REQUIREMENTS, REFER TO THE MANUFACTURER'S GUIDELINES. THE EXPOSED SOIL SURFACE SHOULD BE MOISTENED PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST, BUT WATER SHALL NOT BE USED EXCLUSIVELY.

IN AN EFFORT TO REDUCE THE POTENTIAL FOR TRACKING MUD OFF THE SITE, COURSE STONE "TRACKING PADS" AND AN IMMEDIATE CONSTRUCTION OF A GRAVEL SUB-BASE FOR ROADWAYS ARE RECOMMENDED. DIRT TRACKED ONTO EXISTING ROADWAYS SHALL BE REMOVED BY SHOVEL AND G-BROOM AT THE END OF EACH DAY.

EXCAVATION THAT MUST BE DE-WATERED WILL BE PUMPED INTO AN ACTIVE DRAINAGE SYSTEM. BOTH THE INLET AND OUTLET OF THE PUMPS SHOULD BE FILTERED AND PROTECTED FROM SURGE ACTION. DEBRIS AND OTHER WASTE RESULTING FROM EQUIPMENT MAINTENANCE AND CONSTRUCTION SHALL NOT BE DISCARDED ON SITE. THE BI-WEEKLY EROSION AND SEDIMENTATION MONITORING REPORTS SHALL BE SUBMITTED TO THE ZONING AGENT DURING THE TIME THE ROADWAYS ARE BEING CONSTRUCTED.

IN THE EVENT OF CONFLICT BETWEEN THESE PLANS AND OTHER REGULATIONS, THE MORE STRINGENT SHALL APPLY.

II. CONSTRUCTION SEQUENCE AND DETAILD EROSION CONTROL MEASURES

THIS CONSTRUCTION PLAN PROPOSES EROSION CONTROL MEASURES WHICH WILL PERFORM ONE OR MORE OF THE FOLLOWING FUNCTIONS:
1. A REGISTERED LAND SURVEYOR SHALL FIELD STAKE LIMITS OF CLEARING AND LOCATION OF TEMPORARY SEDIMENTATION BASINS.

2. UPON COMPLETION OF THE FIELD STAKING, ALL VEGETATION, INCLUDING OVERHANGING TREE LIMBS SHALL BE CHIPPED AND SUCH CHIPS SHALL BE STORED IN NON-GRADED AREAS FOR FUTURE USE AS EROSION BERMS ALONG SILT FENCING AND MULCH. EROSION AND SEDIMENT MEASURES SHALL BE INSTALLED AS APPROPRIATE PRIOR TO ANY SITE DISTURBANCE.

3. TEMPORARY STORM WATER RETENTION BASINS SHALL BE CONSTRUCTED AND SITE RUNOFF DIRECTED TOWARD THE BASINS.

4. STUMPING CAN COMMENCE AND BE GROUND INTO CHIPS. CHIPS SHALL BE STOCK PILED IN NON-GRADED AREAS. ANTI-TRACKING PADS SHALL BE INSTALLED PRIOR TO STRIPPING OF THE BALANCE OF THE SITE. THIS ANTI-TRACKING PADDING SHALL BE MAINTAINED AND REPLACED AS NECESSARY.

5. TEMPORARY SEDIMENTATION BASINS SHALL BE CONSTRUCTED AS DEPICTED, AND MAINTAINED UNTIL STORM DRAINAGE STRUCTURES ALONG WITH EROSION AND SEDIMENTATION CONTROLS, HAY BALES, CHECK DAMS, SILT SACKS AND LEVEL SPREADERS HAVE BEEN INSTALLED.

6. ROADWAYS AND PARKING AREAS SHALL BE ROUGH GRADED, DIRECTING STORM WATER RUNOFF TOWARD THE SEDIMENTATION BASINS. EROSION AND SEDIMENTATION CONTROLS SHALL BE INSTALLED AND MAINTAINED UNTIL COMPLETION OF THE PROJECT AND SITE DISTURBANCE IS STABILIZED.

7. INSTALLATION OF THE SEWER SYSTEM FROM THE EXISTING MANHOLE ON PHASE 1 AND THEN THE WATER MAIN FROM MEADOWBROOK LANE TO THE EXISTING CONNECTION PROVIDED FOR IN PHASE 1. INDIVIDUAL WATER SERVICES SHALL BE INSTALLED AS BUILDINGS ARE CONSTRUCTED.

8. UNDERGROUND TELEPHONE, CABLE AND ELECTRIC SHALL BE INSTALLED, FOLLOWED BY THE PLACEMENT OF THE PROCESS GRAVEL BASE, BITUMINOUS PAVEMENT AND BITUMINOUS CONCRETE LIP CURBING. THE SHOULDERS OF ROADWAYS AND PARKING AREAS SHALL BE FINE GRADED, LOAMED AND SEEDED, AS SPECIFIED.

9. PERMANENT STORM WATER RECHARGE BASINS SHALL BE COMPLETED AND STABILIZED IMMEDIATELY, ALONG WITH THE RIP-RAP OVERFLOW AREA SOUTH OF CATCH BASIN 7. ALL SILT SACKS SHALL BE MAINTAINED AND CHECKED AFTER EVERY STORM EVENT UNTIL THE SITE HAS BEEN COMPLETELY STABILIZED.

BEFORE AND AFTER EACH STORM EVENT AND ONCE EVERY DAY, ALL SEDIMENT AND EROSION CONTROLS WILL BE INSPECTED BY THE ENGINEER OR ENVIRONMENTAL SUPERVISOR. ANY CORRECTIVE MEASURES TO MITIGATE ENVIRONMENTAL CONCERNS WILL BE ORDERED AT THAT TIME. THERE WILL BE 150 FEET OF SILT FENCE WITH THE REQUIRED POSTS ON HAND FOR EMERGENCY SITUATIONS.

III. BUILDING SITE DEVELOPMENT

1. THE LIMITS OF DISTURBANCE SHALL BE ESTABLISHED IN THE FIELD FOR EACH PROPOSED BUILDING. THE MAXIMUM DISTURBANCE LIMITS OF 24-30 FEET BEYOND THE PHYSICAL DIMENSIONS OF THE BUILDING AND RELATED APPURTENANCES IS RECOMMENDED.

2. TOPSOIL AND EXCAVATED SUBSOIL FROM THE FOUNDATION AREA SHALL BE STOCKPILED WITH THE AREA OF DISTURBANCE IF NOT USED FOR THE ON SITE RE-GRADING. EACH STOCKPILE SHALL BE ADEQUATELY RINGED ON THE DOWN GRADIENT SIDE WITH SEDIMENT CONTROL MATERIALS MENTIONED PREVIOUSLY.

3. ANY ADDITIONAL STOCKPILING OF LUMBER AND OTHER BUILDING MATERIALS SHALL ALSO BE CONFINED TO THE AREA OF DISTURBANCE. VEHICULAR MOVEMENT SHALL BE DIRECTED TO ESTABLISHED PARKING AREAS.

4. ONCE THE PROPOSED BUILDING IS ENCLOSED, ALL EFFORTS SHALL BE MADE TO COMPLETE ON SITE IMPROVEMENTS, SUCH AS WATER SERVICE, SEWER LATERALS, ROOF LEADER DRAINS, ETC.. THEREAFTER, AREA AROUND THE BUILDING SHALL BE FINE GRADED AND MULCHED.

IV. SEEDING AND PLANTING:

1. SEED BED PREPARATION: FINE GRADE AND RAKE SOIL SURFACE TO REMOVE STONES LARGER THAN 2 INCHES IN DIAMETER FROM LAWN AREAS. APPLY LIMESTONE AT A MINIMUM RATE OF 2 TONS PER ACRE OR 90 LBS. PER 1000 SQUARE FEET. FERTILIZE WITH 10-10-10 AT A RATE OF 300 LBS. PER ACRE OR 7.5 LBS. PER 1000 SQUARE FEET. WORK LIME AND FERTILIZER INTO SOIL UNIFORMLY TO A DEPTH OF 4 INCHES WITH A WHISK, SPRING-TOOTH HARROW OR OTHER SUITABLE EQUIPMENT FOLLOWING THE CONTOUR LINES.

2. SEED APPLICATION: APPLY GRASS SEED MIXTURE BY HAND, CYCLONE SEEDER OR HYDROSEED. INCREASE SEED MIXTURE BY 10% IF HYDROSEEDING. LIGHTLY DRAG OR ROLL THE SEEDED SURFACE TO COVER SEED. SEED SHALL CONSIST OF A MIXTURE OF KENTUCKY BLUEGRASS (0.45LBS/1000 SF), CREEPING RED FESCUE (0.45 LBS/1000 SF), AND PERENNIAL RYE GRASS (0.10 LBS/1000 SF). SEEDING OF PERMANENT GRASS SEED SHALL BE DONE BETWEEN APRIL 15 AND JUNE 15, OR SEPTEMBER 1 THROUGH OCTOBER 15. IN THE EVENT THAT SEEDING CANNOT BE COMPLETED DURING THE ABOVE DATES, A TEMPORARY GRASS SEED CONSISTING OF 1.0 LBS/1000 SF OF ANNUAL RYE GRASS SHALL BE APPLIED. MOISTURE CONDITIONS SHALL BE SUPPLEMENTED FOR TEMPORARY SEEDING BETWEEN JUNE 16 AND AUGUST 31.

3. MULCHING: IMMEDIATELY FOLLOWING SEEDING, MULCH THE SEEDED SURFACE WITH STRAW OR HAY AT A RATE OF 1.5 TO 2 TONS PER ACRE WHERE SLOPES EXCEED 10 PERCENT. SPREAD MULCH BY HAND OR MULCH BLOWER. PUNCH MULCH INTO SOIL SURFACE WITH TRACK MACHINE OR DISH HARROW SET STRAIGHT UP. MULCH MATERIAL SHOULD BE SET INTO SOIL SURFACE APPROXIMATELY EVERY 2-3 INCHES.

