

Summit Engineering & Survey, Inc.

HYDRAULIC / HYDROLOGIC CALCULATIONS

**Padding Site Plan
1439 Main Street
Leicester Massachusetts**

Prepared For:
Schold Development, LLC

Prepared By:
**SUMMIT ENGINEERING & SURVEY, INC.
710 MAIN STREET
OXFORD, MASSACHUSETTS**

July 29, 2021

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Summit Engineering & Survey, Inc.

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DRAINAGE SUMMARY

Summit Engineering & Survey, Inc. is pleased to provide the following Hydraulic / Hydrologic analysis for the proposed site plan for Schold Development. The proposed project is located at 1439 Main Street in Leicester, Massachusetts. The existing site consists of an area that has been cleared and an area that is un-developed land, much of it wooded with mature woodland. The hydrologic conditions were analyzed using TR-55 and HydroCAD® for the 2, 10 and 100 year storm events utilizing Technical Paper 40, 24 hour Rainfall events.

Project site consists of the grading a padding site for a future site plan for a commercial site. The project as designed conforms to the Massachusetts DEP Stormwater Management Policy.

EXISTING CONDITIONS:

The site is located at 1439 Main Street behind Tractor Supply on the south side of Route 9. The site is has a cleared area and a wooded along the south and east portion of the site. There is an existing water quality basin located in the east portion of the site that has been design to handle full build out of the parcel and also the existing Tractor Supply Site. The existing basin has been recently cleared of all small trees and brush.

The topography of the site is steep, which slopes from northwest (1014) to southeast (921), which is toward east property line. A majority of the site is graded toward the southeast where an existing basin is located.

For the purpose of the analysis of the effect on the padding site grading, the site was analyzed as two independent watersheds. In the Pre-Development Condition, Subcatchment 1 represents the tributary area of the property that flows to the existing basin. Subcatchment 2 represents the tributary portion of the site that flows to the southeasttoward the property line.

According to the online USGS soil survey, the analyzed area consists of soils with "C" hydrologic ratings. Per the soil map the soil on site are Paxton. The cover consists of predominantly woodland and an area that has been cleared and gravel area.

PROPOSED CONDITIONS:

The proposed condition of the site will consists of a gravel area set at specific elevation for building padding areas for future commercial site. The proposed drainage system will consist of diverter berms and swales to collect and direct runoff during the grading of the pad site. There will be two temporary basins constructed to mitigate runoff as well as treatment of runoff prior to discharge into the existing basin located on the site.

The site will be re-graded in the future to support a future commercial project and control stormwater in accordance with the Massachusetts.

In order to analyze the surface water flows, the site was divided into multiple Subcatchments, Ponds and a Reaches

In summary, the peak rates of runoff were compared under pre-development and post-development conditions for analysis of the 2 year, 10 year, 25 year and 100 year storm events. The following is a **Peak Discharge Summary Table**:

Design Point Analysis:

Watershed		Design Event			
		2 Year	10 Year	25 Year	100 Year
Pre-Development	IP#1E	6.85	10.91	12.25	16.27
	IP#2E	7.74	15.69	18.52	27.33
Post Development	IP#1P	4.84	10.02	11.46	14.85
	IP#2P	3.63	7.33	8.65	12.74

DEP Stormwater Management Standards:

Standard #1: The proposed changes will not cause erosion in adjacent water of the Commonwealth, as BMP measures are proposed in accordance with the design requirements of the Stormwater Management handbook. The Erosion & Sedimentation Control Plan provides for the installation of siltation barriers, temporary basins, temporary construction entrances and outlines intermediary measures to control runoff during construction and after construction.

Standard #2: The proposed development peak discharge rates for the total off-site flow are less than or equal to pre-development discharge rates for the 2 year, 10 year, and 100 year storm events for the design points analyzed. Attached calculations show how the site mitigates the increased flow rates due to surface changes from the site development.

Standard #3: The proposed project does not propose any impervious area at this time. The proposed future site will address this Standard as required by Stormwater Management. The existing basin will continue to address this Standard as it was designed to infiltrate runoff from the Tractor Supply Site after pre-treatment. The existing basin will be monitored throughout the construction to ensure that the Infiltration depths are designed to drain in under 72 hours as required by the Policy.

Standard #4: Over 80% TSS shall occur based on the BMP measurements provided. The treatment train varies for each section. TSS worksheets are provided in the report for each treatment train in the site.

Standard #5: The proposed development will not generate higher potential pollutant loads and therefore will not require additional BMP practices.

Standard #6: The proposed project is not near a critical area.

Standard #7: The proposed project is not a redevelopment project.

Standard #8: Erosion and sediment control measures are proposed as part of the proposed project.

Standard #9: An Operation & Maintenance plan is provided within this document

Standard #10: This project does not propose any illicit discharges.

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STORMWATER MANAGEMENT CHECKLIST

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STANDARD #3 –LOSS OF ANNUAL RECHARGE

The site is predominately un-developed. Temporary Basin 1& 2 are constructed for pretreatment prior to the existing basin located in the southeast corner of the parcel. Soils were found to be Class C permeability.

The table below shows the required and provided recharge volumes for the project. As shown, the proposed condition exceeds the minimum requirement for the additional impervious areas.

