



TOWN OF RAYMOND Planning Board Agenda

January 11, 2024

7 p.m. - Raymond High School

Media Center - 45 Harriman Hill

Public Announcement

*If this meeting is canceled or postponed for any reason the information can be found on our website, posted at Town Hall, Facebook Notification, and RCTV. **

1. Pledge of Allegiance

2. Public Hearing

A. 2024 Zoning Ordinance Amendments-

- Zoning Amendment No. 1 - Article 5: Overlay Districts; Subsections 5.2.4.8., 5.2.4.10, 5.2.4.15. and 5.2.6.2.5. Conditional Uses
- Zoning Amendment No. 2 - Article 5: Overlay Districts; 5.2.4. DEFINITIONS; Add Subsection 5.2.4.21. Wetland Buffer
- Zoning Amendment No. 3 - Article 4: ZONES; Section 4.9.3. DISTRICT BOUNDARIES, Subsection 4.9.3.1. Shoreland Protection Area
- Zoning Amendment No. 4 - Article 4: ZONES; Section 4.9.3. DISTRICT BOUNDARIES, Add Subsection 4.9.3.5. Wetland Setback Area
- Zoning Amendment No. 5 - Article 15: AREA AND DIMENSIONAL REQUIREMENTS & ASSOCIATED NOTES; Section 15.1 Area and Dimensional Table
- Zoning Amendment No. 6 - Article 4: ZONES; Section 4.9.3. DISTRICT BOUNDARIES: Subsection 4.9.3.3, Subsection 4.9.3.4 and Subsection 4.9.4.2. Rockingham County Soil Survey Map
- Zoning Amendment No. 7 - Article 5: Overlay Districts; Section 5.4. Mixed Use Business Campus Overlay District (03/2007); and Article 14: Allowed Uses Table; Section 14.1 Allowed Uses Table and Subsection 14.2.6. Notes to Allowed Uses Table
- Zoning Amendment No. 8 - Article 13 DEFINITIONS: Solar Panels

- B. Application # 2023-016 and Application # 2023-017 Fuel NRG Raymond:** A site plan application is being submitted by Daniel M. Flores of SFC Engineering Partnership, Inc. Proposed construction includes a 30,000 gallon above ground liquid propane tank with fueling area and truck parking. Future plans include a 1,200 square foot commercial building and an additional 30,000 gallon above-ground liquid propane tank. A Conditional Use Permit (Application #2023-017) accompanies the site plan as the proposed construction will render an impervious surface greater than 15% or 2,500 square feet of the lot. The property is located on NH Route 27 and is identified as Raymond Tax Map 32, Lot 69 within Zone C1.

* Note: If you require personal assistance for audio, visual or other special aid, please contact the Selectmen's Office at least 72 hours prior to the meeting. If this meeting is postponed for any reason, it will be held at a time TBD.



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- C. Application #2023-008 Onway Lake Village Subdivision:** A subdivision application is being submitted by Shiv Shrestha and Matt Silverstein of Onway Lake Development, LLC. The subdivision proposes the initial construction of a 38-lot conservation subdivision with cul-de-sac streets which will constitute Phase 1 of a potential future 3 phase development. A Special Permit related to wetland impacts within the development accompanies the application. The property is located at 15 Sargent Drive at the intersection of Sargent Drive and Deer Run Road, and is located just west of the Green Road/Sargent Drive intersection, and is identified as Raymond Tax Map 20 Lot 58 and Tax Map 26 Lot 1, and within Zone B.

3. Public Comment

4. Approval of Minutes

- A. December 21, 2023 & January 4, 2024

5. Other Business

- ◆ Staff Updates
- ◆ Board Member Updates
- ◆ Any other business brought before the board.

6. Adjournment (NO LATER THAN 10:00 P.M.)

Planning Board 2023/2024 Submittal and Meeting Dates

| Submittal Deadline for Completed Application & Materials | Planning Board Meeting Dates (1st & 3rd Thursdays of the Month) | |
|--|---|--|
| December 21, 2023 | Thursday, January 18, 2024 | Site Plan Regulations Public Hearing Potential Date of Zoning Amendment / Warrant Article Public Hearing Mardon Woods (rescheduled from 12-21-23) |
| December 28, 2023 | Thursday, January 25, 2024 | Potential Date of Zoning Amendment / Warrant Article Public Hearing Miendl Road (continued from 1/4/2025) |
| January 4, 2024 | Thursday, February 1, 2024 | Taft Way Special Permit Morrison Rd Driveway Permit |

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Town of Raymond Legal Notice
PLANNING BOARD PUBLIC HEARING
Thursday, January 11, 2024 @ 7:00 pm
in the Raymond High School Media Center
45 Harriman Hill Road, Raymond

You are hereby notified that the **Raymond Planning Board** will hold a public hearing on **Thursday, January 11, 2024, beginning at 7:00 p.m.** to consider **2024 Zoning Amendments.**

If required, a second or third public hearing will be held on **January 18, 2024, and/or January 25, 2024, at 7 p.m.**

The hearings will be held in the Media Center (library) at Raymond High School, 45 Harriman Hill Road.

Zoning Amendment No. 1 - Article 5: Overlay Districts; Subsections 5.2.4.8., 5.2.4.10, 5.2.4.15. and 5.2.6.2.5.
Conditional Uses:

Are you in favor of the adoption of Amendment No. 1 as proposed by the Planning Board for the Town Zoning Ordinance as follows: To amend **Article 5: Overlay Districts** specifically to amend **Subection 5.2.4.8 DEFINITIONS** to amend the definition of **Impervious Surface** as follows: A surface through which regulated substances cannot pass when spilled. Impervious surfaces include concrete unless unsealed cracks or holes are present. Asphalt; earthen, wooden, or gravel surfaces; or other surfaces which could react with or dissolve when in contact with the substances stored on them are not considered impervious for the express purpose of retaining the regulated substances, however these surfaces are considered impervious for the calculation of stormwater impacts and other regulatory calculations separate from the retention of spills. (03/24); **FURTHER to amend Subsection 5.2.4.10 DEFINITIONS** to amend the definition of **Outdoor Storage** as follows: Storage of materials where they are not protected by the elements by a roof, walls, and a floor with a surface impervious to regulated substances. (03/24); **FURTHER to amend Subsection 5.2.4.15 DEFINITIONS** to amend the definition of **Secondary Containment** as follows: A structure such as a berm or dike with a surface impervious to regulated substances which is adequate to hold at least one-hundred ten percent (110%) of the volume of the largest regulated substances container that will be stored there. (03/24); and **FURTHER to amend Subsection 5.2.6.2.5, Conditional Uses** as follows: All regulated substances stored in containers with a capacity of more than 5 gallons must be stored in product-tight containers on a surface impervious to regulated substances designed and maintained to prevent flow to exposed soils, floor drains, and outside drains. (03/24)

Zoning Amendment No. 2 - Article 5: Overlay Districts; 5.2.4. DEFINITIONS; Add Subsection 5.2.4.21. Wetland Buffer:

Are you in favor of the adoption of Amendment No. 2 as proposed by the Planning Board for the Town Zoning Ordinance as follows – To amend **Article 5: Overlay Districts** specifically to amend **Section 5.2.4. DEFINITIONS** by adding the following **Subsection 5.2.4.21. “Wetland Buffer”**: Wetland buffer or wetland setback means a designated area contiguous or adjacent to a wetland that is required for the continued maintenance, function, and ecological stability of the wetland. (03/24)

Zoning Amendment No. 3 - Article 4: ZONES; Section 4.9.3. DISTRICT BOUNDARIES, Subsection 4.9.3.1. Shoreland Protection Area:

Are you in favor of the adoption of Amendment No. 3 as proposed by the Planning Board for the Town Zoning Ordinance as follows: *To amend Article 4: ZONES specifically to amend Section 4.9.3. DISTRICT BOUNDARIES; Subsection 4.9.3.1. to the following: SHORELAND PROTECTION AREA: Is any area of land within seventy-five (75) feet of the seasonal high-water mark of any river, brook, lake or pond, or intermittent or perennial stream.* (03/24)

Zoning Amendment No. 4 - Article 4: ZONES; Section 4.9.3. DISTRICT BOUNDARIES, Add Subsection 4.9.3.5. Wetland Setback Area:

Are you in favor of the adoption of Amendment No. 4 as proposed by the Planning Board for the Town Zoning Ordinance as follows: *To amend Article 4: ZONES specifically to amend Section 4.9.3. DISTRICT BOUNDARIES; by adding the following Subsection 4.9.3.5. “Wetland Setback Area”*: as defined in Section 15.3.2. (03/24); *and FURTHER* to amend section 4.9.5. to the following: “Wetlands and Setbacks” in the heading of the Allowed Uses Table. (03/24)

Zoning Amendment No. 5 - Article 15: AREA AND DIMENSIONAL REQUIREMENTS & ASSOCIATED NOTES; Section 15.1 Area and Dimensional Table

Are you in favor of the adoption of Amendment No. 5 as proposed by the Planning Board for the Town Zoning Ordinance as follows: To amend **Article 15: AREA AND DIMENSIONAL REQUIREMENTS & ASSOCIATED NOTES** specifically to amend **Section 15.1 Area and Dimensional Table** as follows:

| Zone | Minimum Lot Size Square Feet | Minimum Lot Size Acreage | Minimum Frontage | Minimum Setbacks | | | Serviced by Town Water |
|----------|------------------------------|--------------------------|------------------|------------------|------|------|------------------------|
| | | | | Front | Side | Rear | |
| G | * | * | * | * | * | * | * |

***Refer to section 15.3 Special Requirements in Zone G (03/24)**

Zoning Amendment No. 6 - Article 4: ZONES; Section 4.9.3. DISTRICT BOUNDARIES: Subsection 4.9.3.3, Subsection 4.9.3.4 and Subsection 4.9.4.2. Rockingham County Soil Survey Map

Are you in favor of the adoption of Amendment No. 6 as proposed by the Planning Board for the Town Zoning Ordinance as follows: To amend **Article 4: ZONES** specifically to amend **4.9.3. DISTRICT BOUNDARIES; Subsection 4.9.3.3, Rockingham County Soil Survey Map** as follows: To amend the reference in **Subsection 4.9.3.3.** to “Rockingham County Soil Survey Map, most current edition” (03/24); **FURTHER** to amend the reference in **Subsection 4.9.3.4.** to “Rockingham County Soil Survey Map, most current edition” (03/24); and **FURTHER** to amend the reference in **Subsection 4.9.4.2.** to “Rockingham County Soil Survey Map, most current edition”. (03/24)

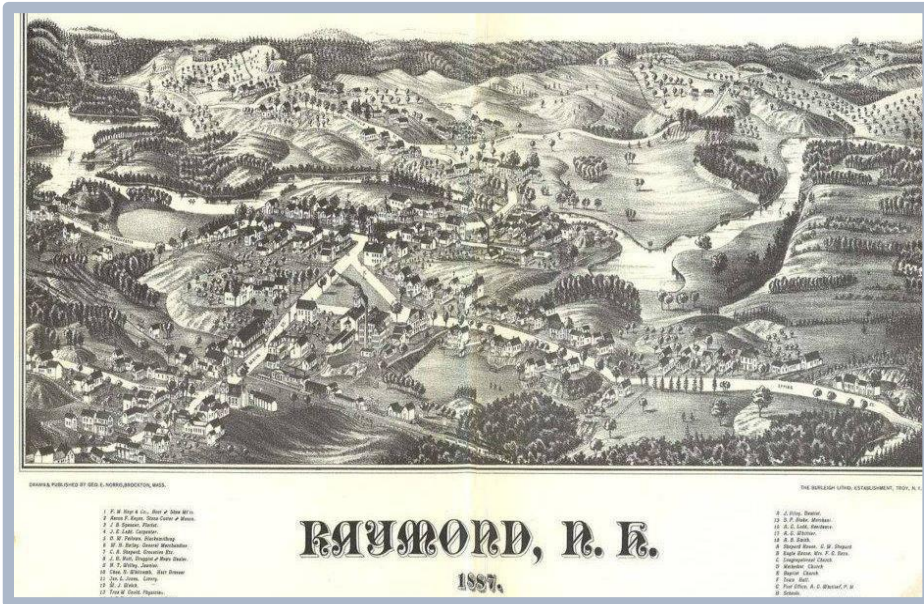
Zoning Amendment No. 7 - Article 5: Overlay Districts; Section 5.4. Mixed Use Business Campus Overlay District (03/2007); and Article 14: Allowed Uses Table; Section 14.1 Allowed Uses Table and Subsection 14.2.6. Notes to Allowed Uses Table

Are you in favor of the adoption of Amendment No. 7 as proposed by the Planning Board for the Town Zoning Ordinance as follows: To amend **Article 5,** specifically to remove **Section 5.4 Mixed Use Business Campus Overlay District (MUBCOD)** (03/24); **FURTHER** to amend **Article 14.1 Allowed Uses Table** to specifically remove all references to the Mixed Use Business Campus Overlay District/MUBCOD (03/24); and **FURTHER** to specifically remove **Subsection 14.2.6.** (03/24)

Zoning Amendment No. 8 - Article 13 DEFINITIONS: Solar Panels

Are you in favor of the adoption of Amendment No. 8 as proposed by the Planning Board for the Town Zoning Ordinance as follows: To amend **Article 13: DEFINITIONS** by specifically **adding the following Subsection named “Solar Panel”:** A Solar Panel is a panel designed to absorb the sun's rays as a source of energy for generating electricity or heating. All Solar Panels are considered 100% impervious for the calculation of impervious surfaces. (03/24)

You are invited to attend, or you may submit written comments to: Town of Raymond, Community Development Department, Office of Planning & Zoning, 4 Epping Street, Raymond, NH 03077. If you require audio or visual aids, please contact the Selectmen’s Office at least 72 hours prior to the meeting. If this meeting is postponed for any reason, it will be held on January 18, 2024.



2023 RAYMOND ZONING ORDINANCE

Last Amended March 2023



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ARTICLE 1: PREAMBLE

- 1.1. **Purpose:** The purpose of this Zoning Ordinance is to promote the health, safety, economic and social well-being of the community, to protect the natural resources including the lakes, rivers, streams, drinking water and aquifer, to lessen congestion in the streets, to secure safety from fires, panic, and other dangers, to promote adequate light and air, to prevent overcrowding of land, to avoid undue concentration of population, and to facilitate the adequate provision of transportation, water, sewerage and schools. The Town of Raymond, New Hampshire adopted this Ordinance in conformance with New Hampshire [RSA 674:16](#).

- 1.2. **Construction of Ordinance:** Any and all terms and provisions of the Zoning Ordinance, including but not limited to tables and dimensional charts, shall be construed pursuant to the following rules:
 - 1.2.1. In case of any conflict between provisions, the language of the most recent amendment to any provision shall control over the language of any prior version of such provision and over the language of any related provision;

 - 1.2.2. The language of the most specific provision on the subject controls over the more general provision.

- 1.3. **Effective Date:** This Ordinance and any amendments shall become effective on the date of adoption.

ARTICLE 2: GENERAL PROVISIONS

2.1 Pre-Existing, Non-Conforming Lots

- 2.1.1. Notwithstanding the area, frontage, setback or other dimensional requirements of this Ordinance, nothing in this Ordinance shall be construed as restricting, limiting, or otherwise prohibiting, the sale, purchase, financing or refinancing of any building or structure located on a pre-existing non-conforming lot as of the effective date of this Ordinance or any subsequent amendment thereto. The Town of Raymond Code Official is authorized to issue a certification confirming the applicability of this provision to any particular building or structure. (03/1994 & 03/1996)
- 2.1.2. Pre-existing (as of 03/01/1996) non-conforming lots are suitable for building purposes provided that such lots can meet current setbacks and can obtain the necessary driveway permits from a Town maintained road and comply with current Health, Safety and Environmental Codes, Ordinances and Regulations. (03/2000)
- 2.1.3. To prohibit making pre-existing non-conforming lot more non-conforming by any changes to lot area, frontage, setbacks, or other dimensional requirement of the Ordinance.(03/2020)

2.2 Use, Non-Conforming (03/2000)

- 2.2.1. EXISTING AT ADOPTION: Uses which exist at the time of adoption of this Ordinance section may continue unless that use is found to be an imminent danger to the public health, safety, or welfare. In such case, the use must immediately either be brought into conformance with the Ordinance or cease.
 - 2.2.2. RE-ESTABLISHMENT LIMITED: No pre-existing non-conforming use shall be allowed to be re-established after five (5) years of being abandoned or closed.
 - 2.2.3. EXPANSION LIMITS: Expansion of any use by twenty-five percent (25%) or more is not permitted.
 - 2.2.4. EXCEPTIONS TO EXPANSION LIMITS: Excepted from this requirement are single family detached residential type occupancies which are allowed expansion of not more than one hundred percent (100%), provided all health, safety, septic, setback and building code requirements can and will be met.
- 2.3. **Fire Damaged Structures:** No owner or occupant of land within the Town of Raymond shall permit fire or other ruins to be left, but shall within six (6) months remove and refill the same to clear ground level or shall repair, rebuild, or replace the structure. The Selectmen upon request for reasonable cause that they deem adequate may authorize extension of up to ninety (90) days.
- 2.4. **Prohibited Uses:** Any use of land or buildings that is or may become obnoxious or injurious by reason or production or emission of odor, dust, fumes, noise, vibration, excessive smoke or refuse matter or similar conditions that are dangerous or offensive to the health, safety, comfort, peace or enjoyment of the community or lending to its disturbance is prohibited.
- 2.5. **Road Names:** To prevent duplication and/or similar sounding road names, both public and private, the Planning Board shall approve all proposed road names prior to use. (03/1997)

- 2.6. **Vehicles:** For any use of land or buildings that is such as to attract vehicles, adequate space shall be provided on the property to accommodate all such vehicles.
- 2.7. **Building Height:** The maximum building height for all new construction within the Town of Raymond shall be three (3) stories (four (4) stories for sprinkled buildings) in the Commercial (C.1), Commercial/Residential (C.2), Industrial (D), Manufactured Housing (E), Residential (A) and Residential/Agricultural (B) zoning districts. Except six (6) stories shall be permitted in the Commercial/Residential (C.2) zoning district where town water and town sewer is provided within the Sewer Overlay District.
- 2.7.1. A story is considered to be a maximum of ten (10) feet in height.
- 2.7.2. Building height shall be measured on 2/3rd of the building perimeter from the adjoining ground level (by utilizing an average between the highest and lowest points) to the uppermost ceiling.
- 2.7.3. For any building exceeding thirty (30) feet in height, the minimum building setbacks from the property line shall equal the height of the building. This requirement shall not supersede the minimum dimensional requirements of [Article 15](#) of the Zoning Ordinance entitled Area & Dimensional Requirements & Associated Notes.
- 2.7.4. These height restrictions do not apply to necessary appurtenant structures such as church spires, belfries, cupolas, smokestacks, flagpoles, antennae, and unenclosed mechanical equipment.
- 2.8. **Disability Access Structures** (03/2010): Pursuant to the authority under [RSA 674:16](#) and [RSA 674:17](#) to adopt zoning ordinances to promote health and general welfare, and in order to provide building access for persons with disabilities, consistent with the intent of [RSA 674:33 \(V\)](#) and the [Americans with Disabilities Act, 42 U.S.C. §12132](#), the Code Official is authorized to grant building permits for Disability Access Structures as referenced in [Section 8.1.3.2](#), notwithstanding that such Disability Access Structures may not comply with area dimension or setback requirements, provided that the applicant meets the following criteria:
- 2.8.1. Disability Access Structures are necessary to allow a person or persons with a recognized physical disability to reside in or regularly use the premises.
- 2.8.2. The construction of Disability Access Structures as limited by this paragraph will otherwise be in harmony with the general purpose and intent of the Zoning Ordinance.
- 2.8.3. If the above criteria are met then the building permit shall be issued, and it shall be valid for only such time as the disabled resident (or other disabled persons regularly using the premises at the time of the application) has a continuing need to use the premises.
- 2.8.4. A notice of the building permit, on a form to be prepared by the Code Official, shall be recorded at the Rockingham County Registry of Deeds, and kept on file at the Town Office.

2.9. **Wetlands:** All development that requires Planning Board approval or re-approval, as determined by the Code Official, shall be subject to the following:

2.9.1 In recognition that the majority of drinking water supply sources come from groundwater; and further, that wetlands provide the chief source of groundwater recharge, all development shall result in no net loss of area or function of wetlands. This must be achieved within the same watershed of the proposed development area. In order of preference, no net loss shall be achieved utilizing the following approaches with input for the Raymond Conservation Commission:

2.9.1.1 Achieve no net loss within the boundaries of the proposed development area and within the Town of Raymond boundaries;

2.9.1.2 Achieve no net loss within Town of Raymond boundaries and within a five (5) miles radius of the development area;

2.9.1.3 In cases where neither option [2.9.1.1](#) nor option [2.9.1.2](#) can be reasonably achieved, as determined by the Planning Board based upon the applicant's application and testimony and the input of the Raymond Conservation Commission, no net loss shall be achieved within a five (5) mile radius of the same watershed as the proposed development area.

2.9.1.4 Applicants to the Planning Board shall be required to work within the framework of techniques, latest technology, and best management practices available in the Town of Raymond and the State of New Hampshire to further the objective of achieving no net loss of wetlands.

2.10. Campers

2.10.1. Campers may be stored, unoccupied, at the owner's premises or permanent domicile in any zone in the Town of Raymond for any period of time.

2.10.2. Campers or tents may be occupied for camping in all zones of the Town of Raymond for up to (90) ninety days of the year, providing proper sanitary facilities are available as determined by the Health Officer.

2.10.3. Campers shall not be occupied as a permanent dwelling at any time in the Town of Raymond. (03/1971)

2.11. **Petroleum Tanks:** All petroleum tanks in Raymond shall conform to regulations issued by the New Hampshire Department of Environmental Services (DES, currently regulation [WS411](#)) and tanks not covered by [WS411](#) shall be installed and maintained in accordance with the applicable NFPA Codes.

2.12. **Temporary Buildings:** Temporary buildings of any type that are normally used as offices and storage facilities at construction sites will be permitted on the site upon which the construction work is being accomplished for the duration of the construction.

- 2.13. **Junkyards:** No new junkyards as defined in [Article 13](#) shall be established, opened, or operated within any zone. No existing junkyards within the Town shall be expanded or in any way enlarged unless a variance is granted by the Board of Adjustment after public hearings in accordance with the Revised Statutes of the State of New Hampshire 236:112 et. seq. or any amendments or successors to the Ordinance.
- 2.14. **Manufactured Home Age Restriction:** All new placements of Manufactured Homes and replacements of all existing manufactured homes shall meet all existing U.S. Department HUD standards at the time of manufacture. Manufactured Homes older than five (5) years shall not be allowed. (03/1998)

ARTICLE 3: OFFICIAL ZONING MAP

- 3.1. **Official Zoning Map:** The Official Zoning Map shall be known as the Raymond Zoning Map, as adopted by the Raymond Planning Board. The Raymond Zoning Map, with all explanatory matter thereon, is hereby made a part of the Raymond Zoning Ordinance and shall serve as the official interpretation of the Zoning District Boundaries (zones), as certified by the Raymond Planning Board, and adopted by the voters. The original, signed copy of said map shall be maintained in the office of the Town Clerk, shall bear the Town Seal, and be signed by the Chairman of the Raymond Planning Board. The map shall incorporate such zoning district amendments as may be made by the voters of the Town of Raymond from time to time. Amendments to district boundaries and/or new boundaries shall be entered on the Zoning Map as soon as possible after approval at Town Meeting and a record of such amendment shall be noted on the Map. Up-to-date copies of the Official Zoning Map shall be maintained by and kept with the Community Development Department.
- 3.2. **Zoning District Boundaries:** All Zoning District Boundaries (zones) are located and bounded as shown on the map titled the Raymond Zoning Map.
- 3.3. **Rules for Interpreting Zoning District Boundaries:** Where uncertainty exists as to the boundaries of districts as shown on the Official Zoning Map, the following rules shall apply:
- 3.3.1. Boundaries indicated as approximately following the center lines of streets, highways, or alleys shall be construed to follow such center lines.
 - 3.3.2. Where a boundary apparently follows a property line, it shall be interpreted as such. Such property line shall be interpreted as one existing at the time of enactment of this Zoning Ordinance or a pertinent amendment.
 - 3.3.3. Boundaries indicated as approximately following town boundary lines shall be construed as following town boundary lines.
 - 3.3.4. Boundaries indicated as following railroad lines shall be construed to be the centerline of the railroad bed.
 - 3.3.5. Boundaries indicated as following water lines shall be construed to follow the water lines as shown on the Town of Raymond's Official Water Map, as may be amended from time to time. The Water Map is updated by, maintained by and available in the Water Department.
 - 3.3.6. Boundaries indicated as approximately following the center lines of streams or rivers shall be construed to follow such center lines as they exist at the enactment of this Ordinance, and in the

event of change in the center line shall be construed as moving with the actual center line.

- 3.3.7. Boundaries indicated as parallel to or extensions of features indicated in [Subsections 3.3.1 through 3.3.6](#) above shall be so construed.
 - 3.3.8. Distances not specifically indicated on the Official Zoning Map shall be determined by the scale of the Official Zoning Map.
 - 3.3.9. Where physical or cultural features existing on the ground are at conflict with those shown on the Official Zoning Map, or in other circumstances not covered by [Subsections 3.3.1 through 3.3.8](#) above, the Zoning Administrator shall interpret the zone boundaries.
- 3.4. **Rules for Amending or Replacing the Official Zoning Map:** If the Official Zoning Map becomes damaged, destroyed, lost, or difficult to interpret because of changes and additions, the Planning Board may, by public hearing, adopt a new Official Zoning Map which shall supersede the prior Official Zoning Map.
- 3.4.1. Any map adopted by the Planning Board by public hearing, pursuant to provisions of [Section 3.4](#) above, may correct clerical, drafting, or other errors or omissions in the prior Official Zoning Map without the necessity of Town Meeting action. However, no other correction may be made unless the same reflects an amendment to the Ordinance lawfully adopted as a result of Town Meeting action.
 - 3.4.2. To the greatest extent practical, outdated, or superseded Official Zoning Maps, together with all records pertaining thereto, shall be preserved for a period of not less than ten (10) years.

ARTICLE 4: ZONES

- 4.1. **Zone A - Residential:** Residential Districts are designed for the protection of areas that have been and are being developed predominately for single-family detached dwellings. These shall include all areas currently serviced by the Raymond Water Department water mains, except areas included in Zone C, Zone D, and Zone F.
- 4.1.1. Please refer to the Allowed Uses Table – ZONE A – RESIDENTIAL DISTRICT in [Article 14](#).
 - 4.1.2. Please refer to the Area and Dimensional Requirements in [Article 15](#).
- 4.2. **Zone B – Residential/Agricultural:** Residential/Agricultural Districts are designed to permit uses that are compatible with and protective of certain areas that have been and are being developed for water quality preservation, residential use, and public use. These shall include all areas within the Town of Raymond which are not specifically included in Zone A, C, D, E, or F as hereinafter provided.
- 4.2.1. Please refer to the Allowed Uses Table – ZONE B – RESIDENTIAL/AGRICULTURAL DISTRICT in [Article 14](#).
 - 4.2.2. Please refer to the Area and Dimensional Requirements in [Article 15](#).
- 4.3. **Zone C.1 - Commercial:** Commercial Districts are designed for the purpose of centralizing the provision of basic goods and services

- 4.3.1. Please refer to the Allowed Uses Table – ZONE C.1 – COMMERCIAL DISTRICT in [Article 14](#).
- 4.3.2. Please refer to the Area and Dimensional Requirements in [Article 15](#).
- 4.4. **Zone C.2 – Commercial/Residential:** Commercial/Residential Districts are designed for the purpose of mixed commercial/residential use
 - 4.4.1. Please refer to the Allowed Uses Table – ZONE C.1–COMMERCIAL DISTRICT in [Article 14](#).
 - 4.4.2. Please refer to the Area and Dimensional Requirements in [Article 15](#).
- 4.5. **Zone C.3 – Mixed Use Commercial:** The C.3 – Mixed Use Commercial District is designed to encourage long term planning and flexibility of design for development along the highest volume non- restricted traffic corridors within the Town of Raymond. The purposes of the Mixed Use Commercial District (C.3) are to:
 - Take advantage of existing infrastructure, to include Route 102, a State of New Hampshire controlled and maintained Class II Highway, existing three phase electrical service and the near-future installation of public water supply to stimulate economic investment, development, and redevelopment of properties along Route 102;
 - Encourage the highest and best use of land in this growth area; provide developers and property owners flexibility to achieve high quality design and to provide for present and future infill projects, utilizing effective access management techniques that will serve to strengthen and support existing and new development;
 - Contribute to the Town’s economic vitality by providing employment opportunities and broadening the tax base.
- 4.5.1. **DISTRICT BOUNDARIES:** The C.3 District, which includes C.3E and C.3W, is shown on the Official Zoning Map of the Town of Raymond, defined as follows:
 - 4.5.1.1. Please refer to [Article 14](#) – Allowed Uses Table, which delineates uses in the C.3 District on the east side of Route 102 (C.3E) and on the west side of Route 102 (C.3W);
 - 4.5.1.2. Within the C.3W District, residential development is not permitted within 500 feet of a property line abutting New Hampshire Route 102.
- 4.5.2. **C.3 ZONE DEVELOPMENT STANDARDS:** Any development proposed within the C.3 District shall be subject to the following standards:
 - 4.5.2.1. New development must be serviced by Town water;
 - 4.5.2.2. Any non-residential structure which is proposed to be located abutting an existing or proposed residential use shall require a minimum setback of one hundred feet (100’) from property lines (03/2022), or in the alternative, fifty feet (50’), which shall include a twenty foot (20’) dense vegetative buffer and a fence of a type designed to shield the residential use from light and noise generated by a non-residential use. Security apartments which are accessory to a non- residential use shall not be affected by this

section.

- 4.5.2.3. The setbacks within [Section 4.5.2.2](#) shall be reduced by 50% within 500 feet of a property line abutting New Hampshire Route 102 within C.3W and for the entirety of C.3E.
 - 4.5.2.4. Please refer to the Allowed Uses Table – ZONE C.3–MIXED USE COMMERCIAL DISTRICT in [Article 14](#).
 - 4.5.2.5. Please refer to the Area and Dimensional Requirements in [Article 15](#).
 - 4.5.2.6. Any residential subdivision proposed for location within permitted areas of the C.3 District shall require a minimum setback of one hundred feet (100') from exterior lot lines of the subdivision, or in the alternative, fifty feet (50'), which shall include a twenty foot (20') dense vegetative buffer and a fence of a type designed to shield the residential use from light and noise generated by a non-residential use. If the entire fifty feet (50') is maintained as a dense vegetative buffer, a fence is not required.
 - 4.5.2.7. All residential development within the C.3 District shall establish no-cut zones to protect required buffers, which shall be reflected on the plan and within property deeds for individual lots.
 - 4.5.2.8. The setbacks within [Section 4.5.2.2](#) shall be reduced by 50% within 500 feet of a property line abutting New Hampshire Route 102 within C.3W and for the entirety of C.3E.
 - 4.5.2.9. In District C.3W, there shall be a minimum setback of one hundred feet (100') from exterior perimeter property lines except those directly abutting New Hampshire Route 102, or in the alternative, fifty feet (50'), which shall include a twenty foot (20') dense vegetative buffer and a fence of a type designed to shield the abutting properties from light and noise. If the entire fifty feet (50') is maintained as a dense vegetative buffer, a fence is not required.
- 4.6. **Zone D - Industrial:** Industrial Districts are designed for industrial, office, truck repair and sales, warehouse, and wholesale business use.
- 4.6.1. Please refer to the Allowed Uses Table – ZONE D–INDUSTRIAL DISTRICT in [Article 14](#).
 - 4.6.2. Please refer to the Area and Dimensional Requirements in [Article 15](#).
- 4.7. **Zone E – Manufactured Housing:** Manufactured Housing districts are designed to permit a placement of Manufactured Housing other than in existing Manufactured Housing Parks in the Town of Raymond and other uses that are compatible with and protection of certain areas that have been and are being developed for water quality preservation, residential use, and public use. These shall include all lands bounded by New Hampshire Route 102 (Chester Road) on the west; New Hampshire Route 107 (Fremont Road) on the north; and the Exeter River on the south and east.
- 4.7.1. Zone E shall include all uses in Zone B, Manufactured Homes, and Manufactured Home Parks. Please refer to the Allowed Uses Table in [Article 14](#).
 - 4.7.2. Please refer to the Area and Dimensional Requirements in [Article 15](#).

4.8. **Zone F – Historic District:** Those uses in compliance with the Town of Raymond Historic District Regulations.

4.8.1. Please refer to the Area and Dimensional Requirements in [Article 15](#).

4.8.2. Please refer to [Section 5.1.1](#) for a list of HISTORIC DISTRICT PROPERTIES

4.9. **Zone G – Conservation District**

4.9.1. **PURPOSE:** In the interest of protecting the public health, safety, and general welfare by preserving the Town’s lakes, ponds, river systems, wetlands, and important local water resources for the benefit of all Town residents, this District is created for the following purposes:

4.9.1.1. Preserve sensitive wetlands, shore land and other water bodies that provide flood protection, augment stream flow during dry periods, absorb nutrients and contribute to the viability of the Town’s groundwater.

4.9.1.2. Protect the wetlands and water bodies that are close to high intensity development through restrictions such as limitations of certain land uses and buffering.

4.9.1.3. Protect wildlife habitat and maintain the ecological values referenced in NH [RSA483-A](#).

4.9.1.4. Limit development in areas where the natural features are not favorable for development.

4.9.1.5. Encourage those low-intensity uses that can be harmoniously and safely located in the wetland areas.

4.9.1.6. Preserve and enhance aesthetic values associated with our lakes, ponds, river systems and wetlands.

4.9.1.7. Encourage the preservation and/or restoration of Raymond’s Shoreland Protection Area as a natural vegetated shoreland buffer to filter sediment and pollutants from runoff and thus help protect the town’s water quality.

4.9.1.8. Discourage the following activities in Raymond's Shoreland Protection Area: any alteration of stream paths; landscaping; mowing; dumping of litter or trash, storage of grass clippings, leaves or snow; use of fertilizer and/or pesticides.

4.9.2. Please refer to the Area and Dimensional Requirements in [Article 15](#).

4.9.3. **DISTRICT BOUNDARIES:** The Conservation District is an Overlay District and is hereby defined as:

4.9.3.1. **SHORELAND PROTECTION AREA:** Is any area of land within seventy-five (75) feet of the seasonal high-water mark of any river, brook, ~~lake or pond, or intermittent or perennial stream, (03/24), pond, or lake as shown on the Water Resource Management Plan (3/2009).~~ Also includes any area of land within seventy five (75) feet of the high water mark of any river, brook, stream, pond, or lake having flowing or standing water for six (6) months of the year not included in Water Resource Management Plan (3/2009).

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4.9.3.2. STATE PROTECTED WATERS: The Exeter River, Lamprey River, Pawtuckaway River, Governor’s Lake, Onway Lake, Norton Pond, Dead Pond (a/k/a On Lamprey River), and Lamprey River Pond (a/k/a Dam in Ruins) fall within the jurisdiction of the Comprehensive Shoreland Protection Act (hereinafter “CSPA”) as amended from time to time; the CSPA requires that local permits for work within the protected shorelands be issued only when consistent with the policies of the statute. The above listed waters shall lie within the Conservation District Shoreland Protection Area, but the more stringent standards of the CSPA shall control over any conflicting local standards. To the extent that the list of waters subject to jurisdiction under the CSPA is amended from time to time, then such amendment will apply with equal force to the provisions of this section. (03/2009)

4.9.3.3. STEEP SLOPE: Any land deemed to be twenty-five percent (25%) or greater in slope for one hundred (100) continuous lineal feet according to the [Rockingham County Soil Survey Map, October, 1994](#)~~most current edition (03/24)~~ or any land twenty-five percent (25%) or greater in slope for one hundred (100) continuous lineal feet as determined by using the procedure described below in [Section 4.9.4.2](#) (Delineation of Steep Slope) and [Section 4.9.4.4](#) (Areas Incorrectly Delineated). (03/2000)

~~4.9.3.4.~~ POORLY DRAINED AND VERY POORLY DRAINED SOILS: Those areas identified as such in the [Rockingham County Soil Survey Map, -most current edition \(03/24\)](#) ~~October, 1994~~. Additionally, all areas of Federal or State of New Hampshire Jurisdictional Wetlands, not otherwise delineated as poorly or very poorly drained soils, shall be considered as very poorly drained soils for the purpose of this Ordinance.

~~4.9.3.4.4.9.3.5.~~ WETLAND SETBACK AREA: as defined in [Section 15.3.2.](#) (03/24)

4.9.4. PROCEDURAL REQUIREMENTS

4.9.4.1. DELINEATION OF WETLANDS: Location of a wetland boundary in a particular area must be determined by an on-site inspection. This data shall be prepared by a certified soil or wetland scientist using the following methodology: [Chapters Env-WT 100-800](#) of the NH Code of Administrative Rules; [Regional Field Indicators for Identifying Hydric Soils in New England](#), New England Interstate Water Pollution Control Commission (April 2004); [Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1](#), Environmental Laboratory, Dept. of the Army, 1987.

4.9.4.2. DELINEATION OF STEEP SLOPE: Except in the case where the [Rockingham County Soil Survey Map, most current edition \(03/24\)](#) ~~October 1994~~, confirmed the absence of steep slope, location of steep slope twenty-five (25%) or greater shall be determined through a topographical survey as prepared by a New Hampshire Licensed Professional.

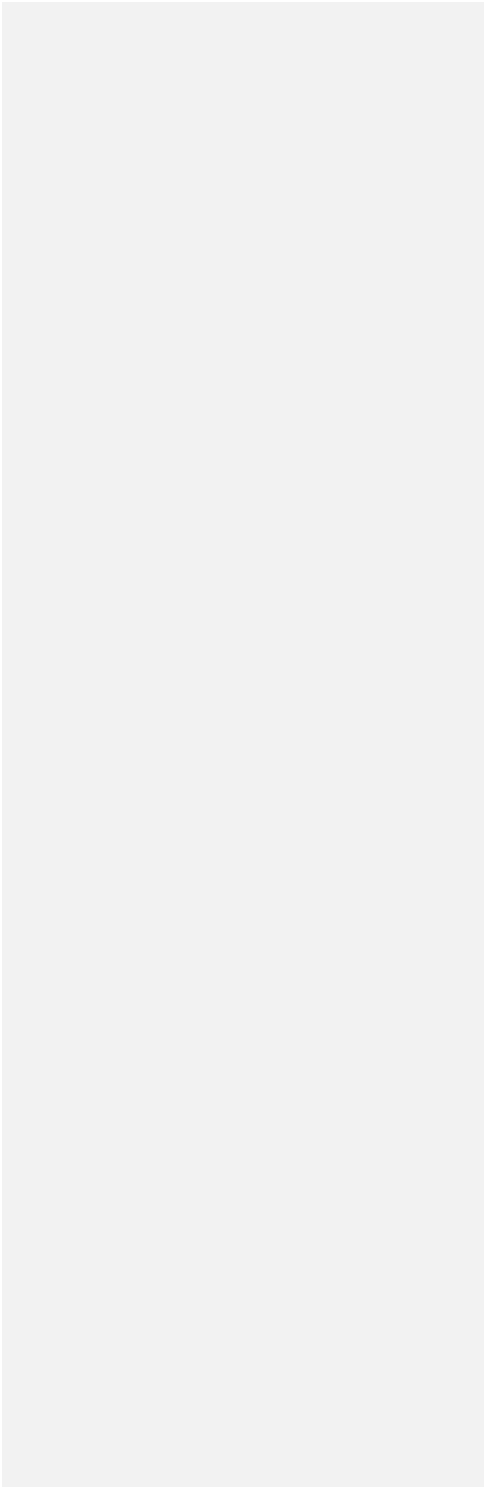
4.9.4.3. DELINEATION OF POORLY AND VERY POORLY DRAINED SOILS: The methodology to be used is described in the Site Specific Soil Mapping Standards for New Hampshire and Vermont, February 2011, prepared by the Society of Soil Scientists of Northern New England (SSSNE) Special Publication No. 3 as may be superseded and amended. This document can be found at <http://sssne.files.wordpress.com/2013/03/nh-vt.pdf>.

4.9.4.4. AREAS INCORRECTLY DELINEATED: Where it is alleged that an area has been incorrectly delineated as a wetland, shoreland protection area or steep slope, or that an area not so designated meets the criteria for such designation, the Planning Board shall determine whether the regulations contained herein apply. In making such a determination, the

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Planning Board may rely on the technical expertise of a qualified soil or wetlands scientist or other professional who shall conduct an on-site investigation of the area in question.



The Planning Board shall retain the right pursuant to NH [RSA 676:4, I\(g\)](#) to assess the expense of this determination to an applicant.

4.9.5. ALLOWED USES TABLE – CONSERVATION DISTRICT

LEGEND: P = Permitted
 ___SP = Special Permit required

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| Type of Use | Wetlands and Setbacks | | Shoreland Protection | Steep Slope |
|---|-----------------------|---------------------|----------------------|-------------|
| | Poorly Drained | Very Poorly Drained | | |
| Agriculture (no-till horticulture is exempt) | P | SP | SP | SP |
| Forestry/Tree Farming | P | P | P | P |
| Public Recreation Areas | P | SP | SP | SP |
| Conservation/Nature Trails | P | P | P | P |
| Open Space | P | P | P | P |
| Utilities | P | P | P | P |
| Buildings & Permanent Structures | SP | SP | SP | SP |
| Accessory Buildings & NON-Permanent Structures | SP | SP | SP | SP |
| Roads/Driveways/ROWs | SP | SP | SP | SP |
| Parking Lots | SP | SP | SP | SP |
| Expansion of Non-conforming Uses (up to 25% expansion only) | SP | SP | SP | SP |

4.9.6. SPECIAL PERMIT (SP):

- 4.9.6.1. The Planning Board may grant a Special Permit for specific uses identified as "SP" if the Board has made a finding of fact that the requested use is consistent with the purposes of the Conservation District and meets the specific criteria stated in [subsection 4.9.6.2](#) below.
- 4.9.6.2. In granting a Special Permit, the Planning Board shall ensure that the following standards have been met:
 - 4.9.6.2.1. A New Hampshire licensed civil engineer, or other appropriate New Hampshire licensed professional, shall provide a review of the design and construction methods for the proposed use.
 - 4.9.6.2.2. The Raymond Conservation Commission has reviewed and provided comments on the proposed use.
 - 4.9.6.2.3. Depending on the size of the proposed use and its impact, as determined by the Planning Board, the applicant may be required to prepare an Erosion Control Plan in order to minimize all detrimental impacts to wetland and shoreland resulting from the proposed use during and after construction.
 - 4.9.6.2.4. The applicant shall maintain the site as nearly as practical and possible to its original grade, shape, and appearance.

4.9.6.2.5. In accordance with NH [RSA 676:4I\(g\)](#) the applicant shall be responsible for the costs of any outside technical assistance that the Planning Board requires as part of its review of the proposed use.

4.9.6.3. SPECIAL PROVISIONS (03/2000)

- 4.9.6.3.1. The setback for a septic system, including the leach field, adjacent to a pond, lake or estuary shall be governed by the limitations contained in the Comprehensive Shoreland Protection Act, NH [RSA 483-B:9 V\(b\)\(2\)\(A\)](#).
- 4.9.6.3.2. In determining the minimum lot size for Zones A, C.1, C.2, D and E, no part of the minimum lot size shall include areas identified as being in the Shoreland Protection Area.
- 4.9.6.3.3. Uses which are not allowed, but existing at the time of the adoption of this amendment may be continued, but may only be expanded by Special Permit.

ARTICLE 5: OVERLAY DISTRICTS

5.1 Zone F - Historic District

5.1.1. Zone F shall include the following parcels of land and buildings:

| Tax Map | Lot | Address | Common Reference |
|---------|-----|-----------------------------------|----------------------------------|
| 23-0 | 60 | 10 Old Fremont Road | The Bean Tavern |
| 27-2 | 29 | 10 Main Street | Former Severance Property |
| 27-2 | 30 | 12 Main Street | Former Cobbler Shop (03/2001) |
| 27-2 | 55 | 7 Main Street | Maclaren Residence (03/2001) |
| 28-1 | 47 | 28 Main Street | Former Welch Oil Co. (03/2001) |
| 28-3 | 58 | 1 Old Manchester Road | Former Doctor's Office |
| 28-3 | 59 | Main Street & Old Manchester Road | Jewett Elderly Housing (03/2001) |
| 28-3 | 68 | 51 Main Street | Methodist Church (03/2001) |
| 28-3 | 79 | 2 Epping Street | Brewitt Funeral Home |
| 28-3 | 80 | 4 Epping Street | Town Office Complex |
| 28-3 | 81 | 8 Epping Street | Sovereign Bank |
| 28-3 | 82 | Epping & Main Streets | Town Common |
| 28-3 | 86 | 9 Epping Street | Pilgrim Inn Apartments (03/2000) |
| 28-3 | 88 | 5 Church Street | Congregational Church (03/2000) |
| 28-3 | 89 | Church Street | Howard Buildings (03/2000) |
| 28-3 | 90 | 56 Main Street | Howard Buildings (03/2000) |
| 28-3 | 91 | 58 Main Street | Howard Buildings (03/2000) |
| 28-3 | 95 | Main Street | Former Railroad Depot |

5.2. Groundwater Conservation Overlay District

- 5.2.1. AUTHORITY: The Town of Raymond hereby adopts this Ordinance pursuant to the authority granted, under [RSA 674:16, II](#) relative to innovative land use controls.
- 5.2.2. PURPOSE: The purpose of this Ordinance is, in the interest of public health, safety, and general welfare, to preserve, maintain, and protect from contamination existing and potential groundwater supply areas and to protect surface waters that are fed by groundwater. The purpose is to be accomplished by regulating land uses which could contribute pollutants to designated wells and/or aquifers identified as being needed for present and/or future public water supply.
- 5.2.3. DESCRIPTION: The Groundwater Conservation District is an Overlay District which is superimposed over the existing underlying zoning and includes within its boundaries the Wellhead Protection Areas identified in the Town’s Wellhead Protection Program dated May, 1992 and the Town’s Source Water Protection Plan dated November, 2009 and as may be designated by NH Department of Environmental Services (NH DES), including those areas currently identified as GAA, GA1 and GA2 and the Stratified Drift Aquifer(s) shown on the map entitled “Combined Aquifer, Surficial Geology and Wellhead Protection Areas” dated February 2009 (Map 4) included in the Town of Raymond’s Source Water Protection Plan dated November, 2009 and as may be amended from time to time by the Raymond Planning Board¹. Copies of these reports and maps shall be kept on file with the Raymond Community Development Department.

5.2.4. DEFINITIONS

- 5.2.4.1. AQUIFER: A geologic formation composed of rock, sand or gravel that contains significant amounts of potentially recoverable water.
- 5.2.4.2. “GAA”: Means “GAA” as defined in [RSA 485-C:5,J](#), namely “groundwater in this class is within the wellhead protection area for wells which presently are used or well sites which have been identified for future use as drinking water supply for public water systems.”
- 5.2.4.3. “GA1”: Means “GA1” as defined in [RSA 485-C:5,J](#), namely “groundwater in a defined zone of high value for present or future drinking water supply.”
- 5.2.4.4. “GA2”: Means “GA2” as defined in [RSA 485-C:5,J](#), namely “groundwater within aquifers identified as highly productive for potential use as a public water supply by the U.S. Geological Survey regional groundwater studies, or other regional studies.”
- 5.2.4.5. GASOLINE STATION: Means that portion of a property where petroleum products are received by tank vessel, pipeline, tank car, or tank vehicle and distributed for the purposes of retail sale of gasoline.

5.2.4.6. GROUNDWATER: Subsurface water that occurs beneath the water table in soils and geologic formations.

5.2.4.7. IMPERVIOUS: Not readily permitting the infiltration of water.

5.2.4.8. IMPERVIOUS SURFACE: A surface through which regulated substances cannot pass when spilled. Impervious surfaces include concrete unless unsealed cracks or holes are present.

¹ The boundaries of Map 4 entitled Combined Aquifer, Surficial Geology, and Wellhead Protection Areas is represented as Official Zoning 2012 Map B.

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Asphalt; earthen, wooden, or gravel surfaces; or other surfaces which could react with or dissolve when in contact with the substances stored on them are not considered impervious for the express purpose of retaining the regulated substances, however these surfaces are considered impervious for the calculation of stormwater impacts and other regulatory calculations separate from the retention of spills. (03/24)

~~5.2.4.6.~~

~~5.2.4.7. IMPERVIOUS: Not readily permitting the infiltration of water.~~

~~5.2.4.8. IMPERVIOUS SURFACE: A surface through which regulated substances cannot pass when spilled. Impervious surfaces include concrete unless unsealed cracks or holes are present. Asphalt; earthen, wooden, or gravel surfaces; or other surfaces which could react with or dissolve when in contact with the substances stored on them are not considered~~

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~~impervious.~~

5.2.4.9. JUNKYARD: An establishment or place of business which is maintained, operated, or used for storing, keeping, buying, or selling junk, or for the maintenance or operation of an automotive recycling yard, and includes garbage dumps and sanitary landfills. The word does not include any motor vehicle dealers registered with the director of motor vehicles under [RSA 261:104](#) and controlled under [RSA 236:126](#).

5.2.4.10. OUTDOOR STORAGE: Storage of materials where they are not protected from the elements by a roof, walls, and a floor with ~~an a surface~~ impervious ~~to regulated substances.~~ ~~(03/24)~~ ~~surface.~~

5.2.4.11. PETROLEUM BULK PLANT or TERMINAL: Means that portion of the property where petroleum products are received by tank vessel, pipeline, tank car, or tank vehicle and are stored or blended in bulk for the purpose of distributing such liquids by tank vessel, pipeline tank car, tank vehicle, portable tank, or container.

5.2.4.12. PUBLIC WATER SYSTEM: A system for the provision to the public of piped water for human consumption, if such system has at least fifteen (15) service connections or regularly serves an average of at least twenty-five (25) individuals daily at least sixty (60) days out of the year.

5.2.4.13. REGULATED SUBSTANCE: Petroleum, petroleum products, and substances listed under 40 CFR 302, 7-1-05 edition, excluding the following substances: (1) ammonia, (2) sodium hypochlorite, (3) sodium hydroxide, (4) acetic acid, (5) sulfuric acid, (6) potassium hydroxide, (7) potassium permanganate, and (8) propane and other liquefied fuels which exist as gases at normal atmospheric temperature and pressure.

5.2.4.14. SANITARY PROTECTIVE RADIUS: The area around a well which must be maintained in its natural state as required by [Env-Dw 301](#) or [Env-Dw 302](#) (for community water systems) and [Env-Ws 373.12](#) and [Env-Ws 372.14](#) (for other public water systems).

5.2.4.15. SECONDARY CONTAINMENT: A structure such as a berm or dike with ~~an a surface~~ impervious ~~to regulated substances~~ ~~surface~~ which is adequate to hold at least one-hundred ten percent (110%) of the volume of the largest regulated-substances container that will be stored there. ~~(03/24)~~

5.2.4.16. SNOW DUMP: For the purposes of this Ordinance, a location where snow which is cleared from roadways and/or motor vehicle parking areas is placed for disposal.

5.2.4.17. SOURCEWATER: Ground water or surface water, in its natural state, prior to any treatment for drinking.

~~5.2.4.18.~~ STRATIFIED DRIFT AQUIFER: A geologic formation of predominantly well-sorted sediment deposited by or in bodies of glacial melt water, including gravel, sand, silt, or clay, which contains sufficient saturated permeable material to yield significant quantities of water to wells.

~~5.2.4.18, 5.2.4.19.~~ SURFACE WATER: Streams, lakes, ponds, and tidal waters, including marshes, water courses and other bodies of water, natural or artificial.

~~5.2.4.19.~~ SURFACE WATER: Streams, lakes, ponds, and tidal waters, including marshes, water courses and other bodies of water, natural or artificial.

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~~†The boundaries of Map 4 entitled Combined Aquifer, Surficial Geology, and Wellhead Protection Areas is represented as Official Zoning 2012 Map B.~~

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5.2.4.20. WELLHEAD PROTECTION AREA: The surface and subsurface area surrounding a water-well or well field supplying a community public water system, through which contaminants are reasonably likely to move toward and reach such water-well or well field.

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~~5.2.4.20.~~ 5.2.4.21. WETLAND BUFFER: Wetland buffer or wetland setback means a designated area contiguous or adjacent to a wetland that is required for the continued maintenance, function, and ecological stability of the wetland. (03/24)

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5.2.5. APPLICABILITY: This Ordinance applies to all uses in the Groundwater Conservation District, except for those uses exempt under [Section 5.2.13](#) of this Ordinance.

5.2.6. PERFORMANCE STANDARDS: The following Performance Standards apply to all uses in the Groundwater Conservation District unless exempt under [Section 5.2.13](#):

5.2.6.1. For any use that will render impervious more than fifteen percent (15%) or more than 2,500 square feet of any lot, whichever is less, a stormwater management plan shall be prepared which the Planning Board determines is consistent with the [New Hampshire Stormwater Manual: Volume I - Stormwater and Antidegradation](#); [Volume II - Post-Construction Best Management Practices Selection and Design](#) and; [Volume III - Erosion and Sediment Controls During Construction](#), NH Department of Environmental Services, December 2008.

5.2.6.2. Conditional Uses, as defined under [Section 5.2.11](#) of this Ordinance shall develop stormwater management and pollution prevention plans and include information consistent with the handbook entitled [Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices](#) (US EPA, 1992). The plan shall demonstrate that the use will:

5.2.6.2.1. Minimize through a source control plan that identifies pollution prevention measures, the release of regulated substances into stormwater;

5.2.6.2.2. Demonstrate that recharge to groundwater will not result in violation of Ambient Groundwater Quality Standards ([Env-Ws 410.05](#)) at the property boundary;

5.2.6.2.3. Stipulate that expansion or redevelopment activities shall require an amended stormwater plan and shall not infiltrate stormwater through areas containing contaminated soils without completing a Phase I Assessment in conformance with ASTM E 1527-05, also referred to as All Appropriate Inquiry (AAI).

5.2.6.2.4. Animal manures, fertilizers, and compost must be stored in accordance with the [Manual of Best Management Practices for Agriculture in New Hampshire](#), NH Department of Agriculture, Markets, and Food (June 2011), and subsequent revisions.

5.2.6.2.5. All regulated substances stored in containers with a capacity of more than 5 gallons must be stored in product-tight containers on ~~an~~ a surface

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impervious ~~to regulated substances~~ surface designed and maintained to prevent flow to exposed soils, floor drains, and outside drains. ~~(03/24)~~

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- 5.2.6.2.6. Facilities where regulated substances are stored must be secured against unauthorized entry by means of a door(s) and/or gate(s) which are locked when authorized personnel are not present and must be inspected weekly by the facility owner.
 - 5.2.6.2.7. Outdoor storage areas for regulated substances, associated material or waste must be protected from exposure to precipitation and must be located at least 75 feet from surface water or storm drains, wetlands, private wells and outside the sanitary protective radius of wells used by public water systems.
 - 5.2.6.2.8. Secondary containment must be provided for outdoor storage of regulated substances if an aggregate of more than 275 gallons of regulated substances are stored outdoors on any particular property.
 - 5.2.6.2.9. Containers in which regulated substances are stored must be clearly and visibly labeled and must be kept closed and sealed when material is not being transferred from one container to another.
 - 5.2.6.2.10. Prior to any land disturbing activities, all inactive wells on the property, not in use or properly maintained at the time the plan is submitted, shall be considered abandoned and must be sealed in accordance with We 604 of the New Hampshire Water Well Board Rules.
- 5.2.7. SPILL PREVENTION, CONTROL AND COUNTERMEASURE (SPCC) PLAN: Conditional Uses, as described under [Section 5.2.11](#) of this Ordinance shall submit a spill control and countermeasure (SPCC) plan to the Technical Review Committee (TRC) who shall determine whether the plan will prevent, contain, and minimize releases from ordinary or catastrophic events such as spills, floods or fires that may cause large releases of regulated substances. It shall include:
- 5.2.7.1. A description of the physical layout and a facility diagram, including all surrounding surface waters and wellhead protection areas;
 - 5.2.7.2. Contact list and phone numbers for the facility response coordinator, cleanup contractors, and all appropriate federal, state, and local agencies who must be contacted in case of a release to the environment;
 - 5.2.7.3. A list of all regulated substances in use and locations of use and storage;
 - 5.2.7.4. A prediction of the direction, rate of flow, and total quantity of regulated substance that could be released where industry experience indicates a potential for equipment failure;
 - 5.2.7.5. A description of containment and/or diversionary structures or equipment to prevent regulated substances from infiltrating into the ground; and
 - 5.2.7.6. Emergency response plan describing and assigning responsibilities and actions to be taken.
- 5.2.8. REPORT OF RESOLUTION: Upon resolution of the response to a spill, the organization responsible

for the premises shall provide a complete Report of Resolution to the Raymond TRC outlining actions taken and clearances provided by pertinent local, state, and federal agencies.

5.2.9. PERMITTED USES: All uses permitted by right or allowed by special exception in the underlying district are permitted in the Groundwater Conservation District unless they are Prohibited Uses or Conditional Uses. All uses must comply with the Performance Standards unless specifically exempt under [Section 5.2.13](#).

5.2.10. PROHIBITED USES: The following uses are prohibited in the Groundwater Conservation District:

5.2.10.1. The siting or operation of a hazardous waste disposal facility as defined under [RSA 147-A](#);

5.2.10.2. The siting or operation of a solid waste landfill;

5.2.10.3. The siting or operation of a junkyard;

5.2.10.4. The siting of a snow dump;

5.2.10.5. The siting or operation of a wastewater or septage lagoon;

5.2.10.6. The siting or operation of a sludge monofil or sludge composting facility;

5.2.10.7. The siting or operation of a petroleum bulk plant or terminal (03/23);

5.2.10.8. The siting or operation of gasoline stations (03/23);

5.2.10.9. The storage of commercial fertilizers, unless such commercial fertilizer storage is within a structure designed to prevent the generation and escape of runoff or leachate and is in compliance with the standards of section 5.2.7, and the outdoor storage of road salt or other de-icing chemicals in bulk (03/23).

5.2.11. CONDITIONAL USES: The issuance of a Conditional Use Permit is subject to Site Plan Approval by the Planning Board. The Planning Board may grant a Conditional Use Permit for a use that is otherwise permitted within the underlying district, if the permitted use is or is involved in one or more of the following:

5.2.11.1. Storage, handling, and use of regulated substances in quantities exceeding 100 gallons or 800 pounds dry weight at any one time, provided that an adequate spill prevention, control and countermeasure (SPCC) plan prepared in accordance with [Section 5.2.7](#) by a qualified professional, submitted to the Technical Review Committee for review and approval, with the final plan also submitted to the Raymond Fire Department and the Raymond Community Development Department for its records. The Technical Review Committee may employ the services of a qualified peer review professional to review the plan at the applicant's expense.

5.2.11.2. Any use that will render impervious more than 15% or 2,500 square feet of any lot, whichever is greater.

5.2.11.3. In granting such approval the Planning Board must first determine that the proposed use is not a prohibited use and will be in compliance with the Performance Standards as well as all applicable local, state, and federal requirements. The Planning Board may, at its

discretion, require a performance guaranty or bond, in an amount and with surety conditions satisfactory to the Board, to be posted to ensure completion of construction of any facilities required for compliance with the Performance Standards. The amount of this bond shall be in addition to any other bond required by the Board under either the Subdivision or Site Plan Review Regulations.

- 5.2.12. EXISTING NON-CONFORMING USES: Existing nonconforming uses may continue without expanding or changing to another nonconforming use, but must be in compliance with all applicable state and federal requirements, including [Env-Ws 421](#), Best Management Practices Rules. However, under no circumstances will a nonconforming use be permitted when a continuance of that use presents a risk to public health and/or safety.
- 5.2.13. EXEMPTIONS: The following uses are exempt from the specified provisions of this ordinance as long as they are in compliance with all applicable local, state, and federal requirements:
 - 5.2.13.1. Any private residence is exempt from all Performance Standards.
 - 5.2.13.2. Any business or facility where regulated substances are stored in containers with a capacity of five (5) gallons or less is exempt from Performance Standards [Sections 5.2.6.2.6](#) through [5.2.6.2.9](#).
 - 5.2.13.3. Storage of heating fuels for on-site use or fuels for emergency electric generation, provided that storage tanks are indoors on a concrete floor or have corrosion control, leak detection, and secondary containment in place, is exempt from Performance Standards [Section 5.2.6.2.6](#).
 - 5.2.13.4. Storage of motor fuel in tanks attached to vehicles and fitted with permanent fuel lines to enable the fuel to be used by that vehicle is exempt from Performance Standards [Section 5.2.6.2.6](#) through [5.2.6.2.9](#).
 - 5.2.13.5. Storage and use of office supplies is exempt from Performance Standards [Section 5.2.6.2.6](#) through [5.2.6.2.9](#).
 - 5.2.13.6. Temporary storage of construction materials on a site where they are to be used is exempt from Performance Standards [Section 5.2.6.2.6](#) through [5.2.6.2.9](#).
 - 5.2.13.7. The sale, transportation, and use of pesticides as defined in [RSA 430:29 XXVI](#) are exempt from all provisions of this Ordinance.
 - 5.2.13.8. Household hazardous waste collection projects regulated under NH Code of Administrative Rules [Env-Wm 401.03\(b\)\(1\)](#) and [501.01\(b\)](#) are exempt from Performance Standards [Section 5.2.6.2.6](#) through [5.2.6.2.9](#).
 - 5.2.13.9. Underground storage tank systems and above ground storage tank systems that are in compliance with applicable state rules are exempt from inspections under [Section 5.2.16](#) of this ordinance.
- 5.2.14. AMENDMENTS TO MAP: The Planning Board, after a public hearing held in accordance with [RSA 675:6](#), may revise the “Combined Aquifer, Surficial Geology and Wellhead Protection Areas” map, as may be recommended from time to time by the New Hampshire Department of Environmental Services.

5.2.15. RELATIONSHIP BETWEEN STATE AND LOCAL REQUIREMENTS: Where both the State and the municipality have existing requirements the more stringent shall govern.

5.2.16. MAINTENANCE AND INSPECTION

5.2.16.1. For uses requiring planning board approval for any reason, a narrative description of maintenance requirements for structures required to comply with Performance Standards shall be recorded so as to run with the land on which such structures are located, at the Registry of Deeds for Rockingham County. The description so prepared shall comply with the requirements of [RSA 478:4-a](#).

5.2.16.2. Inspections may be required to verify compliance with Performance Standards. Such inspections shall be performed by the Director of Public Works or designee at reasonable times with prior notice to the landowner.

5.2.16.3. All properties within the Groundwater Conservation District known to be using or storing regulated substances in containers with a capacity of greater than 5 gallons, except for facilities where all regulated substance storage is exempt from this Ordinance under [Section 5.2.13](#), shall be subject to inspections under this Section.

5.2.16.4. The Board of Selectmen may require a fee for compliance inspections. The fee shall be paid by the property owner. A fee schedule shall be established by the Board of Selectmen as provided for in [RSA 41:9-a](#).

5.2.17. ENFORCEMENT PROCEDURES AND PENALTIES: Any violation of the requirements of this ordinance shall be subject to the enforcement procedures and penalties detailed in [NH RSA 676](#).

5.2.18. SAVING CLAUSE: If any provision of this ordinance is found to be unenforceable, such provision shall be considered separable and shall not be construed to invalidate the remainder of the Ordinance.

5.2.19. EFFECTIVE DATE: This ordinance shall be effective upon adoption by the municipal governing body.

5.3. ~~Sewer Overlay District (Removed March 2021)~~

5.4. ~~Mixed Use Business Campus Overlay District (Removed March 2024)~~ (03/2007) INTENT: The purposes of the Mixed Use Business Campus Overlay District (MUBCOD) are:

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5.4.1. ~~To provide areas in the Town of Raymond which encourage the voluntary development of business office campuses containing a wide range of office uses and which provide the opportunity for ancillary uses compatible with the needs of each business campus proposal, where such office and/or ancillary uses may not otherwise be permitted in the underlying zones;~~

5.4.2. ~~To promote the creation of quality business campuses which contain a combination of open space, conservation, recreation and/or agricultural uses and which will help to create a pleasing working environment and preserve important historic and natural features of the land;~~

5.4.3. ~~To contribute to the Town's economic vitality by providing employment opportunities and broadening the Town's tax base.~~

5.4.4. Furthermore, the MUBCOD is designed to foster economic development of primarily office business campus development while allowing ancillary uses limited to the following: hotel/motel, cafeteria, restaurant, daycare center, adult daycare center, testing labs, research labs, light manufacturing, and warehouse establishments.

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5.4.5. PERMITTED USES: Any use shown as a Permitted Use in the MUBCOD in the Allowed Uses Table in [Article 14](#) shall be permitted in this district.

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5.4.5.1. PROHIBITED USES: Any use not listed or shown as permitted in the Allowed Uses Table in [Article 14](#) shall be prohibited in this district.

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5.4.5.2. DISTRICT BOUNDARIES: The MUBCOD is hereby defined as consisting of any properties within the Town of Raymond which meet the eligibility criteria set forth in [Section 5.4.7](#) below.

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5.4.6. DEFINITION OF TERMS:

5.4.6.1. AGRICULTURE: For purposes of this section, the use of land for agricultural purposes, including farming, dairying, pasturage, agriculture, horticulture, floriculture, biticulture and animal and poultry husbandry and the necessary accessory uses for packing, treating or storing the produce; provided, however, that the operation of any such accessory uses shall be secondary to that of the normal agricultural activities. The operation of commercial feed pens, sales yards and auction yards for cattle, hogs or other livestock is not an agricultural use for purposes of the MUBCOD.

5.4.6.2. ANCILLARY USE: An Ancillary Use is an activity or use on the developable land of the MUBCOD that supports an Office Establishment. Allowed ancillary uses are as follows: hotel/motel, cafeteria, restaurant, daycare center, adult daycare center, testing labs, research labs, light manufacturing, and warehouse establishments. Ancillary Uses may be enjoyed by members of the public as well as individuals affiliated with the office use(s) within the MUBCOD.

5.4.6.3. BUSINESS CAMPUS: For the purposes of this section, a business campus is a development on the developable land consisting of one or more buildings primarily devoted to office establishments. The objective of a business campus is to create a work environment consisting of office space and ancillary uses.

5.4.6.4. CONSERVATION SPACE: For purposes of this section, Conservation Space shall mean the use of land for the protection, preservation, management, or restoration of wildlife and of natural resources such as forests, soil, and water. Conservation land shall be created under this section by submitting the land to restrictive covenants, or to a conservation easement or to the Town of Raymond with development restrictions.

5.4.6.5. OFFICE ESTABLISHMENT: For purposes of this section, Office Establishment shall mean a building or buildings used for business offices and/or by those providing professional services, such as engineers, doctors, bankers, buyers, realtors, and insurance agents.

5.4.6.6. OPEN SPACE: For purposes of this section, Open Space shall mean the preservation of land with no buildings or improvements except walking trails. Open space land shall be created under this section by submitting the land to restrictive covenants, or to a conservation easement or to the Town of Raymond as open space with development

~~restrictions.~~

~~5.4.6.7. RECREATION: The use of land for recreational purposes, including but not limited to playgrounds, sport fields, game courts, beaches, trails, picnicking areas, and leisure time activities and accessory structures or improvements that directly support the accessory use as approved by the Planning Board.~~

~~5.4.7. DEVELOPMENT STANDARDS: If a property owner elects to propose a development pursuant to the terms of this Ordinance, then the proposed development shall conform to the following development standards:~~

~~5.4.7.1. The minimum initial lot size (prior to any subdivision) to qualify for inclusion in the MUBCOD is forty (40) acres. Lots may be assembled to create the forty (40) acre minimum parcel for inclusion in the MUBCOD.~~

~~5.4.7.2. Forty percent (40%) of the initial lot size shall be set aside for conservation, recreation, agriculture, or open space uses; said uses may include baseball, track, soccer, tennis, basketball, and other team sports as well as walking paths and/or agricultural use. The remaining sixty percent (60%) shall be the developable land.~~

~~5.4.7.3. The applicant shall determine whether the property is set aside for conservation, recreation, agriculture or open space or any combination thereof.~~

~~5.4.7.4. The property set aside shall be made accessible to all lots which may be subdivided out of the initial lot.~~

~~5.4.7.5. To qualify as a proposed development in the MUBCOD, the proposed development must have accessible frontage on a New Hampshire State Route, excluding limited access highways or portions thereof.~~

~~5.4.7.6. The proposed development must be served by the Town of Raymond Water Department.~~

~~5.4.7.7. At least sixty seven percent (67%) of the developable land shall be devoted to Office Establishment. The remaining percentage of the developable land may be devoted to Ancillary Use.~~

~~5.4.8. DIMENSIONAL STANDARDS: Setbacks for proposed structures to the exterior lot line shall be one hundred (100) feet whenever the MUBCOD is either located within, or directly abutting, residentially zoned areas, whether currently developed or not. In all other cases, the structure setbacks and dimensional standards in the underlying zone shall be observed.~~

~~5.4.9. APPLICABILITY OF OTHER ORDINANCES: Unless otherwise specified within this section, the regulations of the underlying zoning districts and other Town Ordinances shall be applicable to all properties within the MUBCOD.~~

~~5.4.10. SPECIAL PROVISIONS:~~

~~5.4.10.1. COMPLIANCE PLAN DEVELOPMENT: All proposed development submitted pursuant to the terms of this Ordinance must take place in accordance with a Business Park Development Compliance Plan (Plan) approved by the Planning Board. The Plan must show at least sixty seven percent (67%) of the developable land of the Business Campus~~

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~~devoted to Office Use. The intent of this Ordinance is that all other uses support the Office Establishment as Ancillary Uses. The submission of a Business Park Development Compliance Plan shall not be a substitute for site plan review. A complete site plan review application shall be submitted in accordance with the Raymond Site Plan Review Regulations in addition to any approved Business Park Development Compliance Plan. The Plan shall include, at a minimum, the following information:~~

~~5.4.10.1.1. The owners of record of the parcel or parcels to be combined, clearly indicating their ownership tracts, acreage, property bounds, easements which burden the parcel or parcels, and easements either on the property or off the property which benefit the parcel;~~

~~5.4.10.1.2. Existing conditions of the parcel to include topography, and natural or historical features, scenic views, or other important features making the property unique in its appearance and or setting, any buildings or other structures in existence or previously approved for construction;~~

~~5.4.10.1.3. A conceptual layout of the proposed development showing proposed uses, square footages of buildings and improvements, in sufficient detail to clearly demonstrate the proposal's compliance with the sixty-seven/thirty-three (67/33) percentage split for Office and Ancillary Uses;~~

~~5.4.10.1.4. Actual calculations of the proposed building square footages and lot sizing to demonstrate the development's compliance with the base lot size minimum of forty (40) acres, conservation/recreation/agricultural set aside areas, and development minimum percentage requirements of the MUBCOD. Access to and availability of Town Water Service shall be demonstrated by written approval of the Raymond Water Department; and~~

~~5.4.10.1.5. The Plan information shall be provided on multiple sheets in order that the information is clearly delineated and easily understood.~~

~~5.4.10.1.6. Once the development standards set forth in [Section 5.4.7](#) are met, then the land shown on the Business Park Development Compliance Plan may be subdivided, providing that the proposed subdivision complies with the Subdivision Regulations and providing that the following conditions are met:~~

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~~5.4.10.1.7. An association of lot owners or condominium unit owners shall be formed for the perpetual maintenance and certification of continued compliance with approvals granted, including, but not limited to, all conservation and open space areas, private road networks, utilities, recreational spaces, and or any other commonly owned property within the MUBCOD.~~

~~5.4.10.1.8. Each separate lot created must front on an approved road network, whether the road is public or private, as shown on the approved subdivision plan.~~

~~5.4.10.1.9. Each lot created must have not less than fifty (50) feet of accessible road frontage.~~

~~5.4.10.1.10. Each lot shall be served by the Raymond Town Water System.~~

~~5.4.10.1.11. Each lot shall be a maximum of two (2) acres in size for Ancillary Uses and not less than five (5) acres in size for Office Establishment.~~

5.5. Elderly Housing Overlay District

- 5.5.1. INTENT: This article is established to provide an overlay zoning district within which elderly housing shall be a permitted use. It is declared to be in the public interest and general welfare of the Town of Raymond to encourage a diverse mixture of ages in the general population and to encourage the development of housing for the elderly. The Elderly Housing Overlay Zoning District is designed to establish minimum development standards to ensure that the needs of the elderly are met, to provide locations for elderly housing projects which are compatible with the needs of the elderly, and to encourage housing for the elderly by permitting an increased density above that which is allowed in the underlying zone. This Overlay Zone is designed to provide for the existence of facilities and services specifically designed to meet the physical, social and economic needs of older persons as opposed to any other residential use. The principal use of land may be for one or several building types ranging from independent senior housing, assisted living facility, congregate care, adult retirement community, and active adult community. The form of the unit can consist of attached or detached dwelling(s), with ownership including, but not limited to, condominium, or fee simple.
- 5.5.2. FAIR HOUSING ACT COMPLIANCE: Any housing development under this section must be established and operated in compliance with the [Fair Housing Act](#) as amended, 42 USC Sec. 3601 et seq. The Planning Board may require assurance of compliance with the Act by deed restriction, covenants, or other instruments as a condition of approval.
- 5.5.3. ADDITIONAL REVIEW: The Elderly Housing Overlay District shall require, pursuant to the provisions of the Site Review Regulations and Subdivision Regulations, site review and/or subdivision approval as appropriate.
- 5.5.4. FINDING: The Planning Board finds that the standards set forth herein, including the location of the overlay district, and the minimum standards which govern elderly housing developments, are chosen to further the goal of encouraging elderly housing which meets the needs of the elderly. As a result, any requests for use variances or variances from the minimum standards set forth herein are discouraged.
- 5.5.5. DEFINITIONS
 - 5.5.5.1. ACTIVE ADULT HOUSING: As its name suggests, Active Adult Housing (AAH) describes a category of residences that is both independent of full-time staff support and age restrictive. Housing that is specifically targeted to occupants' age fifty-five (55) years and older.

- 5.5.5.2. ADULT RETIREMENT COMMUNITY: A planned residential development for occupancy of person(s) fifty-five (55) years of age and older that emphasizes social and recreational activities but may also provide personal services, limited health facilities, and transportation.
- 5.5.5.3. ASSISTED LIVING FACILITY: Dwelling Units for occupancy of person(s) sixty-two (62) years of age and older where rooms, meals, personal care, and supervision of self-administered medication are provided. Other services may be provided as an accessory use only, such as recreational activities, financial services, and transportation.
- 5.5.5.4. BEDROOM: A room primarily intended for sleeping which has an interior door, closet, and means of egress window.
- 5.5.5.5. CONGREGATE CARE FACILITY: Units for occupancy of person(s) sixty-two (62) years of age or older where communal dining facilities and services such as housekeeping, organized social and recreational activities, transportation services, and other support services appropriate for the occupants are provided.
- 5.5.5.6. DWELLING UNIT: For the purpose of [Section 5.5](#), the term Dwelling Unit shall mean:
 - 5.5.5.6.1. For active adult housing, adult retirement community, assisted living facility, one or more bedrooms providing complete separate living facilities for the use of one or more persons constituting a single housekeeping unit, with permanent provisions for living, sleeping, eating, cooking and sanitation;
 - 5.5.5.6.2. For congregate care, cooking and eating facilities are optional; however, the unit shall in all other respects constitute a single housekeeping unit.
- 5.5.5.7. ELDERLY HOUSING DEVELOPMENT: Shall consist of active adult housing, adult retirement communities, congregate care facilities, assisted living facilities and ancillary facilities as defined and allowed under the provisions of this Ordinance.
- 5.5.5.8. HOUSEHOLD MEMBER: A person who occupies a dwelling unit in an active adult or adult retirement elderly housing development.
- 5.5.5.9. OCCUPANT: The term occupant shall mean any person(s) residing in a dwelling unit who meets the requirements of [Section 5.5.11](#).
- 5.5.5.10. QUALIFYING HOUSEHOLD MEMBER: For active adult and adult retirement development projects, a household member who meets the requirements of the elderly housing development and occupies an elderly housing dwelling unit.

- 5.5.6. PURPOSE: To provide standards for the location and development of appropriate sites within the Town for the following uses as more fully described herein:
 - 5.5.6.1. Active Adult Community

5.5.6.2. Adult Retirement Community

5.5.6.3. Assisted Living Facility

5.5.6.4. Congregate Care Facility

5.5.7. LOCATION OF ELDERLY HOUSING OVERLAY DISTRICT: Elderly Housing Developments shall be an “allowed use” in the following Zoning Districts:

5.5.7.1. Zone A (Residential)

5.5.7.2. Zone B (Residential/Agricultural)

5.5.7.3. Zone C.2 (Commercial/Residential)

5.5.7.4. Zone E (Manufactured Housing)

5.5.8. SPECIAL EXCEPTION: Elderly Housing Developments may be allowed in the following Zoning Districts by “Special Exception”:

5.5.8.1. Zone F (Historic): Prior to scheduling a public hearing on the request for special exception, the Zoning Board of Adjustment shall request that the Historic District Commission review and comment on the special exception request.

5.5.8.2. The Groundwater Conservation Overlay District ([Section 5.2](#)): Prior to scheduling a public hearing on the request for special exception, the Zoning Board of Adjustment shall request that the Conservation Commission review and comment on the special exception request.

5.5.9. PROHIBITION: Elderly Housing shall NOT be permitted in any of the following Zones:

5.5.9.1. Zone C.1 (Commercial)

5.5.9.2. Zone D (Industrial)

5.5.9.3. Zone G (Conservation District)

5.5.10. USES PERMITTED WITHIN ELDERLY HOUSING OVERLAY DISTRICT:

5.5.10.1. ACTIVE ADULT COMMUNITY: At least eighty percent (80%) of the dwelling units must be occupied by at least one person who is fifty-five (55) years or older.

5.5.10.2. ADULT RETIREMENT COMMUNITY: At least eighty percent (80%) of the dwelling units must be occupied by at least one person who is fifty-five (55) years or older.

5.5.10.3. ASSISTED LIVING FACILITIES: Occupants of these dwelling units must be sixty-two (62) years or older.

- 5.5.10.4. CONGREGATE CARE FACILITIES: Occupants of these dwelling units must be sixty-two (62) years or older.
- 5.5.10.5. Ancillary facilities as accessory uses supportive of the primary elderly overlay use.
- 5.5.10.6. Any elderly housing development may contain one or more types of the above-described housing. However, if a proposed development contains one or more types, then each type will be segregated from the other to ensure compliance with the age restrictions for dwelling units set forth above.
- 5.5.11. OCCUPANCY ELIGIBILITY FOR DWELLING UNITS WITHIN ELDERLY HOUSING DEVELOPMENTS: Dwelling Units qualify for inclusion in this Zone provided the dwelling units are specifically designed for the needs and services of the targeted population. To qualify as a permitted dwelling unit in this Zone all of the units within the elderly housing development project must meet one (1) of the following criteria:
 - 5.5.11.1. For active adult community and adult retirement, at least eighty percent (80%) of the dwelling units must be occupied by at least one (1) occupant fifty-five (55) years of age or older, the occupant(s) who are fifty-five (55) years of age or older shall be the qualifying household member(s); OR
 - 5.5.11.2. For all other types of elderly housing developments as described above, the units are intended for and solely occupied by occupants sixty-two (62) years of age or older; OR
 - 5.5.11.3. A dwelling unit in an active adult community and/or an adult retirement development project may be occupied by a household member who remains after the removal of the qualifying household member as a result of death, divorce, or legal separation. The surviving household member shall be allowed to occupy the unit until the rental period expires or until the next conveyance or transfer of the record title to that dwelling unit at which time the age restriction on occupancy must be re-established.
 - 5.5.11.4. An occupant under the age of fifty-five (55), but over the age of eighteen (18), may live in a dwelling unit, which is part of an active adult or adult retirement community, if the other occupants of the unit meet the age requirements for occupancy and if the occupants can demonstrate that:
 - 5.5.11.4.1. It is necessary for the underage occupant to reside at the site to provide care-taking services or to provide necessary medical assistance to the eligible occupant(s) OR;
 - 5.5.11.4.2. One or both occupants who meet the age requirement have an adult child who is disabled and for whom they are the primary caregivers and/or who they serve as the legal guardians.
 - 5.5.11.4.3. Any requests made under this provision shall be made to the Code Official for review and determination. The Code Official may require that the request be accompanied by documentation from qualified medical personnel indicating that care-taking or medical care is necessary for one

or more occupants of the dwelling unit. The Code Official may also require that the request be accompanied by documentation, which demonstrates the adult child is disabled, and that the parents are the primary caregiver/legal guardian for the child.

5.5.11.4.4. In no event shall more than three (3) occupants live in any dwelling unit of an elderly housing development. The underage occupant referenced in [Section 5.5.11.4](#) above shall not be considered a “household member” as defined herein, and shall occupy the dwelling unit only during such time as they may qualify for occupancy under [Section 5.5.11.4](#) above.

5.5.12. MINIMUM STANDARDS FOR DEVELOPMENT: The following standards are the minimum standards for any elderly housing development:

5.5.12.1. Each development shall be subject to review and approval under the Town of Raymond’s Planning Board Site Review and/or Subdivisions Regulations.

5.5.12.2. The number of elderly housing dwelling units in Raymond, including those which are contained in any elderly housing project application accepted for review by the Planning Board, shall not exceed twenty percent (20%) of the total number of dwelling units in existence in the community which are approved as of April 1 of each calendar year. In determining what constitutes an elderly housing unit, the assessor’s office will reference the portions of the Zoning Ordinance in effect when the dwelling unit was constructed and determine whether it shall be considered “elderly housing” for the purposes of the calculations required under this section. The Code Official will determine whether the number of units in any elderly housing project exceeds the maximum percentage described above.

5.5.12.3. MINIMUM LOT SIZE (03/23):

5.5.12.3.1. Two (2) acres (87,120 sq. ft.) or larger, depending on soil and slope conditions, may be necessary to sustain development according to state lot-size standards.

5.5.12.3.2. Minimum lot frontage shall be two hundred feet (200’) in all districts.

5.5.12.4. MINIMUM UNIT SIZE (03/23):

5.5.12.4.1. A one (1) bedroom dwelling unit shall contain a minimum of 600 square feet of living space.

5.5.12.4.2. A two (2) bedroom dwelling unit shall contain a minimum of 900 square feet of living space.

5.5.12.4.3. No dwelling unit shall contain more than two (2) bedrooms.

5.5.12.5. NET DENSITY CALCULATION:

5.5.12.5.1. Zone G land shall not be considered as part of the Net Density Calculation.

Example:

Gross Acreage minus Zone G = Acres for Density Calculations
100 Gross Acres less 20 Zone G Acres = 80 Acres for Density Calculations

5.5.12.5.2. Open Space: Open space shall consist of a minimum of thirty percent (30%) of the gross acreage of the property. No more than twenty percent (20%) of the gross acreage, if calculated as open space, shall consist of Zone G land.

Example:

Step 1: Gross Acreage minus (-) Zone G Land equals (=) Developable Calculation Area
100 gross acres – 20 gross acres (Zone G) = 80 acres (developable calculation area)

Step 2: Minimum Open Space = 30% of Gross Acreage. 100 acres X 30% = 30 acres

Step 3: A maximum amount of 20% of gross acreage may consist of Zone G land in satisfying the open space requirement 100 acres 20% = 20 acres

Step 4: To meet the Open space set aside, required of 30%, 20 acres (as per step 3 above) and 10 acres of non-Zone G land would be required.

5.5.12.6. BEDROOMS: The number of bedrooms per acre shall not exceed the densities allowed as follows:

5.5.12.6.1. For active adult and adult retirement projects (age fifty-five (55) or older), there shall be no more than four (4) bedrooms per acre.

5.5.12.6.2. For all other elderly housing projects (age sixty-two (62) or older), there shall be no more than eight (8) bedrooms per acre.

5.5.12.7. SETBACKS:

5.5.12.7.1. Any structure shall be set back at least seventy-five feet (75') from the front lot line.

5.5.12.7.2. Any structure shall be set back at least thirty feet (30') from the side and rear lot line.

- 5.5.12.8. BUFFERS: The purpose of the buffer zones is to provide a transition area between adjoining land uses.
 - 5.5.12.8.1. A minimum fifteen foot (15') wide landscaped area shall serve as a buffer on sides and rear.
 - 5.5.12.8.2. There shall be a ten foot (10') wide landscaped area along the public right-of-way.
 - 5.5.12.8.2.1. The buffer area shall contain year-round screening. Screening may consist of shrubs, trees, fencing, as directed by the Planning Board during Site Plan Review.
- 5.5.12.9. ANCILLARY FACILITIES AS ACCESSORY USES: Ancillary facilities, usually associated with the living needs for comfort, health, safety, and welfare of seniors shall be provided to meet the need of the proposed population of the development. These facilities may include dispensaries, common dining, group recreation or other similar or related facilities primarily for the support of the residents of the development. The type and the size of such facilities shall be proportional to and suitable for the type and scope of the proposed elderly housing development.
- 5.5.12.10. OUTDOOR RECREATION FACILITIES: Outdoor recreation facilities shall be required and may be used for self-directed or structured activities that are either active or passive in nature. Outdoor recreation facilities may be incorporated in the minimum Open Space. Allowable impermeable surface for these facilities within the Open Space shall not exceed ten percent (10%) of the Open Space requirement.
 - 5.5.12.10.1. Structured recreation shall be defined as activities that are scheduled, organized activities that may require equipment and that may take place on dedicated sites.
 - 5.5.12.10.2. Self-directed activities shall be defined as activities that a person or people may engage in at will. The participant(s) decides the time, place, and the activity.
 - 5.5.12.10.3. Active recreation is defined as activities that require the expenditure of physical energy such as gardening, playing sports, and hiking.
 - 5.5.12.10.4. Passive recreation is defined as activities that require limited expenditure of physical energy such as reading and playing cards.
- 5.5.12.11. ON-SITE PARKING:
 - 5.5.12.11.1. Each unit must have a minimum of two (2) parking spaces per unit (03/23).
 - 5.5.12.11.2. Covered parking spaces that cannot be used for or converted to storage or additional living space by the user/owner may be included in the calculation for required parking for the development.

- 5.5.13. **HANDICAPPED CONVERTIBLE:** All of the dwelling units shall be handicapped convertible in the following manner: Dwelling units shall be so designed that all rooms including the bathroom area may be converted to a full handicapped unit without the removal of walls, the widening of hallways and or the replacement of doors. All hidden blocking shall be installed in bathrooms for the future installation of handicapped accessible fixtures without the removal of wall surfaces.
- 5.5.14. **AGREEMENTS, RESTRICTIONS AND PROVISIONS:** The applicant shall provide copies of deed restrictions, condominium documents, or restrictive covenants which shall be binding on successors and assigns of the property, and which shall require that the occupants comply with the applicable age restrictions. Such documents shall be reviewed and approved by the Planning Board. Enforcement of any and all agreements, restrictions and or covenants shall be the responsibility of the property owners as to initial and continued enforcement and compliance. In the event the property owner fails to do so, then the Planning Board reserves the right, but not the obligation, to enforce all age and occupancy restrictions which are set forth in applicable agreements.
- 5.5.15. Once approval for an elderly housing development project is obtained within the elderly housing Zoning Overlay District, then the use shall remain as elderly housing unless the following steps occur:
- 5.5.15.1. A majority of the owners of lots or units within the elderly housing development must decide that a use change for the property is desired.
- 5.5.15.2. The owners must apply for and receive new subdivision and/or site plan approval(s) as appropriate from the Planning Board pursuant to the provisions of the Zoning Ordinance in effect at the time of the request. At a minimum, the owners must apply for and receive a change of use approval pursuant to the site review regulations.
- 5.5.15.3. The owners must submit for review and approval, by the Planning Board, modified or replacement restrictive covenants, condominium declarations or such other documents as are required by the Planning Board as a result of the above referenced approval process.
- 5.5.15.4. In addition to the enforcement provisions described herein, the Town of Raymond reserves all rights to pursue, as a zoning violation pursuant to [RSA 676:17](#), any change of use made to a dwelling unit or ancillary structure which is not in conformance with the Elderly Housing Overlay District.
- 5.5.16. **OTHER REQUIREMENTS**
- 5.5.16.1. **Minimum safety standards:** The development shall meet all applicable building codes and life safety codes that have been adopted by the Town of Raymond, as well as other state and federal statutes and regulations.
- 5.5.16.2. Sidewalks and/or suitable walkways shall be provided throughout the development.
- 5.5.16.3. There shall be a minimum of two (2) access points from existing or proposed public roads to the development. One (1) of the access points may be restricted for emergency access

only, upon review of the fire department, providers of emergency services and approval by the Planning Board.

5.5.16.4. The standards contained within this Ordinance shall supersede any conflicting standards contained in other portions of the Zoning Ordinance.

5.6. **Workforce Housing Overlay District (03/23)**

5.6.1. INTENT: This article is established to provide an overlay zoning district within which workforce housing as defined in RSA 674:58-61, as amended shall be a permitted use.

5.6.2. FAIR HOUSING ACT COMPLIANCE: Any housing development under this section must be established and operated in compliance with the Fair Housing Act as amended, 42 USC Sec. 3601 et seq. The Planning Board may require assurance of compliance with the Fair Housing Act by deed restriction, covenants, or other instruments as a condition of approval.

5.6.3. ADDITIONAL REVIEW: The Workforce Housing Overlay District shall require, pursuant to the provisions of the Site Review Regulations and Subdivision Regulations, site review and/or subdivision approval as appropriate.

5.6.4. LOCATION OF WORKFORCE HOUSING OVERLAY DISTRICT: Workforce Housing Developments shall be an "allowed use" in the following Zoning Districts:

- 5.6.4.1. Zone B (Residential/Agricultural)
- 5.6.4.2. Zone E (Manufactured Housing)

5.6.5. MINIMUM STANDARDS FOR DEVELOPMENT: The following standards are the minimum standards for any workforce housing development:

- 5.6.5.1. Each development shall be subject to review and approval under the Town of Raymond's Planning Board Site Review and Subdivisions Regulations.
- 5.6.5.2. The density, lot size, and other dimensional or procedural requirements for the 5.5 Elderly Housing Overlay District shall apply to developments of workforce housing.
- 5.6.5.3. The number of workforce housing dwelling units in Raymond, including those which are contained in any workforce housing project application accepted for review by the Planning Board, shall not exceed the recommendation by the authority having jurisdiction but in no case shall it exceed twenty percent (20%) of the total number of dwelling units in existence in the community, which are approved as of April 1 of each calendar year. In determining what constitutes a workforce housing unit, the assessor's office will reference the portions of the Zoning Ordinance in effect when the dwelling unit was constructed and determine whether it shall be considered "workforce housing" for the purposes of the calculations required under this section. The Code Enforcement Officer will determine whether the number of units in any workforce housing project exceeds the maximum percentage described above.

5.6.6. ON-SITE PARKING

- 5.6.6.1. No less than two (2) spaces per dwelling unit.
- 5.6.6.2. Covered parking spaces that cannot be used for or converted to storage or additional living space by the user/owner may be included in the calculation for required parking for the development.
- 5.6.7. **HANDICAPPED COMPLIANT AND CONVERTIBLE:** All of the dwelling units on the first floor of any building and all units in a building with a passenger elevator shall be handicapped convertible in the following manner: Dwelling units shall be so designed that all rooms including the bathroom area may be converted to a full handicapped unit without the removal of walls, the widening of hallways and or the replacement of doors. All hidden blocking shall be installed in bathrooms for the future installation of handicapped accessible fixtures without the removal of wall surfaces. A minimum of 5% of all units in any workforce housing development shall be fully ADA compliant and a minimum of 2% shall be compliant for the hearing and visually impaired.
- 5.6.8. **AGREEMENTS, RESTRICTIONS AND PROVISIONS:** The applicant shall provide copies of deed restrictions, condominium documents, or restrictive covenants which shall be binding on successors and assigns of the property, and which shall require that the occupants comply with the applicable restrictions. Such documents shall be reviewed and approved by the Planning Board. Enforcement of any and all agreements, restrictions and or covenants shall be the responsibility of the property owners as to initial and continued enforcement and compliance. In the event the property owner fails to do so, then the Planning Board reserves the right, but not the obligation, to enforce all age and occupancy restrictions which are set forth in applicable agreements.
- 5.6.9. Once approval for a multi-unit workforce housing development project is obtained within the workforce housing Zoning Overlay District, then the use shall remain as workforce housing unless the following steps occur:
 - 5.6.9.1. A majority of the owners or residents of lots or units within the workforce housing development must decide that a use change for the property is desired.
 - 5.6.9.2. The owners must apply for and receive new subdivision and/or site plan approval(s) as appropriate from the Planning Board pursuant to the provisions of the Zoning Ordinance in effect at the time of the request. At a minimum, the owners must apply for and receive a change of use approval pursuant to the site review regulations.
 - 5.6.9.3. The owners must submit for review and approval, by the Planning Board, modified or replacement restrictive covenants, condominium declarations or such other documents as are required by the Planning Board as a result of the above referenced approval process.
 - 5.6.9.4. In addition to the enforcement provisions described herein, the Town of Raymond reserves all rights to pursue, as a zoning violation pursuant to RSA 676:17, any change of use made to a dwelling unit or ancillary structure which is not in conformance with the Workforce Housing Overlay District.
- 5.6.10. **OTHER REQUIREMENTS**
 - 5.6.10.1. **Minimum safety standards:** The development shall meet all applicable building codes and life safety codes that have been adopted by the Town of Raymond, as well as other state and federal statutes and regulations.
 - 5.6.10.2. Sidewalks and/or suitable walkways shall be provided throughout the development.

5.6.10.3. There shall be a minimum of two (2) access points from existing or proposed public roads to the development. One (1) of the access points may be restricted for emergency access only, upon review of the fire department, providers of emergency services and approval by the Planning Board.

5.6.11. SAVING CLAUSE: Pursuant to Zoning Article 11.1 the invalidity of any provision of this Ordinance shall not affect the validity of any other provision of this Ordinance.

ARTICLE 6: MISCELLANEOUS PROVISIONS

6.1 Sign Regulations

6.1.1. DEFINITIONS (03/2009)

- 6.1.1.1. **BILLBOARD:** An off-premises sign that identifies or communicates commercial or non-commercial information related to an activity, service, or product.
- 6.1.1.2. **EFFECTIVE DATE:** The date the amendment is adopted.
- 6.1.1.3. **ELECTRONIC READER BOARD:** An electrically activated, changeable sign whose variable message capability can be electronically programmed.
- 6.1.1.4. **FREESTANDING SIGN:** A sign supported by one or more upright poles, columns, or braces placed in the ground and not attached to any building or structure. A sign that stands without supporting elements, such as a “sandwich sign,” is also a freestanding sign. A freestanding sandwich sign shall not exceed four (4) square feet and shall be removed from view when the business is not open.
- 6.1.1.5. **INTERNALLY ILLUMINATED SIGNS:** Signs where the source of the illumination is inside the sign and the light emanates through the message of the sign.
- 6.1.1.6. **NON-ELECTRONIC CHANGEABLE LETTER SIGN:** A sign that is designed so that the message, characters, letters, or illustrations can be manually changed (as opposed to electronically changed) or re-arranged without altering the face or surface of the sign.
- 6.1.1.7. **ON-PREMISES SIGN:** A sign that communicates information about a business, service product, accommodation or attraction that exists or is conducted entirely on the site where the sign is located.
- 6.1.1.8. **PROMOTIONAL TOOL: (03/2013)** Any outside display of a non-permanent nature, which is not part of an approved site plan, that can be easily installed and taken down and is utilized for the purpose of publicizing a product, organization, or venture so as to increase sales or public awareness of the business, activity, product, service or special circumstance at the site. Examples of Promotional Tools include, but are not limited to: inflatables, flutter flags, air dancers and banners.
- 6.1.1.9. **SIGN:** A device or structure designed or intended to convey information to the public in written or pictorial form.
- 6.1.1.10. **TEMPORARY SIGN:** A sign or display that is used for a specific circumstance, situation or

event intended or expected to take place or be completed within a short or definite period of time and will be up for not more than thirty (30) days, and not more than two (2) times per calendar year.

6.1.1.11. WALL SIGN: A sign painted, stenciled, or affixed on a window, which is visible from a right-of-way.

6.1.2. PERMIT REQUIRED FOR SIGNS: Except as provided in [Section 6.1.3](#), no sign may be constructed, erected, moved, enlarged, illuminated, or substantially altered except in accordance with the provisions of this section. Painting or change of message is not a substantial alteration.

6.1.2.1. If plans are submitted for a building permit, site plan review or other land use approval and the plans are of sufficient detail to make a determination, the approving body shall determine whether the proposed sign complies with the provisions of this section; if compliance is determined, a sign permit will be issued as part of the overall approval process.

6.1.2.2. Signs not approved as provided for in [Section 6.1.2.1](#) and not exempted, may be constructed, erected, moved, enlarged, illuminated, or substantially altered, only in accordance with a sign permit issued by the Code Official. In the case of a lot occupied by multiple business enterprises (e.g. shopping center), the Code Official may issue the permit in the name of the lot owner or his agent. While the Town may assist the owner by suggesting a formula for the allocation of the maximum square footage of sign area, the Town shall be responsible for the enforcement of the provisions of this section and not the provisions of any allocation formula.

6.1.3. SIGNS EXCLUDED FROM REGULATION: The following signs are exempt from the Regulations:

6.1.3.1. Signs less than four (4) square feet of a residential nature.

6.1.3.2. Signs erected by action of a governmental body.

6.1.3.3. Official non-commercial signs erected by Public Utilities.

6.1.3.4. Flags, pennants etc. of any public or non-profit body.

6.1.3.5. Integral decorative or architectural features.

6.1.3.6. On site directional signs less than four (4) square feet.

6.1.3.7. Church bulletin boards less than sixteen (16) square feet.

6.1.3.8. Signs painted or permanently attached to vehicles.

6.1.3.9. Religious, political, or non-commercial signs less than sixteen (16) square feet.

6.1.3.10. The following temporary signs are permitted without a zoning determination, site plan approval or a sign permit:

6.1.3.10.1. Residential Real Estate Signs with a maximum size of six (6) square feet.

6.1.3.10.2. Commercial/Industrial Real Estate Signs with a maximum size of thirty-two

(32) square feet.

- 6.1.3.10.3. Limit of one Real Estate Sign (of any type) per lot.
- 6.1.3.10.4. Construction site identification signs.
- 6.1.3.10.5. Window signs.
- 6.1.3.10.6. Displays erected in connection with holidays.
- 6.1.3.10.7. Signs erected in connection with elections/campaigns.
- 6.1.3.10.8. Signs indicating a special event; two (2) weeks prior, plus three (3) days.
- 6.1.3.10.9. Other Temporary signs: one, with a maximum size of four (4) square feet, three (3) days/occasion.
- 6.1.3.10.10. Promotional Tools are permitted without a zoning determination, site plan approval or a sign permit as long as they comply with all of the following:
 - 6.1.3.10.10.1. The number of Promotional Tools utilized at any given time does not exceed two (2) per business at any given time, dimensions not to exceed twelve (12) feet in height and three (3) feet in width per Promotional Tool;
 - 6.1.3.10.10.2. The positioning of Promotional Tools does not impede drivers' sight lines entering or exiting a site;
 - 6.1.3.10.10.3. Promotional Tools are adequately secured so as to prevent dislodging during weather events;
 - 6.1.3.10.10.4. All Promotional Tools shall only be located on the lot where the activity, product, service, or special circumstance is offered or taking place; and
 - 6.1.3.10.10.5. Each Promotional Tool shall bear the name of the business or owner of the device for ease of identification of the responsible party due to its ease of removal.
 - 6.1.3.10.10.6. Any Promotional Tool that does not easily lend itself to the application of this definition or application of the dimensional criteria shall require a Special Sign Permit from the Planning Board. The Planning Board may issue a Special Sign Permit if it finds that the Promotional Tool being proposed meets the intent of this section and is not adverse to public safety.

6.1.4. TOTAL SIGN SURFACE AREA FOR PERMANENT SIGNS

6.1.4.1. The maximum sign surface area permitted on any lot in a residential zone is four (4) square feet per side for a maximum of two (2) sides.

6.1.4.2. Subject to other provisions, the maximum sign surface area in the Commercial 1 (C.1), Commercial 2 (C.2), Commercial 3 East and West (C3E and C3W) and Industrial Zones shall be determined as follows(03/2020):

6.1.4.2.1. Single business enterprises within a multi-unit location are allowed a maximum of sixty-four (64) square feet of sign surface area on the building.

6.1.4.2.2. In no case may the total sign surface area on all sides exceed 300 square feet.

6.1.4.2.3. For lots with less than 100 feet of frontage, a maximum of fifty (50) square feet of surface area per side shall be allowed, two (2) sides maximum.

6.1.4.2.4. For those lots with 101 to 200 feet of frontage, there may be up to 0.5 square foot of sign surface area per linear foot of total street frontage per side, two (2) sides maximum.

6.1.4.2.5. For those lots in excess of 200 feet of frontage, there may be up to 0.75 square feet of sign surface area per linear foot, per side, two (2) sides maximum.

6.1.4.2.6. In no case may the total sign surface area on all sides exceed 300 square feet.

6.1.5. GENERAL PROVISIONS (03/2009): All signs and components shall be maintained and kept in a state of good repair. Non-electronic changeable letter signs shall only be allowed when permanently installed and wired in accordance with the State of New Hampshire Electrical Code. No person, for the purpose of enhancing the visibility of any sign shall damage, trim, destroy or remove trees or other landscaping within the right of way of a public street, on property not under his land use approval. Signs, or any component thereof, shall not substantially interfere with the view necessary for motorists, pedestrians, or cyclists, to proceed, cause confusion with traffic or governmental signs, or be considered a hazard to public safety. **No flashing, animated, Electronic Reader Board or sexually descriptive or suggestive signs will be allowed.**

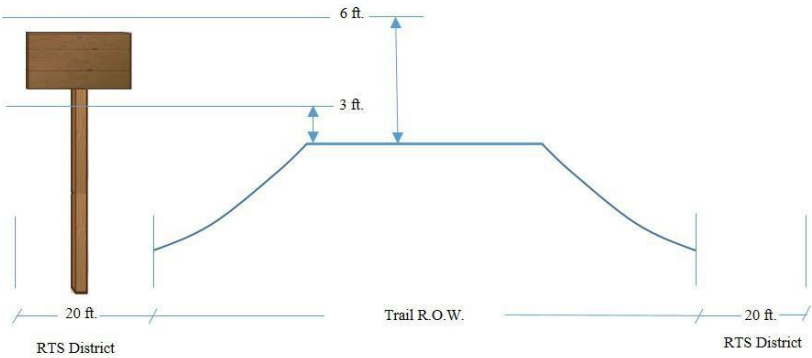
6.1.6. FREESTANDING SIGNS: A single side of a freestanding sign shall not exceed the square footage in sign surface area listed in [Section 6.1.4.2.4](#), and in no case shall exceed 150 square feet. Where there is no discernible side, such as a sphere, the freestanding sign shall not exceed the maximum total surface area allowed. A development may have no more than two (2) freestanding signs. Freestanding signs shall be securely fastened to the ground or to some other substantial supportive structure, shall meet a ten (10) foot setback requirement and shall not exceed a height of thirty (30) feet as measured from ground level with a minimum base height of five (5) feet at the road elevation.

6.1.7. SIGN ILLUMINATION (03/2009): Signs may be illuminated if in accordance with this section.

- 6.1.7.1. No sign within 150 feet of a residential zone may be illuminated between the hours of 12:00 Midnight and 6:00 a.m., unless the impact of lighting on abutting lots is inconsequential.
- 6.1.7.2. Internally illuminated signs are not permissible in Zones A and B.
- 6.1.7.3. Externally or internally illuminated signs shall not cause vagrant lighting, which creates a traffic hazard.
- 6.1.7.4. LED (Light Emitting Diode), fluorescent, or neon lighting shall be allowed to internally illuminate signs.
- 6.1.7.5. Neon or LED building accent lighting shall not be allowed.
- 6.1.8. NON-CONFORMING SIGNS (03/2009): Non-conforming signs may not be moved or altered in any way which makes the sign more non-conforming. Repairs and maintenance may be performed, provided that such work shall not enlarge or expand the non-conformity. If the non-conforming sign is removed, it shall be replaced only with a sign conforming to the provisions of this ordinance. If non-conforming signs are damaged by fire or any other cause other than the willful act of the owner or agent, then such sign may be restored or reconstructed at its original site, provided that the restoration or reconstruction will not enlarge the non-conformity. Such restoration or reconstruction must be started within one year of damage or destruction and must be completed within two (2) years of such damage or destruction. Off-premises signs protected from enforced removal by the Outdoor Advertising Control Act shall not be subjected to the provisions of this section.
- 6.1.9. RAIL TRAIL SIGNAGE (RTS) DISTRICT (03/2015)
 - 6.1.9.1. DISTRICT BOUNDARIES: The RTS District is shown on the Official Zoning Map of the Town of Raymond as two twenty feet-wide corridors parallel to the north and south sides of the Rockingham Recreational Rail Trail – Portsmouth Branch, within the Town of Raymond boundaries.
 - 6.1.9.2. PURPOSE: The RTS district is established to orient rail trail users to the location of nearby attractions in Raymond.
 - 6.1.9.3. STANDARDS
 - 6.1.9.3.1. SIGN DESIGN: Signage within the RTS District, with the exception of signage within the RTS Commercial Zones, shall contain non-commercial directional and informational messages and be a design type similar to that pictured below and shall not be illuminated:



- 6.1.9.3.2. SIGN MATERIALS: Signage shall be of wood. Signs shall be mounted on treated posts as pictured above, using an adequate attachment method (lag bolts, etc.)
- 6.1.9.3.3. DIMENSIONAL REQUIREMENTS: Signage shall not exceed six square feet and must be located at a height so as to be visible between three feet and six feet above the surface grade of the trail.



- 6.1.9.3.4. SPACING REQUIREMENTS: Posts containing signage shall be spaced a minimum of 50 feet between signs, except within the RTS Commercial Zones as described below.
- 6.1.9.4. RTS COMMERCIAL ZONES: Within the RTS District, specifically at the approach to the intersection of Main Street and the Rail Trail (**Figure A**) and at the approach to the intersection of Freetown Road (Routes 102/107) and the Rail Trail (**Figure B**), two commercial zones shall extend four hundred fifty feet along each corridor and on both sides of the intersections. Within the commercial zones, the sign specifications shall be as outlined in Sections [6.1.10.4.1](#) and [6.1.10.4.2](#) below and may contain commercial, directional and informational messages.

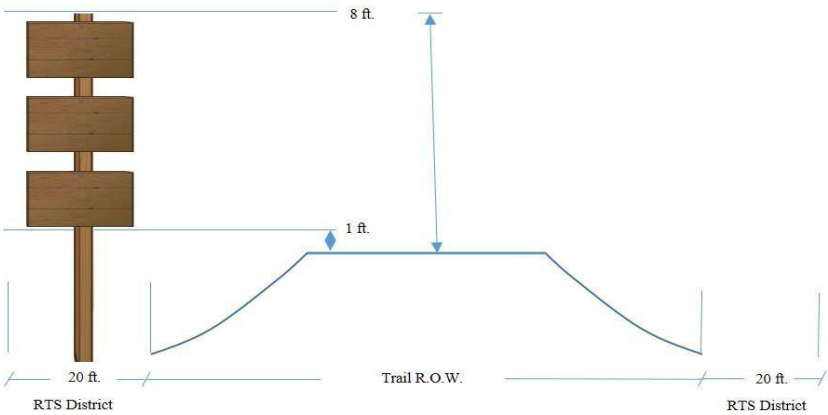
Figure A – Rail Trail at Main Street



Figure B – Rail Trail at Freetown Road



6.1.9.4.1. RTS COMMERCIAL ZONE SIGN STANDARDS: Individual signs and mounting materials shall be of the same materials outlined in [6.1.10.3.2](#).



6.1.9.4.2. RTS COMMERCIAL ZONE DIMENSIONAL REQUIREMENTS: Individual signs shall not exceed six square feet and must be located at a height so as to be visible between one foot and eight feet above the surface grade of the trail.

6.1.9.4.3. RTS COMMERCIAL ZONE SPACING REQUIREMENTS: Posts containing signage shall be spaced a minimum of thirty feet apart.

6.2. [Wireless Communication Facilities](#) (03/2001)

6.2.1. PURPOSE: This section provides requirements for the siting and construction of a wireless communications facility as defined in [Article 13](#).

- 6.2.2. ALLOWED USE: Permitted in Zone D and allowed in Zones A, B, C.1 and C.2 by Special Exception.
- 6.2.3. REGULATION AND PERFORMANCE CRITERIA: This section requires that a Wireless Communication Antenna be placed on an existing wireless communications facility tower if such placement is physically, technically, and legally possible.
- 6.2.4. New ground towers shall be subject to site plan review and the following requirements:
 - 6.2.4.1. WIRELESS COMMUNICATIONS ANTENNA TO BE AFFIXED TO A NEW TOWER:
 - 6.2.4.1.1. HEIGHT - MAXIMUM TOWER HEIGHT - No more than twenty (20) feet above the average height of trees (tree line) within 200 feet of tower location.
 - 6.2.4.1.2. SETBACK: Tower Height plus ten (10) feet from street right-of-way or site boundaries and twice the tower height from abutting residential property lines.
 - 6.2.4.1.3. BUFFERING:
 - 6.2.4.1.3.1. Tower and tower compound shall be fenced to a minimum height of eight (8) feet topped with two strands of barbed wire.
 - 6.2.4.1.3.2. When abutting a residential parcel, the tower and tower compound shall be buffered by a dense stand of trees or shrubs, which shall shield the fence to a height of ten (10) feet within five (5) years of planting on any side facing a residential property.
 - 6.2.4.2. WIRELESS COMMUNICATIONS ANTENNA TO BE AFFIXED TO AN EXISTING BUILDING WITHOUT A ROOF TOWER: Antenna may be placed on the façade or roof of conforming building or structure without regard to the height or setback of the building.
 - 6.2.4.3. WIRELESS COMMUNICATIONS ANTENNA TO BE AFFIXED TO A NEW ROOF TOWER: Roof towers may be placed on the roof of a conforming building using either method:
 - 6.2.4.3.1. Tower height above roof may be as high as the setback to the nearest roof edge.
 - 6.2.4.3.2. The heights for a ground tower may be used for a roof tower if the required setbacks for a ground tower are met.
 - 6.2.4.4. WIRELESS COMMUNICATIONS ANTENNA TO BE ADDED TO EXISTING APPROVED OR PERMITTED TOWER: Allowed if the following conditions are met:
 - 6.2.4.4.1. Tower height is not increased.

6.2.4.4.2. No ancillary features are added other than antenna, required safety hardware and ancillary equipment buildings.

6.2.4.4.3. All conditions of the previous tower approval have been satisfied.

6.2.5. GENERAL CONDITIONS

6.2.5.1. EXISTING NON-CONFORMING TOWER: Subject to zoning requirements concerning non-conforming structures.

6.2.5.2. ANCILLARY EQUIPMENT BUILDINGS: Subject to all requirements of the appropriate zone.

6.2.5.3. INOPERABILITY: If the tower becomes inoperable for a period of six (6) months for whatever reason and the owner shows no intention to repair the facility, the tower shall be removed at the owner’s expense. The Planning Board shall be permitted to require a performance guarantee sufficient to provide for the decommissioning of the tower.

6.2.5.4. CAMOUFLAGE: All towers or other devices supporting antennas shall be camouflaged to reduce their visual impact on the surrounding property uses. The Planning Board shall make a determination for all new structures to determine if the camouflage is adequate.

6.2.5.5. LOCATION: No tower of any kind as defined in this Ordinance may be located within a one (1) mile radius of any other tower.

6.3. **Manufactured Home Parks** (03/2010): Manufactured Home Parks, as defined in [Article 13](#), require site plan approval by the Planning Board. The following regulations shall apply with respect to Manufactured Home Parks:

6.3.1. Manufactured Home Parks, as defined in [Article 13](#), require site review and subdivision approval by the Planning Board;

6.3.2. Manufactured Home Parks shall provide for individual home spaces, driveways, parking, and recreational open space;

6.3.3. A minimum of 10 percent of the non-Zone G land shall be dedicated for recreational purposes;

6.3.4. All utilities (i.e. electric telephone, gas, cable TV, etc.) shall be provided underground to each site by the developer;

6.3.5. All access rights-of-way within the park shall be built to Town of Raymond roadway construction standards. The Planning Board reserves the right to waive these standards if overriding circumstances require it;

6.3.6. A one-hundred foot (100’) wide “no cut” buffer shall be provided along all exterior property lines of the Manufactured Home Park.

6.3.7. All Manufactured Home Parks shall include, but not be limited to a clubhouse which shall be no less than a minimum fifty (50) square feet per unit to be constructed for the Manufactured Home Park.

6.3.8. ALLOWED DENSITY: Allowed density of a Manufactured Home Park shall be as follows:

6.3.8.1. Up to the first 20 acres shall be 1.0 units per acre, less Zone G land.

6.3.8.2. Over 20 acres shall be 0.5 units per acre, less Zone G land.

6.4. **Dwelling – Two Family Unit:** Dwelling – Two Family Units shall meet the following conditions:

6.4.1. Please refer to the Allowed Uses Table in [Article 14](#).

6.4.2. Please refer to the Area and Dimensional Requirements in [Article 15](#).

6.4.3. Located in a subdivision so designed, located and engineered to accommodate such structures, OR

6.4.4. By special permit of the Planning Board, requiring a residential site plan showing the proposed layout of any proposed and existing structures and location of all parking and utilities.

6.4.5. The minimum lot size for a Dwelling - Two Family Unit in Zone A shall be 45,000 square feet. A Dwelling - Two Family Unit in Zone B shall require a minimum of three (3) acres, unless serviced by town water, in which case it shall be eligible for the same area reduction as for Zone B lots serviced by town water (03/2012). Zone G land shall not be used to satisfy lot size requirements (03/2010).

6.4.6. The Planning Board may request further investigative studies to ensure adequate protection of the residents of the subdivision and the Town. The cost of such studies shall be borne by the applicant in accordance with NH [RSA 676:4 I \(g\)](#).

6.5. **Multi-Family Housing**

6.5.1. Please refer to the Allowed Uses Table in [Article 14](#).

6.5.2. Please refer to the Area and Dimensional Requirements in [Article 15](#).

6.5.3. All multi-family developments must comply with all other required local, state, or federal regulations including, but not limited to, the Raymond Subdivision Regulations and the Condominium Act as may be amended.

6.5.4. Minimum lot size for multi-family housing shall be five (5) acres.

6.5.5. In calculating the number of allowed bedrooms per acre of developable land, an applicant shall use data from the New Hampshire Code of Administrative Rules, ENV-WQ 1000-Subdivisions; Individual Sewage Disposal Systems.” In no case shall density exceed eight (8) bedrooms per acre of non-Zone G land. Any multi-family permitted within the C.3 East and C.3 West Zoning Districts, shall comply with all requirements of Section 6.5 except that in no case shall density exceed three (3) bedrooms per acre of Developable land. (3/2017)

- 6.5.6. The building setbacks shall not be less than that of the underlying zone, except that any structure shall be set back seventy-five feet (75') from any existing Town or State road and the additional side and rear setback requirements set forth in [Section 15.2.6](#) and [Section 15.2.7](#) shall be applicable as appropriate, except that within Zone C.1, [Section 15.2.6](#) and [Section 15.2.7](#) shall not apply.
- 6.5.7. All multi-family developments not on public water and sewer must receive a permit from the NH Water Supply and Pollution Control Commission for their septic and water supply proposal prior to obtaining final Planning Board approval.
- 6.5.8. SPECIAL EXCEPTION: A Special Exception may be granted to allow multi-family within Zone C.1 if, as well as the conditions listed in [Section 9.2](#) for the granting of a special exception and all other requirements of [Section 6.5](#) are met, the following conditions shall be required:
 - 6.5.8.1. Any residential units are included as an upper story of an allowed commercial use on the site.
 - 6.5.8.2. Total square footage of such housing shall not exceed 40% of the total square footage of the proposed project.

6.6. **Earth Excavation** (03/2001)

- 6.6.1. PURPOSE: To provide for reasonable opportunities for excavation; to minimize safety hazards which can be created by open excavation; to ensure that the public health and welfare will be safeguarded; to protect natural resources and environment; and to maintain the aesthetic features of the Town.
- 6.6.2. DEFINITIONS
 - 6.6.2.1. EXCAVATION: The commercial taking of soil and materials such as loam, sand, gravel, stone or other fill material including slopes, for sale or for use in another location, as governed by [RSA 155:E](#) and the Town of Raymond's Earth Excavation Regulations.
 - 6.6.2.2. PROCESSING: The conversion of a product from one size shape or use to another size shape or use by the systematic use of machinery or human effort.
 - 6.6.2.3. SCREENING: The mechanical screening to separate naturally occurring different sized materials.
- 6.6.3. ALLOWED EXCAVATION USES AND SPECIAL PERMIT REQUIREMENTS (03/2019)
 - 6.6.3.1. ZONE D – Screening of imported materials allowed, processing allowed.
 - 6.6.3.2. The following activities are allowed in the following zones by Special Permit:
 - 6.6.3.2.1. ZONE C.1 – Screening of on-site materials is allowed, screening of imported materials are allowed only if the screening of such imported materials is secondary and incidental to a primary commercial use or excavation. No processing is allowed.

6.6.3.2.2 ZONES B, C.2 AND C.3 – Screening of on-site materials is allowed as an accessory use only, no screening of imported materials is allowed. No processing is allowed.

6.6.3.3 In order for the Planning Board to grant a Special Permit for the activities described in Sections 6.6.3.2.1 and 6.6.3.2.2, it must find that all of the following requirements and any other specific applicable requirements as set forth in this Ordinance are met:

- a. The specific site is an appropriate location for the proposed use or structure.
- b. Considering the zoning designation of the proposed location, a proposed use will not unreasonably impact the quality of life, character, or public health, safety, and welfare of the area.
- c. The proposed use will not create an undue nuisance or hazard to vehicles or pedestrians.
- d. Adequate and appropriate facilities and utilities will be provided for the proper operation of the proposed use.
- e. The proposed use will not result in unmitigated additional municipal expense.

6.6.3.4 Screening and processing are not allowed in ZONE A.

6.6.4 Exceptions Defined by RSA 155: E 2-a

6.6.4.1 No permit shall be required for the following types of excavations:

- 6.6.4.1.1 Excavation that is exclusively incidental to the construction or alteration of a building or structure(s) or the construction or alteration of a parking lot or way including a driveway on a portion of the premises where the removal occurs; provided, however, that no such excavation shall be commenced without a permit under this chapter unless all state and local permits required for the construction or alteration of the building, structure, parking lot, or way have been issued.
- 6.6.4.1.2 Excavation that is incidental to agricultural or silvicultural activities, normal landscaping, or minor topographical adjustment.
- 6.6.4.1.3 Excavation from a granite quarry for the purpose of producing dimension stone, if such excavation requires a permit under RSA 12-E.
- 6.6.4.1.4 A person owning land abutting a site which was taken by eminent domain or by any other governmental taking upon which construction is taking place may stockpile earth taken from the construction site and may remove the earth at a later date after written notification to the appropriate local official.

6.6.5 REGULATION AND PERFORMANCE CRITERIA: The regulation and performance criteria shall be set forth in the Raymond Earth Excavation Regulations, as amended.

6.7. **Adult Business Establishments:** Notwithstanding any other provisions of this Ordinance, adult business establishments shall be permitted only in the commercial 1 District (C.1) as a special exception, provided that such establishments are subject to the following special requirements. In addition, these regulations are established for the following stated purposes:

6.7.1. **PURPOSE:** It is the purpose of this Ordinance to establish reasonable and uniform regulations to prevent the concentration of adult business establishments within the Town of Raymond; and, it is the intent to promote the health, safety and general welfare of the citizens of the Town of Raymond; and, it is the intent of this Ordinance that its regulations be utilized to prevent the harmful, secondary effects which commonly accompany and are brought about by the concentration of adult business establishments; and, the provisions of this Ordinance have neither the purpose nor the effect of imposing limitation or restriction on the content of any communicative materials, including adult or sexually oriented materials; and, it is not the intent nor effect of this Ordinance to restrict or deny access by adults to adult or sexually oriented materials protected by the First Amendment of the U.S. Constitution.

6.7.2. **REQUIREMENTS**

- 6.7.2.1. Such establishments shall be located at least a two (2) mile radius from any other adult business establishment and at least five hundred (500) feet from the nearest property line of any public, private or parochial school, church, synagogue or similar place of worship, child care facility, group day care facility, public library, playground and any Town Office or other Town facility and at least two hundred fifty (250) feet from the nearest property line of a single or multi-family dwelling.
- 6.7.2.2. No sexually explicit materials, entertainment or activity shall be visible from the exterior of the premises.
- 6.7.2.3. Except as provided herein, nothing in this section shall be construed to waive or otherwise affect any other provision of this section.
- 6.7.2.4. In addition to the above, signs shall not visually depict any person in a “state of nudity” or “semi-nudity.” Signs, or other external displays, shall not depict any written sexually oriented material.
- 6.7.2.5. Because of the high impact nature of an Adult Business Establishment, the business shall submit a community impact statement to the Town of Raymond for review by the Town’s local land use boards.

6.8. Conservation Development:

- 6.8.1. PURPOSE: In conformance with the authority provided by State Statute (NH [RSA 674:21](#)), the purposes of Conservation Development, among others, are as follows:
 - 6.8.1.1. To maintain rural character, preserve farmland, forest and rural views, and conserve open land, including those areas containing unique and sensitive natural features such as woodlands, steep slopes, streams, floodplains, and wetlands, by setting them aside in perpetuity from development;
 - 6.8.1.2. To provide greater design flexibility and efficiency in the siting of services and infrastructure and reduce the amount of roads, sidewalks, and stormwater management structures that must be constructed and maintained.
 - 6.8.1.3. To reduce erosion and sedimentation by the retention of existing vegetation and the minimization of the alteration of and/or development on steep slopes;
 - 6.8.1.4. To provide for a diversity of lot sizes, building siting opportunities, and housing choices for single family detached homes to accommodate a variety of age and income groups, and residential preferences, so that the community's population diversity may be maintained;
 - 6.8.1.5. To create neighborhoods with direct visual access to open land, with amenities in the form of neighborhood open space and with a strong neighborhood identity;
 - 6.8.1.6. To provide for the conservation and maintenance of open land within the Town to achieve the above-mentioned goals and for active or passive recreational use by residents;
 - 6.8.1.7. To create a contiguous network of open spaces or "greenways" by linking the common open spaces within a conservation subdivision with open space on adjoining lands wherever possible;
 - 6.8.1.8. To provide multiple options for landowners in order to minimize impacts on environmental resources (sensitive lands such as wetlands, floodplain, and steep slopes) and disturbance of natural or cultural features (such as mature woodlands, hedgerows and tree lines, critical wildlife habitats, historic buildings, and fieldstone walls);
 - 6.8.1.9. To provide standards reflecting the varying circumstances and interests of individual landowners and the individual characteristics of their properties; and
 - 6.8.1.10. To conserve scenic views and elements of the Town's character, and to minimize perceived density, by minimizing views of new development from existing roads.

6.8.2. DEFINITIONS

- 6.8.2.1. CONSERVATION SUBDIVISION: A subdivision of land consisting of protected open space and single-family detached homes located on unconventional lots that would not otherwise be permitted by the minimum lot size, frontage, and yard requirements of this

Ordinance. Private roads built to Town standards are permitted in a Conservation Subdivision, but a Homeowner’s Association must be established to maintain the roads.

6.8.2.2. YIELD CALCULATION: An analysis showing the maximum number of single-family lots that will be permitted within a Conservation Development, as determined by the underlying zoning as outlined in [Article 15](#) (03/2010).

6.8.3. MINIMUM SIZE AND SETBACK REQUIREMENTS

6.8.3.1. The minimum area required for a Conservation Subdivision shall be ten (10) acres. A side and rear dense vegetative buffer of at least twenty feet (20’) must exist or be created at all side and rear exterior boundaries of the original parcel. This buffer must screen visibility by at least seventy-five percent (75%) to a minimum height of six feet (6’) above finished grade.

6.8.3.2. When any Conservation Subdivision abuts another lot which was not developed as part of a conservation subdivision, then any proposed structure within the conservation subdivision shall be no closer than fifty (50) feet from the lot line of the abutting non-conservation subdivision lot.

6.8.3.3. Buildings within the Conservation Subdivision must conform to [Section 2.7](#). Furthermore, a minimum building separation of thirty-five (35) feet and a minimum side and rear setback of thirty-five (35) feet must be provided for all structures in a Conservation Development. In cases described in [Section 6.8.3.2](#), side or rear setbacks for any proposed structure shall be fifty 50 feet.

6.8.4. ALLOWED ZONES: Conservation developments are allowed in Zones A or B of the Raymond Zoning Map.

6.8.5. REVIEW CRITERIA: In general, the proposed development shall be consistent with the general purpose and goals and objectives of the Master Plan and this Zoning Ordinance. Approval for Conservation Development will be granted only after the Planning Board has rendered a “Finding of Fact” that all of the following criteria have been adequately addressed, including the purpose statements outlined in [Section 6.8.1](#).

6.8.5.1. A conservation plan shall be developed and submitted for review, which identifies the natural, environmental, historical and view shed areas to be protected. Such plan shall include irreplaceable natural and historic features located in the tract, such as, but not limited to, stream beds, stone walls, agricultural areas, significant stands of trees, individual trees of 36” in size or greater, rock outcroppings and other areas which may be considered sensitive.

6.8.5.2. DEVELOPMENT PLAN: A development plan shall be developed and shall include:

6.8.5.2.1. Individual lots, buildings, streets, and parking areas shall be designed and situated to minimize alteration of the natural site features to be preserved;

- 6.8.5.2.2. The usability of conservation open space intended for recreation or public use shall be shown to be suitable for such proposed use;
 - 6.8.5.2.3. Conservation open space intended for recreation or public uses shall be easily accessible to pedestrians;
 - 6.8.5.2.4. Areas to be dedicated to conservation easements or deed restrictions which will restrict ability to make improvements;
 - 6.8.5.2.5. Diversity and originality in lot layout and individual building design shall be encouraged to achieve the best possible relationship between development and the land;
 - 6.8.5.2.6. Individual lots, buildings, and single-family homes shall be arranged and situated to relate to surrounding properties, to take advantage of natural viewscapes and to not obstruct the views of other units, and to lessen the land area devoted to motor vehicle access;
 - 6.8.5.2.7. Individual lots, buildings, units, and parking areas shall be situated to avoid the adverse effects of shadows, noise, and traffic on the residents of the site;
 - 6.8.5.2.8. All plans shall adhere to the Town of Raymond's Subdivision Regulations.
 - 6.8.5.2.9. (03/2018) All Conservation Subdivision applications shall be submitted to the Conservation Commission concurrent with submission to the Raymond Planning Board to allow for timely input from the Conservation Commission to the Raymond Planning Board.
- 6.8.6. OPEN SPACE REQUIREMENTS: At a minimum, the open space set aside and preserved in the conservation development must be equivalent to fifty percent (50%) of the total parcel. A portion of the open space may be dedicated to recreation and other uses occasioned by the development and public.
- 6.8.6.1. Depending on the size and design of the development, it may be necessary that a common open space, permanently reserved and maintained as a landscaped park or recreational space, be provided to serve the homeowners within the development. The area, configuration, and location of such open spaces shall be subject to review and approval by the Planning Board.
 - 6.8.6.2. At least 75% of the designated open space should be contiguous with no portion less than one hundred (100) feet in any dimension.
 - 6.8.6.3. If conservation open space is not dedicated to public use, it shall be protected by legal arrangements, satisfactory to the Planning Board, sufficient to ensure its maintenance and preservation for whatever purpose it is intended. Covenants or other legal arrangements shall specify ownership of the conservation open space; method of maintenance; responsibility for membership and compulsory assessment provision; guarantees that any association formed to own and maintain conservation open space will not be dissolved without the consent of the Planning Board; and any specifications deemed necessary by the Planning Board.

6.8.6.4. The open space, recreational or common land shall be retained and managed by the developer until it is transferred to a Homeowners' Association, the Town, a conservation trust or other suitable public or private organization, which will ensure its retention and maintenance as open space by means of deed restrictions or conservation easement.

6.8.7. ASSOCIATION RESPONSIBILITIES

6.8.7.1. When applicable, the applicant shall establish a private organization commonly referred to as a Homeowners' or Property Owners' Association whose responsibilities will be to assess the homeowners a reasonable fee for general maintenance and upkeep of any roads the Planning Board may deem to be private, common land, community sewerage and water systems, open space, and recreational amenities. If for any reason, the developer or any subsequent organization fails to adequately maintain the utilities and open space as indicated on the subdivision plan and in the Performance Agreement, the Board of Selectmen, after a duly noticed hearing, may assume such responsibility, and assess the homeowners and property owners the cost of such maintenance.

6.8.8. ZONING EXCEPTIONS

6.8.8.1. Acceptance by the Planning Board of a subdivision plan under this section shall relieve the applicant from restrictions dealing with minimum lot sizes and road frontage requirements as may be set forth in the Raymond Zoning Ordinance. Such relief to allow innovative layout and for protection and conservation of the site shall not conflict with the purpose and intent of the Raymond Master Plan or any health or safety codes within the Town. Applicants shall not be relieved of the following requirements:

6.8.8.2. BUILDING CONFORMANCE: Buildings must conform to the requirements set forth in [Section 2.7](#).

6.8.8.3. BUFFER: A side and rear dense vegetative buffer of at least twenty feet (20') must exist or be created at all boundaries abutting other properties. This buffer must screen visibility by at least seventy-five percent (75%) to a minimum height of six feet (6') above finished grade.

6.9. [Home Occupations](#) (03/2015)

6.9.1. Home Occupations meeting all of the following requirements are exempt from Site Plan Review:

6.9.1.1. The Home Occupation is conducted entirely within the residential dwelling or an accessory building thereto, but not both, and shall comprise no more than 25% or 400 square feet of the gross floor area of that structure, whichever is less.

6.9.1.2. The Home Occupation shall be conducted solely by the family residing in the dwelling with no more than two (2) employees not residing at the dwelling allowed.

6.9.1.3. No materials or equipment associated with the Home Occupation shall be stored outside of the structure housing the Home Occupation.

- 6.9.1.4. No equipment or process shall be used that creates noise, vibration, glare, fumes, odors, dust, or electrical interference detectable to the normal senses outside the dwelling or accessory building housing the Home Occupation.
 - 6.9.1.5. One (1) non-illuminated sign consisting of a maximum of three (3) square feet is allowed.
 - 6.9.1.6. Adequate parking for both the residential use and the Home Occupation shall be provided entirely on-site.
 - 6.9.1.7. The Home Occupation shall not utilize commercial vehicles over twelve thousand (12,000) pounds GVWR (gross vehicle weight rating) for either delivery of materials to or from the premises, or overnight parking. The intent is to permit delivery vehicles, such as United Parcel Services vehicles, but to prohibit tractor trailers and other large, heavy commercial vehicles.
- 6.9.2. Home Occupations not meeting all the requirements listed under [Section 6.9.1](#) shall be subject to Site Plan Review under the Home Occupation Site Plan Review Regulations and shall be reviewed and decided upon by the Technical Review Committee.
- 6.9.3. Approvals of Home Occupations are not transferable.

6.10. Accessory Dwelling Units (RSA 674:71, 72 & 73) (03/2017)

- 6.10.1. Please refer to the Allowed Use Table in Article 14.
- 6.10.2. Please refer to the Area and Dimensional Requirements in Article 15.
- 6.10.3. PURPOSE: Accessory dwelling units are intended as an option for homeowners to offer separate and independent living space for their extended families, caregivers, or others, or to offer small dwelling units as rentals to offset the expense of maintaining the dwelling. Accessory dwelling units add diversity of housing options without further land development, additional buildings, increased roads and/or infrastructure in the Town of Raymond.
- 6.10.4. DEFINITIONS
- 6.10.4.1. Accessory Dwelling Unit: a residential living unit that is within or attached via common walls or foundation to an existing or proposed single-family detached dwelling, and that provides independent living facilities for one or more persons, including provisions for sleeping, eating, cooking, and sanitation on the same parcel of land as the principal dwelling unit it accompanies. An accessory dwelling unit may not be subdivided or sold separately from the principal dwelling unit.
 - 6.10.4.2. Principle Dwelling Unit: an existing or proposed single family detached dwelling unit to which an accessory dwelling unit may be added according to the requirements and standards in this ordinance.
 - 6.10.4.3. Property owner: if the owner of the property is a trust, the term "property owner" shall mean the creator or beneficiary of the trust. If the owner of

the property is a corporation, the term “property owner” shall mean the principal stockholder.

6.10.4.4 Principal place of residence: may be demonstrated by voter’s registration, vehicle registration, driver’s license, or the placement of children in local public schools.

6.10.5. REQUIREMENTS

6.10.5.1. Only one accessory dwelling unit shall be allowed as a matter of right in all zoning districts that permit single-family detached dwellings and on any parcel where only one existing, legally conforming single-family dwelling already exists.

6.10.5.2. The accessory dwelling unit shall be clearly incidental and subordinate in extent, use and purpose to the principal dwelling unit.

6.10.5.3. No additional requirements for lot size, frontage, space limitations, or other controls beyond what would be required for a single-family detached dwelling without an accessory dwelling unit shall be required except that the accessory dwelling unit added within or attached to existing homes shall require a zoning determination and a building permit.

6.10.5.4. An accessory dwelling unit shall be deemed a unit of workforce housing for purposes of satisfying the Town of Raymond’s obligation under RSA 674:59, provided the unit meets the criteria in RSA 674:58 IV for rental units.

6.10.5.5. Either the principal dwelling unit or the accessory dwelling unit shall be occupied by the owner of the property as his/her principal place of residence.

6.10.5.6. The owner shall provide proof of residence to the Assessor’s Office no later than January 1st.

6.10.6. STANDARDS

6.10.6.1. The exterior of an attached accessory dwelling unit shall maintain aesthetic continuity and compatibility (doors, windows, siding, trim type and color, and roofing) with the existing single family detached dwelling so that the attached accessory dwelling unit shall not detract from the overall character of the neighborhood. If the only entrance to the accessory dwelling unit is on the street side of the building, the accessory dwelling unit shall utilize the main entrance to the single-family dwelling as a shared access. Any additional entrances or exits shall be located to the side or rear of the units. The Code Enforcement Officer shall be responsible for reviewing and evaluating architectural designs for compatibility prior to issuance of a building permit.

6.10.6.2. The accessory dwelling unit shall be limited to a maximum of two (2) bedrooms.

6.10.6.3. The minimum area for an accessory dwelling unit, whether within or attached, shall not be less than five hundred (500) square feet, and the maximum

area for an accessory dwelling unit shall not be more than either seven-hundred- fifty (750) square feet or one-third (1/3) of the combined heated living area of both units, whichever area is larger; however, maximum area shall not exceed one thousand (1,000) square feet.

6.10.6.4. An interior connecting door shall be provided between the principal dwelling unit and the accessory dwelling unit.

6.10.6.5. Off-street parking for at least four vehicles shall be provided.

6.10.6.6. Adequate provisions must exist or be made for ingress, egress and turning of vehicles within the site, and only one driveway shall serve both dwelling units.

6.10.6.7. The applicant shall obtain a New Hampshire Department of Environmental Services approved plan pursuant to the requirements of RSA 485- A:38 to meet any anticipated increased waste volume demand created by the proposed accessory dwelling unit.

6.10.6.8. Detached accessory dwelling units are not allowed in the Town of Raymond.

6.10.7 NONCONFORMING ACCESSORY DWELLING UNITS: To be considered a nonconforming ADU, an accessory dwelling unit must have been granted a building permit or certificate of occupancy prior to the enactment of this ordinance. Accessory dwelling units constructed before March 2015 that do not have a building permit or certificate of occupancy shall apply to the Raymond Code Enforcement Officer for a determination of compliance with the provisions of this article.

ARTICLE 7: ADMINISTRATION

7.1 Impact Fee Ordinance for Public Capital Facilities

7.1.1. AUTHORITY AND APPLICABILITY (03/2004) - This article is authorized by New Hampshire [RSA 674:21 I \(m\)](#) as an innovative land use control. The administration of this Article shall be in compliance with [RSA 674:21 V \(a. through i.\)](#). This article, as well as, regulations, studies and methodologies adopted by the Planning Board consistent with and in the furtherance of this article, shall govern the assessment of impact fees imposed upon new development in order to meet the needs occasioned by that development for the construction or improvements of capital facilities owned or operated by the Town of Raymond or the Raymond School District.

7.1.2. The public facilities for which impact fees may be assessed in the Town of Raymond may include:

7.1.2.1. Water treatment and distribution facilities;

7.1.2.2. Wastewater treatment and disposal facilities;

7.1.2.3. Sanitary sewer;

7.1.2.4. Storm water;

7.1.2.5. Drainage and flood control facilities;

7.1.2.6. Public road systems and rights of way;

- 7.1.2.7. Public works equipment and facilities;
 - 7.1.2.8. Municipal office structures, equipment, and facilities;
 - 7.1.2.9. Fire, ambulance, emergency management;
 - 7.1.2.10. Police and dispatch equipment and facilities;
 - 7.1.2.11. Public school facilities;
 - 7.1.2.12. Solid waste collection;
 - 7.1.2.13. Transfer, recycling, processing, and disposal facilities;
 - 7.1.2.14. Public library facilities;
 - 7.1.2.15. Public recreation facilities not including public open space.
- 7.1.3. Prior to assessing an impact fee for one or more of the public facilities enumerated above, the Planning Board shall have adopted such studies or methodologies and related fee schedules that provide for a process or method of calculating the proportionate share of capital improvement costs associated with the increased demand placed on capital facility capacity by the new development. (03/2004)
- 7.1.4. The regulations shall govern the assessment of impact fees for public capital facilities in order to accommodate increased demand on the capacity of these facilities due to new development. (03/2004)
- 7.1.5. This Ordinance is intended to require new development to contribute its proportionate share of funds necessary to accommodate its impact on public facilities having a rational nexus to the proposed development, and for which the need is attributable to the proposed development; and implement the relevant portions of the Town of Raymond's Subdivisions Regulations and Site Review Regulations. (03/2004)
- 7.1.6. Implement the relevant portions of the Town of Raymond's Subdivision Regulations and Site Review Regulations. (03/2004)
- 7.1.7. FINDINGS - In review of the impact of growth relative to the existing and planned capital facility capacity available to the Town of Raymond for its municipal and school needs, the Town of Raymond hereby finds that:
- 7.1.7.1. New development in Raymond will create the need for the construction, equipping, or expansion of public capital facilities in order to provide adequate facilities and services for its residents; (03/2004)
 - 7.1.7.2. Impact fees may be used to assess an equitable share of growth-related cost of public facility capacity to new development in proportion to the facility demands created by that development. (03/2004)
 - 7.1.7.3. In the absence of impact fees, anticipated residential and non-residential growth and associated capital improvement costs could necessitate an excessive expenditure of

public funds in order to maintain adequate facility standards and to promote and protect the health, safety, and welfare; (03/2004)

- 7.1.7.4. As documented by the Master Plan and the Capital Improvements Program of the Town of Raymond, recent and anticipated municipal growth rates and associated improvements and costs would necessitate an excessive expenditure of public funds in order to maintain adequate municipal and school facility standards and to promote and protect the public health, safety, and welfare.
- 7.1.7.5. The imposition of impact fees is one of the methods available to ensure that public expenditures are not excessive and new development will bear a proportionate share of the capital costs necessary to accommodate such development.
- 7.1.7.6. The impact fee methodology adopted by the Raymond Planning Board, and as amended represents a reasonable, rational, and proportional method for the assessment of growth-related facility costs to new development.
- 7.1.7.7. An impact fee ordinance for public capital facilities is consistent with the goals and objectives of the Master Plan and the Capital Improvements Program of the Town of Raymond.

7.1.8. DEFINITIONS

- 7.1.8.1. FEE PAYER: The applicant; for the issuance of a building permit which could create new development.
- 7.1.8.2. NEW DEVELOPMENT (03/2004): Any activity which results in a net increase in the demand for additional public capital facilities, as defined in this Ordinance:
 - 7.1.8.2.1. The creation of a new dwelling unit, except for the replacement of existing units of the same size and density.
 - 7.1.8.2.2. The expansion of a dwelling unit to create additional bedroom area.
 - 7.1.8.2.3. The net increase in the gross floor area of any non-residential building/structure or in the habitable portion of a residential building.
 - 7.1.8.2.4. The conversion of an existing use to another use if such changes creates a net increase in the demand on public capital facilities that are subject to impact fee assessment methodologies adopted by the Planning Board.
- 7.1.8.3. NEW RECREATION FACILITIES: Land and facilities owned or operated by the Town of Raymond or the Raymond School District, other than public open space, which are designed for the conduct of recreational sports or other active uses of an organized nature, and which include equipment or improvements to the land to support indoor or outdoor public recreation programs and activities.
- 7.1.8.4. PUBLIC CAPITAL FACILITIES (03/2004): Facilities and equipment owned, maintained, or operated by the Town of Raymond as defined in the Capital Improvement Program and which are listed in the adopted impact fee schedule.

- 7.1.8.5. PUBLIC OPEN SPACE: An unimproved or minimally improved parcel of land or water available to the public for passive recreational uses such as walking, sitting, or picnicking which does not include “public recreation facilities.”
- 7.1.8.6. SCHOOL DISTRICT: The Raymond School District.
- 7.1.9. IMPOSITION OF IMPACT FEES - Impact fees shall be assessed to new development to compensate the Town of Raymond and the Raymond School District for the proportional share of capital facilities generated by new development in the Town of Raymond, including municipal and public-school facilities to be constructed, or which were constructed in anticipation of new development.
 - 7.1.9.1. Any person who seeks a building permit for new development is hereby required to pay a capital facility impact fee upon adoption of this article in the manner set forth herein.
 - 7.1.9.2. Public school facility impact fees may be waived, in the discretion of the Planning Board, for those units within an elderly housing development approved pursuant to the provisions of [Section 5.5.11](#) of this Ordinance, in which at least one (1) occupant of the dwelling unit is required to be fifty-five (55) years of age or older, and where such requirements are documented in restrictive covenants recorded in the Rockingham County Registry of Deeds. (03/2005)
 - 7.1.9.3. A person may request, from the Planning Board, a full or partial waiver of impact fees for any residential units or non-residential development that was approved for construction prior to the effective date of this article.
- 7.1.10. COMPUTATION OF IMPACT FEES - The amount of each impact fee shall be as set forth in the Impact Fee Schedules prepared and updated in accordance with a report prepared and adopted by the Planning Board for the purposes of impact fee assessment.
 - 7.1.10.1. In case of the new development created by conversion or modification of an existing use, the impact fee shall be based upon the net increase in the impact fee assessed for the new use as compared to the highest impact fee that was or would have been assessed for the previous use in existence on or after the effective date of this Ordinance.
- 7.1.11. ASSESSMENT AND PAYMENT OF IMPACT FEES - Assessment and payment of impact fees shall be implemented pursuant to the provisions of [RSA 674:21\(V\) \(d\)](#) as amended. Pursuant to the provisions of [RSA 674:21](#), the Town of Raymond and the assessed party may establish an alternate payment schedule, and the Town of Raymond may require that the future payment of such fees be secured by bonds, letters of credit or other forms of security which are acceptable to the Town of Raymond. (03/2005)
- 7.1.12. APPEALS - If a fee payer believes the Planning Board acted improperly in imposing or calculating the impact fee, their action may be appealed to the Superior Court as provided by [RSA 677:15](#).
- 7.1.13. ADMINISTRATION OF FUNDS COLLECTED
 - 7.1.13.1. All funds collected shall be properly identified and promptly transferred for deposit into separate impact fee accounts for each of the capital facility categories for which impact fees have been assessed. This impact fee account shall be a non-lapsing special revenue fund account and under no circumstances shall such revenues accrue to the General fund.
 - 7.1.13.2. The Town Treasurer shall record all fees paid, by date of payment and the name of the

person making payment and shall maintain an updated record of the current ownership tax map and lot reference number of properties for which fees have been paid under this Article, for each building permit so affected for a period of at least six (6) years from the date of receipt of the impact fee payment associated with issuance of each permit. (03/2004)

- 7.1.13.3. Impact fees collected may be spent from time to time by order of the Board of Selectmen and shall be used solely for the reimbursement of the Town and the School District for the cost of public capital improvements for which they were collected, or to recoup the cost of capital improvements made by the Town or District in anticipation of the needs for which the impact fee was collected.
- 7.1.13.4. In the event that bonds or similar debt instruments have been, or will be, issued by the Town or the District for the funding of capacity related facility improvements, impact fees may be transferred to pay debt service on such bonds or similar debt instruments.
- 7.1.13.5. At the end of each fiscal year, the Town Treasurer shall make a report to the Board of Selectmen, giving a particular account of all impact fee transactions during the year.
- 7.1.14. REFUND OF FEES PAID - The current owner of record of property for which an impact fee has been paid shall be entitled to a refund of that fee, plus accrued interest, where:
 - 7.1.14.1. The impact fee has not been encumbered or legally bound to be spent for the purpose of which it was collected within a period of six (6) years from the date of the full and final payment of the fee; or
 - 7.1.14.2. The Town or, in the case of school facilities, the School District, has failed within the period of six (6) years from the date of the full and final payment of such fee, to appropriate any of the non-impact fee share of related capital improvement costs, thereby permitting the capital improvement or capital improvement plan for which the impact fee was collected to be commenced. If any capital improvement or capital improvement program for which an impact fee is collected has been commenced either prior to or within six years from, the date of final collection of an impact fee, that impact fee payment shall be deemed to be encumbered and legally bound to be spent for said capital improvement or capital improvement program and shall not be refunded, even if it is not fully expended within the six year period.
 - 7.1.14.3. The Board of Selectmen shall provide all owners of record who are due a refund written notice of the amount due, including accrued interest, if any, and shall promptly cause said refund to be made.
- 7.1.15. ADDITIONAL ASSESSMENTS - Payment of the impact fee under this article does not restrict the Town or the Planning Board from requiring other payments from the fee payer, including such payments relating to the cost of the extensions of water and sewer mains or the construction of roads or streets or other infrastructure and public capital facilities specifically benefiting the development as required by the subdivision or site plan review regulations, or as otherwise authorized by law.
- 7.1.16. PREMATURE AND SCATTERED DEVELOPMENT - Nothing in this article shall be construed so as to limit the existing authority of the Planning Board to deny new proposed development, which is scattered or premature, requires an excessive expenditure of public funds, or otherwise violates the Town of Raymond Zoning Ordinance, or the Raymond Planning Board Site Plan Review Regulations

or Subdivision Regulations, or which may otherwise be lawfully denied.

- 7.1.17. REVIEW - The Impact Fee Assessment Schedule shall be reviewed at least once every five years by the Planning Board (3/2017), according to the methodologies established within a report adopted by the Raymond Planning Board, and as amended. Such review may result in recommended adjustments in one or more of the fees based on the most recent data as may be available including, but not limited to, current construction cost information or capital improvement plans or programs, property assessment data, demographic data, U.S. Census information, and other sources. Based on its review, the Board may consider the adoption of an updated or amended impact fee methodology or may modify the schedule to correct errors or inconsistencies identified in the review process. No change in the methodology or in the impact fee schedules shall become effective until it shall have been the subject of a public hearing before the Planning Board, noticed in accordance with RSA 675:7. (03/2016).

ARTICLE 8: PROCEDURE AND ENFORCEMENT

8.1 Administrative Procedure

- 8.1.1. This Ordinance shall be administered by a Code Official who shall be appointed by the Town Manager. In the absence of the Code Official, this Ordinance shall be administered by the Board of Selectmen.
- 8.1.2 There shall be no start of construction, nor shall any building be enlarged, replaced, or altered until a building permit shall first have been obtained from the Code Official. (03/1976)
- 8.1.3 Any request for a building permit, in which a permanent structure shall be constructed, shall be accompanied by a certified plot plan unless one is already on file with the Planning Office, Assessor's Office or with the Code Official, in which case a photocopy of the same shall be submitted. All certified plot plans shall bear the stamp of a Licensed Land Surveyor, as required by the New Hampshire Board of Licensure for Land Surveyors. In cases where a septic plan is required, the septic plan may be used as a certified plot plan if a note is included on the plan by the owner of the plan that it may be used for this purpose, and it also bears the stamp of a Licensed Land Surveyor. (03/2016)
- 8.1.3.1 A permanent structure is one that has, as part of its construction, either a concrete, post, or pier foundation. Examples of permanent structures are homes, additions, garages, barns, pools, commercial or industrial buildings. (03/2002)
- 8.1.3.2 Open non-roofed decks, wheelchair ramps and similar disability access structures and sheds shall be considered non-permanent, for the purpose of providing a certified plot plan only, when applying for the required building permit. (03/2010)
- 8.1.3.3 The certified plot plan shall indicate the location of all permanent buildings, septic systems, well location, driveway(s), and other existing structures such as pools, patios, etc., or in the case of a vacant lot, the lot's boundaries and any permanent existing monumentation. (03/2002)
- 8.1.3.4 The plan shall enumerate the exact lot dimensions, acreage, and square footage of the lot calculated to the nearest one one-hundredth of an acre. (03/2002)

- 8.1.4 The Code Official shall receive all applications for construction, erection, or placement of all buildings and for the enlargement of all buildings as provided in this Ordinance. He shall issue building permits as applied for upon payment of the required fees if, in his opinion, the application complies with all applicable laws of the State of New Hampshire, this Ordinance, and other Town laws and ordinances, provided, however, that in any instance where licenses or permits other than the building permit are required, this building permit shall constitute only an approval upon which the proper authority may issue such licenses or permits, and shall in no way be considered as a substitute or alternative for them.
- 8.1.5 Any permit obtained after construction has begun shall be subject to a payment of twice the normal fee. (3/2017)
- 8.1.6 The Code Official shall keep the records necessary to submit to the Town a report, monthly, of all permits issued and fees paid.

8.2 Enforcement, Legal Procedure and Penalties

- 8.2.2 The Code Official or the Selectmen in his stead, as to the enforcement hereof only, shall make orders and decisions and take any and all actions as may be deemed by him or by them to be reasonable necessary to prevent violation of this Ordinance as well as to secure the intent of the Ordinance.
- 8.2.3 It shall be the duty of the Board of Selectmen, upon any well-founded information or upon complaint of the Code Official, to take any appropriate action or institute legal proceedings necessary or desirable to prevent any unlawful use or development of any land, building, structure, or premises, in violation of any provisions of this Ordinance, whether or not such violation is present or only reasonably anticipated. For this purpose, the Selectmen shall take immediate steps to enforce the provisions of the Ordinance by seeking an injunction or other appropriate redress in the courts, or by any other means, or administrative or legal action, reasonably calculated to enforce this Ordinance, including without exception, seeking conviction of any violator of its terms under the penalty clause of this Ordinance.
- 8.2.4 Any person, firm or corporation violating any of the provisions of the Ordinance shall be subject to the penalties specified in New Hampshire [RSA 676:17](#).

8.3 Codes

- 8.3.2 All construction in the Town of Raymond shall conform to the State Building Code as referenced in [RSA 155-A: 2](#) as it may be amended from time to time. The application of the above codes shall be made in accordance with the provisions of [RSA 155-A: 2](#). (03/2004 & 3/2017)
- 8.3.3 Sprinkler systems shall be installed for all new commercial and industrial buildings of any type to include multifamily residential dwellings of three or more units, lodging or rooming housing, residential board and care, or group housing. Further, any new uses additions, renovations to commercial and or industrial buildings needing the approval of the planning board or exceeding 50% improvement of such a building as determined by the building inspector, shall require the entire structure to be brought into compliance with this section as a condition of approval before issuance of the certificate of occupancy. Sprinkler plans shall be submitted to and approved by the Raymond Fire Department fire inspector(s).
Structures requiring the installation of a sprinkler system shall also have a fire alarm system installed as defined and accepted by the Raymond Fire Department fire inspector(s). Further, a fire alarm system design plan shall be submitted to and approved by the Raymond Fire

Department fire inspector(s) prior to the issuance of a building permit. Sprinkler systems and fire alarm systems under this section shall meet the requirements of the current edition of the State of New Hampshire applicable codes including but not limited to NFPA 70, NFPA 72, and dependent on the occupancy classification, NFPA 13, NFPA 13D, or NFPA 13 R. (03/2023)

- 8.3.4 The Town of Raymond shall conform to the [National Fire Protection Association 17](#), standard for dry chemical extinguishing systems, requiring all new and substantially renovated fuel distribution locations to install pre-engineered fire suppression systems to comply with this code. (Note: For new facilities and does not affect existing facilities unless modifications are done to the fuel distribution system). (03/1997)
- 8.3.5 BUILDING SEPARATION REQUIREMENTS: Regardless of zone, all construction in the Town of Raymond shall conform to the following minimum building separation requirements and the following maximum building height requirements which equals or exceeds the latest [NFPA 80A](#), Recommended Practice for Protection of Buildings from Exterior Fire Exposures and [NFPA 220](#) Construction Classifications. A story is considered to be a maximum of ten (10) feet in height.

| Number of Stories | Separation Between Principle Buildings |
|-------------------|--|
| 1 | 30 feet |
| 2 | 35 feet |
| 3 | 45 feet |
| 4 | 55 feet |
| 5 or greater | 65 feet |

| NFPA Construction Classification | Maximum Building Height |
|----------------------------------|-------------------------|
| Type 1 | 6 Stories |
| Type 2 | 5 Stories |
| Type 3 | 4 Stories |
| Type 4 | 40 feet |
| 5 or greater | 35 feet |

8.3.6 For any building exceeding 30 feet in height, the minimum building setbacks from the property line must equal the height of the building. This requirement shall not supersede the minimum dimensional requirements set forth under [Article 15](#) of the Zoning Ordinance.

- 8.4 **Damage or Destruction:** In the event of the damage or destruction by fire, storm or Act of God of any building or structure not conforming to the regulations of this Ordinance, said building or structure may be rebuilt for its former nonconforming use on its original foundation provided such construction is started within one year from its damage or destruction and is completed within two years from the date of damage or destruction.
- 8.5 **Foundation Certification Required:** Prior to construction proceeding, past placement of the foundation footings, a plot plan certified by a registered land surveyor shall be presented to the Code Official showing acceptable setback from all lot lines. A sketch plan is required at the time the permit is first requested. (03/1987)

8.6 **Building Permit Validity:** All building permits shall be valid for one (1) year, provided that the actual building construction applied for has commenced within six months of the issuance of the permit. An extension may be granted upon request and with no additional fee. A building permit shall be required for all alterations and conversions. Building permits are not transferable.

8.7 **Building Permit Fees:** Building permit fees will be set by the Selectmen.

ARTICLE 9: ZONING BOARD OF ADJUSTMENT

9.1 **Makeup and Authority:** A five (5)-person Zoning Board of Adjustment and up to five (5) alternates shall be appointed by the Board of Selectmen as provided by NH [RSA 673:3](#), as may be amended from time to time. Pursuant to [RSA 674:33](#) and [674:33-a](#), as may be amended from time to time, the Zoning Board of Adjustment shall have the power to:

- 9.1.1. Review and decide on alleged error in administrative finding or decision;
- 9.1.2. Review and decide on a Special Exception request;
- 9.1.3. Review and decide on a Variance request; and
- 9.1.4. Review and decide on Equitable Waivers of Dimensional Requirements.

9.2. **Criteria for Special Exceptions (03/2014)**

9.2.1. When applying to the Zoning Board of Adjustment for a special exception, the applicant shall first submit a completed application stating the reasons for granting thereof. If it is determined by staff that the application will also be subject to site plan review with the Raymond Planning Board, then the applicant will be encouraged to also file the required site plan review application and request, in writing, a joint meeting with both the Zoning Board of Adjustment and the Planning Board per NH [RSA 676:2](#). If the request for a joint meeting is granted by both Boards, then a joint meeting shall be scheduled within thirty (30) days of the date the application was initially received. If the request for a joint meeting is denied, then a public hearing with the Zoning Board of Adjustment shall be scheduled within thirty (30) days of the date the application was initially received.

9.2.2. In order for the Zoning Board of Adjustment to grant a special exception, it must find that all of the following requirements and any other specific applicable requirements as set forth in this Ordinance are met:

- 9.2.2.1. The specific site is an appropriate location for the proposed use or structure.
- 9.2.2.2. Considering the zoning designation of the proposed location, a proposed use will not unreasonably impact the quality of life, character, or public health, safety, and welfare of the area. (3/2017)
- 9.2.2.3. The proposed use will not create an undue nuisance or hazard to vehicles or pedestrians.
- 9.2.2.4. Adequate and appropriate facilities and utilities will be provided for the proper operation of the proposed use.

9.2.2.5. The proposed use will not result in unmitigated additional municipal expense.

9.3. **Criteria for a Variance** (03/2010) - Before authorizing a Variance from the Ordinance, the Board of Adjustment shall find that the five (5) following conditions as set forth by [RSA 674:33, I\(b\)](#), as may be amended from time to time, have been met:

9.3.1. The variance will not be contrary with the public interest;

9.3.2. The spirit of the Ordinance is observed;

9.3.3. Substantial justice is done;

9.3.4. The values of surrounding properties are not diminished; and

9.3.5. Literal enforcement of the provisions of the Ordinance would result in an unnecessary hardship.

9.4. **Criteria for Equitable Waivers of Dimensional Requirements** (03/2010): Pursuant to [RSA 674:33-a](#), as may be amended from time to time, the Zoning Board of Adjustment may grant an equitable waiver of dimensional requirements provided that the Zoning Board of Adjustment makes findings that the provisions of [RSA 674:33-a](#) are met. Alternatively, the ZBA may grant an equitable waiver under [RSA 674:33-a](#) as amended from time to time from a physical layout or dimensional requirement if the owner of the property in violation demonstrates to the satisfaction of the Board that the violation existed for the period of time set forth in the statute and that no enforcement action, including written notice of violation, has been commenced against the violation during that time by the Town of Raymond or any person directly affected.

9.5. **Limits of Approvals of Special Exceptions and Variances** (03/2010)

9.5.1. Purpose: The purpose of this provision is to provide a reasonable time limitation on an approval by the Zoning Board of Adjustment (ZBA) of any relief granted pursuant to an application before it for a Variance or Special Exception. Recognizing that changes in the ordinances, and/or conditions in the neighborhood may conflict with a prior approval that has not been implemented within a reasonable time thereafter, it is in the public interest to require improvements for which said Variance or Special Exception shall have been granted, be substantially completed within the time period set forth in subparagraph 02 below. Failure to do so within this designated time period will result in the approval becoming null and void without further action of the Zoning Board of Adjustment. Thereafter, any site development or use of the property will be subject to all state and town land use regulations then in effect.

9.5.2. All approvals for Variances or Special Exceptions shall only be valid for a period of 4 (four) years from the date such approval was granted; provided, however, that upon substantial completion of any improvements, modifications, alterations, or other changes in the property for which said approval was granted, the rights of the owner or any successor in interest shall vest.

9.5.3. An applicant whose approval will otherwise lapse may apply to the Zoning Board of Adjustment for an extension of time to substantially complete the improvement for which relief was granted. The Zoning Board may grant a reasonable extension of time to the applicant following a duly noticed public hearing and upon a showing of good cause. "Good Cause" shall mean any reasonable explanation for delay in completion of the improvements for which the relief from the ordinance or approval of special exception was granted. The Zoning Board shall make a specific finding of the basis for its decision to grant the extension.

ARTICLE 10: AMENDMENTS

10.1 **Amendments:** This Ordinance may be amended with the provisions of [NH RSA 674](#) as it is or may be amended.

ARTICLE 11: SAVINGS CLAUSE

11.1 **Savings Clause:** The invalidity of any provision of this Ordinance shall not affect the validity of any other provision of this Ordinance.

ARTICLE 12: EFFECTIVE DATE

12.1 **Effective Date:** This Ordinance shall become effective immediately upon its passage.

ARTICLE 13: Definitions

13.1 **Definitions:** For terms for which no definition is provided, Raymond's Ordinances and Regulations may reference The New Illustrated Book of Development Definitions by Moskowitz and Lindbloom, published by the Center for Urban Policy and research, dated 1993 and as may be amended. For the purposes of this Ordinance, the present tense includes the future tense; the singular number includes the plural; and the plural number includes the singular. The word "shall" is mandatory; the word "may" is permissive; the words "used" or "occupied" include the words "intended," "designated," or "arranged" to be used or occupied; and certain terms or words shall be interpreted as follows:

- 13.1.1. **ABANDONED:** Abandonment means the stated intention or otherwise apparent action of an owner to discontinue a non-conforming use of a structure or lot.
- 13.1.2. **ACCESSORY BUILDING:** A building or structure, detached from but located on the same lot, which is customarily incidental and subordinate to the principal building. Accessory buildings shall not contain bedrooms. (3/2017)
- 13.1.3. **ADULT BUSINESS ESTABLISHMENT:** (03/1999) Means any business open to the public, including, but not limited to, any bookstore, video store, newsstand, novelty store, nightclub, bar, cabaret, amusement arcade, theater, sexual encounter center or another business which derives revenue from the sale, rental or viewing of live performances or representations in any form involving displays or materials which meet the definition of "harmful to minors" and/or "sexual conduct" as set forth in [NH RSA 571-B:1](#), et. seq., and which devotes more than twenty percent (20%) of the total display, shelf, rack, table, stand or floor area for live performances or representations in any form of displays or material which meet the definition of "harmful to minors" and/or "sexual conduct" as set forth in [NH RSA 571-B:1](#), et. seq.
- 13.1.4. **AGRICULTURAL USE:** (03/1990) The use of land for the purpose of cultivating the soil, producing farm, forest, or horticultural crops/dairy and/or raising livestock, poultry, or other farm animals.
 - 13.1.4.1. **COMMERCIAL AGRICULTURE:** Agricultural use of land for the principal purpose of sale

either on or off the premises, including any sale facilities located on the premises. A single family detached dwelling is a permitted accessory use.

- 13.1.4.2. NON-COMMERCIAL AGRICULTURE: Agricultural use of land accessory to a residential use where the lot size exceeds two acres.
- 13.1.4.3. PRODUCE STAND: A structure used solely for the sale of produce/vegetables accessory to a non-commercial agricultural use of land where the floor area of the structure does not exceed 150 square feet.
- 13.1.5. AUTOMOTIVE OR SIMILAR SALES FACILITY: (03/1992) A building and/or lot used principally for the sale, display, or rental of new or used automobiles or other similarly sized vehicles, with or without an accessory use for the repair or reconditioning of such vehicles.
- 13.1.6. AUTOMOTIVE REPAIR SHOP: (03/1992) A building and/or lot where automobiles or other similarly sized vehicles are serviced and repaired. No unregistered vehicles shall be allowed on site as per the NH [RSA 236:111](#) et. seq.
- 13.1.7. AUTOMOTIVE SERVICE STATION: (03/1992) A building and/or lot where gasoline, oil, grease, batteries, tires, and automotive accessories are sold at retail, minor servicing and repairs are made and cold drinks, candy, tobacco, and similar goods may be sold.
- 13.1.8. BED AND BREAKFAST INN: (03/1993) A residential dwelling unit or a portion thereof where short term lodging and meals, incidental to lodging, are provided. The operator of the Inn shall live on the premises.
- 13.1.9. BOARD: The Town of Raymond Zoning Board of Adjustment.
- 13.1.10. BOARDING OR ROOMING HOUSE: A building principally containing Boarding Units.
- 13.1.11. BOARDING UNIT: Residence of one or more persons not living as a single housekeeping unit and not having individual cooking facilities.
- 13.1.12. BUILDING: Any structure that has a roof on it and is intended or used for the shelter, housing or enclosure of persons, animals, or property.
- 13.1.13. CAMPER: Any type of readily transportable shelter which was designed and/or is commonly used for camping, including but not limited to: motor homes, pickup truck mounted shelters and towed trailer-type shelters, to include hard and soft body trailers, which do not qualify as Manufactured Housing as defined in this section.
- 13.1.14. CAMPING AREA: Any parcel of land which contains three (3) or more separate lots or sites and/or contains permanent buildings or other structures commonly used for camping including accessory buildings and, if necessary, privately owned and maintained roads to provide access thereto; contains lots or sites which are rented, leased or otherwise let, for the placement of tents, campers, or other normally accepted camping shelters thereon for the purpose of camping; occupancy thereof is for not more than nine (9) months of the year; meets or exceeds all of the current requirements of the State of New Hampshire for that type of camping area.
- 13.1.15. CERTIFIED PLOT PLAN: (03/2004) A survey, sketch plan, map plat, or other exhibit of a lot, drawn

to scale, showing the actual measurements, the size and location of any existing structures or structures to be erected, the location of the lot in relation to abutting streets, and other such information, containing a written statement regarding accuracy, signed, and sealed by a New Hampshire licensed land surveyor under whose supervision said plan was prepared.

- 13.1.16. CHURCH: (03/1990) A building and/or other structure used principally by a body or organization of religious believers to regularly assemble for worship.
- 13.1.17. CODE OFFICIAL: (03/2013) Any employee of the Town of Raymond authorized by the Town Manager to administer or enforce the Zoning Ordinance, including but not limited to the Community Development Director and the Building Inspector, but in all cases someone who is qualified to carry out the duties of the position.
- 13.1.18. COMMERCIAL SERVICE ESTABLISHMENT: (03/1990) A building and/or other structure used principally for providing commercial services to the public, such as a beauty shop, shoe repair shop, dry cleaner, laundry, electrician, plumber, repair service, installation service, general contractor, rental shop and the like. No accessory use for residential purposes shall be permitted.
- 13.1.19. CONSERVATION SUBDIVISION: A subdivision of land consisting of protected open space and single-family detached homes located on unconventional lots that would not otherwise be permitted by the minimum lot size, frontage, and yard requirements of this Ordinance. Private roads built to Town standards are permitted in a Conservation Subdivision, but a Homeowner's Association must be established to maintain the roads. Private roads built to Town standards are permitted in a Conservation Subdivision, but a Homeowner's Association must be established to maintain the roads.
- 13.1.20. DAY CARE: Means a building used principally or as an accessory use to a single family attached dwelling or a free standing building or structure used to provide custodial care for children without a teacher or formal education program.
 - 13.1.20.1. FAMILY DAY CARE HOME: Means a residence occupied by a provider in which child care is regularly provided for any part of a day (but less than twenty-four (24) hours except in emergencies) for one (1) to six (6) children from one (1) or more unrelated families. The maximum of six (6) children includes children under six (6) years of age who are living in the home and children related to the applicant who are received for child care.
 - 13.1.20.2. ADULT DAY CARE FACILITY: An establishment, located in either a private residence or other building, which provides care, supervision, and protection of adult persons.
 - 13.1.20.3. DAY CARE CENTER: (03/2002) A facility licensed by the state, where seven (7) or more children are provided care, supervision, and protection.
- 13.1.21. DENSE VEGETATIVE BUFFER: (03/2002) A natural and/or planted vegetative buffer, which shall provide year-round screening, e.g. evergreen plantings.
- 13.1.22. DRIVEWAY: An access way with two (2) or less dwellings except in the case of a conservation subdivision which may have four (4) dwellings served by one driveway.
- 13.1.23. DUMP: A land site used primarily for the disposal by dumping, burial, burning, or other means, and for whatever purposes, of garbage, sewage, trash ,refuse, junk, discarded machinery,

vehicles or parts thereof, and other waste, scrap, or discarded material of any kind.(03/2020)

- 13.1.24. DWELLING: A structure designed for residential occupancy by one (1) or more families by excluding hotels, motels, tourist homes, overnight cabins.
- 13.1.25. DWELLING UNIT: One (1) or more rooms providing complete separate living facilities for the use of one (1) or more persons constituting a single housekeeping unit, with permanent provisions for living, sleeping, eating, cooking and sanitation.
- 13.1.26. DEWLLING – TWO FAMILY UNIT: A structure on a single lot containing two (2) dwelling units, each of which is separated from the other by an un-pierced wall extending from ground to roof or by an un-pierced wall extending from exterior wall to exterior wall, except for a common stairway exterior to both dwelling units.
- 13.1.27. FLEA MARKET: (03/1998) A commercial venture consisting of rented space to sell items and/or admission is charged.
- 13.1.28. FLOODWAY: The area subject to regular flooding, the limits of which are determined by the normal annual high watermark of any lake, pond, river, or other major water way.
- 13.1.29. FLOOR AREA: (03/2012) The area of floor space which may be occupied on all stories of a building measured between the faces of the interior walls.
- 13.1.30. FORESTRY: (03/2012) The operation of timber tracts, tree farms, forest nurseries, the gathering of forest products, or the performing of forest services.
- 13.1.31. FRONTAGE: The length of a lot at its front lot line which borders on a public street or a street paved in a subdivision approved by the Planning Board.
- 13.1.32. GASOLINE STATION AND CONVENIENCE CENTER: (03/2012) A gasoline station and convenience store comprising the principal use, which may also include a fast food component operated and maintained as a use within the principal structure.
- 13.1.33. HEAVY INDUSTRIAL ESTABLISHMENT: (03/2012) Processing or manufacturing activities in which raw materials are transformed into finished goods on a large scale to be further manufactured, fabricated, assembled, or packaged in a Light Industrial Establishment, as defined in this Ordinance.
- 13.1.34. HEAVY MANUFACTURING ESTABLISHMENT: (03/2012) A structure and/or lot used principally for manufacturing activities not meeting the definition of Light Manufacturing Establishment, as defined in this Ordinance.”
- 13.1.35. HOME OCCUPATION: (03/2015) Any activity carried out for gain by a resident which is conducted in the resident’s single-family detached dwelling, or an accessory building thereto, that is clearly secondary and subordinate to the residential purposes of the dwelling and does not change the residential character of the neighborhood.
- 13.1.36. HOTEL/MOTEL: A building principally containing rooms without individual cooking facilities used for transient occupancy, including an inn, motel, motor inn or tourist court, but not including a boarding or rooming house. A restaurant is a permitted accessory use.