V. PLAN IMPLEMENTATION

PRIOR TO THE START OF CONSTRUCTION, THERE SHALL BE A PRE-CONSTRUCTION MEETING WITH THE TOWN ZONING AGENT, THE TOWN WETLANDS AGENT, THE SITE CONTRACTOR AND THE CONTRACTOR'S PROFESSIONAL SOIL EROSION AND SEDIMENT CONTROL SPECIALIST TO DISCUSS THE PLAN, INSPECTION PROCEDURES AND REPORT REQUIREMENTS.

REGULAR INSPECTION OF THE SITE SHALL BE PERFORMED TO ENSURE COMPLIANCE WITH THIS SEDIMENT AND EROSION CONTROL PLAN, AND A SEDIMENT AND EROSION MONITORING REPORT MAY BE REQUIRED BY THE TOWN OF MANSFIELD ZONING AGENT AND INLAND WETLAND AGENT AS DEEMED NECESSARY.
DURING CONSTRUCTION IT SHALL BE THE RESPONSIBILITY OF ROBERT MAGI (TEL. NO. (203) 692-5222) TO ENSURE THE IMPLEMENTATION OF THIS SEDIMENT & EROSION CONTROL PLAN. THIS RESPONSIBILITY INCLUDES INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE SITE OF THE OBJECTIVES OF THE PLAN, NOTIFYING THE WETLAND AGENT OR HIS DESIGNATE OF ANY TRANSFER OF THIS RESPONSIBILITY AND FOR CONVEYING A COPY OF THE SEDIMENT & EROSION CONTROL PLAN IF AND WHEN SUCH TRANSFER IS APPROPRIATE. ANY MATERIAL REMOVED FROM SITE AND DEPOSITED IN MANSFIELD MUST BE IN FULL COMPLIANCE WITH APPLICABLE ZONING AND INLAND WETLAND REQUIREMENTS.

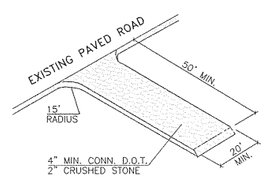
VI. STORM WATER MANAGEMENT PLAN

ONCE CONSTRUCTION IS COMPLETE AND LAWNS AND DISTURBED AREAS FULLY STABILIZED, SOIL EROSION AND SEDIMENT CONTROL MEASURES SUCH AS SILT FENCE AND HAY BALES MAY/SHALL BE REMOVED AT WHICH TIME THIS STORMWATER MANAGEMENT PLAN SHALL BE IMPLEMENTED.

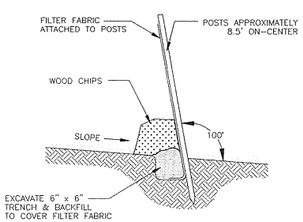
CATCH BASINS AND LAWN DRAINS SHALL BE FITTED WITH "SILT SACS" OR EQUIVALENT GEOSYNTHETIC FILTER FABRICS TO PREVENT SILTATION OR CLOGGING OF CATCH BASIN SUMPS AND DRYWELLS. SUCH FILTERS SHALL BE INSPECTED REGULARLY (SUCH AS AT TIMES OF LAWN MOWING) AND EMPTIED AND OR REPLACED AS NECESSARY. INFILTRATION BASINS SHALL BE MAINTAINED AS LAWNS, MOWED REGULARLY AND KEPT FREE OF TREES, BRUSH OR BRAMBLES.

BOTH FILTER FABRIC SYSTEMS AND INFILTRATION AREAS BEAR CLOSE MONITORING ESPECIALLY IMMEDIATELY AFTER IMPLEMENTATION. MAINTENANCE AND INSPECTION INTERVALS SHOULD BE ADJUSTED AS NECESSARY BASED ON INSPECTION RESULTS, AND A LOG OF INSPECTION DATES AND RESULTS SHOULD BE MAINTAINED.

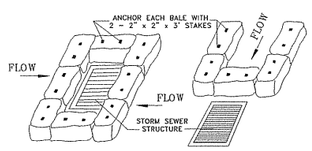
EDWARD PELLETIER, L.S. #14203
ANTICIPATED START DATE: JUNE, 2016 COMPLETION DATE: JANUARY, 2017



ANTI-TRACKING PAD DETAIL
NOT TO SCALE



SILT FENCE DETAIL
NOT TO SCALE



HAY BALE INSTALLATION AT CATCH BASIN
NO SCALE

APPROVED BY THE TOWN OF MANSFIELD INLAND WETLAND AGENCY

CHAIRMAN DATE

APPROVED BY THE MANSFIELD PLANNING AND ZONING COMMISSION

CHAIRMAN DATE

APPROVED BY THE DIRECTOR OF HEALTH

DIRECTOR DATE

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR DATE

--- LEGEND ---

PROPERTY LINE
EXISTING TREE LINE
2' CONTOUR INTERVAL
10' CONTOUR INTERVAL
PROPOSED CONTOUR — 550
EXISTING SPOT GRADE — 242.91
PROPOSED SPOT GRADE — 550.3
WETLAND SOIL LIMITS
BUILDING LINE
PROPOSED CATCH BASIN
STORM DRAINAGE PIPE (15" HDPE)
PROPOSED DRY WELL
PROPOSED BITUMINOUS CURBING
PROPOSED SILT FENCE
LINMITS OF DISTURBANCE — LD

EROSION, SEDIMENTATION & MAINTENANCE PLAN

PREPARED FOR

UNIGLOBE INVESTMENT LLC

91 & 93 MEADOWBROOK LANE
MANSFIELD CENTER, CONNECTICUT

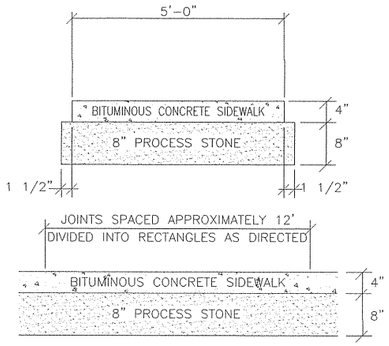
SCALE: 1" = 30' DATE: JANUARY 8, 2016

SHEET 6 OF 10

DATUM ENGINEERING & SURVEYING, LLC
132 CONANTVILLE ROAD
MANSFIELD CENTER, CT 06250
TEL (860)456-1357 FAX (860)456-1840

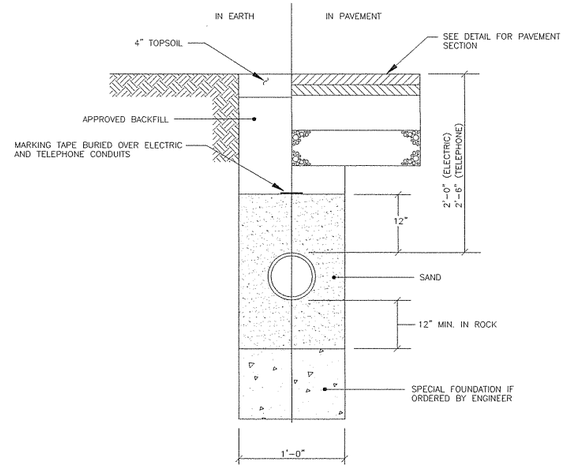
JOB NO. 215049

CHECKED BY:_____ CORRECTIONS BY:_____



5' BITUMINOUS CONCRETE SIDEWALK

NO SCALE



ELECTRICAL & TELEPHONE PVC CONDUIT TRENCH DETAIL

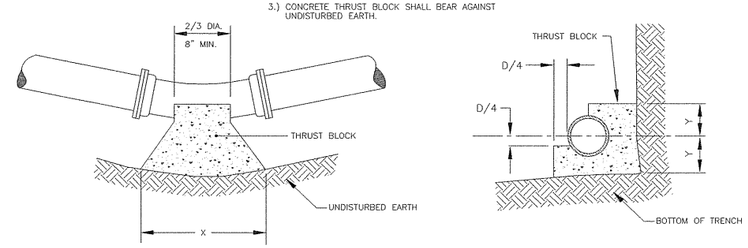
NOT TO SCALE

NOTE:

1.) ALL CONCRETE SHALL BE 3000 PSI AT 28 DAYS

2.) DIMENSIONS SHOWN ARE MINIMUM AND ARE BASED UPON SOIL PRESSURE OF 3000 PSF AND STATIC WATER PRESSURE OF 180 PSI.

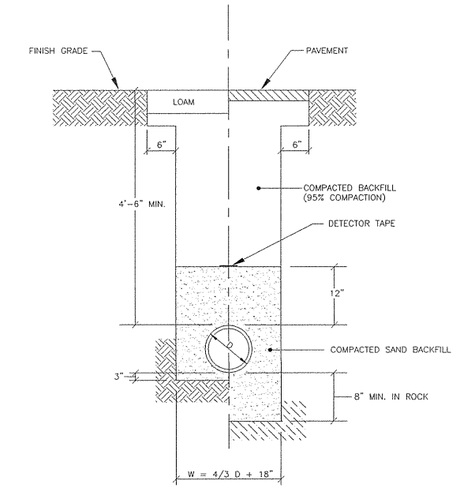
3.) CONCRETE THRUST BLOCK SHALL BEAR AGAINST UNDISTURBED EARTH.