Recharge Volume Summary

Soil Type	Recharge Factor (in. runoff)	Existing Impervious Area (sf)	Additional Impervious Area (sf)	Min. Req. Recharge Volume (cf)
A	0.60	0	0	0
B	0.35	0	0	0
C	0.25	0	0	0
D	0.10	0	0	0
Total Required				0

Standard #3 Only Applies to Additional Impervious

Provided Recharge Volume (cf)		
Roof Recharge (Pond#4)		0
		0
		0
Total Provided		0

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STANDARD #4- 80% TSS REMOVAL

ESTIMATED PROPOSED NEW PAVED COVER= 0 S.F.

REQUIRED WATER QUALITY VOLUME:

Water Quality Volume		
Required Treatment Volume	1.0	Inches Over Impervious Areas
Watershed Series	Paved Area	Water Quality Volume

The design of the drainage system is such that the site is routed through a series of treatment BMP's meeting the Standard. The attached TSS worksheets show the water treatment prior to the existing basin located on. No bypass is designed of the BMP's reducing the WQV.

STANDARD #9- OPERATION & MAINTENANCE

OPERATION & MAINTENANCE PLAN:

CURRENT OWNER & RESPONSIBLE PARTY:

Matt Schold (Contractor shall be responsible during construction)

FUTURE OWNER & RESPONSIBLE PARTY:

Matt Schold

DURING CONSTRUCTION:

SILT FENCE BARRIER:

The silt fence barrier shall be installed prior to construction.

During construction the contractor shall inspect the silt fence barrier on a weekly basis and after any significant rainstorm resulting in greater than 0.5" of rainfall. The barrier shall be inspected for any breaches or disturbed silt fence and repaired immediately.

After construction the barrier shall be maintained as stated above until all new areas are vegetated.

After construction these duties shall transfer to the property owner.

CONSTRUCTION ENTRANCE APRONS:

Construction aprons shall be installed to protect Tractor Supply Parking Lot and Route 9. The construction entrance apron shall be installed prior to commencement of construction and shall be inspected weekly. The construction entrance apron shall be replaced when debris becomes noticeable on the existing pavement surfaces leading to and from the construction site.

SLOPE STABILIZATION:

The slope stabilization controls shall be installed immediately upon obtaining final grades as shown on the project plans. Slopes in the swale area shall be stabilized according to the details provided. All 3:1 slopes established on-site shall be loamed and seeded as soon as weather permits. Any 2:1 slopes established shall be covered with slope stabilization fabric, then loamed and seeded as soon as weather permits. Areas in failure shall be re-graded to final grade and stabilized as necessary.

TEMPORARY BASINS:

The temporary basins shall be inspected immediately after storm events and cleaned to remove sediment build-up. Outfalls shall be inspected for erosion or scouring. Additional rip rap shall be added as required to minimize erosion.

Existing CATCH BASINS:

Existing Catch basins entrances shall have temporary stone or other filtration device installed around inlet to prevent sediment deposits. Sediment shall be removed when accumulation exceeds 1" depth on paved surfaces.

CHECK DAMS:

Check Dams shall be inspected weekly and after rainfall in excess of 0.5". Accumulated sediment shall be removed when depth exceeds 3" on the upstream sided of the dam. Stone or fabric shall be replaced when evidence of clogging is present.

CONSTRUCTION COMPLETION:

The entire stormwater management system shall be inspected upon completion of construction. Portions of the system containing sediment shall be cleaned and all sediment properly removed.

AFTER CONSTRUCTION:

Existing CATCH BASINS:

At a minimum, the catch basins shall be inspected and cleaned on a quarterly basis. It is preferred that collection of accumulated sediment shall be accomplished by means of vacuum pumping and not by means of a clamshell bucket. Disposal of accumulated sediment shall be performed in accordance with applicable local, state, and federal guidelines and regulations.

SEDIMENT BASINS

Sediment Basins shall be visually inspected monthly for accumulation of debris, slope failure, or stone displacement. Slopes shall be mowed quarterly. Bottom shall be swept, vacuumed of accumulated debris semi-annually.

EEXISTING INFILTRATION BASIN

Inspect infiltration basin after major storm events (>3.0 inches) to verify stabilization and infiltration. Mow slopes, berms quarterly. Removed accumulated clippings from infiltration stone. Inspect basin semi-annually for the following:

- Signs of differential settlement

- Cracking
- Erosion
- Leakage in embankments
- Tree growth on embankments
- Condition of rip rap
- Sediment accumulation
- Turf health.

LONG TERM POLLUTION PREVENTION PLAN

The following are the material management practices that shall be used to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff.

Good Housekeeping: The following good housekeeping practices will be followed on site during the construction project and continued upon completion of the construction activities.

1. A concerted effort shall be made to store only enough product required to complete a particular task.
2. All materials stored on site shall be stored in a neat and orderly fashion in their appropriate containers and, if possible, under a roof or other secure enclosure.
3. Products shall be kept in their original containers with the original manufacture's label.
4. Substances shall not be mixed with one another unless recommended by the manufacturer.
5. Whenever possible, all of a product shall be used up before disposing of the container.
6. Manufacture's recommendations for proper use and disposal shall be followed.
7. The site superintendent shall inspect daily to ensure proper use and disposal of materials on site.

Hazardous Products: The following practices are intended to reduce the risks associated with hazardous materials.