- 13.1.37. INDOOR COMMERCIAL RECREATION FACILITY: A building used principally for indoor commercial recreation such as bowling alley, pool hall, indoor pool, tennis court, gymnasium, roller or ice skating rink, indoor movie theater and the like.
- 13.1.38. INDUSTRIAL REPAIR GARAGE: A structure and/or lot used principally for the repair of heavy-duty vehicles and machines.
- 13.1.39. JUNKYARD: Means any business and any place of storage or deposit, whether in connection with another business or not, which has stored or deposited two (2) or more unregistered motor vehicles which are no longer intended or in condition for legal use on the public highways, or used parts of motor vehicles, old iron, metal, glass paper, cordage or other waste of discarded or second hand material which has been a part, or intended to a part of any motor vehicle, the sum of which parts or material shall be equal in bulk to two (2) or more motor vehicles. Junk Yard shall also include any place of business or storage or deposit of motor vehicles purchased for the purpose of dismantling the vehicles for parts of which are parts of a motor vehicle or cut up the parts thereof. Intended use shall be defined as the vehicle's ability to meet current state motor vehicle inspection requirements.
- 13.1.40. LANDFILL: A disposal site in which refuse and earth, or other suitable cover material, are deposited and compacted in alternating layers of specified depth in accordance with an approved plan (03/2020)
- 13.1.41. LIGHT INDUSTRIAL ESTABLISHMENT: (03/2012) A structure and/or lot used principally for the manufacturing, fabricating, assembling, or packaging of components through the systematic use of machinery and labor to produce durable and/or non-durable finished goods or component parts. All manufacturing, fabricating, assembly, or packaging must take place wholly within a structure or structures and involve no permanent outside storage of equipment or materials, unless such storage is approved by the Planning Board.
- 13.1.42. LIGHT MANUFACTURING ESTABLISHMENT: (03/2012) Those manufacturing activities which utilize materials manufactured elsewhere to mechanically produce or assemble a product. All production and assembly must take place wholly within a structure or structures and involve no permanent outside storage of equipment or materials, unless such storage is approved by the Planning Board.
- 13.1.43. LOT LINE FRONT: Any lot line that coincides with a line of a street or a right of way.
- 13.1.44. LOT LINE REAR: The lot line most distant from the front line, except that in the case of a corner lot, the owner shall have the option of choosing which of the lot lines shall be the rear lot line.
- 13.1.45. LOT LINE SIDE: Any lot line not a front or rear lot line.
- 13.1.46. LOT, PRE-EXISTING, NON-CONFORMING: A lot lawfully used or existing at the effective date of this ordinance, or any subsequent amendment thereto, which is not in accordance with all the area, yard, height and frontage requirements of this ordinance or any subsequent amendment thereto for the district in which it is located.
- 13.1.47. LUMBER TREATMENT ESTABLISHMENT: A structure and/or lot used principally for the treatment and preparation of lumber, such as planing mills, sawmills and the like. Outdoor storage of goods

is a permitted accessory use only after site plan review.

- 13.1.48. MACHINE SHOP: (03/1990) Means any facility where parts for various types of machines are assembled and manufactured or repaired.
- 13.1.49. MANUFACTURED HOME PARK: (03/2006) A lot upon which ten (10) or more manufactured homes are located for use for residential purposes, whether or not a charge is made for such accommodations, as governed by [Section 6.3](#) of this ordinance.
- 13.1.50. MANUFACTURED HOME SUBDIVISION: (03/1999) Is a subdivision as defined in NH [RSA 672:14](#) created for the exclusive use of Manufactured Homes.
- 13.1.51. MANUFACTURED HOUSING: Any structure, transportable in one (1) or more sections, which, in the traveling mode, is eight (8) body feet or more in width and forty (40) body feet or more in length, or when erected on site, is three-hundred twenty (320) square feet or more, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to required utilities, which include plumbing, heating and electrical heating systems contained therein, Manufactured Housing as defined in this section shall not include pre site built housing as defined in [RSA 674:31-a](#).
- 13.1.52. MULTI-FAMILY HOUSING: A residential building designed for and occupied by three (3) or more families, regardless of the type of ownership, such as, but not limited to, condominiums, apartments or other common wall or row-type housing units of the same type.
- 13.1.53. NATURAL VEGETATED SHORELAND BUFFER: (03/2011): Preserved and/or restored trees, shrubs and natural groundcover, throughout Raymond's Shoreland Protection Area.
- 13.1.54. NO NET LOSS: (03/2009) As applied to area and function of wetlands, means that for any wetlands filled by any development, an equal area of wetlands with similar or better function, as designed by a certified soil or wetland scientist, must be reconstructed utilizing approaches outlined in [Section 2.9](#).
- 13.1.55. NURSERY SCHOOL: (03/1990) A building used principally, or as an accessory use to a single-family detached dwelling for pre-elementary, non-public education, where there exists a curriculum and teacher to provide an educational program for children.
- 13.1.56. OFFICE ESTABLISHMENT: A building used principally for offices and/or by those providing professional and quasi professional services such as engineers, doctors, bankers, lawyers, realtors, insurance agents and the like, and commercial service establishment having in excess of 3,000 square feet in floor area.
- 13.1.57. OUTDOOR COMMERCIAL RECREATIONAL FACILITY: A lot and/or structure used principally for outdoor commercial recreation, such as golf courses, miniature golf, fish and game clubs, tennis courts and swimming pools, race tracks, outdoor movie theaters and the like.
- 13.1.58. PARKING LOT: Parking lot is defined as a developed location of an open land area, other than a street or way that is designated to accommodate clients, customers, residents of multi-family dwellings, or the public for parking motor vehicles, whether developed with asphalt, concrete, gravel, or other material and regardless of other features like fees or charging stations. (03/23)

- 13.1.59. PRIVATE EDUCATIONAL FACILITY: Any school, which is not a public educational facility and is not a nursery school.
- 13.1.60. PUBLIC EDUCATIONAL FACILITY: A building used principally to educate any child of the Town of Raymond where attendance at such school at the public expense is a right of that child.
- 13.1.61. PUBLIC RECREATIONAL FACILITY: Any lot and/or structure used principally for recreation, built, or maintained at the public expense and open generally to the public, such as public tennis courts, ball fields and parks.
- 13.1.62. RECYCLING COLLECTION CENTER: (03/1991) A facility where predominately residential users can deposit cans, bottles, newspapers, glass and other suitable non-toxic, non-hazardous recyclable materials in separated boxes, bins, etc.
- 13.1.63. RECYCLING PROCESSING CENTER: (03/1991) A facility where recycled materials such as cans, bottles, newspapers, cardboard, glass, and other materials are received and prepared for future processing either on site or off site. In addition, collection of household hazardous waste may be allowed by Special Exception.
- 13.1.64. RESEARCH LAB: (03/1990) A facility which conducts and supervises research into biological, chemical, or mechanical activities. All activities, especially residue or waste material shall be handled and disposed of in strict conformance with appropriate state and federal laws.
- 13.1.65. RESTAURANT: (03/1990) A building or other structure used principally to provide refreshments or meals to the public for consumption principally on the premises, including cafes, lunchrooms, cafeterias, tea rooms, sandwich shops and the like, but not including a fast food restaurant.
- 13.1.66. RESTAURANT, FAST FOOD: (03/1990) A building used principally to dispense prepared food and/or beverages to the public for consumption on or off the premises, the major attributes of which are assembly line preparation of food and speed of dispensing, self-service by the customer by standing in line, and/or service to the customer in automobiles, and which generates a large volume and rapid turnover of entering and exiting motor vehicle traffic.
- 13.1.67. SALES ESTABLISHMENT: (03/1990) A structure and/or lot used principally for the sale of products to the public or at wholesale if principally on the premises, such as grocery, drug store, general merchandise store, bookstore, florist shop, building supply store, auto parts store and the like. Outdoor storage of goods shall be governed by the Site Plan Review regulations of the Town of Raymond.
- 13.1.68. SERVICED BY TOWN WATER: (03/2012) Receiving metered, potable water supply from the Town-owned and maintained water supply system.
- 13.1.69. SITE PLAN: (03/2004) A plan showing the location of all buildings, parking areas, abutters, traffic access and circulation drives, open spaces, landscaping, and any other pertinent information that the Raymond Planning Board deems necessary in implementing its review on non-residential and multi family dwelling unit site plans in accordance with Chapter 674 NH Revised Statutes Annotated.
- 13.1.70. SINGLE FAMILY DETACHED DWELLING: A dwelling which stands apart from other buildings, except accessory buildings, and which is used for residence by a single housekeeping unit, with

permanent provisions for living, sleeping, eating, cooking and sanitation.

13.1.71. SOCIAL FACILITY: A structure and/or lot used principally by clubs of a fraternal, social, or non-profit nature to provide a meeting place and to conduct the business of said club.

~~13.1.72.~~ Solar Panel SOLAR PANEL: A Solar Panel is a panel designed to absorb the Sun's rays as a source of energy for generating electricity or heating. All Solar Panels are considered 100% impervious for the calculation of impervious surfaces. (03/24)

~~13.1.72.~~ 13.1.73. SPECIAL EXCEPTION: (03/1992) As defined in NH [RSA 674:33 IV](#), a use of a building or lot which may be permitted under this Ordinance only upon formal application to the Board of Adjustment and subject to the approval of that Board in accordance with [Section 9.2](#) of the Raymond Zoning Ordinance.

~~13.1.73.~~ 13.1.74. SPECIAL PERMIT: (03/1999 & 03/2018) A permit issued by the Planning Board to allow specific uses and/or activities as required by the Raymond Zoning Ordinance.

~~13.1.74.~~ 13.1.75. STRUCTURE: (03/2000) A combination of materials to form a construction for use, occupancy, or ornamentation whether installed on, above, or below the surface of land or water.

~~13.1.75.~~ 13.1.76. STRUCTURE, PERMANENT: (03/2000) Anything built with a footing or foundation and/or by nature of its size, positioning, projected use, or construction and upon installation or removal, causes any destruction to surroundings or to the structure itself, exclusive of fences, wells, and stone walls.

~~13.1.76.~~ 13.1.77. SUBDIVISION: (03/1990) As defined in NH [RSA 672:14](#), means the division of the lot, tract, or parcel of land into 2 or more lots, plats, sites, or other divisions of land for the purpose, whether immediate or future, of sale, rent, lease, condominium conveyance or building development. It includes re-subdivision and, when appropriate to the context, relates to the process of subdividing or to the land or territory subdivided.

~~13.1.77.~~ 13.1.78. STREET: A thoroughfare, road, avenue, freeway, highway, and other ways open to public use. "Street" shall mean the entire width of the right-of-way whether unimproved or improved, serving more than two (2) dwellings.

~~13.1.78.~~ 13.1.79. TESTING LAB: (03/1990) A facility which conducts tests of experimental activities in a regulated environment in strict conformance with State and Federal laws.

~~13.1.79.~~ 13.1.80. TRUCK AND HEAVY EQUIPMENT REPAIR SHOP: (03/1992) A building and/or lot where trucks and/or heavy equipment type vehicles are serviced and repaired. No unregistered trucks shall be allowed on site as per the NH [RSA 236:111](#) et.seq.

~~13.1.80.~~ 13.1.81. TRUCK AND/OR HEAVY EQUIPMENT SALES FACILITY: (03/1992) A building and/or lot used principally for the sale, display, or rental of new or used trucks and/or similarly sized vehicles with or without an accessory use for the repair or reconditioning of such vehicles.

~~13.1.81.~~ 13.1.82. USE: A purpose defined by this Ordinance for which a structure or lot is used, occupied, or maintained or for which it is designed or intended to be used, occupied, or maintained.

~~13.1.82.~~ 13.1.83. USE, ACCESSORY: A use secondary and subordinate to the principal use of a structure or lot. An accessory use shall not exceed twenty-five percent (25%) of the lot area. Non-commercial

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agriculture shall not, however, be limited in percentage of lot coverage.

~~13.1.83~~, 13.1.84 USE, NON-CONFORMING: (03/1990) A use lawfully existing at the time of adoption of this

Ordinance or any subsequent amendment thereto which does not conform to one or more of the use provisions of this Ordinance or any subsequent amendment thereto. This shall include a use for which a building permit was lawfully issued prior to the posting of the first required legal notice of the adoption of this Ordinance or any subsequent amendment thereto and for which the construction is completed within one year of the effective date of this Ordinance or any subsequent amendment thereto or the time limit prescribed by the building permit or other approval, whichever is shorter.

~~13.1.84~~13.1.85. USED MOTOR VEHICLE DEALERSHIP: (03/2002) The storage and display for sale of more than two (2) used motor vehicles. Motor vehicle sales shall include motor vehicles retail or wholesale sales.

~~13.1.85~~13.1.86. VARIANCE: (03/2010) As defined in [RSA 674:33](#), a relaxation of the terms of this Ordinance granted by the Zoning Board of Adjustment as long as it complies with the variance criteria required under [Section 9.3](#) of this Ordinance.

~~13.1.86~~13.1.87. WAREHOUSE ESTABLISHMENT: (03/1990) A building or other structure used principally for the storage of products, including finished goods, fuels, lumber, food, and chemicals, whether or not involving the wholesaling or retailing of such products principally off the premises.

~~13.1.87~~13.1.88. WETLANDS: (03/2009) means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

~~13.1.88~~13.1.89. WHOLESALE BUSINESS ESTABLISHMENT: (03/2012) Establishments or places of business primarily engaged in selling merchandise to other businesses, including retailers, industrial, commercial, institutional, or professional business users, other than wholesalers, or acting as agents or brokers and buying merchandise for, or selling merchandise to, such individuals or companies.

~~13.1.89~~13.1.90. WIRELESS COMMUNICATIONS FACILITY: (03/1997) All towers, poles, antennas, or other structures intended for use in connection with the commercial transmissions or receipt of radio or television signals or any other spectrum-based transmissions/receptions.

ARTICLE 14: ALLOWED USES TABLE

14.1 Allowed Uses Table

14.1.1. LEGEND: P =Permitted

P500 = Permitted 500 feet from property line abutting NH Route 102

SE = Permitted by Special Exception

A = Permitted as Ancillary Use (MUBCOD)

X = Not Permitted

| Type of Use | Zone A | Zone B | Zone C.1 | Zone C.2 | Zone C.3 - West | Zone C.3 - East | Zone D | MUBCOD |
|---|------------------------------|------------------------------|----------|----------|-----------------|-----------------|--------|--------------|
| ACCESSORY USES (i.e. with and incidental to a principle use, including but not limited to Factory Outlet Sales) | X | X | X | X | X | X | P | X |
| ADULT BUSINESS ESTABLISHMENT | X | X | SE | X | X | X | X | X |
| AGRICULTURAL USE | | | | | | | | X |
| COMMERCIAL AGRICULTURE | SE | P | SE | P | P | P | X | X |
| NON-COMMERCIAL, FORESTRY ONLY | P | P | P | P | P | P | P | X |
| NON-COMMERCIAL, NOT INCLUDING PRODUCE STANDS | P | P | P | P | P | P | P | X |
| PRODUCE STAND (see definition under Agricultural Use) | SE 14.2.2 | SE 14.2.2 | P | P | P | P | X | X |
| AUTOMOTIVE SERVICE STATION | X | X | P | X | X | X | X | X |

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| Type of Use | Zone A | Zone B | Zone C.1 | Zone C.2 | Zone C.3 - West | Zone C.3 - East | Zone D | MPUCOP |
|--|--------|--------|----------|----------|-----------------|-----------------|--------|--------------|
| AUTOMOTIVE REPAIR SHOP | X | X | P | X | X | X | P | X |
| AUTOMOTIVE OR SIMILAR VEHICLE SALES FACILITY 14.2.9 | X | X | P | X | X | X | P | X |
| BED & BREAKFAST INN (limited to 5 or less rooms) | P | P | X | X | P | P | X | X |
| BED & BREAKFAST INN (limited to 10 rooms maximum) | X | X | P | P | P | P | X | X |
| BOARDING OR ROOMING HOUSE | SE | SE | P | P | X | X | X | X |
| CAFETERIA OR RESTAURANT | X | X | X | X | X | X | P | A |
| CAMPING AREA | X | SE | P | P | X | X | X | X |
| CHURCH | P | P | P | P | X | X | X | X |
| CONSERVATION SUBDIVISION (single family only) | P | P | X | X | P 500 | X | X | X |
| COMMERCIAL SERVICE ESTABLISHMENT | X | X | P | P | P | P | X | X |
| CONVERSION APARTMENT | SE | SE | P | P | X | X | X | X |
| DAY CARE | | | | | | | | X |

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| Type of Use | Zone A | Zone B | Zone C.1 | Zone C.2 | Zone C.3 - West | Zone C.3 - East | Zone D | MUBCCOD |
|--|--------|--------|----------|----------|--------------------------------|-----------------------------|-----------------------------|---------|
| ADULT DAY CARE | X | X | X | P | P | P | P 14.2.1 | A |
| DAY CARE CENTER | SE | SE | P | P | P | P | P 14.2.1 | A |
| DAY CARE & ADULT DAY CARE (when associated with an existing business in Zone D) | X | X | X | X | X | X | P | ✗ |
| FAMILY HOME DAY CARE/ADULT DAY CARE | P | P | X | X | P | P | X | ✗ |
| DUMPS (03/2020) | X | X | X | X | X | X | X | ✗ |
| DWELLING – TWO FAMILY UNIT | P | P | X | X | P500 14.2.5 | P 14.2.5 | X | ✗ |
| ELDERLY HOUSING OVERLAY DISTRICT 14.2.8 | P | P | X | P | P500 | X | X | ✗ |
| EXCAVATION, SOIL REMOVAL & PROCESSING | X | X | X | X | X | X | P | ✗ |
| EXCAVATION & SOIL REMOVAL | X | SE | SE | SE | X | X | P | ✗ |
| FLEA MARKET | X | X | P | P | X | X | X | ✗ |
| GASOLINE STATION AND CONVENIENCE CENTER | X | X | P | X | X | X | P | ✗ |
| HEAVY INDUSTRIAL ESTABLISHMENT | X | X | X | X | X | X | SE | ✗ |

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|-----------------------------------|---|---|---|---|---|---|----|--------------|
| HEAVY MANUFACTURING ESTABLISHMENT | X | X | X | X | X | X | SE | * |
|-----------------------------------|---|---|---|---|---|---|----|--------------|

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| Type of Use | Zone A | Zone B | Zone C.1 | Zone C.2 | Zone C.3 - West | Zone C.3 - East | Zone D | MU/COD |
|---------------------------------------|--------|--------|----------|----------|-----------------|-----------------|--------|--------------|
| HOME OCCUPATION | P | P | P | P | P | P | X | * |
| HOTEL/MOTEL (3/2017) | X | X | P | P | X | X | SE | A |
| INDOOR COMMERCIAL RECREATION FACILITY | X | X | P | P | P | X | P | * |
| INDUSTRIAL REPAIR GARAGE | X | X | X | X | X | X | P | * |
| JUNKYARD 14.2.10 | X | X | X | X | X | X | X | * |
| Landfill (03/2020) | X | X | X | X | X | X | X | * |
| LIGHT MANUFACTURING ESTABLISHMENT | X | X | SE | SE | P | P | X | A |
| LIGHT INDUSTRIAL ESTABLISHMENT | X | X | X | X | P | P | P | * |
| LUMBER TREATMENT ESTABLISHMENT | X | X | P | P | X | X | P | * |
| MACHINE SHOP | X | X | X | X | P | P | P | * |
| MANUFACTURED HOME PARK | X | P | X | X | X | X | X | * |

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|-------------------------------|---|---|---|---|---|---|---|--------------|
| MANUFACTURED HOME SUBDIVISION | X | P | X | X | X | X | X | X |
| MULTI-FAMILY HOUSING (3/2017) | X | X | X | P | X | X | X | X |

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| Type of Use | Zone A | Zone B | Zone C.1 | Zone C.2 | Zone C.3 - West | Zone C.3 - East | Zone D | MUBCOD |
|--|--------|--------|----------|----------|-----------------------------|-----------------------------|--------|--------------|
| NURSERY SCHOOL | P | P | P | P | P | P | X | X |
| OFFICE ESTABLISHMENT | X | X | P | P | P | P | P | X |
| OFFICE ESTABLISHMENT/MUBCOD | X | X | X | X | P 14.2.6 | P 14.2.6 | X | P |
| OUTDOOR COMMERCIAL RECREATIONAL FACILITY | X | SE | P | P | P | X | X | X |
| PRIVATE EDUCATIONAL FACILITY | P | P | P | P | P | P | X | X |
| PUBLIC EDUCATIONAL FACILITY | P | P | P | P | P | P | X | X |
| PUBLIC RECEREATION FACILITY | P | P | X | X | P | X | X | X |
| RECYCLING COLLECTION CENTER | X | X | P | P | X | X | X | X |
| RECYCLING PROCESSING CENTER | X | X | X | X | X | X | SE | X |

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| RESEARCH LAB | X | X | X | X | X | X | SE | A |
| RESTAURANT | X | X | P | P | P | P | X | A |
| RESTAURANT, FAST FOOD | X | X | P | P | X | X | X | * |

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| Type of Use | Zone A | Zone B | Zone C.1 | Zone C.2 | Zone C.3 - West | Zone C.3 - East | Zone D | MUBCOD |
|---|--------|--------|----------|----------|--------------------------------|-----------------------------|--------|--------------|
| SALES ESTABLISHMENT | X | X | P | P | P | P | SE | * |
| SANITARY LANDFILL (03/2020) | x | x | x | x | x | x | x | * |
| SINGLE-FAMILY DETACHED DWELLING | P | P | X | X | P500 14.2.7 | P 14.2.7 | X | * |
| SOCIAL FACILITY | X | X | P | P | P | P | X | * |
| TESTING LAB | X | X | X | X | X | X | SE | A |
| TRUCK & HEAVY EQUIPMENT REPAIR SHOP | X | X | SE | X | X | X | P | * |
| TRUCK AND/OR HEAVY EQUIPMENT SALES FACILITY | X | X | SE | X | X | X | P | * |
| USED MOTOR VEHICLE DEALERSHIP 14.2.9 | X | X | P | X | X | X | P | * |
| WAREHOUSE ESTABLISHMENT | X | X | P | P | X | X | P | A |

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|---|----|----|----|----|---|---|---|--------------|
| WHOLESALE BUSINESS ESTABLISHMENT | X | X | X | X | P | P | P | X |
| WIRELESS COMMUNICATIONS FACILITY | SE | SE | SE | SE | P | P | P | X |

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14.2. Notes to Allowed Uses Table

- 14.2.1. As an accessory use to an operating primary allowed use. (03/2003)
- 14.2.2. Allowed only as an accessory to an allowed use and only for the sale of farm product or produce grown or made on-site as part of an approved home occupation or an allowed commercial or non-commercial agricultural use. (03/2003)
- 14.2.3. Where multi-family is a permitted use in the SOD it shall comply with all requirements of [Section 6.5](#), Multi-Family Housing, except that the maximum density for multi-family in the SOD shall be sixteen (16) bedrooms per acre, not eight (8) bedrooms per acre. Only twenty-five percent (25%) of the total acreage of the parcel can be used in calculating the density and no more than twenty-five percent (25%) of the parcel may be developed for multi-family housing. Nothing in this provision shall prevent the balance of the parcel acreage to be used for non-residential purposes. (03/2007)
- 14.2.4. Excavation that is exclusively incidental to the construction or alteration of a building or structure or incidental to lot development consistent with the provision of the SOD overlay district are permitted provided that no such excavation shall commence without appropriate state and local permits required for such construction, alteration, or development.
- 14.2.5. Duplexes may be located within the C.3 District only as part of a major subdivision consisting of minimum of 10 lots. (03/2012)
- ~~14.2.6. Within the C.3 District, all of the provisions regarding MUBCOD will be applied as written, except that only 20 contiguous acres are needed to qualify instead of 40 contiguous acres. (03/2012) (Removed 03/24)~~
- 14.2.7. Single Family Detached Dwelling Units may be located within the C.3 District only as part of a major subdivision or a conservation subdivision with a minimum of 10 lots. (03/2012)
- 14.2.8. Elderly Housing developments may be allowed by Special exception in Zone H and the Groundwater Conservation Overlay District. Please Note: Elderly Housing shall NOT be permitted in any of the following zones: Zone C1; Zone D; Zone G; and Zone F.
- 14.2.9. On or after the effective date of this Ordinance, March 12, 2002, no used motor vehicle dealerships may be located any closer than 2,000 feet to any other used motor vehicle dealership. The distance between such dealerships shall be computed by measuring the lot line closest to an existing used motor vehicle dealership to the lot line of the proposed used motor vehicle

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dealership, unless a certified and approved site plan shows a clearly defined area of use, in which case the area defined on the certified and approved site plan may be used to determine the distance between uses. (03/2002)

- 14.2.10. Please refer to [Section 2.13](#): Junkyards.
- 14.2.11. To restrict any commercial signs promoting cannabis, or marijuana, drug-related paraphernalia, or products.
- 14.2.12. To restrict the commercialization of marijuana and marijuana-based products.
- 14.2.13. Electric Vehicle (EV) Charging Stations shall be permitted in any zoning district in the Town of Raymond in any parking lot that contains six (6) or more parking spaces. Parking spaces set aside for EV Charging may be included in the total number of required parking spaces as specified elsewhere in these regulations. No EV charging station shall preempt handicap parking spaces. All Direct Current charging stations must be approved by the Planning Board. Alternating Current (AC) charging stations may be approved by the Building Inspector. (03/23)

ARTICLE 15: AREA AND DIMENSIONAL REQUIREMENTS & ASSOCIATED NOTES

15.1 [Area and Dimensional Table \(03/22\)](#)

| Zone | Minimum Lot Size Square Feet | Minimum Lot Size Acreage | Minimum Frontage | Minimum Setbacks | | | Serviced by Town Water |
|---|------------------------------|--------------------------|------------------|------------------|------|------|------------------------|
| | | | | Front | Side | Rear | |
| A | 40,000 | 0.92 | 100 | 25 | 10 | 10 | Yes |
| A | 87,120 | 2 | 200 | 30 | 30 | 30 | No |
| B | 87,120 | 2 | 200 | 30 | 30 | 30 | |
| C.1 | 21,780 | 0.5 | 50 | 15 | 15 | 15 | |
| C.2 | 21,780 | 0.5 | 50 | 15 | 15 | 15 | |
| C.3 (non-residential) | 21,780 | 0.5 | 50 | 15 | 15 | 15 | Yes |
| C.3 (Single-family residential) | 65,340 | 1.5 | 150 | 25 | 25 | 25 | Yes |
| C.3 (Two-family residential) *15.2.12 | 65,340 | 1.5 | 150 | 25 | 25 | 25 | Yes |
| C.3 (multi-family residential) *15.2.13 | 21,780 | 5 | 200 | 25 | 25 | 25 | Yes |
| D | 21,780 | 0.5 | 50 | 15 | 15 | 15 | |
| E | 87,120 | 2 | 200 | 50 | 50 | 50 | Yes |

| | | | | | | | |
|---|---------|----|------|------|------|------|-----|
| F | NA | NA | NA | 50 | 50 | 50 | |
| G | 87,120* | 2* | 200* | 15** | 15** | 15** | NA* |
| *The wetland setback is 75 feet per section 15.3 Refer to section 15.3 Special Requirements in Zone G (03/24) | | | | | | | |

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15.2. Notes to Area and Dimensional Requirements

- 15.2.1. Excepted from this requirement are all buildings on any pre-existing lot in Zones B, C, D or E or less than two (2) acres, which shall require setbacks of twenty-five feet (25') from all property lines.
- 15.2.2. Accessory buildings 144 square feet or smaller shall be permitted no closer than 25 feet from side property lines. Larger accessory buildings shall be permitted no closer than thirty feet (30') from the side property lines. (03/2016)
- 15.2.3. All existing lots of one-third acres (14,520 sq. ft.) or less shall meet the setback requirements of Zone A.
- 15.2.4. No new buildings may be erected or established on any lot within the Town of Raymond which does not meet the requirements for lot size specified herein: Only one principal building will be permitted on any one lot except in Zone C.1, C.2 or C.3 Commercial and Zone D Industrial where more than one principal building will be permitted per lot. Within the C.3 District, however, Single Family Detached Dwelling and Dwelling-Two Family Unit developments will be limited to one principal building per lot. (03/2016)
- 15.2.5. Frontage for wedge-shaped lots, on the outside of a curving street, may have two-thirds of the otherwise required frontage, only if their average width meets frontage requirements normally used.
- 15.2.6. Any residential structure proposed for location within a Commercial (C.1 and C.2) or Industrial zone (D) shall require a minimum setback of one hundred feet (100') from property lines (03/2022), or, in the alternative, fifty feet (50') inclusive of a minimum of twenty feet (20') of dense vegetative buffer and a fence of a type designed to shield the residential structures from light and noise generated by a commercial or industrial use. Security apartments which are accessory to any commercial or industrial use shall not be affected by this section. (03/2002)
- 15.2.7. Any commercial or industrial structure which is proposed to be located abutting a residential zone, or in C.2 only, an existing residential use, shall require a minimum setback of fifty feet (50') from property lines (03/2022), which shall include a twenty foot (20') dense vegetative buffer and a fence to shield the residential zone or in C.2 only, an existing residential use, from light and noise generated by the commercial or industrial structure. If the entire fifty-foot (50') buffer is developed and maintained as dense vegetative buffer, a fence is not required. (03/2002)
- 15.2.8. All proposed commercial and industrial uses shall meet the performance standards contained in the Raymond Site Plan Review Regulations. (03/1994)
- 15.2.9. Zones A, B & E, including all residential overlay zones, shall not include the use of Zone G land in determining the maximum number of units or lots being developed. (03/2010)
- 15.2.10. Within the C.3 District, the setbacks reflected in [Section 15.1](#) are superseded by [Sections 4.5.2.2](#)

and [4.5.2.6](#), as applicable.

- 15.2.11. Lots in Zone A and Zone B, which become serviced by town water, will become eligible for a reduction of 50% of the required lot area, except for any lot for a “Dwelling – Two Family Unit” in Zone A.
- 15.2.12. Provisions of [Section 6.4](#) shall be utilized in the design and review of these developments as proposed in the C.3 District as if it were Zone A. (PREVIOUSLY 15.1.1.1 IN 2021 ORDINANCE)
- 15.2.13. Density and area for Multi-family dwellings shall be determined in accordance with Sections [6.5](#) and [6.5.8](#). (PREVIOUSLY 15.1.1.2 IN 2021 ORDINANCE)

15.3. [Special Requirements in Zone G:](#)

All lots containing [Zone G](#) (Conservation District) land must meet the following dimensional and space requirements (03/2010):

- 15.3.1. Minimum usable area calculations shall require a minimum 20,000 contiguous square feet of non-Zone G land in Zone A, and a minimum of 40,000 contiguous square feet of non-Zone G land in Zone B within which there exists a developable area of either, 110’ x 110’ SQUARE, 125’ DIAMETER CIRCLE, 180’ EQUILATERAL TRIANGLE.
- 15.3.2. All lots containing Zone G land shall comply with the frontage and setback requirements of the underlying zone as set forth in [Section 15.1](#) and shall have **minimum wetland setback of 75 feet**, except a minimum wetland setback of 25 feet shall apply to lots that contained an approved structure with a drinking well or municipal water hookup and an approved working septic system on record at date of adoption on record as of March 14, 2023 (03/23).



December 6, 2023

Jason Cleghorn, Community & Economic Development Director
Raymond Community Development & Planning
4 Epping Street
Raymond, NH 03077

RE: **Site Plan Review Application – Map 32 Lot 69**

Dear Sir,

On behalf of Jessica Hatch, landowner, SFC Engineering (SFC) respectfully submits this application for site plan review for property located on tax map 32 lot 69 fronting on NH Rout 27. We request to be placed on the agenda for the next available Planning Board hearing.

Enclosed please find:

- A completed Site Plan Review Application package, which includes:
 1. Signed site plan review application & checklist
 2. Signed Conditional Use Permit application
 3. Waiver request
 4. Notarized Letter of Authorization from property owner
 5. Abutters list with tax map
 6. Project Narrative
 7. Traffic Impact Analysis
 8. Future building specifications
 9. Copy of proof of submittal to Dubois & King
- Application fee: **\$2,062** check payable to Town of Raymond
- Funds to establish planning escrow account in accordance with fee schedule (**\$1,250**)
- (3) copies of mailing labels
- (6) full-size copies of the site plan set dated November 8, 2023
- (10) 11x17 copies of the site plan set dated November 8, 2023
- Drainage report with drainage plans
- Complete plan set in pdf form emailed to Raymond Community Development

Sincerely,

SFC ENGINEERING PARTNERSHIP, INC.

A handwritten signature in blue ink, appearing to read 'Daniel M. Flores', with a long horizontal flourish extending to the right.

Daniel M. Flores, P.E.
Project Manager



Site Plan Review Application

Town of Raymond, NH

Project Name: Fuel NRG Raymond

Location: NH Route 27 Raymond, NH

Project Description: New development consisting of a 30,000 gallon above ground liquid propane tank with fueling area and truck parking and future 1,200 sf commercial building and 30,000 gallon above ground liquid propane tank.

Zone: C1 New Industrial/Commercial Square Footage: 1,200 or Number of Residential Units: _____

Applicant/Agent Information:

Name: Daniel M. Flores, PE (agent)

Phone: 603-361-3294 Fax: _____

Company: SFC Engineering Partnership, Inc.

Address: 183 Rockingham Road Unit 3 East, Windham, NH 03087

By signing this application, you are agreeing to all rules and regulations of the Town of Raymond, and are agreeing to allow agents of the Town of Raymond to conduct inspections of your property during normal business hours to ensure compliance with all Raymond Zoning and Site Plan Review Regulations while your application is under consideration and during any construction and operational phases after approval is granted.

Signed* [Signature] Date: 12/5/2023

*Requires notarized letter of permission

Owner Information:

Name: Jessica Hatch

Phone: 603-777-0386 Fax: _____

Company: Fuel NRG

Address: 119 Rockingham Road, Windham, NH 03087

Signed: [Signature] Date: 12/5/2023

Designers of Record: (Provide Name & License Number for each)

Engineer: Daniel M. Flores, PE #15761

Surveyor: J. Robert Degan, LLS #986

Soil Scientist: Luke D. Hurley #95

Landscape Architect: See waiver request

Fire Protection Engineer: Jeffrey M. Murphy, PE #12996

Other(s): n/a

FEES: See attached Fee Schedule

For Office Use Only:

Date Application Received: _____ Total Fees Collected w/Application: _____

Abutters List Received: _____ Plans & Checklist Received: _____

Appendix II

Site Plan Review Fees

| Sample Chart Using 180 sf per space | |
|--|-------------|
| 1 | \$ 514.80 |
| 2 | \$ 579.60 |
| 3 | \$ 644.40 |
| 4 | \$ 709.20 |
| 5 | \$ 774.00 |
| 6 | \$ 838.80 |
| 7 | \$ 903.60 |
| 8 | \$ 968.40 |
| 9 | \$ 1,183.20 |
| 10 | \$ 1,248.00 |
| 11 | \$ 1,312.80 |
| 12 | \$ 1,377.60 |
| 13 | \$ 1,442.40 |
| 14 | \$ 1,657.20 |
| 15 | \$ 1,722.00 |
| 16 | \$ 1,786.80 |
| 17 | \$ 1,851.60 |
| 18 | \$ 1,916.40 |
| 19 | \$ 2,131.20 |
| 20 | \$ 2,196.00 |
| 21 | \$ 2,260.80 |
| 22 | \$ 2,325.60 |
| 23 | \$ 2,390.40 |

Base Rate: **\$ 300.00**

(Includes staff wages with a 23 % roll-up rate)

Variable Costs (per newly created space): **\$ 0.36**

| | <u>Units - SF</u> |
|-----------------------------|-------------------|
| POV Spaces: | 180 |
| Handicap Accessible Spaces: | 320 |
| Tractor Trailer | 600 |

CALCULATE APPLICATION FEE

PARKING AREA CALCULATION

AUTO PARKING: 3 X 180 SF = 540 SF

HANDICAP SPACE: 1 X 320 = 320 SF

TRUCK PARKING: 25' X 128' = 3200 SF

TOTAL PARKING AREA = 4060 SF

TOTAL PARKING FEE: (4060 SF X \$0.36) + (1.5 X \$300) = \$1,912

NOTIFICATIONS CALCULATION

10 ABUTTERS + 1 LAND OWNER + 4 PROFESSIONALS = 15

TOTAL NOTIFICATION FEE: 15 X \$10 = \$150

TOTAL APPLICATION FEE = \$2,062

ABUTTERS FEE: \$10.00 PER NOTICE

| | |
|---|--------------------|
| Escrow Deposits for Legal/Engineering/Other Peer Review Expenses¹ | |
| Minimum Fee (Discretion of the Technical Review Committee): | \$ 1,250.00 |
| Disturbed Area² - Up to 5 Acres: | \$ 2,500.00 |
| Up to 10 Acres | \$ 3,250.00 |
| Up to 15 Acres: | \$ 4,000.00 |
| Up to 20 Acres: | \$ 4,500.00 |
| Over 20 Acres, but less than 30 acres: | \$ 5,000.00 |
| Over 30 Acres - To be determined by Town Engineer/Legal Counsel | TBD |

¹ Once a balance is reduced to 50% of the original deposit, the applicant shall replenish it to 100%.

² Disturbed area is defined as: That portion of the site that is altered due to construction of streets, roadways, parking areas, utilities, buildings or other physical improvements, including earth excavation, removal or alteration.

Site Plan Review Checklist

TOWN OF RAYMOND, NH

PROJECT NAME Fuel NRG

MAP# 32 LOT # 69 APPLICATION DATE _____ APPLICATION # _____

A copy of all plans and technical reports must be sent to the Town engineer. Proof of submittal must be provided to the Community Development Department at the time of application. If proof of transmittal is not provided, the application may be delayed until the following month's Planning Board meeting. Address is: Dubois & King, 15 Constitution Dr. Suite 1L, Bedford NH 03110, ATTN: Ross Tsantoulis.

| SUBMITTED | | | WAIVED | |
|-------------------------------------|--------------------------|--|--------|-------|
| YES | NO | | YES | NO |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1. Name of project; names and addresses of owners of record; Tax map and lot number. | _____ | _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2. Name, license number and seal of surveyor or other persons, north arrow, scale and date of plan; signature block. | _____ | _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. Vicinity sketch and zoning district(s). | _____ | _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Abutters and uses of abutting land within 200 feet of the site. | _____ | _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 5. Shape, size, height, location and use of existing and proposed structures located on the site and within 200 feet of the site. | _____ | _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 6. Boundary lines, dimensions and bearings; lots area in acres And square feet and total disturbed area in square feet. | _____ | _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 7. Location, name and widths of any existing and proposed roads on the property and within 200 feet of the site | _____ | _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 8. Location of existing and proposed sidewalks and driveways, with indication of travel for both pedestrian and vehicular traffic. | _____ | _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 9. Access to the site, sight distance at access point(s), curb cuts and any proposed changes to existing streets; copy of driveway permit. | _____ | _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 10. Location and number of parking spaces; loading spaces. | _____ | _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 11. Location, type and nature of all existing and proposed Landscaping and screening. | _____ | _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 12. Location, type and nature of all existing and proposed exterior lighting. | _____ | _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 13. Natural features (streams, ponds, wetlands, etc.) | _____ | _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 14. Waste/dumpster locations and snow storage areas | _____ | _____ |

Site Plan Review Checklist

TOWN OF RAYMOND, NH

| SUBMITTED | | | WAIVED | |
|-------------------------------------|-------------------------------------|---|--------------------------|--------------------------|
| YES | NO | | YES | NO |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 15. Existing and proposed grades and contours, including base Flood elevation where appropriate. | <input type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 16. Size and location of all existing and proposed water mains, sewers, culverts, and distances to the existing fire hydrants, cisterns and/ or fire ponds. | <input type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 17. Copy of certification from septic designer as to sufficiency of system. | <input type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 18. Location and type of proposed waste water disposal system; Outline of 4,000 sq. ft. area; test pits; record of percolation tests. | <input type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 19. Existing and proposed Storm water drainage system. | <input type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 20. Location of existing and proposed on-site well (showing required radius on the property.) | <input type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 21. Soil survey data (see: requirements for soils and wetlands data) | <input type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 22. Location of any existing or proposed easements, deed restrictions, covenants. | <input type="checkbox"/> | <input type="checkbox"/> |
| OTHER: | | | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 1. Any federal, state or local permits. | <input type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2. Building elevations and design | <input type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. Sign location and design | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 4. Copies of any proposed or existing easements, deed restrictions, covenants, and street deeds. | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 5. Such additional studies as may be required. | <input type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 6. Six (6) full-size copies of all plans and ten (10) copies of all plans in 11 X 17 format, and digital copy of plans. * | <input type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 7. Three (3) copies of all studies* | <input type="checkbox"/> | <input type="checkbox"/> |
| FEES | | | | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1. Application Fees | | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2. Abutters Notice Fees <i>(to include three (3) labels per abutter)</i> | | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. Engineering and Legal Review Escrow | | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Site Review-Administrative Fee | | |

Plans and reports were submitted to Town engineer on December 6, 2023 via USPS priority mail with signature confirmation. See receipt below with tracking number.

Town Engineer Address:

Dubois & King
Attn: Ross Tsantoulis
15 Constitution Drive
Suite 1L
Bedford, NH 03110


DERRY
24 TSIENNETO RD
DERRY, NH 03038-1599
(800)275-8777

12/06/2023 09:47 AM

| Product | Qty | Unit Price | Price |
|---|-----|------------|----------------|
| Priority Mail® Bedford, NH 03110 Weight: 1 lb 13.00 oz Expected Delivery Date Thu 12/07/2023 Tracking #: 9510 8152 1516 3340 0915 50 | 1 | | \$9.80 |
| Insurance Up to \$100.00 included | | | \$0.00 |
| Signature Confirm | | | \$4.05 |
| Total | | | \$13.85 |
| Grand Total: | | | \$13.85 |
| Credit Card Remit | | | \$13.85 |
| Card Name: VISA Account #: XXXXXXXXXXXX1572 Approval #: 01438G Transaction #: 895 AID: AC000000031010 Chip AL: VISA CREDIT PIN: Not Required CAPITAL ONE VISA | | | |



Application for Conditional Use Permit

Groundwater Conservation Overlay District

Town of Raymond, NH

Conditional Use Permits are Subject to Site Plan Approval by the Planning Board
 Raymond Zoning Ordinance, Article 5, Section 5.2

Map # 32 Lot # 69 Application Date 12/6/2023 Application # _____

Project Name: Fuel NRG Raymond

Location: Route 27 Raymond, NH Map #32 Lot #69

Zone: C1 New Industrial/Commercial Square Footage: 1,200 or Number of Residential Units: _____

Applicant/Agent Information:

Name: Daniel M. Flores, PE (agent) Phone: 603-361-3294

Company: SFC Engineering Partnership, Inc. Fax: _____

Address: 183 Rockingham Road Unit 3 East, Windham, NH 03087

Signed*:  Date: 12/5/2023

Please Check All that Apply:

5.2.11. CONDITIONAL USES: The issuance of a Conditional Use Permit is subject to Site Plan Approval by the Planning Board. The Planning Board may grant a Conditional Use Permit for a use that is otherwise permitted within the underlying district, if the permitted use is or is involved in one or more of the following:

5.2.11.1. Storage, handling, and use of regulated substances in quantities exceeding 100 gallons or 800 pounds dry weight at any one time, provided that an adequate spill prevention, control and countermeasure (SPCC) plan prepared in accordance with [Section 5.2.7](#) by a qualified professional, submitted to the Technical Review Committee for review and approval, with the final plan also submitted to the Raymond Fire Department and the Raymond Community Development Department for its records. The Technical Review Committee may employ the services of a qualified peer review professional to review the plan at the applicant's expense.

5.2.11.2. Any use that will render impervious more than 15% or 2,500 square feet of any lot, whichever is greater.

5.2.11.3

In granting such approval the Planning Board must first determine that the proposed use is not a prohibited use and will be in compliance with the Performance Standards as well as all applicable local, state and federal requirements. The Planning Board may, at its discretion, require a performance guaranty or bond, in an amount and with surety conditions satisfactory to the Board, to be posted to ensure completion of construction of any facilities required for compliance with the Performance Standards. The amount of this bond shall be in addition to any other bond required by the Board under either the Subdivision or Site Plan Review Regulations.

(Continued)



Application for Conditional Use Permit *Groundwater Conservation Overlay District* Town of Raymond, NH

If you chose 5.2.11.1, above, you must provide a SPCC plan in accordance with the following:

5.2.7 SPILL PREVENTION, CONTROL AND COUNTERMEASURE (SPCC) PLAN: Conditional Uses, as described under [Section 5.2.11](#) of this Ordinance shall submit a spill control and countermeasure (SPCC) plan to the Technical Review Committee (TRC) who shall determine whether the plan will prevent, contain, and minimize releases from ordinary or catastrophic events such as spills, floods or fires that may cause large releases of regulated substances. It shall include:

- 5.2.7.1 A description of the physical layout and a facility diagram, including all surrounding surface waters and wellhead protection areas;
- 5.2.7.2 Contact list and phone numbers for the facility response coordinator, cleanup contractors, and all appropriate federal, state, and local agencies who must be contacted in case of a release to the environment;
- 5.2.7.3 A list of all regulated substances in use and locations of use and storage;
- 5.2.7.4 A prediction of the direction, rate of flow, and total quantity of regulated substance that could be released where industry experience indicates a potential for equipment failure;
- 5.2.7.5 A description of containment and/or diversionary structures or equipment to prevent regulated substances from infiltrating into the ground; and
- 5.2.7.6 Emergency response plan describing and assigning responsibilities and actions to be taken.

Raymond NH Planning Board Waiver Request Form

Applicable to Site Plan Review and Subdivision Regulations

Project Name & Application Number:

Regulation, Article & Section from which a waiver is being sought:

Section 3.03.03(c) of the Raymond Site Plan regulations, which requires a landscape plan prepared by a New Hampshire Licensed Landscape Architect.

Where the Planning Board finds that unnecessary hardship may result from strict compliance with these regulations with respect to a particular tract of land, the Board may modify or waive these regulations so that substantial justice may be done and the public interest is secured, provided that:

Please respond to the criteria below:

- a. Explain how the granting of the waiver will not be detrimental to public safety, health, or welfare or injurious to other adjacent property;

The project has been design to be set off the road, and to retain a natural vegetated buffer. The property sits adjacent to the Tranquility Estates mobile home park, which abuts it to the north and east. We keep development 50' away from the property lines abutting the residential development. The property also abuts Dudley Brook to the south. We keep the development over 75' from the wetland, allowing natural vegetation to remain.

The proposed bioretention area for stormwater management will be a grasslined bioretention area. A grasslined bioretention area differs from a conventional bioretention area in that grass is provided versus native plantings. Grasslined bioretention areas are an accepted practice by NHDES Alteration of Terrain Bureau. The UNH Stormwater Center has found that grass provides equal or better stormwater treatment than conventional native plantings, while proving to be a hardier vegetation with less need for upkeep.

The proposed alternatives will provide natural vegetative screening, and an industry-acceptable stormwater management approach without need for a plan prepared by a New Hampshire Licensed Landscape Architect.

- b. Explain how granting this waiver shall not have the effect of nullifying the intent and purpose of these regulations, the Zoning Ordinance, Master Plan or Official Zoning Map;

Granting this waiver will not nullify the intent and purpose of these regulations, the Zoning Ordinance, Master Plan, or Official Zoning Map in that the project has been designed to retain natural vegetation to the maximum extent. Doing so achieves the desire of providing vegetated screening to adjacent residential property, and providing a vegetated buffer to the natural resource (Dudley Brook and adjacent wetlands).

In granting waivers, the Planning Board may require such conditions as will, in the Board's judgment, secure substantially the objectives of the standards or requirements of these regulations.

A petition for waiver shall be submitted by the applicant at the time when the application is filed for consideration by the Planning Board. All petitions shall be made in writing using the Town's Waiver Request Form. The petition shall state fully the grounds for the waiver and all of the facts relied upon by the petitioner.

Any granted waivers must be noted on the final approved plan.

New Hampshire Department of Environmental Services (NHDES)

Alteration of Terrain Newsletter

November 2019 - Email #51

Optimizing Treatment for Phosphorus and Nitrogen

A rule effective in August 2017, Env-Wq 1503.11(h) through (j), requires that for projects in certain locations, the applicant must demonstrate that there is not a net increase in phosphorous and/or nitrogen as a result of the project. The areas where stormwater must optimize for treatment of both nutrients are in watersheds of Outstanding Resources Waters, and Class A surface waters. These areas are delineated on the DES GIS Datamapper under the Alteration of Terrain screening layers.

Phosphorus and nitrogen treatment is best provided in subsurface gravel wetlands, or in enhanced biofiltration systems which include an internal storage reservoir (enhanced bio with ISR).

Although the BMP performance curves show high removal rates for nitrogen for infiltration systems, anaerobic treatment of nitrogen is necessary for high removal rates of dissolved inorganic nitrogen (DIN), which is a major concern in stormwater because it is the most bioavailable form of nitrogen. The anaerobic environments present in a gravel wetland or enhanced bio with ISR provide high removal rates for DIN. However, because gravel wetlands or enhanced bio with ISR do not infiltrate stormwater, some treatment for phosphorus is lost, and enhancements to the filter media are required to improve treatment for this pollutant.

The UNH Stormwater Center is developing a specification for enhanced bio with ISR. We hope to have this specification available in the coming months. In the meantime, please utilize gravel wetlands when necessary to treat for both phosphorous and nitrogen.

When it's necessary to provide optimized treatment only for N, gravel wetlands, or enhanced bio with ISR, should be used. When necessary to optimize treatment only for P, infiltration or non-underdrained filtration should be used. For enhanced phosphorous removal, drinking water residuals or iron filings at 5 percent (by volume) can be added to the filter media.

Vegetation in Bioretention Basins

The UNH Stormwater Center recommends the use of grass on the bottom of bioretention basins. Although prohibited by Env-Wq 1508.07 (k)(6) for surface filters, DES allows (and actually encourages) the use of grass. Grass is more easily maintained, and it appears that the root structure may be more effective than roots of individual plantings in supporting an open structure in the soil and therefore helping to maintain infiltration rates.

Housekeeping Edits to BMP

A revised Excel file was posted on our website in July. There were no revisions to the calculations, only formatting changes and clarification of the notations on the far right side of the sheets. The revised file can be downloaded at https://www.des.nh.gov/organization/divisions/water/aot/documents/bmp_worksh.xls.

To be sure you're using the most accurate worksheets, we recommend you download them from our website for each project.

December 5, 2023

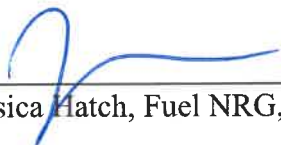
Town of Raymond
Community Development & Planning
4 Epping Street
Raymond, NH 03077

RE: Owner Authorization - Map 32 Lot 69

To Whom it May Concern,

SFC Engineering Partnership, Inc. is authorized to represent Jessica Hatch, property owner, throughout the local approval process for proposed development of their property identified as Raymond tax map 32 lot 69.

Sincerely,



Jessica Hatch, Fuel NRG, Landowner

12/5/23
Date

This instrument was acknowledged before me on this 5 day of December,
2023.

Notary Public:  My commission expires: _____

WENDY CHAMBERS
NOTARY PUBLIC
State of New Hampshire
My Commission Expires
October 7, 2025



100 feet Abutters List Report

Raymond, NH
December 04, 2023

Subject Property:

Parcel Number: 032-000-069-000
CAMA Number: 032-000-069-000-000
Property Address: ROUTE 27

Mailing Address: HATCH, JESSICA
119 ROCKINGHAM ROAD
WINDHAM, NH 03077

Abutters:

Parcel Number: 032-002-033-000
CAMA Number: 032-002-033-000-000
Property Address: 232 ROUTE 27

Mailing Address: GRANT, JODI M. & AMY M.
236 ROUTE 27
RAYMOND, NH 03077

Parcel Number: 032-002-034-000
CAMA Number: 032-002-034-000-000
Property Address: 236 ROUTE 27

Mailing Address: GRANT, JODI M & AMY M
236 ROUTE 27
RAYMOND, NH 03077

Parcel Number: 032-002-035-000
CAMA Number: 032-002-035-000-000
Property Address: 238 ROUTE 27

Mailing Address: GRANT, JODI M & AMY M
236 ROUTE 27
RAYMOND, NH 03077

Parcel Number: 032-002-037-000
CAMA Number: 032-002-037-000-000
Property Address: ROUTE 27

Mailing Address: HATCH, JESSICA
119 ROCKINGHAM ROAD
WINDHAM, NH 03077

Parcel Number: 032-002-038-000
CAMA Number: 032-002-038-000-000
Property Address: 75 LONG HILL ROAD

Mailing Address: GOURLEY, JASON M. HEATHER A.
MARSTON
75 LONG HILL ROAD
RAYMOND, NH 03077

Parcel Number: 032-002-040-000
CAMA Number: 032-002-040-000-000
Property Address: 71 LONG HILL ROAD

Mailing Address: ROY, EUGENE W & LAURA L
71 LONG HILL ROAD
RAYMOND, NH 03077

Parcel Number: 038-004-125-060
CAMA Number: 038-004-060-000-000
Property Address: 3 OLD CART ROAD

Mailing Address: BARNARD, HAROLD L JUNE A
BARNARD
3 OLD CART ROAD
RAYMOND, NH 03077

Parcel Number: 038-004-125-061
CAMA Number: 038-004-061-000-000
Property Address: 1 OLD CART ROAD

Mailing Address: ROUSE, ROBERT S.
1 OLD CART ROAD
RAYMOND, NH 03077-4201

Parcel Number: 038-004-125-062
CAMA Number: 038-004-062-000-000
Property Address: 2 OLD CART ROAD

Mailing Address: MILLS, KATIE A.
2 OLD CART ROAD
RAYMOND, NH 03077

Parcel Number: 038-004-125-000
CAMA Number: 038-004-125-000-000
Property Address: ROUTE 27

Mailing Address: TRANQUILITY ESTATES
COOPERATIVE, INC.
8 OLD CART ROAD
RAYMOND, NH 03077



www.cai-tech.com

Data shown on this report is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this report.

12/4/2023

Page 1 of 1



Fuel NRG Raymond

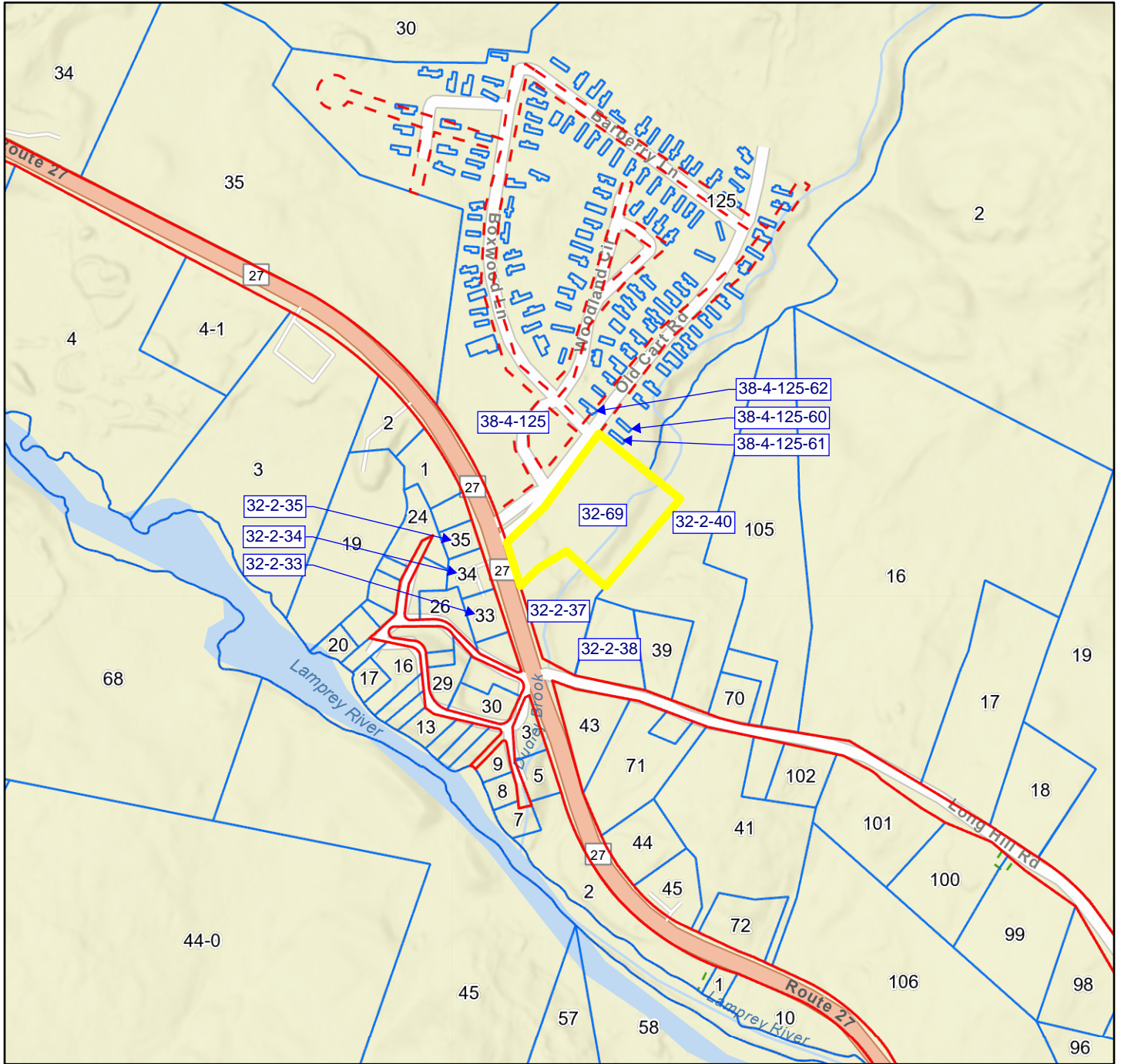
Town of Raymond, NH

1 inch = 500 Feet



www.cai-tech.com

November 9, 2023



| | | | | | |
|--|---------------|--|------------|--|-----------------|
| | CAI Town Line | | PUBLIC ROW | | Easement |
| | Parcel - Poly | | PARCEL | | World Hillshade |
| | PRIVATE ROW | | WATER | | |

Data shown on this map is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map.

CIVIL
ENGINEER

SFC Engineering Partnership, Inc.
Attn: Daniel M. Flores, PE
183 Rockingham Road, Unit 3 East
Windham, NH 03087

LAND
SURVEYOR

S&H Land Services LLC
Attn: J. Robert Degan, LLS
141 Londonderry Turnpike
Hooksett, NH 03106

SOIL
SCIENTIST

BSC Group
Attn: Luke Hurley
150 Dow Street
Manchester, NH 03101

FIRE
PROTECTION
ENGINEER

SFC Engineering Partnership, Inc.
Attn: Jeffrey M. Murphy, PE
183 Rockingham Road, Unit 3 East
Windham, NH 03087

PROJECT NARRATIVE

FUEL NRG
MAP 32, LOT 69
ROUTE 27

A. PROJECT DESCRIPTION

Fuel NRG proposes the development of a 30,000 gallon above ground liquid propane tank, fueling area, tank storage, and associated access drive and parking area on the vacant property located on NH Route 27 (tax map 32 lot 69). Future development is depicted that will include a 30' x 40' commercial building with parking, a second 30,000-gallon liquid propane tank, a well, septic system, and fire cistern with pump house.

B. EXISTING CONDITIONS

The property is identified as lot 69 on tax map 32 consisting of 3.8± acres fronting NH Route 27 at the intersection of Old Cart Road (private road). The property is undeveloped, consisting of woodlands and meadow areas. Dudley Brook forms the southeasterly boundary of the property. Tranquility Estates mobile home park abuts the property to the north and east.

The property is flat, with a drop in the terrain at the lot center, and a further drop forming the embankment of Dudley Brook. A jurisdictional wetland abuts the brook, with no wetlands within the lot. Soils primarily consist of Hinckley loamy sand with seasonal water table greater than 72". No portion of the parcel is located within a flood hazard area, as interpreted from the FEMA Flood Insurance Rate Map for the Town of Raymond, Community-Panel number 33015C0187E dated May 17, 2005.

C. PROPOSED DEVELOPMENT

Proposed development includes a fenced 30,000-gallon above ground liquid propane tank, gravel fueling area, gravel area with canopy for parking of up to 10 trucks, and a fenced gravel area for smaller tank storage. The site will accommodate future development consisting of a second 30,000-gallon liquid propane tank, a 30' by 40' single story commercial building with parking, pole barn over truck parking area, a private water well and septic system to support the building, and up to 30,000 gallons of fire cistern with fire pump building. Note that the cistern and fire pump are proposed for the future building, not for the liquid propane tanks.

D. ZONING REVIEW

The property is primarily located in the Commercial C1 zone, with a small portion at the southeasterly corner in the Residential/Agricultural B zone. The proposed use is permitted in the C1 zone as a commercial service establishment.

Required property line setbacks are met with the proposed development. Note that we hold a 50' setback to land abutting the Tranquility Estates mobile home park.

Dudley Brook is not subject to NH Protected Shoreland (RSA 483-B); however, the wetlands abutting the brook require a 75' setback. Note that no development is proposed within this 75' wetland setback.

The parcel is located within Raymond's Groundwater Conservation Overlay District, which requires a Conditional Use Permit for storage, handling, and use of regulated substances in quantities exceeding 100 gallons or 800 pounds dry weight, or if greater than 15% of the lot area is made impervious. The post development impervious area will equal 23.5% of the lot area. A conditional use permit application is included.

E. WAIVER REQUESTS

Our application includes a request to waiver section 3.03.03(c) of the Raymond Site Plan regulations, which requires a landscape plan prepared by a New Hampshire Licensed Landscape Architect.

F. ENVIRONMENTAL CONSIDERATIONS

The property abuts Dudley Brook, which includes jurisdictional wetlands delineated along the edge of the water. The property is located within Raymond's Groundwater Conservation Overlay District due to location within the Wellhead Protection Area (see Exhibit A for NHDES Data Mapper).

The property is well suited for the proposed development: there are no wetlands within the project area and the terrain is mostly flat. The property is not within a flood hazard area.

In order to protect the integrity of the brook, we have designed the site to exceed Raymond's 75' wetland setback, allowing natural vegetation to remain. We have also designed the site to grade all runoff to a large bioretention area, positioned between the proposed development and the brook.

Liquid propane does not have the potential for environmental impacts, such as storage of fuel oils. Being a pressurized gas, liquid propane, if a leak were to occur, will not impact groundwater.

G. STORMWATER MANAGEMENT

A stormwater management report has been prepared for the proposed development. The stormwater management system has been designed in accordance with section 6.11 of the Raymond Site Plan Regulations.

A bioretention area will be located southeasterly of the fueling area to capture stormwater runoff from the proposed development (both current and future phases). The bioretention area has been designed to capture, treat, and infiltrate runoff while reducing peak flows and volumes.

H. WATER SUPPLY AND SEPTIC SERVICE

The current phase with just the bulk fuel tank will not require water supply or septic service.

The future phase development depicts locations of a private well and an Individual Sewage Disposal System (ISDS). Both are designed to meet applicable local and state standards.

I. FIRE PROTECTION

The project plan set includes a sheet titled Fire Protection Site Plan. This plan depicts maneuvering for a fire apparatus, as well as review of applicable codes.

Note that the current phase fire protection needs for the bulk fuel tank will be met by the existing dry hydrant located near the intersection of Route 27 and Long Hill Road.

The future phase development will require installation of a fire cistern with fire pump to serve a sprinkler system that will be required in the buildings.

J. ADDITIONAL PERMITTING

The current phase development will require the following land use permits:

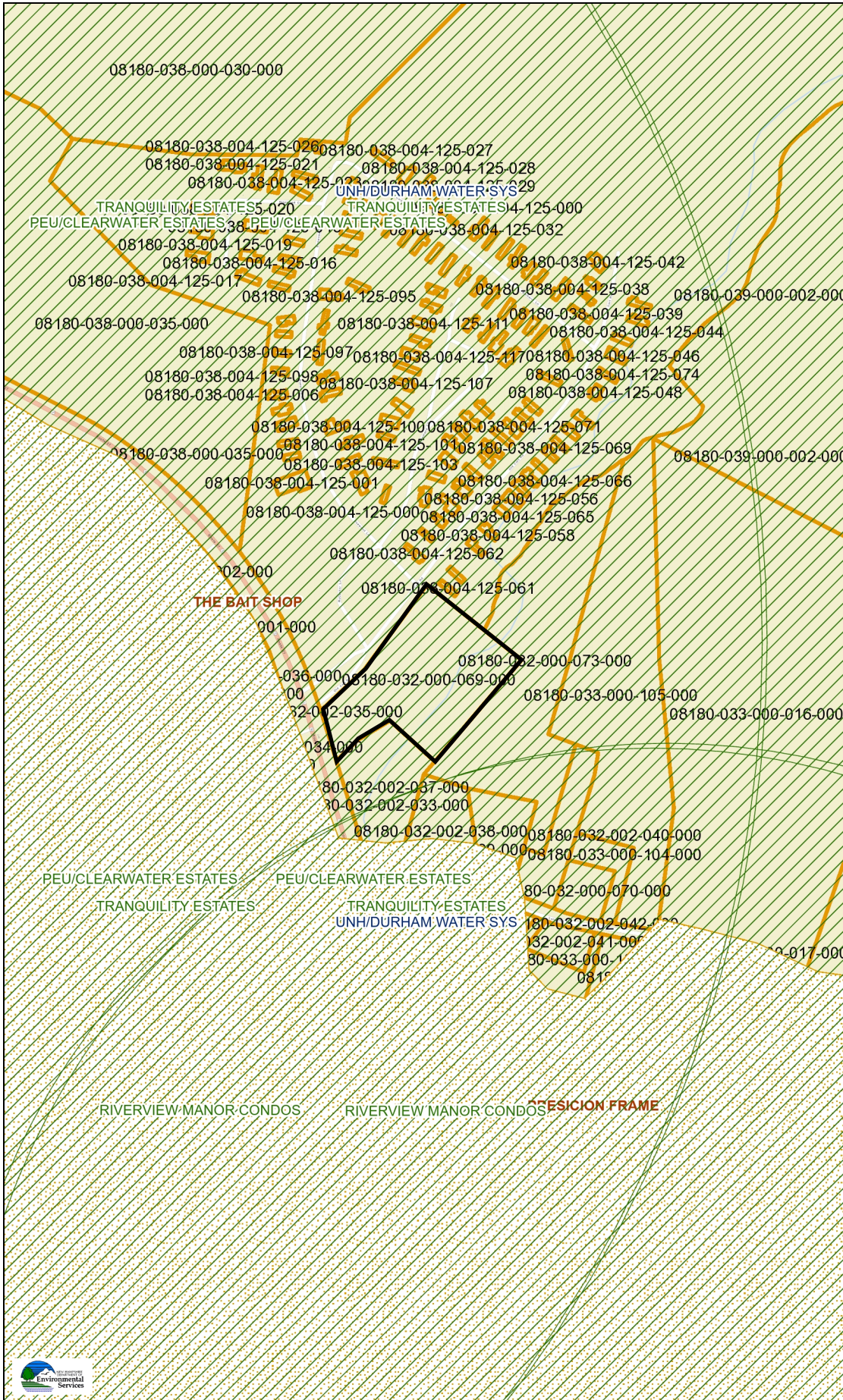
1. NHDOT driveway permit. Application for a driveway permit was submitted to NHDOT on November 21, 2023.
2. Notice of Intent (NOI) with Storm Water Pollution Prevention Plan (SWPPP). An NOI must be filed with the EPA for 14 days prior to construction for coverage under the federal Construction General Permit (CGP) for construction activities that impact more than 1 acre.

The future phase development will require the following permits:

1. NHDES Construction Approval. The ISDS will require local review and approval prior to application to NHDES Subsurface Bureau.

-END-

Map 32 Lot 69



Legend

- Wellhead Protection Areas
- Groundwater Classification / GAA
- Source Water Protection Area
- Groundwater Classification / GA1
- Groundwater Classification / GA2
- Local Potential Contaminatic Sources
- Parcels
- Additional Lines

Map Scale

1: 5,000

© NH DES, <http://des.nh.gov>

Map Generated: 12/4/2023



Notes

TRAFFIC IMPACT ASSESSMENT

FUEL NRG
MAP 32, LOT 69
ROUTE 27

A. PROJECT DESCRIPTION

Fuel NRG proposes the development of a 30,000 gallon above ground liquid propane tank, fueling area, tank storage, and associated access drive and parking area on the vacant property located on NH Route 27 (tax map 32 lot 69). Future development is depicted that will include a 30' x 40' commercial building with parking, a second 30,000-gallon liquid propane tank, a well, septic system, and fire cistern with pump house.

B. ANTICIPATED TRAFFIC

The initial phase will include buildout of the 30,000-gallon liquid propane bulk fuel tank. This tank will serve the owner's fleet of 4 bobtail delivery trucks for fuel delivery in the local area. Parking will be provided for the 4 bobtail delivery trucks and the owner's fleet of 6 HVAC box trucks that provide service and installation to customers. For each truck, the owner anticipates an employee arriving in the morning to pick up the truck, then not returning until the end of the day, where the truck will be parked overnight. The bobtail delivery trucks will fuel up in the morning with sufficient fuel for their delivery route that day. The owner anticipates that a tanker truck will be needed once per week to refill the bulk fuel tank.

The future phase will include construction of a small office with retail space. The office will house on average one employee. The retail space will allow a customer to come to a showroom to see HVAC options. The owner anticipates perhaps 5 customers on a busy day.

C. TRAFFIC IMPACT

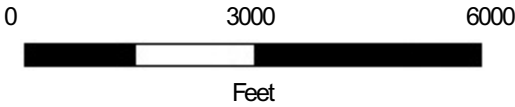
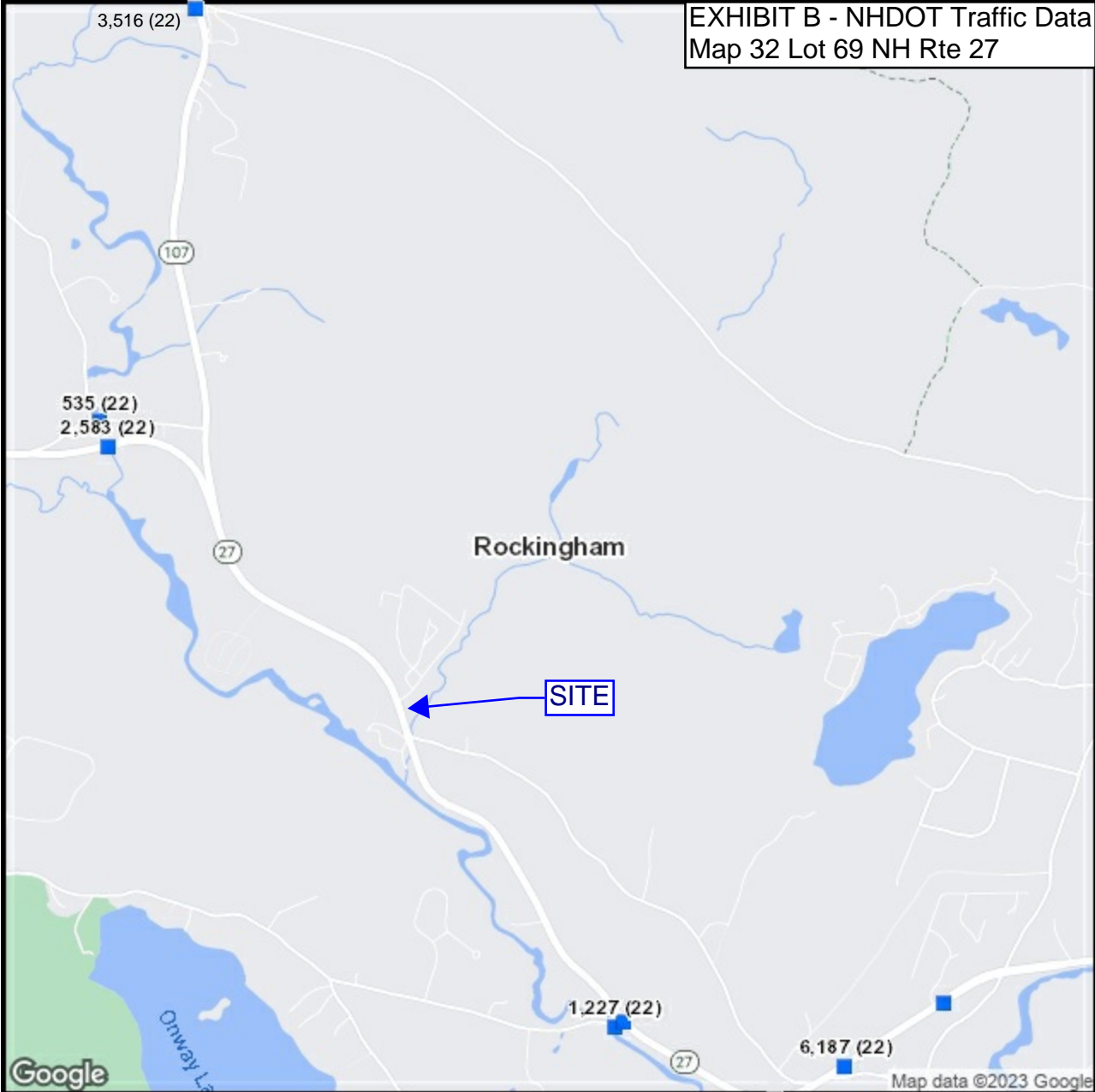
Review of the NHDOT Transport Data Management System provides Annual Average Daily Traffic (AADT) records on Route 27. See exhibit B for this data, which is copied below:

- Location ID 62115052 located north of the site with 2022 AADT of 3516 trips.
- Location ID 82383108 located south of the site with 2022 AADT of 6187 trips.

Based on the use of the property, we anticipate 54 average daily trips. This represents an increase in trips on the road of approximately 1.5%. It is concluded that the proposed development will have a negligible impact on traffic on Route 27.

-END-

EXHIBIT B - NHDOT Traffic Data
Map 32 Lot 69 NH Rte 27



- TCDS Locations**
- Short
 - Continuous
 - WIM
 - Located Short
 - Located Continuous
 - Located WIM
 - Inactive Location



12/1/2023

Building #1 Specifications

| Building Info | Style | Width | Height | Length | Truss Spacing | Roof Pitch | Lower Chord | Peak Height | Soffit Height |
|---------------|-------|-------|--------|--------|---------------|------------|-------------|-------------|---------------|
| | 306 | 30' | 14' | 40' | 8' | | 4/12 | 0/12 | 20' 6.5" |

306 30'x14'x40' (#1) - Building Use: Commercial - Office and Warehouse

Foundation

Formed Concrete Foundation Wall with Spread Footing and Isolated Floor Slab (Form 222 - Detail #4/4B)(Form 222 – Detail #4) (By owner)

Laminated wood columns to be mounted to concrete foundation with steel column sockets using adhesive anchor rods, unless a professional engineer or design loads require other anchoring system.

Treated Wood splashboard system.

Siding

South, East, North, West wall(s) Fluoroflex™ 1000 Hi-Rib Steel Minimum .019 (Fastened with Stainless Steel Screws)

Wainscot

South, East, North, West with 36" tall Fluoroflex™ 1000 Hi-Rib Steel Minimum .019 wainscot (Fastened with Stainless Steel Screws)

Protective Liner

South, East, North, West wall(s) with 7/16" thick OSB by approx. 32" tall Protective Liner

Roof

Hi-Rib Steel Minimum .019 (Fluoroflex™ 1000) (Fastened with Stainless Steel Screws) with Vent-A-Ridge
Structure has been designed for the future installation of a snow retainage system (but not included at this time).

Overhangs

South, North wall(s) 1' Wide Vented Sidewall Overhang with Standard 6" fascia, 5" Gutters and 3"x4" Downspouts, with elbows at base
East, West wall(s) 1' Wide Non Vented Endwall Overhang with Standard 6" fascia

Walk Doors

- 1 A 3' x 6'8" 9 Lite Tempered Glass in Leaf with Embossed Crossbuck Fibersteel Walk Door(s) out-swing right hinge with interconnected lever lockset/deadbolt, closer
- 1 B Framed Opening - 3070 Glass Entry Door out-swing right hinge
Door Unit Not Included

Windows

- 6 C 3'4"x4'0" MB Single Hung Window(s) with low E glass with argon, grids between the glass

Overhead Door Opening

- 1 D 12'0" x 12'0" Overhead Door Opening (Requires a minimum 12' 2" X 12' 1" panel), OHD/ Operator requires 0' Headroom, Available Headroom is 2' 1"

Porches

- 1 40' lineal feet of coverage, 8' wide Porch with 4/12 Pitch, approx. 12' 1" grade to porch frame
 Start porch on South wall 0' from left edge of building for 40'
 Start of porch open and end of porch open
 Roof of porch to be Fluoroflex™ 1000 Hi-Rib Steel Minimum .019
 Morton Foundation System of concrete lower in ground with laminated wood column upper.
 Porch Frames with Soffit Under Porch
 1' sidewall overhang with 5" Gutters and 3"x4" Downspouts, 1' overhang on West end and 1' overhang on East end

Eyebrows

- 1 E 28 lineal feet of coverage, 2' wide Eyebrow, 6" fascia and 10/12 roof pitch, 8' grade to soffit
 Start eyebrow on West wall 1 feet from left edge of building for 28 feet
 Start of eyebrow Hipped End and end of eyebrow Hipped End
 Roof of eyebrow to be Fluoroflex™ 1000 Hi-Rib Steel
 with 5" Gutter

Energy Performer

1200 sq. ft Ceiling Finish with Hi-Rib Steel (.019 White CQ Polyester Solid) Fastened to Lower Chord of Truss with Painted Steel Screws, 4 Mil Vapor Retarder and Air Deflector at Eaves Between Trusses

Interior Wall with 2"x4" Horizontal Stripping at 16" On Centers, Wall Cavity is Insulated with 6" Fiberglass Insulation and 4 Mil Vapor Retarder.

40' long, on South wall starting @ 0'

30' long, on East wall starting @ 0'

40' long, on North wall starting @ 0'

30' long, on West wall starting @ 0'

Subcontracts

Install [1,200] Sq Ft of R-[49] fiberglass blown-in insulation in the attic area of the [30]' x [14]' x [40]' Morton Building.



MORTON™ BUILDINGS, INC.

252 W. Adams, P.O. Box 399 • Morton, Illinois 61550-0399

Date:

8/22/2023

Page:

4 of 8

306 30'x14'x40' West and South Walls





MORTON™ BUILDINGS, INC.

252 W. Adams, P.O. Box 399 • Morton, Illinois 61550-0399

Date:

8/22/2023

Page:

5 of 8

306 30'x14'x40' East and North Walls



REFERENCE PLANS

- "A MAP OF A SUBDIVISION TO BE KNOWN AS MARTY'S STOP, OWNED BY JEAN R. & RITA L. DUBE AND SITUATED IN RAYMOND, N.H." DATED OCTOBER 17, 1975 AND PREPARED BY R.S.L. LAYOUT & DESIGN. R.C.R.D. PLAN #D-5511.
- "PROPERTY IN THE TOWN OF RAYMOND, N.H., LEISURE VILLAGE MOBILE HOME COMMUNITY" LAST REVISED AUGUST 13, 1984 AND PREPARED BY HOLDEN ENGINEERING & SURVEYING, INC. R.C.R.D. PLAN #D-12875.
- "PLAN AND PROFILE OF PROPOSED FEDERAL AID PROJECT NO. 240-D, SOUTH SIDE ROAD, TOWNS OF CANDIA - RAYMOND, ROCKINGHAM COUNTY" DATED 1932 AND PREPARED BY THE STATE OF NEW HAMPSHIRE STATE HIGHWAY DEPARTMENT. ON FILE WITH THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION.

TAX MAP 38 LOT 4-125
 TRANQUILITY ESTATES
 COOP, INC.
 8 OLD CART ROAD
 RAYMOND, NH 03077
 BK: 6321 PG: 989

TAX MAP 32 LOT 2-40
 EUGENE W. & LAURA L. ROY
 71 LONG HILL ROAD
 RAYMOND, NH 03077
 BK: 2620 PG: 1518

TAX MAP 32 LOT 69
 166,100 S.F.±
 3.8 ACRES±

TAX MAP 32 LOT 2-37
 EMILE R. JR. & CHRISTINE BUSSIÈRE
 JACQUELINE BUSSIÈRE &
 MICHELLE MARSHALL
 15 NORTH STREET
 MANCHESTER, NH 03104
 BK: 4745 PG: 1706

TAX MAP 32 LOT 2-34
 JODI M. & AMY M. GRANT
 236 ROUTE 27
 RAYMOND, NH 03077
 BK: 3168 PG: 95

TAX MAP 32 LOT 2-33
 JODI M. & AMY M. GRANT
 236 ROUTE 27
 RAYMOND, NH 03077
 BK: 3754 PG: 1815

5/8" REBAR
 FOUND DOWN 1"

7/8" REBAR
 FOUND FLUSH

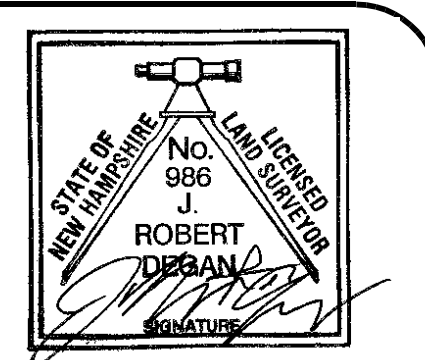
SYMBOL LEGEND

- MONUMENT TO BE SET
- BOUND FOUND
- REBAR FOUND
- ⊕ UTILITY POLE
- EDGE OF PAVEMENT
- OVERHEAD WIRES
- - - EDGE OF WETLAND
- · - · - EDGE OF WATER

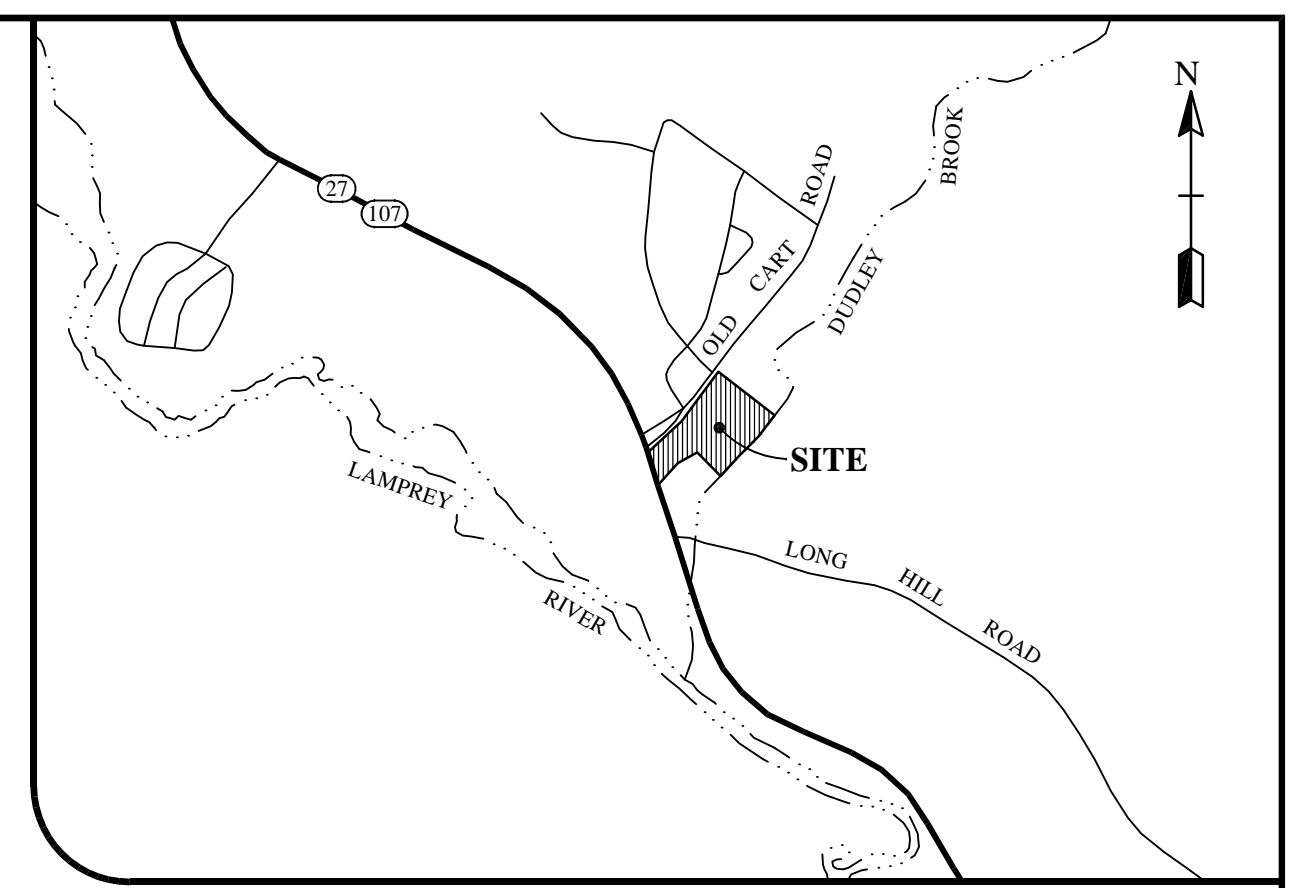
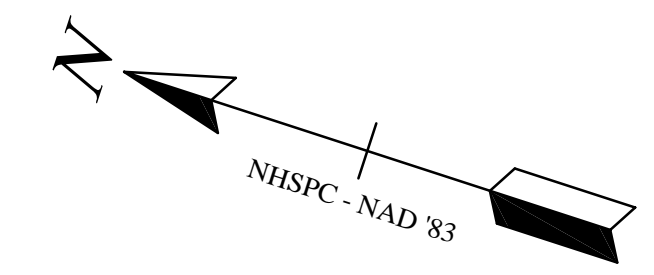
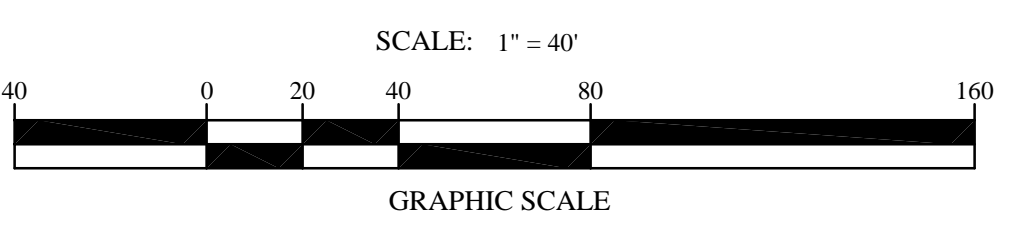
SURVEYOR'S CERTIFICATION

"I HEREBY CERTIFY THAT THIS SURVEY AND PLAT WERE PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND IS THE RESULT OF AN ACTUAL FIELD SURVEY MADE ON THE GROUND AND HAS AN ERROR OF CLOSURE OF GREATER ACCURACY THAN ONE PART IN TEN THOUSAND (1:10,000)."

LICENSED LAND SURVEYOR _____ DATE 11/16/2023



N.H. ROUTES 27 & 107
 (CLASS II - 66' R-O-W - PAVED 57' WIDE)
 (SEE NOTE 7)



LOCUS MAP
 NOT TO SCALE

NOTES

- OWNER OF RECORD:
 TAX MAP 32 LOT 69
 JESSICA HATCH
 119 ROCKINGHAM ROAD
 WINDHAM, NH 03087
 BK: 6509 PG: 874
- THE INTENT OF THIS PLAN IS TO SHOW THE BOUNDARY OF THE SUBJECT PARCEL AND THE IMPROVEMENTS THEREON.
- THE SUBJECT PARCEL IS ZONED "C1" AND "B". DIMENSIONAL REQUIREMENTS ARE AS FOLLOWS:

| ZONE: | C1 | B |
|----------------|------------------------|------------------------|
| MIN. LOT SIZE: | 21,780 SQ FT (0.5 AC.) | 87,120 SQ FT (2.0 AC.) |
| MIN. FRONTAGE: | 50 FEET | 200 FEET |

 MINIMUM BUILDING SETBACKS:
 FRONT = 15 FEET 30 FEET
 SIDE = 15 FEET 30 FEET
 REAR = 15 FEET 30 FEET
- THIS PLAN REPRESENTS EXISTING CONDITIONS, BOUNDARY EVIDENCE, AND MONUMENTATION AS OBSERVED DURING A SURVEY BY THIS OFFICE IN OCTOBER 2023.
- THE SUBJECT PROPERTY IS NOT LOCATED WITHIN THE 1% ANNUAL CHANCE FLOODPLAIN AS SHOWN ON THE FLOOD INSURANCE RATE MAP FOR ROCKINGHAM COUNTY, NEW HAMPSHIRE. MAP NUMBER 33015C 0187E. EFFECTIVE DATE MAY 17, 2005.
- ALL UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE. THIS OFFICE HAS NOT LOCATED ANY UNDERGROUND UTILITIES. ALWAYS CALL DIG SAFE TO MARK OUT UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION ACTIVITIES.
- THIS OFFICE WAS UNABLE TO RECOVER ANY HIGHWAY BOUNDS FOR THE ROUTE 27 / 107 R-O-W. R-O-W SHOWN IS BASED ON THE CENTERLINE OF THE EXISTING ROADWAY.

BOUNDARY PLAN
TAX MAP 32 LOT 69
 PREPARED FOR:
JESSICA HATCH
 LOCATED AT:
N.H. ROUTE 27
RAYMOND, NEW HAMPSHIRE



| NO. | DATE | DESCRIPTION | BY |
|-----|------|-------------|----|
| | | | |
| | | | |

JONES & BEACH ENGINEERS INC.

85 Portsmouth Avenue, PO Box 219, Stratham, NH 03885
603.772.4746 - JonesandBeach.com

September 7, 2023

Raymond Planning Board
Attn. Diana Luszczyk, Chair
4 Epping Street
Raymond, NH 03077

RE: Subdivision Application
15 Sargent Drive, Raymond, NH
Tax Map 20, Lot 58 & Tax Map 26, Lot 1
JBE Project No. 14232.7

Dear Ms. Luszczyk,

Jones & Beach Engineers, Inc. respectfully submits a Subdivision Application for the above-referenced parcel on behalf of our client, Onway Lake Development, LLC. This is Phase 1 of a multi-phase development that we have discussed with the Planning Board at multiple Design Review hearings. The intent of this application is to propose a 38-lot Conservation subdivision. We have provided a yield plan showing the lot layout with a conventional subdivision. The actual layout of smaller lots with less roadway provides for open space. The area of open space is outlined on the conservation subdivision plans.

Roughly half of the lots will have frontage on Deer Run Road, which is the existing private paved road that provides access to Onway Lake Village. The other half of the lots will have frontage on one of the 2 cul-de-sacs that we are proposing. The house lots will have septic and wells for this Phase of the project. Underground electric will be provided along the edge of Deer Run Road and into the new cul-de-sacs. The roadway will be re-paved once the construction is completed along the road.

This Phase will require NHDES Wetland Permit, Alteration of Terrain Permit and State Subdivision. The local permitting will consist of a Subdivision Application and Special Permit application for unavoidable impacts to wetlands and steep slope areas. These areas are outlined in the plan set.

The following items are provided in support of this Application:

1. Subdivision Application with Checklist.
2. Special Permit Application
3. Letter of Authorization.
4. Current Deed.
5. Test Pits.
6. Abutters List & Mailing Labels (3 sets).
7. Tax Map.
8. Three (3) Drainage Analysis.
9. Six (6) Full Size Plan Sets.
10. Ten (10) Reduced Size (11" x 17") Plan Sets.
11. Fee Check.

If you have any questions or need any additional information, please feel free to contact our office.
Thank you very much for your time.

Very truly yours,

JONES & BEACH ENGINEERS, INC.



Joseph Coronati
Vice President

cc: Shiv Shrestha, Onway Lake Development, LLC (via email)
Matt Silverstein, Onway Lake Development, LLC (via email)
John Bosen, Esq (via email)
Jeff Adler, DuBois & King (via email & U.S. Mail)



SUBDIVISION APPLICATION

Town of Raymond NH

Map # 20 & 26 Lot # 58 & 1 Application Date 8/22/23 Application # _____

Project Name: Onway Lake Village

Location: 15 Sargent Drive, Raymond, NH

Project Description: To construct a 38-lot subdivision with cul-de-sacs


Zone: New Industrial / Commercial Square Footage: _____ or Number of Residential Units: 58
residential/agriculture

Applicant/Agent Information:

Name: Shiv Shrestha Phone: 603-305-0597

Company: Onway Lake Development, LLC Fax: _____

Address: 427 Amherst Street, Floor 2, Suite 1, Nashua, NH 03063

Signed*:  Date: 8/29/23

***Requires notarized letter of permission.**

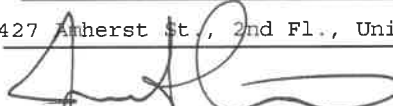
By signing this application, you are agreeing to all rules and regulations of the Town of Raymond, and are agreeing to allow agents of the Town of Raymond to conduct inspections, during normal business hours to ensure compliance with all Raymond Zoning and Site Review regulations while your application is under consideration and during any construction and operational phases after approval is granted.

Owner Information:

Name: _____ Phone: _____

Company: Yawno Properties, LLC
Raymond Village, LLC Fax: _____

Address: 427 Amherst St., 2nd Fl., Unit 1, Nashua, NH 03063 - both owners

Signed:  Date: 8/29/23

Designers of Record:

Engineer: Michael Kerivan, Jones & Beach Engineers, Inc., #9846

Surveyor: David Collier, Jones & Beach Engineers, Inc., #892

Soil Scientist: _____

Landscape Architect: _____

Fees: See Attached Fee Schedule

FOR OFFICE USE ONLY

Date Application Received: _____ Total Fees Collected with Application: \$ _____ *Abutters*

List Received: _____ Check List Received: _____

PB Hearing Date: _____ Notice Date: _____

PB Application Acceptance Date: _____

SUBDIVISION FEES

| Fee Schedule by # of New Lots | |
|-------------------------------|---------|
| 1 | \$356 |
| 2 | \$431 |
| 3 | \$506 |
| 4 | \$793 |
| 5 | \$868 |
| 6 | \$943 |
| 7 | \$1,018 |
| 8 | \$1,093 |
| 9 | \$1,379 |
| 10 | \$1,454 |
| 11 | \$1,529 |
| 12 | \$1,604 |
| 13 | \$1,679 |
| 14 | \$1,965 |
| 15 | \$2,040 |
| 16 | \$2,115 |
| 17 | \$2,190 |
| 18 | \$2,265 |
| 19 | \$2,551 |
| 20 | \$2,626 |
| 21 | \$2,701 |
| 22 | \$2,776 |
| 23 | \$2,851 |

How to calculate your fees:

- Using the chart to the left, take the proper amount that corresponds with the number of new lots you are proposing to create. *If you are proposing over 23 lots, see special instructions below the fee schedule chart.* \$4,275.00
- Add \$10.00 for each abutter that you have. $36 \times 10 = \$360.00$
- Total up items 1 & 2. This is your application fee.
- See the chart at the bottom of the page to find your required escrow deposit. TOTAL = \$4,635.00

NOTE:
BASE RATE: \$300.00
 (includes staff wages with a 23% roll-up rate)

VARIABLE RATE: \$75.00
 (install poles, reflective plates, materials & labor and mapping updates)

NOTE:
 For each lot over 23, use the **Base Rate (\$300.00)** multiplied by **4.75**, added to the **Variable Rate (\$75.00)** multiplied by the **number of new lots**.

(BR x 4.75) + (VR x Z)
{Z is the # of new lots}

An Escrow deposit for Legal/Engineering Review is also required!

| Escrow Deposits for Legal & Engineering Review | |
|--|---------------------------------------|
| Type | Fee |
| Minor Subdivision (TBD by the TRC) | \$850.00 |
| Major Subdivision up to 8 lots | \$1,250.00 |
| 9 to 13 lots | \$1,850.00 |
| 14 to 18 lots | \$2,250.00 |
| 19 to 23 lots | \$2,500.00 |
| 23 to 30 lots | \$2,750.00 |
| Over 30 lots | TBD by Town Engineer or Legal Counsel |

Escrow Fee = \$3,000.00

NOTE: Once a balance is reduced to 50% of the original deposit, the applicant shall replenish it to 100% of the amount initially required by this schedule.



Subdivision Checklist

TOWN OF RAYMOND, NH

PROJECT NAME Onway Lake Village

MAP# 20 & 26 LOT # 58 & 1 APPLICATION DATE 8/22/23 APPLICATION # _____

This checklist can be used for either a major or minor subdivision. For a minor subdivision, several of the items would likely be waived by the Planning Board due to lack of relevancy (e.g., topographic or soils data) The Board, however, reserves the right to require that all items be met if, in its judgment, the data are necessary to make an informed decision.

A copy of all plans and technical reports must be sent to the Town engineer. Proof of submittal must be provided to the Community Development Department at the time of application. If proof of transmittal is not provided, the application may be delayed until the following month's Planning Board meeting. Address is: Dubois & King, 18 Constitution Dr., Bedford NH 03110, ATTN: Jeff Adler.

| SUBMITTED | | WAIVED | |
|---|--------------------------|--------------------------|--------------------------|
| YES | NO | YES | NO |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1. Name of subdivision; name and address of subdivider. | | | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Name, license number and seal of surveyor or other persons north arrow, scale and date of plan. | | | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Names and addresses of all abutters and all holders of conservation preservation or agricultural preservation easements (on the plat or on separate sheet.) | | | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Locus plan, showing zoning designations | | | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Signature block for Planning Board endorsement. | | | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Names of abutting subdivisions, streets, driveways, easements, building lines, parks/public spaces, notation of use of abutting land, and similar facts regarding abutting properties. | | | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Boundary survey and location of permanent markers. | | | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Location of property lines, lot areas in square feet and acres; lots numbered According to Town tax map system. | | | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Location and amount of frontage on public right-of-way | | | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Location of building setback lines. | | | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Existing and/or proposed buildings, other structures. | | | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Location of any existing or proposed easements, land to be dedicated to public use. | | | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Existing and proposed water mains, culverts, drains, sewers; proposed connections or alternative means of providing water supply and sewage disposal. | | | |



Subdivision Checklist

TOWN OF RAYMOND, NH

| SUBMITTED | | | WAIVED | |
|----------------|----------|--|--------|-----|
| YES | NO | | YES | NO |
| <u>X</u> | ___ | 14. Existing and proposed streets, with names, classification, width of travel surface and rights-of-way. | ___ | ___ |
| <u>X</u> | ___ | 15. Final road profiles, centerline stationing, cross sections. | ___ | ___ |
| <u>X</u> | ___ | 16. Location and width of existing and proposed driveways. | ___ | ___ |
| <u>X</u> | ___ | 17. Location of all surface water, wetlands, rock ledges, stone walls, open space to be preserved, and any other man-made or natural features. | ___ | ___ |
| <u>X</u> | ___ | 18. Existing and proposed topographic contours. | ___ | ___ |
| <u>X</u> | ___ | 19. Soil and wetland delineation. <i>(see: requirements for soils and wetlands data).</i> | ___ | ___ |
| <u>X</u> | ___ | 20. Location of perc tests, test results, outline of 4,000 area, applicable septic square-foot septic setback lines. | ___ | ___ |
| <u>X</u> | ___ | 21. Location of existing and proposed wells, with required radius on property. | ___ | ___ |
| <u>X</u> | ___ | 22. Base flood elevations. | ___ | ___ |
| OTHER: | | | | |
| <u>X</u> | ___ | 23. Plans for stormwater management and erosion control. | ___ | ___ |
| <u>Pending</u> | ___ | 24. Copy of state subdivision approval for septic system. | ___ | ___ |
| <u>Pending</u> | ___ | 25. Alteration of Terrain Permit. | ___ | ___ |
| <u>N/A</u> | ___ | 26. Town or DOT Driveway Permit | ___ | ___ |
| <u>Not Yet</u> | ___ | 27. Copies of any proposed or existing easements, deed restrictions, covenants, and street deeds. | ___ | ___ |
| ___ | <u>X</u> | 28. Such additional studies as may be required. | ___ | ___ |
| <u>X</u> | ___ | 29. Six (6) full-size copies of all plans and ten (10) copies of all plans in 11 X 17 format, and digital copy of plans. * | ___ | ___ |
| <u>X</u> | ___ | 30. Three (3) copies of all studies* | ___ | ___ |
| FEES | | | | |
| <u>X</u> | ___ | 1. Application Fees | | |
| <u>X</u> | ___ | 2. Abutters Notice Fees <i>(to include three (3) labels per abutter)</i> | | |
| <u>X</u> | ___ | 3. Engineering and Legal Review Escrow | | |



Application for Special Permit

Town of Raymond, NH

Site Information

Property Address: 15 Sargent Drive, Raymond, NH

Map #: 20 & 26 Lot #: 58 & 1

Property Owner Information

Name: Yawno Properties, LLC
Raymond Village, LLC Phone: _____

Address: 427 Amherst St., 2nd Fl., Unit 1, Nashua, NH 03063 - both owners

Address: _____

Applicant/Agent Information

Name: Shiv Shrestha Phone: 603-305-0597

Address: Onway Lake Development, LLC, 427 Amherst St., 2nd Fl., Unit 1, Nashua, NH 03063

Address: _____

Project Description

The intent of this application is to propose a 38-lot Conservation subdivision. We have provided a
yield plan showing the lot layout with a conventional subdivision. The actual layout of smaller
lots with less roadway provides for open space. The area of open space is outlined on the
conservation subdivision plans.

Applicant Signature* (see page 2):

Date:

8/29/23

Submission Checklist

- ***COMPLETED & SIGNED APPLICATION.** If the applicant is NOT the property owner, a notarized letter of permission from the property owner is required to be submitted with this application.
- **LIST OF ABUTTERS.** The list of abutters must include the following information:
 - Name of property owner(s)
 - Address of property owner(s)
 - Name of abutting property owner(s)
 - Address of abutting property owner(s)
 - Tax Map and Lot Numbers for all properties listed
 - Name and Address of any agents authorized by the applicant to represent them and whose professional seal appears on a plat submitted to the Planning Board (i.e. land surveyors, wetland scientists, engineers, etc.)

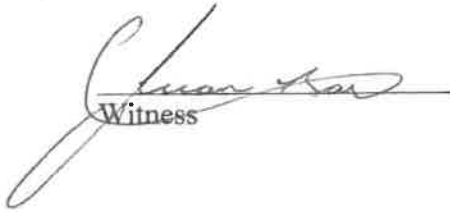
(For more information, please refer to NH Revised Statutes Annotated 672:3 for a definition of the term "abutter," and RSA 676:4 for legal notice requirements).

- **APPLICATION FEE.** The application fee to the Planning Board for a Special Permit is as follows:
 - \$100.00 base application fee, plus;
 - \$10.00 per abutter (including the applicant, property owner(s), and any agents authorized to represent the property owner(s))
 - **When writing a check, this amount must be kept separate from the Escrow Account (see below).** Please make checks payable to the Town of Raymond.
- **ESCROW ACCOUNT.** This is a separate account established by the applicant to cover the cost of any additional legal notification, engineering review, legal review, document recording or outside copying incurred by the Town. Any unused funds will be returned to the applicant.
 - \$250.00 – Minimum amount required to establish Escrow Account.
 - **When writing a check, this amount must be kept separate from the Application Fee (see above).** Please make checks payable to the Town of Raymond.
- **PLANS.**
 - One (1) 24" x 36" copy of the plan, plus ten (10) 11" x 17" copies shall be provided.
 - OR-
 - If the original plan is smaller than 24" x 36" in size, then one (1) copy of the original plan, plus ten (10) 11" x 17" copies of the plan shall be provided.

Letter of Authorization

I, Matthew Silverstein of Yawno Properties, LLC with a mailing address of 427 Amherst Street, 2nd Floor, Suite 1 Nashua NH, developer and manager of property located in Raymond, NH, known as Tax Map 20, Lot 58, do hereby authorize Jones & Beach Engineers, Inc., PO Box 219, Stratham, NH, to act on my behalf concerning the previously mentioned property. The parcel is located on 15 Sargent Road in Raymond, NH.

I hereby appoint Jones & Beach Engineers, Inc., as my agent to act on my behalf in the review process, to include any required signatures.


Witness

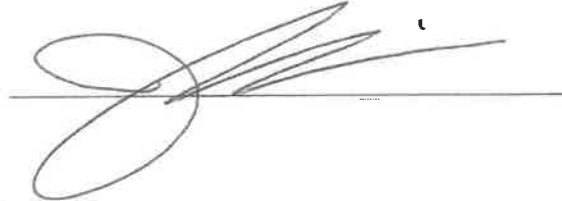

Matthew Silverstein
Yawno Properties, LLC

4-5-23
Date

Personally, appeared the above-named Matthew Silverstein in his capacity of Yawno Properties, LLC, known to me or satisfactorily proven to be the person whose signature appears on this letter of authorization and acknowledged that the facts contained in the letter of authorization are true based upon their knowledge, information, and belief. Before me,

Notary Public/Justice of the Peace

My commission expires 1/25/24

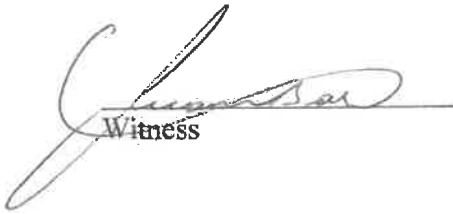





Letter of Authorization

I, Matthew Silverstein of Onway Lake Development, LLC, of 427 Amherst Street, 2nd Floor, Suite 1, Nashua, NH 03063, developer and manager of property located in Raymond, NH, known as Tax Map 20, Lot 58, do hereby authorize Jones & Beach Engineers, Inc., PO Box 219, Stratham, NH, to act on my behalf concerning the previously mentioned property. The parcel is located on 15 Sargent Road in Raymond, NH.

I hereby appoint Jones & Beach Engineers, Inc., as my agent to act on my behalf in the review process, to include any required signatures.


Witness

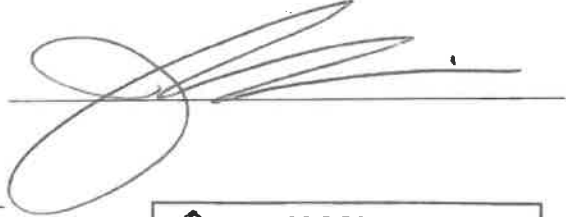

Matthew Silverstein
Onway Lake Development, LLC

4-5-23
Date

Personally, appeared the above-named Matthew Silverstein, in his capacity as manager of Onway Lake Development, LLC, known to me or satisfactorily proven to be the person whose signature appears on this letter of authorization and acknowledged that the facts contained in the letter of authorization are true based upon their knowledge, information, and belief. Before me,

Notary Public/Justice of the Peace

My commission expires 1/25/24

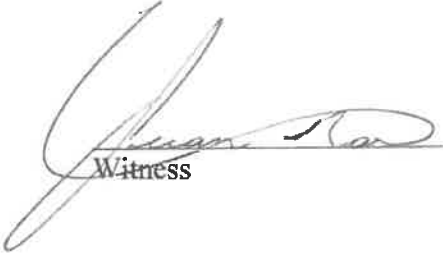




Letter of Authorization

I Matthew Silverstein of Chemm Development, LLC, 427 Amherst Street, 2nd Floor, Suite 1, Nashua, NH 03063, developer and manager of property located in Raymond, NH, known as Tax Map 20, Lot 58, do hereby authorize Jones & Beach Engineers, Inc., PO Box 219, Stratham, NH, to act on my behalf concerning the previously mentioned property. The parcel is located on 15 Sargent Road in Raymond, NH.

I hereby appoint Jones & Beach Engineers, Inc., as my agent to act on my behalf in the review process, to include any required signatures.


Witness


Matthew Silverstein
Chemm Development, LLC

4-5-23
Date

Personally, appeared the above-named Matthew Silverstein, in his capacity as manager of Chemm Development, LLC, known to me or satisfactorily proven to be the person whose signature appears on this letter of authorization and acknowledged that the facts contained in the letter of authorization are true based upon their knowledge, information, and belief. Before me,

Notary Public/Justice of the Peace

My commission expires 1/25/24





Baroff & Craven, PA
740 Chestnut Street
Manchester, NH 03104

E # 22027314 06/23/2022 02:57:36 PM
Book 6418 Page 287 Page 1 of 3
Register of Deeds, Rockingham County



| | | |
|--------------|-----------|-----------|
| LCHIP | ROA621999 | 25.00 |
| TRANSFER TAX | RO116197 | 13,770.00 |
| RECORDING | | 18.00 |
| SURCHARGE | | 2.00 |

WARRANTY DEED

KNOW ALL PERSONS BY THESE PRESENTS, that **Onway Lake Village Condominiums LLC**, a New Hampshire Limited Liability Company with an address of P.O. Box 779, Raymond, New Hampshire, 03077 (“Grantor”), for consideration paid, grants to, **Yawno Properties, LLC**, a New Hampshire limited liability company with an address of 427 Amherst Street, 2nd Floor, Suite 1, Nashua, New Hampshire 03063 (“Grantee”), with **WARRANTY COVENANTS**, the following:

A certain tract or parcel of land in the Town of Raymond, County of Rockingham, State of New Hampshire, shown as Tax Map 20 Lot 58 on a plan entitled "Overview Condominium Site Plan" prepared for Onway Lake Village Condominiums, dated 04/02/18 and revised through 08/22/19, prepared by Jones & Beach Engineers, Inc., and recorded at the Rockingham County Registry of Deeds as Plan D-41946 (the "Plan"). The property conveyed herein is more particularly bounded and described on the Plan as follows:

Beginning at a point along the Northerly sideline of Sargent Drive as shown on the Plan and at the southeastern corner of the property conveyed herein; Thence running along the northerly sideline of Sargent Drive North 59°39'33" West a distance of 818.72 feet to a point; Thence turning and running North 30°15'35" East a distance of 50.00 feet to a point; Thence turning and running North 59°08'56" West a distance of 50.00 feet to a point; Thence turning and running South 30°16'13" West a distance of 50.00 feet to a point; Thence turning and running North 59°41'59" West a distance of 40.96 feet to a point; Thence turning and running North 13°22'30" East a distance of 1,044.03 feet to a point; Thence turning and running North 72°17'38" West a distance of 3,050.34 feet to a point at the southwestern corner of the property conveyed herein; Thence turning and running North 15°45'46" East a distance of 2,304.72 feet to a point along land now or formerly of the State of New Hampshire at the northwestern corner of the property conveyed herein; Thence turning and running South 47°04'06" East a distance of 165.09 feet to a point; Thence turning and running in a curve to the left having a radius of

3,734.30 feet and an arc length of 244.21 feet to a point; Thence turning and running in a curve to the left having a radius of 3,734.73 feet and an arc length of 464.74 feet to a point; Thence turning and running in a curve to the left having a radius of 1,866.87 feet and an arc length of 347.08 feet to a point along a stone wall; Thence turning and running in a curve to the left having a radius of 1,757.17 feet and an arc length of 130.98 feet to a point; Thence turning and running South 27°57'09" West along Tax Map 26 Lot 1 Phase 1 as shown on the Plan a distance of 107.29 feet to a point ("Point A"); Thence continuing South 27°57'09" West approximately 20 feet to the edge of a stream; Thence running along the stream in a generally easterly direction to a point; Thence turning and running South 09°55'32" West approximately 20 feet to a point ("Point B"); Thence continuing South 09°55'32" West a distance of 208.48 feet to a point; Thence turning and running South 08°15'57" East a distance of 142.92 feet to a point; Thence turning and running South 05°22'43" East a distance of 111.05 feet to a point; Thence turning and running South 16°43'26" West a distance of 278.87 feet to a point; Thence turning and running South 77°27'16" East a distance of 745.14 feet to a point; Thence turning and running South 13°37'06" West a distance of 339.90 feet to a point; Thence turning and running South 13°33'04" West a distance of 1,138.08 feet to a point; Thence turning and running South 13°33'23" West a distance of 537.22 feet to a point at southeastern corner of the property conveyed herein and the point and place of beginning.

The survey tie line from Point A and Point B runs South 59°24'35" East a distance of 1,845.02 feet.

Said parcel containing 6,877,998 square feet, 157.9 acres, more or less.

This property is conveyed **TOGETHER WITH AND SUBJECT TO** all other easements, restrictions, rights, covenants, conditions, encumbrances and other matters of record to the extent in force and applicable, including current use.

Meaning and intending to describe and convey a portion only of the property conveyed to the within Grantor by Quitclaim Deed of John F. Tracy, Trustee of the J&D Realty Trust, said deed being dated February 13, 2019, and recorded at the Rockingham County Registry of Deeds at Book 5980, Page 479.

The real estate conveyed herein is not subject to homestead rights.

Executed this 20 day of June, 2022.

Onway Lake Village Condominiums LLC

Robert Murray
Witness

By: [Signature]
John F. Tracy, Member

STATE OF NEW HAMPSHIRE
ROCKINGHAM, SS

On this 20 day of June, 2022, personally appeared the above-named John F. Tracy as duly authorized Member of Onway Lake Village Condominiums LLC, known to me or satisfactorily proven to be, and subscribed to the foregoing and acknowledged same to be his free act and deed on behalf of Onway Lake Village Condominiums LLC.

Before me,

Robert Murray
Notary Public/Justice of the Peace

Name: Roberta L Murray

My Commission Expires: 6/30/2026



Baroff & Craven, PA
740 Chestnut Street
Manchester, NH 03104

E # 22027315 06/23/2022 02:57:37 PM
Book 6418 Page 290 Page 1 of 3
Register of Deeds, Rockingham County



| | | |
|--------------|-----------|----------|
| LCHIP | ROA622000 | 25.00 |
| TRANSFER TAX | RO116198 | 9,450.00 |
| RECORDING | | 18.00 |
| SURCHARGE | | 2.00 |

WARRANTY DEED

KNOW ALL PERSONS BY THESE PRESENTS, that **Onway Lake Village Condominiums LLC**, a New Hampshire Limited Liability Company with an address of P.O. Box 779, Raymond, New Hampshire, 03077 (“Grantor”), for consideration paid, grants to, **Raymond Village LLC**, a New Hampshire limited liability company having an address of 427 Amherst Street, Floor 2, Suite 1, Nashua, New Hampshire 03063 (“Grantee”), with **WARRANTY COVENANTS**, the following:

1. Condominium Units 80, 87, 91, 94, 95, 102 of the Onway Lake Village Condominiums (the “Condominium”), located in Raymond, ^{Rockingham County} New Hampshire, as established by Declaration of Condominium and By-laws of Onway Lake Village Condominiums dated November 20, 2019, and recorded at the Rockingham County Registry of Deeds at Book 6075, Page 1619, as amended by First Amendment to Declaration of Condominium for Onway Lake Village Condominiums, dated March 9, 2020, and recorded at the Rockingham County Registry of Deeds at Book 6093, Page 2012, and as further amended by Second Amendment to Declaration of Condominium of even or near even date herewith and recorded prior hereto. Reference is also made to Condominium Site Plan and Floor Plans entitled “Overview Condominium Site Plan” dated 04/02/18 and revised through 08/22/19 by Jones & Beach Engineers, Inc., and recorded at the Rockingham County Registry of Deeds as Plan D-41946 (the “Plan”).
2. Also conveying the following forty-two (42) Condominium Units that are not yet begun but have prototype plans included in the Attorney General Registration: Units 1, 2, 3, 6, 8, 9, 10, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 57, 77, 78, 79, 82, 85, 86, 88, 89, 90, 96, 97, 98, 99, 100, 101, 104, 105, 106, 107, 108, 109, 110, 111 in the Condominium.

Each Unit is hereby conveyed together with a **1/57th** undivided interest in the Common Areas and facilities and with the right to use the Common Areas in common with others entitled thereto and the exclusive right to use the Limited Common Area(s) assigned to each Unit and is conveyed subject to the provisions of the said Declaration and By-Laws and the Rules and Regulations adopted thereunder.

Each Unit is acquired with the benefit of and subject to the provisions of New Hampshire R.S.A. 356-B, the Condominium Act, as that Statute is written as of the date hereof, and as it may, in the future be amended.

This property is conveyed **TOGETHER WITH AND SUBJECT TO** all other easements, restrictions, rights, covenants, conditions, encumbrances and other matters of record to the extent in force and applicable, including current use and including the rights to pass over other land of the within Grantor for access and egress to the property described herein.

Meaning and intending to describe and convey a portion only of the property conveyed to the within Grantor by Quitclaim Deed of John F. Tracy, Trustee of the J&D Realty Trust, said deed being dated February 13, 2019, and recorded at the Rockingham County Registry of Deeds at Book 5980, Page 479.

The real estate conveyed herein is not subject to homestead rights.

[Signature on the following page]

Executed this 20 day of June, 2022.

Onway Lake Village Condominiums LLC

Robert J Murray
Witness

By: [Signature]
John F. Tracy, Member

STATE OF NEW HAMPSHIRE
ROCKINGHAM, SS

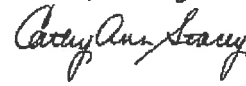
On this 20 day of June, 2022, personally appeared the above-named John F. Tracy as duly authorized Member of Onway Lake Village Condominiums LLC, known to me or satisfactorily proven to be, and subscribed to the foregoing and acknowledged same to be his free act and deed on behalf of Onway Lake Village Condominiums LLC.

Before me,

Robert J Murray

Notary Public/Justice of the Peace
My Commission Expires:





LCHIP ROA438436 25.00
RECORDING 30.00
SURCHARGE 2.00



Return to:



Colliander & Brown, PA
126 Daniel Street, Suite 100
Portsmouth, NH 03801

QUITCLAIM DEED

KNOW ALL PERSONS BY THESE PRESENTS, that **John F. Tracy, Trustee of the J&D Realty Trust**, with an address of 20 Joshua Lane, Epping, New Hampshire 03042, for no consideration paid, grants to **Onway Lake Village Condominiums LLC**, a New Hampshire Limited Liability Company with an address of P.O. Box 779, Raymond, New Hampshire, 03077, with **QUITCLAIM COVENANTS**, the following:

Two certain tracts of land with the buildings thereon, if any, situated in Raymond, County of Rockingham and State of New Hampshire, bounded and described as follows:

TRACT 1:

Being an area of land containing 179.6 acres +/- and shown on a plan of land entitled "Plan of Land for Onway Village in Raymond, N.H." dated March 1988 drawn by Parker Survey Associates, Inc. of Exeter & Seabrook, N.H. and recorded in the Rockingham County Registry of Deeds as Plan D-18199, bounded and described as follows:

Beginning at a point on the southerly sideline of land now or formerly of the State of New Hampshire, so-called, as shown on said plan, and the northeasterly corner of the within described premises; thence turning and running along said land of the State of New Hampshire along an arc of a circle with a radius of 1736.87 feet, a length of 384.80 feet and a central angle of 12-32-58 to a point; thence continuing along an arc of a circle with a radius of 2270.30 feet, a length of 32.03 feet and a central angle of 00-48-30 to a point; thence turning and running S 21° 08' 11" W 17.00 feet to a point; thence turning and running along an arc of a circle with a radius of 2287.30 feet, a length of 270.51 feet and a central angle of 06-46-34 to a point; thence continuing along an arc of a circle with a radius of 1827.03, a length of 309.31 and a central angle of 09-42-00 to a point; thence continuing along an arc of a circle with a radius of 2151.19, a length of 266.82 feet and a central angle of 07-06-24 to a point; thence continuing N 87° 33' 13" E 550.30 feet to a point; thence by and along an arc of a circle with a radius of 1854.86 feet,

a length of 948.86 feet and a central angle of 29-18-36 to a found iron pin; thence continuing S 63° 08' 11" E 548.70 feet to a point; thence turning and running N 26° 51' 49" E 22.00 feet to a point; thence turning and running S 63° 08' 11" E 94.60 feet to a point; thence by and along an arc of a circle with a radius of 8627.37 feet, a length of 607.42 feet and a central angle of 04-02-02 to a point; thence continuing S 67° 10' 15" E 1744.14 feet to a point at land now or formerly of Sargent; thence turning and running along said Sargent land S 13° 02' 55" W 85.20 feet to a point; thence turning and running S 05° 30' 55" E 320.06 feet to land now or formerly of Johnson; thence turning and running along said Johnson land S 68° 56' 39" W 252.54 feet to a set iron pin; thence turning and running S 50° 43' 43" W 101.65 feet to a set iron pin; thence still along said Johnson land S 63° 11' 17" W 120.99 feet to a set iron pin; thence continuing S 51° 36' 07" W 39.55 feet to a set iron pin; thence turning and running S 30° 10' 34" W 119.31 feet to a set iron pin; thence continuing S 16° 10' 32" W 41.27 feet to a set iron pin; thence S 00° 12' 22" W 108.34 feet to a set iron pin; thence S 03° 25' 39" W 64.43 feet to a set iron pin; thence continuing S 15° 39' 33" W 57.06 feet to a set iron pin; thence S 29° 55' 50" W 22.96 feet to a point at land now or formerly of Hamer-Andre Assoc., Inc., so-called, as shown on said plan; thence by and along said Hamer-Andre Assoc., Inc. land N 63° 43' 32" W 2069.14 feet to a found iron pin; thence turning and running S 15° 07' 30" W 649.65 feet to a point at land now or formerly of the Town of Raymond, so-called, as shown on said plan; thence by and along said Town of Raymond land N 56° 42' 30" W 632.00 feet to a point; thence turning and running S 30° 58' 28" W 427.92 feet to a point; thence turning and running S 56° 42' 30" E 755.00 feet to a point; thence turning and running along said Town of Raymond land and land now or formerly of Frizzle & Perkins, so-called, as shown on said plan, S 15° 07' 30" W 208.00 feet to a point at land now or formerly of Feng & Rice, so-called, as shown on said plan; thence turning and running along said Feng & Rice land N 76° 16' 55" W 1365.28 feet to a found drill hole at a stone wall; thence by and along said stone wall N 30° 55' 24" E 340.37 feet to a found iron pin; thence turning and running still along said stone wall N 60° 08' 32" W 744.99 feet to a found drill hole at land now or formerly of Mutrie, so-called, as shown on said plan; thence turning and running along said Mutrie land and the remains of a fence N 34° 03' 37" E 279.01 feet to a found iron pin; thence continuing along said Mutrie land and the remains of wall and fence N 11° 59' 27" E 110.87 feet to a found iron pin; thence continuing N 09° 12' 43" E 143.25 feet to a point; thence still along said Mutrie land N 27° 09' 43" E 229 +/- feet to a point at middle of a brook; thence turning and running in a northwesterly direction along said Mutrie land and a brook 2300 feet + to a point; thence turning and running N 45° 18' 37" E 127.07 feet to the point of beginning.

Also included are Beach Areas designated Parcels A containing 23,100 square feet, B containing 15,700 square feet, C containing 18,400 square feet, and D containing 1600 square feet all as shown on the aforesaid plan.

Excepting and reserving to Charles S. Scribner and James W. Scribner and Muriel Rice, formerly Muriel Scribner, and their heirs and assigns forever an easement, the area identified as "CEM" on the plan, meaning to except and reserve here from the Scribner Family cemetery for all cemetery purposes, together with the right of access thereto and by vehicle over the private road known as Scribner Road, and the right of way referred to on the aforesaid plan and referred

to in a Quitclaim Deed from Mary Sargent to Camp Se-Sa-Ma-Ca, Inc. dated May 5, 1967 and recorded in the Rockingham County Registry of Deeds at Book 1885, Page 208. See Deed of Charles S. Scribner, Muriel Rice and James W. Scribner dated July 18, 1984 recorded at Book 2502, Page 300. Also see easement deed from Camp Se-Sa-Ma-Ca, Inc. to Charles S. Scribner, Muriel Rice, and John W. Scribner dated July 18, 1984 recorded at Book 2502, Page 304.

Reserving to Mary T. Sargent, her heirs and assigns forever, a fifteen (15) foot right of way to the low water mark on Onway Lake, that right of way having as a southerly edge the gateway, fence, post and an old existing railroad crossing to the water line contained in Deed of Camp Se-Sa-Ma-Ca, Inc. to Mary T. Sargent, dated July 30, 1980, recorded at Book 2368, Page 1196, Subject to License Agreement dated May 6, 1986 and recorded in the Rockingham County Registry of Deeds at Book 2600, Page 2206.

Also granting the rights of mortgagor may hold in a real covenant dated 10/28/85 recorded at Book 2650, Page 1864.

TRACT II:

The land conveyed herein is shown as Lot 27A on a plan of land entitled "Sargent - Acres Subdivision" recorded in the Rockingham County Registry of Deeds as Plan D-13004, containing three sheets, described as follows:

Commencing at a drill hole at the Southeast corner of the premises abutting the roadway identified on said plan as "Access road"; thence N 53° 30' 20" W a distance of eight hundred twenty-three and thirty-seven hundredths (823.37) feet to a point; thence N 36° 29' 40" E a distance of fifty and zero hundredths (50.00) feet to a point; thence N 53° 30' 20" W a distance of fifty and zero hundredths (50.00) feet to a point; thence S 36° 29' 40" W a distance of fifty and zero hundredths (50.00) feet to a point; thence N 53° 30' 20" W a distance of forty-three and zero hundredths (43.00) feet to a &kill hole at a stone wall; thence N 19° 14' 22" E a distance of one thousand two hundred sixty-two and forty-four hundredths (1,262.44) feet along the stone wall to a drill hole; thence N 72° 21' 32" W a distance of three thousand twenty and ninety-one hundredth (3,020.91) feet to a stone bound; thence N 21° 27' 02" E a distance of two thousand four hundred twenty-six and one hundredth (2,426.01) feet to a point at land now or formerly of the State of New Hampshire, said point being twenty-eight and ten hundredths (28.10) feet from a referenced stone bound; thence Southeasterly a distance of one thousand three hundred fifty-eight and seventy-two (1,358.72) feet along land of the State of New Hampshire formerly of the B & M Railroad and partially along a stone wall to an iron pin set sixty-seven and fifty hundredths (67.50) feet from a drill hole in a stone wall shown on said plan; thence S 34° 09' 31" W a distance of one hundred twenty-eight and twenty-four hundredths (128.24) feet to the midpoint of a brook as shown on said plan; thence along the center point of said brook to a point set thirty and zero hundredths (30.00) feet from a referenced stone bound on said plan; thence S 15° 54' 41" W a distance of two hundred seven and seventy-two hundredths (207.72) feet to a fenced corner; thence S 00° 40' 17" E a distance of two hundred fifty-four hundredths (254.53) feet to an existing iron pin; thence S 22° 47' 27" W a distance of two hundred seventy-seven and

fifty-one hundredths (277.51) feet to a drill hole at the corner of a stone wall; thence S 71° 18' 19" E a distance of seven hundred forty-five and fifty-six hundredths (745.56) feet along the stone wall to a drill hole; thence S 19° 47' 22" W a distance of two thousand fifteen and thirty-one hundredths (2,015.31) feet along the stone wall to a drill hole at the point of beginning.

Being an area of 155.12 acres +/-.

Specifically excluded from this deed is title to the land referenced on any Site Plan or other matters of record known as Leavitt Road. The deed is specifically subject to all matters of record including, but not limited to:

- a. all outstanding real estate taxes;
- b. provisions of existing building and zoning laws;
- c. any liens for municipal betterments assessed after the date of this agreement;
- d. land use change taxes;
- e. Declaration of Protective Covenants recorded at the Rockingham County Registry of Deeds Book 3168, Page 1942;
- f. Onway Lake Village Cottage Owners Association, Inc. Bylaws recorded at the Rockingham County Registry of Deeds Book 3168, Page 1935;
- g. Ground Lease of Onway Lake Village recorded at the Rockingham County Registry of Deeds Book 3168, Page 1952;
- h. Notice of Decision Amended Site Plan Review recorded at the Rockingham County Registry of Deeds Book 3130, Page 1435;
- i. Revised Conditions of Approval recorded at the Rockingham County Registry of Deeds Book 3130, Page 1436;
- j. Conveyances to current Cottage Owners of record and any previous conditions;
- k. Cemetery easement to the benefit of Charles and James Scribner and Muriel Rice, formerly Muriel Scribner to access the Scribner Family Cemetery;
- l. A 15-foot right-of-way to the benefit of Mary T. Sargent, her heirs and assigns, to the low water mark on Onway Lake;
- m. License agreement recorded in Book 2600, Page 2206, giving permission to pass over the right-of-way to access Onway Lake;

- n. Covenant recorded in Book 2600, Page 2208, stipulating that the use of the old railroad right-of-way may be used in the spring, summer and fall providing it does not adversely affect the activities at Camp Se-Sa-Me-Ca. In addition, it states that the right-of-way can be used for snowmobiling in the winter.

Meaning and intending to convey the same premises conveyed to John Tracy and David V. Zaloga, Trustee of J&D Realty Trust, by Commissioner's Deed of Paul McInnis, Commissioner, dated June 6, 2000 and recorded in the Rockingham County Registry of Deeds at Book 3480, Page 0514.

Trustee Certificate: The undersigned Trustee as Trustee under the **J&D Realty Trust** under Declaration of Trust dated June 6, 2000, as amended, has full and absolute power in said trust agreement to convey any interest in real estate and improvements thereon held in said trust and no purchaser or third party shall be bound to inquire whether the Trustee has said power or is properly exercising said power or to see to the application of any trust asset paid to the Trustee for a conveyance thereof, and the Trust has not been revoked and is still in full force and effect.

This conveyance is not subject to homestead rights.

THIS IS A NON-CONTRACTUAL TRANSFER EXEMPT FROM REAL ESTATE TRANSFER TAX UNDER NH RSA 78-B:2 IX.

SUBJECT TO ALL liens of record with Enterprise Bank and Trust Company.

[Signature on the following page]

Executed this 13th day of February, 2019.

J&D Realty Trust

Roberta J. Murray

Witness

By:

John F. Tracy
John F. Tracy, Trustee

STATE OF NEW HAMPSHIRE
ROCKINGHAM, SS

On this 13th day of February, 2019, personally appeared the above-named John F. Tracy as Trustee of the J&D Realty Trust, known to me or satisfactorily proven to be, and subscribed to the foregoing and acknowledged same to be his free act and deed on behalf of the Trust.

Before me,

Roberta J. Murray

Notary Public/Justice of the Peace

Name:

My Commission Expires:



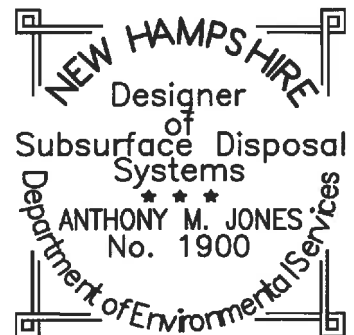
**TEST PITS
FOR
15 Sargent Drive
Raymond, NH
December 14, 2022
JBE Project No. 14232.7**

Performed by: Anthony Jones, Jones & Beach Engineers, Inc., SSD #1900

Test Pit #1

| | | |
|----------|-----------|---|
| 0"- 4" | 10 YR 3/2 | very dark greyish brown fine sandy loam granular, friable many roots |
| 4"- 29" | 10YR 4/6 | dark yellowish brown fine sandy loam granular, friable common roots |
| 29"- 53" | 2.5Y 5/4 | light olive brown sandy loam blocky, firm common distinct |

SHWT = 29"
Roots to 30"
No H₂O observed
No Refusal observed
Perc Rate = 16 min/inch



Test Pit #2

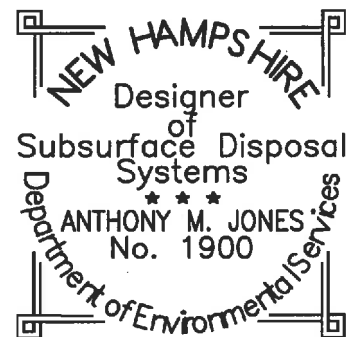
| | | |
|----------|-----------|--|
| 0"- 8" | 10 YR 3/2 | very dark greyish brown fine sandy loam granular, friable many roots |
| 8"- 28" | 10YR 3/2 | very dark greyish brown fine sandy loam massive, friable common roots |
| 28"- 50" | 2.5Y 5/4 | light olive brown fine sandy loam massive, friable common distinct few roots |

SHWT = 28"
Roots to 40"
H₂O @ 40"
No Refusal observed
Perc Rate = 12 min/inch

Test Pit #3

| | | |
|----------|-----------|--|
| 0"- 6" | 10 YR 3/3 | dark brown fine sandy loam granular, friable common roots |
| 6"- 30" | 10YR 4/6 | dark yellowish brown fine sandy loam granular, friable common roots |
| 30"- 58" | 2.5Y 5/4 | light olive brown sandy loam massive, firm few distinct |

SHWT = 30"
Roots to 30"
No H₂O observed
No Refusal observed
Perc Rate = 16 min/inch



Test Pit #4

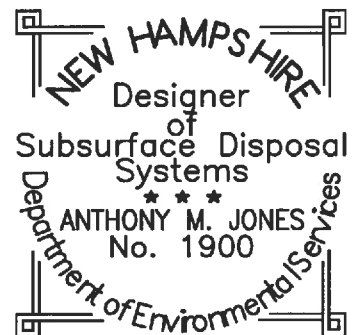
| | | |
|----------|-----------|---|
| 0"- 4" | 10 YR 3/2 | very dark greyish brown fine sandy loam granular, friable many roots |
| 4"- 24" | 10YR 5/6 | yellowish brown fine sandy loam granular, friable common roots |
| 24"- 36" | 2.5Y 5/6 | light olive brown fine sandy loam granular, friable few roots |
| 36"-54" | 2.5Y 5/4 | light olive brown sandy loam massive, firm common distinct |

SHWT = 36"
Roots to 38"
No H₂O observed
No Refusal observed
Perc Rate = 12 min/inch

Test Pit #5

| | | |
|----------|-----------|---|
| 0"- 4" | 10 YR 3/2 | very dark greyish brown fine sandy loam granular, friable common roots |
| 4"- 34" | 10YR 5/6 | yellowish brown fine sandy loam granular, friable few roots |
| 34"- 50" | 2.5Y 5/4 | light olive brown sandy loam massive, firm few distinct |

SHWT = 34"
Roots to 34"
No H₂O observed
No Refusal observed
Perc Rate = 12 min/inch



Test Pit #6

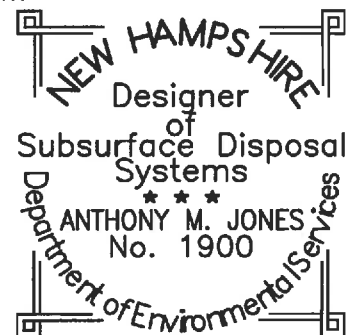
| | | |
|----------|-----------|---|
| 0"- 8" | 10 YR 3/3 | dark brown fine sandy loam granular, friable common roots |
| 8"- 28" | 10YR 5/6 | yellowish brown fine sandy loam granular, friable common roots |
| 28"- 56" | 2.5Y 5/4 | light olive brown loamy sand massive, firm few distinct |

SHWT = 28"
Roots to 28"
No H₂O observed
No Refusal observed
Perc Rate = 10 min/inch

Test Pit #7

| | | |
|----------|-----------|--|
| 0"- 6" | 10 YR 3/4 | dark yellowish brown fine sandy loam granular, friable common roots |
| 6"- 16" | 10YR 5/6 | yellowish brown fine sandy loam granular, friable common roots |
| 16"- 28" | 2.5Y 5/6 | light olive brown loamy sand granular, friable few roots |
| 28"-52" | 2.5Y 6/3 | light yellowish brown loamy sand massive, friable common distinct |

SHWT = 28"
Roots to 24"
No H₂O observed
No Refusal observed
Perc Rate = 8 min/inch



Test Pit #8

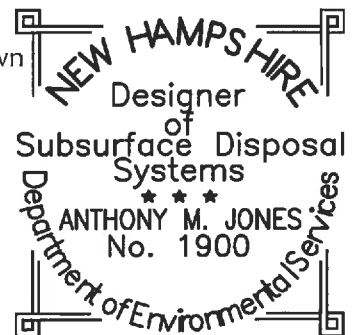
| | | |
|----------|-----------|--|
| 0"- 4" | 10 YR 3/3 | dark brown fine sandy loam granular, friable common roots |
| 4"- 18" | 10YR 5/6 | yellowish brown fine sandy loam granular, friable |
| 18"- 22" | 10YR 5/4 | light olive brown fine sandy loam massive, friable few roots |
| 22"-50" | 2.5Y 6/3 | light yellowish brown loamy sand massive, friable common distinct |

SHWT = 22"
Roots to 22"
No H₂O observed
No Refusal observed
Perc Rate = 6 min/inch

Test Pit #9

| | | |
|----------|-----------|---|
| 0"- 4" | 10 YR 3/3 | dark brown fine sandy loam granular, friable many roots |
| 4"- 18" | 2.5Y 5/4 | light olive brown fine sandy loam granular, friable common roots |
| 18"- 30" | 2.5Y 5/6 | light olive brown fine sandy loam granular, friable common roots |
| 30"-51" | 2.5Y 6/3 | light yellowish brown loamy sand massive, firm common distinct |

SHWT = 30"
Roots to 30"
No H₂O observed
Refusal @ 51"
Perc Rate = 8 min/inch



Test Pit #10

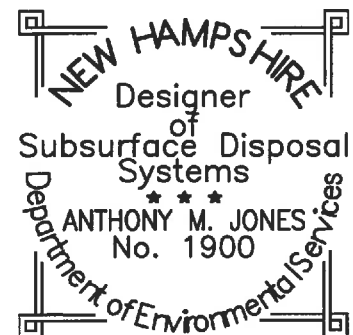
| | | |
|----------|-----------|---|
| 0"- 4" | 10 YR 3/3 | dark brown fine sandy loam granular, friable many roots |
| 4"- 46" | 2.5Y 5/4 | light olive brown fine sandy loam granular, friable common roots |
| 46"- 54" | 2.5Y 6/3 | light yellowish brown loamy sand massive, firm few distinct |

SHWT = 46"
Roots to 46"
No H₂O observed
No Refusal observed
Perc Rate = 6 min/inch

Test Pit #11

| | | |
|----------|-----------|---|
| 0"- 10" | 10 YR 3/2 | very dark greyish brown fine sandy loam granular, friable many roots |
| 10"- 26" | 10YR 5/6 | yellowish brown fine sandy loam granular, friable common roots |
| 26"- 38" | 2.5Y 5/4 | light olive brown loamy sand massive, friable common distinct |
| 38"-50" | 2.5Y 6/3 | light yellowish brown loamy sand massive, firm many distinct |

SHWT = 26"
Roots to 26"
H₂O @ 32"
No Refusal observed
Perc Rate = 16 min/inch



Test Pit #12

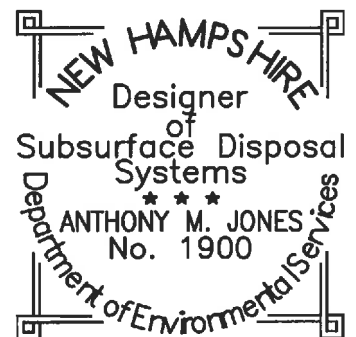
| | | |
|----------|-----------|---|
| 0"- 6" | 10 YR 3/3 | dark brown fine sandy loam granular, friable many roots |
| 6"- 37" | 2.5Y 5/4 | light olive brown fine sandy loam granular, friable common roots |
| 37"- 49" | 2.5Y 6/4 | light yellowish brown loamy sand massive, firm few distinct |

SHWT = 37"
Roots to 37"
No H₂O observed
No Refusal observed
Perc Rate = 14 min/inch

Test Pit #13

| | | |
|----------|-----------|---|
| 0"- 6" | 10 YR 3/3 | dark brown fine sandy loam granular, friable many roots |
| 6"- 35" | 2.5Y 5/4 | light olive brown fine sandy loam granular, friable common roots |
| 35"- 54" | 2.5Y 6/4 | light yellowish brown loamy sand massive, friable few distinct |

SHWT = 35"
Roots to 38"
No H₂O observed
Refusal @ 54"
Perc Rate = 14 min/inch



Test Pit #33

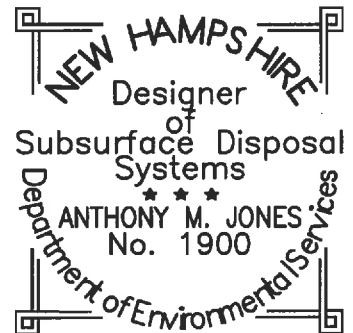
| | | |
|----------|-----------|--|
| 0"- 2" | 10 YR 3/3 | dark brown fine sandy loam granular, friable many roots |
| 2"- 24" | 2.5Y 5/4 | light olive brown loamy sand massive, friable |
| 24"- 50" | 2.5Y 5/4 | light olive brown sand massive, friable common faint |

SHWT = 24"
Roots to 8"
No H₂O observed
No Refusal observed
Perc Rate = 8 min/inch

Test Pit #34

| | | |
|----------|-----------|---|
| 0"- 6" | 10 YR 3/2 | very dark greyish brown fine sandy loam granular, friable many roots |
| 6"- 32" | 10YR 5/6 | yellowish brown fine sandy loam granular, friable common roots |
| 32"- 49" | 2.5Y 5/4 | light olive brown loamy sand massive, friable few distinct |

SHWT = 32"
Roots to 32"
No H₂O observed
No Refusal observed
Perc Rate = 8 min/inch



Test Pit #35

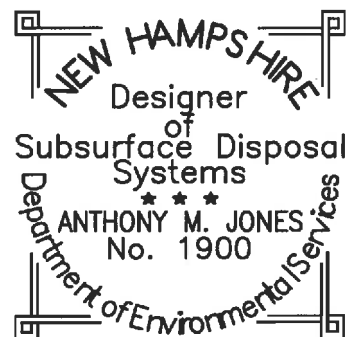
| | | |
|----------|-----------|---|
| 0"- 6" | 10 YR 3/2 | dark brown fine sandy loam granular, friable many roots |
| 6"- 32" | 10YR 5/6 | yellowish brown fine sandy loam granular, friable common roots |
| 32"- 50" | 2.5Y 5/4 | light olive brown loamy sand massive, friable few distinct |

SHWT = 32"
Roots to 32"
No H₂O observed
No Refusal observed
Perc Rate = 10 min/inch

Test Pit #36

| | | |
|----------|-----------|---|
| 0"- 4" | 10 YR 3/3 | dark brown fine sandy loam granular, friable many roots |
| 4"- 32" | 10YR 5/6 | yellowish brown fine sandy loam granular, friable common roots |
| 32"- 50" | 2.5Y 5/4 | light olive brown loamy sand blocky, friable common faint |

SHWT = 32"
Roots to 32"
No H₂O observed
No Refusal observed
Perc Rate = 10 min/inch



Test Pit #37

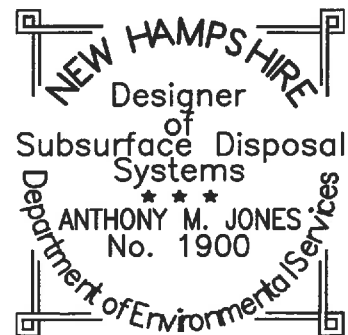
| | | |
|----------|-----------|--|
| 0"- 6" | 10 YR 3/3 | dark brown fine sandy loam granular, friable many roots |
| 6"- 38" | 10YR 5/6 | yellowish brown fine sandy loam granular, friable common roots |
| 38"- 54" | 2.5Y 5/4 | light olive brown loamy sand massive, friable few distinct few roots |

SHWT = 38"
Roots to 38"
No H₂O observed
Refusal @ 54"
Perc Rate = 12 min/inch

Test Pit #38

| | | |
|----------|-----------|---|
| 0"- 6" | 10 YR 3/2 | very dark greyish brown fine sandy loam granular, friable many roots |
| 6"- 38" | 10YR 5/6 | yellowish brown fine sandy loam granular, friable common roots |
| 38"- 58" | 2.5Y 5/4 | light olive brown loamy sand massive, friable many faint |

SHWT = 38"
Roots to 38"
No H₂O observed
No Refusal observed
Perc Rate = 12 min/inch



**TEST PITS
FOR
15 Sargent Drive
Raymond, NH
June 22, 2023
JBE Project No. 14232.7**

Performed by: Joseph Coronati & Anthony Jones, Jones & Beach Engineers, Inc., SSD #1716 & #1900

Witnessed by: Paul Ayer, Raymond Building Inspector

Test Pit #11A Septic

| | | |
|----------|----------|--|
| 0" – 4" | 10YR 3/3 | dark brown fine sandy loam granular, friable common roots |
| 4" – 36" | 10YR 4/6 | dark yellowish brown fine sandy loam granular, friable common roots |
| 36"-60" | 2.5Y 5/3 | light olive brown sand single grain, friable few, distinct redox |

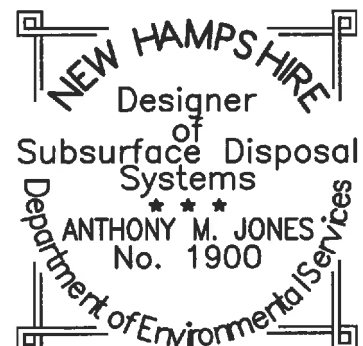
SHWT = 36"

Roots: 36"

No H₂O observed

No Refusal observed

Perc Rate = 10 min/inch



Test Pit #12A Septic

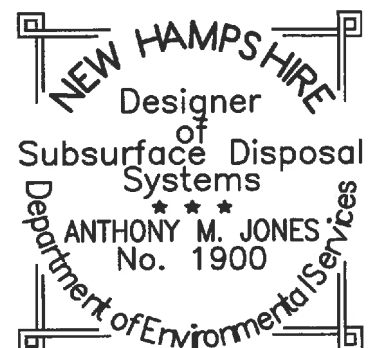
| | | |
|-----------|-----------|--|
| 0"- 2" | | topsoil |
| 2" - 24" | 10YR 5/6 | yellowish brown fine sandy loam loose, friable |
| 24" - 45" | 10YR 6/4 | light yellowish brown loamy sand firm, stony |
| 45"-66" | 7.5YR 7/3 | pink loamy sand firm, small grain |

SHWT = 24"
Roots: 24"
No H₂O observed
No Refusal observed
Perc Rate = 12 min/inch

Test Pit #13A Septic

| | | |
|-----------|-----------|---|
| 0"- 3" | | topsoil |
| 3" - 30" | 7.5YR 4/6 | strong brown fine sandy loam friable, loose with boulders |
| 30" - 63" | 10YR 6/4 | light yellowish brown loamy sand firm, boulders |

SHWT = 30"
Roots: 30"
No H₂O observed
No Refusal observed
Perc Rate = 14 min/inch



Test Pit #13B Drainage

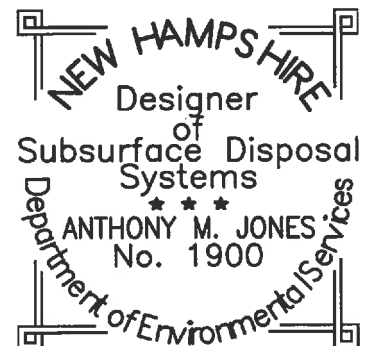
| | | |
|-----------|-----------|---|
| 0"- 3" | | topsoil |
| 3" - 22" | 7.5YR 4/6 | strong brown fine sandy loam friable, loose |
| 22" - 64" | 10YR 6/4 | light yellowish brown loamy sand firm |

SHWT = 22"
Roots: 22"
No H₂O observed
No Refusal observed
Perc Rate = 14 min/inch

Test Pit #14 Drainage

| | | |
|-----------|----------|---|
| 0"- 3" | | topsoil |
| 3" - 25" | 10YR 4/6 | dark yellowish brown fine sandy loam friable, loose with boulders stony with cobbles |
| 25" - 65" | 10YR 5/6 | yellowish brown loamy sand firm, stony |

SHWT = 25"
Roots: 25"
No H₂O observed
No Refusal observed
Perc Rate = 14 min/inch



Test Pit #14A

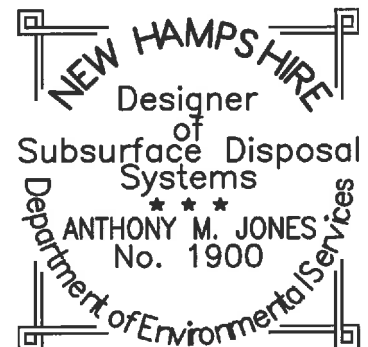
| | | |
|-----------|-----------|--|
| 0"- 3" | | topsoil |
| 3" - 24" | 10YR 5/6 | yellowish brown fine sandy loam friable, loose |
| 24" - 40" | 10YR 6/6 | brownish yellow loamy sand firm, stony with boulders |
| 40" - 65" | 7.5YR 4/6 | strong brown loamy sand firm |

SHWT = 24"
Roots: 24"
No H₂O observed
No Refusal observed
Perc Rate = 14 min/inch

Test Pit #15

| | | |
|-----------|-----------|--|
| 0"- 3" | | topsoil |
| 3" - 18" | 10YR 5/6 | yellowish brown fine sandy loam friable, loose |
| 18" - 32" | 7.5YR 4/6 | strong brown loamy sand firm, cobbles |

SHWT = 18"
Roots: 20"
No H₂O observed
Refusal observed at: 32"
Perc Rate = 14 min/inch



Test Pit #15A

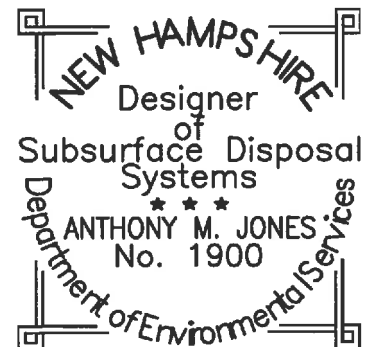
| | | |
|-----------|-----------|--|
| 0"- 3" | | topsoil |
| 3" - 24" | 10YR 5/6 | yellowish brown fine sandy loam friable, loose |
| 24" - 49" | 7.5YR 5/3 | brown clayey sand firm, ribbons |

SHWT = 24"
Roots: 24"
No H₂O observed
Refusal observed at: 49"
Perc Rate = 20 min/inch

Test Pit #16

| | | |
|-----------|----------|---|
| 0"- 5" | | topsoil |
| 5" - 22" | 10YR 5/3 | brown fine sandy loam, mixed soils friable, loose |
| 22" - 56" | 10YR 5/2 | grayish brown clayey sand firm, stony rocky |

SHWT = 22"
Roots: 22"
No H₂O observed
Refusal observed at: 56"
Perc Rate = 18 min/inch



Test Pit #17

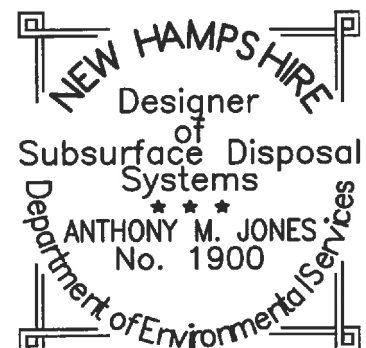
| | | |
|-----------|----------|--|
| 0"- 3" | | topsoil |
| 3" - 27" | 10YR 5/6 | yellowish brown fine sandy loam friable, loose |
| 27" - 64" | 10YR 6/4 | light yellowish brown clayey sand firm, stony |

SHWT = 27"
Roots: 27"
No H₂O observed
No Refusal observed
Perc Rate = 18 min/inch

Test Pit #18

| | | |
|-----------|----------|--|
| 0"- 3" | | topsoil |
| 3" - 23" | 10YR 5/6 | yellowish brown fine sandy loam friable, loose |
| 23" - 70" | 10YR 6/4 | light yellowish brown clayey sand firm, stony |

SHWT = 23"
Roots: 25"
No H₂O observed
No Refusal observed
Perc Rate = 18 min/inch



Test Pit #19

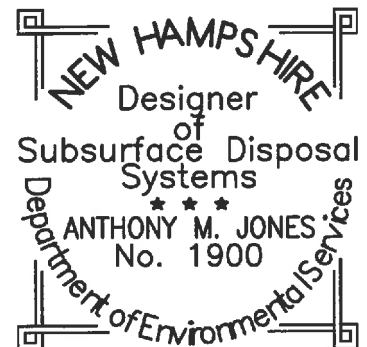
| | | |
|-----------|----------|---|
| 0"- 3" | | topsoil |
| 3" - 27" | 10YR 5/6 | yellowish brown fine sandy loam friable, loose large rocks, surface boulders |
| 27" - 69" | 10YR 6/4 | light yellowish brown clayey sand firm, boulders |

SHWT = 27"
Roots: 27"
No H₂O observed
No Refusal observed
Perc Rate = 18 min/inch

Test Pit #20

| | | |
|-----------|----------|---|
| 0"- 3" | | topsoil |
| 3" - 21" | 10YR 5/6 | yellowish brown fine sandy loam friable, loose, rocky |
| 21" - 42" | 10YR 6/4 | light yellowish brown clayey sand firm, rocky |

SHWT = 21"
Roots: 21"
No H₂O observed
Refusal observed at: 42"
Perc Rate = 18 min/inch



Test Pit #21

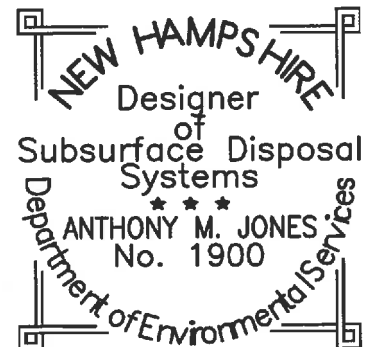
| | | |
|-----------|----------|---|
| 0"- 3" | | topsoil |
| 3" – 22" | 10YR 4/6 | dark yellowish brown fine sandy loam friable, loose, rocky |
| 22" – 64" | 10YR 6/3 | pale brown clayey sand firm, rocky |

SHWT = 22"
Roots: 22"
No H₂O observed
No Refusal observed
Perc Rate = 18 min/inch

Test Pit #21A Drainage

| | | |
|-----------|----------|---|
| 0"- 3" | | topsoil |
| 3" – 20" | 10YR 4/6 | dark yellowish brown fine sandy loam friable, rocky |
| 20" – 57" | 10YR 6/3 | pale brown clayey sand firm |

SHWT = 18"
Roots: 20"
No H₂O observed
No Refusal observed
Perc Rate = 20 min/inch



Test Pit #22

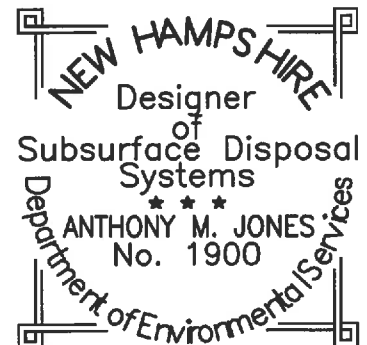
| | | |
|-----------|----------|--|
| 0" – 6" | 10YR 3/3 | dark brown fine sandy loam granular, loose common roots |
| 6" – 32" | 10YR 4/6 | dark yellowish brown fine sandy loam granular, friable common roots |
| 32" – 60" | 2.5Y 5/4 | light olive brown sand massive, friable many distinct redox |

SHWT = 32"
Roots: 32"
No H₂O observed
No Refusal observed
Perc Rate = 12 min/inch

Test Pit #22A

| | | |
|-----------|----------|--|
| 0" – 6" | 10YR 3/3 | dark brown fine sandy loam granular, friable common roots |
| 6" – 32" | 10YR 4/6 | dark yellowish brown fine sandy loam granular, friable common roots |
| 32" – 51" | 2.5Y 5/4 | light olive brown sand massive, friable common distinct redox |

SHWT = 32"
Roots: 32"
No H₂O observed
No Refusal observed
Perc Rate = 12 min/inch



Test Pit #23

| | | |
|-----------|----------|--|
| 0" – 4" | 10YR 3/3 | dark brown fine sandy loam granular, friable common roots |
| 4" – 30" | 10YR 4/6 | dark yellowish brown fine sandy loam granular, friable common roots |
| 30" – 50" | 2.5Y 5/4 | light olive brown loamy sand massive, friable common distinct redox |

SHWT = 30"
Roots: 30"
No H₂O observed
No Refusal observed
Perc Rate = 14 min/inch

Test Pit #24

| | | |
|-----------|----------|--|
| 0" – 6" | 10YR 3/3 | dark brown fine sandy loam granular, friable many roots |
| 6" – 28" | 10YR 4/6 | dark yellowish brown fine sandy loam granular, friable common roots |
| 28" – 50" | 2.5Y 5/4 | light olive brown loamy sand massive, friable common distinct redox |

SHWT = 28"
Roots: 30"
No H₂O observed
Refusal observed at: 50"
Perc Rate = 14 min/inch



Test Pit #25

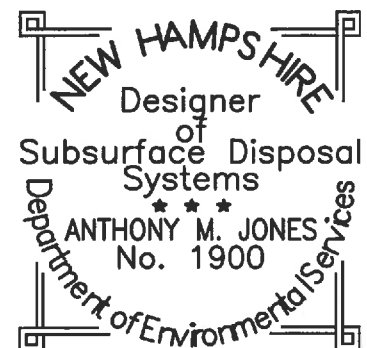
| | | |
|-----------|----------|--|
| 0" – 6" | 10YR 3/3 | dark brown fine sandy loam granular, friable common roots |
| 6" – 32" | 10YR 4/6 | dark yellowish brown fine sandy loam granular, friable common roots |
| 32" – 58" | 2.5Y 5/4 | light olive brown loamy sand massive, friable common distinct redox |

SHWT = 32"
Roots: 32"
No H₂O observed
Refusal observed at: 58"
Perc Rate = 14 min/inch

Test Pit #26

| | | |
|-----------|----------|--|
| 0" – 6" | 10YR 3/3 | dark brown fine sandy loam granular, friable common roots |
| 6" – 36" | 10YR 4/6 | dark yellowish brown fine sandy loam granular, friable common roots |
| 36" – 52" | 2.5Y 5/4 | light olive brown loamy sand massive, friable common distinct redox |

SHWT = 36"
Roots: 36"
No H₂O observed
No Refusal observed
Perc Rate = 14 min/inch



Test Pit #27

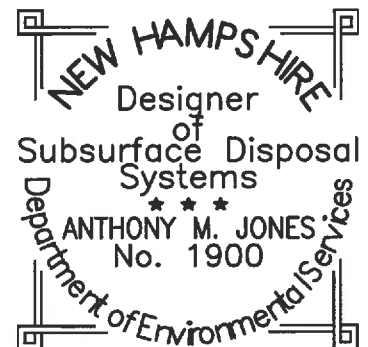
| | | |
|-----------|----------|--|
| 0" – 4" | 10YR 3/3 | dark brown fine sandy loam granular, friable many roots |
| 4" – 32" | 10YR 4/6 | dark yellowish brown fine sandy loam granular, friable common roots |
| 32" – 65" | 2.5Y 5/4 | light olive brown loamy sand massive, friable common distinct redox |

SHWT = 32"
Roots: 32"
No H₂O observed
No Refusal observed
Perc Rate = 14 min/inch

Test Pit #28

| | | |
|-----------|----------|--|
| 0" – 4" | 10YR 3/3 | dark brown fine sandy loam granular, friable common roots |
| 4" – 31" | 10YR 4/6 | dark yellowish brown fine sandy loam granular, friable common roots |
| 31" – 48" | 2.5Y 5/4 | light olive brown sand massive, friable common distinct redox |

SHWT = 31"
Roots: 31"
No H₂O observed
No Refusal observed
Perc Rate = 10 min/inch



Test Pit #29

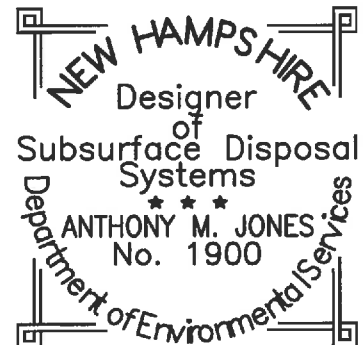
| | | |
|-----------|----------|--|
| 0" – 4" | 10YR 3/3 | dark brown fine sandy loam granular, friable common roots |
| 4" – 34" | 10YR 4/6 | dark yellowish brown fine sandy loam granular, friable common roots 12"-20" boulders |
| 34" – 48" | 2.5Y 5/3 | light olive brown loamy sand massive, friable few distinct redox |

SHWT = 34"
Roots: 34"
No H₂O observed
No Refusal observed
Perc Rate = 14 min/inch

Test Pit #30

| | | |
|-----------|----------|--|
| 0" – 6" | 10YR 3/3 | dark brown fine sandy loam granular, friable common roots |
| 6" – 32" | 10YR 4/6 | dark yellowish brown fine sandy loam granular, friable common roots |
| 32" – 52" | 2.5Y 5/4 | light olive brown loamy sand massive, friable few distinct redox |

SHWT = 32"
Roots: 32"
No H₂O observed
No Refusal observed
Perc Rate = 14 min/inch



Test Pit #30A

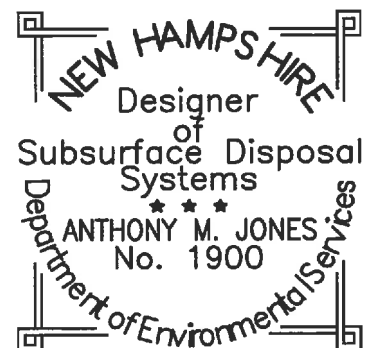
| | | |
|-----------|----------|--|
| 0" – 6" | 10YR 3/3 | dark brown fine sandy loam granular, friable common roots |
| 6" – 34" | 10YR 4/6 | dark yellowish brown fine sandy loam granular, friable common roots |
| 34" – 50" | 2.5Y 5/4 | light olive brown sand massive, friable common distinct redox |

SHWT = 34"
Roots: 34"
No H₂O observed
No Refusal observed
Perc Rate = 10 min/inch

Test Pit #31 Drainage

| | | |
|-----------|----------|--|
| 0"- 3" | | topsoil |
| 3" – 27" | 10YR 4/6 | dark yellowish brown fine sandy loam friable, loose rocky |
| 27" – 56" | 10YR 6/3 | pale brown clayey sand firm |

SHWT = 27"
Roots: 27"
No H₂O observed
No Refusal observed
Perc Rate = 18 min/inch



Test Pit #31A

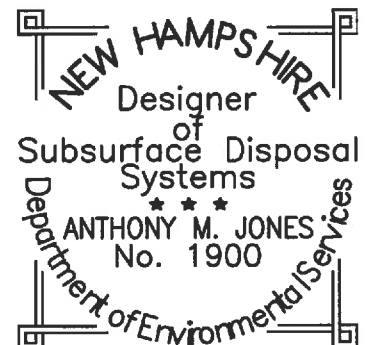
| | | |
|-----------|----------|--|
| 0" – 6" | 10YR 3/3 | dark brown fine sandy loam granular, friable common roots |
| 6" – 30" | 10YR 4/6 | dark yellowish brown fine sandy loam granular, friable common roots |
| 30" – 55" | 2.5Y 5/3 | light olive brown loamy sand massive, friable common distinct redox |

SHWT = 30"
Roots: 30"
No H₂O observed
No Refusal observed
Perc Rate = 14 min/inch

Test Pit #32

| | | |
|-----------|----------|--|
| 0" – 6" | 10YR 3/3 | dark brown fine sandy loam granular, friable common roots |
| 6" – 30" | 10YR 5/4 | yellowish brown fine sandy loam granular, friable common roots |
| 30" – 52" | 2.5Y 5/3 | reddish brown loamy sand massive, friable common distinct redox |

SHWT = 30"
Roots: 30"
No H₂O observed
No Refusal observed
Perc Rate = 14 min/inch



Test Pit #32A

| | | |
|-----------|----------|--|
| 0" – 4" | 10YR 3/3 | dark brown fine sandy loam granular, friable common roots |
| 4" – 28" | 2.5Y 5/4 | light olive brown fine sandy loam granular, friable common roots |
| 28" – 56" | 2.5Y 5/3 | light olive brown loamy sand massive, friable common distinct redox |

SHWT = 28"
Roots: 28"
No H₂O observed
No Refusal observed
Perc Rate = 14 min/inch

Test Pit #33A

| | | |
|-----------|----------|--|
| 0" – 4" | 10YR 3/3 | dark brown fine sandy loam granular, friable common roots |
| 4" – 32" | 2.5Y 5/4 | light olive brown loamy sand granular, friable common roots |
| 32" – 50" | 2.5Y 5/3 | light olive brown sand massive, friable common distinct redox |

SHWT = 32"
Roots: 32"
H₂O observed at: 44"
No Refusal observed
Perc Rate = 10 min/inch





100 feet Abutters List Report

Raymond, NH
August 22, 2023

Subject Properties:

| | | | |
|-------------------|---------------------|------------------|-------------------------------|
| Parcel Number: | 026-000-001-000 | Mailing Address: | RAYMOND VILLAGE, LLC |
| CAMA Number: | 026-000-001-000-000 | | 427 AMHERST STREET, 2ND FLOOR |
| Property Address: | 38 SCRIBNER ROAD | | SUITE 1 |
| | | | NASHUA, NH 03063 |

| | | | |
|-------------------|-----------------------|------------------|-----------------------|
| Parcel Number: | 026-000-001-000 | Mailing Address: | TASCI PROPERTIES, LLC |
| CAMA Number: | 026-000-001-103-000 | | 163 BROADWAY |
| Property Address: | 15 SARGENT DRIVE #103 | | MILFORD, CT 06460 |

| | | | |
|-------------------|-----------------------|------------------|-------------------------------|
| Parcel Number: | 026-000-001-000 | Mailing Address: | RAYMOND VILLAGE, LLC |
| CAMA Number: | 026-000-001-105-000 | | 427 AMHERST STREET, 2ND FLOOR |
| Property Address: | 15 SARGENT DRIVE #102 | | SUITE 1 |
| | | | NASHUA, NH 03063 |

| | | | |
|-------------------|---------------------|------------------|---------------------|
| Parcel Number: | 026-000-001-000 | Mailing Address: | KUCHARZYK, HENRY F. |
| CAMA Number: | 026-000-001-503-000 | | P.O. BOX 1701 |
| Property Address: | 15 SARGENT DRIVE #3 | | LOWELL, MA 01853 |

| | | | |
|-------------------|---------------------|------------------|---------------------|
| Parcel Number: | 026-000-001-000 | Mailing Address: | KUCHARZYK, HENRY F. |
| CAMA Number: | 026-000-001-505-000 | | P.O. BOX 1701 |
| Property Address: | 15 SARGENT DRIVE #5 | | LOWELL, MA 01853 |

| | | | |
|-------------------|---------------------|------------------|-------------------|
| Parcel Number: | 026-000-001-000 | Mailing Address: | MCDONOUGH, SULANE |
| CAMA Number: | 026-000-001-507-000 | | P.O. BOX 964 |
| Property Address: | 15 SARGENT DRIVE #7 | | RAYMOND, NH 03077 |

| | | | |
|-------------------|----------------------|------------------|-------------------------------|
| Parcel Number: | 026-000-001-000 | Mailing Address: | RAYMOND VILLAGE, LLC |
| CAMA Number: | 026-000-001-580-000 | | 427 AMHERST STREET, 2ND FLOOR |
| Property Address: | 15 SARGENT DRIVE #80 | | SUITE 1 |
| | | | NASHUA, NH 03063 |

| | | | |
|-------------------|----------------------|------------------|---------------------|
| Parcel Number: | 026-000-001-000 | Mailing Address: | KUCHARZYK, HENRY F. |
| CAMA Number: | 026-000-001-581-000 | | P.O. BOX 1701 |
| Property Address: | 15 SARGENT DRIVE #81 | | LOWELL, MA 01853 |

| | | | |
|-------------------|----------------------|------------------|-------------------|
| Parcel Number: | 026-000-001-000 | Mailing Address: | TRACY, JOHN F |
| CAMA Number: | 026-000-001-584-000 | | P.O. BOX 364 |
| Property Address: | 15 SARGENT DRIVE #84 | | RAYMOND, NH 03077 |

| | | | |
|-------------------|----------------------|------------------|-------------------------------|
| Parcel Number: | 026-000-001-000 | Mailing Address: | RAYMOND VILLAGE, LLC |
| CAMA Number: | 026-000-001-587-000 | | 427 AMHERST STREET, 2ND FLOOR |
| Property Address: | 15 SARGENT DRIVE #87 | | SUITE 1 |
| | | | NASHUA, NH 03063 |



