

STARBUCK DRIVE-THRU SITE PLAN

SP# 04-24

STAFF REPORT

May 15, 2024

SITE: 77 Derry Street, Map 165 / Lot 155

ZONING: Business (B)

PURPOSE OF PLAN: To show a proposed 2,472 sf. Starbucks drive-thru restaurant along with appurtenant parking and site improvements. The restaurant would be developed on an approximately 66-space portion of the existing parking lot at the northern end of Hudson Mall shopping center site.

PLAN UNDER REVIEW: Non-Residential Site Plan SP# 04-24, Map 165 Lot 155, 77 Derry Street, Hudson, NH; prepared by: Hayner/Swanson, Inc. 3 Congress Street, Nashua, NH 03062; prepared for: Hudson-Vickery, LLC, 25 Orchard View Drive, Londonderry, NH 03053; consisting of 16 sheets and general notes 1-24 on Sheet 1; dated February 16, 2024.

ATTACHMENTS:

- 1) Application with associated waiver request, dated March 21, 2024, received May 3, 2024 – Attachment “A”.
- 2) Department Comments – Attachment “B”.
- 3) Peer Review, prepared by Fuss & O’Neill, dated April 11, 2024 – Attachment “C”.
- 4) Stormwater Management & Erosion Control Plan, prepared by Hayner/Swanson, Inc., Dated March 4, Received March 21, 2024 – Attachment “D”.
- 5) Parking Utilization Study, prepared by Vanasse & Associates, Inc., dated December 19, 2024 – Attachment “E”.
- 6) CAP Fee sheet – Attachment “F”.

APPLICATION TRACKING:

- May 3, 2024 – Site plan application received.
- April 11, 2024 – Peer Review completed.
- May 15, 2024 – Public hearing scheduled.

WAIVER REQUESTED:

- §275-8.C.(2) – Parking calculations

COMMENTS & RECOMMENDATIONS

BACKGROUND

The site is approximately 10.602 acres and is located in the Business zone. The proposed site is home to the approximately 115,000 sq. ft. Hudson Mall which includes a Hannaford's grocery store, a detached 3,100 sq. ft. McDonalds restaurant and various other retail and restaurant tenants. The overall site has a total of 468 parking spaces. Hudson Mall is abutted by businesses to the west, and a cemetery to the North, West, and South. The site is served by municipal water and sewer. No section of the property is within a floodplain, and no wetlands are located on site. The site is accessed by a signalized intersection on the west side of the property, and a full access drive on the south-west corner of the property.

DEPARTMENT COMMENTS

Assessing has provided the following comment:

In reviewing the proposed site plan I would offer the following map/lot/sublot number to be utilized and placed on the recorded plan as I believe that this will be a ground lease set up with building owned by the drive-thru restaurant operator; Tax Map 165b Lot 155 Sublot 002

Engineering has provided the following comment:

CB 5 shall be equipped with a mechanical/oil separator.

PEER REVIEW

Fuss & O'Neill has completed a peer review of the plans provided as of April 11, 2024. No major or immediate problems have been noted, however several items need to be corrected or clarified on the plan set. Full comments may be found in Attachment "C".

WAIVERS REQUESTED

The Applicant is seeking one waiver from §275-8.C. (2) – Parking calculations.

The Applicant is seeking permission to have 421 spaces on the lot where normally 644 would be required. The site is already non-conforming, currently having 486 where 619 would be required. Development of the proposed use would result in a net reduction of 65 spaces. The application has provided a Parking Utilization Study Memorandum (Attachment "E") which details current and projected parking required. The applicant states that there is no reasonable way to provide the additional spaces required to meet the ordinance.

As is common with large developments, formula based parking calculations can oftentimes overestimate how many spaces are actually needed. The applicant's reasoning outlined in the memorandum is based on actual observation and is in line with current best-practices for planning and site design. The applicant has met requirements related to ADA parking spaces by adding two in their redesign of parking next to the proposed building.

STAFF COMMENTS

The area to be utilized by this development is situated at some distance from the more heavily used portions of the Mall adjacent to Hannaford’s. This portion of the parking lot, therefore, is typically empty or underutilized. The addition of free-standing commercial buildings is a common way to in-fill overly large parking lots on older multi-tenant shopping center sites. With no homes directly abutting the property, increased site activity would have minimal impacts to surrounding land uses. As indicated in the Fuss & O’Neill peer review letter, several items need to be addressed or corrected in the plans. Therefore, staff recommends plan acceptance, but does not recommend approval at this time.

RECOMMENDATIONS

Staff recommends acceptance of the plan, followed by deliberation and consideration of the site plan and waiver request prior to potential approval or further requests for information/continuation.

DRAFT MOTIONS:

ACCEPT THE SITE PLAN APPLICATION:

I move to accept the Site Plan Application for Non-Residential Site Plan SP# 04-24, Map 165 Lot 155, 77 Derry Street, Hudson, NH.

Motion by: _____ Second: _____ Carried/Failed: _____

WAIVER:

I move to grant a waiver from §275-8.C.(2), Parking Calculations, to allow for a total of 421 parking spaces, where 619 would be required, based on the Board’s discussion, the testimony of the Applicant’s representative, and in accordance with the language included in the submitted Waiver Request Form for said waiver.

Motion by: _____ Second: _____ Carried/Failed: _____

MOTION TO CONTINUE:

I move to continue the Site Plan Application for Non-Residential Site Plan SP# 04-24, Map 165 Lot 155, 77 Derry Street, Hudson, NH.

Motion by: _____ Second: _____ Carried/Failed: _____



*Town of Hudson
12 School Street
Hudson, NH 03501*

SITE PLAN APPLICATION

Revised July 24, 2023

The following information must be filed with the Planning Department *at the time of filing a site plan application*:

1. One (1) original completed application with original signatures, and one (1) copy.
2. Three (3) full plan sets (sheet size: 22" x 34").
3. One (1) original copy of the project narrative, and one (1) copy.
4. A list of direct abutters and a list of indirect abutters, and two (2) sets of mailing labels for abutter notifications.
5. All of the above application materials, including plans, shall also be submitted in electronic form as a PDF.
6. All plans shall be folded and all pertinent data shall be attached to the plans with an elastic band or other enclosure.

The following information is required to be filed with the Planning Department *no later than 10:00 A.M., Tuesday ONE WEEK prior to the scheduled Planning meeting. The purpose of these materials is hardcopy distribution to Planning Board members, not review. Any plan revisions that require staff review must be submitted no later than 10:00A.M., Tuesday TWO WEEKS prior to the scheduled Planning meeting. Depending on the complexity of changes, more time may be required for review. Please contact the Town Planner if you have any questions on this matter.*

1. Submission of fifteen (15) 11" X 17" plan sets, revised if applicable.
2. Submission of two (2) full plan sets (sheet size: 22" x 34"), if revised.
3. All of the above application materials, including plans, shall also be submitted in electronic form as a PDF.

Note: Prior to filing an application, it is recommended to schedule an appointment with the Town Planner.

SITE PLAN APPLICATION

Date of Application: _____ Tax Map #: 165 Lot #: 155

Site Address: Hudson Mall, 77 Derry Street

Name of Project: Proposed Drive-Thru Restaurant

Zoning District: B - Business General SP#: _____
(For Town Use Only)

Z.B.A. Action: N/A

PROPERTY OWNER:

DEVELOPER:

Name: Hudson-Vickerry, LLC

(same as owner)

Address: c/o The MEG Companies

Address: 25 Orchard View Dr., Londonderry, NH 03053

Telephone # (603) 434-6700

Email: _____

PROJECT ENGINEER:

SURVEYOR:

Name: Hayner/Swanson, Inc.

Hayner/Swanson, Inc.

Address: 3 Congress Street

3 Congress Street

Address: Nashua, NH 03062

Nashua, NH 03062

Telephone # (603) 883-2057

(603) 883-2057

Email: eblatchford@hayner-swanson.com

dpollock@hayner-swanson.com

PURPOSE OF PLAN:

To show proposed 2,472 sf drive-thru restaurant along with appurtenant parking and site improvements.

(For Town Use Only)

Routing Date: _____ Deadline Date: _____ Meeting Date: _____

_____ I have no comments _____ I have comments (attach to form)

_____ Title: _____ Date: _____

(Initials)

Department:

Zoning: ___ Engineering: ___ Assessor: ___ Police: ___ Fire: ___ DPW: ___ Consultant: ___

SITE DATA SHEETPLAN NAME: Proposed Drive-Thru RestaurantPLAN TYPE: SITE PLANLEGAL DESCRIPTION: MAP 165 LOT 155DATE: 16 February 2024-----
Location by Street: 77 Derry RoadZoning: B - BusinessProposed Land Use: RestaurantExisting Use: Retail shopping centerSurrounding Land Use(s): Commercial and cemeteryNumber of Lots Occupied: OneExisting Area Covered by Building: 66,600 sfExisting Buildings to be removed: N/AProposed Area Covered by Building: 69,072 sfOpen Space Proposed: 12.3% (9.6% existing)Open Space Required: 35%Total Area: S.F.: 461,823 Acres: 10.602Area in Wetland: 0 sf Area Steep Slopes: 0 sfRequired Lot Size: 30,000 sfExisting Frontage: 1,081.49 ftRequired Frontage: 150 ft

Building Setbacks:	<u>Required*</u>	<u>Proposed</u>
Front:	<u>50 ft</u>	<u>57 ft</u>
Side:	<u>35 ft</u>	<u>63 ft</u>
Rear:	<u>15 ft</u>	<u>195 ft</u>

SITE DATA SHEET
(Continued)

Flood Zone Reference: See Sheet 1 of 15, Note #19.

Width of Driveways: 34 +/- ft

Number of Curb Cuts: 2 existing

Proposed Parking Spaces: 421 (waiver requested)

Required Parking Spaces: 644

Basis of Required Parking (Use): Retail - 1 space/200 sf, restaurant - 1 space/100 sf

Dates/Case #/Description/Stipulations of ZBA, Conservation Commission, NH Wetlands Board Actions: N/A
(Attach stipulations on separate sheet)

Waiver Requests

<i>Town Code Reference:</i>	<i>Regulation Description:</i>
<u>275-(8)(C)(2)</u>	<u>Required number of parking spaces</u>
_____	_____
_____	_____
_____	_____

(For Town Use Only)

Data Sheets Checked By: _____ Date: _____

SITE PLAN APPLICATION AUTHORIZATION

I hereby apply for *Site Plan* Review and acknowledge I will comply with all of the Ordinances of the Town of Hudson, New Hampshire State Laws, as well as any stipulations of the Planning Board, in development and construction of this project. I understand that if any of the items listed under the *Site Plan* specifications or application form are incomplete, the application will be considered rejected.

Pursuant to RSA 674:1-IV, the owner(s) by the filing of this application as indicated above, hereby given permission for any member of the Hudson Planning Board, the Town Planner, the Town Engineer, and such agents or employees of the Town or other persons as the Planning Board may authorize, to enter upon the property which is the subject of this application at all reasonable times for the purpose of such examinations, surveys, tests and inspections as may be appropriate. The owner(s) release(s) any claim to or right he/she (they) may now or hereafter possess against any of the above individuals as a result of any examinations, surveys, tests and/or inspections conducted on his/her (their) property in connection with this applications.

Signature of Owner: Robert Gordon Date: 2/19/24

Print Name of Owner: ROBERT F. GORDON

- ❖ If other than an individual, indicate name of organization and its principal owner, partners, or corporate officers.

Signature of Developer: Robert Gordon Date: 2/19/24

Print Name of Developer: ROBERT F. GORDON

- ❖ The developer/individual in charge must have control over all project work and be available to the Code Enforcement Officer/Building Inspector during the construction phase of the project. The individual in charge of the project must notify the Code Enforcement Officer/Building Inspector within two (2) working days of any change.

WAIVER REQUEST FORM

Name of Subdivision/Site Plan: Proposed Drive-Thru Restaurant

Street Address: 77 Derry Street

I, as the designated representative of Hudson-Vickerry, LLC hereby request that the Planning Board waive the requirements of item 275-(8)(C)(2) of the Hudson Land Use Regulations in reference to a plan presented by Hayner/Swanson, Inc.

(name of surveyor and engineer) dated 16 February 2024 for property tax map(s) 165 and lot(s) 155 in the Town of Hudson, NH.

As the aforementioned applicant, I, herein, acknowledge that this waiver is requested in accordance with the provisions set forth in RSA 674:36, II (n), i.e., without the Planning Board granting said waiver, it would pose an unnecessary hardship upon me (the applicant), and the granting of this waiver would not be contrary to the spirit and intent of the Land Use Regulations.

Hardship reason(s) for granting this waiver (if additional space is needed please attach the appropriate documentation hereto):

See attached waiver request information.

Reason(s) for granting this waiver, relative to not being contrary to the spirit and intent of the Land Use Regulations: (if additional space is needed please attach the appropriate documentation hereto):

See attached waiver request information.

Signed: 
Applicant or Authorized Agent

SCHEDULE OF FEES**A. REVIEW FEES:**

1. <u>Site Plan Use</u>	<u>Project Size/Fee</u>	
Multi-Family	\$105.00/unit for 3-50 units \$78.50/unit for each additional unit over 50	\$ _____
Commercial/Semi Public/Civic or Recreational	\$157.00/1,000 sq. ft. for first 100,000 sq.ft. (bldg. area): \$78.50/1,000 sq.ft. thereafter.	\$ <u>471.00</u>
Industrial	\$150.00/1,000 sq.ft for first 100,000 sq.ft. (bldg. area); \$78.50/1,000 sq.ft thereafter.	\$ _____
No Buildings	\$30.00 per 1,000 sq.ft. of proposed developed area	\$ _____

CONSULTANT REVIEW FEE: (Separate Check)

Total 1.1 acres @ \$600.00 per acre, or \$1,250.00,
whichever is greater. \$ 1,250.00

This is an estimate for cost of consultant review. The fee is expected to cover the amount. A complex project may require additional funds. A simple project may result in a refund.

LEGAL FEE:

The applicant shall be charged attorney costs billed to the Town for the Town's attorney review of any application plan set documents.

B. POSTAGE:

<u>12</u> Direct Abutters Applicant, Professionals, etc. as required by RSA 676:4.1.d @\$5.01 (or Current Certified Mail Rate)	\$ <u>60.12</u>
<u>3</u> Indirect Abutters (property owners within 200 feet) @\$0.66 (or Current First Class Rate)	\$ <u>1.98</u>

C. TAX MAP UPDATING FEE: (FLAT FEE) \$ 275.00

TOTAL \$ 808.10

SCHEDULE OF FEES
(Continued)

(For Town Use)	
AMOUNT RECEIVED: \$ _____	DATE RECEIVED: _____
RECEIPT NO.: _____	RECEIVED BY: _____

NOTE: fees below apply only upon plan approval, not collected at time of application.

D. RECORDING:

*****The applicant shall be responsible for the recording of the approved plan, and all documents as required by an approval, at the Hillsborough County Registry of Deeds (HCRD), located at 19 Temple Street, Nashua, NH 03061. Additional fees associated with recording can be found at HCRD.*****

E. COST ALLOCATION PROCEDURE AMOUNT CONTRIBUTION AND OTHER IMPACT FEE PAYMENTS:

To be determined by the Planning Board at time of plan approval and shall be paid by the applicant at the time of submittal of the Certificate of Occupancy Permit requests.

*****The applicant shall be responsible for all fees incurred by the town for processing and review of the applicant’s application, plan and related materials.*****

WAIVER REQUEST #1:

Site Plan Regulation: Hudson Site Plan Regulation Chapter 275-8 C (2) – Required number of Parking Spaces.