	45° BEND					22 1/2° BEND					11 1/4° BEND				
DIA.	6"	8"	12"	16"	24"	6"	8"	12"	16"	24"	6"	8"	12"	16"	24"
X	12"	18"	24"	36"	42"	12"	16"	18"	24"	42"	12"	12"	14"	18"	42"
Y	12"	12"	12"	16"	28"	12"	12"	12"	14"	28"	12"	12"	12"	14"	28"

THRUST BLOCK DETAIL

NOT TO SCALE



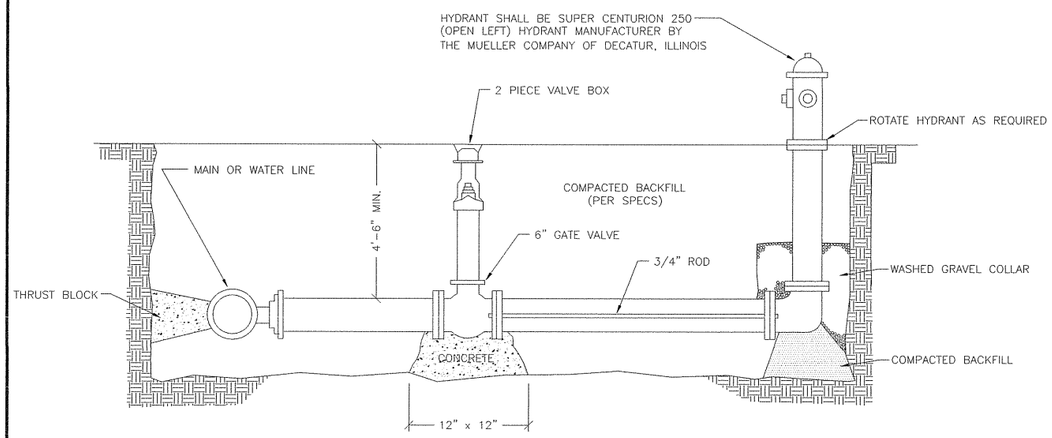
TYPICAL WATER MAIN TRENCH DETAIL

NOT TO SCALE

1. ALL WATER LINE MATERIALS SHALL BE PER WWW SPECS

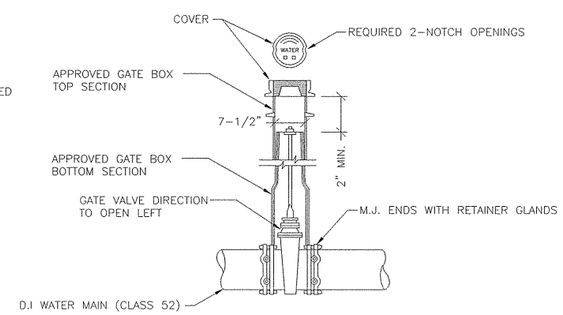
2. WATER MAIN TO MAINTAIN A MINIMUM 10 FEET FROM STORM DRAINAGE RECHARGE STRUCTURES UNLESS APPROVED BY WWW.

3. ALL BUILDING WATER LINE SERVICES TO BE 1" COPPER



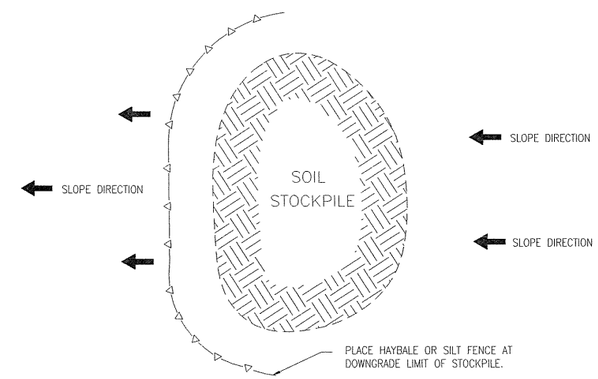
FIRE HYDRANT ASSEMBLY

NO SCALE



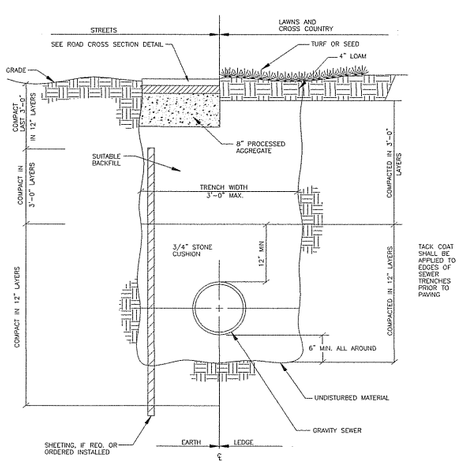
12" OR LESS VERTICAL GATE VALVE AND GATE BOX (OPEN LEFT)

NO SCALE



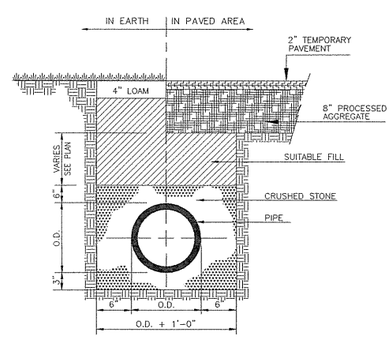
STOCKPILE EROSION PROTECTION DETAIL

NOT TO SCALE



TYPICAL GRAVITY SEWER TRENCH SECTION DETAIL

NOT TO SCALE



STORM SEWER TRENCH SECTION

NO SCALE

APPROVED BY THE TOWN OF MANSFIELD INLAND WETLAND AGENCY

CHAIRMAN DATE

APPROVED BY THE MANSFIELD PLANNING AND ZONING COMMISSION

CHAIRMAN DATE

APPROVED BY THE DIRECTOR OF HEALTH

DIRECTOR DATE

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR DATE

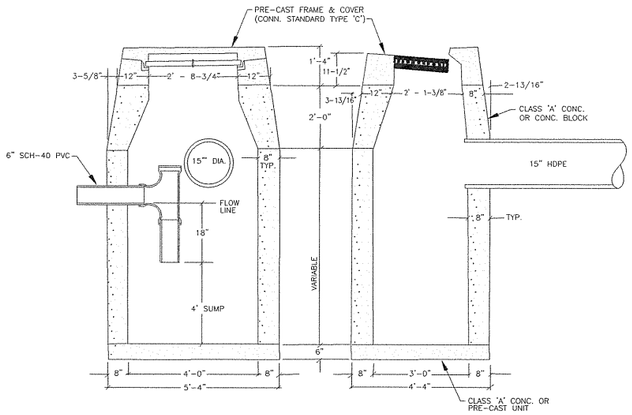
DETAIL SHEET
PREPARED FOR
UNIGLOBE INVESTMENT LLC
91 & 93 MEADOWBROOK LANE
MANSFIELD CENTER, CONNECTICUT
SCALE: AS NOTED DATE: JANUARY 8, 2016

SHEET 7 OF 10

DATUM
ENGINEERING & SURVEYING, LLC
132 CONANTVILLE ROAD
MANSFIELD CENTER, CT 06250
TEL (860)456-1357 FAX (860)456-1840

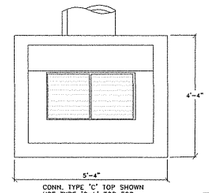
JOB NO. 215049

CHECKED BY:_____ CORRECTIONS BY:_____



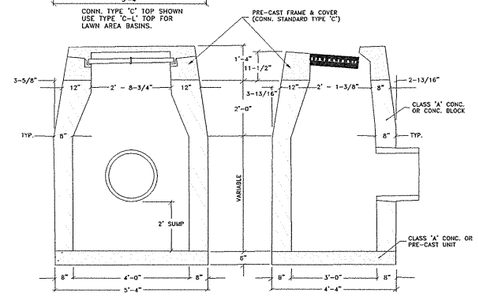
CONN. STATE STANDARD CATCH BASIN

NO SCALE



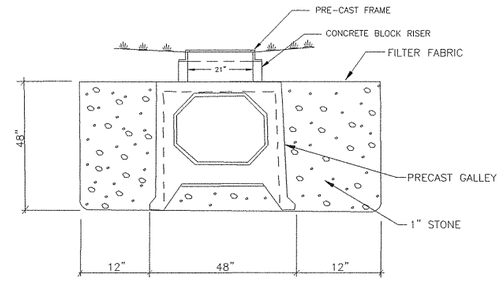
CATCH BASIN SCHEDULE

NUMBER	TOP FRAME	INVERT
CB 1	242.7	239.0
CB 2	237.3	233.5
CB 3	237.5	233.2
CB 4	236.7	234.14
CB 5	239.5	236.2
CB 6	239.5	236.0
CB 7	237.5	235.5



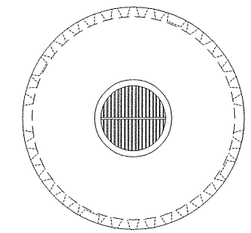
CONN. STATE STANDARD CATCH BASIN

NO SCALE



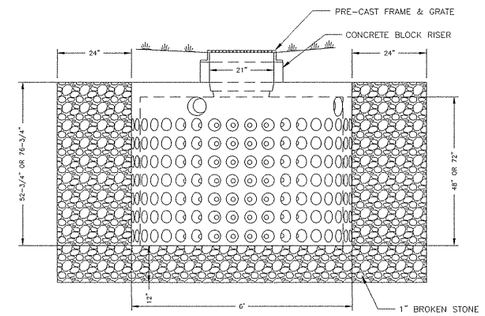
GALLERY CROSS SECTION

NO SCALE



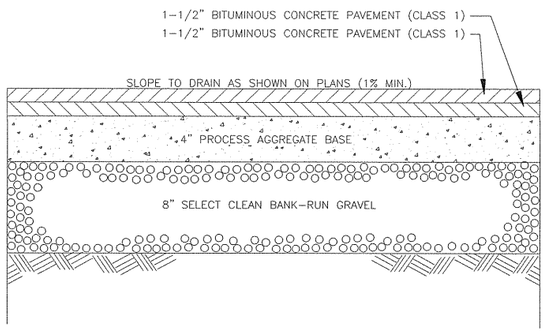
DRY WELL/YARD DRAIN SCHEDULE

NUMBER	SIZE	TOP FRAME	BOTTOM ELEV.	INVERT
DW 1	6'Dx4'H	242.8	237.6	–
DW 2	6'Dx4'H	242.1	236.9	–
DW 3	6'Dx6'H	242.8	235.4	–
DW 4	6'Dx4'H	242.1	236.9	–
DW 5	6'Dx4'H	246.0	240.8	–
DW 6	6'Dx4'H	244.8	239.6	–
DW 7	6'Dx4'H	244.0	238.8	–
DW 8	6'Dx4'H	242.8	237.6	–
DW 9	6'Dx6'H	239.0	230.1	235.64
DW 10	6'Dx6'H	239.0	231.6	237.14
DW 11	6'Dx6'H	239.5	231.6	237.14
DW 12	6'Dx6'H	240.0	231.1	236.64
DW 13	6'Dx6'H	240.0	231.1	236.64
DW 14	6'Dx6'H	240.5	230.1	235.64
DW 15	6'Dx4'H	242.3	237.1	–
DW 16	6'Dx4'H	241.8	236.4	–
DW 17	6'Dx4'H	242.0	236.8	–
DW 18	6'Dx4'H	247.3	242.1	–
YD 1	6'Dx6'H	237.8	230.4	236.20
YD 2	6'Dx6'H	242.5	235.1	238.86