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100 feet Abutters List Report

Raymond, NH
August 22, 2023

Parcel Number: 026-000-001-000
CAMA Number: 026-000-001-591-000
Property Address: 15 SARGENT DRIVE #91

Mailing Address: RAYMOND VILLAGE, LLC
427 AMHERST STREET, 2ND FLOOR
SUITE 1
NASHUA, NH 03063

Parcel Number: 026-000-001-000
CAMA Number: 026-000-001-592-000
Property Address: 15 SARGENT DRIVE #92

Mailing Address: URBINA, EUGENIO & CLAUDIA
P.O. BOX 1432
RAYMOND, NH 03077

Parcel Number: 026-000-001-000
CAMA Number: 026-000-001-593-000
Property Address: 15 SARGENT DRIVE #93

Mailing Address: MILLIKEN, KIMBERLY
14 EPPING WOODS ROAD
EPPING, NH 03042

Parcel Number: 026-000-001-000
CAMA Number: 026-000-001-594-000
Property Address: 15 SARGENT DRIVE #94

Mailing Address: EMERTON, SCOTT LAURI EMERTON
P.O. BOX 163
WINTER HARBOR, ME 04693

Parcel Number: 026-000-001-000
CAMA Number: 026-000-001-595-000
Property Address: 15 SARGENT DRIVE #95

Mailing Address: RAYMOND VILLAGE, LLC
427 AMHERST STREET, 2ND FLOOR
SUITE 1
NASHUA, NH 03063

Subject Properties:

Parcel Number: 020-000-058-000
CAMA Number: 020-000-058-000-000
Property Address: 15 SARGENT DRIVE

Mailing Address: YAWNO PROPERTIES, LLC
427 AMHERST STREET, 2ND FLOOR
SUITE 1
NASHUA, NH 03063

Abutters:

Parcel Number: 020-000-059-000
CAMA Number: 020-000-059-000-000
Property Address: GREEN ROAD

Mailing Address: WILLIAMS, HERBERT R & JUDITH A
101 GREEN ROAD
RAYMOND, NH 03077

Parcel Number: 020-000-060-000
CAMA Number: 020-000-060-000-000
Property Address: GREEN ROAD

Mailing Address: STATE OF NEW HAMPSHIRE
JOHN O. MORTON BLDG. P.O. BOX 483
CONCORD, NH 03301

Parcel Number: 021-000-001-001
CAMA Number: 021-000-001-001-000
Property Address: 3 SARGENT DRIVE

Mailing Address: JEFFERY, LISA L.
3 A SARGENT DRIVE
RAYMOND, NH 03077

Parcel Number: 021-000-001-002
CAMA Number: 021-000-001-002-000
Property Address: 3B SARGENT DRIVE

Mailing Address: ROBINSON, JAMES R BETTY-ANN L
ARCHAMBAULT
3B SARGENT DRIVE
RAYMOND, NH 03077



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8/22/2023

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100 feet Abutters List Report

Raymond, NH
August 22, 2023

Parcel Number: 021-000-001-001 Mailing Address: CONDO MAIN X
CAMA Number: 021-000-001A-000-026 X X
Property Address: 3-3 B SARGENT DRIVE X, XX XXXXX

Parcel Number: 021-000-001-002 Mailing Address: CONDO MAIN X
CAMA Number: 021-000-001A-000-026 X X
Property Address: 3-3 B SARGENT DRIVE X, XX XXXXX

Parcel Number: 021-000-001-001 Mailing Address: CONDO MAIN X
CAMA Number: 021-000-001A-000-026 X X
Property Address: 3-3 B SARGENT DRIVE X, XX XXXXX

Parcel Number: 021-000-001-002 Mailing Address: CONDO MAIN X
CAMA Number: 021-000-001A-000-026 X X
Property Address: 3-3 B SARGENT DRIVE X, XX XXXXX

Parcel Number: 021-000-002-000 Mailing Address: PALMER, JACOB
CAMA Number: 021-000-002-000-000 4 FENG DRIVE
Property Address: 4 FENG DRIVE RAYMOND, NH 03077

Parcel Number: 021-000-003-000 Mailing Address: BRUSCATO, DAVID R DENISE M
CAMA Number: 021-000-003-000-000 BRUSCATO
Property Address: 6 FENG DRIVE P.O. BOX 421
RAYMOND, NH 03077

Parcel Number: 021-000-004-000 Mailing Address: VIGLIOTTE, AUDRA L.
CAMA Number: 021-000-004-000-000 8 FENG DRIVE
Property Address: 8 FENG DRIVE RAYMOND, NH 03077

Parcel Number: 021-000-005-000 Mailing Address: DUMONT FAMILY TRUST OF 2018
CAMA Number: 021-000-005-000-000 LAWRENCE J. & MARGARET DUMONT/
Property Address: 10 FENG DRIVE TRUSTEES
RAYMOND, NH 03077

Parcel Number: 021-000-006-000 Mailing Address: LORD, NORMAN ERIC SAMANTHA ANN
CAMA Number: 021-000-006-000-000 BRAGG- LORD
Property Address: 12 FENG DRIVE 12 FENG DRIVE
RAYMOND, NH 03077

Parcel Number: 021-000-007-000 Mailing Address: HOLLINS, NICHOLAS SAMANTHA
CAMA Number: 021-000-007-000-000 TOOMEY
Property Address: 14 FENG DRIVE 14 FENG DRIVE
RAYMOND, NH 03077

Parcel Number: 021-000-008-000 Mailing Address: CRABB, KRIZEL & JASON NANETTE
CAMA Number: 021-000-008-000-000 HINOJALES
Property Address: 16 FENG DRIVE 16 FENG DRIVE
RAYMOND, NH 03077

Parcel Number: 021-000-009-000 Mailing Address: RADIGAN, DEBRA A. & FRANK D.
CAMA Number: 021-000-009-000-000 15 FENG DRIVE
Property Address: 15 FENG DRIVE RAYMOND, NH 03077



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8/22/2023

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100 feet Abutters List Report

Raymond, NH
August 22, 2023

Parcel Number: 021-000-027-000
CAMA Number: 021-000-027-000-000
Property Address: 6 BIRCH COURT

Mailing Address: T AND D IVERSON 2016 TRUST
THOMAS F. & DIANE M. IVERSON /
TRUSTEES
6 BIRCH COURT
RAYMOND, NH 03077

Parcel Number: 021-000-028-000
CAMA Number: 021-000-028-000-000
Property Address: 8 BIRCH COURT

Mailing Address: FRIZZLE FAMILY REVOCABLE TRUST
OF 2005 BRUCE A & CHERYL P /
TRUSTEES
8 BIRCH COURT
RAYMOND, NH 03077

Parcel Number: 021-000-029-000
CAMA Number: 021-000-029-000-000
Property Address: GREEN ROAD

Mailing Address: RAYMOND, TOWN OF
4 EPPING STREET
RAYMOND, NH 03077

Parcel Number: 021-000-030-000
CAMA Number: 021-000-030-000-000
Property Address: BIRCH COURT

Mailing Address: RAYMOND, TOWN OF
4 EPPING STREET
RAYMOND, NH 03077

Parcel Number: 021-000-039-000
CAMA Number: 021-000-039-000-000
Property Address: LEAVITT ROAD

Mailing Address: DIFEO & BROGNA, LLC
270 11th SQ. SW
VERO BEACH, FL 32962

Parcel Number: 021-000-057-000
CAMA Number: 021-000-057-000-000
Property Address: 17 GREEN ROAD

Mailing Address: BRUNO, KENNETH M
17 GREEN ROAD
RAYMOND, NH 03077

Parcel Number: 021-000-058-000
CAMA Number: 021-000-058-000-000
Property Address: 15 GREEN ROAD

Mailing Address: BOSWORTH, CRAIG P & SHANNON F
15 GREEN ROAD
RAYMOND, NH 03077

Parcel Number: 021-000-059-000
CAMA Number: 021-000-059-000-000
Property Address: 13 GREEN ROAD

Mailing Address: JENKINS, JOHN M
13 GREEN ROAD
RAYMOND, NH 03077

Parcel Number: 021-000-060-000
CAMA Number: 021-000-060-000-000
Property Address: 11 GREEN ROAD

Mailing Address: HARWOOD, STEPHEN DEBRA
HARWOOD
11 GREEN ROAD
RAYMOND, NH 03077

Parcel Number: 021-000-067-001
CAMA Number: 021-000-067-001-000
Property Address: 32 SCRIBNER ROAD

Mailing Address: FRISBEE, WILLIAM J.
32 SCRIBNER ROAD
RAYMOND, NH 03077

Parcel Number: 021-000-067-002
CAMA Number: 021-000-067-002-000
Property Address: 34 SCRIBNER ROAD

Mailing Address: EAGAN, CHRISTOPHER W. & KOREEN D.
34 SCRIBNER ROAD
RAYMOND, NH 03077

Parcel Number: 025-000-011-000
CAMA Number: 025-000-011-000-000
Property Address: LANGFORD ROAD

Mailing Address: RAYMOND, TOWN OF
4 EPPING STREET
RAYMOND, NH 03077



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8/22/2023

Page 4 of 5



100 feet Abutters List Report

Raymond, NH
August 22, 2023

Parcel Number: 026-000-005-000
CAMA Number: 026-000-005-000-000
Property Address: 37 SCRIBNER ROAD

Mailing Address: BILODEAU, SHAUN & JAMIE L.
37 SCRIBNER ROAD
RAYMOND, NH 03077

Parcel Number: 026-000-010-000
CAMA Number: 026-000-010-000-000
Property Address: 36 SCRIBNER ROAD

Mailing Address: SENECA, ROBERT & COLLEEN
36 SCRIBNER ROAD
RAYMOND, NH 03077

Parcel Number: 026-000-011-000
CAMA Number: 026-000-011-000-000
Property Address: 42 SCRIBNER ROAD

Mailing Address: SOVIC, MARIANNA
10 HANOVER STREET
NASHUA, NH 03060

JONES & BEACH ENGINEERS, INC, ATTN. JOSEPH CORONATI, DAVID COLLIER, & MICHAEL KERIVAN PO BOX 219,
STRATHAM, NH 03885

SHIV SHRESTHA, 427 AMHERST ST, FLOOR 2, SUITE 1, NASHUA, NH 03063



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8/22/2023

Page 5 of 5

BILODEAU, SHAUN & JAMIE L
37 SCRIBNER ROAD
RAYMOND, NH 03077

FRIZZLE FAMILY REVOCABLE
BRUCE A & CHERYL P / TRUS
8 BIRCH COURT
RAYMOND, NH 03077

SENECAL, ROBERT & COLLEEN
36 SCRIBNER ROAD
RAYMOND, NH 03077

BOSWORTH, CRAIG P & SHANN
15 GREEN ROAD
RAYMOND, NH 03077

HARWOOD, STEPHEN
DEBRA HARWOOD
11 GREEN ROAD
RAYMOND, NH 03077

SOVIC, MARIANNA
10 HANOVER STREET
NASHUA, NH 03060

BRUNO, KENNETH M
17 GREEN ROAD
RAYMOND, NH 03077

HOLLINS, NICHOLAS
SAMANTHA TOOMEY
14 FENG DRIVE
RAYMOND, NH 03077

STATE OF NEW HAMPSHIRE
JOHN O. MORTON BLDG.
P.O. BOX 483
CONCORD, NH 03301

BRUSCATO, DAVID R
DENISE M BRUSCATO
P.O. BOX 421
RAYMOND, NH 03077

JEFFERY, LISA L.
3 A SARGENT DRIVE
RAYMOND, NH 03077

T AND D IVERSON 2016 TRU
THOMAS F. & DIANE M. IVER
6 BIRCH COURT
RAYMOND, NH 03077

CONDO MAIN
X
X
X
X, XX XXXXX

JENKINS, JOHN M
13 GREEN ROAD
RAYMOND, NH 03077

VIGLIOTTE, AUDRA L.
8 FENG DRIVE
RAYMOND, NH 03077

CRABB, KRIZEL & JASON
NANETTE HINOJALES
16 FENG DRIVE
RAYMOND, NH 03077

LORD, NORMAN ERIC
SAMANTHA ANN BRAGG- LORD
12 FENG DRIVE
RAYMOND, NH 03077

WILLIAMS, HERBERT R & JUD
101 GREEN ROAD
RAYMOND, NH 03077

DIFEO & BROGNA, LLC
270 11th SQ. SW
VERO BEACH, FL 32962

PALMER, JACOB
4 FENG DRIVE
RAYMOND, NH 03077

YAWNO PROPERTIES, LLC
427 AMHERST STREET, 2ND FLOOR
SUITE 1
NASHUA, NH 03063

DUMONT FAMILY TRUST OF 20
LAWRENCE J. & MARGARET DU
10 FENG DRIVE
RAYMOND, NH 03077

RADIGAN, DEBRA A. & FRANK
15 FENG DRIVE
RAYMOND, NH 03077

SHIV SHRESTHA
427 AMHERST ST, FLOOR 2, SUITE 1
NASHUA, NH 03063

EAGAN, CHRISTOPHER W. & K
34 SCRIBNER ROAD
RAYMOND, NH 03077

RAYMOND, TOWN OF
4 EPPING STREET
RAYMOND, NH 03077

JONES & BEACH ENGINEERS, INC
ATTN. JOSEPH CORONATI, DAVID COLLIER,
& MICHAEL KERIVAN
PO BOX 219
STRATHAM, NH 03885

FRISBEE, WILLIAM J.
32 SCRIBNER ROAD
RAYMOND, NH 03077

ROBINSON, JAMES R
BETTY-ANN L ARCHAMBAULT
3B SARGENT DRIVE
RAYMOND, NH 03077



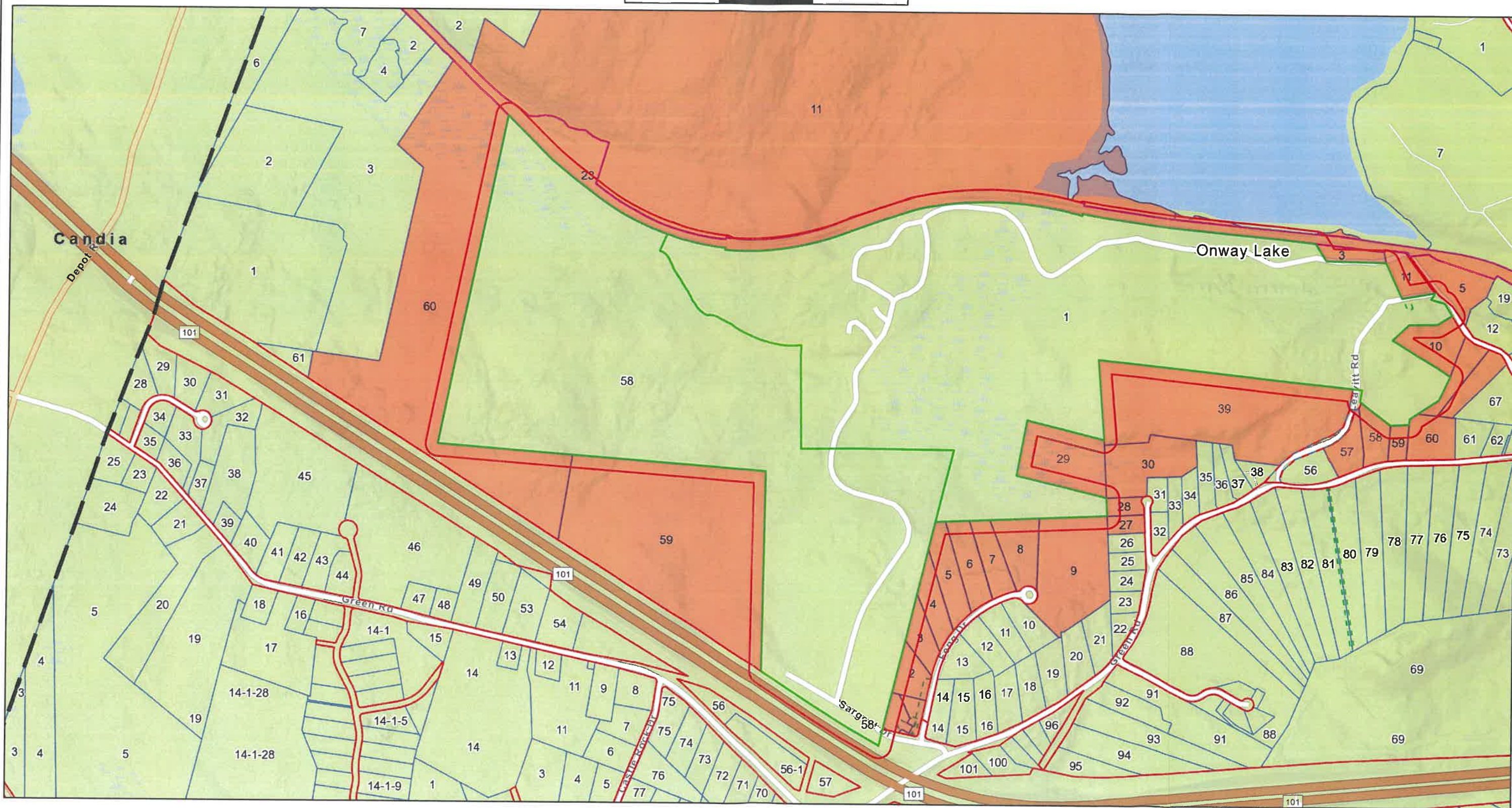
August 22, 2023

Town of Raymond, NH

1 inch = 752 Feet



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GENERAL LEGEND

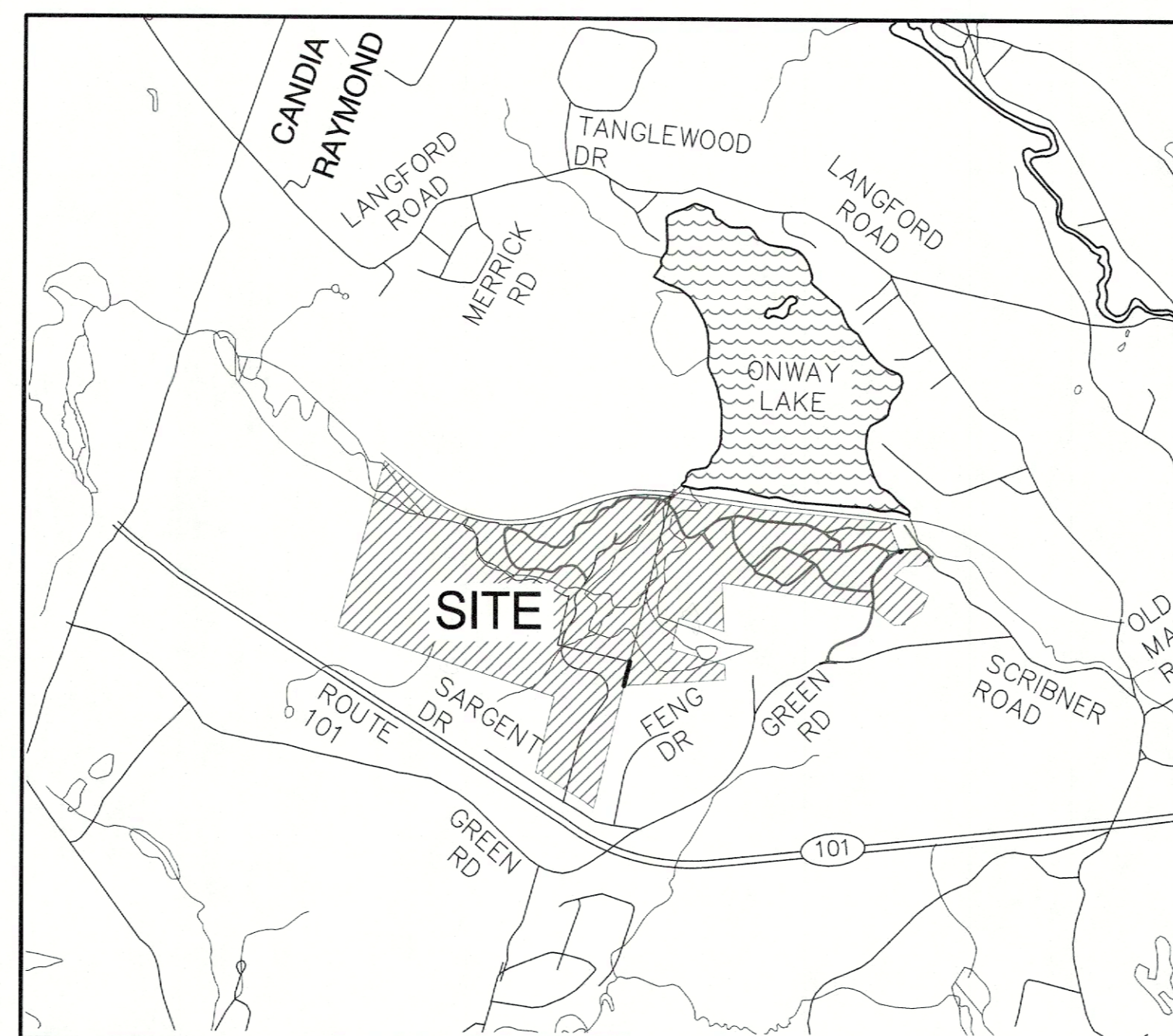
| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|----------------------------------|
| --- | --- | PROPERTY LINES |
| --- | --- | SETBACK LINES |
| --- | --- | CENTERLINE |
| --- | --- | FRESHWATER WETLANDS LINE |
| --- | --- | TIDAL WETLANDS LINE |
| --- | --- | STREAM CHANNEL |
| --- | --- | TREE LINE |
| --- | --- | STONEWALL |
| --- | --- | BARBED WIRE |
| --- | --- | FENCE |
| --- | --- | STOCKADE FENCE |
| --- | --- | SOIL BOUNDARY |
| --- | --- | AQUIFER PROTECTION LINE |
| --- | --- | FLOOD PLAIN LINE |
| --- | --- | ZONELINE |
| --- | --- | EASEMENT |
| --- | --- | MAJOR CONTOUR |
| --- | --- | MINOR CONTOUR |
| --- | --- | EDGE OF PAVEMENT |
| --- | --- | VERTICAL GRANITE CURB |
| --- | --- | SLOPE GRANITE CURB |
| --- | --- | CAPE COD BERM |
| --- | --- | POURED CONCRETE CURB |
| --- | --- | SILT FENCE |
| --- | --- | DRAINAGE LINE |
| --- | --- | SEWER LINE |
| --- | --- | SEWER FORCE MAIN |
| --- | --- | GAS LINE |
| --- | --- | WATER LINE |
| --- | --- | WATER SERVICE |
| --- | --- | OVERHEAD ELECTRIC |
| --- | --- | UNDERGROUND ELECTRIC |
| --- | --- | GUARDRAIL |
| --- | --- | UNDERDRAIN |
| --- | --- | FIRE PROTECTION LINE |
| --- | --- | THRUST BLOCK |
| --- | --- | IRON PIPE/IRON ROD |
| --- | --- | DRILL HOLE |
| --- | --- | IRON ROD/DRILL HOLE |
| --- | --- | STONE/GRAVITE BOUND |
| --- | --- | SPOT GRADE |
| --- | --- | PAVEMENT SPOT GRADE |
| --- | --- | CURB SPOT GRADE |
| --- | --- | BENCHMARK (TBM) |
| --- | --- | DOUBLE POST SIGN |
| --- | --- | SINGLE POST SIGN |
| --- | --- | WELL |
| --- | --- | TEST PIT |
| --- | --- | FAILED TEST PIT |
| --- | --- | MONITORING WELL |
| --- | --- | PERC TEST |
| --- | --- | PHOTO LOCATION |
| --- | --- | TREES AND BUSHES |
| --- | --- | UTILITY POLE |
| --- | --- | LIGHT POLES |
| --- | --- | DRAIN MANHOLE |
| --- | --- | SEWER MANHOLE |
| --- | --- | HYDRANT |
| --- | --- | WATER GATE |
| --- | --- | WATER SHUT OFF |
| --- | --- | REDUCER |
| --- | --- | SINGLE GRATE CATCH BASIN |
| --- | --- | DOUBLE GRATE CATCH BASIN |
| --- | --- | TRANSFORMER |
| --- | --- | CULVERT W/WINGWALLS |
| --- | --- | CULVERT W/FLARED END SECTION |
| --- | --- | CULVERT W/STRAIGHT HEADWALL |
| --- | --- | STONE CHECK DAM |
| --- | --- | DRAINAGE FLOW DIRECTION |
| --- | --- | 4K SEPTIC AREA |
| --- | --- | WETLAND IMPACT |
| --- | --- | VEGETATED FILTER STRIP |
| --- | --- | RIPRAP |
| --- | --- | PAVEMENT HATCH |
| --- | --- | OPEN WATER |
| --- | --- | FRESHWATER WETLANDS |
| --- | --- | TIDAL WETLANDS |
| --- | --- | STABILIZED CONSTRUCTION ENTRANCE |
| --- | --- | CONCRETE |
| --- | --- | GRAVEL |
| --- | --- | SNOW STORAGE |
| --- | --- | RETAINING WALL |

CONSERVATION SUBDIVISION PLAN

"ONWAY LAKE VILLAGE"

TAX MAP 20 AND LOTS 1 AND 58

SARGENT ROAD, RAYMOND, NH



LOCUS MAP
SCALE 1" = 2000'

SHEET INDEX

| | |
|---------|--|
| CS | COVER SHEET |
| PH1 | PHASING PLAN |
| C1 | OVERVIEW EXISTING CONDITIONS PLAN |
| C2-C5 | EXISTING CONDITIONS PLAN |
| C6-C8 | CONVENTIONAL SUBDIVISION PLAN |
| A1 | OVERVIEW CONSERVATION SUBDIVISION AND LOT LINE ADJUSTMENT PLAN |
| A2-A9 | CONSERVATION SUBDIVISION AND LOT LINE ADJUSTMENT PLAN |
| C9 | OVERVIEW GRADING AND DRAINAGE PLAN |
| C10-C15 | GRADING AND DRAINAGE PLAN |
| P1-P2 | PLAN AND PROFILE |
| D1-D4 | DETAIL SHEET |
| E1 | EROSION AND SEDIMENT CONTROL DETAILS |

CIVIL ENGINEER / SURVEYOR
JONES & BEACH ENGINEERS, INC.
 85 PORTSMOUTH AVENUE
 PO BOX 219
 STRATHAM, NH 03885
 (603) 772-4746
 CONTACT: JOSEPH CORONATI
 EMAIL: JCORONATI@JONESANDBEACH.COM

ELECTRIC
 NH ELECTRIC COOPERATIVE
 272-284 NH 107
 RAYMOND, NH 03077

CABLE/TELEPHONE
 FAIRPOINT COMMUNICATIONS
 5 FLORAL AVE
 RAYMOND, NH 03077

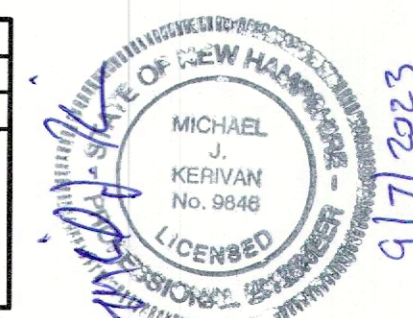
WETLAND CONSULTANT
 GOVE ENVIRONMENTAL SERVICES, INC.
 8 CONTINENTAL DR., BLDG 2, UNIT H
 EXETER, NH 03833
 (603) 418-7260
 CONTACT: BRENDEN WALDEN

| |
|-----------------------------|
| TOTAL LOT AREA |
| MAP 20 LOT 58 |
| 6,882,144 SF = 157.99 ACRES |
| MAP 26 LOT 1 |
| 8,193,408 SF = 188.09 AC |
| TOTAL |
| 15,075,552 SF = 346.09 AC |

APPROVED - RAYMOND, NH
 PLANNING BOARD

DATE: _____

| | | |
|---|-----------------|----------------------|
| Design: JAC | Draft: AJB | Date: 4/15/21 |
| Checked: JAC | Scale: AS NOTED | Project No.: 14232.7 |
| Drawing Name: 14232.7-PLAN.dwg | | |
| THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE. | | |



| REV. | DATE | REVISION | BY |
|------|--------|-------------------|-----|
| 0 | 9/7/23 | ISSUED FOR REVIEW | LAZ |
| | | | |

Designed and Produced in NH

J/B Jones & Beach Engineers, Inc.

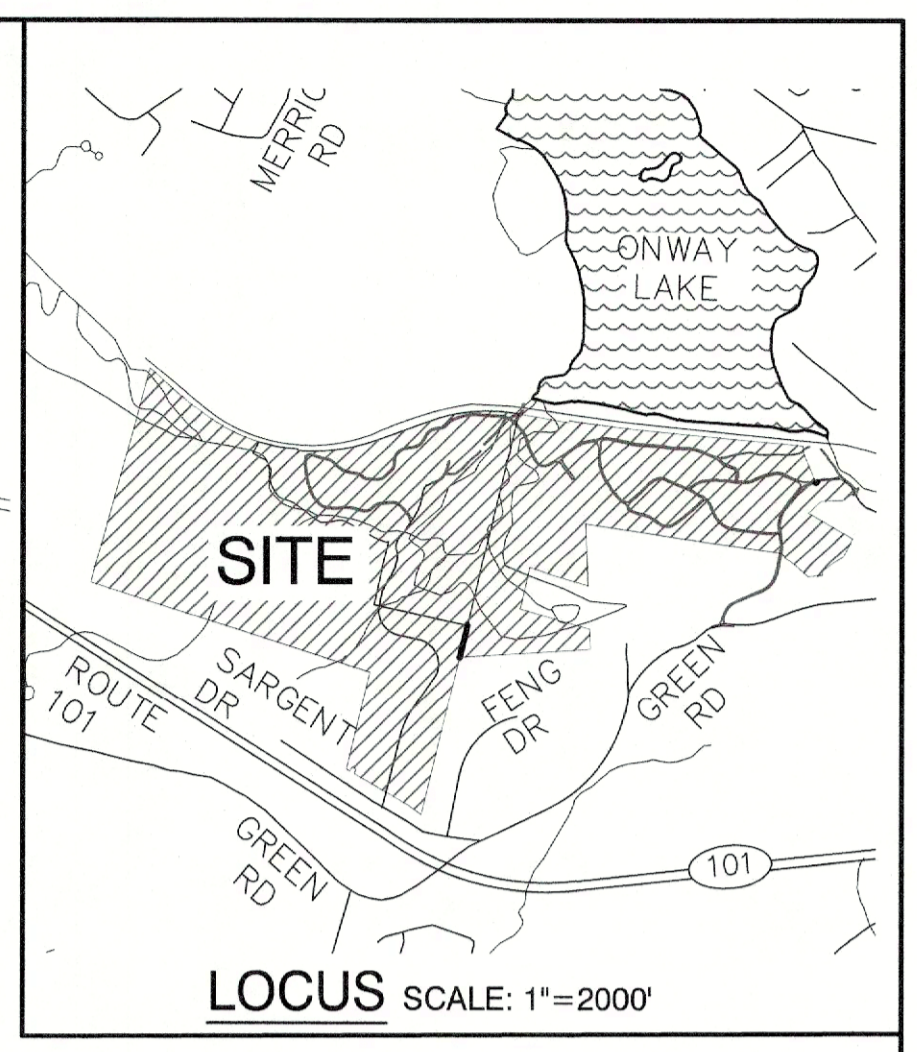
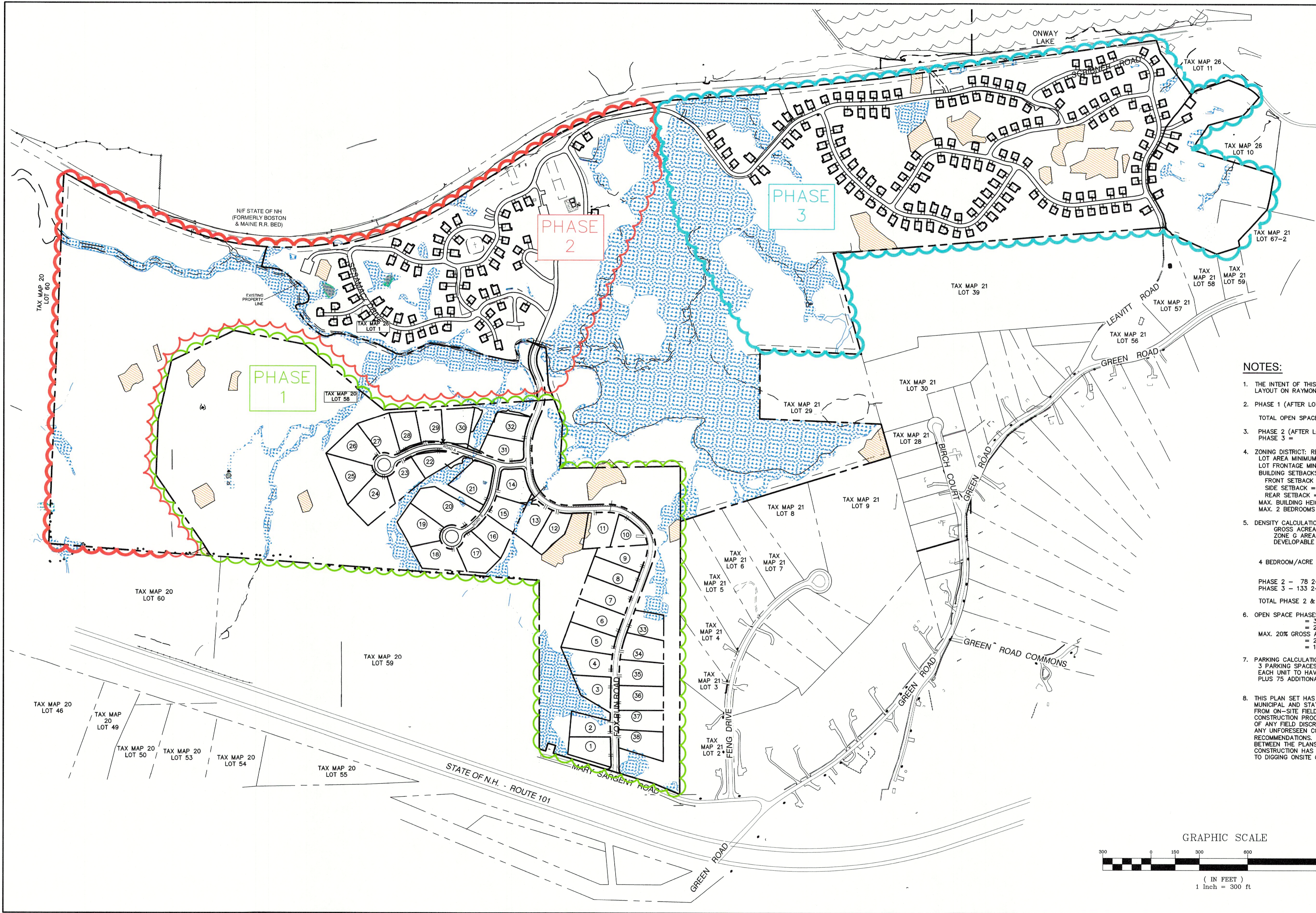
85 Portsmouth Ave. PO Box 219 Stratham, NH 03885

603-772-4746
 FAX: 603-772-0227
 E-MAIL: JBE@JONESANDBEACH.COM

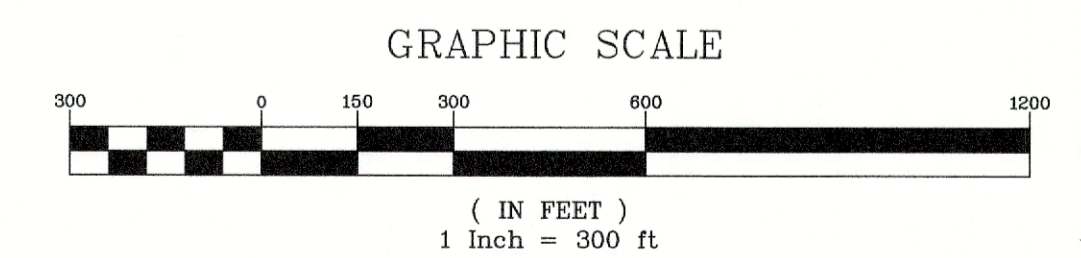
| | |
|------------------|--|
| Plan Name: | COVER SHEET |
| Project: | 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE |
| Owner of Record: | RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 |

| | |
|-------------------------|-----------|
| DRAWING No. | CS |
| SHEET 1 OF 34 | |
| JBE PROJECT NO. 14232.7 | |

PROJECT NAME AND LOCATION: JBE # 14232.7 REVISION X XX/XXXX



- NOTES:**
- THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED PHASING OF A MULTI-FAMILY LAYOUT ON RAYMOND TAX MAP 20, LOT 58 AND TAXMAP 26, LOT 1.
 - PHASE 1 (AFTER LOT LINE ADJUSTMENT) = 4,397,950 SF = 100.96 AC
TOTAL OPEN SPACE PHASE 1 = 2,665,739 SF = 61.20 AC (61% OF TOTAL)
 - PHASE 2 (AFTER LOT LINE ADJUSTMENT) = 4,596,935 SF = 105.53 AC
PHASE 3 = 6,080,669 SF = 139.59 AC
 - ZONING DISTRICT: RESIDENTIAL/AGRICULTURAL
LOT AREA MINIMUM = 87,120 SF
LOT FRONTAGE MINIMUM = 75'
BUILDING SETBACKS (MINIMUM):
FRONT SETBACK = 75'
SIDE SETBACK = 30'
REAR SETBACK = 30'
MAX. BUILDING HEIGHT = 30'
MAX. 2 BEDROOMS PER UNIT
 - DENSITY CALCULATION PHASES 2 AND 3 (AFTER LOT LINE ADJUSTMENT):
GROSS ACREAGE = 10,677,604 SF = 245.12 AC
ZONE G AREA = 2,843,626 SF = 65.28 AC
DEVELOPABLE AREA = GROSS ACREAGE MINUS ZONE G AREA
= 245.12 AC - 65.28 AC = 179.84 AC
4 BEDROOM/ACRE ALLOWED = 724 TOTAL BEDROOMS ALLOWED
= 362 2-BEDROOM UNITS ALLOWED
PHASE 2 - 78 2-BEDROOM UNITS PROPOSED
PHASE 3 - 133 2-BEDROOM UNITS PROPOSED
TOTAL PHASE 2 & PHASE 3 = 211 2-BEDROOM UNITS PROPOSED
 - OPEN SPACE PHASES 2 AND 3 (AFTER LOT LINE ADJUSTMENT)
= 30% OF GROSS ACREAGE
= 245.12 AC * 30% = 73.54 AC
MAX. 20% GROSS ACREAGE TO BE IN ZONE G
= 2,135,521 SF = 49.02 AC ZONE G
= 1,067,760 SF = 24.51 AC UPLAND IN OPEN SPACE
 - PARKING CALCULATIONS:
3 PARKING SPACES PER DWELLING UNIT REQUIRED.
EACH UNIT TO HAVE 2 GARAGE PARKING SPACES PLUS 2 SPACES IN EACH DRIVEWAY
PLUS 75 ADDITIONAL PARKING SPACES PROVIDED ON SITE.
 - THIS PLAN SET HAS BEEN PREPARED BY JONES & BEACH ENGINEERS, INC., FOR MUNICIPAL AND STATE APPROVALS AND FOR CONSTRUCTION BASED ON DATA OBTAINED FROM ON-SITE FIELD SURVEY AND EXISTING MUNICIPAL RECORDS. THROUGHOUT THE CONSTRUCTION PROCESS, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY OF ANY FIELD DISCREPANCY FROM DATA AS SHOWN ON THE DESIGN PLANS, INCLUDING ANY UNFORESEEN CONDITIONS, SUBSURFACE OR OTHERWISE, FOR EVALUATION AND RECOMMENDATIONS. ANY CONTRADICTION BETWEEN ITEMS ON THIS PLAN/PLAN SET, OR BETWEEN THE PLANS AND ON-SITE CONDITIONS, MUST BE RESOLVED BEFORE RELATED CONSTRUCTION HAS BEEN INITIATED. CONTRACTOR TO ALWAYS CONTACT DIG SAFE PRIOR TO DIGGING ON-SITE OR OFF-SITE TO ENSURE SAFETY AND OBEY THE LAW.



| |
|-----------------------------|
| TOTAL LOT AREA |
| MAP 20 LOT 58 |
| 6,882,144 SF = 157.99 ACRES |
| MAP 26 LOT 1 |
| 8,193,408 SF = 188.09 AC |
| TOTAL |
| 15,075,552 SF = 346.09 AC |

Design: JAC Draft: AJB Date: 4/15/21
 Checked: JAC Scale: AS NOTED Project No.: 14232.7
 Drawing Name: 14232.7-PLAN.dwg
 THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.



| REV. | DATE | REVISION | BY |
|------|--------|-------------------|-----|
| 0 | 9/7/23 | ISSUED FOR REVIEW | LAZ |

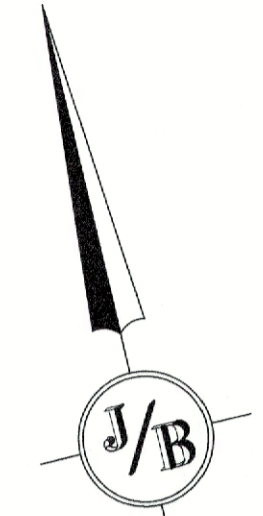
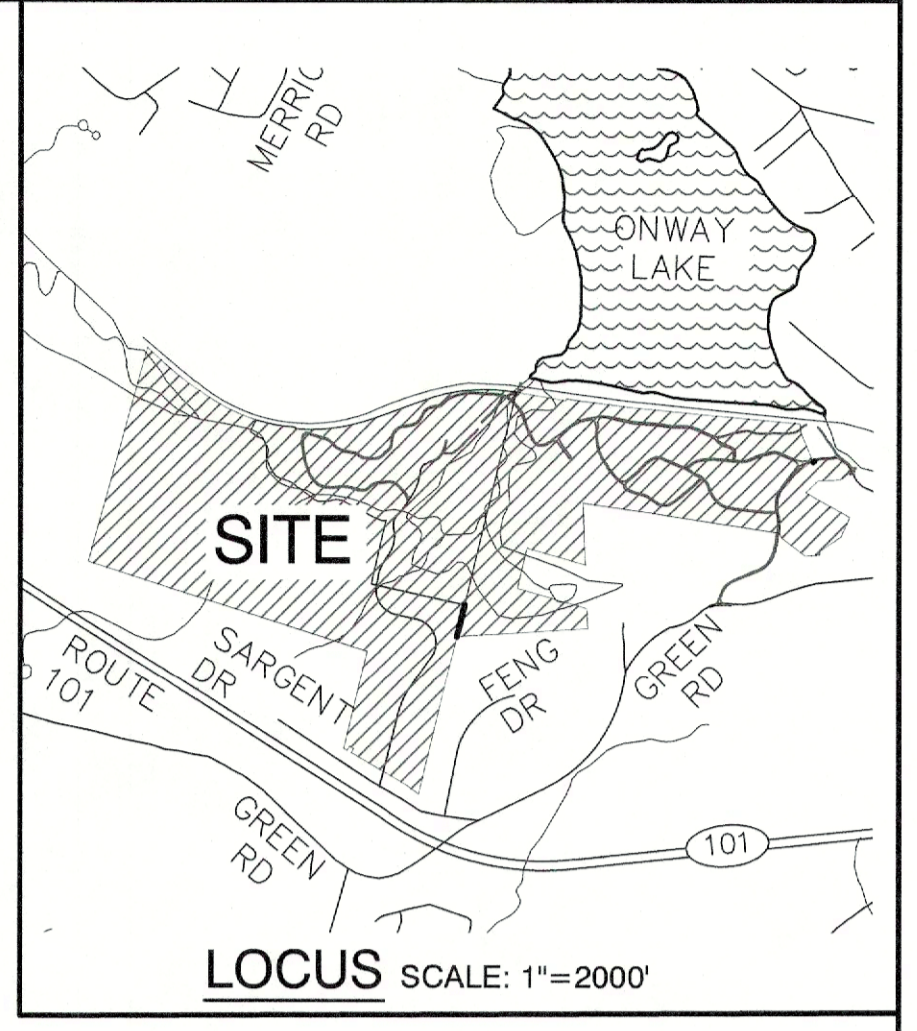
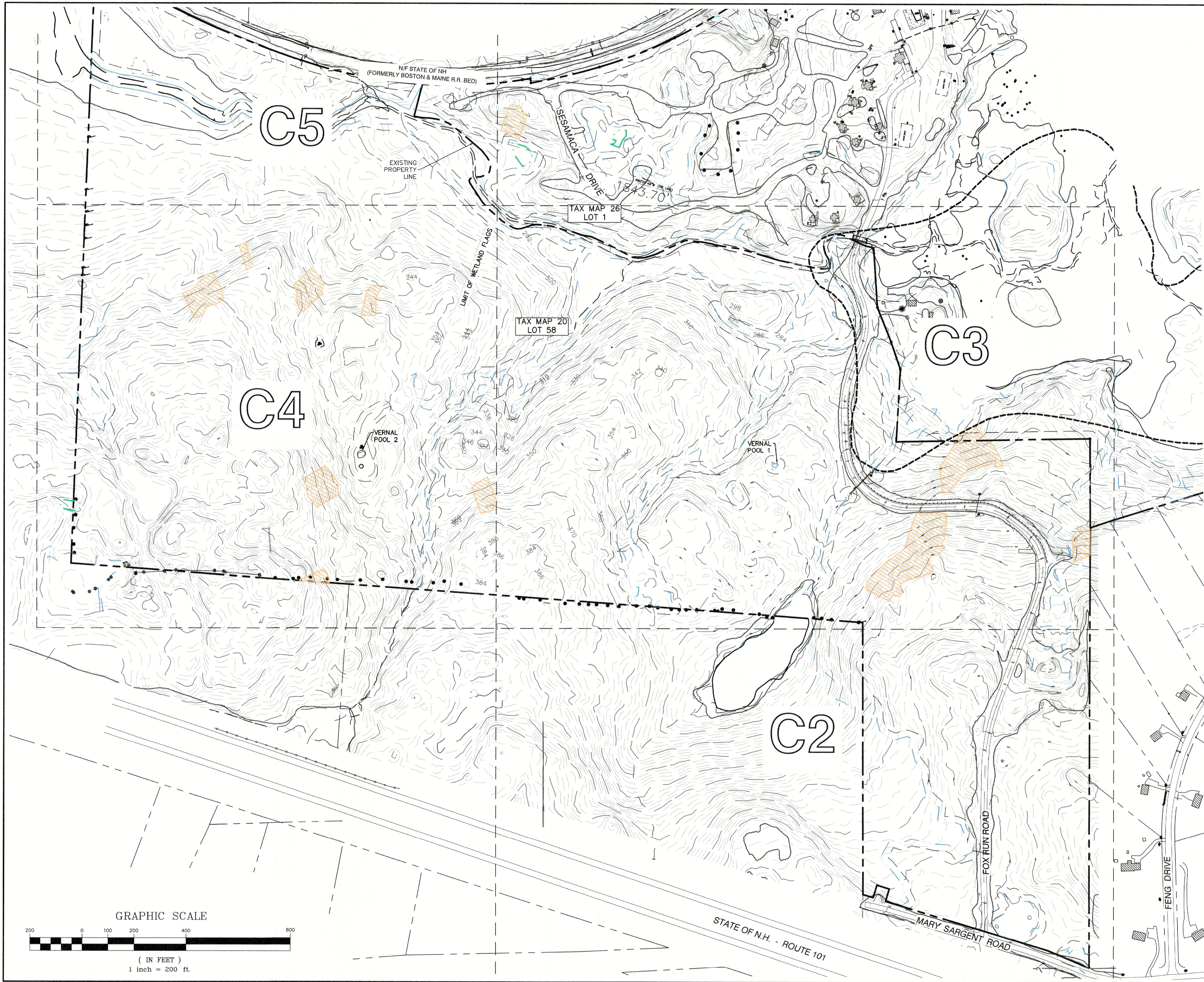
Designed and Produced in NH

J/B Jones & Beach Engineers, Inc.
 Civil Engineering Services

85 Portsmouth Ave. PO Box 219 Stratham, NH 03885 603-772-4746 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM

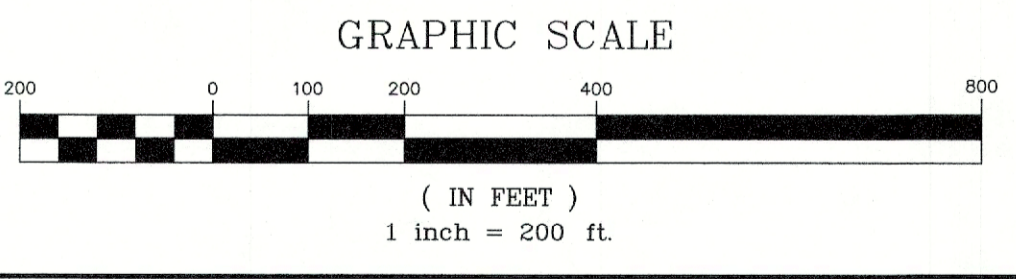
Plan Name: **PHASING PLAN**
 Project: **15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE**
 Owners: YAWNO PROPERTIES, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063

DRAWING No. **PH1**
 SHEET 2 OF 34
 JBE PROJECT NO. 14232.7



NOTES:

1. THE INTENT OF THIS PLAN IS TO SHOW THE BOUNDARY AND EXISTING CONDITIONS OF LOTS 58 AND 1 AS SHOWN ON TOWN OF RAYMOND TAX MAP 20.
2. THE UTILITY LOCATIONS SHOWN HEREON WERE DETERMINED BY OBSERVED ABOVE GROUND EVIDENCE AND SHOULD BE CONSIDERED APPROXIMATE IN LOCATION ONLY. LOCATION, DEPTH, SIZE, TYPE, EXISTENCE OR NONEXISTENCE OF UNDERGROUND UTILITIES AND/OR UNDERGROUND STORAGE TANKS WAS NOT VERIFIED BY THIS SURVEY. ALL CONTRACTORS SHOULD NOTIFY IN WRITING ALL UTILITY COMPANIES AND GOVERNMENT AGENCIES PRIOR TO ANY EXCAVATION WORK OR CALL DIG-SAFE AT 1-888-DIG-SAFE.
3. THE SUBJECT PARCEL IS PARTIALLY LOCATED WITHIN AN AREA HAVING A SPECIAL FLOOD HAZARD ZONE DESIGNATION BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), ON FLOOD INSURANCE RATE MAPS NO. 33015C0186E, 33015C0187E & 33015C0190E WITH EFFECTIVE DATE OF MAY 17, 2005.
4. BASIS OF BEARING: HORIZONTAL - NH STATE PLANE. VERTICAL - NAVD88.
5. CERTAIN DATA HEREON MAY VARY FROM RECORDED DATA DUE TO DIFFERENCES IN DECLINATION, ORIENTATION, AND METHODS OF MEASUREMENT.
6. ALL BOOK AND PAGE NUMBERS REFER TO THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
7. THE TAX MAP AND LOT NUMBERS ARE BASED ON THE TOWN OF RAYMOND TAX RECORDS AND ARE SUBJECT TO CHANGE.
8. THIS SURVEY IS NOT A CERTIFICATION TO OWNERSHIP OR TITLE OF LANDS SHOWN. OWNERSHIP AND ENCUMBRANCES ARE MATTERS OF TITLE EXAMINATION NOT OF A BOUNDARY SURVEY. THE INTENT OF THIS PLAN IS TO RETRACE THE BOUNDARY LINES OF DEEDS REFERENCED HEREON. OWNERSHIP OF ADJOINING PROPERTIES IS ACCORDING TO ASSESSOR'S RECORDS. THIS PLAN MAY OR MAY NOT INDICATE ALL ENCUMBRANCES EXPRESSED, IMPLIED OR PRESCRIPTIVE.
9. ANY USE OF THIS PLAN AND OR ACCOMPANYING DESCRIPTIONS SHOULD BE DONE WITH LEGAL COUNSEL, TO BE CERTAIN THAT TITLES ARE CLEAR, THAT INFORMATION IS CURRENT, AND THAT ANY NECESSARY CERTIFICATES ARE IN PLACE FOR A PARTICULAR CONVEYANCE, OR OTHER USES.
10. THE LIMITS OF JURISDICTIONAL WETLANDS WERE DELINEATED BY GOVE ENVIRONMENTAL SERVICE IN JUNE 2022 IN ACCORDANCE WITH THE FOLLOWING GUIDANCE DOCUMENTS:
 - A. THE CORPS OF ENGINEERS FEDERAL MANUAL FOR IDENTIFYING AND DELINEATING JURISDICTIONAL WETLANDS.
 - B. THE NORTH CENTRAL & NORTHEAST REGIONAL SUPPLEMENT TO THE FEDERAL MANUAL.
 - C. THE CURRENT VERSION OF THE FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, AS PUBLISHED BY THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION AND/OR THE CURRENT VERSION OF THE FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, AS PUBLISHED BY THE USDA, NRCS, AS APPROPRIATE.
 - D. THE CURRENT NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS, AS PUBLISHED BY THE US FISH AND WILDLIFE SERVICE.
12. SURVEY TIE LINES SHOWN HEREON ARE NOT BOUNDARY LINES. THEY SHOULD ONLY BE USED TO LOCATE THE PARCEL SURVEYED FROM THE FOUND MONUMENTS SHOWN AND LOCATED BY THIS SURVEY.
13. THE LOCATION OF VERNAL POOLS ARE APPROXIMATE PENDING FIELD VERIFICATION BY THIS OFFICE.



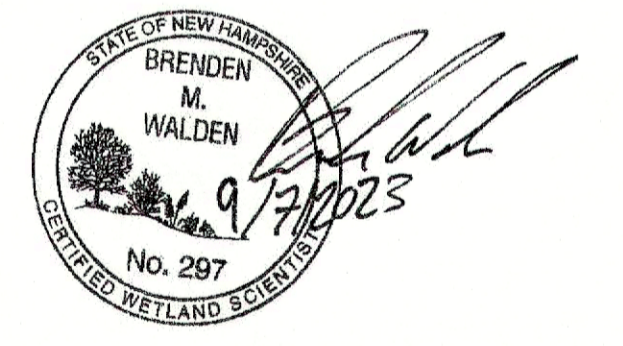
CERTIFICATION:

I CERTIFY THAT THIS PLAT WAS PREPARED UNDER MY DIRECT SUPERVISION, THAT IT IS THE RESULT OF A FIELD SURVEY BY THIS OFFICE AND HAS AN UNADJUSTED LINEAR ERROR OF CLOSURE THAT EXCEEDS BOTH THE MINIMUM OF 1:10,000 AS DEFINED IN SECTION 503.04 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES AND THE MINIMUM OF 1:15,000 AS DEFINED IN SECTION 4.2 OF THE N.H.L.S.A. ETHICS AND STANDARDS.

THIS SURVEY CONFORMS TO A CATEGORY 1 CONDITION 1 SURVEY AS DEFINED IN SECTION 4.1 OF THE N.H.L.S.A. ETHICS AND STANDARDS.

DAVID M. COLLIER, LLS 892
ON BEHALF OF JONES & BEACH ENGINEERS, INC.

DATE: 9/7/23



| | |
|-----------------------|----------------------------------|
| TOTAL LOT AREA | |
| MAP 20 LOT 58 | 6,882,144 SF = 157.99 ACRES |
| MAP 26 LOT 1 | 8,193,408 SF = 188.09 AC |
| TOTAL | 15,075,552 SF = 346.09 AC |

| | | |
|---|-----------------|----------------------|
| Design: JAC | Draft: AJB | Date: 4/15/21 |
| Checked: JAC | Scale: AS NOTED | Project No.: 14232.7 |
| Drawing Name: 14232.7-PLAN.dwg | | |
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| REV. | DATE | REVISION | BY |
|------|--------|-------------------|-----|
| 0 | 9/7/23 | ISSUED FOR REVIEW | LAZ |
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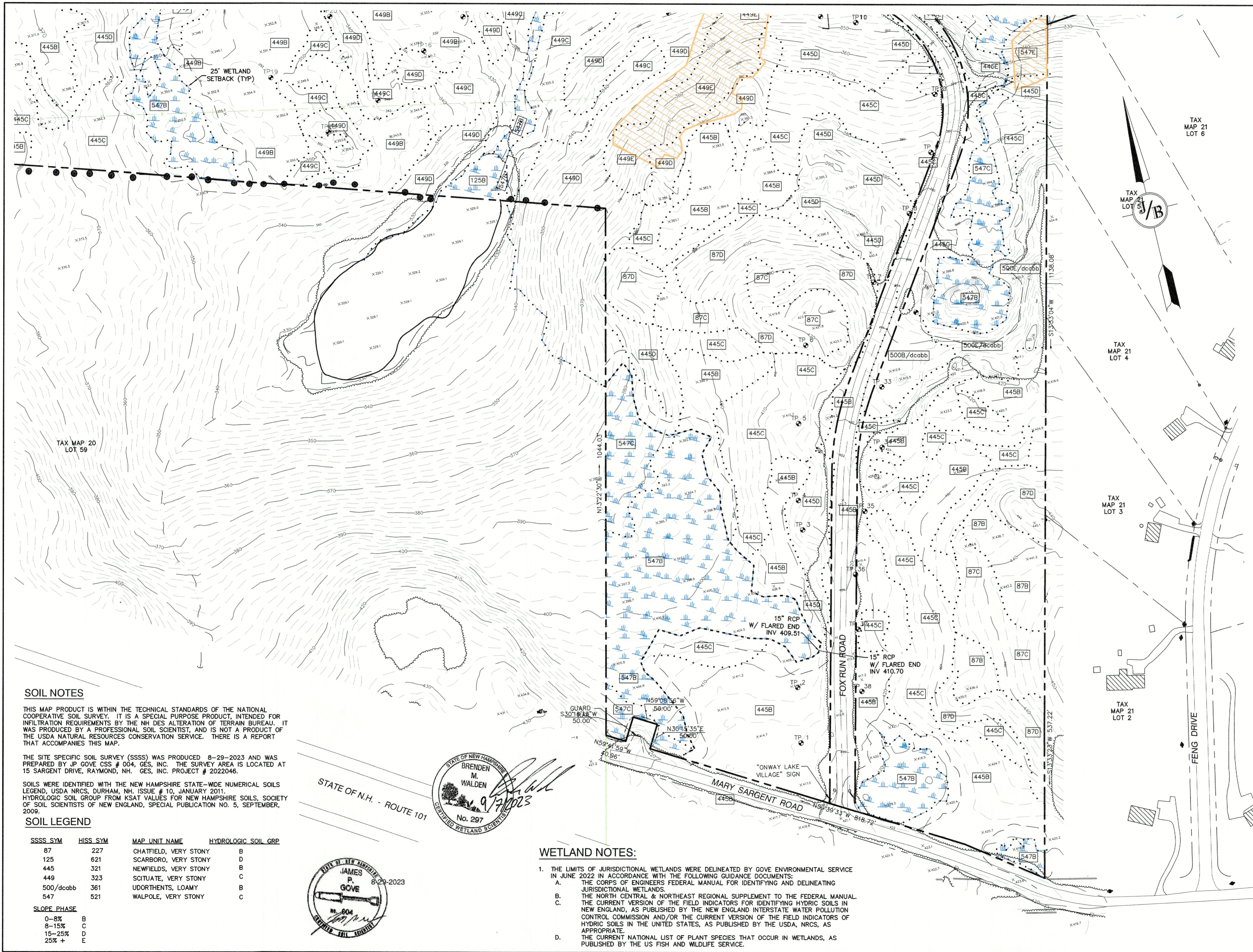
Designed and Produced in NH

J/B Jones & Beach Engineers, Inc.

85 Portsmouth Ave. Stratham, NH 03885
Civil Engineering Services
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

| |
|---|
| Plan Name: OVERVIEW EXISTING CONDITIONS PLAN |
| Project: 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE |
| Owners: YAWNO PROPERTIES, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 |

| | |
|---------------|-------------------------|
| DRAWING No. | C1 |
| SHEET 3 OF 34 | JBE PROJECT NO. 14232.7 |



- ABUTTERS:**
- 21/28 FRIZZLE FAMILY REVOCABLE TRUST OF 2005
HERBERT R. & JUDITH A. WILLIAMS
101 GREEN ROAD
RAYMOND, NH 03077
BK 2688 PG 858
 - 21/29 TOWN OF RAYMOND
4 EPPING STREET
RAYMOND, NH 03077
BK 2371 PG 1733
 - 21/30 TOWN OF RAYMOND
4 EPPING STREET
RAYMOND, NH 03077
BK 2429 PG 1363
 - 21/39 DIFEQ & BROGNA, LLC
270 11TH SQ. SW
VERO BEACH, FL 32962
BK 4512 PG 863
 - 21/57 KENNETH M. BRUNO
17 GREEN ROAD
RAYMOND, NH 03077
BK 4510 PG 1165
 - 21/58 CRAIG P. & SHANNON F. BOSWORTH
15 GREEN ROAD
RAYMOND, NH 03077
BK 3794 PG 493
 - 21/59 JOHN M. JENKINS
13 GREEN ROAD
RAYMOND, NH 03077
BK 4356 PG 83
 - 21/60 STEPHEN & DEBRA HARWOOD
11 GREEN ROAD
RAYMOND, NH 03077
BK 2764 PG 1326
 - 21/67-1 WILLIAM J. FRISBEE
32 SCRIBNER ROAD
RAYMOND, NH 03077
BK 5470 PG 2819
 - 21/67-2 CHRISTOPHER W. & KOREEN D. EAGAN
34 SCRIBNER ROAD
RAYMOND, NH 03077
BK 6048 PG 1790
 - 25/11 TOWN OF RAYMOND
4 EPPING STREET
RAYMOND, NH 03077
BK 3447 PG 208
 - 26/5 SHAUN & JAMIE L. BILODEAU
37 SCRIBNER ROAD
RAYMOND, NH 03077
BK 5959 PG 397
 - 26/10 ROBERT & COLLEEN SENECAL
36 SCRIBNER ROAD
RAYMOND, NH 03077
BK 4011 PG 2686
 - 26/11 MARIANNA SOVIC
10 HANOVER STREET
NASHUA, NH 03060
BK 6426 PG 1050
 - 20/60 STATE OF NEW HAMPSHIRE
JOHN O. MORTON BLDG
P.O. BOX 483
CONCORD, NH 03301
 - 21/1-1 LISA L. JEFFREY
3A SARGENT DRIVE
RAYMOND, NH 03077
BK 6187 PG 1869
 - 21/1-2 JAMES R. ROBINSON & BETTY-ANN L. ARCHAMBAULT
38 SARGENT DRIVE
RAYMOND, NH 03077
BK 4400 PG 1463
 - 21/2 JACOB PALMER
4 FENG DRIVE
RAYMOND, NH 03077
BK 6154 PG 300
 - 21/3 DAVID R. & DENISE M. BRUSCATO
P.O. BOX 421
RAYMOND, NH 03077
BK 3186 PG 2169
 - 21/4 AUDRA L. YCLOTTE
8 FENG DRIVE
RAYMOND, NH 03077
BK 5932 PG 650
 - 21/5 DUMONT FAMILY TRUST OF 2018
LAWRENCE J. & MARGARET DUMOT, TRUSTEES
10 FENG DRIVE
RAYMOND, NH 03044
BK 5959 PG 661
 - 21/6 NORMAN ERIC LORD
SAMANTHA ANN BRAGG-LORD
12 FENG DRIVE
RAYMOND, NH 03077
BK 3521 PG 1209
 - 21/7 NICHOLAS HOLLINS
SAMANTHA TOOMEY
14 FENG DRIVE
RAYMOND, NH 03077
BK 6019 PG 113
 - 21/8 KRIZEL CRABB
JASON NANETTE HINOJALES
16 FENG DRIVE
RAYMOND, NH 03077
BK 5940 PG 2669
 - 21/9 DEBRA A. & FRANK D. RADIGAN
15 FENG DRIVE
RAYMOND, NH 03077
BK 5745 PG 2877
 - 21/27 T AND D IVERSON 2016 TRUST
THOMAS F. & DIANE M. IVERSON, TRUSTEES
6 BIRCH COURT
RAYMOND, NH 03077
BK 5763 PG 2783

SOIL NOTES

THIS MAP PRODUCT IS WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOIL SURVEY. IT IS A SPECIAL PURPOSE PRODUCT, INTENDED FOR INFILTRATION REQUIREMENTS BY THE NH DES ALTERATION OF TERRAIN BUREAU. IT WAS PRODUCED BY A PROFESSIONAL SOIL SCIENTIST, AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCES CONSERVATION SERVICE. THERE IS A REPORT THAT ACCOMPANIES THIS MAP.

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SOILS WERE IDENTIFIED WITH THE NEW HAMPSHIRE STATE-WIDE NUMERICAL SOILS LEGEND, USDA NRCS, DURHAM, NH, ISSUE # 10, JANUARY 2011, HYDROLOGIC SOIL GROUP FROM KSAT VALUES FOR NEW HAMPSHIRE SOILS, SOCIETY OF SOIL SCIENTISTS OF NEW ENGLAND, SPECIAL PUBLICATION NO. 5, SEPTEMBER, 2009.

SOIL LEGEND

| SSSS SYM | HISS SYM | MAP UNIT NAME | HYDROLOGIC SOIL GRP |
|-----------|----------|-----------------------|---------------------|
| 87 | 227 | CHATFIELD, VERY STONY | B |
| 125 | 621 | SCARBORO, VERY STONY | D |
| 445 | 321 | NEWFIELDS, VERY STONY | B |
| 449 | 323 | SCITUATE, VERY STONY | C |
| 500/dcabb | 361 | UDORTHENTS, LOAMY | B |
| 547 | 521 | WALPOLE, VERY STONY | C |

| SLOPE PHASE | |
|-------------|---|
| 0-8% | B |
| 8-15% | C |
| 15-25% | D |
| 25% + | E |

STATE OF N.H. - ROUTE 101

BRENDEN M. WALDEN
No. 297
9/7/2023

JAMES P. GOVE
No. 004
8/29/2023

WETLAND NOTES:

- THE LIMITS OF JURISDICTIONAL WETLANDS WERE DELINEATED BY GOVE ENVIRONMENTAL SERVICE IN JUNE 2022 IN ACCORDANCE WITH THE FOLLOWING GUIDANCE DOCUMENTS:
 - THE CORPS OF ENGINEERS FEDERAL MANUAL FOR IDENTIFYING AND DELINEATING JURISDICTIONAL WETLANDS.
 - THE NORTH CENTRAL & NORTHEAST REGIONAL SUPPLEMENT TO THE FEDERAL MANUAL.
 - THE CURRENT VERSION OF THE FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, AS PUBLISHED BY THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION AND/OR THE CURRENT VERSION OF THE FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, AS PUBLISHED BY THE USDA, NRCS, AS APPROPRIATE.
 - THE CURRENT NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS, AS PUBLISHED BY THE US FISH AND WILDLIFE SERVICE.

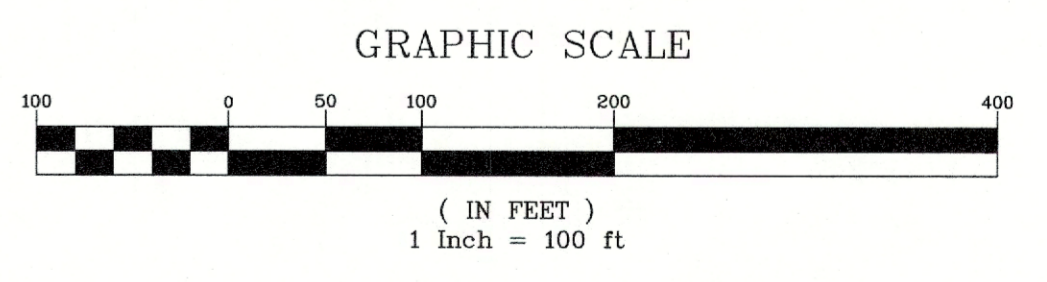
CERTIFICATION:

I CERTIFY THAT THIS PLAT WAS PREPARED UNDER MY DIRECT SUPERVISION, THAT IT IS THE RESULT OF A FIELD SURVEY BY THIS OFFICE AND HAS AN UNADJUSTED LINEAR ERROR OF CLOSURE THAT EXCEEDED BOTH THE MINIMUM OF 1:10,000 AS DEFINED IN SECTION 503.04 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES AND THE MINIMUM OF 1:15,000 AS DEFINED IN SECTION 4.2 OF THE N.H.L.S.A. ETHICS AND STANDARDS.

THIS SURVEY CONFORMS TO A CATEGORY 1 CONDITION 1 SURVEY AS DEFINED IN SECTION 4.1 OF THE N.H.L.S.A. ETHICS AND STANDARDS.

DAVID M. COLLIER, LLS 892
ON BEHALF OF JONES & BEACH ENGINEERS, INC.

DATE: 9/3/23



Design: JAC Draft: AJB Date: 4/15/21
Checked: JAC Scale: AS NOTED Project No.: 14232.7
Drawing Name: 14232.7-PLAN.dwg

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.



| REV. | DATE | REVISION | BY |
|------|--------|-------------------|-----|
| 0 | 9/7/23 | ISSUED FOR REVIEW | LAZ |
| | | | |

Designed and Produced in NH

J/B Jones & Beach Engineers, Inc.

85 Portsmouth Ave. Civil Engineering Services 603-772-4746
PO Box 219 FAX: 603-772-0227
Stratham, NH 03885 E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: **EXISTING CONDITIONS PLAN**

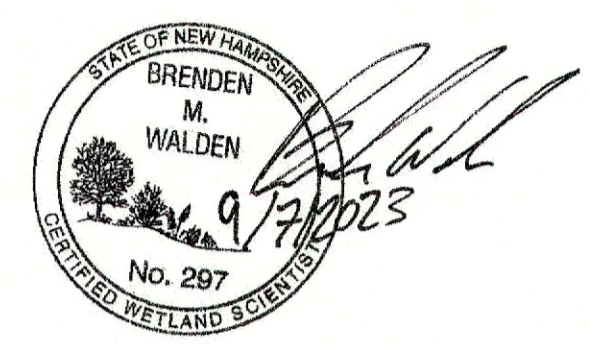
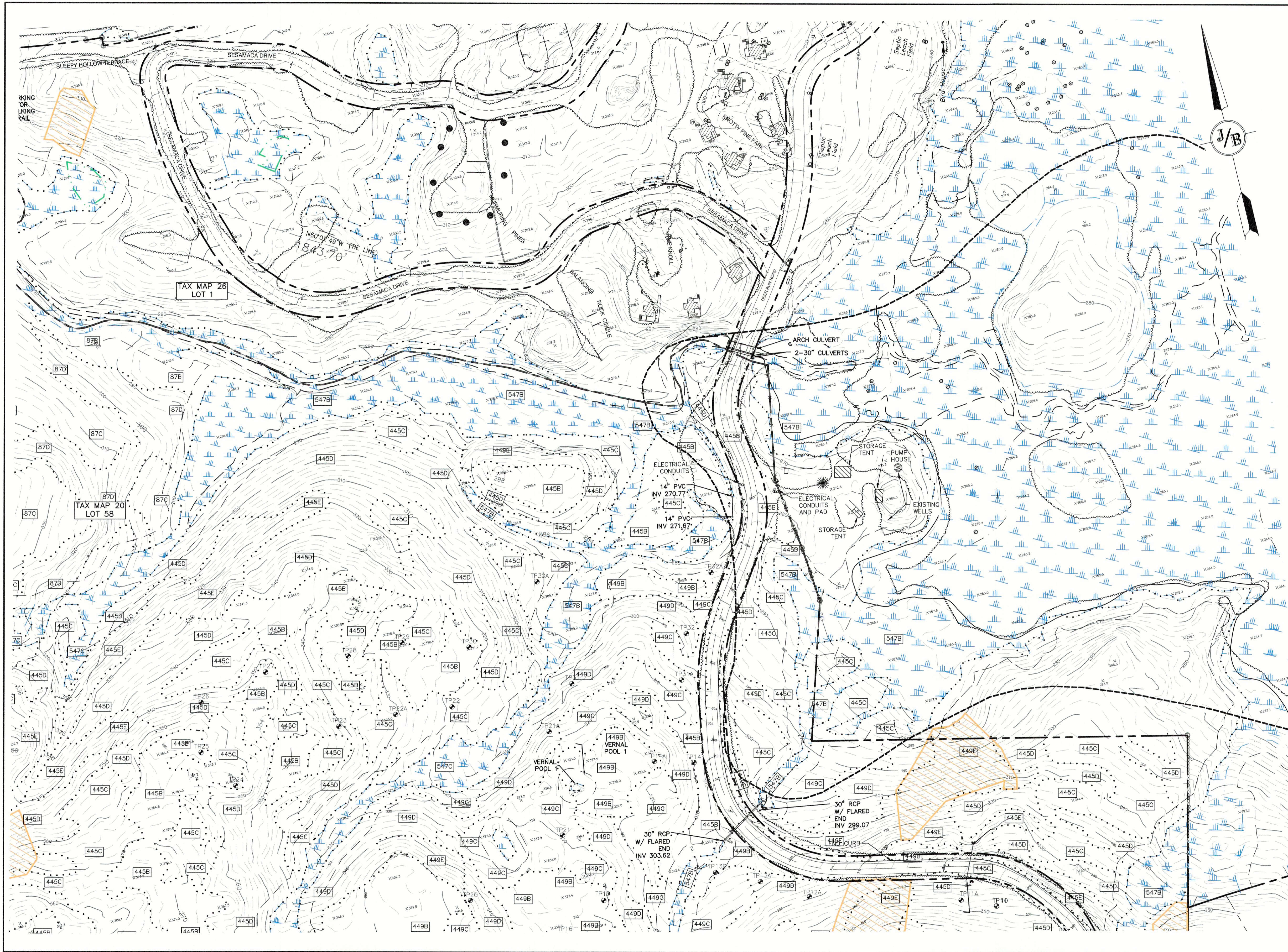
Project: **15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE**

Owners: YAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063

DRAWING No.

C2

SHEET 4 OF 34
JBE PROJECT NO. 14232.7



WETLAND NOTES:

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 - C. THE CURRENT VERSION OF THE FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, AS PUBLISHED BY THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION AND/OR THE CURRENT VERSION OF THE FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, AS PUBLISHED BY THE USDA, NRCS, AS APPROPRIATE.
 - D. THE CURRENT NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS, AS PUBLISHED BY THE US FISH AND WILDLIFE SERVICE.

SOIL NOTES

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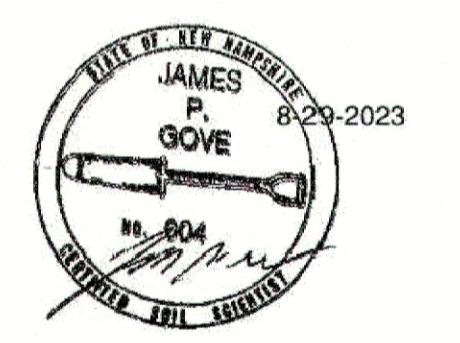
SOILS WERE IDENTIFIED WITH THE NEW HAMPSHIRE STATE-WIDE NUMERICAL SOILS LEGEND, USDA NRCS, DURHAM, NH. ISSUE # 10, JANUARY 2011. HYDROLOGIC SOIL GROUP FROM KSAT VALUES FOR NEW HAMPSHIRE SOILS, SOCIETY OF SOIL SCIENTISTS OF NEW ENGLAND, SPECIAL PUBLICATION NO. 5, SEPTEMBER, 2009.

SOIL LEGEND

| SSSS_SYM | HISS_SYM | MAP UNIT NAME | HYDROLOGIC SOIL_GRP |
|-----------|----------|-----------------------|---------------------|
| 87 | 227 | CHATFIELD, VERY STONY | B |
| 125 | 621 | SCARBORO, VERY STONY | D |
| 445 | 321 | NEWFIELDS, VERY STONY | B |
| 449 | 323 | SCITUATE, VERY STONY | C |
| 500/dcabb | 361 | UDORTHENTS, LOAMY | B |
| 547 | 521 | WALPOLE, VERY STONY | C |

SLOPE PHASE

| | |
|--------|---|
| 0-8% | B |
| 8-15% | C |
| 15-25% | D |
| 25% + | E |



CERTIFICATION:

I CERTIFY THAT THIS PLAN WAS PREPARED UNDER MY DIRECT SUPERVISION, THAT IT IS THE RESULT OF A FIELD SURVEY BY THIS OFFICE AND HAS AN UNADJUSTED LINEAR ERROR OF CLOSURE THAT EXCEEDS THE MINIMUM OF 1:10,000 AS DEFINED IN SECTION 503.04 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES AND THE MINIMUM OF 1:15,000 AS DEFINED IN SECTION 4.2 OF THE N.H.L.S.A. ETHICS AND STANDARDS.

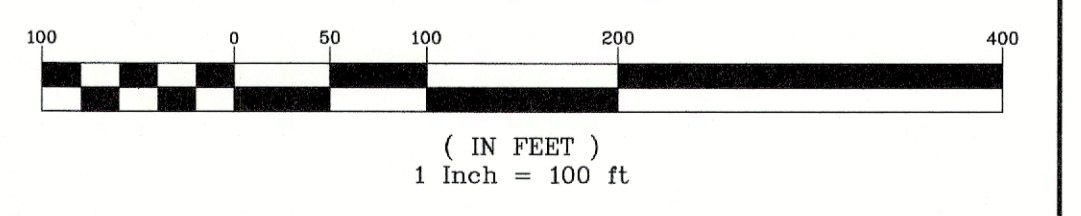
THIS SURVEY CONFORMS TO A CATEGORY 1 CONDITION 1 SURVEY AS DEFINED IN SECTION 4.1 OF THE N.H.L.S.A. ETHICS AND STANDARDS.

DAVID M. COLLIER
 No. 892
 DAVID M. COLLIER
 SIGNATURE

DAVID M. COLLIER, LLS 892
 ON BEHALF OF JONES & BEACH ENGINEERS, INC.

DATE: 9/7/23

GRAPHIC SCALE



| | | |
|---|-----------------|----------------------|
| Design: JAC | Draft: AJB | Date: 4/15/21 |
| Checked: JAC | Scale: AS NOTED | Project No.: 14232.7 |
| Drawing Name: 14232.7-PLAN.dwg | | |
| THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE. | | |



| REV. | DATE | REVISION | BY |
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| 0 | 9/7/23 | ISSUED FOR REVIEW | LAZ |
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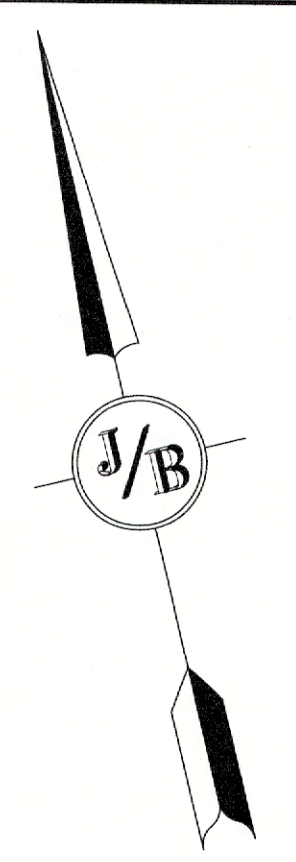
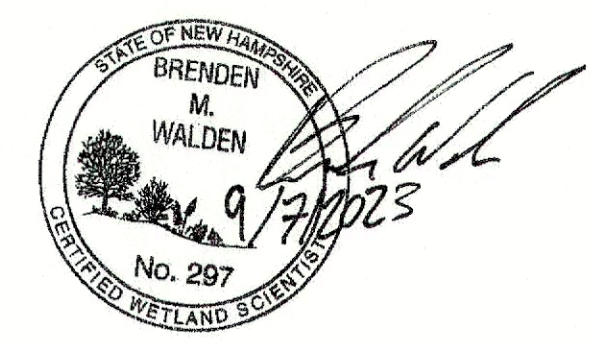
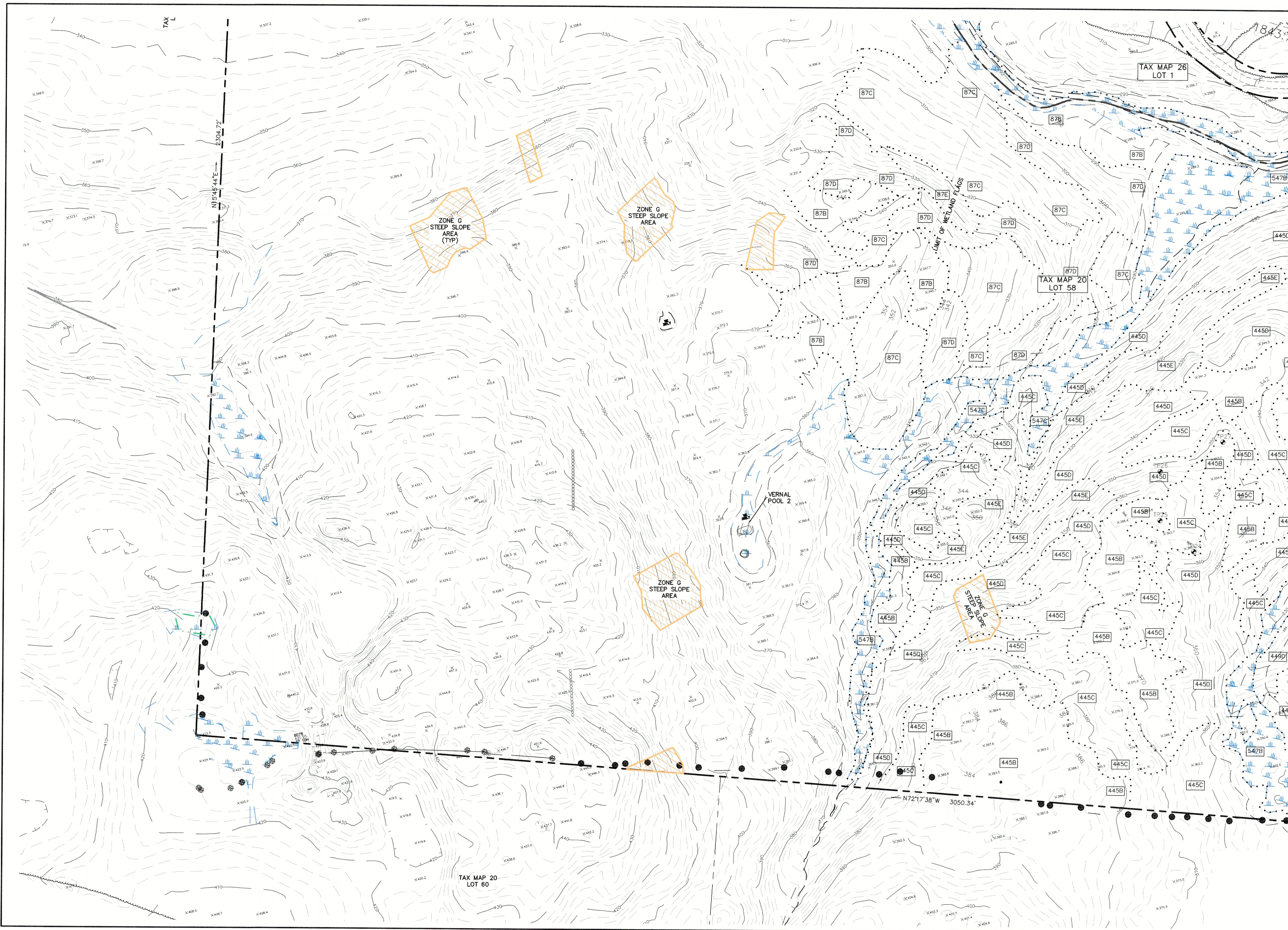
Designed and Produced in NH

J/B Jones & Beach Engineers, Inc.

85 Portsmouth Ave. Civil Engineering Services 603-772-4746
 PO Box 219 Stratham, NH 03885 FAX: 603-772-0227
 E-MAIL: JBE@JONESANDBEACH.COM

| | |
|------------|---|
| Plan Name: | EXISTING CONDITIONS PLAN |
| Project: | 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE |
| Owners: | YAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 2ND FLOOR, SUITE 1, NASHUA, NH 03063 |

| | |
|---------------|-------------------------|
| DRAWING No. | C3 |
| SHEET 5 OF 34 | JBE PROJECT NO. 14232.7 |



WETLAND NOTES:

1. THE LIMITS OF JURISDICTIONAL WETLANDS WERE DELINEATED BY GOVE ENVIRONMENTAL SERVICE IN JUNE 2022 IN ACCORDANCE WITH THE FOLLOWING GUIDANCE DOCUMENTS:
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SOIL LEGEND

| SSSS SYM | HISS SYM | MAP UNIT NAME | HYDROLOGIC SOIL GRP |
|-----------|----------|-----------------------|---------------------|
| 87 | 227 | CHATFIELD, VERY STONY | B |
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| 547 | 521 | WALPOLE, VERY STONY | C |

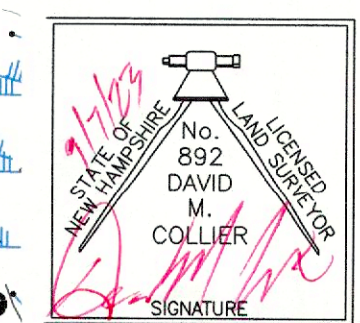
SLOPE PHASE

| | |
|--------|---|
| 0-3% | B |
| 3-15% | C |
| 15-25% | D |
| 25% + | E |

CERTIFICATION:

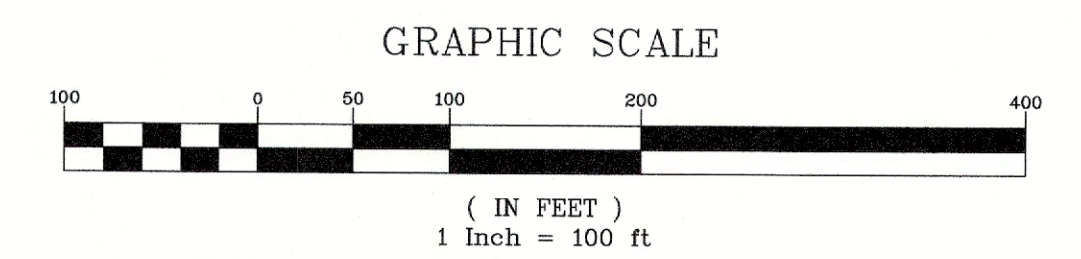
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DAVID M. COLLIER, LLS 892
ON BEHALF OF JONES & BEACH ENGINEERS, INC.

DATE:



| | | |
|---|-----------------|----------------------|
| Design: JAC | Draft: AJB | Date: 4/15/21 |
| Checked: JAC | Scale: AS NOTED | Project No.: 14232.7 |
| Drawing Name: 14232.7-PLAN.dwg | | |
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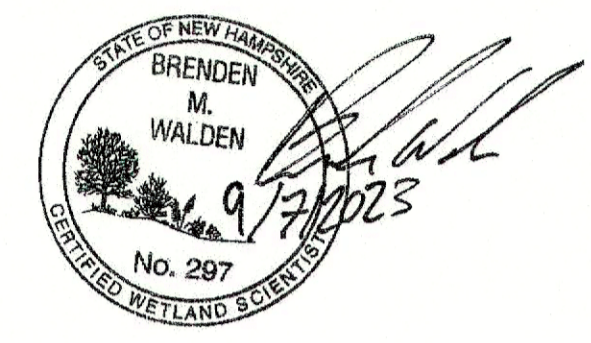
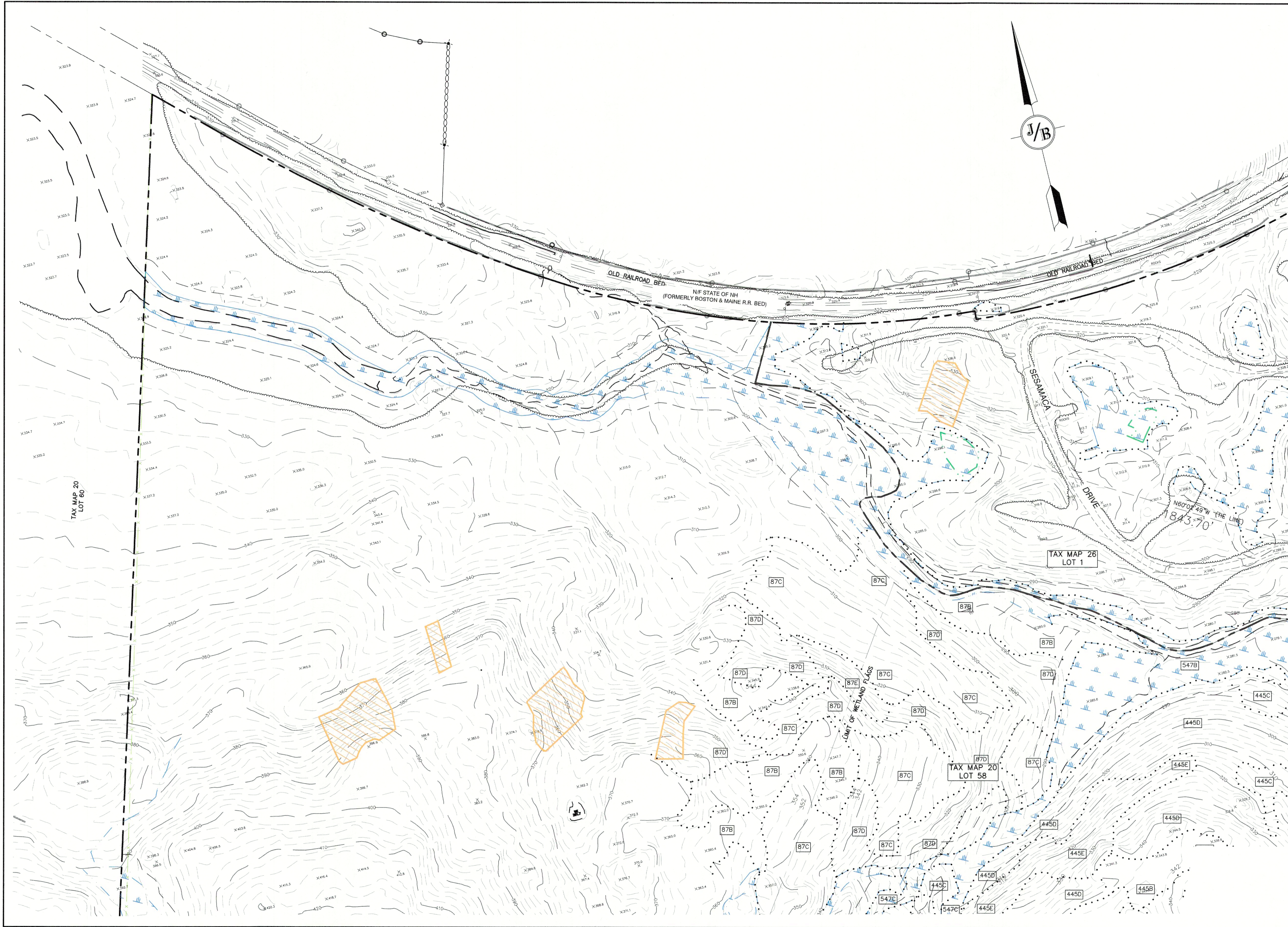
85 Portsmouth Ave. Stratham, NH 03885

Civil Engineering Services

603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

| | |
|------------|---|
| Plan Name: | EXISTING CONDITIONS PLAN |
| Project: | 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE |
| Owners: | YAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 |

| | |
|---------------|-------------------------|
| DRAWING No. | C4 |
| SHEET 6 OF 34 | JBE PROJECT NO. 14232.7 |



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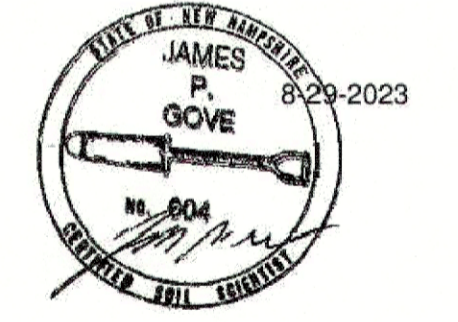
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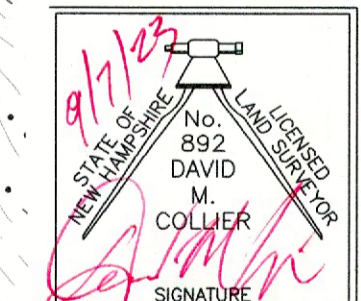
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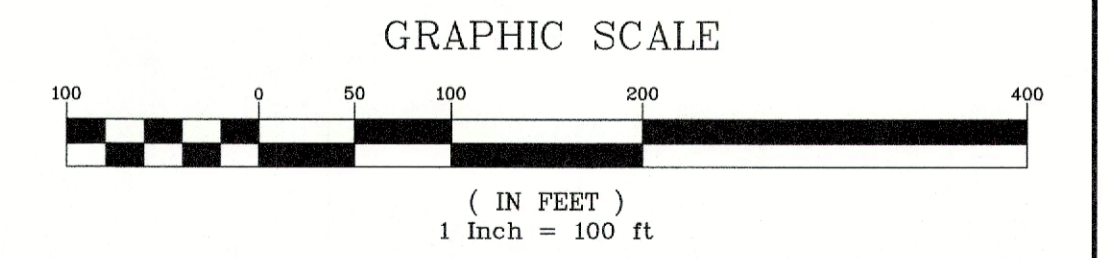
CERTIFICATION:

I CERTIFY THAT THIS PLAN WAS PREPARED UNDER MY DIRECT SUPERVISION, THAT IT IS THE RESULT OF A FIELD SURVEY BY THIS OFFICE AND HAS AN UNADJUSTED LINEAR ERROR OF CLOSURE THAT EXCEEDS BOTH THE MINIMUM OF 1:10,000 AS DEFINED IN SECTION 503.04 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES AND THE MINIMUM OF 1:15,000 AS DEFINED IN SECTION 4.2 OF THE N.H.L.S.A. ETHICS AND STANDARDS.

THIS SURVEY CONFORMS TO A CATEGORY 1 CONDITION 1 SURVEY AS DEFINED IN SECTION 4.1 OF THE N.H.L.S.A. ETHICS AND STANDARDS.



DAVID M. COLLIER, LLS 892
ON BEHALF OF JONES & BEACH ENGINEERS, INC. DATE: 9/7/23



| | | |
|---|-----------------|----------------------|
| Design: JAC | Draft: AJB | Date: 4/15/21 |
| Checked: JAC | Scale: AS NOTED | Project No.: 14232.7 |
| Drawing Name: 14232.7-PLAN.dwg | | |
| THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE. | | |



| REV. | DATE | REVISION | BY |
|------|--------|-------------------|-----|
| 0 | 9/7/23 | ISSUED FOR REVIEW | LAZ |
| | | | |

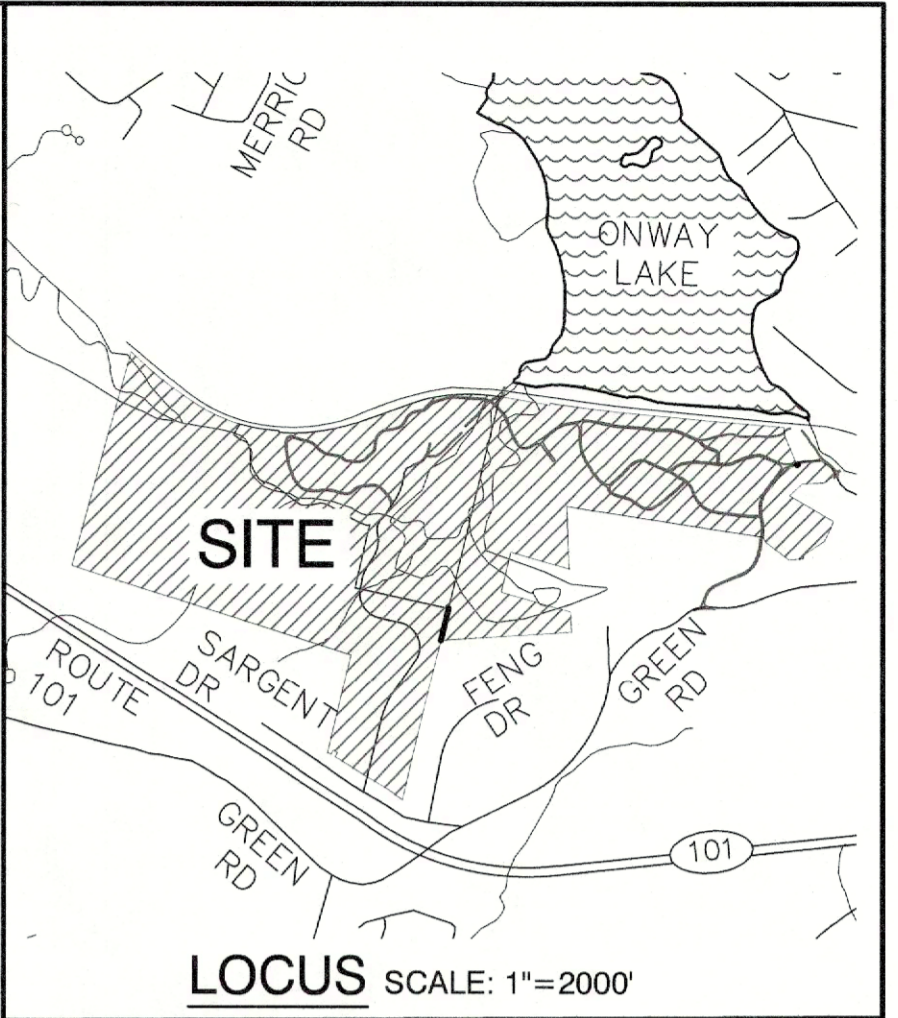
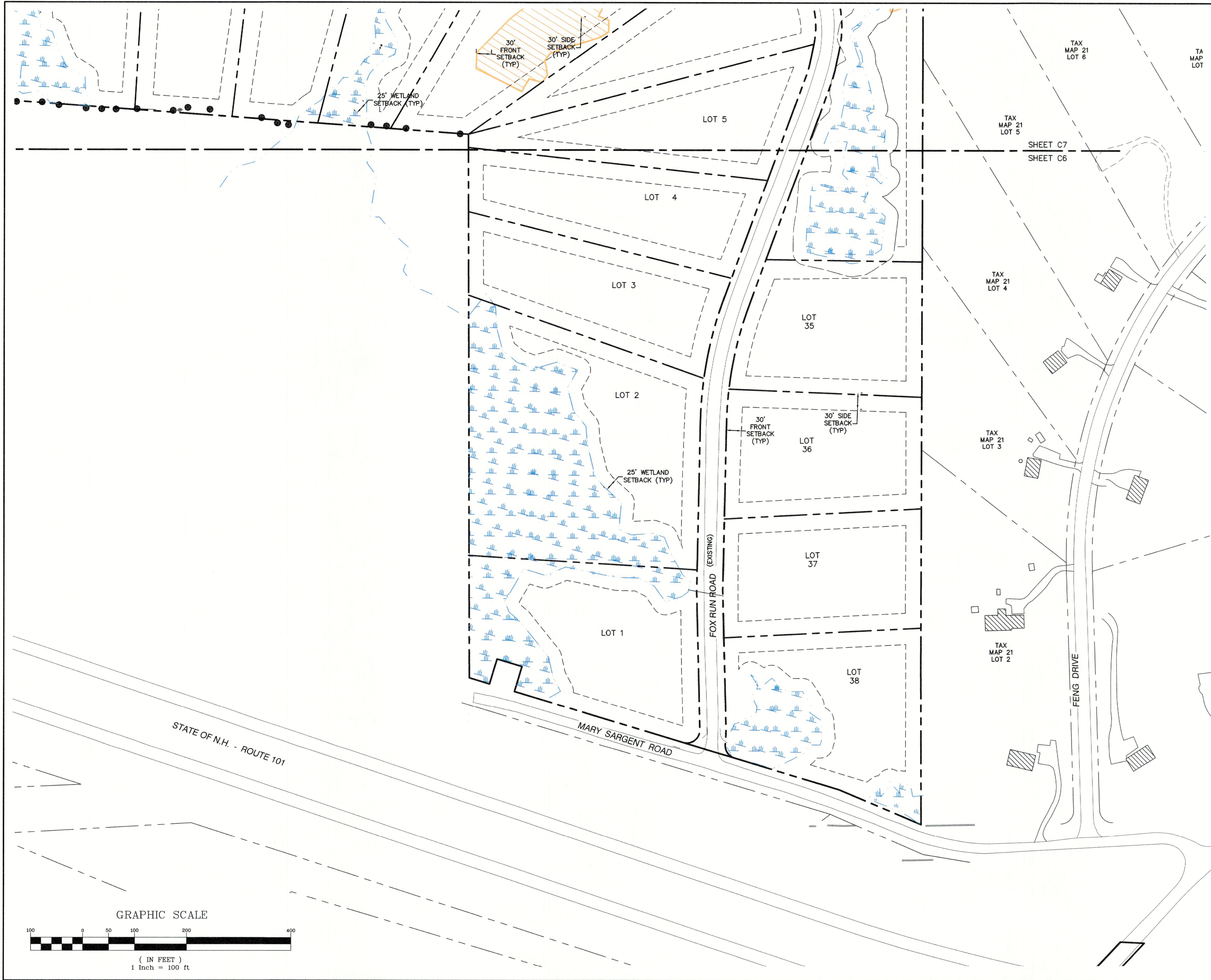
Designed and Produced in NH

J/B Jones & Beach Engineers, Inc.

85 Portsmouth Ave. Civil Engineering Services 603-772-4746
PO Box 219 Stratham, NH 03885 FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

| | |
|------------|---|
| Plan Name: | EXISTING CONDITIONS PLAN |
| Project: | 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE |
| Owners: | YAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 2ND FLOOR, SUITE 1, NASHUA, NH 03063 |

| | |
|---------------|-------------------------|
| DRAWING No. | C5 |
| SHEET 7 OF 34 | JBE PROJECT NO. 14232.7 |

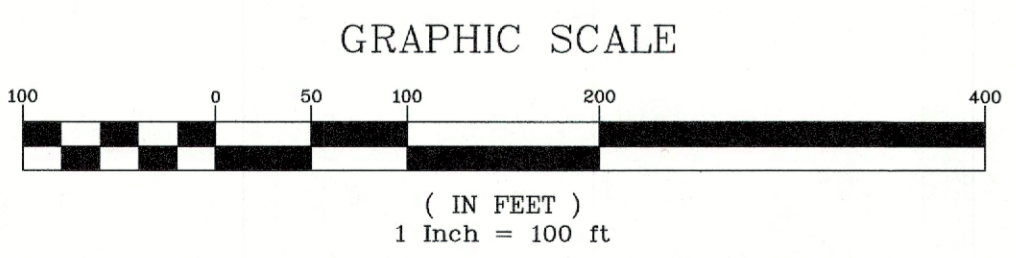


NOTES:

- THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED CONVENTIONAL SUBDIVISION PLAN FOR SINGLE FAMILY LOTS OF RAYMOND NH ON TAX MAP 20, LOT 58.
- ZONING DISTRICT: RESIDENTIAL/AGRICULTURAL
 LOT AREA MINIMUM = 87,120 SF
 LOT FRONTAGE MINIMUM = 200'
 BUILDING SETBACKS (MINIMUM):
 FRONT SETBACK = 30'
 SIDE SETBACK = 30'
 REAR SETBACK = 30'
 MAX. BUILDING HEIGHT = 30'
- YIELD CALCULATION:
 MINIMUM LOT SIZE = 87,120 S.F.
 2 ACRE YIELD LOTS = 38 LOTS
 LINEAR FEET OF ROAD
 EXISTING ROAD = 3,265 LF
 PROPOSED ROAD = 3,920 LF
- THIS PLAN SET HAS BEEN PREPARED BY JONES & BEACH ENGINEERS, INC. FOR MUNICIPAL AND STATE APPROVALS AND FOR CONSTRUCTION BASED ON DATA OBTAINED FROM ON-SITE FIELD SURVEY AND EXISTING MUNICIPAL RECORDS. THROUGHOUT THE CONSTRUCTION PROCESS, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY OF ANY FIELD DISCREPANCY FROM DATA AS SHOWN ON THE DESIGN PLANS, INCLUDING ANY UNFORESEEN CONDITIONS, SUBSURFACE OR OTHERWISE, FOR EVALUATION AND RECOMMENDATIONS. ANY CONTRADICTION BETWEEN ITEMS ON THIS PLAN/PLAN SET OR BETWEEN THE PLANS AND ON-SITE CONDITIONS, MUST BE RESOLVED BEFORE RELATED CONSTRUCTION HAS BEEN INITIATED. CONTRACTOR TO ALWAYS CONTACT DIG SAFE PRIOR TO DIGGING ONSITE OR OFFSITE TO ENSURE SAFETY AND OBEY THE LAW.

| YIELD AREAS | | | | | | | |
|-------------|-----------|-----------|--------------|------------|------------------------|------------------------|---------------|
| LOT NUMBER | AREA (SF) | AREA (AC) | WETLAND (SF) | STEEP (SF) | TOTAL USABLE AREA (SF) | TOTAL USABLE AREA (AC) | FRONTAGE (LF) |
| 1 | 124,246 | 2.85 | 36,100 | | 88,146 | 2.02 | 356.2 |
| 2 | 193,128 | 4.43 | 104,668 | | 88,460 | 2.03 | 368.3 |
| 3 | 87,538 | 2.01 | 167 | | 87,371 | 2.01 | 200.6 |
| 4 | 87,284 | 2.00 | | | 87,284 | 2.00 | 200.0 |
| 5 | 87,525 | 2.01 | | | 87,525 | 2.01 | 277.3 |
| 6 | 87,315 | 2.00 | | | 87,315 | 2.00 | 261.1 |
| 7 | 135,937 | 3.12 | | 47,465 | 88,472 | 2.03 | 459.0 |
| 8 | 105,220 | 2.42 | 17,405 | | 87,815 | 2.02 | 307.9 |
| 9 | 88,568 | 2.03 | 1,243 | | 87,325 | 2.00 | 242.4 |
| 10 | 87,570 | 2.01 | 200 | | 87,370 | 2.00 | 214.5 |
| 11 | 108,924 | 2.50 | 21,671 | | 87,253 | 2.00 | 240.2 |
| 12 | 98,860 | 2.27 | 10974 | | 87,886 | 2.02 | 225.5 |
| 13 | 87,352 | 2.01 | | | 87,352 | 2.01 | 200.0 |
| 14 | 94,995 | 2.18 | | 7,587 | 87,408 | 2.01 | 200.2 |
| 15 | 102,612 | 2.36 | 11,878 | 398 | 90,336 | 2.07 | 301.6 |
| 16 | 88,056 | 2.02 | | | 88,056 | 2.02 | 200.2 |
| 17 | 103,096 | 2.37 | | 13,615 | 89,481 | 2.05 | 225.4 |
| 18 | 87,447 | 2.01 | | | 87,447 | 2.01 | 235.7 |
| 19 | 90,591 | 2.08 | | 3,225 | 87,366 | 2.01 | 200.8 |
| 20 | 101,756 | 2.34 | | 12,910 | 88,846 | 2.04 | 200.1 |
| 21 | 91,538 | 2.10 | | | 91,538 | 2.10 | 203.3 |
| 22 | 87,584 | 2.01 | | | 87,584 | 2.01 | 275.2 |
| 23 | 100,451 | 2.31 | | 13,321 | 87,130 | 2.00 | 354.6 |
| 24 | 119,855 | 2.75 | | 7948 | 111,907 | 2.57 | 673.6 |
| 25 | 183,057 | 4.20 | 16,131 | | 166,926 | 3.83 | 885.2 |
| 26 | 116,193 | 2.67 | 2504 | | 113,689 | 2.61 | 1,168.5 |
| 27 | 90,110 | 2.07 | | | 90,110 | 2.07 | 268.6 |
| 28 | 97,262 | 2.23 | 3,364 | | 93,898 | 2.16 | 219.5 |
| 29 | 113,659 | 2.61 | 17294 | | 96,365 | 2.21 | 242.7 |
| 30 | 122,900 | 2.82 | 26012 | | 96,888 | 2.22 | 353.8 |
| 31 | 89,449 | 2.05 | 2,079 | | 87,370 | 2.01 | 585.2 |
| 32 | 126,390 | 2.90 | 15,915 | | 110,475 | 2.54 | 881.7 |
| 33 | 113,861 | 2.61 | | 25941 | 87,920 | 2.02 | 312.4 |
| 34 | 184,091 | 4.23 | 51,374 | 7595 | 125,122 | 2.87 | 737.2 |
| 35 | 87,354 | 2.01 | 136 | | 87,218 | 2.00 | 259.8 |
| 36 | 87,541 | 2.01 | | | 87,541 | 2.01 | 250.1 |
| 37 | 87,175 | 2.00 | | | 87,175 | 2.00 | 228.6 |
| 38 | 111,624 | 2.56 | 23,883 | | 87,745 | 2.00 | 241.8 |

| |
|-----------------------------|
| TOTAL LOT AREA |
| MAP 20 LOT 58 |
| 6,882,144 SF = 157.99 ACRES |
| MAP 26 LOT 1 |
| 8,193,408 SF = 188.09 AC |
| TOTAL |
| 15,075,552 SF = 346.09 AC |



Design: JAC Draft: AJB Date: 4/15/21
 Checked: JAC Scale: AS NOTED Project No.: 14232.7
 Drawing Name: 14232.7-PLAN.dwg
 THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.



| REV. | DATE | REVISION | BY |
|------|--------|-------------------|-----|
| 0 | 9/7/23 | ISSUED FOR REVIEW | LAZ |

Designed and Produced in NH

J/B Jones & Beach Engineers, Inc.

85 Portsmouth Ave. Civil Engineering Services 603-772-4746
 PO Box 219 Stratham, NH 03885 FAX: 603-772-0227
 E-MAIL: JBE@JONESANDBEACH.COM

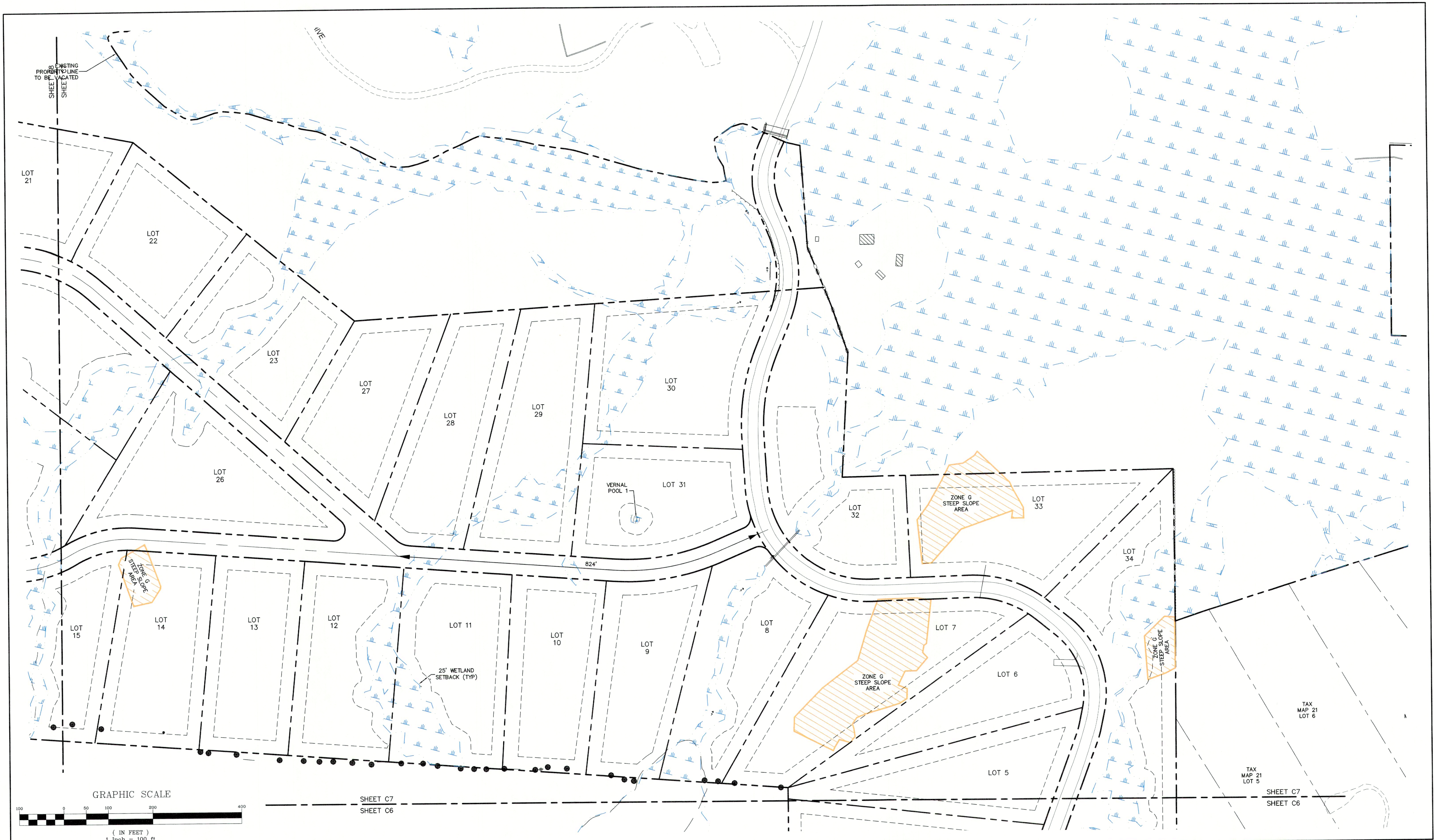
Plan Name: **CONVENTIONAL SUBDIVISION PLAN**

Project: **15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE**

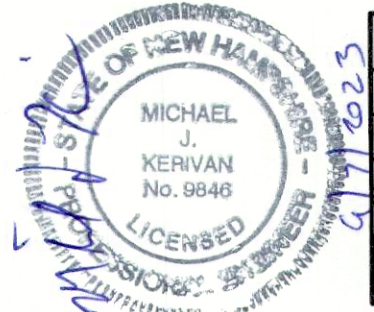
Owners: YAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063

DRAWING No. **C6**

SHEET 6 OF 34
 JBE PROJECT NO. 14232.7



Design: JAC Draft: AJB Date: 4/15/21
 Checked: JAC Scale: AS NOTED Project No.: 14232.7
 Drawing Name: 14232.7-PLAN.dwg
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| REV. | DATE | REVISION | BY |
|------|--------|-------------------|-----|
| 0 | 9/7/23 | ISSUED FOR REVIEW | LAZ |
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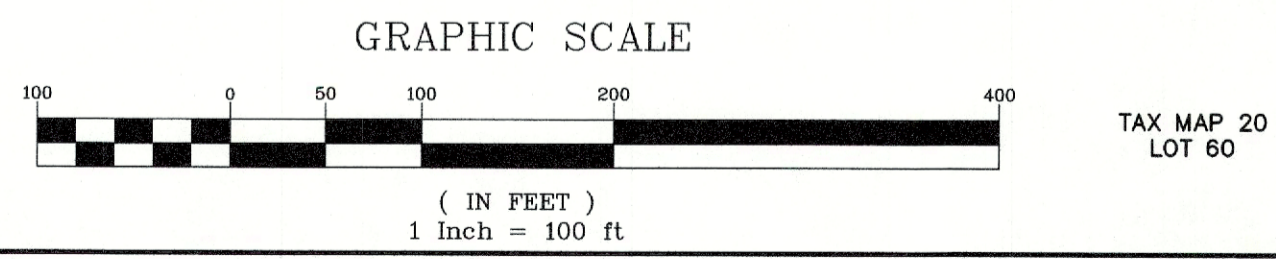
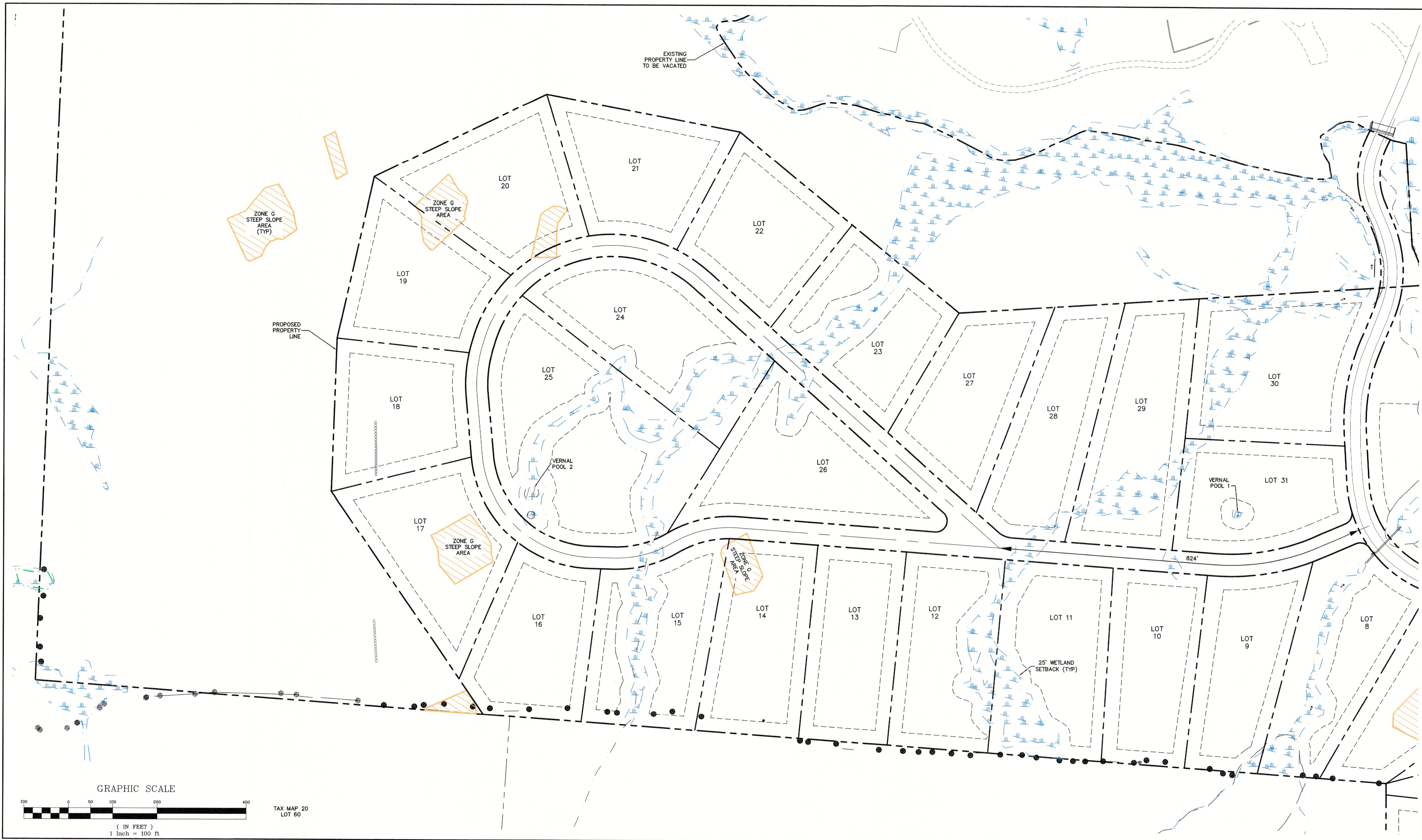
Designed and Produced in NH

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Civil Engineering Services

85 Portsmouth Ave. PO Box 219 Stratham, NH 03885 603-772-4746 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: **CONVENTIONAL SUBDIVISION PLAN**
 Project: **15 SARGENT DRIVE
RAYMOND, NEW HAMPSHIRE**
 Owners: YAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063

DRAWING No.
C7
 SHEET 9 OF 34
 JBE PROJECT NO. 14232.7



Design: JAC Draft: AJB Date: 4/15/21
 Checked: JAC Scale: AS NOTED Project No.: 14232.7
 Drawing Name: 14232.7-PLAN.dwg

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| REV. | DATE | REVISION | BY |
|------|--------|-------------------|-----|
| 0 | 9/7/23 | ISSUED FOR REVIEW | LAZ |
| | | | |

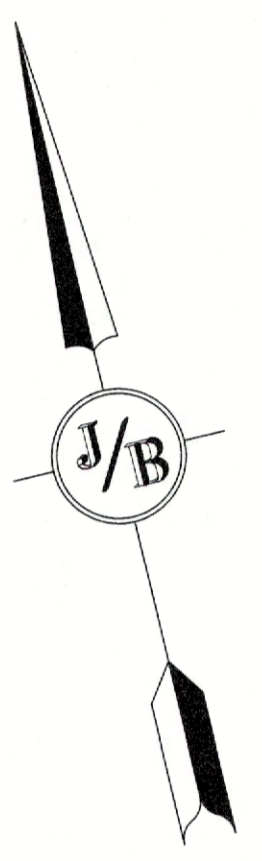
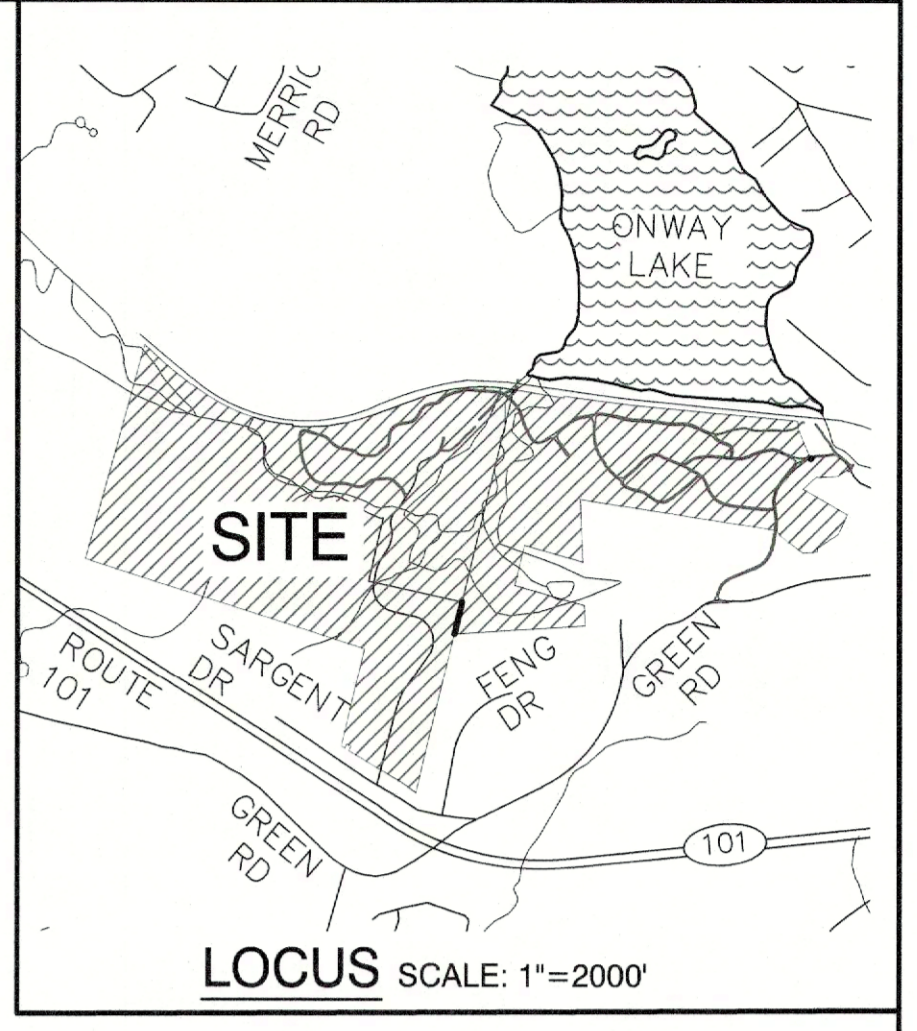
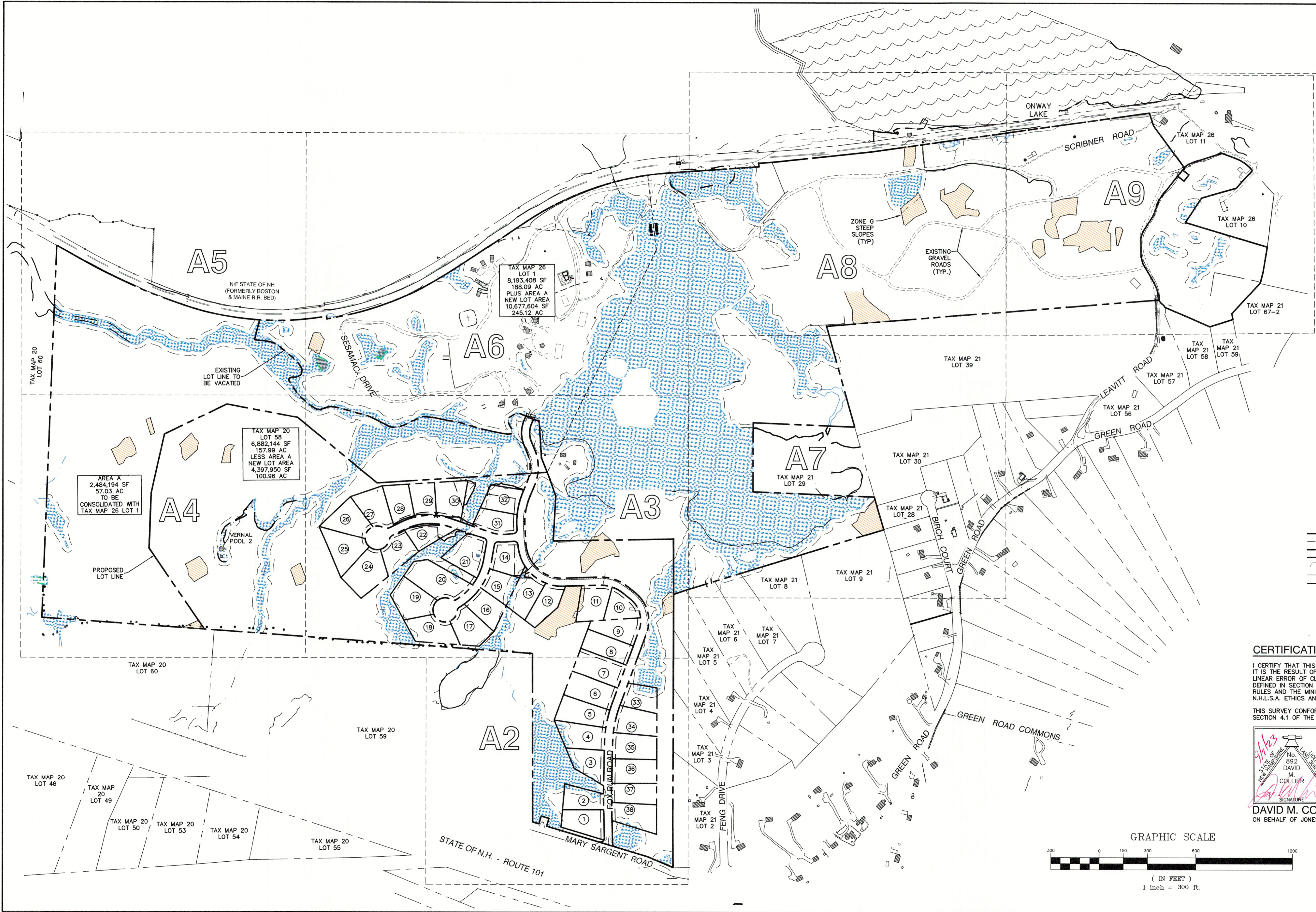
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Civil Engineering Services

85 Portsmouth Ave. PO Box 219 Stratham, NH 03885 603-772-4746 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM

| | |
|------------|---|
| Plan Name: | CONVENTIONAL SUBDIVISION PLAN |
| Project: | 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE |
| Owners: | YAWNO PROPERTIES, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 |

DRAWING No.
C8
SHEET 10 OF 34
JBE PROJECT NO. 14232.7



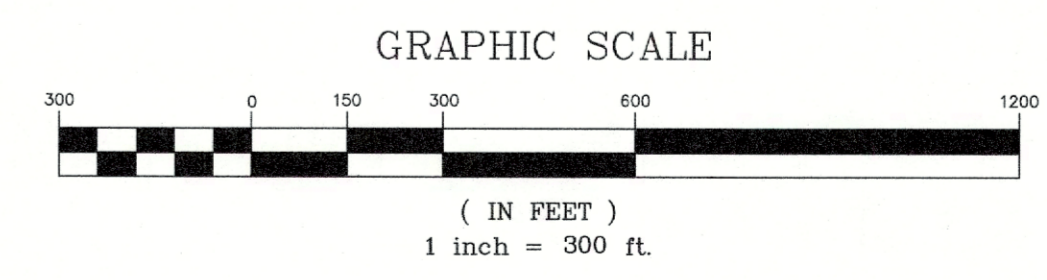
GENERAL LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|-------------------------|
| --- | --- | PROPERTY LINES |
| --- | --- | SETBACK LINES |
| --- | --- | EASEMENT |
| --- | --- | FRESHWATER WETLAND LINE |
| --- | --- | TREE LINE |
| --- | --- | FENCE |
| --- | --- | EDGE OF PAVEMENT |
| ○ | ● | IRON PIN |
| ○ | ○ | DRILL HOLE |
| ■ | ■ | GRANITE BOUND |
| ■ | ■ | FRESHWATER WETLANDS |
| --- | --- | STONE WALL |

CERTIFICATION:
 I CERTIFY THAT THIS PLAT WAS PREPARED UNDER MY DIRECT SUPERVISION, THAT IT IS THE RESULT OF A FIELD SURVEY BY THIS OFFICE AND HAS AN UNADJUSTED LINEAR ERROR OF CLOSURE THAT EXCEEDS BOTH THE MINIMUM OF 1:10,000 AS DEFINED IN SECTION 503.04 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES AND THE MINIMUM OF 1:15,000 AS DEFINED IN SECTION 4.2 OF THE N.H.L.S.A. ETHICS AND STANDARDS.
 THIS SURVEY CONFORMS TO A CATEGORY 1 CONDITION 1 SURVEY AS DEFINED IN SECTION 4.1 OF THE N.H.L.S.A. ETHICS AND STANDARDS.

9/1/23
 DAVID M. COLLIER, LLS 892
 ON BEHALF OF JONES & BEACH ENGINEERS, INC.

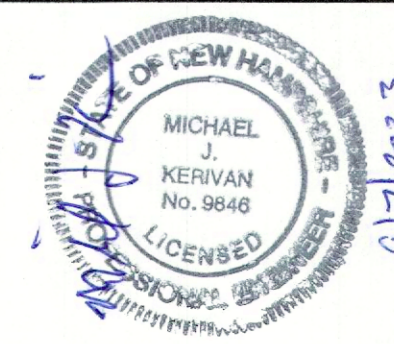
DATE: 9/1/23



TOTAL LOT AREA

| | |
|---------------|----------------------------------|
| MAP 20 LOT 58 | 6,882,144 SF = 157.99 ACRES |
| MAP 26 LOT 1 | 8,193,408 SF = 188.09 AC |
| TOTAL | 15,075,552 SF = 346.09 AC |

Design: JAC Draft: AJB Date: 4/15/21
 Checked: JAC Scale: AS NOTED Project No.: 14232.7
 Drawing Name: 14232.7-PLAN.dwg
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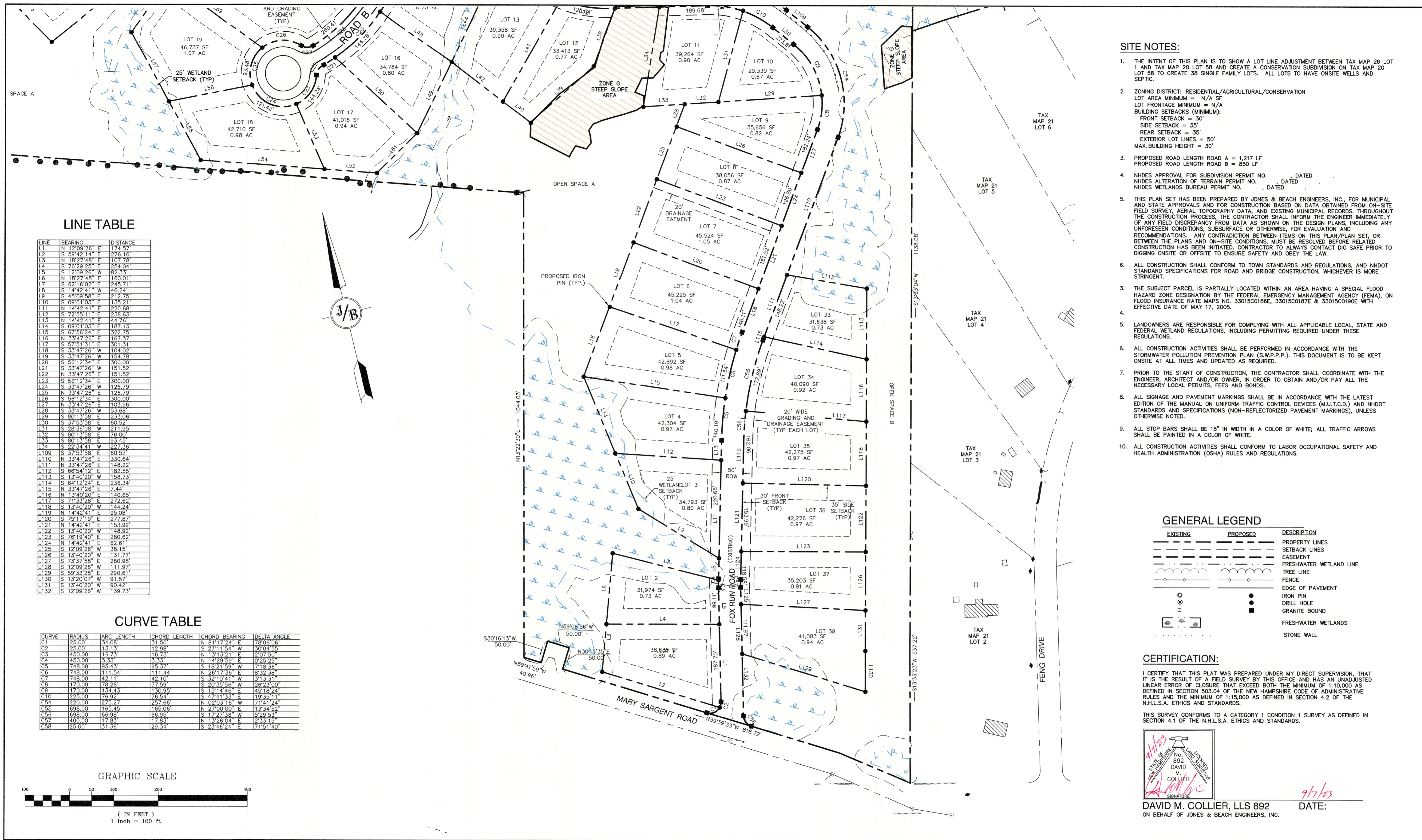


| REV. | DATE | REVISION | BY |
|------|--------|-------------------|-----|
| 0 | 9/7/23 | ISSUED FOR REVIEW | LAZ |

J/B Jones & Beach Engineers, Inc.
 Civil Engineering Services
 85 Portsmouth Ave. PO Box 219 Stratham, NH 03885
 603-772-4746 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: **OVERVIEW CONSERVATION SUBDIVISION PLAN**
 Project: **15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE**
 Owners: YAWNO PROPERTIES, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063; RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063

DRAWING No. **A1**
 SHEET 11 OF 34
 JBE PROJECT NO. 14232.7



SITE NOTES:

- THE INTENT OF THIS PLAN IS TO SHOW A LOT LINE ADJUSTMENT BETWEEN TAX MAP 26 LOT 1 AND TAX MAP 20 LOT 58 AND CREATE A CONSERVATION SUBDIVISION ON TAX MAP 20 LOT 58 TO CREATE 38 SINGLE FAMILY LOTS. ALL LOTS TO HAVE ONSITE WELLS AND SEPTIC.
- ZONING DISTRICT: RESIDENTIAL/AGRICULTURAL/CONSERVATION
 LOT AREA MINIMUM = N/A SF
 LOT FRONTAGE MINIMUM = N/A
 BUILDING SETBACKS (MINIMUM):
 FRONT SETBACK = 30'
 SIDE SETBACK = 35'
 REAR SETBACK = 35'
 EXTERIOR LOT LINES = 50'
 MAX. BUILDING HEIGHT = 30'
- PROPOSED ROAD LENGTH ROAD A = 1,217 LF
 PROPOSED ROAD LENGTH ROAD B = 850 LF
- NHDES APPROVAL FOR SUBDIVISION PERMIT NO. _____ DATED _____
 NHDES ALTERATION OF TERRAIN PERMIT NO. _____ DATED _____
 NHDES WETLANDS BUREAU PERMIT NO. _____ DATED _____
- THIS PLAN SET HAS BEEN PREPARED BY JONES & BEACH ENGINEERS, INC., FOR MUNICIPAL AND STATE APPROVALS AND FOR CONSTRUCTION BASED ON DATA OBTAINED FROM ON-SITE FIELD SURVEY, AERIAL TOPOGRAPHY DATA, AND EXISTING MUNICIPAL RECORDS. THROUGHOUT THE CONSTRUCTION PROCESS, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY OF ANY FIELD DISCREPANCY FROM DATA AS SHOWN ON THE DESIGN PLANS, INCLUDING ANY UNFORESEEN CONDITIONS, SUBSURFACE OR OTHERWISE, FOR EVALUATION AND RECOMMENDATIONS. ANY CONTRADICTION BETWEEN ITEMS ON THIS PLAN/PLAN SET, OR BETWEEN THE PLANS AND ON-SITE CONDITIONS, MUST BE RESOLVED BEFORE RELATED CONSTRUCTION HAS BEEN INITIATED. CONTRACTOR TO ALWAYS CONTACT DIG SAFE PRIOR TO DIGGING ONSITE OR OFFSITE TO ENSURE SAFETY AND OBEY THE LAW.
- ALL CONSTRUCTION SHALL CONFORM TO TOWN STANDARDS AND REGULATIONS, AND NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, WHICHEVER IS MORE STRINGENT.
- THE SUBJECT PARCEL IS PARTIALLY LOCATED WITHIN AN AREA HAVING A SPECIAL FLOOD HAZARD ZONE DESIGNATION BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), ON FLOOD INSURANCE RATE MAPS NO. 33015C0186E, 33015C0187E & 33015C0190E WITH EFFECTIVE DATE OF MAY 17, 2005.
- LANDOWNERS ARE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL WETLAND REGULATIONS, INCLUDING PERMITTING REQUIRED UNDER THESE REGULATIONS.
- ALL CONSTRUCTION ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN (S.W.P.P.). THIS DOCUMENT IS TO BE KEPT ONSITE AT ALL TIMES AND UPDATED AS REQUIRED.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER, ARCHITECT AND/OR OWNER, IN ORDER TO OBTAIN AND/OR PAY ALL THE NECESSARY LOCAL PERMITS, FEES AND BONDS.
- ALL SIGNAGE AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) AND NHDOT STANDARDS AND SPECIFICATIONS (NON-REFLECTORIZED PAVEMENT MARKINGS), UNLESS OTHERWISE NOTED.
- ALL STOP BARS SHALL BE 18" IN WIDTH IN A COLOR OF WHITE; ALL TRAFFIC ARROWS SHALL BE PAINTED IN A COLOR OF WHITE.
- ALL CONSTRUCTION ACTIVITIES SHALL CONFORM TO LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS.

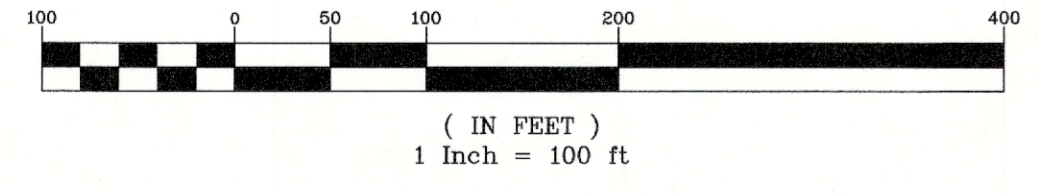
LINE TABLE

| LINE | BEARING | DISTANCE |
|------|---------------|----------|
| L1 | N 12°09'26" E | 174.57' |
| L2 | S 59°42'14" E | 276.16' |
| L3 | N 18°27'48" E | 160.01' |
| L4 | S 72°29'25" E | 254.04' |
| L5 | S 12°09'26" W | 82.33' |
| L6 | N 18°27'48" E | 160.01' |
| L7 | S 62°16'02" E | 245.71' |
| L8 | S 14°42'41" W | 146.24' |
| L9 | S 45°09'58" E | 212.75' |
| L10 | S 09°01'03" E | 135.21' |
| L11 | N 14°42'41" E | 220.68' |
| L12 | S 72°29'25" E | 254.04' |
| L13 | N 14°42'41" E | 44.76' |
| L14 | S 09°01'03" E | 187.13' |
| L15 | S 67°56'24" E | 322.75' |
| L16 | N 33°47'26" E | 167.37' |
| L17 | S 57°51'31" E | 301.31' |
| L18 | S 33°47'26" W | 104.02' |
| L19 | S 33°47'26" W | 154.78' |
| L20 | S 56°12'34" E | 300.00' |
| L21 | S 33°47'26" W | 151.52' |
| L22 | N 33°47'26" E | 151.52' |
| L23 | S 56°12'34" E | 300.00' |
| L24 | S 33°47'26" W | 126.79' |
| L25 | N 33°47'26" E | 126.79' |
| L26 | S 56°12'34" E | 300.00' |
| L27 | N 33°47'26" E | 103.96' |
| L28 | S 33°47'26" W | 53.68' |
| L29 | S 80°13'58" E | 233.63' |
| L30 | S 37°53'58" E | 60.52' |
| L31 | S 28°36'08" W | 211.95' |
| L32 | S 80°13'58" E | 76.00' |
| L33 | S 80°13'58" E | 76.00' |
| L34 | S 22°34'41" W | 227.36' |
| L109 | S 37°53'58" E | 60.52' |
| L110 | N 33°47'26" E | 330.64' |
| L111 | N 33°47'26" E | 300.00' |
| L112 | S 66°54'12" E | 182.55' |
| L113 | S 13°40'20" W | 158.73' |
| L114 | S 64°12'24" E | 236.34' |
| L115 | N 33°47'26" E | 7.44' |
| L116 | N 13°40'20" E | 140.65' |
| L117 | S 71°33'28" E | 272.62' |
| L118 | S 13°40'20" W | 144.24' |
| L119 | N 14°42'41" E | 95.08' |
| L120 | S 75°17'19" E | 277.87' |
| L121 | N 14°42'41" E | 153.99' |
| L122 | S 13°40'20" W | 148.92' |
| L123 | S 76°19'40" E | 280.62' |
| L124 | N 14°42'41" E | 62.61' |
| L125 | S 12°09'26" W | 38.15' |
| L126 | S 13°40'20" W | 131.77' |
| L127 | S 73°37'58" E | 280.98' |
| L128 | S 12°09'26" W | 62.61' |
| L129 | S 59°33'28" E | 290.61' |
| L130 | S 13°20'07" W | 91.57' |
| L131 | S 13°40'20" W | 90.42' |
| L132 | S 12°09'26" W | 139.73' |

CURVE TABLE

| CURVE | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|-------|---------|------------|--------------|----------------|-------------|
| C1 | 25.00' | 34.06' | 31.50' | N 81°17'24" E | 78°06'06" |
| C2 | 25.00' | 13.13' | 12.98' | S 27°11'54" W | 30°04'55" |
| C3 | 450.00' | 16.73' | 16.73' | N 13°13'21" E | 2°07'50" |
| C4 | 450.00' | 16.73' | 16.73' | N 142°29'59" E | 07°29'25" |
| C5 | 748.00' | 95.43' | 95.37' | S 18°21'59" W | 7°18'36" |
| C6 | 748.00' | 111.54' | 111.44' | N 26°17'36" E | 8°32'38" |
| C7 | 748.00' | 42.11' | 42.10' | S 32°10'41" W | 3°13'31" |
| C8 | 170.00' | 78.28' | 77.59' | S 20°35'56" W | 26°23'00" |
| C9 | 170.00' | 134.43' | 130.95' | S 15°14'46" E | 45°18'24" |
| C10 | 225.00' | 76.92' | 76.54' | S 47°41'33" E | 19°35'11" |
| C54 | 220.00' | 275.27' | 257.66' | N 02°03'16" W | 71°41'24" |
| C55 | 698.00' | 165.45' | 165.06' | N 27°00'00" E | 13°34'52" |
| C56 | 698.00' | 66.98' | 66.95' | S 17°27'38" W | 8°29'53" |
| C57 | 400.00' | 17.83' | 17.83' | N 13°28'04" E | 2°33'15" |
| C58 | 25.00' | 31.36' | 29.34' | S 23°46'24" E | 71°51'40" |

GRAPHIC SCALE



GENERAL LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|-------------------------|
| --- | --- | PROPERTY LINES |
| --- | --- | SETBACK LINES |
| --- | --- | EASEMENT |
| --- | --- | FRESHWATER WETLAND LINE |
| --- | --- | TREE LINE |
| --- | --- | FENCE |
| --- | --- | EDGE OF PAVEMENT |
| ○ | ○ | IRON PIN |
| ● | ● | DRILL HOLE |
| ■ | ■ | GRANITE BOUND |
| --- | --- | FRESHWATER WETLANDS |
| --- | --- | STONE WALL |

CERTIFICATION:

I CERTIFY THAT THIS PLAT WAS PREPARED UNDER MY DIRECT SUPERVISION, THAT IT IS THE RESULT OF A FIELD SURVEY BY THIS OFFICE AND HAS AN UNADJUSTED LINEAR ERROR OF CLOSURE THAT EXCEEDS BOTH THE MINIMUM OF 1:10,000 AS DEFINED IN SECTION 503.04 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES AND THE MINIMUM OF 1:15,000 AS DEFINED IN SECTION 4.2 OF THE N.H.L.S.A. ETHICS AND STANDARDS.

THIS SURVEY CONFORMS TO A CATEGORY 1 CONDITION 1 SURVEY AS DEFINED IN SECTION 4.1 OF THE N.H.L.S.A. ETHICS AND STANDARDS.

DAVID M. COLLIER
 LICENSED SURVEYOR
 No. 892
 DAVID M. COLLIER
 SIGNATURE

DAVID M. COLLIER, LLS 892 DATE: 9/17/23
 ON BEHALF OF JONES & BEACH ENGINEERS, INC.

Design: JAC Draft: AJB Date: 4/15/21
 Checked: JAC Scale: AS NOTED Project No.: 14232.7
 Drawing Name: 14232.7-PLAN.dwg
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| REV. | DATE | REVISION | BY |
|------|--------|-------------------|-----|
| 0 | 9/7/23 | ISSUED FOR REVIEW | LAZ |
| | | | |

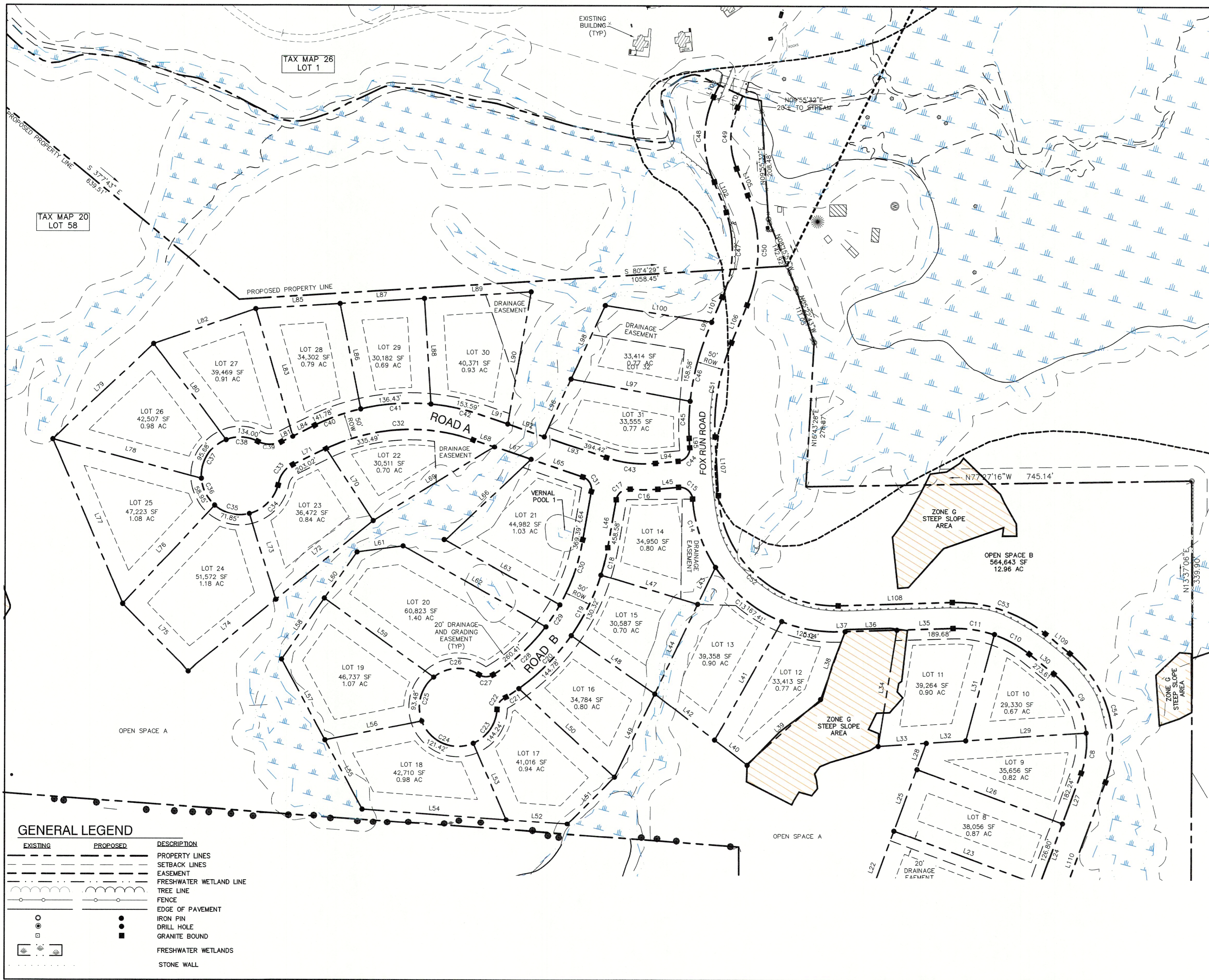
Designed and Produced in NH

J/B Jones & Beach Engineers, Inc.
 Civil Engineering Services

85 Portsmouth Ave. PO Box 219 Stratham, NH 03885
 603-772-4746 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: CONSERVATION SUBDIVISION PLAN
 Project: 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE
 Owners: YAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063

DRAWING No. **A2**
 SHEET 12 OF 34
 JBE PROJECT NO. 14232.7



LINE TABLE

| LINE | BEARING | DISTANCE |
|------|---------------|----------|
| L34 | S 27°34'41" W | 227.76 |
| L35 | N 78°15'26" W | 108.29 |
| L36 | S 78°15'26" E | 99.96 |
| L37 | N 78°15'26" W | 12.13 |
| L38 | N 33°28'30" E | 139.22 |
| L39 | N 61°59'33" E | 190.52 |
| L40 | S 38°57'04" E | 77.52 |
| L41 | S 42°55'42" W | 262.90 |
| L42 | S 38°57'04" E | 146.18 |
| L43 | S 39°07'38" W | 79.42 |
| L44 | N 39°07'38" E | 191.53 |
| L45 | N 81°57'12" W | 40.39 |
| L46 | S 23°29'13" W | 93.76 |
| L47 | S 59°45'46" E | 194.84 |
| L48 | S 41°35'51" E | 196.18 |
| L49 | S 39°07'38" W | 178.25 |
| L50 | S 33°51'01" E | 251.83 |
| L51 | N 58°39'50" E | 128.33 |
| L52 | S 22°18'09" E | 118.64 |
| L53 | S 09°45'28" E | 160.24 |
| L54 | N 22°18'09" W | 278.76 |
| L55 | S 14°57'22" E | 151.06 |
| L56 | S 87°35'28" E | 190.42 |
| L57 | S 14°57'22" E | 177.03 |
| L58 | S 48°44'58" W | 143.51 |
| L59 | S 40°49'04" W | 269.17 |
| L60 | S 48°44'58" W | 109.11 |
| L61 | S 84°18'17" E | 89.72 |
| L62 | S 47°03'53" E | 316.61 |
| L63 | S 47°03'53" E | 239.18 |
| L64 | S 23°29'13" W | 101.19 |
| L65 | S 57°43'05" E | 105.48 |
| L66 | N 60°08'59" E | 227.20 |
| L67 | S 57°43'05" E | 76.00 |
| L68 | S 57°43'05" E | 42.97 |
| L69 | S 72°04'15" W | 274.04 |
| L70 | S 19°50'39" E | 166.39 |
| L71 | S 77°55'17" W | 71.70 |
| L72 | N 64°29'12" E | 241.94 |
| L73 | S 03°25'14" E | 173.55 |
| L74 | N 64°29'12" E | 216.88 |
| L75 | S 31°05'43" E | 180.28 |
| L76 | S 56°30'13" W | 259.95 |
| L77 | S 09°31'21" E | 345.91 |
| L78 | S 61°28'41" E | 296.89 |
| L79 | S 60°13'59" W | 266.94 |
| L80 | S 23°43'41" E | 231.64 |
| L81 | S 77°35'17" W | 24.33 |
| L82 | N 84°26'38" E | 208.71 |
| L83 | S 02°34'19" E | 255.72 |
| L84 | S 77°35'17" W | 42.37 |
| L85 | S 80°04'29" E | 162.55 |
| L86 | S 02°23'55" W | 207.52 |
| L87 | S 80°04'29" E | 163.03 |
| L88 | N 09°55'51" E | 204.76 |
| L89 | S 80°04'29" E | 206.59 |
| L90 | N 23°32'16" E | 259.09 |
| L91 | S 57°43'05" E | 52.83 |
| L92 | N 57°43'05" E | 75.00 |
| L93 | S 57°43'05" E | 128.99 |
| L94 | S 81°57'12" E | 44.19 |
| L95 | N 10°13'29" E | 18.38 |
| L96 | N 38°23'55" E | 122.11 |
| L97 | N 66°02'11" W | 233.78 |
| L98 | S 38°23'55" W | 156.99 |
| L99 | S 35°53'12" W | 21.82 |
| L100 | S 67°30'17" E | 207.78 |
| L101 | S 35°53'12" W | 56.64 |
| L102 | S 09°00'11" E | 55.81 |
| L103 | N 38°42'18" E | 20.58 |
| L104 | N 38°42'18" E | 20.58 |
| L105 | S 09°00'11" E | 55.95 |
| L106 | N 35°53'12" E | 76.46 |
| L107 | S 10°13'29" W | 113.82 |
| L108 | N 78°15'26" W | 220.37 |

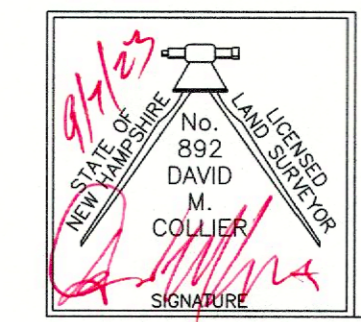
CURVE TABLE

| CURVE | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|-------|--------|------------|--------------|---------------|-------------|
| C11 | 225.00 | 81.57 | 81.12 | S 67°52'17" E | 20°46'17" |
| C12 | 275.00 | 112.91 | 112.11 | N 66°29'43" W | 23°31'25" |
| C13 | 275.00 | 167.87 | 165.09 | S 37°15'59" E | 34°56'04" |
| C14 | 275.00 | 139.47 | 137.98 | S 05°16'11" E | 29°03'31" |
| C15 | 25.00 | 40.22 | 36.02 | N 35°51'52" W | 92°10'41" |
| C16 | 275.00 | 52.85 | 52.80 | S 76°26'42" E | 11°01'01" |
| C17 | 25.00 | 37.34 | 33.96 | S 66°16'31" W | 85°34'36" |
| C18 | 425.00 | 54.50 | 54.46 | S 27°09'38" W | 7°20'49" |
| C19 | 425.00 | 130.32 | 129.81 | N 39°37'06" E | 17°34'07" |
| C20 | 425.00 | 144.78 | 144.08 | N 58°09'43" E | 19°51'07" |
| C21 | 425.00 | 35.89 | 35.88 | N 70°20'26" E | 4°50'19" |
| C22 | 25.00 | 24.62 | 23.64 | N 44°32'54" E | 56°25'22" |
| C23 | 75.00 | 83.65 | 79.38 | N 48°17'23" E | 63°54'20" |
| C24 | 75.00 | 121.41 | 108.58 | S 53°22'54" E | 92°45'07" |
| C25 | 75.00 | 93.48 | 87.55 | S 28°42'07" W | 71°24'55" |
| C26 | 75.00 | 93.94 | 87.92 | N 79°42'23" W | 71°46'06" |
| C27 | 25.00 | 28.11 | 26.65 | S 76°01'54" E | 64°25'10" |
| C28 | 375.00 | 138.50 | 137.71 | N 61°10'41" E | 21°09'39" |
| C29 | 375.00 | 50.15 | 50.11 | S 46°45'59" W | 7°39'44" |
| C30 | 375.00 | 127.29 | 126.68 | S 33°12'40" W | 19°26'54" |
| C31 | 25.00 | 35.43 | 32.54 | S 17°06'56" E | 81°12'18" |
| C32 | 375.00 | 292.52 | 285.16 | S 80°33'54" E | 44°41'38" |
| C33 | 50.00 | 46.36 | 44.72 | S 51°01'23" W | 53°07'48" |
| C34 | 75.00 | 84.96 | 80.49 | S 56°54'34" W | 64°54'12" |
| C35 | 75.00 | 71.85 | 69.14 | S 63°11'32" E | 54°53'34" |
| C36 | 75.00 | 58.95 | 57.45 | S 13°13'41" E | 45°02'08" |
| C37 | 75.00 | 95.68 | 89.32 | N 45°50'06" E | 73°05'28" |
| C38 | 75.00 | 63.27 | 61.41 | S 73°27'02" E | 48°20'15" |
| C39 | 50.00 | 46.36 | 44.72 | N 75°50'49" W | 53°07'48" |
| C40 | 425.00 | 94.41 | 94.72 | S 83°57'07" W | 12°43'41" |
| C41 | 425.00 | 136.43 | 135.85 | S 80°29'15" E | 18°23'35" |
| C42 | 425.00 | 100.68 | 100.44 | S 64°30'16" E | 13°34'23" |
| C43 | 225.00 | 95.17 | 94.46 | N 69°50'08" W | 24°14'07" |
| C44 | 25.00 | 38.32 | 34.68 | S 54°08'08" W | 87°49'19" |
| C45 | 470.60 | 71.06 | 70.99 | S 14°54'37" W | 83°39'06" |
| C46 | 470.60 | 136.76 | 136.28 | S 27°33'41" W | 16°39'02" |
| C47 | 230.60 | 178.08 | 173.69 | S 13°45'48" W | 44°14'47" |
| C48 | 200.00 | 166.53 | 161.76 | S 14°51'03" W | 47°42'28" |
| C49 | 150.00 | 124.90 | 121.32 | S 14°51'03" W | 47°42'28" |
| C50 | 280.60 | 216.85 | 211.49 | S 13°44'50" W | 44°16'43" |
| C51 | 420.60 | 185.74 | 184.23 | N 23°14'08" E | 25°18'07" |
| C52 | 225.00 | 347.47 | 313.95 | S 34°00'58" E | 88°28'54" |
| C53 | 275.00 | 193.70 | 189.72 | S 58°04'42" E | 40°21'28" |
| C54 | 220.60 | 275.27 | 237.66 | N 02°03'16" W | 71°41'24" |

CERTIFICATION:

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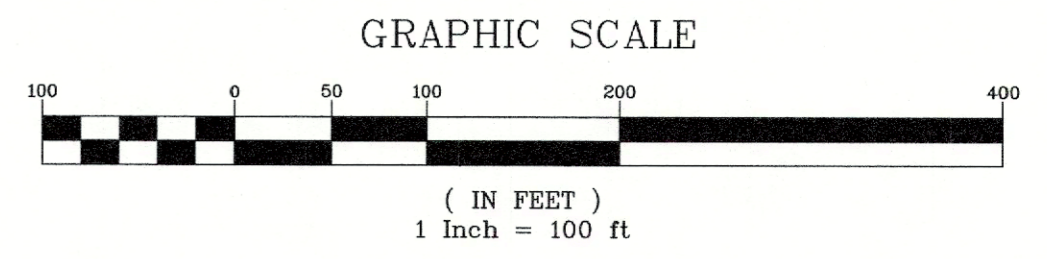


DAVID M. COLLIER, LLS 892
ON BEHALF OF JONES & BEACH ENGINEERS, INC.

DATE: 9/17/23

GENERAL LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|-------------------------|
| --- | --- | PROPERTY LINES |
| --- | --- | SETBACK LINES |
| --- | --- | EASEMENT |
| --- | --- | FRESHWATER WETLAND LINE |
| --- | --- | TREE LINE |
| --- | --- | FENCE |
| --- | --- | EDGE OF PAVEMENT |
| ○ | ● | IRON PIN |
| ○ | ● | DRILL HOLE |
| ■ | ■ | GRANITE BOUND |
| --- | --- | FRESHWATER WETLANDS |
| --- | --- | STONE WALL |



Design: JAC Draft: AJB Date: 4/15/21
 Checked: JAC Scale: AS NOTED Project No.: 14232.7
 Drawing Name: 14232.7-PLAN.dwg
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| REV. | DATE | ISSUED FOR REVIEW | BY |
|------|--------|-------------------|-----|
| 0 | 9/7/23 | ISSUED FOR REVIEW | LAZ |
| | | REVISION | |

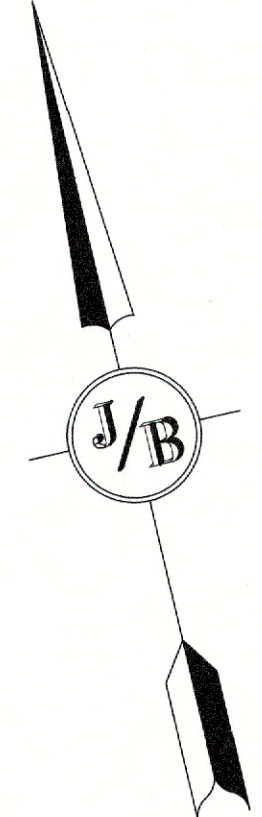
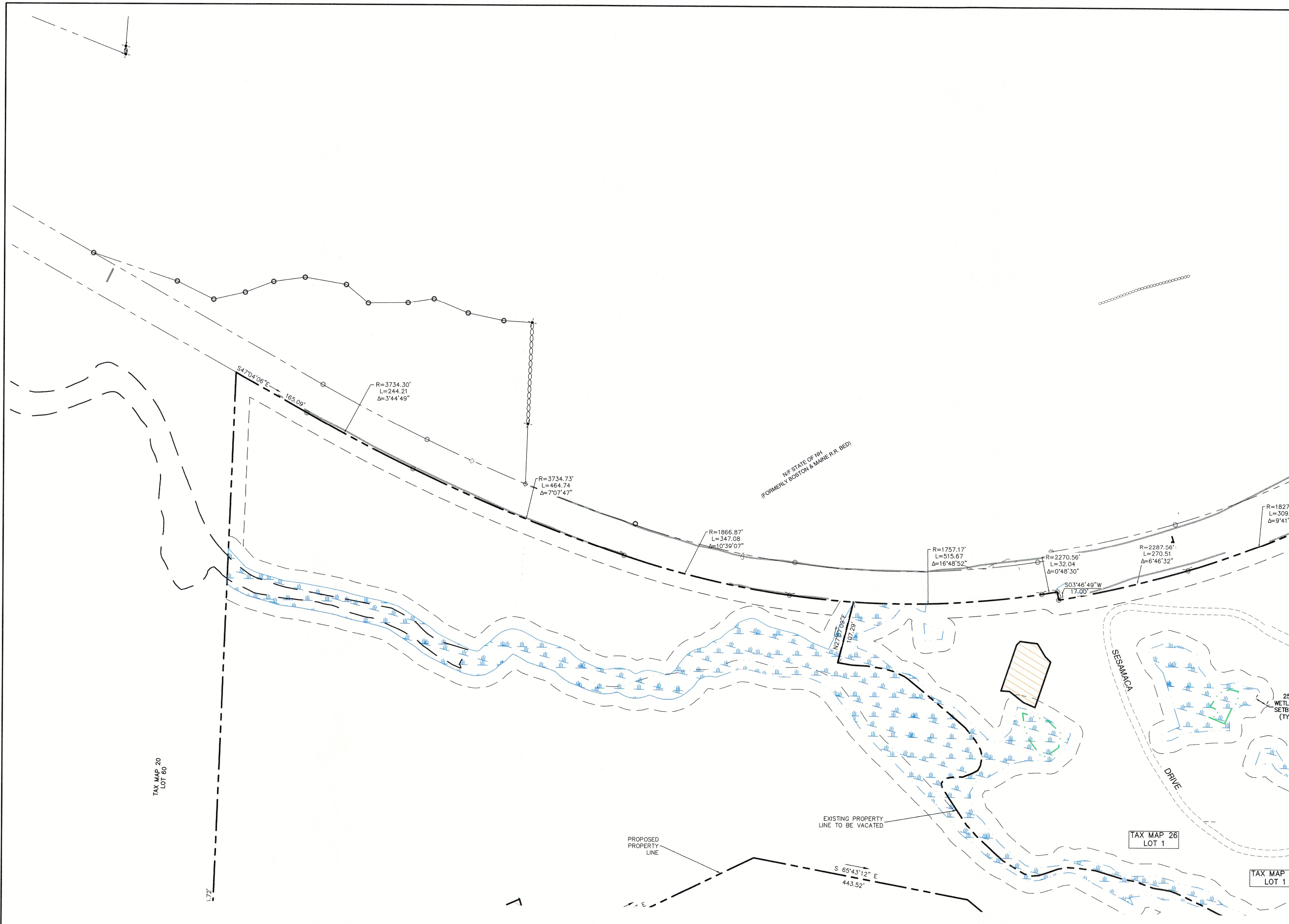
Designed and Produced in NH

J/B Jones & Beach Engineers, Inc.

85 Portsmouth Ave. Civil Engineering Services 603-772-4746
 PO Box 219 FAX: 603-772-0227
 Stratham, NH 03885 E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: CONSERVATION SUBDIVISION PLAN
 Project: 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE
 Owners: YAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063

DRAWING No. **A3**
 SHEET 13 OF 34
 JBE PROJECT NO. 14232.7



GENERAL LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|-------------------------|
| --- | --- | PROPERTY LINES |
| --- | --- | SETBACK LINES |
| --- | --- | EASEMENT |
| --- | --- | FRESHWATER WETLAND LINE |
| --- | --- | TREE LINE |
| --- | --- | FENCE |
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| ○ | ● | IRON PIN |
| □ | ■ | DRILL HOLE |
| --- | --- | GRANITE BOUND |
| --- | --- | FRESHWATER WETLANDS |
| --- | --- | STONE WALL |

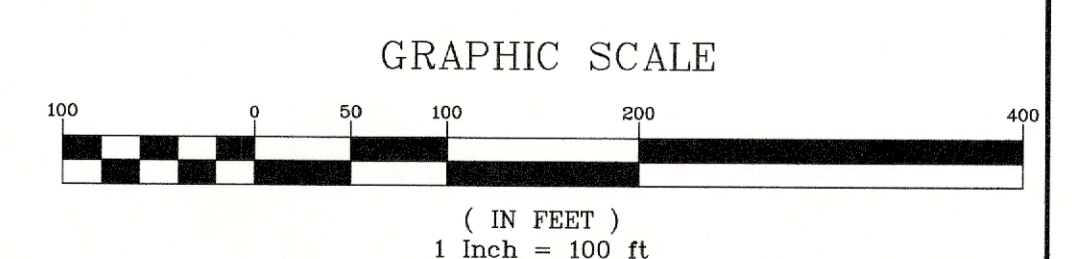
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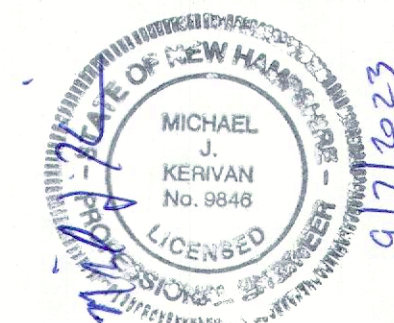
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DAVID M. COLLIER, LLS 892
 ON BEHALF OF JONES & BEACH ENGINEERS, INC.