1. Products shall be kept in original containers unless they are not re-sealable.
2. Where feasible, the original label and material safety data shall be retained, whereas they contain important product information.
3. If surplus product must be disposed of, follow manufacturers or local and State recommended methods for proper disposal.

Product Specific Practices: The following product-specific practices shall be followed on site:
Petroleum Products:

1. All on site vehicles shall be monitored for leaks and receive regular preventative maintenance to reduce the risk of leakage.
2. Petroleum products shall be stored in tightly sealed containers which are clearly labeled.
3. Petroleum Products shall be stored in compliance with Fire Marshall regulations.

Bituminous Concrete:

Any bituminous concrete or asphalt substances used on site shall be applied according to the manufacturer's recommendations.

Fertilizers:

Fertilizers shall be applied in the minimum amounts recommended by the manufacturer. Once applied, fertilizers shall be worked into the soil to limit exposure to stormwater. Storage shall be in a covered shed or trailer. The contents of any partially-used bags of fertilizer shall be transferred to a sealable plastic bag or bin to avoid spills

Paints:

1. All containers shall be tightly sealed and stored when not required for use.
2. Excess paint shall not be discharged into any catch basin, drain manhole or any portion of the stormwater management system.
3. Excess paint shall be properly disposed of according to manufacturer's recommendations or State and local regulations.

Concrete Trucks:

Concrete trucks shall not be allowed to wash out or discharge surplus concrete or drum wash water on site.

SPILL CONTROL PRACTICES

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices shall be followed for spill prevention and cleanup:

1. Manufacturer's recommended methods for cleanup shall be readily available at the onsite trailer, and site personnel shall be made aware of the procedures and the location of the information.
2. Materials and equipment necessary for spill clean up shall be kept in the material storage area on site. Equipment and materials shall include, but not be limited to, brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust and plastic and metal trash containers specifically for this purpose.
3. All spills shall be cleaned up immediately after discovery.
4. The spill area shall be kept well ventilated, and personnel shall wear appropriate protective clothing to prevent injury from contact with hazardous substance.
5. Spills of toxic or hazardous material shall be reported to the appropriate State and/or local authority in accordance with local and/or State regulations.
6. The spill prevention plan shall be adjusted to include measures to prevent a particular type of spill from reoccurring and instructions on how to clean up the spill if there is another occurrence. A description of the spill, what caused it, and the clean up measures shall also be included.
7. The "Manager" shall be the spill prevention and cleanup coordinator. The "Manager" shall designate at least three other site personnel who will be trained in the spill control practices identified above.

APPENDICES:

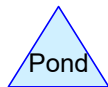
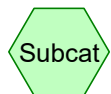
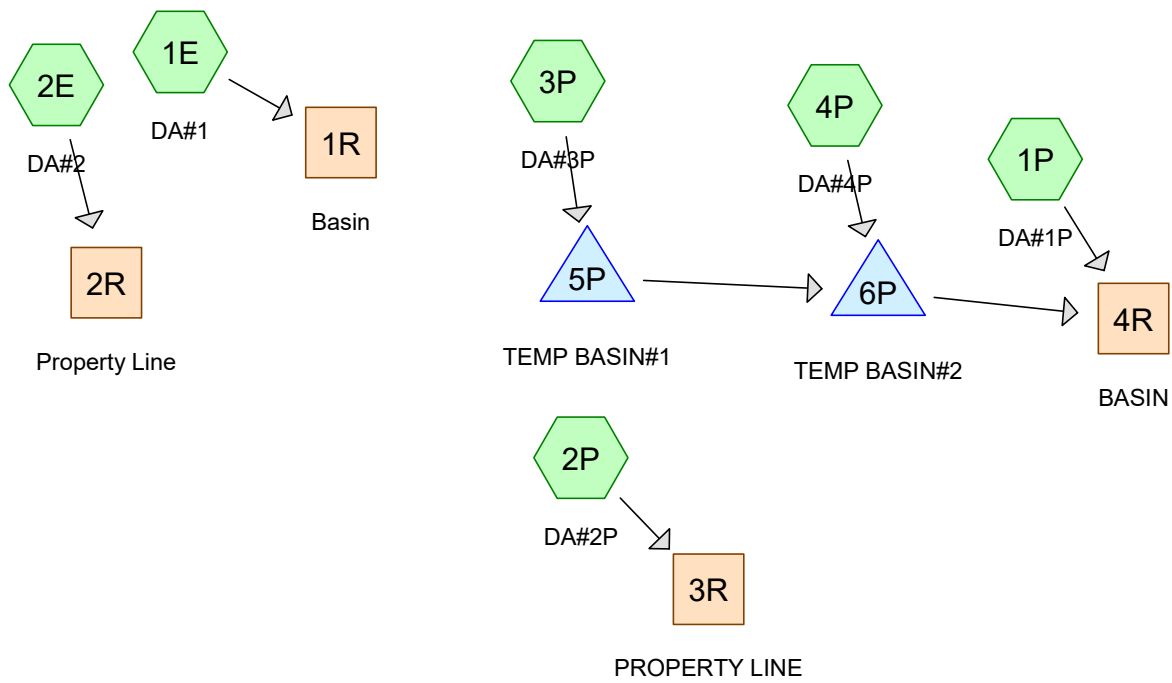
PRE-DEVELOPMENT DIAGRAM