Waiver Request: A waiver is requested from **Chapter 275-8 C (2)** in order to allow 421 parking spaces on a lot where 644 spaces are required per the regulation. The site currently has 486 parking spaces where 619 spaces are required by the regulation.

Basis of Waiver:

As detailed in the accompanying Parking Utilization Study Memorandum, prepared by Vanasse & Associates, Inc., the existing shopping center has a current maximum parking utilization rate of 30% (143 spaces) and 35% (165 spaces) during the respective weekday and Saturday peak periods observed during the study. This leaves over 300 parking spaces unutilized at peak times of business. It is proposed to build the new coffee shop/restaurant with drive-thru in the existing parking lot at the north end of the site, eliminating 73 existing parking spaces, and constructing 20 new parking spaces to serve the proposed restaurant. It is also proposed to remove pavement markings for 17 employee parking spaces located behind the main shopping center building to allow for improved truck maneuvering in the central loading dock area. This will still leave in excess of 200 spaces above the anticipated maximum parking utilization at peak weekday and weekend shopping times.

Waiver Request From Standards

The hardship reason for granting this waiver is that there is no reasonable way to add the 223 additional parking spaces on this property in order to comply with the Site Plan Regulation. And as demonstrated in the Vanasse & Associates study, they are not needed.

Granting this waiver will not be contrary to the spirit and intent of the Town's Land Use Regulations because the spirit and intent of Chapter 275-8 C (2) is that adequate parking is provided for the intended use. As evaluated in the Vanasse & Associates study, adequate parking is provided to support the existing uses with the addition of the proposed project.

Chapter 276-7 Waivers

The requirements of Chapter 275-8 C (2) are unnecessary.

The purpose of Chapter 275-8 C (2) is to ensure adequate number of parking spaces are provided for a particular use. Given the above-stated reasons, it is the owner's opinion that ample parking is provided for this business operation.

Granting the waiver will not violate the purposes or general standards of the Land Use Regulations.

This waiver will not violate the public safety purposes of Chapter 275-8 C (2), in that the plan represents good planning principles and is balanced with regard to parking, building and improves open space on the site.

Granting the waiver shall result in a general benefit to the Town and surrounding properties.

Granting the waiver will support the proposed restaurant project, which will create approximately 15-20 new jobs, increase annual tax revenue, and is the type of development specifically contemplated by the Town's Master Plan. As a result, the waiver will result in a general benefit to the Town.

ABUTTER LIST**Job No. 1708-S**

March 18, 2024

Map	Lot No.	Name & Address
OWNER(S):		
165	155	Hudson-Vickerry, LLC c/o The MEG Companies 25 Orchard View Drive Londonderry, NH 03053
ABUTTERS:		
165	141	Abbot Farm Condominium c/o Great Northern Property Mgmt. 636 Daniel Webster Highway Merrimack, NH 03054
165	147	102 Plaza, Inc. P.O. Box 188 Beverly, MA 01915-0188
165	148	Bank of New Hampshire Attn: TD Bank 380 Wellington St., Twr. B, Fl. 12 London, ON N6A 4S4
165	149	Global Companies, LLC c/o Engie Insight – MS 5534 P.O. Box2440 Spokane, WA 99210-2440
165	150	Cafua Realty Trust IX, LLC 280 Merrimack Street Methuen, MA 01844
165	151	Branford Properties of Nevada, LLC 5451 Arville Street Las Vegas, NV 89118
165	152	Russell Baldwin & Emily Sousa 320 Boylston Street Lowell, MA 01852
165	153	Deanna & Donald Brooks 100 Derry Street Hudson, NH 03051

Attachment "A"

166	1	St. Patrick Cemetery Bishop of Manchester Roman Catholic 153 Ash Street Manchester, NH 03104
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ABUTTERS WITHIN 200 FEET:

165	132	Maurice E. Duval Trust Denise E. Duval, Trustee 2 Summer Street Hudson, NH 03051
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165	146	DT Retail Properties, LLC 500 Volvo Parkway Chesapeake, VA 23320
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165	154	Clifford R. & Kim R. Antonell 1 Wildflower Lane Wayland, MA 01778
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DESIGN PROFESSIONALS:

James N. Petropulos, P.E.
Hayner/Swanson, Inc.
3 Congress Street
Nashua, NH 03062-3301

Dennis C. Pollock, L.L.S.
Hayner/Swanson, Inc.
3 Congress Street
Nashua, NH 03062-3301



TOWN OF HUDSON
Land Use Division



12 School Street • Hudson, New Hampshire 03051 • Tel: 603-886-6008 • Fax: 603-594-1142

Zoning Determination #24-018

March 5, 2024

Sent Email and 1st Class mail

Hudson-Vickerry, LLC
25 Orchard View Drive
Londonderry, NH 03053

Re: 77 Derry Street Map 165 Lot 155-000
District: Business (B)

Dear Mr. Gordon,

Your request: To construct a 1-story, 2,465 sq. ft. building to operate a coffee shop restaurant with walk-in and drive-through food service. (**Site Plan, Floor Plan, and Elevation where provided**)

Zoning Review / Determination:

77 Derry Street is located within the Business (B) zone, where fast-food, restaurants and drive-through establishments are allowed use per §334-21 Table of Permitted Principal Uses (Use D-16). An updated site plan approved by the Planning Board is required per §334-16.1 Site Plan Approvals.

Sincerely,

Chris Sullivan
Zoning Administrator/Code Enforcement Officer
(603) 886-6000 (ext. 1275)
csullivan@hudsonnh.gov

cc: Public File
B. Dubowik, Administrative Aide
Earle D. Blatchford (Hayner/Swanson, Inc. (Senior Project Manager)
Owner
File

NOTE: this determination may be appealed to the Hudson Zoning Board of Adjustment within 30 days of the receipt of this letter.



PROJECT NARRATIVE

Proposed Drive-Thru Restaurant Hudson Mall, 77 Derry Street Map 165, Lot 155 Hudson, New Hampshire 4 March 2024

The subject site under consideration for this application is located at 77 Derry Street, Hudson, NH. The parcel is known to the Hudson Assessors Department as Map 165, Lot 155. The lot measures 10.602 acres and is located in the B - Business zoning district. The site is abutted by Derry Street, and commercial and residential properties to the west; and St. Patrick Cemetery to the north, east, and south.

The lot currently contains a 1-story, 114,800 square foot retail shopping center building, and a 3,100 square foot fast-food drive thru restaurant; along with associated parking and loading areas. Primary access to the site is provided via one non-signalized full-access driveway off Derry Street at the southerly end of the site, and one signalized full-access driveway off Derry Street near the northerly end of the site. The site is currently serviced by municipal sewer and water, natural gas, and overhead telecommunications and electric utilities from Derry Street. Existing stormwater management practices consist of a series of catch basins, and underground drain pipes. This collection system discharges via underground pipe connection to the municipal drainage system in Derry Street.

NRCS soil mapping shows that this site contains Windsor loamy sands. The proposed building improvements are entirely in the area of Windsor soils. The property is completely developed with 9.6+/-% open space, and no onsite wetlands. No portion of the subject site is located within the 100-year Flood Hazard Area.

It is being proposed to construct a 1-story, 2,465 square foot coffee shop restaurant with drive-thru in the existing parking lot north of the main existing shopping center building. The project proposes to remove 68 existing parking spaces and adjacent driveways to accommodate the new building, drive-thru, and parking lot with 20 new parking spaces. It is also proposed to eliminate 17 current employee parking spaces in the rear loading area to accommodate a truck maneuvering area. This results in a net reduction of 65 underutilized parking spaces. Associated site improvements include a new parking area, stormwater management systems, landscaping, site lighting, and utility services to the new building. To the best of our

Attachment "A"

knowledge the sewer, water, gas, telecommunication, and electric utilities present onsite and in the adjacent roadway have adequate capacity to service this intended use.

Upon project completion the site will contain approximately 13.0+/-% open space, compared to the existing 9.6+/-%. There are no wetland impacts proposed. The layout for the proposed building and associated site improvements has been developed to integrate with the existing shopping center and minimize environmental issues.

A traffic and parking utilization report has been prepared by the traffic consultant which summarizes the anticipated impacts of the proposed project on the site and area road network.

WARRANTY DEED

Robert F. Gordon, as Trustee of Hudson-Vickerry Realty Co., Trust, a New Hampshire realty trust, with a principal place of business at 25 Orchard View Drive, Londonderry, New Hampshire for consideration paid grants to Hudson Vickerry, LLC, a New Hampshire limited liability company, with a principal place of business at 25 Orchard View Drive, Londonderry, New Hampshire, with Warranty Covenants the following described premises:

A certain tract or parcel of land together with the buildings and improvements now or hereafter located thereon, situated in the town of Hudson, County of Hillsborough, State of New Hampshire being more particularly bounded and described as follows:

Beginning at a stone bound on the easterly sideline of New Hampshire Route 102 (Derry Street) at the southwest corner of the premises at land of St. Patrick Cemetery; thence

1. N 19° 06' 30" W, a distance of 106.95 feet by said Derry Street to a point; thence
2. Northerly along a curve to the right having a radius of 2,158 feet, a delta angle of 11° 57' 08" and an arc length of 450.17 feet by said dedicated portion to a point; thence
3. Northerly and northeasterly by a curve to the right by said dedicated portion having a radius of 30 feet, a delta angle of 68° 45' 45" and an arc length of 36 feet to a point; thence
4. N 61° 36' 22" E a distance of 24.25 feet by dedicated portion to a point; thence
5. N 13° 36' 14" W, a distance of 78.35 feet by dedicated portion to a point; thence
6. Westerly and northerly along a curve to the right having a radius of 30 feet, a delta angle of 92° 43' 56" an arc length of 48.55 feet by said dedicated portion to a point; thence

7. Northerly along a curve to the right having a radius of 2,958 feet, a delta angle of $04^{\circ} 54' 32''$ and an arc length of 253.43 feet by dedicated portion to a point; thence
8. N $01^{\circ} 02' 26''$ W a distance of 83.79 feet by said dedicated portion to the aforesaid land of St. Patrick Cemetery ; thence
9. N $63^{\circ} 00' 19''$ E, a distance of 143.24 feet by said cemetery to a stone bound; thence
10. S $81^{\circ} 18' 13''$ E, a distance of 118.57 feet by said cemetery to a stone bound; thence
11. S $64^{\circ} 52' 39''$ E, a distance of 70.99 feet by said cemetery to a point; thence
12. S $27^{\circ} 26' 36''$ E, a distance of 251.98 feet by said cemetery to a point; thence
13. N $73^{\circ} 12' 46''$ E, a distance of 48.83 feet by said cemetery to a stone bound; thence
14. S $30^{\circ} 23' 43''$ E, a distance of 301.52 feet by said cemetery to a stone bound; thence
15. S $30^{\circ} 25' 16''$ E, a distance of 200.11 feet by said cemetery to a stone bound; thence
16. S $54^{\circ} 30' 35''$ W, a distance of 398.30 feet by said cemetery to a stone bound; thence
17. S $54^{\circ} 49' 02''$ W, a distance of 283.30 feet by said cemetery to a stone bound at the point of beginning.

The premises are conveyed subject to:

Attachment "A"

1. Rights, if any, as may exist in a wood road and in pine timber, and right to go upon land to make repairs to water pipes as recited in deed of Rose A. Banister to John Dugan, dated September 15, 1913, and recorded at Book 714, Page 143. Reference is made to Plan #7212 for possible wood road.
2. Right of way (12 feet in width) as recited in deed of Alphonse J. Raudonis to Hudson Vickerry Realty Co. Trust dated December 7, 1972, and recorded at Book 2264, Page 355, and in deed of Alphonse J. Raudonis to Robert F. Gordon, et als, Trustees of Hudson-Vickerry Realty Co. Trust dated December 14, 1973, and recorded at Book 2338, Page 423. Reference is made to Plan #7212 for twelve (12) foot right of way along northerly property line.
3. Easement (25 feet in width) to New England Telephone and Telegraph Company dated February 16, 1974, and recorded at Book 2345, Page 398.
4. Easement from Robert F. Gordon, et als, Trustees of Hudson Vickerry Realty Co. Trust to Hudson Water Co. dated February 5, 1975, and recorded at Book 2391, Page 845.
5. Three Easements contained in the Memorandum of Lease dated August 23, 1988, and recorded at Book 5072, Page 1107, between Hudson-Vickerry Realty Co. Trust and McDonald's Corporation.
6. Signalization Maintenance Easement from Hudson-Vickerry Realty Co Trust to Town of Hudson dated February 10, 1988, and recorded at Book 4747, Page 235.
7. Amendment to Signalization Maintenance Easement from Hudson-Vickerry Realty Co. Trust to Town of Hudson, dated October 3, 1988, and recorded at Book 5023, Page 174.
8. Development Agreement between Hudson Vickerry Realty Co., Trust and the Town of Hudson, dated June 6, 1997, recorded at Book 5832, Page 706.

BK6307PG1989

9. Signalization Maintenance Easement from Hudson-Vickerry Realty Co Trust to Town of Hudson dated February 10, 1988, and recorded at Book 4747, Page 235.
10. Amendment to Signalization Maintenance Easement from Hudson-Vickerry Realty Co. Trust to Town of Hudson, dated October 3, 1988, and recorded at Book 5023, Page 174.
11. Development Agreement between Hudson Vickerry Realty Co., Trust and the Town of Hudson, dated June 6, 1997, recorded at Book 5832, Page 706.
12. The property is also conveyed subject to rht rights of McDonald's Corporation as Lessee, as evidenced by Memorandum of Lease dated June 8, 1976, recorded at Book 2490, Page 108, as amended by Lease Supplement effective October 9, 1967, recorded at Book 2490, Page 112, and further amended by Memorandum of Lease dated August 23, 1988, recorded at Book 5072, Page 1107.
13. Said premises are also conveyed subject to the rights of Hannaford Brothers, as Lessee, as evidenced by Notices of Lease dated December 28, 1990, recorded at Book 5238, Page 922, and Book 5280, Page 102.
14. The premises are also conveyed subject to the rights of Blockbuster Videos, Inc., as Lessee, as evidenced by Memorandum of Lease dated September 8, 1994, recorded at Book 5615, Page 390.
15. The premises are also conveyed subject to the rights of Papa Gino's, Inc., as Lessee, dated October 31, 1998, recorded at Book 6088, Page 574.

BK6307PG1990

Meaning and intending to describe a portion of the premises conveyed to the Grantor by deeds recorded at Book 2264, Page 355, Book 2264, Page 359, and Book 2378, Page 289.

This Deed is being given pursuant to N.H. RSA 78-B: 2 (XVII) (a), and no transfer taxes are payable as a result of this conveyance.

Attachment "A"

IN WITNESS WHEREOF, the undersigned has caused this deed to be executed this _____ day of October, 2000.