9/7/23
 DATE:



| | | |
|---|-----------------|----------------------|
| Design: JAC | Draft: AJB | Date: 4/15/21 |
| Checked: JAC | Scale: AS NOTED | Project No.: 14232.7 |
| Drawing Name: 14232.7-PLAN.dwg | | |
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| REV. | DATE | REVISION | BY |
|------|--------|-------------------|-----|
| 0 | 9/7/23 | ISSUED FOR REVIEW | LAZ |

Designed and Produced in NH

J/B Jones & Beach Engineers, Inc.
 Civil Engineering Services

85 Portsmouth Ave. PO Box 219 Stratham, NH 03885

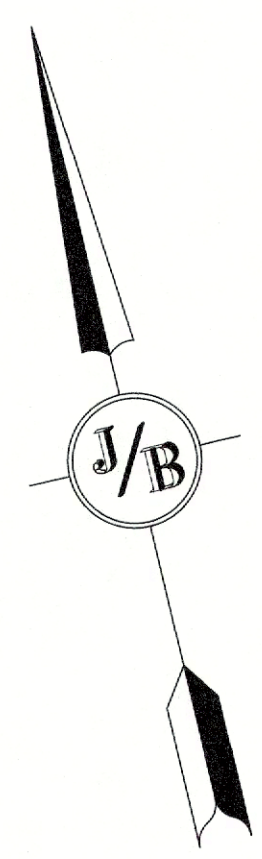
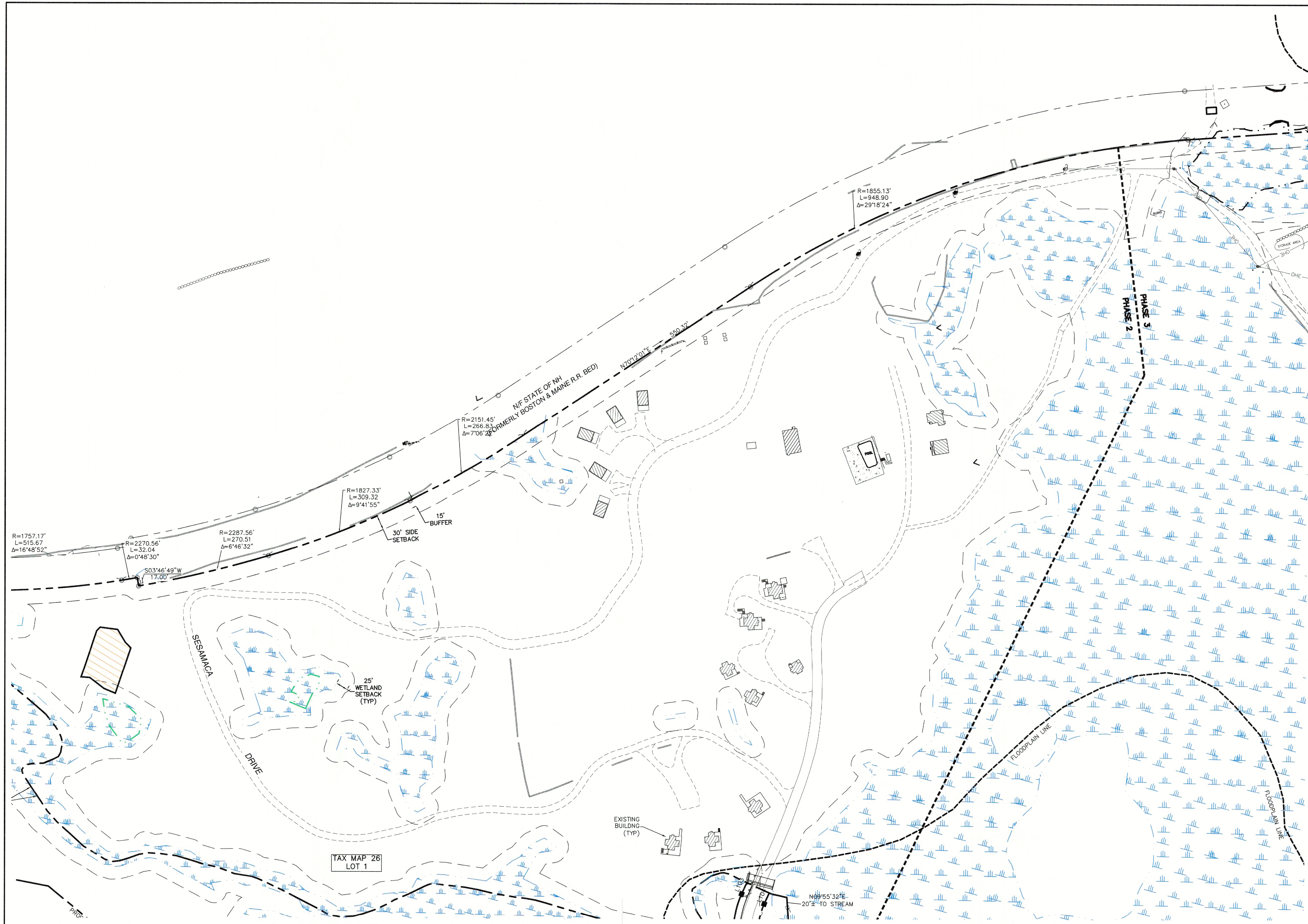
603-772-4746 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM

| | |
|------------|---|
| Plan Name: | CONSERVATION SUBDIVISION PLAN |
| Project: | 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE |
| Owners: | YAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 |

DRAWING No.

A5

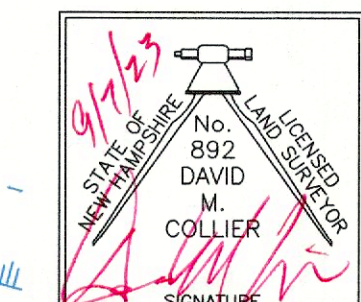
SHEET 15 OF 34
 JBE PROJECT NO. 14232.7



GENERAL LEGEND

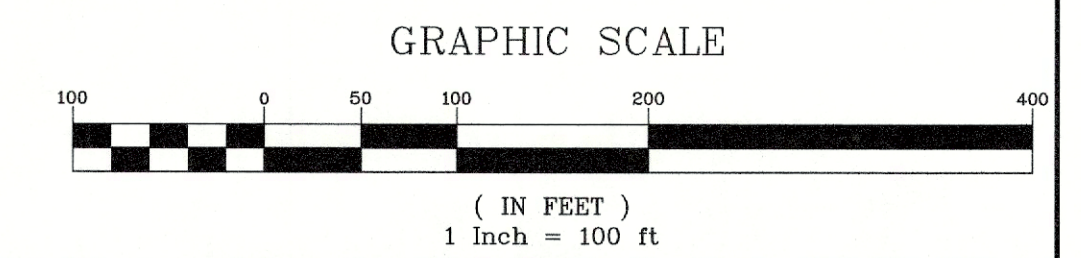
| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|-------------------------|
| --- | --- | PROPERTY LINES |
| --- | --- | SETBACK LINES |
| --- | --- | EASEMENT |
| --- | --- | FRESHWATER WETLAND LINE |
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| ○ | ● | IRON PIN |
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DAVID M. COLLIER, LLS 892
 ON BEHALF OF JONES & BEACH ENGINEERS, INC.

DATE: 9/7/23



| | | |
|---|-----------------|----------------------|
| Design: JAC | Draft: AJB | Date: 4/15/21 |
| Checked: JAC | Scale: AS NOTED | Project No.: 14232.7 |
| Drawing Name: 14232.7-PLAN.dwg | | |
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| REV. | DATE | REVISION | BY |
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| 0 | 9/7/23 | ISSUED FOR REVIEW | LAZ |

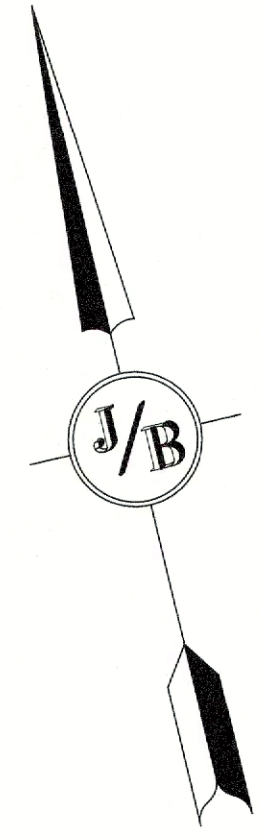
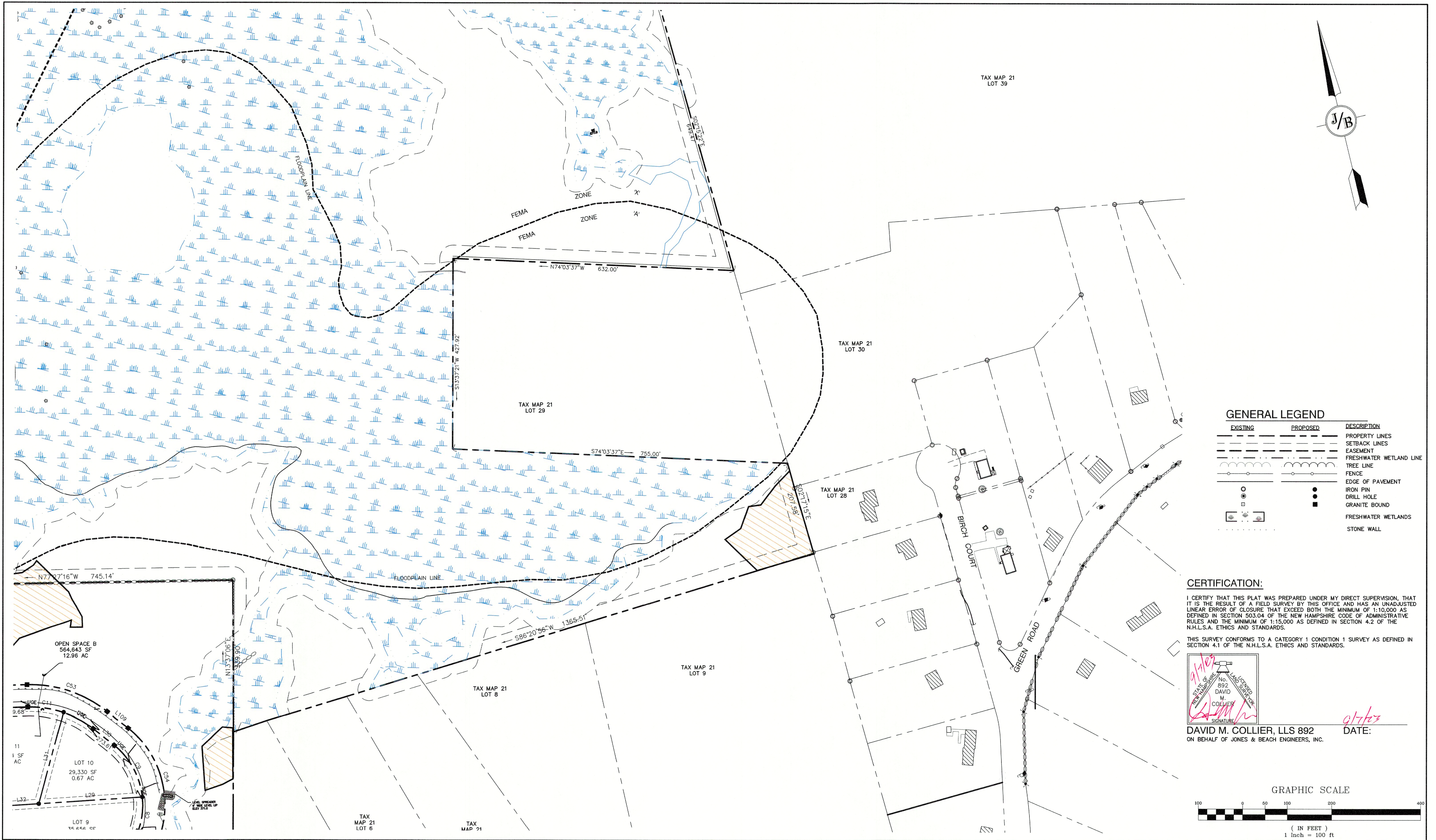
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| Plan Name: | CONSERVATION SUBDIVISION PLAN |
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| Owners: | YAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 |

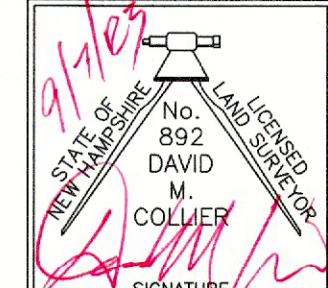
| | |
|----------------|-------------------------|
| DRAWING No. | A6 |
| SHEET 16 OF 34 | JBE PROJECT NO. 14232.7 |



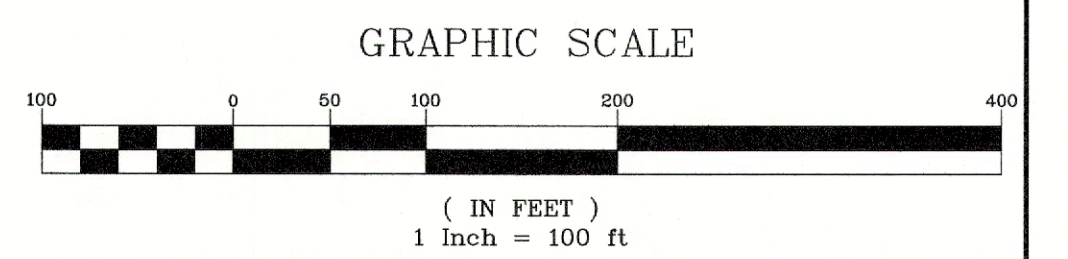
GENERAL LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|-------------------------|
| --- | --- | PROPERTY LINES |
| --- | --- | SETBACK LINES |
| --- | --- | EASEMENT |
| --- | --- | FRESHWATER WETLAND LINE |
| --- | --- | TREE LINE |
| --- | --- | FENCE |
| --- | --- | EDGE OF PAVEMENT |
| ○ | ○ | IRON PIN |
| ○ | ○ | DRILL HOLE |
| ■ | ■ | GRANITE BOUND |
| --- | --- | FRESHWATER WETLANDS |
| --- | --- | STONE WALL |

CERTIFICATION:
 I CERTIFY THAT THIS PLAT WAS PREPARED UNDER MY DIRECT SUPERVISION, THAT IT IS THE RESULT OF A FIELD SURVEY BY THIS OFFICE AND HAS AN UNADJUSTED LINEAR ERROR OF CLOSURE THAT EXCEEDS BOTH THE MINIMUM OF 1:10,000 AS DEFINED IN SECTION 503.04 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES AND THE MINIMUM OF 1:15,000 AS DEFINED IN SECTION 4.2 OF THE N.H.L.S.A. ETHICS AND STANDARDS.
 THIS SURVEY CONFORMS TO A CATEGORY 1 CONDITION 1 SURVEY AS DEFINED IN SECTION 4.1 OF THE N.H.L.S.A. ETHICS AND STANDARDS.




 DAVID M. COLLIER, LLS 892 DATE: 9/7/23
 ON BEHALF OF JONES & BEACH ENGINEERS, INC.



Design: JAC Draft: AJB Date: 4/15/21
 Checked: JAC Scale: AS NOTED Project No.: 14232.7
 Drawing Name: 14232.7-PLAN.dwg
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|------|--------|-------------------|-----|
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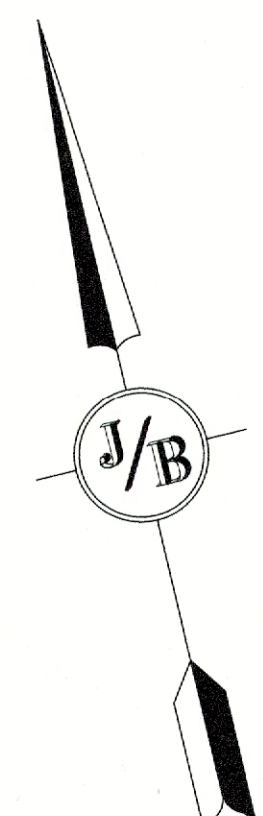
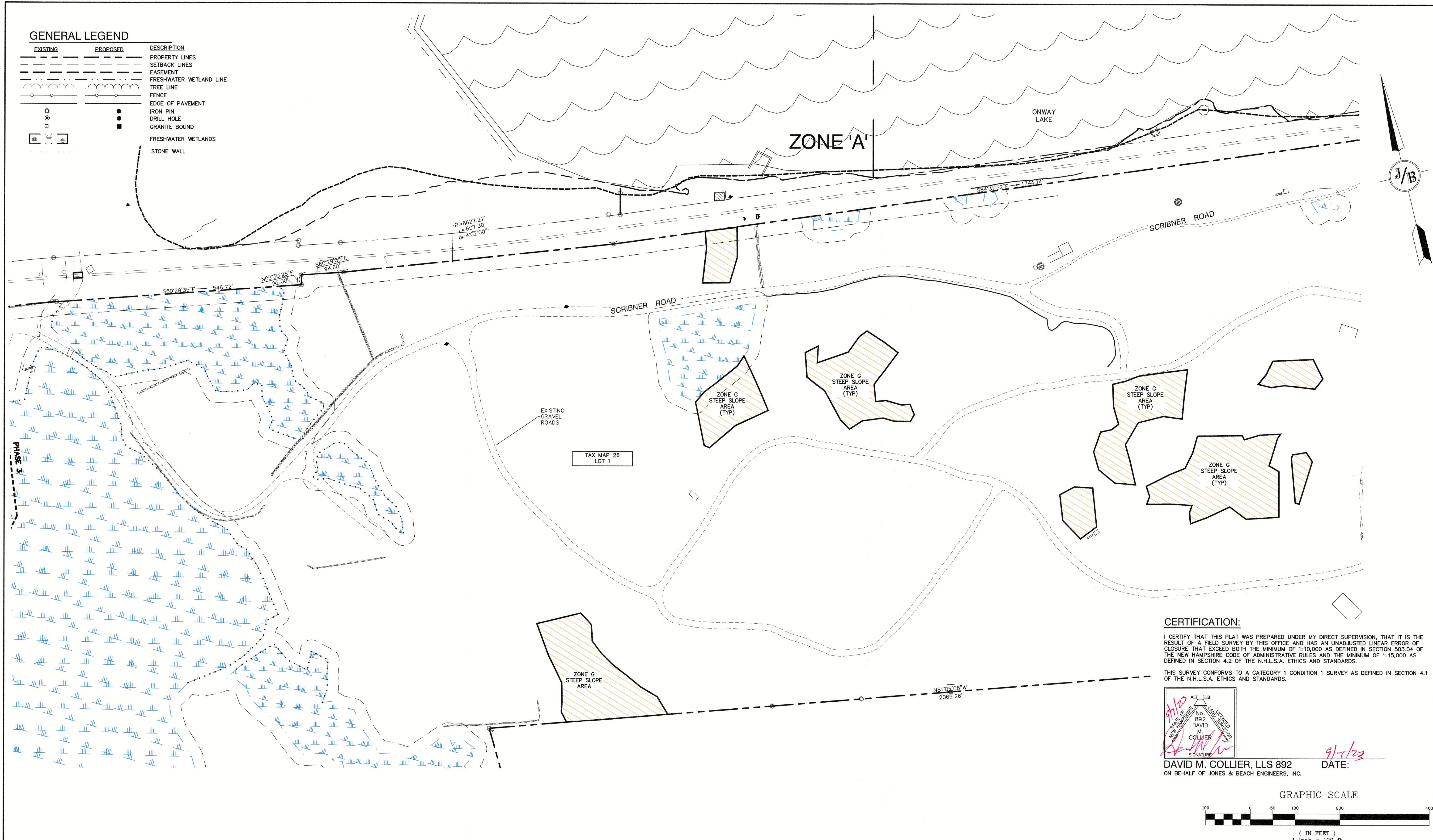

 Designed and Produced in NH
Jones & Beach Engineers, Inc.
 Civil Engineering Services
 85 Portsmouth Ave. PO Box 219 Stratham, NH 03885 603-772-4746 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM

| | |
|------------|---|
| Plan Name: | CONSERVATION SUBDIVISION PLAN |
| Project: | 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE |
| Owners: | YAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 |

DRAWING No.
A7
 SHEET 17 OF 34
 JBE PROJECT NO. 14232.7

GENERAL LEGEND

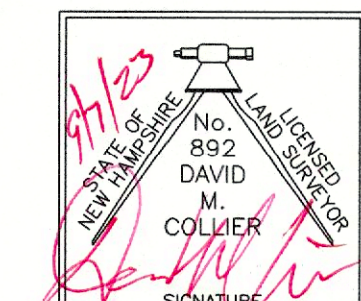
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| | | PROPERTY LINES |
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| | | EASEMENT |
| | | FRESHWATER WETLAND LINE |
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| | | GRANITE BOUND |
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| | | STONE WALL |



CERTIFICATION:

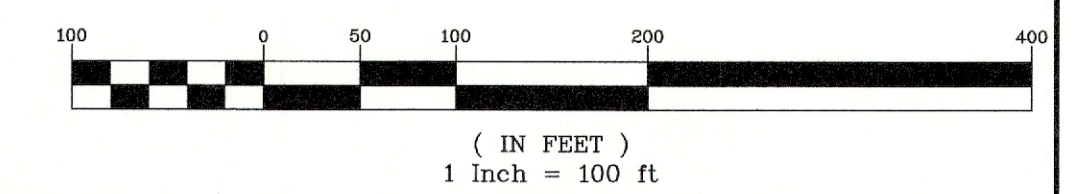
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THIS SURVEY CONFORMS TO A CATEGORY 1 CONDITION 1 SURVEY AS DEFINED IN SECTION 4.1 OF THE N.H.L.S.A. ETHICS AND STANDARDS.

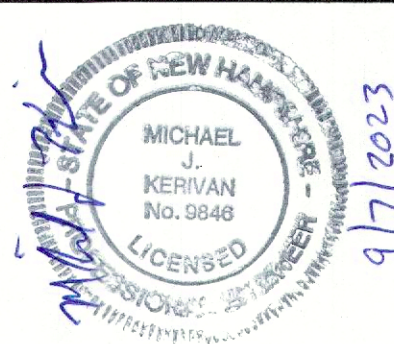


DAVID M. COLLIER, LLS 892 DATE: 9/7/23
ON BEHALF OF JONES & BEACH ENGINEERS, INC.

GRAPHIC SCALE



| | | |
|---|-----------------|----------------------|
| Design: JAC | Draft: AJB | Date: 4/15/21 |
| Checked: JAC | Scale: AS NOTED | Project No.: 14232.7 |
| Drawing Name: 14232.7-PLAN.dwg | | |
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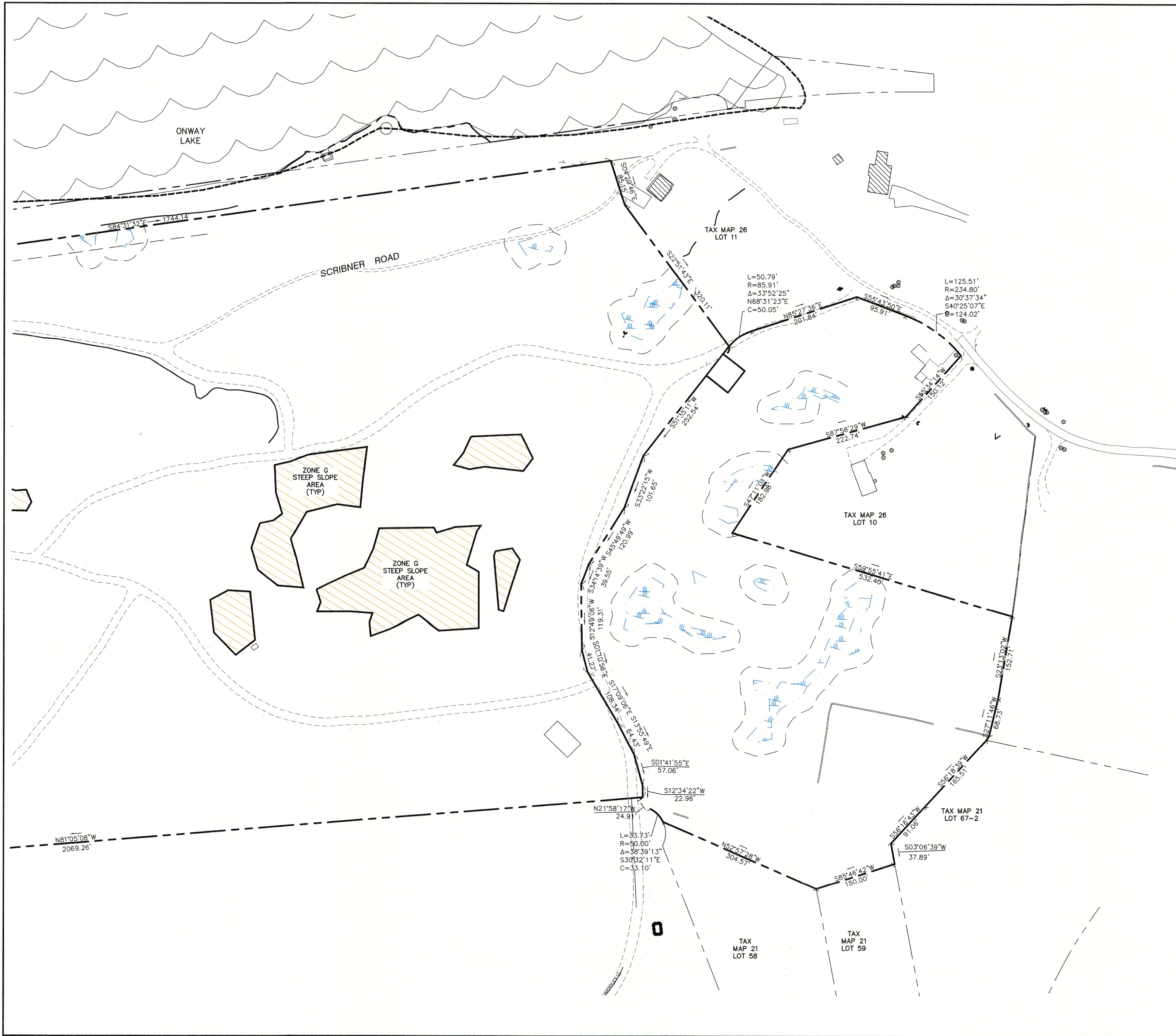


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|------|--------|-------------------|-----|
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 Civil Engineering Services
 85 Portsmouth Ave. PO Box 219 Stratham, NH 03885
 603-772-4746 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM

| | |
|------------|--|
| Plan Name: | CONSERVATION SUBDIVISION PLAN |
| Project: | 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE |
| Owners: | YAWN PROPERTIES, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 |

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| DRAWING No. | A8 |
| SHEET 18 OF 34 | JBE PROJECT NO. 14232.7 |



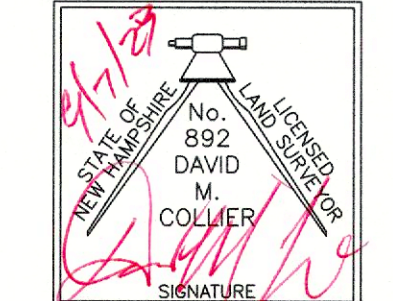
ABUTTERS:

- | | |
|---|---|
| <p>TAX MAP 20, LOT 59 HERBERT R. & JUDITH A. WILLIAMS 101 GREEN ROAD RAYMOND, NH 03077 BK 2669 PG 858</p> <p>20/60 STATE OF NEW HAMPSHIRE JOHN O. MORTON BLDG P.O. BOX 483 CONCORD, NH 03301</p> <p>21/1-1 LISA L. JEFFREY 3A SARGENT DRIVE RAYMOND, NH 03077 BK 6187 PG 1869</p> <p>21/1-2 JAMES R. ROBINSON & BETTY-ANN L. ARCHAMBAULT 38 SARGENT DRIVE RAYMOND, NH 03077 BK 4400 PG 1463</p> <p>21/2 JACOB PALMER 4 FENG DRIVE RAYMOND, NH 03077 BK 6154 PG 300</p> <p>21/3 DAVID R. & DENISE M. BRUSCATO P.O. BOX 421 RAYMOND, NH 03077 BK 3186 PG 2169</p> <p>21/4 AUDRA L. VIOLLOTTE 8 FENG DRIVE RAYMOND, NH 03077 BK 5932 PG 650</p> <p>21/5 DUMONT FAMILY TRUST OF 2018 LAWRENCE J. & MARGARET DUMOT, TRUSTEES 10 FENG DRIVE RAYMOND, NH 03044 BK 5959 PG 661</p> <p>21/6 NORMAN ERIC LORD SAMANTHA ANN BRAGG-LORD 12 FENG DRIVE RAYMOND, NH 03077 BK 3521 PG 1209</p> <p>21/7 NICHOLAS HOLLINS SAMANTHA TOOMEY 14 FENG DRIVE RAYMOND, NH 03077 BK 6019 PG 113</p> <p>21/8 KRIZEL CRABB JASON NANETTE HINOJALES 16 FENG DRIVE RAYMOND, NH 03077 BK 5940 PG 2669</p> <p>21/9 DEBRA A. & FRANK D. RADIGAN 15 FENG DRIVE RAYMOND, NH 03077 BK 5745 PG 2877</p> <p>21/27 T AND D IVERSON 2016 TRUST THOMAS F. & DIANE M. IVERSON, TRUSTEES 8 BIRCH COURT RAYMOND, NH 03077 BK 5763 PG 2783</p> | <p>21/28 FRIZZLE FAMILY REVOCABLE TRUST OF 2005 BRUCE A. & CHERYL P. FRIZZLE, TRUSTEES 8 BIRCH COURT RAYMOND, NH 03077 BK 4581 PG 2840</p> <p>21/29 TOWN OF RAYMOND 4 EPPING STREET RAYMOND, NH 03077 BK 2371 PG 1733</p> <p>21/30 TOWN OF RAYMOND 4 EPPING STREET RAYMOND, NH 03077 BK 2429 PG 1363</p> <p>21/39 DIFEO & BROGNA, LLC 270 11TH SQ. SW VERO BEACH, FL 32962 BK 4512 PG 863</p> <p>21/57 KENNETH M. BRUNO 17 GREEN ROAD RAYMOND, NH 03077 BK 4510 PG 1165</p> <p>21/58 CRAIG P. & SHANNON F. BOSWORTH 15 GREEN ROAD RAYMOND, NH 03077 BK 3794 PG 493</p> <p>21/59 JOHN M. JENKINS 13 GREEN ROAD RAYMOND, NH 03077 BK 4356 PG 93</p> <p>21/60 STEPHEN & DEBRA HARWOOD 11 GREEN ROAD RAYMOND, NH 03077 BK 2764 PG 1326</p> <p>21/67-1 WILLIAM J. FRISBEE 32 SCRIBNER ROAD RAYMOND, NH 03077 BK 5470 PG 2819</p> <p>21/67-2 CHRISTOPHER W. & KOREAN D. EAGAN 34 SCRIBNER ROAD RAYMOND, NH 03077 BK 6048 PG 1790</p> <p>25/11 TOWN OF RAYMOND 4 EPPING STREET RAYMOND, NH 03077 BK 3447 PG 208</p> <p>26/5 SHAUN & JAMIE L. BILODEAU 37 SCRIBNER ROAD RAYMOND, NH 03077 BK 5959 PG 397</p> <p>26/10 ROBERT & COLLEEN SENEAL 36 SCRIBNER ROAD RAYMOND, NH 03077 BK 4011 PG 2686</p> <p>26/11 MARIANNA SOVIC 10 HANOVER STREET NASHUA, NH 03060 BK 6426 PG 1050</p> |
|---|---|

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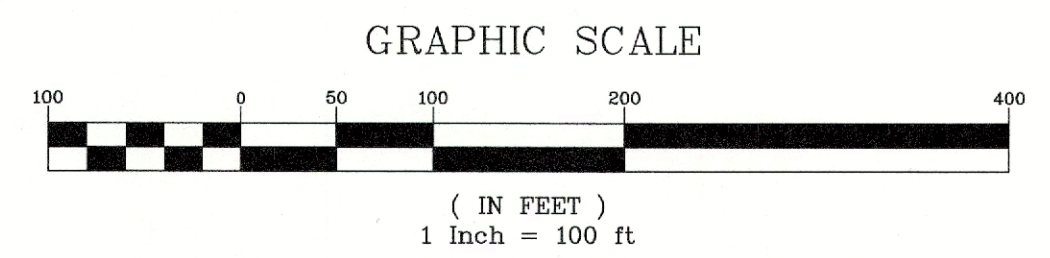


DAVID M. COLLIER, LLS 892
ON BEHALF OF JONES & BEACH ENGINEERS, INC.

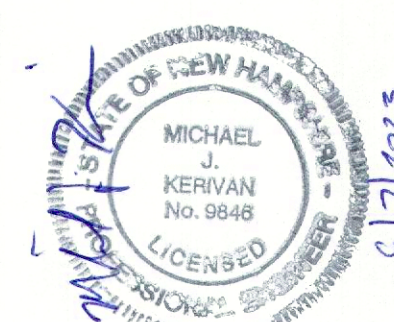
DATE: 9/7/23

GENERAL LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|-------------------------|
| --- | --- | PROPERTY LINES |
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| ○ | ● | DRILL HOLE |
| □ | ■ | GRANITE BOUND |
| --- | --- | FRESHWATER WETLANDS |
| --- | --- | STONE WALL |



Design: JAC | Draft: AJB | Date: 4/15/21
 Checked: JAC | Scale: AS NOTED | Project No.: 14232.7
 Drawing Name: 14232.7-PLAN.dwg
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| 0 | 9/7/23 | ISSUED FOR REVIEW | LAZ |
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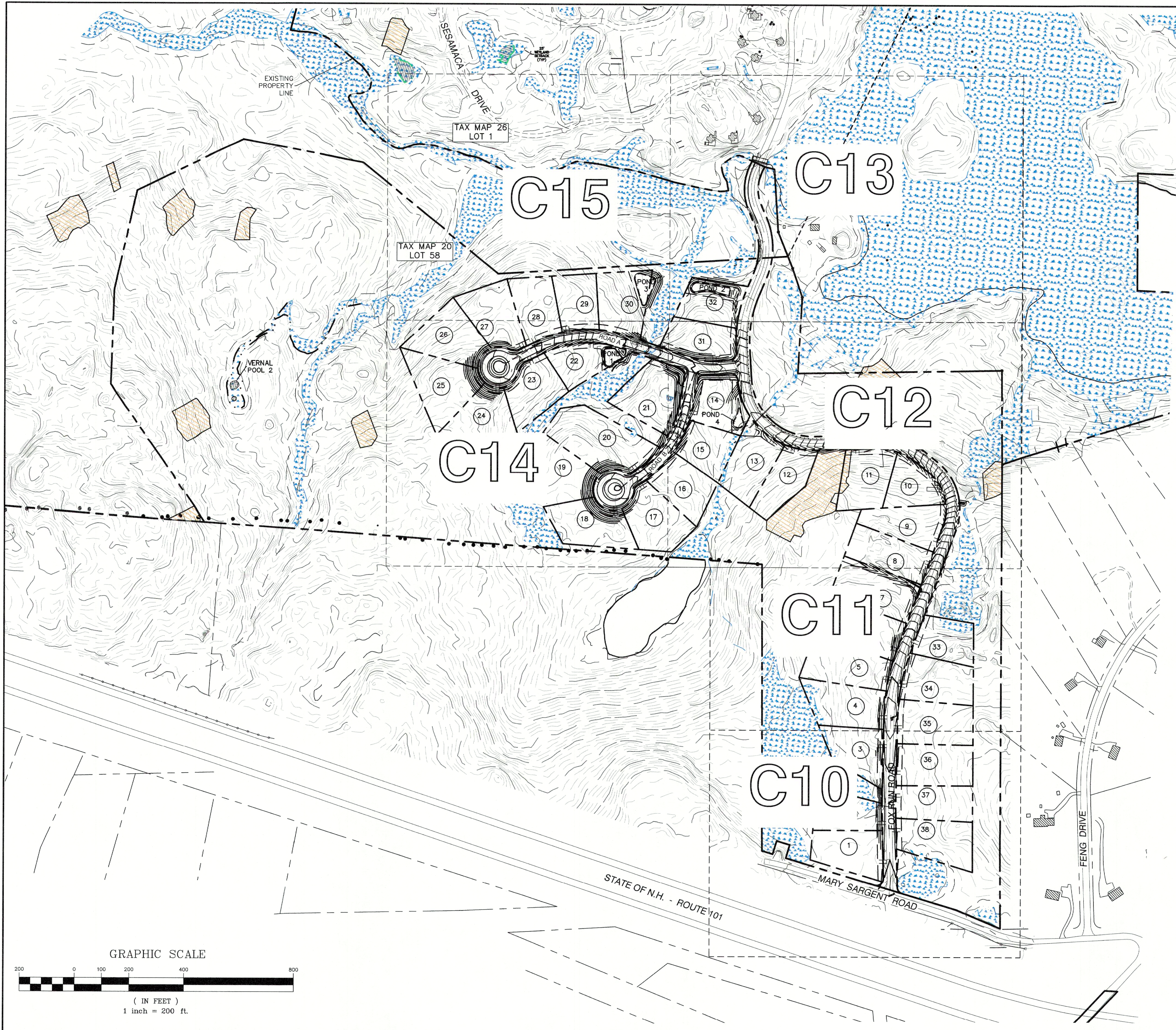
Designed and Produced in NH

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85 Portsmouth Ave. | Civil Engineering Services | 603-772-4746
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 E-MAIL: JBE@JONESANDBEACH.COM

| | |
|------------|--|
| Plan Name: | CONSERVATION SUBDIVISION PLAN |
| Project: | 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE |
| Owners: | YAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 |

DRAWING No.
A9
SHEET 19 OF 34
JBE PROJECT NO. 14232.7



GRADING AND DRAINAGE NOTES:

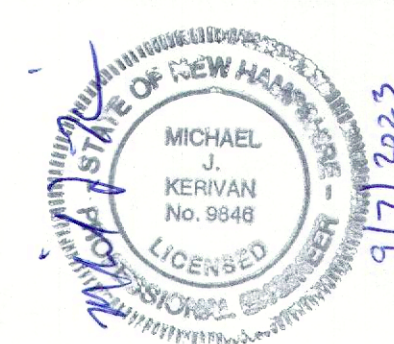
- THIS SITE WILL REQUIRE A USEPA NPDES PERMIT FOR STORMWATER DISCHARGE FOR THE CONSTRUCTION SITE. THE CONSTRUCTION SITE OPERATOR SHALL DEVELOP AND IMPLEMENT A CONSTRUCTION STORM WATER POLLUTION PREVENTION PLAN (SWPPP), WHICH SHALL REMAIN ON SITE AND BE MADE ACCESSIBLE TO THE PUBLIC. THE CONSTRUCTION SITE OPERATOR SHALL SUBMIT A NOTICE OF INTENT (NOI) TO THE EPA REGIONAL OFFICE SEVEN DAYS PRIOR TO COMMENCEMENT OF ANY WORK ON SITE. EPA WILL POST THE NOI AT WWW.EPA.GOV/NPDES/STORMWATER/NOI/NOISEARCH.CFM. AUTHORIZATION IS GRANTED UNDER THE PERMIT ONCE THE NOI IS SHOWN IN "ACTIVE" STATUS ON THIS WEBSITE. A COMPLETED NOTICE OF TERMINATION SHALL BE SUBMITTED TO THE NPDES PERMITTING AUTHORITY WITHIN 30 DAYS AFTER EITHER OF THE FOLLOWING CONDITIONS HAVE BEEN MET:
 - FINAL STABILIZATION HAS BEEN ACHIEVED ON ALL PORTIONS OF THE SITE FOR WHICH THE PERMITTEE IS RESPONSIBLE; OR
 - ANOTHER OPERATOR/PERMITTEE HAS ASSUMED CONTROL OVER ALL AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED. PROVIDE DPW WITH A COPY OF THE NOTICE OF TERMINATION (NOT).
- IF THIS CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 85 % MATURE VEGETATION COVER, OR RIPRAP BY OCTOBER 15, THEN THE SITE MUST BE PROTECTED WITH OVER-WINTER STABILIZATION. THE WINTER CONSTRUCTION PERIOD IS FROM OCTOBER 15 THROUGH MAY 15. WINTER EXCAVATION AND EARTHWORK ACTIVITIES SHALL BE LIMITED IN EXTENT AND DURATION, TO MINIMIZE POTENTIAL EROSION AND SEDIMENTATION IMPACTS.
- UNDERGROUND FACILITIES, UTILITIES AND STRUCTURES HAVE BEEN PLOTTED FROM FIELD OBSERVATION AND THEIR LOCATION MUST BE CONSIDERED APPROXIMATE ONLY. NEITHER JONES & BEACH ENGINEERS, INC., NOR ANY OF THEIR EMPLOYEES TAKE RESPONSIBILITY FOR THE LOCATION OF ANY UNDERGROUND STRUCTURES AND/OR UTILITIES NOT SHOWN THAT MAY EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL UNDERGROUND STRUCTURES AND/OR UTILITIES LOCATED PRIOR TO EXCAVATION WORK BY CALLING 888-DIG-SAFE (888-344-7233).
- ALL BENCHMARKS AND TOPOGRAPHY SHOULD BE FIELD VERIFIED BY THE CONTRACTOR.
- SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED. SEE CONSTRUCTION SEQUENCE ON SHEET E1.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR IS REQUIRED TO HAVE THE PROJECT'S LAND SURVEYOR STAKE OR FLAG CLEARING LIMITS. A MINIMUM OF 48 HOURS NOTICE IS REQUIRED.
- ALL SWALES AND DETENTION PONDS ARE TO BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
- PROPOSED RIM ELEVATIONS OF DRAINAGE STRUCTURES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH WITH FINISH GRADES.
- ALL SWALES AND ANY SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH NORTH AMERICAN GREEN S75 EROSION CONTROL BLANKETS (OR AN EQUIVALENT APPROVED IN WRITING BY THE ENGINEER), UNLESS OTHERWISE SPECIFIED.
- ALL DRAINAGE AND SANITARY STRUCTURE INTERIOR DIAMETERS (4' MIN) SHALL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON THESE PLANS. CATCH BASINS SHALL HAVE 3' DEEP SUMPS WITH GREASE HOODS, UNLESS OTHERWISE NOTED.
- ALL DRAINAGE STRUCTURES SHALL BE PRECAST, UNLESS OTHERWISE SPECIFIED.
- ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC H20 LOADING AND SHALL BE INSTALLED ACCORDINGLY.
- ALL DRAINAGE PIPE SHALL BE NON-PERFORATED ADS N-12 OR APPROVED EQUAL.
- STONE INLET PROTECTION SHALL BE PLACED AT ALL CATCH BASINS. SEE DETAIL WITHIN THE DETAIL SHEETS.
- LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY ALL GOVERNING AUTHORITIES. THE GENERAL CONTRACTOR SHALL STRICTLY ADHERE TO THE EPA SWPPP DURING CONSTRUCTION OPERATIONS.
- ALL EXPOSED AREAS SHALL BE SEEDED AS SPECIFIED WITHIN 3 DAYS OF FINAL GRADING AND ANYTIME CONSTRUCTION STOPS FOR LONGER THAN 3 DAYS.
- MAINTAIN EROSION CONTROL MEASURES AFTER EACH RAIN EVENT OF 0.5" OR GREATER IN A 24 HOUR PERIOD AND AT LEAST ONCE A WEEK.
- THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE, AS THE GENERAL CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SEDIMENT FROM LEAVING THE SITE.
- CONSTRUCTION VEHICLES SHALL UTILIZE THE STABILIZED CONSTRUCTION ENTRANCE TO THE EXTENT POSSIBLE THROUGHOUT CONSTRUCTION.
- IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
- SEDIMENT SHALL BE REMOVED FROM ALL SEDIMENT BASINS BEFORE THEY ARE 25% FULL.
- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH PROJECT SPECIFICATIONS.
- ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED, IF DEEMED NECESSARY BY ON-SITE INSPECTION BY ENGINEER AND/OR REGULATORY OFFICIALS.
- SEE ALSO EROSION AND SEDIMENT CONTROL SPECIFICATIONS ON SHEET E1.

UTILITY NOTES:

- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER, ARCHITECT AND/OR OWNER, IN ORDER TO OBTAIN AND/OR PAY ALL THE NECESSARY LOCAL PERMITS, CONNECTION FEES AND BONDS.
- THE CONTRACTOR SHALL PROVIDE A MINIMUM NOTICE OF FOURTEEN (14) DAYS TO ALL CORPORATIONS, COMPANIES AND/OR LOCAL AUTHORITIES OWNING OR HAVING A JURISDICTION OVER UTILITIES RUNNING TO, THROUGH OR ACROSS PROJECT AREAS PRIOR TO DEMOLITION AND/OR CONSTRUCTION ACTIVITIES.
- THE LOCATION, SIZE, DEPTH AND SPECIFICATIONS FOR CONSTRUCTION OF PROPOSED PRIVATE UTILITY SERVICES SHALL BE TO THE STANDARDS AND REQUIREMENTS OF THE RESPECTIVE UTILITY COMPANY (ELECTRIC, TELEPHONE, CABLE TELEVISION, FIRE ALARM, GAS, WATER, AND SEWER).
- A PRECONSTRUCTION MEETING SHALL BE HELD WITH THE OWNER, ENGINEER, ARCHITECT, CONTRACTOR, LOCAL OFFICIALS, AND ALL PROJECT-RELATED UTILITY COMPANIES (PUBLIC AND PRIVATE) PRIOR TO START OF CONSTRUCTION.
- ALL CONSTRUCTION SHALL CONFORM TO THE CITY STANDARDS AND REGULATIONS, AND NHDES STANDARDS AND SPECIFICATIONS, WHICHEVER ARE MORE STRINGENT, UNLESS OTHERWISE SPECIFIED.
- ALL CONSTRUCTION ACTIVITIES SHALL CONFORM TO LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS.
- BUILDINGS TO BE SERVICED BY UNDERGROUND UTILITIES UNLESS OTHERWISE NOTED.
- THE CONTRACTOR IS TO VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITY STUBS PRIOR TO CONSTRUCTION AND DISCONNECT ALL EXISTING SERVICE CONNECTIONS AT THEIR RESPECTIVE MAINS IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANY'S STANDARDS AND SPECIFICATIONS. ENGINEER TO BE NOTIFIED.
- AS-BUILT PLANS SHALL BE SUBMITTED TO DEPARTMENT OF PUBLIC WORKS.
- FRAMES AND COVERS: MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30 INCH DIA. CLEAR OPENING. THE WORD "DRAIN" SHALL BE CAST INTO THE CENTER OF THE UPPER FACE OF EACH COVER WITH RAISED, 3" LETTERS.
- PROPOSED RIM ELEVATIONS OF DRAINAGE MANHOLES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH WITH FINISH GRADES.
- CONTRACTOR TO FURNISH SHOP DRAWINGS FOR UTILITY RELATED ITEMS TO ENSURE CONFORMANCE WITH THE PLANS AND SPECIFICATIONS. SHOP DRAWINGS SHOULD BE SENT IN TRIPLICATE TO THE DESIGN ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
- EXISTING UTILITIES SHALL BE DISASSED BEFORE CONSTRUCTION.
- ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.

Design: JAC Draft: AJB Date: 4/15/21
 Checked: JAC Scale: AS NOTED Project No.: 14232.7
 Drawing Name: 14232.7-PLAN.dwg

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 E-MAIL: JBE@JONESANDBEACH.COM

| | |
|------------|--|
| Plan Name: | OVERVIEW GRADING AND DRAINAGE PLAN |
| Project: | 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE |
| Owners: | YAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 2ND FLOOR, SUITE 1, NASHUA, NH 03063 |

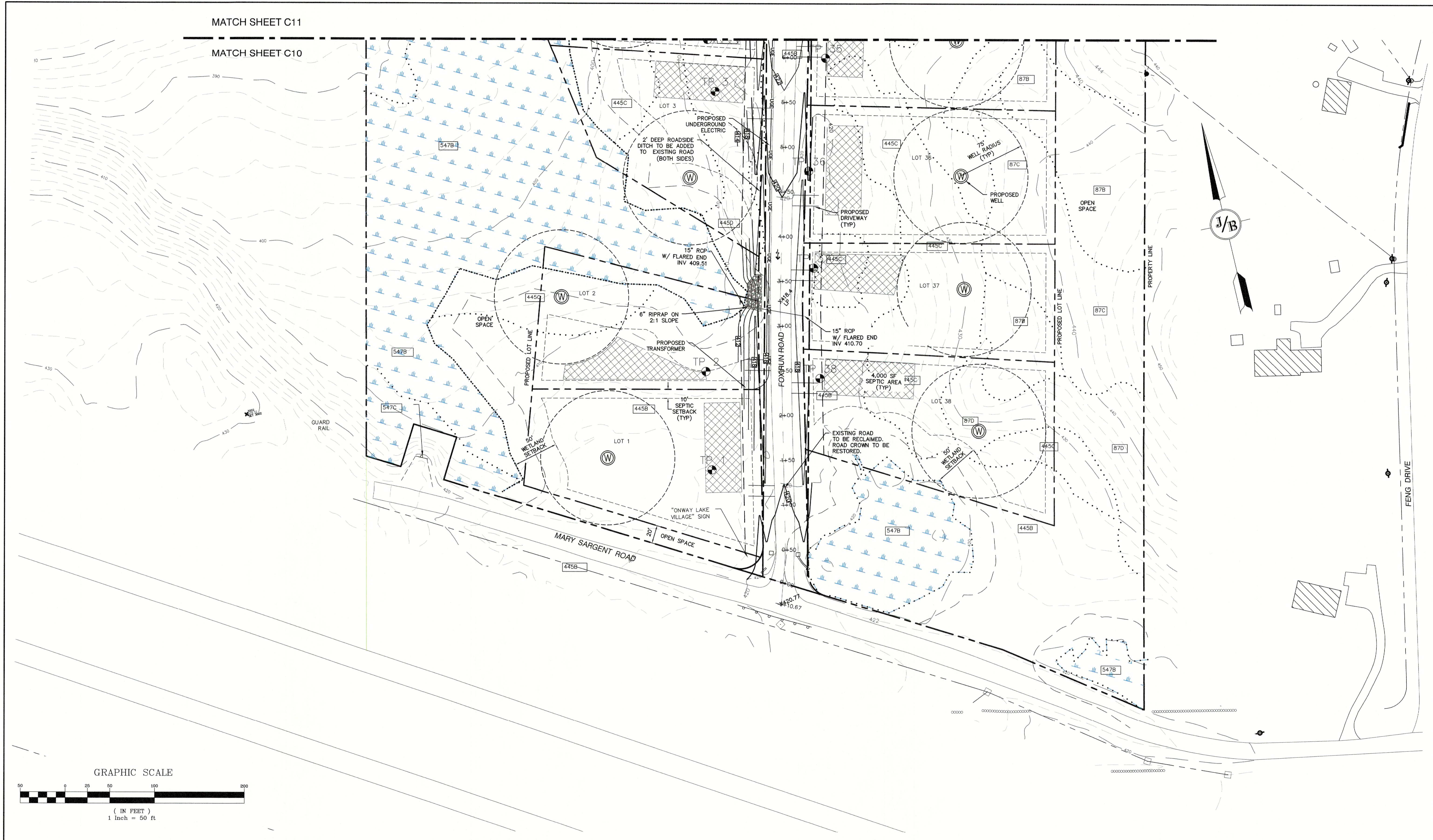
DRAWING No.

C9

SHEET 20 OF 34
 JBE PROJECT NO. 14232.7

MATCH SHEET C11

MATCH SHEET C10



GRAPHIC SCALE



(IN FEET)
1 Inch = 50 ft

Design: JAC Draft: AJB Date: 4/15/21
 Checked: JAC Scale: AS NOTED Project No.: 14232.7
 Drawing Name: 14232.7-PLAN.dwg

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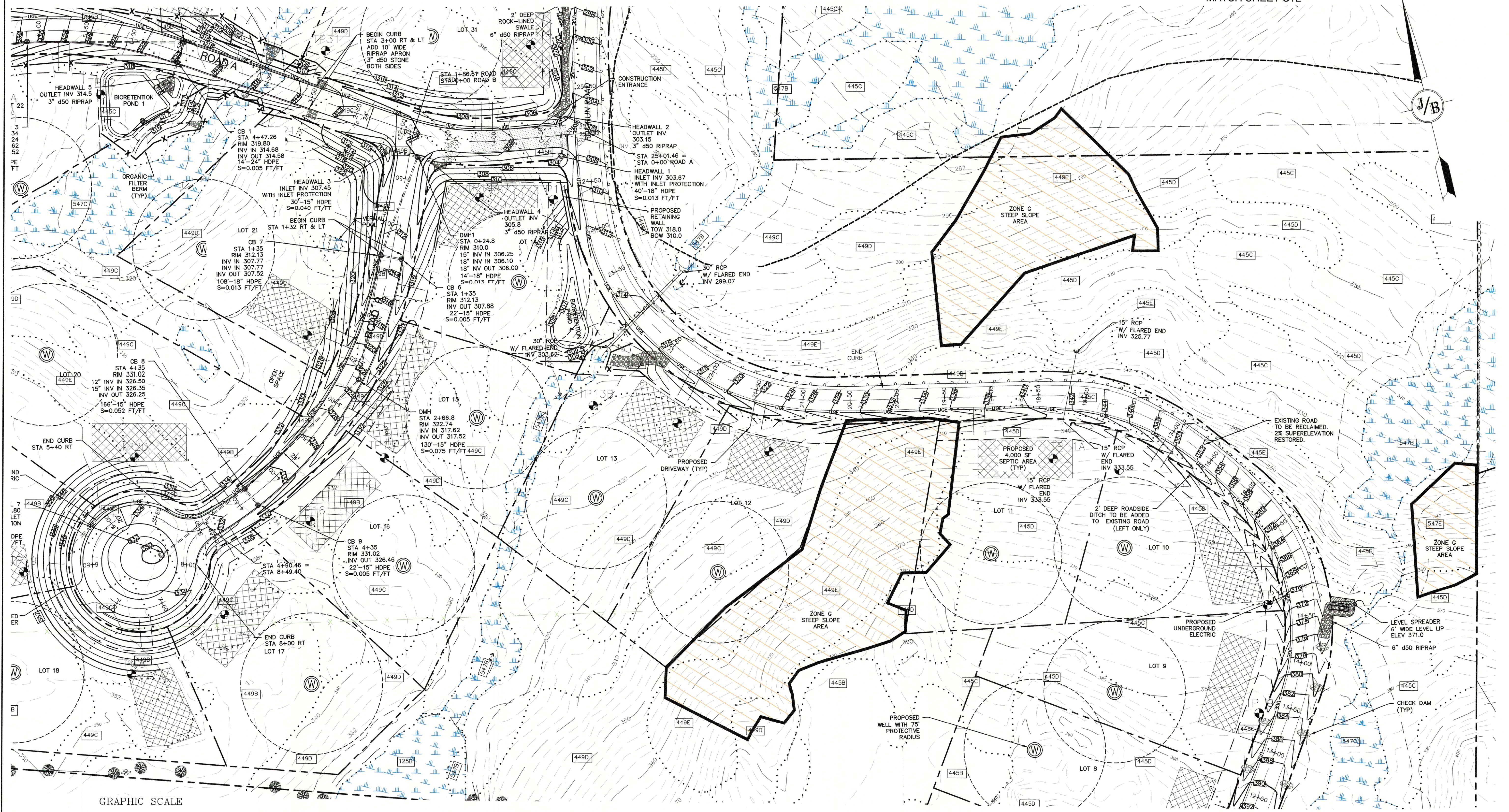
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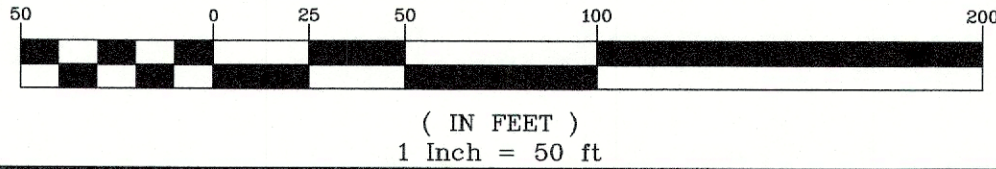
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| Plan Name: | GRADING AND DRAINAGE PLAN |
| Project: | 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE |
| Owners: | YAWNO PROPERTIES, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 |

DRAWING No.
C10
 SHEET 21 OF 34
 JBE PROJECT NO. 14232.7

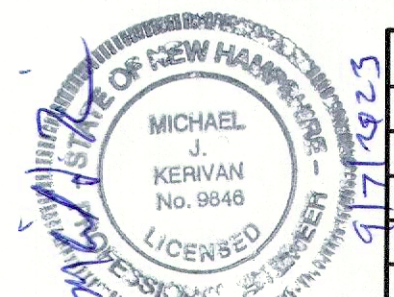


GRAPHIC SCALE



Design: JAC Draft: AJB Date: 4/15/21
 Checked: JAC Scale: AS NOTED Project No.: 14232.7
 Drawing Name: 14232.7-PLAN.dwg

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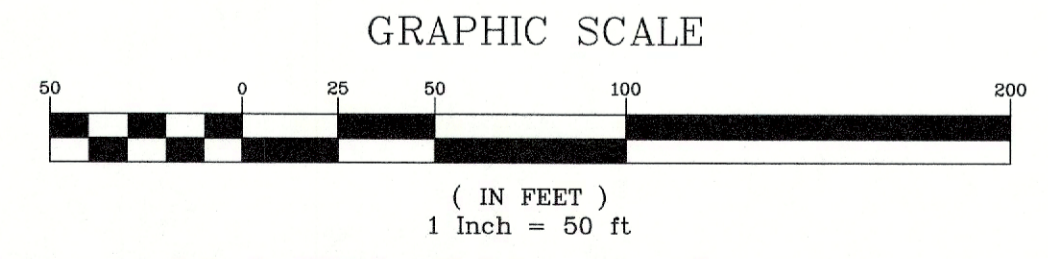
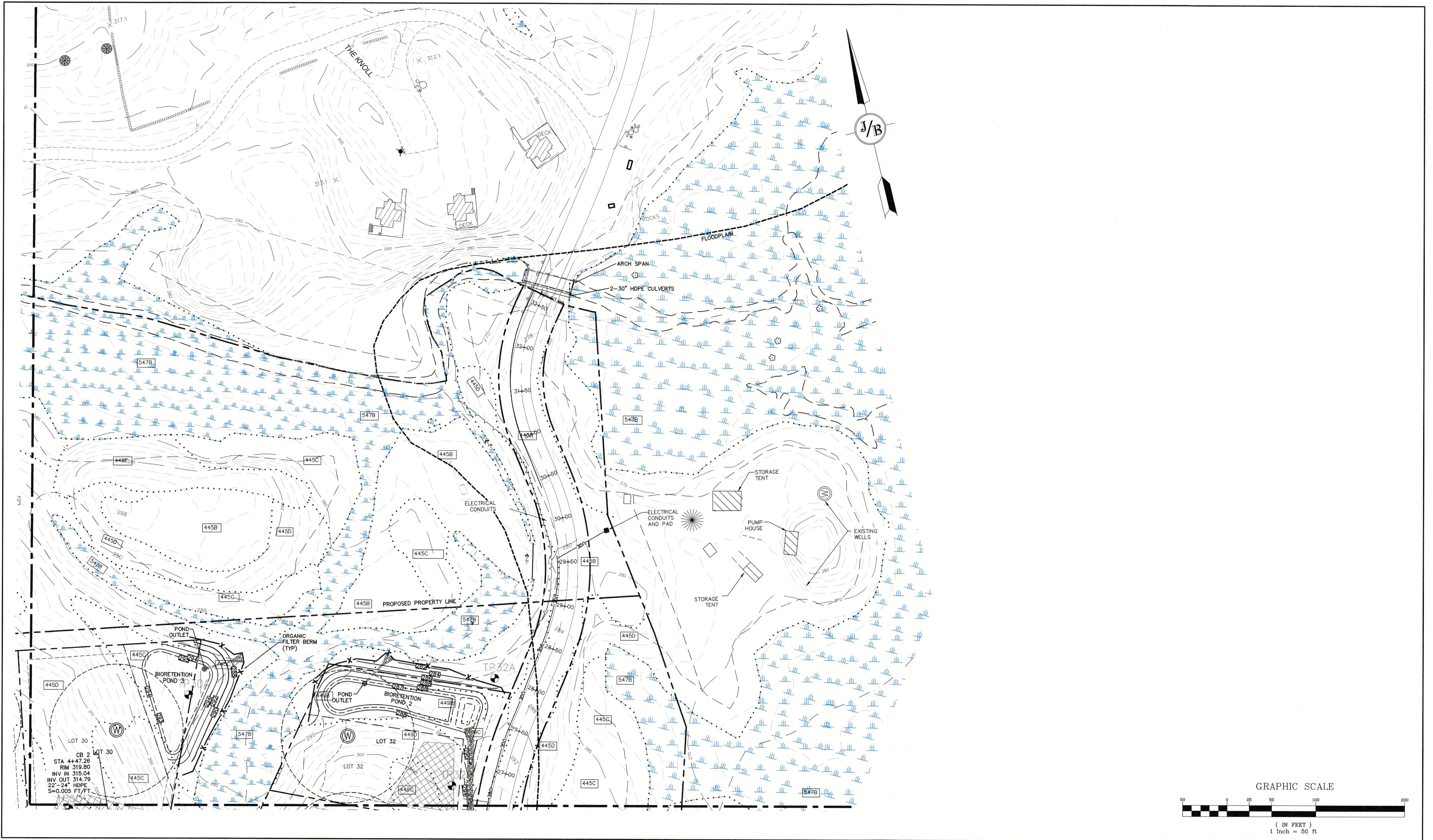
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J/B Jones & Beach Engineers, Inc.

85 Portsmouth Ave. Civil Engineering Services 603-772-4746
 PO Box 219 Stratham, NH 03885 FAX: 603-772-0227
 E-MAIL: JBE@JONESANDBEACH.COM

| | |
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| Plan Name: | GRADING AND DRAINAGE PLAN |
| Project: | 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE |
| Owners: | YAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 2ND FLOOR, SUITE 1, NASHUA, NH 03063 |

DRAWING No.
C12
 SHEET 23 OF 34
 JBE PROJECT NO. 14232.7



Design: JAC Draft: AJB Date: 4/15/21
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 Drawing Name: 14232.7-PLAN.dwg

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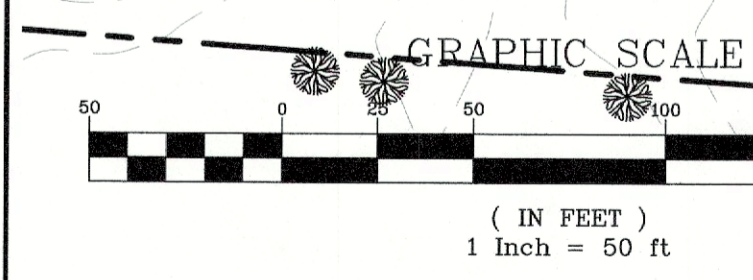
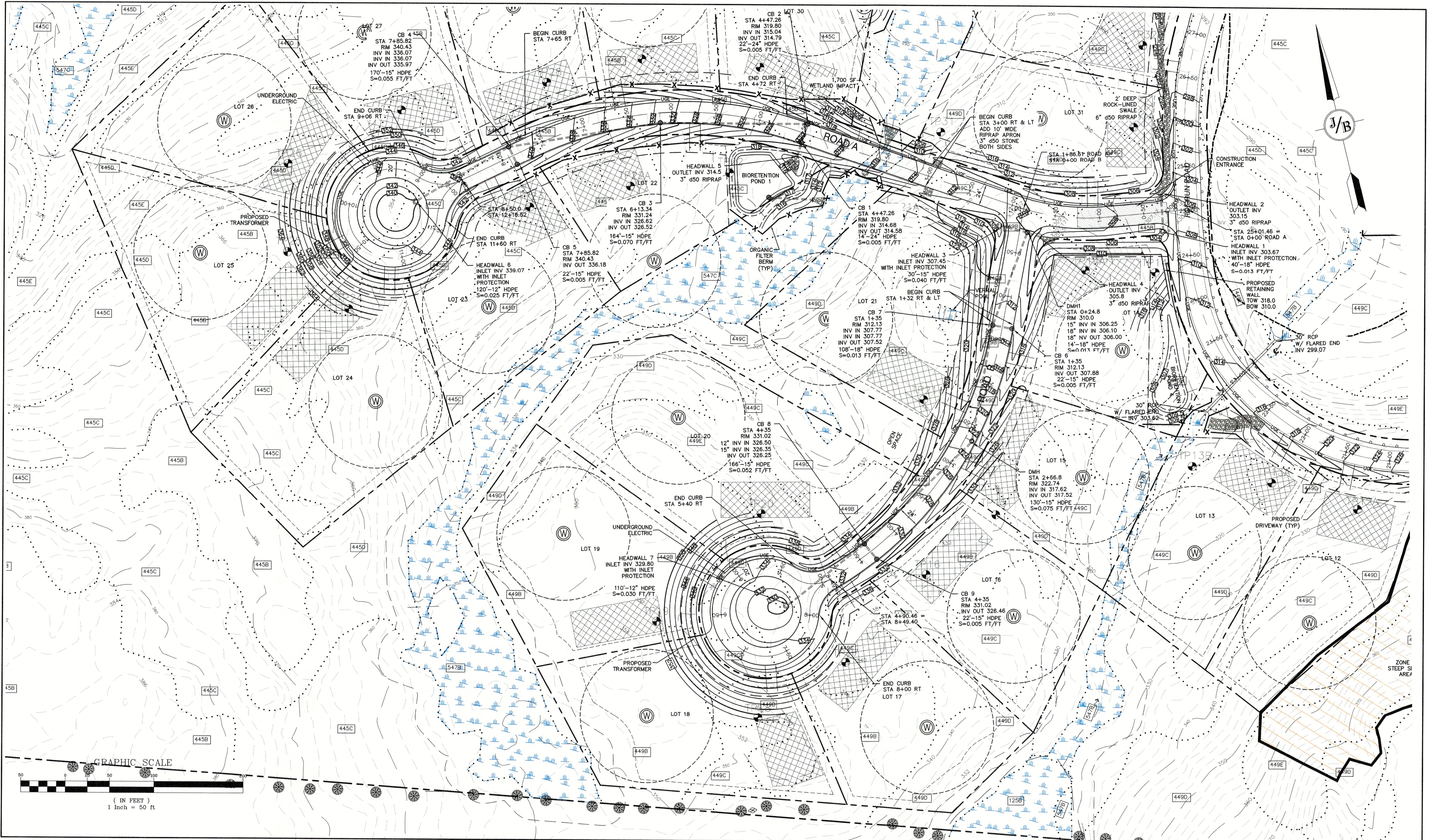
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Plan Name: **GRADING AND DRAINAGE PLAN**

Project: **15 SARGENT DRIVE
RAYMOND, NEW HAMPSHIRE**

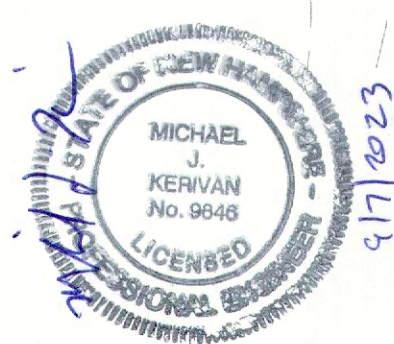
Owners: YAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063

DRAWING No.
C13
 SHEET 24 OF 34
 JBE PROJECT NO. 14232.7



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Plan Name: **GRADING AND DRAINAGE PLAN**

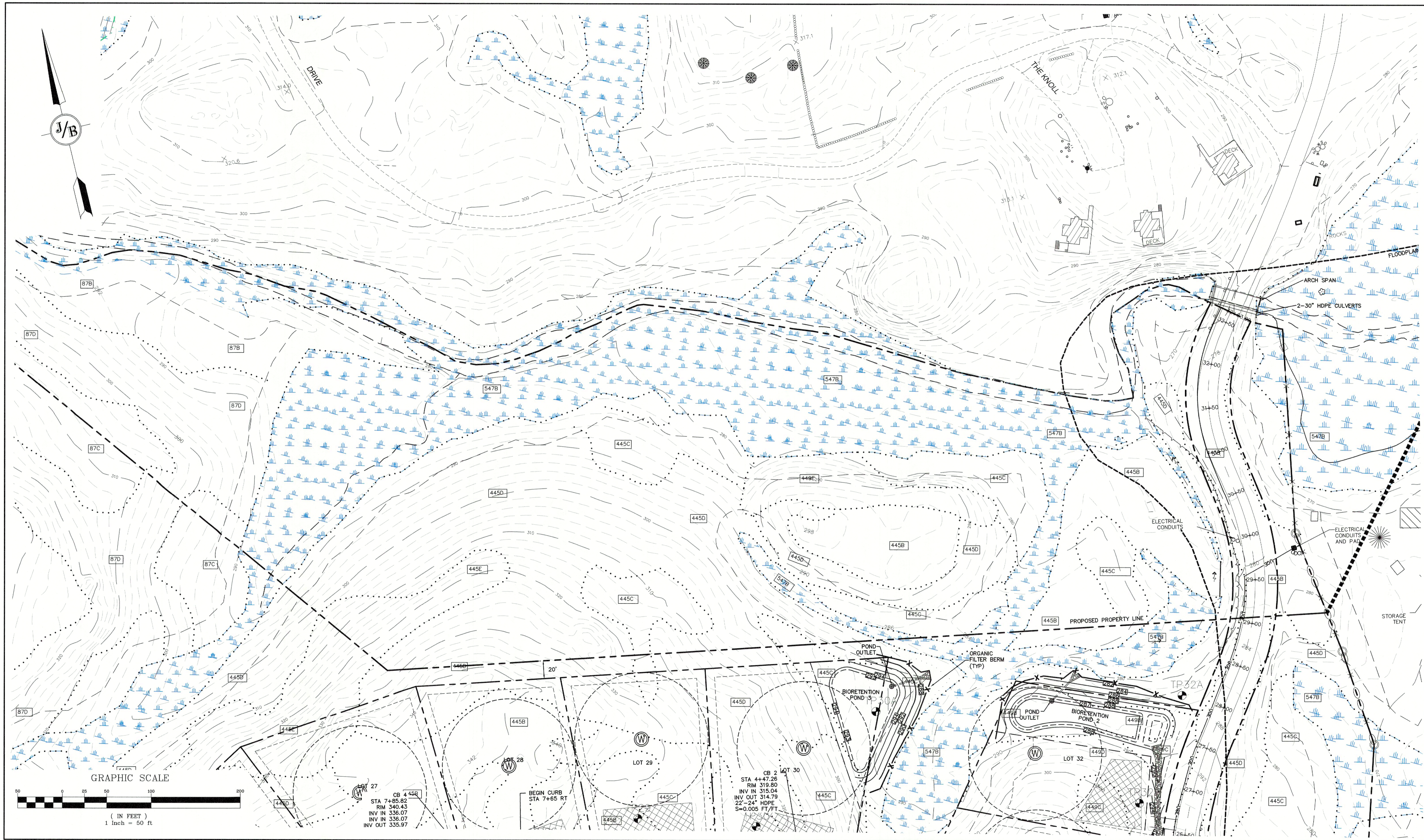
Project: 15 SARGENT DRIVE
RAYMOND, NEW HAMPSHIRE

Owners: YAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET,
2ND FLOOR, SUITE 1, NASHUA, NH 03063 2ND FLOOR, SUITE 1, NASHUA, NH 03063

DRAWING No. 14232

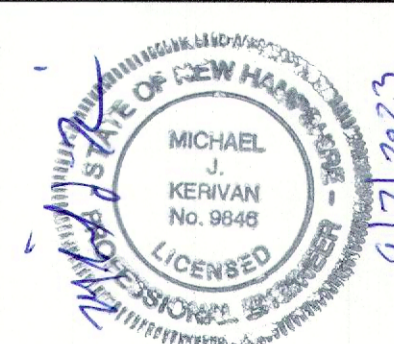
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SHEET 25 OF 34
JBE PROJECT NO. 14232.7



Design: JAC Draft: AJB Date: 4/15/21
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 Drawing Name: 14232.7-PLAN.dwg

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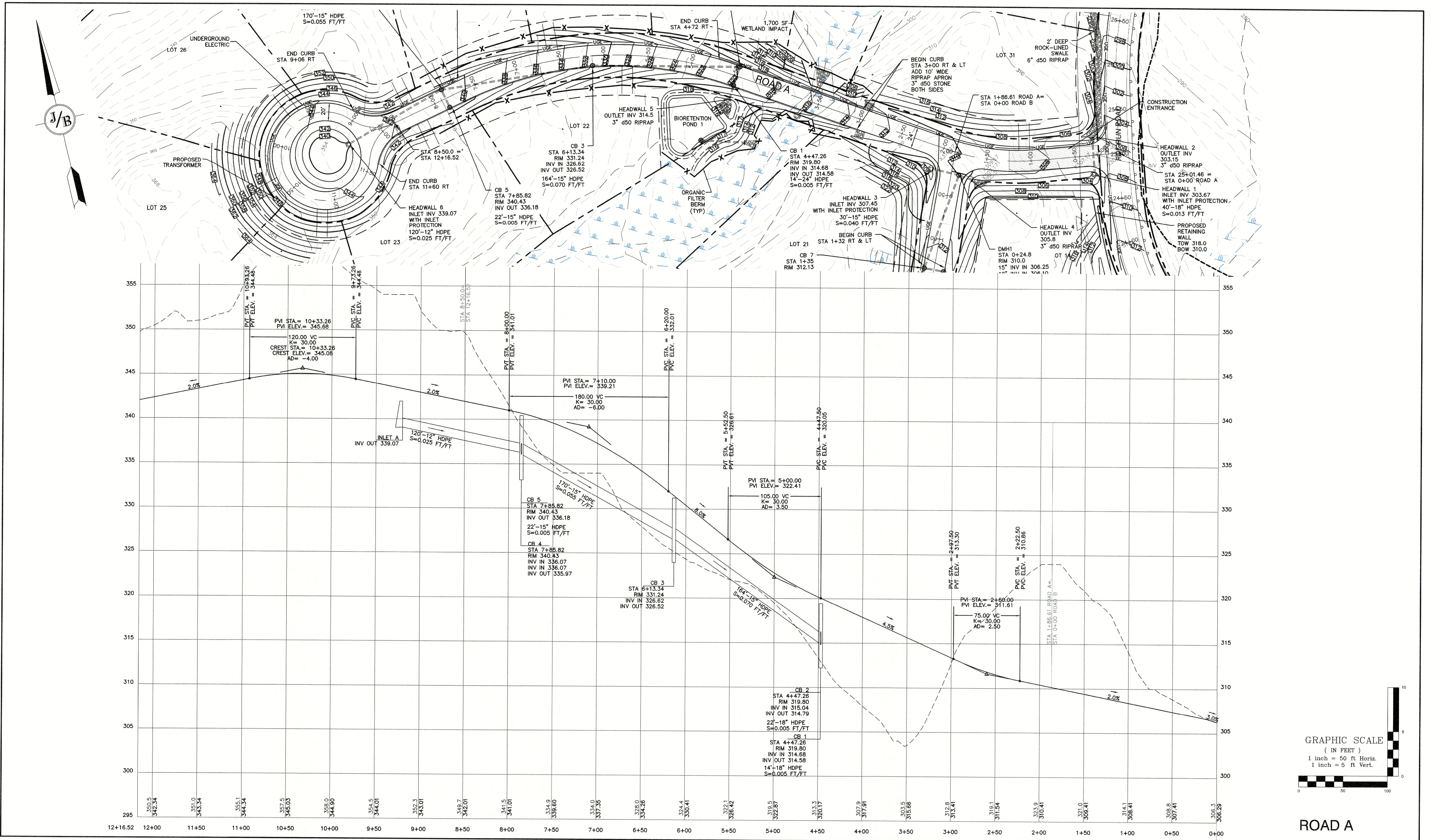
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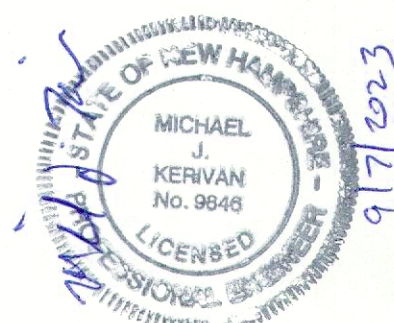
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| Plan Name: | GRADING AND DRAINAGE PLAN |
| Project: | 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE |
| Owners: | YAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 2ND FLOOR, SUITE 1, NASHUA, NH 03063 |

DRAWING No.
C15
 SHEET 26 OF 34
 JBE PROJECT NO. 14232.7



Design: JAC Draft: AJB Date: 4/15/21
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 Drawing Name: 14232.7-PLAN.dwg

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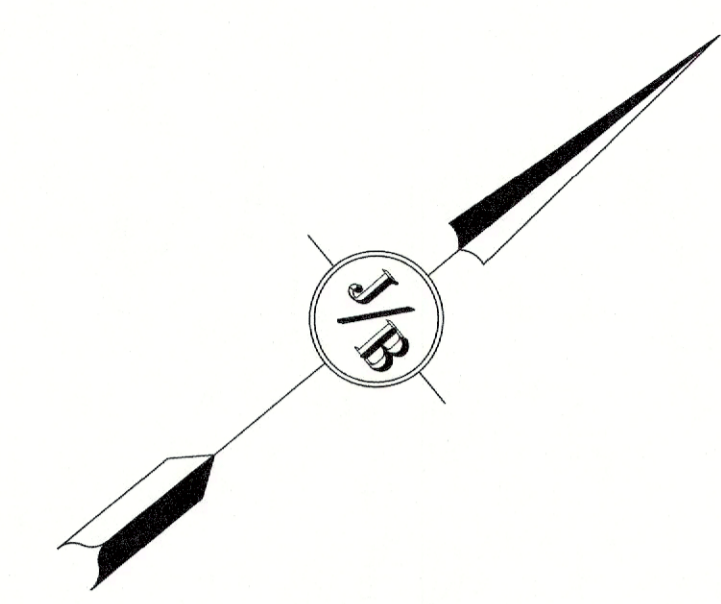
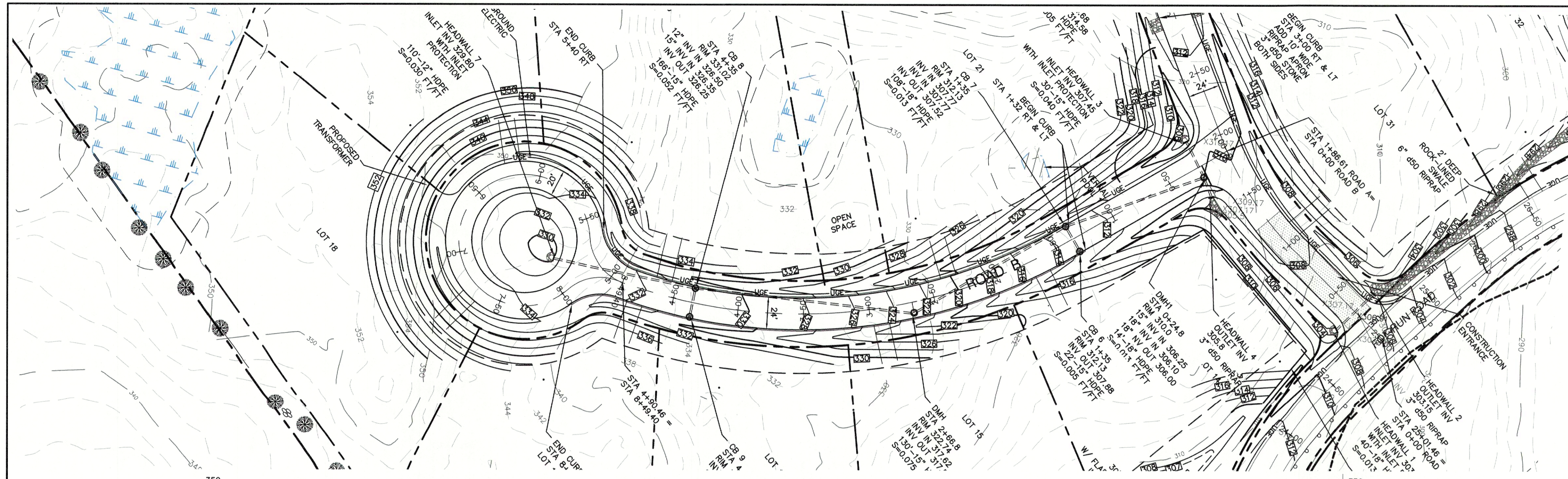
Plan Name: **ROAD PLAN AND PROFILE**

Project: **15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE**

Owners: YAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063

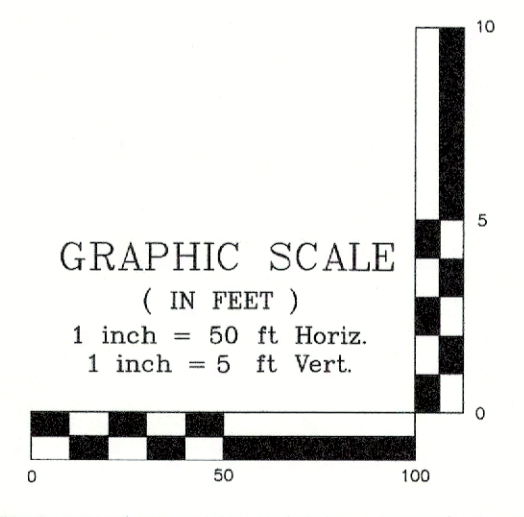
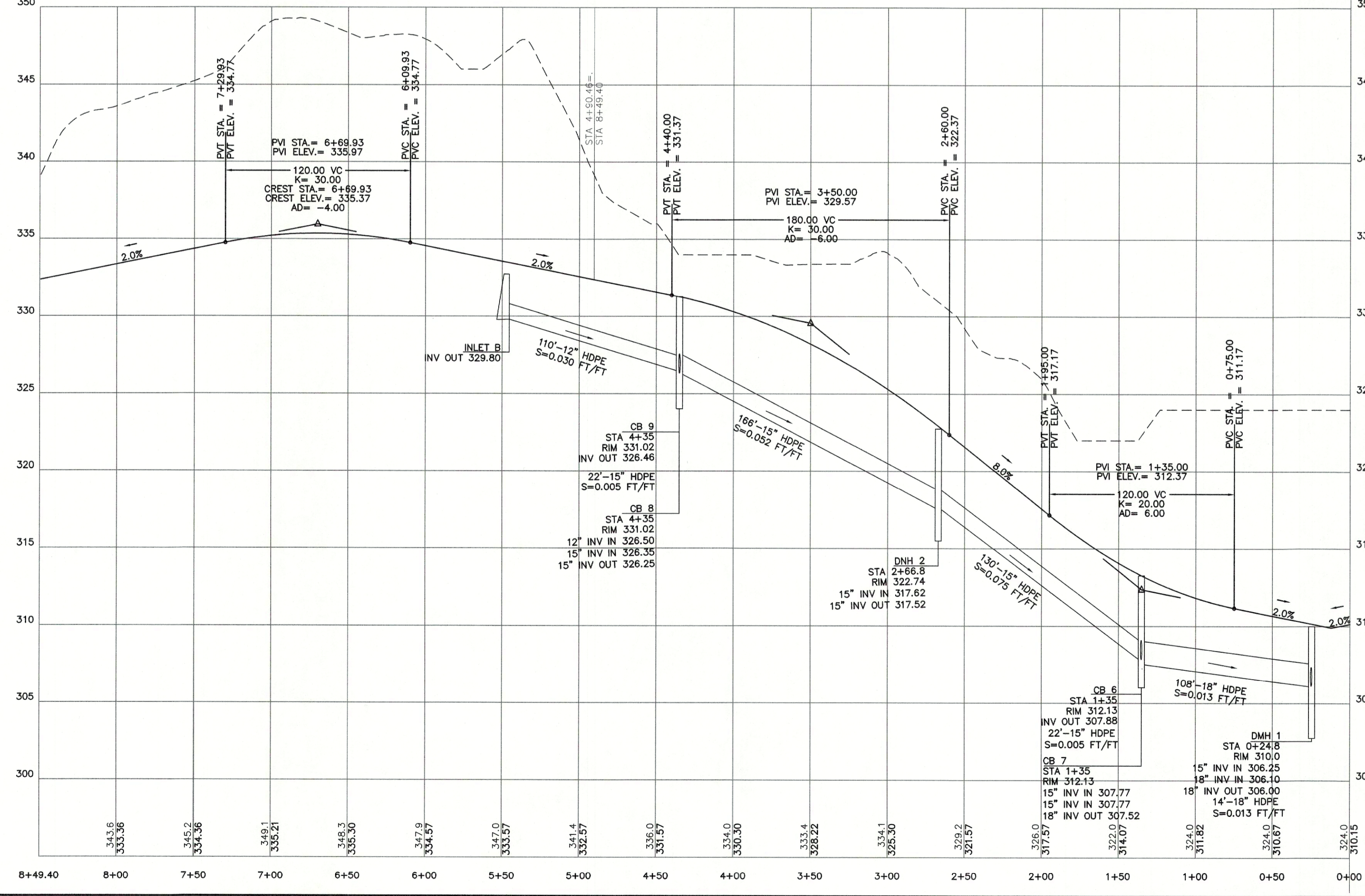
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SHEET 27 OF 34
 JBE PROJECT NO. 14232.7



NOTES:

- ALL ROAD AND DRAINAGE WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR THE TOWN, AND NHDOT SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, WHICHEVER IS MORE STRINGENT.
- AS-BUILT PLANS TO BE SUBMITTED TO THE TOWN PRIOR TO ACCEPTANCE OF THE ROADWAY.
- DEVELOPER IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL WETLAND REGULATIONS, INCLUDING ANY PERMITTING AND SETBACK REQUIREMENTS REQUIRED UNDER THESE REGULATIONS.
- CONTRACTOR TO COORDINATE AND COMPLETE ALL WORK REQUIRED FOR THE RELOCATION AND/OR INSTALLATION OF ELECTRIC, CATV, TELEPHONE, AND FIRE ALARM PER UTILITY DESIGN AND STANDARDS. LOCATIONS SHOWN ARE APPROXIMATE. LOW PROFILE STRUCTURES SHALL BE USED TO THE GREATEST EXTENT POSSIBLE.
- THIS PLAN HAS BEEN PREPARED BY JONES & BEACH ENGINEERS, INC. FOR MUNICIPAL AND STATE APPROVALS AND FOR CONSTRUCTION BASED ON DATA OBTAINED FROM ON-SITE FIELD SURVEY AND EXISTING MUNICIPAL RECORDS. THROUGHOUT THE CONSTRUCTION PROCESS, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY OF ANY FIELD DISCREPANCY FROM DATA SHOWN ON THE DESIGN PLANS. THIS INCLUDES ANY UNFORESEEN CONDITIONS, SUBSURFACE OR OTHERWISE, FOR EVALUATION AND RECOMMENDATIONS. ANY CONTRADICTION BETWEEN ITEMS OF THIS PLAN/PLAN SET, OR BETWEEN THE PLANS AND ON-SITE CONDITIONS MUST BE RESOLVED BEFORE RELATED CONSTRUCTION HAS BEEN INITIATED.
- SILTATION AND EROSION CONTROLS SHALL BE INSTALLED PRIOR TO CONSTRUCTION, SHALL BE MAINTAINED DURING CONSTRUCTION, AND SHALL REMAIN UNTIL SITE HAS BEEN STABILIZED WITH PERMANENT VEGETATION. SEE DETAIL SHEET E1 FOR ADDITIONAL NOTES ON EROSION CONTROL.
- ALL DISTURBED AREAS NOT STABILIZED BY NOVEMBER 1st SHALL BE COVERED WITH AN EROSION CONTROL BLANKET. PRODUCT TO BE SPECIFIED BY THE ENGINEER.
- FINAL DRAINAGE, GRADING AND EROSION PROTECTION MEASURES SHALL CONFORM TO REGULATIONS OF THE PUBLIC WORKS DEPARTMENT.
- CONTRACTOR TO VERIFY EXISTING UTILITIES AND TO NOTIFY ENGINEER OF ANY DISCREPANCY IMMEDIATELY.
- ROADWAY INTERSECTIONS WITH SLOPE GRANITE CURB SHALL EXTEND AROUND RADIUS WITH 6' STRAIGHT PIECE ALONG TANGENT.
- RETAINING WALLS SHALL BE DESIGNED AND STAMPED BY A LICENSED PROFESSIONAL ENGINEER. CONTRACTOR SHALL COORDINATE WITH MANUFACTURER PRIOR TO INSTALLATION.
- 6" PERFORATED ADS UNDER DRAIN PLACEMENT TO BE DETERMINED BY THE ENGINEER DURING TIME OF SUBGRADE INSPECTION TO ADJUST LOCATION IN THE FIELD ONLY WITH PRIOR APPROVAL OF PROJECT ENGINEER OR PUBLIC WORKS DEPARTMENT.
- ALL DRIVEWAYS TO BE CONSTRUCTED MAXIMUM 10% SLOPE. SEE DETAIL SHEET.
- DRAINAGE INSPECTION AND MAINTENANCE SCHEDULE: SILT FENCING WILL BE INSPECTED DURING AND AFTER STORM EVENTS TO ENSURE THAT THE FENCE STILL HAS INTEGRITY AND IS NOT ALLOWING SEDIMENT TO PASS. SEDIMENT BUILD UP IN SWALES WILL BE REMOVED IF IT IS DEEPER THAN SIX INCHES, AND IS TO BE REMOVED FROM SIMPS BELOW THE INLET OF CURBS SEMIANNUALLY, AS WELL AS FROM CATCH BASINS. FOLLOWING MAJOR STORM EVENTS, THE STAGE DISCHARGE OUTLET STRUCTURES ARE TO BE INSPECTED AND ANY DEBRIS REMOVED FROM THE ORIFICE, TRASH TRACK AND EMERGENCY SPILL WAY. INFREQUENTLY, SEDIMENT MAY ALSO HAVE TO BE REMOVED FROM THE SUMP OF THE STRUCTURE.
- ALL DRAINAGE INFRASTRUCTURE SHALL BE INSTALLED AND STABILIZED PRIOR TO DIRECTING ANY RUNOFF TO IT.
- DETENTION PONDS REQUIRE TIMELY MAINTENANCE AND SHOULD BE INSPECTED AFTER EVERY MAJOR STORM EVENT. AS WELL AS FREQUENTLY DURING THE FIRST YEAR OF OPERATION, AND ANNUALLY THEREAFTER. EVERY FIVE YEARS, THE SERVICES OF A PROFESSIONAL ENGINEER SHOULD BE RETAINED TO PERFORM A THOROUGH INSPECTION OF THE DETENTION POND AND ITS INFRASTRUCTURE. ANY DEBRIS AND SEDIMENT ACCUMULATIONS SHOULD BE REMOVED FROM THE OUTLET STRUCTURE(S) AND EMERGENCY SPILLWAY(S) AND DISPOSED OF PROPERLY. DETENTION POND BERMS SHOULD BE MOWED AT LEAST ONCE ANNUALLY SO AS TO PREVENT THE ESTABLISHMENT OF WOODY VEGETATION. TREES SHOULD NEVER BE ALLOWED TO GROW ON A DETENTION POND BERM, AS THEY MAY DESTABILIZE THE STRUCTURE AND INCREASE THE POTENTIAL FOR FAILURE. AREAS SHOWING SIGNS OF EROSION OR THIN OR DYING VEGETATION SHOULD BE REPAIRED IMMEDIATELY BY WHATEVER MEANS NECESSARY, WITH THE EXCEPTION OF FERTILIZER, RODENT BORROWS SHOULD BE REPAIRED IMMEDIATELY AND THE ANIMALS SHOULD BE TRAPPED AND RELOCATED IF THE PROBLEM PERSISTS.
- THE DETENTION PONDS ARE TO BE CONSTRUCTED PRIMARILY THROUGH EXCAVATION. IN THOSE AREAS WHERE THE BERMS MUST BE CONSTRUCTED BY THE PLACEMENT OF FILL, THE ENTIRE EMBANKMENT AREA OF THE DETENTION PONDS SHALL BE EXCAVATED TO PROPOSED GRADE, STRIPPED OF ALL ORGANIC MATERIALS, COMPACTED TO AT LEAST 95% AND SCARIFIED PRIOR TO THE PLACEMENT OF THE EMBANKMENT MATERIAL. IN THE EVENT THE FOUNDATION MATERIAL EXPOSED DOES NOT ALLOW THE SPECIFIED COMPACTION, AN ADDITIONAL ONE FOOT (1') OF EXCAVATION AND THE PLACEMENT OF A ONE FOOT (1') THICK, TWELVE FOOT (12') WIDE PAD OF THE MATERIAL DESCRIBED IN THE NOTE BELOW, COMPACTED TO 95% OF ASTM D-1557 MAY BE NECESSARY. PLACEMENT AND COMPACTION SHOULD OCCUR AT A MOISTURE CONTENT OF OPTIMUM PLUS OR MINUS 3%, AND NO FROZEN OR ORGANIC MATERIAL SHOULD BE PLACED WITHIN FOR ANY REASON.
- EMBANKMENT MATERIAL FOR THE BERMS SHALL BE CLEAN MINERAL SOIL WITH A CLAY COMPONENT FREE OF ROOTS, ORGANIC MATTER, AND OTHER DELETERIOUS SUBSTANCES, AND SHALL CONTAIN NO ROCKS OR LUMPS OVER FOUR INCHES (4") IN DIAMETER. THIS MATERIAL SHOULD BE INSTALLED IN 6" LIFTS AND COMPACTED TO 95% OS ASTM D-1557, AND SHOULD MEET THE FOLLOWING SPECIFICATIONS: 4" PASSING 100% #4 SIEVE 25-70%, #200 SIEVE 10-29% (IN TOTAL SAMPLE).
- EMBANKMENT IS TO HAVE 3:1 SIDE SLOPES (MAX.) AND IS TO BE BROUGHT TO SPECIFIED GRADES PRIOR TO THE ADDITION OF LOAM (4" MINIMUM) SO AS TO ALLOW FOR THE COMPACTION OF THE STRUCTURE OVER TIME WHILE MAINTAINING THE PROPER BERM ELEVATION.
- COMPACTION TESTING SERVICES (I.E. NUCLEAR DENSITY TESTS) ARE TO BE PERFORMED BY AN INDEPENDENT GEOTECHNICAL ENGINEER RETAINED BY THE CONTRACTOR FOR ROADWAY CONSTRUCTION, AND ON THE FOUNDATION OF THE BERM AND ON EVERY LIFT OF NEWLY PLACED MATERIAL.
- SLOPED GRANITE CURB TO BE TIPPED DOWN AT ALL DRIVEWAY ENTRANCES BY THE CONTRACTOR.



ROAD B

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 Drawing Name: 14232.7-PLAN.dwg
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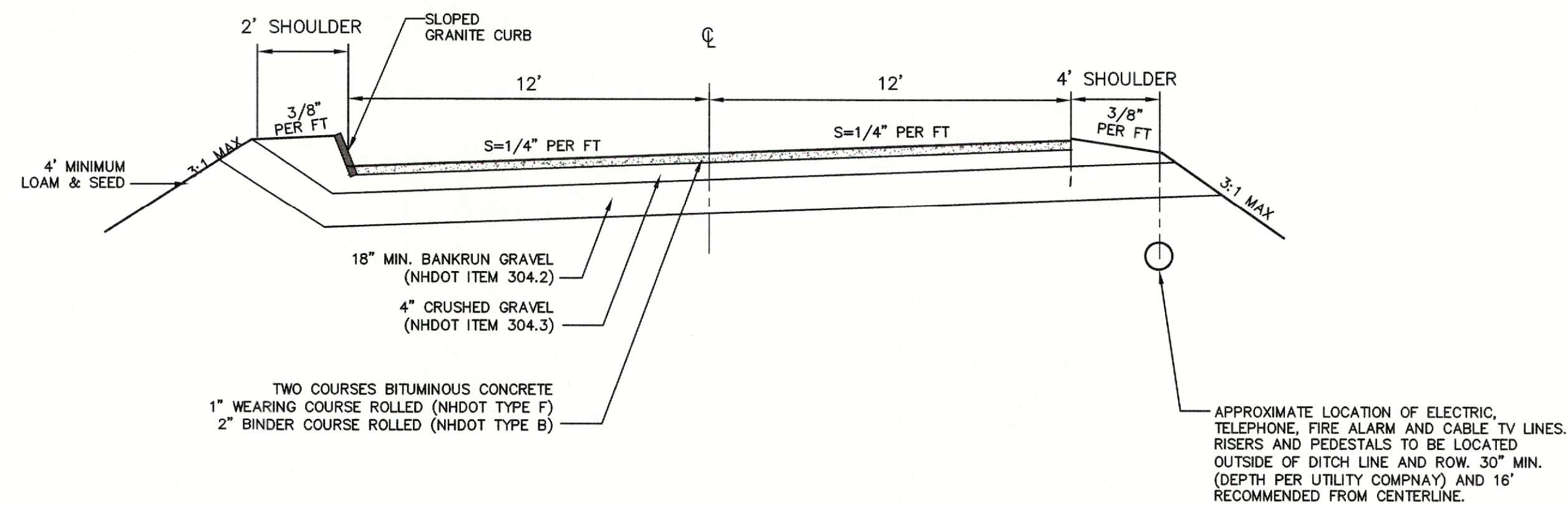


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 Civil Engineering Services
 85 Portsmouth Ave. PO Box 219 Stratham, NH 03885
 603-772-4746 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: **ROAD PLAN AND PROFILE**
 Project: **15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE**
 Owners: YAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063

DRAWING No. **P2**
 SHEET 28 OF 34
 JBE PROJECT NO. 14232.7



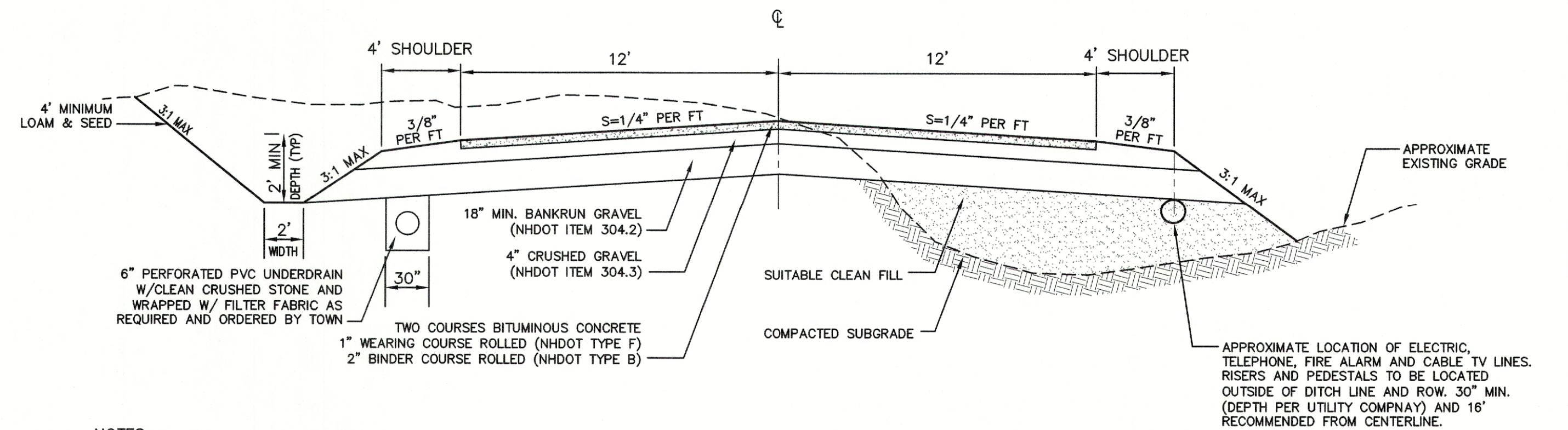
NOTES:

1. REMOVE ALL ORGANICS, TOPSOIL AND MATERIAL YIELDING TO A 10 TON ROLLER. SUBBASE AREAS THAT CONTAIN UNSUITABLE MATERIALS MUST BE EXCAVATED TO A DEPTH NO LESS THAN 36" BELOW FINISH GRADE AND BE REPLACED WITH GRAVEL COMPACTED TO 95%.
2. ALL MATERIALS TO BE AS SPECIFIED PER TOWN STANDARDS AND NHDOT, WHICHEVER IS MOST STRINGENT. GRADATION AND COMPACTION TEST RESULTS (95% MIN.) SHALL BE SUBMITTED FOR REVIEW AND APPROVAL.
3. LOAM AND/OR UNSTABLE MATERIAL SHALL BE REMOVED TO A SOLID BASE MATERIAL.
4. COMPACTION SHALL BE PERFORMED TO 95% OF THE MATERIALS' MODIFIED PROCTOR VALUE.

ROAD A (STA. 4+72 - 7+65)

TYPICAL ROADWAY SECTION - SUPERELEVATED RIGHT

NOT TO SCALE



NOTES:

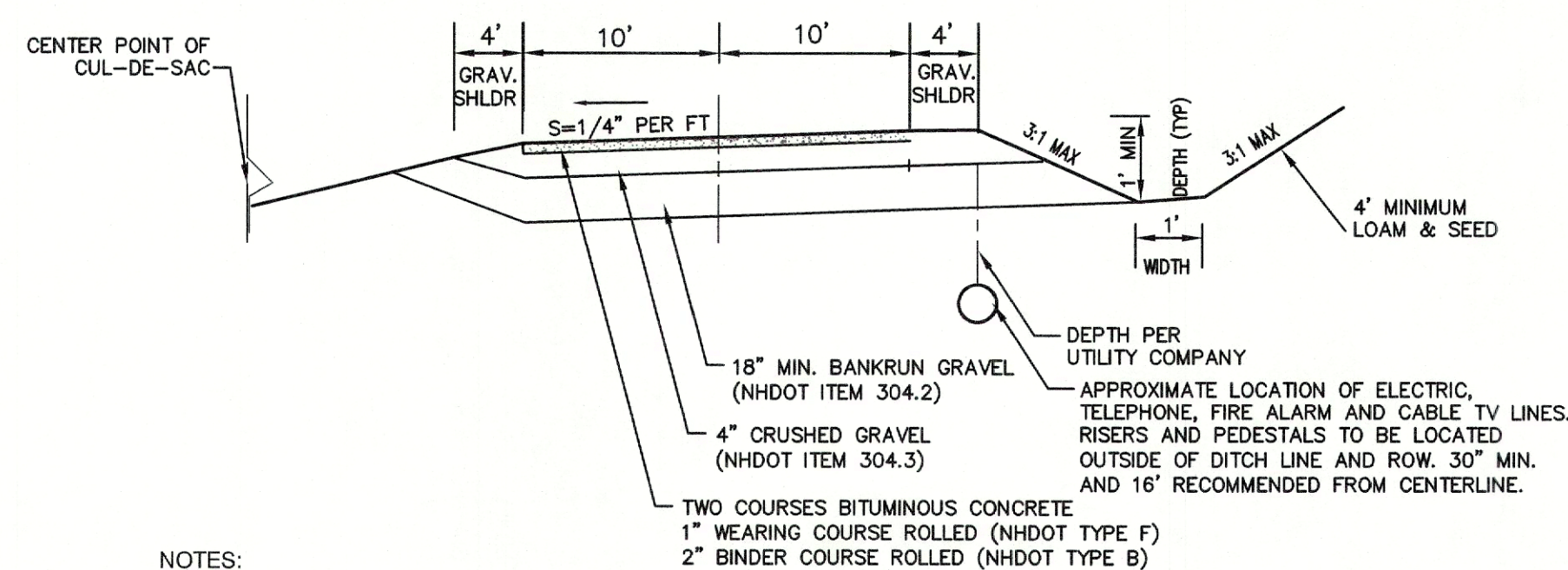
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ROAD A (STA. 0+00 - 3+00)

ROAD B (STA. 0+00 - 1+32)

TYPICAL ROADWAY SECTION - DITCH BOTH SIDES

NOT TO SCALE

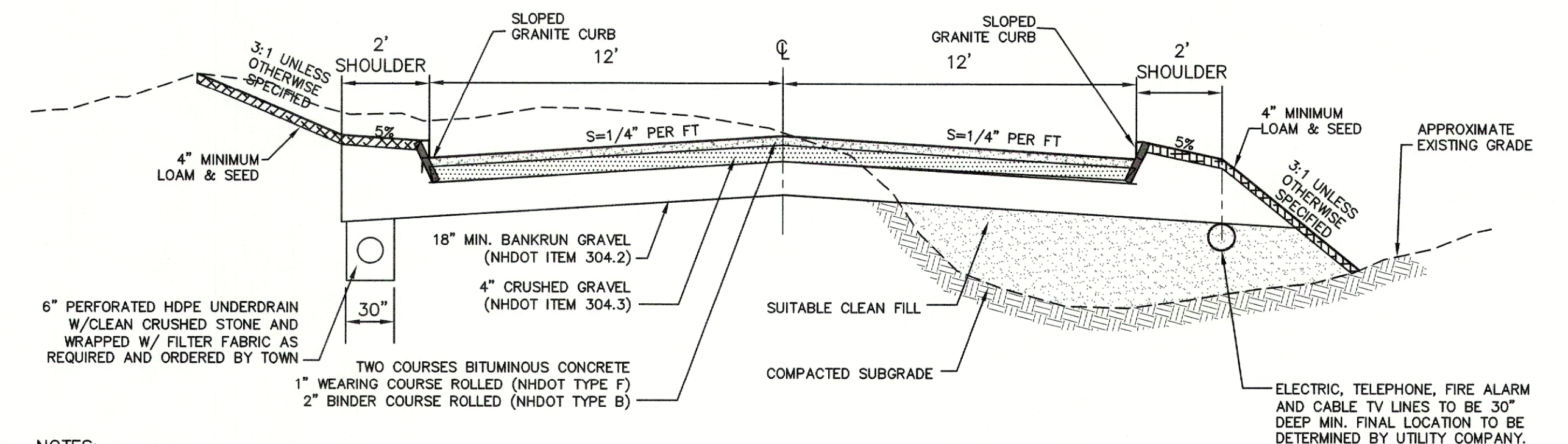


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3. TOWN MAY REQUIRE UNDERDRAIN, ADDITIONAL GRAVEL AND/OR ADDITIONAL DRAINAGE IF SOIL CONDITIONS WARRANT.
4. WOVEN GEOTEXTILE FABRIC SHALL BE PLACED ABOVE SUBGRADE AT ALL WETLAND CROSSINGS.

CUL-DE-SAC SECTION ROADS A AND B

NOT TO SCALE



NOTES:

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4. COMPACTION SHALL BE PERFORMED TO 95% OF THE MATERIALS' MODIFIED PROCTOR VALUE.

ROAD A (STA. 3+00 - 4+72)

ROAD A (STA. 7+65- 9+06)

ROAD B (STA. 1+32- 5+40)

TYPICAL ROADWAY SECTION - SLOPED GRANITE CURB BOTH SIDES

NOT TO SCALE

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| Design: JAC | Draft: AJB | Date: 4/15/21 |
| Checked: JAC | Scale: AS NOTED | Project No.: 14232.7 |
| Drawing Name: 14232.7-PLAN.dwg | | |
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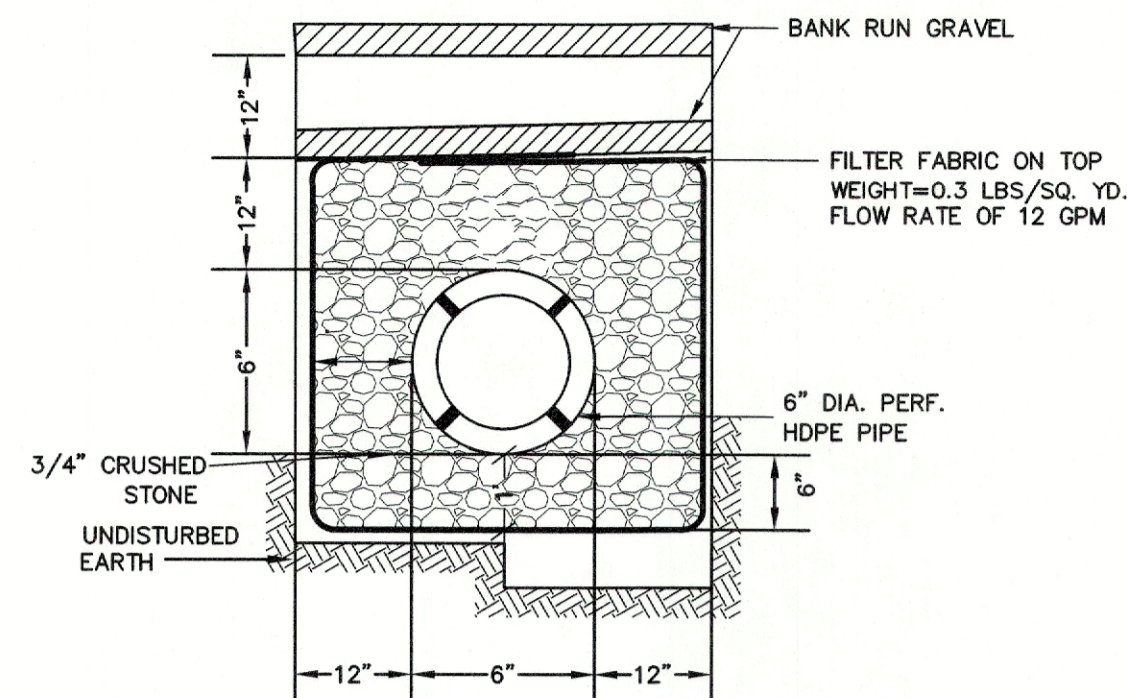
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|------------------|--|
| Plan Name: | DETAIL SHEET |
| Project: | 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE |
| Owner of Record: | RAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 2ND FLOOR, SUITE 1, NASHUA, NH 03063 |

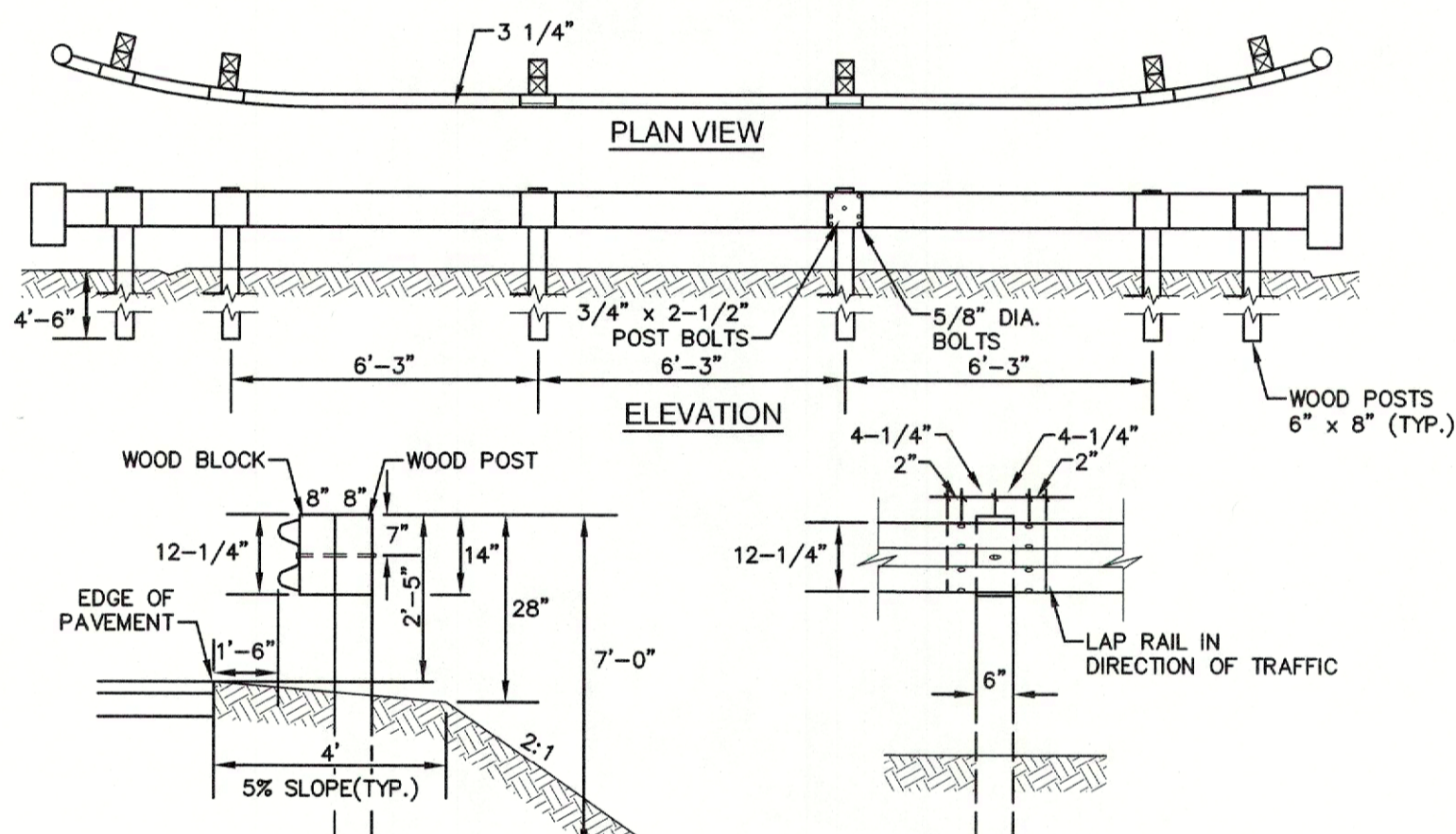
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| DRAWING No. | D1 |
| SHEET 29 OF 34 | JBE PROJECT NO. 14232.7 |



- NOTES:**
1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.
 2. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO PROJECT AND TOWN SPECIFICATIONS.
 3. UNDERDRAINS SHALL BE 6 INCHES MINIMUM DIAMETER PERFORATED HDPE INSTALLED WITH A MINIMUM OF 12 INCHES OF CRUSHED STONE AROUND THE PIPE. THE STONE SHALL BE COVERED WITH A FILTER FABRIC, WHICH HAS A WEIGHT OF 0.3 LBS/SQ. YD. AND A FLOW RATE OF 12 GPM.
 4. INVERT OF UNDERDRAIN SHALL BE 2.5' BELOW FINISHED GRADE AND SHALL BE PITCHED TOWARD THE DOWNSTREAM CATCH BASIN INLET AT ALL POINTS. HOWEVER, UNDERDRAIN ELEVATION SHALL NOT DIRECTLY FOLLOW 6" DROP OF CURB WHEN CROSSING UNDER CURBING. THEREFORE, UNDERDRAIN INVERT IN AT CATCH BASINS SHALL BE 2' BELOW FINISHED GRADE.

ROADWAY UNDERDRAIN TRENCH

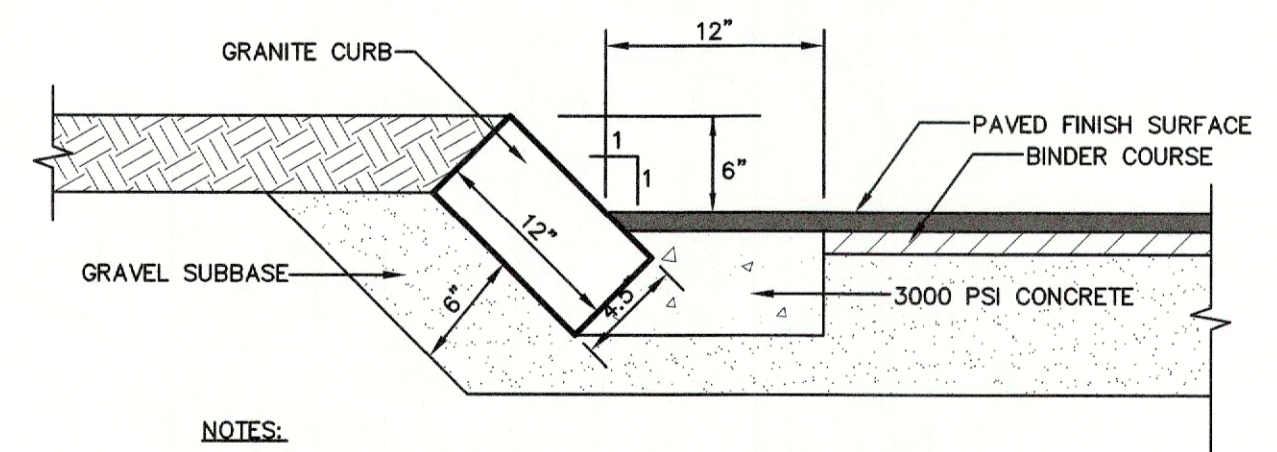
NOT TO SCALE



- NOTES:**
1. USE IN HEAVY TRAFFIC AREAS.
 2. STEEL BRACKET TO BE 10 OR 12 GAUGE STEEL.
 3. ALL TIMBER POSTS TO TREATED WITH PRESERVATIVE MATERIAL CONFORMING TO AASHTO M133.
 4. POST BOLTS TO BE 18" W/MIN. 2 1/2" THREAD LENGTH.
 5. RAIL SHEET THICKNESS TO BE 12 GAUGE GALVANIZED STEEL.

GUARD RAIL (STEEL)

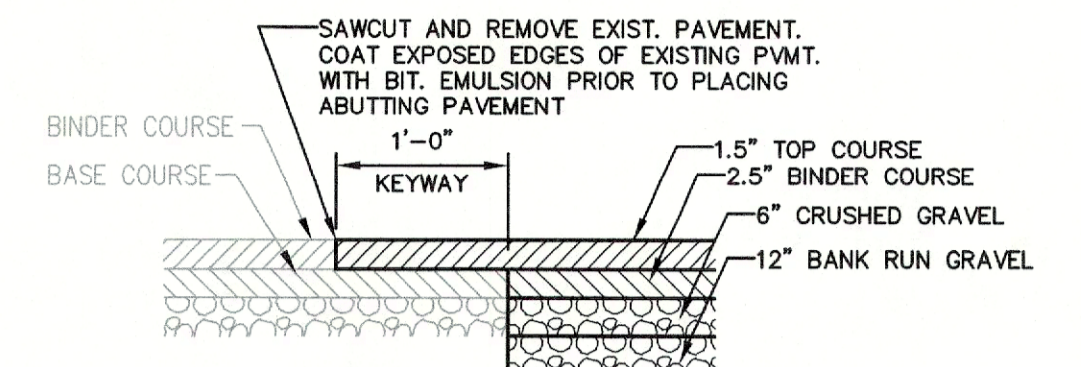
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- NOTES:**
1. CURB TO BE PLACED PRIOR TO PLACING TOP SURFACE COURSE.
 2. JOINTS BETWEEN STONES SHALL BE MORTARED.

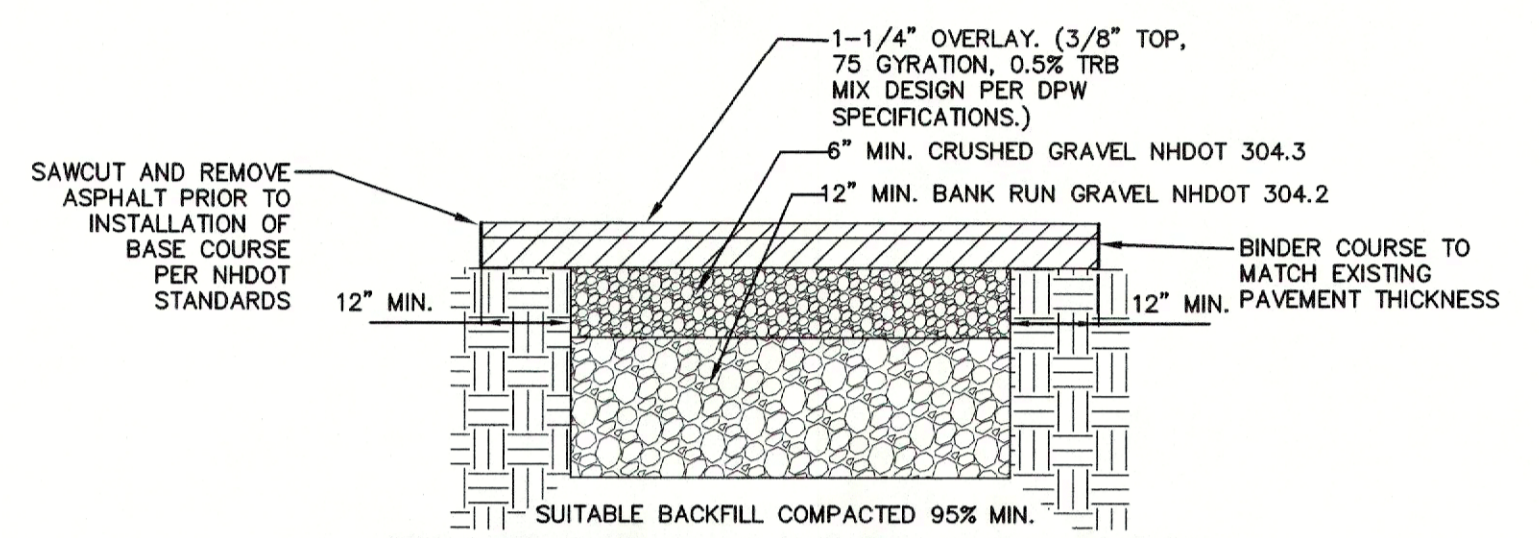
SLOPED GRANITE CURB

NOT TO SCALE



KEYWAY DETAIL FOR CONNECTION TO EXISTING PAVEMENT

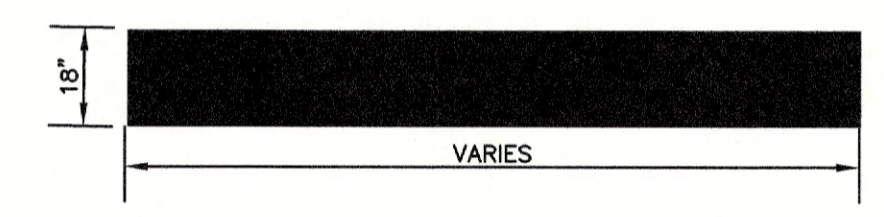
NOT TO SCALE



- NOTES:**
1. AFTER PROPER BACKFILLING AND COMPACTION, ADJACENT PAVEMENT MUST BE "SAWCUT" (STRAIGHT CUTS) A MINIMUM OF ONE FOOT (1') AROUND THE PERIMETER OF THE EXCAVATION. PAVEMENT MUST BE REMOVED.
 2. INSTALL BASE COURSE LEAVING A REVEAL FOR SURFACE COURSE.
 3. INSTALL SURFACE COURSE OF ASPHALT PAVING.
 4. APPLY EMULSION SEALANT AT PERIMETER OF JOINT OVERLAPPING BASE COURSE. INSTALL WEARING COURSE OF ASPHALT TO GRADE. APPLY LIGHT SAND TO ABSORB EXCESS JOINT SEALANT.
 5. GRAVEL COMPACTIONS TO MEET 95% MINIMUM.
 6. PAVEMENT REPAIRS IN SAGAMORE AVE. RIGHT OF WAY TO MEET NHDOT STANDARDS.
 7. WHERE WORK IMPACTS SAGAMORE AVE. TRAVEL LANE, MILL AND INLAY FOR FULL WIDTH OF LANE MAY BE REQUIRED.

TYPICAL PAVEMENT REPAIR DETAIL

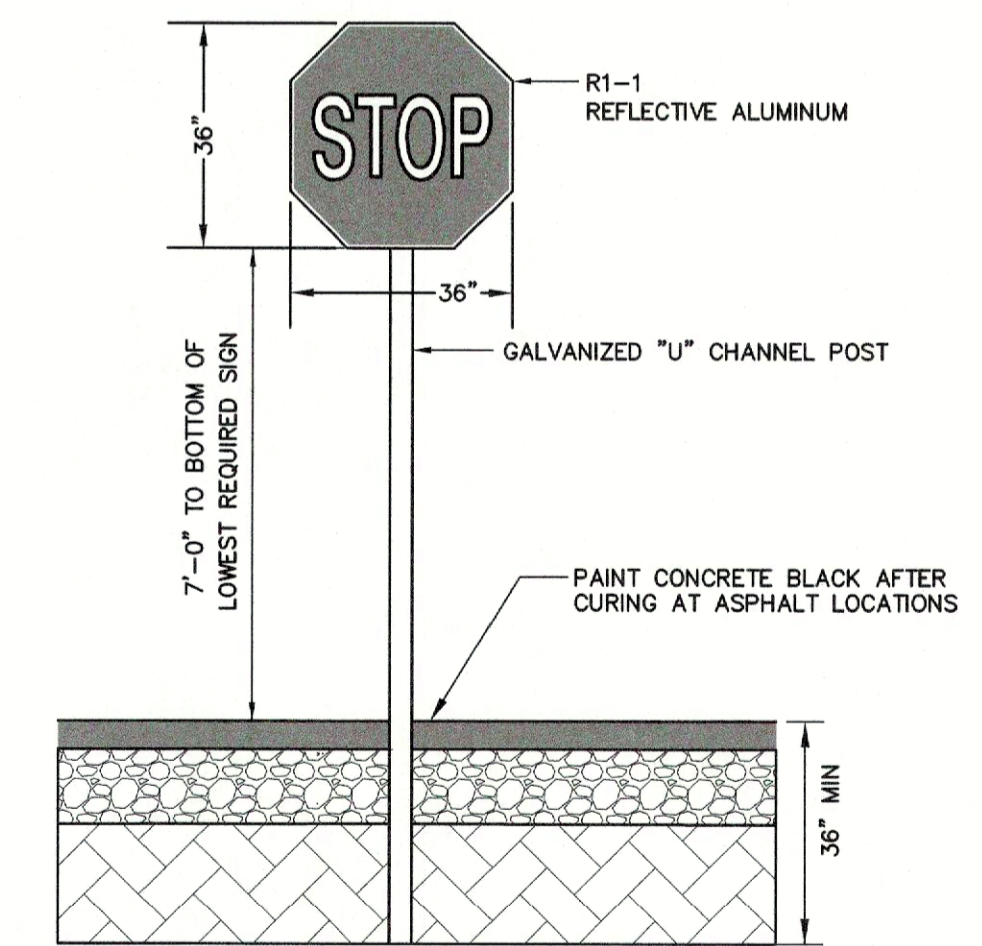
NOT TO SCALE



- NOTES:**
1. ALL STOP BARS TO BE SOLID WHITE REFLECTIVE TRAFFIC PAINT AS PER DIMENSIONS ABOVE.

STOP BAR

NOT TO SCALE



- NOTES:**
1. ALL SIGNAGE SHALL BE TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS AND NHDOT STANDARDS.
 2. SIGN, HARDWARE, AND INSTALLATION TO CONFORM TO 2016 NHDOT STANDARD SPECIFICATION, SECTION 615 - TRAFFIC SIGNS.
 3. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS/CATALOG CUTS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ERRECTING SIGNS.
 4. THE LOCATION OF THE SIGNS SHALL BE AS INDICATED ON THE DRAWINGS AND/OR AS DIRECTED BY THE TOWN OF RAYMOND DEPARTMENT OF PUBLIC WORKS.

STOP SIGN (R1-1)

NOT TO SCALE

| | | |
|---|-----------------|----------------------|
| Design: JAC | Draft: AJB | Date: 4/15/21 |
| Checked: JAC | Scale: AS NOTED | Project No.: 14232.7 |
| Drawing Name: 14232.7-PLAN.dwg | | |
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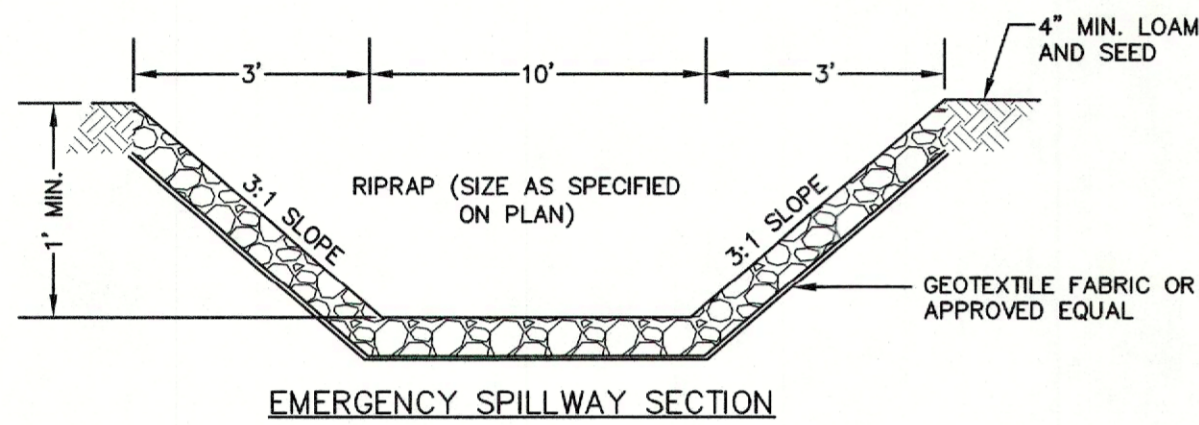
85 Portsmouth Ave. PO Box 219 Stratham, NH 03885

Civil Engineering Services

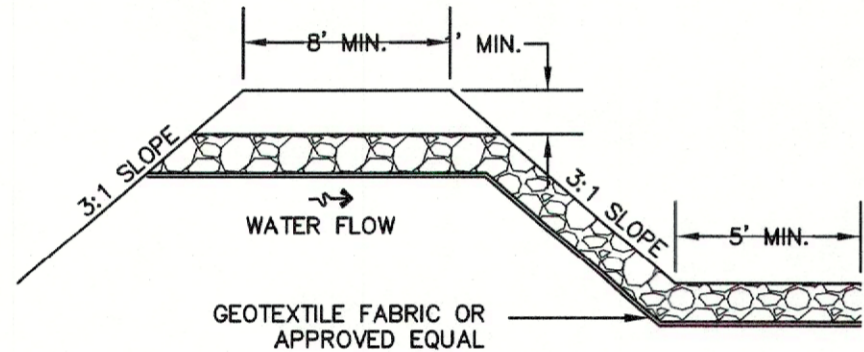
603-772-4746 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM

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| Plan Name: | DETAIL SHEET |
| Project: | 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE |
| Owner of Record: | KAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 |

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| DRAWING No. | D2 |
| SHEET 30 OF 34 | JBE PROJECT NO. 14232.7 |



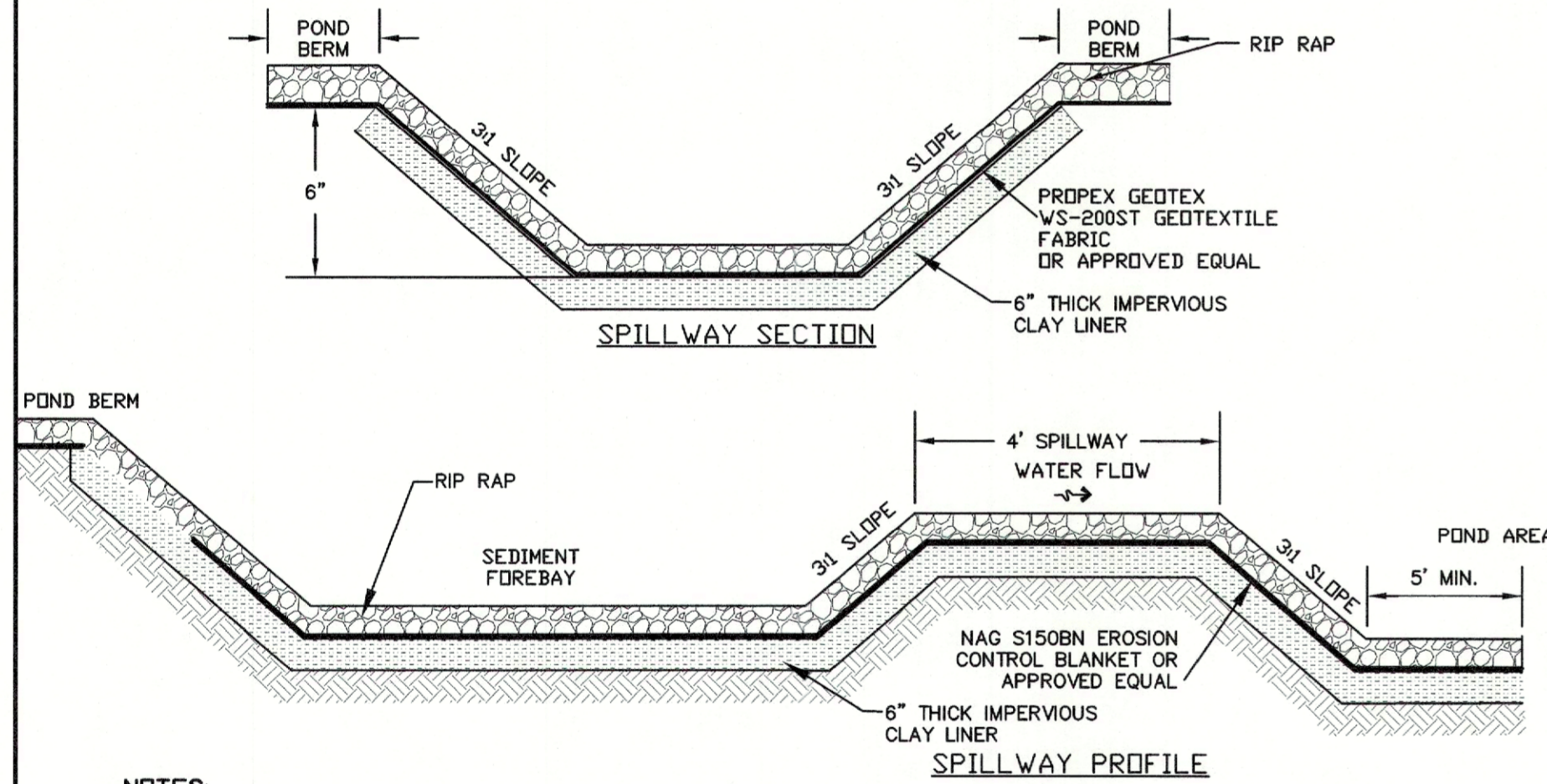
EMERGENCY SPILLWAY SECTION



EMERGENCY SPILLWAY PROFILE

EMERGENCY SPILLWAY

NOT TO SCALE



NOTES:

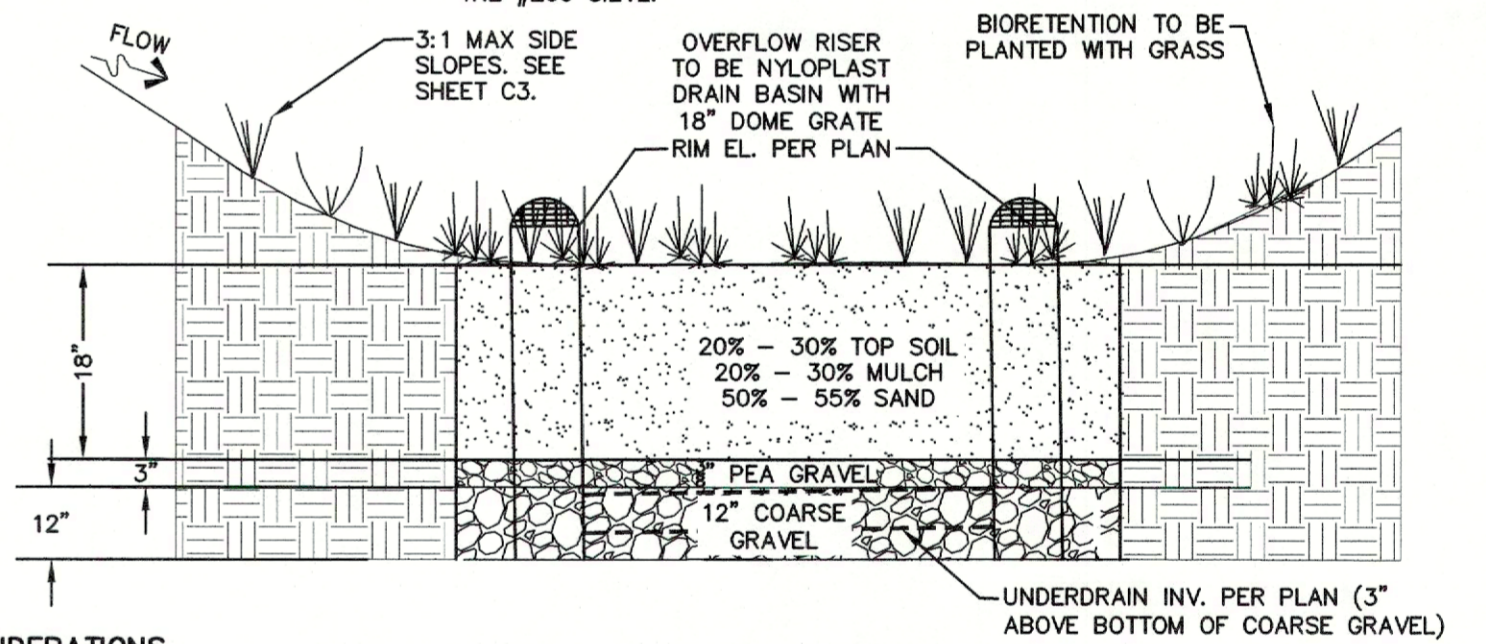
1. A 6" THICK IMPERVIOUS CLAY LINER IS TO BE PLACED UNDER ENTIRE SEDIMENT FOREBAY AND SPILLWAY.
2. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURE WHEN IT HAS ACCUMULATED TO ONE HALF THE ORIGINAL HEIGHT OF THE STRUCTURE.
3. 6" THICK IMPERVIOUS CLAY LINER MATERIAL SHALL BE CLEAN SILTY-CLAY BORROW FREE OF ROOTS, ORGANIC MATTER, AND OTHER DELETERIOUS SUBSTANCES, AND SHALL CONTAIN NO ROCKS OR LUMPS OVER THREE INCHES (3") IN DIAMETER. THIS MATERIAL SHALL BE INSTALLED IN 6" LIFTS COMPACTED TO 92% OF ASTM D-1557, AND SHALL MEET THE FOLLOWING SPECIFICATIONS: 6" PASSING 100%, #4 SIEVE 95-100%, #40 SIEVE 60-90%, #100 SIEVE 40-60%, #200 SIEVE 25-45% (OF THE FRACTION PASSING THE #4 SIEVE). THE CLAY COMPONENT SHALL HAVE A PLASTICITY INDEX OF AT LEAST 8 AND A HYDRAULIC CONDUCTIVITY OF 10 TO THE -6 CM/SEC.
4. COMPACTION AND MATERIALS TESTING SERVICES SHALL BE PERFORMED BY AN INDEPENDENT GEOTECHNICAL ENGINEER RETAINED BY THE OWNER.

SEDIMENT FOREBAY SPILLWAY

NOT TO SCALE

| SAND SPECIFICATION | | TOPSOIL SPECIFICATION | | PEA GRAVEL SPECIFICATION | | COARSE GRAVEL SPECIFICATION | |
|--------------------|-------------|--|--|--------------------------|-------------|-----------------------------|-------------|
| SIEVE SIZE | % BY WEIGHT | LOAMY SAND TOPSOIL WITH MINIMAL CLAY CONTENT AND BETWEEN 15 TO 25% FINES PASSING THE #200 SIEVE. | MULCH SPECIFICATION MODERATELY FINE, SHREDDED BARK OR WOOD FIBER MULCH WITH LESS THAN 5% PASSING THE #200 SIEVE. | SIEVE SIZE | % BY WEIGHT | SIEVE SIZE | % BY WEIGHT |
| #4 | 100 | | | #4 | 100 | #4 | 100 |
| #8 | 95-100 | | | #8 | 85-100 | #8 | 75-100 |
| #16 | 80-100 | | | #16 | 10-30 | #16 | 50-100 |
| #30 | 50-85 | | | #30 | 0-10 | #30 | 15-80 |
| #60 | 25-60 | | | #60 | 0-15 | #60 | 0-15 |
| #100 | 10-30 | | | #100 | 0-5 | #100 | 0-5 |
| #200 | 2-10 | | | #200 | 0-5 | #200 | 0-5 |
| | 0-5 | | | | | | |

* TEST PITS TERMINATED AT THESE DEPTHS BELOW REFERENCE POINT WITHOUT ENCOUNTERING LEDGE.



DESIGN CONSIDERATIONS

1. DO NOT DIRECT RUNOFF TO THE BIORETENTION SYSTEMS UNTIL IT HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
2. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUN-OFF, WATER FROM EXCAVATIONS) TO THE BIORETENTION AREA DURING ANY STAGE OF CONSTRUCTION.
3. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.
4. EMERGENCY SPILLWAY ELEVATION (EL. B) REFERS TO BOTTOM OF RIP RAP.
5. THE EXISTING NATIVE SUBGRADE MATERIAL SHALL NOT BE COMPACTED OR SUBJECT TO EXCESSIVE CONSTRUCTION EQUIPMENT TRAFFIC PRIOR TO STONE PLACEMENT. IF SOIL MEDIA OR SUBGRADE IS OVER COMPACTED, DISTURBED, OR CONTAMINATED BY FOREIGN OR DELETERIOUS MATERIALS OR LIQUIDS, REMOVE THE SOIL MEDIA AND CONTAMINATION; RESTORE THE SUBGRADE AS DIRECTED BY ENGINEER AND REPLACE CONTAMINATED SOIL MEDIA WITH NEW SOIL MEDIA.
6. IN ADDITION TO DESIGN CRITERIA LISTED HERE, REFER TO GUIDELINES LISTED IN UNIVERSITY OF NEW HAMPSHIRE (UNH) STORMWATER CENTER BIORETENTION SOIL SPECIFICATION.
7. BIORETENTION SYSTEM SHALL HAVE SEDIMENT FOREBAYS FOR PRE-TREATMENT.
8. SEDIMENT FOREBAY SPILLWAY, EMERGENCY SPILLWAY, POND BERM, AND MSDOS DETAILS APPLY TO CONSTRUCTION OF WET POND AND BIORETENTION POND.

MAINTENANCE REQUIREMENTS:

1. SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EVENT EXCEEDING 2.5 INCHES IN A 24 HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS WARRANTED BY SUCH INSPECTION.
2. TRASH AND DEBRIS SHOULD BE REMOVED AT EACH INSPECTION.
3. AT LEAST ONCE ANNUALLY, SYSTEM SHOULD BE INSPECTED FOR DRAWDOWN TIME. IF BIORETENTION SYSTEM DOES NOT DRAIN WITHIN 72 HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL SHOULD ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE FILTRATION FUNCTION OR INFILTRATION FUNCTION (AS APPLICABLE), INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER MEDIA.
4. VEGETATION SHOULD BE INSPECTED AT LEAST ANNUALLY, AND MAINTAINED IN HEALTHY CONDITION, INCLUDING PRUNING, REMOVAL AND REPLACEMENT OF DEAD OR DISEASED VEGETATION, AND REMOVAL OF INVASIVE SPECIES.

BIORETENTION SYSTEM

NOT TO SCALE

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| Design: JAC | Draft: AJB | Date: 4/15/21 |
| Checked: JAC | Scale: AS NOTED | Project No.: 14232.7 |
| Drawing Name: 14232.7-PLAN.dwg | | |
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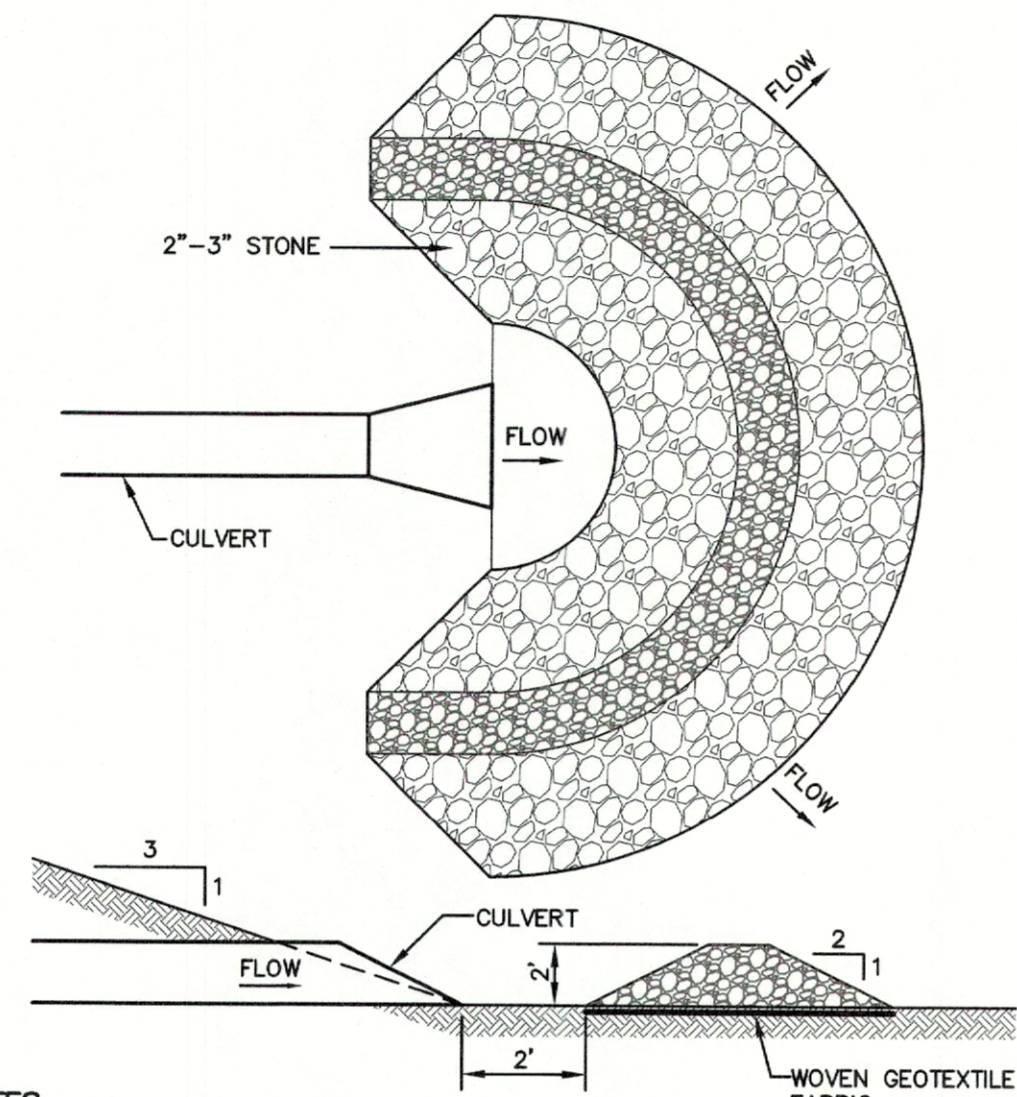
85 Portsmouth Ave. Civil Engineering Services 603-772-4746
 PO Box 219 Stratham, NH 03885 FAX: 603-772-0227
 E-MAIL: JBE@JONESANDBEACH.COM

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| Plan Name: | DETAIL SHEET |
| Project: | 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE |
| Owner of Record: | KAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 2ND FLOOR, SUITE 1, NASHUA, NH 03063 |

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| DRAWING No. | D4 |
| SHEET 32 OF 34 | JBE PROJECT NO. 14232.7 |

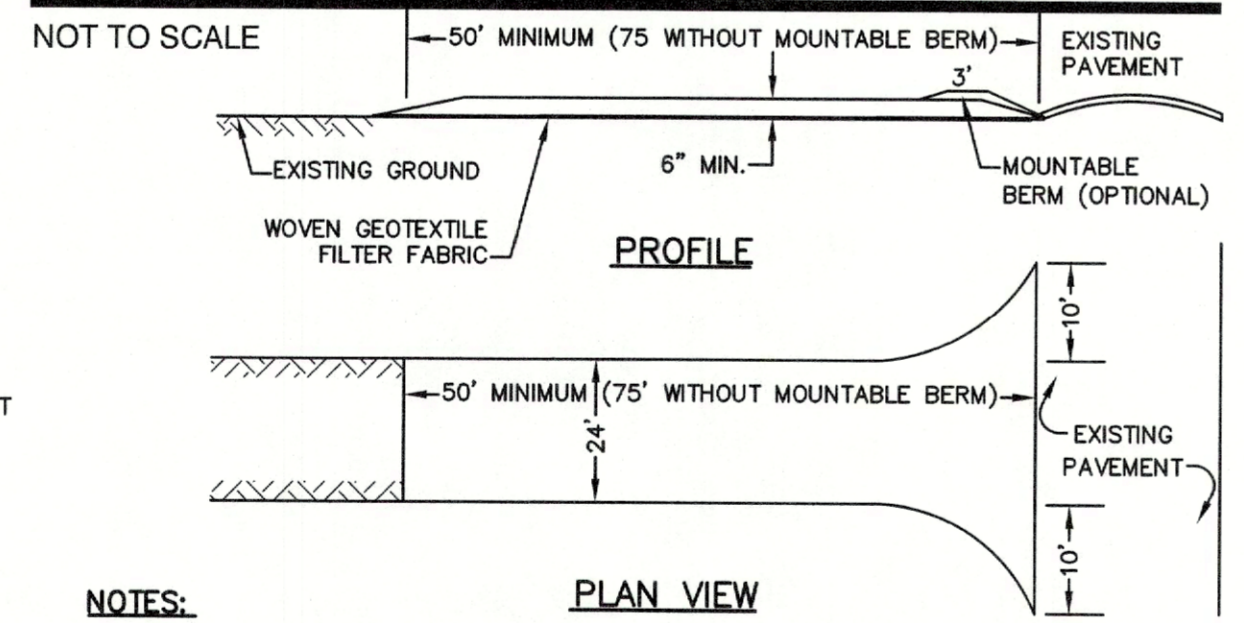
TEMPORARY EROSION CONTROL NOTES

- THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME. AT NO TIME SHALL AN AREA IN EXCESS OF 5 ACRES BE EXPOSED AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.
- EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND AT LOCATIONS AS REQUIRED, DIRECTED BY THE ENGINEER.
- ALL DISTURBED AREAS (INCLUDING POND AREAS BELOW THE PROPOSED WATERLINE) SHALL BE RETURNED TO PROPOSED GRADES AND ELEVATIONS. DISTURBED AREAS SHALL BE LOAMED WITH A MINIMUM OF 6" OF SCREENED ORGANIC LOAM AND SEEDED WITH SEED MIXTURE 'C' AT A RATE NOT LESS THAN 1.10 POUNDS OF SEED PER 1,000 S.F. OF AREA (48 LBS. / ACRE).
- SILT FENCES AND OTHER BARRIERS SHALL BE INSPECTED EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 0.5" OR GREATER. ALL DAMAGED AREAS SHALL BE REPAIRED, AND SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED OF.
- AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED AND THE AREA DISTURBED BY THE REMOVAL SMOOTHED AND RE-VEGETATED.
- AREAS MUST BE SEEDED AND MULCHED OR OTHERWISE PERMANENTLY STABILIZED WITHIN 3 DAYS OF FINAL GRADING, OR TEMPORARILY STABILIZED WITHIN 14 DAYS OF THE INITIAL DISTURBANCE OF SOIL. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
- ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING NORTH AMERICAN GREEN ST150BN EROSION CONTROL BLANKETS (OR AN EQUIVALENT APPROVED IN WRITING BY THE ENGINEER) ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING. ELSEWHERE, THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
- ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
- AFTER OCTOBER 15th, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3" OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.
- AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
 - BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
 - A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
 - A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH STONE OR RIPRAP HAS BEEN INSTALLED; OR
 - EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
- FUGITIVE DUST CONTROL IS REQUIRED TO BE CONTROLLED IN ACCORDANCE WITH ENV-A 1000, AND THE PROJECT IS TO MEET THE REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES.
- PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR'S NAME, ADDRESS, AND PHONE NUMBER SHALL BE SUBMITTED TO DES VIA EMAIL (RIDGELY.MAUCK@DES.NH.GOV).
- PRIOR TO CONSTRUCTION, A PHASING PLAN THAT DELINEATES EACH PHASE OF THE PROJECT SHALL BE SUBMITTED. ALL TEMPORARY SEDIMENT BASINS THAT WILL BE NEEDED FOR DEWATERING WORK AREAS SHALL BE LOCATED AND IDENTIFIED ON THIS PLAN.
- IN ORDER TO ENSURE THE STABILITY OF THE SITE AND EFFECTIVE IMPLEMENTATION OF THE SEDIMENT AND EROSION CONTROL MEASURES SPECIFIED IN THE PLANS FOR THE DURATION OF CONSTRUCTION, THE CONTRACTOR SHALL BE IN STRICT COMPLIANCE WITH THE FOLLOWING INSPECTION AND MAINTENANCE REQUIREMENTS IN ADDITION TO THOSE CALLED FOR IN THE SWPPP:
 - A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL OR A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE ("MONITOR") SHALL BE EMPLOYED TO INSPECT THE SITE FROM THE START OF ALTERATION OF TERRAIN ACTIVITIES UNTIL THE SITE IS IN FULL COMPLIANCE WITH THE SITE SPECIFIC PERMIT ("PERMIT").
 - DURING THIS PERIOD, THE MONITOR SHALL INSPECT THE SUBJECT SITE AT LEAST ONCE A WEEK, AND IF POSSIBLE, DURING ANY 1/2 INCH OR GREATER RAIN EVENT (I.E. 1/2 INCH OF PRECIPITATION OR MORE WITHIN A 24 HOUR PERIOD). IF UNABLE TO BE PRESENT DURING SUCH A STORM, THE MONITOR SHALL INSPECT THE SITE WITHIN 24 HOURS OF THIS EVENT.
 - THE MONITOR SHALL PROVIDE TECHNICAL ASSISTANCE AND RECOMMENDATIONS TO THE CONTRACTOR ON THE APPROPRIATE BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROLS REQUIRED TO MEET THE REQUIREMENTS OF RSA 485 A:17 AND ALL APPLICABLE DES PERMIT CONDITIONS.
 - WITHIN 24 HOURS OF EACH INSPECTION, THE MONITOR SHALL SUBMIT A REPORT TO DES VIA EMAIL (RIDGELY MAUCK AT: RIDGELY.MAUCK@DES.NH.GOV).
 - THE MONITOR SHALL MEET WITH DES TO DECIDE UPON A REPORT FORMAT. THE REPORT FORMAT SHALL BE REVIEWED AND APPROVED BY DES PRIOR TO THE START OF CONSTRUCTION.



- NOTES:**
- TEMPORARY CULVERT INLET PROTECTION CHECK DAMS SHALL BE CONSTRUCTED OF 2-3" STONE OVER WOVEN GEOTEXTILE FABRIC.
 - SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURE WHEN IT HAS ACCUMULATED TO ONE HALF THE ORIGINAL HEIGHT OF THE STRUCTURE.
 - STRUCTURE SHALL BE REMOVED WHEN THE SITE IS STABILIZED WITH THE PROPOSED RIP RAP FIELD. AREAS OUTSIDE THE RIP RAP FIELD ARE TO BE VEGETATED AND SMOOTHED.

TEMPORARY CULVERT INLET PROTECTION CHECK DAM



- NOTES:**
- STONE FOR STABILIZED CONSTRUCTION ENTRANCE SHALL BE 3 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
 - THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50 FEET, 75' WITHOUT A MOUNTABLE BERM, AND EXCEPT FOR A SINGLE RESIDENTIAL LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.
 - THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
 - THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS, OR 10 FEET, WHICHEVER IS GREATER.
 - GEOTEXTILE FILTER FABRIC SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE. FILTER FABRIC IS NOT REQUIRED FOR A SINGLE FAMILY RESIDENTIAL LOT.
 - ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A STONE BERM WITH 5:1 SLOPES THAT CAN BE REMOVED PROMPTLY.
 - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO THE PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

SEEDING SPECIFICATIONS

- GRADING AND SHAPING**
 - SLOPES SHALL NOT BE STEEPER THAN 2:1 WITHOUT APPROPRIATE EROSION CONTROL MEASURES AS SPECIFIED ON THE PLANS (3:1 SLOPES OR FLATTER ARE PREFERRED).
 - WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.
- SEEDBED PREPARATION**
 - SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
 - STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT 4 INCHES TO PREPARE A SEEDBED AND FERTILIZER AND LIME MIXED INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN A REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.
- ESTABLISHING A STAND**
 - LIME AND FERTILIZER SHOULD BE APPLIED PRIOR TO OR AT THE TIME OF SEEDING AND INCORPORATED INTO THE SOIL. TYPES AND AMOUNTS OF LIME AND FERTILIZER SHOULD BE BASED ON AN EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE, THE FOLLOWING MINIMUM AMOUNTS SHOULD BE APPLIED:
 - AGRICULTURAL LIMESTONE, 2 TONS PER ACRE OR 100 LBS. PER 1,000 SQ.FT.
 - NITROGEN(N), 50 LBS. PER ACRE OR 1.1 LBS. PER 1,000 SQ.FT.
 - PHOSPHATE(P2O5), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ.FT.
 - POTASH(K2O), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ.FT.
 (NOTE: THIS IS THE EQUIVALENT OF 500 LBS. PER ACRE OF 10-20-20 FERTILIZER OR 1,000 LBS. PER ACRE OF 5-10-10.)
 - SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH .25 INCH OF SOIL OR LESS, BY CULTPACKING OR RAKING.
 - REFER TO THE 'SEEDING GUIDE' AND 'SEEDING RATES' TABLES ON THIS SHEET FOR APPROPRIATE SEED MIXTURES AND RATES OF SEEDING. ALL LEGUMES (CROWN VETCH, BIRDSFOOT, TREFLOIL AND FLATPEA) MUST BE INOCULATED WITH THEIR SPECIFIC INOCULANT PRIOR TO THEIR INTRODUCTION TO THE SITE.
 - WHEN SEEDING AREAS ARE NOT MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDING AREAS ARE MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20TH OR FROM AUGUST 10TH TO SEPTEMBER 1st.
- MULCH**
 - HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
 - MULCH WILL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE BEST MANAGEMENT PRACTICE FOR MULCHING. HAY OR STRAW MULCH SHALL BE PLACED AT A RATE OF 90 LBS PER 1000 S.F.
- MAINTENANCE TO ESTABLISH A STAND**
 - PLANTED AREAS SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
 - FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIALS TAKE 2 TO 3 YEARS TO BECOME FULLY ESTABLISHED.
 - IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, ANNUAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.

| USE | SEEDING MIXTURE 1/ | DROUGHTY | WELL DRAINED | MODERATELY WELL DRAINED | POORLY DRAINED |
|---|--------------------|----------|--------------|-------------------------|----------------|
| STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS | A | FAIR | GOOD | GOOD | FAIR |
| | B | POOR | GOOD | FAIR | FAIR |
| | C | POOR | GOOD | EXCELLENT | GOOD |
| | D | FAIR | EXCELLENT | EXCELLENT | POOR |
| WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER. | A | GOOD | GOOD | GOOD | FAIR |
| | C | GOOD | EXCELLENT | EXCELLENT | FAIR |
| LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES. | A | GOOD | GOOD | GOOD | FAIR |
| | B | GOOD | GOOD | FAIR | POOR |
| | C | GOOD | EXCELLENT | EXCELLENT | FAIR |
| PLAY AREAS AND ATHLETIC FIELDS (TOPSOIL IS ESSENTIAL FOR GOOD TURF.) | E | FAIR | EXCELLENT | EXCELLENT | 2/ |
| | F | FAIR | EXCELLENT | EXCELLENT | 2/ |

GRAVEL PIT, SEE NH-PM-24 IN APPENDIX FOR RECOMMENDATION REGARDING RECLAMATION OF SAND AND GRAVEL PITS.

1/ REFER TO SEEDING MIXTURES AND RATES IN TABLE BELOW.
2/ POORLY DRAINED SOILS ARE NOT DESIRABLE FOR USE AS PLAYING AREA AND ATHLETIC FIELDS.

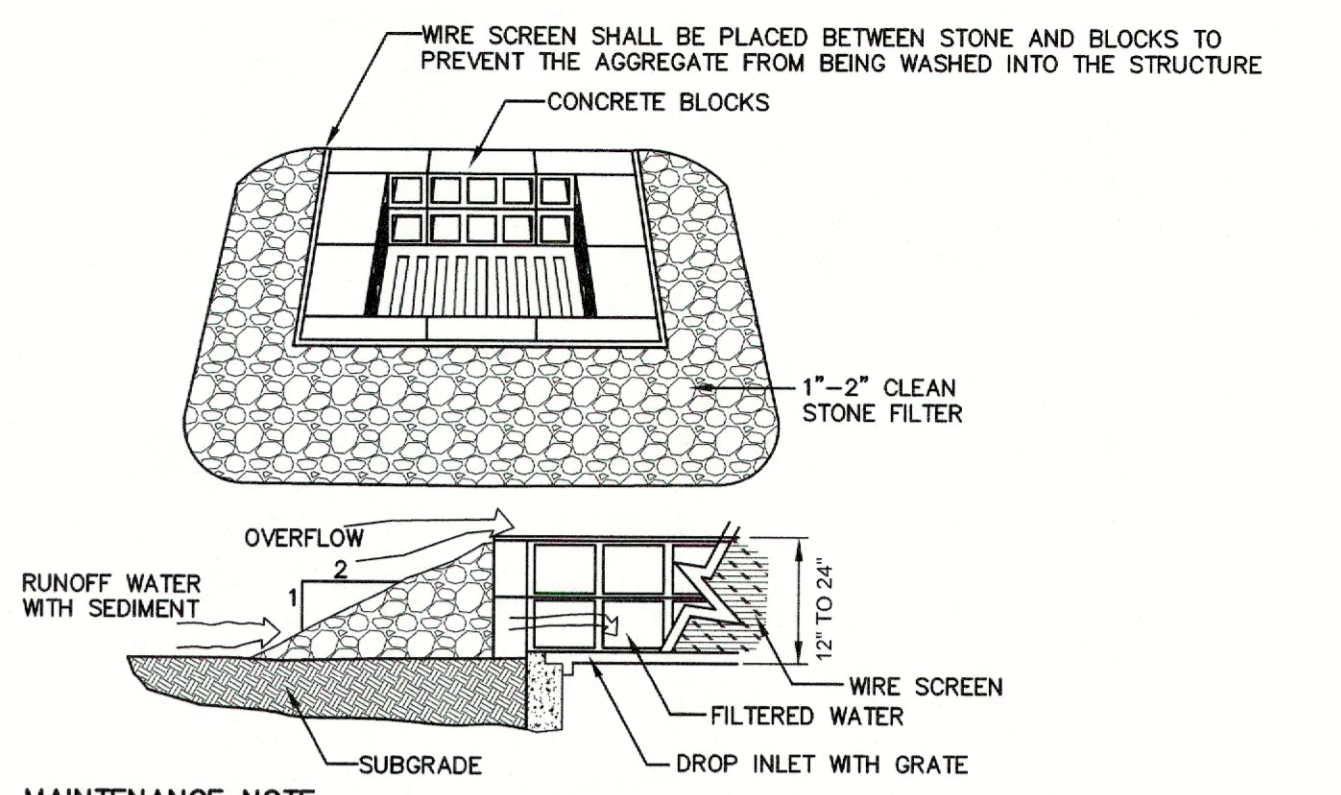
NOTE: TEMPORARY SEED MIX FOR STABILIZATION OF TURF SHALL BE WINTER RYE OR OATS AT A RATE OF 2.5 LBS. PER 1000 S.F. AND SHALL BE PLACED PRIOR TO OCTOBER 15th, IF PERMANENT SEEDING NOT YET COMPLETE.

SEEDING GUIDE

| MIXTURE | POUNDS PER ACRE | POUNDS PER 1,000 Sq. Ft. |
|---------------------------|-----------------|--------------------------|
| A. TALL FESCUE | 20 | 0.45 |
| CREeping RED FESCUE | 20 | 0.45 |
| RED TOP | 2 | 0.05 |
| TOTAL | 42 | 0.95 |
| B. TALL FESCUE | 15 | 0.35 |
| CREeping RED FESCUE | 10 | 0.25 |
| CROWN VETCH | 15 | 0.35 |
| OR | | |
| FLAT PEA | 30 | 0.75 |
| TOTAL | 40 OR 55 | 0.95 OR 1.35 |
| C. TALL FESCUE | 20 | 0.45 |
| CREeping RED FESCUE | 20 | 0.45 |
| BIRDS FOOT TREFLOIL | 8 | 0.20 |
| TOTAL | 48 | 1.10 |
| D. TALL FESCUE | 20 | 0.45 |
| FLAT PEA | 30 | 0.75 |
| TOTAL | 50 | 1.20 |
| E. CREeping RED FESCUE 1/ | 50 | 1.15 |
| KENTUCKY BLUEGRASS 1/2 | 50 | 1.15 |
| TOTAL | 100 | 2.30 |
| F. TALL FESCUE 1 | 150 | 3.60 |

1/ FOR HEAVY USE ATHLETIC FIELDS CONSULT THE UNIVERSITY OF NEW HAMPSHIRE COOPERATIVE EXTENSION TURF SPECIALIST FOR CURRENT VARIETIES AND SEEDING RATES.

SEEDING RATES



- MAINTENANCE NOTE:**
- ALL STRUCTURES SHOULD BE INSPECTED AFTER EVERY RAINFALL AND REPAIRS MADE AS NECESSARY. SEDIMENT SHOULD BE REMOVED FROM TRAPPING DEVICES AFTER THE SEDIMENT HAS REACHED A MAXIMUM OF ONE HALF THE DEPTH OF THE TRAP. THE SEDIMENT SHOULD BE DISPOSED IN A SUITABLE UPLAND AREA AND PROTECTED FROM EROSION BY EITHER STRUCTURE OR VEGETATIVE MEANS. THE TEMPORARY TRAPS SHOULD BE REMOVED AND THE AREA REPAIRED AS SOON AS THE CONTRIBUTING DRAINAGE AREA TO THE INLET HAS BEEN COMPLETELY STABILIZED.