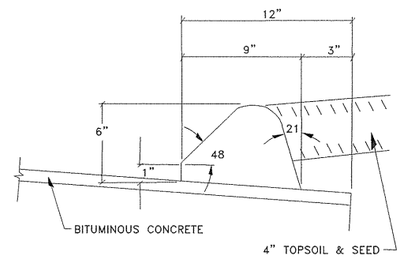
PRECAST DRYWELL/YARD DRAIN

NO SCALE



PAVEMENT DETAIL

NOT TO SCALE



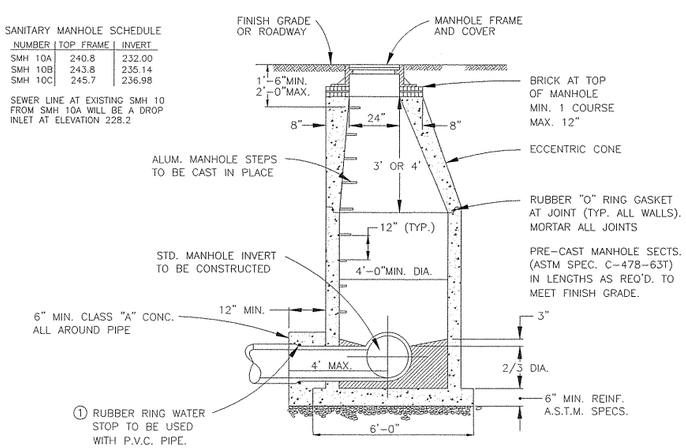
CURB DETAIL

NO SCALE

SANITARY MANHOLE SCHEDULE

NUMBER	TOP FRAME	INVERT
SMH 10A	240.8	232.00
SMH 10B	243.8	235.14
SMH 10C	245.7	236.98

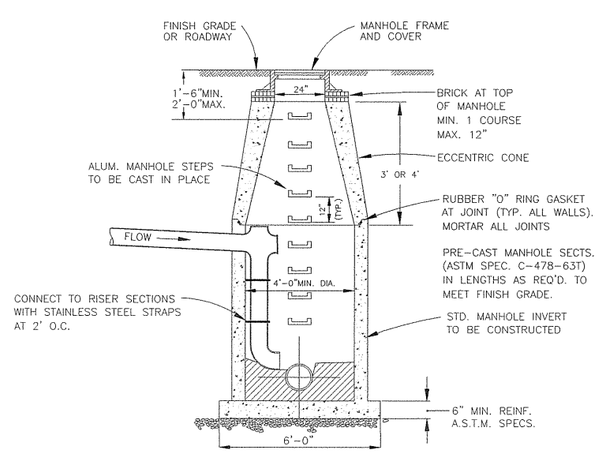
SEWER LINE AT EXISTING SMH 10 FROM SMH 10A WILL BE A DROP INLET AT ELEVATION 228.2



PRECAST MANHOLE DETAIL

NOT TO SCALE

1. MANHOLE SHALL BE WATERTIGHT. IN LIEU OF PARGING, TWO COATS OF BITUMINOUS WATERPROOFING MAY BE BRUSHED ON OR SPRAYED ON. INERTOL, TREMCO OR APPROVED EQUAL MAY BE USED TO OBTAIN DESIRED RESULTS. DO NOT BACKFILL UNTIL LAST COAT IS DRY.



PRECAST DROP MANHOLE DETAIL

NOT TO SCALE

APPROVED BY THE TOWN OF MANSFIELD INLAND WETLAND AGENCY

CHAIRMAN _____ DATE _____

APPROVED BY THE MANSFIELD PLANNING AND ZONING COMMISSION

CHAIRMAN _____ DATE _____

APPROVED BY THE DIRECTOR OF HEALTH

DIRECTOR _____ DATE _____

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR _____ DATE _____

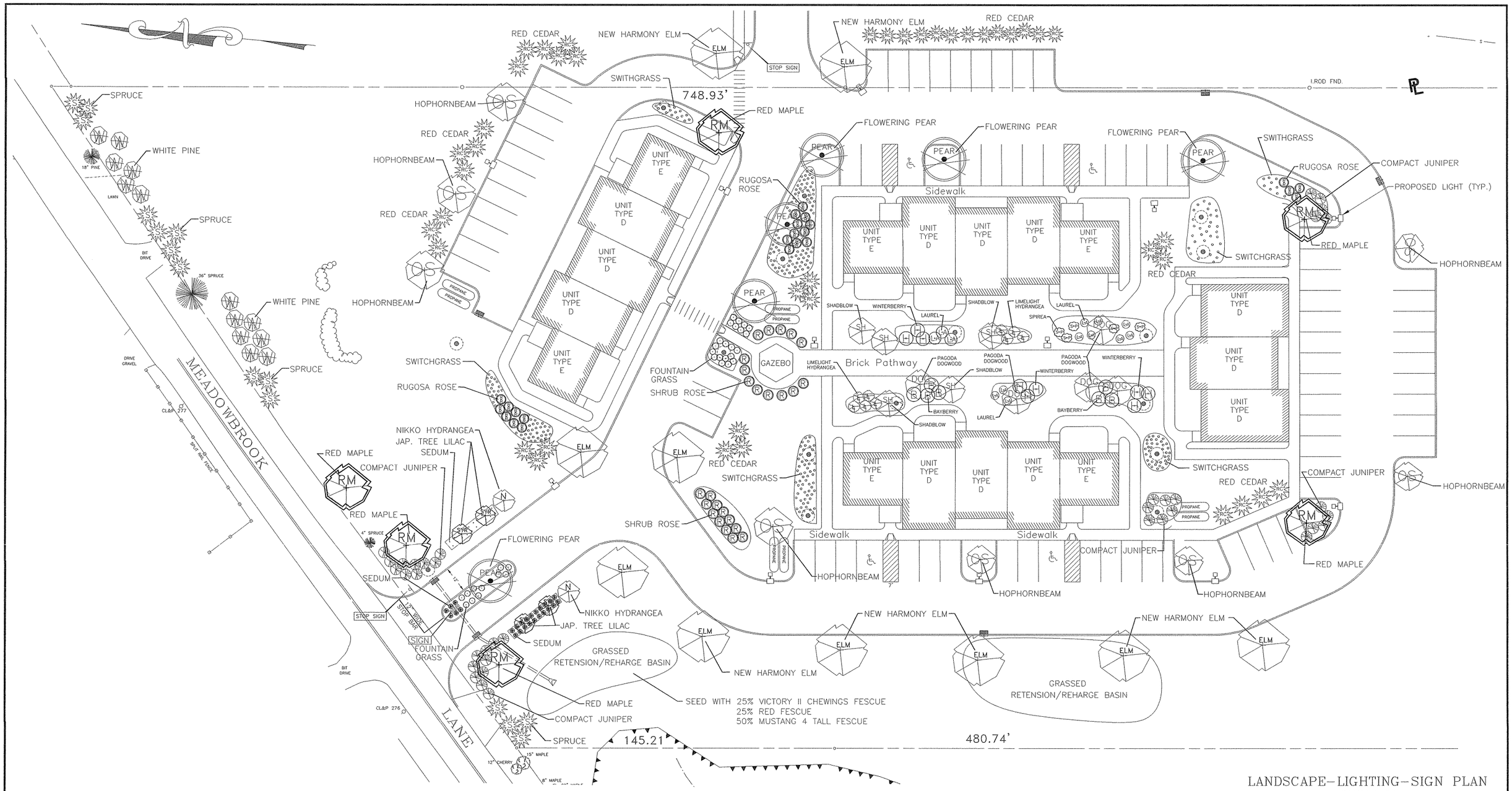
DETAIL SHEET
PREPARED FOR
UNIGLOBE INVESTMENT LLC
91 & 93 MEADOWBROOK LANE
MANSFIELD CENTER, CONNECTICUT
SCALE: AS NOTED DATE: JANUARY 8, 2016

SHEET 8 OF 10

DATUM
ENGINEERING & SURVEYING, LLC
132 CONANTVILLE ROAD
MANSFIELD CENTER, CT 06250
TEL (860)456-1357 FAX (860)456-1840

JOB NO. 215049

CHECKED BY:_____ CORRECTIONS BY:_____



LANDSCAPE–LIGHTING–SIGN PLAN

PREPARED FOR

ARTISAN DEVELOPMENT, LLC

91 & 93 MEADOWBROOK LANE
MANSFIELD CENTER, CONNECTICUT

SCALE: 1" = 20' DATE: OCTOBER 12, 2015

SHEET 9 OF 10

APPROVED BY THE TOWN OF MANSFIELD INLAND WETLAND AGENCY

CHAIRMAN DATE

APPROVED BY THE MANSFIELD PLANNING AND ZONING COMMISSION

CHAIRMAN DATE

APPROVED BY THE DIRECTOR OF HEALTH

DIRECTOR DATE

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR DATE

40 20 0 20 60
SCALE : 1" = 20'

LANDSCAPE ARCHITECT
J. ALEXOPOULOS, LAND. ARCH.
CT LIC. NO. 550

DATUM
ENGINEERING & SURVEYING, LLC
132 CONANTVILLE ROAD
MANSFIELD CENTER, CT 06250
TEL (860)456-1357 FAX (860)456-1840

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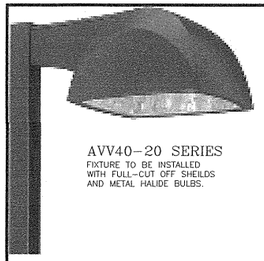
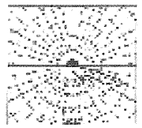


AVV40-20 SERIES
FIXTURE TO BE INSTALLED WITH FULL-CUT OFF SHIELDS AND METAL HALIDE BULBS.