WITNESS:

HUDSON-VICKERRY REALTY
CO, TRUST

Kathleen N. Sullivan

by *Robert F. Gordon Trust*
Robert F. Gordon, Trustee

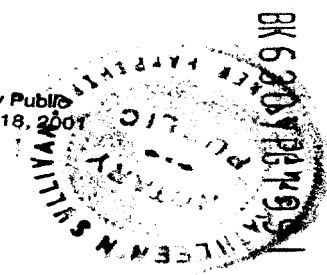
STATE OF NEW HAMPSHIRE
COUNTY OF ~~HILLSBOROUGH~~
Rockingham

DATED: Oct. 25, 2000

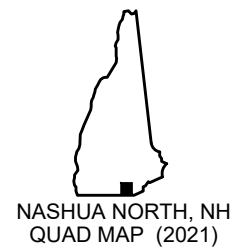
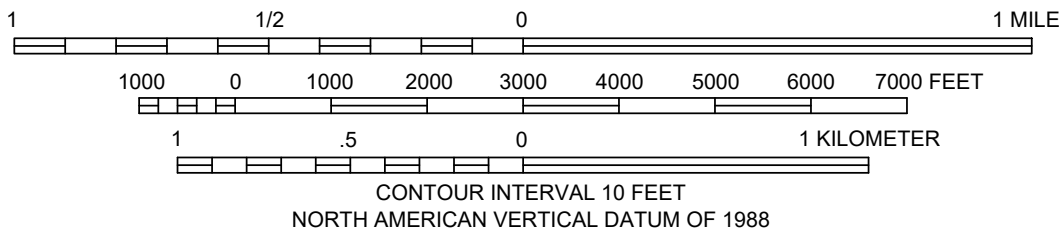
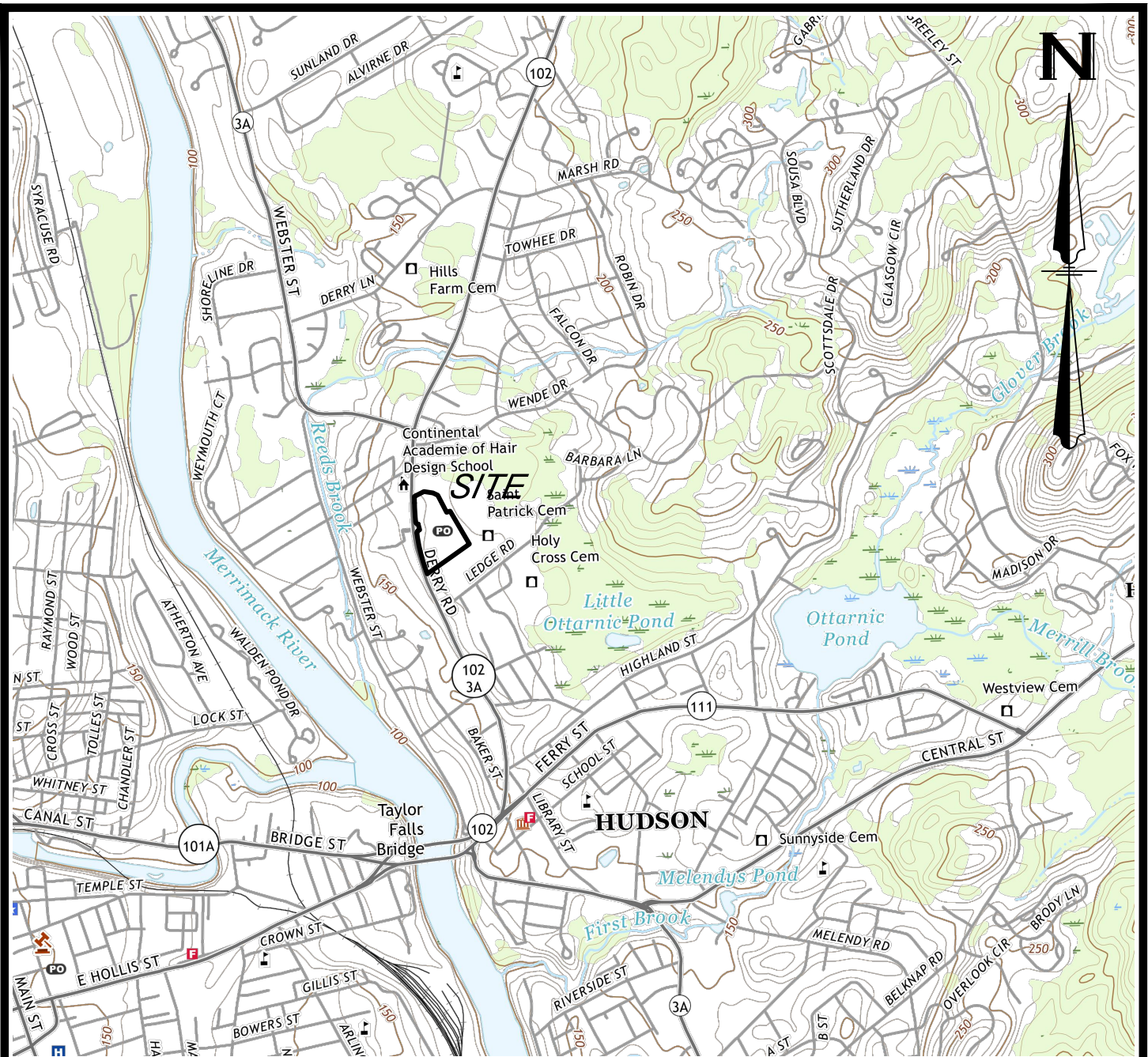
Before me, the undersigned officer, personally appeared Robert F. Gordon, who acknowledged himself to be the Trustee of Hudson-Vickerry Co., Trust, a New Hampshire Trust, and that he, as such Trustee, being authorized so to do, executed the foregoing instrument for the purposes therein contained, by signing the name of the Trust by himself as such Trustee.

Kathleen N. Sullivan
Justice of the Peace/Notary Public

KATHLEEN N. SULLIVAN, Notary Public
My Commission Expires December 18, 2001



BK 6307 PG 1991



VICINITY PLAN
PROPOSED DRIVE-THRU RESTAURANT
 77 DERRY ROAD
 HUDSON, NH

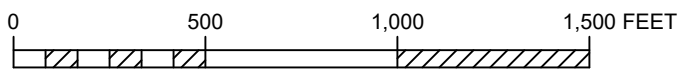
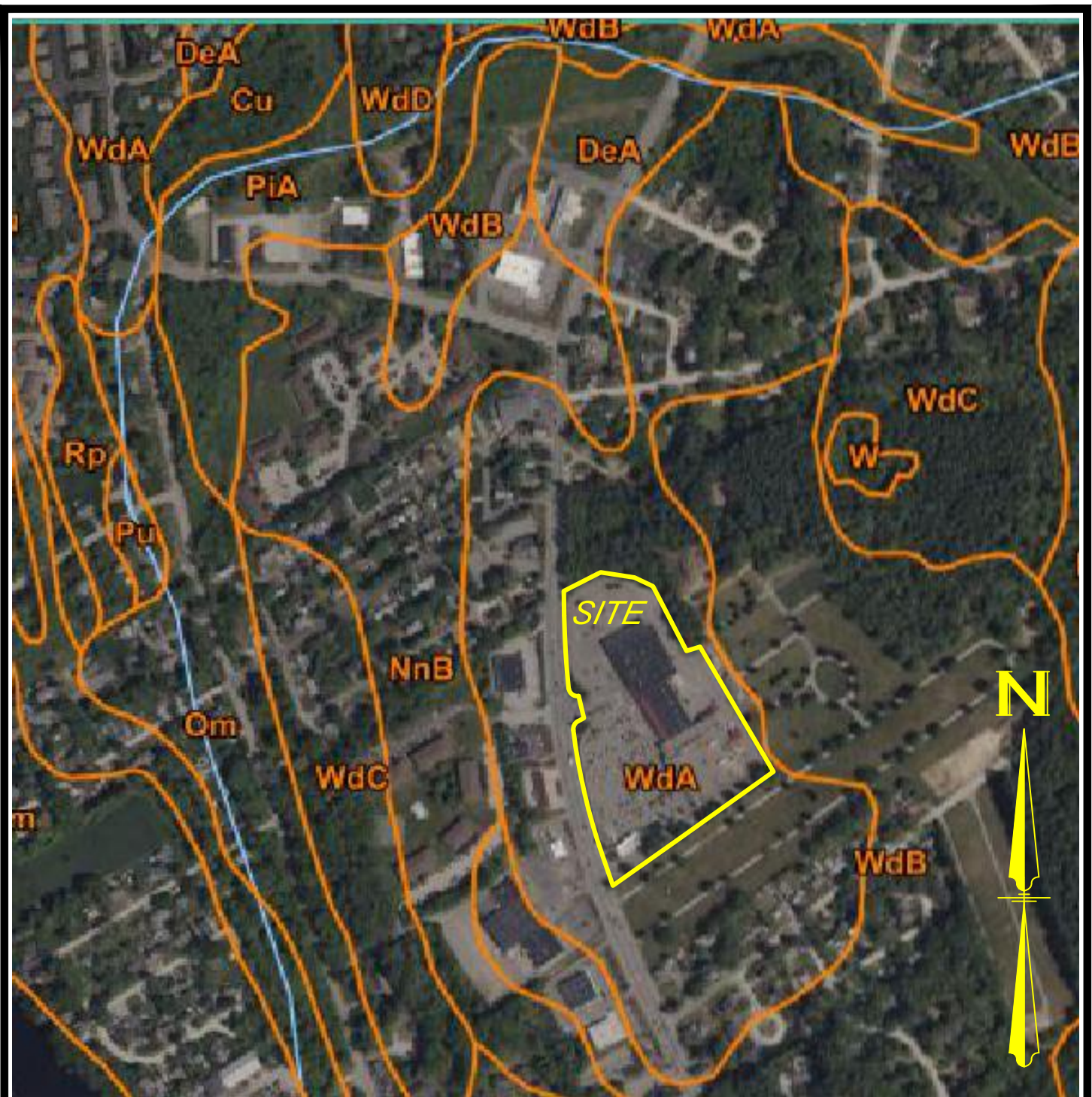
PREPARED FOR:
HUDSON-VICKERRY, LLC
 25 ORCHARD VIEW DR, LONDONDERRY, NH 03053
OCTOBER 2023

FIG. 1

HSI Hayner/Swanson, Inc.
 3 Congress Street Nashua, NH 03062 (603) 883-2057
 131 Middlesex Turnpike Burlington, MA 01803 (781) 203-1501
 www.hayner-swanson.com

Drawing: 1708SB-USGS
 Location: J:\1000\1708\DWG\1708 SB

1708-SB
 File Number



SOIL SURVEY STAFF, NATURAL RESOURCES CONSERVATION SERVICE, UNITED STATES DEPT. OF AGRICULTURE. WEB SOIL SURVEY. AVAILABLE ONLINE AT <http://websoilsurvey.nrcs.usda.gov/> ACCESSED OCTOBER 5, 2023.

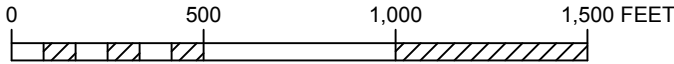
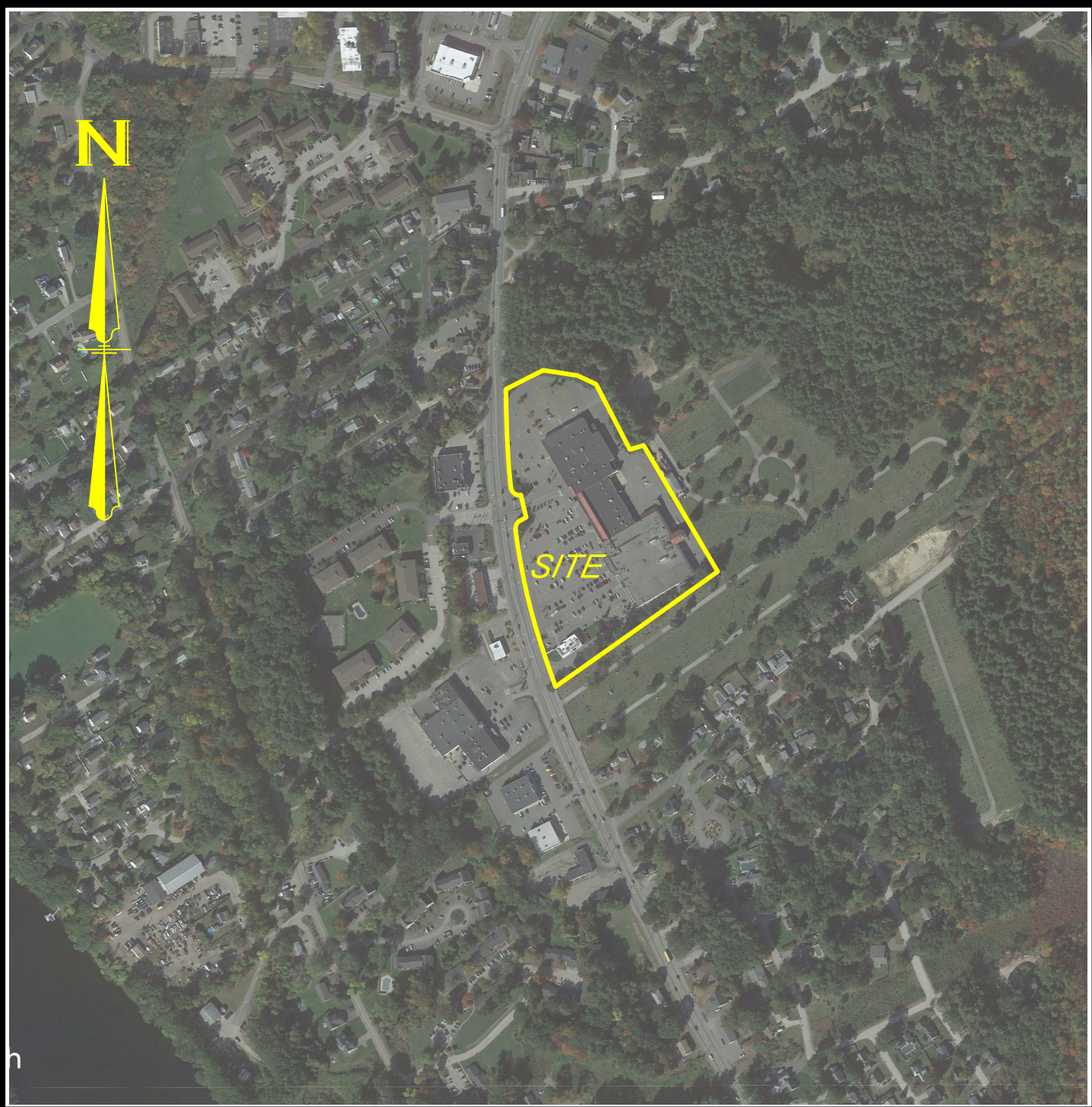
NRCS SOILS MAP
PROPOSED DRIVE-THRU RESTAURANT
 77 DERRY ROAD
 HUDSON, NH

FIG. 2
PREPARED FOR:
HUDSON-VICKERRY, LLC
 25 ORCHARD VIEW DR, LONDONDERRY, NH 03053
OCTOBER 2023

 **Hayner/Swanson, Inc.**
 3 Congress Street Nashua, NH 03062 (603) 883-2057
 131 Middlesex Turnpike Burlington, MA 01803 (781) 203-1501
www.hayner-swanson.com