TEMPORARY CATCH BASIN INLET PROTECTION (Block and Gravel Drop Inlet Sediment Filter)

NOT TO SCALE

CONSTRUCTION SEQUENCE

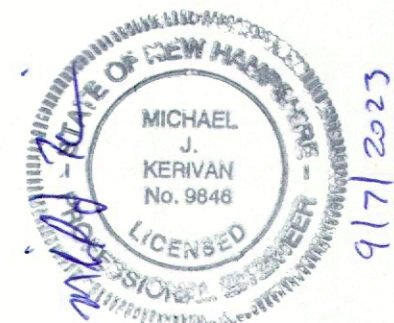
- PRIOR TO THE START OF ANY ACTIVITY, IT IS THE RESPONSIBILITY OF THE SITE'S SITE DEVELOPER (OR OWNER) TO FILE A NOTICE OF INTENT (NOI) FORM WITH THE ENVIRONMENTAL PROTECTION AGENCY (EPA) IN ORDER TO GAIN COVERAGE UNDER THE NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES. A PRE CONSTRUCTION MEETING IS TO BE HELD WITH ALL DEPARTMENT HEADS PRIOR TO THE START OF CONSTRUCTION.
- WETLAND BOUNDARIES ARE TO BE CLEARLY MARKED PRIOR TO THE START OF CONSTRUCTION. AT LEAST A TEMPORARY CULVERT OR ROADBED TO BE IN PLACE PRIOR TO THE START OF CONSTRUCTION.
- CUT AND REMOVE TREES IN CONSTRUCTION AREA AS REQUIRED OR DIRECTED.
- INSTALL SILT FENCING, HAY BALES AND CONSTRUCTION ENTRANCES PRIOR TO THE START OF CONSTRUCTION. THESE ARE TO BE MAINTAINED UNTIL THE FINAL PAVEMENT SURFACING AND LANDSCAPING AREAS ARE ESTABLISHED.
- CLEAR, CUT, GRUB AND DISPOSE OF DEBRIS IN APPROVED FACILITIES. THIS INCLUDES ANY REQUIRED DEMOLITION OF EXISTING STRUCTURES, UTILITIES, ETC.
- CONSTRUCT AND/OR INSTALL TEMPORARY OR PERMANENT SEDIMENT AND/OR DETENTION BASIN(S) AS REQUIRED. THESE FACILITIES SHALL BE INSTALLED AND STABILIZED PRIOR TO DIRECTING RUN-OFF TO THEM.
- STRIP LOAM AND PAVEMENT, OR RECLAIM EXISTING PAVEMENT WITHIN LIMITS OF WORK PER THE RECOMMENDATIONS OF THE PROJECT ENGINEER AND STOCKPILE EXCESS MATERIAL. STABILIZE STOCKPILE AS NECESSARY.
- PERFORM PRELIMINARY SITE GRADING IN ACCORDANCE WITH THE PLANS, INCLUDING THE CONSTRUCTION OF ANY RETAINING WALLS AND SOUND WALLS.
- PREPARE BUILDING PAD(S) TO ENABLE BUILDING CONSTRUCTION TO BEGIN.
- INSTALL THE SEWER AND DRAINAGE SYSTEMS FIRST, THEN ANY OTHER UTILITIES IN ACCORDANCE WITH THE PLAN AND DETAILS. ANY CONFLICTS BETWEEN UTILITIES ARE TO BE RESOLVED WITH THE INVOLVEMENT AND APPROVAL OF THE ENGINEER.
- INSTALL INLET PROTECTION AT ALL CATCH BASINS AS THEY ARE CONSTRUCTED IN ACCORDANCE WITH DETAILS.
- ALL SWALES AND DRAINAGE STRUCTURES ARE TO BE CONSTRUCTED AND STABILIZED PRIOR TO HAVING RUN-OFF DIRECTED TO THEM.
- DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINAGE DITCHES, CHECK DAMS, SEDIMENT TRAPS, ETC., TO PREVENT EROSION ON THE SITE AND PREVENT ANY SILTATION OF ABUTTING WATERS AND/OR PROPERTY.
- PERFORM FINAL FINE GRADING, INCLUDING PLACEMENT OF 'SELECT' SUBGRADE MATERIALS.
- PAVE ALL PARKING LOTS AND ROADWAYS WITH INITIAL 'BASE COURSE'.
- PERFORM ALL REMAINING SITE CONSTRUCTION (I.E. BUILDING, CURBING, UTILITY CONNECTIONS, ETC.).
- LOAM AND SEED ALL DISTURBED AREAS AND INSTALL ANY REQUIRED SEDIMENT AND EROSION CONTROL FACILITIES (I.E. RIP RAP, EROSION CONTROL BLANKETS, ETC.).
- FINISH PAVING ALL ROADWAYS AND PARKING AREAS WITH 'FINISH' COURSE.
- ALL ROADWAYS AND PARKING LOTS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- ALL CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- COMPLETE PERMANENT SEEDING AND LANDSCAPING.
- REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER SEEDING AREAS HAVE BEEN 75%-85% ESTABLISHED AND SITE IMPROVEMENTS ARE COMPLETE. SMOOTH AND RE-VEGETATE ALL DISTURBED AREAS.
- CLEAN SITE AND ALL DRAINAGE STRUCTURES, PIPES AND SUMPS OF ALL SILT AND DEBRIS.
- INSTALL ALL PAINTED PAVEMENT MARKINGS AND SIGNAGE PER THE PLANS AND DETAILS.
- ALL EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EVERY HALF-INCH OF RAINFALL.
- UPON COMPLETION OF CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY ANY RELEVANT PERMITTING AGENCIES THAT THE CONSTRUCTION HAS BEEN FINISHED IN A SATISFACTORY MANNER.

- NOTES:**
- ORGANIC FILTER BERMS SHALL BE UTILIZED IN LIEU OF SILT FENCE EXCEPT THAT A DOUBLE ROW OF PERIMETER CONTROLS INCLUDING BOTH ORGANIC FILTER BERM AND SILT FENCE SHALL BE UTILIZED WITHIN 50' OF ANY WETLAND.
 - THE EROSION CONTROL MIX USED IN THE FILTER BERMS SHALL BE A WELL-GRADED MIXTURE OF PARTICLE SIZES, MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER, STUMP GRINDINGS, SHREDDED OR COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS, AND SHALL BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH, AND SHALL MEET THE FOLLOWING STANDARDS:
 - THE ORGANIC CONTENT SHALL BE 80-100% OF DRY WEIGHT.
 - PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN, AND 70-85% PASSING A 0.75" SCREEN.
 - THE ORGANIC PORTION SHALL BE FIBROUS AND ELONGATED.
 - LARGE PORTIONS OF SILTS, CLAYS, OR FINE SANDS SHALL NOT BE INCLUDED IN THE MIXTURE.
 - SOLUBLE SALTS CONTENT SHALL BE >4.0mmhos/cm.
 - THE PH SHALL BE BETWEEN 5.0 AND 8.0.
 - ORGANIC FILTER BERMS SHALL BE INSTALLED ALONG A RELATIVELY LEVEL CONTOUR. IT MAY BE NECESSARY TO CUT TALL GRASSES OR WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES THAT WOULD ENABLE FINES TO WASH UNDER THE BERM.
 - ON SLOPES LESS THAN 5%, OR AT THE BOTTOM OF SLOPES STEEPER THAN 3:1, UP TO 20' LONG, THE BERM SHALL BE A MINIMUM OF 12" HIGH (AS MEASURED ON THE UPHILL SIDE), AND A MINIMUM OF 36" WIDE. ON LONGER OR STEEPER SLOPES, THE BERM SHALL BE WIDER TO ACCOMMODATE THE POTENTIAL ADDITIONAL RUNOFF.
 - FROZEN GROUND, OUTCROPS OF BEDROCK, AND VERY ROOTED FORESTED AREAS PRESENT THE MOST PRACTICAL AND EFFECTIVE LOCATIONS FOR ORGANIC FILTER BERMS. OTHER BMP'S SHOULD BE USED AT LOW POINTS OF CONCENTRATED RUNOFF, BELOW CULVERT OUTLET APRONS, AROUND CATCH BASINS, AND AT THE BOTTOM OF STEEP PERIMETER SLOPES THAT HAVE A LARGE CONTRIBUTING AREA.
 - SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT HAS ACCUMULATED TO ONE HALF THE ORIGINAL HEIGHT OF THE STRUCTURE.
 - STRUCTURES MAY BE LEFT IN PLACE ONCE THE SITE IS STABILIZED.

ORGANIC FILTER BERM

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| | | |
|---|-----------------|----------------------|
| Design: JAC | Draft: AJB | Date: 4/15/21 |
| Checked: JAC | Scale: AS NOTED | Project No.: 14232.7 |
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J/B Jones & Beach Engineers, Inc.

85 Portsmouth Ave. PO Box 219 Stratham, NH 03885

Civil Engineering Services

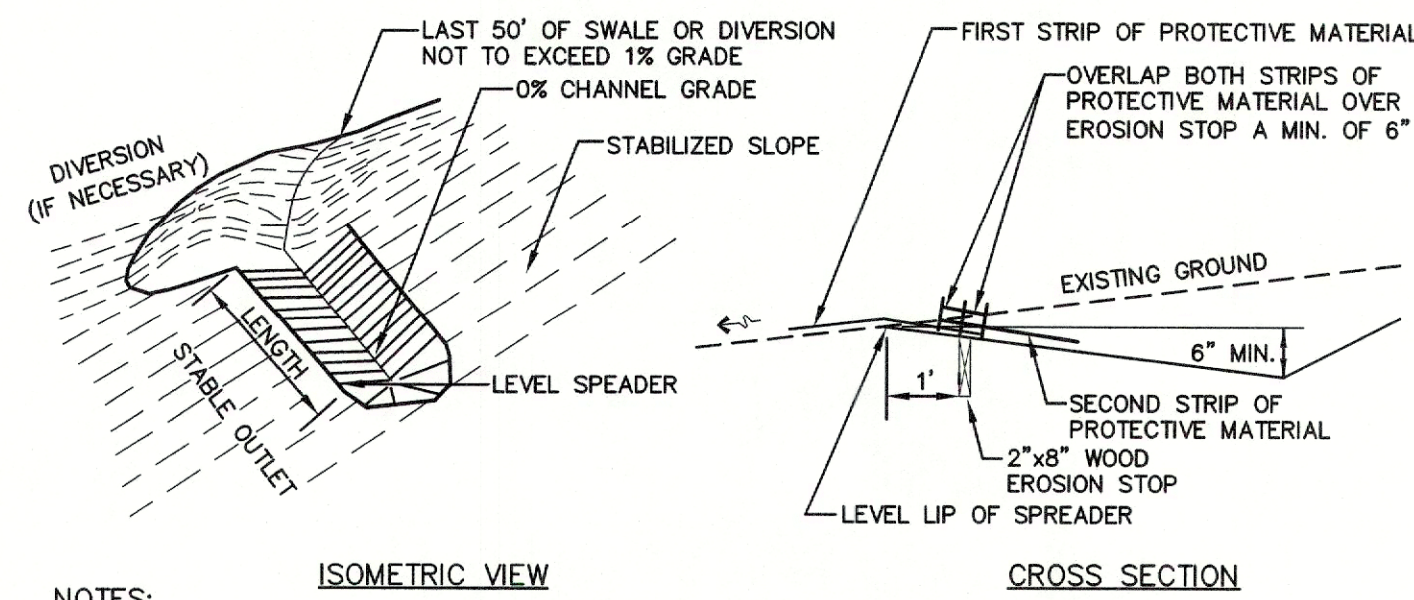
603-772-4746 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM

| | |
|------------------|---|
| Plan Name: | EROSION AND SEDIMENT CONTROL DETAILS |
| Project: | 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE |
| Owner of Record: | RAYMOND PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 |

DRAWING No.

E1

SHEET 33 OF 34
JBE PROJECT NO. 14232.7

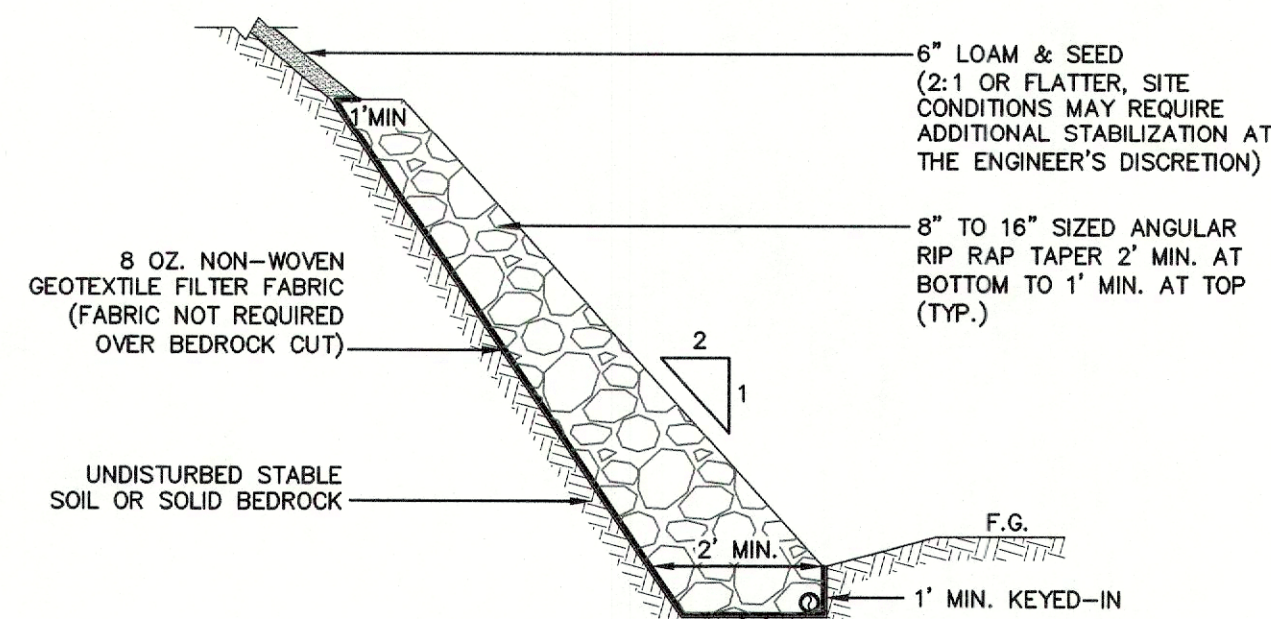


NOTES:

1. CONSTRUCT THE LEVEL SPREADER LIP ON A ZERO PERCENT GRADE TO ENSURE UNIFORM SPREADING OF RUNOFF.
2. LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL AND NOT ON FILL.
3. AN EROSION STOP SHALL BE PLACED VERTICALLY A MINIMUM OF SIX INCHES DEEP IN A SLIT TRENCH ONE FOOT BACK OF THE LEVEL LIP AND PARALLEL TO THE LIP. THE EROSION STOP SHALL EXTEND THE ENTIRE LENGTH OF THE LEVEL LIP.
4. ENTIRE LEVEL LIP AREA SHALL BE PROTECTED BY PLACING TWO STRIPS OF JUTE OR EXCELSIOR MATTING ALONG THE LIP. EACH STRIP SHALL OVERLAP THE EROSION STOP BY AT LEAST SIX INCHES.
5. ENTRANCE CHANNEL TO THE LEVEL SPREADER SHALL NOT EXCEED A 1 PERCENT GRADE FOR AT LEAST 50 FEET BEFORE ENTERING THE SPREADER.
6. THE FLOW FROM THE LEVEL SPREADER SHALL OUTLET ONTO STABILIZED AREAS. WATER MUST NOT RECONCENTRATE IMMEDIATELY BELOW THE SPREADER.
7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE SHALL BE PERFORMED.
8. MAINTENANCE: THE LEVEL SPREADER SHOULD BE CHECKED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE IF THE SPREADER HAS BEEN DAMAGED. SEDIMENT DEEPER THAN 4" ACCUMULATION SHOULD BE REMOVED. IF RILLING HAS TAKEN PLACE ON THE LIP, THEN THE DAMAGE SHOULD BE REPAIRED AND REVEGETATED. THE VEGETATION SHOULD BE MOWED OCCASIONALLY TO CONTROL WEEDS AND THE ENCROACHMENT OF WOODY VEGETATION. CLIPPINGS SHOULD BE REMOVED AND DISPOSED OF OUTSIDE THE SPREADER AND AWAY FROM OUTLET AREA. FERTILIZATION SHOULD BE DONE AS NECESSARY TO KEEP THE VEGETATION HEALTHY AND DENSE.

LEVEL SPREADER

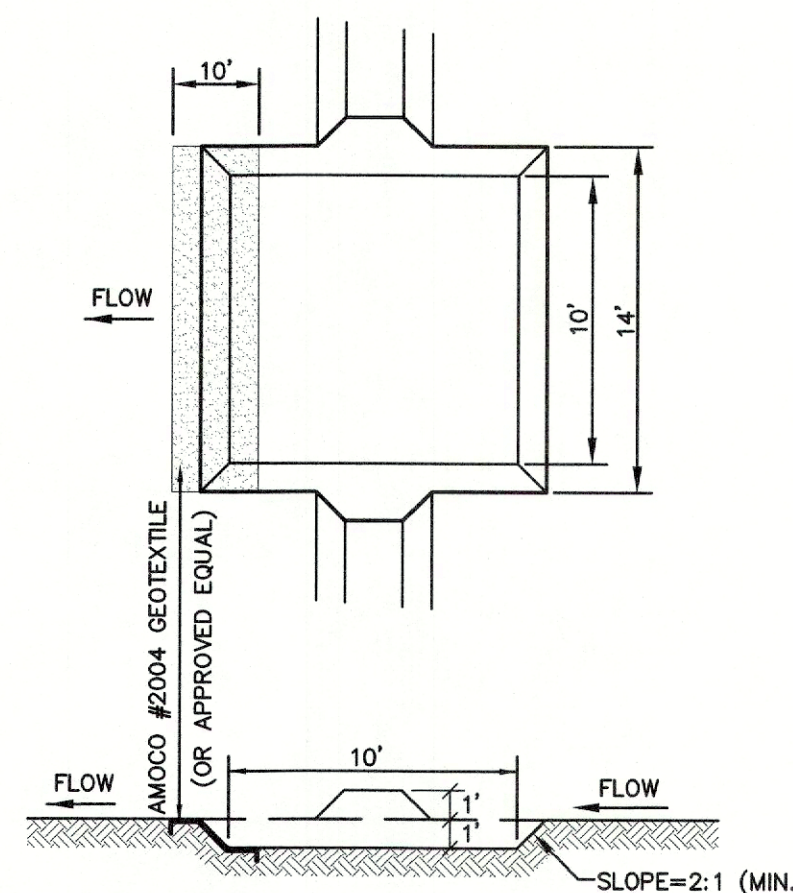
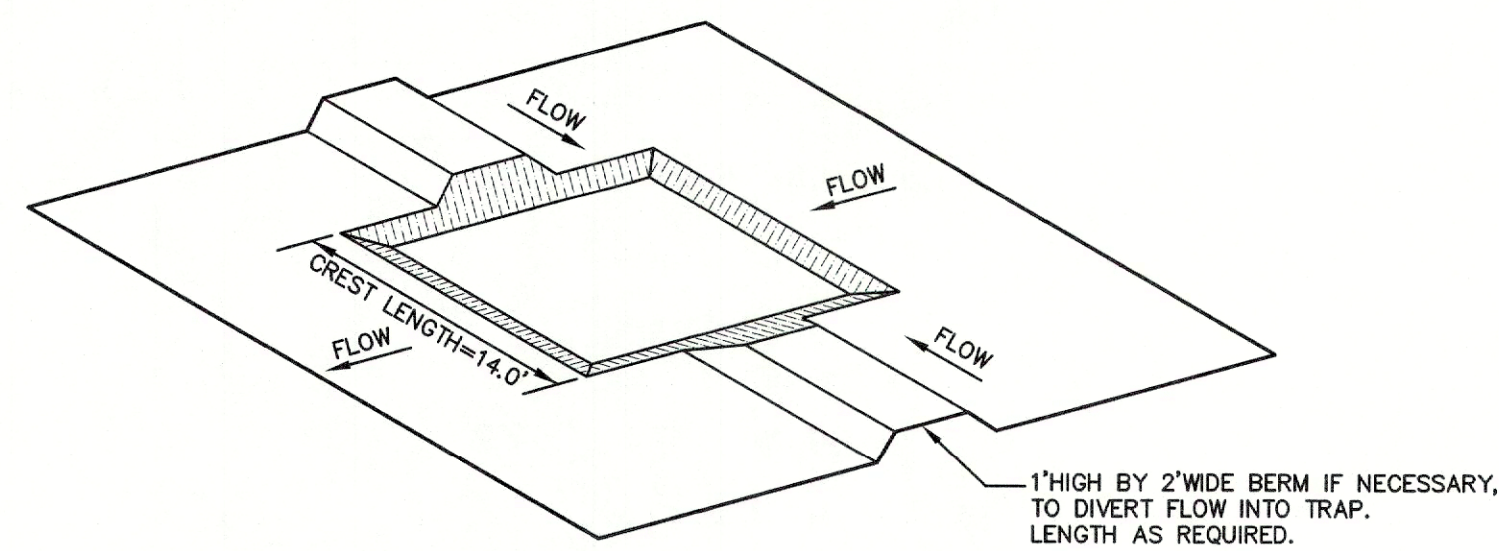
NOT TO SCALE



NOTE:
STRUCTURAL/GEOTECH ENGINEER TO APPROVE & STAMP RIP RAP SLOPES GREATER THAN 2:1 PRIOR TO CONSTRUCTION.

RIP RAP SLOPE COVER

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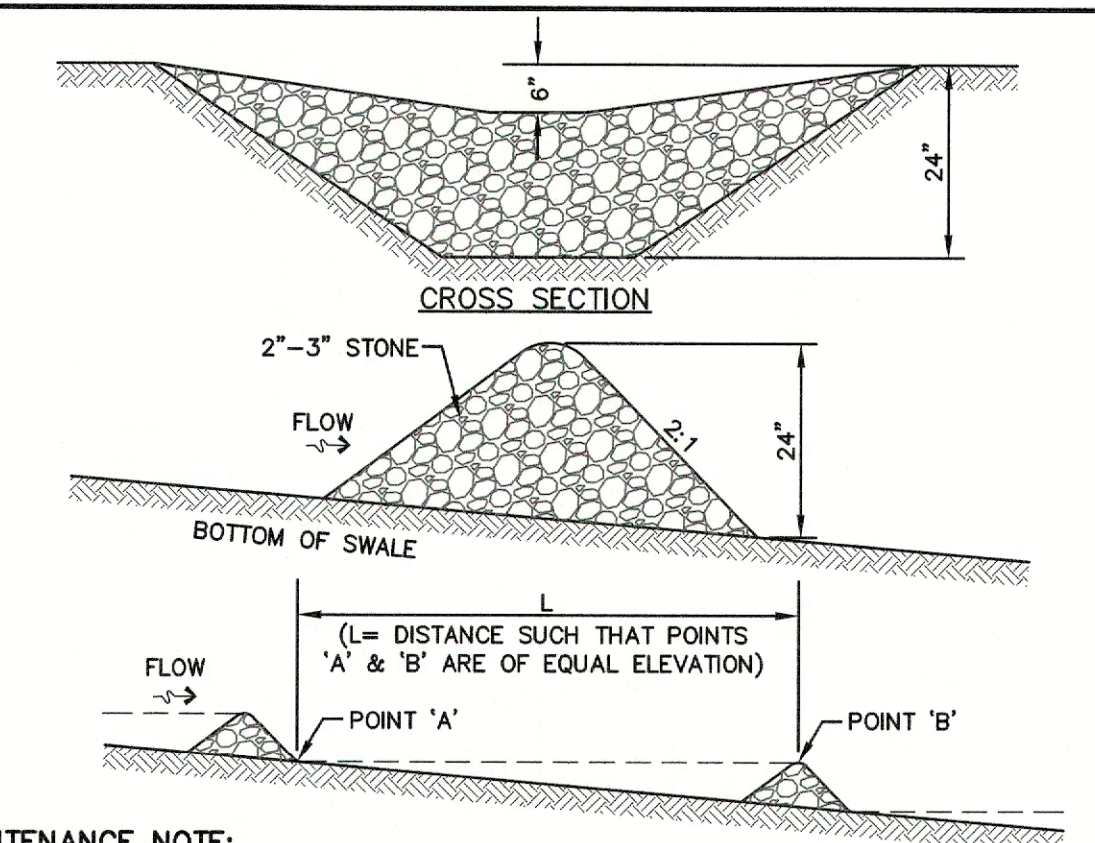


CONSTRUCTION SPECIFICATIONS:

1. THE AREA UNDER THE EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ALL VEGETATION, ROOTS, AND DEBRIS.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS, WOODY VEGETATION, STONES OVER 6" SIZE, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIALS. THE FILL SHALL BE COMPACTED BY ROUTING CONSTRUCTION EQUIPMENT OVER IT SO THAT THE ENTIRE AREA OF THE FILL IS TRAVERSED BY AT LEAST ONE WHEEL OR TREAD TRACK OF THE EQUIPMENT.
3. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE MINIMIZED.
4. ALL CUT AND FILL SLOPES SHALL BE 2:1 (H:V) OR FLATTER.
5. OUTLET CREST ELEVATIONS SHALL BE AT LEAST ONE FOOT BELOW THE TOP OF THE EMBANKMENT.
6. OUTLET CREST IS TO BE STABILIZED WITH AMOCO #2004 GEOTEXTILE (OR APPROVED EQUAL), WHICH IS TO BE "TOED" INTO THE GROUND AT ITS ENDS AT LEAST SIX INCHES AND IS TO EXTEND AT LEAST ONE FOOT INTO THE TRAP AND ONE FOOT DOWNSTREAM FROM THE OUTLET EDGE FOR THE ENTIRE LENGTH OF THE CREST.
7. ALL DISTURBED AREAS SHALL BE VEGETATED USING THE APPROPRIATE VEGETATIVE BEST MANAGEMENT PRACTICE.
8. ALL TRAPS ARE TO HAVE SEDIMENT DEPOSITS REMOVED AND DISPOSED PROPERLY AT LEAST ONCE WEEKLY AND AFTER EACH RAINFALL.

TEMPORARY SEDIMENT TRAP

NOT TO SCALE

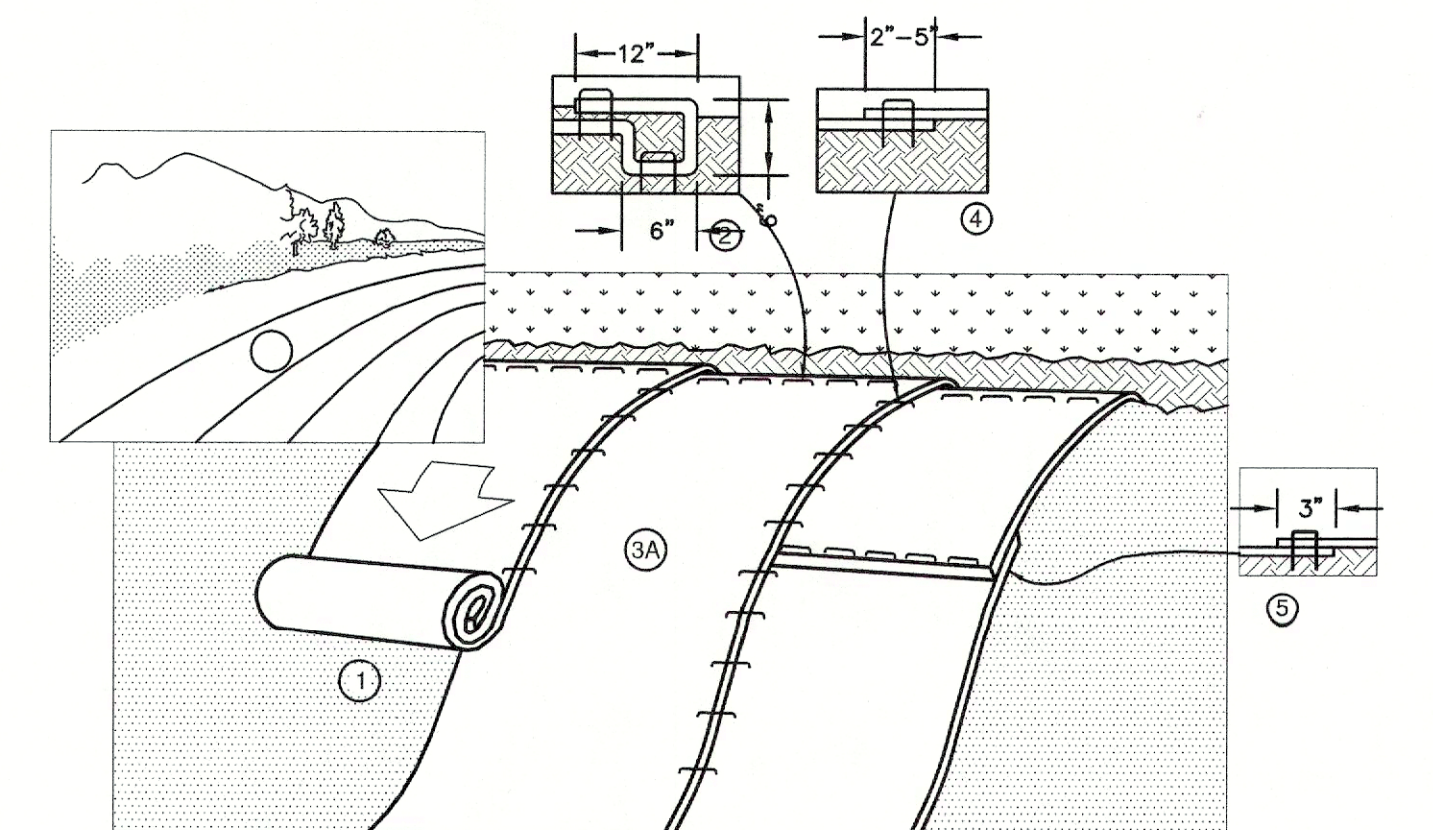


MAINTENANCE NOTE:

1. STONE CHECK DAMS SHOULD BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY. PARTICULAR ATTENTION SHOULD BE GIVEN TO END RUN AND EROSION AT THE DOWNSTREAM TOE OF THE STRUCTURE. WHEN THE STRUCTURES ARE REMOVED, THE DISTURBED PORTION SHOULD BE BROUGHT TO THE EXISTING CHANNEL GRADE AND THE AREAS PREPARED, SEEDED AND MULCHED. WHILE THIS PRACTICE IS NOT INTENDED TO BE USED PRIMARILY FOR SEDIMENT TRAPPING, SOME SEDIMENT WILL ACCUMULATE BEHIND THE STRUCTURES. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT HAS ACCUMULATED TO ONE HALF OF THE ORIGINAL HEIGHT OF THE STRUCTURE.

STONE CHECK DAM

NOT TO SCALE



NOTES:

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP BY 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM™, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH. NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.



NORTH AMERICAN GREEN
14649 HIGHWAY 41 NORTH
EVANSVILLE, INDIANA 47725
1-800-772-2040

EROSION CONTROL BLANKET SLOPE INSTALLATION
(North American Green SC150BN)

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| Design: JAC | Draft: AJB | Date: 4/15/21 |
| Checked: JAC | Scale: AS NOTED | Project No.: 14232.7 |
| Drawing Name: 14232.7-PLAN.dwg | | |
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Civil Engineering Services

603-772-4746 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM

| | |
|------------------|---|
| Plan Name: | DETAIL SHEET |
| Project: | 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE |
| Owner of Record: | KAWNO PROPERTIES, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 |

| | |
|---|-----------|
| DRAWING No. | E2 |
| SHEET 34 OF 34 JBE PROJECT NO. 14232.7 | |

JONES & BEACH ENGINEERS INC.

85 Portsmouth Avenue, PO Box 219, Stratham, NH 03885
603.772.4746 - JonesandBeach.com

DRAINAGE ANALYSIS SEDIMENT AND EROSION CONTROL PLAN

Prepared for:

**Onway Lake Village
15 Sargent Drive
Tax Map 20 Lot 56, Tax Map 26, Lot 1
Sargent Drive
Raymond, NH 03077**



**September 7, 2023
JBE Project No. 14232.7**

1. EXECUTIVE SUMMARY

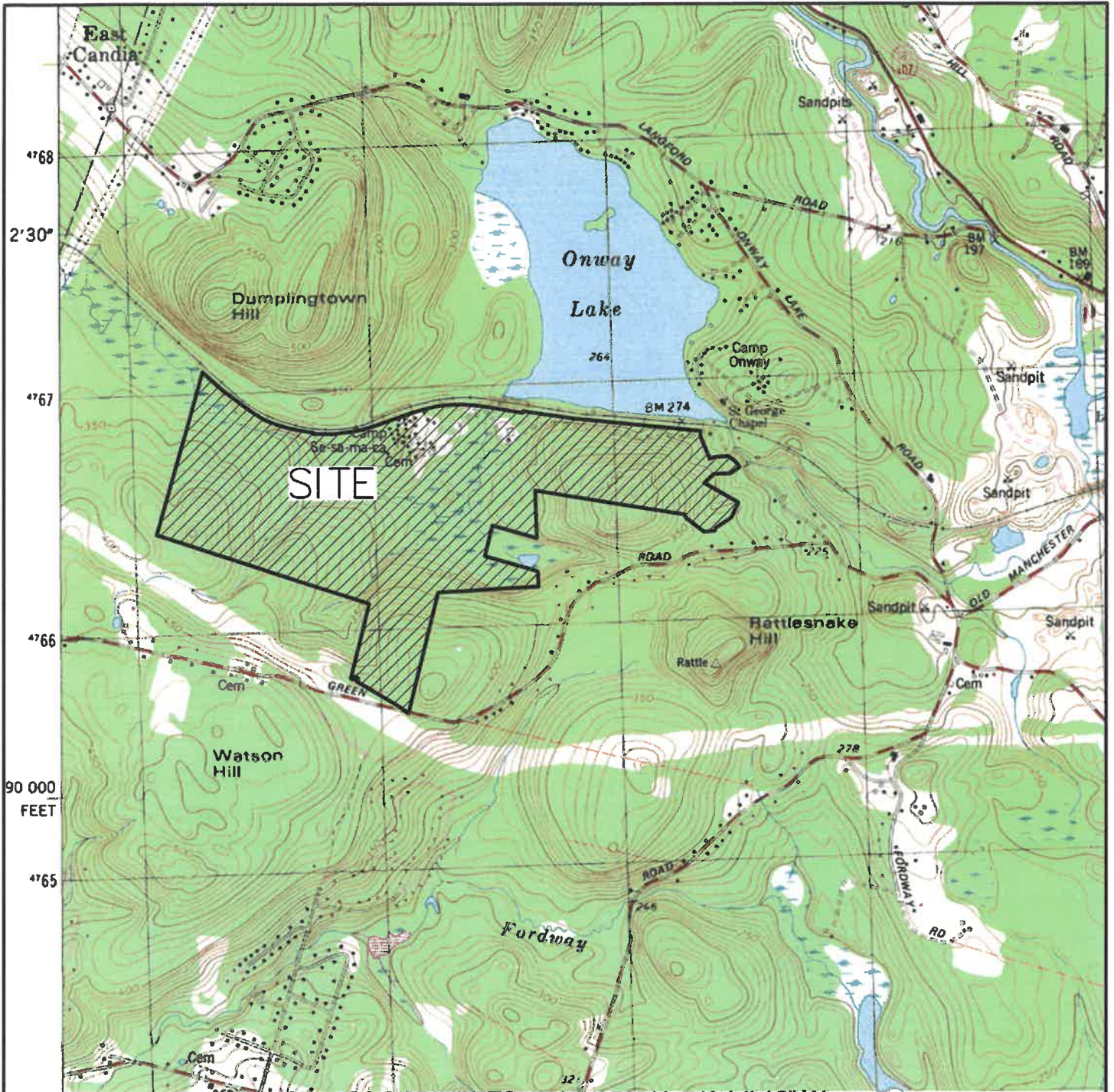
Onway Lake Development, LLC, proposes to construct a 38-lot conservation subdivision on a ±346.1-acre parcel of land located on the north side of Mary Sargent Road in Raymond, NH. A drainage analysis of the entire site and its offsite contributing watershed areas was conducted for the purpose of estimating the peak rate of stormwater runoff and to subsequently design adequate drainage structures. Two models were compiled, one for the area in its existing (pre-construction) condition, and a second for its proposed (post-construction) condition. A summary of the existing and proposed conditions peak rates of runoff is as follows:

| COMPONENT | PEAK DISCHARGE COMPARISON | | | | | | | |
|-------------------|---------------------------|-------|---------|-------|---------|--------|---------|--------|
| | 2 Year | | 10 Year | | 25 Year | | 50 Year | |
| | Pre | Post | Pre | Post | Pre | Post | Pre | Post |
| Analysis Point #1 | 27.44 | 25.86 | 95.08 | 65.33 | 156.57 | 105.42 | 183.01 | 138.95 |

The drainage design intent for this site is to maintain the post-development peak flow to the pre-development peak flow conditions to the extent practicable and to effectively treat stormwater from the development of this site. This has been accomplished through the use of bioretention ponds to maintain the peak discharge and effectively treat stormwater exiting the site.

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 - 4.6.4. 50 Year - 24 Hour Summary
5. Soils Report
6. Plans
 - 6.1. Existing Conditions Watershed Plan - W1
 - 6.2. Proposed Conditions Watershed Plan - W2



SITE COORDINATES: 43° 01' 52" N, 71° 14' 12" W

GRAPHIC SCALE



(IN FEET)

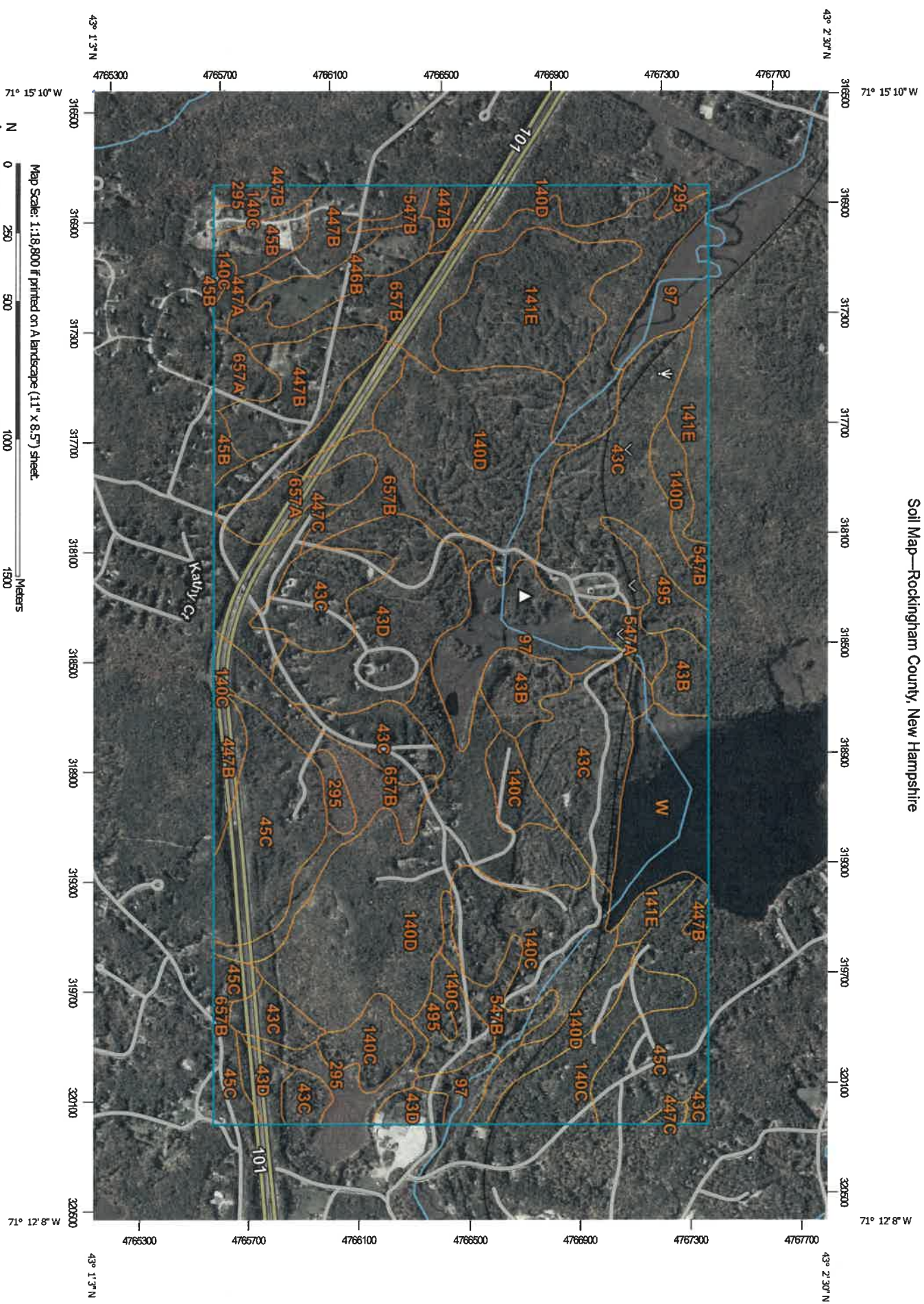
1 inch = 2000ft.

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Civil Engineering Services
 85 Portsmouth Ave. 603-772-4746
 PO Box 219
 Stratham, NH 03885 E-Mail: JBE@jonesandbeach.com

Drawing Name: **USGS PLAN**
 Project: **ONWAY LAKE VILLAGE**
 Applicant: **ONWAY LAKE DEVELOPMENT, LLC**

DRAWING No.
USGS1
 SHEET 1 OF 1
 JBE PROJECT
 No. 14232.7

Soil Map—Rockingham County, New Hampshire







USDA
Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

Map Scale: 1:18,800 if printed on A landscape (11" x 8.5") sheet.
0 500 1000 2500 5000 10000
Feet
0 500 1000 2000 3000 4000
Meters

MAP LEGEND

| | | |
|--|--|---|
|  Area of Interest (AOI) |  Area of Interest (AOI) |  Spoil Area |
| Soils |  Soil Map Unit Polygons |  Stony Spot |
|  Soil Map Unit Lines |  Very Stony Spot |  Wet Spot |
|  Soil Map Unit Points |  Other |  Special Line Features |
| Special Point Features |  Blowout | Water Features |
|  Borrow Pit |  Clay Spot |  Streams and Canals |
|  Closed Depression |  Gravel Pit | Transportation |
|  Gravelly Spot |  Landfill |  Rails |
|  Lava Flow |  Marsh or swamp |  Interstate Highways |
|  Mine or Quarry |  Miscellaneous Water |  US Routes |
|  Perennial Water |  Rock Outcrop |  Major Roads |
|  Saline Spot |  Sandy Spot |  Local Roads |
|  Severely Eroded Spot |  Sinkhole | Background |
|  Slide or Slip |  Sodic Spot |  Aerial Photography |

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Rockingham County, New Hampshire
 Survey Area Data: Version 25, Sep 12, 2022

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

Date(s) aerial images were photographed: Sep 19, 2021—Nov 1, 2021

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

Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|-----------------|--|--------------|----------------|
| 43B | Canton fine sandy loam, 0 to 8 percent slopes, very stony | 29.3 | 1.9% |
| 43C | Canton fine sandy loam, 8 to 15 percent slopes, very stony | 199.2 | 13.1% |
| 43D | Canton fine sandy loam, 15 to 25 percent slopes, very stony | 84.6 | 5.6% |
| 45B | Montauk fine sandy loam, 0 to 8 percent slopes, very stony | 17.2 | 1.1% |
| 45C | Montauk fine sandy loam, 8 to 15 percent slopes, very stony | 123.0 | 8.1% |
| 97 | Freetown and Natchaug mucky peats, ponded, 0 to 2 percent slopes | 81.5 | 5.4% |
| 140C | Chatfield-Hollis-Canton complex, 8 to 15 percent slopes, rocky | 144.7 | 9.5% |
| 140D | Chatfield-Hollis-Canton complex, 15 to 35 percent slopes, rocky | 274.8 | 18.1% |
| 141E | Hollis-Rock outcrop-Chatfield complex, 15 to 60 percent slopes | 89.7 | 5.9% |
| 295 | Freetown mucky peat, 0 to 2 percent slopes | 29.8 | 2.0% |
| 446B | Scituate-Newfields complex, 3 to 8 percent slopes | 22.0 | 1.4% |
| 447A | Scituate-Newfields complex, 0 to 3 percent slopes, very stony | 4.8 | 0.3% |
| 447B | Scituate-Newfields complex, 3 to 8 percent slopes, very stony | 75.9 | 5.0% |
| 447C | Scituate-Newfields complex, 8 to 15 percent slopes, very stony | 56.5 | 3.7% |
| 495 | Natchaug mucky peat, 0 to 2 percent slopes | 16.7 | 1.1% |
| 547A | Walpole very fine sandy loam, 0 to 3 percent slopes, very stony | 10.5 | 0.7% |
| 547B | Walpole very fine sandy loam, 3 to 8 percent slopes, very stony | 21.8 | 1.4% |

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|------------------------------------|--|----------------|----------------|
| 657A | Ridgebury fine sandy loam, 0 to 3 percent slopes, very stony | 31.8 | 2.1% |
| 657B | Ridgebury fine sandy loam, 3 to 8 percent slopes, very stony | 156.3 | 10.3% |
| W | Water | 50.0 | 3.3% |
| Totals for Area of Interest | | 1,520.3 | 100.0% |

4. DRAINAGE ANALYSIS

4.1 METHODOLOGY

This drainage report includes an existing conditions analysis of the area involved in the proposed development, as well as a proposed condition, or post-construction analysis, of the same location. These analyses were accomplished using the USDA SCS TR-20 Method within the HydroCAD Stormwater Modeling System. The curve numbers were developed using the SCS TR-55 Runoff Curve numbers for Urban Areas. A Type III SCS 24-hour rainfall distribution was utilized in analyzing the data for the 2 Year – 24 Hour (3.00”), 10 Year – 24 Hour (4.52”), 25 Year – 24 Hour (5.72”) and 50 Year – 24 Hour (6.84”) storms.

4.2 EXISTING CONDITIONS ANALYSIS

The study area consists of the subject property and upstream contributing area. The study area contains 127.574 acres including offsite contributing areas. The existing site is currently developed consisting of a single family subdivision. The proposed new lots are in an area that is significantly forested with the exception of a roadway that runs through the site and accesses the existing lots. The existing site contains a high point located in the southern portion of the subject parcel. The site drains away to a large wetland complex located to the northeast of the property from this high point resulting in the Analysis Points as defined below.

The majority of the soils for this site are described as Hydrological Soils "B". A smaller amount of soil is described as Hydrological Soils "C" with a smaller section of soils directly adjacent to Route 101 described as Hydrological Soils "D". Site specific soil mapping has been performed by Gove Environmental Services, Inc. for the on-site soil. Offsite soils have been obtained using the Web Soil Survey by the Natural Resources Conservation Service.

One (1) Analysis Point (AP) was defined for this project.

Analysis Point #1 is defined as the edge of wetland on the northeast side of the property. Stormwater to this Analysis Point is collected from the entire portion of the proposed project. Stormwater is collected along the west side of the access road and also into wetland fingers within the proposed construction area and is directed to existing cross culverts under the access road. These culverts discharge to Analysis Point #1.

Analysis Point #6 is defined as the existing wetland system in the south-western portion of the subject parcel. This analysis point includes drainage from the central high point of the subject parcel and includes areas located in the southern corner of the subject parcel.

4.3 PROPOSED CONDITIONS ANALYSIS

The proposed site includes the construction of 38-lot conservation subdivision with associated parking, utilities, and drainage. Two (2) roadways are proposed to access the new lots. One roadway will intersect with the existing drive, and the other proposed road will come off that. Each of the new roads will contain a closed drainage system consisting of catch basins and manholes that will direct the runoff to the proposed bioretention area. Four (4) bioretention areas are proposed throughout the

project area. The existing roadway will be reclaimed and paved at the existing elevation. The existing cross culverts will remain.

4.4 CONCLUSION

This proposed site development will have minimal effect on abutting infrastructures or properties by way of stormwater runoff or siltation. Peak runoff rate from the proposed site has been maintained to the existing conditions peak rate to the extent practicable. Treatment is obtained through the use of deep sump catch basins and bioretention areas as described above.

The area of disturbance is greater than 100,000 square feet and will require an NHDES Alteration of Terrain Permit.

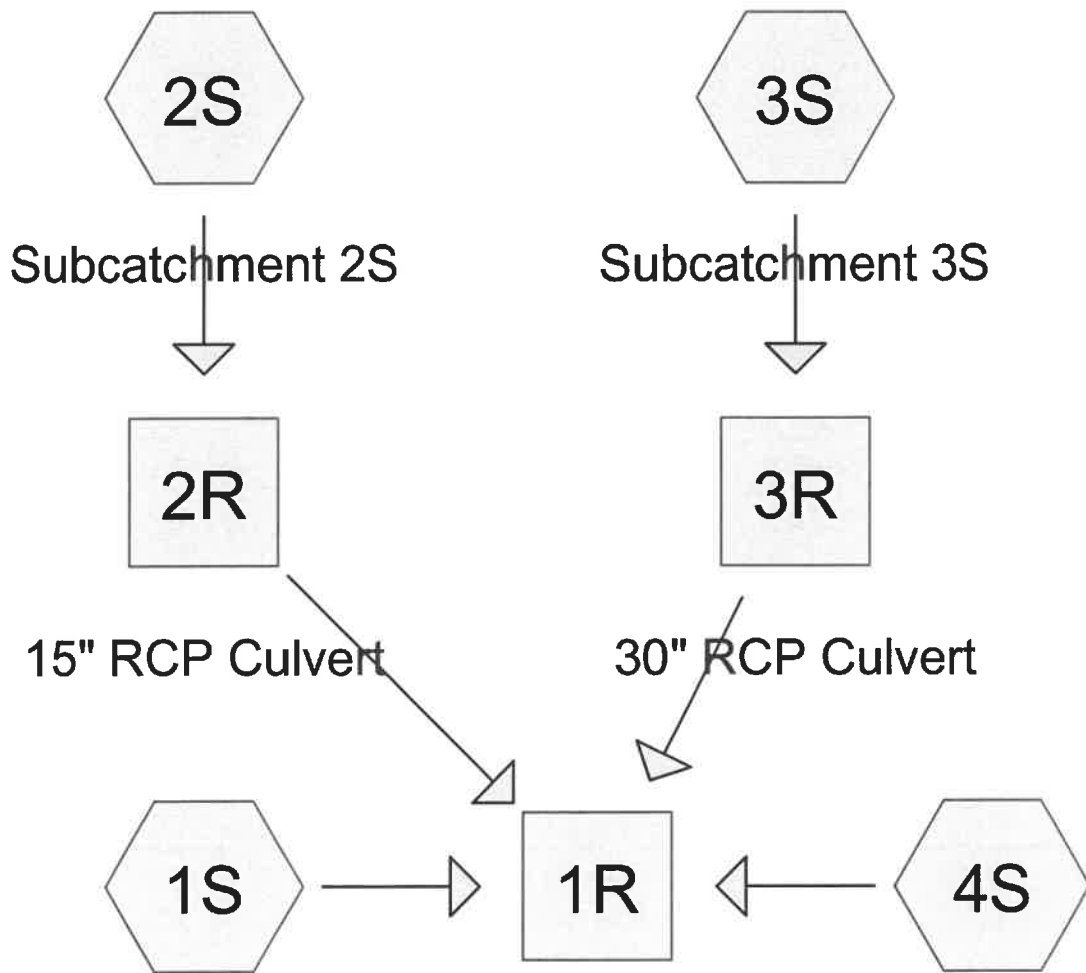
Respectfully Submitted,
JONES & BEACH ENGINEERS, INC.



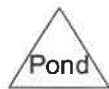
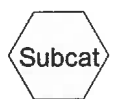
Michael Kerivan, P.E.
Project Engineer

4.5 EXISTING CONDITIONS ANALYSIS APPENDIX I

2 Year - 24 Hour Summary
10 Year - 24 Hour Complete
25 Year - 24 Hour Summary
50 Year - 24 Hour Summary



Subcatchment 1S Analysis Point 1 Subcatchment 4S



14232.7 EX CONDITION

Area Listing (all nodes)

| Area (acres) | CN | Description (subcatchment-numbers) |
|-----------------|-----------|--|
| 5.415 | 61 | >75% Grass cover, Good, HSG B (1S, 2S, 3S, 4S) |
| 0.849 | 74 | >75% Grass cover, Good, HSG C (1S, 3S, 4S) |
| 1.843 | 98 | Paved parking, HSG B (1S, 2S, 4S) |
| 0.221 | 98 | Paved parking, HSG C (1S) |
| 67.245 | 55 | Woods, Good, HSG B (1S, 2S, 3S, 4S) |
| 30.960 | 70 | Woods, Good, HSG C (1S, 3S, 4S) |
| 21.041 | 77 | Woods, Good, HSG D (1S, 3S) |
| 127.574 | 63 | TOTAL AREA |

14232.7 EX CONDITION

Soil Listing (all nodes)

| Area (acres) | Soil Group | Subcatchment Numbers |
|-----------------|---------------|-------------------------|
| 0.000 | HSG A | |
| 74.503 | HSG B | 1S, 2S, 3S, 4S |
| 32.030 | HSG C | 1S, 3S, 4S |
| 21.041 | HSG D | 1S, 3S |
| 0.000 | Other | |
| 127.574 | | TOTAL AREA |

14232.7 EX CONDITION

Type III 24-hr 2-Year Storm Rainfall=3.00"

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

Subcatchment 1S: Subcatchment 1S Runoff Area=1,282,235 sf 4.92% Impervious Runoff Depth>0.31"
 Flow Length=235' Tc=14.7 min CN=61 Runoff=5.48 cfs 0.772 af

Subcatchment 2S: Subcatchment 2S Runoff Area=122,075 sf 14.29% Impervious Runoff Depth>0.35"
 Flow Length=620' Tc=14.4 min CN=62 Runoff=0.61 cfs 0.081 af

Subcatchment 3S: Subcatchment 3S Runoff Area=2,727,324 sf 0.00% Impervious Runoff Depth>0.48"
 Flow Length=1,400' Tc=22.8 min CN=66 Runoff=19.71 cfs 2.497 af

Subcatchment 4S: Subcatchment 4S Runoff Area=1,425,510 sf 0.65% Impervious Runoff Depth>0.28"
 Flow Length=2,310' Tc=39.7 min CN=60 Runoff=3.77 cfs 0.764 af

Reach 1R: Analysis Point 1 Inflow=27.44 cfs 4.113 af
 Outflow=27.44 cfs 4.113 af

Reach 2R: 15" RCP Culvert Avg. Flow Depth=0.14' Max Vel=7.94 fps Inflow=0.61 cfs 0.081 af
 15.0" Round Pipe n=0.012 L=76.0' S=0.1024 ' Capacity=22.39 cfs Outflow=0.61 cfs 0.081 af

Reach 3R: 30" RCP Culvert Avg. Flow Depth=0.80' Max Vel=14.63 fps Inflow=19.71 cfs 2.497 af
 30.0" Round Pipe n=0.012 L=112.0' S=0.0406 ' Capacity=89.56 cfs Outflow=19.71 cfs 2.497 af

Total Runoff Area = 127.574 ac Runoff Volume = 4.113 af Average Runoff Depth = 0.39"
98.38% Pervious = 125.511 ac 1.62% Impervious = 2.064 ac

14232.7 EX CONDITION

Type III 24-hr 10-Year Storm Rainfall=4.52"

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

Subcatchment 1S: Subcatchment 1S Runoff Area=1,282,235 sf 4.92% Impervious Runoff Depth>0.98"
 Flow Length=235' Tc=14.7 min CN=61 Runoff=24.57 cfs 2.396 af

Subcatchment 2S: Subcatchment 2S Runoff Area=122,075 sf 14.29% Impervious Runoff Depth>1.03"
 Flow Length=620' Tc=14.4 min CN=62 Runoff=2.55 cfs 0.242 af

Subcatchment 3S: Subcatchment 3S Runoff Area=2,727,324 sf 0.00% Impervious Runoff Depth>1.27"
 Flow Length=1,400' Tc=22.8 min CN=66 Runoff=61.51 cfs 6.643 af

Subcatchment 4S: Subcatchment 4S Runoff Area=1,425,510 sf 0.65% Impervious Runoff Depth>0.91"
 Flow Length=2,310' Tc=39.7 min CN=60 Runoff=16.80 cfs 2.477 af

Reach 1R: Analysis Point 1 Inflow=95.08 cfs 11.757 af
 Outflow=95.08 cfs 11.757 af

Reach 2R: 15" RCP Culvert Avg. Flow Depth=0.28' Max Vel=12.07 fps Inflow=2.55 cfs 0.242 af
 15.0" Round Pipe n=0.012 L=76.0' S=0.1024 '/' Capacity=22.39 cfs Outflow=2.54 cfs 0.242 af

Reach 3R: 30" RCP Culvert Avg. Flow Depth=1.52' Max Vel=19.66 fps Inflow=61.51 cfs 6.643 af
 30.0" Round Pipe n=0.012 L=112.0' S=0.0406 '/' Capacity=89.56 cfs Outflow=61.51 cfs 6.642 af

Total Runoff Area = 127.574 ac Runoff Volume = 11.758 af Average Runoff Depth = 1.11"
98.38% Pervious = 125.511 ac 1.62% Impervious = 2.064 ac

14232.7 EX CONDITION

Type III 24-hr 10-Year Storm Rainfall=4.52"

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Summary for Subcatchment 1S: Subcatchment 1S

Runoff = 24.57 cfs @ 12.23 hrs, Volume= 2.396 af, Depth> 0.98"
 Routed to Reach 1R : Analysis Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Rainfall=4.52"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 53,504 | 98 | Paved parking, HSG B |
| 9,639 | 98 | Paved parking, HSG C |
| 168,109 | 61 | >75% Grass cover, Good, HSG B |
| 30,960 | 74 | >75% Grass cover, Good, HSG C |
| 833,824 | 55 | Woods, Good, HSG B |
| 156,381 | 70 | Woods, Good, HSG C |
| 29,818 | 77 | Woods, Good, HSG D |
| 1,282,235 | 61 | Weighted Average |
| 1,219,092 | | 95.08% Pervious Area |
| 63,143 | | 4.92% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|--|
| 5.6 | 34 | 0.0100 | 0.10 | | Sheet Flow, Grass: Short n= 0.150 P2= 3.00" |
| 6.8 | 16 | 0.0100 | 0.04 | | Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.00" |
| 2.3 | 185 | 0.0700 | 1.32 | | Shallow Concentrated Flow, Woodland Kv= 5.0 fps |
| 14.7 | 235 | Total | | | |

Summary for Subcatchment 2S: Subcatchment 2S

Runoff = 2.55 cfs @ 12.22 hrs, Volume= 0.242 af, Depth> 1.03"
 Routed to Reach 2R : 15" RCP Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Rainfall=4.52"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 17,450 | 98 | Paved parking, HSG B |
| 9,518 | 61 | >75% Grass cover, Good, HSG B |
| 95,107 | 55 | Woods, Good, HSG B |
| 122,075 | 62 | Weighted Average |
| 104,625 | | 85.71% Pervious Area |
| 17,450 | | 14.29% Impervious Area |

14232.7 EX CONDITION

Type III 24-hr 10-Year Storm Rainfall=4.52"

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| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|-------------|------------------|------------------|----------------------|-------------------|--|
| 8.8 | 50 | 0.0500 | 0.09 | | Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.00" |
| 5.6 | 570 | 0.1160 | 1.70 | | Shallow Concentrated Flow, Woodland Kv= 5.0 fps |
| 14.4 | 620 | Total | | | |

Summary for Subcatchment 3S: Subcatchment 3S

Runoff = 61.51 cfs @ 12.35 hrs, Volume= 6.643 af, Depth> 1.27"
Routed to Reach 3R : 30" RCP Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.52"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 32,176 | 61 | >75% Grass cover, Good, HSG B |
| 2,186 | 74 | >75% Grass cover, Good, HSG C |
| 1,053,862 | 55 | Woods, Good, HSG B |
| 752,367 | 70 | Woods, Good, HSG C |
| 886,733 | 77 | Woods, Good, HSG D |
| 2,727,324 | 66 | Weighted Average |
| 2,727,324 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|-------------|------------------|------------------|----------------------|-------------------|---|
| 5.2 | 50 | 0.0200 | 0.16 | | Sheet Flow, Range n= 0.130 P2= 3.00" |
| 10.4 | 880 | 0.0800 | 1.41 | | Shallow Concentrated Flow, Woodland Kv= 5.0 fps |
| 7.2 | 470 | 0.0480 | 1.10 | | Shallow Concentrated Flow, Woodland Kv= 5.0 fps |
| 22.8 | 1,400 | Total | | | |

Summary for Subcatchment 4S: Subcatchment 4S

Runoff = 16.80 cfs @ 12.63 hrs, Volume= 2.477 af, Depth> 0.91"
Routed to Reach 1R : Analysis Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.52"

14232.7 EX CONDITION

Type III 24-hr 10-Year Storm Rainfall=4.52"

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| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 9,310 | 98 | Paved parking, HSG B |
| 26,078 | 61 | >75% Grass cover, Good, HSG B |
| 3,822 | 74 | >75% Grass cover, Good, HSG C |
| 946,419 | 55 | Woods, Good, HSG B |
| 439,881 | 70 | Woods, Good, HSG C |
| 1,425,510 | 60 | Weighted Average |
| 1,416,200 | | 99.35% Pervious Area |
| 9,310 | | 0.65% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---|
| 11.0 | 50 | 0.0290 | 0.08 | | Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.00" |
| 4.1 | 380 | 0.0940 | 1.53 | | Shallow Concentrated Flow, Woodland Kv= 5.0 fps |
| 24.2 | 1,625 | 0.0500 | 1.12 | | Shallow Concentrated Flow, Woodland Kv= 5.0 fps |
| 0.4 | 255 | 0.0200 | 11.18 | 268.21 | Trap/Vee/Rect Channel Flow, Bot.W=10.00' D=2.00' Z= 1.0 '/' Top.W=14.00' n= 0.025 Earth, clean & winding |
| 39.7 | 2,310 | Total | | | |

Summary for Reach 1R: Analysis Point 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 127.574 ac, 1.62% Impervious, Inflow Depth > 1.11" for 10-Year Storm event
 Inflow = 95.08 cfs @ 12.35 hrs, Volume= 11.757 af
 Outflow = 95.08 cfs @ 12.35 hrs, Volume= 11.757 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 2R: 15" RCP Culvert

[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 2.802 ac, 14.29% Impervious, Inflow Depth > 1.03" for 10-Year Storm event
 Inflow = 2.55 cfs @ 12.22 hrs, Volume= 0.242 af
 Outflow = 2.54 cfs @ 12.23 hrs, Volume= 0.242 af, Atten= 1%, Lag= 0.1 min
 Routed to Reach 1R : Analysis Point 1

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Max. Velocity= 12.07 fps, Min. Travel Time= 0.1 min
 Avg. Velocity= 5.95 fps, Avg. Travel Time= 0.2 min

Peak Storage= 16 cf @ 12.23 hrs
 Average Depth at Peak Storage= 0.28' , Surface Width= 1.05'
 Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 22.39 cfs

14232.7 EX CONDITION

Type III 24-hr 10-Year Storm Rainfall=4.52"

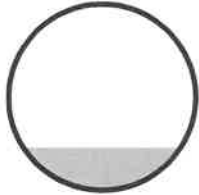
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15.0" Round Pipe
n= 0.012 Concrete pipe, finished
Length= 76.0' Slope= 0.1024 '/'
Inlet Invert= 333.55', Outlet Invert= 325.77'



Summary for Reach 3R: 30" RCP Culvert

[52] Hint: Inlet/Outlet conditions not evaluated

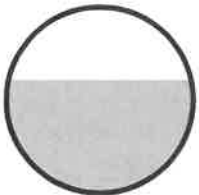
[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 62.611 ac, 0.00% Impervious, Inflow Depth > 1.27" for 10-Year Storm event
Inflow = 61.51 cfs @ 12.35 hrs, Volume= 6.643 af
Outflow = 61.51 cfs @ 12.35 hrs, Volume= 6.642 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 1R : Analysis Point 1

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 19.66 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 10.15 fps, Avg. Travel Time= 0.2 min

Peak Storage= 350 cf @ 12.35 hrs
Average Depth at Peak Storage= 1.52' , Surface Width= 2.44'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 89.56 cfs

30.0" Round Pipe
n= 0.012 Concrete pipe, finished
Length= 112.0' Slope= 0.0406 '/'
Inlet Invert= 303.62', Outlet Invert= 299.07'



14232.7 EX CONDITION

Type III 24-hr 25-Year Storm Rainfall=5.72"

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

Subcatchment 1S: Subcatchment 1S Runoff Area=1,282,235 sf 4.92% Impervious Runoff Depth>1.65"
Flow Length=235' Tc=14.7 min CN=61 Runoff=44.72 cfs 4.054 af

Subcatchment 2S: Subcatchment 2S Runoff Area=122,075 sf 14.29% Impervious Runoff Depth>1.73"
Flow Length=620' Tc=14.4 min CN=62 Runoff=4.52 cfs 0.404 af

Subcatchment 3S: Subcatchment 3S Runoff Area=2,727,324 sf 0.00% Impervious Runoff Depth>2.04"
Flow Length=1,400' Tc=22.8 min CN=66 Runoff=101.48 cfs 10.645 af

Subcatchment 4S: Subcatchment 4S Runoff Area=1,425,510 sf 0.65% Impervious Runoff Depth>1.56"
Flow Length=2,310' Tc=39.7 min CN=60 Runoff=30.76 cfs 4.250 af

Reach 1R: Analysis Point 1 Inflow=156.57 cfs 19.351 af
Outflow=156.57 cfs 19.351 af

Reach 2R: 15" RCP Culvert Avg. Flow Depth=0.38' Max Vel=14.26 fps Inflow=4.52 cfs 0.404 af
15.0" Round Pipe n=0.012 L=76.0' S=0.1024 '/' Capacity=22.39 cfs Outflow=4.52 cfs 0.404 af

Reach 3R: 30" RCP Culvert Avg. Flow Depth=2.50' Max Vel=20.72 fps Inflow=101.48 cfs 10.645 af
30.0" Round Pipe n=0.012 L=112.0' S=0.0406 '/' Capacity=89.56 cfs Outflow=93.85 cfs 10.644 af

Total Runoff Area = 127.574 ac Runoff Volume = 19.352 af Average Runoff Depth = 1.82"
98.38% Pervious = 125.511 ac 1.62% Impervious = 2.064 ac

14232.7 EX CONDITION

Type III 24-hr 50-Year Storm Rainfall=6.84"

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

Subcatchment 1S: Subcatchment 1S Runoff Area=1,282,235 sf 4.92% Impervious Runoff Depth>2.37"
 Flow Length=235' Tc=14.7 min CN=61 Runoff=65.63 cfs 5.805 af

Subcatchment 2S: Subcatchment 2S Runoff Area=122,075 sf 14.29% Impervious Runoff Depth>2.46"
 Flow Length=620' Tc=14.4 min CN=62 Runoff=6.57 cfs 0.574 af

Subcatchment 3S: Subcatchment 3S Runoff Area=2,727,324 sf 0.00% Impervious Runoff Depth>2.83"
 Flow Length=1,400' Tc=22.8 min CN=66 Runoff=142.10 cfs 14.761 af

Subcatchment 4S: Subcatchment 4S Runoff Area=1,425,510 sf 0.65% Impervious Runoff Depth>2.25"
 Flow Length=2,310' Tc=39.7 min CN=60 Runoff=45.51 cfs 6.136 af

Reach 1R: Analysis Point 1 Inflow=183.01 cfs 27.275 af
 Outflow=183.01 cfs 27.275 af

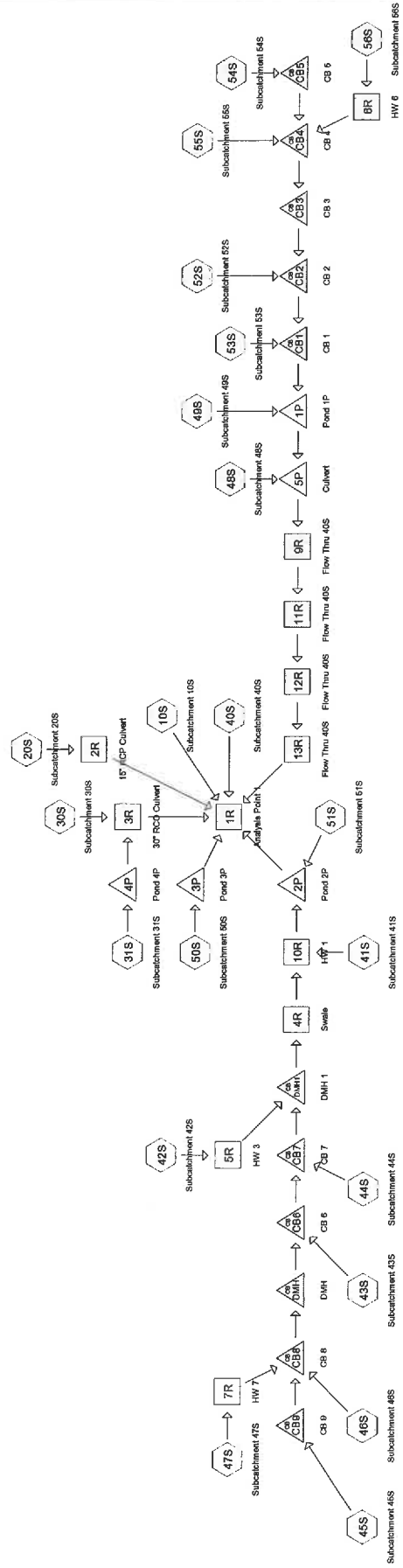
Reach 2R: 15" RCP Culvert Avg. Flow Depth=0.46' Max Vel=15.84 fps Inflow=6.57 cfs 0.574 af
 15.0" Round Pipe n=0.012 L=76.0' S=0.1024 '/' Capacity=22.39 cfs Outflow=6.57 cfs 0.574 af

Reach 3R: 30" RCP Culvert Avg. Flow Depth=2.50' Max Vel=20.74 fps Inflow=142.10 cfs 14.761 af
 30.0" Round Pipe n=0.012 L=112.0' S=0.0406 '/' Capacity=89.56 cfs Outflow=94.31 cfs 14.760 af

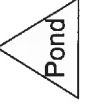
Total Runoff Area = 127.574 ac Runoff Volume = 27.276 af Average Runoff Depth = 2.57"
98.38% Pervious = 125.511 ac 1.62% Impervious = 2.064 ac

4.6 PROPOSED CONDITIONS ANALYSIS APPENDIX II

2 Year - 24 Hour Summary
10 Year - 24 Hour Complete
25 Year - 24 Hour Summary
50 Year - 24 Hour Summary



Routing Diagram for 14232.7 PR CONDITION
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14232.7 PR CONDITION

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Area Listing (all nodes)

| Area (acres) | CN | Description (subcatchment-numbers) |
|-----------------|-----------|---|
| 7.598 | 61 | >75% Grass cover, Good, HSG B (10S, 20S, 30S, 31S, 40S, 41S, 49S, 50S, 51S, 56S) |
| 3.028 | 74 | >75% Grass cover, Good, HSG C (10S, 30S, 40S, 41S, 42S, 47S, 51S) |
| 2.489 | 98 | Paved parking, HSG B (10S, 20S, 31S, 40S, 41S, 42S, 51S, 52S, 53S, 54S, 55S, 56S) |
| 0.840 | 98 | Paved parking, HSG C (10S, 41S, 42S, 43S, 44S, 45S, 46S, 47S, 51S) |
| 64.417 | 55 | Woods, Good, HSG B (10S, 20S, 30S, 40S, 48S, 49S, 50S) |
| 28.162 | 70 | Woods, Good, HSG C (10S, 30S, 31S, 40S, 41S, 42S, 48S, 51S) |
| 21.041 | 77 | Woods, Good, HSG D (10S, 30S) |
| 127.575 | 64 | TOTAL AREA |

14232.7 PR CONDITION

Soil Listing (all nodes)

| Area (acres) | Soil Group | Subcatchment Numbers |
|-----------------|---------------|---|
| 0.000 | HSG A | |
| 74.503 | HSG B | 10S, 20S, 30S, 31S, 40S, 41S, 42S, 48S, 49S, 50S, 51S, 52S, 53S, 54S, 55S, 56S |
| 32.030 | HSG C | 10S, 30S, 31S, 40S, 41S, 42S, 43S, 44S, 45S, 46S, 47S, 48S, 51S |
| 21.041 | HSG D | 10S, 30S |
| 0.000 | Other | |
| 127.575 | | TOTAL AREA |

14232.7 PR CONDITION*Type III 24-hr 2-Year Storm Rainfall=3.00"*

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

| | |
|---|--|
| Subcatchment 10S: Subcatchment 10S | Runoff Area=1,282,235 sf 4.92% Impervious Runoff Depth>0.36" Flow Length=235' Tc=14.7 min CN=61 Runoff=5.48 cfs 0.891 af |
| Subcatchment 20S: Subcatchment 20S | Runoff Area=442,727 sf 3.94% Impervious Runoff Depth>0.27" Flow Length=620' Tc=14.4 min CN=58 Runoff=1.17 cfs 0.231 af |
| Subcatchment 30S: Subcatchment 30S | Runoff Area=2,221,772 sf 0.00% Impervious Runoff Depth>0.62" Flow Length=1,400' Tc=22.8 min CN=68 Runoff=19.65 cfs 2.645 af |
| Subcatchment 31S: Subcatchment 31S | Runoff Area=49,614 sf 12.41% Impervious Runoff Depth>0.76" Tc=6.0 min CN=71 Runoff=0.89 cfs 0.072 af |
| Subcatchment 40S: Subcatchment 40S | Runoff Area=678,373 sf 1.19% Impervious Runoff Depth>0.30" Flow Length=2,055' Tc=39.3 min CN=59 Runoff=1.53 cfs 0.386 af |
| Subcatchment 41S: Subcatchment 41S | Runoff Area=110,223 sf 4.11% Impervious Runoff Depth>0.81" Tc=6.0 min CN=72 Runoff=2.14 cfs 0.170 af |
| Subcatchment 42S: Subcatchment 42S | Runoff Area=114,239 sf 4.41% Impervious Runoff Depth>0.81" Tc=6.0 min CN=72 Runoff=2.22 cfs 0.176 af |
| Subcatchment 43S: Subcatchment 43S | Runoff Area=3,935 sf 100.00% Impervious Runoff Depth>2.77" Tc=6.0 min CN=98 Runoff=0.26 cfs 0.021 af |
| Subcatchment 44S: Subcatchment 44S | Runoff Area=3,826 sf 100.00% Impervious Runoff Depth>2.77" Tc=6.0 min CN=98 Runoff=0.25 cfs 0.020 af |
| Subcatchment 45S: Subcatchment 45S | Runoff Area=2,382 sf 100.00% Impervious Runoff Depth>2.77" Tc=6.0 min CN=98 Runoff=0.16 cfs 0.013 af |
| Subcatchment 46S: Subcatchment 46S | Runoff Area=2,134 sf 100.00% Impervious Runoff Depth>2.77" Tc=6.0 min CN=98 Runoff=0.14 cfs 0.011 af |
| Subcatchment 47S: Subcatchment 47S | Runoff Area=9,882 sf 42.24% Impervious Runoff Depth>1.51" Tc=6.0 min CN=84 Runoff=0.40 cfs 0.029 af |
| Subcatchment 48S: Subcatchment 48S | Runoff Area=302,219 sf 0.00% Impervious Runoff Depth>0.36" Tc=15.0 min CN=61 Runoff=1.29 cfs 0.210 af |
| Subcatchment 49S: Subcatchment 49S | Runoff Area=92,671 sf 0.00% Impervious Runoff Depth>0.25" Tc=10.0 min CN=57 Runoff=0.22 cfs 0.043 af |
| Subcatchment 50S: Subcatchment 50S | Runoff Area=157,470 sf 0.00% Impervious Runoff Depth>0.22" Tc=10.0 min CN=56 Runoff=0.30 cfs 0.066 af |
| Subcatchment 51S: Subcatchment 51S | Runoff Area=59,105 sf 9.56% Impervious Runoff Depth>0.91" Tc=10.0 min CN=74 Runoff=1.16 cfs 0.102 af |

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| | |
|---|--|
| Subcatchment 52S: Subcatchment 52S | Runoff Area=776 sf 100.00% Impervious Runoff Depth>2.77" Tc=6.0 min CN=98 Runoff=0.05 cfs 0.004 af |
| Subcatchment 53S: Subcatchment 53S | Runoff Area=8,495 sf 100.00% Impervious Runoff Depth>2.77" Tc=6.0 min CN=98 Runoff=0.55 cfs 0.045 af |
| Subcatchment 54S: Subcatchment 54S | Runoff Area=2,464 sf 100.00% Impervious Runoff Depth>2.77" Tc=6.0 min CN=98 Runoff=0.16 cfs 0.013 af |
| Subcatchment 55S: Subcatchment 55S | Runoff Area=2,403 sf 100.00% Impervious Runoff Depth>2.77" Tc=6.0 min CN=98 Runoff=0.16 cfs 0.013 af |
| Subcatchment 56S: Subcatchment 56S | Runoff Area=10,203 sf 43.21% Impervious Runoff Depth>1.07" Tc=6.0 min CN=77 Runoff=0.28 cfs 0.021 af |
| Reach 1R: Analysis Point 1 | Inflow=25.86 cfs 5.162 af Outflow=25.86 cfs 5.162 af |
| Reach 2R: 15" RCP Culvert | Avg. Flow Depth=0.19' Max Vel=9.64 fps Inflow=1.17 cfs 0.231 af 15.0" Round Pipe n=0.012 L=76.0' S=0.1024 '/ Capacity=22.39 cfs Outflow=1.17 cfs 0.231 af |
| Reach 3R: 30" RCO Culvert | Avg. Flow Depth=1.25' Max Vel=13.05 fps Inflow=20.12 cfs 2.716 af 15.0" Round Pipe n=0.012 L=112.0' S=0.0406 '/ Capacity=14.11 cfs Outflow=14.11 cfs 2.715 af |
| Reach 4R: Swale | Avg. Flow Depth=0.38' Max Vel=3.33 fps Inflow=3.41 cfs 0.270 af n=0.022 L=145.0' S=0.0147 '/ Capacity=25.48 cfs Outflow=3.39 cfs 0.270 af |
| Reach 5R: HW 3 | Avg. Flow Depth=0.34' Max Vel=8.33 fps Inflow=2.22 cfs 0.176 af 15.0" Round Pipe n=0.012 L=30.0' S=0.0400 '/ Capacity=14.00 cfs Outflow=2.22 cfs 0.176 af |
| Reach 6R: HW 6 | Avg. Flow Depth=0.15' Max Vel=3.94 fps Inflow=0.28 cfs 0.021 af 12.0" Round Pipe n=0.012 L=120.0' S=0.0250 '/ Capacity=6.10 cfs Outflow=0.28 cfs 0.021 af |
| Reach 7R: HW 7 | Avg. Flow Depth=0.17' Max Vel=4.67 fps Inflow=0.40 cfs 0.029 af 12.0" Round Pipe n=0.012 L=110.0' S=0.0300 '/ Capacity=6.69 cfs Outflow=0.40 cfs 0.029 af |
| Reach 9R: Flow Thru 40S | Avg. Flow Depth=0.30' Max Vel=5.51 fps Inflow=1.97 cfs 0.346 af n=0.022 L=120.0' S=0.0875 '/ Capacity=49.34 cfs Outflow=1.97 cfs 0.346 af |
| Reach 10R: HW 1 | Avg. Flow Depth=0.68' Max Vel=7.04 fps Inflow=5.53 cfs 0.440 af 18.0" Round Pipe n=0.012 L=40.0' S=0.0130 '/ Capacity=12.97 cfs Outflow=5.53 cfs 0.440 af |
| Reach 11R: Flow Thru 40S | Avg. Flow Depth=0.37' Max Vel=3.66 fps Inflow=1.97 cfs 0.346 af n=0.025 L=470.0' S=0.0379 '/ Capacity=28.59 cfs Outflow=1.96 cfs 0.345 af |
| Reach 12R: Flow Thru 40S | Avg. Flow Depth=0.34' Max Vel=7.51 fps Inflow=1.96 cfs 0.345 af 14.0" Round Pipe n=0.010 L=40.0' S=0.0225 '/ Capacity=10.48 cfs Outflow=1.96 cfs 0.345 af |
| Reach 13R: Flow Thru 40S | Avg. Flow Depth=0.13' Max Vel=1.41 fps Inflow=1.96 cfs 0.345 af n=0.025 L=405.0' S=0.0093 '/ Capacity=67.29 cfs Outflow=1.92 cfs 0.343 af |

14232.7 PR CONDITION

Type III 24-hr 2-Year Storm Rainfall=3.00"

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| | |
|-------------------------|---|
| Pond 1P: Pond 1P | Peak Elev=313.58' Storage=1,207 cf Inflow=1.22 cfs 0.139 af Outflow=0.68 cfs 0.136 af |
| Pond 2P: Pond 2P | Peak Elev=287.14' Storage=6,317 cf Inflow=6.60 cfs 0.542 af Outflow=2.60 cfs 0.535 af |
| Pond 3P: Pond 3P | Peak Elev=290.74' Storage=966 cf Inflow=0.30 cfs 0.066 af Outflow=0.12 cfs 0.061 af |
| Pond 4P: Pond 4P | Peak Elev=305.31' Storage=557 cf Inflow=0.89 cfs 0.072 af Outflow=0.52 cfs 0.071 af |
| Pond 5P: Culvert | Peak Elev=304.55' Storage=73 cf Inflow=1.97 cfs 0.346 af 36.0" Round Culvert n=0.012 L=40.0' S=0.1000 ' /' Outflow=1.97 cfs 0.346 af |
| Pond CB1: CB 1 | Peak Elev=315.14' Inflow=1.20 cfs 0.096 af 24.0" Round Culvert n=0.012 L=14.0' S=0.0057 ' /' Outflow=1.20 cfs 0.096 af |
| Pond CB2: CB 2 | Peak Elev=315.26' Inflow=0.64 cfs 0.051 af 24.0" Round Culvert n=0.012 L=22.0' S=0.0050 ' /' Outflow=0.64 cfs 0.051 af |
| Pond CB3: CB 3 | Peak Elev=326.93' Inflow=0.59 cfs 0.047 af 15.0" Round Culvert n=0.012 L=164.0' S=0.0700 ' /' Outflow=0.59 cfs 0.047 af |
| Pond CB4: CB 4 | Peak Elev=336.38' Inflow=0.59 cfs 0.047 af 15.0" Round Culvert n=0.012 L=170.0' S=0.0550 ' /' Outflow=0.59 cfs 0.047 af |
| Pond CB5: CB 5 | Peak Elev=336.45' Inflow=0.16 cfs 0.013 af 15.0" Round Culvert n=0.012 L=22.0' S=0.0050 ' /' Outflow=0.16 cfs 0.013 af |
| Pond CB6: CB 6 | Peak Elev=308.45' Inflow=0.94 cfs 0.073 af 15.0" Round Culvert n=0.012 L=22.0' S=0.0050 ' /' Outflow=0.94 cfs 0.073 af |
| Pond CB7: CB 7 | Peak Elev=308.08' Inflow=1.19 cfs 0.094 af 18.0" Round Culvert n=0.012 L=108.0' S=0.0131 ' /' Outflow=1.19 cfs 0.094 af |
| Pond CB8: CB 8 | Peak Elev=326.69' Inflow=0.69 cfs 0.053 af 15.0" Round Culvert n=0.012 L=166.0' S=0.0520 ' /' Outflow=0.69 cfs 0.053 af |
| Pond CB9: CB 9 | Peak Elev=326.75' Inflow=0.16 cfs 0.013 af 15.0" Round Culvert n=0.012 L=22.0' S=0.0050 ' /' Outflow=0.16 cfs 0.013 af |
| Pond DMH: DMH | Peak Elev=317.96' Inflow=0.69 cfs 0.053 af 15.0" Round Culvert n=0.012 L=130.0' S=0.0750 ' /' Outflow=0.69 cfs 0.053 af |
| Pond DMH1: DMH 1 | Peak Elev=307.03' Inflow=3.41 cfs 0.270 af 18.0" Round Culvert n=0.012 L=14.0' S=0.0143 ' /' Outflow=3.41 cfs 0.270 af |

Total Runoff Area = 127.575 ac Runoff Volume = 5.182 af Average Runoff Depth = 0.49"
97.39% Pervious = 124.246 ac 2.61% Impervious = 3.329 ac

14232.7 PR CONDITION*Type III 24-hr 10-Year Storm Rainfall=4.52"*

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

| | |
|---|--|
| Subcatchment 10S: Subcatchment 10S | Runoff Area=1,282,235 sf 4.92% Impervious Runoff Depth>1.09" Flow Length=235' Tc=14.7 min CN=61 Runoff=24.57 cfs 2.664 af |
| Subcatchment 20S: Subcatchment 20S | Runoff Area=442,727 sf 3.94% Impervious Runoff Depth>0.91" Flow Length=620' Tc=14.4 min CN=58 Runoff=6.66 cfs 0.772 af |
| Subcatchment 30S: Subcatchment 30S | Runoff Area=2,221,772 sf 0.00% Impervious Runoff Depth>1.54" Flow Length=1,400' Tc=22.8 min CN=68 Runoff=55.99 cfs 6.534 af |
| Subcatchment 31S: Subcatchment 31S | Runoff Area=49,614 sf 12.41% Impervious Runoff Depth>1.76" Tc=6.0 min CN=71 Runoff=2.26 cfs 0.167 af |
| Subcatchment 40S: Subcatchment 40S | Runoff Area=678,373 sf 1.19% Impervious Runoff Depth>0.96" Flow Length=2,055' Tc=39.3 min CN=59 Runoff=7.42 cfs 1.246 af |
| Subcatchment 41S: Subcatchment 41S | Runoff Area=110,223 sf 4.11% Impervious Runoff Depth>1.83" Tc=6.0 min CN=72 Runoff=5.25 cfs 0.387 af |
| Subcatchment 42S: Subcatchment 42S | Runoff Area=114,239 sf 4.41% Impervious Runoff Depth>1.83" Tc=6.0 min CN=72 Runoff=5.44 cfs 0.401 af |
| Subcatchment 43S: Subcatchment 43S | Runoff Area=3,935 sf 100.00% Impervious Runoff Depth>4.28" Tc=6.0 min CN=98 Runoff=0.39 cfs 0.032 af |
| Subcatchment 44S: Subcatchment 44S | Runoff Area=3,826 sf 100.00% Impervious Runoff Depth>4.28" Tc=6.0 min CN=98 Runoff=0.38 cfs 0.031 af |
| Subcatchment 45S: Subcatchment 45S | Runoff Area=2,382 sf 100.00% Impervious Runoff Depth>4.28" Tc=6.0 min CN=98 Runoff=0.24 cfs 0.020 af |
| Subcatchment 46S: Subcatchment 46S | Runoff Area=2,134 sf 100.00% Impervious Runoff Depth>4.28" Tc=6.0 min CN=98 Runoff=0.21 cfs 0.017 af |
| Subcatchment 47S: Subcatchment 47S | Runoff Area=9,882 sf 42.24% Impervious Runoff Depth>2.83" Tc=6.0 min CN=84 Runoff=0.74 cfs 0.054 af |
| Subcatchment 48S: Subcatchment 48S | Runoff Area=302,219 sf 0.00% Impervious Runoff Depth>1.09" Tc=15.0 min CN=61 Runoff=5.75 cfs 0.628 af |
| Subcatchment 49S: Subcatchment 49S | Runoff Area=92,671 sf 0.00% Impervious Runoff Depth>0.86" Tc=10.0 min CN=57 Runoff=1.45 cfs 0.152 af |
| Subcatchment 50S: Subcatchment 50S | Runoff Area=157,470 sf 0.00% Impervious Runoff Depth>0.80" Tc=10.0 min CN=56 Runoff=2.22 cfs 0.242 af |
| Subcatchment 51S: Subcatchment 51S | Runoff Area=59,105 sf 9.56% Impervious Runoff Depth>1.98" Tc=10.0 min CN=74 Runoff=2.70 cfs 0.224 af |

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| | |
|---|--|
| Subcatchment 52S: Subcatchment 52S | Runoff Area=776 sf 100.00% Impervious Runoff Depth>4.28" Tc=6.0 min CN=98 Runoff=0.08 cfs 0.006 af |
| Subcatchment 53S: Subcatchment 53S | Runoff Area=8,495 sf 100.00% Impervious Runoff Depth>4.28" Tc=6.0 min CN=98 Runoff=0.84 cfs 0.070 af |
| Subcatchment 54S: Subcatchment 54S | Runoff Area=2,464 sf 100.00% Impervious Runoff Depth>4.28" Tc=6.0 min CN=98 Runoff=0.24 cfs 0.020 af |
| Subcatchment 55S: Subcatchment 55S | Runoff Area=2,403 sf 100.00% Impervious Runoff Depth>4.28" Tc=6.0 min CN=98 Runoff=0.24 cfs 0.020 af |
| Subcatchment 56S: Subcatchment 56S | Runoff Area=10,203 sf 43.21% Impervious Runoff Depth>2.22" Tc=6.0 min CN=77 Runoff=0.60 cfs 0.043 af |
| Reach 1R: Analysis Point 1 | Inflow=65.33 cfs 13.698 af Outflow=65.33 cfs 13.698 af |
| Reach 2R: 15" RCP Culvert 15.0" Round Pipe n=0.012 L=76.0' S=0.1024 '/ | Avg. Flow Depth=0.47' Max Vel=15.91 fps Inflow=6.66 cfs 0.772 af Capacity=22.39 cfs Outflow=6.67 cfs 0.772 af |
| Reach 3R: 30" RCO Culvert 15.0" Round Pipe n=0.012 L=112.0' S=0.0406 '/ | Avg. Flow Depth=1.25' Max Vel=13.10 fps Inflow=57.16 cfs 6.699 af Capacity=14.11 cfs Outflow=14.80 cfs 6.699 af |
| Reach 4R: Swale | Avg. Flow Depth=0.56' Max Vel=4.11 fps Inflow=7.39 cfs 0.555 af n=0.022 L=145.0' S=0.0147 '/ Capacity=25.48 cfs Outflow=7.39 cfs 0.554 af |
| Reach 5R: HW 3 15.0" Round Pipe n=0.012 L=30.0' S=0.0400 '/ | Avg. Flow Depth=0.54' Max Vel=10.69 fps Inflow=5.44 cfs 0.401 af Capacity=14.00 cfs Outflow=5.45 cfs 0.401 af |
| Reach 6R: HW 6 12.0" Round Pipe n=0.012 L=120.0' S=0.0250 '/ | Avg. Flow Depth=0.21' Max Vel=4.94 fps Inflow=0.60 cfs 0.043 af Capacity=6.10 cfs Outflow=0.60 cfs 0.043 af |
| Reach 7R: HW 7 12.0" Round Pipe n=0.012 L=110.0' S=0.0300 '/ | Avg. Flow Depth=0.22' Max Vel=5.60 fps Inflow=0.74 cfs 0.054 af Capacity=6.69 cfs Outflow=0.74 cfs 0.054 af |
| Reach 9R: Flow Thru 40S | Avg. Flow Depth=0.48' Max Vel=7.56 fps Inflow=6.97 cfs 0.934 af n=0.022 L=120.0' S=0.0875 '/ Capacity=49.34 cfs Outflow=6.98 cfs 0.934 af |
| Reach 10R: HW 1 18.0" Round Pipe n=0.012 L=40.0' S=0.0130 '/ | Avg. Flow Depth=1.20' Max Vel=8.37 fps Inflow=12.64 cfs 0.941 af Capacity=12.97 cfs Outflow=12.64 cfs 0.941 af |
| Reach 11R: Flow Thru 40S | Avg. Flow Depth=0.59' Max Vel=5.01 fps Inflow=6.98 cfs 0.934 af n=0.025 L=470.0' S=0.0379 '/ Capacity=28.59 cfs Outflow=6.96 cfs 0.933 af |
| Reach 12R: Flow Thru 40S 14.0" Round Pipe n=0.010 L=40.0' S=0.0225 '/ | Avg. Flow Depth=0.69' Max Vel=10.47 fps Inflow=6.96 cfs 0.933 af Capacity=10.48 cfs Outflow=6.96 cfs 0.933 af |
| Reach 13R: Flow Thru 40S | Avg. Flow Depth=0.27' Max Vel=2.26 fps Inflow=6.96 cfs 0.933 af n=0.025 L=405.0' S=0.0093 '/ Capacity=67.29 cfs Outflow=6.83 cfs 0.930 af |

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| | |
|-------------------------|---|
| Pond 1P: Pond 1P | Peak Elev=315.56' Storage=2,904 cf Inflow=3.17 cfs 0.311 af Outflow=1.25 cfs 0.307 af |
| Pond 2P: Pond 2P | Peak Elev=287.53' Storage=8,582 cf Inflow=15.14 cfs 1.165 af Outflow=12.93 cfs 1.155 af |
| Pond 3P: Pond 3P | Peak Elev=292.95' Storage=2,547 cf Inflow=2.22 cfs 0.242 af Outflow=1.11 cfs 0.234 af |
| Pond 4P: Pond 4P | Peak Elev=307.32' Storage=1,186 cf Inflow=2.26 cfs 0.167 af Outflow=1.17 cfs 0.165 af |
| Pond 5P: Culvert | Peak Elev=305.06' Storage=181 cf Inflow=6.97 cfs 0.935 af 36.0" Round Culvert n=0.012 L=40.0' S=0.1000 '/' Outflow=6.97 cfs 0.934 af |
| Pond CB1: CB 1 | Peak Elev=315.57' Inflow=2.00 cfs 0.159 af 24.0" Round Culvert n=0.012 L=14.0' S=0.0057 '/' Outflow=2.00 cfs 0.159 af |
| Pond CB2: CB 2 | Peak Elev=315.57' Inflow=1.16 cfs 0.090 af 24.0" Round Culvert n=0.012 L=22.0' S=0.0050 '/' Outflow=1.16 cfs 0.090 af |
| Pond CB3: CB 3 | Peak Elev=327.08' Inflow=1.08 cfs 0.083 af 15.0" Round Culvert n=0.012 L=164.0' S=0.0700 '/' Outflow=1.08 cfs 0.083 af |
| Pond CB4: CB 4 | Peak Elev=336.53' Inflow=1.08 cfs 0.083 af 15.0" Round Culvert n=0.012 L=170.0' S=0.0550 '/' Outflow=1.08 cfs 0.083 af |
| Pond CB5: CB 5 | Peak Elev=336.58' Inflow=0.24 cfs 0.020 af 15.0" Round Culvert n=0.012 L=22.0' S=0.0050 '/' Outflow=0.24 cfs 0.020 af |
| Pond CB6: CB 6 | Peak Elev=308.66' Inflow=1.57 cfs 0.123 af 15.0" Round Culvert n=0.012 L=22.0' S=0.0050 '/' Outflow=1.57 cfs 0.123 af |
| Pond CB7: CB 7 | Peak Elev=308.38' Inflow=1.95 cfs 0.154 af 18.0" Round Culvert n=0.012 L=108.0' S=0.0131 '/' Outflow=1.95 cfs 0.154 af |
| Pond CB8: CB 8 | Peak Elev=326.84' Inflow=1.18 cfs 0.091 af 15.0" Round Culvert n=0.012 L=166.0' S=0.0520 '/' Outflow=1.18 cfs 0.091 af |
| Pond CB9: CB 9 | Peak Elev=326.88' Inflow=0.24 cfs 0.020 af 15.0" Round Culvert n=0.012 L=22.0' S=0.0050 '/' Outflow=0.24 cfs 0.020 af |
| Pond DMH: DMH | Peak Elev=318.11' Inflow=1.18 cfs 0.091 af 15.0" Round Culvert n=0.012 L=130.0' S=0.0750 '/' Outflow=1.18 cfs 0.091 af |
| Pond DMH1: DMH 1 | Peak Elev=307.96' Inflow=7.39 cfs 0.555 af 18.0" Round Culvert n=0.012 L=14.0' S=0.0143 '/' Outflow=7.39 cfs 0.555 af |

Total Runoff Area = 127.575 ac Runoff Volume = 13.728 af Average Runoff Depth = 1.29"
97.39% Pervious = 124.246 ac 2.61% Impervious = 3.329 ac

14232.7 PR CONDITION

Type III 24-hr 10-Year Storm Rainfall=4.52"

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Summary for Subcatchment 10S: Subcatchment 10S

Runoff = 24.57 cfs @ 12.23 hrs, Volume= 2.664 af, Depth> 1.09"
 Routed to Reach 1R : Analysis Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Rainfall=4.52"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 53,504 | 98 | Paved parking, HSG B |
| 9,639 | 98 | Paved parking, HSG C |
| 168,109 | 61 | >75% Grass cover, Good, HSG B |
| 30,960 | 74 | >75% Grass cover, Good, HSG C |
| 833,824 | 55 | Woods, Good, HSG B |
| 156,381 | 70 | Woods, Good, HSG C |
| 29,818 | 77 | Woods, Good, HSG D |
| 1,282,235 | 61 | Weighted Average |
| 1,219,092 | | 95.08% Pervious Area |
| 63,143 | | 4.92% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|--|
| 5.6 | 34 | 0.0100 | 0.10 | | Sheet Flow, Grass: Short n= 0.150 P2= 3.00" |
| 6.8 | 16 | 0.0100 | 0.04 | | Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.00" |
| 2.3 | 185 | 0.0700 | 1.32 | | Shallow Concentrated Flow, Woodland Kv= 5.0 fps |
| 14.7 | 235 | Total | | | |

Summary for Subcatchment 20S: Subcatchment 20S

Runoff = 6.66 cfs @ 12.24 hrs, Volume= 0.772 af, Depth> 0.91"
 Routed to Reach 2R : 15" RCP Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Rainfall=4.52"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 17,450 | 98 | Paved parking, HSG B |
| 358,617 | 55 | Woods, Good, HSG B |
| 66,660 | 61 | >75% Grass cover, Good, HSG B |
| 442,727 | 58 | Weighted Average |
| 425,277 | | 96.06% Pervious Area |
| 17,450 | | 3.94% Impervious Area |

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Type III 24-hr 10-Year Storm Rainfall=4.52"

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| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|-------------|------------------|------------------|----------------------|-------------------|--|
| 8.8 | 50 | 0.0500 | 0.09 | | Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.00" |
| 5.6 | 570 | 0.1160 | 1.70 | | Shallow Concentrated Flow, Woodland Kv= 5.0 fps |
| 14.4 | 620 | Total | | | |

Summary for Subcatchment 30S: Subcatchment 30S

Runoff = 55.99 cfs @ 12.34 hrs, Volume= 6.534 af, Depth> 1.54"
Routed to Reach 3R : 30" RCO Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.52"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 4,001 | 61 | >75% Grass cover, Good, HSG B |
| 13,572 | 74 | >75% Grass cover, Good, HSG C |
| 729,486 | 55 | Woods, Good, HSG B |
| 481,325 | 70 | Woods, Good, HSG C |
| 886,733 | 77 | Woods, Good, HSG D |
| 18,086 | 55 | Woods, Good, HSG B |
| 88,569 | 70 | Woods, Good, HSG C |
| 2,221,772 | 68 | Weighted Average |
| 2,221,772 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|-------------|------------------|------------------|----------------------|-------------------|---|
| 5.2 | 50 | 0.0200 | 0.16 | | Sheet Flow, Range n= 0.130 P2= 3.00" |
| 10.4 | 880 | 0.0800 | 1.41 | | Shallow Concentrated Flow, Woodland Kv= 5.0 fps |
| 7.2 | 470 | 0.0480 | 1.10 | | Shallow Concentrated Flow, Woodland Kv= 5.0 fps |
| 22.8 | 1,400 | Total | | | |

Summary for Subcatchment 31S: Subcatchment 31S

Runoff = 2.26 cfs @ 12.10 hrs, Volume= 0.167 af, Depth> 1.76"
Routed to Pond 4P : Pond 4P

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.52"

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Type III 24-hr 10-Year Storm Rainfall=4.52"

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| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 6,158 | 98 | Paved parking, HSG B |
| 14,389 | 61 | >75% Grass cover, Good, HSG B |
| 29,067 | 70 | Woods, Good, HSG C |
| 49,614 | 71 | Weighted Average |
| 43,456 | | 87.59% Pervious Area |
| 6,158 | | 12.41% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|----------------------|
| 6.0 | | | | | Direct Entry, |

Summary for Subcatchment 40S: Subcatchment 40S

Runoff = 7.42 cfs @ 12.64 hrs, Volume= 1.246 af, Depth> 0.96"
 Routed to Reach 1R : Analysis Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Rainfall=4.52"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 8,041 | 98 | Paved parking, HSG B |
| 26,078 | 61 | >75% Grass cover, Good, HSG B |
| 3,822 | 74 | >75% Grass cover, Good, HSG C |
| 410,334 | 55 | Woods, Good, HSG B |
| 159,812 | 70 | Woods, Good, HSG C |
| 70,286 | 55 | Woods, Good, HSG B |
| 678,373 | 59 | Weighted Average |
| 670,332 | | 98.81% Pervious Area |
| 8,041 | | 1.19% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|--|
| 11.0 | 50 | 0.0290 | 0.08 | | Sheet Flow, |
| | | | | | Woods: Light underbrush n= 0.400 P2= 3.00" |
| 4.1 | 380 | 0.0940 | 1.53 | | Shallow Concentrated Flow, |
| | | | | | Woodland Kv= 5.0 fps |
| 24.2 | 1,625 | 0.0500 | 1.12 | | Shallow Concentrated Flow, |
| | | | | | Woodland Kv= 5.0 fps |
| 39.3 | 2,055 | Total | | | |

Summary for Subcatchment 41S: Subcatchment 41S

Runoff = 5.25 cfs @ 12.10 hrs, Volume= 0.387 af, Depth> 1.83"
 Routed to Reach 10R : HW 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Rainfall=4.52"

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Type III 24-hr 10-Year Storm Rainfall=4.52"

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| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 1,510 | 98 | Paved parking, HSG B |
| 3,019 | 98 | Paved parking, HSG C |
| 1,718 | 61 | >75% Grass cover, Good, HSG B |
| 29,663 | 74 | >75% Grass cover, Good, HSG C |
| 74,313 | 70 | Woods, Good, HSG C |
| 110,223 | 72 | Weighted Average |
| 105,694 | | 95.89% Pervious Area |
| 4,529 | | 4.11% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 6.0 | | | | | Direct Entry, |

Summary for Subcatchment 42S: Subcatchment 42S

Runoff = 5.44 cfs @ 12.10 hrs, Volume= 0.401 af, Depth> 1.83"
 Routed to Reach 5R : HW 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Rainfall=4.52"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 1,082 | 98 | Paved parking, HSG B |
| 3,959 | 98 | Paved parking, HSG C |
| 84,975 | 70 | Woods, Good, HSG C |
| 24,223 | 74 | >75% Grass cover, Good, HSG C |
| 114,239 | 72 | Weighted Average |
| 109,198 | | 95.59% Pervious Area |
| 5,041 | | 4.41% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 6.0 | | | | | Direct Entry, |

Summary for Subcatchment 43S: Subcatchment 43S

Runoff = 0.39 cfs @ 12.09 hrs, Volume= 0.032 af, Depth> 4.28"
 Routed to Pond CB6 : CB 6

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Rainfall=4.52"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 3,935 | 98 | Paved parking, HSG C |
| 3,935 | | 100.00% Impervious Area |

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Type III 24-hr 10-Year Storm Rainfall=4.52"

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| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|-------------|------------------|------------------|----------------------|-------------------|---------------|
| 6.0 | | | | | Direct Entry, |

Summary for Subcatchment 44S: Subcatchment 44S

Runoff = 0.38 cfs @ 12.09 hrs, Volume= 0.031 af, Depth> 4.28"
 Routed to Pond CB7 : CB 7

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Rainfall=4.52"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 3,826 | 98 | Paved parking, HSG C |
| 3,826 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|-------------|------------------|------------------|----------------------|-------------------|---------------|
| 6.0 | | | | | Direct Entry, |

Summary for Subcatchment 45S: Subcatchment 45S

Runoff = 0.24 cfs @ 12.09 hrs, Volume= 0.020 af, Depth> 4.28"
 Routed to Pond CB9 : CB 9

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Rainfall=4.52"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 2,382 | 98 | Paved parking, HSG C |
| 2,382 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|-------------|------------------|------------------|----------------------|-------------------|---------------|
| 6.0 | | | | | Direct Entry, |

Summary for Subcatchment 46S: Subcatchment 46S

Runoff = 0.21 cfs @ 12.09 hrs, Volume= 0.017 af, Depth> 4.28"
 Routed to Pond CB8 : CB 8

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Rainfall=4.52"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 2,134 | 98 | Paved parking, HSG C |
| 2,134 | | 100.00% Impervious Area |

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Type III 24-hr 10-Year Storm Rainfall=4.52"

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| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|-------------|------------------|------------------|----------------------|-------------------|----------------------|
| 6.0 | | | | | Direct Entry, |

Summary for Subcatchment 47S: Subcatchment 47S

Runoff = 0.74 cfs @ 12.09 hrs, Volume= 0.054 af, Depth> 2.83"
 Routed to Reach 7R : HW 7

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Rainfall=4.52"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 4,174 | 98 | Paved parking, HSG C |
| 5,708 | 74 | >75% Grass cover, Good, HSG C |
| 9,882 | 84 | Weighted Average |
| 5,708 | | 57.76% Pervious Area |
| 4,174 | | 42.24% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|-------------|------------------|------------------|----------------------|-------------------|----------------------|
| 6.0 | | | | | Direct Entry, |

Summary for Subcatchment 48S: Subcatchment 48S

Runoff = 5.75 cfs @ 12.24 hrs, Volume= 0.628 af, Depth> 1.09"
 Routed to Pond 5P : Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Rainfall=4.52"

| Area (sf) | CN | Description |
|-----------|----|-----------------------|
| 179,243 | 55 | Woods, Good, HSG B |
| 122,976 | 70 | Woods, Good, HSG C |
| 302,219 | 61 | Weighted Average |
| 302,219 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|-------------|------------------|------------------|----------------------|-------------------|----------------------|
| 15.0 | | | | | Direct Entry, |

Summary for Subcatchment 49S: Subcatchment 49S

Runoff = 1.45 cfs @ 12.17 hrs, Volume= 0.152 af, Depth> 0.86"
 Routed to Pond 1P : Pond 1P

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Rainfall=4.52"

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Type III 24-hr 10-Year Storm Rainfall=4.52"

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| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 23,783 | 61 | >75% Grass cover, Good, HSG B |
| 68,888 | 55 | Woods, Good, HSG B |
| 92,671 | 57 | Weighted Average |
| 92,671 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Summary for Subcatchment 50S: Subcatchment 50S

Runoff = 2.22 cfs @ 12.17 hrs, Volume= 0.242 af, Depth> 0.80"
 Routed to Pond 3P : Pond 3P

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Rainfall=4.52"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 20,243 | 61 | >75% Grass cover, Good, HSG B |
| 137,227 | 55 | Woods, Good, HSG B |
| 157,470 | 56 | Weighted Average |
| 157,470 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Summary for Subcatchment 51S: Subcatchment 51S

Runoff = 2.70 cfs @ 12.15 hrs, Volume= 0.224 af, Depth> 1.98"
 Routed to Pond 2P : Pond 2P

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Rainfall=4.52"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 2,124 | 98 | Paved parking, HSG B |
| 3,527 | 98 | Paved parking, HSG C |
| 181 | 61 | >75% Grass cover, Good, HSG B |
| 23,937 | 74 | >75% Grass cover, Good, HSG C |
| 29,336 | 70 | Woods, Good, HSG C |
| 59,105 | 74 | Weighted Average |
| 53,454 | | 90.44% Pervious Area |
| 5,651 | | 9.56% Impervious Area |

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Type III 24-hr 10-Year Storm Rainfall=4.52"

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| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|-------------|------------------|------------------|----------------------|-------------------|----------------------|
| 10.0 | | | | | Direct Entry, |

Summary for Subcatchment 52S: Subcatchment 52S

Runoff = 0.08 cfs @ 12.09 hrs, Volume= 0.006 af, Depth> 4.28"
 Routed to Pond CB2 : CB 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Rainfall=4.52"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 776 | 98 | Paved parking, HSG B |
| 776 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|-------------|------------------|------------------|----------------------|-------------------|----------------------|
| 6.0 | | | | | Direct Entry, |

Summary for Subcatchment 53S: Subcatchment 53S

Runoff = 0.84 cfs @ 12.09 hrs, Volume= 0.070 af, Depth> 4.28"
 Routed to Pond CB1 : CB 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Rainfall=4.52"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 8,495 | 98 | Paved parking, HSG B |
| 8,495 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|-------------|------------------|------------------|----------------------|-------------------|----------------------|
| 6.0 | | | | | Direct Entry, |

Summary for Subcatchment 54S: Subcatchment 54S

Runoff = 0.24 cfs @ 12.09 hrs, Volume= 0.020 af, Depth> 4.28"
 Routed to Pond CB5 : CB 5

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Rainfall=4.52"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 2,464 | 98 | Paved parking, HSG B |
| 2,464 | | 100.00% Impervious Area |

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| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|-------------|------------------|------------------|----------------------|-------------------|----------------------|
| 6.0 | | | | | Direct Entry, |

Summary for Subcatchment 55S: Subcatchment 55S

Runoff = 0.24 cfs @ 12.09 hrs, Volume= 0.020 af, Depth> 4.28"
 Routed to Pond CB4 : CB 4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Rainfall=4.52"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 2,403 | 98 | Paved parking, HSG B |
| 2,403 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|-------------|------------------|------------------|----------------------|-------------------|----------------------|
| 6.0 | | | | | Direct Entry, |

Summary for Subcatchment 56S: Subcatchment 56S

Runoff = 0.60 cfs @ 12.09 hrs, Volume= 0.043 af, Depth> 2.22"
 Routed to Reach 6R : HW 6

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Rainfall=4.52"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 4,409 | 98 | Paved parking, HSG B |
| 5,794 | 61 | >75% Grass cover, Good, HSG B |
| 10,203 | 77 | Weighted Average |
| 5,794 | | 56.79% Pervious Area |
| 4,409 | | 43.21% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|-------------|------------------|------------------|----------------------|-------------------|----------------------|
| 6.0 | | | | | Direct Entry, |

Summary for Reach 1R: Analysis Point 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 127.575 ac, 2.61% Impervious, Inflow Depth > 1.29" for 10-Year Storm event
 Inflow = 65.33 cfs @ 12.24 hrs, Volume= 13.698 af
 Outflow = 65.33 cfs @ 12.24 hrs, Volume= 13.698 af, Atten= 0%, Lag= 0.0 min

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Type III 24-hr 10-Year Storm Rainfall=4.52"

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Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3

Summary for Reach 2R: 15" RCP Culvert

[52] Hint: Inlet/Outlet conditions not evaluated

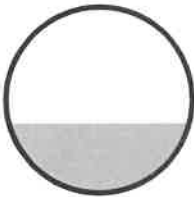
[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 10.164 ac, 3.94% Impervious, Inflow Depth > 0.91" for 10-Year Storm event
Inflow = 6.66 cfs @ 12.24 hrs, Volume= 0.772 af
Outflow = 6.67 cfs @ 12.24 hrs, Volume= 0.772 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 1R : Analysis Point 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 15.91 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 7.63 fps, Avg. Travel Time= 0.2 min

Peak Storage= 32 cf @ 12.24 hrs
Average Depth at Peak Storage= 0.47' , Surface Width= 1.21'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 22.39 cfs

15.0" Round Pipe
n= 0.012 Concrete pipe, finished
Length= 76.0' Slope= 0.1024 '/'
Inlet Invert= 333.55', Outlet Invert= 325.77'



Summary for Reach 3R: 30" RCO Culvert

[52] Hint: Inlet/Outlet conditions not evaluated

[55] Hint: Peak inflow is 405% of Manning's capacity

[76] Warning: Detained 1.815 af (Pond w/culvert advised)

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=4)

Inflow Area = 52.144 ac, 0.27% Impervious, Inflow Depth > 1.54" for 10-Year Storm event
Inflow = 57.16 cfs @ 12.34 hrs, Volume= 6.699 af
Outflow = 14.80 cfs @ 12.02 hrs, Volume= 6.699 af, Atten= 74%, Lag= 0.0 min
Routed to Reach 1R : Analysis Point 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 13.10 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 9.05 fps, Avg. Travel Time= 0.2 min

Peak Storage= 137 cf @ 12.05 hrs
Average Depth at Peak Storage= 1.25'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 14.11 cfs

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15.0" Round Pipe

n= 0.012 Concrete pipe, finished

Length= 112.0' Slope= 0.0406 1'

Inlet Invert= 303.62', Outlet Invert= 299.07'



Summary for Reach 4R: Swale

Inflow Area = 3.131 ac, 15.76% Impervious, Inflow Depth > 2.13" for 10-Year Storm event
Inflow = 7.39 cfs @ 12.10 hrs, Volume= 0.555 af
Outflow = 7.39 cfs @ 12.10 hrs, Volume= 0.554 af, Atten= 0%, Lag= 0.5 min
Routed to Reach 10R : HW 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 4.11 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.19 fps, Avg. Travel Time= 2.0 min

Peak Storage= 261 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.56' , Surface Width= 4.88'
Bank-Full Depth= 1.00' Flow Area= 4.5 sf, Capacity= 25.48 cfs

1.50' x 1.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 1' Top Width= 7.50'
Length= 145.0' Slope= 0.0147 1'
Inlet Invert= 305.80', Outlet Invert= 303.67'



Summary for Reach 5R: HW 3

[52] Hint: Inlet/Outlet conditions not evaluated

[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 2.623 ac, 4.41% Impervious, Inflow Depth > 1.83" for 10-Year Storm event
Inflow = 5.44 cfs @ 12.10 hrs, Volume= 0.401 af
Outflow = 5.45 cfs @ 12.10 hrs, Volume= 0.401 af, Atten= 0%, Lag= 0.0 min
Routed to Pond DMH1 : DMH 1

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Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 10.69 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 4.11 fps, Avg. Travel Time= 0.1 min

Peak Storage= 15 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.54' , Surface Width= 1.24'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 14.00 cfs

15.0" Round Pipe
n= 0.012 Corrugated PP, smooth interior
Length= 30.0' Slope= 0.0400 '/'
Inlet Invert= 307.45', Outlet Invert= 306.25'



Summary for Reach 6R: HW 6

[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.234 ac, 43.21% Impervious, Inflow Depth > 2.22" for 10-Year Storm event
Inflow = 0.60 cfs @ 12.09 hrs, Volume= 0.043 af
Outflow = 0.60 cfs @ 12.10 hrs, Volume= 0.043 af, Atten= 0%, Lag= 0.3 min
Routed to Pond CB4 : CB 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 4.94 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.79 fps, Avg. Travel Time= 1.1 min

Peak Storage= 15 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.21' , Surface Width= 0.82'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.10 cfs

12.0" Round Pipe
n= 0.012 Corrugated PP, smooth interior
Length= 120.0' Slope= 0.0250 '/'
Inlet Invert= 339.07', Outlet Invert= 336.07'



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Summary for Reach 7R: HW 7

[52] Hint: Inlet/Outlet conditions not evaluated

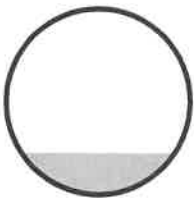
[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 0.227 ac, 42.24% Impervious, Inflow Depth > 2.83" for 10-Year Storm event
Inflow = 0.74 cfs @ 12.09 hrs, Volume= 0.054 af
Outflow = 0.74 cfs @ 12.10 hrs, Volume= 0.054 af, Atten= 0%, Lag= 0.3 min
Routed to Pond CB8 : CB 8

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 5.60 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.94 fps, Avg. Travel Time= 0.9 min

Peak Storage= 14 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.22' , Surface Width= 0.83'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.69 cfs

12.0" Round Pipe
n= 0.012 Corrugated PP, smooth interior
Length= 110.0' Slope= 0.0300 '/'
Inlet Invert= 329.80', Outlet Invert= 326.50'



Summary for Reach 9R: Flow Thru 40S

[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 9.624 ac, 4.42% Impervious, Inflow Depth > 1.16" for 10-Year Storm event
Inflow = 6.97 cfs @ 12.25 hrs, Volume= 0.934 af
Outflow = 6.98 cfs @ 12.25 hrs, Volume= 0.934 af, Atten= 0%, Lag= 0.2 min
Routed to Reach 11R : Flow Thru 40S

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 7.56 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 3.11 fps, Avg. Travel Time= 0.6 min

Peak Storage= 111 cf @ 12.25 hrs
Average Depth at Peak Storage= 0.48' , Surface Width= 3.84'
Bank-Full Depth= 1.00' Flow Area= 4.0 sf, Capacity= 49.34 cfs

0.00' x 1.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 4.0 '/' Top Width= 8.00'
Length= 120.0' Slope= 0.0875 '/'
Inlet Invert= 300.00', Outlet Invert= 289.50'

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Summary for Reach 10R: HW 1

[52] Hint: Inlet/Outlet conditions not evaluated

[62] Hint: Exceeded Reach 4R OUTLET depth by 0.63' @ 12.10 hrs

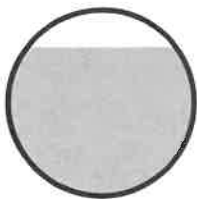
[64] Warning: Exceeded Reach 4R outlet bank by 0.20' @ 12.10 hrs

Inflow Area = 5.662 ac, 10.55% Impervious, Inflow Depth > 1.99" for 10-Year Storm event
Inflow = 12.64 cfs @ 12.10 hrs, Volume= 0.941 af
Outflow = 12.64 cfs @ 12.10 hrs, Volume= 0.941 af, Atten= 0%, Lag= 0.1 min
Routed to Pond 2P : Pond 2P

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 8.37 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.65 fps, Avg. Travel Time= 0.3 min

Peak Storage= 60 cf @ 12.10 hrs
Average Depth at Peak Storage= 1.20' , Surface Width= 1.21'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 12.97 cfs

18.0" Round Pipe
n= 0.012 Corrugated PP, smooth interior
Length= 40.0' Slope= 0.0130 '/'
Inlet Invert= 303.67', Outlet Invert= 303.15'



Summary for Reach 11R: Flow Thru 40S

[62] Hint: Exceeded Reach 9R OUTLET depth by 0.11' @ 12.30 hrs

Inflow Area = 9.624 ac, 4.42% Impervious, Inflow Depth > 1.16" for 10-Year Storm event
Inflow = 6.98 cfs @ 12.25 hrs, Volume= 0.934 af
Outflow = 6.96 cfs @ 12.27 hrs, Volume= 0.933 af, Atten= 0%, Lag= 1.2 min
Routed to Reach 12R : Flow Thru 40S

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Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 5.01 fps, Min. Travel Time= 1.6 min
Avg. Velocity = 2.07 fps, Avg. Travel Time= 3.8 min

Peak Storage= 652 cf @ 12.27 hrs
Average Depth at Peak Storage= 0.59' , Surface Width= 4.71'
Bank-Full Depth= 1.00' Flow Area= 4.0 sf, Capacity= 28.59 cfs

0.00' x 1.00' deep channel, n= 0.025 Earth, clean & winding
Side Slope Z-value= 4.0 ' / ' Top Width= 8.00'
Length= 470.0' Slope= 0.0379 ' / '
Inlet Invert= 289.50', Outlet Invert= 271.67'



‡

Summary for Reach 12R: Flow Thru 40S

[52] Hint: Inlet/Outlet conditions not evaluated

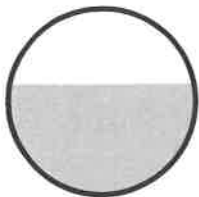
[62] Hint: Exceeded Reach 11R OUTLET depth by 0.10' @ 12.25 hrs

| | | | | |
|-------------------------------------|-----------------------|-------------------|----------------------|-------------------------|
| Inflow Area = | 9.624 ac, | 4.42% Impervious, | Inflow Depth > 1.16" | for 10-Year Storm event |
| Inflow = | 6.96 cfs @ 12.27 hrs, | Volume= | 0.933 af | |
| Outflow = | 6.96 cfs @ 12.27 hrs, | Volume= | 0.933 af, | Atten= 0%, Lag= 0.0 min |
| Routed to Reach 13R : Flow Thru 40S | | | | |

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 10.47 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.94 fps, Avg. Travel Time= 0.2 min

Peak Storage= 27 cf @ 12.27 hrs
Average Depth at Peak Storage= 0.69' , Surface Width= 1.15'
Bank-Full Depth= 1.17' Flow Area= 1.1 sf, Capacity= 10.48 cfs

14.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 40.0' Slope= 0.0225 ' / '
Inlet Invert= 271.67', Outlet Invert= 270.77'



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Summary for Reach 13R: Flow Thru 40S

[61] Hint: Exceeded Reach 12R outlet invert by 0.27' @ 12.30 hrs

Inflow Area = 9.624 ac, 4.42% Impervious, Inflow Depth > 1.16" for 10-Year Storm event
Inflow = 6.96 cfs @ 12.27 hrs, Volume= 0.933 af
Outflow = 6.83 cfs @ 12.31 hrs, Volume= 0.930 af, Atten= 2%, Lag= 2.5 min
Routed to Reach 1R : Analysis Point 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 2.26 fps, Min. Travel Time= 3.0 min
Avg. Velocity = 0.67 fps, Avg. Travel Time= 10.1 min

Peak Storage= 1,226 cf @ 12.31 hrs
Average Depth at Peak Storage= 0.27' , Surface Width= 12.18'
Bank-Full Depth= 1.00' Flow Area= 14.0 sf, Capacity= 67.29 cfs

10.00' x 1.00' deep channel, n= 0.025 Earth, clean & winding
Side Slope Z-value= 4.0 '/' Top Width= 18.00'
Length= 405.0' Slope= 0.0093 '/'
Inlet Invert= 270.77', Outlet Invert= 267.00'



Summary for Pond 1P: Pond 1P

Inflow Area = 2.686 ac, 15.85% Impervious, Inflow Depth > 1.39" for 10-Year Storm event
Inflow = 3.17 cfs @ 12.12 hrs, Volume= 0.311 af
Outflow = 1.25 cfs @ 12.49 hrs, Volume= 0.307 af, Atten= 61%, Lag= 22.3 min
Primary = 1.25 cfs @ 12.49 hrs, Volume= 0.307 af
Routed to Pond 5P : Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Starting Elev= 312.50' Surf.Area= 2,656 sf Storage= 276 cf
Peak Elev= 315.56' @ 12.49 hrs Surf.Area= 2,656 sf Storage= 2,904 cf (2,628 cf above start)

Plug-Flow detention time= 52.5 min calculated for 0.301 af (97% of inflow)
Center-of-Mass det. time= 23.2 min (856.3 - 833.1)

| Volume | Invert | Avail.Storage | Storage Description |
|--------|---------|---------------|--|
| #1 | 312.24' | 8,409 cf | Custom Stage Data (Irregular) Listed below (Recalc) |

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| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Voids (%) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|------------------|-------------------|---------------|-----------|------------------------|------------------------|------------------|
| 312.24 | 2,656 | 202.1 | 0.0 | 0 | 0 | 2,656 |
| 312.25 | 2,656 | 202.1 | 40.0 | 11 | 11 | 2,658 |
| 313.24 | 2,656 | 202.1 | 40.0 | 1,052 | 1,062 | 2,858 |
| 313.25 | 2,656 | 202.1 | 20.0 | 5 | 1,068 | 2,860 |
| 313.49 | 2,656 | 202.1 | 20.0 | 127 | 1,195 | 2,909 |
| 313.50 | 2,656 | 202.1 | 5.0 | 1 | 1,197 | 2,911 |
| 314.99 | 2,656 | 202.1 | 5.0 | 198 | 1,394 | 3,212 |
| 315.00 | 2,656 | 202.1 | 100.0 | 27 | 1,421 | 3,214 |
| 315.99 | 2,656 | 202.1 | 100.0 | 2,629 | 4,050 | 3,414 |
| 316.00 | 3,950 | 245.8 | 100.0 | 33 | 4,083 | 4,971 |
| 317.00 | 4,713 | 263.9 | 100.0 | 4,326 | 8,409 | 5,749 |

| Device | Routing | Invert | Outlet Devices |
|--------|---------|---------|---|
| #1 | Primary | 312.50' | 6.0" Round Culvert L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 312.50' / 312.25' S= 0.0125 ' S= 0.0125 ' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.20 sf |
| #2 | Primary | 316.50' | 10.0' long + 3.0 ' SideZ x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83 |

Primary OutFlow Max=1.25 cfs @ 12.49 hrs HW=315.56' TW=304.91' (Dynamic Tailwater)

- 1=Culvert (Inlet Controls 1.25 cfs @ 6.37 fps)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 2P: Pond 2P

Inflow Area = 7.019 ac, 10.36% Impervious, Inflow Depth > 1.99" for 10-Year Storm event
 Inflow = 15.14 cfs @ 12.11 hrs, Volume= 1.165 af
 Outflow = 12.93 cfs @ 12.17 hrs, Volume= 1.155 af, Atten= 15%, Lag= 3.9 min
 Primary = 12.93 cfs @ 12.17 hrs, Volume= 1.155 af
 Routed to Reach 1R : Analysis Point 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
 Starting Elev= 283.50' Surf.Area= 3,309 sf Storage= 344 cf
 Peak Elev= 287.53' @ 12.17 hrs Surf.Area= 5,969 sf Storage= 8,582 cf (8,238 cf above start)

Plug-Flow detention time= 40.7 min calculated for 1.147 af (98% of inflow)
 Center-of-Mass det. time= 28.5 min (865.9 - 837.4)

| Volume | Invert | Avail.Storage | Storage Description |
|--------|---------|---------------|--|
| #1 | 283.24' | 11,516 cf | Custom Stage Data (Irregular) Listed below (Recalc) |

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| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Voids (%) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---------------------|----------------------|------------------|--------------|---------------------------|---------------------------|---------------------|
| 283.24 | 3,309 | 325.9 | 0.0 | 0 | 0 | 3,309 |
| 283.25 | 3,309 | 325.9 | 40.0 | 13 | 13 | 3,312 |
| 284.24 | 3,309 | 325.9 | 40.0 | 1,310 | 1,324 | 3,635 |
| 284.25 | 3,309 | 325.9 | 20.0 | 7 | 1,330 | 3,638 |
| 284.49 | 3,309 | 325.9 | 20.0 | 159 | 1,489 | 3,716 |
| 284.50 | 3,309 | 325.9 | 5.0 | 2 | 1,491 | 3,720 |
| 285.99 | 3,309 | 325.9 | 5.0 | 247 | 1,737 | 4,205 |
| 286.00 | 3,309 | 325.9 | 100.0 | 33 | 1,770 | 4,208 |
| 286.99 | 4,315 | 344.8 | 100.0 | 3,763 | 5,533 | 5,270 |
| 287.00 | 5,314 | 407.6 | 100.0 | 48 | 5,581 | 9,031 |
| 288.00 | 6,577 | 434.1 | 100.0 | 5,934 | 11,516 | 10,855 |

| Device | Routing | Invert | Outlet Devices |
|--------|---------|---------|--|
| #1 | Primary | 283.50' | 6.0" Round Culvert L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 283.50' / 283.25' S= 0.0125 '/ Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.20 sf |
| #2 | Primary | 287.00' | 10.0' long + 3.0 '/ SideZ x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83 |

Primary OutFlow Max=12.40 cfs @ 12.17 hrs HW=287.52' TW=0.00' (Dynamic Tailwater)

1=Culvert (Inlet Controls 1.45 cfs @ 7.38 fps)

2=Broad-Crested Rectangular Weir (Weir Controls 10.95 cfs @ 1.83 fps)

Summary for Pond 3P: Pond 3P

Inflow Area = 3.615 ac, 0.00% Impervious, Inflow Depth > 0.80" for 10-Year Storm event
 Inflow = 2.22 cfs @ 12.17 hrs, Volume= 0.242 af
 Outflow = 1.11 cfs @ 12.53 hrs, Volume= 0.234 af, Atten= 50%, Lag= 21.2 min
 Primary = 1.11 cfs @ 12.53 hrs, Volume= 0.234 af
 Routed to Reach 1R : Analysis Point 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
 Starting Elev= 290.50' Surf.Area= 4,871 sf Storage= 507 cf
 Peak Elev= 292.95' @ 12.53 hrs Surf.Area= 4,871 sf Storage= 2,547 cf (2,041 cf above start)

Plug-Flow detention time= 81.0 min calculated for 0.222 af (92% of inflow)
 Center-of-Mass det. time= 30.4 min (931.2 - 900.8)

| Volume | Invert | Avail.Storage | Storage Description |
|--------|---------|---------------|--|
| #1 | 290.24' | 7,925 cf | Custom Stage Data (Irregular) Listed below (Recalc) |

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| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Voids (%) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---------------------|----------------------|------------------|--------------|---------------------------|---------------------------|---------------------|
| 290.24 | 4,871 | 293.1 | 0.0 | 0 | 0 | 4,871 |
| 290.25 | 4,871 | 293.1 | 40.0 | 19 | 19 | 4,874 |
| 291.24 | 4,871 | 293.1 | 40.0 | 1,929 | 1,948 | 5,164 |
| 291.25 | 4,871 | 293.1 | 20.0 | 10 | 1,958 | 5,167 |
| 291.49 | 4,871 | 293.1 | 20.0 | 234 | 2,192 | 5,237 |
| 291.50 | 4,871 | 293.1 | 5.0 | 2 | 2,194 | 5,240 |
| 292.99 | 4,871 | 293.1 | 5.0 | 363 | 2,557 | 5,677 |
| 293.00 | 4,871 | 293.1 | 100.0 | 49 | 2,606 | 5,680 |
| 294.00 | 5,779 | 312.0 | 100.0 | 5,319 | 7,925 | 6,639 |

| Device | Routing | Invert | Outlet Devices |
|--------|---------|---------|---|
| #1 | Primary | 290.50' | 6.0" Round Culvert L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 290.50' / 290.25' S= 0.0125 '/ Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.20 sf |
| #2 | Primary | 293.50' | 10.0' long + 3.0 ' SideZ x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83 |

Primary OutFlow Max=1.10 cfs @ 12.53 hrs HW=292.93' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Inlet Controls 1.10 cfs @ 5.62 fps)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 4P: Pond 4P

Inflow Area = 1.139 ac, 12.41% Impervious, Inflow Depth > 1.76" for 10-Year Storm event
 Inflow = 2.26 cfs @ 12.10 hrs, Volume= 0.167 af
 Outflow = 1.17 cfs @ 12.27 hrs, Volume= 0.165 af, Atten= 48%, Lag= 10.6 min
 Primary = 1.17 cfs @ 12.27 hrs, Volume= 0.165 af
 Routed to Reach 3R : 30" RCO Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
 Starting Elev= 304.50' Surf.Area= 1,347 sf Storage= 140 cf
 Peak Elev= 307.32' @ 12.27 hrs Surf.Area= 1,557 sf Storage= 1,186 cf (1,046 cf above start)

Plug-Flow detention time= 33.4 min calculated for 0.162 af (97% of inflow)
 Center-of-Mass det. time= 13.4 min (863.3 - 849.9)

| Volume | Invert | Avail.Storage | Storage Description |
|--------|---------|---------------|--|
| #1 | 304.24' | 2,408 cf | Custom Stage Data (Irregular) Listed below (Recalc) |

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| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Voids (%) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---------------------|----------------------|------------------|--------------|---------------------------|---------------------------|---------------------|
| 304.24 | 1,347 | 170.7 | 0.0 | 0 | 0 | 1,347 |
| 304.25 | 1,347 | 170.7 | 40.0 | 5 | 5 | 1,349 |
| 305.24 | 1,347 | 170.7 | 40.0 | 533 | 539 | 1,518 |
| 305.25 | 1,347 | 170.7 | 20.0 | 3 | 541 | 1,519 |
| 305.49 | 1,347 | 170.7 | 20.0 | 65 | 606 | 1,560 |
| 305.50 | 1,347 | 170.7 | 5.0 | 1 | 607 | 1,562 |
| 306.99 | 1,347 | 170.7 | 5.0 | 100 | 707 | 1,816 |
| 307.00 | 1,347 | 170.7 | 100.0 | 13 | 721 | 1,818 |
| 308.00 | 2,053 | 251.8 | 100.0 | 1,688 | 2,408 | 4,553 |

| Device | Routing | Invert | Outlet Devices |
|--------|---------|---------|---|
| #1 | Primary | 304.50' | 6.0" Round Culvert L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 304.50' / 304.25' S= 0.0125 '/ Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.20 sf |
| #2 | Primary | 307.50' | 10.0' long + 3.0 ' SideZ x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83 |

Primary OutFlow Max=1.17 cfs @ 12.27 hrs HW=307.32' TW=304.87' (Dynamic Tailwater)

1=Culvert (Inlet Controls 1.17 cfs @ 5.95 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 5P: Culvert

[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 9.624 ac, 4.42% Impervious, Inflow Depth > 1.17" for 10-Year Storm event
 Inflow = 6.97 cfs @ 12.24 hrs, Volume= 0.935 af
 Outflow = 6.97 cfs @ 12.25 hrs, Volume= 0.934 af, Atten= 0%, Lag= 0.4 min
 Primary = 6.97 cfs @ 12.25 hrs, Volume= 0.934 af
 Routed to Reach 9R : Flow Thru 40S

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 305.06' @ 12.25 hrs Surf.Area= 252 sf Storage= 181 cf

Plug-Flow detention time= 0.8 min calculated for 0.932 af (100% of inflow)
 Center-of-Mass det. time= 0.6 min (876.8 - 876.2)

| Volume | Invert | Avail.Storage | Storage Description |
|--------|---------|---------------|--|
| #1 | 304.00' | 46,029 cf | Custom Stage Data (Irregular) Listed below (Recalc) |

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| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---------------------|----------------------|------------------|---------------------------|---------------------------|---------------------|
| 304.00 | 100 | 40.0 | 0 | 0 | 100 |
| 306.00 | 443 | 99.8 | 502 | 502 | 780 |
| 308.00 | 1,603 | 192.8 | 1,926 | 2,428 | 2,965 |
| 310.00 | 4,597 | 325.3 | 5,943 | 8,371 | 8,452 |
| 312.00 | 9,639 | 444.2 | 13,928 | 22,300 | 15,774 |
| 314.00 | 14,240 | 515.9 | 23,730 | 46,029 | 21,335 |

| Device | Routing | Invert | Outlet Devices |
|--------|---------|---------|---|
| #1 | Primary | 304.00' | 36.0" Round Culvert L= 40.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 304.00' / 300.00' S= 0.1000 '/ Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 7.07 sf |

Primary OutFlow Max=6.96 cfs @ 12.25 hrs HW=305.06' TW=300.48' (Dynamic Tailwater)

↑**1=Culvert** (Inlet Controls 6.96 cfs @ 3.10 fps)

Summary for Pond CB1: CB 1

Inflow Area = 0.559 ac, 76.20% Impervious, Inflow Depth > 3.42" for 10-Year Storm event
 Inflow = 2.00 cfs @ 12.09 hrs, Volume= 0.159 af
 Outflow = 2.00 cfs @ 12.09 hrs, Volume= 0.159 af, Atten= 0%, Lag= 0.0 min
 Primary = 2.00 cfs @ 12.09 hrs, Volume= 0.159 af
 Routed to Pond 1P : Pond 1P

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 315.57' @ 12.48 hrs
 Flood Elev= 319.80'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|---------|--|
| #1 | Primary | 314.58' | 24.0" Round Culvert L= 14.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 314.58' / 314.50' S= 0.0057 '/ Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 3.14 sf |

Primary OutFlow Max=2.01 cfs @ 12.09 hrs HW=315.32' TW=314.97' (Dynamic Tailwater)

↑**1=Culvert** (Barrel Controls 2.01 cfs @ 2.81 fps)

Summary for Pond CB2: CB 2

Inflow Area = 0.364 ac, 63.44% Impervious, Inflow Depth > 2.96" for 10-Year Storm event
 Inflow = 1.16 cfs @ 12.09 hrs, Volume= 0.090 af
 Outflow = 1.16 cfs @ 12.09 hrs, Volume= 0.090 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.16 cfs @ 12.09 hrs, Volume= 0.090 af
 Routed to Pond CB1 : CB 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 315.57' @ 12.47 hrs
 Flood Elev= 319.80'

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| Device | Routing | Invert | Outlet Devices |
|--------|---------|---------|---|
| #1 | Primary | 314.79' | 24.0" Round Culvert L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 314.79' / 314.68' S= 0.0050 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 3.14 sf |

Primary OutFlow Max=1.14 cfs @ 12.09 hrs HW=315.45' TW=315.33' (Dynamic Tailwater)
 ↳ **1=Culvert** (Outlet Controls 1.14 cfs @ 1.86 fps)

Summary for Pond CB3: CB 3

Inflow Area = 0.346 ac, 61.55% Impervious, Inflow Depth > 2.89" for 10-Year Storm event
 Inflow = 1.08 cfs @ 12.09 hrs, Volume= 0.083 af
 Outflow = 1.08 cfs @ 12.09 hrs, Volume= 0.083 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.08 cfs @ 12.09 hrs, Volume= 0.083 af
 Routed to Pond CB2 : CB 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 327.08' @ 12.09 hrs
 Flood Elev= 331.24'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|---------|--|
| #1 | Primary | 326.52' | 15.0" Round Culvert L= 164.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 326.52' / 315.04' S= 0.0700 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf |

Primary OutFlow Max=1.06 cfs @ 12.09 hrs HW=327.08' TW=315.45' (Dynamic Tailwater)
 ↳ **1=Culvert** (Inlet Controls 1.06 cfs @ 2.01 fps)

Summary for Pond CB4: CB 4

[62] Hint: Exceeded Reach 6R OUTLET depth by 0.25' @ 12.10 hrs

Inflow Area = 0.346 ac, 61.55% Impervious, Inflow Depth > 2.89" for 10-Year Storm event
 Inflow = 1.08 cfs @ 12.09 hrs, Volume= 0.083 af
 Outflow = 1.08 cfs @ 12.09 hrs, Volume= 0.083 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.08 cfs @ 12.09 hrs, Volume= 0.083 af
 Routed to Pond CB3 : CB 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 336.53' @ 12.09 hrs
 Flood Elev= 340.43'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|---------|--|
| #1 | Primary | 335.97' | 15.0" Round Culvert L= 170.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 335.97' / 326.62' S= 0.0550 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf |

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Primary OutFlow Max=1.06 cfs @ 12.09 hrs HW=336.53' TW=327.08' (Dynamic Tailwater)
↳ **1=Culvert** (Inlet Controls 1.06 cfs @ 2.01 fps)

Summary for Pond CB5: CB 5

Inflow Area = 0.057 ac, 100.00% Impervious, Inflow Depth > 4.28" for 10-Year Storm event
Inflow = 0.24 cfs @ 12.09 hrs, Volume= 0.020 af
Outflow = 0.24 cfs @ 12.09 hrs, Volume= 0.020 af, Atten= 0%, Lag= 0.0 min
Primary = 0.24 cfs @ 12.09 hrs, Volume= 0.020 af
Routed to Pond CB4 : CB 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 336.58' @ 12.09 hrs
Flood Elev= 340.43'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|---------|--|
| #1 | Primary | 336.18' | 15.0" Round Culvert L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 336.18' / 336.07' S= 0.0050 '/ Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf |

Primary OutFlow Max=0.24 cfs @ 12.09 hrs HW=336.57' TW=336.52' (Dynamic Tailwater)
↳ **1=Culvert** (Outlet Controls 0.24 cfs @ 1.08 fps)

Summary for Pond CB6: CB 6

Inflow Area = 0.421 ac, 68.86% Impervious, Inflow Depth > 3.50" for 10-Year Storm event
Inflow = 1.57 cfs @ 12.09 hrs, Volume= 0.123 af
Outflow = 1.57 cfs @ 12.09 hrs, Volume= 0.123 af, Atten= 0%, Lag= 0.0 min
Primary = 1.57 cfs @ 12.09 hrs, Volume= 0.123 af
Routed to Pond CB7 : CB 7

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 308.66' @ 12.09 hrs
Flood Elev= 312.13'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|---------|--|
| #1 | Primary | 307.88' | 15.0" Round Culvert L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 307.88' / 307.77' S= 0.0050 '/ Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf |

Primary OutFlow Max=1.57 cfs @ 12.09 hrs HW=308.65' TW=308.36' (Dynamic Tailwater)
↳ **1=Culvert** (Outlet Controls 1.57 cfs @ 2.82 fps)

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Summary for Pond CB7: CB 7

Inflow Area = 0.509 ac, 74.24% Impervious, Inflow Depth > 3.63" for 10-Year Storm event
 Inflow = 1.95 cfs @ 12.09 hrs, Volume= 0.154 af
 Outflow = 1.95 cfs @ 12.09 hrs, Volume= 0.154 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.95 cfs @ 12.09 hrs, Volume= 0.154 af
 Routed to Pond DMH1 : DMH 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 308.38' @ 12.09 hrs
 Flood Elev= 312.13'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|---------|---|
| #1 | Primary | 307.52' | 18.0" Round Culvert L= 108.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 307.52' / 306.10' S= 0.0131 '/ Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf |

Primary OutFlow Max=1.92 cfs @ 12.09 hrs HW=308.36' TW=307.90' (Dynamic Tailwater)
 ↑ **1=Culvert** (Outlet Controls 1.92 cfs @ 2.74 fps)

Summary for Pond CB8: CB 8

[62] Hint: Exceeded Reach 7R OUTLET depth by 0.12' @ 12.10 hrs

Inflow Area = 0.331 ac, 60.36% Impervious, Inflow Depth > 3.29" for 10-Year Storm event
 Inflow = 1.18 cfs @ 12.09 hrs, Volume= 0.091 af
 Outflow = 1.18 cfs @ 12.09 hrs, Volume= 0.091 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.18 cfs @ 12.09 hrs, Volume= 0.091 af
 Routed to Pond DMH : DMH

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 326.84' @ 12.09 hrs
 Flood Elev= 331.02'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|---------|---|
| #1 | Primary | 326.25' | 15.0" Round Culvert L= 166.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 326.25' / 317.62' S= 0.0520 '/ Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf |

Primary OutFlow Max=1.16 cfs @ 12.09 hrs HW=326.84' TW=318.11' (Dynamic Tailwater)
 ↑ **1=Culvert** (Inlet Controls 1.16 cfs @ 2.06 fps)

Summary for Pond CB9: CB 9

Inflow Area = 0.055 ac, 100.00% Impervious, Inflow Depth > 4.28" for 10-Year Storm event
 Inflow = 0.24 cfs @ 12.09 hrs, Volume= 0.020 af
 Outflow = 0.24 cfs @ 12.09 hrs, Volume= 0.020 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.24 cfs @ 12.09 hrs, Volume= 0.020 af
 Routed to Pond CB8 : CB 8

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Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 326.88' @ 12.09 hrs

Flood Elev= 331.02'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|---------|--|
| #1 | Primary | 326.46' | 15.0" Round Culvert L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 326.46' / 326.35' S= 0.0050 '/ Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf |

Primary OutFlow Max=0.23 cfs @ 12.09 hrs HW=326.87' TW=326.83' (Dynamic Tailwater)↑**1=Culvert** (Outlet Controls 0.23 cfs @ 0.97 fps)**Summary for Pond DMH: DMH**

Inflow Area = 0.331 ac, 60.36% Impervious, Inflow Depth > 3.29" for 10-Year Storm event
 Inflow = 1.18 cfs @ 12.09 hrs, Volume= 0.091 af
 Outflow = 1.18 cfs @ 12.09 hrs, Volume= 0.091 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.18 cfs @ 12.09 hrs, Volume= 0.091 af
 Routed to Pond CB6 : CB 6

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 318.11' @ 12.09 hrs

Flood Elev= 322.74'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|---------|---|
| #1 | Primary | 317.52' | 15.0" Round Culvert L= 130.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 317.52' / 307.77' S= 0.0750 '/ Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf |

Primary OutFlow Max=1.16 cfs @ 12.09 hrs HW=318.11' TW=308.65' (Dynamic Tailwater)↑**1=Culvert** (Inlet Controls 1.16 cfs @ 2.06 fps)**Summary for Pond DMH1: DMH 1**

[62] Hint: Exceeded Reach 5R OUTLET depth by 1.17' @ 12.10 hrs

Inflow Area = 3.131 ac, 15.76% Impervious, Inflow Depth > 2.13" for 10-Year Storm event
 Inflow = 7.39 cfs @ 12.10 hrs, Volume= 0.555 af
 Outflow = 7.39 cfs @ 12.10 hrs, Volume= 0.555 af, Atten= 0%, Lag= 0.0 min
 Primary = 7.39 cfs @ 12.10 hrs, Volume= 0.555 af
 Routed to Reach 4R : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 307.96' @ 12.10 hrs

Flood Elev= 310.00'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|---------|----------------------------|
| #1 | Primary | 306.00' | 18.0" Round Culvert |

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L= 14.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 306.00' / 305.80' S= 0.0143 '/ S_c= 0.900
n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=7.31 cfs @ 12.10 hrs HW=307.93' TW=306.36' (Dynamic Tailwater)
↑**1=Culvert** (Inlet Controls 7.31 cfs @ 4.14 fps)

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

| | |
|---|---|
| Subcatchment 10S: Subcatchment 10S | Runoff Area=1,282,235 sf 4.92% Impervious Runoff Depth>1.81" Flow Length=235' Tc=14.7 min CN=61 Runoff=44.72 cfs 4.450 af |
| Subcatchment 20S: Subcatchment 20S | Runoff Area=442,727 sf 3.94% Impervious Runoff Depth>1.58" Flow Length=620' Tc=14.4 min CN=58 Runoff=13.08 cfs 1.337 af |
| Subcatchment 30S: Subcatchment 30S | Runoff Area=2,221,772 sf 0.00% Impervious Runoff Depth>2.40" Flow Length=1,400' Tc=22.8 min CN=68 Runoff=89.90 cfs 10.182 af |
| Subcatchment 31S: Subcatchment 31S | Runoff Area=49,614 sf 12.41% Impervious Runoff Depth>2.67" Tc=6.0 min CN=71 Runoff=3.49 cfs 0.254 af |
| Subcatchment 40S: Subcatchment 40S | Runoff Area=678,373 sf 1.19% Impervious Runoff Depth>1.64" Flow Length=2,055' Tc=39.3 min CN=59 Runoff=13.90 cfs 2.134 af |
| Subcatchment 41S: Subcatchment 41S | Runoff Area=110,223 sf 4.11% Impervious Runoff Depth>2.76" Tc=6.0 min CN=72 Runoff=8.02 cfs 0.583 af |
| Subcatchment 42S: Subcatchment 42S | Runoff Area=114,239 sf 4.41% Impervious Runoff Depth>2.76" Tc=6.0 min CN=72 Runoff=8.32 cfs 0.604 af |
| Subcatchment 43S: Subcatchment 43S | Runoff Area=3,935 sf 100.00% Impervious Runoff Depth>5.48" Tc=6.0 min CN=98 Runoff=0.49 cfs 0.041 af |
| Subcatchment 44S: Subcatchment 44S | Runoff Area=3,826 sf 100.00% Impervious Runoff Depth>5.48" Tc=6.0 min CN=98 Runoff=0.48 cfs 0.040 af |
| Subcatchment 45S: Subcatchment 45S | Runoff Area=2,382 sf 100.00% Impervious Runoff Depth>5.48" Tc=6.0 min CN=98 Runoff=0.30 cfs 0.025 af |
| Subcatchment 46S: Subcatchment 46S | Runoff Area=2,134 sf 100.00% Impervious Runoff Depth>5.48" Tc=6.0 min CN=98 Runoff=0.27 cfs 0.022 af |
| Subcatchment 47S: Subcatchment 47S | Runoff Area=9,882 sf 42.24% Impervious Runoff Depth>3.93" Tc=6.0 min CN=84 Runoff=1.01 cfs 0.074 af |
| Subcatchment 48S: Subcatchment 48S | Runoff Area=302,219 sf 0.00% Impervious Runoff Depth>1.81" Tc=15.0 min CN=61 Runoff=10.46 cfs 1.049 af |
| Subcatchment 49S: Subcatchment 49S | Runoff Area=92,671 sf 0.00% Impervious Runoff Depth>1.50" Tc=10.0 min CN=57 Runoff=2.92 cfs 0.267 af |
| Subcatchment 50S: Subcatchment 50S | Runoff Area=157,470 sf 0.00% Impervious Runoff Depth>1.43" Tc=10.0 min CN=56 Runoff=4.63 cfs 0.431 af |
| Subcatchment 51S: Subcatchment 51S | Runoff Area=59,105 sf 9.56% Impervious Runoff Depth>2.95" Tc=10.0 min CN=74 Runoff=4.05 cfs 0.333 af |

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| | |
|---|--|
| Subcatchment 52S: Subcatchment 52S | Runoff Area=776 sf 100.00% Impervious Runoff Depth>5.48" Tc=6.0 min CN=98 Runoff=0.10 cfs 0.008 af |
| Subcatchment 53S: Subcatchment 53S | Runoff Area=8,495 sf 100.00% Impervious Runoff Depth>5.48" Tc=6.0 min CN=98 Runoff=1.07 cfs 0.089 af |
| Subcatchment 54S: Subcatchment 54S | Runoff Area=2,464 sf 100.00% Impervious Runoff Depth>5.48" Tc=6.0 min CN=98 Runoff=0.31 cfs 0.026 af |
| Subcatchment 55S: Subcatchment 55S | Runoff Area=2,403 sf 100.00% Impervious Runoff Depth>5.48" Tc=6.0 min CN=98 Runoff=0.30 cfs 0.025 af |
| Subcatchment 56S: Subcatchment 56S | Runoff Area=10,203 sf 43.21% Impervious Runoff Depth>3.23" Tc=6.0 min CN=77 Runoff=0.87 cfs 0.063 af |
| Reach 1R: Analysis Point 1 | Inflow=105.42 cfs 21.999 af Outflow=105.42 cfs 21.999 af |
| Reach 2R: 15" RCP Culvert 15.0" Round Pipe n=0.012 L=76.0' S=0.1024 '/ | Avg. Flow Depth=0.69' Max Vel=18.90 fps Inflow=13.08 cfs 1.337 af Capacity=22.39 cfs Outflow=13.08 cfs 1.337 af |
| Reach 3R: 30" RCO Culvert 15.0" Round Pipe n=0.012 L=112.0' S=0.0406 '/ | Avg. Flow Depth=1.25' Max Vel=13.10 fps Inflow=91.60 cfs 10.434 af Capacity=14.11 cfs Outflow=14.24 cfs 10.433 af |
| Reach 4R: Swale | Avg. Flow Depth=0.68' Max Vel=4.55 fps Inflow=10.87 cfs 0.807 af n=0.022 L=145.0' S=0.0147 '/ Capacity=25.48 cfs Outflow=10.89 cfs 0.807 af |
| Reach 5R: HW 3 15.0" Round Pipe n=0.012 L=30.0' S=0.0400 '/ | Avg. Flow Depth=0.69' Max Vel=11.89 fps Inflow=8.32 cfs 0.604 af Capacity=14.00 cfs Outflow=8.32 cfs 0.604 af |
| Reach 6R: HW 6 12.0" Round Pipe n=0.012 L=120.0' S=0.0250 '/ | Avg. Flow Depth=0.26' Max Vel=5.51 fps Inflow=0.87 cfs 0.063 af Capacity=6.10 cfs Outflow=0.87 cfs 0.063 af |
| Reach 7R: HW 7 12.0" Round Pipe n=0.012 L=110.0' S=0.0300 '/ | Avg. Flow Depth=0.26' Max Vel=6.14 fps Inflow=1.01 cfs 0.074 af Capacity=6.69 cfs Outflow=1.01 cfs 0.074 af |
| Reach 9R: Flow Thru 40S | Avg. Flow Depth=0.58' Max Vel=8.61 fps Inflow=11.74 cfs 1.521 af n=0.022 L=120.0' S=0.0875 '/ Capacity=49.34 cfs Outflow=11.75 cfs 1.521 af |
| Reach 10R: HW 1 18.0" Round Pipe n=0.012 L=40.0' S=0.0130 '/ | Avg. Flow Depth=1.50' Max Vel=8.29 fps Inflow=18.90 cfs 1.389 af Capacity=12.97 cfs Outflow=12.97 cfs 1.389 af |
| Reach 11R: Flow Thru 40S | Avg. Flow Depth=0.72' Max Vel=5.72 fps Inflow=11.75 cfs 1.521 af n=0.025 L=470.0' S=0.0379 '/ Capacity=28.59 cfs Outflow=11.74 cfs 1.519 af |
| Reach 12R: Flow Thru 40S 14.0" Round Pipe n=0.010 L=40.0' S=0.0225 '/ | Avg. Flow Depth=1.17' Max Vel=11.16 fps Inflow=11.74 cfs 1.519 af Capacity=10.48 cfs Outflow=11.08 cfs 1.519 af |
| Reach 13R: Flow Thru 40S | Avg. Flow Depth=0.35' Max Vel=2.64 fps Inflow=11.08 cfs 1.519 af n=0.025 L=405.0' S=0.0093 '/ Capacity=67.29 cfs Outflow=10.73 cfs 1.515 af |

14232.7 PR CONDITION

Type III 24-hr 25-Year Storm Rainfall=5.72"

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| | |
|-------------------------|--|
| Pond 1P: Pond 1P | Peak Elev=316.37' Storage=5,594 cf Inflow=5.22 cfs 0.478 af Outflow=1.42 cfs 0.473 af |
| Pond 2P: Pond 2P | Peak Elev=287.62' Storage=9,127 cf Inflow=17.02 cfs 1.722 af Outflow=16.71 cfs 1.710 af |
| Pond 3P: Pond 3P | Peak Elev=293.55' Storage=5,402 cf Inflow=4.63 cfs 0.431 af Outflow=1.49 cfs 0.421 af |
| Pond 4P: Pond 4P | Peak Elev=307.64' Storage=1,715 cf Inflow=3.49 cfs 0.254 af Outflow=2.49 cfs 0.252 af |
| Pond 5P: Culvert | Peak Elev=305.42' Storage=281 cf Inflow=11.74 cfs 1.522 af 36.0" Round Culvert n=0.012 L=40.0' S=0.1000 ' /' Outflow=11.74 cfs 1.521 af |
| Pond CB1: CB 1 | Peak Elev=316.37' Inflow=2.65 cfs 0.211 af 24.0" Round Culvert n=0.012 L=14.0' S=0.0057 ' /' Outflow=2.65 cfs 0.211 af |
| Pond CB2: CB 2 | Peak Elev=316.37' Inflow=1.58 cfs 0.122 af 24.0" Round Culvert n=0.012 L=22.0' S=0.0050 ' /' Outflow=1.58 cfs 0.122 af |
| Pond CB3: CB 3 | Peak Elev=327.19' Inflow=1.48 cfs 0.114 af 15.0" Round Culvert n=0.012 L=164.0' S=0.0700 ' /' Outflow=1.48 cfs 0.114 af |
| Pond CB4: CB 4 | Peak Elev=336.64' Inflow=1.48 cfs 0.114 af 15.0" Round Culvert n=0.012 L=170.0' S=0.0550 ' /' Outflow=1.48 cfs 0.114 af |
| Pond CB5: CB 5 | Peak Elev=336.68' Inflow=0.31 cfs 0.026 af 15.0" Round Culvert n=0.012 L=22.0' S=0.0050 ' /' Outflow=0.31 cfs 0.026 af |
| Pond CB6: CB 6 | Peak Elev=309.70' Inflow=2.07 cfs 0.163 af 15.0" Round Culvert n=0.012 L=22.0' S=0.0050 ' /' Outflow=2.07 cfs 0.163 af |
| Pond CB7: CB 7 | Peak Elev=309.51' Inflow=2.55 cfs 0.203 af 18.0" Round Culvert n=0.012 L=108.0' S=0.0131 ' /' Outflow=2.55 cfs 0.203 af |
| Pond CB8: CB 8 | Peak Elev=326.95' Inflow=1.58 cfs 0.122 af 15.0" Round Culvert n=0.012 L=166.0' S=0.0520 ' /' Outflow=1.58 cfs 0.122 af |
| Pond CB9: CB 9 | Peak Elev=326.98' Inflow=0.30 cfs 0.025 af 15.0" Round Culvert n=0.012 L=22.0' S=0.0050 ' /' Outflow=0.30 cfs 0.025 af |
| Pond DMH: DMH | Peak Elev=318.22' Inflow=1.58 cfs 0.122 af 15.0" Round Culvert n=0.012 L=130.0' S=0.0750 ' /' Outflow=1.58 cfs 0.122 af |
| Pond DMH1: DMH 1 | Peak Elev=309.37' Inflow=10.87 cfs 0.807 af 18.0" Round Culvert n=0.012 L=14.0' S=0.0143 ' /' Outflow=10.87 cfs 0.807 af |

Total Runoff Area = 127.575 ac Runoff Volume = 22.036 af Average Runoff Depth = 2.07"
97.39% Pervious = 124.246 ac 2.61% Impervious = 3.329 ac

14232.7 PR CONDITION*Type III 24-hr 50-Year Storm Rainfall=6.84"*

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

| | |
|---|--|
| Subcatchment 10S: Subcatchment 10S | Runoff Area=1,282,235 sf 4.92% Impervious Runoff Depth>2.58" Flow Length=235' Tc=14.7 min CN=61 Runoff=65.63 cfs 6.325 af |
| Subcatchment 20S: Subcatchment 20S | Runoff Area=442,727 sf 3.94% Impervious Runoff Depth>2.29" Flow Length=620' Tc=14.4 min CN=58 Runoff=19.90 cfs 1.942 af |
| Subcatchment 30S: Subcatchment 30S | Runoff Area=2,221,772 sf 0.00% Impervious Runoff Depth>3.27" Flow Length=1,400' Tc=22.8 min CN=68 Runoff=124.20 cfs 13.880 af |
| Subcatchment 31S: Subcatchment 31S | Runoff Area=49,614 sf 12.41% Impervious Runoff Depth>3.59" Tc=6.0 min CN=71 Runoff=4.70 cfs 0.340 af |
| Subcatchment 40S: Subcatchment 40S | Runoff Area=678,373 sf 1.19% Impervious Runoff Depth>2.37" Flow Length=2,055' Tc=39.3 min CN=59 Runoff=20.80 cfs 3.077 af |
| Subcatchment 41S: Subcatchment 41S | Runoff Area=110,223 sf 4.11% Impervious Runoff Depth>3.69" Tc=6.0 min CN=72 Runoff=10.74 cfs 0.778 af |
| Subcatchment 42S: Subcatchment 42S | Runoff Area=114,239 sf 4.41% Impervious Runoff Depth>3.69" Tc=6.0 min CN=72 Runoff=11.13 cfs 0.806 af |
| Subcatchment 43S: Subcatchment 43S | Runoff Area=3,935 sf 100.00% Impervious Runoff Depth>6.60" Tc=6.0 min CN=98 Runoff=0.59 cfs 0.050 af |
| Subcatchment 44S: Subcatchment 44S | Runoff Area=3,826 sf 100.00% Impervious Runoff Depth>6.60" Tc=6.0 min CN=98 Runoff=0.58 cfs 0.048 af |
| Subcatchment 45S: Subcatchment 45S | Runoff Area=2,382 sf 100.00% Impervious Runoff Depth>6.60" Tc=6.0 min CN=98 Runoff=0.36 cfs 0.030 af |
| Subcatchment 46S: Subcatchment 46S | Runoff Area=2,134 sf 100.00% Impervious Runoff Depth>6.60" Tc=6.0 min CN=98 Runoff=0.32 cfs 0.027 af |
| Subcatchment 47S: Subcatchment 47S | Runoff Area=9,882 sf 42.24% Impervious Runoff Depth>4.98" Tc=6.0 min CN=84 Runoff=1.27 cfs 0.094 af |
| Subcatchment 48S: Subcatchment 48S | Runoff Area=302,219 sf 0.00% Impervious Runoff Depth>2.58" Tc=15.0 min CN=61 Runoff=15.35 cfs 1.491 af |
| Subcatchment 49S: Subcatchment 49S | Runoff Area=92,671 sf 0.00% Impervious Runoff Depth>2.20" Tc=10.0 min CN=57 Runoff=4.49 cfs 0.390 af |
| Subcatchment 50S: Subcatchment 50S | Runoff Area=157,470 sf 0.00% Impervious Runoff Depth>2.11" Tc=10.0 min CN=56 Runoff=7.24 cfs 0.636 af |
| Subcatchment 51S: Subcatchment 51S | Runoff Area=59,105 sf 9.56% Impervious Runoff Depth>3.90" Tc=10.0 min CN=74 Runoff=5.36 cfs 0.441 af |

14232.7 PR CONDITION

Type III 24-hr 50-Year Storm Rainfall=6.84"

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| | |
|---|--|
| Subcatchment 52S: Subcatchment 52S | Runoff Area=776 sf 100.00% Impervious Runoff Depth>6.60" Tc=6.0 min CN=98 Runoff=0.12 cfs 0.010 af |
| Subcatchment 53S: Subcatchment 53S | Runoff Area=8,495 sf 100.00% Impervious Runoff Depth>6.60" Tc=6.0 min CN=98 Runoff=1.28 cfs 0.107 af |
| Subcatchment 54S: Subcatchment 54S | Runoff Area=2,464 sf 100.00% Impervious Runoff Depth>6.60" Tc=6.0 min CN=98 Runoff=0.37 cfs 0.031 af |
| Subcatchment 55S: Subcatchment 55S | Runoff Area=2,403 sf 100.00% Impervious Runoff Depth>6.60" Tc=6.0 min CN=98 Runoff=0.36 cfs 0.030 af |
| Subcatchment 56S: Subcatchment 56S | Runoff Area=10,203 sf 43.21% Impervious Runoff Depth>4.22" Tc=6.0 min CN=77 Runoff=1.13 cfs 0.082 af |
| Reach 1R: Analysis Point 1 | Inflow=138.95 cfs 30.572 af Outflow=138.95 cfs 30.572 af |
| Reach 2R: 15" RCP Culvert 15.0" Round Pipe n=0.012 L=76.0' S=0.1024 '/ | Avg. Flow Depth=0.92' Max Vel=20.60 fps Inflow=19.90 cfs 1.942 af Capacity=22.39 cfs Outflow=19.90 cfs 1.942 af |
| Reach 3R: 30" RCO Culvert 15.0" Round Pipe n=0.012 L=112.0' S=0.0406 '/ | Avg. Flow Depth=1.25' Max Vel=13.05 fps Inflow=126.41 cfs 14.218 af Capacity=14.11 cfs Outflow=15.11 cfs 14.217 af |
| Reach 4R: Swale | Avg. Flow Depth=0.77' Max Vel=4.88 fps Inflow=14.25 cfs 1.056 af n=0.022 L=145.0' S=0.0147 '/ Capacity=25.48 cfs Outflow=14.28 cfs 1.055 af |
| Reach 5R: HW 3 15.0" Round Pipe n=0.012 L=30.0' S=0.0400 '/ | Avg. Flow Depth=0.84' Max Vel=12.65 fps Inflow=11.13 cfs 0.806 af Capacity=14.00 cfs Outflow=11.14 cfs 0.806 af |
| Reach 6R: HW 6 12.0" Round Pipe n=0.012 L=120.0' S=0.0250 '/ | Avg. Flow Depth=0.29' Max Vel=5.94 fps Inflow=1.13 cfs 0.082 af Capacity=6.10 cfs Outflow=1.14 cfs 0.082 af |
| Reach 7R: HW 7 12.0" Round Pipe n=0.012 L=110.0' S=0.0300 '/ | Avg. Flow Depth=0.30' Max Vel=6.55 fps Inflow=1.27 cfs 0.094 af Capacity=6.69 cfs Outflow=1.27 cfs 0.094 af |
| Reach 9R: Flow Thru 40S | Avg. Flow Depth=0.67' Max Vel=9.44 fps Inflow=16.92 cfs 2.136 af n=0.022 L=120.0' S=0.0875 '/ Capacity=49.34 cfs Outflow=16.94 cfs 2.135 af |
| Reach 10R: HW 1 18.0" Round Pipe n=0.012 L=40.0' S=0.0130 '/ | Avg. Flow Depth=1.50' Max Vel=8.12 fps Inflow=25.01 cfs 1.833 af Capacity=12.97 cfs Outflow=12.97 cfs 1.833 af |
| Reach 11R: Flow Thru 40S | Avg. Flow Depth=0.82' Max Vel=6.26 fps Inflow=16.94 cfs 2.135 af n=0.025 L=470.0' S=0.0379 '/ Capacity=28.59 cfs Outflow=16.98 cfs 2.133 af |
| Reach 12R: Flow Thru 40S 14.0" Round Pipe n=0.010 L=40.0' S=0.0225 '/ | Avg. Flow Depth=1.17' Max Vel=11.16 fps Inflow=16.98 cfs 2.133 af Capacity=10.48 cfs Outflow=10.48 cfs 2.133 af |
| Reach 13R: Flow Thru 40S | Avg. Flow Depth=0.35' Max Vel=2.63 fps Inflow=10.48 cfs 2.133 af n=0.025 L=405.0' S=0.0093 '/ Capacity=67.29 cfs Outflow=10.48 cfs 2.128 af |

14232.7 PR CONDITION*Type III 24-hr 50-Year Storm Rainfall=6.84"*

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| | |
|-------------------------|---|
| Pond 1P: Pond 1P | Peak Elev=316.70' Storage=7,022 cf Inflow=7.34 cfs 0.651 af Outflow=3.67 cfs 0.645 af |
| Pond 2P: Pond 2P | Peak Elev=287.65' Storage=9,322 cf Inflow=18.34 cfs 2.274 af Outflow=17.98 cfs 2.258 af |
| Pond 3P: Pond 3P | Peak Elev=293.75' Storage=6,493 cf Inflow=7.24 cfs 0.636 af Outflow=4.42 cfs 0.624 af |
| Pond 4P: Pond 4P | Peak Elev=307.74' Storage=1,901 cf Inflow=4.70 cfs 0.340 af Outflow=4.25 cfs 0.338 af |
| Pond 5P: Culvert | Peak Elev=305.74' Storage=397 cf Inflow=16.89 cfs 2.136 af 36.0" Round Culvert n=0.012 L=40.0' S=0.1000 ' ' Outflow=16.92 cfs 2.136 af |
| Pond CB1: CB 1 | Peak Elev=316.71' Inflow=3.26 cfs 0.261 af 24.0" Round Culvert n=0.012 L=14.0' S=0.0057 ' ' Outflow=3.26 cfs 0.261 af |
| Pond CB2: CB 2 | Peak Elev=316.71' Inflow=1.98 cfs 0.154 af 24.0" Round Culvert n=0.012 L=22.0' S=0.0050 ' ' Outflow=1.98 cfs 0.154 af |
| Pond CB3: CB 3 | Peak Elev=327.29' Inflow=1.87 cfs 0.144 af 15.0" Round Culvert n=0.012 L=164.0' S=0.0700 ' ' Outflow=1.87 cfs 0.144 af |
| Pond CB4: CB 4 | Peak Elev=336.74' Inflow=1.87 cfs 0.144 af 15.0" Round Culvert n=0.012 L=170.0' S=0.0550 ' ' Outflow=1.87 cfs 0.144 af |
| Pond CB5: CB 5 | Peak Elev=336.77' Inflow=0.37 cfs 0.031 af 15.0" Round Culvert n=0.012 L=22.0' S=0.0050 ' ' Outflow=0.37 cfs 0.031 af |
| Pond CB6: CB 6 | Peak Elev=311.76' Inflow=2.54 cfs 0.201 af 15.0" Round Culvert n=0.012 L=22.0' S=0.0050 ' ' Outflow=2.54 cfs 0.201 af |
| Pond CB7: CB 7 | Peak Elev=311.46' Inflow=3.12 cfs 0.249 af 18.0" Round Culvert n=0.012 L=108.0' S=0.0131 ' ' Outflow=3.12 cfs 0.249 af |
| Pond CB8: CB 8 | Peak Elev=327.04' Inflow=1.95 cfs 0.151 af 15.0" Round Culvert n=0.012 L=166.0' S=0.0520 ' ' Outflow=1.95 cfs 0.151 af |
| Pond CB9: CB 9 | Peak Elev=327.07' Inflow=0.36 cfs 0.030 af 15.0" Round Culvert n=0.012 L=22.0' S=0.0050 ' ' Outflow=0.36 cfs 0.030 af |
| Pond DMH: DMH | Peak Elev=318.31' Inflow=1.95 cfs 0.151 af 15.0" Round Culvert n=0.012 L=130.0' S=0.0750 ' ' Outflow=1.95 cfs 0.151 af |
| Pond DMH1: DMH 1 | Peak Elev=311.25' Inflow=14.25 cfs 1.056 af 18.0" Round Culvert n=0.012 L=14.0' S=0.0143 ' ' Outflow=14.25 cfs 1.056 af |

Total Runoff Area = 127.575 ac Runoff Volume = 30.617 af Average Runoff Depth = 2.88"
97.39% Pervious = 124.246 ac 2.61% Impervious = 3.329 ac



GOVE ENVIRONMENTAL SERVICES, INC

SITE-SPECIFIC SOIL SURVEY REPORT

For

15 Sargent Drive, Raymond, NH

By

GES, Inc.

Project # 2022046

Date: 8-29-2023

1. MAPPING STANDARDS

Site-Specific Soil Mapping Standards for New Hampshire and Vermont. SSSNNE Special Publication No. 3, Version 7.0, July, 2021.

This map product is within the technical standards of the National Cooperative Soil Survey. It is a special purpose product, intended for infiltration requirements by the NH DES Alteration of Terrain Bureau. The soil map was produced by a professional soil scientist and is not a product of the USDA Natural Resources Conservation Service. This report accompanies the soil map.

The site-specific soil map (SSSM) was produced 8-29-2023; prepared by JP Gove, CSS #004, GES, Inc.

Soils were identified with the New Hampshire State-wide Numerical Soils Legend, USDA NRCS, Durham, NH. Issue # 10, January 2011.

Hydrologic Soil Group was determined using SSSNNE Special Publication No. 5, Ksat Values for New Hampshire Soils, September 2009.

High Intensity Soil Map symbols, based upon SSSNNE Special Publication 1, December 2017, were added to the Soil Legend.

Scale of soil map: Approximately 1" = 100'.

Contours Interval: 2 feet

2. LANDFORMS & EXISTING CONDITIONS:

The Phase 1 of the site is located on a series of large, steeply-sloping, glacial till hills. Some of the hills are bedrock controlled. Between the hills, intermittent and perennial streams flow toward the west and Onway Lake. This is a large site, of which only a portion of the site was soil mapped. It is mostly forested, with past and present logging operations taking place. Numerous skidder trails crisscross the steep to very steep hills. Surface boulders and rock are present throughout. Some outcrops are visible on the upper portions or upper slope breaks of the bedrock controlled landforms.

3. DATE SOIL MAP PRODUCED

Date(s) of on-site field work: August--2023

Date(s) of test pits: December 14, 2022 and June 22, 2023

Test pits recorded by: Jones and Beach Engineers, Inc. and witnessed by Town of Raymond

4. GEOGRAPHIC LOCATION AND SIZE OF SITE

City or town where soil mapping was conducted: Raymond

Location: 15 Sargent Drive

Size of area: Approximately 100 acres

Was the map for the entire lot? No

If no, where was the mapping conducted on the parcel: Phase 1 is a portion of Lot 58.