LIGHTING SCIENCES INC. CERTIFIED TEST REPORT NO. LS 23057 CANDLEPOWER DISTRIBUTION CURVE OF 400W PSMH AERODOME LIGHT.

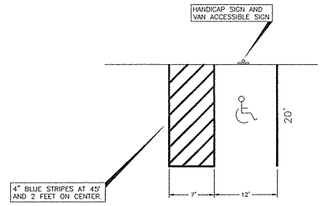
ISOFOOTCANDLE PLOT OF 400W PSMH AEROODME LIGHT AT 25' MOUNTING HEIGHT (PLAN VIEW)

SITE LIGHTING

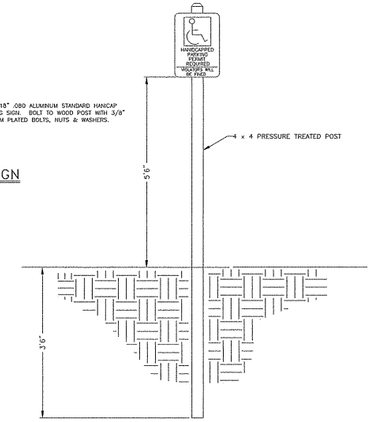
NOT TO SCALE

ACCESSIBLE PARKING SIGN

NOT TO SCALE



VAN ACCESSIBLE HANDICAP PARKING SPACE DETAIL



ACCESSIBLE PARKING SIGN

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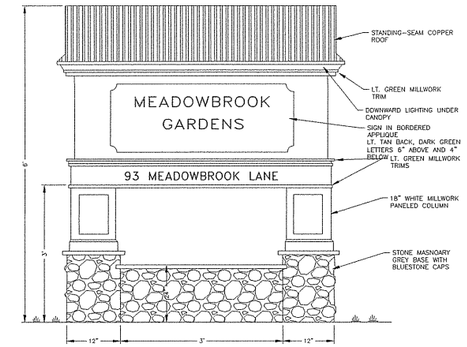
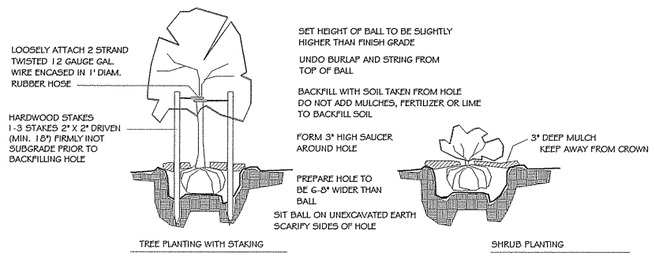
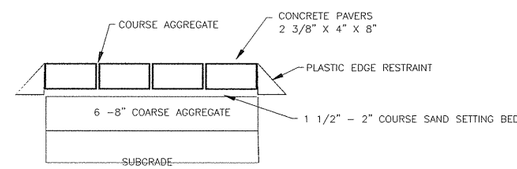


IDENTITY SIGN DETAIL

NO SCALE

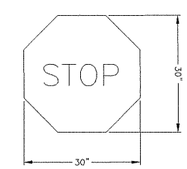


PLANTING DETAILS - NOT TO SCALE



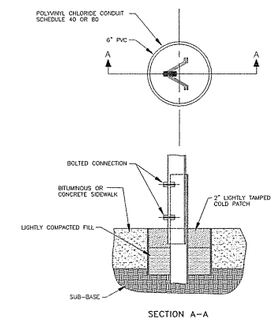
BRICK WALKWAY DETAIL

NOT TO SCALE



STOP SIGN DETAIL

NOT TO SCALE



SIGN POST DETAIL

NO SCALE

PLANTING SCHEDULE

Symbol Code	Name/ Scientific Name	Size	Quantity
RM	ACER RUBRUM 'COLUMNARE'/ COLUMNAR RED MAPLE	2 1/2" - 3" CAL.	6
SH	AMELANCHIER CANADENSIS/ SHADBLOW	6 - 7'	4
DOG	CORNUS ALTERNIFOLIA/ PAGODA DOGWOOD	2 1/2" - 3" CAL.	4
OST	OSTRYA VIRGINICA/ HOPHORNBEAM	2 1/2" - 3" CAL.	6
PEAR	PYRUS CALLERYANA 'CHANTICLEER'/ FLOWERING PEAR	2 1/2" - 3" CAL.	6
SYR	SYRINGA RETICULATA/ JAPANESE TREE LILAC	2 1/2" - 3" CAL.	2
ELM	ULMUS AMERICANA 'NEW HARMONY'/ NEW HARMONY ELM	2 1/2" - 3" CAL.	10
RC	JUNIPERUS VIRGINIANA/ RED CEDAR	6 - 7'	42
	PICEA PUNGENS/ COLORADO SPRUCE	6 - 7'	16
PW	PINUS STROBUS/ WHITE PINE	6 - 7'	13
N	HYDRANGEA MACROPHYLLA 'NIKKO BLUE'/BIGLEAF HYDRANGEA	18 - 21"	2
HL	HYDRANGEA PANICULATA 'LIMELIGHT'/LIMELIGHT HYDRANGEA	18 - 21"	9
H	ILEX VERTICILLATA/ WINTERBERRY	18 - 21"	9
	JUNIPERUS CHIN. PFITZ. COMPACTUM/ COMPACT PFITZER JUNIPER	18 - 21"	37
L+A	KALMIA LATIFOLIA/ LAUREL	18 - 21"	11
B	MYRICA PENNSYLVANICUM/ BAYBERRY	18 - 21"	7
R	ROSA 'KNOCKOUT'/ KNOCKOUT SHRUB ROSE	18 - 21"	25
RR	ROSA RUGOSA/ RUGOSA ROSE	18 - 21"	23
S+P	SPIRAEA BUMALDA 'ANTHONY WATERER'/ SPIREA	18 - 21"	4
	PENNISETUM ALOPECUROIDES/ FOUNTAIN GRASS	2 GAL.	32
	SEDUM 'BRILLIANT'/ SEDUM	1 GAL.	26
	PANICUM 'RUBY RIBBONS/ SWITCHGRASS	PLUGS	255

APPROVED BY THE TOWN OF MANSFIELD INLAND WETLAND AGENCY

CHAIRMAN DATE

APPROVED BY THE MANSFIELD PLANNING AND ZONING COMMISSION

CHAIRMAN DATE

APPROVED BY THE DIRECTOR OF HEALTH

DIRECTOR DATE

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR DATE

LANDSCAPE ARCHITECT

J. ALEXOPOULOS, LAND. ARCH.
CT LIC. NO. 550

LANDSCAPE-LIGHTING-SIGN DETAILS
PREPARED FOR
ARTISAN DEVELOPMENT, LLC
91 & 93 MEADOWBROOK LANE
MANSFIELD CENTER, CONNECTICUT
SCALE: AS NOTED DATE: JANUARY 8, 2016

SHEET 10 OF 10

DATUM
ENGINEERING & SURVEYING, LLC
132 CONANTVILLE ROAD
MANSFIELD CENTER, CT 06250
TEL (860)456-1357 FAX (860)456-1840
JOB NO. 215049

CHECKED BY:_____ CORRECTIONS BY:_____

Department of Planning and Development

Date: March 2, 2016

To: Mansfield Inland Wetlands Agency

From: Jennifer Kaufman, Inland Wetlands Agent

Subject: Receipt of New Application for Wetlands License
Bicentennial Pond (IWA File #W1563)
Bicentennial Pond, Assessor's Parcel ID 23.60.7
Description of work: Aquatic Weed Management and Sediment Removal

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Project Description

To improve the recreational use and overall ecological health of Bicentennial Pond, the Town of Mansfield proposes to manage approximately 2.6 acres of nuisance aquatic species and remove accumulated soft organic matter and from the swimming area of Bicentennial Pond.

Organic Matter/Sediment Removal- Natural eutrophication and sedimentation deposited from surface runoff along with organic material buildup has accumulated in the beach area at Bicentennial Pond, requiring remediation to restore natural bottom depth and quality of the pond's recreational function. The work will be accomplished by using a compact, hydraulic sediment removal system (the "dredge"). The dredge is equipped with a trash pump that will extract the accumulated sediment from the pond bottom and pump it to a nearby dewatering area. The spoils will be dewatered using geotextile fabric tubes, which retain spoils material while filtering the water before it is returned to the pond in a clarified state. Once the spoils are completely dewatered they can be extracted from the containment membrane and hauled off-site for disposal. Approximately 15,000 square feet of the pond will be disturbed during the excavation and it is estimated that no more than 30 cubic yard of sediment and organic matter will be removed from the pond.

Nuisance Aquatic Weed Management-To improve the recreational experience and overall health of the pond, the Town of Mansfield proposes to work with a licensed contractor (All Habitat Services, Inc.) to complete an herbicide treatment to manage a population and of non-native, invasive Water Chestnut and other native nuisance aquatic weed species. This work will be conducted in accordance with a CT DEEP Aquatic Pesticide Use permit and state, and federal regulations.

Department of Planning and Development

☒ The project includes work in wetlands.

☐ The project includes work in the 150 foot upland review area.

☐ The project is located in a Public Water Supply Watershed.

Application Fees and Notifications

☒ The applicant has paid the required application fee

☒ The applicant has submitted copies of the notice mailed to neighbors and a list of abutters to be notified. Certified mail receipts must be submitted prior to action on the application.

Receipt Motion

_____ MOVES, _____ seconds to receive the application submitted by Bicentennial Pond, Assessor's Parcel ID 23.60.7 (IWA File #W1563) under the Wetlands and Watercourses Regulations of the Town of Mansfield for Aquatic Weed Management and Sediment Removal on property located at Bicentennial Pond as shown on a map dated 10/27/2015 and as described in application submissions, and to refer said application to staff and the Conservation Commission for review and comments.