Drawing: 1708SB-USGS
 Location: J:\1000\1708\DWG\1708 SB

1708-SB
 File Number



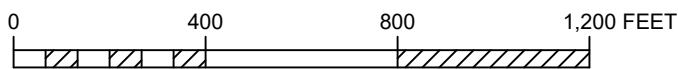
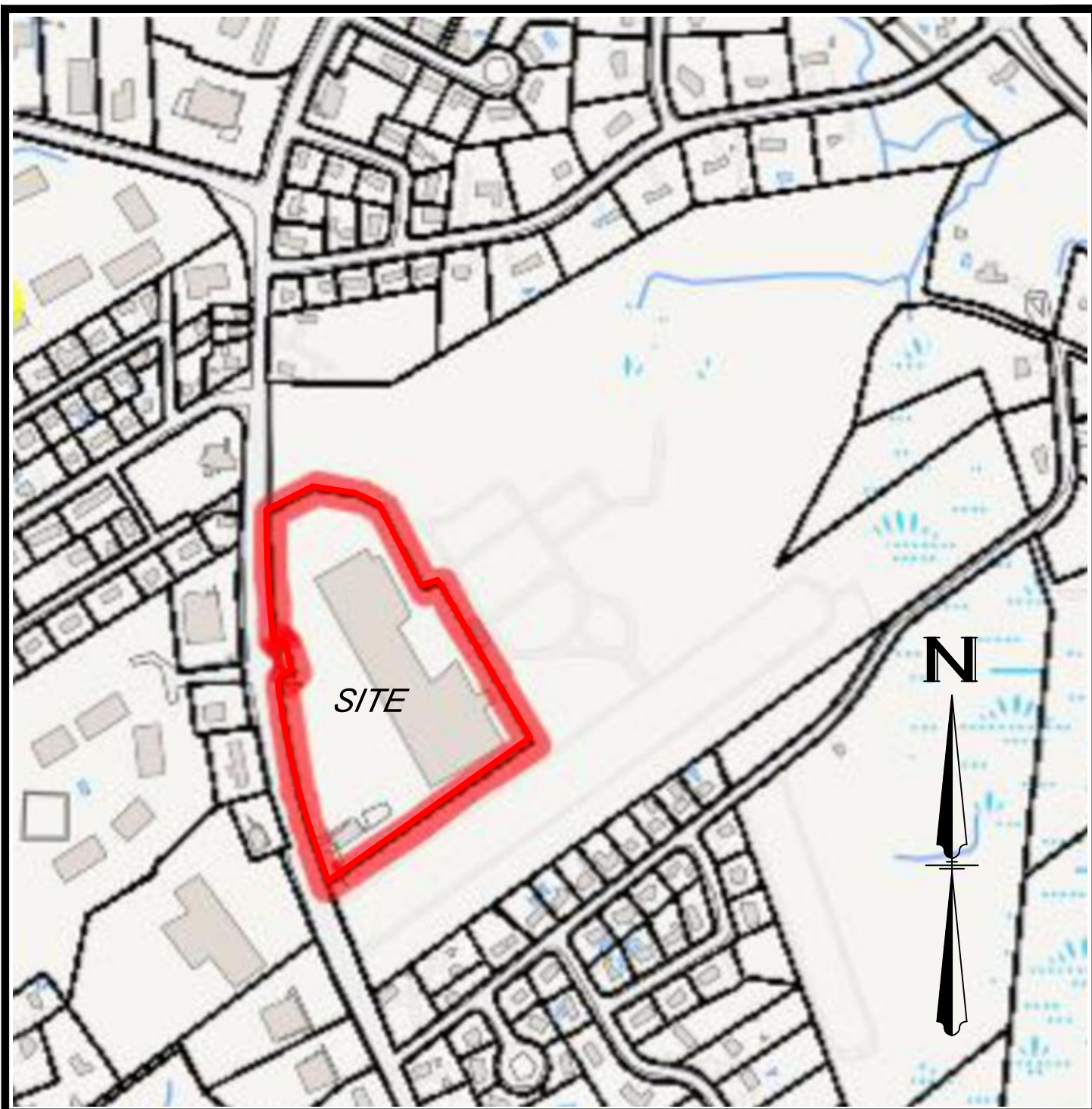
AERIAL DISPLAY PLAN
PROPOSED DRIVE-THRU RESTAURANT
 77 DERRY ROAD
 HUDSON, NH

PREPARED FOR: FIG. 3
HUDSON-VICKERRY, LLC
 25 ORCHARD VIEW DR, LONDONDERRY, NH 03053
 OCTOBER 2023

 **Hayner/Swanson, Inc.**
 3 Congress Street Nashua, NH 03062 (603) 883-2057
 131 Middlesex Turnpike Burlington, MA 01803 (781) 203-1501
www.haynerswanson.com

Drawing: 1708SB-USGS
 Location: J:\1000\1708\DWG\1708 SB

1708-SB
 File Number



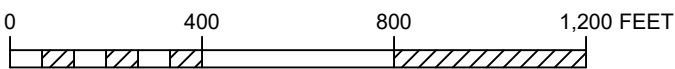
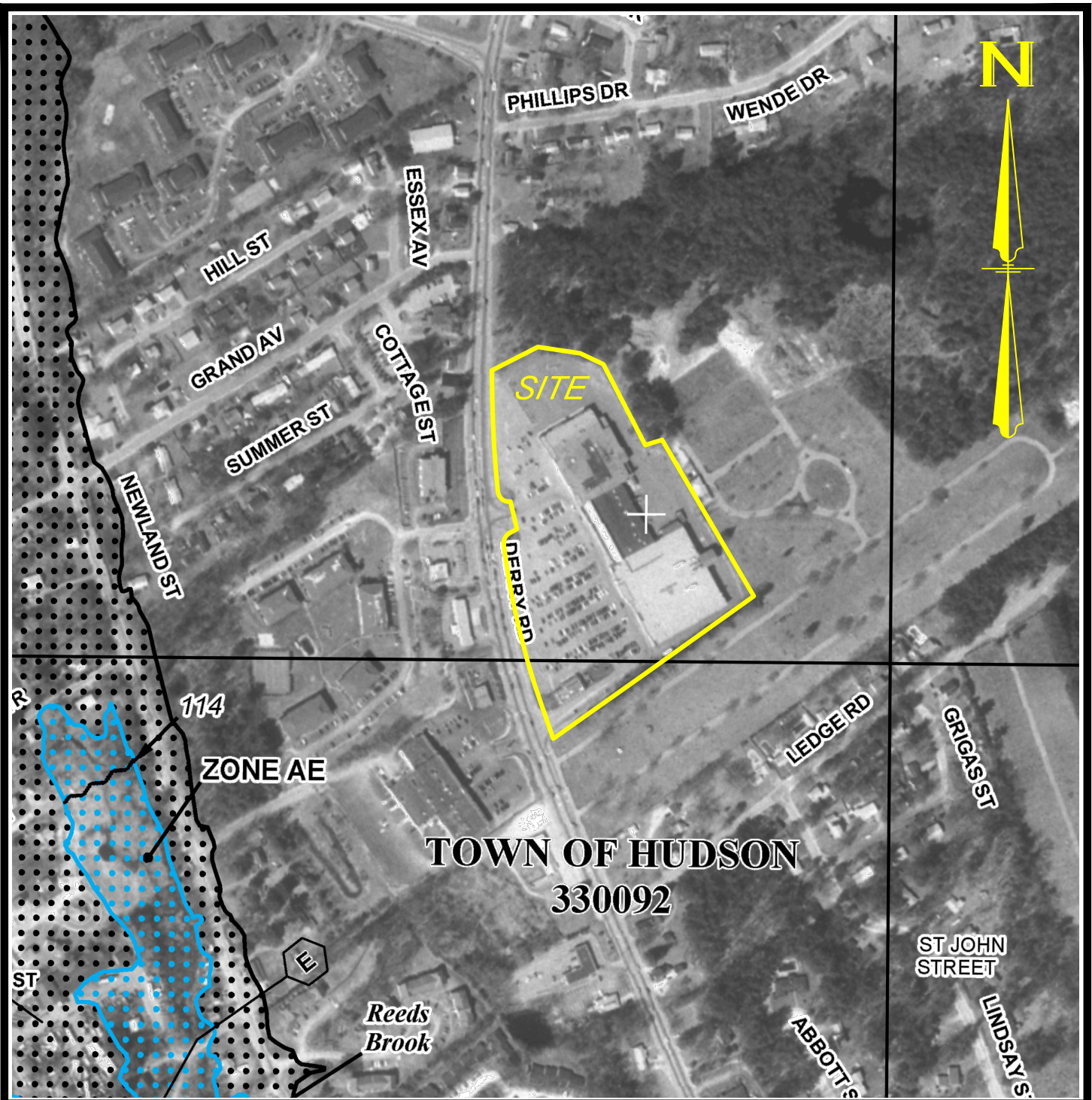
TAX MAP
PROPOSED DRIVE-THRU RESTAURANT
77 DERRY ROAD
HUDSON, NH

FIG. 4
PREPARED FOR:
HUDSON-VICKERRY, LLC
25 ORCHARD VIEW DR, LONDONDERRY, NH 03053
OCTOBER 2023

 **Hayner/Swanson, Inc.**
3 Congress Street Nashua, NH 03062 (603) 883-2057
131 Middlesex Turnpike Burlington, MA 01803 (781) 203-1501
www.hayner-swanson.com

Drawing: 1708SB-USGS
Location: J:\1000\1708\DWG\1708 SB

1708-SB
File Number



FIRM: HILLSBOROUGH COUNTY, NEW HAMPSHIRE
 TOWN OF HUDSON COMMUNITY No. 330092
 MAP No. 33011C0514E
 EFFECTIVE DATE: APRIL 18, 2011

FLOOD INSURANCE RATE MAP
PROPOSED DRIVE-THRU RESTAURANT
 77 DERRY ROAD
 HUDSON, NH

PREPARED FOR: **HUDSON-VICKERRY, LLC**
 25 ORCHARD VIEW DR, LONDONDERRY, NH 03053
OCTOBER 2023

FIG. 5

HSI Hayner/Swanson, Inc.
 3 Congress Street Nashua, NH 03062 (603) 883-2057
 131 Middlesex Turnpike Burlington, MA 01803 (781) 203-1501
 www.hayner-swanson.com

Drawing: 1708SB-USGS
 Location: J:\1000\1708\DWG\1708 SB

1708-SB
 File Number

SITE PLAN APPLICATION

Date of Application: _____ Tax Map #: 165 Lot #: 155

Site Address: Hudson Mall, 77 Derry Street

Name of Project: Proposed Drive-Thru Restaurant

Zoning District: B - Business General SP#: _____
(For Town Use Only)

Z.B.A. Action: N/A

<u>PROPERTY OWNER:</u>	<u>DEVELOPER:</u>
Name: <u>Hudson-Vickerry, LLC</u>	<u>(same as owner)</u>
Address: <u>c/o The MEG Companies</u>	_____
Address: <u>25 Orchard View Dr., Londonderry, NH 03053</u>	_____
Telephone # <u>(603) 434-6700</u>	_____
Email: _____	_____

<u>PROJECT ENGINEER:</u>	<u>SURVEYOR:</u>
Name: <u>Hayner/Swanson, Inc.</u>	<u>Hayner/Swanson, Inc.</u>
Address: <u>3 Congress Street</u>	<u>3 Congress Street</u>
Address: <u>Nashua, NH 03062</u>	<u>Nashua, NH 03062</u>
Telephone # <u>(603) 883-2057</u>	<u>(603) 883-2057</u>
Email: <u>eblatchford@hayner-swanson.com</u>	<u>dpollock@hayner-swanson.com</u>

PURPOSE OF PLAN:
To show proposed 2,472 sf drive-thru restaurant along with appurtenant parking and site improvements.

(For Town Use Only)

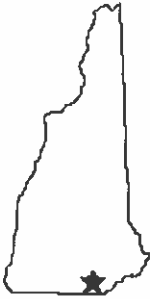
Routing Date: _____ Deadline Date: _____ Meeting Date: _____

_____ I have no comments I have comments (attach to form)

(Initials) JM Title: Chief Assessor Date: 4-10-24

Department: _____

Zoning: ___ Engineering: ___ Assessor: Police: ___ Fire: ___ DPW: ___ Consultant: ___



TOWN OF HUDSON

Office of the Chief Assessor



Jim Michaud
Chief Assessor, CAE
email: jmichaud@hudsonnh.gov
www.hudsonnh.gov

12 School Street · Hudson, New Hampshire 03051 · Tel: 603-886-6009 · Fax: 603-598-6481

To: Planning

April 10, 2024

From: Jim Michaud, Chief Assessor

Re: Hudson Mall – Proposed Drive-Thru Restaurant proposal - Tax Map 165 Lot 155

In reviewing the proposed site plan I would offer the following map/lot/sublot number to be utilized and placed on the recorded plan as I believe that this will be a ground lease set up with building owned by the drive-thru restaurant operator;

Tax Map 165b Lot 155 Sublot 002

Dubowik, Brooke

From: Dhima, Elvis
Sent: Monday, March 25, 2024 1:53 PM
To: Dubowik, Brooke; Gradert Benjamin; Hebert, David; Kirkland, Donald; McElhinney, Steven; Michaud, Jim; Sullivan, Christopher; Malley, Tim; Twardosky, Jason
Subject: RE: Dept. Sign-off - Proposed Drive-Thru Restaurant @ 77 Derry Street

Brooke

Please see below

1. CB 5 shall be equipped with mechanical/oil separator

Thanks

E

Elvis Dhima, P.E.
Town Engineer

12 School Street
Hudson, NH 03051
Phone: (603) 886-6008
Mobile: (603) 318-8286



SITE PLAN APPLICATION

Date of Application: _____ Tax Map #: 165 Lot #: 155
Site Address: Hudson Mall, 77 Derry Street
Name of Project: Proposed Drive-Thru Restaurant
Zoning District: B - Business General SP#: _____
(For Town Use Only)
Z.B.A. Action: N/A

PROPERTY OWNER: **DEVELOPER:**
Name: Hudson-Vickerry, LLC (same as owner)
Address: c/o The MEG Companies
Address: 25 Orchard View Dr., Londonderry, NH 03053
Telephone # (603) 434-6700
Email: _____

PROJECT ENGINEER: **SURVEYOR:**
Name: Hayner/Swanson, Inc. Hayner/Swanson, Inc.
Address: 3 Congress Street 3 Congress Street
Address: Nashua, NH 03062 Nashua, NH 03062
Telephone # (603) 883-2057 (603) 883-2057
Email: eblatchford@hayner-swanson.com dpollock@hayner-swanson.com

PURPOSE OF PLAN:
To show proposed 2,472 sf drive-thru restaurant along with appurtenant parking and site improvements.

(For Town Use Only)

Routing Date: _____ Deadline Date: _____ Meeting Date: _____

I have no comments _____ I have comments (attach to form)

CJS Title: ZONING ADMINISTRATOR Date: 3-25-24
(Initials)

Department: _____

Zoning: Engineering: _____ Assessor: _____ Police: _____ Fire: _____ DPW: _____ Consultant: _____

SITE PLAN APPLICATION

Date of Application: _____ Tax Map #: 165 Lot #: 155

Site Address: Hudson Mall, 77 Derry Street

Name of Project: Proposed Drive-Thru Restaurant

Zoning District: B - Business General SP#: _____
(For Town Use Only)

Z.B.A. Action: N/A

PROPERTY OWNER: **DEVELOPER:**

Name: Hudson-Vickerry, LLC (same as owner)

Address: c/o The MEG Companies

Address: 25 Orchard View Dr., Londonderry, NH 03053

Telephone # (603) 434-6700

Email: _____

PROJECT ENGINEER: **SURVEYOR:**

Name: Hayner/Swanson, Inc. Hayner/Swanson, Inc.

Address: 3 Congress Street 3 Congress Street

Address: Nashua, NH 03062 Nashua, NH 03062

Telephone # (603) 883-2057 (603) 883-2057

Email: eblatchford@hayner-swanson.com dpollock@hayner-swanson.com

PURPOSE OF PLAN:
To show proposed 2,472 sf drive-thru restaurant along with appurtenant parking and site improvements.