5. PURPOSE OF THE SOIL MAP

Was the map prepared to meet the requirement of Alteration of Terrain? yes

If no, what was the purpose of the map? Town of Raymond land use.

Who was the map prepared for? Jones & Beach Engineers, Inc.



6. SOIL IDENTIFICATION LEGEND

| Map Unit Symbol | Map Unit Name | HISS Symbol | Hydrologic Soil Group |
|---------------------|--|-------------|-----------------------|
| SSSS SYM. | SSSS MAP NAME | HISS SYM. | HYDROLOGIC SOIL GRP. |
| 87 | Chatfield, very stony | 227 | B |
| 125 | Scarboro, very stony | 621 | D |
| 445 | Newfields, very stony | 321 | B |
| 449 | Scituate, very stony | 323 | C |
| 500/dcabb | Udorthents, loamy d – moderately well drained, c – glacial till, a – no mineral restrictive layer, b -moderate infiltration, b- HSG B | 361 | B |
| 547 | Walpole, very stony | 521 | C |
| SLOPE PHASE: | | | |
| 0-8% | B | 8-15% | C |
| 25%+ | E | 15-25% | D |

87- Chatfield, very stony:

The Chatfield series consists of well drained soils formed in loamy melt-out till. They are moderately deep to bedrock. They are nearly level to very steep soils on bedrock-controlled hills and ridges. Slope ranges from 0 to 70 percent. Crystalline bedrock is at depths of 50 to 100 cm. Saturated hydraulic conductivity is moderately high or high in the mineral soil. Mean annual temperature is about 9 degrees C, and mean annual precipitation is about 1205 mm.

TAXONOMIC CLASS: Coarse-loamy, mixed, superactive, mesic Typic Dystrudepts

TYPICAL PEDON: Chatfield fine sandy loam, on a 13 percent slope in a wooded area. (Colors are for moist soil unless otherwise noted).

Oi -- 0 to 3 cm, slightly decomposed leaf, needle, and twig litter; extremely acid, pH 4.2. (0 to 15 cm thick.)

A -- 3 to 5 cm, very dark gray (10YR 3/1) fine sandy loam, gray (10YR 5/1), dry; weak fine subangular blocky structure; friable; many fine and medium roots throughout; 5 percent mixed gravel and cobbles; very strongly acid, pH 4.5; abrupt smooth boundary. (1 to 25 cm thick.)

Bw1-- 5 to 33 cm, strong brown (7.5YR 5/6) gravelly fine sandy loam; weak fine subangular blocky structure; friable; common fine roots throughout and common medium roots throughout; 15 percent mixed gravel and cobbles; very strongly acid, pH 4.5; abrupt wavy boundary.

Bw2 -- 33 to 76 cm, strong brown (7.5YR 5/6) gravelly fine sandy loam; moderate medium subangular blocky structure; friable; few fine roots throughout; 20 percent mixed rock fragments; very strongly acid, pH 4.5; abrupt irregular boundary. (Combined thickness of the Bw horizons is 10 to 80 cm.)

2R -- 76 cm; fractured slightly-weathered schist bedrock.

Onsite: Chatfield is found on the steep hills that have outcrops exposed at the highest points. The depth to bedrock ranges from 20 to 40 inches. Estimated seasonal high water table is not observed above the bedrock. Inclusions are Canton at 10% and Hollis, also at 10%.



125 – Scarboro, very stony:

The Scarboro series consists of very deep, very poorly drained soils in sandy glaciofluvial deposits on outwash plains, deltas, and terraces. They are nearly level soils in depressions. Slope ranges from 0 through 3 percent. Saturated hydraulic conductivity is high or very high. Mean annual temperature is about 49 degrees F. (9 degrees C.) and the mean annual precipitation is about 44 inches (1118 millimeters).

TAXONOMIC CLASS: Sandy, mixed, mesic Histic Humaquepts

TYPICAL PEDON: Scarboro mucky fine sandy loam woodland; in an area of Scarboro mucky fine sandy loam at an elevation of about 212 meters. (Colors are for moist soil.)

Oi-- 0 to 1 inch (0 to 3 centimeters); slightly decomposed maple leaves and other plant material

Oa-- 1 to 8 inches (3 to 20 centimeters); dark brown (10YR3/3) mucky peat; thin platy structure; friable; common fine roots; very strongly acid; abrupt wavy boundary. (Combined thickness of Oi, Oe, and Oa horizons is 8 to 13 inches (20 to 33 centimeters).)

A-- 8 to 14 inches (20 to 36 centimeters); black (N 2/0) mucky fine sandy loam; weak medium granular structure; friable; common fine roots; very strongly acid; abrupt smooth boundary. (0 to 14 inches (0 to 36 centimeters) thick.)

Cg1-- 14 to 19 inches (36 to 48 centimeters); grayish brown (2.5Y 5/2) loamy sand; massive; friable; many fine roots; very strongly acid; abrupt irregular boundary.

Cg2-- 19 to 22 inches (48 to 56 centimeters); grayish brown (2.5Y 5/2) sand; massive; friable; few fine roots; 10 percent rock fragments; common medium prominent dark brown (7.5YR 3/2) areas of iron depletion and common medium prominent yellowish red (5YR 4/6) masses of iron; very strongly acid; clear wavy boundary.

Cg3-- 22 to 65 inches (56 to 165 centimeters); grayish brown (2.5Y 5/2) gravelly sand; single grain; loose; 15 percent rock fragments; strongly acid.

Onsite: This is a small map unit confined to the marsh area along the southern boundary.

445 – Newfields, very stony

The Newfields series consists of very deep, moderately well drained soils formed in a loamy mantle underlain by sandy till on upland hills, moraines, till plains, and mountain side slopes. Saturated hydraulic conductivity is moderately high to very high. Slope ranges from 0 through 25 percent. Mean annual precipitation is about 40 inches (1016 millimeters), and mean annual temperature is about 48 degrees F. (9 degrees C.).

TAXONOMIC CLASS: Coarse-loamy over sandy or sandy-skeletal, mixed, active, mesic Oxyaquic Dystrudepts

TYPICAL PEDON: Newfields fine sandy loam, on a nearly level slope in a wooded area. The surface is covered by a 1 inch (3 centimeter) layer of leaves and twigs. (Colors are for moist soil.)

Ap -- 0 to 9 inches (0 to 23 centimeters); very dark grayish brown (10YR 3/2) fine sandy loam; light brownish gray (10YR 6/2) dry; moderate medium granular structure; friable; many fine and medium, and common coarse roots; 5 percent gravel; moderately acid; abrupt smooth boundary. (4 to 10 inches (10 to 25 centimeters) thick.)

Bw1 -- 9 to 20 inches (23 to 51 centimeters); yellowish brown (10YR 5/6) fine sandy loam; weak medium granular structure; very friable; common medium and few coarse roots; 10 percent gravel; moderately acid; clear wavy boundary.

Bw2 -- 20 to 28 inches (51 to 71 centimeters); olive yellow (2.5Y 6/6) fine sandy loam; weak medium granular structure; very friable; common fine and few medium roots; 10 percent gravel; moderately acid; clear wavy boundary. (Combined thickness of the Bw horizon is 5 to 30 inches (13 to 76 centimeters).)

BC -- 28 to 35 inches (71 to 89 centimeters); light yellowish brown (2.5Y 6/4) fine sandy loam; massive; friable; few fine and medium roots; 5 percent gravel; few fine



distinct yellowish brown (10YR 5/6) masses of iron accumulation and many medium distinct light gray (5Y 7/2) iron depletions; moderately acid; clear wavy boundary. (0 to 20 (0 to 51 centimeters) inches thick.)

2C1 -- 35 to 43 inches (89 to 109 centimeters); light yellowish brown (2.5Y 6/4) gravelly loamy sand; massive; friable; 25 percent gravel; many medium prominent strong brown (7.5YR 5/8) and common fine prominent yellowish red (5YR 5/8) masses of iron accumulation, and many medium distinct light gray (5Y 7/2) iron depletions; moderately acid; clear wavy boundary. (0 to 30 inches (0 to 76 centimeters) thick.)

2C2 -- 43 to 64 inches (109 to 163 centimeters); pale olive (5Y 6/3) gravelly loamy sand; massive; friable; 25 percent gravel; common fine prominent strong brown (7.5YR 5/8) masses of iron accumulation and many medium faint light gray (5Y 7/2) iron depletions; moderately acid.

Onsite: Newfields makes up the majority of the soils on Phase 1. Over 30 test pits were classified as Newfields or Newfields variants. The estimated seasonal high water table is 30 to 40 inches deep, with no mineral restrictive layer. Inclusions are Canton at 5% and Scituate at 10%. Inclusions are also along and in the roadway traversing the site.

449 – Scituate, very stony

The Scituate series consists of moderately well drained soils formed in a loamy eolian influenced mantle of till underlain by sandy lodgement till. The soils are very deep to bedrock and moderately deep to a densic contact. They are nearly level through moderately steep soils on glaciated uplands. Saturated hydraulic conductivity is moderately high or high in the solum and moderately low or moderately high in the substratum. Mean annual precipitation is about 43 inches (1092 millimeters) and the

mean annual temperature is about 48 degrees F. (9 degrees C.)

TAXONOMIC CLASS: Coarse-loamy, mixed, active, mesic Oxyaquic Dystrudepts

TYPICAL PEDON: Scituate fine sandy loam - woodland, in a stony area. (Colors are for moist soil unless otherwise indicated).

A -- 0 to 5 inches (0 to 13 centimeters); black (10YR 2/1) fine sandy loam, dark gray (10YR 4/1) dry; weak and moderate fine granular structure; very friable; many fine roots; 10 percent gravel; extremely acid; abrupt wavy boundary. (1 to 6 inches (3 to 15 centimeters) thick.)

Bw1 -- 5 to 21 inches (13 to 53 centimeters); strong brown (7.5YR 5/6) fine sandy loam; massive; very friable; common fine roots; 10 percent gravel; strongly acid; clear wavy boundary.

Bw2 -- 21 to 27 inches (53 to 69 centimeters); yellowish brown (10YR 5/6) sandy loam; massive; very friable; few fine roots; 10 percent gravel; common fine and medium distinct yellowish red (5YR 5/6) masses of iron accumulation; strongly acid; clear wavy boundary. (Combined thickness of the Bw horizons is 6 to 40 inches (15 to 102 centimeters) thick.)

2Cd -- 27 to 65 inches (69 to 165 centimeters); yellowish brown (10YR 5/4) very gravelly loamy sand; massive; firm; 30 percent gravel and 5 percent cobbles; common medium distinct light brownish gray (2.5Y 6/2) iron depletions; moderately acid.

Onsite: Scituate is the second most common soil series on the site, with over 20 of the test pits being classified as Scituate. The estimated seasonal high water table is 20 to 30 inches, with an mineral restrictive layer (hard pan) at the depth of the water table. Inclusions are Canton at 5% and Newfields at 10%. Inclusions along and in the roadway are also present.



547 – Walpole, very stony

The Walpole Series consists of very deep, poorly drained sandy soils formed in outwash and stratified drift. They are nearly level to gently sloping soils in low-lying positions on terraces and plains. Slope ranges from 0 to 8 percent. Saturated hydraulic conductivity is moderately high or high in the surface layer and subsoil, and high or very high in the substratum. Mean annual temperature is about 48 degrees F., and mean annual precipitation is about 43 inches.

TAXONOMIC CLASS: Sandy, mixed, mesic Aeric Endoaquepts

TYPICAL PEDON: Walpole sandy loam - forested, 2 percent slope. (Colors are for moist soil.)

Oe--0 to 3 cm (0 to 1 in); black (10YR 2/1) moderately decomposed forest plant material. (0 to 7 cm thick)

A--3 to 18 cm (1 to 7 in); very dark brown (10YR 2/2) sandy loam; weak medium granular structure; very friable; many fine and medium roots; 8 percent gravel; very strongly acid; clear smooth boundary. (8 to 33 cm thick)

Bg--18 to 53 cm (7 to 21 in); dark grayish brown (2.5Y 4/2) sandy loam; massive; friable; common fine and few medium roots in the upper part of the horizon and few fine roots in the lower part; 10 percent gravel; common medium prominent strong brown (7.5YR 5/6) and common medium prominent yellowish brown (10YR 5/4) and yellowish brown (10YR 5/6) masses of iron accumulation and common medium distinct light brownish gray (10YR 6/2) iron depletions; strongly acid; gradual smooth boundary.

BC--53 to 63 cm (21 to 25 in); light olive brown (2.5Y 5/4) gravelly sandy loam; massive; friable; 20 percent gravel; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation and light brownish gray (10YR 6/2) and dark grayish brown (2.5Y 4/2) iron depletions; strongly acid; clear smooth boundary. (Combined thickness of the Bg and BC horizons is 36 to 61 cm.)

C1--63 to 104 cm (25 to 41 in); light yellowish brown (2.5Y 6/4) very gravelly loamy sand; single grain; very friable; 30 percent gravel and 5 percent cobbles; common medium distinct strong brown (7.5YR 5/6) and yellowish brown (10YR 5/4) masses of iron accumulation; strongly acid; gradual smooth boundary. (25 to 102 cm thick)

C2--104 to 165 cm (41 to 65 in); light brownish gray (10YR 6/2) very gravelly sand, few brown (10YR 5/3) streaks; single grain; loose; 35 percent gravel and 5 percent cobbles; moderately acid.

Onsite: Walpole stony make up the majority of the wetland soils. Often associated with intermittent or perennial streams. These can be flat to steeply sloping. These are mineral soils with estimated seasonal high water tables at or near the surface. Inclusions are small areas of Scarborough, stony at 5%.

500/dcabb – Udorthents, loamy

Udorthents are soils that have been disturbed by human activities such as cutting or filling¹². They are usually loamy and moderately coarse textured¹². They may consist of the exposed substrata of other soils, such as Boxford, Charlton, Newport, Paxton, Pittstown, or Woodridge soils, or of a mixture of several soils².

Onsite: This represents an area that was excavated along and to the west of the road. It is possible that a portion of the wetlands next to these map units were also excavated. One assumption is that the fill was used to create the road fill and embankments to the north of the excavated area.



7. RESPONSIBLE SOIL SCIENTIST

Name: James Gove

Certified Soil Scientist Number: 004

8. OTHER DISTINGUISHING FEATURES OF SITE

Is the site in a natural condition? For the most part.

If no, what is the nature of the disturbance? Excavation area.

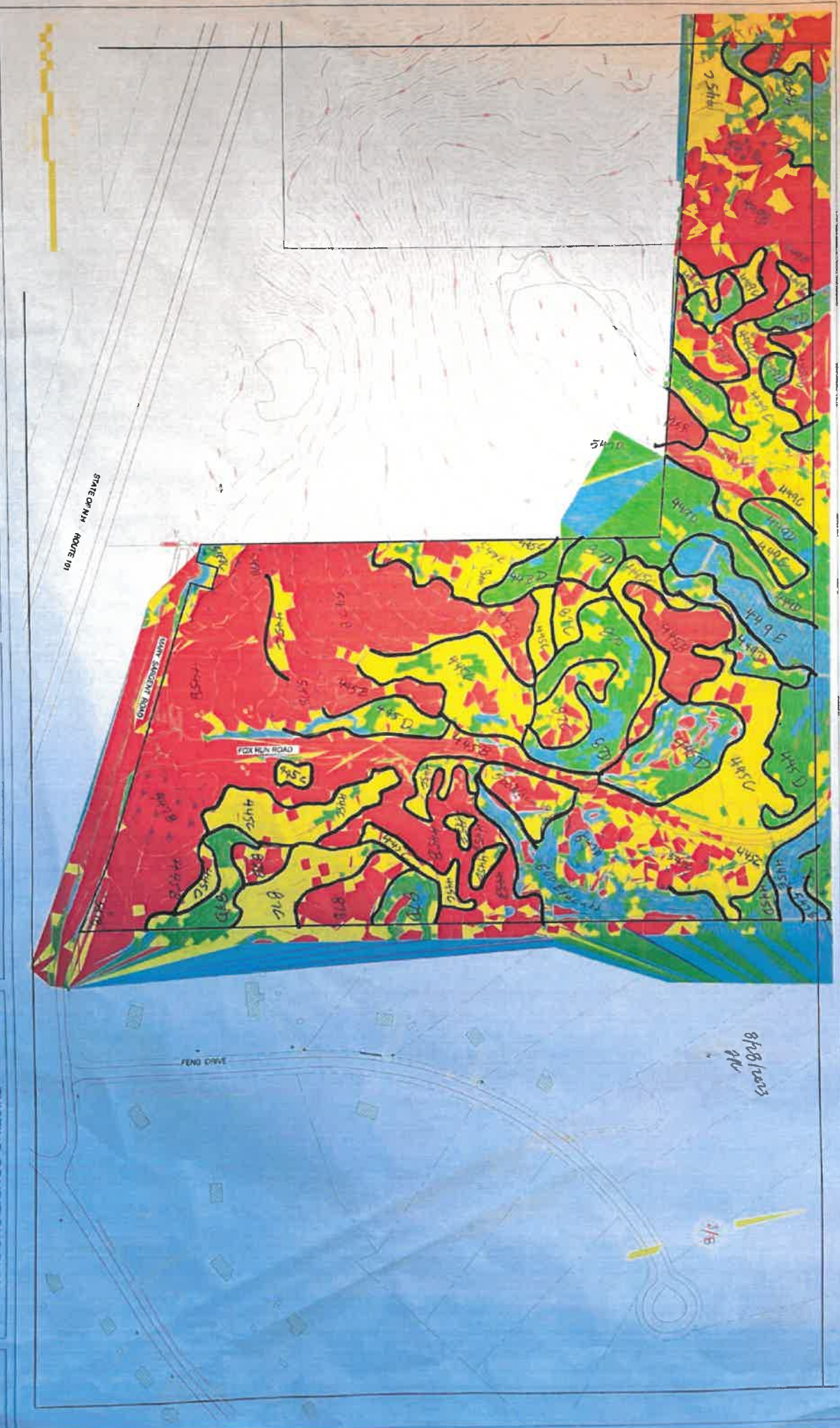
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| Client | Sheet No. | North Arrow |
| Design | Revision | Date |

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| Author | Checked | Approved |
| Date | Date | Date |

J/B Jones & Beach Engineers, Inc.
 Civil Engineering Services

EXISTING CONDITIONS PLAN
 13 SARACENT DRIVE
 SAVERNOCK NEW HAMPSHIRE

C1



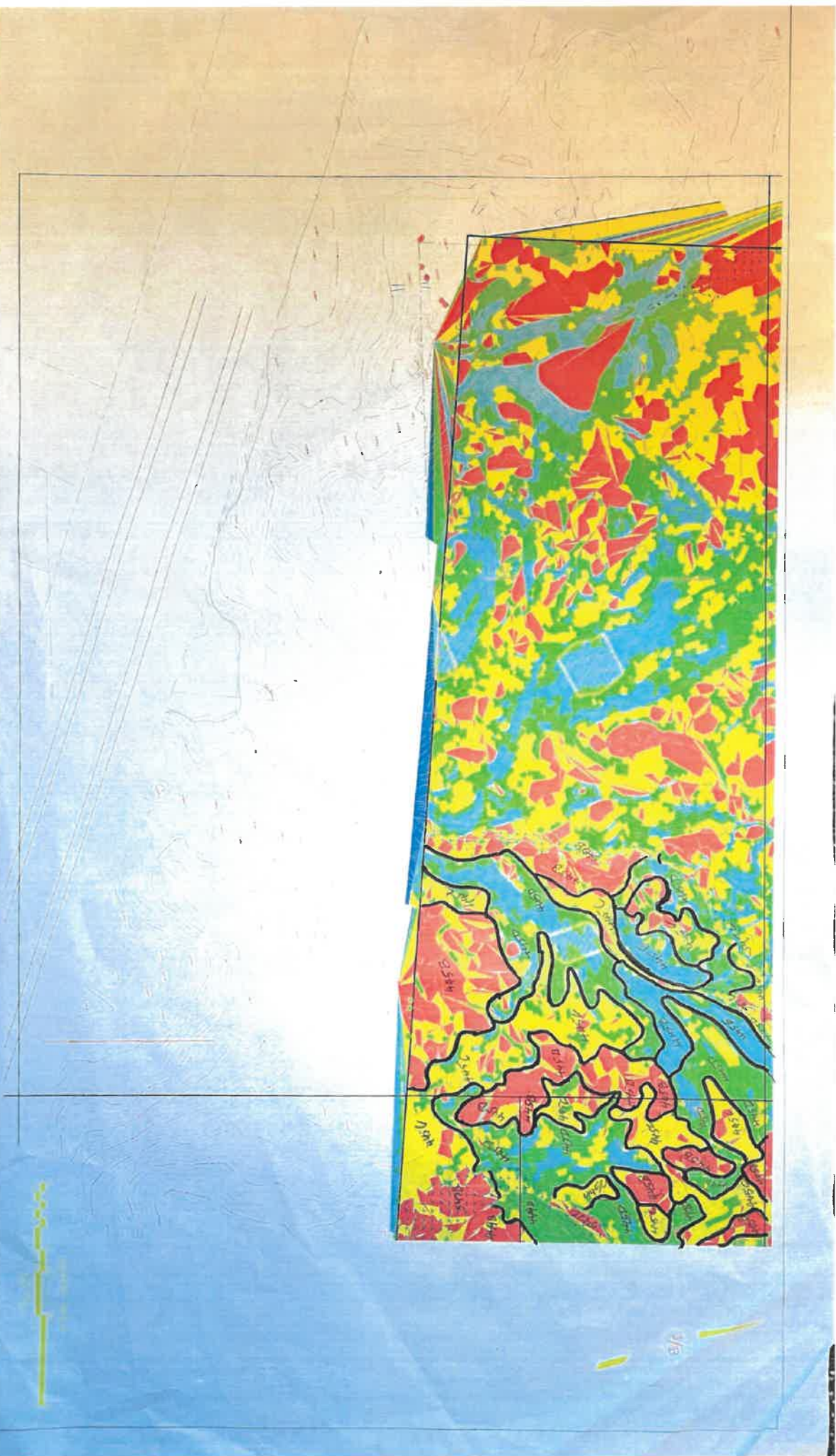
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| Client | |
| Location | |
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| Revision | |
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J/R Jones & Beach Engineers, Inc.
 Civil Engineering Services

EXISTING CONDITIONS PLAN
 12 SARGENT DRIVE
 PALMWOOD, NEW HAMPSHIRE

C3



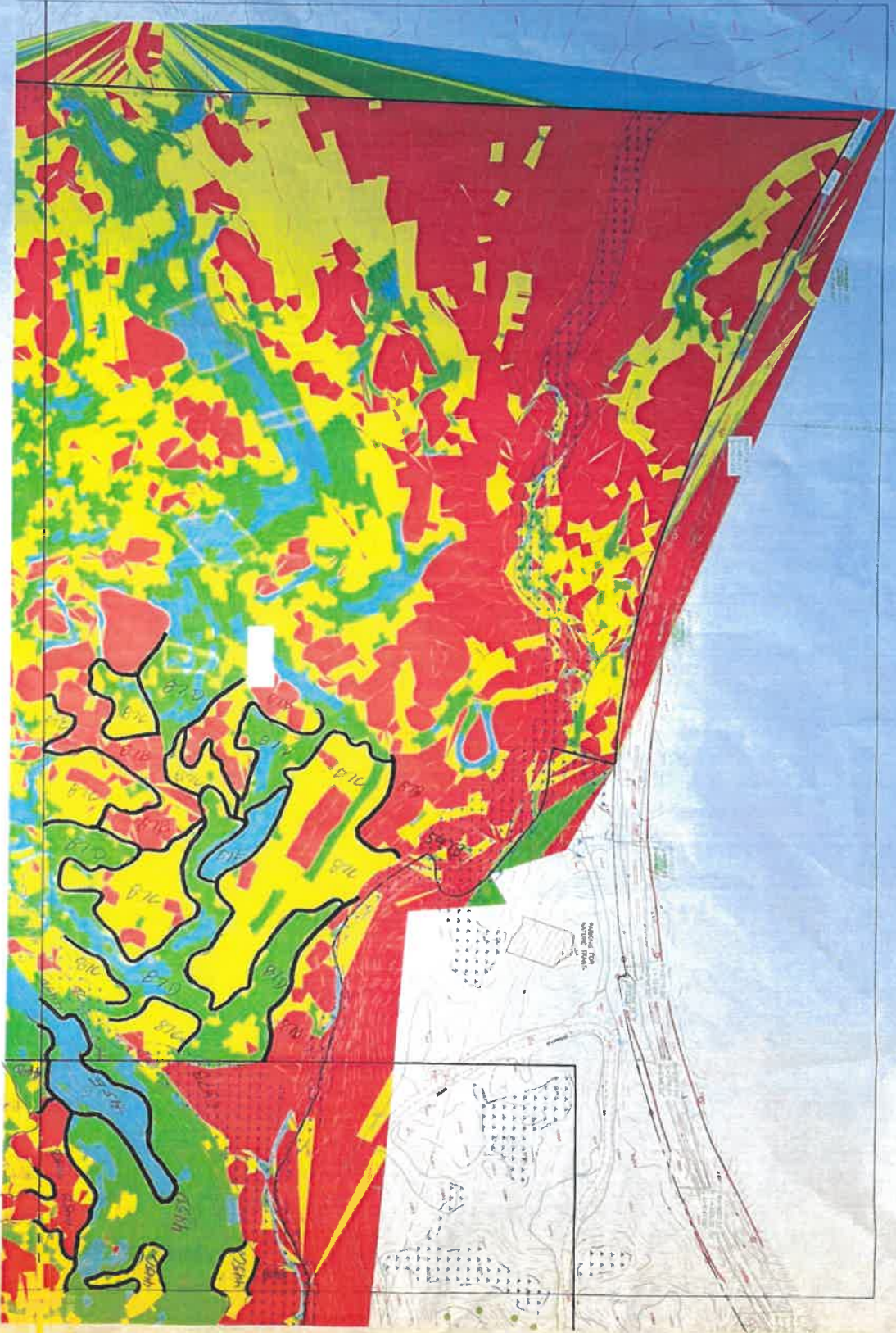
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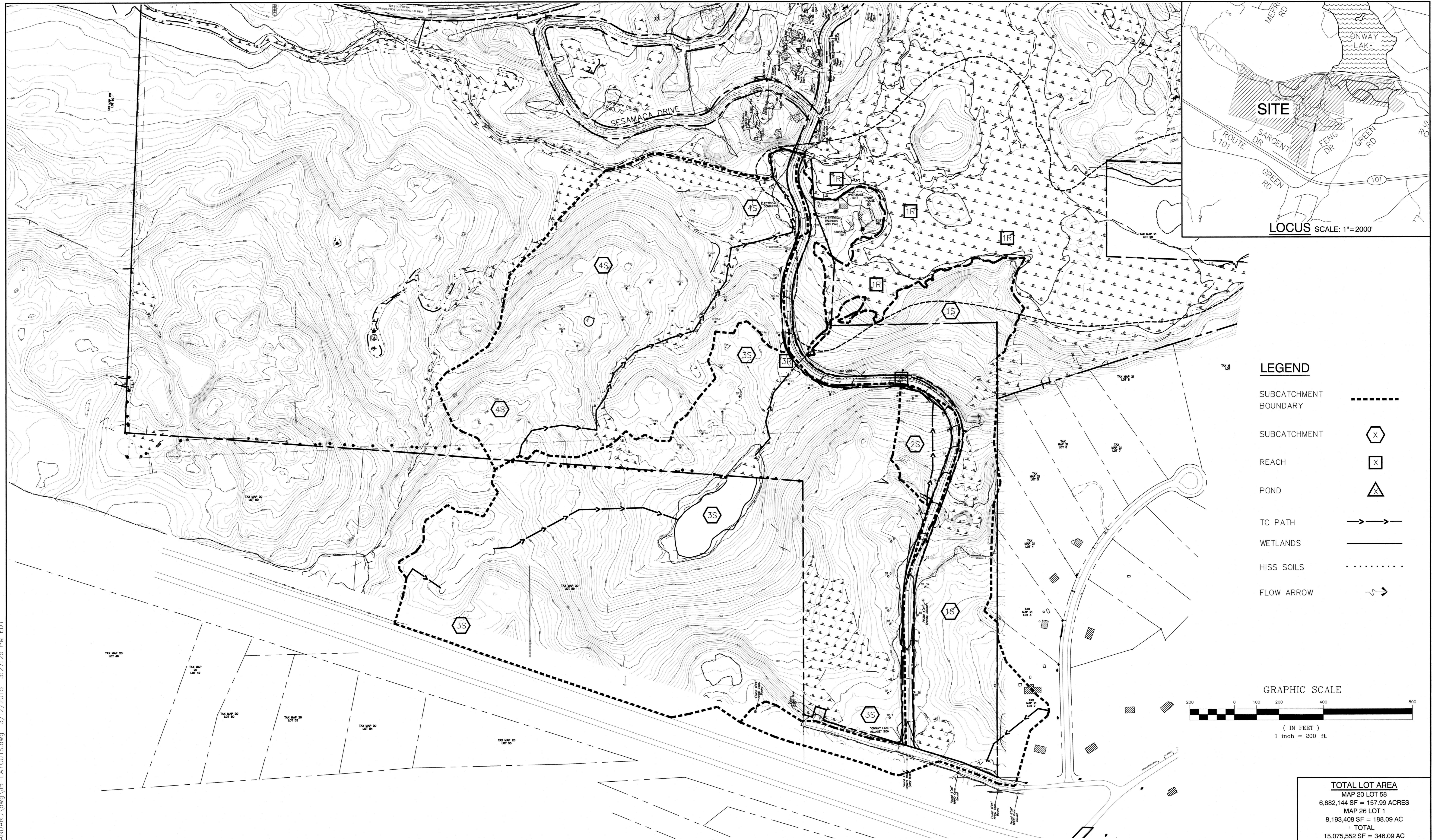
1/3
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EXISTING CONDITIONS PLAN
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C4



1/3



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| Design: JAC | Draft: MJK | Date: 9/7/23 |
| Checked: JAC | Scale: 1"=200' | Project No.: 14232.7 |
| Drawing Name: 14232.7-WATERSHED.dwg | | |
| THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE. | | |



| REV. | DATE | REVISION | BY |
|------|--------|-------------------|-----|
| 0 | 9/7/23 | ISSUED FOR REVIEW | MJK |

Designed and Produced in NH

J/B Jones & Beach Engineers, Inc.
Civil Engineering Services


85 Portsmouth Ave. PO Box 219 Stratham, NH 03885
 603-772-4746
 E-MAIL: JBE@JONESANDBEACH.COM

| | |
|------------------|---|
| Plan Name: | EXISTING WATERSHED PLAN |
| Project: | 15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE |
| Owner of Record: | YAWNO PROPERTIES, LLC, 427 AMHERST STREET, RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063 |

| | |
|--------------|-------------------------|
| DRAWING No. | W1 |
| SHEET 1 OF 2 | JBE PROJECT NO. 14232.7 |

MEMORANDUM

TO: YAWNO Properties, LLC and
Raymond Village, LLC
c/o Shiv Shrestha and
Matthew Silverstine
427 Amherst Street
2nd Floor, Suite 1
Nashua, NH 03063

FROM: Mr. Jeffrey S. Dirk, P.E.*, PTOE, FITE 
Managing Partner and
Mr. Matthew P. Pelletier
Transportation Engineer
Vanasse & Associates, Inc.
35 New England Business Center Drive
Suite 140
Andover, MA 01810-1066
(978) 269-6830
jdirk@rdva.com

**Professional Engineer in CT, MA, ME, NH, RI and VA*

DATE: November 29, 2023

RE: 9838

SUBJECT: Traffic Impact Study
Proposed Residential Development – 15 Sargent Drive
Raymond, New Hampshire

Vanasse & Associates, Inc. (VAI) has conducted a Traffic Impact Study (TIS) in order to determine the potential impacts on the transportation infrastructure associated with the proposed construction of a residential development to be located on a parcel of land generally situated between the Rockingham Recreational Trail and properties located along Sargent Drive and Green Road in Raymond, New Hampshire (hereafter referred to as the “Project”). The Project will consist of a mix of conventional single-family homes and age-qualified detached homes, and will be developed phases as market conditions dictate. This assessment is based on a three (3) phase development program, with Phase 1 to consist of the single-family home component and Phases 2 and 3 to consist of the age-qualified housing.

This study has been completed in accordance with the New Hampshire Department of Transportation (NHDOT) guidelines for the preparation of TISs as defined in the Driveway Permit Policy and evaluates the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; and identifies and analyzes existing traffic conditions and future traffic conditions, both with and without the Project. Based on this assessment, we have concluded the following with respect to the Project:

1. Using trip-generation statistics published by the Institute of Transportation Engineer (ITE),¹ the completed Project (all three phases) is expected to generate approximately 1,324 vehicle trips on an average weekday (two-way, 24-hour volume), with approximately 111 vehicle trips expected during the weekday morning peak-hour and 132 vehicle trips expected during the weekday evening peak-hour;
2. The Project will not have a significant impact (increase) on motorist delays or vehicle queuing over Existing or anticipated future conditions without the Project (No-Build conditions), with the majority of the movements at the study area intersections shown to continue operate at

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



a level-of-service (LOS) D or better, where and LOS of “D” or better is generally defined as “acceptable” traffic operations, acknowledging that, independent of the Project, one or more movements at the Old Manchester Road/Scribner Road/Industrial Drive and at the Old Manchester Road intersection with the NH Route 101 ramps are currently or are predicted to operate at or over capacity (i.e., LOS “E” or “F”);

3. All movements at the intersection of Sargent Drive at Green Road, the intersection that will serve as the primary access to the Project site, are predicted to operate at LOS B or better with vehicle queues of up to one (1) vehicle predicted; and
4. Lines of sight at the Project site roadway intersection with Sargent Drive were found to exceed or can be made to exceed the recommended minimum distance for the intersection to operate in a safe and efficient manner based on the appropriate approach speed. Lines of sight at the Project site roadway intersection with Green Road were found to be limited by an existing vertical curve along Green Road to the east of the roadway. Due to this obstruction, the Green Road access should be secured by means of a gate and restricted to emergency vehicles only until such time as the intersection can be improved to provide the required sight distance (see *Recommendations*).

In consideration of the above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure in a safe and efficient manner with implementation of the recommendations defined herein.

The following details our assessment of the Project.

PROJECT DESCRIPTION

The Project will entail the construction of a 249-unit residential development to be located on a parcel of land generally situated between the Rockingham Recreational Trail and properties located along Sargent Drive and Green Road in Raymond, New Hampshire, with a physical address of 15 Sargent Drive. The Project will consist of a mix of conventional single-family homes and age-qualified detached homes, and will be developed phases as market conditions dictate. This assessment is based on a three (3) phase development program, with Phase 1 consisting of the single-family home component and will include 38 homes and Phases 2 and 3 to consist of the age-qualified housing, with Phase 2 to include 78 homes and Phase 3 to include 133 homes.

The Project site encompasses approximately 362.66± acres of land that is generally situated north of Sargent Drive and properties located along Green Road, and is bounded by the Rockingham Recreational Trail to the north, residential properties and areas of open and wooded space to the south and east; and areas of open and wooded space to the west. The Project site currently contains areas of open and wooded space, low-lying wetland areas, and 15 residential units which have been constructed as part of Phase 2. Figure 1 depicts the Project site in relation to the existing roadway network.

Access to the Project site will be provided by way of two roadways that intersect Sargent Road and Green Road, respectively. Deer Run Road, which intersects the north side of Sargent Road approximately 730 feet northwest of Feng Drive, has been constructed and will serve as the primary access to the Project. The Green Road access will be an extension of Leavitt Road, which is currently an unimproved gravel road that intersects the north side of Green Road approximately 125 feet east of the driveway to 27 Green Road. As a part of this assessment, it has been recommended that the Green Road access serve as an emergency vehicle access only, with general traffic and primary emergency response using Deer Run Road. As such, the analyses presented herein reflect this recommendation; however, a secondary access to Green Road



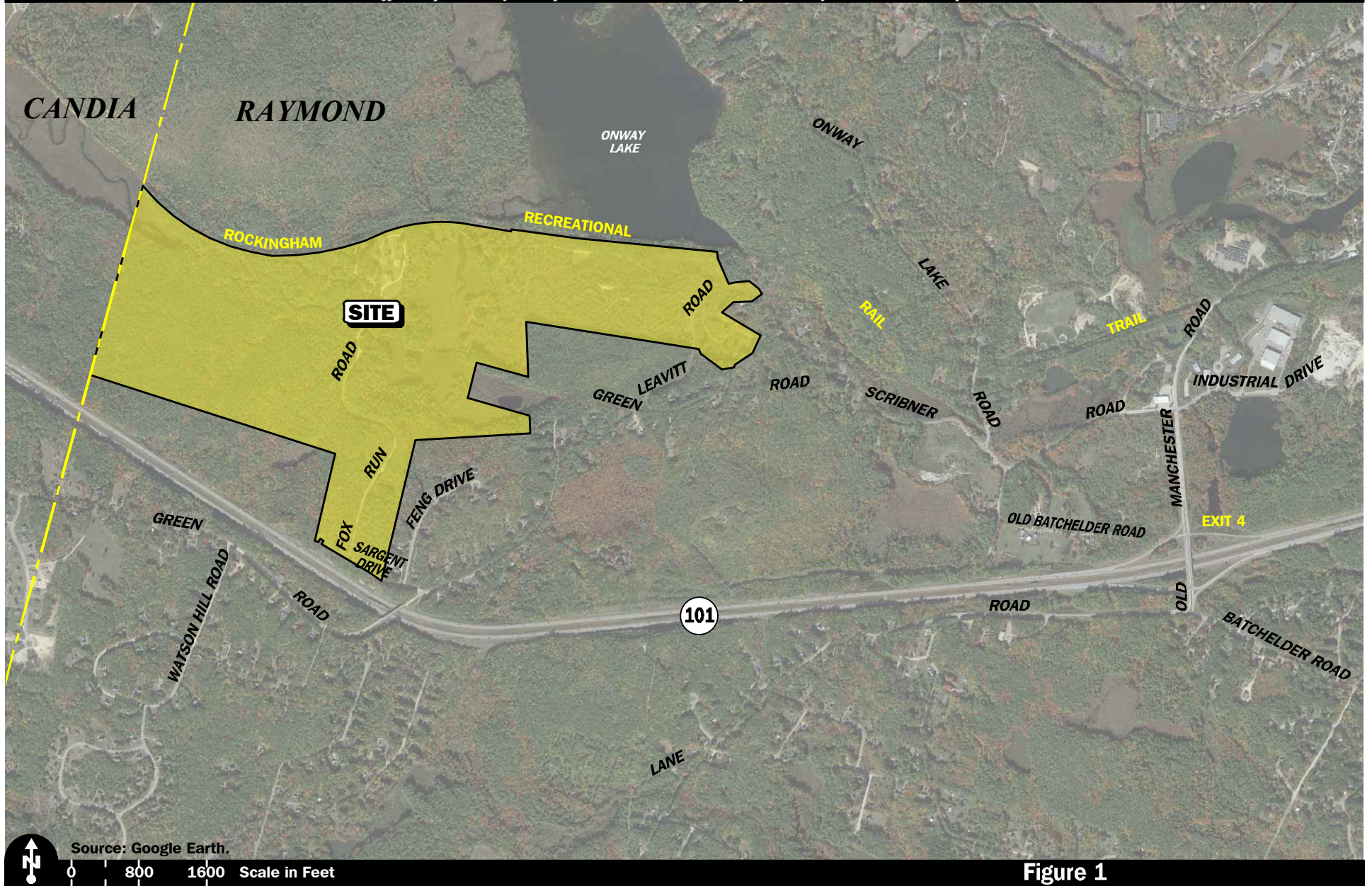


Figure 1
Site Location Map

should be developed as a part of Phase 3 of the Project given: i) the length of roadway within the development; ii) the number of residential units served; and iii) the potential for adverse weather and roadways becoming impassible due to water, fallen trees or other obstruction to travel.

Off-street parking for the residential units will be provided in individual garages that will accommodate two (2) vehicles and in the driveways leading to the garages which will accommodate parking for an additional two (2) vehicles, or parking for a minimum of four (4) vehicles per unit. Additional surface parking will be provided elsewhere within the Project site that will be dispersed between the development phases.

STUDY METHODOLOGY

This study was prepared in consultation with the Town of Raymond and NHDOT; was performed in accordance with the NHDOT guidelines for the preparation of TISs as defined in the Driveway Permit Policy and the standards of the Traffic Engineering and Transportation Planning Professions for the preparation of such reports; and was conducted in three distinct stages.

The first stage of the study involved an assessment of existing conditions in the study area and included an inventory of roadway geometrics, pedestrian and bicycle facilities, and public transportation services; observations of traffic flow; and the collection of daily and peak-period traffic counts.

In the second stage of the study, future conditions on the transportation system were projected and analyzed. Specific travel demand forecasts for the Project were assessed along with future demands on the transportation system that are expected due to growth independent of the Project. In accordance with NHDOT guidelines for the preparation of TISs, four future conditions were evaluated: 1) 2024 No-Build conditions *without* the Project; 2) 2024 Opening-Year Build conditions *with* the Project; 3) 2034 No-Build conditions *without* the Project; and 4) 2034 Build conditions (ten-year projection from opening-year) *with* the Project. The analyses conducted in stage two of the study identify existing or projected future roadway capacity and traffic safety issues.

The third stage of the study presents and evaluates measures to address roadway and intersection capacity issues and safety concerns, if any, identified in stages one and two of the study.

EXISTING CONDITIONS

A comprehensive field inventory of existing conditions within the study area was conducted in October 2023. The field investigation consisted of an inventory of existing roadway geometrics; pedestrian and bicycle facilities; public transportation services; traffic volumes; and operating characteristics; as well as posted speed limits and land use information within the study area. The study area that was assessed for the Project consisted of the following specific intersections through which Project-related traffic will travel:

- Old Manchester Road at Scribner Road and Industrial Drive
- Old Manchester Road at the NH Route 101 Westbound Ramps
- Old Manchester Road at the NH Route 101 Eastbound Ramps
- Old Manchester Road at Lane Road and Batchelder Road
- Green Road at Sargent Drive



The following describes the study area roadways and intersections.

Roadways

Old Manchester Road

- Two-lane, Tier 5, Class V Major Collector roadway under Town jurisdiction;
- Traverses a general north-south direction between the Rockingham Recreational Trail and Batchelder Road/Lane Road;
- Provides two 11- to 20-foot-wide travel lanes separated by a double-yellow centerline north of the NH Route 101 Westbound Ramps and by a median to the south, with variable width marked shoulders provided within the study area;
- Sidewalks are generally provided along one or both sides of Old Manchester Road;
- The Rockingham Recreational Trail crosses Old Manchester Road north of Industrial Drive
- Illumination is provided intermittently by way of streetlights mounted on poles;
- The posted speed limit within the study area is 35 miles per hour (mph) in the northbound direction and 30 mph southbound;
- Land use within the study area consists of the Raymond Police and Fire Departments; residential, commercial, industrial and institutional properties; and areas of open and wooded space.

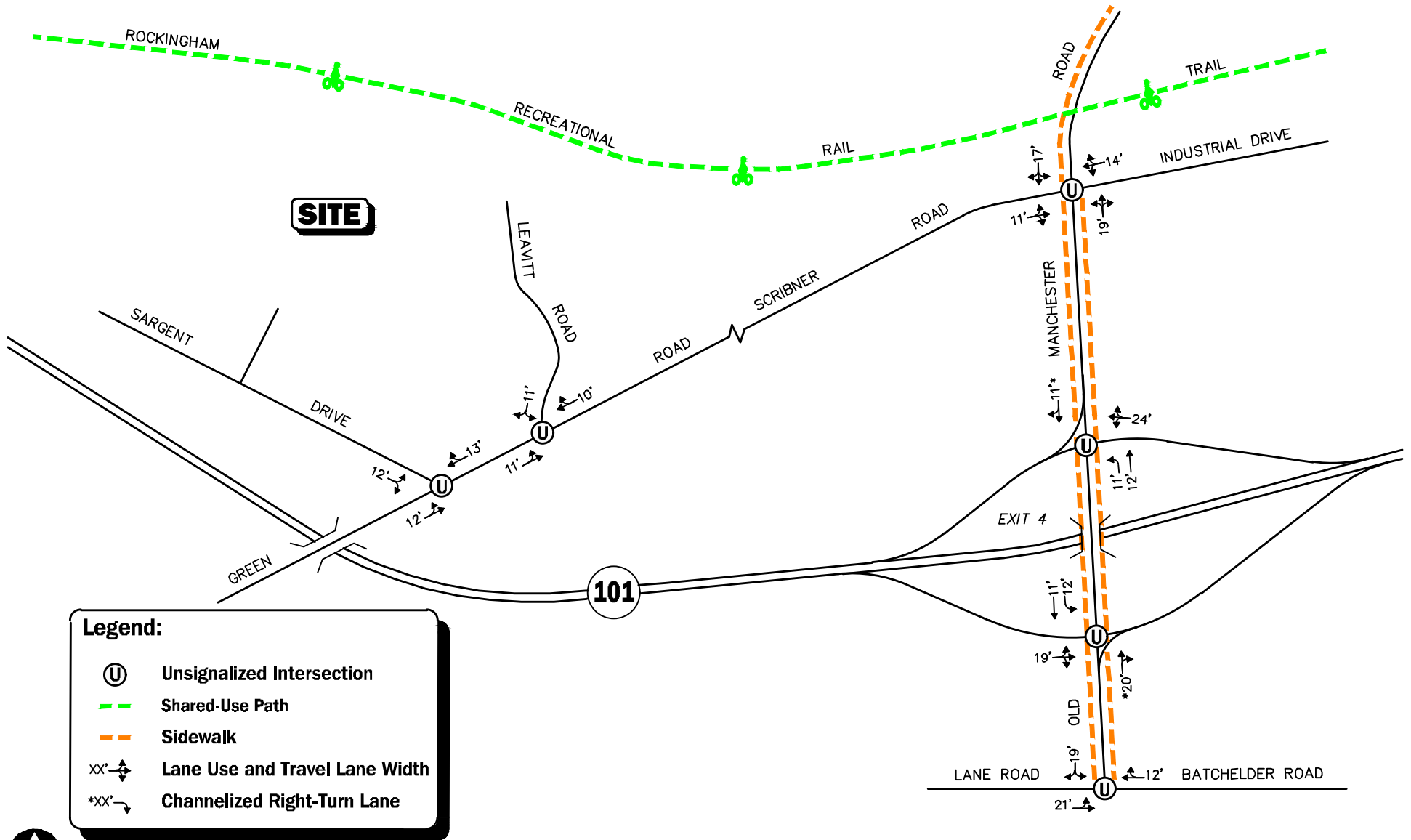
Green Road

- Two-lane, Tier 5, Class V local roadway under Town jurisdiction;
- Traverses a general northeast-southwest direction between Scribner Road and Lane Road/ Depot Road;
- Provides two 11- to 13-foot-wide travel lanes separated by a double-yellow center line with variable marked shoulders provided within the study area;
- Sidewalks and illumination are not provided within the study area;
- The posted speed limit is 30 mph in the vicinity of the Project site;
- Land use within the study area consists of the Project site, residential properties and areas of open and wooded space.

Intersections

Table 1 and Figure 2 summarize the existing lane use, traffic control, and pedestrian and bicycle accommodations at the study area intersection as observed in March and September 2023.





Not to Scale

Figure 2

Existing Intersection Lane Use, Travel Lane Width, and Pedestrian Facilities



Table 1
STUDY AREA INTERSECTION DESCRIPTION

| Intersection | Traffic Control Type ^a | No. of Travel Lanes Provided | Shoulder Provided? (Yes/No/Width) | Pedestrian Accommodations? (Yes/No/Description) | Bicycle Accommodations? (Yes/No/Description) |
|--|-----------------------------------|---|---|--|--|
| Old Manchester Rd./ Scribner Rd./ Industrial Dr. | S | 1 general-purpose travel lane on all approaches | Yes; 1 to 4 feet on Old Manchester Rd., 3 feet on Scribner Rd., and 1 to 2 feet on Industrial Dr. | Yes; sidewalks provided along both sides of Old Manchester Rd. south leg and along the west side of Old Manchester Rd. north leg | Yes; shared-traveled-way ^b |
| Old Manchester Rd./ NH Rte. 101 Westbound Ramps | S | 1 general-purpose travel lane on NH Rte. 101 Westbound Off-Ramp and Old Manchester Rd. southbound approach; 1 left-turn lane and 1 through travel lane provided on Old Manchester Rd. northbound approach | Yes; 3 to 11 feet on Old Manchester Rd. and 2 feet on NH Rte. 101 Ramps | Yes; sidewalks provided along both sides of Old Manchester Rd. | Yes; shared-traveled-way on Old Manchester Rd. |
| Old Manchester Rd./ NH Rte. 101 Eastbound Ramps | S | 1 general-purpose travel lane on NH Rte. 101 Eastbound Off-Ramp and Old Manchester Rd. northbound approach; 1 left-turn lane and 1 through travel lane provided on Old Manchester Rd. southbound approach | Yes; 2 to 11 feet on Old Manchester Rd. 2 to 6 feet on NH Rte. 101 Ramps | Yes; sidewalks provided along both sides of Old Manchester Rd. | Yes; shared-traveled-way on Old Manchester Rd. |
| Old Manchester Rd./ Lane Rd./ Batchelder Rd. | S | 1 general-purpose travel lane on all approaches | Yes; 2 to 3 feet on Old Manchester Rd. and 3 feet on Batchelder Rd. | Yes; sidewalks provided along both sides of Old Manchester Rd. | Yes; shared-traveled-way |
| Green Rd./ Sargent Dr. | S | 1 general-purpose travel lane on all approaches | Yes; 2 to 3 feet on Green Rd. | No | Yes; shared-traveled-way |

^aS = STOP-sign control.

^bCombined shoulder and travel lane width equal to or exceed 14 feet.

Existing Traffic Volumes

In order to determine existing traffic-volume demands and flow patterns within the study area, automatic traffic recorder (ATR) counts, turning movement counts (TMCs) and vehicle classification counts were completed in February and October 2023. The ATR counts were conducted on Green Road, north of Sargent Drive, on October 3rd through 4th, 2023 (Tuesday through Wednesday, inclusive), in order to record weekday traffic conditions over an extended period, with weekday morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak-period TMCs performed at the study area intersections on Wednesday, February 8, 2023 and on Tuesday, October 3, 2023 (Green Road at Sargent Drive). These time periods were selected for analysis purposes as they are representative of the peak-traffic-volume hours for both the Project and the adjacent roadway network.



Traffic Volume Adjustments

In order to evaluate the potential for seasonal fluctuation of traffic volumes within the study area, 2019 peak-hour and average daily traffic count data were reviewed for NHDOT continuous count station No. 02071090, which is located on N.H. Route 101 at the Raymond town line in Candia. Based on a review of this data, it was determined that traffic volumes for the months of February and October are approximately 37.0 and 14.0 percent below peak-month (August) conditions, respectively. As such, the February and October traffic volumes were adjusted upward by 37.0 and 14.0 percent, respectively, in order to be representative of peak-month conditions in accordance with NHDOT standards.

In order to account for the impact on the traffic volume and trip patterns resulting from the COVID-19 pandemic, traffic-volume data collected at NHDOT Continuous Count Station 02071090 was reviewed. Based on a comparison of pre-COVID-19 (February 2019) and post-COVID-19 (February 2023) traffic-volume data, it was determined that the February 2023 traffic volumes are below the conditions that existed prior to the COVID-19 pandemic. As such, the following pandemic-related adjustments were applied to the seasonally adjusted February 2023 traffic volumes:

- *Weekday Morning Peak-Hour*: +17.6%
- *Weekday Evening Peak-Hour*: +11.1%

At the time of the publication of this assessment, traffic volume data was not available for the subject count station for the full month of October 2023. As such, a comparison between the traffic volumes recorded at the count station in September 2019 and in September 2023 was completed. Based on this pre- and post-COVID-19 comparison, it was determined that the September 2023 traffic volumes are also below the conditions that existed prior to the COVID-19 pandemic. As such, the following pandemic-related adjustments were applied to the seasonally adjusted October 2023 traffic volumes:

- *Average Weekday*: +3.2%
- *Weekday Morning Peak-Hour*: +11.9%
- *Weekday Evening Peak-Hour*: +4.5%

The 2023 Existing peak-month, peak-hour traffic volumes are summarized in Table 2, with the weekday morning and evening peak-month, peak-hour traffic volumes graphically depicted on Figures 3 and 4, respectively. Note that the peak-hour traffic volumes that are presented in Table 2 were obtained from the aforementioned figures.

Table 2
2023 EXISTING TRAFFIC VOLUMES

| Location/Peak Hour | AWT ^a | VPH ^b | K Factor ^c | Directional Distribution ^d |
|--|------------------|------------------|-----------------------|---------------------------------------|
| <i>Green Road, north of Sargent Drive:</i> | 715 | -- | -- | -- |
| Weekday Morning (7:15 – 8:15 AM) | -- | 88 | 12.3 | 71.6% NB |
| Weekday Evening (4:30 – 5:30 PM) | -- | 91 | 12.7 | 61.5% SB |

^aAverage weekday traffic in vehicles per day.

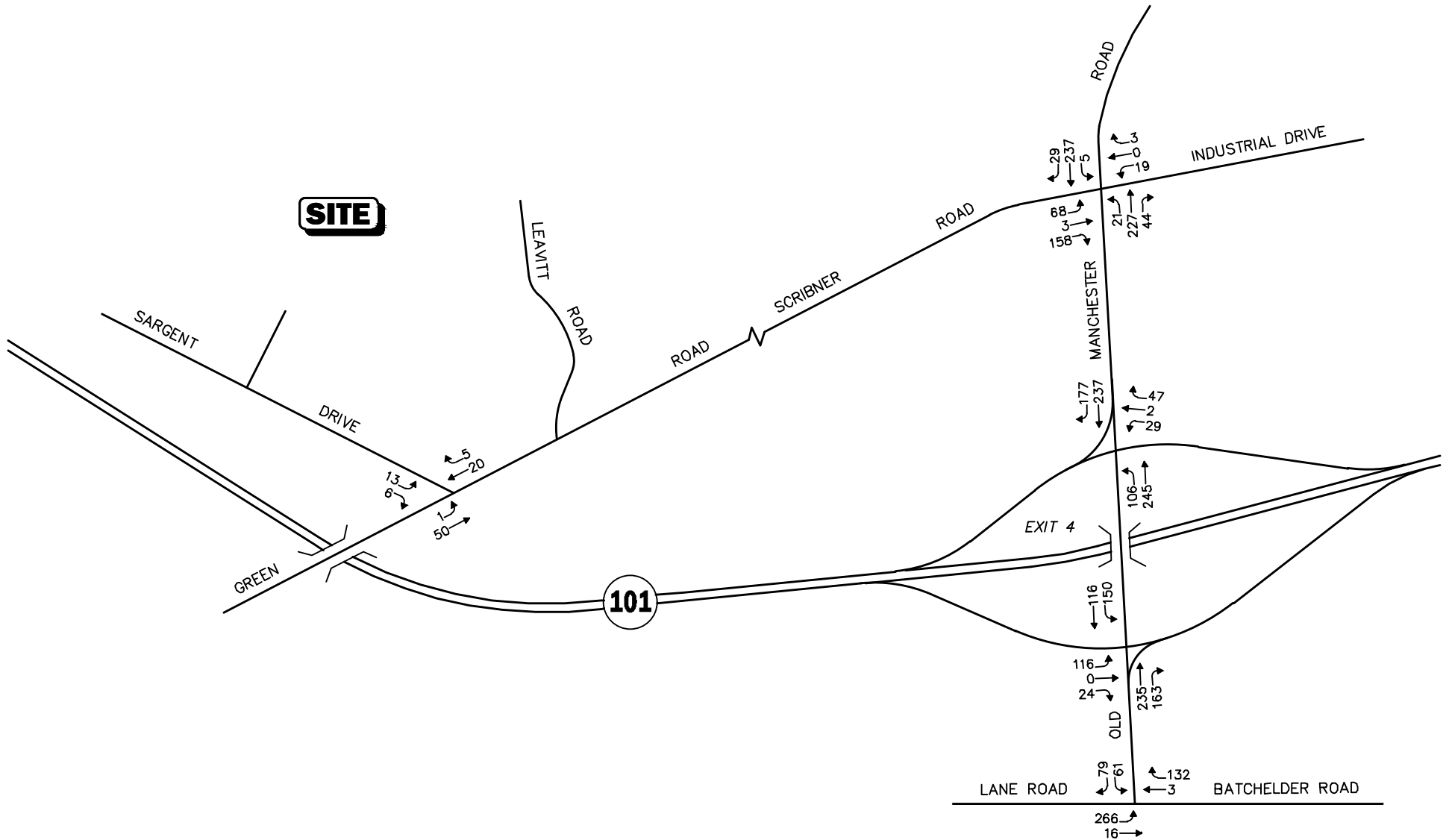
^bVehicles per hour.

^cPercent of daily traffic occurring during the peak hour.

^dPercent traveling in peak direction.

NB = northbound; SB = southbound.





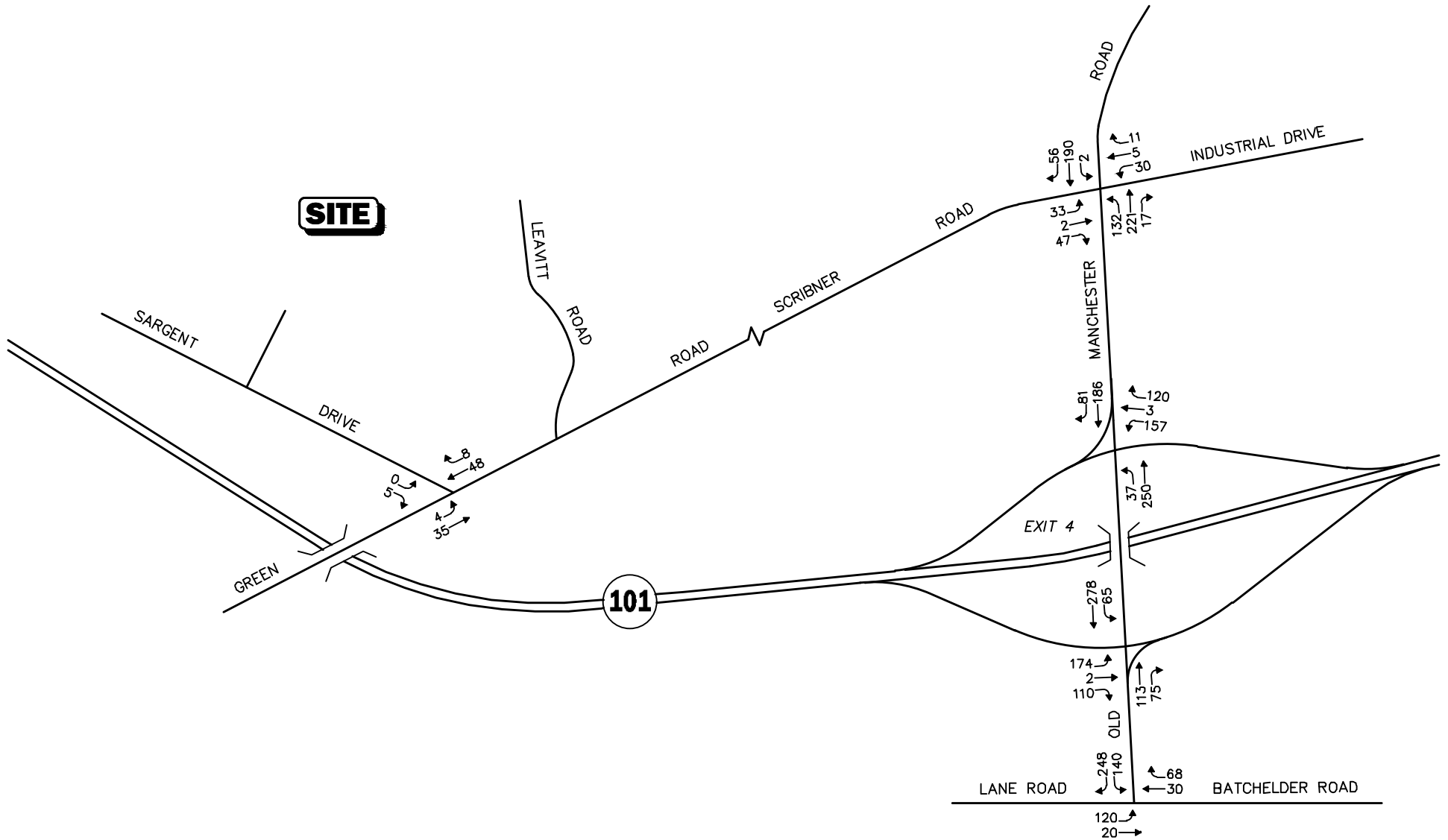
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not to Scale



Figure 3

2023 Existing
Peak-Month
Weekday Morning
Peak-Hour Traffic Volumes



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not to Scale

Figure 4

2023 Existing
Peak-Month
Weekday Evening
Peak-Hour Traffic Volumes



As can be seen in Table 2, under peak-month conditions, Green Road in the vicinity of the Project site was found to accommodate approximately 715 vehicles on an average weekday (two-way, 24-hour volume), with approximately 88 vehicles per hour (vph) during the weekday morning peak-hour and 91 vph during the weekday evening peak-hour.

Pedestrian and Bicycle Facilities

A comprehensive field inventory of pedestrian and bicycle facilities within the study area was undertaken in September 2023. The field inventory consisted of a review of the location of sidewalks and pedestrian crossing locations along the study roadways and at the study area intersections, as well as the location of existing and planned future bicycle facilities. As detailed on Figure 2, sidewalks are generally provided along one or both sides of Old Manchester Road within the study area.

Old Manchester Road and Green Road generally provide sufficient width to accommodate bicycle travel in a shared traveled-way configuration (i.e., bicyclists and motor vehicles sharing the traveled-way).² To the north of the Project site, the Rockingham Recreational Trail (Portsmouth Branch) traverses a former railroad right-of-way between Manchester and Newfields, a distance of approximately 25.3 miles, crossing under NH Route 101 and traveling through the Towns of Auburn, Candia, Raymond, and Epping. The Rockingham Recreational Trail abuts the Project site to the north and crosses Old Manchester Road to the east of the Project site between the Lamprey River Elementary School and the Granite State Trade School.

Spot Speed Measurements

Vehicle travel speed measurements were performed on Green Road in the vicinity of the Project site in conjunction with the ATR counts, the results of which are summarized in Table 3.

**Table 3
VEHICLE TRAVEL SPEED MEASUREMENTS**

| | Green Road | |
|---|------------|-----------|
| | Eastbound | Westbound |
| Mean Travel Speed (mph) | 28 | 33 |
| 85 th Percentile Speed (mph) | 32 | 38 |
| Posted Speed Limit (mph) | 30 | 30 |

mph = miles per hour.

As can be seen in Table 3, the mean vehicle travel speed along Green Road in the vicinity of the Project site was found to be 28 mph in the eastbound direction and 33 westbound. The measured 85th percentile vehicle travel speed, or the speed at which 85 percent of the observed vehicles traveled at or below, was found to be 32 mph in the eastbound direction and 38 mph westbound, which is two (2) to eight (8) mph above the posted speed limit (30 mph) in the vicinity of the Project site. The 85th percentile speed is used as the basis of engineering design and in the evaluation of sight distances and is often used in establishing posted speed limits.

²A minimum combined travel lane and paved shoulder width of 14 feet is required to support bicycle travel in a shared traveled-way condition.



Public Transportation Services

Public transportation services are not currently provided within the Town of Raymond.

Motor Vehicle Crash Data

Motor vehicle crash data for the study area intersections was provided by the Raymond Police Department for the period of January 1, 2018, through November 8, 2023, in order to examine motor vehicle crash trends occurring within the study area. The data is summarized in Table 4.

Table 4
MOTOR VEHICLE CRASH DATA SUMMARY^a

| Intersection | Total No. of | |
|---|--------------|---------|
| | Crashes | Average |
| <i>Old Manchester Road at Scribner Road and Industrial Drive:</i> | 2 | 0.34 |
| <i>Old Manchester Road at the NH Route 101 Ramps:^b</i> | 4 | 0.69 |
| <i>Old Manchester Road at Lane Road and Batchelder Road:</i> | 6 | 1.03 |
| <i>Green Road at Sargent Drive:</i> | 0 | 0.00 |

^aSource: Raymond Police Department, January 1, 2018 through November 8, 2023.

^bCrashes occurring at the NH Route 101 Eastbound and Westbound Ramp intersections with Old Manchester Road are not differentiated within the Raymond Police Department database.

As can be seen in Table 4, the study area intersections were reported to have experienced an average of 1.03 or fewer reported motor vehicle crashes per year during the reported period, with the Old Manchester Road/Lane Road/Batchelder Road intersection experiencing the largest number of reported crashes. No (0) motor vehicle crashes were reported to have occurred at the Green Road/Sargent Drive intersection.

FUTURE CONDITIONS

Traffic volumes in the study area were projected to the years 2024 and 2034, which reflects the anticipated opening-year of the Project and a ten-year planning horizon from opening-year, respectively, consistent with NHDOT TIS guidelines. The future condition traffic-volume projections incorporate identified specific development projects by others, as well as general background traffic growth as a result of development external to the study area and presently unforeseen projects. Anticipated Project-generated traffic volumes superimposed upon the 2024 and 2034 No-Build traffic volumes reflect the Build conditions with the Project.

Future Traffic Growth

Future traffic growth is a function of the expected land development in the immediate area and the surrounding region. Several methods can be used to estimate this growth. A procedure frequently employed estimates an annual percentage increase in traffic growth and applies that percentage to all traffic volumes under study. The drawback to such a procedure is that some turning volumes may actually grow at either a higher or a lower rate at particular intersections.

An alternative procedure identifies the location and type of planned development, estimates the traffic to be generated, and assigns it to the area roadway network. This procedure produces a more realistic estimate



of growth for local traffic; however, potential population growth and development external to the study area would not be accounted for in the resulting traffic projections.

To provide a conservative analysis framework, both procedures were used, the salient components of which are described below.

Specific Development by Others

The Town of Raymond Department of Community Development and Planning was contacted in order to determine if there were any projects planned within the study that would have an impact on future traffic volumes along the study roadways and at the study area intersections. Based on this consultation, the following developments were identified for inclusion in this assessment:

- ***Proposed Warehouse Building, Industrial Drive, Raymond, New Hampshire.*** This project entails the construction of a 550,025± sf warehouse building to be located off of Industrial Drive to the east of the Project site. Traffic volumes associated with this project were obtained from the traffic study prepared for the development³ and were incorporated into the future conditions traffic volumes.
- ***Proposed Warehouse Development, Old Manchester Road and Scribner Road, Raymond, New Hampshire.*** This project entails the construction of two (2) warehouse buildings totaling 300,000± sf to be located in the southwest quadrant of the Old Manchester/Scribner Road intersection to the east of the Project site. Traffic volumes associated with this project were estimated using trip-generation statistics published by the ITE⁴ and were assigned onto the study area roadway network based on existing traffic patterns.
- ***Proposed Mega-X Fueling Facility, Old Manchester Road, Raymond, New Hampshire.*** This project entails the construction of a 6,500± sf convenience store (containing a 1,200± sf coffee shop with a drive-through window) with accompanying 18-pump vehicle fueling facility to be located in the southwest quadrant of Old Manchester Road/Scribner Road intersection to the east of the Project site. Traffic volumes associated with this project were obtained from the traffic study prepared for the development⁵ and were incorporated into the future conditions traffic volumes.
- ***White Rock Place Multifamily Residential Development, 109 Main Street, Raymond, New Hampshire.*** This project entails the construction of a 156-unit multifamily residential development to be located at 109 Main Street to the east of the Project site. Traffic volumes associated with this project were obtained from the traffic study prepared for the development⁶ and were incorporated into the future conditions traffic volumes.
- ***Proposed Multifamily Residential Development, 65 and 101 Batchelder Road, Raymond, New Hampshire.*** This project entails the construction of 300± single-family homes to be located between Batchelder Road, Mark Lane and Wendover Lane to the southeast of the Project site.

³Response to Planning Board Comments; Proposed Warehouse/Distribution Facility, Raymond, New Hampshire; VAI; March 24, 2023.

⁴Institute of Transportation Engineers, op. cit. 1.

⁵Traffic Impact and Access Study; Proposed MEGA-X Convenience Store (With Gas); Old Manchester Road; Raymond, New Hampshire; Tetra Tech; August 28, 2019.

⁶Updated Traffic Impact Study; White Rock Place Multifamily Residential Development; 109 Main Street; Raymond, New Hampshire; VAI; May 3, 2023, Updated August 17, 2023.



Traffic volumes associated with this project were obtained from the traffic study prepared for the development⁷ and were incorporated into the future conditions traffic volumes.

- ***Proposed Commercial Development, Silver Fox Lane, Raymond, New Hampshire.*** This project entails the construction of a commercial development to be located off of Silver Fox Lane to the east of the Project site, which will include a Starbucks restaurant, Domino’s pizza shop, self-storage facility, medical office space and general retail space. Based on a review of the traffic study prepared for this project,⁸ it was concluded that traffic volumes associated with this project within the study area of this assessment are expected to be relatively minor and would be reflected in the general background traffic growth rate (discussion follows).
- ***Proposed Residential Development, Raymond Road (NH Route 156), Nottingham, New Hampshire.*** This project entails the construction of 16 single-family homes to be located off NH Route 156 in Nottingham, northeast of the Project site. Based on a review of traffic volumes associated with this project (estimated using trip-generation statistics published by the ITE), it was concluded that traffic volumes associated with this project within the study area of this assessment are expected to be relatively minor and would be reflected in the general background traffic growth rate.

No other developments were identified at this time that are expected to result in an increase in traffic within the study area beyond the general background traffic growth rate.

General Background Traffic Growth

Traffic-volume data compiled by NHDOT from permanent count stations located in Raymond were reviewed in order to determine general traffic growth trends in the area. This data indicates that traffic volumes have fluctuated over the 10-year period between 2009 and 2019, with the average traffic growth rate found to be 0.70 percent. In order to provide a prudent planning condition, a slightly higher 1.0 percent per year compounded annual background traffic growth rate was used in order to account for future traffic growth and presently unforeseen development within the study area.

Roadway Improvement Projects

The Town of Raymond was contacted and the NHDOT Project Database was reviewed in order to determine if there were any planned roadway improvement projects expected to be completed within the study area. Based on this review, the following roadway improvement project was identified:

- ***Old Manchester Road/Scribner Road/Industrial Drive Intersection Improvements, Raymond, New Hampshire.*** As a part of the mitigation commitments for the Mega-X Fueling Facility⁹ and for the proposed warehouse development to be located off of Industrial Drive,¹⁰ left-turn lanes will be added to Industrial Drive and the Old Manchester Road northbound approach. These improvements are expected to be substantially complete by 2024 and are reflected in the future year conditions of this assessment (2024 and 2034 No-Build and Build conditions).

⁷Traffic Impact Study; Proposed Multifamily Residential Development; 65 and 101 Batchelder Road; Raymond, New Hampshire; VAI; August 23, 2023.

⁸Traffic Impact and Access Study; Proposed Commercial Subdivision, Essex Commons, Raymond, New Hampshire; Stephen G. Pernaw & Company, Inc.; November 11, 2021.

⁹Tetra Tech; op. cit. 5.

¹⁰VAI, op. cit. 3.



No other roadway improvement projects aside from routine maintenance activities were identified to be planned within the study area at this time.

No-Build Traffic Volumes

The 2024 and 2034 No-Build peak-month, peak-hour traffic volumes were developed by applying the 1.0 percent per year compounded annual background traffic growth rate to the 2023 Existing peak-month peak-hour traffic volumes and then adding the peak-hour traffic volumes associated with the identified specific development projects by others. The resulting 2024 No-Build weekday morning and evening peak-month peak-hour traffic volumes are shown on Figures 5 and 6, with the corresponding 2034 No-Build peak-month peak-hour traffic volumes shown on Figures 7 and 8.

Project-Generated Traffic

Design year (2024 and 2034) Build traffic volumes for the study area roadways were determined by estimating Project-generated traffic volumes and assigning those volumes on the study roadways. The following sections describe the methodology used to develop the anticipated traffic characteristics of the Project.

As proposed, the Project will entail the phased construction of 249 residential units, with Phase 1 to consist of 38 single-family homes, Phase 2 to consist of 78 age-qualified residential units¹¹ and Phase 3 to consist of 133 age-qualified residential units. In order to develop the traffic characteristics of the Project, trip-generation statistics published by the ITE¹² for similar land uses as that proposed were used. ITE Land Use Codes (LUC) 210, *Single-Family Detached Housing*, and LUC 251, *Senior Adult Housing – Single-Family*, were used to develop the traffic characteristics of the Project, the results of which are summarized in Table 5.

**Table 5
TRIP-GENERATION SUMMARY**

| Time Period/Direction | Vehicle Trips | | | (D=A+B+C) Total |
|-----------------------------------|---|---|--|----------------------------|
| | (A) Phase 1 (38 units) ^a | (B) Phase 2 (78 units) ^b | (C) Phase 3 (133 units) ^b | |
| <i>Average Weekday Daily:</i> | | | | |
| Entering | 207 | 168 | 287 | 662 |
| <u>Exiting</u> | <u>207</u> | <u>168</u> | <u>287</u> | <u>662</u> |
| Total | 414 | 336 | 574 | 1,324 |
| <i>Weekday Morning Peak Hour:</i> | | | | |
| Entering | 8 | 11 | 16 | 35 |
| <u>Exiting</u> | <u>23</u> | <u>21</u> | <u>32</u> | <u>76</u> |
| Total | 31 | 32 | 48 | 111 |
| <i>Weekday Evening Peak Hour:</i> | | | | |
| Entering | 25 | 22 | 34 | 81 |
| <u>Exiting</u> | <u>15</u> | <u>15</u> | <u>21</u> | <u>51</u> |
| Total | 40 | 37 | 55 | 132 |

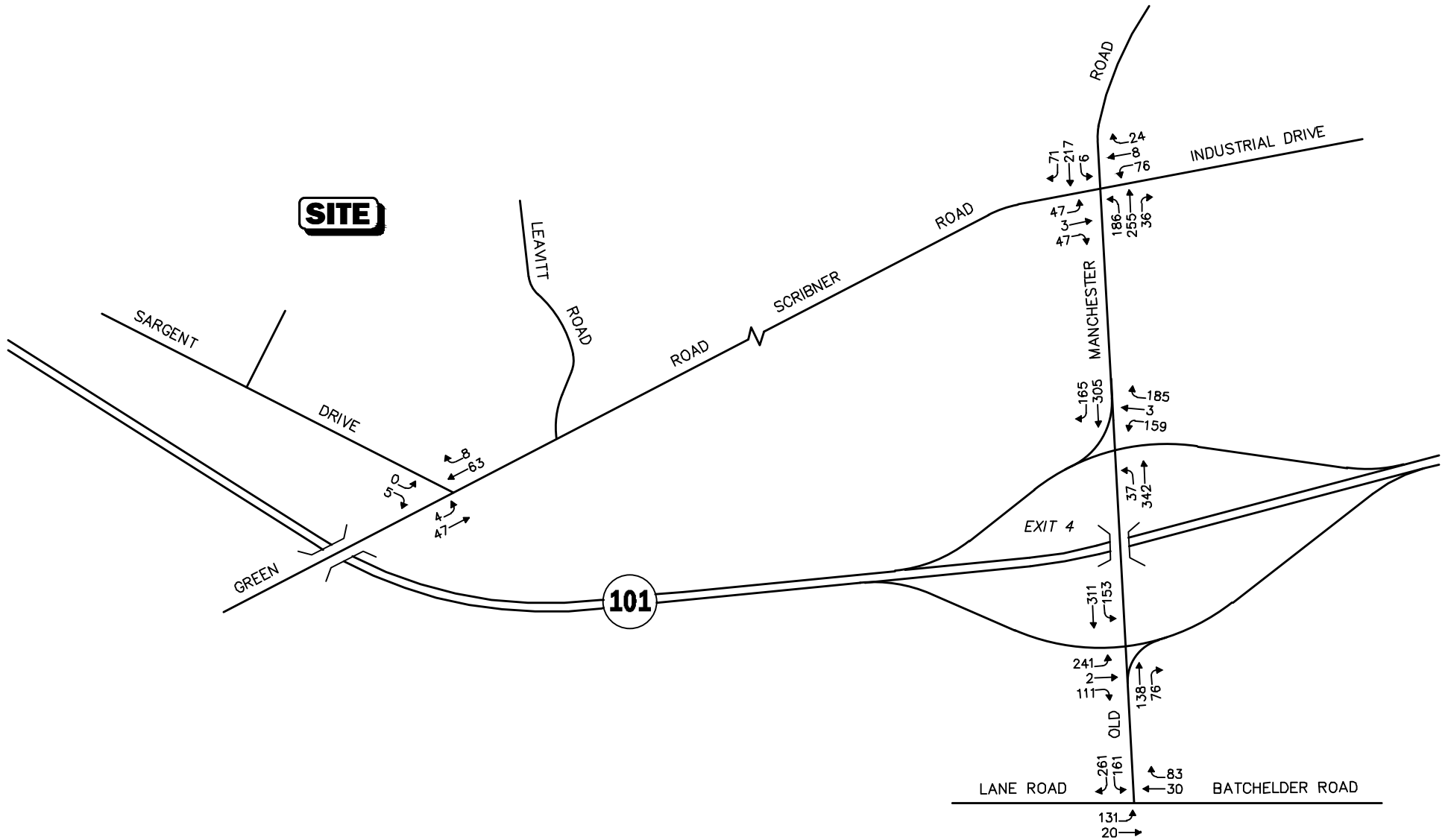
^aBased on ITE LUC 210, *Single-Family Detached Housing*.

^bBased on ITE LUC 251, *Senior Adult Housing – Single-Family*.

¹¹For the purpose of this assessment, all 78 units associated with Phase 2 were assumed to be new, acknowledging that 15 units have already been constructed.

¹²Institute of Transportation Engineers, op. cit. 1.





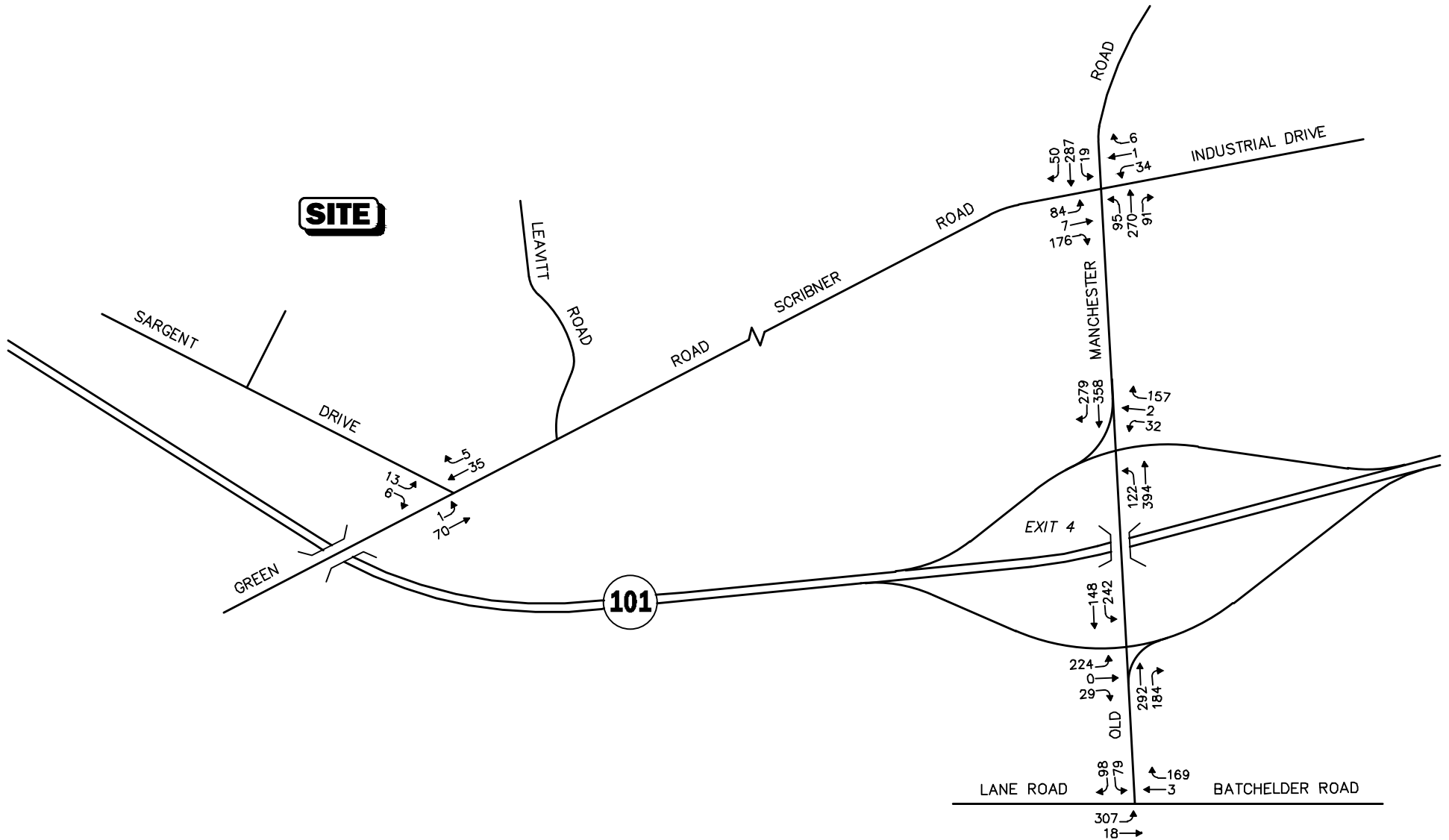
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not to Scale



Figure 6

2024 No-Build
Peak-Month
Weekday Evening
Peak-Hour Traffic Volumes



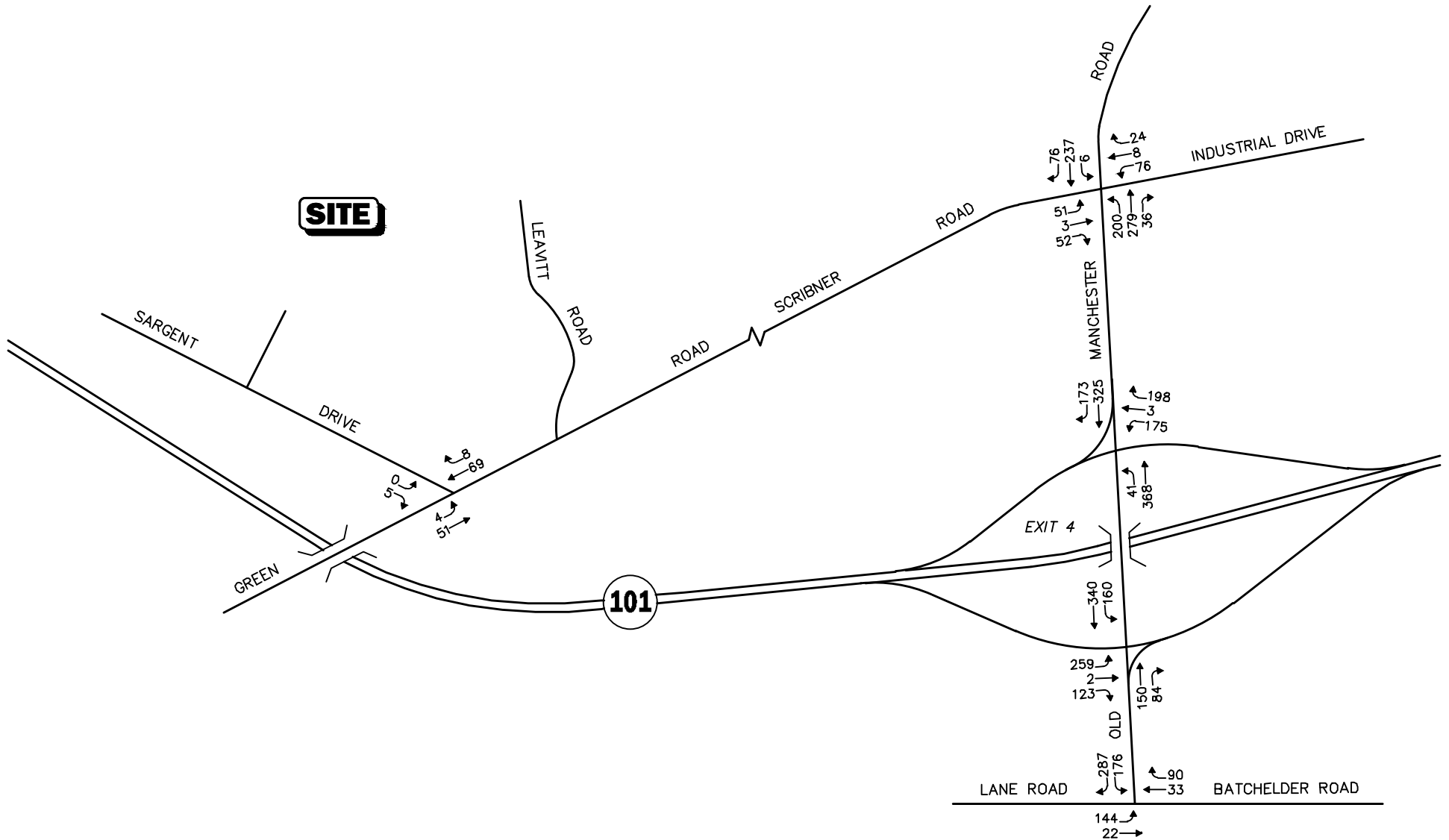
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not to Scale



Figure 7

2034 No-Build
Peak-Month
Weekday Morning
Peak-Hour Traffic Volumes



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not to Scale



Figure 8

2034 No-Build
Peak-Month
Weekday Evening
Peak-Hour Traffic Volumes

Project-Generated Traffic-Volume Summary

As can be seen in Table 5, using the aforementioned methodology, the Project is expected to generate approximately 1,324 vehicle trips on an average weekday (two-way, 24-hour volume, or 662 vehicles entering and 662 exiting), with approximately 111 vehicle trips (35 vehicles entering and 76 exiting) expected during the weekday morning peak-hour and 132 vehicle trips (81 vehicles entering and 51 exiting) expected during the weekday evening peak-hour.

Trip Distribution and Assignment

The directional distribution of generated trips to and from the Project site was determined based on a review of U.S. Census Journey-to-Work data for residents of the Town of Raymond and then refined based on a review of existing traffic patterns within the study area. The general trip distribution for the Project is graphically depicted on Figure 9, with the additional traffic expected to be generated by the Project assigned onto the study area roadway network as shown on Figures 10 and 11.

Build Traffic Volumes

The 2024 Opening-Year Build and 2034 Build condition traffic volumes were developed by adding the peak-hour Project-generated traffic to the corresponding 2024 and 2034 No-Build peak-month peak-hour traffic volumes. The resulting 2024 Opening-Year Build condition weekday morning and evening peak-month, peak-hour traffic volumes are graphically depicted on Figures 12 and 13, with the corresponding 2034 Build condition peak-month peak-hour traffic volumes depicted on Figures 14 and 15.

TRAFFIC OPERATIONS ANALYSIS

In order to assess the potential impact of the Project on the roadway network, a detailed traffic operations analysis (motorist delays, vehicle queuing, and level of service) was performed at the study area intersections. Capacity analyses provide an indication of how well transportation facilities serve the traffic demands placed upon them, with vehicle queue analyses providing a secondary measure of the operational characteristics of an intersection or section of roadway under study.

In brief, six levels of service are defined for each type of facility. They are given letter designations ranging from A to F, with LOS “A” representing the best operating conditions and LOS “F” representing congested or constrained operations. An LOS of “E” is representative of a transportation facility that is operating at its design capacity with an LOS of “D” generally defined as the limit of “acceptable” traffic operations. Since the level of service of a traffic facility is a function of the flows placed upon it, such a facility may operate at a wide range of levels of service depending on the time of day, day of week, or period of the year. The Synchro® 11 intersection capacity analysis software, which is based on the analysis methodologies and procedures presented in the HCM 6th Edition¹³ for unsignalized intersections was used to complete the level-of-service and vehicle queue analyses.

Analysis Results

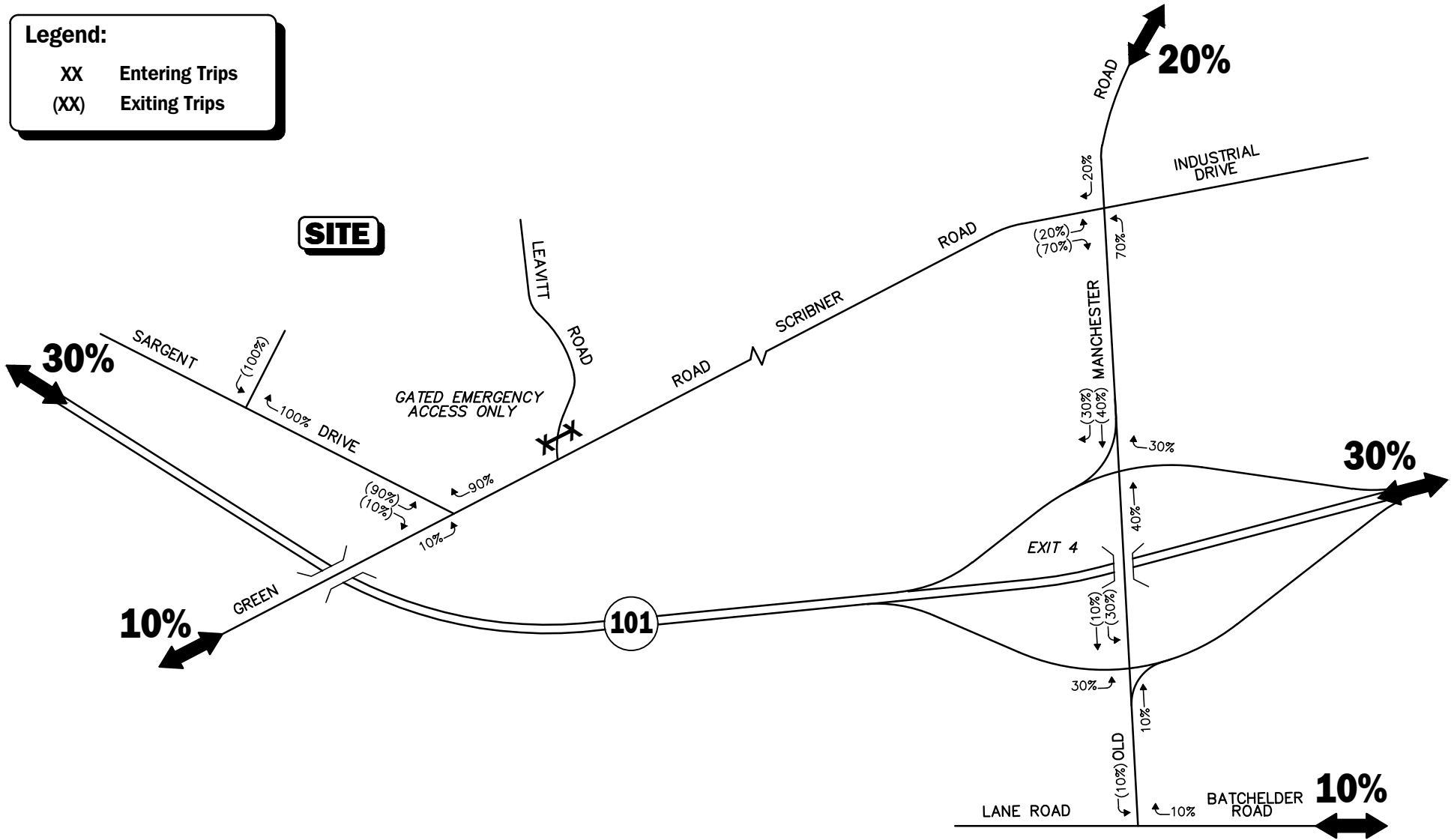
Level-of-service and vehicle queue analyses were conducted for 2023 Existing, 2024 and 2034 No-Build, and 2024 Opening-Year Build and 2034 Build conditions for the intersections within the study area. The results of the intersection capacity and vehicle queue analyses are summarized in Table 6, with the detailed analysis results presented in the Appendix.

¹³Highway Capacity Manual; Transportation Research Board; Washington, DC; 2016.



Legend:

- XX Entering Trips
- (XX) Exiting Trips



Not to Scale

Figure 9

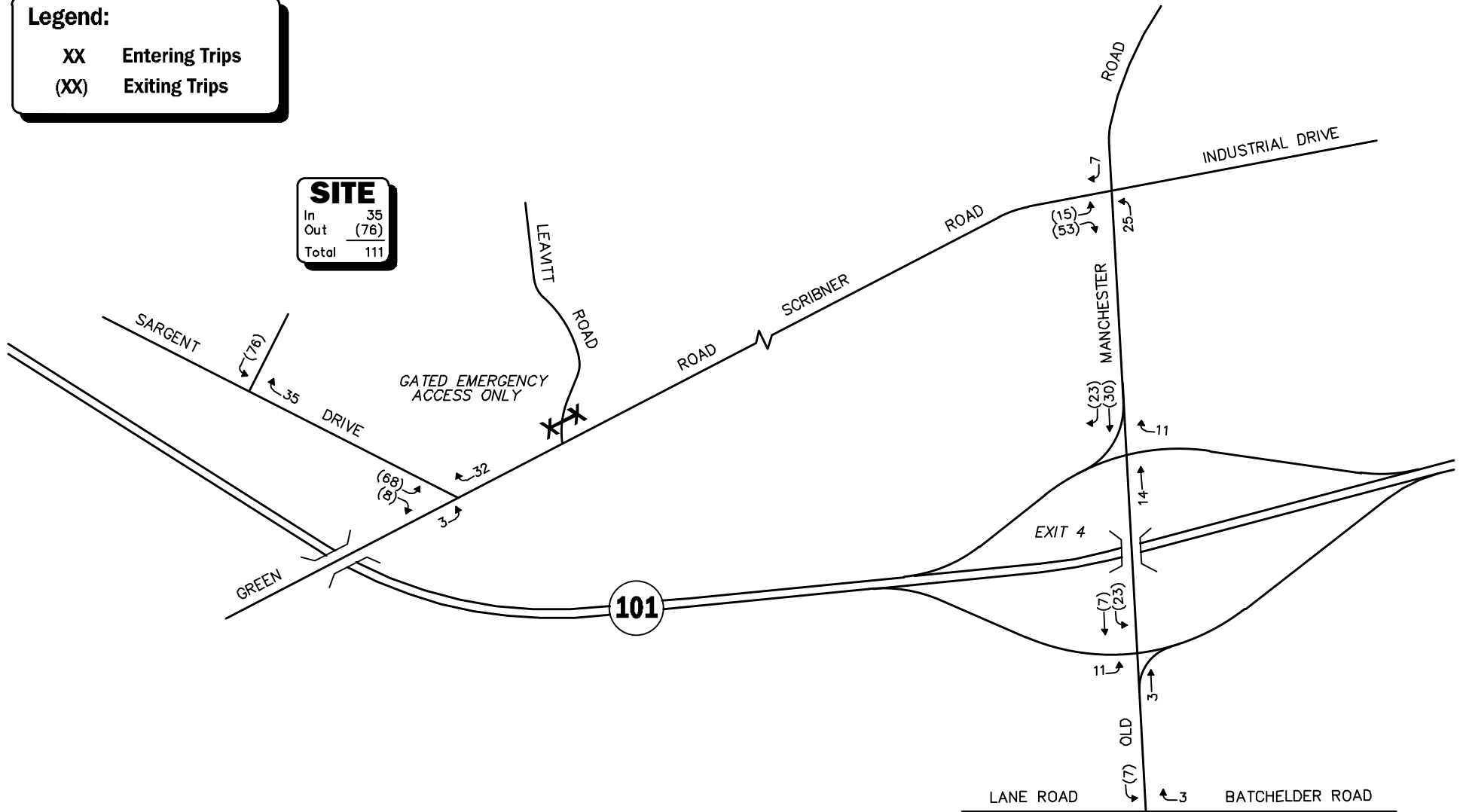
Trip Distribution Map



Legend:

- XX Entering Trips
- (XX) Exiting Trips

| | |
|-------------|------|
| SITE | |
| In | 35 |
| Out | (76) |
| Total | 111 |



Not to Scale



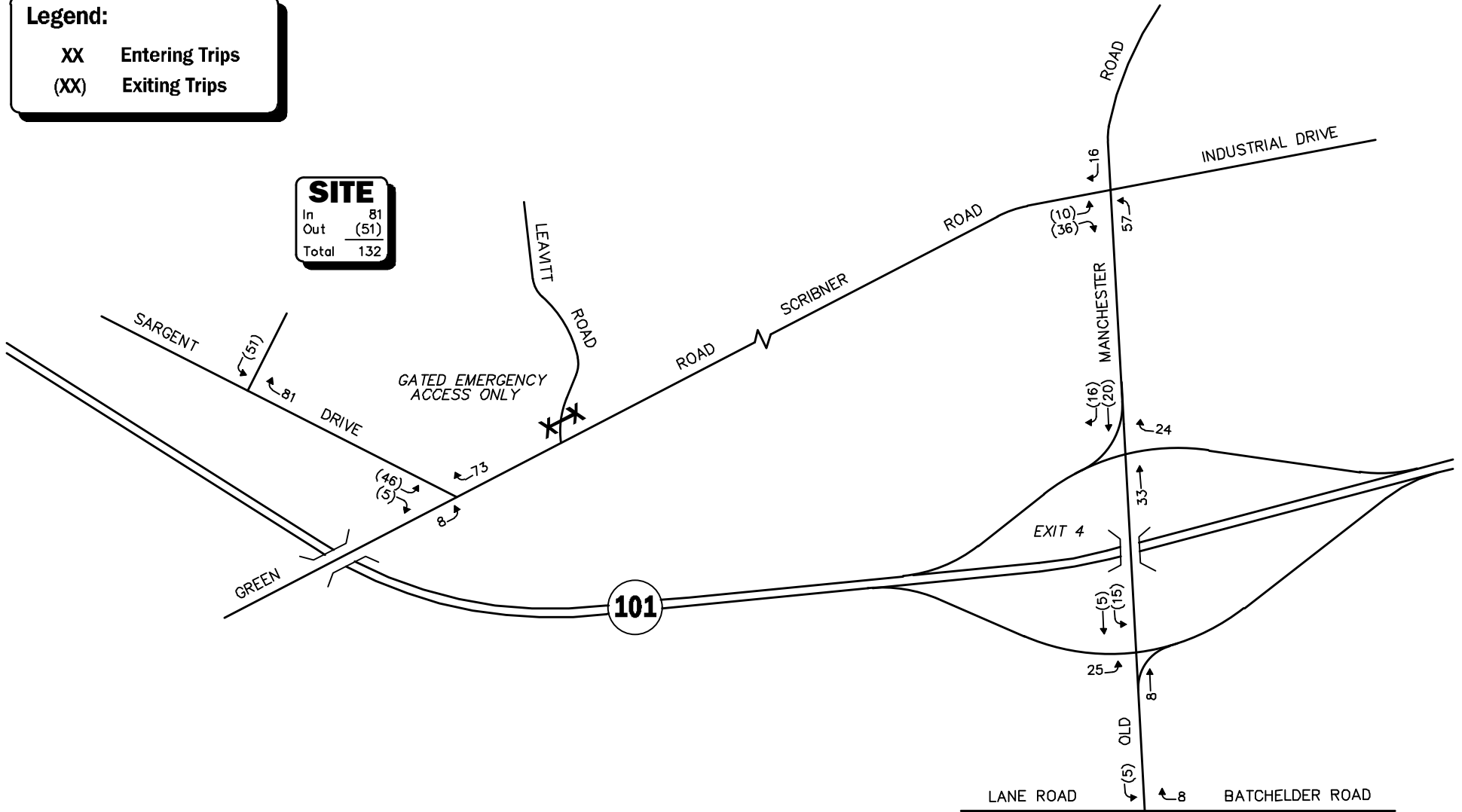
Figure 10

**Project-Generated
Weekday Morning
Peak-Hour Traffic Volumes**

Legend:

- XX Entering Trips
- (XX) Exiting Trips

| | |
|-------------|------|
| SITE | |
| In | 81 |
| Out | (51) |
| Total | 132 |

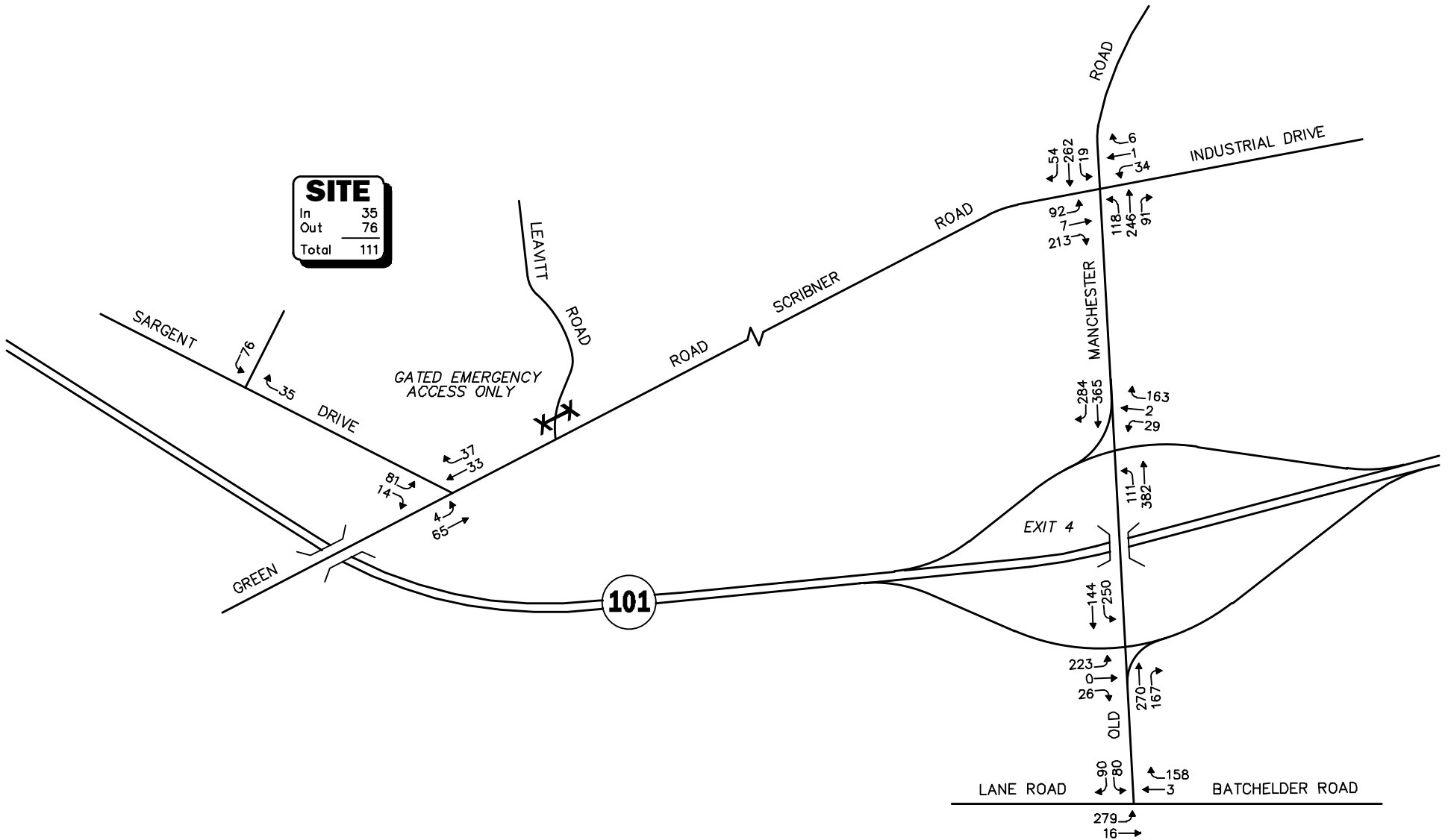


Not to Scale



Figure 11

**Project-Generated
Weekday Evening
Peak-Hour Traffic Volumes**



| SITE | |
|-------|-----|
| In | 35 |
| Out | 76 |
| Total | 111 |

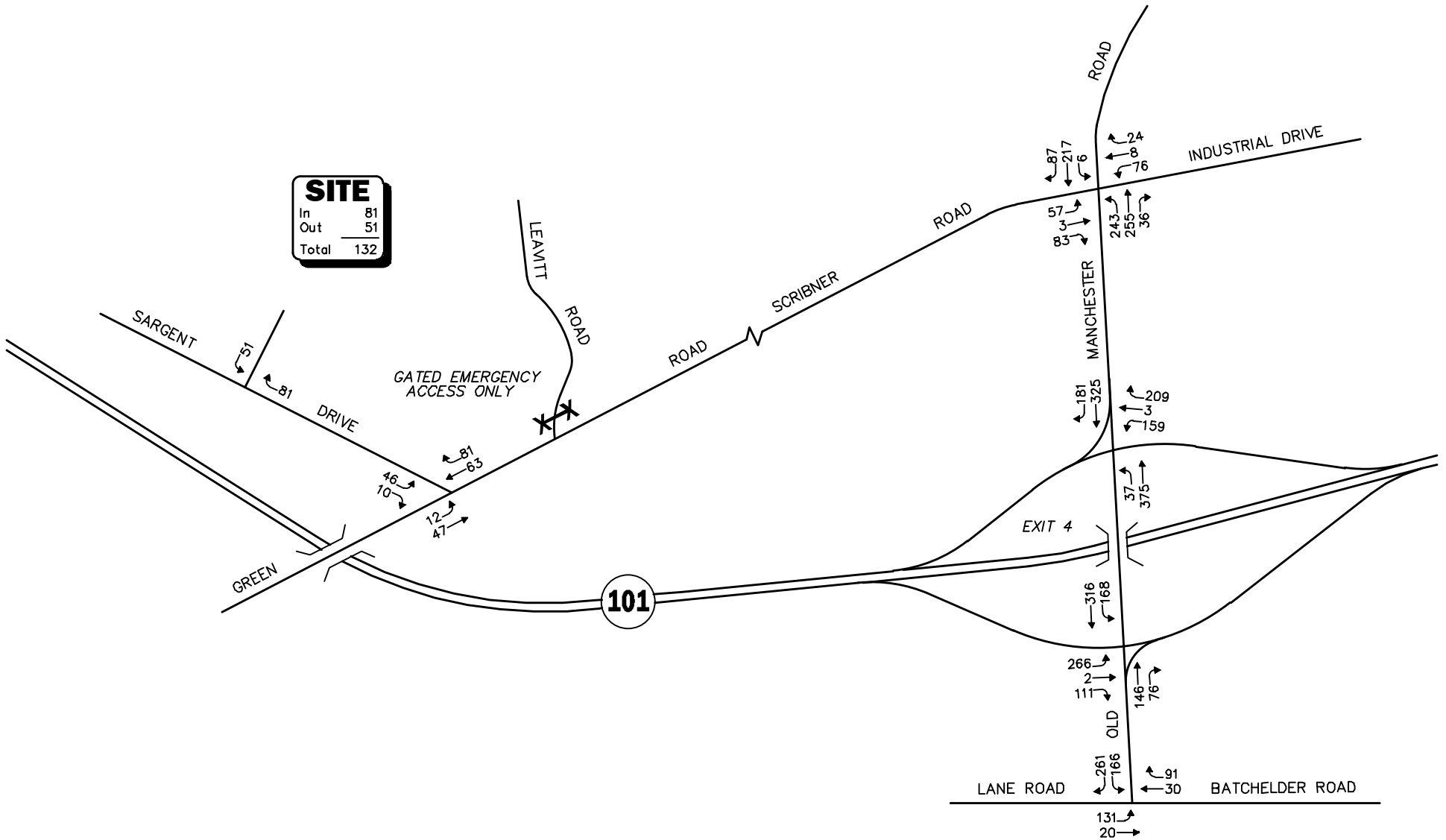
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not to Scale



Figure 12

2024 Build
Peak-Month
Weekday Morning
Peak-Hour Traffic Volumes



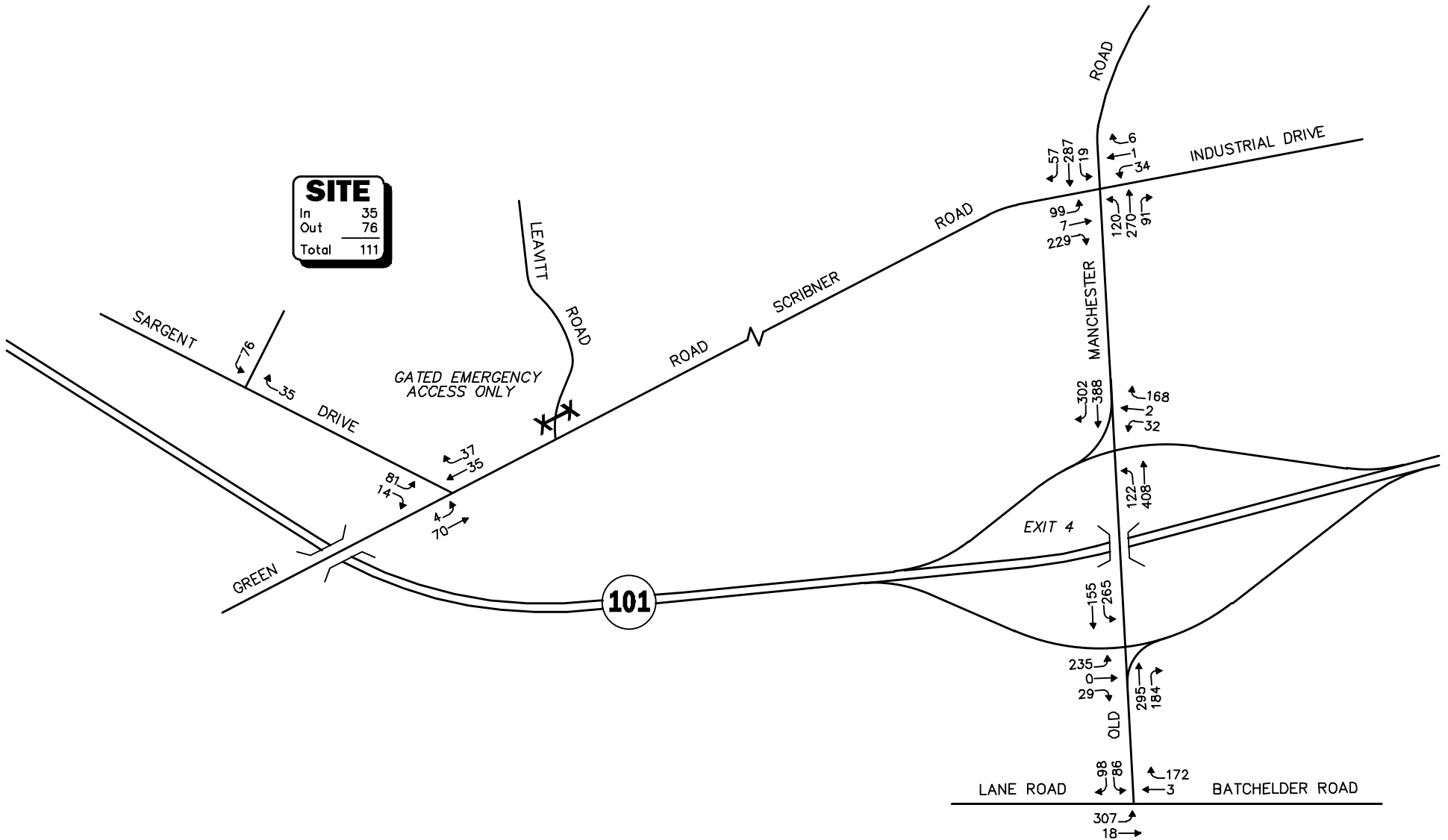
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not to Scale



Figure 13

2024 Build
Peak-Month
Weekday Evening
Peak-Hour Traffic Volumes




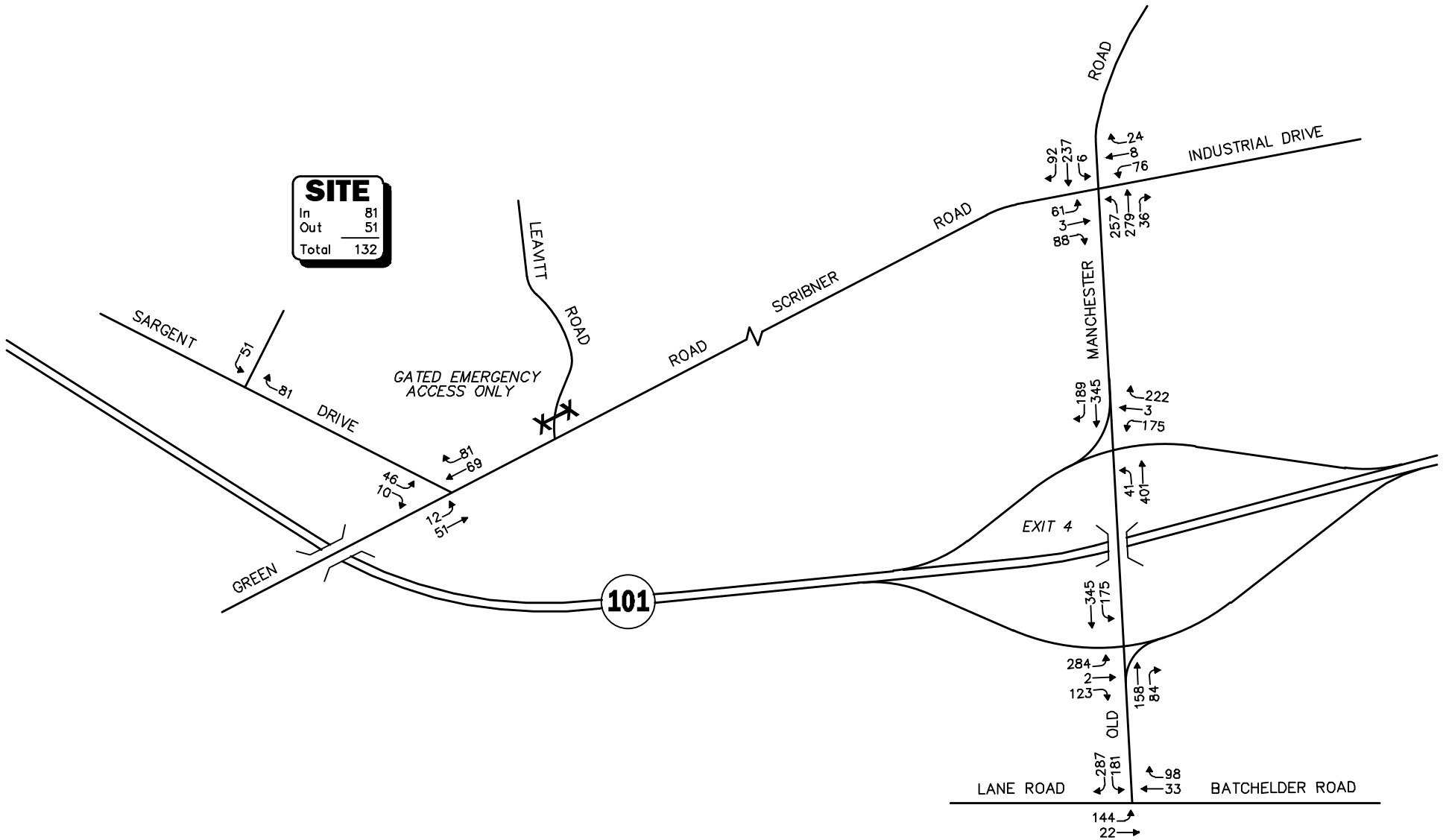
 Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.
Not to Scale



Figure 14
2034 Build
Peak-Month
Weekday Morning
Peak-Hour Traffic Volumes



| | |
|-------------|-----|
| SITE | |
| In | 81 |
| Out | 51 |
| Total | 132 |



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not to Scale



Figure 15

**2034 Build
Peak-Month
Weekday Evening
Peak-Hour Traffic Volumes**

The following is a summary of the level-of-service and vehicle queue analyses for the intersections within the study area. For context, we note that an LOS of “D” or better is generally defined as “acceptable” operating conditions.

Caution should be taken when interpreting the results for oversaturated conditions (i.e., conditions where the volume-to-capacity ratio exceeds 1.0) as the analysis model is not calibrated to provide reliable delays under such conditions. When excessive delay or extended vehicle queuing occur, motorists self-select travel times or travel routes when alternatives exist, conditions that are not captured in a microscopic analysis model which assumes that traffic will keep arriving at a regular rate irrespective of the delays and vehicle queuing that result.

Old Manchester Road at Scribner Road and Industrial Drive

The addition of Project-related traffic was shown to result in an increase in average motorist delay on the Scribner Road approach over 2024 No-Build conditions of 42.9 seconds during the weekday morning peak-hour and 47.3 seconds during the weekday evening peak-hour that caused a change in level of service from LOS E to LOS F, with a corresponding increase in vehicle queuing of six (6) vehicles during the weekday morning peak-hour and five (5) vehicles during the weekday evening peak-hour.

Under 2034 No-Build conditions, the Scribner Road approach was identified to be operating over capacity (i.e., LOS “F”) during both the weekday morning and evening peak-hours independent of the Project. The addition of Project-related traffic was shown to result in an increase in average motorist delay on the Scribner Road approach over 2034 No-Build conditions of 77.5 seconds during the weekday morning peak-hour and 98.4 seconds during the weekday evening peak-hour that caused an increase in vehicle queuing of seven (7) vehicles during the weekday morning peak-hour and six (6) vehicles during the weekday evening peak-hour.

Independent of the Project, left-turn movements from the Industrial Drive approach were shown to operate over capacity during the weekday morning and evening peak-hours under 2024 and 2034 No-Build conditions. Project-related impacts on this movement over 2024 No-Build conditions were identified to be an increase in average motorist delay of 112.4 seconds during the weekday morning peak-hour and 129.8 seconds during the weekday evening peak-hour that resulted in an increase in vehicle queuing of up to three (3) vehicles. Project-related impacts over 2034 No-Build conditions were identified to be an increase in average motorist delay of 182.6 seconds during the weekday morning peak-hour and 191.6 seconds during the weekday evening peak-hour that also resulted in an increase in vehicle queuing of up to three (3) vehicles.

Old Manchester Road at NH Route 101 Westbound Ramps

No change in level of service is predicted to occur over 2024 or 2034 No-Build conditions, acknowledging that the NH Route 101 westbound off-ramp approach is predicted to operate at capacity during the weekday morning peak-hour under 2034 No-Build conditions and over capacity during the weekday evening peak-hour under 2024 and 2034 No-Build conditions. Project-related impacts on this approach over 2024 No-Build conditions were identified to be an increase in average motorist delay of 4.8 seconds during the weekday morning peak-hour and 28.8 seconds during the weekday evening peak-hour that resulted in an increase in vehicle queuing of up to three (3) vehicles. Project-related impacts over 2034 No-Build conditions were identified to be an increase in average motorist delay of 8.4 seconds during the weekday morning peak-hour and 46.2 seconds during the weekday evening peak-hour that resulted in an increase in vehicle queuing of up to four (4) vehicles.



Old Manchester Road at NH Route 101 Eastbound Ramps

No change in level of service is predicted to occur over 2024 or 2034 No-Build conditions, acknowledging that the NH Route 101 eastbound off-ramp approach is predicted to operate over capacity during the weekday morning and evening peak hours under both 2024 and 2034 No-Build conditions. Project-related impacts on this approach over 2024 No-Build conditions were identified to be an increase in average motorist delay of 112.6 seconds during the weekday morning peak-hour and 94.5 seconds during the weekday evening peak-hour that resulted in an increase in vehicle queuing of up to six (6) vehicles. Project-related impacts over 2034 No-Build conditions were identified to be an increase in average motorist delay of 146.2 seconds during the weekday morning peak-hour and 111.1 seconds during the weekday evening peak-hour that also resulted in an increase in vehicle queuing of up to six (6) vehicles.

Old Manchester Road at Lane Road and Batchelder Road

No change in level of service is predicted to occur over 2024 or 2034 No-Build conditions, with all movements continuing to operate at LOS D or better. Project-related impacts at the intersection were defined as a predicted increase in average motorist delay of up to 1.1 seconds during the weekday morning peak-hour with no (0) increase in vehicle queuing and up to 1.8 seconds during the weekday evening peak-hour with a predicted increase in vehicle queuing of up to one (1) vehicle.

Green Road at Sargent Drive

Under 2024 Opening-Year Build and 2034 Build conditions, the addition of Project-related traffic to the Sargent Drive approach was shown to result in an increase in average motorist delay of up to 1.5 seconds during both the weekday morning and evening peak hours that caused a change in level of service from LOS A to LOS B. All movements along Green Road approaching Sargent Drive are predicted to operate at LOS A under all analysis conditions, with negligible vehicle queuing predicted.



**Table 6
UNIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY**

| Unsignalized Intersection/Peak Hour/Movement | 2023 Existing | | | | 2024 No-Build | | | | 2024 Opening-Year Build | | | | 2034 No-Build | | | | 2034 Build | | | |
|--|---------------------|--------------------|------------------|--|---------------|-------|-----|---------------------------|-------------------------|-------|-----|---------------------------|---------------|-------|-----|---------------------------|------------|-------|-----|---------------------------|
| | Demand ^a | Delay ^b | LOS ^c | Queue ^d 95 th | Demand | Delay | LOS | Queue 95 th | Demand | Delay | LOS | Queue 95 th | Demand | Delay | LOS | Queue 95 th | Demand | Delay | LOS | Queue 95 th |
| Old Manchester Road at Scribner Road and Industrial Drive | | | | | | | | | | | | | | | | | | | | |
| <i>Weekday Morning:</i> | | | | | | | | | | | | | | | | | | | | |
| Scribner Road EB LT/TH/RT | 229 | 18.1 | C | 3 | 244 | 38.7 | E | 6 | 312 | 81.6 | F | 12 | 267 | 61.1 | F | 9 | 335 | 138.6 | F | 16 |
| Industrial Drive WB LT/TH/RT | 22 | 28.6 | D | 1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Industrial Drive WB LT | -- | -- | -- | -- | 34 | 115.3 | F | 4 | 34 | 227.7 | F | 6 | 34 | 177.6 | F | 5 | 34 | 360.2 | F | 7 |
| Industrial Drive WB TH/RT | -- | -- | -- | -- | 7 | 11.7 | B | 0 | 7 | 12.0 | B | 0 | 7 | 12.1 | B | 0 | 7 | 12.5 | B | 0 |
| Old Manchester Road NB LT/TH/RT | 292 | 0.6 | A | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Old Manchester Road NB LT | -- | -- | -- | -- | 93 | 8.6 | A | 1 | 118 | 8.7 | A | 1 | 95 | 8.7 | A | 1 | 120 | 8.9 | A | 1 |
| Old Manchester Road NB TH/RT | -- | -- | -- | -- | 337 | 0.0 | A | 0 | 337 | 0.0 | A | 0 | 361 | 0.0 | A | 0 | 361 | 0.0 | A | 0 |
| Old Manchester Road SB LT/TH/RT | 271 | 0.1 | A | 0 | 328 | 0.5 | A | 0 | 335 | 0.5 | A | 0 | 356 | 0.4 | A | 0 | 363 | 0.4 | A | 0 |
| <i>Weekday Afternoon:</i> | | | | | | | | | | | | | | | | | | | | |
| Scribner Road EB LT/TH/RT | 82 | 18.1 | C | 1 | 97 | 37.0 | E | 3 | 143 | 84.3 | F | 8 | 106 | 53.9 | F | 5 | 152 | 152.3 | F | 11 |
| Industrial Drive WB LT/TH/RT | 46 | 22.9 | C | 1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Industrial Drive WB LT | -- | -- | -- | -- | 76 | 84.4 | F | 5 | 76 | 214.2 | F | 8 | 76 | 130.1 | F | 6 | 76 | 321.7 | F | 9 |
| Industrial Drive WB TH/RT | -- | -- | -- | -- | 32 | 15.0 | C | 1 | 32 | 17.2 | C | 1 | 32 | 16.3 | C | 1 | 32 | 18.8 | C | 1 |
| Old Manchester Road NB LT/TH/RT | 370 | 3.0 | A | 1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Old Manchester Road NB LT | -- | -- | -- | -- | 186 | 8.8 | A | 1 | 243 | 9.1 | A | 1 | 200 | 9.0 | A | 1 | 257 | 9.4 | A | 1 |
| Old Manchester Road NB TH/RT | -- | -- | -- | -- | 291 | 0.0 | A | 0 | 291 | 0.0 | A | 0 | 315 | 0.0 | A | 0 | 315 | 0.0 | A | 0 |
| Old Manchester Road SB LT/TH/RT | 248 | 0.1 | A | 0 | 294 | 0.2 | A | 0 | 310 | 0.2 | A | 0 | 319 | 0.1 | A | 0 | 335 | 0.1 | A | 0 |
| Old Manchester Road at NH Route 101 Westbound Ramp | | | | | | | | | | | | | | | | | | | | |
| <i>Weekday Morning:</i> | | | | | | | | | | | | | | | | | | | | |
| NH Route 101 Westbound Ramp WB LT/TH/RT | 78 | 15.7 | C | 1 | 183 | 27.9 | D | 5 | 194 | 32.7 | D | 6 | 191 | 37.6 | E | 7 | 202 | 46.0 | E | 8 |
| Old Manchester Road NB LT | 106 | 8.2 | A | 1 | 111 | 8.6 | A | 1 | 111 | 8.7 | A | 1 | 122 | 8.7 | A | 1 | 122 | 8.9 | A | 1 |
| Old Manchester Road NB TH | 245 | 0.0 | A | 0 | 368 | 0.0 | A | 0 | 382 | 0.0 | A | 0 | 394 | 0.0 | A | 0 | 408 | 0.0 | A | 0 |
| Old Manchester Road SB TH/RT | 414 | 0.0 | A | 0 | 596 | 0.0 | A | 0 | 649 | 0.0 | A | 0 | 637 | 0.0 | A | 0 | 690 | 0.0 | A | 0 |
| <i>Weekday Afternoon:</i> | | | | | | | | | | | | | | | | | | | | |
| NH Route 101 Westbound Ramp WB LT/TH/RT | 280 | 20.9 | C | 4 | 347 | 56.5 | F | 11 | 371 | 85.3 | F | 14 | 376 | 99.0 | F | 15 | 400 | 145.2 | F | 19 |
| Old Manchester Road NB LT | 37 | 7.8 | A | 0 | 37 | 8.2 | A | 0 | 37 | 8.3 | A | 0 | 41 | 8.3 | A | 0 | 41 | 8.3 | A | 0 |
| Old Manchester Road NB TH | 250 | 0.0 | A | 0 | 342 | 0.0 | A | 0 | 375 | 0.0 | A | 0 | 368 | 0.0 | A | 0 | 401 | 0.0 | A | 0 |
| Old Manchester Road SB TH/RT | 267 | 0.0 | A | 0 | 470 | 0.0 | A | 0 | 506 | 0.0 | A | 0 | 498 | 0.0 | A | 0 | 534 | 0.0 | A | 0 |
| Old Manchester Road at NH Route 101 Eastbound Ramp | | | | | | | | | | | | | | | | | | | | |
| <i>Weekday Morning:</i> | | | | | | | | | | | | | | | | | | | | |
| NH Route 101 Eastbound Ramp EB LT/TH/RT | 140 | 25.7 | D | 3 | 238 | 262.8 | F | 19 | 249 | 375.4 | F | 23 | 253 | 390.9 | F | 24 | 264 | 537.1 | F | 28 |
| Old Manchester Road NB TH/RT | 398 | 0.0 | A | 0 | 434 | 0.0 | A | 0 | 437 | 0.0 | A | 0 | 476 | 0.0 | A | 0 | 479 | 0.0 | A | 0 |
| Old Manchester Road SB LT | 150 | 8.3 | A | 1 | 227 | 8.7 | A | 1 | 250 | 8.8 | A | 1 | 242 | 8.9 | A | 1 | 265 | 9.0 | A | 1 |
| Old Manchester Road SB TH | 116 | 0.0 | A | 0 | 137 | 0.0 | A | 0 | 144 | 0.0 | A | 0 | 148 | 0.0 | A | 0 | 155 | 0.0 | A | 0 |
| <i>Weekday Afternoon:</i> | | | | | | | | | | | | | | | | | | | | |
| NH Route 101 Eastbound Ramp EB LT/TH/RT | 286 | 25.6 | D | 5 | 354 | 177.2 | F | 19 | 379 | 271.7 | F | 25 | 384 | 275.4 | F | 26 | 409 | 386.5 | F | 32 |
| Old Manchester Road NB TH/RT | 188 | 0.0 | A | 0 | 214 | 0.0 | A | 0 | 222 | 0.0 | A | 0 | 234 | 0.0 | A | 0 | 242 | 0.0 | A | 0 |
| Old Manchester Road SB LT | 65 | 7.6 | A | 0 | 153 | 7.9 | A | 1 | 168 | 7.9 | A | 1 | 160 | 7.9 | A | 1 | 175 | 8.0 | A | 1 |
| Old Manchester Road SB TH | 278 | 0.0 | A | 0 | 311 | 0.0 | A | 0 | 316 | 0.0 | A | 0 | 340 | 0.0 | A | 0 | 345 | 0.0 | A | 0 |

See notes at end of Table.

Table 6 Continued
UNSIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

| Unsignalized Intersection/Peak Hour/Movement | 2023 Existing | | | | 2024 No-Build | | | | 2024 Opening-Year Build | | | | 2034 No-Build | | | | 2034 Build | | | |
|---|---------------------|--------------------|------------------|--|---------------|-------|-----|---------------------------|-------------------------|-------|-----|---------------------------|---------------|-------|-----|---------------------------|------------|-------|-----|---------------------------|
| | Demand ^a | Delay ^b | LOS ^c | Queue ^d 95 th | Demand | Delay | LOS | Queue 95 th | Demand | Delay | LOS | Queue 95 th | Demand | Delay | LOS | Queue 95 th | Demand | Delay | LOS | Queue 95 th |
| Old Manchester Road at Lane Road and Batchelder Road | | | | | | | | | | | | | | | | | | | | |
| <i>Weekday Morning:</i> | | | | | | | | | | | | | | | | | | | | |
| Lane Road EB LT/TH | 282 | 7.6 | A | 1 | 295 | 7.7 | A | 1 | 295 | 7.8 | A | 1 | 325 | 7.9 | A | 1 | 325 | 7.9 | A | 1 |
| Batchelder Road WB TH/RT | 135 | 0.0 | A | 0 | 158 | 0.0 | A | 0 | 161 | 0.0 | A | 0 | 172 | 0.0 | A | 0 | 175 | 0.0 | A | 0 |
| Old Manchester Road SB LT/RT | 140 | 14.7 | B | 2 | 163 | 16.6 | C | 2 | 170 | 17.4 | C | 2 | 177 | 19.4 | C | 3 | 184 | 20.5 | C | 3 |
| <i>Weekday Afternoon:</i> | | | | | | | | | | | | | | | | | | | | |
| Lane Road EB LT/TH | 140 | 6.6 | A | 1 | 151 | 6.7 | A | 1 | 151 | 6.8 | A | 1 | 166 | 6.8 | A | 1 | 166 | 6.8 | A | 1 |
| Batchelder Road WB TH/RT | 98 | 0.0 | A | 0 | 113 | 0.0 | A | 0 | 121 | 0.0 | A | 0 | 123 | 0.0 | A | 0 | 131 | 0.0 | A | 0 |
| Old Manchester Road SB LT/RT | 388 | 16.9 | C | 5 | 422 | 20.6 | C | 6 | 427 | 21.7 | C | 7 | 463 | 27.7 | D | 9 | 468 | 29.5 | D | 9 |
| Green Road at Sargent Drive | | | | | | | | | | | | | | | | | | | | |
| <i>Weekday Morning:</i> | | | | | | | | | | | | | | | | | | | | |
| Green Road EB LT/TH | 51 | 0.1 | A | 0 | 66 | 0.1 | A | 0 | 69 | 0.4 | A | 0 | 71 | 0.1 | A | 0 | 74 | 0.4 | A | 0 |
| Green Road WB TH/RT | 25 | 0.0 | A | 0 | 38 | 0.0 | A | 0 | 70 | 0.0 | A | 0 | 40 | 0.0 | A | 0 | 72 | 0.0 | A | 0 |
| Sargent Drive SB LT/RT | 19 | 9.0 | A | 0 | 19 | 9.2 | A | 0 | 95 | 10.1 | B | 1 | 19 | 9.2 | A | 0 | 95 | 10.2 | B | 1 |
| <i>Weekday Afternoon:</i> | | | | | | | | | | | | | | | | | | | | |
| Green Road EB LT/TH | 39 | 0.8 | A | 0 | 51 | 0.6 | A | 0 | 59 | 1.5 | A | 0 | 55 | 0.5 | A | 0 | 63 | 1.4 | A | 0 |
| Green Road WB TH/RT | 56 | 0.0 | A | 0 | 71 | 0.0 | A | 0 | 144 | 0.0 | A | 0 | 77 | 0.0 | A | 0 | 150 | 0.0 | A | 0 |
| Sargent Drive SB LT/RT | 5 | 8.6 | A | 0 | 5 | 8.7 | A | 0 | 56 | 10.1 | B | 1 | 5 | 8.7 | A | 0 | 56 | 10.2 | B | 1 |

^aDemand in vehicles per hour.

^bAverage control delay per vehicle (in seconds).

^cLevel of service.

^dQueue length in vehicles.

NB = northbound; SB = southbound; EB = eastbound; WB = westbound; LT = left-turning movements; TH = through movements; RT = right-turning movements.

SIGHT DISTANCE ASSESSMENT

Sight distance measurements were performed at the Project site roadway intersections in accordance with American Association of State Highway and Transportation Officials (AASHTO)¹⁴ requirements. Both stopping sight distance (SSD) and intersection sight distance (ISD) measurements were performed. In brief, SSD is the distance required by a vehicle traveling at the design speed of a roadway, on wet pavement, to stop prior to striking an object in its travel path. ISD or corner sight distance (CSD) is the sight distance required by a driver entering or crossing an intersecting roadway to perceive an on-coming vehicle and safely complete a turning or crossing maneuver with on-coming traffic. In accordance with AASHTO standards, if the measured ISD is at least equal to the required SSD value for the appropriate design speed, the intersection can operate in a safe manner. Table 7 presents the measured SSD and ISD at the subject intersections.

Table 7
SIGHT DISTANCE MEASUREMENTS^a

| Intersection/Sight Distance Measurement | Feet | | |
|---|------------------------|------------------------------|----------------------|
| | Required Minimum (SSD) | Desirable (ISD) ^b | Measured |
| <i>Sargent Drive at Deer Run Road</i> | | | |
| <i>Stopping Sight Distance:</i> | | | |
| Sargent Drive approaching from the east | 250 | -- | 489 |
| Sargent Drive approaching from the west | 250 | -- | 480 |
| <i>Intersection Sight Distance:</i> | | | |
| Looking to the east from Deer Run Road | 250 | 335 | 254/450 ^c |
| Looking to the west from Deer Run Road | 250 | 390 | 204/480 ^c |
| <i>Green Road at the Project Site Roadway (Leavitt Road)</i> | | | |
| <i>Stopping Sight Distance:</i> | | | |
| Green Road approaching from the east | 305 | -- | 236 |
| Green Road approaching from the west | 305 | -- | 500+ |
| <i>Intersection Sight Distance:</i> | | | |
| Looking to the east from the Project Site Roadway | 305 | 385 | 275 |
| Looking to the west from the Project Site Roadway | 305 | 445 | 500+ |

^aRecommended minimum values obtained from *A Policy on Geometric Design of Highways and Streets*, 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); 2018; and based on an approach speed of 35 mph along Sargent Drive and 40 mph along Green Road.

^bValues shown are the intersection sight distance for a vehicle turning right or left exiting a roadway under STOP control such that motorists approaching the intersection on the major street should not need to adjust their travel speed to less than 70 percent of their initial approach speed.

^cAvailable sight distance with the selective trimming/removal of trees and vegetation located within the sight triangle areas.

As can be seen in Table 7, with the selective trimming/removal of trees and vegetation located within the sight triangle areas of Deer Run Road, the available lines of sight to and from the intersection will exceed the recommended minimum sight distances to function in a safe (SSD) and efficient (ISD) manner based on a 35 mph approach speed along Sargent Drive, which is above the statutory speed limit (30 mph).¹⁵

¹⁴*A Policy on Geometric Design of Highway and Streets*, 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); Washington D.C.; 2018.

¹⁵The statutory or “prima facie” speed is defined in M.G.L Chapter 90, Section 17, as the speed which would be deemed reasonable and proper to operate a motor vehicle.



The available lines of sight approaching from and looking to the east at the Project site roadway (Leavitt Road) intersection with Green Road were found to be below the recommended minimum sight distance for safe operation of the intersection based on a 40 mph approach speed. The sight lines were limited by the existing vertical curve along Green Road to the east of the intersection. In order to provide the necessary sight distance, either the profile of the vertical curve along Green Road should be reduced or the roadway (Leavitt Road) should be realigned to the east to a point where the required sight distance can be provided. Due to this sight line limitation, the Green Road access should be secured by means of a gate and restricted to emergency vehicles until such time as the required sight lines can be provided.

SUMMARY

VAI has completed a detailed assessment of the potential impacts on the transportation infrastructure associated with the proposed construction of a residential development to be located on a parcel of land generally situated between the Rockingham Recreational Trail and properties located along Mary Sargent Road and Green Road in Raymond, New Hampshire. This study has been completed in accordance with NHDOT standards for the preparation of a TIS and includes an evaluation of the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; under existing and future conditions, both with and without the Project. Based on this assessment, we have concluded the following with respect to the Project:

1. Using trip-generation statistics published by the ITE,¹⁶ the completed Project (all three phases) is expected to generate approximately 1,324 vehicle trips on an average weekday (two-way, 24-hour volume), with approximately 111 vehicle trips expected during the weekday morning peak-hour and 132 vehicle trips expected during the weekday evening peak-hour;
2. The Project will not have a significant impact (increase) on motorist delays or vehicle queuing over Existing or anticipated future conditions without the Project (No-Build conditions), with the majority of the movements at the study area intersections shown to continue operate at a level-of-service (LOS) D or better, where and LOS of “D” or better is generally defined as “acceptable” traffic operations, acknowledging that, independent of the Project, one or more movements at the Old Manchester Road/Scribner Road/Industrial Drive and at the Old Manchester Road intersection with the NH Route 101 ramps are currently or are predicted to operate at or over capacity (i.e., LOS “E” or “F”);
3. All movements at the intersection of Sargent Drive at Green Road, the intersection that will serve as the primary access to the Project site, are predicted to operate at LOS B or better with vehicle queues of up to one (1) vehicle predicted; and
4. Lines of sight at the Project site roadway intersection with Sargent Drive were found to exceed or can be made to exceed the recommended minimum distance for the intersection to operate in a safe and efficient manner based on the appropriate approach speed. Lines of sight at the Project site roadway intersection with Green Road (Leavitt Road) were found to be limited by an existing vertical curve along Green Road to the east of the roadway. Due to this obstruction, the Green Road access should be secured by means of a gate and restricted to emergency vehicles only until such time as the intersection can be improved to provide the required sight distance (see *Recommendations*).

¹⁶Institute of Transportation Engineers, op. cit. 1.



In consideration of the above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure in a safe and efficient manner with the implementation of the recommendations that follow.

RECOMMENDATIONS

Project Access

Access to the Project site will be provided by way of two roadways that intersect Sargent Road and Green Road, respectively. Deer Run Road, which intersects the north side of Sargent Road approximately 730 feet northwest of Feng Drive, has been constructed and will serve as the primary access to the Project. The Green Road access will be an extension of Leavitt Road, which is currently an unimproved gravel road that intersects the north side of Green Road approximately 125 feet east of the driveway to 27 Green Road. The following recommendations are offered with respect to the design and operation of the Project site access and internal circulation, many of which are reflected on the Site Plan:

- Primary circulating roadways within the Project site will be 24 feet in width and should support a design speed of 25 mph with appropriate geometry to accommodate the turning and maneuvering requirements of the largest anticipated responding emergency vehicle.
- The roadways terminating in a cul-de-sac (“Road A” and “Road B”) will be 20 feet in width and the cul-de-sac will be designed to accommodate the maneuvering of emergency vehicles. On-street parking should be prohibited along these roadways.
- A secondary access to Green Road should be developed prior to advancement of Phase 3 of the Project that affords the required sight lines for safe operation (305 feet minimum). Until that time, the access to Green Road should be paved or constructed of a stabilized base material that will support travel by the largest responding emergency vehicle under all weather conditions and should be gated or otherwise secured in a means acceptable to the Raymond Fire Department that restricts access by general traffic.
- Driveways to the residential units should be a minimum of 23 feet long measured between the far edge of pavement and the edge of the traveled-way.
- Vehicles exiting the Project site should be placed under STOP-sign control with a marked STOP-line provided.
- All signs and pavement markings to be installed as a part of the Project should conform to the applicable standards of the *Manual on Uniform Traffic Control Devices (MUTCD)*.¹⁷
- Signs and landscaping to be installed as a part of the Project within the intersection sight triangle areas should be designed and maintained so as not to restrict lines of sight.
- Existing trees and vegetation located within the sight triangle areas of the Project site roadways should be selectively trimmed or removed and maintained so as to provide the necessary sight lines for the driveway to operate in a safe manner.
- Snow accumulation (windrows) within sight triangle areas of the Project site roadways should be promptly removed where such accumulations would impede sight lines.

¹⁷*Manual on Uniform Traffic Control Devices (MUTCD)*; Federal Highway Administration; Washington, D.C.; 2009.



Off-Site

Old Manchester Road/Scribner Road/Industrial Drive

Independent of the Project, one or more movements at this unsignalized intersection are predicted to operate at or over capacity under 2024 No-Build conditions with consideration of the traffic volume increases associated with the projects that have been approved along the Old Manchester Road corridor and the planned improvements to the intersection (i.e., construction of left-turn lanes on the Industrial Drive and Old Manchester Road northbound approaches). Given the volume of traffic that is expected to be processed by this intersection and the proximity of the Raymond Police and Fire Department facilities to the intersection, consideration should be given to placing the intersection under traffic signal control subject to meeting the necessary warrants specified in the MUTCD¹⁸ for the implementation of traffic signal control. In order to assist the Town in advancing this improvement, the Project proponent will perform a detailed Traffic Signal Warrants Analysis (TSWA) in accordance with the methodology defined in the MUTCD to determine if and when the installation of a traffic control signal is warranted. The TSWA will be submitted to the Town prior to the issuance of a Certificate of Occupancy for 50 residential units.

Old Manchester Road at the NH Route 101 East and Westbound Ramps

Independent of the Project all movements from the NH Route 101 east and westbound off-ramps are predicted to operate at or over capacity under 2024 No-Build conditions with consideration of the traffic volume increases associated with the projects that have been approved along the Old Manchester Road corridor. The Project is predicted to increase traffic volumes on the off-ramp approaches by up to 25 vehicles during the weekday peak-hours. Recognizing the relatively modest increase in traffic that the Project represents at these intersections over No-Build conditions, the Project proponent will undertake an Intersection Improvement Study at the Old Manchester Road/NH Route 101 eastbound ramps and Old Manchester Road/NH Route 101 westbound ramps to include an evaluation of the implementation of traffic signal control or reconstructing the intersections to operate under modern roundabout control. This evaluation will include performing a detailed TSWA in accordance with the methodology defined in the MUTCD and the preparation of conceptual plans depicting the recommended traffic control alternative. The Intersection Improvement Study will be submitted to the Town prior to the commencement of Phase 3 of the Project or the issuance of a Certificate of Occupancy for 100 residential units, whichever occurs first.

With implementation of the aforementioned recommendations, safe and efficient access will be provided to the Project site and the Project can be accommodated within the confines of the existing and improved transportation system.

cc: File

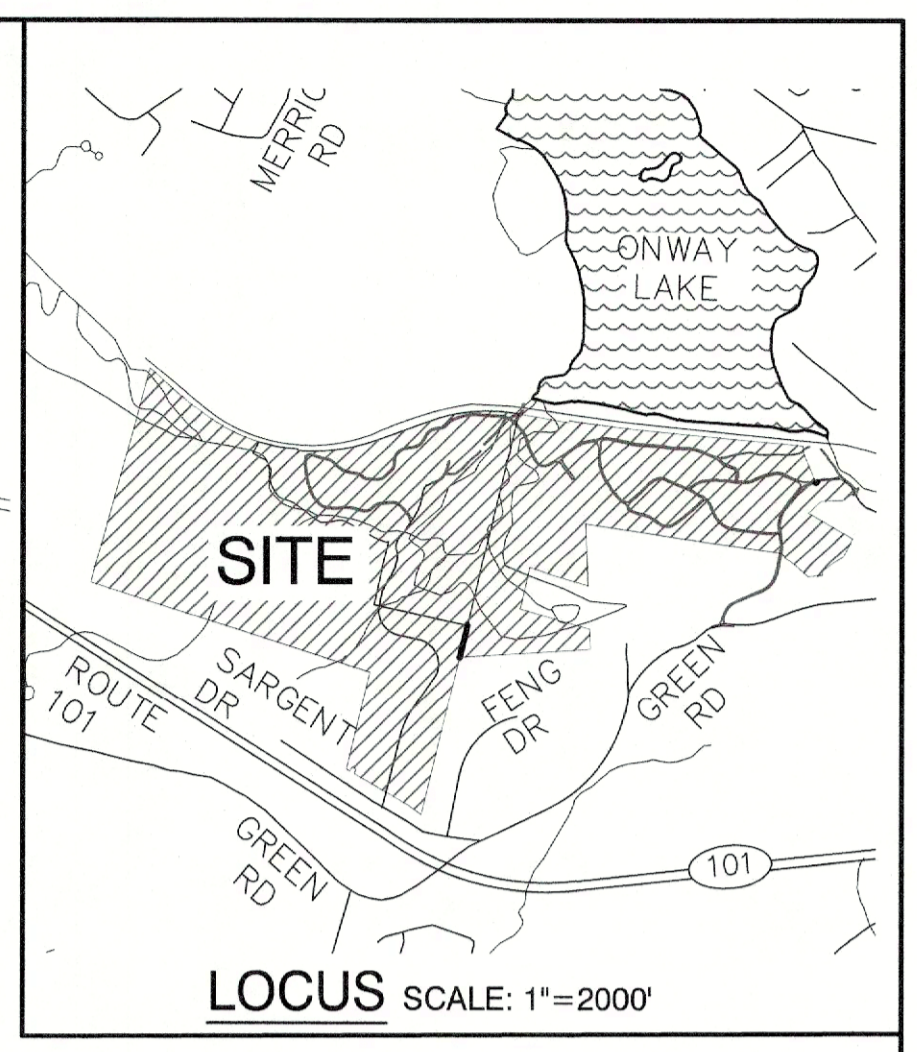
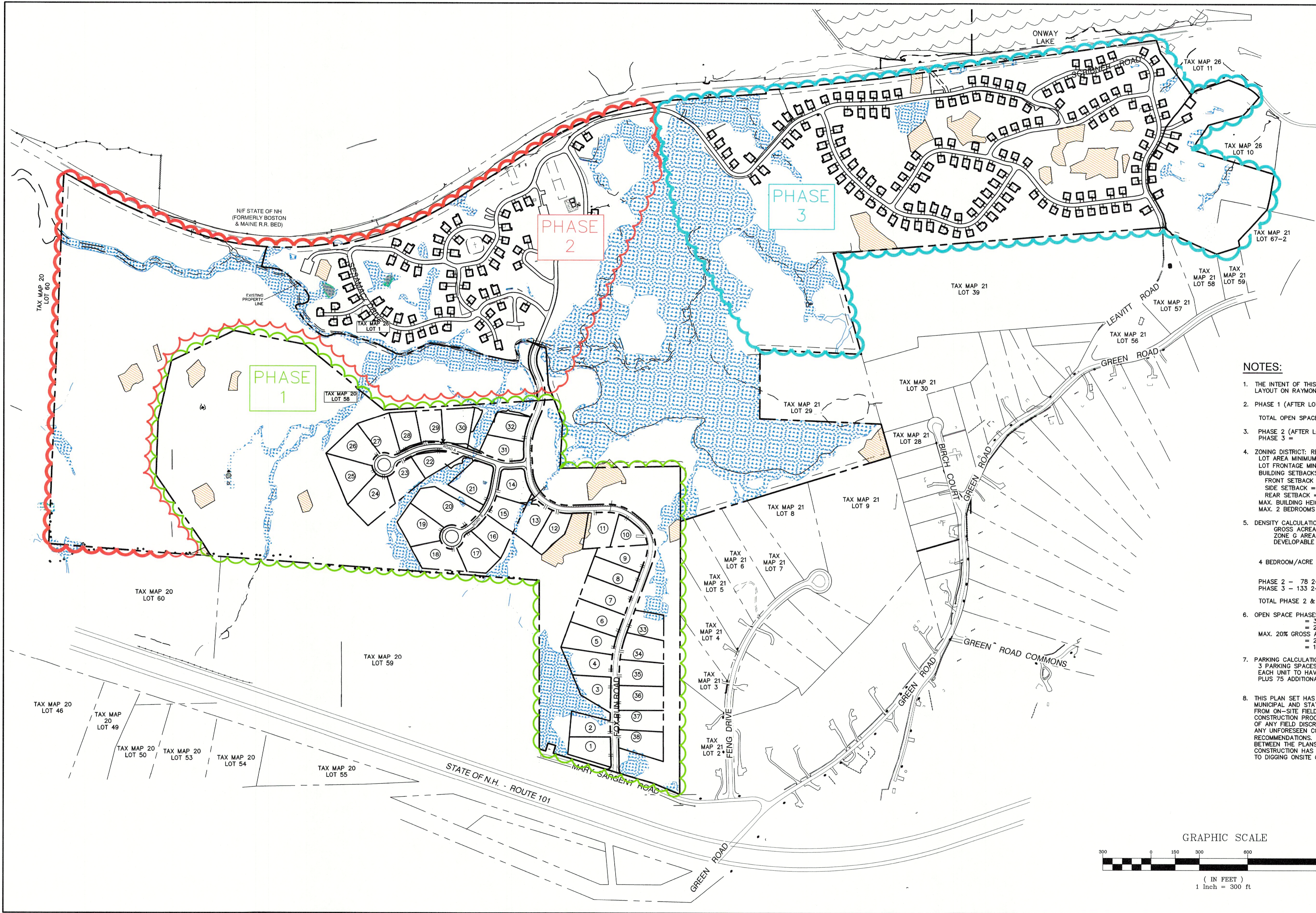
¹⁸Federal Highway Administration, op. cit. 19.