POST-DEVELOPMENT DIAGRAM

PRE-DEVELOPMENT WATERSHED MAP

POST-DEVELOPMENT WATERSHED MAP

SOIL MAPS



Routing Diagram for 1439 Main Street

Prepared by {enter your company name here}, Printed 7/29/2021
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1439 Main Street*Type III 24-hr 2YR Rainfall=3.40"*

Prepared by {enter your company name here}

Printed 7/29/2021

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

Subcatchment 1E: DA#1	Runoff Area=107,129 sf 0.00% Impervious Runoff Depth>2.13" Flow Length=537' Tc=3.8 min CN=89 Runoff=6.85 cfs 0.436 af
Subcatchment 1P: DA#1P	Runoff Area=30,392 sf 0.00% Impervious Runoff Depth>2.13" Tc=6.0 min CN=89 Runoff=1.80 cfs 0.124 af
Subcatchment 2E: DA#2	Runoff Area=272,789 sf 0.00% Impervious Runoff Depth>1.07" Flow Length=762' Slope=0.1000 '/' Tc=7.4 min CN=74 Runoff=7.74 cfs 0.559 af
Subcatchment 2P: DA#2P	Runoff Area=122,118 sf 0.00% Impervious Runoff Depth>1.07" Tc=6.0 min CN=74 Runoff=3.63 cfs 0.250 af
Subcatchment 3P: DA#3P	Runoff Area=115,249 sf 0.00% Impervious Runoff Depth>2.13" Tc=6.0 min CN=89 Runoff=6.81 cfs 0.469 af
Subcatchment 4P: DA#4P	Runoff Area=112,159 sf 0.00% Impervious Runoff Depth>2.13" Tc=6.0 min CN=89 Runoff=6.63 cfs 0.457 af
Reach 1R: Basin	Inflow=6.85 cfs 0.436 af Outflow=6.85 cfs 0.436 af
Reach 2R: Property Line	Inflow=7.74 cfs 0.559 af Outflow=7.74 cfs 0.559 af
Reach 3R: PROPERTY LINE	Inflow=3.63 cfs 0.250 af Outflow=3.63 cfs 0.250 af
Reach 4R: BASIN	Inflow=4.84 cfs 0.709 af Outflow=4.84 cfs 0.709 af
Pond 5P: TEMP BASIN#1	Peak Elev=972.53' Storage=11,785 cf Inflow=6.81 cfs 0.469 af Outflow=1.23 cfs 0.246 af
Pond 6P: TEMP BASIN#2	Peak Elev=972.42' Storage=7,782 cf Inflow=6.63 cfs 0.702 af Outflow=3.73 cfs 0.585 af

1439 Main Street*Type III 24-hr 10YR Rainfall=4.90"*

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

Subcatchment 1E: DA#1	Runoff Area=107,129 sf 0.00% Impervious Runoff Depth>3.47" Flow Length=537' Tc=3.8 min CN=89 Runoff=10.91 cfs 0.712 af
Subcatchment 1P: DA#1P	Runoff Area=30,392 sf 0.00% Impervious Runoff Depth>3.47" Tc=6.0 min CN=89 Runoff=2.86 cfs 0.202 af
Subcatchment 2E: DA#2	Runoff Area=272,789 sf 0.00% Impervious Runoff Depth>2.11" Flow Length=762' Slope=0.1000 '/' Tc=7.4 min CN=74 Runoff=15.69 cfs 1.104 af
Subcatchment 2P: DA#2P	Runoff Area=122,118 sf 0.00% Impervious Runoff Depth>2.12" Tc=6.0 min CN=74 Runoff=7.33 cfs 0.494 af
Subcatchment 3P: DA#3P	Runoff Area=115,249 sf 0.00% Impervious Runoff Depth>3.47" Tc=6.0 min CN=89 Runoff=10.84 cfs 0.765 af
Subcatchment 4P: DA#4P	Runoff Area=112,159 sf 0.00% Impervious Runoff Depth>3.47" Tc=6.0 min CN=89 Runoff=10.55 cfs 0.745 af
Reach 1R: Basin	Inflow=10.91 cfs 0.712 af Outflow=10.91 cfs 0.712 af
Reach 2R: Property Line	Inflow=15.69 cfs 1.104 af Outflow=15.69 cfs 1.104 af
Reach 3R: PROPERTY LINE	Inflow=7.33 cfs 0.494 af Outflow=7.33 cfs 0.494 af
Reach 4R: BASIN	Inflow=10.02 cfs 1.363 af Outflow=10.02 cfs 1.363 af
Pond 5P: TEMP BASIN#1	Peak Elev=973.17' Storage=15,592 cf Inflow=10.84 cfs 0.765 af Outflow=4.39 cfs 0.537 af
Pond 6P: TEMP BASIN#2	Peak Elev=973.28' Storage=11,508 cf Inflow=13.06 cfs 1.282 af Outflow=8.64 cfs 1.161 af