(For Town Use Only)		
Routing Date: _____	Deadline Date: _____	Meeting Date: _____
<input checked="" type="checkbox"/> I have no comments <input type="checkbox"/> I have comments (attach to form)		
<u>SCM</u>	Title: <u>Captain Steven McElhinney</u>	Date: <u>03/25/24</u>
(Initials)		
Department: _____		
Zoning: ___ Engineering: ___ Assessor: ___ Police: <input checked="" type="checkbox"/> Fire: ___ DPW: ___ Consultant: ___		

Dubowik, Brooke

From: Hebert, David
Sent: Monday, March 25, 2024 1:42 PM
To: Dubowik, Brooke; Dhima, Elvis; Gradert Benjamin; Kirkland, Donald; McElhinney, Steven; Michaud, Jim; Sullivan, Christopher; Malley, Tim; Twardosky, Jason
Subject: RE: Dept. Sign-off - Proposed Drive-Thru Restaurant @ 77 Derry Street
Attachments: Fire Comments 3-25-24.pdf

Fire Department access and water supply are good



Dave Hebert
Fire Marshal
Hudson Fire Department
Inspectional Services Division

Town of Hudson | 12 School Street | Hudson, NH 03051
603-886-6005 (Main) | 603-816-1271 (Direct)



April 11, 2024

Mr. Jay Minkarah
Acting Town Planner
Town of Hudson
12 School Street
Hudson, NH 03051

Re: Town of Hudson Planning Board Review
Hudson Mall Starbucks Site Plan, 77 Derry Street
Tax Map 165 Lot 155; Acct. #1350-192
Reference No. 20030249.238

Dear Mr. Minkarah:

Fuss & O'Neill (F&O) has reviewed the first submission of the materials received on March 25, 2024, related to the above-referenced project. Authorization to proceed was received on March 29, 2024. A list of items reviewed is enclosed. The scope of our review is based on the Site Plan Review Codes, Stormwater Codes, Driveway Review Codes, Sewer Use Ordinance 77, Zoning Regulations, and criteria outlined in the CLD Consulting Engineers Proposal approved September 16, 2003, revised September 20, 2004, June 4, 2007, September 3, 2008, and October 2015.

We have included a copy of Fuss & O'Neill's evaluation of the checklist for your reference. We note that several items could not be verified by Fuss & O'Neill and require action by the Town.

The project appears to consist of construction of a coffee shop restaurant with drive-thru on the previously developed Hudson Mall property. Proposed improvements to the site also include the construction of parking areas, landscaping, drainage, utilities, and other associated site improvements. The site is to be serviced by public water and sewer systems.

The following items are noted:

1. Site Plan Review Codes (HR 275)

- a. Hudson Regulation (HR) 275-6.C. The site currently has sidewalks along Derry Street. The applicant has not proposed any changes or disturbances to these sidewalks.
- b. HR 275-6.C. The applicant is proposing removing an existing crosswalk and installing a new crosswalk along the north side of the existing Hudson Mall building to connect to the proposed site. However, the applicant has not proposed any changes to the existing sidewalk at these locations. The new crosswalk connection should include a curb ramp and detectable warning panel, and the existing crosswalk striping should be removed.

50 Commercial Street
Manchester, NH
03101
t 603.668.8223
800.286.2469
www.fando.com

California
Connecticut
Maine
Massachusetts
New Hampshire
Rhode Island
Vermont

Mr. Jay Minkarah

April 11, 2024

Page 2 of 7

- c. HR 275-6.I. The scope of this review does not include the adequacy of any fire protection provisions for the proposed building. The applicant has not shown a proposed fire service connection to the building. We note that there is one fire hydrant shown within the proposed disturbed area that will remain and be adjacent to the drive-thru bypass lane. Also the plans do not show a separate fire service water connection to the restaurant building.
- d. HR 275-6.T. The applicant is not proposing any offsite improvements on the plan set.
- e. HR 275-8.C.(2)(g) and Zoning Ordinance (ZO) 334-15.A. The applicant has provided parking calculations on the plan set and noted that 644 parking spaces are required for the entire Hudson Mall site with the proposed Starbucks and that 421 spaces are provided. The applicant has requested a waiver for the reduced number of parking spaces.
- f. HR 275-8.C.(6). The applicant has noted that 13 loading spaces are required for the entire site and 14 are provided. We note that the applicant did not label these spaces on the plan and it does not appear that any are near the Starbucks building. The applicant should clarify the loading space intended to be used for this new structure.
- g. HR 275-9.C.(11). The applicant has provided 18 handicap accessible parking spaces for the site which meets the minimum requirement.
- h. HR 275-9.C.(11). The applicant is proposing the removal of two existing handicap accessible parking spaces that are adjacent to a crosswalk that leads to the north side of the Hudson Mall building, where there are several exterior doors for tenant businesses. The applicant should clarify which handicap accessible parking spaces are intended for use by those businesses. We note that the applicant has proposed two handicap accessible parking spaces near the new restaurant.
- i. HR 275-9.F. The applicant has provided a copy of the existing deed but no copies of any easements were provided as part of the package received for review. We note that multiple easements are shown on the plan.

2. Administrative Review Codes (HR 276)

- a. HR 276-11.1.B.(6). The applicant should add the owner's signature to the plan set for the final approval copy. A location was shown on the plan for future signature.
- d. HR 276-11.1.B.(20). The applicant has not provided the height of the existing building on the plan set.
- c. HR 276-11.1.B.(24). The site does not currently meet the open space requirement. We note that the proposed changes do increase the overall open space for the site but does not make it compliant.
- d. HR 276-11.1.B.(25). The applicant has proposed a travelway within the side setback area of the proposed disturbed area. We note that the existing site also has a travelway and parking spaces within this setback.

3. Driveway Review Codes (HR 275-6.B/Chapter 193)

- a. HR 193.10. The applicant has not proposed any changes to the existing site driveways as part of the proposed development.

Mr. Jay Minkarah
April 11, 2024
Page 3 of 7

4. Traffic (HR 275-9.B)

Fuss & O'Neill, Inc. has reviewed the Parking Utilization and Trip Generation Study prepared by Vanasse & Associates, Inc. (VAI) dated December 19, 2023, for the proposed drive-thru restaurant development at 77 Derry Street (The Hudson Mall) in Hudson, New Hampshire (Tax Map 165, Lot 155). The project proposes the development of a 2,472 square foot (sf) drive-thru restaurant in the area of a surface parking lot located to the north of the existing buildings in the mall. Access and egress to the site will be provided via the existing entrance to the mall. As part of the restaurant construction, several of the mall's parking spaces will be removed to accommodate the new development. The purpose of the VAI report is to determine if additional parking is needed for the proposed site or if the existing Hudson Mall parking lot is large enough to accommodate the proposed drive-through restaurant.

VAI visited the site and appropriately gathered 12-hour parking utilization data for both a weekday and Saturday, ultimately determining that approximately 39% of the existing parking lot adjacent to the proposed restaurant is utilized during the peak Saturday interval, while 29% is utilized during the weekday peak interval. Similar percentages were determined for the entire Hudson Mall parking lot, not just adjacent to the proposed development. According to the data, between 315 and 335 parking spaces remained available during the mall's peak intervals during the count period. We ultimately agree with the report's conclusion that these remaining spaces should be more than enough to accommodate for the removal of about 46 parking spaces associated with the construction of the restaurant.

The VAI report also calculated trips generated by the proposed site following standard procedures and using appropriate trip generation rates and data from the ITE *Trip Generation*, 11th Edition publication for the project scenario. While the restaurant would be expected to generate 212 trips during the weekday morning peak hour and 218 trips during the Saturday midday peak hour, approximately 90% of these trips would be pass-by. This results in about 22 new trips being generated by the site during either peak hour.

We also agree that the layout of the site, which provides queueing space for about 15 or 16 vehicles, is reasonable and follows the conclusions found in the industry study provided in the report and the requirements of the Site Plan Regulations Section 275-8.C.

While we agree with the overall conclusion of the VAI report, and recognize that the majority of the traffic generated by the site is pass-by traffic, it does not appear that the applicant has considered any impacts to the mall entrance signalized intersection. Adding, or at least shifting around onto different approaches, up to 218 trips may result in some level of operational deficiency of the signals depending on their existing timings and coordination settings. The Town should consider having the applicant conduct a minor capacity analysis at this

Mr. Jay Minkarah
April 11, 2024
Page 4 of 7

intersection with existing signal timings to confirm that no signal timing adjustments or optimizations will be needed as a result of the project development.

Note that there are several minor discrepancies between the report and notes on the plans. We don't believe these discrepancies impact the conclusions in the report however.

- The report notes the drive-through aisle can accommodate 15 vehicles in queue, the plans show 16.
- The report notes there will be 417 parking spaces following construction, the plans show 421.
- The report notes 490 existing parking spaces (including corrals), the plans note 486.
- The report notes the proposed restaurant as 2,472 square feet, the plans note this as 2,465 square feet.

5. Utility Design/Conflicts

- a. HR 275-9.E. & 276-13. The applicant has proposed connecting to the existing gas, water, sewer, and communications utilities already at the site.
- b. HR 275-9.E & 276-13. The applicant has not provided any sewer details in the plan set. The applicant has also noted that the grease trap design is by others and has not provided any additional information on this structure. The applicant should include a detail for the grease trap in the plans.
- c. Engineering Technical Guidelines & Typical Details (ETGTD) Section 701. The applicant should confirm that the existing sewer main within the site and the Town sewer main that it connects to have adequate capacity to handle the anticipated flow from the proposed facility.
- d. ETGTD Detail S-5. The applicant has proposed a sewer service connection to the building with less than 4 feet of cover. We note that rigid insulation is proposed to be installed above the sewer pipe.
- e. ETGTD Section 801. The applicant should confirm with the Town that the existing water main has enough flow and pressure to meet domestic requirements for the proposed facility and also for any proposed fire suppression system requirements.
- f. The proposed grading at the existing fire hydrant is about six inches higher than existing grades. The applicant should review with the Fire Department to determine if a hydrant extension is required for this hydrant.
- g. The plan should note that the gate valve cover for the hydrant is to be raised to the proposed grade for the drive thru bypass lane.
- h. The plans show an existing capped water pipe in the island near the proposed rain garden. The applicant should clarify what this water pipe is and if it or other existing pipes connecting to this location will be impacted by the proposed construction.

6. Drainage Design/Stormwater Management (HR 275-9.A./Chapter 290)

- a. HR 275-6.F. and 290-5.A.4. The applicant should provide the NHDES GRV worksheet and compare the required to the provided volume.
- b. HR 275-9.A.3. The applicant should provide the required test pit log and the location of the test pit.

Mr. Jay Minkarah

April 11, 2024

Page 5 of 7

- c. HR 275-9.A.3. The applicant should also provide additional information as to the use of the 6.0 iph infiltration rate within the HydroCAD analysis. The applicant should provide additional information and/or conversion calculations to support the use of the infiltration rate. Does this rate utilize a factor of safety, does it follow typical current engineering practice as outlined within Env-Wq 1504.14(c), etc.
- d. HR 290-5.A.3. The applicant should provide the appropriate BMP worksheet for the intended rain garden practice proposed. The BMP worksheet provided is intended for use on a practice not utilized within this design. The appropriate BMP worksheet for this project would be the Filtration Practice worksheet, which takes into account separation to ESHWT/ledge and infiltration rate, etc.
- e. HR 290-5.A.3. The applicant should update the Typical Section-Rain Garden detail on Detail Sheet 11 of 16 to match the filter media depth of 24" within the Stormwater Management Plan.
- f. HR 290-5.A.11. The applicant should provide reasoning for the varying direct entry Tc values utilized for DA1 and DA2 in the pre-development HydroCAD, and how was the use of an 8-minute Tc determined for DA1. Unless sheet/shallow/channel flow or other allowed methods are utilized, any size pavement area is typically 6 minutes for Tc. We note use of 6 minutes is for all nodes in post-development as well.
- g. HR 290-5.A.11. The applicant states proposed pre-treatment on site is use of deep sump catch basins. The proposed rain garden is utilizing sheet flow from Subcatchment 3, and runoff directly enters the rain garden. The applicant should provide additional information on the pre-treatment of the impervious runoff prior to treatment within the rain garden.
- h. HR 290-5.A.12. The applicant should update the I&M manual to state the proposed BMP is a rain garden, not a basin as currently listed.
- i. HR 290-5.B. The applicant states a disturbed area of 36,375 sf in two sections of the write up, section I.c and section II.e. Fuss & O'Neill performed a PDF area measurement and came up with $44,180 \pm$ sf of disturbance from the Site Demo Plan, and $48,900 \pm$ sf disturbance on the Master Site Plan. The applicant should review the disturbed area and confirm the disturbance. If greater than 40,000 sf, the project will be required to meet Site Plan Review Regulations Section 290-5.B in addition to Section 290-5.A.
- j. HR 290-5.B. If greater than 1 acre the applicant should provide a note on the plan set stating the requirement of the EPA GCP, E-NOI, and/or SWPPP.
- k. The applicant should show the proposed rim elevation for existing catch basin RCB 1473 on the plans.
- l. The applicant will be required to comply with all provisions of the Town of Hudson's MS4 permit, including but not limited to annual reporting requirements, construction site stormwater runoff control, and record keeping requirements. The applicant has noted that the project has been designed to meet MS4 requirements.
- m. Please note that this review was carried out in accordance with applicable regulations and standards in place in New Hampshire at this time. Note that conditions at the site, including average weather conditions, patterns and trends, and design storm characteristics, may change in the future. In addition, future changes in federal, state or local laws, rules or regulations, or in generally accepted scientific or industry information concerning environmental, atmospheric and geotechnical conditions and developments may affect the information and conclusions set forth in this review. In no way shall Fuss & O'Neill be liable for any of these changed conditions that may impact this review, regardless of the source of or reason for such changed conditions. Other than as described herein, no other

Mr. Jay Minkarah
April 11, 2024
Page 6 of 7

investigation or analysis has been requested by the Client or performed by Fuss & O'Neill in preparing this review.

7. Zoning (ZO 334)

- a. ZO 334-17 & 334-21. The applicant has noted that the subject parcel is located within the Business (B) zoning district, and that the proposed drive-thru restaurant use is allowed within the district.
- b. ZO 334-35. The applicant has noted that there are no wetlands located on the site.
- c. ZO 334-60. The applicant has not shown any sign details on the plan set but has noted that all signs are subject to approval by the Hudson Planning Board prior to installation.
- d. ZO 334-83 and HR 218-4.E. The applicant has noted that the project is not located within a Flood Hazard Area.

8. Erosion Control/Wetland Impacts

- a. The applicant has noted that the Town of Hudson shall reserve the right to require any additional erosion control measures as needed.

9. Landscaping (HR 275-8.C.(7) & 276-11.1.B.(20)) and Lighting (HR 276-11.1.B.(14))

- a. HR 275-8.C.(7) & (8). The applicant has provided landscaping for the proposed disturbance area. The existing landscaping for the entire site was not evaluated as part of this review. The proposed restaurant only has one parking aisle therefore interior landscape calculations are not required. It appears that the applicant has not proposed any additional screening of the project area. Existing woods to the north and east provide screening although these trees are located on abutting property.
- b. HR 276-11.1.B.(14). The applicant has provided a lighting plan that shows photometric values and full cut-off fixtures are proposed. The applicant has noted that the lighting will be operational from dusk to dawn.
- c. HR 276-11.1.B.(14). The applicant has proposed a light along the south side parking row that is in the same location as a proposed tree

10. State and Local Permits (HR 275-9.G.)

- a. HR 275-9.G. The applicant should list the required permits and their status on the plan set.
- b. HR 275-9.G. The applicant should provide copies of any applicable Town, State or Federal approvals or permits to the Town.
- c. Additional local and state permitting may be required.