APPLICATION FOR PERMIT
MANSFIELD INLAND WETLANDS AGENCY
4 SOUTH EAGLEVILLE ROAD, STORRS, CT 06268
860-429-3015x6204 (DIRECT) TEL: 860-429-3330 OR
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 the 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, Parks and Recreation_____

Mailing Address_____10 South Eagleville Road, Storrs-Mansfield, CT _____

_____Zip____06268_____

Phone____860-429-3015x6109_____Email__VincenteCA@MansfieldCT.org_____

Title and Brief Description of Project

Aquatic Weed Management and Sediment Removal_____

Location of Project_____Bicentennial Pond_____

Intended Start Date ____Late April/Early May 2016_____

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

Name_____Same_____

Mailing Address_____

_____Zip_____

Phone_____Email_____

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)**
   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_____
_____
_____
_____
_____
_____
_____

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

____a.) 15,000 ft^2_____
____b.) none_____
_____
_____

3) Describe the type of materials you are using for the project: _For Aquatic Weed Management: selective applications of the herbicides Rodeo, Clipper, Platoon, and Nautique. For sediment removal: Hydraulic sediment removal system, geotechnical fabric membrane for sediment dewatering, and Biopolymer conditioning agents for coagulation and flocculation

a) include ***type*** of material used as fill or to be excavated _____Soft Organic Sediment
b) include ***volume*** of material to be filled or excavated____30 cubic yards_____
_____

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).
   The sediment is contained in a geotechnical fabric membrane. Dewatering leachate discharge will be returned to the pond via a suitably protected outlet. Discharge water quality subject to construction discharge BMP's. CT 2002 Erosion Control Guidelines and BMP's are incorporated into operational work plan.

Part D - Site Description

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

_____
_____

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**.**
The hydraulic dredger will cause the least disturbance. Other options would include using an excavator but this would cause more disturbance. Weeds could be hand pulled but this is only a temporary solution, would be very labor intensive and costly. Also, often times all of the root is not removed using this method causing the weeds to spread further.

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)**

2) Applicant's map date and date of last revision____10/27/2015_____
3) Zone Classification _____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) Attach list of abutters, name, and address

2) **Proof of Written Notice to Abutters.** You must notify abutting (neighboring) property owners (any property immediately contiguous with the subject property, including those across the street) 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***. To generate an abutters list go to http://www.mainstreetmaps.com/CT/Mansfield/

Part I - Additional Notices, if necessary

Notice to Windham Water Works and CT Department of Public Health is attached. If this application is in the public watershed for the Windham Water Works (WWW), you must notify the WWW and the Department of Public Health 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.

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.

The Statewide Reporting Form 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

Application fees shall be in accordance with the current Mansfield Code of Ordinance fee Schedule, pursuant to Section 8-1c of the Connecticut General Statutes. The fee schedule includes provisions for applicant-funded consultant studies and reports. The current fee schedule is available in the Planning and Zoning office.

Note: The Agency may require additional information about the upland review area 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.

Certification

I hereby certify that:

- I am familiar with the information contained in this form and that such information is true and correct to the best of my knowledge.
- I understand the penalties for obtaining a permit through deception or through inaccurate or misleading information.

_____ _____

Signature Date

Authorization to Enter Property

The undersigned hereby consent 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 issued by the Agency.

_____ _____

Signature Date

Project Description

In the Wetlands

To improve the recreational use and overall ecological health of Bicentennial Pond, the Town of Mansfield proposes to manage approximately 2.6 acres of nuisance aquatic weeds and remove accumulated organic matter and sediment from the swimming area at Bicentennial Pond. A detailed pond assessment and project description is attached.

Organic Matter/Sediment Removal

Natural eutrophication and sedimentation deposited from surface runoff along with organic material buildup has accumulated in the beach area at Bicentennial Pond, requiring remediation to restore natural bottom depth and quality of the pond's recreational function.

The work will be accomplished by using a compact, hydraulic sediment removal system (the "dredge"). The dredge is equipped with a trash pump that will extract the accumulated sediment from the pond bottom and pump it to a nearby dewatering area. The spoils will be dewatered using geotextile fabric tubes, which retain spoils material while filtering the water before it is returned to the pond in a clarified state. Once the spoils are completely dewatered they can be extracted from the containment membrane and hauled off-site for disposal.

Nuisance Aquatic Weed Management

To improve the recreational experience and overall health of the pond, the Town of Mansfield proposes to work with a licensed contractor (All Habitat Services, Inc.) to complete an herbicide treatment to manage a population and of non-native, invasive Water Chestnut and other native nuisance aquatic weed species. This work will be conducted in accordance with a CT DEEP Aquatic Pesticide Use permit and state, and federal regulations.

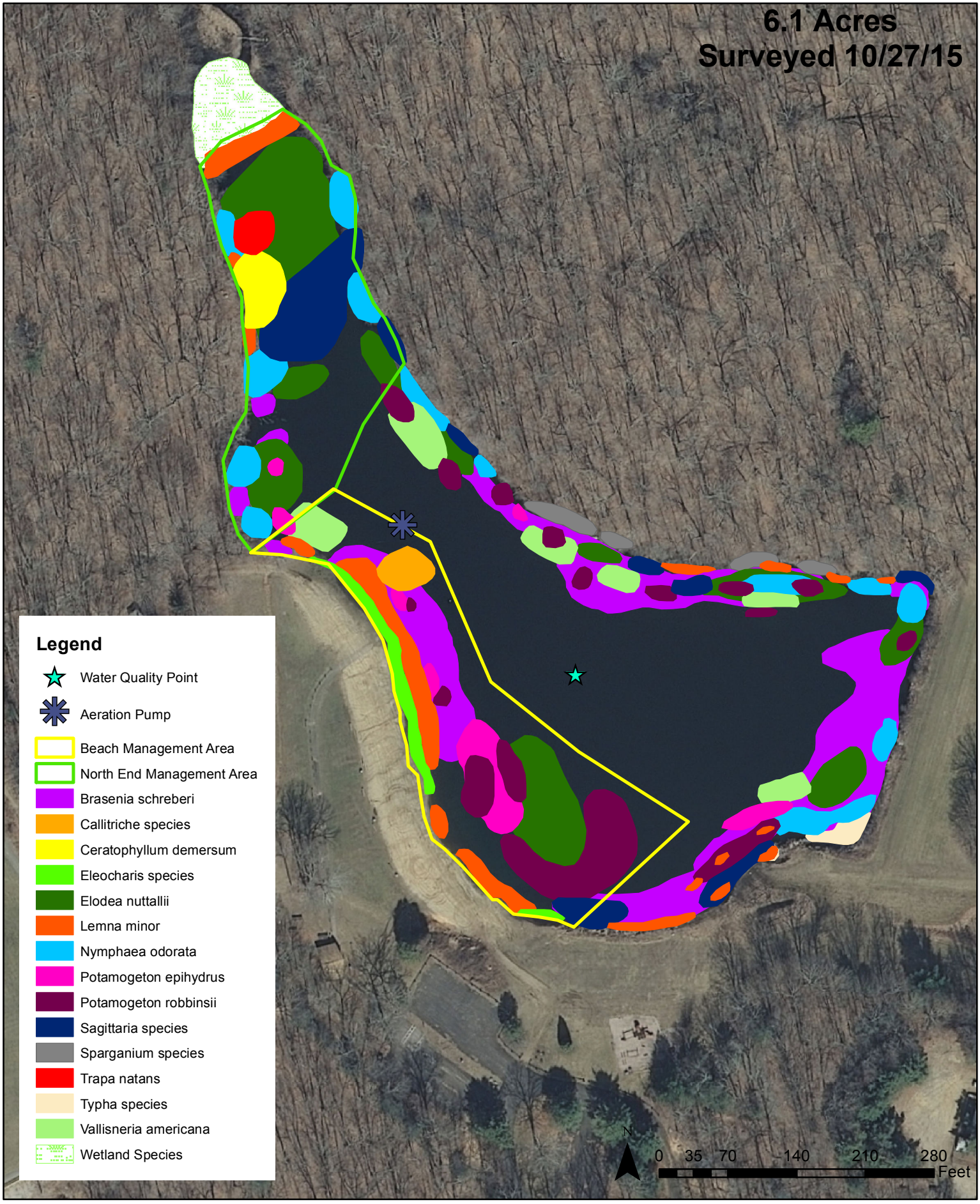
In October 2015, Parks and Recreation Staff identified a small population of the non-native, aquatic invasive, Water Chestnut. Water Chestnut is a highly competitive plant that is capable of rapid growth and spread. Water Chestnut displaces native species, reduces biodiversity, hampers recreational uses, reduces real estate value and diminishes aesthetic values. It is especially hazardous in swimming areas because the sharp ½" barbs can penetrate shoes with leather soles and pose a hazard to swimmers and beach visitors.

In addition to this, species 13 other aquatic plant species were identified in the swimming area. While these species are native, several of them can become a nuisance, negatively impacting recreational use and the overall pond ecosystem.

In the Upland Review Area

*While t*he project will be staged in the upland review area but there will be no site disturbance. All sediment will be placed in a "roll off" dumpster and will be removed from the site. The sediment will be brought to a location determined by Mansfield Department of Public works, dried out, and reused.

Bicentennial Pond
Storrs-Mansfield, CT



Plan for Swim Area Cleaning at Bicentennial Pond

Prepared By:
All Habitat Services, LLC
P.O. Box 231
Branford, CT 06405
203.245.1212
March 1, 2016

Overview

The objective of this project is the removal of accumulated insitu sediment from the swimming area of Bicentennial Pond. Natural eutrophication and sedimentation deposited from surface runoff along with organic material buildup has accumulated in this area; requiring remediation to restore natural bottom depth and quality recreational function.

The work will be accomplished by using a compact, hydraulic sediment removal system (the "dredge"). The dredge is equipped with a trash pump that will extract the accumulated sediment from the pond bottom and pump it to a nearby dewatering area. The spoils will be dewatered using geotextile fabric tubes, which retain spoils material while filtering the water before it is returned to the pond in a clarified state. Once the spoils are completely dewatered they can be extracted from the containment membrane and hauled off-site for disposal.