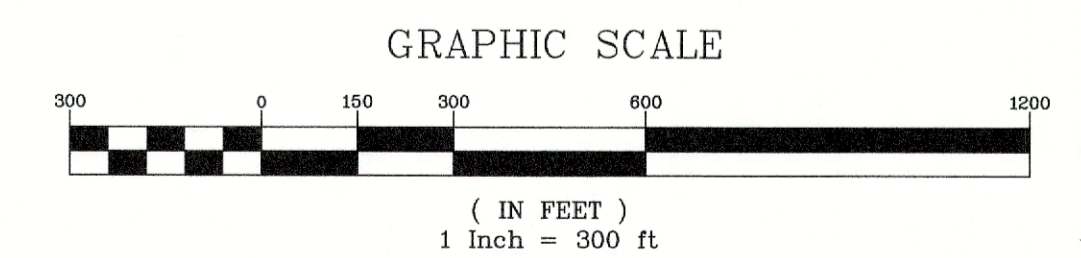
ATTACHMENTS

PROJECT SITE PLAN
AUTOMATIC TRAFFIC RECORDER COUNT DATA
TURNING MOVEMENT COUNT DATA
SEASONAL ADJUSTMENT DATA
COVID ADJUSTMENT DATA
VEHICLE TRAVEL SPEED DATA
GENERAL BACKGROUND TRAFFIC GROWTH
BACKGROUND DEVELOPMENT NETWORKS
TRIP-GENERATION CALCULATIONS
TRIP-DISTRIBUTION DATA
CAPACITY ANALYSIS WORKSHEETS

PROJECT SITE PLAN



- NOTES:**
- THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED PHASING OF A MULTI-FAMILY LAYOUT ON RAYMOND TAX MAP 20, LOT 58 AND TAXMAP 26, LOT 1.
 - PHASE 1 (AFTER LOT LINE ADJUSTMENT) = 4,397,950 SF = 100.96 AC
TOTAL OPEN SPACE PHASE 1 = 2,665,739 SF = 61.20 AC (61% OF TOTAL)
 - PHASE 2 (AFTER LOT LINE ADJUSTMENT) = 4,596,935 SF = 105.53 AC
PHASE 3 = 6,080,669 SF = 139.59 AC
 - ZONING DISTRICT: RESIDENTIAL/AGRICULTURAL
LOT AREA MINIMUM = 87,120 SF
LOT FRONTAGE MINIMUM = 75'
BUILDING SETBACKS (MINIMUM):
FRONT SETBACK = 75'
SIDE SETBACK = 30'
REAR SETBACK = 30'
MAX. BUILDING HEIGHT = 30'
MAX. 2 BEDROOMS PER UNIT
 - DENSITY CALCULATION PHASES 2 AND 3 (AFTER LOT LINE ADJUSTMENT):
GROSS ACREAGE = 10,677,604 SF = 245.12 AC
ZONE G AREA = 2,843,626 SF = 65.28 AC
DEVELOPABLE AREA = GROSS ACREAGE MINUS ZONE G AREA
= 245.12 AC - 65.28 AC = 179.84 AC
4 BEDROOM/ACRE ALLOWED = 724 TOTAL BEDROOMS ALLOWED
= 362 2-BEDROOM UNITS ALLOWED
PHASE 2 - 78 2-BEDROOM UNITS PROPOSED
PHASE 3 - 133 2-BEDROOM UNITS PROPOSED
TOTAL PHASE 2 & PHASE 3 = 211 2-BEDROOM UNITS PROPOSED
 - OPEN SPACE PHASES 2 AND 3 (AFTER LOT LINE ADJUSTMENT)
= 30% OF GROSS ACREAGE
= 245.12 AC * 30% = 73.54 AC
MAX. 20% GROSS ACREAGE TO BE IN ZONE G
= 2,135,521 SF = 49.02 AC ZONE G
= 1,067,760 SF = 24.51 AC UPLAND IN OPEN SPACE
 - PARKING CALCULATIONS:
3 PARKING SPACES PER DWELLING UNIT REQUIRED.
EACH UNIT TO HAVE 2 GARAGE PARKING SPACES PLUS 2 SPACES IN EACH DRIVEWAY
PLUS 75 ADDITIONAL PARKING SPACES PROVIDED ON SITE.
 - THIS PLAN SET HAS BEEN PREPARED BY JONES & BEACH ENGINEERS, INC., FOR MUNICIPAL AND STATE APPROVALS AND FOR CONSTRUCTION BASED ON DATA OBTAINED FROM ON-SITE FIELD SURVEY AND EXISTING MUNICIPAL RECORDS. THROUGHOUT THE CONSTRUCTION PROCESS, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY OF ANY FIELD DISCREPANCY FROM DATA AS SHOWN ON THE DESIGN PLANS, INCLUDING ANY UNFORESEEN CONDITIONS, SUBSURFACE OR OTHERWISE, FOR EVALUATION AND RECOMMENDATIONS. ANY CONTRADICTION BETWEEN ITEMS ON THIS PLAN/PLAN SET, OR BETWEEN THE PLANS AND ON-SITE CONDITIONS, MUST BE RESOLVED BEFORE RELATED CONSTRUCTION HAS BEEN INITIATED. CONTRACTOR TO ALWAYS CONTACT DIG SAFE PRIOR TO DIGGING ON-SITE OR OFF-SITE TO ENSURE SAFETY AND OBEY THE LAW.



| |
|-----------------------------|
| TOTAL LOT AREA |
| MAP 20 LOT 58 |
| 6,882,144 SF = 157.99 ACRES |
| MAP 26 LOT 1 |
| 8,193,408 SF = 188.09 AC |
| TOTAL |
| 15,075,552 SF = 346.09 AC |

Design: JAC Draft: AJB Date: 4/15/21
 Checked: JAC Scale: AS NOTED Project No.: 14232.7
 Drawing Name: 14232.7-PLAN.dwg
 THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.



| REV. | DATE | REVISION | BY |
|------|--------|-------------------|-----|
| 0 | 9/7/23 | ISSUED FOR REVIEW | LAZ |

Designed and Produced in NH

J/B Jones & Beach Engineers, Inc.
 Civil Engineering Services

85 Portsmouth Ave. PO Box 219 Stratham, NH 03885
 603-772-4746 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: **PHASING PLAN**
 Project: **15 SARGENT DRIVE RAYMOND, NEW HAMPSHIRE**
 Owners: YAWNO PROPERTIES, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063; RAYMOND VILLAGE, LLC, 427 AMHERST STREET, 2ND FLOOR, SUITE 1, NASHUA, NH 03063

DRAWING No. **PH1**
 SHEET 2 OF 34
 JBE PROJECT NO. 14232.7

AUTOMATIC TRAFFIC RECORDER COUNT DATA

Accurate Counts
978-664-2565

Location : Green Road
Location : North of Sargent Drive
City/State: Raymond, NH

Site Code: 98380001

| 10/3/2023 Time | NB | | Hour Totals | | SB | | Hour Totals | | Combined Totals | |
|-------------------|---------|-----------|-------------|-----------|---------|-----------|-------------|-----------|-----------------|-----------|
| | Morning | Afternoon | Morning | Afternoon | Morning | Afternoon | Morning | Afternoon | Morning | Afternoon |
| 12:00 | 0 | 4 | | | 0 | 0 | | | | |
| 12:15 | 0 | 6 | | | 0 | 6 | | | | |
| 12:30 | 0 | 0 | | | 1 | 10 | | | | |
| 12:45 | 0 | 1 | 0 | 11 | 0 | 5 | 1 | 21 | 1 | 32 |
| 1:00 | 0 | 2 | | | 0 | 2 | | | | |
| 1:15 | 0 | 2 | | | 0 | 5 | | | | |
| 1:30 | 0 | 2 | | | 0 | 0 | | | | |
| 1:45 | 0 | 0 | 0 | 6 | 0 | 5 | 0 | 12 | 0 | 18 |
| 2:00 | 0 | 2 | | | 1 | 1 | | | | |
| 2:15 | 1 | 2 | | | 0 | 13 | | | | |
| 2:30 | 0 | 4 | | | 0 | 4 | | | | |
| 2:45 | 0 | 5 | 1 | 13 | 0 | 9 | 1 | 27 | 2 | 40 |
| 3:00 | 1 | 5 | | | 0 | 7 | | | | |
| 3:15 | 1 | 6 | | | 0 | 11 | | | | |
| 3:30 | 2 | 2 | | | 1 | 9 | | | | |
| 3:45 | 0 | 5 | 4 | 18 | 0 | 3 | 1 | 30 | 5 | 48 |
| 4:00 | 0 | 4 | | | 0 | 9 | | | | |
| 4:15 | 4 | 5 | | | 0 | 10 | | | | |
| 4:30 | 1 | 3 | | | 0 | 13 | | | | |
| 4:45 | 2 | 2 | 7 | 14 | 0 | 11 | 0 | 43 | 7 | 57 |
| 5:00 | 4 | 4 | | | 0 | 13 | | | | |
| 5:15 | 3 | 7 | | | 1 | 11 | | | | |
| 5:30 | 2 | 2 | | | 0 | 9 | | | | |
| 5:45 | 5 | 9 | 14 | 22 | 0 | 5 | 1 | 38 | 15 | 60 |
| 6:00 | 3 | 6 | | | 0 | 8 | | | | |
| 6:15 | 4 | 4 | | | 0 | 7 | | | | |
| 6:30 | 5 | 7 | | | 0 | 9 | | | | |
| 6:45 | 12 | 2 | 24 | 19 | 1 | 6 | 1 | 30 | 25 | 49 |
| 7:00 | 9 | 3 | | | 4 | 8 | | | | |
| 7:15 | 11 | 0 | | | 3 | 8 | | | | |
| 7:30 | 17 | 1 | | | 4 | 5 | | | | |
| 7:45 | 6 | 2 | 43 | 6 | 7 | 5 | 18 | 26 | 61 | 32 |
| 8:00 | 13 | 0 | | | 4 | 4 | | | | |
| 8:15 | 5 | 1 | | | 2 | 1 | | | | |
| 8:30 | 9 | 1 | | | 4 | 2 | | | | |
| 8:45 | 4 | 0 | 31 | 2 | 4 | 4 | 14 | 11 | 45 | 13 |
| 9:00 | 8 | 1 | | | 2 | 4 | | | | |
| 9:15 | 3 | 0 | | | 2 | 4 | | | | |
| 9:30 | 4 | 0 | | | 2 | 2 | | | | |
| 9:45 | 3 | 0 | 18 | 1 | 3 | 1 | 9 | 11 | 27 | 12 |
| 10:00 | 3 | 0 | | | 4 | 1 | | | | |
| 10:15 | 6 | 1 | | | 5 | 0 | | | | |
| 10:30 | 4 | 0 | | | 3 | 0 | | | | |
| 10:45 | 6 | 1 | 19 | 2 | 4 | 0 | 16 | 1 | 35 | 3 |
| 11:00 | 1 | 1 | | | 2 | 0 | | | | |
| 11:15 | 3 | 0 | | | 3 | 1 | | | | |
| 11:30 | 2 | 0 | | | 7 | 0 | | | | |
| 11:45 | 4 | 1 | 10 | 2 | 5 | 0 | 17 | 1 | 27 | 3 |
| Total | 171 | 116 | | | 79 | 251 | | | 250 | 367 |
| Percent | 59.6% | 40.4% | | | 23.9% | 76.1% | | | 40.5% | 59.5% |

Accurate Counts
978-664-2565

Location : Green Road
Location : North of Sargent Drive
City/State: Raymond, NH

Site Code: 98380001

| 10/4/2023 Time | NB | | Hour Totals | | SB | | Hour Totals | | Combined Totals | |
|-------------------|---------|-----------|-------------|-----------|---------|-----------|-------------|-----------|-----------------|-----------|
| | Morning | Afternoon | Morning | Afternoon | Morning | Afternoon | Morning | Afternoon | Morning | Afternoon |
| 12:00 | 0 | 4 | | | 1 | 6 | | | | |
| 12:15 | 0 | 4 | | | 1 | 9 | | | | |
| 12:30 | 0 | 5 | | | 1 | 9 | | | | |
| 12:45 | 0 | 4 | 0 | 17 | 0 | 2 | 3 | 26 | 3 | 43 |
| 1:00 | 0 | 3 | | | 0 | 6 | | | | |
| 1:15 | 0 | 1 | | | 0 | 8 | | | | |
| 1:30 | 0 | 2 | | | 0 | 5 | | | | |
| 1:45 | 0 | 3 | 0 | 9 | 1 | 5 | 1 | 24 | 1 | 33 |
| 2:00 | 0 | 2 | | | 0 | 5 | | | | |
| 2:15 | 0 | 3 | | | 0 | 8 | | | | |
| 2:30 | 0 | 0 | | | 0 | 3 | | | | |
| 2:45 | 0 | 6 | 0 | 11 | 0 | 8 | 0 | 24 | 0 | 35 |
| 3:00 | 0 | 2 | | | 0 | 10 | | | | |
| 3:15 | 1 | 2 | | | 1 | 11 | | | | |
| 3:30 | 1 | 2 | | | 0 | 7 | | | | |
| 3:45 | 2 | 2 | 4 | 8 | 0 | 6 | 1 | 34 | 5 | 42 |
| 4:00 | 2 | 1 | | | 0 | 8 | | | | |
| 4:15 | 2 | 1 | | | 1 | 12 | | | | |
| 4:30 | 1 | 5 | | | 0 | 5 | | | | |
| 4:45 | 3 | 2 | 8 | 9 | 0 | 7 | 1 | 32 | 9 | 41 |
| 5:00 | 3 | 8 | | | 0 | 8 | | | | |
| 5:15 | 5 | 3 | | | 0 | 7 | | | | |
| 5:30 | 1 | 5 | | | 0 | 8 | | | | |
| 5:45 | 0 | 5 | 9 | 21 | 1 | 5 | 1 | 28 | 10 | 49 |
| 6:00 | 4 | 2 | | | 1 | 10 | | | | |
| 6:15 | 3 | 5 | | | 1 | 11 | | | | |
| 6:30 | 5 | 5 | | | 1 | 8 | | | | |
| 6:45 | 11 | 5 | 23 | 17 | 0 | 8 | 3 | 37 | 26 | 54 |
| 7:00 | 14 | 5 | | | 2 | 2 | | | | |
| 7:15 | 7 | 2 | | | 1 | 7 | | | | |
| 7:30 | 10 | 0 | | | 6 | 6 | | | | |
| 7:45 | 8 | 0 | 39 | 7 | 4 | 2 | 13 | 17 | 52 | 24 |
| 8:00 | 8 | 2 | | | 4 | 2 | | | | |
| 8:15 | 11 | 0 | | | 3 | 0 | | | | |
| 8:30 | 5 | 2 | | | 5 | 5 | | | | |
| 8:45 | 5 | 0 | 29 | 4 | 4 | 3 | 16 | 10 | 45 | 14 |
| 9:00 | 7 | 1 | | | 3 | 3 | | | | |
| 9:15 | 5 | 1 | | | 5 | 1 | | | | |
| 9:30 | 6 | 0 | | | 5 | 2 | | | | |
| 9:45 | 1 | 0 | 19 | 2 | 3 | 0 | 16 | 6 | 35 | 8 |
| 10:00 | 3 | 2 | | | 4 | 2 | | | | |
| 10:15 | 5 | 0 | | | 4 | 1 | | | | |
| 10:30 | 4 | 0 | | | 6 | 1 | | | | |
| 10:45 | 2 | 0 | 14 | 2 | 4 | 0 | 18 | 4 | 32 | 6 |
| 11:00 | 2 | 1 | | | 2 | 1 | | | | |
| 11:15 | 3 | 1 | | | 5 | 0 | | | | |
| 11:30 | 3 | 0 | | | 4 | 0 | | | | |
| 11:45 | 2 | 0 | 10 | 2 | 6 | 0 | 17 | 1 | 27 | 3 |
| Total | 155 | 109 | | | 90 | 243 | | | 245 | 352 |
| Percent | 58.7% | 41.3% | | | 27.0% | 73.0% | | | 41.0% | 59.0% |
| Grand Total | 326 | 225 | | | 169 | 494 | | | 495 | 719 |
| Percent | 59.2% | 40.8% | | | 25.5% | 74.5% | | | 40.8% | 59.2% |

ADT

ADT: 607

AADT: 607

Accurate Counts
978-664-2565

Site Code: 98380001

Location : Green Road
Location : North of Sargent Drive
City/State: Raymond, NH

| 10/2/2023 | Monday | | Tuesday | | Wednesday | | Thursday | | Friday | | Saturday | | Sunday | | Week Average | |
|------------|----------|----|-----------|------|-----------|-------|----------|----|--------|----|----------|----|--------|----|--------------|-------|
| Time | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB |
| 12:00 AM | * | * | 0 | 1 | 0 | 3 | * | * | * | * | * | * | * | * | 0 | 2 |
| 1:00 | * | * | 0 | 0 | 0 | 1 | * | * | * | * | * | * | * | * | 0 | 0 |
| 2:00 | * | * | 1 | 1 | 0 | 0 | * | * | * | * | * | * | * | * | 0 | 0 |
| 3:00 | * | * | 4 | 1 | 4 | 1 | * | * | * | * | * | * | * | * | 4 | 1 |
| 4:00 | * | * | 7 | 0 | 8 | 1 | * | * | * | * | * | * | * | * | 8 | 0 |
| 5:00 | * | * | 14 | 1 | 9 | 1 | * | * | * | * | * | * | * | * | 12 | 1 |
| 6:00 | * | * | 24 | 1 | 23 | 3 | * | * | * | * | * | * | * | * | 24 | 2 |
| 7:00 | * | * | 43 | 18 | 39 | 13 | * | * | * | * | * | * | * | * | 41 | 16 |
| 8:00 | * | * | 31 | 14 | 29 | 16 | * | * | * | * | * | * | * | * | 30 | 15 |
| 9:00 | * | * | 18 | 9 | 19 | 16 | * | * | * | * | * | * | * | * | 18 | 12 |
| 10:00 | * | * | 19 | 16 | 14 | 18 | * | * | * | * | * | * | * | * | 16 | 17 |
| 11:00 | * | * | 10 | 17 | 10 | 17 | * | * | * | * | * | * | * | * | 10 | 17 |
| 12:00 PM | * | * | 11 | 21 | 17 | 26 | * | * | * | * | * | * | * | * | 14 | 24 |
| 1:00 | * | * | 6 | 12 | 9 | 24 | * | * | * | * | * | * | * | * | 8 | 18 |
| 2:00 | * | * | 13 | 27 | 11 | 24 | * | * | * | * | * | * | * | * | 12 | 26 |
| 3:00 | * | * | 18 | 30 | 8 | 34 | * | * | * | * | * | * | * | * | 13 | 32 |
| 4:00 | * | * | 14 | 43 | 9 | 32 | * | * | * | * | * | * | * | * | 12 | 38 |
| 5:00 | * | * | 22 | 38 | 21 | 28 | * | * | * | * | * | * | * | * | 22 | 33 |
| 6:00 | * | * | 19 | 30 | 17 | 37 | * | * | * | * | * | * | * | * | 18 | 34 |
| 7:00 | * | * | 6 | 26 | 7 | 17 | * | * | * | * | * | * | * | * | 6 | 22 |
| 8:00 | * | * | 2 | 11 | 4 | 10 | * | * | * | * | * | * | * | * | 3 | 10 |
| 9:00 | * | * | 1 | 11 | 2 | 6 | * | * | * | * | * | * | * | * | 2 | 8 |
| 10:00 | * | * | 2 | 1 | 2 | 4 | * | * | * | * | * | * | * | * | 2 | 2 |
| 11:00 | * | * | 2 | 1 | 1 | 1 | * | * | * | * | * | * | * | * | 2 | 1 |
| Total | 0 | 0 | 287 | 330 | 263 | 333 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 277 | 331 |
| Day | 0 | | 617 | | 596 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 608 | |
| AM Peak | | | 7:00 | 7:00 | 7:00 | 10:00 | | | | | | | | | 7:00 | 10:00 |
| Volume | | | 43 | 18 | 39 | 18 | | | | | | | | | 41 | 17 |
| PM Peak | | | 5:00 | 4:00 | 5:00 | 6:00 | | | | | | | | | 5:00 | 4:00 |
| Volume | | | 22 | 43 | 21 | 37 | | | | | | | | | 22 | 38 |
| Comb Total | 0 | | 617 | | 596 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 608 | |
| ADT | ADT: 607 | | AADT: 607 | | | | | | | | | | | | | |

TURNING MOVEMENT COUNT DATA

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Industrial Dr / Scribner Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230001
 Site Code : 96230001
 Start Date : 2/8/2023
 Page No : 1

Groups Printed- Cars - Trucks

| Start Time | Old Manchester Rd From North | | | Industrial Dr From East | | | Old Manchester Rd From South | | | Scribner Rd From West | | | Int. Total |
|--------------------|---------------------------------|------------|-----------|----------------------------|----------|----------|---------------------------------|------------|-----------|--------------------------|----------|------------|------------|
| | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | |
| 07:00 AM | 1 | 25 | 3 | 3 | 0 | 0 | 3 | 36 | 7 | 14 | 0 | 20 | 112 |
| 07:15 AM | 0 | 34 | 3 | 1 | 0 | 0 | 3 | 37 | 7 | 12 | 0 | 28 | 125 |
| 07:30 AM | 2 | 34 | 4 | 2 | 0 | 0 | 5 | 27 | 9 | 10 | 1 | 24 | 118 |
| 07:45 AM | 0 | 48 | 8 | 6 | 0 | 2 | 2 | 38 | 4 | 6 | 1 | 22 | 137 |
| Total | 3 | 141 | 18 | 12 | 0 | 2 | 13 | 138 | 27 | 42 | 2 | 94 | 492 |
| 08:00 AM | 1 | 23 | 2 | 4 | 0 | 0 | 8 | 28 | 4 | 4 | 1 | 17 | 92 |
| 08:15 AM | 1 | 13 | 6 | 3 | 1 | 0 | 8 | 43 | 4 | 9 | 1 | 13 | 102 |
| 08:30 AM | 0 | 49 | 5 | 4 | 0 | 1 | 5 | 23 | 8 | 11 | 0 | 12 | 118 |
| 08:45 AM | 2 | 29 | 10 | 3 | 1 | 0 | 6 | 14 | 4 | 5 | 0 | 12 | 86 |
| Total | 4 | 114 | 23 | 14 | 2 | 1 | 27 | 108 | 20 | 29 | 2 | 54 | 398 |
| Grand Total | 7 | 255 | 41 | 26 | 2 | 3 | 40 | 246 | 47 | 71 | 4 | 148 | 890 |
| Apprch % | 2.3 | 84.2 | 13.5 | 83.9 | 6.5 | 9.7 | 12 | 73.9 | 14.1 | 31.8 | 1.8 | 66.4 | |
| Total % | 0.8 | 28.7 | 4.6 | 2.9 | 0.2 | 0.3 | 4.5 | 27.6 | 5.3 | 8 | 0.4 | 16.6 | |
| Cars | 6 | 249 | 39 | 12 | 2 | 3 | 37 | 242 | 36 | 69 | 2 | 147 | 844 |
| % Cars | 85.7 | 97.6 | 95.1 | 46.2 | 100 | 100 | 92.5 | 98.4 | 76.6 | 97.2 | 50 | 99.3 | 94.8 |
| Trucks | 1 | 6 | 2 | 14 | 0 | 0 | 3 | 4 | 11 | 2 | 2 | 1 | 46 |
| % Trucks | 14.3 | 2.4 | 4.9 | 53.8 | 0 | 0 | 7.5 | 1.6 | 23.4 | 2.8 | 50 | 0.7 | 5.2 |

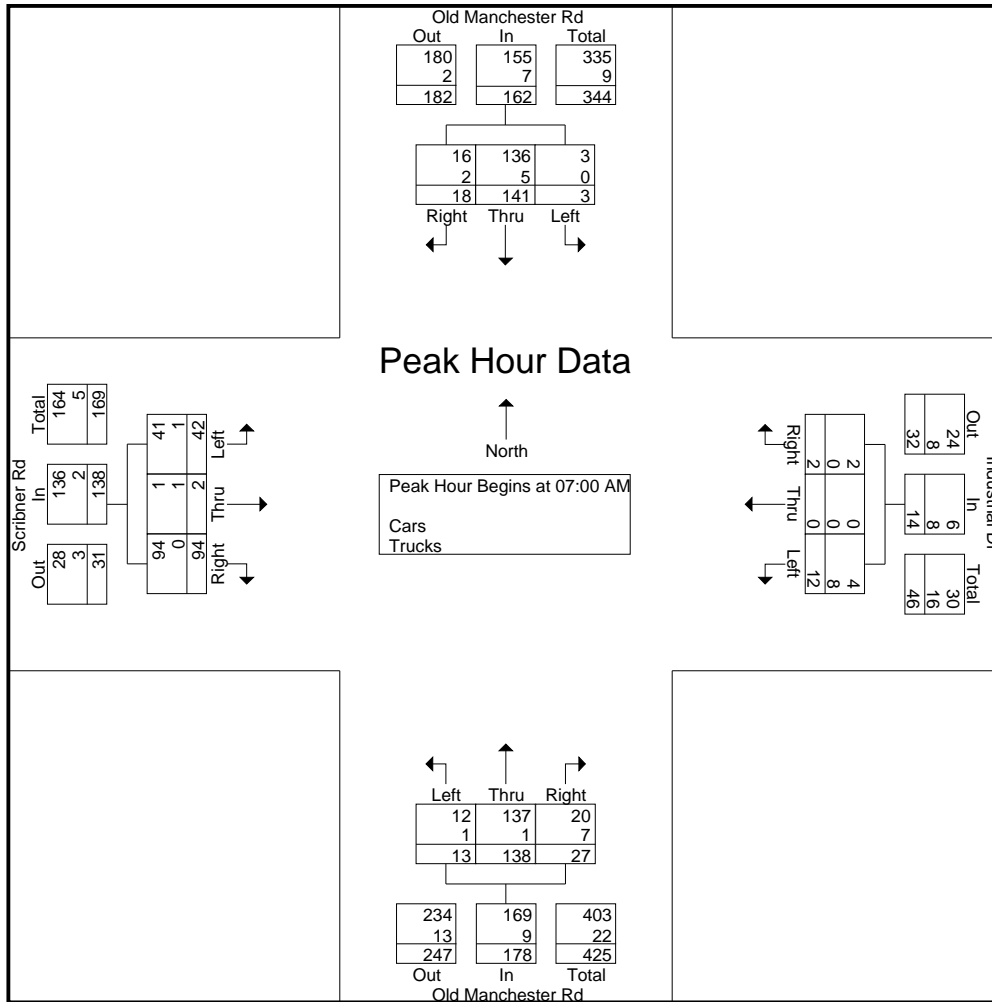
| Start Time | Old Manchester Rd From North | | | | Industrial Dr From East | | | | Old Manchester Rd From South | | | | Scribner Rd From West | | | | Int. Total |
|--|---------------------------------|------------|-----------|------------|----------------------------|----------|----------|------------|---------------------------------|------------|-----------|------------|--------------------------|----------|-----------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:00 AM | | | | | | | | | | | | | | | | | |
| 07:00 AM | 1 | 25 | 3 | 29 | 3 | 0 | 0 | 3 | 3 | 36 | 7 | 46 | 14 | 0 | 20 | 34 | 112 |
| 07:15 AM | 0 | 34 | 3 | 37 | 1 | 0 | 0 | 1 | 3 | 37 | 7 | 47 | 12 | 0 | 28 | 40 | 125 |
| 07:30 AM | 2 | 34 | 4 | 40 | 2 | 0 | 0 | 2 | 5 | 27 | 9 | 41 | 10 | 1 | 24 | 35 | 118 |
| 07:45 AM | 0 | 48 | 8 | 56 | 6 | 0 | 2 | 8 | 2 | 38 | 4 | 44 | 6 | 1 | 22 | 29 | 137 |
| Total Volume | 3 | 141 | 18 | 162 | 12 | 0 | 2 | 14 | 13 | 138 | 27 | 178 | 42 | 2 | 94 | 138 | 492 |
| % App. Total | 1.9 | 87 | 11.1 | | 85.7 | 0 | 14.3 | | 7.3 | 77.5 | 15.2 | | 30.4 | 1.4 | 68.1 | | |
| PHF | .375 | .734 | .563 | .723 | .500 | .000 | .250 | .438 | .650 | .908 | .750 | .947 | .750 | .500 | .839 | .863 | .898 |
| Cars | 3 | 136 | 16 | 155 | 4 | 0 | 2 | 6 | 12 | 137 | 20 | 169 | 41 | 1 | 94 | 136 | 466 |
| % Cars | 100 | 96.5 | 88.9 | 95.7 | 33.3 | 0 | 100 | 42.9 | 92.3 | 99.3 | 74.1 | 94.9 | 97.6 | 50.0 | 100 | 98.6 | 94.7 |
| Trucks | 0 | 5 | 2 | 7 | 8 | 0 | 0 | 8 | 1 | 1 | 7 | 9 | 1 | 1 | 0 | 2 | 26 |
| % Trucks | 0 | 3.5 | 11.1 | 4.3 | 66.7 | 0 | 0 | 57.1 | 7.7 | 0.7 | 25.9 | 5.1 | 2.4 | 50.0 | 0 | 1.4 | 5.3 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Industrial Dr / Scribner Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230001
 Site Code : 96230001
 Start Date : 2/8/2023
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 07:00 AM | | | | 07:45 AM | | | | 07:30 AM | | | | 07:00 AM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 1 | 25 | 3 | 29 | 6 | 0 | 2 | 8 | 5 | 27 | 9 | 41 | 14 | 0 | 20 | 34 |
| +15 mins. | 0 | 34 | 3 | 37 | 4 | 0 | 0 | 4 | 2 | 38 | 4 | 44 | 12 | 0 | 28 | 40 |
| +30 mins. | 2 | 34 | 4 | 40 | 3 | 1 | 0 | 4 | 8 | 28 | 4 | 40 | 10 | 1 | 24 | 35 |
| +45 mins. | 0 | 48 | 8 | 56 | 4 | 0 | 1 | 5 | 8 | 43 | 4 | 55 | 6 | 1 | 22 | 29 |
| Total Volume | 3 | 141 | 18 | 162 | 17 | 1 | 3 | 21 | 23 | 136 | 21 | 180 | 42 | 2 | 94 | 138 |
| % App. Total | 1.9 | 87 | 11.1 | | 81 | 4.8 | 14.3 | | 12.8 | 75.6 | 11.7 | | 30.4 | 1.4 | 68.1 | |
| PHF | .375 | .734 | .563 | .723 | .708 | .250 | .375 | .656 | .719 | .791 | .583 | .818 | .750 | .500 | .839 | .863 |
| Cars | 3 | 136 | 16 | 155 | 8 | 1 | 3 | 12 | 21 | 133 | 17 | 171 | 41 | 1 | 94 | 136 |
| % Cars | 100 | 96.5 | 88.9 | 95.7 | 47.1 | 100 | 100 | 57.1 | 91.3 | 97.8 | 81 | 95 | 97.6 | 50 | 100 | 98.6 |
| Trucks | 0 | 5 | 2 | 7 | 9 | 0 | 0 | 9 | 2 | 3 | 4 | 9 | 1 | 1 | 0 | 2 |
| % Trucks | 0 | 3.5 | 11.1 | 4.3 | 52.9 | 0 | 0 | 42.9 | 8.7 | 2.2 | 19 | 5 | 2.4 | 50 | 0 | 1.4 |

Accurate Counts

978-664-2565

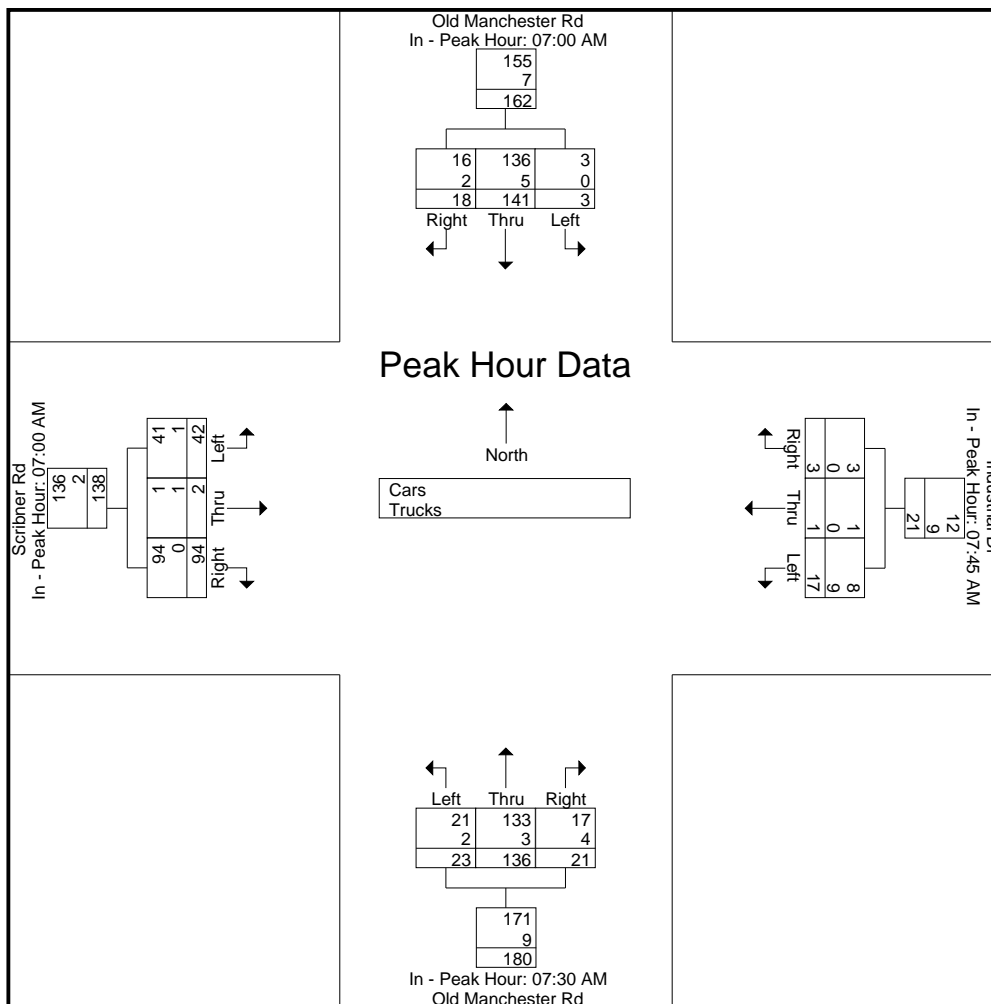
File Name : 96230001

Site Code : 96230001

Start Date : 2/8/2023

Page No : 3

N/S Street : Old Manchester Road
 E/W Street : Industrial Dr / Scribner Rd
 City/State : Raymond, NH
 Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Industrial Dr / Scribner Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230001
 Site Code : 96230001
 Start Date : 2/8/2023
 Page No : 4

Groups Printed- Cars

| Start Time | Old Manchester Rd From North | | | Industrial Dr From East | | | Old Manchester Rd From South | | | Scribner Rd From West | | | Int. Total |
|--------------------|---------------------------------|------------|-----------|----------------------------|----------|----------|---------------------------------|------------|-----------|--------------------------|----------|------------|------------|
| | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | |
| 07:00 AM | 1 | 24 | 2 | 2 | 0 | 0 | 3 | 36 | 6 | 14 | 0 | 20 | 108 |
| 07:15 AM | 0 | 33 | 3 | 0 | 0 | 0 | 3 | 37 | 5 | 12 | 0 | 28 | 121 |
| 07:30 AM | 2 | 33 | 4 | 0 | 0 | 0 | 5 | 26 | 6 | 9 | 0 | 24 | 109 |
| 07:45 AM | 0 | 46 | 7 | 2 | 0 | 2 | 1 | 38 | 3 | 6 | 1 | 22 | 128 |
| Total | 3 | 136 | 16 | 4 | 0 | 2 | 12 | 137 | 20 | 41 | 1 | 94 | 466 |
| 08:00 AM | 1 | 22 | 2 | 1 | 0 | 0 | 8 | 28 | 4 | 4 | 0 | 17 | 87 |
| 08:15 AM | 1 | 13 | 6 | 1 | 1 | 0 | 7 | 41 | 4 | 9 | 1 | 12 | 96 |
| 08:30 AM | 0 | 49 | 5 | 4 | 0 | 1 | 5 | 23 | 7 | 10 | 0 | 12 | 116 |
| 08:45 AM | 1 | 29 | 10 | 2 | 1 | 0 | 5 | 13 | 1 | 5 | 0 | 12 | 79 |
| Total | 3 | 113 | 23 | 8 | 2 | 1 | 25 | 105 | 16 | 28 | 1 | 53 | 378 |
| Grand Total | 6 | 249 | 39 | 12 | 2 | 3 | 37 | 242 | 36 | 69 | 2 | 147 | 844 |
| Apprch % | 2 | 84.7 | 13.3 | 70.6 | 11.8 | 17.6 | 11.7 | 76.8 | 11.4 | 31.7 | 0.9 | 67.4 | |
| Total % | 0.7 | 29.5 | 4.6 | 1.4 | 0.2 | 0.4 | 4.4 | 28.7 | 4.3 | 8.2 | 0.2 | 17.4 | |

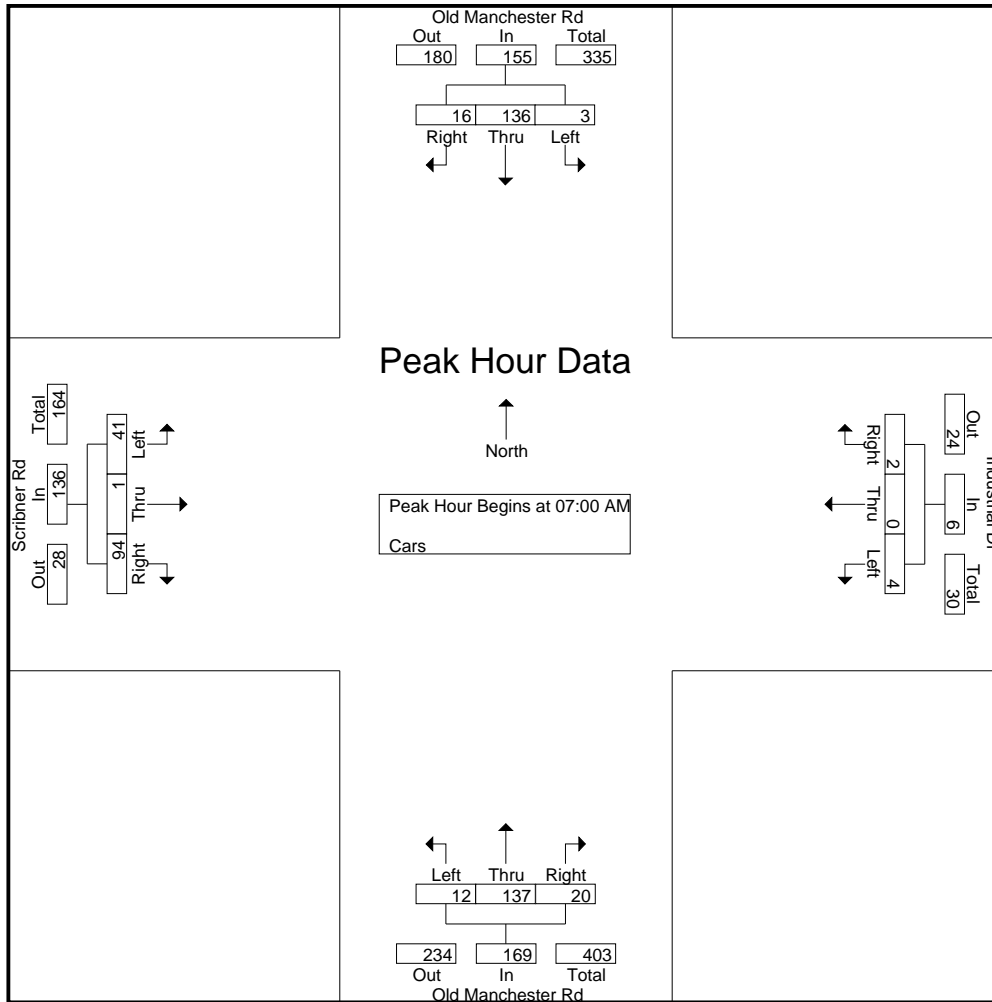
| Start Time | Old Manchester Rd From North | | | | Industrial Dr From East | | | | Old Manchester Rd From South | | | | Scribner Rd From West | | | | Int. Total |
|--|---------------------------------|-------------|-------------|------------|----------------------------|----------|-------------|------------|---------------------------------|-------------|-------------|------------|--------------------------|------------|-------------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:00 AM | | | | | | | | | | | | | | | | | |
| 07:00 AM | 1 | 24 | 2 | 27 | 2 | 0 | 0 | 2 | 3 | 36 | 6 | 45 | 14 | 0 | 20 | 34 | 108 |
| 07:15 AM | 0 | 33 | 3 | 36 | 0 | 0 | 0 | 0 | 3 | 37 | 5 | 45 | 12 | 0 | 28 | 40 | 121 |
| 07:30 AM | 2 | 33 | 4 | 39 | 0 | 0 | 0 | 0 | 5 | 26 | 6 | 37 | 9 | 0 | 24 | 33 | 109 |
| 07:45 AM | 0 | 46 | 7 | 53 | 2 | 0 | 2 | 4 | 1 | 38 | 3 | 42 | 6 | 1 | 22 | 29 | 128 |
| Total Volume | 3 | 136 | 16 | 155 | 4 | 0 | 2 | 6 | 12 | 137 | 20 | 169 | 41 | 1 | 94 | 136 | 466 |
| % App. Total | 1.9 | 87.7 | 10.3 | | 66.7 | 0 | 33.3 | | 7.1 | 81.1 | 11.8 | | 30.1 | 0.7 | 69.1 | | |
| PHF | .375 | .739 | .571 | .731 | .500 | .000 | .250 | .375 | .600 | .901 | .833 | .939 | .732 | .250 | .839 | .850 | .910 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Industrial Dr / Scribner Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230001
 Site Code : 96230001
 Start Date : 2/8/2023
 Page No : 5



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

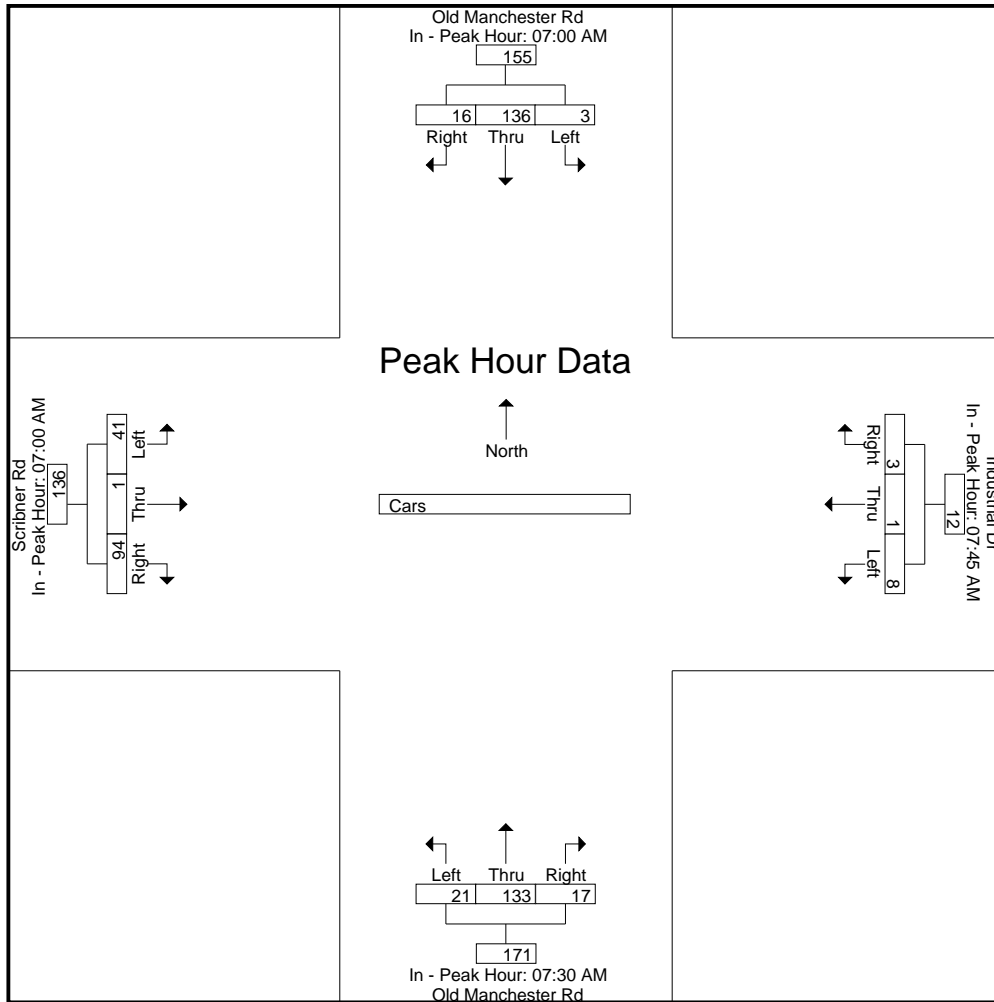
| | 07:00 AM | | | | 07:45 AM | | | | 07:30 AM | | | | 07:00 AM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 1 | 24 | 2 | 27 | 2 | 0 | 2 | 4 | 5 | 26 | 6 | 37 | 14 | 0 | 20 | 34 |
| +15 mins. | 0 | 33 | 3 | 36 | 1 | 0 | 0 | 1 | 1 | 38 | 3 | 42 | 12 | 0 | 28 | 40 |
| +30 mins. | 2 | 33 | 4 | 39 | 1 | 1 | 0 | 2 | 8 | 28 | 4 | 40 | 9 | 0 | 24 | 33 |
| +45 mins. | 0 | 46 | 7 | 53 | 4 | 0 | 1 | 5 | 7 | 41 | 4 | 52 | 6 | 1 | 22 | 29 |
| Total Volume | 3 | 136 | 16 | 155 | 8 | 1 | 3 | 12 | 21 | 133 | 17 | 171 | 41 | 1 | 94 | 136 |
| % App. Total | 1.9 | 87.7 | 10.3 | | 66.7 | 8.3 | 25 | | 12.3 | 77.8 | 9.9 | | 30.1 | 0.7 | 69.1 | |
| PHF | .375 | .739 | .571 | .731 | .500 | .250 | .375 | .600 | .656 | .811 | .708 | .822 | .732 | .250 | .839 | .850 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
E/W Street : Industrial Dr / Scribner Rd
City/State : Raymond, NH
Weather : Clear

File Name : 96230001
Site Code : 96230001
Start Date : 2/8/2023
Page No : 6



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Industrial Dr / Scribner Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230001
 Site Code : 96230001
 Start Date : 2/8/2023
 Page No : 7

Groups Printed- Trucks

| Start Time | Old Manchester Rd From North | | | Industrial Dr From East | | | Old Manchester Rd From South | | | Scribner Rd From West | | | Int. Total |
|--------------------|------------------------------|----------|----------|-------------------------|----------|----------|------------------------------|----------|-----------|-----------------------|----------|----------|------------|
| | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | |
| 07:00 AM | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 |
| 07:15 AM | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 4 |
| 07:30 AM | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 3 | 1 | 1 | 0 | 9 |
| 07:45 AM | 0 | 2 | 1 | 4 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 9 |
| Total | 0 | 5 | 2 | 8 | 0 | 0 | 1 | 1 | 7 | 1 | 1 | 0 | 26 |
| 08:00 AM | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 5 |
| 08:15 AM | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 1 | 6 |
| 08:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 |
| 08:45 AM | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 3 | 0 | 0 | 0 | 7 |
| Total | 1 | 1 | 0 | 6 | 0 | 0 | 2 | 3 | 4 | 1 | 1 | 1 | 20 |
| Grand Total | 1 | 6 | 2 | 14 | 0 | 0 | 3 | 4 | 11 | 2 | 2 | 1 | 46 |
| Apprch % | 11.1 | 66.7 | 22.2 | 100 | 0 | 0 | 16.7 | 22.2 | 61.1 | 40 | 40 | 20 | |
| Total % | 2.2 | 13 | 4.3 | 30.4 | 0 | 0 | 6.5 | 8.7 | 23.9 | 4.3 | 4.3 | 2.2 | |

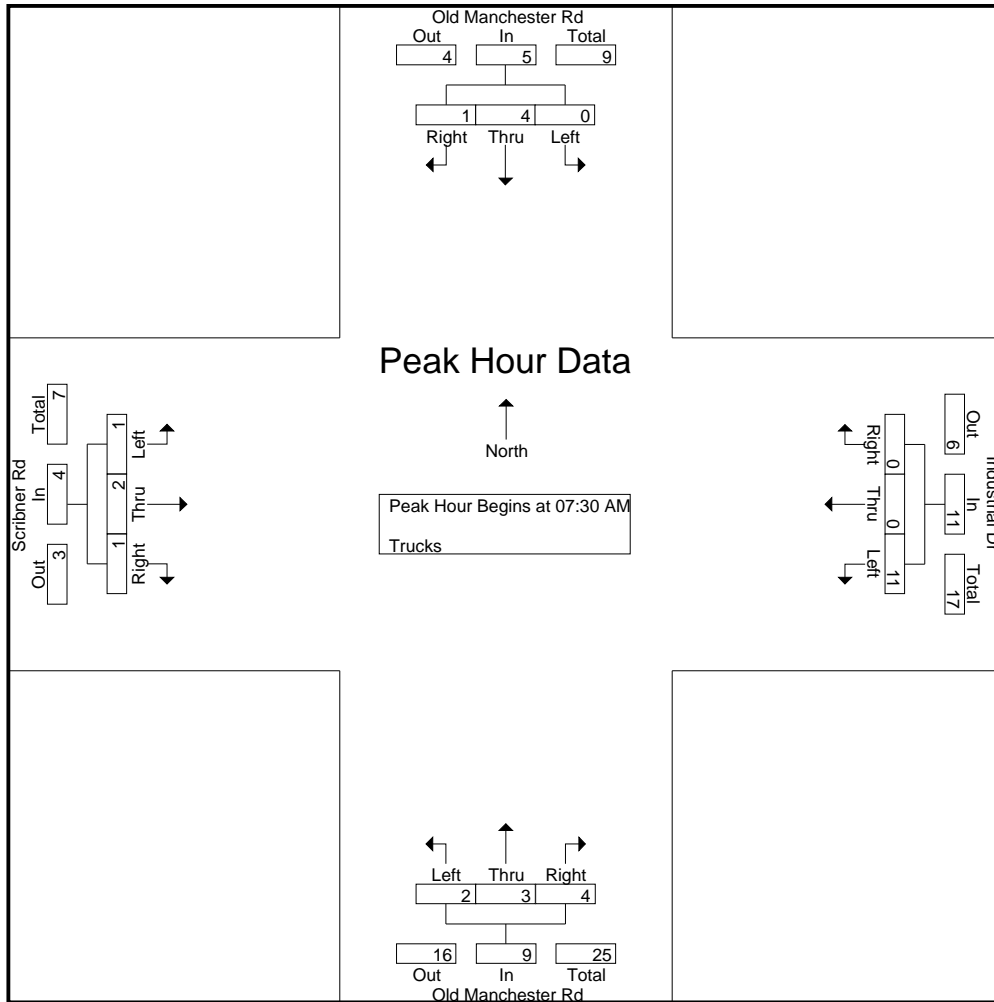
| Start Time | Old Manchester Rd From North | | | | Industrial Dr From East | | | | Old Manchester Rd From South | | | | Scribner Rd From West | | | | Int. Total |
|--|------------------------------|-----------|-----------|------------|-------------------------|----------|----------|------------|------------------------------|-------------|-------------|------------|-----------------------|-----------|-----------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:30 AM | | | | | | | | | | | | | | | | | |
| 07:30 AM | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 2 | 0 | 1 | 3 | 4 | 1 | 1 | 0 | 2 | 9 |
| 07:45 AM | 0 | 2 | 1 | 3 | 4 | 0 | 0 | 4 | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 9 |
| 08:00 AM | 0 | 1 | 0 | 1 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 5 |
| 08:15 AM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 1 | 2 | 0 | 3 | 0 | 0 | 1 | 1 | 6 |
| Total Volume | 0 | 4 | 1 | 5 | 11 | 0 | 0 | 11 | 2 | 3 | 4 | 9 | 1 | 2 | 1 | 4 | 29 |
| % App. Total | 0 | 80 | 20 | | 100 | 0 | 0 | | 22.2 | 33.3 | 44.4 | | 25 | 50 | 25 | | |
| PHF | .000 | .500 | .250 | .417 | .688 | .000 | .000 | .688 | .500 | .375 | .333 | .563 | .250 | .500 | .250 | .500 | .806 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Industrial Dr / Scribner Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230001
 Site Code : 96230001
 Start Date : 2/8/2023
 Page No : 8



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

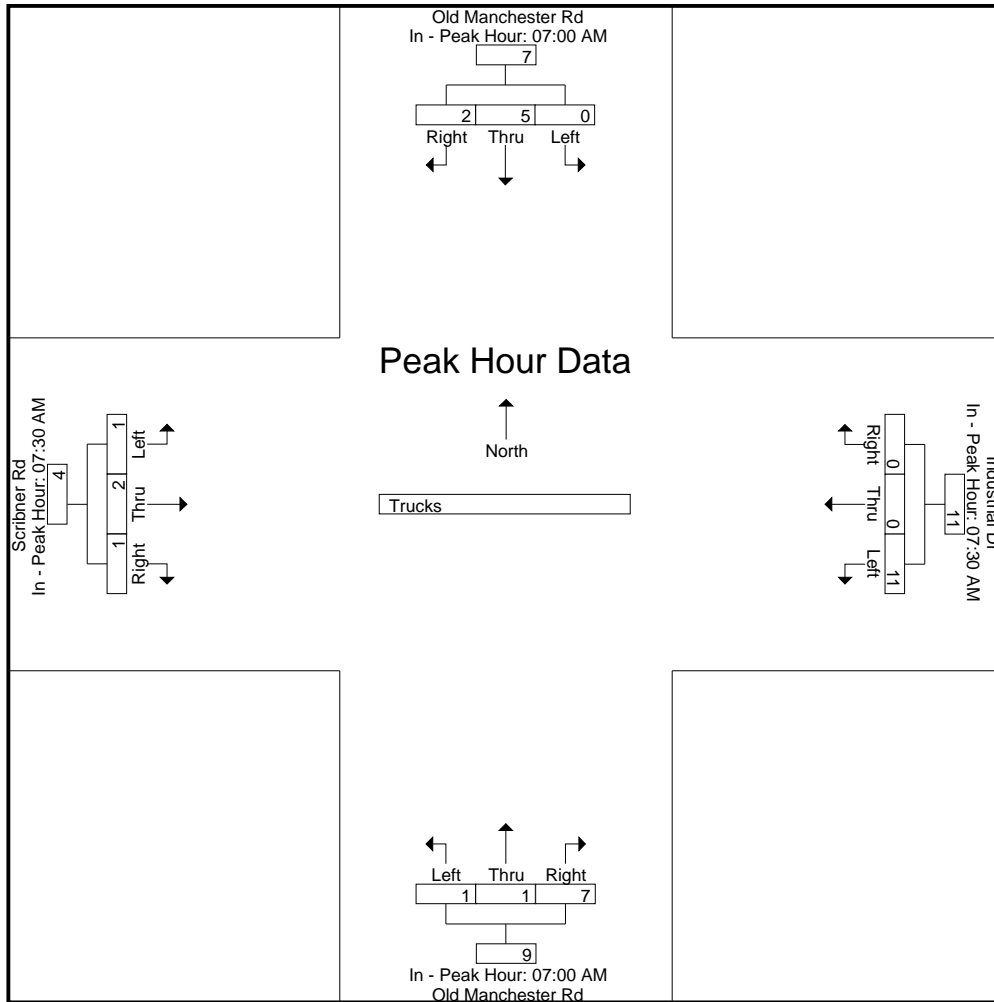
| | 07:00 AM | | | | 07:30 AM | | | | 07:00 AM | | | | 07:30 AM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 0 | 1 | 1 | 2 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 2 |
| +15 mins. | 0 | 1 | 0 | 1 | 4 | 0 | 0 | 4 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 1 | 0 | 1 | 3 | 0 | 0 | 3 | 0 | 1 | 3 | 4 | 0 | 1 | 0 | 1 |
| +45 mins. | 0 | 2 | 1 | 3 | 2 | 0 | 0 | 2 | 1 | 0 | 1 | 2 | 0 | 0 | 1 | 1 |
| Total Volume | 0 | 5 | 2 | 7 | 11 | 0 | 0 | 11 | 1 | 1 | 7 | 9 | 1 | 2 | 1 | 4 |
| % App. Total | 0 | 71.4 | 28.6 | | 100 | 0 | 0 | | 11.1 | 11.1 | 77.8 | | 25 | 50 | 25 | |
| PHF | .000 | .625 | .500 | .583 | .688 | .000 | .000 | .688 | .250 | .250 | .583 | .563 | .250 | .500 | .250 | .500 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Industrial Dr / Scribner Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230001
 Site Code : 96230001
 Start Date : 2/8/2023
 Page No : 9



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Industrial Dr / Scribner Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230001
 Site Code : 96230001
 Start Date : 2/8/2023
 Page No : 10

Groups Printed- Bikes Peds

| Start Time | Old Manchester Rd From North | | | | Industrial Dr From East | | | | Old Manchester Rd From South | | | | Scribner Rd From West | | | | Exclu. Total | Inclu. Total | Int. Total |
|--------------------|------------------------------|------|-------|------|-------------------------|------|-------|------|------------------------------|------|-------|------|-----------------------|------|-------|------|--------------|--------------|------------|
| | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | | | |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 08:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Apprch % | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | | | |
| Total % | | | | | | | | | | | | | | | | | 100 | 0 | |

| Start Time | Old Manchester Rd From North | | | | Industrial Dr From East | | | | Old Manchester Rd From South | | | | Scribner Rd From West | | | | Int. Total | |
|--|------------------------------|------|-------|------------|-------------------------|------|-------|------------|------------------------------|------|-------|------------|-----------------------|------|-------|------------|------------|------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:00 AM | | | | | | | | | | | | | | | | | | |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | | |
| PHF | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |

Accurate Counts

978-664-2565

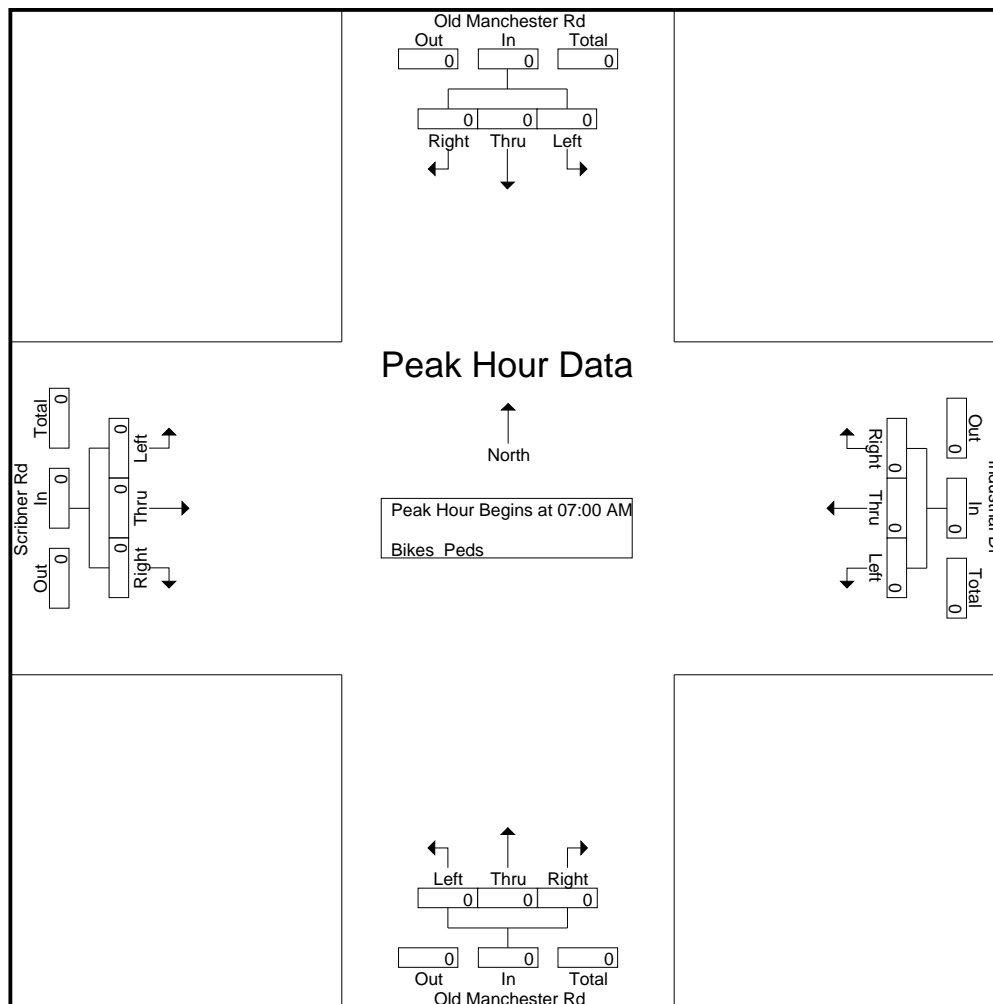
File Name : 96230001

Site Code : 96230001

Start Date : 2/8/2023

Page No : 11

N/S Street : Old Manchester Road
 E/W Street : Industrial Dr / Scribner Rd
 City/State : Raymond, NH
 Weather : Clear



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 07:00 AM | | | | 07:00 AM | | | | 07:00 AM | | | | 07:00 AM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PHF | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |

Accurate Counts

978-664-2565

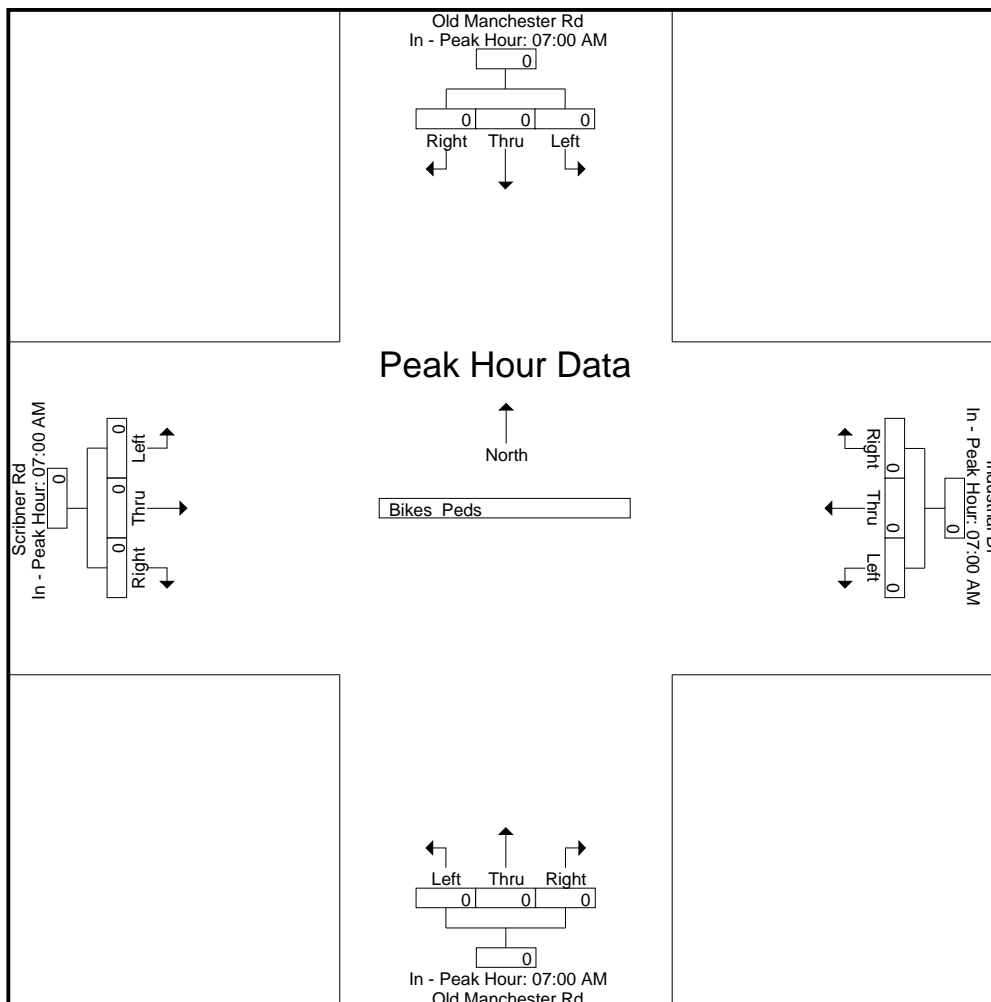
File Name : 96230001

Site Code : 96230001

Start Date : 2/8/2023

Page No : 12

N/S Street : Old Manchester Road
E/W Street : Industrial Dr / Scribner Rd
City/State : Raymond, NH
Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Industrial Dr / Scribner Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230001
 Site Code : 96230001
 Start Date : 2/8/2023
 Page No : 1

Groups Printed- Cars - Trucks

| Start Time | Old Manchester Rd From North | | | Industrial Dr From East | | | Old Manchester Rd From South | | | Scribner Rd From West | | | Int. Total |
|--------------------|---------------------------------|------------|-----------|----------------------------|----------|-----------|---------------------------------|------------|-----------|--------------------------|----------|-----------|------------|
| | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | |
| 04:00 PM | 0 | 37 | 14 | 11 | 0 | 1 | 18 | 33 | 1 | 7 | 0 | 8 | 130 |
| 04:15 PM | 1 | 24 | 5 | 7 | 0 | 5 | 18 | 37 | 1 | 6 | 0 | 6 | 110 |
| 04:30 PM | 1 | 46 | 12 | 6 | 1 | 3 | 15 | 32 | 7 | 3 | 0 | 4 | 130 |
| 04:45 PM | 0 | 19 | 12 | 9 | 1 | 1 | 23 | 40 | 0 | 8 | 0 | 5 | 118 |
| Total | 2 | 126 | 43 | 33 | 2 | 10 | 74 | 142 | 9 | 24 | 0 | 23 | 488 |
| 05:00 PM | 0 | 32 | 5 | 3 | 1 | 0 | 23 | 37 | 1 | 6 | 1 | 12 | 121 |
| 05:15 PM | 0 | 28 | 8 | 2 | 0 | 3 | 26 | 36 | 3 | 5 | 0 | 10 | 121 |
| 05:30 PM | 0 | 26 | 10 | 1 | 0 | 0 | 10 | 39 | 1 | 5 | 0 | 11 | 103 |
| 05:45 PM | 0 | 24 | 8 | 1 | 1 | 0 | 13 | 34 | 2 | 6 | 1 | 5 | 95 |
| Total | 0 | 110 | 31 | 7 | 2 | 3 | 72 | 146 | 7 | 22 | 2 | 38 | 440 |
| Grand Total | 2 | 236 | 74 | 40 | 4 | 13 | 146 | 288 | 16 | 46 | 2 | 61 | 928 |
| Apprch % | 0.6 | 75.6 | 23.7 | 70.2 | 7 | 22.8 | 32.4 | 64 | 3.6 | 42.2 | 1.8 | 56 | |
| Total % | 0.2 | 25.4 | 8 | 4.3 | 0.4 | 1.4 | 15.7 | 31 | 1.7 | 5 | 0.2 | 6.6 | |
| Cars | 2 | 235 | 74 | 40 | 3 | 13 | 146 | 288 | 11 | 46 | 1 | 60 | 919 |
| % Cars | 100 | 99.6 | 100 | 100 | 75 | 100 | 100 | 100 | 68.8 | 100 | 50 | 98.4 | 99 |
| Trucks | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 5 | 0 | 1 | 1 | 9 |
| % Trucks | 0 | 0.4 | 0 | 0 | 25 | 0 | 0 | 0 | 31.2 | 0 | 50 | 1.6 | 1 |

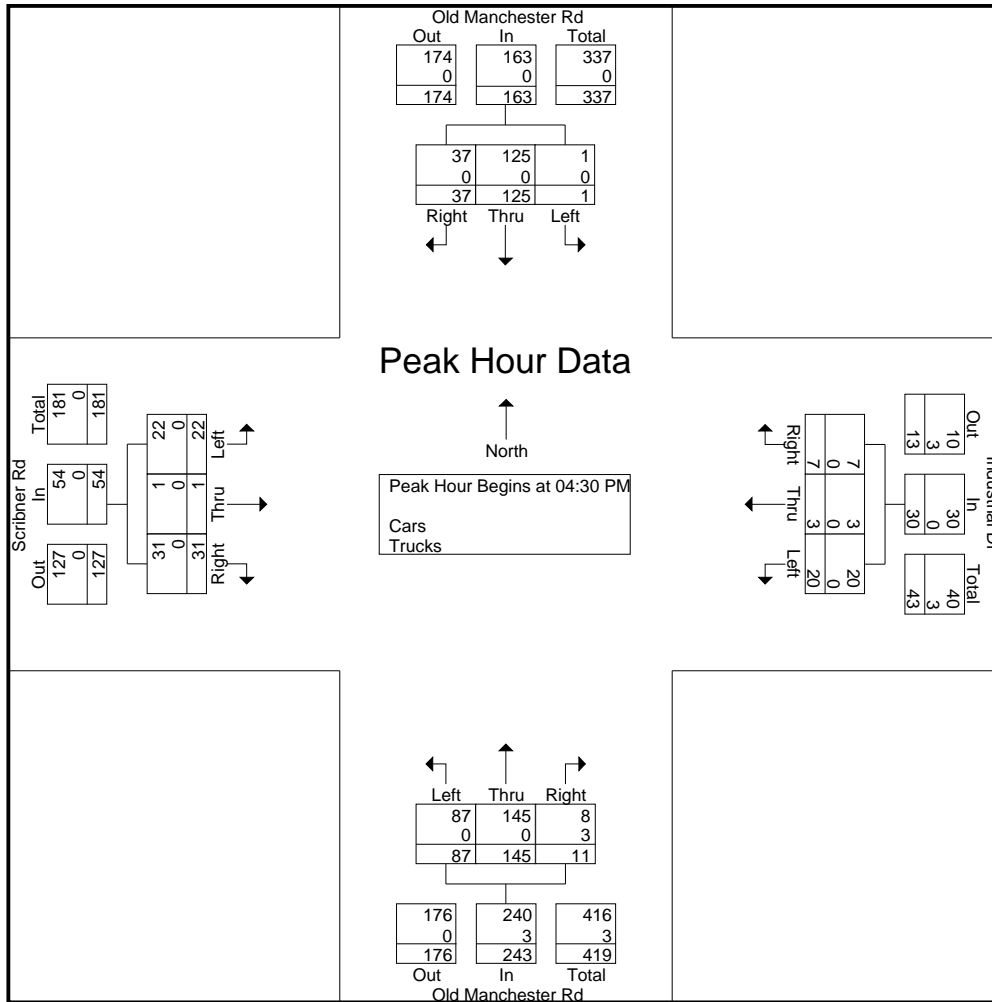
| Start Time | Old Manchester Rd From North | | | | Industrial Dr From East | | | | Old Manchester Rd From South | | | | Scribner Rd From West | | | | Int. Total |
|--|---------------------------------|-----------|-----------|------------|----------------------------|------|-------|------------|---------------------------------|------|-------|------------|--------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:30 PM | | | | | | | | | | | | | | | | | |
| 04:30 PM | 1 | 46 | 12 | 59 | 6 | 1 | 3 | 10 | 15 | 32 | 7 | 54 | 3 | 0 | 4 | 7 | 130 |
| 04:45 PM | 0 | 19 | 12 | 31 | 9 | 1 | 1 | 11 | 23 | 40 | 0 | 63 | 8 | 0 | 5 | 13 | 118 |
| 05:00 PM | 0 | 32 | 5 | 37 | 3 | 1 | 0 | 4 | 23 | 37 | 1 | 61 | 6 | 1 | 12 | 19 | 121 |
| 05:15 PM | 0 | 28 | 8 | 36 | 2 | 0 | 3 | 5 | 26 | 36 | 3 | 65 | 5 | 0 | 10 | 15 | 121 |
| Total Volume | 1 | 125 | 37 | 163 | 20 | 3 | 7 | 30 | 87 | 145 | 11 | 243 | 22 | 1 | 31 | 54 | 490 |
| % App. Total | 0.6 | 76.7 | 22.7 | | 66.7 | 10 | 23.3 | | 35.8 | 59.7 | 4.5 | | 40.7 | 1.9 | 57.4 | | |
| PHF | .250 | .679 | .771 | .691 | .556 | .750 | .583 | .682 | .837 | .906 | .393 | .935 | .688 | .250 | .646 | .711 | .942 |
| Cars | 1 | 125 | 37 | 163 | 20 | 3 | 7 | 30 | 87 | 145 | 8 | 240 | 22 | 1 | 31 | 54 | 487 |
| % Cars | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 72.7 | 98.8 | 100 | 100 | 100 | 100 | 99.4 |
| Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 3 |
| % Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27.3 | 1.2 | 0 | 0 | 0 | 0 | 0.6 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Industrial Dr / Scribner Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230001
 Site Code : 96230001
 Start Date : 2/8/2023
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

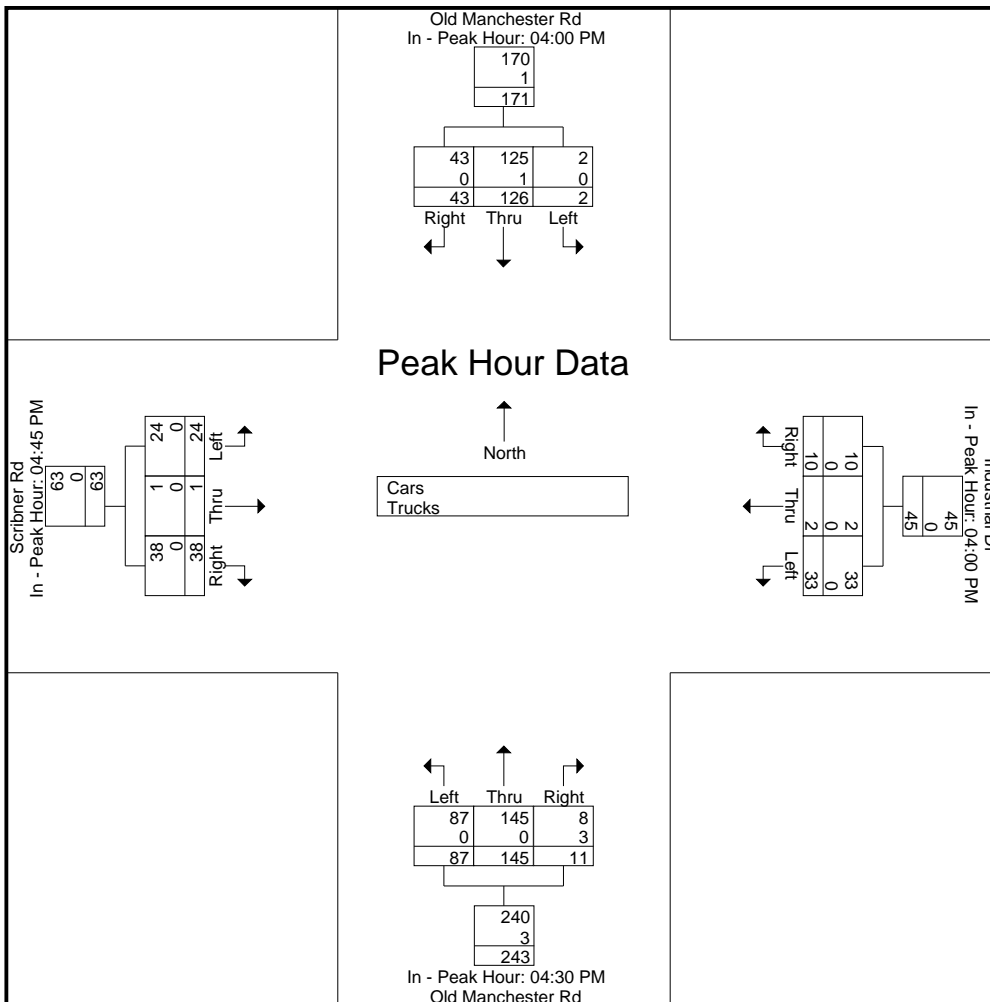
| | 04:00 PM | | | | 04:30 PM | | | | 04:45 PM | | | | | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|------|------|------|------|
| +0 mins. | 0 | 37 | 14 | 51 | 11 | 0 | 1 | 12 | 15 | 32 | 7 | 54 | 8 | 0 | 5 | 13 |
| +15 mins. | 1 | 24 | 5 | 30 | 7 | 0 | 5 | 12 | 23 | 40 | 0 | 63 | 6 | 1 | 12 | 19 |
| +30 mins. | 1 | 46 | 12 | 59 | 6 | 1 | 3 | 10 | 23 | 37 | 1 | 61 | 5 | 0 | 10 | 15 |
| +45 mins. | 0 | 19 | 12 | 31 | 9 | 1 | 1 | 11 | 26 | 36 | 3 | 65 | 5 | 0 | 11 | 16 |
| Total Volume | 2 | 126 | 43 | 171 | 33 | 2 | 10 | 45 | 87 | 145 | 11 | 243 | 24 | 1 | 38 | 63 |
| % App. Total | 1.2 | 73.7 | 25.1 | | 73.3 | 4.4 | 22.2 | | 35.8 | 59.7 | 4.5 | | 38.1 | 1.6 | 60.3 | |
| PHF | .500 | .685 | .768 | .725 | .750 | .500 | .500 | .938 | .837 | .906 | .393 | .935 | .750 | .250 | .792 | .829 |
| Cars | 2 | 125 | 43 | 170 | 33 | 2 | 10 | 45 | 87 | 145 | 8 | 240 | 24 | 1 | 38 | 63 |
| % Cars | 100 | 99.2 | 100 | 99.4 | 100 | 100 | 100 | 100 | 100 | 100 | 72.7 | 98.8 | 100 | 100 | 100 | 100 |
| Trucks | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 |
| % Trucks | 0 | 0.8 | 0 | 0.6 | 0 | 0 | 0 | 0 | 0 | 0 | 27.3 | 1.2 | 0 | 0 | 0 | 0 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Industrial Dr / Scribner Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230001
 Site Code : 96230001
 Start Date : 2/8/2023
 Page No : 3



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Industrial Dr / Scribner Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230001
 Site Code : 96230001
 Start Date : 2/8/2023
 Page No : 4

Groups Printed- Cars

| Start Time | Old Manchester Rd From North | | | Industrial Dr From East | | | Old Manchester Rd From South | | | Scribner Rd From West | | | Int. Total |
|--------------------|---------------------------------|------------|-----------|----------------------------|----------|-----------|---------------------------------|------------|-----------|--------------------------|----------|-----------|------------|
| | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | |
| 04:00 PM | 0 | 36 | 14 | 11 | 0 | 1 | 18 | 33 | 0 | 7 | 0 | 7 | 127 |
| 04:15 PM | 1 | 24 | 5 | 7 | 0 | 5 | 18 | 37 | 1 | 6 | 0 | 6 | 110 |
| 04:30 PM | 1 | 46 | 12 | 6 | 1 | 3 | 15 | 32 | 4 | 3 | 0 | 4 | 127 |
| 04:45 PM | 0 | 19 | 12 | 9 | 1 | 1 | 23 | 40 | 0 | 8 | 0 | 5 | 118 |
| Total | 2 | 125 | 43 | 33 | 2 | 10 | 74 | 142 | 5 | 24 | 0 | 22 | 482 |
| 05:00 PM | 0 | 32 | 5 | 3 | 1 | 0 | 23 | 37 | 1 | 6 | 1 | 12 | 121 |
| 05:15 PM | 0 | 28 | 8 | 2 | 0 | 3 | 26 | 36 | 3 | 5 | 0 | 10 | 121 |
| 05:30 PM | 0 | 26 | 10 | 1 | 0 | 0 | 10 | 39 | 1 | 5 | 0 | 11 | 103 |
| 05:45 PM | 0 | 24 | 8 | 1 | 0 | 0 | 13 | 34 | 1 | 6 | 0 | 5 | 92 |
| Total | 0 | 110 | 31 | 7 | 1 | 3 | 72 | 146 | 6 | 22 | 1 | 38 | 437 |
| Grand Total | 2 | 235 | 74 | 40 | 3 | 13 | 146 | 288 | 11 | 46 | 1 | 60 | 919 |
| Apprch % | 0.6 | 75.6 | 23.8 | 71.4 | 5.4 | 23.2 | 32.8 | 64.7 | 2.5 | 43 | 0.9 | 56.1 | |
| Total % | 0.2 | 25.6 | 8.1 | 4.4 | 0.3 | 1.4 | 15.9 | 31.3 | 1.2 | 5 | 0.1 | 6.5 | |

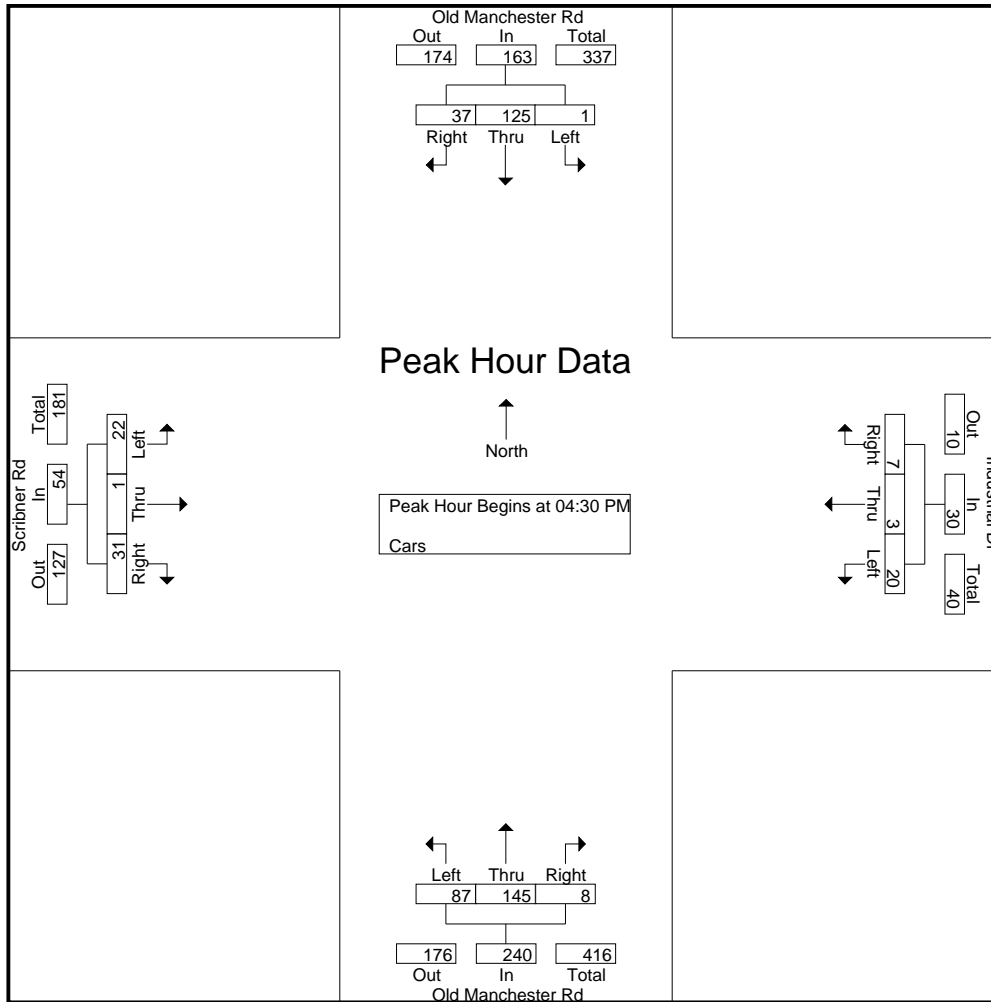
| Start Time | Old Manchester Rd From North | | | | Industrial Dr From East | | | | Old Manchester Rd From South | | | | Scribner Rd From West | | | | Int. Total |
|--|---------------------------------|------------|-----------|------------|----------------------------|----------|----------|------------|---------------------------------|------------|----------|------------|--------------------------|----------|-----------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:30 PM | | | | | | | | | | | | | | | | | |
| 04:30 PM | 1 | 46 | 12 | 59 | 6 | 1 | 3 | 10 | 15 | 32 | 4 | 51 | 3 | 0 | 4 | 7 | 127 |
| 04:45 PM | 0 | 19 | 12 | 31 | 9 | 1 | 1 | 11 | 23 | 40 | 0 | 63 | 8 | 0 | 5 | 13 | 118 |
| 05:00 PM | 0 | 32 | 5 | 37 | 3 | 1 | 0 | 4 | 23 | 37 | 1 | 61 | 6 | 1 | 12 | 19 | 121 |
| 05:15 PM | 0 | 28 | 8 | 36 | 2 | 0 | 3 | 5 | 26 | 36 | 3 | 65 | 5 | 0 | 10 | 15 | 121 |
| Total Volume | 1 | 125 | 37 | 163 | 20 | 3 | 7 | 30 | 87 | 145 | 8 | 240 | 22 | 1 | 31 | 54 | 487 |
| % App. Total | 0.6 | 76.7 | 22.7 | | 66.7 | 10 | 23.3 | | 36.2 | 60.4 | 3.3 | | 40.7 | 1.9 | 57.4 | | |
| PHF | .250 | .679 | .771 | .691 | .556 | .750 | .583 | .682 | .837 | .906 | .500 | .923 | .688 | .250 | .646 | .711 | .959 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Industrial Dr / Scribner Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230001
 Site Code : 96230001
 Start Date : 2/8/2023
 Page No : 5



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 04:00 PM | | | | 04:30 PM | | | | 04:45 PM | | | | | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|------|------|------|------|
| +0 mins. | 0 | 36 | 14 | 50 | 11 | 0 | 1 | 12 | 15 | 32 | 4 | 51 | 8 | 0 | 5 | 13 |
| +15 mins. | 1 | 24 | 5 | 30 | 7 | 0 | 5 | 12 | 23 | 40 | 0 | 63 | 6 | 1 | 12 | 19 |
| +30 mins. | 1 | 46 | 12 | 59 | 6 | 1 | 3 | 10 | 23 | 37 | 1 | 61 | 5 | 0 | 10 | 15 |
| +45 mins. | 0 | 19 | 12 | 31 | 9 | 1 | 1 | 11 | 26 | 36 | 3 | 65 | 5 | 0 | 11 | 16 |
| Total Volume | 2 | 125 | 43 | 170 | 33 | 2 | 10 | 45 | 87 | 145 | 8 | 240 | 24 | 1 | 38 | 63 |
| % App. Total | 1.2 | 73.5 | 25.3 | | 73.3 | 4.4 | 22.2 | | 36.2 | 60.4 | 3.3 | | 38.1 | 1.6 | 60.3 | |
| PHF | .500 | .679 | .768 | .720 | .750 | .500 | .500 | .938 | .837 | .906 | .500 | .923 | .750 | .250 | .792 | .829 |

Accurate Counts

978-664-2565

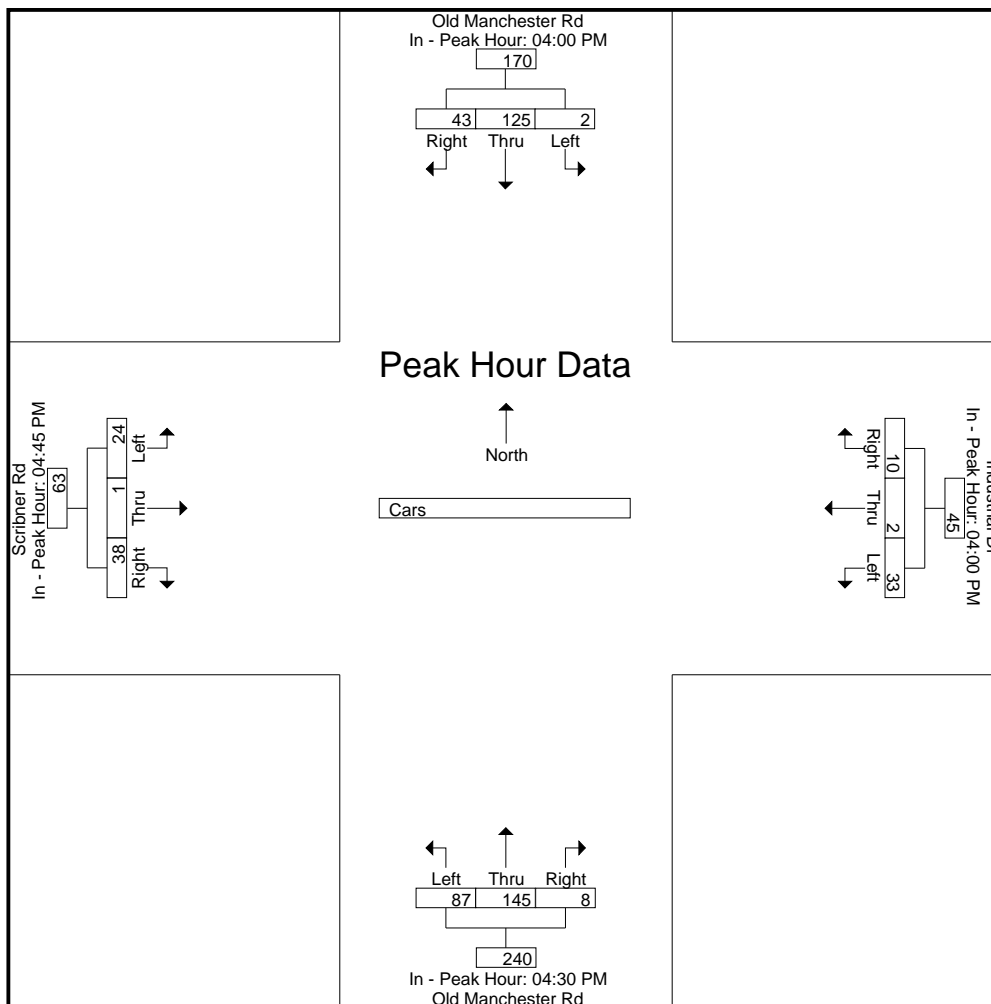
File Name : 96230001

Site Code : 96230001

Start Date : 2/8/2023

Page No : 6

N/S Street : Old Manchester Road
E/W Street : Industrial Dr / Scribner Rd
City/State : Raymond, NH
Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Industrial Dr / Scribner Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230001
 Site Code : 96230001
 Start Date : 2/8/2023
 Page No : 7

Groups Printed- Trucks

| Start Time | Old Manchester Rd From North | | | Industrial Dr From East | | | Old Manchester Rd From South | | | Scribner Rd From West | | | Int. Total |
|--------------------|---------------------------------|----------|----------|----------------------------|----------|----------|---------------------------------|----------|----------|--------------------------|----------|----------|------------|
| | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | |
| 04:00 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 3 |
| 04:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| 04:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 1 | 6 |
| 05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:45 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 3 |
| Total | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 3 |
| Grand Total | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 5 | 0 | 1 | 1 | 9 |
| Apprch % | 0 | 100 | 0 | 0 | 100 | 0 | 0 | 0 | 100 | 0 | 50 | 50 | |
| Total % | 0 | 11.1 | 0 | 0 | 11.1 | 0 | 0 | 0 | 55.6 | 0 | 11.1 | 11.1 | |

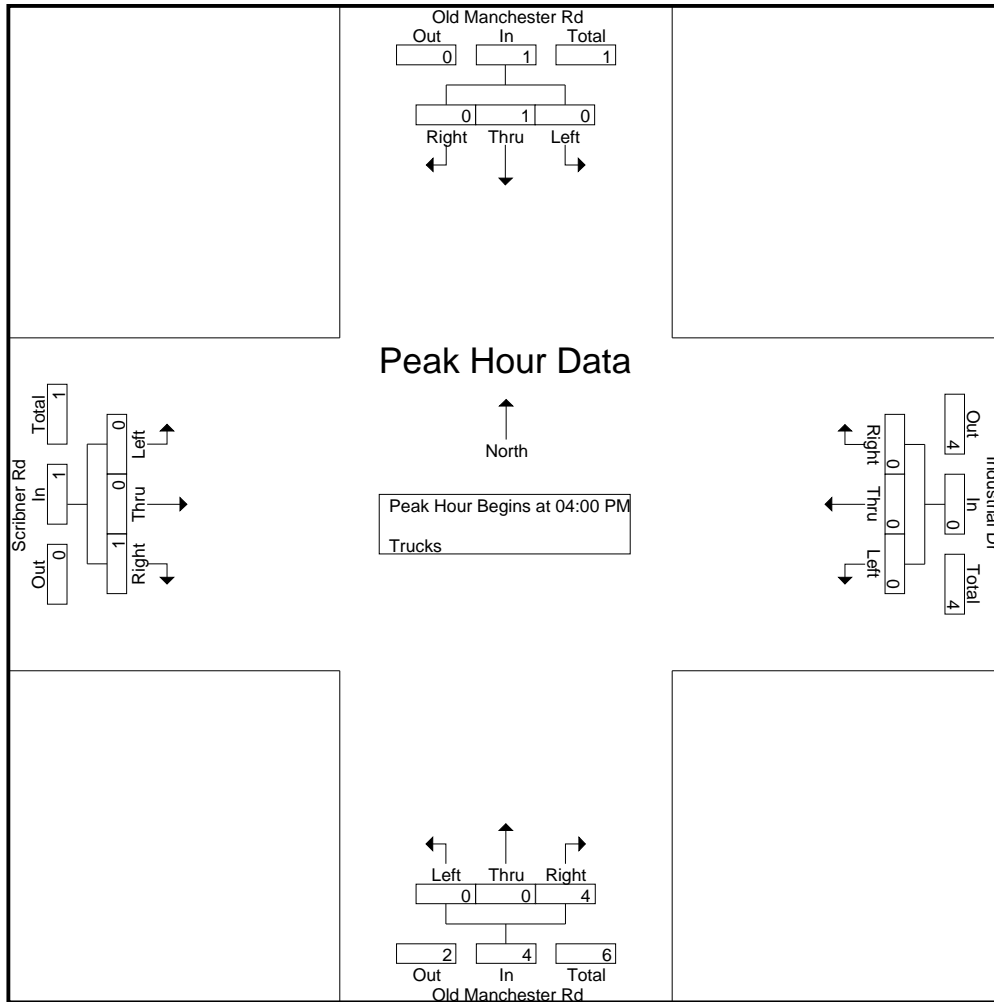
| Start Time | Old Manchester Rd From North | | | | Industrial Dr From East | | | | Old Manchester Rd From South | | | | Scribner Rd From West | | | | Int. Total | |
|--|---------------------------------|------------|----------|------------|----------------------------|----------|----------|------------|---------------------------------|----------|----------|------------|--------------------------|----------|------------|------------|------------|----------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | | |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:00 PM | | | | | | | | | | | | | | | | | | |
| 04:00 PM | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 3 |
| 04:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 3 |
| 04:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 1 | 1 | 6 |
| % App. Total | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 100 | 0 | 0 | 0 |
| PHF | .000 | .250 | .000 | .250 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .333 | .333 | .000 | .000 | .250 | .250 | .500 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Industrial Dr / Scribner Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230001
 Site Code : 96230001
 Start Date : 2/8/2023
 Page No : 8



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 04:00 PM | | | | 05:00 PM | | | | 04:00 PM | | | | 04:00 PM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 4 | 4 | 0 | 0 | 1 | 1 |
| % App. Total | 0 | 100 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 100 | 0 | 0 | 100 | 100 |
| PHF | .000 | .250 | .000 | .250 | .000 | .250 | .000 | .250 | .000 | .000 | .333 | .333 | .000 | .000 | .250 | .250 |

Accurate Counts

978-664-2565

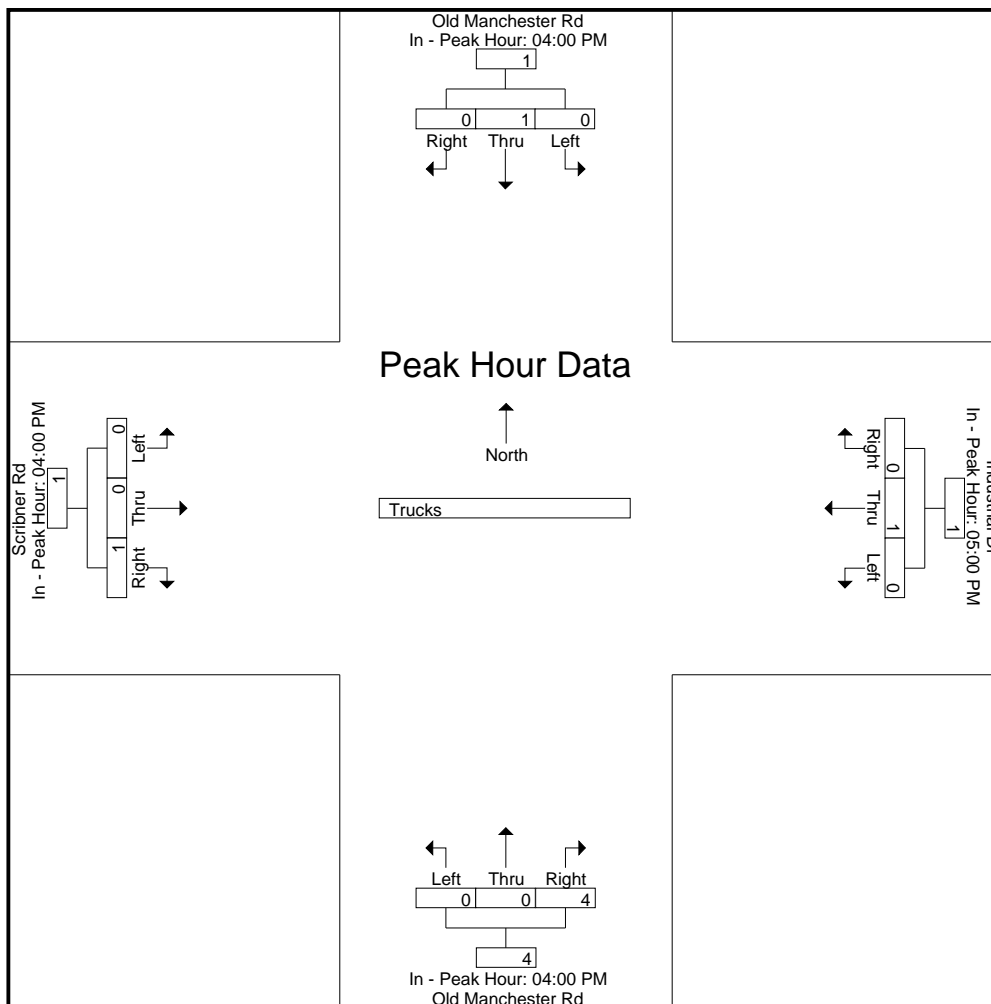
File Name : 96230001

Site Code : 96230001

Start Date : 2/8/2023

Page No : 9

N/S Street : Old Manchester Road
E/W Street : Industrial Dr / Scribner Rd
City/State : Raymond, NH
Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Industrial Dr / Scribner Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230001
 Site Code : 96230001
 Start Date : 2/8/2023
 Page No : 10

Groups Printed- Bikes Peds

| Start Time | Old Manchester Rd From North | | | | Industrial Dr From East | | | | Old Manchester Rd From South | | | | Scribner Rd From West | | | | Exclu. Total | Inclu. Total | Int. Total |
|--------------------|------------------------------|------|-------|------|-------------------------|------|-------|------|------------------------------|------|-------|------|-----------------------|------|-------|------|--------------|--------------|------------|
| | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | | | |
| 04:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:30 PM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 04:45 PM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Total | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| Apprch % | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | | | |
| Total % | | | | | | | | | | | | | | | | | 100 | 0 | |

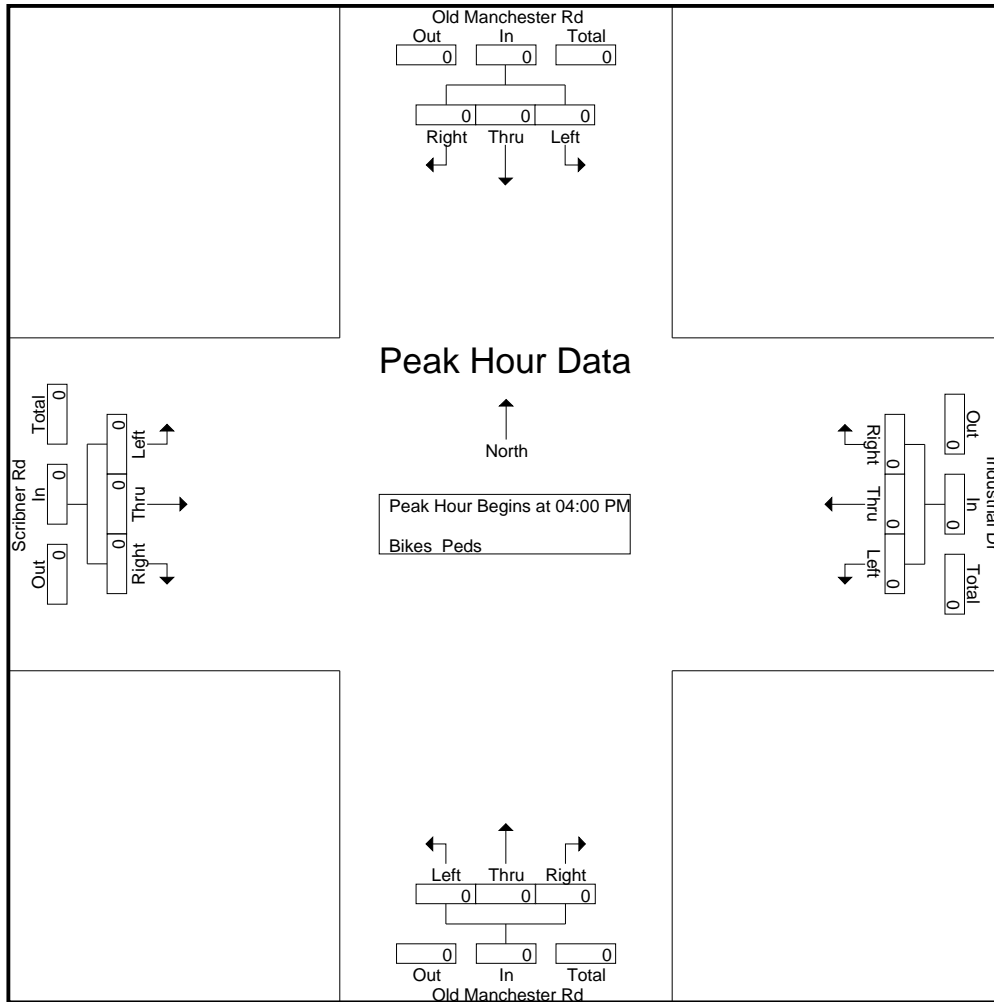
| Start Time | Old Manchester Rd From North | | | | Industrial Dr From East | | | | Old Manchester Rd From South | | | | Scribner Rd From West | | | | Int. Total | |
|--|------------------------------|------|-------|------------|-------------------------|------|-------|------------|------------------------------|------|-------|------------|-----------------------|------|-------|------------|------------|------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | | |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:00 PM | | | | | | | | | | | | | | | | | | |
| 04:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | | |
| PHF | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Industrial Dr / Scribner Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230001
 Site Code : 96230001
 Start Date : 2/8/2023
 Page No : 11



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 04:00 PM | | | | 04:00 PM | | | | 04:00 PM | | | | 04:00 PM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PHF | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |

Accurate Counts

978-664-2565

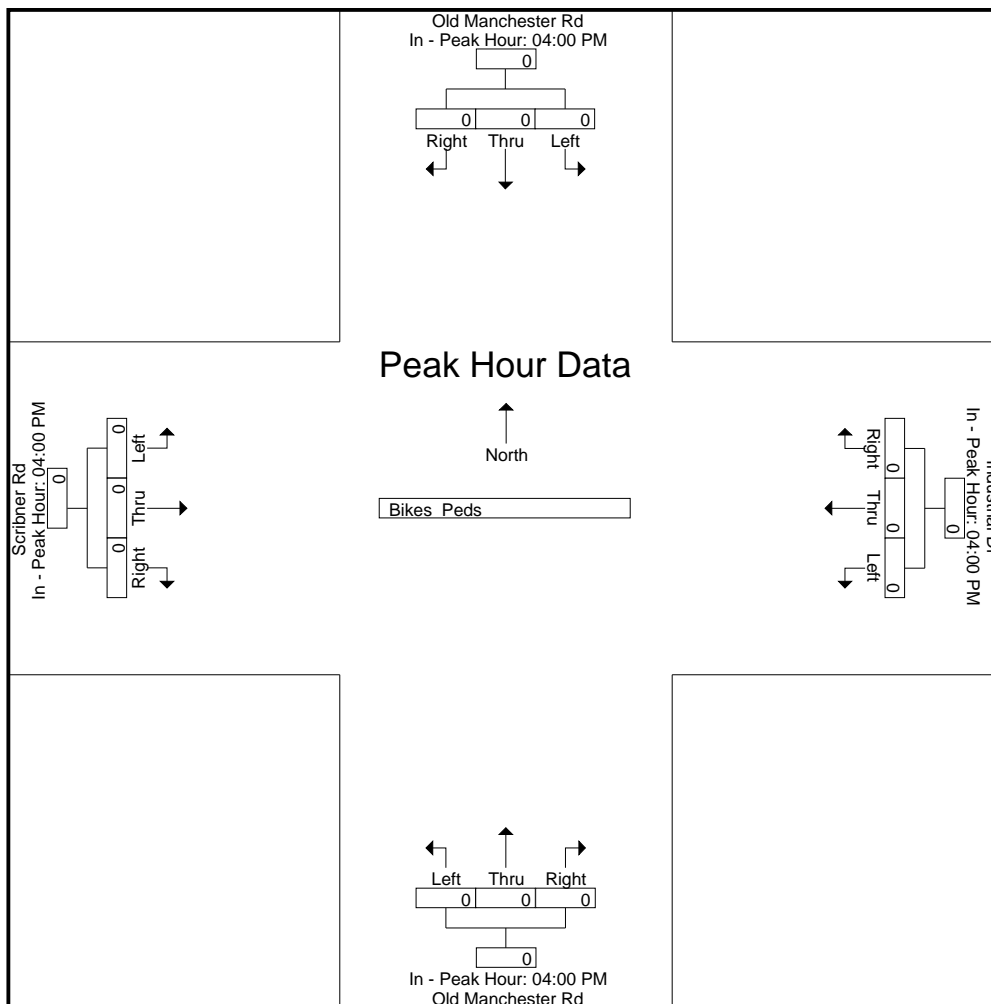
File Name : 96230001

Site Code : 96230001

Start Date : 2/8/2023

Page No : 12

N/S Street : Old Manchester Road
E/W Street : Industrial Dr / Scribner Rd
City/State : Raymond, NH
Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 WB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230002
 Site Code : 96230002
 Start Date : 2/8/2023
 Page No : 1

Groups Printed- Cars - Trucks

| Start Time | Old Manchester Rd From North | | | Route 101 WB Ramp From East | | | Old Manchester Rd From South | | | Route 101 WB Ramp From West | | | Int. Total |
|--------------------|---------------------------------|------------|------------|--------------------------------|----------|-----------|---------------------------------|------------|----------|--------------------------------|----------|----------|------------|
| | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | |
| 07:00 AM | 0 | 28 | 19 | 3 | 0 | 6 | 15 | 41 | 0 | 0 | 0 | 0 | 112 |
| 07:15 AM | 0 | 32 | 32 | 3 | 0 | 3 | 22 | 44 | 0 | 0 | 0 | 0 | 136 |
| 07:30 AM | 0 | 36 | 22 | 4 | 0 | 9 | 16 | 32 | 0 | 0 | 0 | 0 | 119 |
| 07:45 AM | 0 | 40 | 37 | 7 | 1 | 11 | 13 | 35 | 0 | 0 | 0 | 0 | 144 |
| Total | 0 | 136 | 110 | 17 | 1 | 29 | 66 | 152 | 0 | 0 | 0 | 0 | 511 |
| 08:00 AM | 0 | 26 | 17 | 8 | 0 | 10 | 14 | 29 | 0 | 0 | 0 | 0 | 104 |
| 08:15 AM | 0 | 24 | 7 | 6 | 0 | 14 | 14 | 40 | 0 | 0 | 0 | 0 | 105 |
| 08:30 AM | 0 | 40 | 23 | 3 | 0 | 11 | 9 | 24 | 0 | 0 | 0 | 0 | 110 |
| 08:45 AM | 0 | 29 | 15 | 7 | 0 | 7 | 7 | 18 | 0 | 0 | 0 | 0 | 83 |
| Total | 0 | 119 | 62 | 24 | 0 | 42 | 44 | 111 | 0 | 0 | 0 | 0 | 402 |
| Grand Total | 0 | 255 | 172 | 41 | 1 | 71 | 110 | 263 | 0 | 0 | 0 | 0 | 913 |
| Apprch % | 0 | 59.7 | 40.3 | 36.3 | 0.9 | 62.8 | 29.5 | 70.5 | 0 | 0 | 0 | 0 | |
| Total % | 0 | 27.9 | 18.8 | 4.5 | 0.1 | 7.8 | 12 | 28.8 | 0 | 0 | 0 | 0 | |
| Cars | 0 | 239 | 169 | 40 | 1 | 60 | 108 | 256 | 0 | 0 | 0 | 0 | 873 |
| % Cars | 0 | 93.7 | 98.3 | 97.6 | 100 | 84.5 | 98.2 | 97.3 | 0 | 0 | 0 | 0 | 95.6 |
| Trucks | 0 | 16 | 3 | 1 | 0 | 11 | 2 | 7 | 0 | 0 | 0 | 0 | 40 |
| % Trucks | 0 | 6.3 | 1.7 | 2.4 | 0 | 15.5 | 1.8 | 2.7 | 0 | 0 | 0 | 0 | 4.4 |

| Start Time | Old Manchester Rd From North | | | | Route 101 WB Ramp From East | | | | Old Manchester Rd From South | | | | Route 101 WB Ramp From West | | | | Int. Total |
|--|---------------------------------|-----------|-----------|------------|--------------------------------|----------|-----------|------------|---------------------------------|-----------|-------|------------|--------------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:00 AM | | | | | | | | | | | | | | | | | |
| 07:00 AM | 0 | 28 | 19 | 47 | 3 | 0 | 6 | 9 | 15 | 41 | 0 | 56 | 0 | 0 | 0 | 0 | 112 |
| 07:15 AM | 0 | 32 | 32 | 64 | 3 | 0 | 3 | 6 | 22 | 44 | 0 | 66 | 0 | 0 | 0 | 0 | 136 |
| 07:30 AM | 0 | 36 | 22 | 58 | 4 | 0 | 9 | 13 | 16 | 32 | 0 | 48 | 0 | 0 | 0 | 0 | 119 |
| 07:45 AM | 0 | 40 | 37 | 77 | 7 | 1 | 11 | 19 | 13 | 35 | 0 | 48 | 0 | 0 | 0 | 0 | 144 |
| Total Volume | 0 | 136 | 110 | 246 | 17 | 1 | 29 | 47 | 66 | 152 | 0 | 218 | 0 | 0 | 0 | 0 | 511 |
| % App. Total | 0 | 55.3 | 44.7 | | 36.2 | 2.1 | 61.7 | | 30.3 | 69.7 | 0 | | 0 | 0 | 0 | | |
| PHF | .000 | .850 | .743 | .799 | .607 | .250 | .659 | .618 | .750 | .864 | .000 | .826 | .000 | .000 | .000 | .000 | .887 |
| Cars | 0 | 128 | 107 | 235 | 16 | 1 | 24 | 41 | 65 | 148 | 0 | 213 | 0 | 0 | 0 | 0 | 489 |
| % Cars | 0 | 94.1 | 97.3 | 95.5 | 94.1 | 100 | 82.8 | 87.2 | 98.5 | 97.4 | 0 | 97.7 | 0 | 0 | 0 | 0 | 95.7 |
| Trucks | 0 | 8 | 3 | 11 | 1 | 0 | 5 | 6 | 1 | 4 | 0 | 5 | 0 | 0 | 0 | 0 | 22 |
| % Trucks | 0 | 5.9 | 2.7 | 4.5 | 5.9 | 0 | 17.2 | 12.8 | 1.5 | 2.6 | 0 | 2.3 | 0 | 0 | 0 | 0 | 4.3 |

Accurate Counts

978-664-2565

File Name : 96230002

Site Code : 96230002

Start Date : 2/8/2023

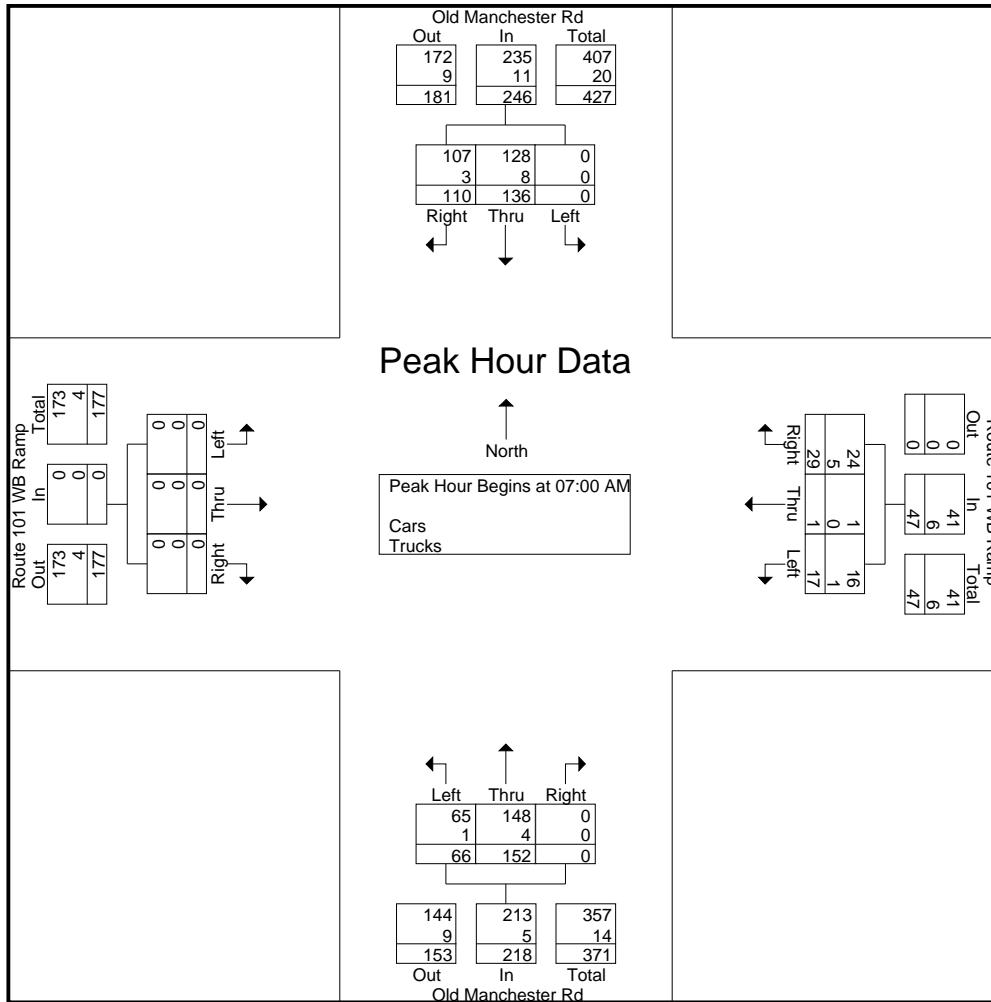
Page No : 2

N/S Street : Old Manchester Road

E/W Street : Route 101 WB Ramp

City/State : Raymond, NH

Weather : Clear



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 07:00 AM | | | | 07:45 AM | | | | 07:00 AM | | | | 07:00 AM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 0 | 28 | 19 | 47 | 7 | 1 | 11 | 19 | 15 | 41 | 0 | 56 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 32 | 32 | 64 | 8 | 0 | 10 | 18 | 22 | 44 | 0 | 66 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 36 | 22 | 58 | 6 | 0 | 14 | 20 | 16 | 32 | 0 | 48 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 40 | 37 | 77 | 3 | 0 | 11 | 14 | 13 | 35 | 0 | 48 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 136 | 110 | 246 | 24 | 1 | 46 | 71 | 66 | 152 | 0 | 218 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 55.3 | 44.7 | | 33.8 | 1.4 | 64.8 | | 30.3 | 69.7 | 0 | | 0 | 0 | 0 | |
| PHF | .000 | .850 | .743 | .799 | .750 | .250 | .821 | .888 | .750 | .864 | .000 | .826 | .000 | .000 | .000 | .000 |
| Cars | 0 | 128 | 107 | 235 | 23 | 1 | 42 | 66 | 65 | 148 | 0 | 213 | 0 | 0 | 0 | 0 |
| % Cars | 0 | 94.1 | 97.3 | 95.5 | 95.8 | 100 | 91.3 | 93 | 98.5 | 97.4 | 0 | 97.7 | 0 | 0 | 0 | 0 |
| Trucks | 0 | 8 | 3 | 11 | 1 | 0 | 4 | 5 | 1 | 4 | 0 | 5 | 0 | 0 | 0 | 0 |
| % Trucks | 0 | 5.9 | 2.7 | 4.5 | 4.2 | 0 | 8.7 | 7 | 1.5 | 2.6 | 0 | 2.3 | 0 | 0 | 0 | 0 |

Accurate Counts

978-664-2565

File Name : 96230002

Site Code : 96230002

Start Date : 2/8/2023

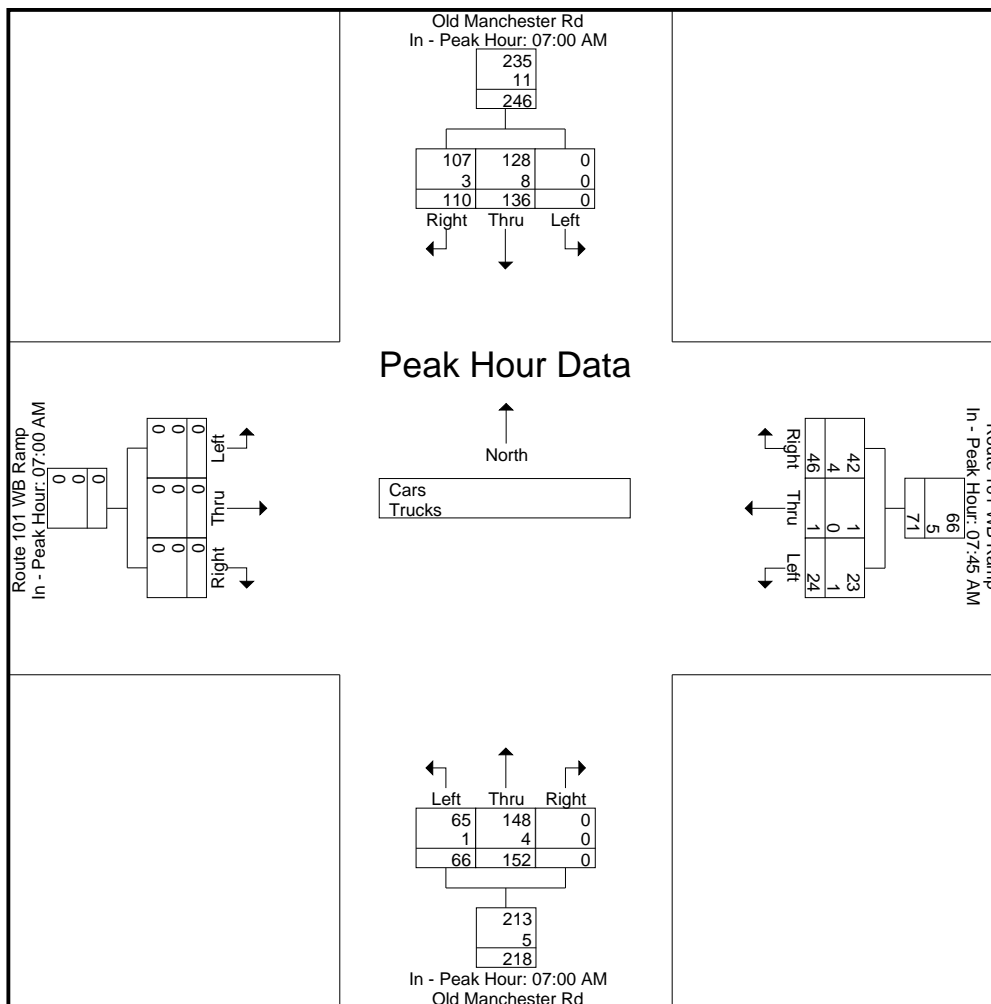
Page No : 3

N/S Street : Old Manchester Road

E/W Street : Route 101 WB Ramp

City/State : Raymond, NH

Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 WB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230002
 Site Code : 96230002
 Start Date : 2/8/2023
 Page No : 4

Groups Printed- Cars

| Start Time | Old Manchester Rd From North | | | Route 101 WB Ramp From East | | | Old Manchester Rd From South | | | Route 101 WB Ramp From West | | | Int. Total |
|--------------------|---------------------------------|------|-------|--------------------------------|------|-------|---------------------------------|------|-------|--------------------------------|------|-------|------------|
| | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | |
| 07:00 AM | 0 | 27 | 18 | 3 | 0 | 6 | 14 | 40 | 0 | 0 | 0 | 0 | 108 |
| 07:15 AM | 0 | 30 | 32 | 3 | 0 | 2 | 22 | 43 | 0 | 0 | 0 | 0 | 132 |
| 07:30 AM | 0 | 35 | 22 | 4 | 0 | 7 | 16 | 30 | 0 | 0 | 0 | 0 | 114 |
| 07:45 AM | 0 | 36 | 35 | 6 | 1 | 9 | 13 | 35 | 0 | 0 | 0 | 0 | 135 |
| Total | 0 | 128 | 107 | 16 | 1 | 24 | 65 | 148 | 0 | 0 | 0 | 0 | 489 |
| 08:00 AM | 0 | 24 | 17 | 8 | 0 | 10 | 13 | 29 | 0 | 0 | 0 | 0 | 101 |
| 08:15 AM | 0 | 19 | 7 | 6 | 0 | 12 | 14 | 38 | 0 | 0 | 0 | 0 | 96 |
| 08:30 AM | 0 | 40 | 23 | 3 | 0 | 11 | 9 | 24 | 0 | 0 | 0 | 0 | 110 |
| 08:45 AM | 0 | 28 | 15 | 7 | 0 | 3 | 7 | 17 | 0 | 0 | 0 | 0 | 77 |
| Total | 0 | 111 | 62 | 24 | 0 | 36 | 43 | 108 | 0 | 0 | 0 | 0 | 384 |
| Grand Total | 0 | 239 | 169 | 40 | 1 | 60 | 108 | 256 | 0 | 0 | 0 | 0 | 873 |
| Apprch % | 0 | 58.6 | 41.4 | 39.6 | 1 | 59.4 | 29.7 | 70.3 | 0 | 0 | 0 | 0 | |
| Total % | 0 | 27.4 | 19.4 | 4.6 | 0.1 | 6.9 | 12.4 | 29.3 | 0 | 0 | 0 | 0 | |

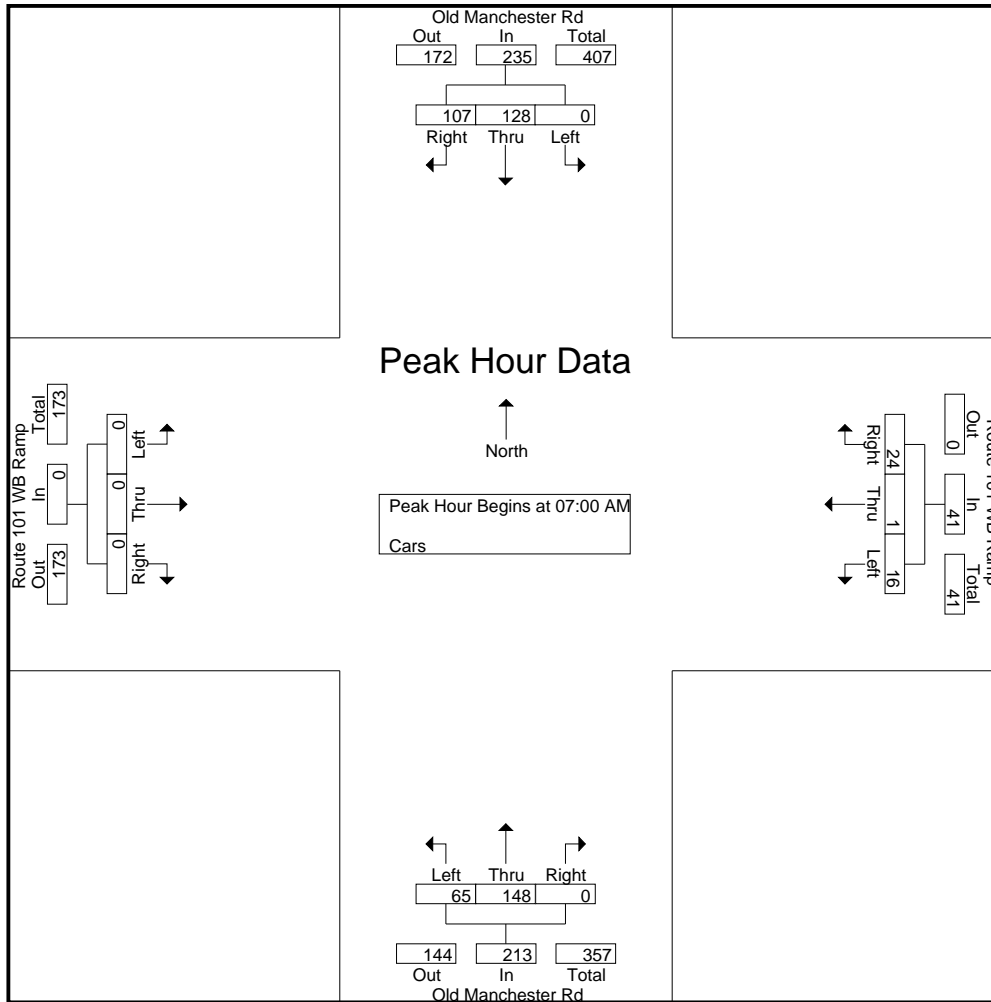
| Start Time | Old Manchester Rd From North | | | | Route 101 WB Ramp From East | | | | Old Manchester Rd From South | | | | Route 101 WB Ramp From West | | | | Int. Total |
|---|---------------------------------|-----------|-----------|------------|--------------------------------|----------|----------|------------|---------------------------------|-----------|-------|------------|--------------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:00 AM | | | | | | | | | | | | | | | | | |
| 07:00 AM | 0 | 27 | 18 | 45 | 3 | 0 | 6 | 9 | 14 | 40 | 0 | 54 | 0 | 0 | 0 | 0 | 108 |
| 07:15 AM | 0 | 30 | 32 | 62 | 3 | 0 | 2 | 5 | 22 | 43 | 0 | 65 | 0 | 0 | 0 | 0 | 132 |
| 07:30 AM | 0 | 35 | 22 | 57 | 4 | 0 | 7 | 11 | 16 | 30 | 0 | 46 | 0 | 0 | 0 | 0 | 114 |
| 07:45 AM | 0 | 36 | 35 | 71 | 6 | 1 | 9 | 16 | 13 | 35 | 0 | 48 | 0 | 0 | 0 | 0 | 135 |
| Total Volume | 0 | 128 | 107 | 235 | 16 | 1 | 24 | 41 | 65 | 148 | 0 | 213 | 0 | 0 | 0 | 0 | 489 |
| % App. Total | 0 | 54.5 | 45.5 | | 39 | 2.4 | 58.5 | | 30.5 | 69.5 | 0 | | 0 | 0 | 0 | | |
| PHF | .000 | .889 | .764 | .827 | .667 | .250 | .667 | .641 | .739 | .860 | .000 | .819 | .000 | .000 | .000 | .000 | .906 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 WB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230002
 Site Code : 96230002
 Start Date : 2/8/2023
 Page No : 5



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 07:00 AM | | | | 07:45 AM | | | | 07:00 AM | | | | 07:00 AM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 0 | 27 | 18 | 45 | 6 | 1 | 9 | 16 | 14 | 40 | 0 | 54 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 30 | 32 | 62 | 8 | 0 | 10 | 18 | 22 | 43 | 0 | 65 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 35 | 22 | 57 | 6 | 0 | 12 | 18 | 16 | 30 | 0 | 46 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 36 | 35 | 71 | 3 | 0 | 11 | 14 | 13 | 35 | 0 | 48 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 128 | 107 | 235 | 23 | 1 | 42 | 66 | 65 | 148 | 0 | 213 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 54.5 | 45.5 | | 34.8 | 1.5 | 63.6 | | 30.5 | 69.5 | 0 | | 0 | 0 | 0 | |
| PHF | .000 | .889 | .764 | .827 | .719 | .250 | .875 | .917 | .739 | .860 | .000 | .819 | .000 | .000 | .000 | .000 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road

E/W Street : Route 101 WB Ramp

City/State : Raymond, NH

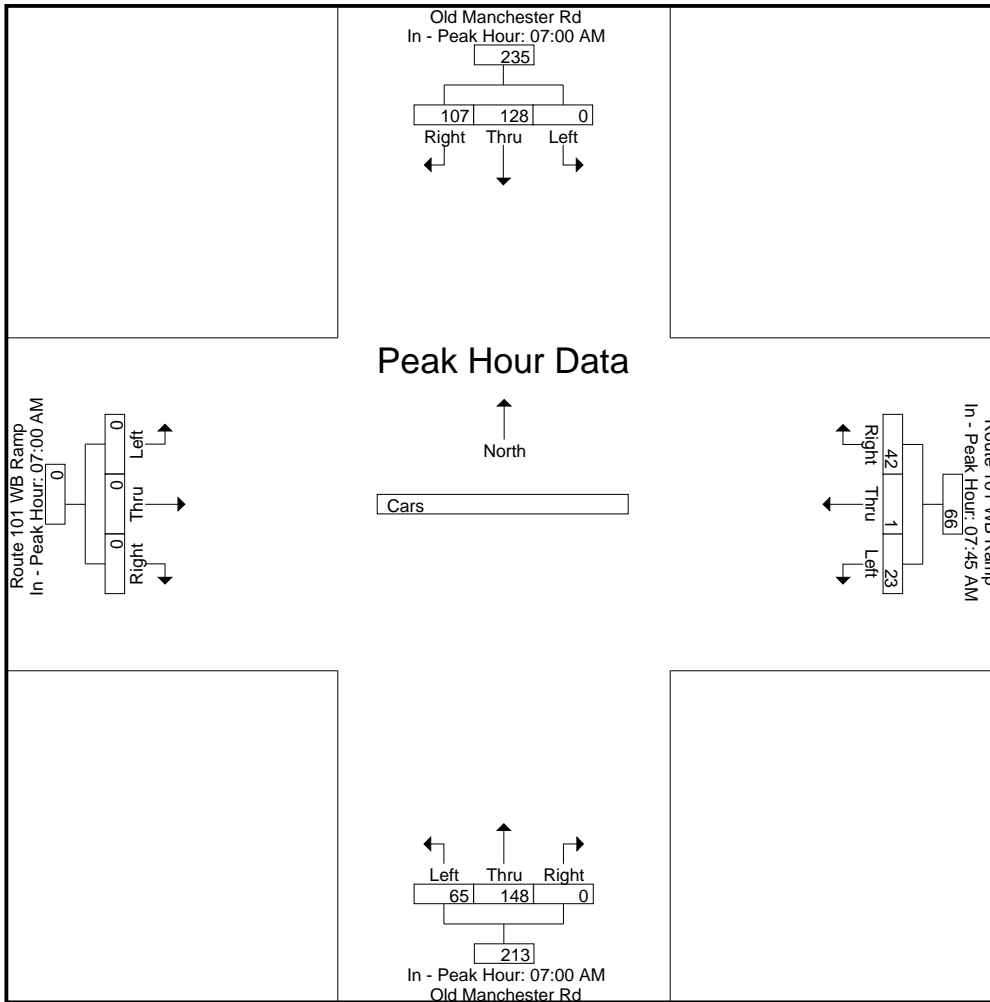
Weather : Clear

File Name : 96230002

Site Code : 96230002

Start Date : 2/8/2023

Page No : 6



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 WB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230002
 Site Code : 96230002
 Start Date : 2/8/2023
 Page No : 7

Groups Printed- Trucks

| Start Time | Old Manchester Rd From North | | | Route 101 WB Ramp From East | | | Old Manchester Rd From South | | | Route 101 WB Ramp From West | | | Int. Total |
|--------------------|---------------------------------|-----------|----------|--------------------------------|----------|-----------|---------------------------------|----------|----------|--------------------------------|----------|----------|------------|
| | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | |
| 07:00 AM | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| 07:15 AM | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 4 |
| 07:30 AM | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 5 |
| 07:45 AM | 0 | 4 | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| Total | 0 | 8 | 3 | 1 | 0 | 5 | 1 | 4 | 0 | 0 | 0 | 0 | 22 |
| 08:00 AM | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| 08:15 AM | 0 | 5 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 9 |
| 08:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:45 AM | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 6 |
| Total | 0 | 8 | 0 | 0 | 0 | 6 | 1 | 3 | 0 | 0 | 0 | 0 | 18 |
| Grand Total | 0 | 16 | 3 | 1 | 0 | 11 | 2 | 7 | 0 | 0 | 0 | 0 | 40 |
| Apprch % | 0 | 84.2 | 15.8 | 8.3 | 0 | 91.7 | 22.2 | 77.8 | 0 | 0 | 0 | 0 | |
| Total % | 0 | 40 | 7.5 | 2.5 | 0 | 27.5 | 5 | 17.5 | 0 | 0 | 0 | 0 | |

| Start Time | Old Manchester Rd From North | | | | Route 101 WB Ramp From East | | | | Old Manchester Rd From South | | | | Route 101 WB Ramp From West | | | | Int. Total |
|---|---------------------------------|-------------|-------------|------------|--------------------------------|----------|-------------|------------|---------------------------------|-----------|----------|------------|--------------------------------|----------|----------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:30 AM | | | | | | | | | | | | | | | | | |
| 07:30 AM | 0 | 1 | 0 | 1 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 5 |
| 07:45 AM | 0 | 4 | 2 | 6 | 1 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 08:00 AM | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| 08:15 AM | 0 | 5 | 0 | 5 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 9 |
| Total Volume | 0 | 12 | 2 | 14 | 1 | 0 | 6 | 7 | 1 | 4 | 0 | 5 | 0 | 0 | 0 | 0 | 26 |
| % App. Total | 0 | 85.7 | 14.3 | | 14.3 | 0 | 85.7 | | 20 | 80 | 0 | | 0 | 0 | 0 | | |
| PHF | .000 | .600 | .250 | .583 | .250 | .000 | .750 | .583 | .250 | .500 | .000 | .625 | .000 | .000 | .000 | .000 | .722 |

Accurate Counts

978-664-2565

File Name : 96230002

Site Code : 96230002

Start Date : 2/8/2023

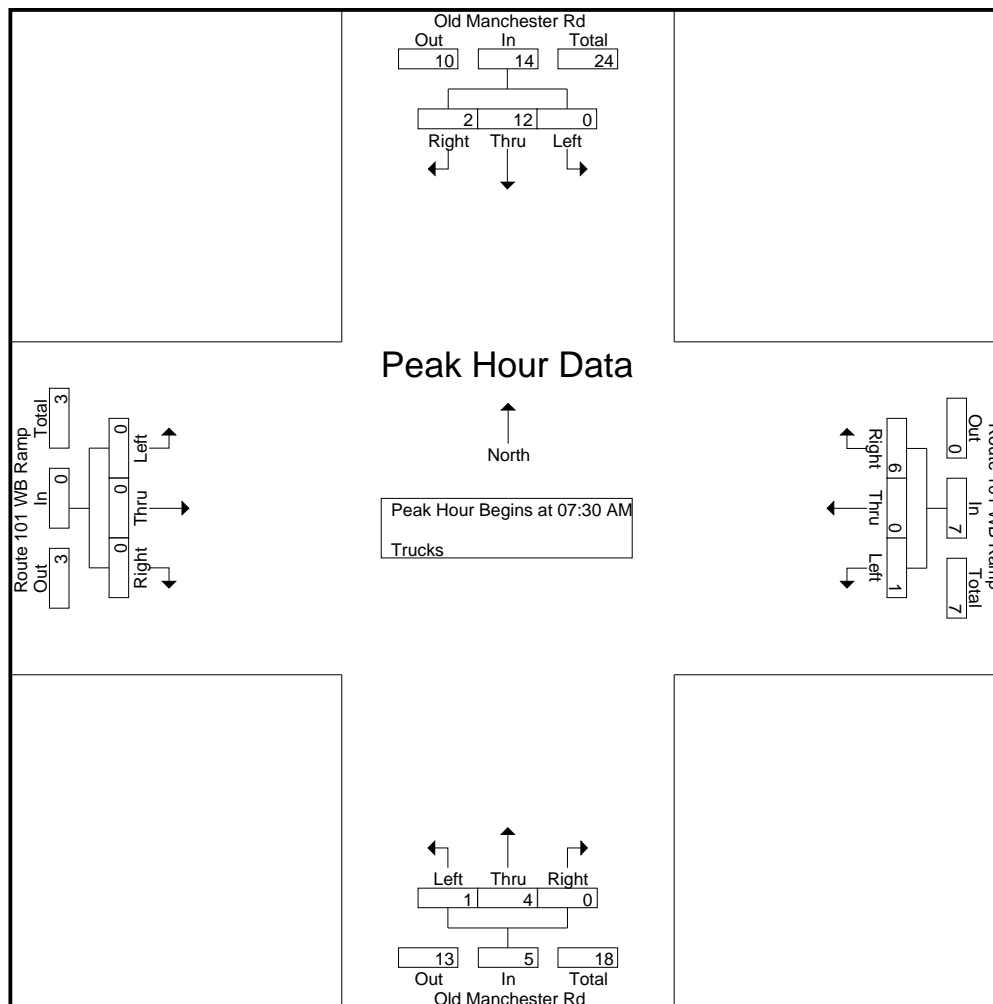
Page No : 8

N/S Street : Old Manchester Road

E/W Street : Route 101 WB Ramp

City/State : Raymond, NH

Weather : Clear



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 07:30 AM | | | | 07:30 AM | | | | 07:00 AM | | | | 07:00 AM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 0 | 1 | 0 | 1 | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 4 | 2 | 6 | 1 | 0 | 2 | 3 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 5 | 0 | 5 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 12 | 2 | 14 | 1 | 0 | 6 | 7 | 1 | 4 | 0 | 5 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 85.7 | 14.3 | | 14.3 | 0 | 85.7 | | 20 | 80 | 0 | | 0 | 0 | 0 | |
| PHF | .000 | .600 | .250 | .583 | .250 | .000 | .750 | .583 | .250 | .500 | .000 | .625 | .000 | .000 | .000 | .000 |

Accurate Counts

978-664-2565

File Name : 96230002

Site Code : 96230002

Start Date : 2/8/2023

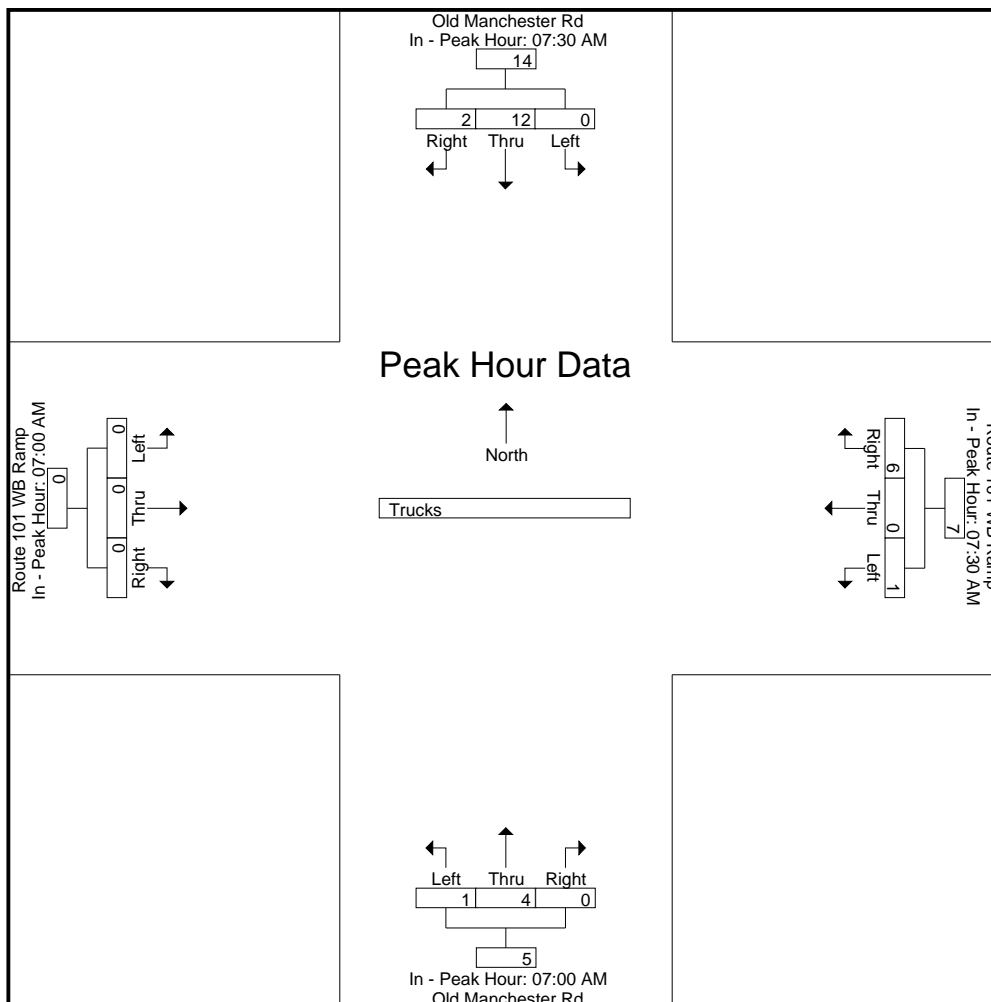
Page No : 9

N/S Street : Old Manchester Road

E/W Street : Route 101 WB Ramp

City/State : Raymond, NH

Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 WB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230002
 Site Code : 96230002
 Start Date : 2/8/2023
 Page No : 10

Groups Printed- Bikes Peds

| Start Time | Old Manchester Rd From North | | | | Route 101 WB Ramp From East | | | | Old Manchester Rd From South | | | | Route 101 WB Ramp From West | | | | Exclu. Total | Inclu. Total | Int. Total |
|--------------------|------------------------------|------|-------|------|-----------------------------|------|-------|------|------------------------------|------|-------|------|-----------------------------|------|-------|------|--------------|--------------|------------|
| | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | | | |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 08:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 08:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| Apprch % | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | | | |
| Total % | | | | | | | | | | | | | | | | | 100 | 0 | |

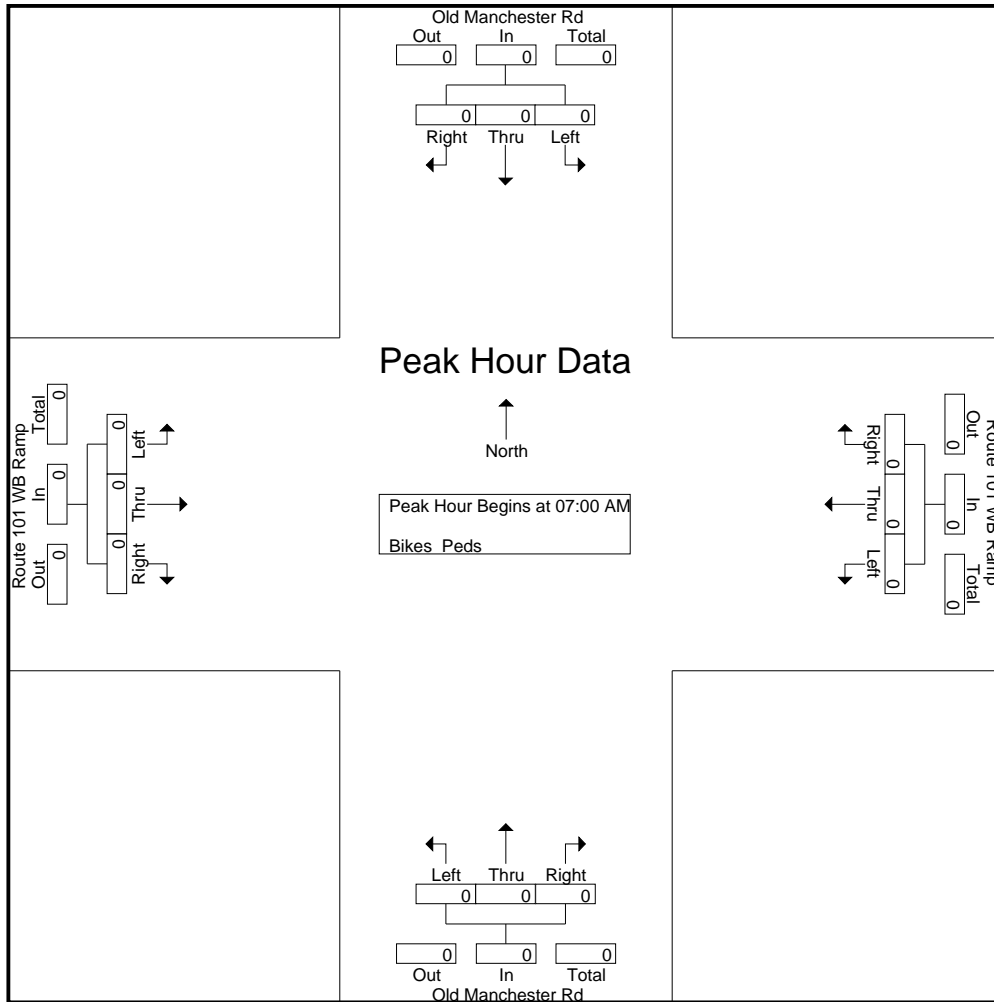
| Start Time | Old Manchester Rd From North | | | | Route 101 WB Ramp From East | | | | Old Manchester Rd From South | | | | Route 101 WB Ramp From West | | | | Int. Total | |
|--|------------------------------|------|-------|------------|-----------------------------|------|-------|------------|------------------------------|------|-------|------------|-----------------------------|------|-------|------------|------------|------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:00 AM | | | | | | | | | | | | | | | | | | |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | | |
| PHF | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 WB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230002
 Site Code : 96230002
 Start Date : 2/8/2023
 Page No : 11



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 07:00 AM | | | | 07:00 AM | | | | 07:00 AM | | | | 07:00 AM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PHF | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |

Accurate Counts

978-664-2565

File Name : 96230002

Site Code : 96230002

Start Date : 2/8/2023

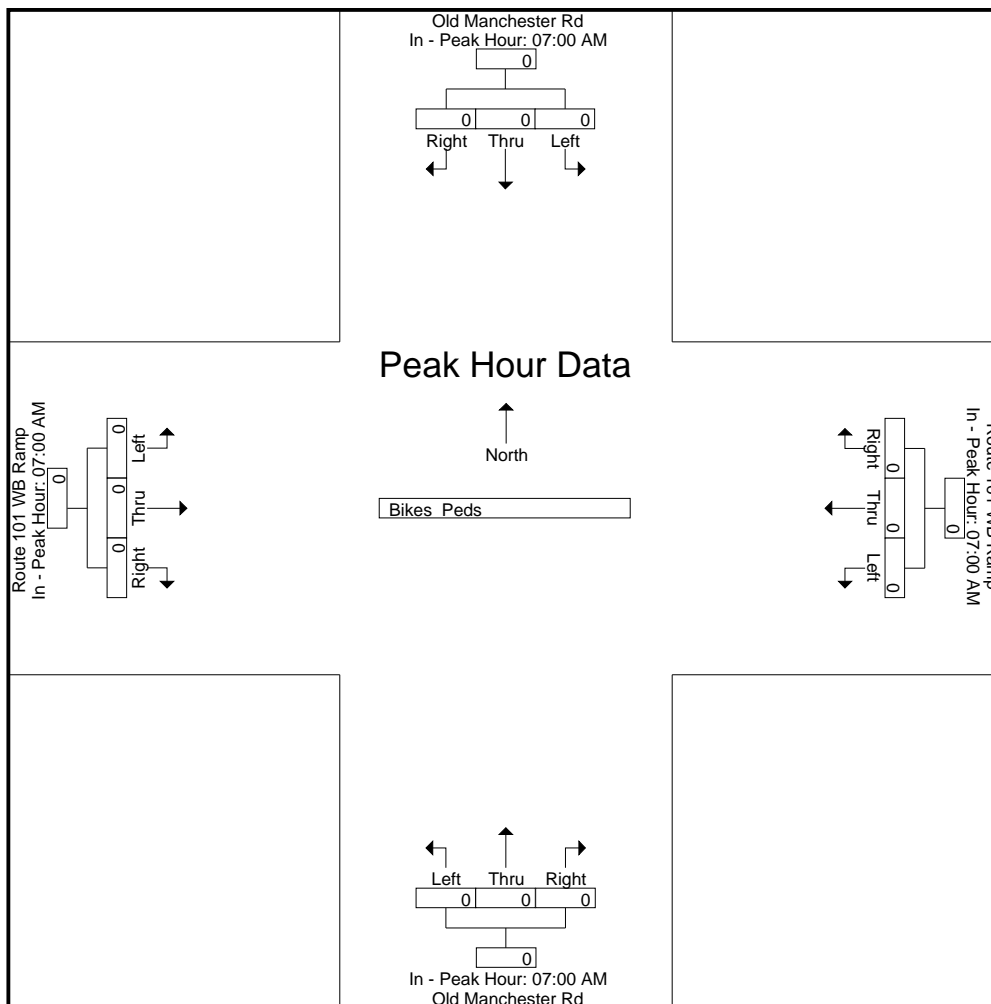
Page No : 12

N/S Street : Old Manchester Road

E/W Street : Route 101 WB Ramp

City/State : Raymond, NH

Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 WB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230002
 Site Code : 96230002
 Start Date : 2/8/2023
 Page No : 1

Groups Printed- Cars - Trucks

| Start Time | Old Manchester Rd From North | | | Route 101 WB Ramp From East | | | Old Manchester Rd From South | | | Route 101 WB Ramp From West | | | Int. Total |
|--------------------|---------------------------------|------------|------------|--------------------------------|----------|------------|---------------------------------|------------|----------|--------------------------------|----------|----------|-------------|
| | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | |
| 04:00 PM | 0 | 38 | 18 | 23 | 0 | 21 | 5 | 28 | 0 | 0 | 0 | 0 | 133 |
| 04:15 PM | 0 | 26 | 12 | 26 | 0 | 18 | 5 | 41 | 0 | 0 | 0 | 0 | 128 |
| 04:30 PM | 0 | 39 | 18 | 31 | 0 | 16 | 7 | 35 | 0 | 0 | 0 | 0 | 146 |
| 04:45 PM | 0 | 16 | 15 | 22 | 1 | 23 | 6 | 40 | 0 | 0 | 0 | 0 | 123 |
| Total | 0 | 119 | 63 | 102 | 1 | 78 | 23 | 144 | 0 | 0 | 0 | 0 | 530 |
| 05:00 PM | 0 | 34 | 11 | 20 | 0 | 17 | 3 | 49 | 0 | 0 | 0 | 0 | 134 |
| 05:15 PM | 0 | 33 | 9 | 30 | 1 | 22 | 8 | 38 | 0 | 0 | 0 | 0 | 141 |
| 05:30 PM | 0 | 25 | 12 | 26 | 0 | 10 | 8 | 39 | 0 | 0 | 0 | 0 | 120 |
| 05:45 PM | 0 | 19 | 14 | 13 | 1 | 17 | 7 | 35 | 0 | 0 | 0 | 0 | 106 |
| Total | 0 | 111 | 46 | 89 | 2 | 66 | 26 | 161 | 0 | 0 | 0 | 0 | 501 |
| Grand Total | 0 | 230 | 109 | 191 | 3 | 144 | 49 | 305 | 0 | 0 | 0 | 0 | 1031 |
| Apprch % | 0 | 67.8 | 32.2 | 56.5 | 0.9 | 42.6 | 13.8 | 86.2 | 0 | 0 | 0 | 0 | |
| Total % | 0 | 22.3 | 10.6 | 18.5 | 0.3 | 14 | 4.8 | 29.6 | 0 | 0 | 0 | 0 | |
| Cars | 0 | 228 | 108 | 190 | 2 | 141 | 49 | 301 | 0 | 0 | 0 | 0 | 1019 |
| % Cars | 0 | 99.1 | 99.1 | 99.5 | 66.7 | 97.9 | 100 | 98.7 | 0 | 0 | 0 | 0 | 98.8 |
| Trucks | 0 | 2 | 1 | 1 | 1 | 3 | 0 | 4 | 0 | 0 | 0 | 0 | 12 |
| % Trucks | 0 | 0.9 | 0.9 | 0.5 | 33.3 | 2.1 | 0 | 1.3 | 0 | 0 | 0 | 0 | 1.2 |

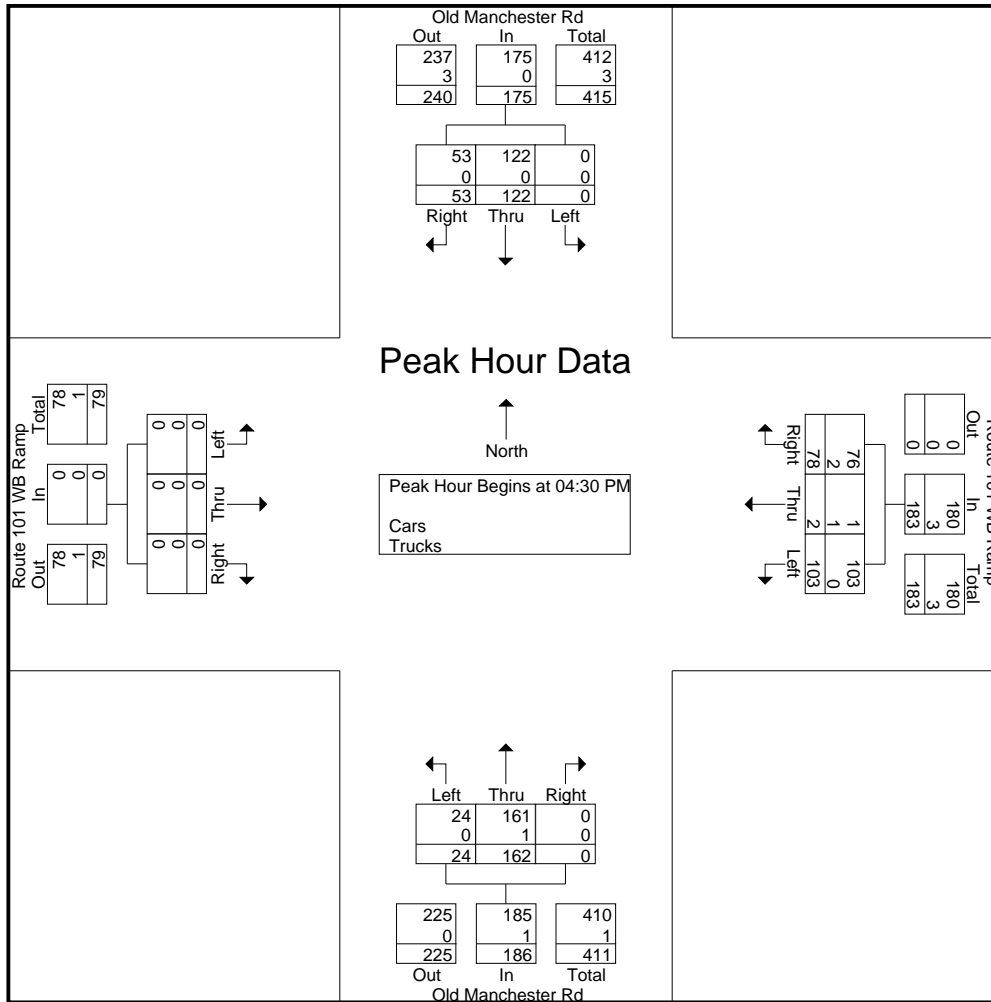
| Start Time | Old Manchester Rd From North | | | | Route 101 WB Ramp From East | | | | Old Manchester Rd From South | | | | Route 101 WB Ramp From West | | | | Int. Total |
|--|---------------------------------|-----------|-----------|------------|--------------------------------|----------|-----------|------------|---------------------------------|-----------|-------|------------|--------------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:30 PM | | | | | | | | | | | | | | | | | |
| 04:30 PM | 0 | 39 | 18 | 57 | 31 | 0 | 16 | 47 | 7 | 35 | 0 | 42 | 0 | 0 | 0 | 0 | 146 |
| 04:45 PM | 0 | 16 | 15 | 31 | 22 | 1 | 23 | 46 | 6 | 40 | 0 | 46 | 0 | 0 | 0 | 0 | 123 |
| 05:00 PM | 0 | 34 | 11 | 45 | 20 | 0 | 17 | 37 | 3 | 49 | 0 | 52 | 0 | 0 | 0 | 0 | 134 |
| 05:15 PM | 0 | 33 | 9 | 42 | 30 | 1 | 22 | 53 | 8 | 38 | 0 | 46 | 0 | 0 | 0 | 0 | 141 |
| Total Volume | 0 | 122 | 53 | 175 | 103 | 2 | 78 | 183 | 24 | 162 | 0 | 186 | 0 | 0 | 0 | 0 | 544 |
| % App. Total | 0 | 69.7 | 30.3 | | 56.3 | 1.1 | 42.6 | | 12.9 | 87.1 | 0 | | 0 | 0 | 0 | | |
| PHF | .000 | .782 | .736 | .768 | .831 | .500 | .848 | .863 | .750 | .827 | .000 | .894 | .000 | .000 | .000 | .000 | .932 |
| Cars | 0 | 122 | 53 | 175 | 103 | 1 | 76 | 180 | 24 | 161 | 0 | 185 | 0 | 0 | 0 | 0 | 540 |
| % Cars | 0 | 100 | 100 | 100 | 100 | 50.0 | 97.4 | 98.4 | 100 | 99.4 | 0 | 99.5 | 0 | 0 | 0 | 0 | 99.3 |
| Trucks | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 4 |
| % Trucks | 0 | 0 | 0 | 0 | 0 | 50.0 | 2.6 | 1.6 | 0 | 0.6 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0.7 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 WB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230002
 Site Code : 96230002
 Start Date : 2/8/2023
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 04:00 PM | | | | 04:30 PM | | | | 04:45 PM | | | | 04:00 PM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 0 | 38 | 18 | 56 | 31 | 0 | 16 | 47 | 6 | 40 | 0 | 46 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 26 | 12 | 38 | 22 | 1 | 23 | 46 | 3 | 49 | 0 | 52 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 39 | 18 | 57 | 20 | 0 | 17 | 37 | 8 | 38 | 0 | 46 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 16 | 15 | 31 | 30 | 1 | 22 | 53 | 8 | 39 | 0 | 47 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 119 | 63 | 182 | 103 | 2 | 78 | 183 | 25 | 166 | 0 | 191 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 65.4 | 34.6 | | 56.3 | 1.1 | 42.6 | | 13.1 | 86.9 | 0 | | 0 | 0 | 0 | |
| PHF | .000 | .763 | .875 | .798 | .831 | .500 | .848 | .863 | .781 | .847 | .000 | .918 | .000 | .000 | .000 | .000 |
| Cars | 0 | 117 | 62 | 179 | 103 | 1 | 76 | 180 | 25 | 166 | 0 | 191 | 0 | 0 | 0 | 0 |
| % Cars | 0 | 98.3 | 98.4 | 98.4 | 100 | 50 | 97.4 | 98.4 | 100 | 100 | 0 | 100 | 0 | 0 | 0 | 0 |
| Trucks | 0 | 2 | 1 | 3 | 0 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 0 | 1.7 | 1.6 | 1.6 | 0 | 50 | 2.6 | 1.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Accurate Counts

978-664-2565

File Name : 96230002

Site Code : 96230002

Start Date : 2/8/2023

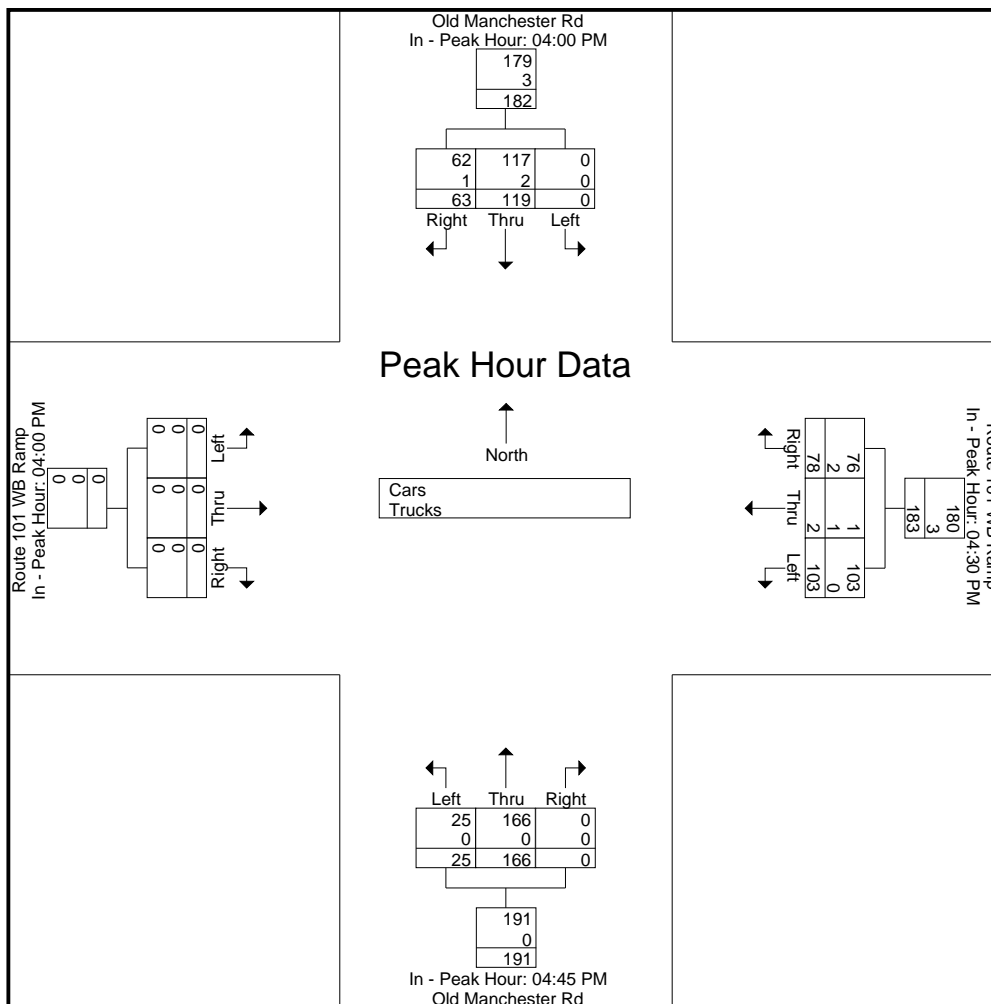
Page No : 3

N/S Street : Old Manchester Road

E/W Street : Route 101 WB Ramp

City/State : Raymond, NH

Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 WB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230002
 Site Code : 96230002
 Start Date : 2/8/2023
 Page No : 4

Groups Printed- Cars

| Start Time | Old Manchester Rd From North | | | Route 101 WB Ramp From East | | | Old Manchester Rd From South | | | Route 101 WB Ramp From West | | | Int. Total |
|--------------------|---------------------------------|------|-------|--------------------------------|------|-------|---------------------------------|------|-------|--------------------------------|------|-------|------------|
| | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | |
| 04:00 PM | 0 | 36 | 17 | 22 | 0 | 20 | 5 | 27 | 0 | 0 | 0 | 0 | 127 |
| 04:15 PM | 0 | 26 | 12 | 26 | 0 | 18 | 5 | 41 | 0 | 0 | 0 | 0 | 128 |
| 04:30 PM | 0 | 39 | 18 | 31 | 0 | 14 | 7 | 34 | 0 | 0 | 0 | 0 | 143 |
| 04:45 PM | 0 | 16 | 15 | 22 | 0 | 23 | 6 | 40 | 0 | 0 | 0 | 0 | 122 |
| Total | 0 | 117 | 62 | 101 | 0 | 75 | 23 | 142 | 0 | 0 | 0 | 0 | 520 |
| 05:00 PM | 0 | 34 | 11 | 20 | 0 | 17 | 3 | 49 | 0 | 0 | 0 | 0 | 134 |
| 05:15 PM | 0 | 33 | 9 | 30 | 1 | 22 | 8 | 38 | 0 | 0 | 0 | 0 | 141 |
| 05:30 PM | 0 | 25 | 12 | 26 | 0 | 10 | 8 | 39 | 0 | 0 | 0 | 0 | 120 |
| 05:45 PM | 0 | 19 | 14 | 13 | 1 | 17 | 7 | 33 | 0 | 0 | 0 | 0 | 104 |
| Total | 0 | 111 | 46 | 89 | 2 | 66 | 26 | 159 | 0 | 0 | 0 | 0 | 499 |
| Grand Total | 0 | 228 | 108 | 190 | 2 | 141 | 49 | 301 | 0 | 0 | 0 | 0 | 1019 |
| Apprch % | 0 | 67.9 | 32.1 | 57.1 | 0.6 | 42.3 | 14 | 86 | 0 | 0 | 0 | 0 | |
| Total % | 0 | 22.4 | 10.6 | 18.6 | 0.2 | 13.8 | 4.8 | 29.5 | 0 | 0 | 0 | 0 | |

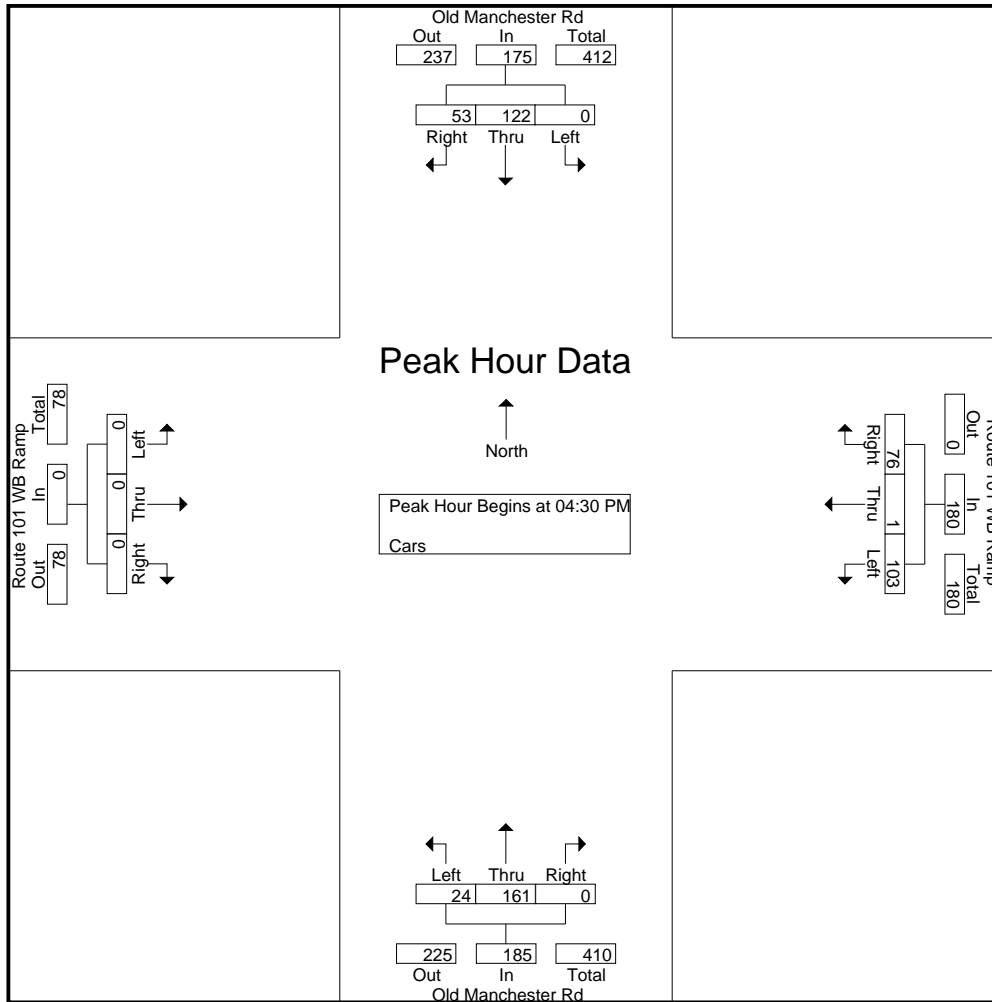
| Start Time | Old Manchester Rd From North | | | | Route 101 WB Ramp From East | | | | Old Manchester Rd From South | | | | Route 101 WB Ramp From West | | | | Int. Total |
|--|---------------------------------|-----------|-----------|------------|--------------------------------|----------|-----------|------------|---------------------------------|-----------|-------|------------|--------------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:30 PM | | | | | | | | | | | | | | | | | |
| 04:30 PM | 0 | 39 | 18 | 57 | 31 | 0 | 14 | 45 | 7 | 34 | 0 | 41 | 0 | 0 | 0 | 0 | 143 |
| 04:45 PM | 0 | 16 | 15 | 31 | 22 | 0 | 23 | 45 | 6 | 40 | 0 | 46 | 0 | 0 | 0 | 0 | 122 |
| 05:00 PM | 0 | 34 | 11 | 45 | 20 | 0 | 17 | 37 | 3 | 49 | 0 | 52 | 0 | 0 | 0 | 0 | 134 |
| 05:15 PM | 0 | 33 | 9 | 42 | 30 | 1 | 22 | 53 | 8 | 38 | 0 | 46 | 0 | 0 | 0 | 0 | 141 |
| Total Volume | 0 | 122 | 53 | 175 | 103 | 1 | 76 | 180 | 24 | 161 | 0 | 185 | 0 | 0 | 0 | 0 | 540 |
| % App. Total | 0 | 69.7 | 30.3 | | 57.2 | 0.6 | 42.2 | | 13 | 87 | 0 | | 0 | 0 | 0 | | |
| PHF | .000 | .782 | .736 | .768 | .831 | .250 | .826 | .849 | .750 | .821 | .000 | .889 | .000 | .000 | .000 | .000 | .944 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 WB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230002
 Site Code : 96230002
 Start Date : 2/8/2023
 Page No : 5



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 04:00 PM | | | | 04:30 PM | | | | 04:45 PM | | | | 04:00 PM | | | |
|--------------|----------|-----------|-----------|-----------|-----------|----------|-----------|-----------|----------|-----------|------|-----------|----------|------|------|------|
| +0 mins. | 0 | 36 | 17 | 53 | 31 | 0 | 14 | 45 | 6 | 40 | 0 | 46 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 26 | 12 | 38 | 22 | 0 | 23 | 45 | 3 | 49 | 0 | 52 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 39 | 18 | 57 | 20 | 0 | 17 | 37 | 8 | 38 | 0 | 46 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 16 | 15 | 31 | 30 | 1 | 22 | 53 | 8 | 39 | 0 | 47 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 117 | 62 | 179 | 103 | 1 | 76 | 180 | 25 | 166 | 0 | 191 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 65.4 | 34.6 | | 57.2 | 0.6 | 42.2 | | 13.1 | 86.9 | 0 | | 0 | 0 | 0 | |
| PHF | .000 | .750 | .861 | .785 | .831 | .250 | .826 | .849 | .781 | .847 | .000 | .918 | .000 | .000 | .000 | .000 |

Accurate Counts

978-664-2565

File Name : 96230002

Site Code : 96230002

Start Date : 2/8/2023

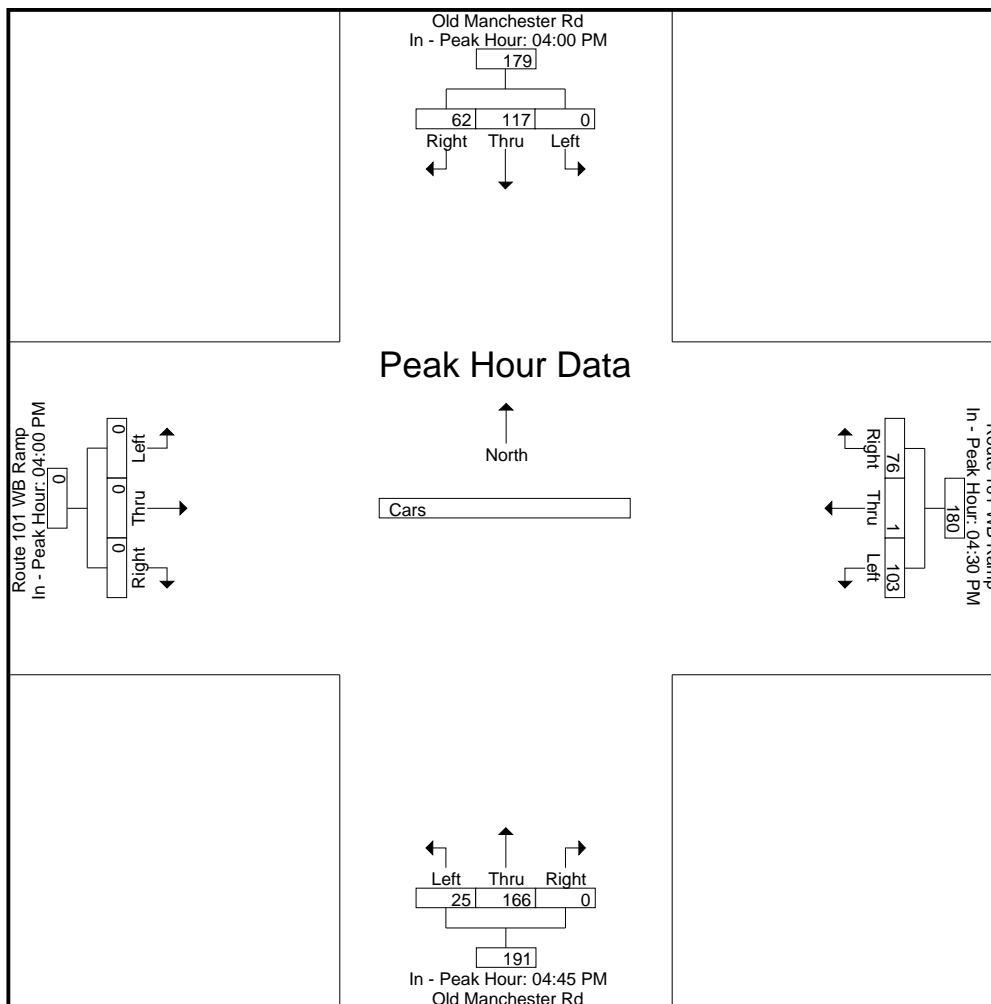
Page No : 6

N/S Street : Old Manchester Road

E/W Street : Route 101 WB Ramp

City/State : Raymond, NH

Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 WB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230002
 Site Code : 96230002
 Start Date : 2/8/2023
 Page No : 7

Groups Printed- Trucks

| Start Time | Old Manchester Rd From North | | | Route 101 WB Ramp From East | | | Old Manchester Rd From South | | | Route 101 WB Ramp From West | | | Int. Total |
|--------------------|---------------------------------|----------|----------|--------------------------------|----------|----------|---------------------------------|----------|----------|--------------------------------|----------|----------|------------|
| | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | |
| 04:00 PM | 0 | 2 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 6 |
| 04:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:30 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| 04:45 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 0 | 2 | 1 | 1 | 1 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 10 |
| 05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| Grand Total | 0 | 2 | 1 | 1 | 1 | 3 | 0 | 4 | 0 | 0 | 0 | 0 | 12 |
| Apprch % | 0 | 66.7 | 33.3 | 20 | 20 | 60 | 0 | 100 | 0 | 0 | 0 | 0 | |
| Total % | 0 | 16.7 | 8.3 | 8.3 | 8.3 | 25 | 0 | 33.3 | 0 | 0 | 0 | 0 | |

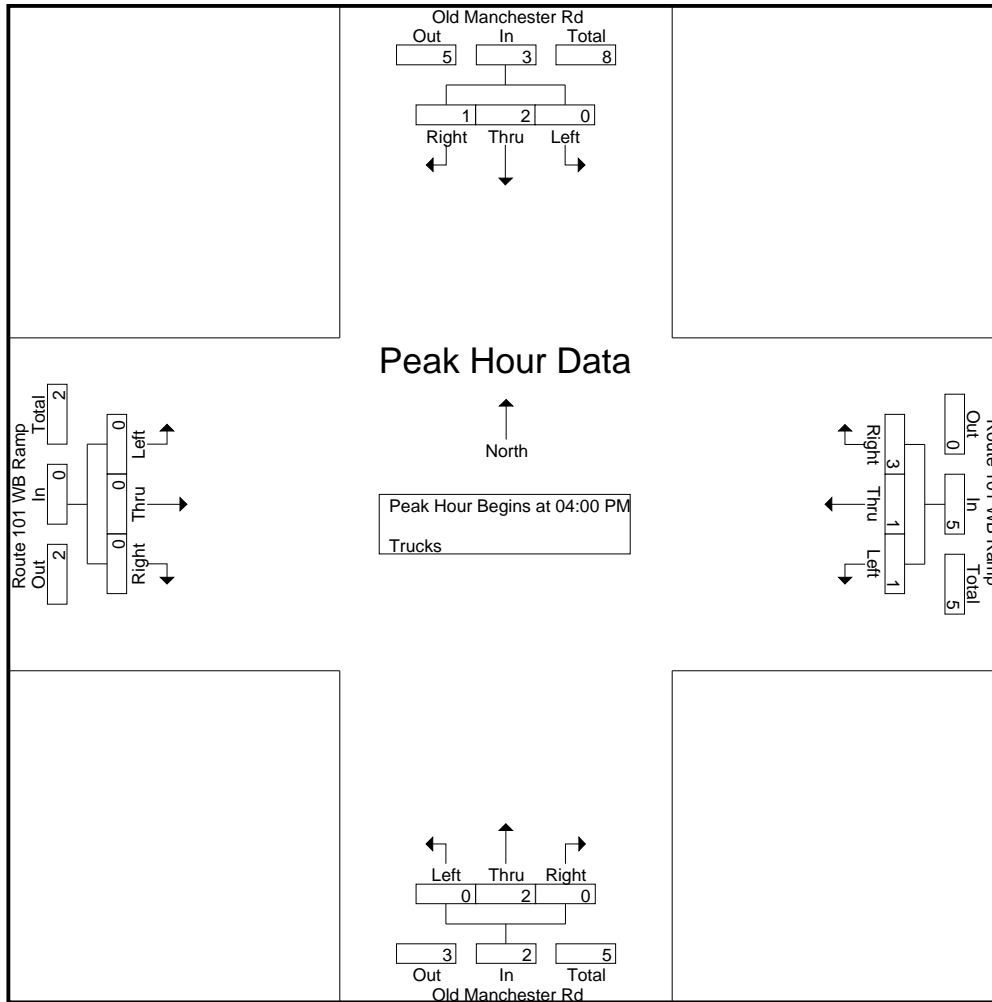
| Start Time | Old Manchester Rd From North | | | | Route 101 WB Ramp From East | | | | Old Manchester Rd From South | | | | Route 101 WB Ramp From West | | | | Int. Total |
|---|---------------------------------|-------------|-------------|------------|--------------------------------|-----------|-----------|------------|---------------------------------|------------|----------|------------|--------------------------------|----------|----------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:00 PM | | | | | | | | | | | | | | | | | |
| 04:00 PM | 0 | 2 | 1 | 3 | 1 | 0 | 1 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 6 |
| 04:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| 04:45 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total Volume | 0 | 2 | 1 | 3 | 1 | 1 | 3 | 5 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 10 |
| % App. Total | 0 | 66.7 | 33.3 | | 20 | 20 | 60 | | 0 | 100 | 0 | | 0 | 0 | 0 | | |
| PHF | .000 | .250 | .250 | .250 | .250 | .250 | .375 | .625 | .000 | .500 | .000 | .500 | .000 | .000 | .000 | .000 | .417 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 WB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230002
 Site Code : 96230002
 Start Date : 2/8/2023
 Page No : 8



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 04:00 PM | | | | 04:00 PM | | | | 04:00 PM | | | | 04:00 PM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 0 | 2 | 1 | 3 | 1 | 0 | 1 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 2 | 1 | 3 | 1 | 1 | 3 | 5 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 66.7 | 33.3 | | 20 | 20 | 60 | | 0 | 100 | 0 | | 0 | 0 | 0 | |
| PHF | .000 | .250 | .250 | .250 | .250 | .250 | .375 | .625 | .000 | .500 | .000 | .500 | .000 | .000 | .000 | .000 |

Accurate Counts

978-664-2565

File Name : 96230002

Site Code : 96230002

Start Date : 2/8/2023

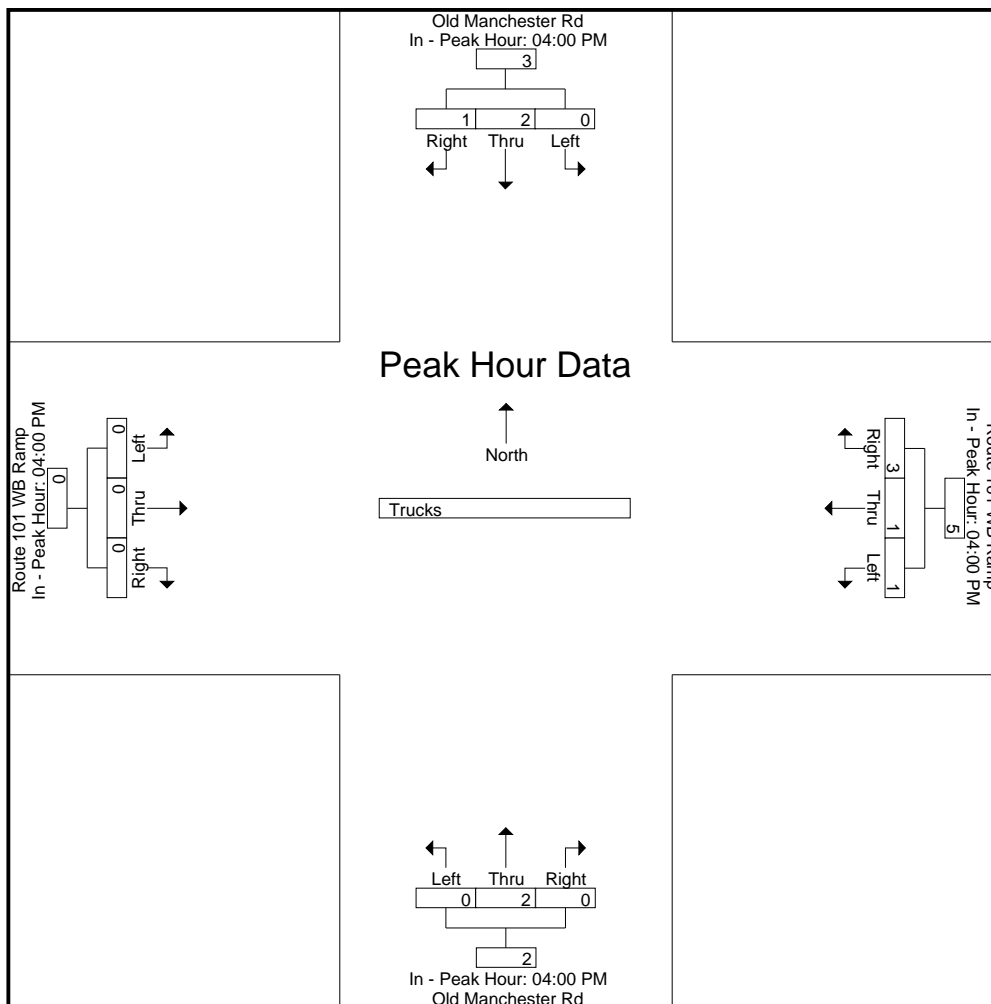
Page No : 9

N/S Street : Old Manchester Road

E/W Street : Route 101 WB Ramp

City/State : Raymond, NH

Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 WB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230002
 Site Code : 96230002
 Start Date : 2/8/2023
 Page No : 10

Groups Printed- Bikes Peds

| Start Time | Old Manchester Rd From North | | | | Route 101 WB Ramp From East | | | | Old Manchester Rd From South | | | | Route 101 WB Ramp From West | | | | Exclu. Total | Inclu. Total | Int. Total |
|--------------------|------------------------------|------|-------|------|-----------------------------|------|-------|------|------------------------------|------|-------|------|-----------------------------|------|-------|------|--------------|--------------|------------|
| | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | | | |
| 04:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 04:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Apprch % | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | | | |
| Total % | | | | | | | | | | | | | | | | | 100 | 0 | |

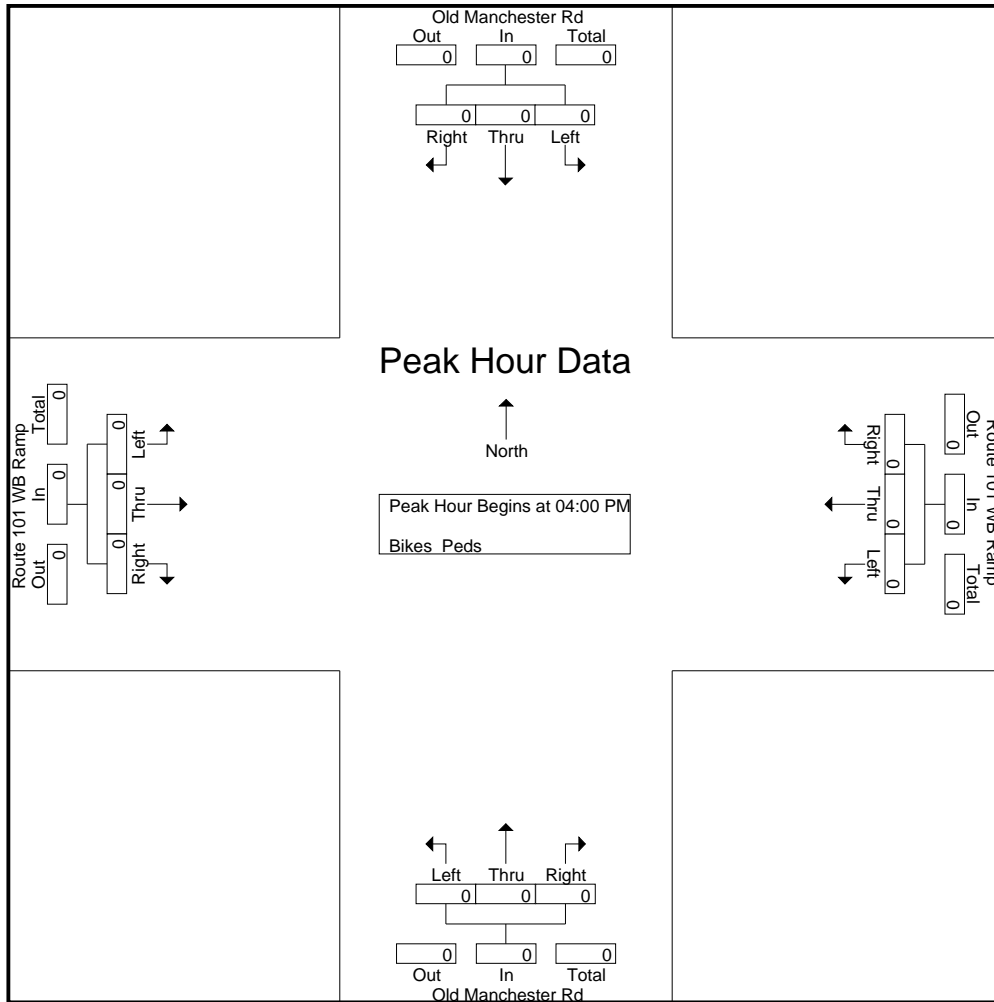
| Start Time | Old Manchester Rd From North | | | | Route 101 WB Ramp From East | | | | Old Manchester Rd From South | | | | Route 101 WB Ramp From West | | | | Int. Total | |
|--|------------------------------|------|-------|------------|-----------------------------|------|-------|------------|------------------------------|------|-------|------------|-----------------------------|------|-------|------------|------------|------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | | |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:00 PM | | | | | | | | | | | | | | | | | | |
| 04:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | | |
| PHF | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 WB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230002
 Site Code : 96230002
 Start Date : 2/8/2023
 Page No : 11