1439 Main Street*Type III 24-hr 25yr Rainfall=5.40"*

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

Subcatchment 1E: DA#1	Runoff Area=107,129 sf 0.00% Impervious Runoff Depth>3.93" Flow Length=537' Tc=3.8 min CN=89 Runoff=12.25 cfs 0.805 af
Subcatchment 1P: DA#1P	Runoff Area=30,392 sf 0.00% Impervious Runoff Depth>3.93" Tc=6.0 min CN=89 Runoff=3.21 cfs 0.228 af
Subcatchment 2E: DA#2	Runoff Area=272,789 sf 0.00% Impervious Runoff Depth>2.49" Flow Length=762' Slope=0.1000 '/' Tc=7.4 min CN=74 Runoff=18.52 cfs 1.301 af
Subcatchment 2P: DA#2P	Runoff Area=122,118 sf 0.00% Impervious Runoff Depth>2.49" Tc=6.0 min CN=74 Runoff=8.65 cfs 0.583 af
Subcatchment 3P: DA#3P	Runoff Area=115,249 sf 0.00% Impervious Runoff Depth>3.93" Tc=6.0 min CN=89 Runoff=12.18 cfs 0.866 af
Subcatchment 4P: DA#4P	Runoff Area=112,159 sf 0.00% Impervious Runoff Depth>3.93" Tc=6.0 min CN=89 Runoff=11.85 cfs 0.842 af
Reach 1R: Basin	Inflow=12.25 cfs 0.805 af Outflow=12.25 cfs 0.805 af
Reach 2R: Property Line	Inflow=18.52 cfs 1.301 af Outflow=18.52 cfs 1.301 af
Reach 3R: PROPERTY LINE	Inflow=8.65 cfs 0.583 af Outflow=8.65 cfs 0.583 af
Reach 4R: BASIN	Inflow=11.46 cfs 1.585 af Outflow=11.46 cfs 1.585 af
Pond 5P: TEMP BASIN#1	Peak Elev=973.39' Storage=16,981 cf Inflow=12.18 cfs 0.866 af Outflow=5.17 cfs 0.637 af
Pond 6P: TEMP BASIN#2	Peak Elev=973.58' Storage=12,945 cf Inflow=15.61 cfs 1.479 af Outflow=9.82 cfs 1.357 af

1439 Main Street*Type III 24-hr 100YR Rainfall=6.90"*

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Printed 7/29/2021

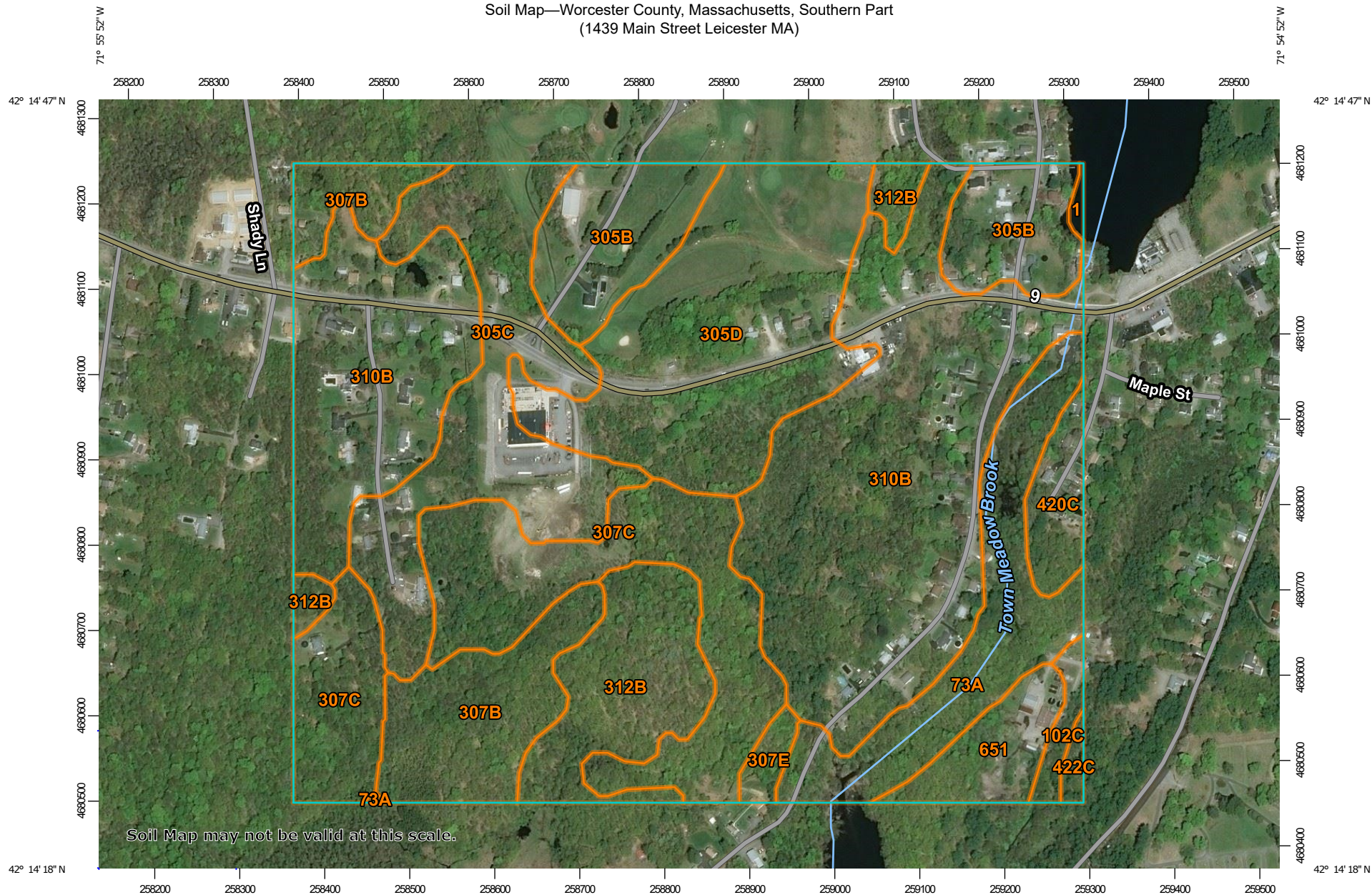
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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1E: DA#1	Runoff Area=107,129 sf 0.00% Impervious Runoff Depth>5.30" Flow Length=537' Tc=3.8 min CN=89 Runoff=16.27 cfs 1.087 af
Subcatchment 1P: DA#1P	Runoff Area=30,392 sf 0.00% Impervious Runoff Depth>5.30" Tc=6.0 min CN=89 Runoff=4.27 cfs 0.308 af
Subcatchment 2E: DA#2	Runoff Area=272,789 sf 0.00% Impervious Runoff Depth>3.69" Flow Length=762' Slope=0.1000 '/' Tc=7.4 min CN=74 Runoff=27.33 cfs 1.926 af
Subcatchment 2P: DA#2P	Runoff Area=122,118 sf 0.00% Impervious Runoff Depth>3.69" Tc=6.0 min CN=74 Runoff=12.74 cfs 0.863 af
Subcatchment 3P: DA#3P	Runoff Area=115,249 sf 0.00% Impervious Runoff Depth>5.30" Tc=6.0 min CN=89 Runoff=16.17 cfs 1.169 af
Subcatchment 4P: DA#4P	Runoff Area=112,159 sf 0.00% Impervious Runoff Depth>5.30" Tc=6.0 min CN=89 Runoff=15.74 cfs 1.138 af
Reach 1R: Basin	Inflow=16.27 cfs 1.087 af Outflow=16.27 cfs 1.087 af
Reach 2R: Property Line	Inflow=27.33 cfs 1.926 af Outflow=27.33 cfs 1.926 af
Reach 3R: PROPERTY LINE	Inflow=12.74 cfs 0.863 af Outflow=12.74 cfs 0.863 af
Reach 4R: BASIN	Inflow=14.85 cfs 2.257 af Outflow=14.85 cfs 2.257 af
Pond 5P: TEMP BASIN#1	Peak Elev=973.99' Storage=20,978 cf Inflow=16.17 cfs 1.169 af Outflow=6.90 cfs 0.937 af
Pond 6P: TEMP BASIN#2	Peak Elev=974.42' Storage=17,320 cf Inflow=21.44 cfs 2.074 af Outflow=12.54 cfs 1.949 af