Equipment and Process Design

The dredge is equipped with a 16.5-hp gasoline engine, which hydraulically powers the suction and discharge hoses. The dredge pump and agitator pump are mounted on a flotation platform made of a tubular steel base and upper structure with high density polyethylene pontoons. The 20 foot suction hose, which is powered by the two pumps, is lowered to the desired depth by the dredge operator. The sediment material is fed into the impeller of the suction hose where it is vacuumed up by the pump and conveyed through a 4-inch discharge hose suspended along the water's surface by floats to the dewatering area. A 4-inch boost pump and additional pipe can extend the distance to the dewatering site if necessary.

Piranha Dredge

The operator will manually move the dredge throughout the swimming area area extracting all of the sediment up to 4' deep on each pass. A series of these parallel swaths will continue until the entire area is covered. The dredge is equipped with a sonar-mapping device and a GPS guided parallel swathing navigation system to assist the operator in determining which areas are dredged.

Geotextile Tube Dewatering

The sediment and water forms a slurry (approx. 15% solids / 85% water) as it is pulled through the pump's impeller and discharged to the dewatering system. The discharge is piped into a geotextile tube where the solids are decanted and dewatered as the leachate passes through the tube's fabric wall. Each geotextile tube will progressively contain more spoils and less water until there is insufficient volume to support pumping capacity.

Geotextile Tube Dewatering in Roll Off Container

Where necessary, the dewatering and sediment storage area is prepared by removing all ground obstructions that could puncture the geotextile fabric. If needed, the area is graded to a level grade 0º across the width and not more than 0.5% slope along the length of the tube to provide directional flow. The geotextile tube is then installed on top of an impervious geotechnical fabric liner to

improve stability of the drainage surface area, as well as, to ensure the leachate water is returned to the pond in a clarified state. The perimeter of the dewatering area is surrounded by sediment control measures to avoid any unnecessary, non-directional runoff. The leachate water flowing from the tubes is then returned to the pond either by pump or gravity flow system. In cases where there is a small amount of sediment to be removed, the dewatering geotextile membrane is placed in a roll off container. This is an efficient dewatering option as it minimizes site preparation and disturbance. The dewatered spoils are easily hauled away for disposal.

Preferential Methodology

Using a hydraulic dredging technique to remove sediment is a proven successful approach and, in this case, it is the best available method. The dredging process can be time consuming and methodical; it drives water dependent species from the active work area well in advance of the dredge's approach and provides egress to safe refuge areas elsewhere in the water body. Hydraulic dredging is compatible with the inhabiting wildlife species. It presents the least amount of disruption to the water body system including vegetation, fish, reptiles, amphibians, waterfowl and other species.

Project Scope

Preconstruction Planning and Permitting
A formalized site-specific dredging plan is developed to define the appropriate scope of work to be conducted, and also to facilitate compliance with the relevant regulatory permitting requirements. For this project, the scope requires removing a small volume of soft sediment present on the sandy bottom of the swimming area at Bicentennial Pond. The project area is the limit of the approximately 300' length of shoreline out approximately 50' or a maximum water depth of 4.5'.

The physical properties of several composite sediment samples will be analyzed to characterize the ratio of soft organic silt and loam sediments to the coarse, sandy sediment horizon, to estimate dewatering consolidation rates. A composite wet sediment sample is screened against a battery of coagulants and flocculants to determine a goodness of fit for conditioners selected to assist consolidation during the dewatering process.

If required by the CT DEEP, a series of additional composite samples would be laboratory screened for the presence of heavy metals, extractable total petroleum hydrocarbons, polycyclic aromatic hydrocarbons, PCB's, pesticides and herbicides, to provide an environmental characterization of the sediment in determining its suitability for reuse or handling for disposal.

Should higher than normal background levels of contaminants be found and verified during the testing of the composite wet sediment testing, All Habitat Services would suspend further mobilization efforts pending discussions with the owner on how to best proceed. This is to avoid disturbance of contaminants currently at rest. Copies of any potentially required sediment sample test would be provided to the owner. Additionally, All Habitat Services will take reasonable efforts to assure that all fuels, oils and grease material used during dredging operations do not enter the pond.

At this time, there does not appear to be any permitting for this project beyond local requirements. However, in the event that permitting is determined to be required for the completion of this project, please note that costs of permitting would be the responsibility of the owner. Permitting is a two-tier process; All Habitat Services would notify and register with the CT DEEP describing the planned sediment removal operation for Bicentennial Pond. DEEP acknowledgement of the project registration would be provided to the owner. Should permitting be necessary, the permitting process would take place during the first 30 days following the signing of the contract.

CT DEP # B-2020
NYSDEC# 13326

P.O. Box 231 Branford, CT 06405
Phone:203.245.1212
Fax:203.245.2981
www.allhabitat.com

November 13, 2015

Jennifer Kaufman
Natural Resources and Sustainability Coordinator
Inland Wetlands Agent
Town of Mansfield
10 South Eagleville Road
Storrs-Mansfield, CT 06268

Dear Jennifer,

Thank you for your interest in All Habitat Services, LLC for managing the aquatic vegetation at Bicentennial Pond in Mansfield. We are pleased offer the following proposal for your consideration.

Scope of Services

The objective of this proposal is the management of the nuisance aquatic species in Bicentennial Pond in Mansfield for the purpose of improved recreational use and overall health of the pond.

Our inspection of Bicentennial Pond on October 27, 2015 identified fourteen species present including: Watershield (*Brasenia schreberi*), Water Starwort (*Callitriche* species), Coontail (*Ceratophyllum demersum*), Spikerush (*Eleocharis* species), Western Waterweed (*Elodea nuttallii*), Duckweed (*Lemna minor*), White Water Lily (*Nymphaea odorata*), Ribbon-leaf Pondweed (*Potamogeton epihydrus*), Robbin's Pondweed (*Potamogeton robbinsii*), Arrowhead (*Sagittaria* species), Burreed (*Sparganium* species), Water Chestnut (*Trapa natans*), Cattail (*Typha* species), and American Eelgrass (*Vallisneria americana*). A map of the location of these species is provided.

Of the fourteen identified species, the only invasive species present was the Water Chestnut, which has begun to infest the northern end of the pond. Water Chestnut is a highly competitive species that can form dense floating mats which will out-compete native vegetation and cause reduced oxygen levels, increasing the potential for fish kills. If left unmanaged, this infestation will spread and continue to negatively impact native species diversity, water quality and the overall aesthetic and recreational value of the park pond. Remediation is required to restore normal function to this valuable water resource.

The pond is also experiencing an abundance of Watershield and White Water Lillies as well as the beginning stages of a Duckweed infestation in the pond. While these species are native, they can become a nuisance, which, can also affect recreational use and also harm the overall structure of the pond ecosystem. Duckweed in particular has a tendency to create an unsightly covering across the entire surface of the water, thus causing a reduction of photosynthesis to any other submerged plants. Without control this plant can also reduce the oxygen levels of the water body and can result in complete oxygen depletion of the pond system.

Other vegetation that may be considered for management includes: the Western Waterweed, Robbin's Pondweed, Ribbon-leaf Pondweed, American Eelgrass and Water Starwort. These species were found along the beach area and are the primary contributors to the reduction in recreational use of the swim area. Management of these species will restore the recreational use and improve aesthetics of the beach area.

This proposal offers two phases for management of the nuisance vegetation in the pond. The first phase is to consider control of the approximately 1.4 acre area of vegetation associated with the beach (Beach Management Area), which is primarily used for recreational purposes. The second phase proposes management of the vegetation in the approximately 1.2 acre area in the northern end of the pond (North End Management Area). Management in the northern end of the pond will likely prove beneficial for longer-term control to prevent species spreading. It is also in the northern end that the invasive species, Water Chestnut, was found. In particular, this highly prolific invasive requires immediate management before it has the opportunity to spread throughout the rest of the pond. We offer the following herbicide management options below.

Herbicide Management

For the management of the Water Chestnut infestation, we prescribe a surface application using a tank mix of the aquatic labeled herbicides Rodeo® (Glyphosate) and Platoon® (2,4-D) at a rate of 3 quarts and 2.8 gallons per surface acre respectively, to deliver an effective concentration for control of the Water Chestnut present in the north end treatment area. Rodeo® is a non-selective herbicide that disrupts synthesis of a primary amino acid essential to chlorophyll production. Platoon® is a dicot selective herbicide, which alters the photosynthetic cycle and disrupts regulated cell division affecting vital plant tissues and nutrient production. Affected vegetation will begin to decompose in a 2 to 3 week period following treatment. Should any Water Chestnut show signs of recovery after the initial treatment, a second treatment may be necessary.

For the treatment of the Watershield and White Water Lilies, we also recommend a surface application of Rodeo® at a rate of 3 quarts per acre. The treatment should be applied when the lillies are actively growing for best results. Following treatment, plants will gradually wilt, yellow and die after approximately 2 weeks.

To manage for the American Eelgrass, Ribbon-leaf Pondweed and Robbin's Pondweed, we recommend an application of Nautique® (Copper Carbonate) at a rate of 1.0 ppm. Nautique® is a chelated copper formulation that works on contact to impede growth of target vegetation. Treatment is most effective when applied at first signs of growth and to actively growing vegetation. Results of treatment will occur within two to four weeks after application.

For the Western Waterweed and Water Starwort, we suggest a submersed application of Clipper® (Flumioxazin) at a rate of 200 ppb. Clipper® is a fast acting contact herbicide that interferes with a plant's ability to produce chlorophyll. Treatment should be conducted at the beginning of the season and should be followed by additional applications 5-10 weeks apart, as necessary, to maintain the desired level of control throughout the season.

For the management of Duckweed throughout the pond, we recommend a selective spot surface application of Clipper® (Flumioxazin) across the entire pond. Clipper® is a fast acting contact herbicide that interferes with a plant's ability to produce chlorophyll. Treated plants will respond quickly and decompose. An initial treatment will be applied at a rate of 12 ounces per surface acre. Control of Duckweed can be rather difficult and may take several applications. Follow-up applications may be necessary throughput the season to manage any re-infestations and may be applied 28 days following the initial application.