11. Other

- a. The applicant should review the size/scale of the printed plans. When measured against the scale on the full-size drawings there is a discrepancy – 120' on the drawing scale measures 118' with an actual scale.
- b. We recommend that the stop signs at the facility driveways more closely line up with the proposed stop bars.

Mr. Jay Minkarah
April 11, 2024
Page 7 of 7

Please feel free to call if you have any questions.

Very truly yours,



Steven W. Reichert, P.E.

SWR:

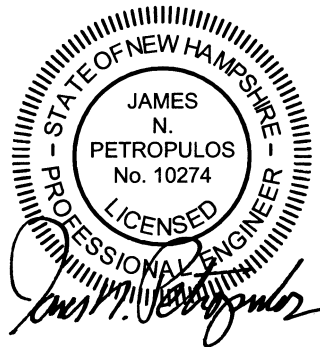
Enclosure

cc: Town of Hudson Engineering Division – File
Hayner/Swanson, Inc. – eblatchford@hayner-swanson.com

STORMWATER MANAGEMENT & EROSION
CONTROL PLAN (SMECP)

Proposed Drive -Thru Restaurant
Tax Map 165, Lot 155
Hudson Mall, 77 Derry Street
Hudson, New Hampshire

March 4, 2024



Prepared for:
Hudson Vickerry, LLC
c/o the MEG Companies, 25 Orchard View Drive
Londonderry, NH 03053

Prepared by:
Hayner/Swanson, Inc.
3 Congress Street
Nashua, NH 03062

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Plan Reference: Site Plan (16 Sheets) Map 165, Lot 155, Proposed Drive-Thru restaurant, 77 Derry Street, Hudson, NH, prepared for: Hudson-Vickerry, LLC, Londonderry, NH, dated 16 February 2024 and prepared by Hayner/Swanson, Inc., Nashua, NH

I. INTRODUCTION

A. Abstract

The following report is a detailed stormwater study of the Proposed Drive-Thru Restaurant project located at the Hudson Mall, 77 Derry Street in Hudson, NH. The purpose of the study is to analyze the qualitative and quantitative stormwater impacts of the proposed building project. The goal of the stormwater management system for this project is to comply with the stormwater management regulations set forth in the Town of Hudson Stormwater Management Regulations (Chapter 290) and the New Hampshire Department of Environmental Services (NHDES) stormwater design standards.

B. Existing Conditions

The project area under consideration for this application is located at the northerly end of the Hudson Mall property, 77 Derry Street, Hudson, NH (see Figure 1). The site is known to the Hudson Assessors Department as Map 165, Lot 155. The parcel measures 10.602 acres and is located in the B - Business zoning district. The site is abutted by Derry Street, and commercial and residential properties to the west; and St. Patrick Cemetery to the north, east, and south.

The lot currently contains a 1-story, 114,800 square foot retail shopping center building, and a 3,100 square foot fast-food drive thru restaurant; along with associated parking and loading areas. Primary access to the site is provided via one non-signalized full-access driveway off Derry Street at the southerly end of the site, and one signalized full-access driveway off Derry Street near the northerly end of the site. The site is currently serviced by municipal sewer and water, natural gas, and overhead telecommunications and electric utilities from Derry Street. Existing stormwater management practices consist of a series of catch basins, and underground drain pipes. This collection system discharges via underground pipe connection to the municipal drainage system in Derry Street.

NRCS soil mapping shows that this site contains Windsor loamy sands. The proposed building improvements are entirely in the area of Windsor soils. The property is completely developed with 9.6+/-% open space, and no onsite wetlands. No portion of the subject site is located within the 100-year Flood Hazard Area.

C. Proposed Development

It is being proposed to construct a 1-story, 2,465 square foot coffee shop restaurant with drive-thru in the existing parking lot north of the main existing shopping center

building. The project proposes to remove 68 existing parking spaces and adjacent driveways to accommodate the new building, drive-thru, and parking lot with 20 new parking spaces. It is also proposed to eliminate 17 current employee parking spaces in the rear loading area to accommodate a truck maneuvering area. This results in a net reduction of 65 underutilized parking spaces. Associated site improvements include a new parking area, stormwater management systems, landscaping, site lighting, and utility services to the new building. To the best of our knowledge the sewer, water, gas, telecommunication, and electric utilities present onsite and in the adjacent roadway have adequate capacity to service this intended use.

Upon project completion the site will contain approximately 13.0+/-% open space, compared to the existing 9.6+/-%. There are no wetland impacts proposed. The layout for the proposed building and associated site improvements has been developed to integrate with the existing shopping center and minimize environmental issues. The site development associated with the overall construction of this project disturbs approximately 45,000 square feet of contiguous area and therefore a NHDES Alteration of Terrain permit is not required. It should be pointed out that 8,625 SF of the proposed disturbed area entails removing existing pavement areas outside the proposed project development pad (see post-development drainage subareas DA 1, DA 11, and DA 12) and converting them to landscape areas. This makes the effective disturbed area attributed to the proposed development equal to 36,375 SF. Construction is expected to begin in the summer of 2024 and will be completed in the summer of 2025.

II. STORM DRAINAGE ANALYSES

A. Intent

With regard to stormwater management, it is the intent of this design to address both qualitative and quantitative aspects of the runoff produced by the proposed improvements. The design shall address the requirements of the Town of Hudson Stormwater Management Regulations (Chapter 290) and NHDES stormwater design requirements by using, to the maximum practical extent, Low Impact Development (LID) strategies to promote recharge and reduce site disturbances. Furthermore, the design shall seek to maintain existing drainage patterns, provide permanent methods for protecting water quality and minimize impacts to downstream drainage facilities.

To meet these goals, the proposed project will include a combination of stormwater management practices that include offline deep-sump catch basins fitted with gas hoods for stormwater pretreatment, and a rain garden bioretention area for stormwater treatment and groundwater recharge. The catch basins are designed to capture pavement areas less than 0.25 acres in size to meet NHDES requirements for pretreatment practices. The rain garden bioretention area will have an engineered filter

media in the base. These measures are permanent methods for protecting water quality by providing pollutant removal through the use of vertical filtration through the filter media and native soils. Through settling, storage and recharge, infiltration practices can achieve high rates of removal for a number of urban pollutants (sediment, trace metals, hydrocarbons, BOD, nutrients, pesticides, etc.) and provide removal of total suspended solids, total nitrogen, and total phosphorous (New Hampshire Stormwater Manual). In addition to water quality benefits, the stormwater management area will provide flood control during large storm events by reducing the peak rates of runoff leaving this site.

B. Methodology

In accordance with the Town of Hudson and NHDES stormwater management design requirements; the 2-year, 10-year, 25-year and 50-year 24-hour storm events were evaluated. Evaluation of the quantitative runoff impacts of the proposed development were determined by comparing the post-development flows with the pre-development flows for the project portion of this site.

Total drainage area calculations for pre-development conditions and post-development conditions were evaluated and designed using the HydroCAD® version 10.10-5a stormwater modeling program for the Soil Conservation Service (SCS) Type III storm distribution. Values for time of concentration used in the analysis were calculated using the methodology contained within U.S.D.A-S.C.S. publication Urban Hydrology for Small Watersheds Technical Release No. 55 (TR55).

The Rational Method of determining peak rates of runoff was used to size and design the individual drain lines for this project based upon the 25-year storm frequency. Stormwater Management Areas were designed in accordance with the methodology for the "best management practice" (BMP), as presented in the New Hampshire Department of Environmental Services New Hampshire Stormwater Manual.

C. Pre-Development Drainage Conditions

As can be seen on the Pre-Development Drainage Area Map (in Exhibits), the existing project area is divided into two drainage subareas 1 and 2. Subarea 1 is the majority of the project area which is collected in the onsite closed drainage system and conducted to the municipal drainage system in Derry Street. Subarea 1 is predominantly paved parking area, with some landscaped areas. The summation of runoff leaving this portion of the project area is analyzed in this study as Point of Analysis A (POA A).

Subarea 2 is the much smaller remaining portion of the project area, which sheet flows onto the adjacent St. Patrick Cemetery property (Map 166, Lot 1) across the northerly property line. Subarea 2 is a paved parking area. The summation of runoff leaving this portion of the of the project area is analyzed at Point of Analysis B (POA B).

The pre-development drainage calculations are shown in Appendix A of this study and summarized in Table 1 below.

TABLE 1: SUMMARY OF PRE-DEVELOPMENT PEAK FLOWS

Location	Storm Frequency	Pre-Development Peak Flows (cfs)
POA A	2-year	2.27
	10-year	3.57
	25-year	4.57
	50-year	5.50
POA B	2-year	0.19
	10-year	0.29
	25-year	0.36
	50-year	0.43

D. Post-Development Drainage Conditions

The intent of the overall stormwater management design to address both qualitative and quantitative aspects of runoff in accordance with the Town of Hudson and NHDES stormwater design regulations, pre-treatment and treatment practices are included in the overall drainage system. The design intent is to capture, treat, and infiltrate the stormwater from proposed pavement areas to provide groundwater recharge; and improve stormwater treatment compared to the existing condition.

As can be seen on the Post-Development Drainage Area Map (in Exhibits), the existing project area is divided into 12 drainage subareas 1 through 12. Subarea 1 is an area of existing parking that is being converted to landscape area and sheet flows to Derry Street. Subareas 2 through 6, and 8 and 9 will be collected in a new closed drainage system, treated, a portion detained and infiltrated, and connected to the existing closed drainage system which connects to the municipal drainage system in Derry Street. Subareas 7 and 10 are small development areas that sheet flow to the existing drainage system; and Subareas 11 and 12 are existing pavement areas that are being converted to grass slopes and sheet flow onto the St. Patrick Cemetery property. The summation of runoff from the redevelopment Subareas 1 through 10 is analyzed in this study as Point of Analysis A (POA A). The summation of runoff from redevelopment Subareas 11 and 12 is analyzed in this study as Point of Analysis B (POA B).

The characteristics of the proposed stormwater management areas are shown below in Table 2. The post-development runoff computations are detailed in Appendix B.

**TABLE 2: SUMMARY OF POST-DEVELOPMENT
STORMWATER MANAGEMENT AREA CHARACTERISTICS**

Location	Storm Frequency	Inflow (cfs)	Outflow (cfs)	Bottom of Practice Elevation	Top of Practice Elevation	Max. Water Elevation
SMA A Rain Garden	2-year	0.23	0.00	182.00	183.8	180.87
	10-year	0.51	0.00			182.11
	25-year	0.74	0.00			182.38
	50-year	0.97	0.00			182.62

A comparison of pre-development and post-development peak flows and volumes are summarized in Tables 3 and 4, respectfully below:

**TABLE 3: COMPARISON OF PRE-DEVELOPMENT AND
POST-DEVELOPMENT PEAK FLOWS**

Location	Storm Frequency	Pre-Development Peak Flows (cfs)	Post-Development Peak Flows (cfs)	Δ (cfs)
POA A	2-year	2.27	1.06	-1.21
	10-year	3.57	1.88	-1.69
	25-year	4.57	2.54	-2.03
	50-year	5.50	3.18	-2.32
POA B	2-year	0.19	0.00	-0.19
	10-year	0.29	0.00	-0.29
	25-year	0.36	0.01	-0.35
	50-year	0.43	0.02	-0.41

**TABLE 4: COMPARISON OF PRE-DEVELOPMENT AND
POST-DEVELOPMENT VOLUMES**

Location	Storm Frequency	Pre-Development Runoff (cf)	Post-Development Runoff (cf)	Δ (cf)
POA A	2-year	8,312	3,659	-4,653
	10-year	13,417	6,534	-6,883
	25-year	17,424	8,973	-8,451
	50-year	21,214	11,369	-9,845

POA B	2-year	697	0	-697
	10-year	1,089	44	-1,045
	25-year	1,394	87	-1,307
	50-year	1,655	174	-1,481

E. Impervious Area Calculations

This proposed building project results in a net decrease in onsite impervious area of 0.36 acres (15,680 SF). A summary of on-site impervious cover is provided below in table 5.

TABLE 5: COMPARISON OF PRE-DEVELOPMENT AND POST-DEVELOPMENT IMPERVIOUS AREAS (Acres)

	Pre-Development	Post-Development	Δ
Total Impervious Area (Ac)	9.58	9.22	-0.36
Treated Impervious Area (Ac)	0.0	0.52	+0.52

In order to comply with the Town of Hudson Stormwater Management standards, this project will meet the requirements of Section 290-5A by implementing treatment measures for proposed impervious cover. As previously stated above, the effective area of disturbance for the proposed redevelopment project is 36,375 SF, therefore the enhanced stormwater management standards outlined in Section 290-5B are not required.

F. Results

1. The project uses Low Impact Development techniques to accommodate stormwater runoff created by the proposed building and associated site improvements.
2. The project provides permanent methods for protecting water quality through the use of treatment practices such as deep-sump catch basins with gas hoods, and the rain garden bioretention basin to promote the recharge of runoff into native soils.
3. The proposed stormwater management systems provide sufficient recharge and storage volumes so that the post-development peak rates and volumes of runoff are less than the pre-development peak rates and volumes of runoff for the 2-, 10-, 25- and 50-year storm events to POA A and POA B.

4. The design complies with Chapter 290 of the Town of Hudson Stormwater Management standards with regard to treatment of impervious areas for redeveloped sites. Given that the project reduces peak rates and volumes leaving this site at both Points of Analysis, it is our opinion that there will be no adverse impact to the downstream drainage condition.

III. STORMWATER MANAGEMENT INFORMATION

A. Chapter 290 – Report/Plan Checklist:

Town of Hudson – Chapter 290 - Stormwater Management

Chapter 290-7A Report Checklist	
Item	Applicant Comment
1.Project Narrative	See SMECP report, Pages 1 & 2
2.Description of wetlands	See SMECP report, Page 1 & 2
3.Description of LID practices	See SMECP report, Page 6
4.Description of application buffers	See SMECP report, Page 1
5.Description of erosion control practices	See SMECP report, Page 8
6.Drainage Calculations	See SMECP report/Appendices A, B & C
7.Other studies	n/a
8.Stamped Report and Plans	See SMECP report and Plans
9.Inspection & Maintenance Manual	See SMECP Appendix E
10.BMP Maintenance Plan	See I & M Manual in SMECP Appendix E

Chapter 290-7B Plan Checklist	
Item	Applicant Comment
1.Locus Map	See Cover Sheet, Sheet 1 of 16
2.Parcel Map	See Sheet 1 of 16
3.Base Map Information	See Sheet 3 of 16 for Existing Conditions
4.Existing and Proposed Plan Information	See Sheet 1-6 of 16
5.Location of CRITICAL areas	n/a
6.Wetland Locations	n/a
7.Limits of Disturbance	See Plans and SMECP report Page 2
8.Proposed Erosion Control Measures	See Sheets 12 & 13 of 16
9.Proposed Construction Information	See Sheets 2, 4, & 5 of 13
10.Sanitary Waste Locations	See Sheets 5 & 7 of 16
11.Construction Schedule/Phasing	12 Month Construction Project
12.100-Year Flood Boundaries	n/a
13.Soils Information	See SMECP report Page 1 and Exhibits
14.Wetland Impact Areas	n/a
15.Permanent BMP's	See Sheets 5, and 11 of 16
16.Snow Storage Areas	See Sheet 6 of 16

17. Proposed Drainage Information	See Sheets 5, 7, & 11 of 16
18. Test Pit and Infiltration rates	See SMECP report and Sheet 2 & 3 of 13
19. Location of Nearest Receiving Wetland	Merrimack River (0.35 miles from property)
20. Downstream Drainage Capacity	See SMECP report, Page 7
21. Explanation of Downstream Impact	See SMECP report, Page 7

IV. EROSION CONTROL PROVISIONS

Temporary and permanent erosion control measures are proposed throughout the project, to ensure that the adjacent off-site areas and public roadways are protected from erosion and debris during and after construction of this project. A DRAFT copy of the prepared Stormwater Pollution Prevention Plan (SWPPP) for this project is also included as an Appendix to this report to provide additional information regarding erosion control measures during construction.