Soil Map—Worcester County, Massachusetts, Southern Part
(1439 Main Street Leicester MA)



Soil Map may not be valid at this scale.

Map Scale: 1:6,350 if printed on A landscape (11" x 8.5") sheet.

0 50 100 200 300 Meters

0 300 600 1200 1800 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

7/29/2021
Page 1 of 3

Soil Map—Worcester County, Massachusetts, Southern Part
(1439 Main Street Leicester MA)

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 1:25,000.

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:

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: Worcester County, Massachusetts, Southern Part

Survey Area Data: Version 13, Jun 11, 2020

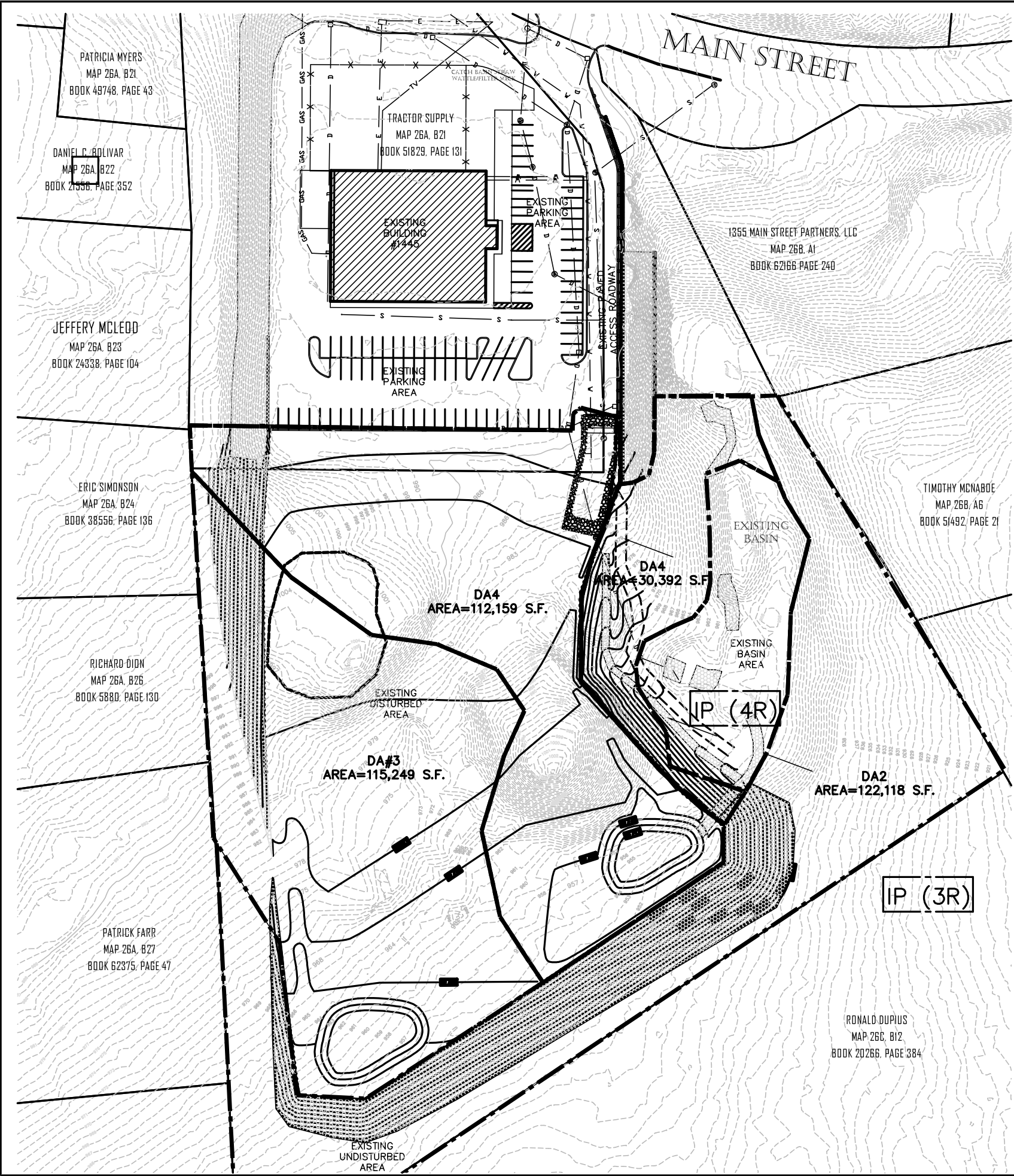
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 18, 2019—Jul 9, 2019