As a qualified municipality, these services are available under the terms and conditions of the State of Connecticut DAS Procurement Services Contract 13PSX0212. All Habitat Services, LLC will provide all chemicals, labor and equipment for the application(s) as requested. Specific, mutually agreeable date(s) for this chemical treatment will be scheduled with you in advance. The application will be performed by All Habitat Services, LLC's CT DEEP Licensed Applicator's, in accordance with the product label and the CT DEEP Aquatic Pesticide Use Permit. All Habitat Services, LLC will post the shoreline with printed signs, restricting the above water uses immediately prior to treatment. All Habitat Services, LLC carries workmen's compensation, liability and property damage insurance, which will remain in effect throughout the duration of this Agreement.

We hope that this proposal meets with your approval. Please feel free to contact us again if we may be of further assistance.

Best Regards,

David Roach S-3538
General Manager
All Habitat Services, LLC

Open Space Preservation Committee
Tuesday, January 19, 2016
DRAFT Minutes
Mansfield Town Hall, Conference Room B
7:00p.m.

Members present: Jim Morrow (chair), Ken Feathers, Quentin Kessel, Michael Soares, Vicky Wetherell, and Jennifer Kaufman (staff).

The meeting was called to order at 7:05 pm.

Michael Soares was appointed secretary.

Minutes of the December 2015 meeting were approved.

Opportunity for public comment – No members of the public were present.

Old Business

- Enabling Legislation for a Local Conservation Fund (Project Green Space)-Next Steps – In January Town Council passed a motion to refer this policy initiative to town committees for their review and comments. OSPC members agreed that the policy may not be a "good fit" for Mansfield, but Mansfield's endorsement of it would show support for other towns with limited resources for protecting open space. Kessel brought up the recent proposal by State Sen. Witkos (R-Canton) to establish a constitutional amendment to protect open space in Connecticut and implement strengthened restrictions on the sale of preserved land; the following discussion focused on how this amendment could also strengthen open space preservation at the municipal level.

New Business

- Town Council Update-Joint meeting with other committees – Members continued to discuss their interest in developing a presentation for the Town Council to detail the status, operation, and priorities of the town's open space program. It was agreed that OPSC and other town committees (Ag., PAC, etc.) will cooperate to form a subcommittee on this effort. Morrow and Soares volunteered for the subcommittee.

- Ravine Road – Jennifer updated the committee on recent events regarding the partial road closure. All options for Ravine Road were discussed.

- Model Easement (see attachment from Mansfield's Town attorney).-Agenda item was tabled

- Draft Zoning Regulation Updates – Drafts were reviewed by members and no comments were made at this time.

Executive Session

- The committee voted to go into Executive Session at 8:39 and to come out of Executive Session at 9:08. Recommendations will be forwarded to the Town Manager.

The meeting was adjourned at 9:14.

DRAFT Minutes
Mansfield Inland Wetlands Agency
Regular Meeting
Monday, March 7, 2016
Council Chambers, Audrey P. Beck Municipal Building

Members present:	C. Ausburger, B. Chandy, R. Hall (6:33 p.m.), G. Lewis, K. Rawn, B. Ryan, V. Ward
Members absent:	J. Goodwin, S. Westa
Alternates present:	P. Aho, T. Berthelot
Staff present:	J. Kaufman, Wetlands Agent
	L. Painter, Director of Planning and Development

Vice Chair Ryan called the meeting to order at 6:30 p.m. and appointed alternates Aho and Berthelot to act in members' absence.

Approval of Minutes:

a. 2/01/2016 Regular Meeting:
Rawn MOVED and Lewis seconded to approve the 2/1/2016 minutes as written. MOTION PASSED. Chandy noted that she listened to the recording.

b. 2/16/2016 Special Meeting:
Rawn MOVED and Lewis seconded to approve the 2/16/2016 Special Meeting minutes as written. MOTION PASSED. Chandy noted that she listened to the recording.

Communications:

The Conservation Commission meeting minutes and Kaufman's monthly business memo were noted. Kaufman provided an update on the Mansfield Auto Part's site.

Old Business:

a. **W1561– H. Raphaelson, Dog Lane, 2 lot subdivision**
Tabled pending a 4/4/16 Public Hearing

New Business:

a. **W1562-Meadowbrook Gardens, 91 & 93 Meadowbrook Lane, 36 Units**
Rawn MOVED, Ward seconded, to:
1) Receive the application submitted by Uniglobe Investment (IWA File #W1562) under the Wetlands and Watercourses Regulations of the Town of Mansfield for construction of 36 dwelling units on property located at 91 & 93 Meadowbrook Lane as shown on a map dated 1/8/2016 and as described in application submissions, schedule a public hearing on May 2, 2016 and to refer said application to staff and the Conservation Commission for review and comments.
2) Authorize staff to engage the services of BSC Group to review the project to ensure that the stormwater will be managed in a manner that does not significantly impact wetlands. Pursuant to Chapter 122 of the Code of Ordinances, fees incurred for this review shall be the responsibility of the applicant. A deposit in the amount of the estimated cost shall be provided to the Town prior to issuance of a notice to proceed.

MOTION PASSED UNANIMOUSLY.

b. **W1563-Bicentennial Pond, Aquatic Weed Management and Sediment Removal**
Chandy MOVED, Hall seconded, to receive the application submitted by the Town of Mansfield, Assessor's Parcel ID 23.60.7 (IWA File #W1563) under the Wetlands and Watercourses Regulations of the Town of Mansfield for Aquatic Weed Management and Sediment Removal on property located at Bicentennial Pond as shown on a map dated 10/27/2015 and as described in application submissions, and to refer said application to staff and the Conservation Commission for review and comments. MOTION PASSED UNANIMOUSLY.

Reports from Officers and Committees:
None.

Other Communications:
None.

Adjournment:
Vice Chair Ryan declared the meeting adjourned at 6:46 p.m.

Respectfully submitted,

Vera S. Ward, Secretary

DRAFT MINUTES
MANSFIELD PLANNING AND ZONING COMMISSION
Regular Meeting
Monday, March 7, 2016
Council Chamber, Audrey P. Beck Municipal Building

Members present:	C. Ausburger, B. Chandy, R. Hall (6:33 p.m.), G. Lewis, K. Rawn, B. Ryan, V. Ward
Members absent:	J. Goodwin, S. Westa
Alternates present:	P. Aho, T. Berthelot
Staff present:	Linda Painter, Director of Planning and Development
	Janell Mullen, Assistant Planner/Zoning Enforcement Officer

Vice Chair Ryan called the meeting to order at 6:50 p.m. and appointed alternates Aho and Berthelot to act in members' absence.

Ward MOVED, Rawn seconded, to move Item 6B after item 4. MOTION PASSED UNANIMOUSLY.

Approval of Minutes:

a. February 16, 2016, Regular Meeting:
Chandy MOVED, Hall seconded, to approve the 2-16-2016 minutes as presented. MOTION PASSED UNANIMOUSLY.

Zoning Agent's Report:

Janell Mullen, Zoning Agent, reported that the property at 1925 Storrs Road is substantially cleared and work continues to progress. Mullen reviewed the over occupation enforcement that continues and agreed to include an update in the next meeting packet. Rawn questioned the amount of staff time that has been invested in the process. Mullen mentioned her involvement with the UConn off-campus Housing Fair to help inform students of the **3or4 no more** rule.

New Business:

b. Plan 4 Health Presentation, Ana Zeller, Eastern Highlands Health District
Ana Zeller, Community Health and Wellness Coordinator for Eastern Highlands Health District, gave a presentation on Plan 4 Health, a program designed to bring local planning and public health departments together to foster Healthy Communities, creating vibrant places and improving health across the nation by promoting active transportation and improving access to healthy foods.

Old Business:

a. Draft Zoning Regulations
Staff reviewed the latest revisions to live/amplified music regulations based on previous Commission discussion. The latest draft includes specific hours when outdoor music would be allowed by right; requires a zoning permit for music uses associated with businesses; and provides for revocation of music permits if multiple noise violations are issued within a defined time period. Members were encouraged to review the draft regulations for more discussion at the next meeting. Staff will update and distribute revised drafts of the stormwater and water service connection regulations based on comments received from various committees, including the Zoning Focus Group. Painter also distributed a proposed approach to the overall rewrite for discussion at the next meeting.

b. Modification Request to a Gravel Permit, 1090 Stafford Road, PZC File #1258
Item is tabled until March 21, 2015. A March field trip has been scheduled for this site.

c. **Zoning Map Amendment Application, 91 & 93 Meadowbrook Lane, PZC File #1338**
Tabled pending a 5/2/16 Public Hearing

d. **Special Permit Application, Meadowbrook Gardens, 91 & 93 Meadowbrook Lane, PZC File #1284-3**
Ward MOVED, Chandy seconded, to authorize staff to engage the services of BSC Group to review the Meadowbrook Gardens Special Permit application (PZC File 1284-3) submitted by Uniglobe Investment LLC. The scope of services for this contract shall include, but not be limited to, the following areas: stormwater management, traffic and erosion and sedimentation controls. Pursuant to Chapter 122 of the Code of Ordinances, fees incurred for this review shall be the responsibility of the applicant. A deposit in the amount of the estimated cost shall be provided to the Town prior to issuance of a notice to proceed. MOTION PASSED UNANIMOUSLY. A Field Trip has been set for 4/13/16 and a 5/2/16 Public Hearing.

New Business Continued:

a. **Special Permit Application, Efficiency Unit, 152 Cedar Swamp Road, M. Ricci owner/applicant, PZC File #1339**
Chandy MOVED, Hall seconded, to receive the Special Permit Application (File #1339) submitted by Mark Ricci, for an efficiency unit within a single family dwelling, on property located at 153 Cedar Swamp Road, as shown on plans dated 2-27-16, as shown and described in application submissions, and to refer said application to staff and committees, for review and comments and to set a Public Hearing for 3-21-16. MOTION PASSED UNANIMOUSLY.

Reports from Officers and Committees:
The Director reviewed her written report and noted the Eastern Gateway Corridor Study is beginning.

Communications and Bills:
Noted.

Adjournment:
The Vice Chair declared the meeting adjourned at 7:55 p.m.

Respectfully submitted,

Vera S. Ward, Secretary