A. Temporary Erosion Control Measures

During the site construction phase of the project, specific erosion and sedimentation controls have been developed into the design of the project. Proposed locations and construction details of these devices are shown in greater detail on the attached site plans. Reference to the New Hampshire Stormwater Management Manual, Vol. 3, Construction Phase Erosion and Sediment Controls was made for the temporary erosion control devices such as silt socks, a gravel construction exit, and temporary seeding. The erosion control notes and construction sequence were developed to limit soil loss due to erosion and are therefore directed at minimizing the degradation of water quality on and off the site.

B. Permanent Erosion Control Measures

Permanent erosion control measures have been included in the design of the project to limit long-term erosion conditions. The proposed subsurface infiltration basins reduce peak rates of runoff which lessens the likelihood of downstream adverse impacts caused by erosion. Riprap aprons provide outlet protection at the new discharge headwall and where needed to reduce stormwater velocities to manageable levels. Loam and seed requirements have been specified to establish conditions that minimize erodible conditions. This is complemented by the minimization of stormwater flow lengths to keep runoff quantities and velocities as low as possible. These permanent measures, when completed and in place, provide treatment methods that will maintain long-term water quality in downstream waterways.

MEMORANDUM

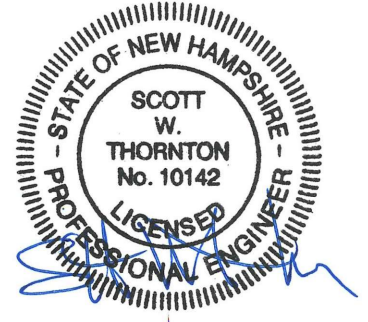
TO: Mr. Earle Blatchford
Hayner/Swanson, Inc.
3 Congress Street
Nashua, NH 03062

FROM: Scott W. Thornton, P.E. *and*
Thomas Hannon
Vanasse & Associates, Inc.
35 New England Business Center Drive
Suite 140
Andover, MA 01810
(978) 474-8800

DATE: December 19, 2023

REF: 9857

SUBJECT: Parking Utilization Study – Proposed Drive-Through Restaurant
Hudson, New Hampshire



Vanasse & Associates, Inc. (VAI) has prepared this memorandum to identify the parking utilization of a commercial shopping plaza (The Hudson Mall) in Hudson, New Hampshire to evaluate the ability of the site to accommodate a drive-through restaurant proposed to be located within the existing surface parking lot on-site (hereafter, the “Project”). VAI discussed the proposal with the Hudson Town Engineer, visited the site, performed parking utilization counts during typical times of peak retail activity, and identified available parking capacity both in the site as a whole and in the specific area where the restaurant is proposed. Additionally, vehicle-trip generation and queueing capacity were reviewed as part of this analysis. Our findings are presented below.

SUMMARY

The analysis indicated that the existing Hudson Mall has more parking spaces than demand requires. Maximum parking utilization varies between 30 and 35 percent over the entire 478-space parking lot during a typical weekday and Saturday, and between 29 and 39 percent over the 66-space sub-lot where the restaurant is proposed. This indicates that the parking lot can accommodate the loss of the number of spaces proposed to construct the drive-through restaurant and still provide sufficient capacity to meet demand. The Hudson Mall is expected to provide 417 spaces following construction of the Project. In addition, while the restaurant is expected to generate approximately 212 trips during the weekday morning peak hour and 218 trips during the Saturday midday peak hour, only 10 percent of these trips are expected to be new to the area with the rest originating from the adjacent passing traffic stream. Finally, typical maximum drive-through window vehicle queue lengths are between 12 and 13 vehicles at busy locations. The proposed restaurant will have a drive-through window aisle that can accommodate up to 15 vehicles in queue, which will provide adequate storage for customer vehicles.

PROJECT DESCRIPTION

The Project proposes to construct a 2,472 square foot (sf) restaurant with a drive-through window operation in the area of a surface parking lot located to the north of existing buildings in The Hudson Mall, located at 77 Derry Street in Hudson, New Hampshire. This will involve the removal of a number of parking spaces that are located in an area of the existing parking lot. While a number of spaces will be recreated, the site’s ability to accommodate the Project and the resulting parking demand required evaluation. Accordingly,



VAI conducted parking utilization counts of The Hudson Mall parking facilities to determine current parking demand during periods of peak retail activity. This approach was discussed and confirmed with the Hudson Town Engineer.

PARKING UTILIZATION

VAI visited The Hudson Mall shopping plaza on two different days to collect parking data on separate occasions. Dates of data collection were Saturday, October 21, 2023, and Wednesday, October 25, 2023. Data was collected over a 10-hour period on Saturday and over a 12-hour period on Wednesday in 30-minute intervals as noted below:

- October 21, 2023 (typical weekend): 8:00 AM – 6:00 PM
- October 25, 2023 (typical weekday): 7:00 AM – 7:00 PM

The Hudson Mall was observed to contain 478 spaces; this number is exclusive of spaces used for collecting shopping carts and spaces covered by dumpsters. The parking lot was partitioned into four zones as shown in Figure 1, with Zone 3 coded as the parking zone where the Project will be constructed. The breakdown of the zones is shown in Table 1 below.

**Table 1
THE HUDSON MALL PARKING SUPPLY**

<u>Parking Lot Zone</u>	<u>Parking Space Count</u>
1	300 ^a
2	58
3	66
<u>4</u>	<u>54^b</u>
Total	478

^aDoes not include 9 spaces used by carriage corrals.

^bDoes not include 3 spaces used by carriage corrals.

Zones 1, 2, and 4, which together provide 412 parking spaces (300+58+54), are not proposed to be affected by the Project. Zone 3, where the Project will be constructed, will be reduced to 20 spaces after construction of the Project. However, the site was reviewed to determine if the existing demand can be accommodated by the post-construction parking supply. Parking counts indicated that Zone 3 experiences a minimum of use, with a maximum utilization of 19 spaces (29 percent) and 26 spaces (39 percent) during the respective weekday and Saturday periods of observation. The entire site parking supply experiences a maximum utilization of 143 spaces (30 percent) and 165 spaces (35 percent) during the respective weekday and Saturday periods. The data for Zone 3 is shown in Table 2 while the data for the overall site is shown in Table 3.





Figure 1

Site Location Map



Table 2
ZONE 3 PARKING DATA^a

Day	Peak 30-Minute Interval	Total Number of Spaces	Number of Utilized Spaces	Number of Available Spaces	Peak Parking Utilization
Saturday	2:00 – 2:30 PM	66	26	40	39%
Weekday	6:00 – 6:30 PM	66	19	47	29%

^aBased on counts performed by VAI in October 2023.

Table 3
THE HUDSON MALL OVERALL PARKING DATA^a

Day	Peak 30-Minute	Total Number of Spaces	Number of Utilized Spaces	Number of Available Spaces	Peak Parking Utilization
Saturday	11:00 – 11:30 AM	478	165	313	35%
Weekday	4:30 – 5:00 PM	478	143	335	30%

^aBased on counts performed by VAI in October 2023.

This data indicates that even under the maximum Saturday utilization period, 313 parking spaces were vacant and not being used by the stores at The Hudson Mall. With regard to Zone 3, up to 40 spaces were available for use during the peak Saturday time period in this zone.

Since the maximum utilization of Zone 3 was 26 spaces, and up to 312 spaces were available, the remainder of the parking lot can easily accommodate the existing Zone 3 parking demand and have 286 spaces left over, based on the observed utilization data. The site is proposed to provide 417 parking spaces at the end of completion, which will still exceed parking demand at the Hudson Mall.

TRIP GENERATION

In addition to the parking utilization, trip generation for the Project was also calculated. In order to estimate the volume of traffic to be generated by the Project, trip-generation rates published by the Institute of Transportation Engineers (ITE) *Trip Generation Manual*¹ were researched. Land Use Code (LUC) 937, *Coffee/Donut Shop with Drive-Through Window* was used. The trip-generation estimates for the Project are provided for a typical weekday morning and Saturday midday peak hours, which traditionally correspond to the critical peak periods for these types of uses. The trip estimates were also adjusted to reflect common characteristics associated with these uses as described below.

Pass-By Trips

ITE-recommended practice recognizes that a varying proportion of coffee shop trips are drawn from the

¹*Trip Generation*, 11th Edition; Institute of Transportation Engineers; Washington, DC; 2021.



adjacent traffic stream and do not represent new trips on area roadways (referred to as “pass-by” trips). Pass-by data published by ITE² includes surveys of shopping centers and commercial uses throughout the United States. This data indicates that the average pass-by trip percentage for *Coffee/Donut Shops with Drive-Through Windows and No Indoor Seating Area* on average is 90 percent during a weekday morning peak period.

Given the commuter patterns and commercial nature of the Derry Street corridor, it is expected that a significant percentage of Project-related traffic will be pass-by in nature, drawn from the adjacent traffic flows adjacent to the site. Consequently, the 90 percent pass-by rate was retained for the traffic projections for the Project. The trip-generation projections for the Project are summarized in Table 4.

Table 4
PROPOSED SITE TRIP-GENERATION SUMMARY

Time Period/ Directional Distribution	Total Vehicle Trips ^a (A)	Pass-By Vehicle Trips ^b (B)	New Vehicle Trips (C=A-B)
<i>Weekday Morning Peak Hour:</i>			
Entering	108	95	13
<u>Exiting</u>	<u>104</u>	<u>95</u>	<u>9</u>
Total	212	190	22
<i>Saturday Midday Peak Hour:</i>			
Entering	109	98	11
<u>Exiting</u>	<u>109</u>	<u>98</u>	<u>11</u>
Total	218	196	22

^aBased on ITE LUC 937, *Coffee/Donut Shop with Drive-through Window*; 2,472 sf.

^bBased on 90 percent pass-by rate as indicated by ITE.

As can be seen in Table 4, the facility is expected to generate 22 *new* vehicle trips (13 entering and 9 exiting) expected during the weekday morning peak hour and 22 *new* vehicle trips (11 entering and 11 exiting) expected during the Saturday midday peak hour.

TRIP DISTRIBUTION

The directional distribution of the site-generated trips to and from the drive-through window facility was determined based on a review of existing travel patterns from traffic count data from New Hampshire Department of Transportation (NHDOT) count station No. 22229021, which is located on Derry Road, north of Old Derry Road in Hudson, New Hampshire on the town line with Litchfield. Based on a review of this data, it was determined that the trip distribution for the Project along Derry Road would be 52 percent westbound and 48 percent eastbound.

²*Trip Generation Manual, 11th Edition*, Institute of Transportation Engineers; Washington, DC; September 2021.



DRIVE-THROUGH FACILITY QUEUE ANALYSIS

In order to assess vehicle queuing associated with the proposed drive-through window facility, both the Town of Hudson³ and an industry study⁴ for drive-through window vehicle queue requirements were reviewed. According to the study, the range of maximum vehicle queue lengths is between 12 and 12.4 vehicles for land uses similar to the proposed facility. The current design for the proposed drive-through window aisle can accommodate between 14 and 15 vehicles in queue without impeding access or circulation within the site.

cc: File

³Town of Hudson Bylaw Section 275-8 Paragraph Cc5.

⁴Spack Solutions Drive-Thru Queue Study, 2019, 3.2 *Coffee Shops*.



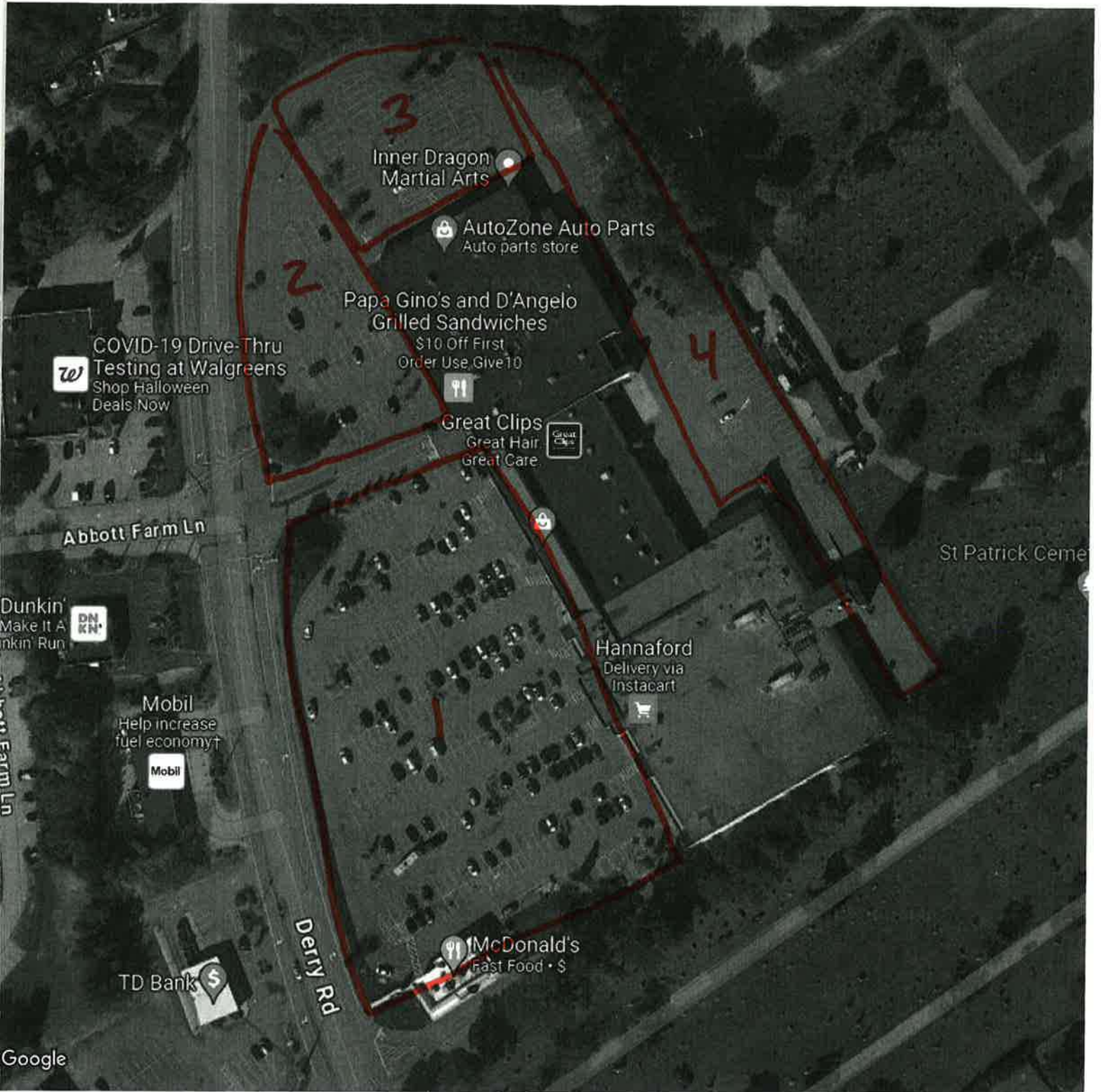
APPENDIX

PARKING COUNTS
TRIP GENERATION DATA
TRIP DISTRIBUTION
DRIVE-THROUGH QUEUE ANALYSIS



PARKING COUNTS





9857 HUDSON

Parking Study

- EVERY 1/2 hr, total # of cars in 4 zones

Weekday 7-7 (Wed or Thurs)