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

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Water	0.2	0.1%
73A	Whitman fine sandy loam, 0 to 3 percent slopes, extremely stony	12.3	7.1%
102C	Chatfield-Hollis-Rock outcrop complex, 0 to 15 percent slopes	1.3	0.7%
305B	Paxton fine sandy loam, 3 to 8 percent slopes	12.7	7.4%
305C	Paxton fine sandy loam, 8 to 15 percent slopes	18.4	10.7%
305D	Paxton fine sandy loam, 15 to 25 percent slopes	23.4	13.6%
307B	Paxton fine sandy loam, 0 to 8 percent slopes, extremely stony	12.0	7.0%
307C	Paxton fine sandy loam, 8 to 15 percent slopes, extremely stony	22.4	12.9%
307E	Paxton fine sandy loam, 15 to 35 percent slopes, extremely stony	1.1	0.6%
310B	Woodbridge fine sandy loam, 3 to 8 percent slopes	49.7	28.8%
312B	Woodbridge fine sandy loam, 0 to 8 percent slopes, extremely stony	11.4	6.6%
420C	Canton fine sandy loam, 8 to 15 percent slopes	3.0	1.7%
422C	Canton fine sandy loam, 8 to 15 percent slopes, extremely stony	0.5	0.3%
651	Udorthents, smoothed	4.2	2.4%
Totals for Area of Interest		172.8	100.0%



JASON KNOTT
MAP 26B, A10
BOOK 61586, PAGE 357



Andrew R. Baum



DIG SAFE NOTE:

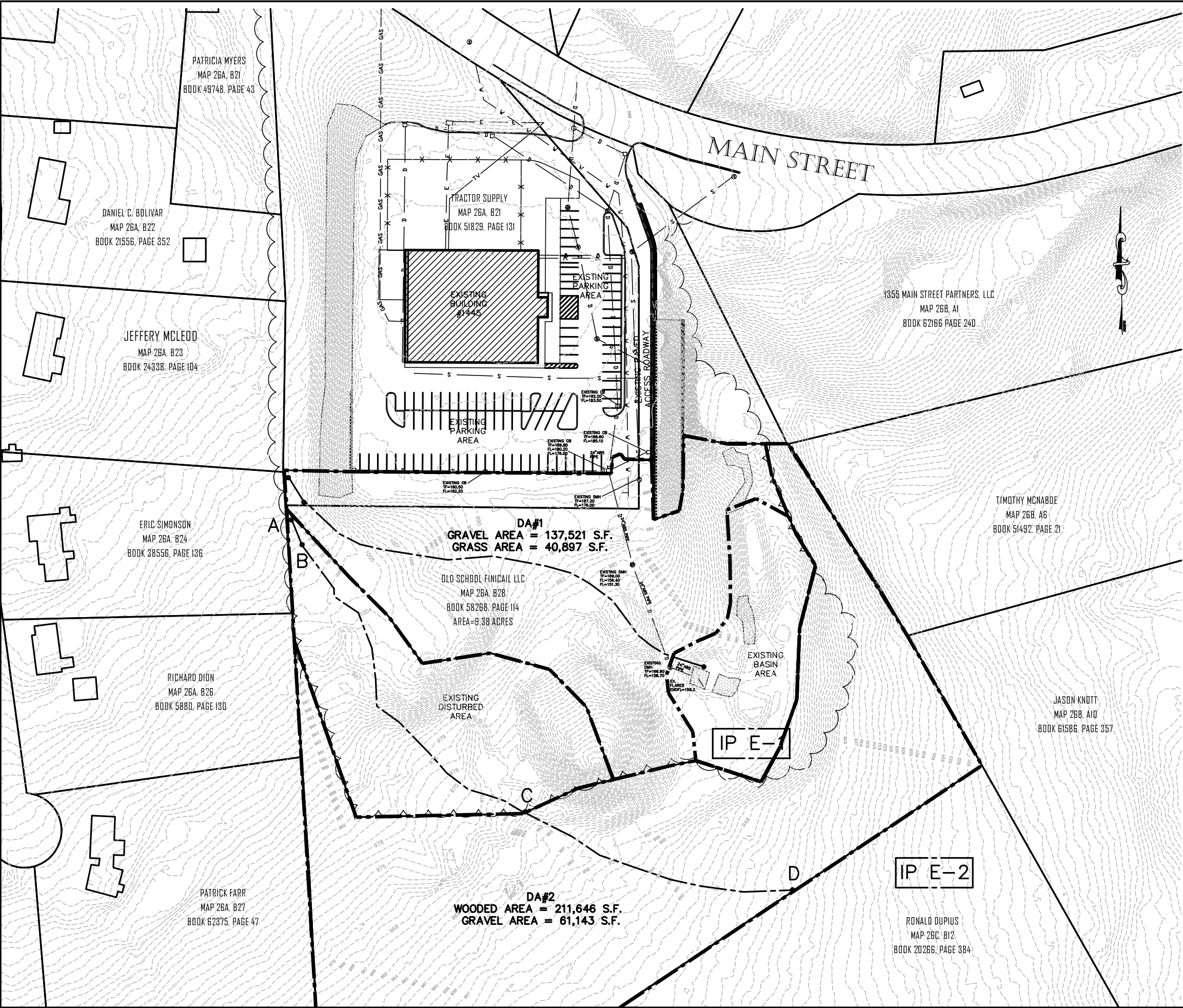
UTILITIES ARE PLOTTED FROM FIELD LOCATION AND ANY RECORD INFORMATION AVAILABLE, AND SHOULD BE CONSIDERED APPROXIMATE. OTHER UTILITIES MAY EXIST WHICH ARE NOT EVIDENT OR FOR WHICH RECORD INFORMATION WAS NOT AVAILABLE. CONTRACTORS (IN ACCORDANCE WITH MASS.G.L. CHAPTER 82 SECTION 40 AS AMENDED) MUST CONTACT ALL UTILITY COMPANIES BEFORE EXCAVATING AND DRILLING. ALSO, CALL "DIG-SAFE" AT (888)344-7233 (1(888)DIG-SAFE). EXISTING LINES OTHER THAN THOSE INDICATED ON THESE DRAWINGS MAY BE ON THE SITE. THE CONTRACTOR IS WARNED TO PROCEED WITH CAUTION WITH ALL WORK, ESPECIALLY EXCAVATION WORK, AND TO MAKE ALL POSSIBLE INVESTIGATIONS AS TO POSSIBLE UNMARKED UTILITY LINES.

RONALD DUPIUS
MAP 26B, B12
BOOK 20266, PAGE 384

INTERSTATE TOWING

REVISIONS		
REV.	DATE	DESCRIPTION
PROJECT NO.	21-212	
DESIGNED BY	PML	
CHECKED BY	AB	
DATE	6/14/21	
CAD FILE	21-212 SPECIAL PERMIT PLAN	
GRAPHIC SCALE		
		
(IN FEET) 1 inch = 50 feet		

P.L.	P.L.S.
APPROVAL UNDER SITE PLAN REVIEW. LEICESTER PLANNING BOARD BEING A MAJORITY	
APPROVAL DATE: _____ ENDORSEMENT DATE: _____	
PREPARED BY: SUMMIT Engineering & Survey, Inc. 710 MAIN STREET OXFORD, MA 01537 P:(508) 987-8710 F:(508) 987-8714	
SHEET TITLE POST DEVELOPMENT PLAN	
DEFINITIVE SITE PLAN at 1439 MAIN STREET (ROUTE 9) LEICESTER, MA PREPARED FOR SCHOLD DEVELOPMENT	
SHEET NO. C-3.0	



P.L.

P.L.S.

APPROVAL UNDER SITE PLAN REVIEW.
LEICESTER PLANNING BOARD
BEING A MAJORITY

APPROVAL DATE: _____
ENDORSEMENT DATE: _____

PREPARED BY:
SUMMIT
Engineering & Survey, Inc.
710 MAIN STREET
OXFORD, MA 01537
P:(508) 987-8710 F:(508) 987-8714

SHEET TITLE

PRE-DEVELOPMENT
PLAN

SPECIAL PERMIT PLAN
at
1439 MAIN STREET
(ROUTE 9)
LEICESTER, MA
PREPARED FOR
SCHOLD DEVELOPMENT

SHEET NO.

C-2.0

REVISIONS

REV.	DATE	DESCRIPTION

PROJECT NO.	21-212
DESIGNED BY	PML
CHECKED BY	AB
DATE	6/14/21
CAD FILE	21-212 SPECIAL PERMIT

GRAPHIC SCALE

500

0

25

50

100

(IN FEET)
1 inch = 50 feet