SAT. 8-6

VAI Calculations

Attachment "E"

Job: Hudson, NH Job Number: 9857
 Location: Hudson Mall Date: 10/21/23
 Title: Parking Study (Saturday) Sheet: 1 of 1
 Calculated by: SRF Checked by:

Time Ending	# of Cars Parked In Zone:					Total
	1	2	3	4		
				Marked Spaces	Unmarked Spaces	
8:00AM	54	1	9	2	0	66
8:30	57	3	11	3	1	75
9:00	76	2	14	4	3	99
9:30	91	2	16	5	3	117
10:00	110	6	16	5	3	140
10:30	112	9	18	5	2	146
11:00	130	13	16	4	2	165
11:30	117	16	17	5	2	157
12:00	121	8	20	4	2	155
12:30	117	14	20	4	2	157
1:00	127	7	18	4	1	157
1:30	129	11	18	4	1	163
2:00	114	13	26	5	1	159
2:30	111	11	8	4	1	135
3:00	103	11	6	4	1	125
3:30	95	9	6	5	1	116
4:00	106	9	6	4	1	126
4:30	82	9	5	4	1	101
5:00	73	7	5	4	1	90
5:30	72	10	5	4	1	92
6:00	56	6	5	4	1	72

Total Number of Parking Spaces in:

Zone 1 - 300 spaces + 9 spaces used by carriage corrals

Zone 2 - 58 spaces

Zone 3 - 66 spaces

Zone 4 - 54 spaces + 3 spaces used by dumpsters

VAI Calculations

Attachment "E"

Job: Hudson, NH
 Location: Hudson Mall
 Title: Parking Study (Weekday)
 Calculated by SRF

Job Number: 9857
 Date: 10/25/23
 Sheet: 1 of 1
 Checked by:

Time Ending	# of Cars Parked In Zone:							Total
	1		2		3	4		
	Marked Spaces	Unmarked Spaces	Marked Spaces	Unmarked Spaces		Marked Spaces	Unmarked Spaces	
7:00 AM	32	0	7	0	7	3	0	49
7:30	43	0	8	0	7	3	0	61
8:00	48	0	7	0	9	3	0	67
8:30	46	0	7	0	7	4	0	64
9:00	57	0	11	0	9	5	1	83
9:30	80	0	9	0	8	6	1	104
10:00	79	0	12	0	10	6	2	109
10:30	87	0	11	0	10	7	4	119
11:00	76	0	9	0	10	7	4	106
11:30	93	0	11	0	7	6	2	119
12:00	93	0	16	0	8	5	3	125
12:30	85	0	9	0	8	6	3	111
1:00	102	0	10	0	8	6	3	129
1:30	98	0	13	0	13	6	2	132
2:00	90	0	10	0	6	5	2	113
2:30	95	1	10	0	12	5	2	125
3:00	98	0	8	1	8	4	2	121
3:30	92	0	12	0	8	5	2	119
4:00	104	0	15	0	9	5	2	135
4:30	112	0	11	0	14	5	1	143
5:00	98	0	14	0	14	4	1	131
5:30	106	0	13	0	17	5	1	142
6:00	91	0	15	0	19	5	1	131
6:30	83	0	13	0	15	3	0	114
7:00	61	0	10	0	12	4	0	87

Note: At 12:00 a tractor trailer was making a delivery in front of Papa Gino's in zone #2
 Note: At 12:00 a tractor trailer was making a delivery in front of Autozone in zone #3
 Note: Autozone tractor trailer was parked, using 8 spaces, in zone #3 from 12:30-6:30 pm

Total Number of Parking Spaces in:
 Zone 1 - 300 spaces + 9 spaces used by carriage corrals
 Zone 2 - 58 spaces
 Zone 3 - 66 spaces
 Zone 4 - 54 spaces + 3 spaces used by dumpsters

TRIP GENERATION DATA



Institute of Transportation Engineers (ITE)
Trip Generation, 11th Edition
Land Use Code (LUC) 937 - Coffee/Donut Shop with Drive-through Window

Average Vehicle Trips Ends vs: 1,000 Sq. Feet Gross Floor Area
Independent Variable (X): 2.472

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 85.88 * (X)
T = 85.88 * 2.472
T = 212.30
T = 212 vehicle trips
with 51% (108 vph) entering and 49% (104 vph) exiting.

SATURDAY MIDDAY PEAK HOUR OF GENERATOR

T = 87.91 * (X)
T = 87.91 * 2.472
T = 217.31
T = 218 vehicle trips
with 50% (109 vph) entering and 50% (109 vph) exiting.

TRIP DISTRIBUTION



Hourly Volume By Lane [Exit](#)

HOURLY VOLUME BY LANE

Location: 22229021 Start Date: 2022-06-28

	22229021_WB	22229021	22229021_EB
12-1 AM	28	43	15
1-2 AM	17	32	15
2-3 AM	13	33	20
3-4 AM	25	47	22
4-5 AM	87	160	73
5-6 AM	244	446	202
6-7 AM	441	745	304
7-8 AM	665	1097	432
8-9 AM	545	973	428
9-10 AM	454	862	408
10-11 AM	432	808	376
11-12 AM	434	829	395
12-1 PM	465	912	447
1-2 PM	450	876	426
2-3 PM	491	952	461
3-4 PM	527	1046	519
4-5 PM	676	1322	646
5-6 PM	626	1227	601
6-7 PM	430	921	491
7-8 PM	325	690	365
8-9 PM	256	524	268
9-10 PM	169	346	177
10-11 PM	102	190	88
11-12 PM	41	102	61
TOTAL	7943	15183	7240

Hourly Volume By Lane [Exit](#)

HOURLY VOLUME BY LANE

Location: 22229021 Start Date: 2022-06-29

	22229021_WB	22229021	22229021_EB
12-1 AM	26	43	17
1-2 AM	16	32	16
2-3 AM	13	27	14
3-4 AM	33	62	29
4-5 AM	89	150	61
5-6 AM	247	473	226
6-7 AM	428	737	309
7-8 AM	619	1051	432
8-9 AM	536	959	423
9-10 AM	466	845	379
10-11 AM	475	849	374
11-12 AM	435	853	418
12-1 PM	465	926	461
1-2 PM	447	882	435
2-3 PM	512	1005	493
3-4 PM	542	1089	547
4-5 PM	572	1239	667
5-6 PM	632	1257	625
6-7 PM	487	988	501
7-8 PM	365	692	327
8-9 PM	283	585	302
9-10 PM	178	379	201
10-11 PM	96	186	90
11-12 PM	52	104	52
TOTAL	8014	15413	7399

Hourly Volume By Lane **Exit**

HOURLY VOLUME BY LANE

Location: 22229021 Start Date: 2022-06-30

	22229021_WB	22229021	22229021_EB
12-1 AM	29	53	24
1-2 AM	11	30	19
2-3 AM	10	30	20
3-4 AM	27	55	28
4-5 AM	91	170	79
5-6 AM	221	424	203
6-7 AM	425	701	276
7-8 AM	586	1025	439
8-9 AM	526	990	464
9-10 AM	459	870	411
10-11 AM	448	855	407
11-12 AM	468	911	443
12-1 PM	491	964	473
1-2 PM	479	922	443
2-3 PM	500	1025	525
3-4 PM	533	1089	556
4-5 PM	583	1195	612
5-6 PM	593	1190	597
6-7 PM	468	961	493
7-8 PM	359	723	364
8-9 PM	328	616	288
9-10 PM	196	381	185
10-11 PM	127	226	99
11-12 PM	72	135	63
TOTAL	8030	15541	7511

DRIVE-THROUGH QUEUE ANALYSIS



§ 275-7 Forms and procedure required.

Form and procedure requirements shall be in accordance with § 276-3.

§ 275-8 Application submission.

All applications for SITE PLAN PERMITS shall comply with the provisions of §§ 276-3 and 276-11 of the LAND USE REGULATIONS.

- A. (Reserved)
- B. (Reserved)
- C. In addition to the general regulations, notations of, or showing compliance with, the following shall be required of all SITE PLAN APPLICATIONS:
 - (1) Parking Calculations and Requirements.
 - (2) Parking Calculations. The calculations for required off-street spaces shall be computed in accord with the specifications listed below. Any use not listed shall provide parking as required by the PLANNING BOARD. The PLANNING BOARD may vary these requirements if the APPLICANT can demonstrate that fewer spaces than required below are consistent with the proposed use:
 - (a) Automotive fuel stations: one space for each fuel dispenser, plus two spaces for each working bay, plus one space per employee on the largest shift. Automotive fuel stations with general retail shall provide, in addition to the foregoing parking requirements, one parking space per 200 square feet of gross leasable area established for the general retail use. Automotive fuel stations with fast-food establishments shall provide, in addition to the foregoing parking requirements, one parking space per 100 square feet of gross leasable area established for the fast-food use.
 - (b) Beauty parlors and barber shops: three spaces per operator.
 - (c) Eating and drinking establishments:
 - [1] Eating and drinking establishments (without a bar): one space per 100 square feet of gross leasable area.
 - [2] Eating and drinking establishments (with a bar): one space per 75 square feet of gross leasable area.
 - [3] Fast-food eating and drinking establishments (with and without drive-through window service): one space per 100 square feet of gross leasable area.
 - [4] All other eating and drinking establishments not indicated above shall provide a minimum of one space per 100 square feet of gross leasable area.
 - [5] Eating and drinking establishments having drive-through window service shall provide a minimum of 12 vehicle stacking spaces or a number of stacking spaces determined appropriate by the PLANNING BOARD for the use served.
 - (d) Funeral homes: one for each 75 square feet of floor space in slumber rooms, parlors and individual service rooms.
 - (e) Hospitals and nursing homes: one per five patients.
 - (f) Furniture sales showrooms: one per 100 square feet of showroom area.
 - (g) Industrial: one for each 600 square feet of gross floor space or 0.75 space per employee of the combined employment of the two largest successive shifts, whichever is larger.
 - (h) Laundromats: one space for each two washing machines.
 - (i) Medical office and/or clinics: one parking space per each 300 square feet of gross floor area in the building.
 - (j) Motel or hotel: one per guest sleeping room plus one per employee of the largest shift.
 - (k) (Reserved)
 - (l) Private club or lodge: one per four members.
 - (m) Professional offices and business services: one for every 300 square feet of gross leasable area.
 - (n) Recreational areas: 3.5 parking spaces per tennis court and 20 spaces per ball field; other requirements as stipulated by the PLANNING BOARD.
 - (o) Residential units: two per unit.
 - (p) Retail business and personal service establishments: one space per 200 square feet of gross leasable areas.
 - (q) Stadium, theater or other place of public assembly: one space per four seats.

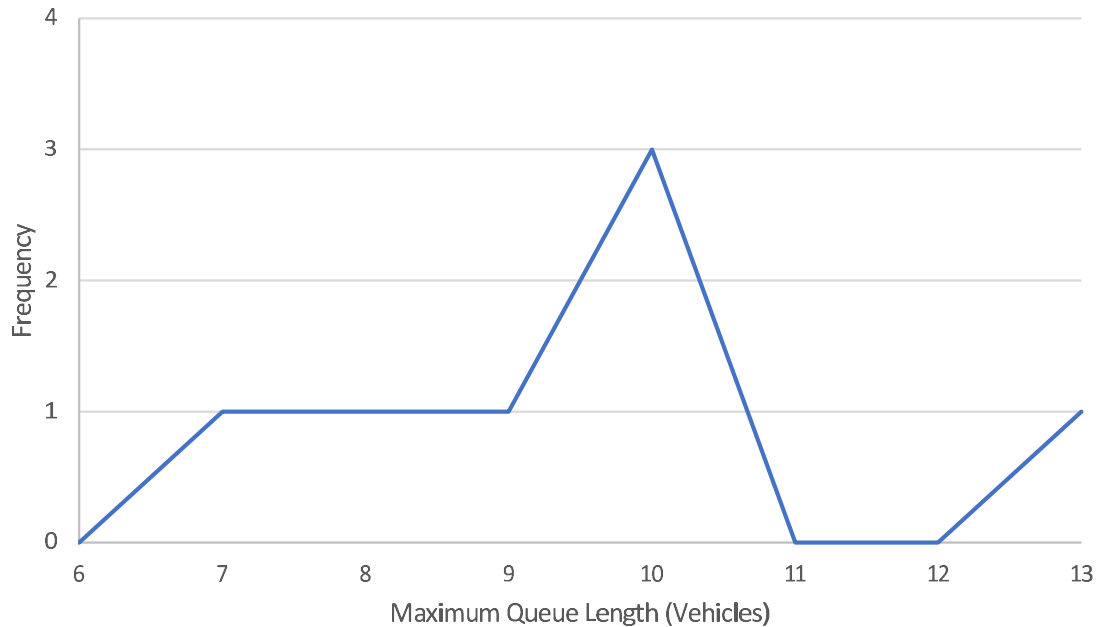
3.2 Coffee Shops

Data collection was done at four coffee shops with drive-thru services between November 2018 and March 2019. Seven days of data were collected. The coffee shops were located in the cities of Bloomington, Edina, Richfield, and West St. Paul, MN. Vehicles being served at the drive-thru window were counted as being in the queue.

Table 3.2 – Drive-Thru Coffee Shop Maximum Queue Statistics

Number of Data Points	7
Average Maximum Queue (Vehicles)	9.57
Standard Deviation (Vehicles)	1.90
Coefficient of Variation	20%
Range (Vehicles)	7 to 13
85th Percentile (Vehicles)	12.40
33rd Percentile (Vehicles)	8.64

Figure 3.2 – Drive-Thru Coffee Shop Maximum Queue Frequency



The maximum queues for coffee shops were concentrated between 7:00am and 10:00am. With an 85th percentile maximum queue of 12 vehicles, the data suggests that coffee shops with drive-thru lanes should be able to accommodate at least 240 feet of vehicle stacking during morning hours.



TOWN OF HUDSON

Planning Department



12 School Street • Hudson, New Hampshire 03051 • Tel: 603-886-6008 • Fax: 603-594-1142

CAP FEE WORKSHEET - 2024

Date: 05-10-24 Zone # 1 Map/Lot: 165-155-000
77 Derry Street

Project Name: Starbucks Drive-Thru Restaurant

Proposed ITE Use #1: Fast Food Restaurant

Proposed Building Area (square footage): 2,472 S.F.

CAP FEES: (ONE CHECK NEEDED)

1.	(Bank 09) 2070-702	(\$22.99 x 2,472) Traffic Improve (Zone 2)	\$ <u>56,831.28</u>
		Total CAP Fee	\$ <u>56,831.28</u>

Check should be made payable to the Town of Hudson.

Thank you,

Brooke Dubowik

Planning Administrative Aide