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 04:00 PM | | | | 04:00 PM | | | | 04:00 PM | | | | 04:00 PM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PHF | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |

Accurate Counts

978-664-2565

File Name : 96230002

Site Code : 96230002

Start Date : 2/8/2023

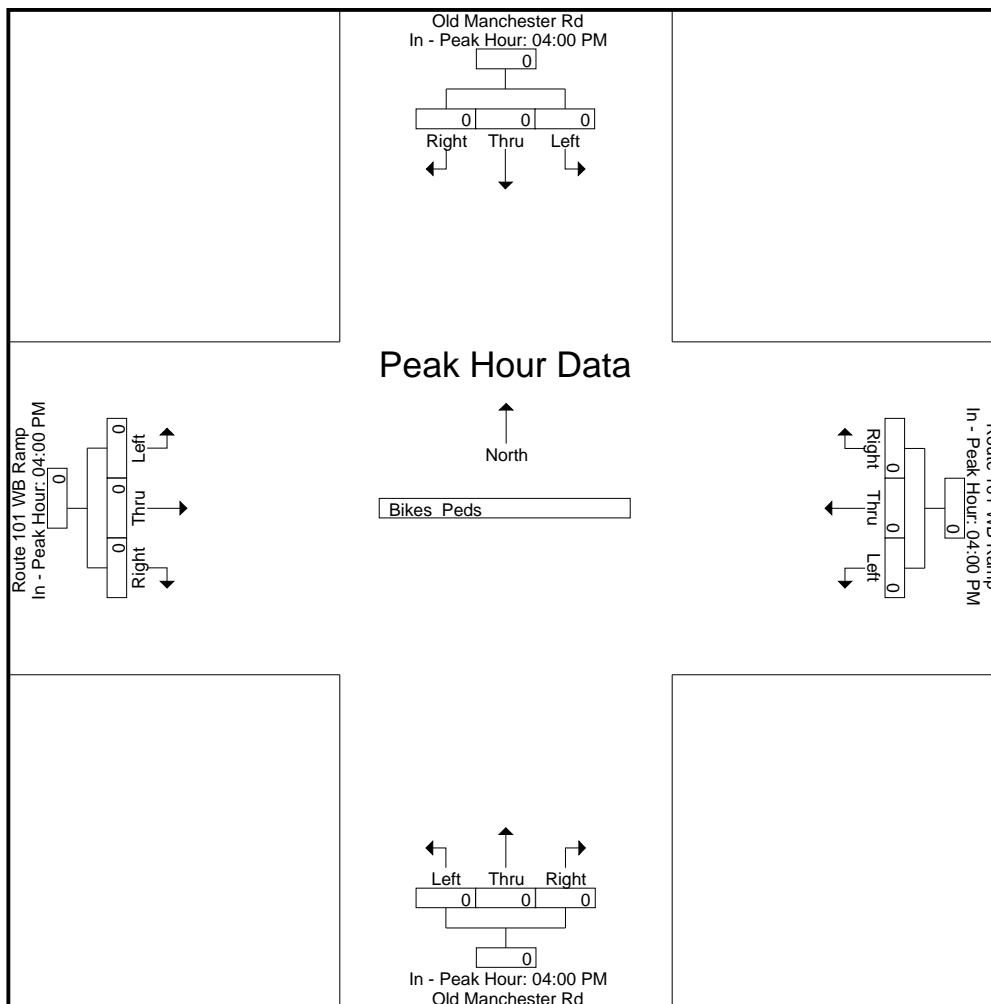
Page No : 12

N/S Street : Old Manchester Road

E/W Street : Route 101 WB Ramp

City/State : Raymond, NH

Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 EB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230003
 Site Code : 96230003
 Start Date : 2/8/2023
 Page No : 1

Groups Printed- Cars - Trucks

| Start Time | Old Manchester Rd From North | | | Route 101 EB Ramp From East | | | Old Manchester Rd From South | | | Route 101 EB Ramp From West | | | Int. Total |
|--------------------|---------------------------------|------------|----------|--------------------------------|----------|----------|---------------------------------|------------|------------|--------------------------------|----------|-----------|------------|
| | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | |
| 07:00 AM | 24 | 7 | 0 | 0 | 0 | 0 | 0 | 39 | 26 | 20 | 0 | 3 | 119 |
| 07:15 AM | 20 | 15 | 0 | 0 | 0 | 0 | 0 | 40 | 22 | 23 | 0 | 6 | 126 |
| 07:30 AM | 24 | 15 | 0 | 0 | 0 | 0 | 0 | 34 | 25 | 14 | 0 | 1 | 113 |
| 07:45 AM | 25 | 21 | 0 | 0 | 0 | 0 | 0 | 32 | 28 | 15 | 0 | 3 | 124 |
| Total | 93 | 58 | 0 | 0 | 0 | 0 | 0 | 145 | 101 | 72 | 0 | 13 | 482 |
| 08:00 AM | 17 | 19 | 0 | 0 | 0 | 0 | 0 | 30 | 25 | 15 | 0 | 7 | 113 |
| 08:15 AM | 17 | 13 | 0 | 0 | 0 | 0 | 0 | 38 | 11 | 15 | 0 | 5 | 99 |
| 08:30 AM | 21 | 21 | 0 | 0 | 0 | 0 | 0 | 27 | 15 | 5 | 1 | 2 | 92 |
| 08:45 AM | 16 | 21 | 0 | 0 | 0 | 0 | 0 | 17 | 10 | 8 | 0 | 8 | 80 |
| Total | 71 | 74 | 0 | 0 | 0 | 0 | 0 | 112 | 61 | 43 | 1 | 22 | 384 |
| Grand Total | 164 | 132 | 0 | 0 | 0 | 0 | 0 | 257 | 162 | 115 | 1 | 35 | 866 |
| Apprch % | 55.4 | 44.6 | 0 | 0 | 0 | 0 | 0 | 61.3 | 38.7 | 76.2 | 0.7 | 23.2 | |
| Total % | 18.9 | 15.2 | 0 | 0 | 0 | 0 | 0 | 29.7 | 18.7 | 13.3 | 0.1 | 4 | |
| Cars | 152 | 126 | 0 | 0 | 0 | 0 | 0 | 253 | 161 | 110 | 1 | 35 | 838 |
| % Cars | 92.7 | 95.5 | 0 | 0 | 0 | 0 | 0 | 98.4 | 99.4 | 95.7 | 100 | 100 | 96.8 |
| Trucks | 12 | 6 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 5 | 0 | 0 | 28 |
| % Trucks | 7.3 | 4.5 | 0 | 0 | 0 | 0 | 0 | 1.6 | 0.6 | 4.3 | 0 | 0 | 3.2 |

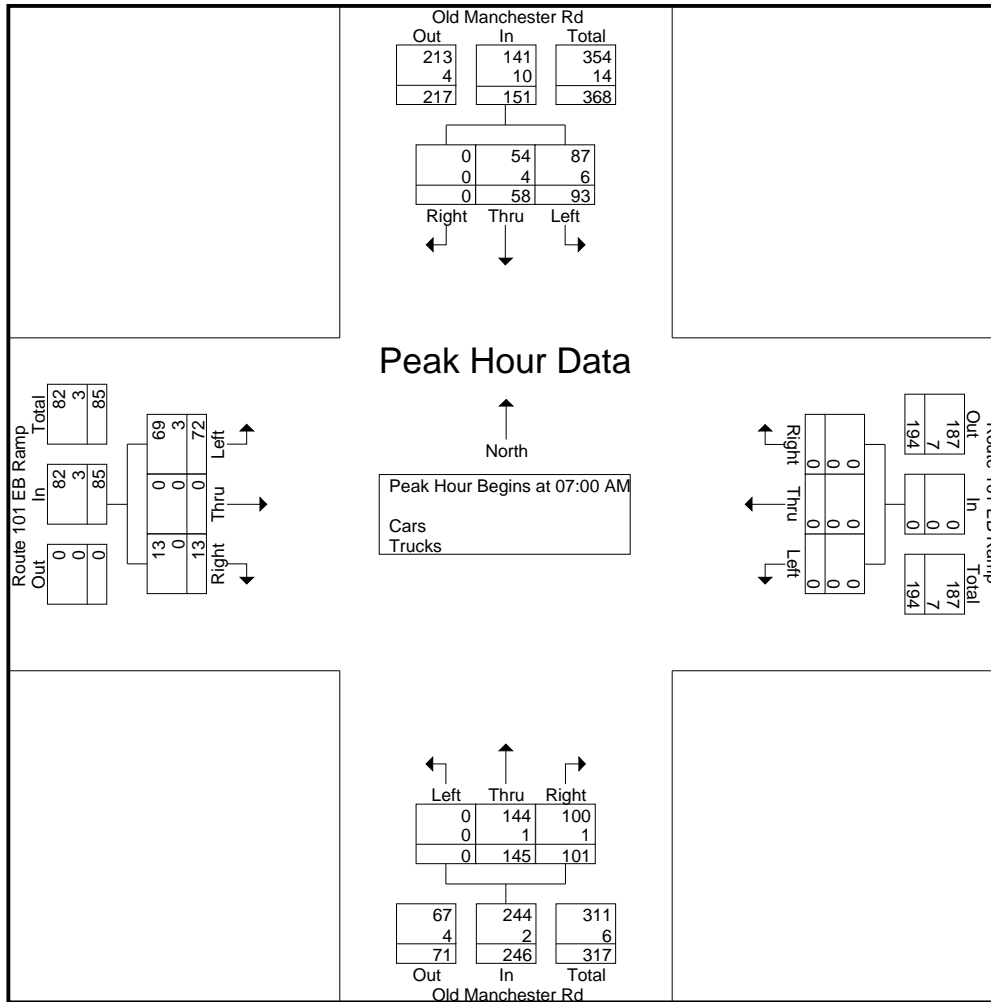
| Start Time | Old Manchester Rd From North | | | | Route 101 EB Ramp From East | | | | Old Manchester Rd From South | | | | Route 101 EB Ramp From West | | | | Int. Total |
|--|---------------------------------|-----------|-------|------------|--------------------------------|------|-------|------------|---------------------------------|-----------|-----------|------------|--------------------------------|------|----------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:00 AM | | | | | | | | | | | | | | | | | |
| 07:00 AM | 24 | 7 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 39 | 26 | 65 | 20 | 0 | 3 | 23 | 119 |
| 07:15 AM | 20 | 15 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 40 | 22 | 62 | 23 | 0 | 6 | 29 | 126 |
| 07:30 AM | 24 | 15 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 34 | 25 | 59 | 14 | 0 | 1 | 15 | 113 |
| 07:45 AM | 25 | 21 | 0 | 46 | 0 | 0 | 0 | 0 | 0 | 32 | 28 | 60 | 15 | 0 | 3 | 18 | 124 |
| Total Volume | 93 | 58 | 0 | 151 | 0 | 0 | 0 | 0 | 0 | 145 | 101 | 246 | 72 | 0 | 13 | 85 | 482 |
| % App. Total | 61.6 | 38.4 | 0 | | 0 | 0 | 0 | | 0 | 58.9 | 41.1 | | 84.7 | 0 | 15.3 | | |
| PHF | .930 | .690 | .000 | .821 | .000 | .000 | .000 | .000 | .000 | .906 | .902 | .946 | .783 | .000 | .542 | .733 | .956 |
| Cars | 87 | 54 | 0 | 141 | 0 | 0 | 0 | 0 | 0 | 144 | 100 | 244 | 69 | 0 | 13 | 82 | 467 |
| % Cars | 93.5 | 93.1 | 0 | 93.4 | 0 | 0 | 0 | 0 | 0 | 99.3 | 99.0 | 99.2 | 95.8 | 0 | 100 | 96.5 | 96.9 |
| Trucks | 6 | 4 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 3 | 0 | 0 | 3 | 15 |
| % Trucks | 6.5 | 6.9 | 0 | 6.6 | 0 | 0 | 0 | 0 | 0 | 0.7 | 1.0 | 0.8 | 4.2 | 0 | 0 | 3.5 | 3.1 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 EB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230003
 Site Code : 96230003
 Start Date : 2/8/2023
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 07:15 AM | | | | 07:00 AM | | | | 07:00 AM | | | | 07:00 AM | | | |
|--------------|-----------|-----------|------|-----------|----------|------|------|------|----------|-----------|-----------|-----------|-----------|------|----------|-----------|
| +0 mins. | 20 | 15 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 39 | 26 | 65 | 20 | 0 | 3 | 23 |
| +15 mins. | 24 | 15 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 40 | 22 | 62 | 23 | 0 | 6 | 29 |
| +30 mins. | 25 | 21 | 0 | 46 | 0 | 0 | 0 | 0 | 0 | 34 | 25 | 59 | 14 | 0 | 1 | 15 |
| +45 mins. | 17 | 19 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 32 | 28 | 60 | 15 | 0 | 3 | 18 |
| Total Volume | 86 | 70 | 0 | 156 | 0 | 0 | 0 | 0 | 0 | 145 | 101 | 246 | 72 | 0 | 13 | 85 |
| % App. Total | 55.1 | 44.9 | 0 | | 0 | 0 | 0 | 0 | 0 | 58.9 | 41.1 | | 84.7 | 0 | 15.3 | |
| PHF | .860 | .833 | .000 | .848 | .000 | .000 | .000 | .000 | .000 | .906 | .902 | .946 | .783 | .000 | .542 | .733 |
| Cars | 79 | 66 | 0 | 145 | 0 | 0 | 0 | 0 | 0 | 144 | 100 | 244 | 69 | 0 | 13 | 82 |
| % Cars | 91.9 | 94.3 | 0 | 92.9 | 0 | 0 | 0 | 0 | 0 | 99.3 | 99 | 99.2 | 95.8 | 0 | 100 | 96.5 |
| Trucks | 7 | 4 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 3 | 0 | 0 | 3 |
| % Trucks | 8.1 | 5.7 | 0 | 7.1 | 0 | 0 | 0 | 0 | 0 | 0.7 | 1 | 0.8 | 4.2 | 0 | 0 | 3.5 |

Accurate Counts

978-664-2565

File Name : 96230003

Site Code : 96230003

Start Date : 2/8/2023

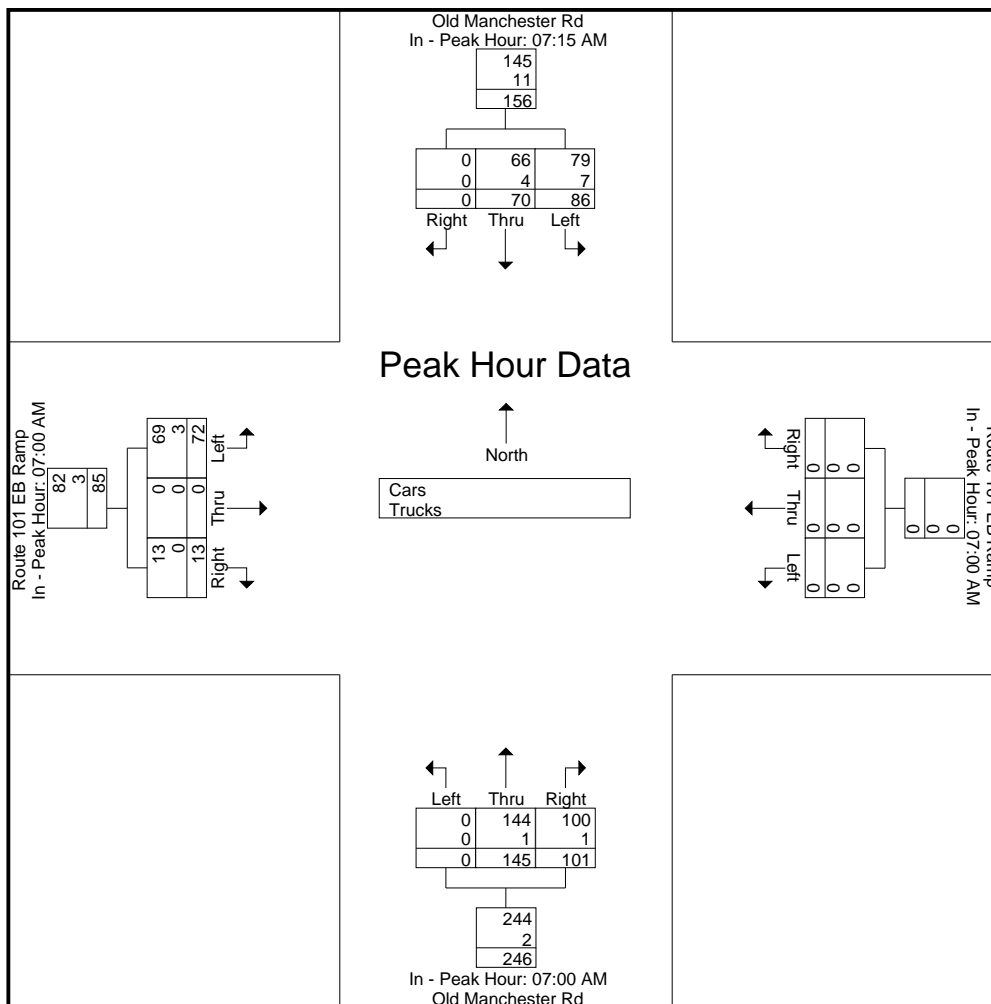
Page No : 3

N/S Street : Old Manchester Road

E/W Street : Route 101 EB Ramp

City/State : Raymond, NH

Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 EB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230003
 Site Code : 96230003
 Start Date : 2/8/2023
 Page No : 4

Groups Printed- Cars

| Start Time | Old Manchester Rd From North | | | Route 101 EB Ramp From East | | | Old Manchester Rd From South | | | Route 101 EB Ramp From West | | | Int. Total |
|--------------------|---------------------------------|------------|----------|--------------------------------|----------|----------|---------------------------------|------------|------------|--------------------------------|----------|-----------|------------|
| | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | |
| 07:00 AM | 24 | 6 | 0 | 0 | 0 | 0 | 0 | 39 | 26 | 19 | 0 | 3 | 117 |
| 07:15 AM | 19 | 14 | 0 | 0 | 0 | 0 | 0 | 40 | 21 | 22 | 0 | 6 | 122 |
| 07:30 AM | 23 | 15 | 0 | 0 | 0 | 0 | 0 | 33 | 25 | 13 | 0 | 1 | 110 |
| 07:45 AM | 21 | 19 | 0 | 0 | 0 | 0 | 0 | 32 | 28 | 15 | 0 | 3 | 118 |
| Total | 87 | 54 | 0 | 0 | 0 | 0 | 0 | 144 | 100 | 69 | 0 | 13 | 467 |
| 08:00 AM | 16 | 18 | 0 | 0 | 0 | 0 | 0 | 29 | 25 | 14 | 0 | 7 | 109 |
| 08:15 AM | 13 | 12 | 0 | 0 | 0 | 0 | 0 | 36 | 11 | 15 | 0 | 5 | 92 |
| 08:30 AM | 21 | 21 | 0 | 0 | 0 | 0 | 0 | 27 | 15 | 5 | 1 | 2 | 92 |
| 08:45 AM | 15 | 21 | 0 | 0 | 0 | 0 | 0 | 17 | 10 | 7 | 0 | 8 | 78 |
| Total | 65 | 72 | 0 | 0 | 0 | 0 | 0 | 109 | 61 | 41 | 1 | 22 | 371 |
| Grand Total | 152 | 126 | 0 | 0 | 0 | 0 | 0 | 253 | 161 | 110 | 1 | 35 | 838 |
| Apprch % | 54.7 | 45.3 | 0 | 0 | 0 | 0 | 0 | 61.1 | 38.9 | 75.3 | 0.7 | 24 | |
| Total % | 18.1 | 15 | 0 | 0 | 0 | 0 | 0 | 30.2 | 19.2 | 13.1 | 0.1 | 4.2 | |

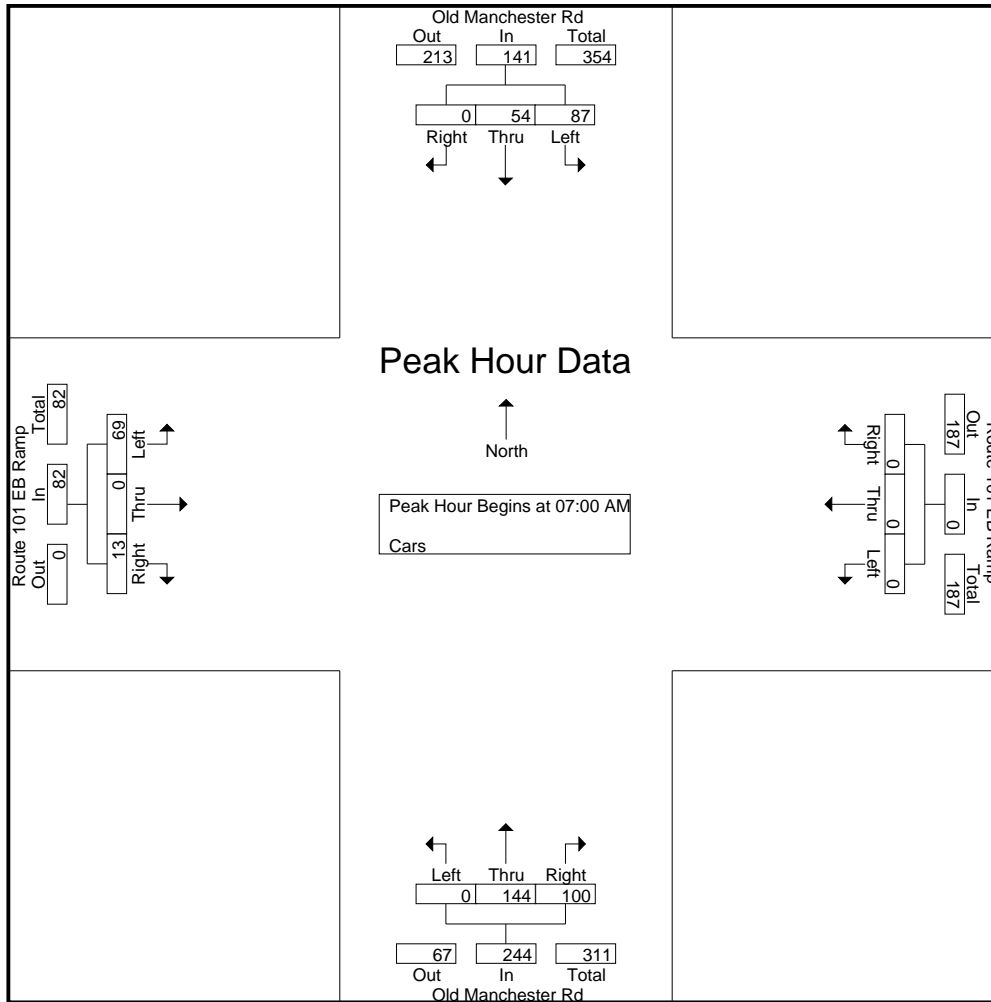
| Start Time | Old Manchester Rd From North | | | | Route 101 EB Ramp From East | | | | Old Manchester Rd From South | | | | Route 101 EB Ramp From West | | | | Int. Total |
|---|---------------------------------|-----------|-------|------------|--------------------------------|------|-------|------------|---------------------------------|-----------|-----------|------------|--------------------------------|------|----------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:00 AM | | | | | | | | | | | | | | | | | |
| 07:00 AM | 24 | 6 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 39 | 26 | 65 | 19 | 0 | 3 | 22 | 117 |
| 07:15 AM | 19 | 14 | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 40 | 21 | 61 | 22 | 0 | 6 | 28 | 122 |
| 07:30 AM | 23 | 15 | 0 | 38 | 0 | 0 | 0 | 0 | 0 | 33 | 25 | 58 | 13 | 0 | 1 | 14 | 110 |
| 07:45 AM | 21 | 19 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 32 | 28 | 60 | 15 | 0 | 3 | 18 | 118 |
| Total Volume | 87 | 54 | 0 | 141 | 0 | 0 | 0 | 0 | 0 | 144 | 100 | 244 | 69 | 0 | 13 | 82 | 467 |
| % App. Total | 61.7 | 38.3 | 0 | | 0 | 0 | 0 | | 0 | 59 | 41 | | 84.1 | 0 | 15.9 | | |
| PHF | .906 | .711 | .000 | .881 | .000 | .000 | .000 | .000 | .000 | .900 | .893 | .938 | .784 | .000 | .542 | .732 | .957 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 EB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230003
 Site Code : 96230003
 Start Date : 2/8/2023
 Page No : 5



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 07:15 AM | | | | 07:00 AM | | | | 07:00 AM | | | | 07:00 AM | | | |
|--------------|-----------|-----------|------|-----------|----------|------|------|------|----------|-----------|-----------|-----------|-----------|------|----------|-----------|
| +0 mins. | 19 | 14 | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 39 | 26 | 65 | 19 | 0 | 3 | 22 |
| +15 mins. | 23 | 15 | 0 | 38 | 0 | 0 | 0 | 0 | 0 | 40 | 21 | 61 | 22 | 0 | 6 | 28 |
| +30 mins. | 21 | 19 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 33 | 25 | 58 | 13 | 0 | 1 | 14 |
| +45 mins. | 16 | 18 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 32 | 28 | 60 | 15 | 0 | 3 | 18 |
| Total Volume | 79 | 66 | 0 | 145 | 0 | 0 | 0 | 0 | 0 | 144 | 100 | 244 | 69 | 0 | 13 | 82 |
| % App. Total | 54.5 | 45.5 | 0 | | 0 | 0 | 0 | | 0 | 59 | 41 | | 84.1 | 0 | 15.9 | |
| PHF | .859 | .868 | .000 | .906 | .000 | .000 | .000 | .000 | .000 | .900 | .893 | .938 | .784 | .000 | .542 | .732 |

Accurate Counts

978-664-2565

File Name : 96230003

Site Code : 96230003

Start Date : 2/8/2023

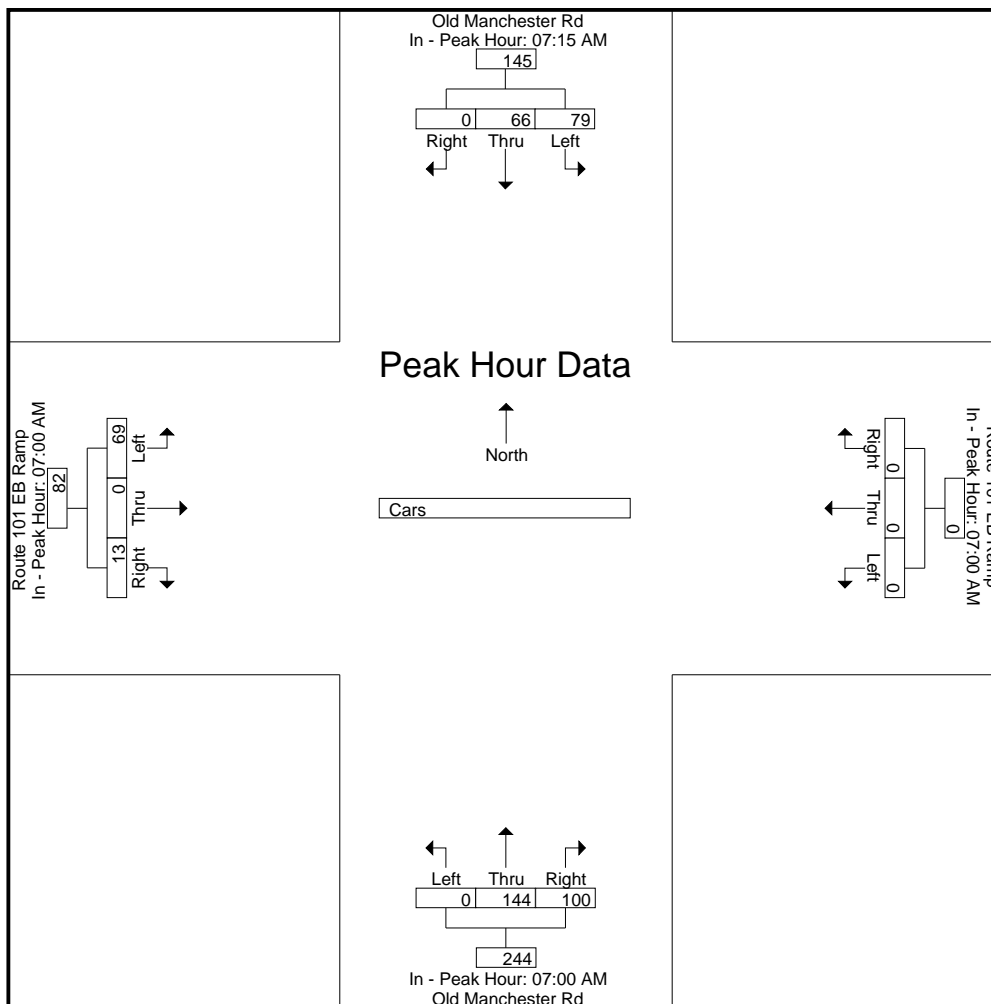
Page No : 6

N/S Street : Old Manchester Road

E/W Street : Route 101 EB Ramp

City/State : Raymond, NH

Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 EB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230003
 Site Code : 96230003
 Start Date : 2/8/2023
 Page No : 7

Groups Printed- Trucks

| Start Time | Old Manchester Rd From North | | | Route 101 EB Ramp From East | | | Old Manchester Rd From South | | | Route 101 EB Ramp From West | | | Int. Total |
|--------------------|---------------------------------|----------|----------|--------------------------------|----------|----------|---------------------------------|----------|----------|--------------------------------|----------|----------|------------|
| | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | |
| 07:00 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| 07:15 AM | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 4 |
| 07:30 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 3 |
| 07:45 AM | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| Total | 6 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 0 | 0 | 15 |
| 08:00 AM | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 4 |
| 08:15 AM | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 7 |
| 08:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:45 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| Total | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 13 |
| Grand Total | 12 | 6 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 5 | 0 | 0 | 28 |
| Apprch % | 66.7 | 33.3 | 0 | 0 | 0 | 0 | 0 | 80 | 20 | 100 | 0 | 0 | |
| Total % | 42.9 | 21.4 | 0 | 0 | 0 | 0 | 0 | 14.3 | 3.6 | 17.9 | 0 | 0 | |

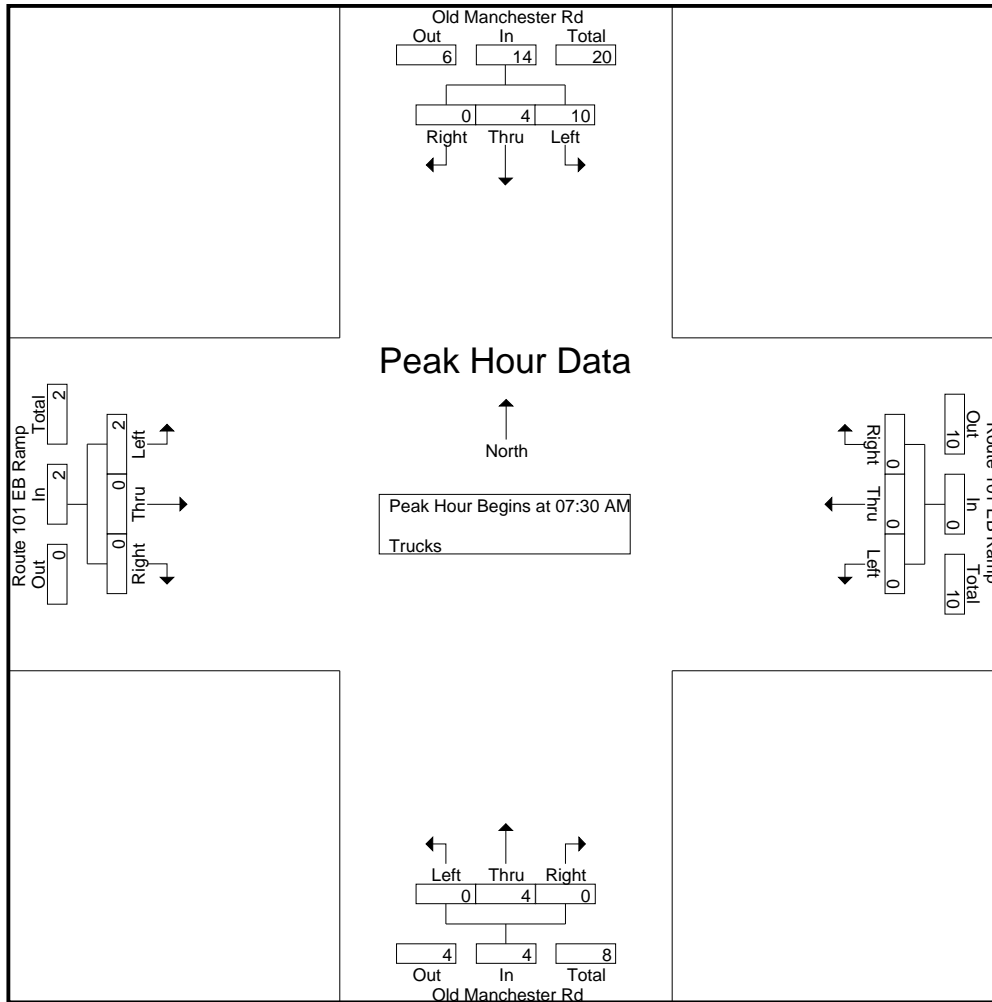
| Start Time | Old Manchester Rd From North | | | | Route 101 EB Ramp From East | | | | Old Manchester Rd From South | | | | Route 101 EB Ramp From West | | | | Int. Total |
|---|---------------------------------|-------------|----------|------------|--------------------------------|----------|----------|------------|---------------------------------|------------|----------|------------|--------------------------------|----------|----------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:30 AM | | | | | | | | | | | | | | | | | |
| 07:30 AM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 3 |
| 07:45 AM | 4 | 2 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 08:00 AM | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 4 |
| 08:15 AM | 4 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 7 |
| Total Volume | 10 | 4 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 2 | 0 | 0 | 2 | 20 |
| % App. Total | 71.4 | 28.6 | 0 | | 0 | 0 | 0 | | 0 | 100 | 0 | | 100 | 0 | 0 | | |
| PHF | .625 | .500 | .000 | .583 | .000 | .000 | .000 | .000 | .000 | .500 | .000 | .500 | .500 | .000 | .000 | .500 | .714 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 EB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230003
 Site Code : 96230003
 Start Date : 2/8/2023
 Page No : 8



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 07:30 AM | | | | 07:00 AM | | | | 07:30 AM | | | | 07:00 AM | | | |
|---------------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| +15 mins. | 4 | 2 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| +30 mins. | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| +45 mins. | 4 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 |
| Total Volume | 10 | 4 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 3 | 0 | 0 | 3 |
| % App. Total | 71.4 | 28.6 | 0 | | 0 | 0 | 0 | | 0 | 100 | 0 | | 100 | 0 | 0 | |
| PHF | .625 | .500 | .000 | .583 | .000 | .000 | .000 | .000 | .000 | .500 | .000 | .500 | .750 | .000 | .000 | .750 |

Accurate Counts

978-664-2565

File Name : 96230003

Site Code : 96230003

Start Date : 2/8/2023

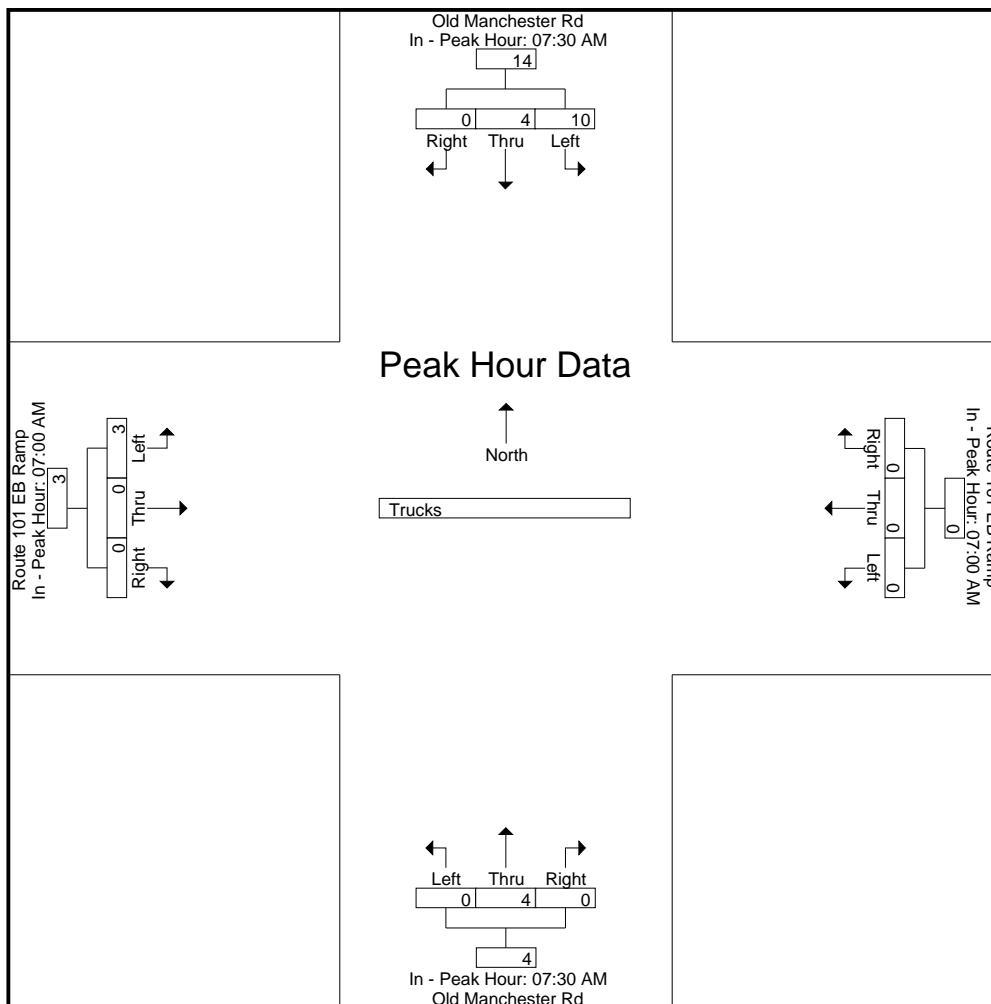
Page No : 9

N/S Street : Old Manchester Road

E/W Street : Route 101 EB Ramp

City/State : Raymond, NH

Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 EB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230003
 Site Code : 96230003
 Start Date : 2/8/2023
 Page No : 10

Groups Printed- Bikes Peds

| Start Time | Old Manchester Rd From North | | | | Route 101 EB Ramp From East | | | | Old Manchester Rd From South | | | | Route 101 EB Ramp From West | | | | Exclu. Total | Inclu. Total | Int. Total |
|--------------------|------------------------------|------|-------|------|-----------------------------|------|-------|------|------------------------------|------|-------|------|-----------------------------|------|-------|------|--------------|--------------|------------|
| | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | | | |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 08:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 08:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 3 |
| Apprch % | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 100 | 0 | | 0 | 0 | 0 | | | | |
| Total % | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 100 | 0 | | 0 | 0 | 0 | | 66.7 | 33.3 | |

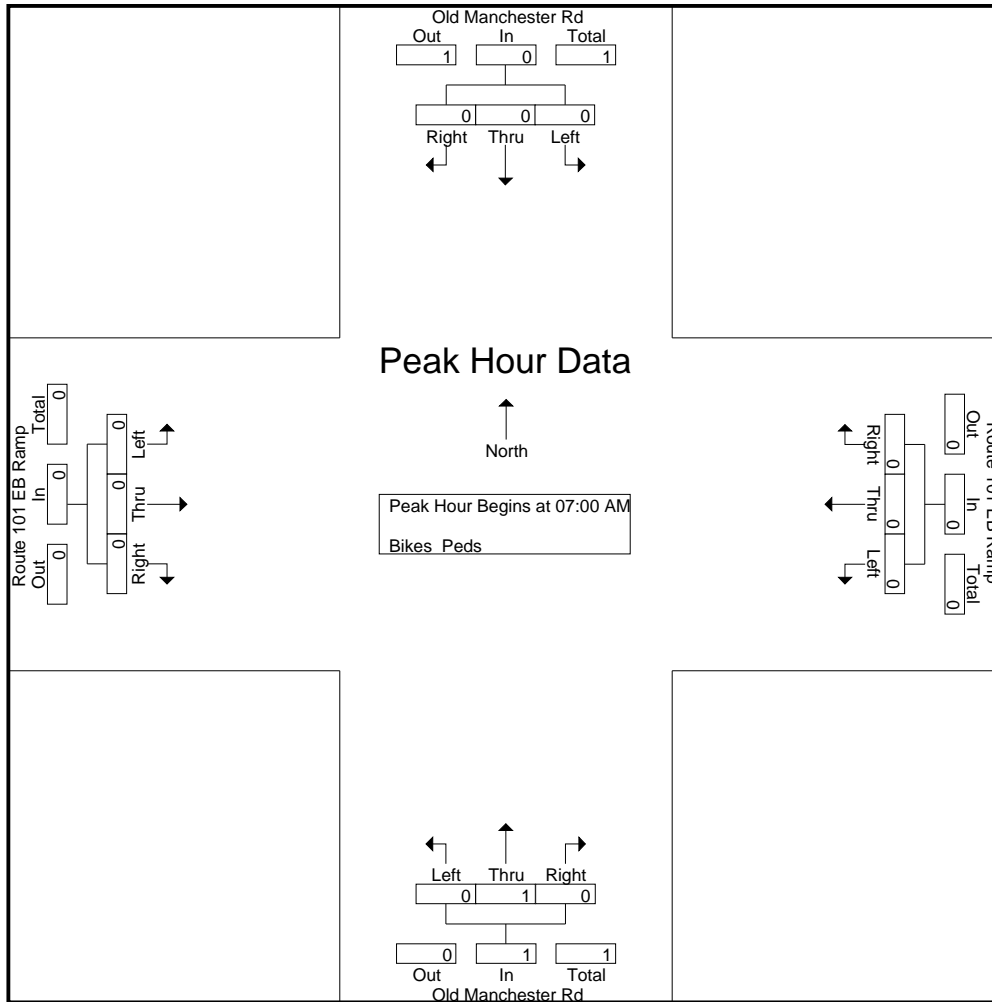
| Start Time | Old Manchester Rd From North | | | | Route 101 EB Ramp From East | | | | Old Manchester Rd From South | | | | Route 101 EB Ramp From West | | | | Int. Total |
|--|------------------------------|------|-------|------------|-----------------------------|------|-------|------------|------------------------------|------|-------|------------|-----------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:00 AM | | | | | | | | | | | | | | | | | |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| % App. Total | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 100 | 0 | | 0 | 0 | 0 | | |
| PHF | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .250 | .000 | .250 | .000 | .000 | .000 | .000 | .250 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 EB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230003
 Site Code : 96230003
 Start Date : 2/8/2023
 Page No : 11



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 07:00 AM | | | | 07:00 AM | | | | 07:00 AM | | | | 07:00 AM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 100 | 0 | 0 | 0 | 0 |
| PHF | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .250 | .000 | .250 | .000 | .000 | .000 | .000 |

Accurate Counts

978-664-2565

File Name : 96230003

Site Code : 96230003

Start Date : 2/8/2023

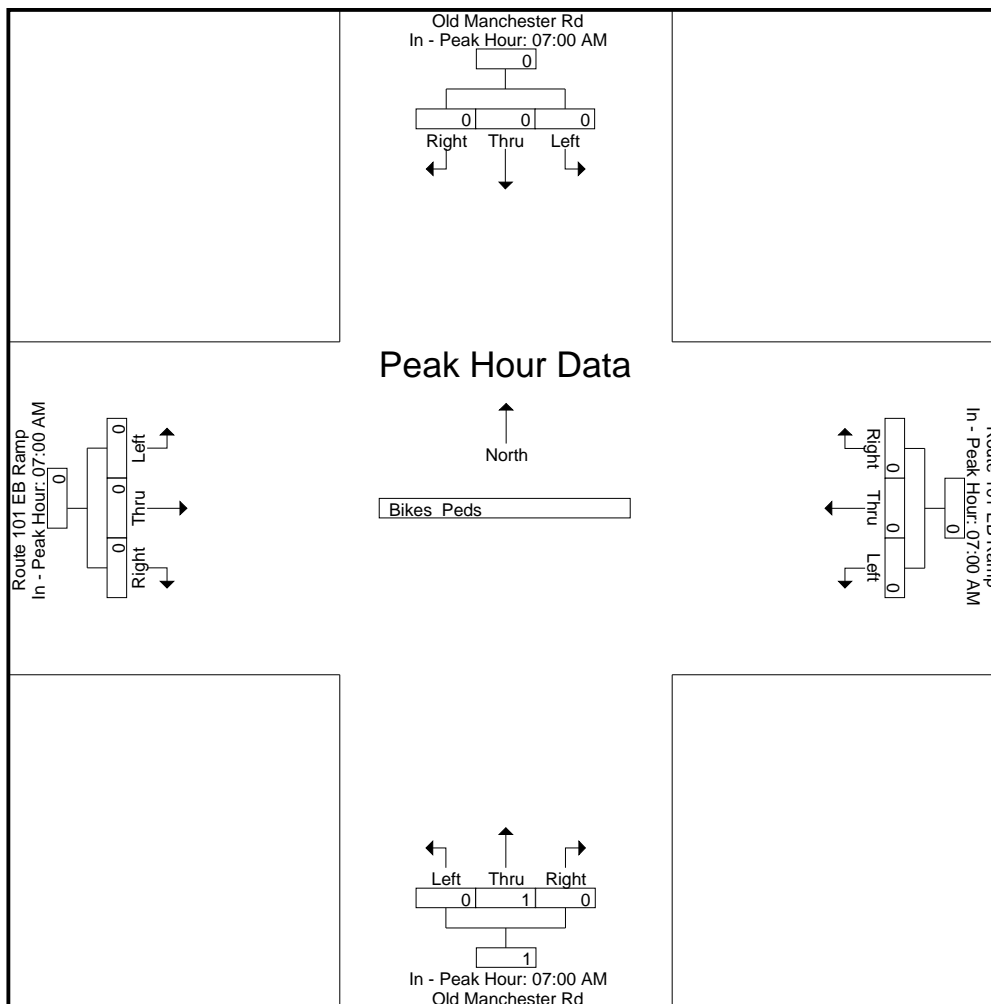
Page No : 12

N/S Street : Old Manchester Road

E/W Street : Route 101 EB Ramp

City/State : Raymond, NH

Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 EB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230003
 Site Code : 96230003
 Start Date : 2/8/2023
 Page No : 1

Groups Printed- Cars - Trucks

| Start Time | Old Manchester Rd From North | | | Route 101 EB Ramp From East | | | Old Manchester Rd From South | | | Route 101 EB Ramp From West | | | Int. Total |
|--------------------|---------------------------------|------------|----------|--------------------------------|----------|----------|---------------------------------|------------|------------|--------------------------------|----------|------------|-------------|
| | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | |
| 04:00 PM | 9 | 51 | 0 | 0 | 0 | 0 | 0 | 13 | 10 | 19 | 0 | 15 | 117 |
| 04:15 PM | 10 | 42 | 0 | 0 | 0 | 0 | 0 | 19 | 11 | 28 | 0 | 16 | 126 |
| 04:30 PM | 7 | 63 | 0 | 0 | 0 | 0 | 0 | 18 | 14 | 23 | 1 | 20 | 146 |
| 04:45 PM | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 16 | 12 | 30 | 0 | 15 | 112 |
| Total | 33 | 188 | 0 | 0 | 0 | 0 | 0 | 66 | 47 | 100 | 1 | 66 | 501 |
| 05:00 PM | 15 | 38 | 0 | 0 | 0 | 0 | 0 | 21 | 10 | 31 | 0 | 12 | 127 |
| 05:15 PM | 14 | 48 | 0 | 0 | 0 | 0 | 0 | 15 | 13 | 30 | 0 | 24 | 144 |
| 05:30 PM | 8 | 44 | 0 | 0 | 0 | 0 | 0 | 19 | 12 | 29 | 0 | 19 | 131 |
| 05:45 PM | 5 | 26 | 0 | 0 | 0 | 0 | 0 | 16 | 19 | 26 | 0 | 17 | 109 |
| Total | 42 | 156 | 0 | 0 | 0 | 0 | 0 | 71 | 54 | 116 | 0 | 72 | 511 |
| Grand Total | 75 | 344 | 0 | 0 | 0 | 0 | 0 | 137 | 101 | 216 | 1 | 138 | 1012 |
| Apprch % | 17.9 | 82.1 | 0 | 0 | 0 | 0 | 0 | 57.6 | 42.4 | 60.8 | 0.3 | 38.9 | |
| Total % | 7.4 | 34 | 0 | 0 | 0 | 0 | 0 | 13.5 | 10 | 21.3 | 0.1 | 13.6 | |
| Cars | 74 | 342 | 0 | 0 | 0 | 0 | 0 | 136 | 101 | 213 | 1 | 138 | 1005 |
| % Cars | 98.7 | 99.4 | 0 | 0 | 0 | 0 | 0 | 99.3 | 100 | 98.6 | 100 | 100 | 99.3 |
| Trucks | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 7 |
| % Trucks | 1.3 | 0.6 | 0 | 0 | 0 | 0 | 0 | 0.7 | 0 | 1.4 | 0 | 0 | 0.7 |

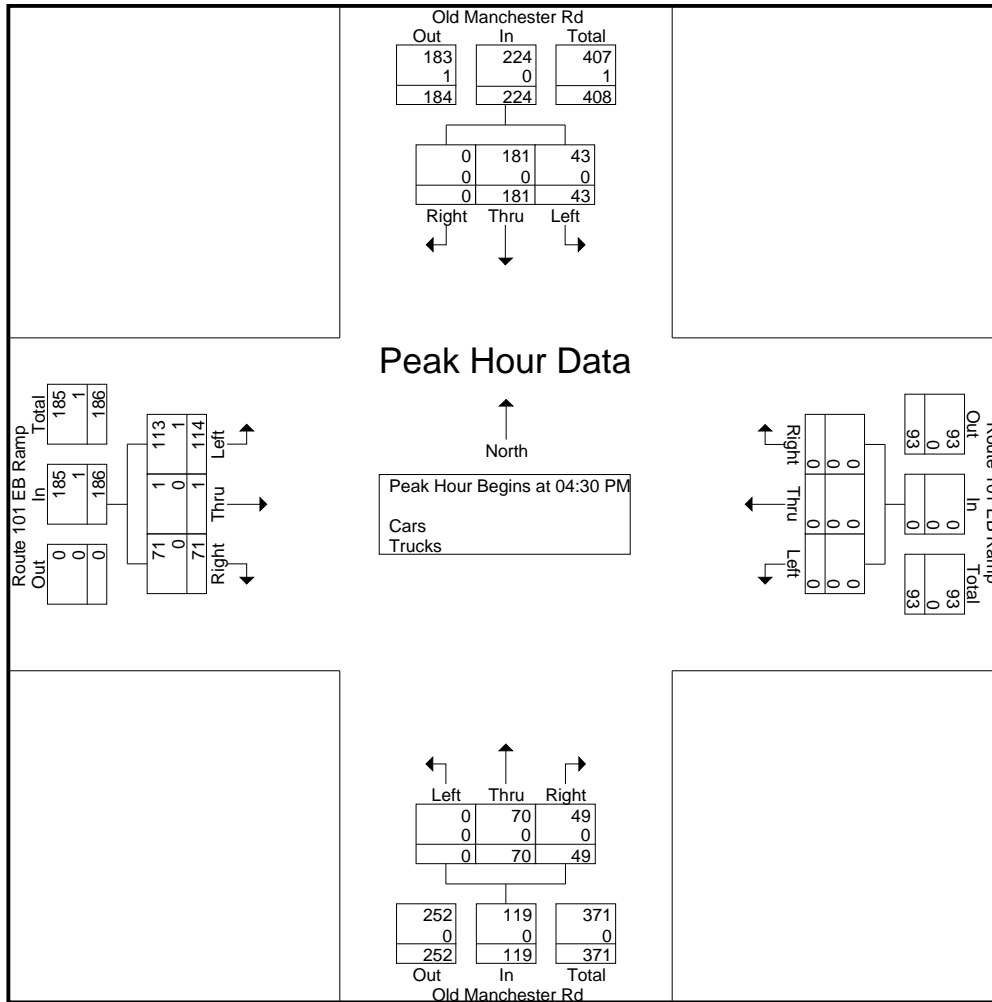
| Start Time | Old Manchester Rd From North | | | | Route 101 EB Ramp From East | | | | Old Manchester Rd From South | | | | Route 101 EB Ramp From West | | | | Int. Total |
|--|---------------------------------|------------|----------|------------|--------------------------------|----------|----------|------------|---------------------------------|-----------|-----------|------------|--------------------------------|----------|-----------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:30 PM | | | | | | | | | | | | | | | | | |
| 04:30 PM | 7 | 63 | 0 | 70 | 0 | 0 | 0 | 0 | 0 | 18 | 14 | 32 | 23 | 1 | 20 | 44 | 146 |
| 04:45 PM | 7 | 32 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 16 | 12 | 28 | 30 | 0 | 15 | 45 | 112 |
| 05:00 PM | 15 | 38 | 0 | 53 | 0 | 0 | 0 | 0 | 0 | 21 | 10 | 31 | 31 | 0 | 12 | 43 | 127 |
| 05:15 PM | 14 | 48 | 0 | 62 | 0 | 0 | 0 | 0 | 0 | 15 | 13 | 28 | 30 | 0 | 24 | 54 | 144 |
| Total Volume | 43 | 181 | 0 | 224 | 0 | 0 | 0 | 0 | 0 | 70 | 49 | 119 | 114 | 1 | 71 | 186 | 529 |
| % App. Total | 19.2 | 80.8 | 0 | | 0 | 0 | 0 | | 0 | 58.8 | 41.2 | | 61.3 | 0.5 | 38.2 | | |
| PHF | .717 | .718 | .000 | .800 | .000 | .000 | .000 | .000 | .000 | .833 | .875 | .930 | .919 | .250 | .740 | .861 | .906 |
| Cars | 43 | 181 | 0 | 224 | 0 | 0 | 0 | 0 | 0 | 70 | 49 | 119 | 113 | 1 | 71 | 185 | 528 |
| % Cars | 100 | 100 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 100 | 100 | 100 | 99.1 | 100 | 100 | 99.5 | 99.8 |
| Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| % Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.9 | 0 | 0 | 0.5 | 0.2 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 EB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230003
 Site Code : 96230003
 Start Date : 2/8/2023
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

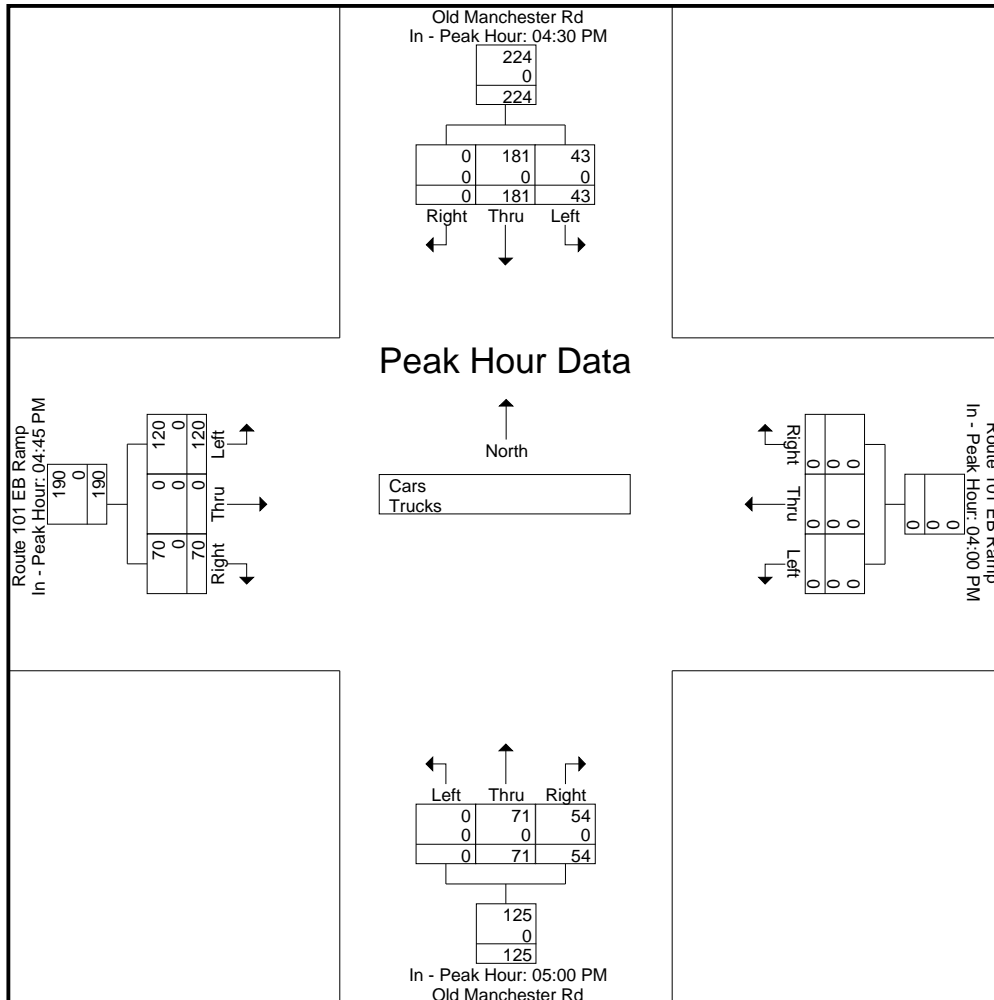
| | 04:30 PM | | | | 04:00 PM | | | | 05:00 PM | | | | 04:45 PM | | | |
|--------------|-----------|-----------|------|-----------|----------|------|------|------|----------|-----------|-----------|-----------|-----------|------|-----------|-----------|
| +0 mins. | 7 | 63 | 0 | 70 | 0 | 0 | 0 | 0 | 0 | 21 | 10 | 31 | 30 | 0 | 15 | 45 |
| +15 mins. | 7 | 32 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 15 | 13 | 28 | 31 | 0 | 12 | 43 |
| +30 mins. | 15 | 38 | 0 | 53 | 0 | 0 | 0 | 0 | 0 | 19 | 12 | 31 | 30 | 0 | 24 | 54 |
| +45 mins. | 14 | 48 | 0 | 62 | 0 | 0 | 0 | 0 | 0 | 16 | 19 | 35 | 29 | 0 | 19 | 48 |
| Total Volume | 43 | 181 | 0 | 224 | 0 | 0 | 0 | 0 | 0 | 71 | 54 | 125 | 120 | 0 | 70 | 190 |
| % App. Total | 19.2 | 80.8 | 0 | | 0 | 0 | 0 | | 0 | 56.8 | 43.2 | | 63.2 | 0 | 36.8 | |
| PHF | .717 | .718 | .000 | .800 | .000 | .000 | .000 | .000 | .000 | .845 | .711 | .893 | .968 | .000 | .729 | .880 |
| Cars | 43 | 181 | 0 | 224 | 0 | 0 | 0 | 0 | 0 | 71 | 54 | 125 | 120 | 0 | 70 | 190 |
| % Cars | 100 | 100 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 100 | 100 | 100 | 100 | 0 | 100 | 100 |
| Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 EB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230003
 Site Code : 96230003
 Start Date : 2/8/2023
 Page No : 3



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 EB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230003
 Site Code : 96230003
 Start Date : 2/8/2023
 Page No : 4

Groups Printed- Cars

| Start Time | Old Manchester Rd From North | | | Route 101 EB Ramp From East | | | Old Manchester Rd From South | | | Route 101 EB Ramp From West | | | Int. Total |
|--------------------|---------------------------------|------------|----------|--------------------------------|----------|----------|---------------------------------|------------|------------|--------------------------------|----------|------------|-------------|
| | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | |
| 04:00 PM | 8 | 49 | 0 | 0 | 0 | 0 | 0 | 12 | 10 | 19 | 0 | 15 | 113 |
| 04:15 PM | 10 | 42 | 0 | 0 | 0 | 0 | 0 | 19 | 11 | 28 | 0 | 16 | 126 |
| 04:30 PM | 7 | 63 | 0 | 0 | 0 | 0 | 0 | 18 | 14 | 22 | 1 | 20 | 145 |
| 04:45 PM | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 16 | 12 | 30 | 0 | 15 | 112 |
| Total | 32 | 186 | 0 | 0 | 0 | 0 | 0 | 65 | 47 | 99 | 1 | 66 | 496 |
| 05:00 PM | 15 | 38 | 0 | 0 | 0 | 0 | 0 | 21 | 10 | 31 | 0 | 12 | 127 |
| 05:15 PM | 14 | 48 | 0 | 0 | 0 | 0 | 0 | 15 | 13 | 30 | 0 | 24 | 144 |
| 05:30 PM | 8 | 44 | 0 | 0 | 0 | 0 | 0 | 19 | 12 | 29 | 0 | 19 | 131 |
| 05:45 PM | 5 | 26 | 0 | 0 | 0 | 0 | 0 | 16 | 19 | 24 | 0 | 17 | 107 |
| Total | 42 | 156 | 0 | 0 | 0 | 0 | 0 | 71 | 54 | 114 | 0 | 72 | 509 |
| Grand Total | 74 | 342 | 0 | 0 | 0 | 0 | 0 | 136 | 101 | 213 | 1 | 138 | 1005 |
| Apprch % | 17.8 | 82.2 | 0 | 0 | 0 | 0 | 0 | 57.4 | 42.6 | 60.5 | 0.3 | 39.2 | |
| Total % | 7.4 | 34 | 0 | 0 | 0 | 0 | 0 | 13.5 | 10 | 21.2 | 0.1 | 13.7 | |

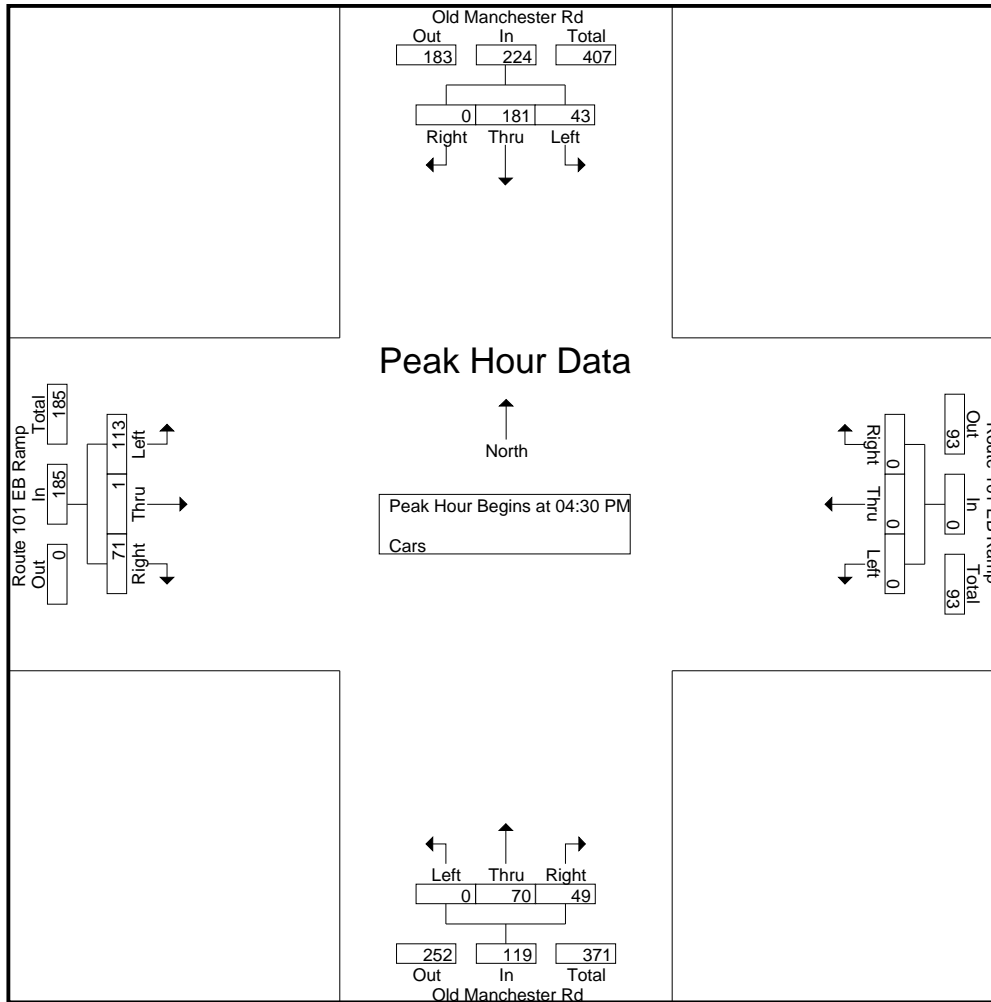
| Start Time | Old Manchester Rd From North | | | | Route 101 EB Ramp From East | | | | Old Manchester Rd From South | | | | Route 101 EB Ramp From West | | | | Int. Total |
|---|---------------------------------|-----------|-------|------------|--------------------------------|------|-------|------------|---------------------------------|-----------|-----------|------------|--------------------------------|----------|-----------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:30 PM | | | | | | | | | | | | | | | | | |
| 04:30 PM | 7 | 63 | 0 | 70 | 0 | 0 | 0 | 0 | 0 | 18 | 14 | 32 | 22 | 1 | 20 | 43 | 145 |
| 04:45 PM | 7 | 32 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 16 | 12 | 28 | 30 | 0 | 15 | 45 | 112 |
| 05:00 PM | 15 | 38 | 0 | 53 | 0 | 0 | 0 | 0 | 0 | 21 | 10 | 31 | 31 | 0 | 12 | 43 | 127 |
| 05:15 PM | 14 | 48 | 0 | 62 | 0 | 0 | 0 | 0 | 0 | 15 | 13 | 28 | 30 | 0 | 24 | 54 | 144 |
| Total Volume | 43 | 181 | 0 | 224 | 0 | 0 | 0 | 0 | 0 | 70 | 49 | 119 | 113 | 1 | 71 | 185 | 528 |
| % App. Total | 19.2 | 80.8 | 0 | | 0 | 0 | 0 | | 0 | 58.8 | 41.2 | | 61.1 | 0.5 | 38.4 | | |
| PHF | .717 | .718 | .000 | .800 | .000 | .000 | .000 | .000 | .000 | .833 | .875 | .930 | .911 | .250 | .740 | .856 | .910 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 EB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230003
 Site Code : 96230003
 Start Date : 2/8/2023
 Page No : 5



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 04:30 PM | | | | 04:00 PM | | | | 05:00 PM | | | | 04:45 PM | | | |
|--------------|-----------|-----------|------|-----------|----------|------|------|------|----------|-----------|-----------|-----------|-----------|------|-----------|-----------|
| +0 mins. | 7 | 63 | 0 | 70 | 0 | 0 | 0 | 0 | 0 | 21 | 10 | 31 | 30 | 0 | 15 | 45 |
| +15 mins. | 7 | 32 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 15 | 13 | 28 | 31 | 0 | 12 | 43 |
| +30 mins. | 15 | 38 | 0 | 53 | 0 | 0 | 0 | 0 | 0 | 19 | 12 | 31 | 30 | 0 | 24 | 54 |
| +45 mins. | 14 | 48 | 0 | 62 | 0 | 0 | 0 | 0 | 0 | 16 | 19 | 35 | 29 | 0 | 19 | 48 |
| Total Volume | 43 | 181 | 0 | 224 | 0 | 0 | 0 | 0 | 0 | 71 | 54 | 125 | 120 | 0 | 70 | 190 |
| % App. Total | 19.2 | 80.8 | 0 | | 0 | 0 | 0 | | 0 | 56.8 | 43.2 | | 63.2 | 0 | 36.8 | |
| PHF | .717 | .718 | .000 | .800 | .000 | .000 | .000 | .000 | .000 | .845 | .711 | .893 | .968 | .000 | .729 | .880 |

Accurate Counts

978-664-2565

File Name : 96230003

Site Code : 96230003

Start Date : 2/8/2023

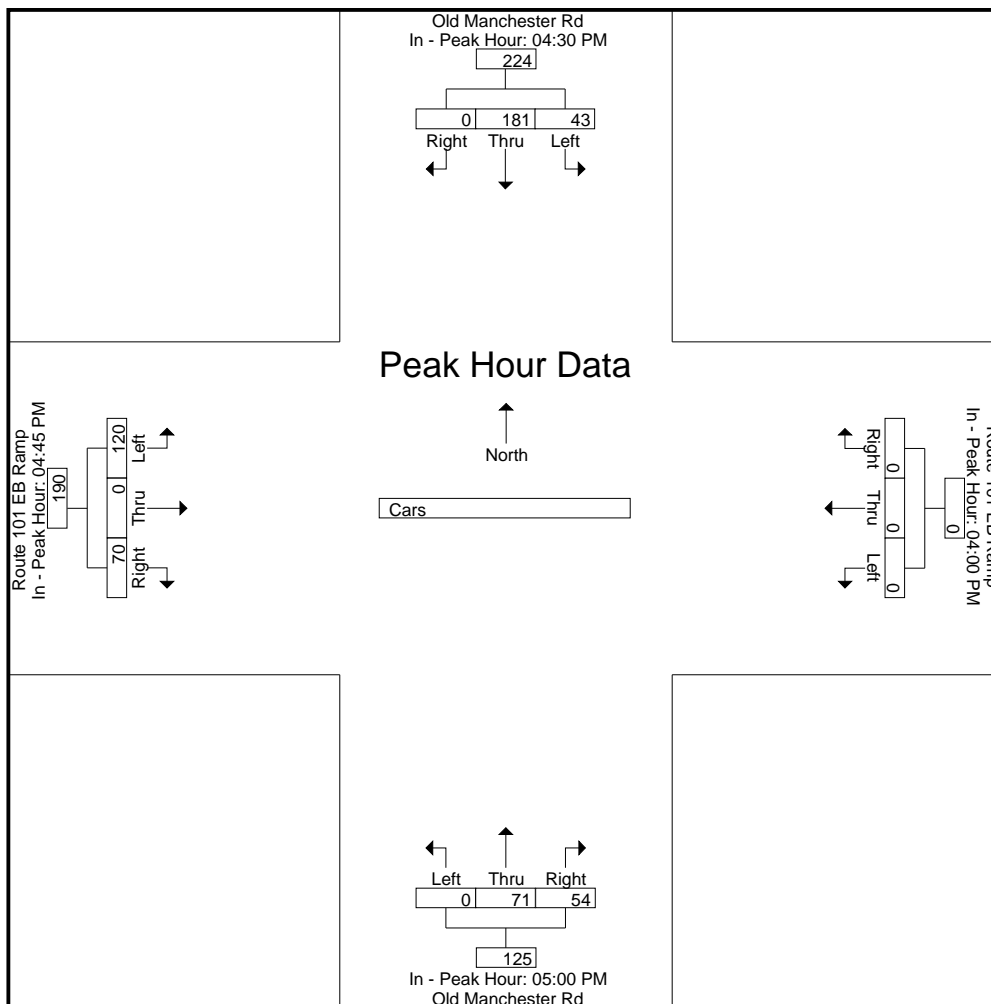
Page No : 6

N/S Street : Old Manchester Road

E/W Street : Route 101 EB Ramp

City/State : Raymond, NH

Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road

E/W Street : Route 101 EB Ramp

City/State : Raymond, NH

Weather : Clear

File Name : 96230003

Site Code : 96230003

Start Date : 2/8/2023

Page No : 7

Groups Printed- Trucks

| Start Time | Old Manchester Rd From North | | | Route 101 EB Ramp From East | | | Old Manchester Rd From South | | | Route 101 EB Ramp From West | | | Int. Total |
|--------------------|---------------------------------|----------|----------|--------------------------------|----------|----------|---------------------------------|----------|----------|--------------------------------|----------|----------|------------|
| | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | |
| 04:00 PM | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 4 |
| 04:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 04:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 5 |
| 05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| Grand Total | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 7 |
| Apprch % | 33.3 | 66.7 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 100 | 0 | 0 | |
| Total % | 14.3 | 28.6 | 0 | 0 | 0 | 0 | 0 | 14.3 | 0 | 42.9 | 0 | 0 | |

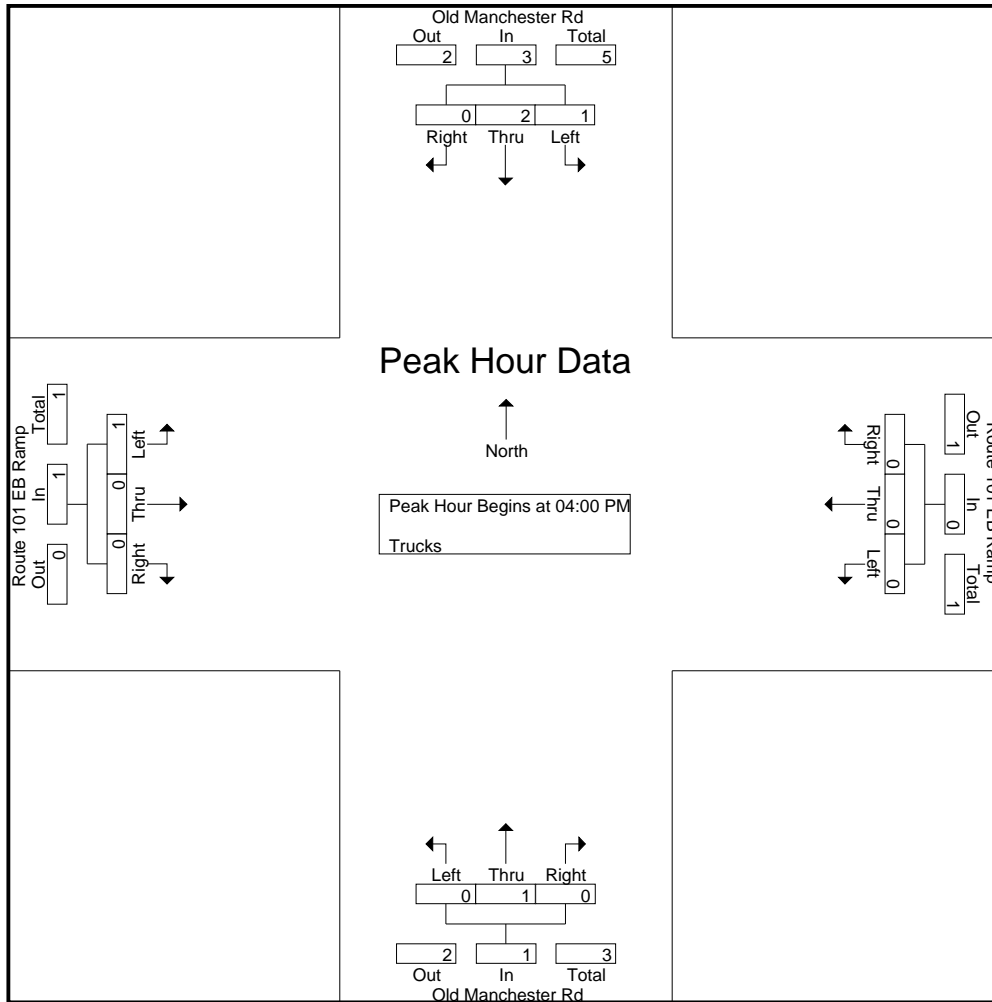
| Start Time | Old Manchester Rd From North | | | | Route 101 EB Ramp From East | | | | Old Manchester Rd From South | | | | Route 101 EB Ramp From West | | | | Int. Total |
|---|---------------------------------|-------------|----------|------------|--------------------------------|----------|----------|------------|---------------------------------|------------|----------|------------|--------------------------------|----------|----------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:00 PM | | | | | | | | | | | | | | | | | |
| 04:00 PM | 1 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 4 |
| 04:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| 04:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 1 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 5 |
| % App. Total | 33.3 | 66.7 | 0 | | 0 | 0 | 0 | | 0 | 100 | 0 | | 100 | 0 | 0 | | |
| PHF | .250 | .250 | .000 | .250 | .000 | .000 | .000 | .000 | .000 | .250 | .000 | .250 | .250 | .000 | .000 | .250 | .313 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 EB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230003
 Site Code : 96230003
 Start Date : 2/8/2023
 Page No : 8



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 04:00 PM | | | | 04:00 PM | | | | 04:00 PM | | | | 05:00 PM | | | |
|---------------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 1 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| Total Volume | 1 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 2 |
| % App. Total | 33.3 | 66.7 | 0 | | 0 | 0 | 0 | | 0 | 100 | 0 | | 100 | 0 | 0 | |
| PHF | .250 | .250 | .000 | .250 | .000 | .000 | .000 | .000 | .000 | .250 | .000 | .250 | .250 | .000 | .000 | .250 |

Accurate Counts

978-664-2565

File Name : 96230003

Site Code : 96230003

Start Date : 2/8/2023

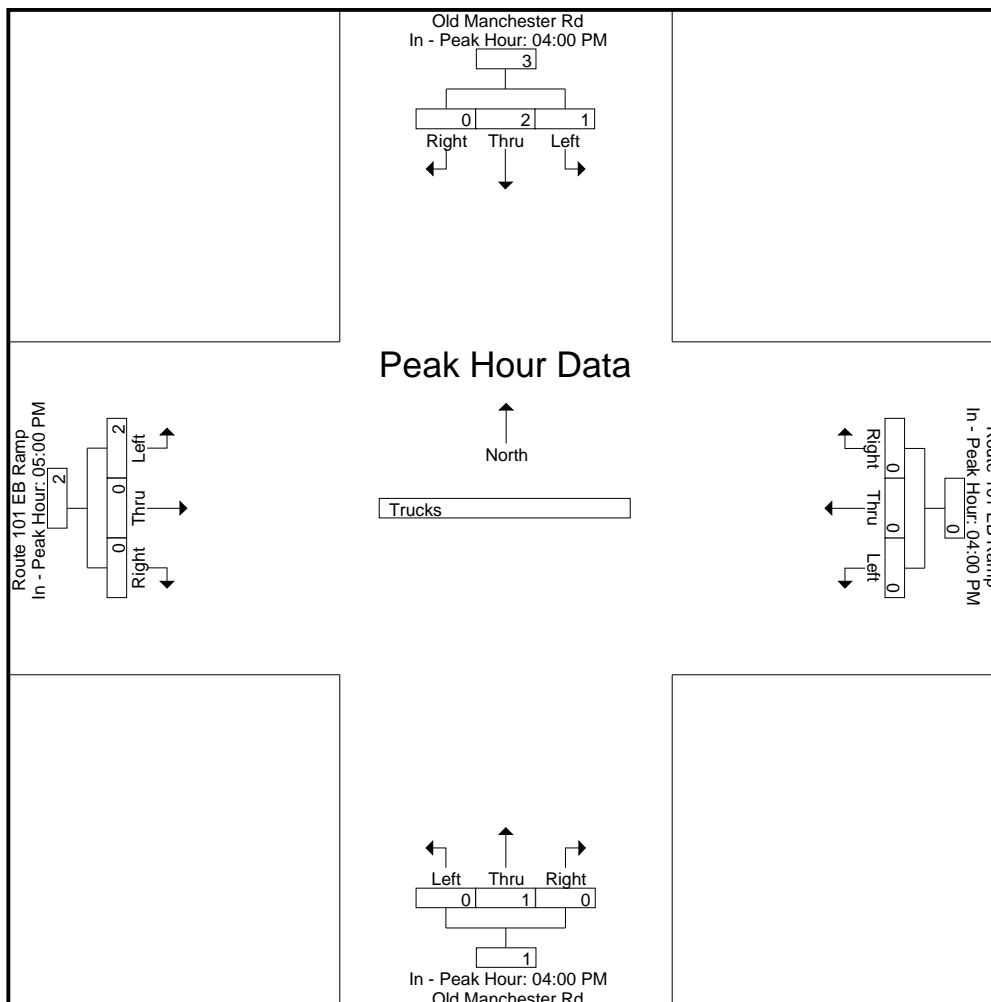
Page No : 9

N/S Street : Old Manchester Road

E/W Street : Route 101 EB Ramp

City/State : Raymond, NH

Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 EB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230003
 Site Code : 96230003
 Start Date : 2/8/2023
 Page No : 10

Groups Printed- Bikes Peds

| Start Time | Old Manchester Rd From North | | | | Route 101 EB Ramp From East | | | | Old Manchester Rd From South | | | | Route 101 EB Ramp From West | | | | Exclu. Total | Inclu. Total | Int. Total |
|--------------------|------------------------------|------|-------|------|-----------------------------|------|-------|------|------------------------------|------|-------|------|-----------------------------|------|-------|------|--------------|--------------|------------|
| | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | | | |
| 04:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 04:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Apprch % | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | | | |
| Total % | | | | | | | | | | | | | | | | | 100 | 0 | |

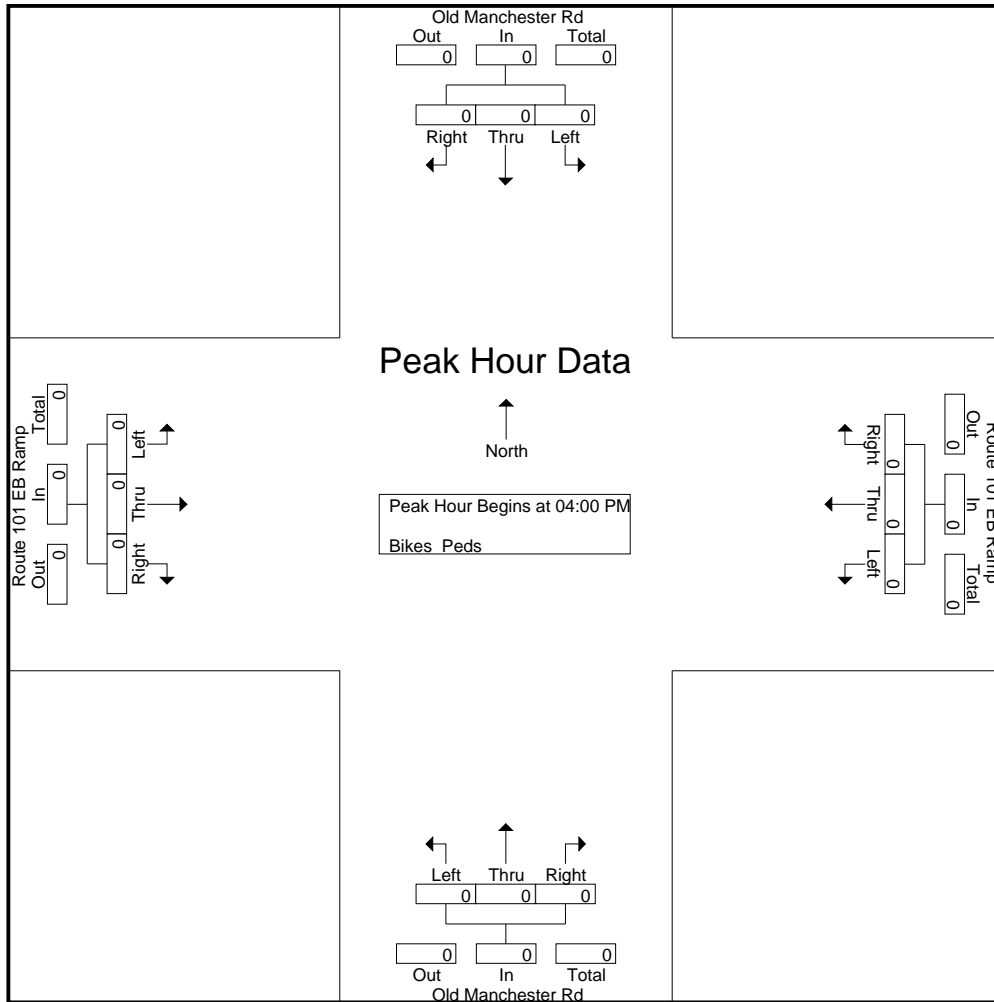
| Start Time | Old Manchester Rd From North | | | | Route 101 EB Ramp From East | | | | Old Manchester Rd From South | | | | Route 101 EB Ramp From West | | | | Int. Total | |
|--|------------------------------|------|-------|------------|-----------------------------|------|-------|------------|------------------------------|------|-------|------------|-----------------------------|------|-------|------------|------------|------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | | |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:00 PM | | | | | | | | | | | | | | | | | | |
| 04:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | | |
| PHF | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Route 101 EB Ramp
 City/State : Raymond, NH
 Weather : Clear

File Name : 96230003
 Site Code : 96230003
 Start Date : 2/8/2023
 Page No : 11



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 04:00 PM | | | | 04:00 PM | | | | 04:00 PM | | | | 04:00 PM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PHF | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |

Accurate Counts

978-664-2565

File Name : 96230003

Site Code : 96230003

Start Date : 2/8/2023

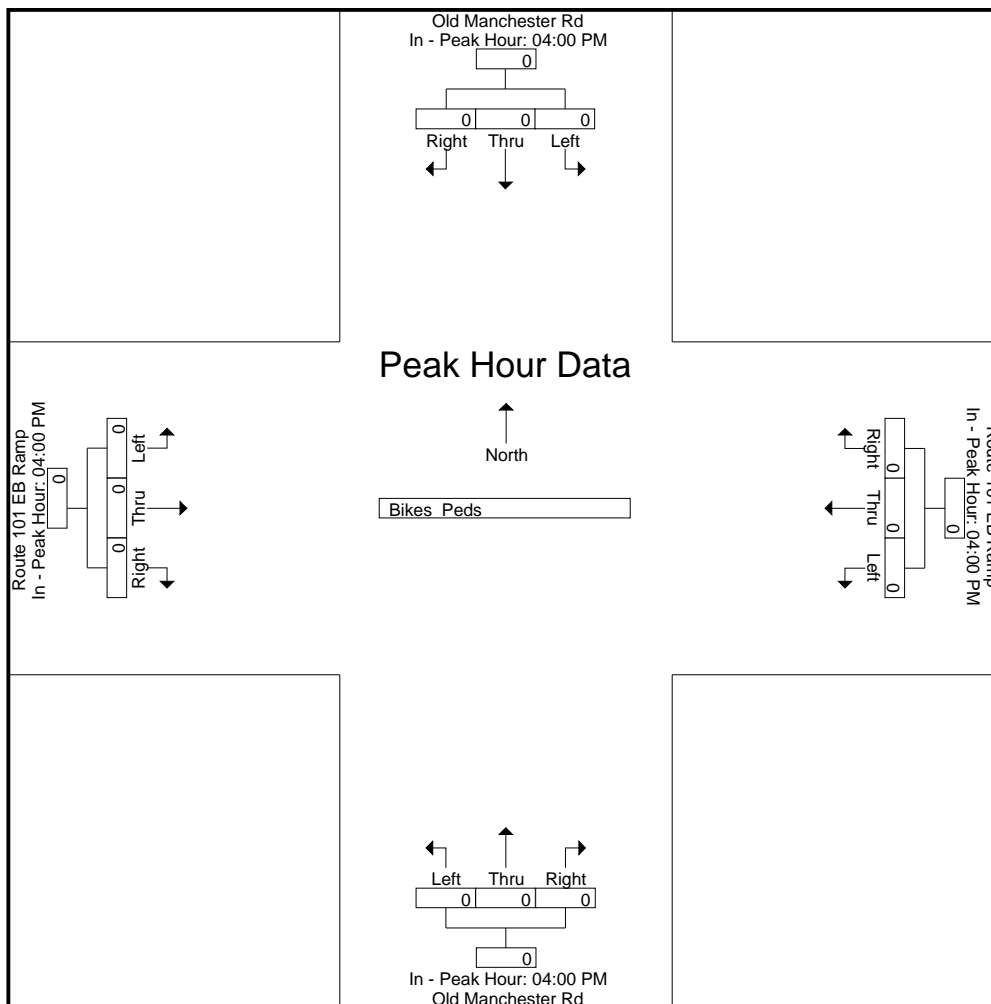
Page No : 12

N/S Street : Old Manchester Road

E/W Street : Route 101 EB Ramp

City/State : Raymond, NH

Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Batchelder Rd / Lane Rd
 City/State : Raymond, MA
 Weather : Clear

File Name : 96230004
 Site Code : 96230004
 Start Date : 2/8/2023
 Page No : 1

Groups Printed- Cars - Trucks

| Start Time | Old Manchester Rd From North | | Batchelder Rd From East | | Lane Rd From West | | Int. Total |
|--------------------|---------------------------------|-----------|----------------------------|------------|----------------------|-----------|------------|
| | Left | Right | Thru | Right | Left | Thru | |
| 07:00 AM | 4 | 6 | 2 | 22 | 43 | 3 | 80 |
| 07:15 AM | 11 | 10 | 1 | 19 | 42 | 3 | 86 |
| 07:30 AM | 5 | 11 | 0 | 20 | 40 | 3 | 79 |
| 07:45 AM | 9 | 14 | 0 | 20 | 40 | 3 | 86 |
| Total | 29 | 41 | 3 | 81 | 165 | 12 | 331 |
| 08:00 AM | 13 | 14 | 1 | 19 | 36 | 1 | 84 |
| 08:15 AM | 5 | 13 | 3 | 15 | 34 | 7 | 77 |
| 08:30 AM | 12 | 11 | 0 | 16 | 28 | 1 | 68 |
| 08:45 AM | 15 | 14 | 1 | 8 | 17 | 3 | 58 |
| Total | 45 | 52 | 5 | 58 | 115 | 12 | 287 |
| Grand Total | 74 | 93 | 8 | 139 | 280 | 24 | 618 |
| Apprch % | 44.3 | 55.7 | 5.4 | 94.6 | 92.1 | 7.9 | |
| Total % | 12 | 15 | 1.3 | 22.5 | 45.3 | 3.9 | |
| Cars | 74 | 86 | 8 | 138 | 277 | 20 | 603 |
| % Cars | 100 | 92.5 | 100 | 99.3 | 98.9 | 83.3 | 97.6 |
| Trucks | 0 | 7 | 0 | 1 | 3 | 4 | 15 |
| % Trucks | 0 | 7.5 | 0 | 0.7 | 1.1 | 16.7 | 2.4 |

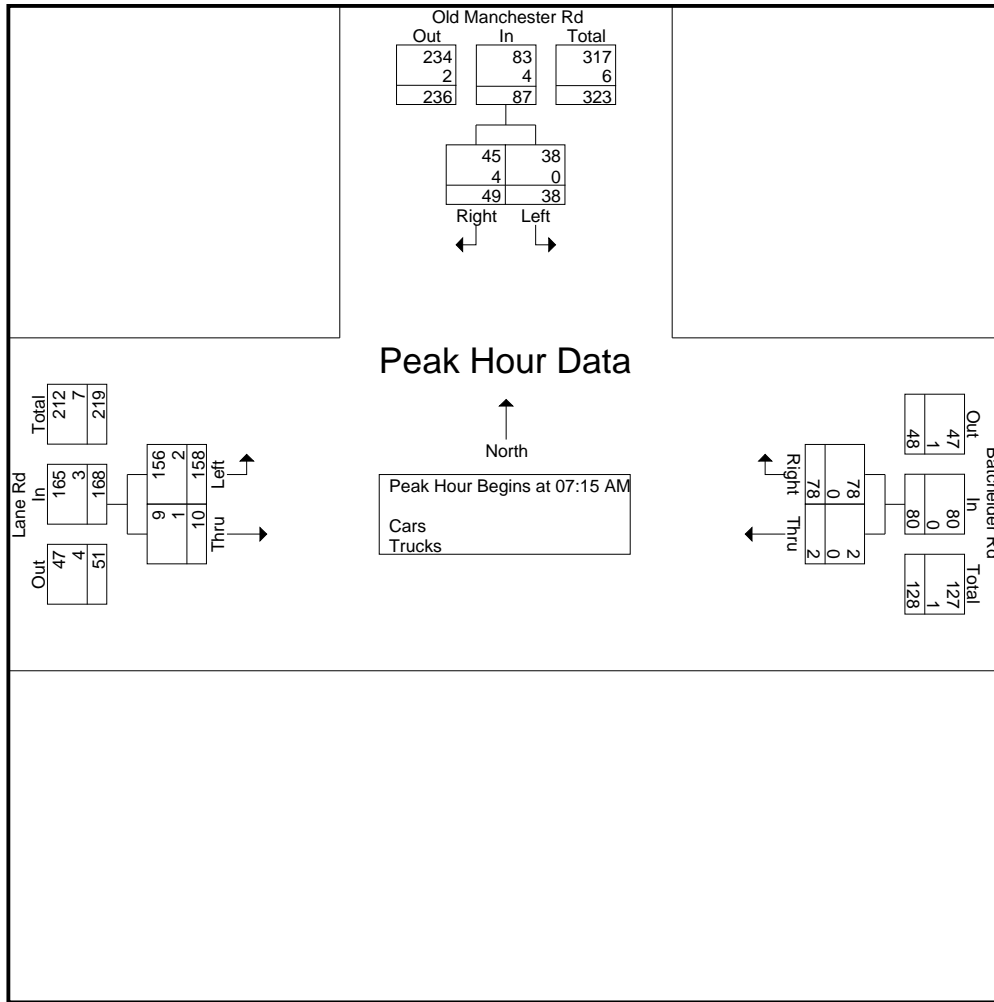
| Start Time | Old Manchester Rd From North | | | Batchelder Rd From East | | | Lane Rd From West | | | Int. Total |
|--|---------------------------------|-------|------------|----------------------------|-------|------------|----------------------|------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:15 AM | | | | | | | | | | |
| 07:15 AM | 11 | 10 | 21 | 1 | 19 | 20 | 42 | 3 | 45 | 86 |
| 07:30 AM | 5 | 11 | 16 | 0 | 20 | 20 | 40 | 3 | 43 | 79 |
| 07:45 AM | 9 | 14 | 23 | 0 | 20 | 20 | 40 | 3 | 43 | 86 |
| 08:00 AM | 13 | 14 | 27 | 1 | 19 | 20 | 36 | 1 | 37 | 84 |
| Total Volume | 38 | 49 | 87 | 2 | 78 | 80 | 158 | 10 | 168 | 335 |
| % App. Total | 43.7 | 56.3 | | 2.5 | 97.5 | | 94 | 6 | | |
| PHF | .731 | .875 | .806 | .500 | .975 | 1.00 | .940 | .833 | .933 | .974 |
| Cars | 38 | 45 | 83 | 2 | 78 | 80 | 156 | 9 | 165 | 328 |
| % Cars | 100 | 91.8 | 95.4 | 100 | 100 | 100 | 98.7 | 90.0 | 98.2 | 97.9 |
| Trucks | 0 | 4 | 4 | 0 | 0 | 0 | 2 | 1 | 3 | 7 |
| % Trucks | 0 | 8.2 | 4.6 | 0 | 0 | 0 | 1.3 | 10.0 | 1.8 | 2.1 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Batchelder Rd / Lane Rd
 City/State : Raymond, MA
 Weather : Clear

File Name : 96230004
 Site Code : 96230004
 Start Date : 2/8/2023
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 08:00 AM | | | 07:00 AM | | | 07:00 AM | | |
|--------------|----------|------|------|----------|------|------|----------|-------|------|
| +0 mins. | 13 | 14 | 27 | 2 | 22 | 24 | 43 | 3 | 46 |
| +15 mins. | 5 | 13 | 18 | 1 | 19 | 20 | 42 | 3 | 45 |
| +30 mins. | 12 | 11 | 23 | 0 | 20 | 20 | 40 | 3 | 43 |
| +45 mins. | 15 | 14 | 29 | 0 | 20 | 20 | 40 | 3 | 43 |
| Total Volume | 45 | 52 | 97 | 3 | 81 | 84 | 165 | 12 | 177 |
| % App. Total | 46.4 | 53.6 | | 3.6 | 96.4 | | 93.2 | 6.8 | |
| PHF | .750 | .929 | .836 | .375 | .920 | .875 | .959 | 1.000 | .962 |
| Cars | 45 | 49 | 94 | 3 | 81 | 84 | 163 | 11 | 174 |
| % Cars | 100 | 94.2 | 96.9 | 100 | 100 | 100 | 98.8 | 91.7 | 98.3 |
| Trucks | 0 | 3 | 3 | 0 | 0 | 0 | 2 | 1 | 3 |
| % Trucks | 0 | 5.8 | 3.1 | 0 | 0 | 0 | 1.2 | 8.3 | 1.7 |

Accurate Counts

978-664-2565

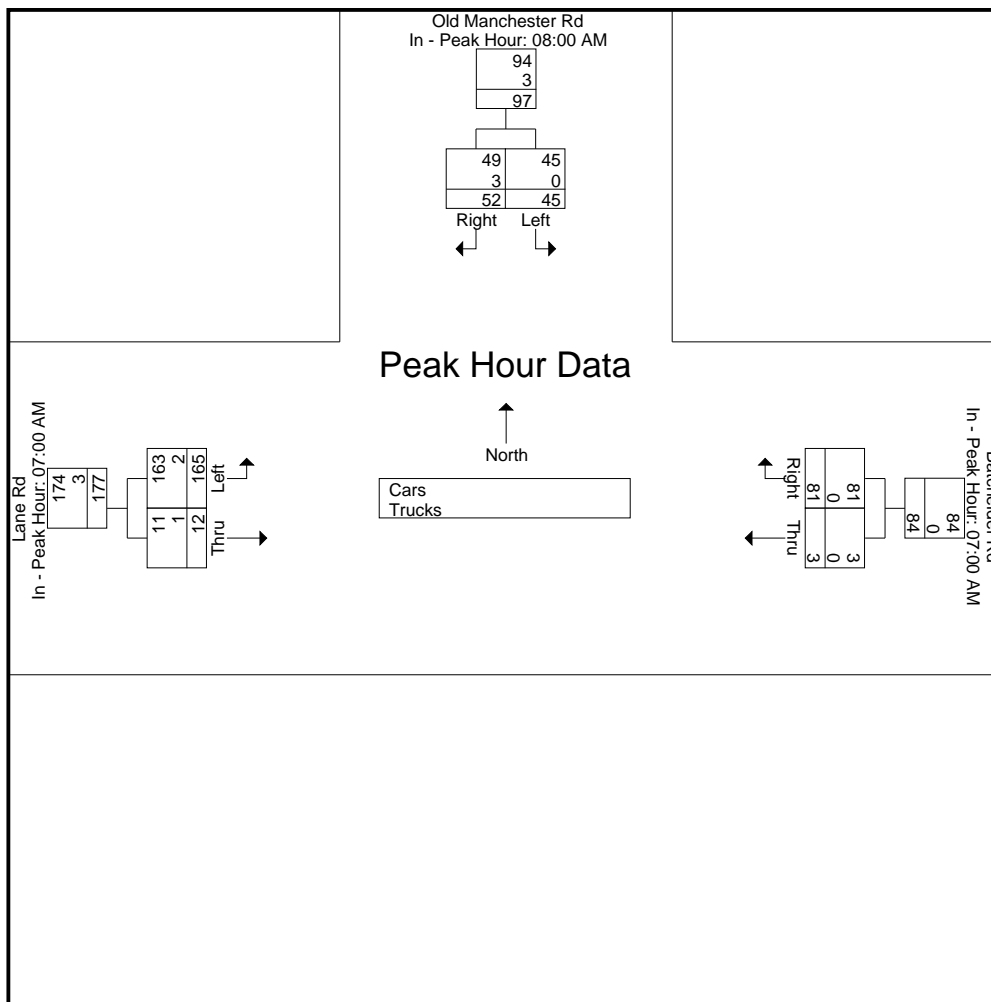
File Name : 96230004

Site Code : 96230004

Start Date : 2/8/2023

Page No : 3

N/S Street : Old Manchester Road
 E/W Street : Batchelder Rd / Lane Rd
 City/State : Raymond, MA
 Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Batchelder Rd / Lane Rd
 City/State : Raymond, MA
 Weather : Clear

File Name : 96230004
 Site Code : 96230004
 Start Date : 2/8/2023
 Page No : 4

Groups Printed- Cars

| Start Time | Old Manchester Rd From North | | Batchelder Rd From East | | Lane Rd From West | | Int. Total |
|--------------------|---------------------------------|-----------|----------------------------|------------|----------------------|-----------|------------|
| | Left | Right | Thru | Right | Left | Thru | |
| 07:00 AM | 4 | 5 | 2 | 22 | 43 | 3 | 79 |
| 07:15 AM | 11 | 9 | 1 | 19 | 41 | 3 | 84 |
| 07:30 AM | 5 | 11 | 0 | 20 | 39 | 2 | 77 |
| 07:45 AM | 9 | 12 | 0 | 20 | 40 | 3 | 84 |
| Total | 29 | 37 | 3 | 81 | 163 | 11 | 324 |
| 08:00 AM | 13 | 13 | 1 | 19 | 36 | 1 | 83 |
| 08:15 AM | 5 | 12 | 3 | 14 | 33 | 4 | 71 |
| 08:30 AM | 12 | 11 | 0 | 16 | 28 | 1 | 68 |
| 08:45 AM | 15 | 13 | 1 | 8 | 17 | 3 | 57 |
| Total | 45 | 49 | 5 | 57 | 114 | 9 | 279 |
| Grand Total | 74 | 86 | 8 | 138 | 277 | 20 | 603 |
| Apprch % | 46.2 | 53.8 | 5.5 | 94.5 | 93.3 | 6.7 | |
| Total % | 12.3 | 14.3 | 1.3 | 22.9 | 45.9 | 3.3 | |

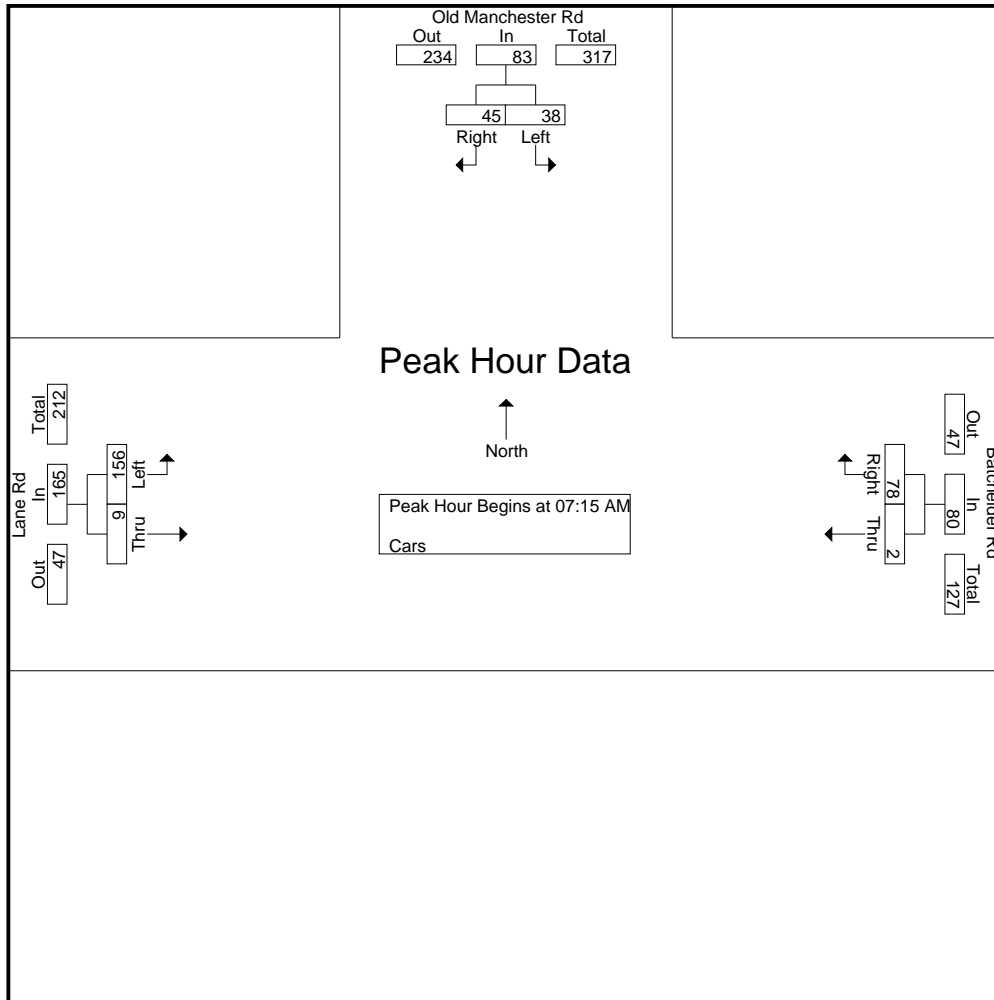
| Start Time | Old Manchester Rd From North | | | Batchelder Rd From East | | | Lane Rd From West | | | Int. Total |
|--|---------------------------------|-------------|------------|----------------------------|-------------|------------|----------------------|------------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:15 AM | | | | | | | | | | |
| 07:15 AM | 11 | 9 | 20 | 1 | 19 | 20 | 41 | 3 | 44 | 84 |
| 07:30 AM | 5 | 11 | 16 | 0 | 20 | 20 | 39 | 2 | 41 | 77 |
| 07:45 AM | 9 | 12 | 21 | 0 | 20 | 20 | 40 | 3 | 43 | 84 |
| 08:00 AM | 13 | 13 | 26 | 1 | 19 | 20 | 36 | 1 | 37 | 83 |
| Total Volume | 38 | 45 | 83 | 2 | 78 | 80 | 156 | 9 | 165 | 328 |
| % App. Total | 45.8 | 54.2 | | 2.5 | 97.5 | | 94.5 | 5.5 | | |
| PHF | .731 | .865 | .798 | .500 | .975 | 1.00 | .951 | .750 | .938 | .976 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Batchelder Rd / Lane Rd
 City/State : Raymond, MA
 Weather : Clear

File Name : 96230004
 Site Code : 96230004
 Start Date : 2/8/2023
 Page No : 5



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 08:00 AM | | | 07:00 AM | | | 07:00 AM | | |
|--------------|----------|------|------|----------|------|------|----------|------|------|
| +0 mins. | 13 | 13 | 26 | 2 | 22 | 24 | 43 | 3 | 46 |
| +15 mins. | 5 | 12 | 17 | 1 | 19 | 20 | 41 | 3 | 44 |
| +30 mins. | 12 | 11 | 23 | 0 | 20 | 20 | 39 | 2 | 41 |
| +45 mins. | 15 | 13 | 28 | 0 | 20 | 20 | 40 | 3 | 43 |
| Total Volume | 45 | 49 | 94 | 3 | 81 | 84 | 163 | 11 | 174 |
| % App. Total | 47.9 | 52.1 | | 3.6 | 96.4 | | 93.7 | 6.3 | |
| PHF | .750 | .942 | .839 | .375 | .920 | .875 | .948 | .917 | .946 |

Accurate Counts

978-664-2565

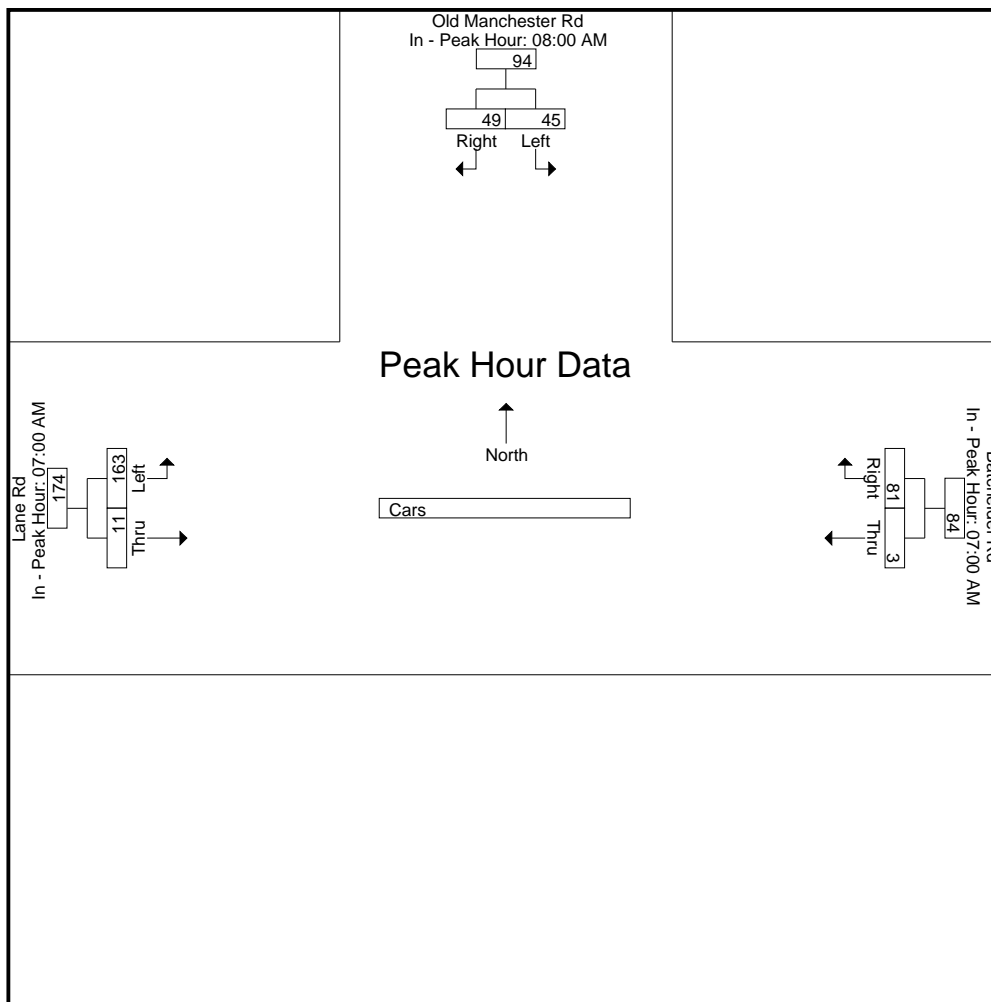
File Name : 96230004

Site Code : 96230004

Start Date : 2/8/2023

Page No : 6

N/S Street : Old Manchester Road
E/W Street : Batchelder Rd / Lane Rd
City/State : Raymond, MA
Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Batchelder Rd / Lane Rd
 City/State : Raymond, MA
 Weather : Clear

File Name : 96230004
 Site Code : 96230004
 Start Date : 2/8/2023
 Page No : 7

Groups Printed- Trucks

| Start Time | Old Manchester Rd From North | | Batchelder Rd From East | | Lane Rd From West | | Int. Total |
|--------------------|---------------------------------|----------|----------------------------|----------|----------------------|----------|------------|
| | Left | Right | Thru | Right | Left | Thru | |
| 07:00 AM | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 07:15 AM | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| 07:30 AM | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 07:45 AM | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| Total | 0 | 4 | 0 | 0 | 2 | 1 | 7 |
| 08:00 AM | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 08:15 AM | 0 | 1 | 0 | 1 | 1 | 3 | 6 |
| 08:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:45 AM | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Total | 0 | 3 | 0 | 1 | 1 | 3 | 8 |
| Grand Total | 0 | 7 | 0 | 1 | 3 | 4 | 15 |
| Apprch % | 0 | 100 | 0 | 100 | 42.9 | 57.1 | |
| Total % | 0 | 46.7 | 0 | 6.7 | 20 | 26.7 | |

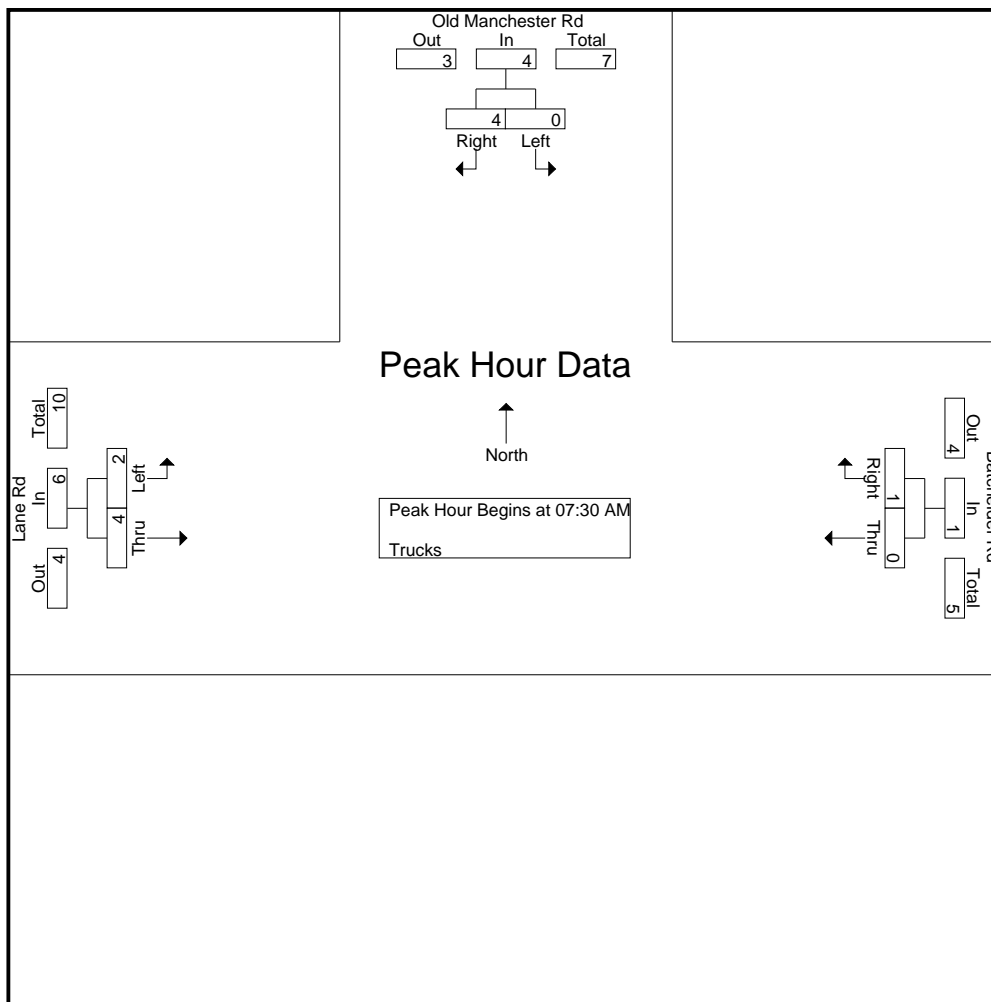
| Start Time | Old Manchester Rd From North | | | Batchelder Rd From East | | | Lane Rd From West | | | Int. Total |
|--|---------------------------------|----------|------------|----------------------------|----------|------------|----------------------|----------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:30 AM | | | | | | | | | | |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 |
| 07:45 AM | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 08:00 AM | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 08:15 AM | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 3 | 4 | 6 |
| Total Volume | 0 | 4 | 4 | 0 | 1 | 1 | 2 | 4 | 6 | 11 |
| % App. Total | 0 | 100 | | 0 | 100 | | 33.3 | 66.7 | | |
| PHF | .000 | .500 | .500 | .000 | .250 | .250 | .500 | .333 | .375 | .458 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Batchelder Rd / Lane Rd
 City/State : Raymond, MA
 Weather : Clear

File Name : 96230004
 Site Code : 96230004
 Start Date : 2/8/2023
 Page No : 8



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 07:00 AM | | | 07:30 AM | | | 07:30 AM | | |
|--------------|----------|------|------|----------|------|------|----------|------|------|
| +0 mins. | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 2 |
| +15 mins. | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 2 | 2 | 0 | 1 | 1 | 1 | 3 | 4 |
| Total Volume | 0 | 4 | 4 | 0 | 1 | 1 | 2 | 4 | 6 |
| % App. Total | 0 | 100 | | 0 | 100 | | 33.3 | 66.7 | |
| PHF | .000 | .500 | .500 | .000 | .250 | .250 | .500 | .333 | .375 |

Accurate Counts

978-664-2565

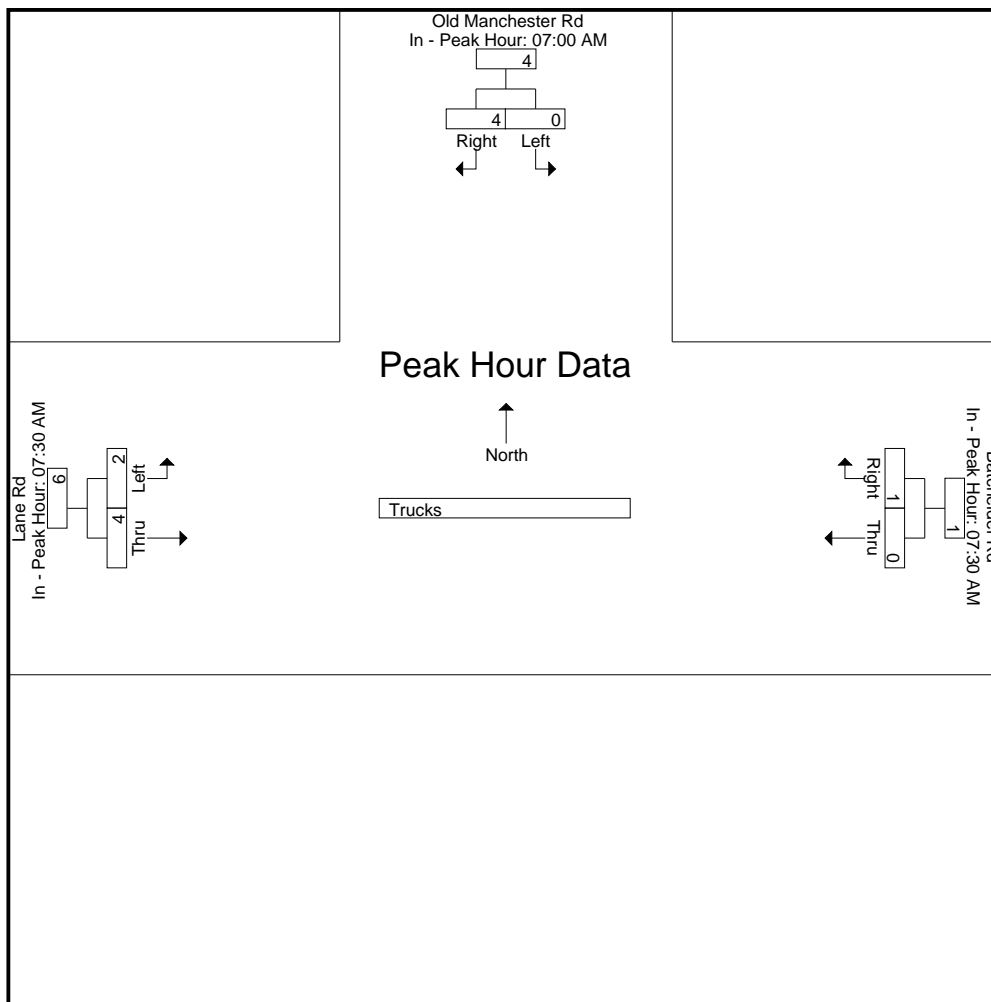
File Name : 96230004

Site Code : 96230004

Start Date : 2/8/2023

Page No : 9

N/S Street : Old Manchester Road
E/W Street : Batchelder Rd / Lane Rd
City/State : Raymond, MA
Weather : Clear

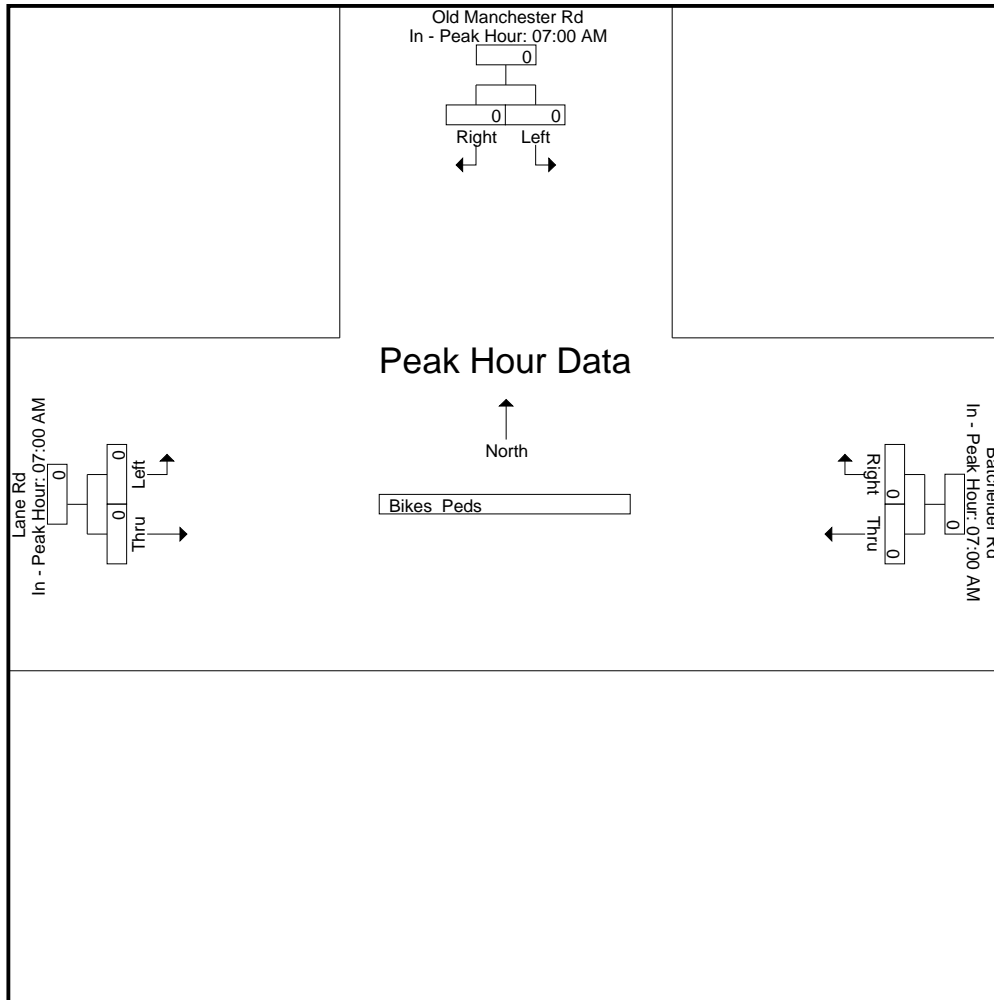


Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
E/W Street : Batchelder Rd / Lane Rd
City/State : Raymond, MA
Weather : Clear

File Name : 96230004
Site Code : 96230004
Start Date : 2/8/2023
Page No : 12



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Batchelder Rd / Lane Rd
 City/State : Raymond, MA
 Weather : Clear

File Name : 96230004
 Site Code : 96230004
 Start Date : 2/8/2023
 Page No : 1

Groups Printed- Cars - Trucks

| Start Time | Old Manchester Rd From North | | Batchelder Rd From East | | Lane Rd From West | | Int. Total |
|--------------------|---------------------------------|------------|----------------------------|-----------|----------------------|-----------|------------|
| | Left | Right | Thru | Right | Left | Thru | |
| 04:00 PM | 30 | 35 | 2 | 9 | 15 | 3 | 94 |
| 04:15 PM | 26 | 33 | 6 | 10 | 19 | 2 | 96 |
| 04:30 PM | 24 | 55 | 4 | 12 | 21 | 3 | 119 |
| 04:45 PM | 20 | 31 | 6 | 10 | 18 | 3 | 88 |
| Total | 100 | 154 | 18 | 41 | 73 | 11 | 397 |
| 05:00 PM | 17 | 33 | 6 | 14 | 18 | 2 | 90 |
| 05:15 PM | 31 | 44 | 4 | 9 | 22 | 5 | 115 |
| 05:30 PM | 22 | 36 | 6 | 12 | 16 | 7 | 99 |
| 05:45 PM | 22 | 22 | 2 | 9 | 26 | 1 | 82 |
| Total | 92 | 135 | 18 | 44 | 82 | 15 | 386 |
| Grand Total | 192 | 289 | 36 | 85 | 155 | 26 | 783 |
| Apprch % | 39.9 | 60.1 | 29.8 | 70.2 | 85.6 | 14.4 | |
| Total % | 24.5 | 36.9 | 4.6 | 10.9 | 19.8 | 3.3 | |
| Cars | 192 | 288 | 35 | 85 | 154 | 26 | 780 |
| % Cars | 100 | 99.7 | 97.2 | 100 | 99.4 | 100 | 99.6 |
| Trucks | 0 | 1 | 1 | 0 | 1 | 0 | 3 |
| % Trucks | 0 | 0.3 | 2.8 | 0 | 0.6 | 0 | 0.4 |

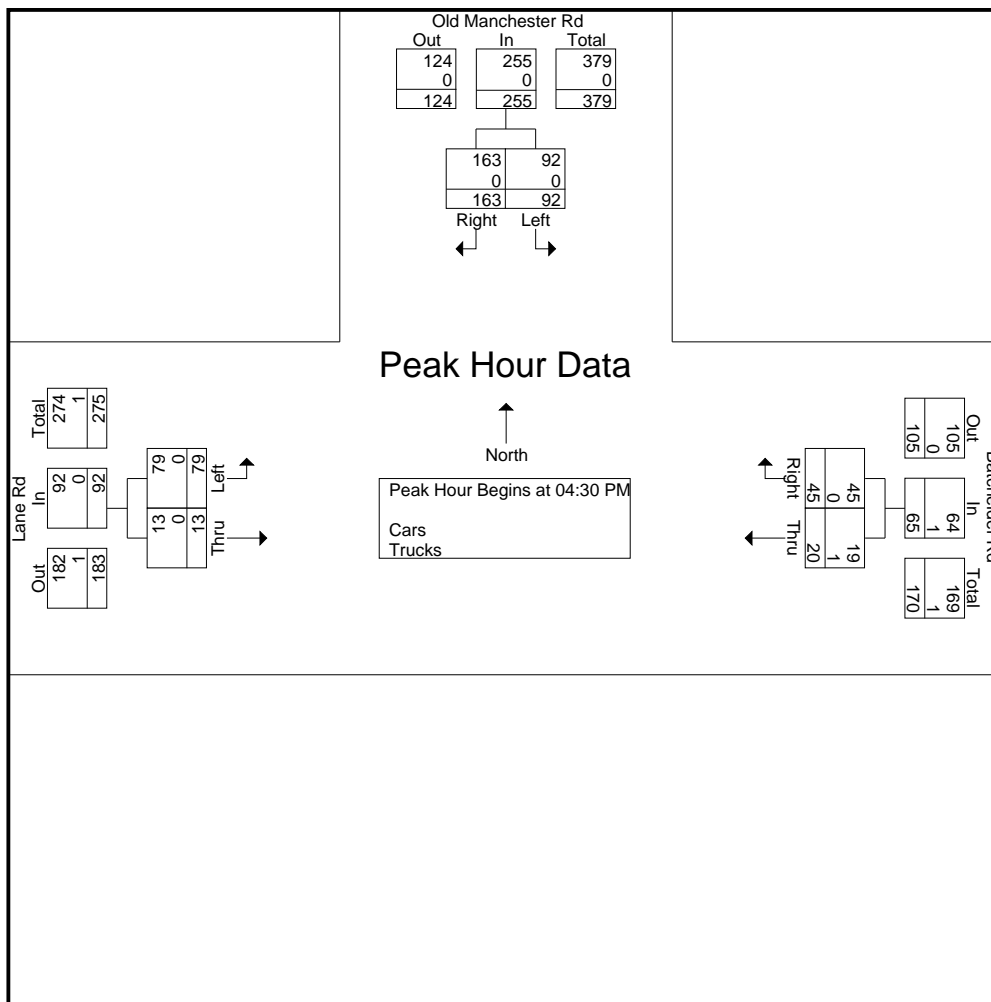
| Start Time | Old Manchester Rd From North | | | Batchelder Rd From East | | | Lane Rd From West | | | Int. Total |
|--|---------------------------------|-----------|------------|----------------------------|-----------|------------|----------------------|----------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:30 PM | | | | | | | | | | |
| 04:30 PM | 24 | 55 | 79 | 4 | 12 | 16 | 21 | 3 | 24 | 119 |
| 04:45 PM | 20 | 31 | 51 | 6 | 10 | 16 | 18 | 3 | 21 | 88 |
| 05:00 PM | 17 | 33 | 50 | 6 | 14 | 20 | 18 | 2 | 20 | 90 |
| 05:15 PM | 31 | 44 | 75 | 4 | 9 | 13 | 22 | 5 | 27 | 115 |
| Total Volume | 92 | 163 | 255 | 20 | 45 | 65 | 79 | 13 | 92 | 412 |
| % App. Total | 36.1 | 63.9 | | 30.8 | 69.2 | | 85.9 | 14.1 | | |
| PHF | .742 | .741 | .807 | .833 | .804 | .813 | .898 | .650 | .852 | .866 |
| Cars | 92 | 163 | 255 | 19 | 45 | 64 | 79 | 13 | 92 | 411 |
| % Cars | 100 | 100 | 100 | 95.0 | 100 | 98.5 | 100 | 100 | 100 | 99.8 |
| Trucks | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| % Trucks | 0 | 0 | 0 | 5.0 | 0 | 1.5 | 0 | 0 | 0 | 0.2 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Batchelder Rd / Lane Rd
 City/State : Raymond, MA
 Weather : Clear

File Name : 96230004
 Site Code : 96230004
 Start Date : 2/8/2023
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 04:30 PM | | | 04:15 PM | | | 05:00 PM | | |
|--------------|-----------|-----------|-----------|----------|-----------|-----------|-----------|----------|-----------|
| +0 mins. | 24 | 55 | 79 | 6 | 10 | 16 | 18 | 2 | 20 |
| +15 mins. | 20 | 31 | 51 | 4 | 12 | 16 | 22 | 5 | 27 |
| +30 mins. | 17 | 33 | 50 | 6 | 10 | 16 | 16 | 7 | 23 |
| +45 mins. | 31 | 44 | 75 | 6 | 14 | 20 | 26 | 1 | 27 |
| Total Volume | 92 | 163 | 255 | 22 | 46 | 68 | 82 | 15 | 97 |
| % App. Total | 36.1 | 63.9 | | 32.4 | 67.6 | | 84.5 | 15.5 | |
| PHF | .742 | .741 | .807 | .917 | .821 | .850 | .788 | .536 | .898 |
| Cars | 92 | 163 | 255 | 21 | 46 | 67 | 82 | 15 | 97 |
| % Cars | 100 | 100 | 100 | 95.5 | 100 | 98.5 | 100 | 100 | 100 |
| Trucks | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| % Trucks | 0 | 0 | 0 | 4.5 | 0 | 1.5 | 0 | 0 | 0 |

Accurate Counts

978-664-2565

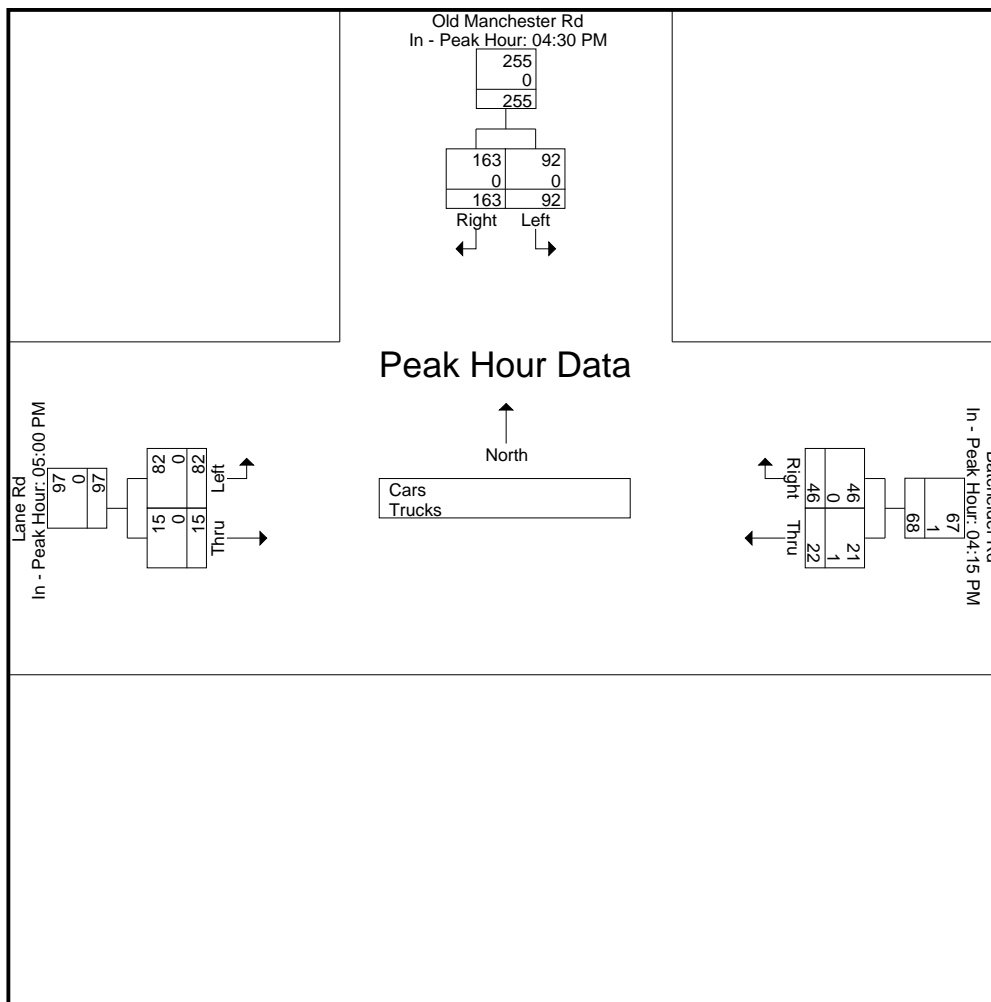
File Name : 96230004

Site Code : 96230004

Start Date : 2/8/2023

Page No : 3

N/S Street : Old Manchester Road
 E/W Street : Batchelder Rd / Lane Rd
 City/State : Raymond, MA
 Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Batchelder Rd / Lane Rd
 City/State : Raymond, MA
 Weather : Clear

File Name : 96230004
 Site Code : 96230004
 Start Date : 2/8/2023
 Page No : 4

Groups Printed- Cars

| Start Time | Old Manchester Rd From North | | Batchelder Rd From East | | Lane Rd From West | | Int. Total |
|--------------------|---------------------------------|------------|----------------------------|-----------|----------------------|-----------|------------|
| | Left | Right | Thru | Right | Left | Thru | |
| 04:00 PM | 30 | 34 | 2 | 9 | 14 | 3 | 92 |
| 04:15 PM | 26 | 33 | 6 | 10 | 19 | 2 | 96 |
| 04:30 PM | 24 | 55 | 4 | 12 | 21 | 3 | 119 |
| 04:45 PM | 20 | 31 | 5 | 10 | 18 | 3 | 87 |
| Total | 100 | 153 | 17 | 41 | 72 | 11 | 394 |
| 05:00 PM | 17 | 33 | 6 | 14 | 18 | 2 | 90 |
| 05:15 PM | 31 | 44 | 4 | 9 | 22 | 5 | 115 |
| 05:30 PM | 22 | 36 | 6 | 12 | 16 | 7 | 99 |
| 05:45 PM | 22 | 22 | 2 | 9 | 26 | 1 | 82 |
| Total | 92 | 135 | 18 | 44 | 82 | 15 | 386 |
| Grand Total | 192 | 288 | 35 | 85 | 154 | 26 | 780 |
| Apprch % | 40 | 60 | 29.2 | 70.8 | 85.6 | 14.4 | |
| Total % | 24.6 | 36.9 | 4.5 | 10.9 | 19.7 | 3.3 | |

| Start Time | Old Manchester Rd From North | | | Batchelder Rd From East | | | Lane Rd From West | | | Int. Total |
|--|---------------------------------|-----------|------------|----------------------------|-----------|------------|----------------------|----------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:30 PM | | | | | | | | | | |
| 04:30 PM | 24 | 55 | 79 | 4 | 12 | 16 | 21 | 3 | 24 | 119 |
| 04:45 PM | 20 | 31 | 51 | 5 | 10 | 15 | 18 | 3 | 21 | 87 |
| 05:00 PM | 17 | 33 | 50 | 6 | 14 | 20 | 18 | 2 | 20 | 90 |
| 05:15 PM | 31 | 44 | 75 | 4 | 9 | 13 | 22 | 5 | 27 | 115 |
| Total Volume | 92 | 163 | 255 | 19 | 45 | 64 | 79 | 13 | 92 | 411 |
| % App. Total | 36.1 | 63.9 | | 29.7 | 70.3 | | 85.9 | 14.1 | | |
| PHF | .742 | .741 | .807 | .792 | .804 | .800 | .898 | .650 | .852 | .863 |

Accurate Counts

978-664-2565

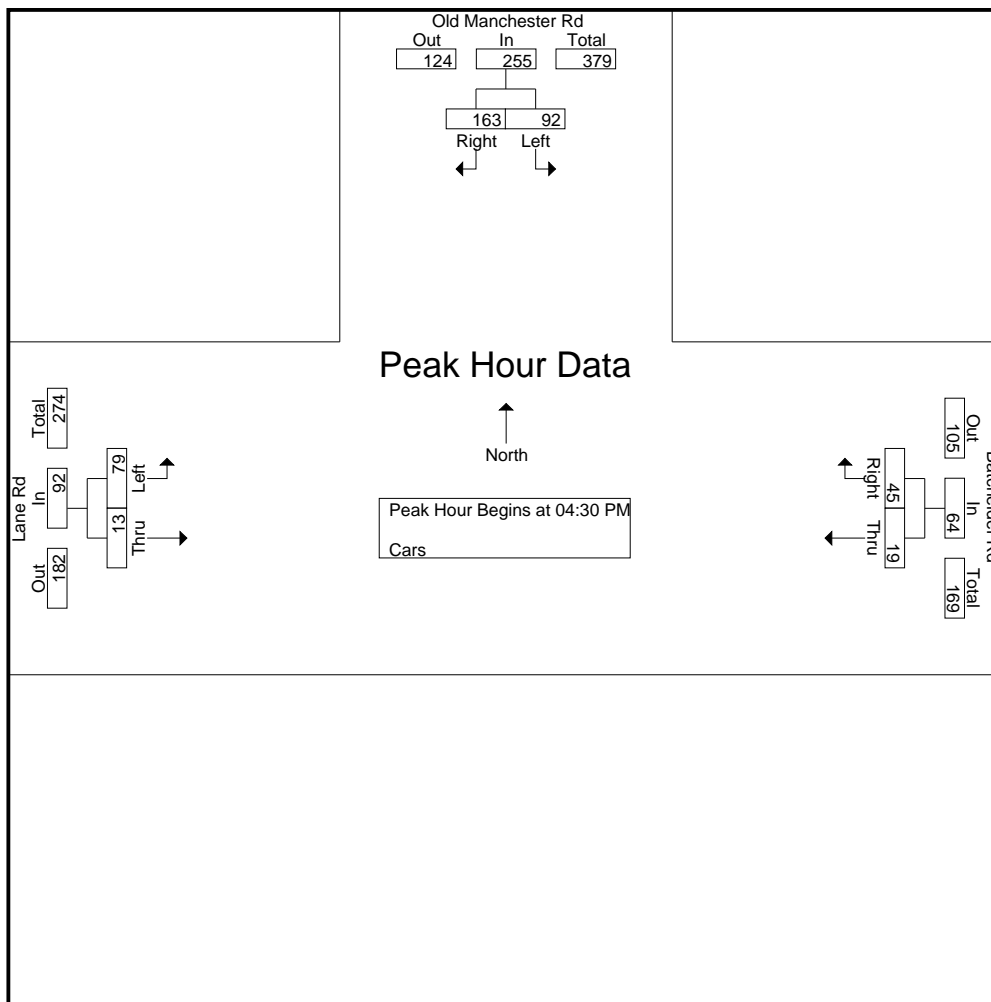
File Name : 96230004

Site Code : 96230004

Start Date : 2/8/2023

Page No : 5

N/S Street : Old Manchester Road
 E/W Street : Batchelder Rd / Lane Rd
 City/State : Raymond, MA
 Weather : Clear



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

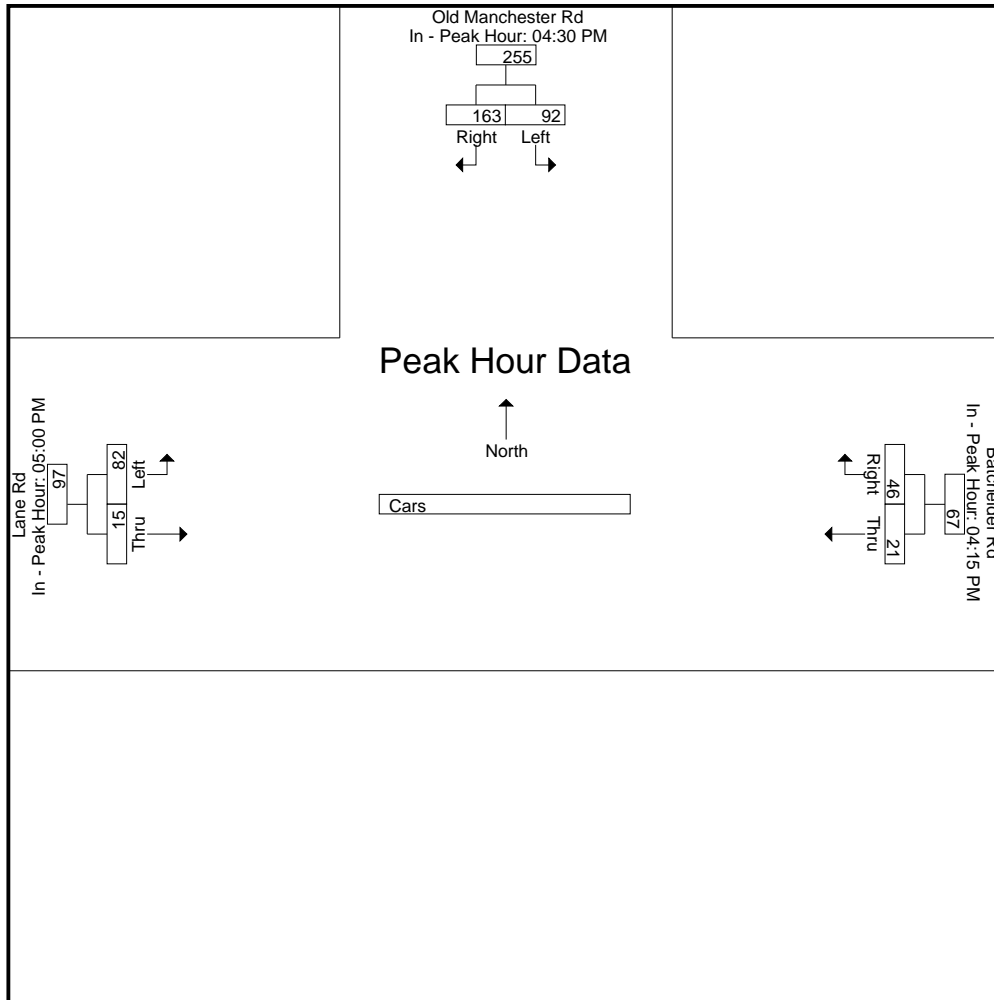
| | 04:30 PM | | | 04:15 PM | | | 05:00 PM | | |
|--------------|-----------|-----------|-----------|----------|-----------|-----------|-----------|----------|-----------|
| +0 mins. | 24 | 55 | 79 | 6 | 10 | 16 | 18 | 2 | 20 |
| +15 mins. | 20 | 31 | 51 | 4 | 12 | 16 | 22 | 5 | 27 |
| +30 mins. | 17 | 33 | 50 | 5 | 10 | 15 | 16 | 7 | 23 |
| +45 mins. | 31 | 44 | 75 | 6 | 14 | 20 | 26 | 1 | 27 |
| Total Volume | 92 | 163 | 255 | 21 | 46 | 67 | 82 | 15 | 97 |
| % App. Total | 36.1 | 63.9 | | 31.3 | 68.7 | | 84.5 | 15.5 | |
| PHF | .742 | .741 | .807 | .875 | .821 | .838 | .788 | .536 | .898 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
E/W Street : Batchelder Rd / Lane Rd
City/State : Raymond, MA
Weather : Clear

File Name : 96230004
Site Code : 96230004
Start Date : 2/8/2023
Page No : 6



Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Batchelder Rd / Lane Rd
 City/State : Raymond, MA
 Weather : Clear

File Name : 96230004
 Site Code : 96230004
 Start Date : 2/8/2023
 Page No : 7

Groups Printed- Trucks

| Start Time | Old Manchester Rd From North | | Batchelder Rd From East | | Lane Rd From West | | Int. Total |
|--------------------|---------------------------------|-------|----------------------------|-------|----------------------|------|------------|
| | Left | Right | Thru | Right | Left | Thru | |
| 04:00 PM | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| 04:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:45 PM | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Total | 0 | 1 | 1 | 0 | 1 | 0 | 3 |
| 05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 0 | 1 | 1 | 0 | 1 | 0 | 3 |
| Apprch % | 0 | 100 | 100 | 0 | 100 | 0 | |
| Total % | 0 | 33.3 | 33.3 | 0 | 33.3 | 0 | |

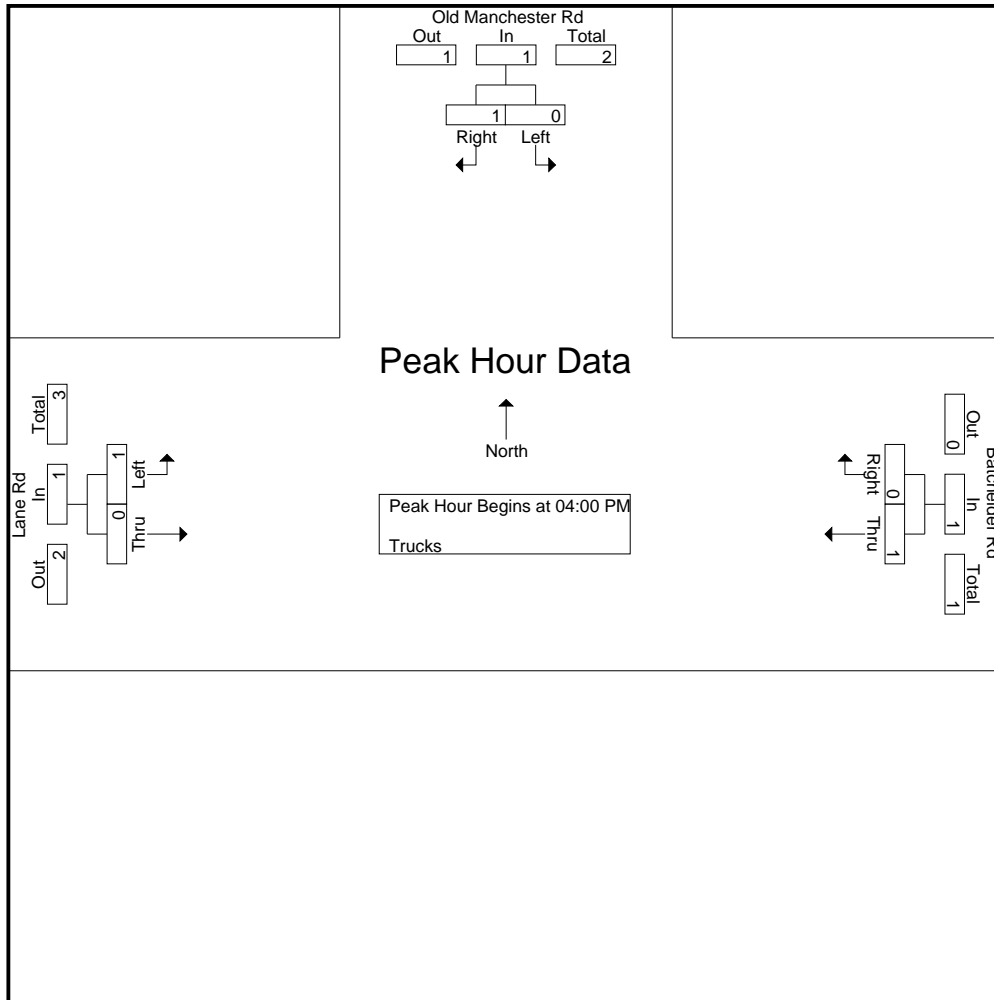
| Start Time | Old Manchester Rd From North | | | Batchelder Rd From East | | | Lane Rd From West | | | Int. Total |
|--|---------------------------------|-------|------------|----------------------------|-------|------------|----------------------|------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:00 PM | | | | | | | | | | |
| 04:00 PM | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 04:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:45 PM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| Total Volume | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 3 |
| % App. Total | 0 | 100 | | 100 | 0 | | 100 | 0 | | |
| PHF | .000 | .250 | .250 | .250 | .000 | .250 | .250 | .000 | .250 | .375 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Batchelder Rd / Lane Rd
 City/State : Raymond, MA
 Weather : Clear

File Name : 96230004
 Site Code : 96230004
 Start Date : 2/8/2023
 Page No : 8



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 04:00 PM | | | 04:00 PM | | | 04:00 PM | | |
|--------------|----------|------|------|----------|------|------|----------|------|------|
| +0 mins. | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| Total Volume | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| % App. Total | 0 | 100 | | 100 | 0 | | 100 | 0 | |
| PHF | .000 | .250 | .250 | .250 | .000 | .250 | .250 | .000 | .250 |

Accurate Counts

978-664-2565

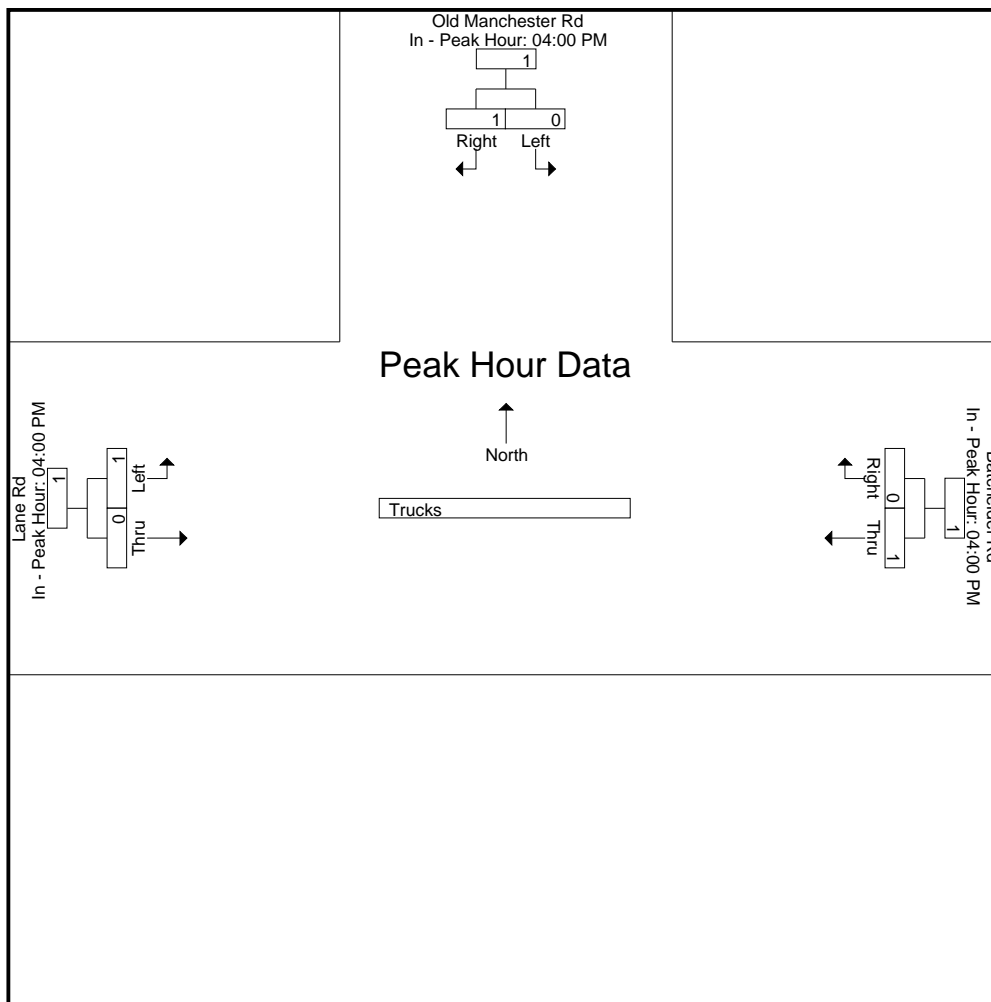
File Name : 96230004

Site Code : 96230004

Start Date : 2/8/2023

Page No : 9

N/S Street : Old Manchester Road
E/W Street : Batchelder Rd / Lane Rd
City/State : Raymond, MA
Weather : Clear

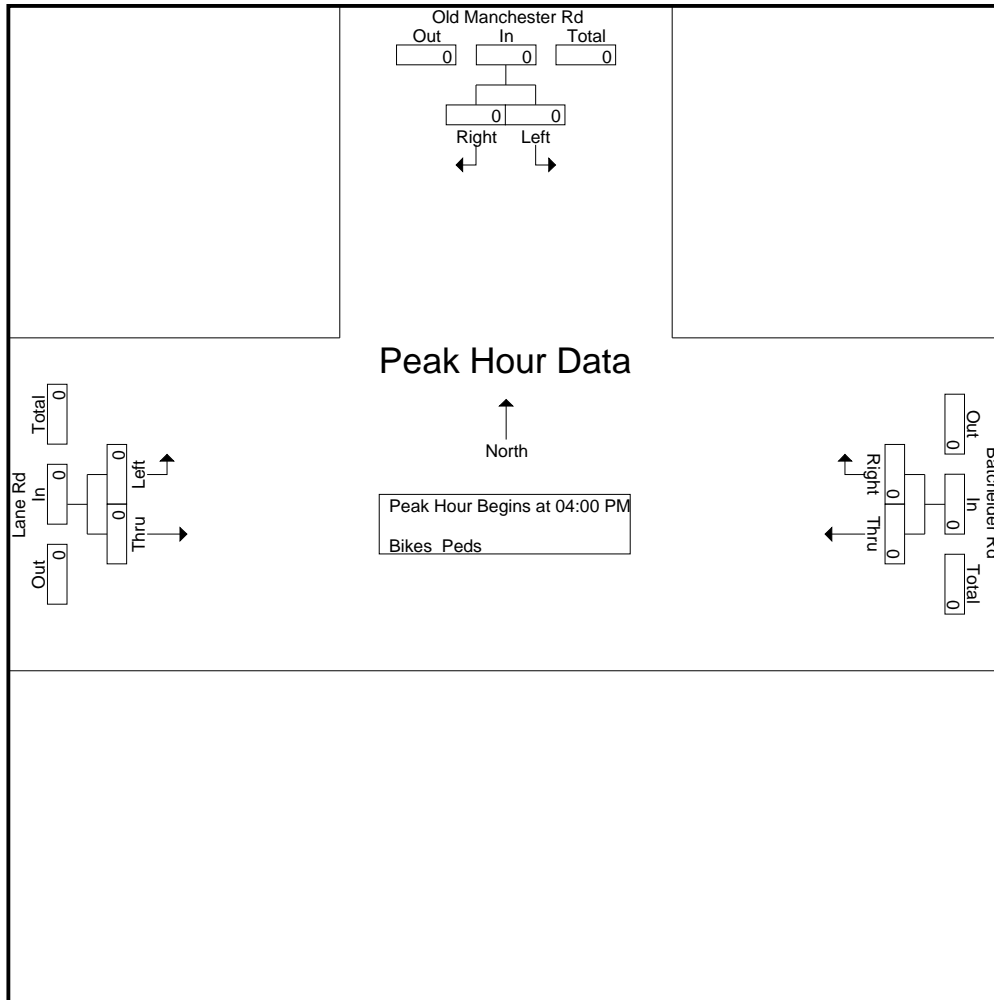


Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
 E/W Street : Batchelder Rd / Lane Rd
 City/State : Raymond, MA
 Weather : Clear

File Name : 96230004
 Site Code : 96230004
 Start Date : 2/8/2023
 Page No : 11



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

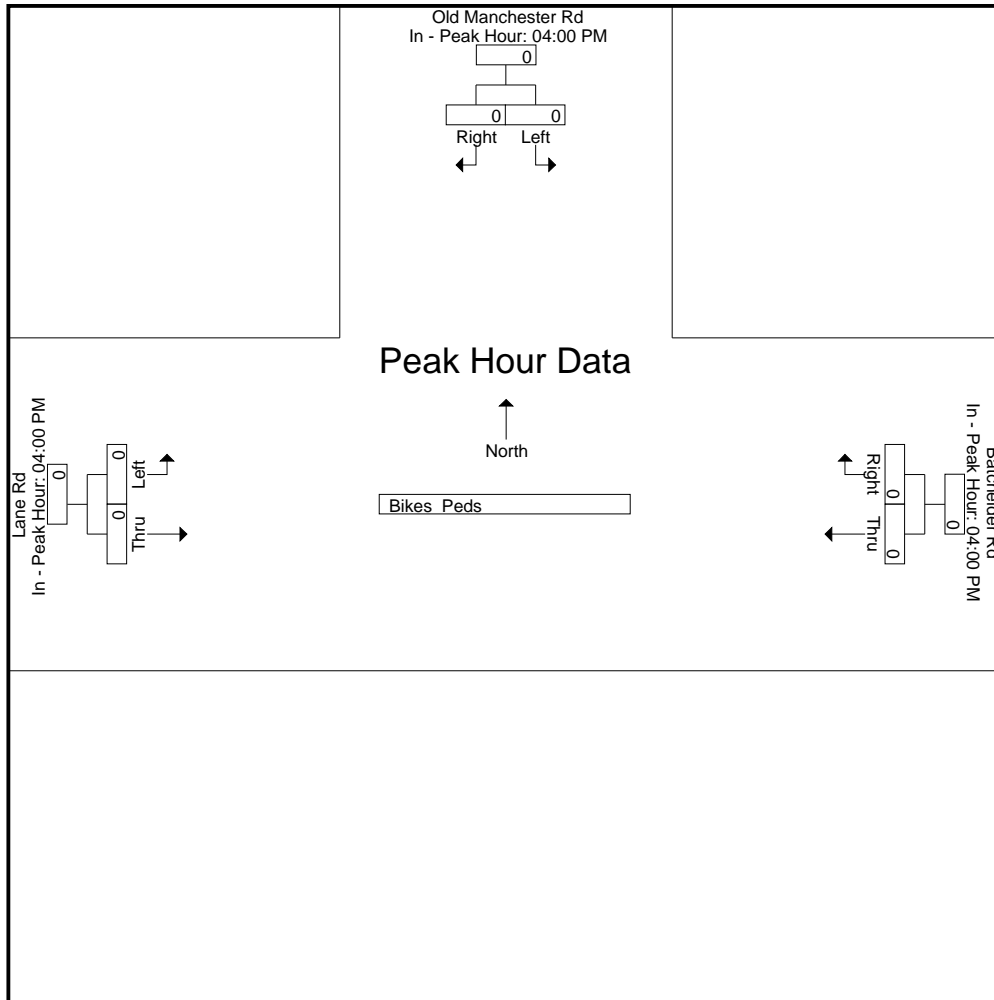
| | 04:00 PM | | | 04:00 PM | | | 04:00 PM | | |
|--------------|----------|------|------|----------|------|------|----------|------|------|
| +0 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PHF | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |

Accurate Counts

978-664-2565

N/S Street : Old Manchester Road
E/W Street : Batchelder Rd / Lane Rd
City/State : Raymond, MA
Weather : Clear

File Name : 96230004
Site Code : 96230004
Start Date : 2/8/2023
Page No : 12



Accurate Counts

978-664-2565

N/S Street : Sargent Drive
 E/W Street : Green Road
 City/State : Raymond, NH
 Weather : Clear

File Name : 98380001
 Site Code : 98380001
 Start Date : 10/3/2023
 Page No : 1

Groups Printed- Cars - Trucks

| Start Time | Sargent Dr From North | | Green Rd From East | | Green Rd From West | | Int. Total |
|--------------------|--------------------------|----------|-----------------------|----------|-----------------------|-----------|------------|
| | Left | Right | Thru | Right | Left | Thru | |
| 07:00 AM | 1 | 2 | 1 | 0 | 1 | 11 | 16 |
| 07:15 AM | 4 | 1 | 5 | 1 | 0 | 7 | 18 |
| 07:30 AM | 1 | 1 | 2 | 1 | 0 | 16 | 21 |
| 07:45 AM | 3 | 2 | 5 | 2 | 1 | 3 | 16 |
| Total | 9 | 6 | 13 | 4 | 2 | 37 | 71 |
| 08:00 AM | 2 | 1 | 4 | 0 | 0 | 13 | 20 |
| 08:15 AM | 0 | 0 | 2 | 0 | 1 | 5 | 8 |
| 08:30 AM | 1 | 0 | 4 | 0 | 0 | 8 | 13 |
| 08:45 AM | 0 | 0 | 3 | 1 | 0 | 4 | 8 |
| Total | 3 | 1 | 13 | 1 | 1 | 30 | 49 |
| Grand Total | 12 | 7 | 26 | 5 | 3 | 67 | 120 |
| Apprch % | 63.2 | 36.8 | 83.9 | 16.1 | 4.3 | 95.7 | |
| Total % | 10 | 5.8 | 21.7 | 4.2 | 2.5 | 55.8 | |
| Cars | 12 | 7 | 24 | 5 | 3 | 66 | 117 |
| % Cars | 100 | 100 | 92.3 | 100 | 100 | 98.5 | 97.5 |
| Trucks | 0 | 0 | 2 | 0 | 0 | 1 | 3 |
| % Trucks | 0 | 0 | 7.7 | 0 | 0 | 1.5 | 2.5 |

| Start Time | Sargent Dr From North | | | Green Rd From East | | | Green Rd From West | | | Int. Total |
|--|--------------------------|----------|------------|-----------------------|----------|------------|-----------------------|-----------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:15 AM | | | | | | | | | | |
| 07:15 AM | 4 | 1 | 5 | 5 | 1 | 6 | 0 | 7 | 7 | 18 |
| 07:30 AM | 1 | 1 | 2 | 2 | 1 | 3 | 0 | 16 | 16 | 21 |
| 07:45 AM | 3 | 2 | 5 | 5 | 2 | 7 | 1 | 3 | 4 | 16 |
| 08:00 AM | 2 | 1 | 3 | 4 | 0 | 4 | 0 | 13 | 13 | 20 |
| Total Volume | 10 | 5 | 15 | 16 | 4 | 20 | 1 | 39 | 40 | 75 |
| % App. Total | 66.7 | 33.3 | | 80 | 20 | | 2.5 | 97.5 | | |
| PHF | .625 | .625 | .750 | .800 | .500 | .714 | .250 | .609 | .625 | .893 |
| Cars | 10 | 5 | 15 | 14 | 4 | 18 | 1 | 39 | 40 | 73 |
| % Cars | 100 | 100 | 100 | 87.5 | 100 | 90.0 | 100 | 100 | 100 | 97.3 |
| Trucks | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 2 |
| % Trucks | 0 | 0 | 0 | 12.5 | 0 | 10.0 | 0 | 0 | 0 | 2.7 |

Accurate Counts

978-664-2565

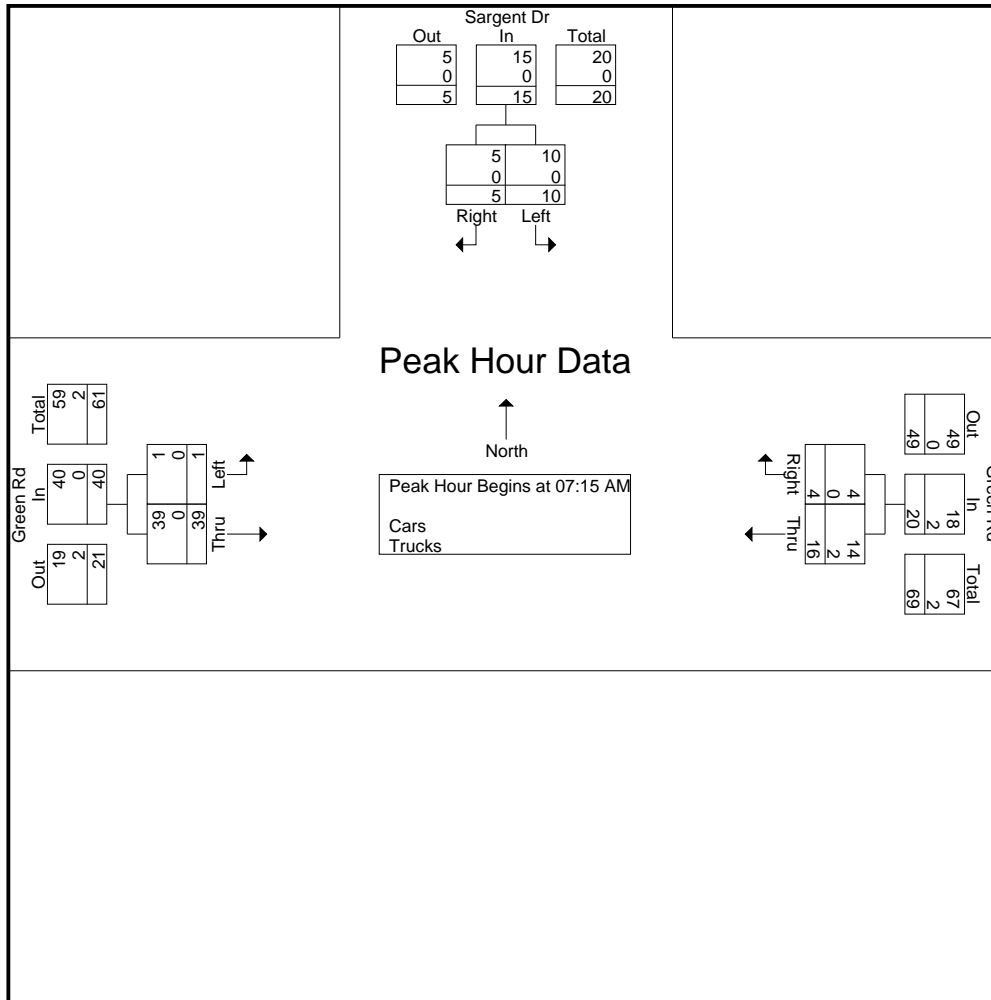
File Name : 98380001

Site Code : 98380001

Start Date : 10/3/2023

Page No : 2

N/S Street : Sargent Drive
 E/W Street : Green Road
 City/State : Raymond, NH
 Weather : Clear



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 07:00 AM | | | 07:15 AM | | | 07:15 AM | | |
|--------------|----------|------|------|----------|------|------|----------|------|------|
| +0 mins. | 1 | 2 | 3 | 5 | 1 | 6 | 0 | 7 | 7 |
| +15 mins. | 4 | 1 | 5 | 2 | 1 | 3 | 0 | 16 | 16 |
| +30 mins. | 1 | 1 | 2 | 5 | 2 | 7 | 1 | 3 | 4 |
| +45 mins. | 3 | 2 | 5 | 4 | 0 | 4 | 0 | 13 | 13 |
| Total Volume | 9 | 6 | 15 | 16 | 4 | 20 | 1 | 39 | 40 |
| % App. Total | 60 | 40 | | 80 | 20 | | 2.5 | 97.5 | |
| PHF | .563 | .750 | .750 | .800 | .500 | .714 | .250 | .609 | .625 |
| Cars | 9 | 6 | 15 | 14 | 4 | 18 | 1 | 39 | 40 |
| % Cars | 100 | 100 | 100 | 87.5 | 100 | 90 | 100 | 100 | 100 |
| Trucks | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 |
| % Trucks | 0 | 0 | 0 | 12.5 | 0 | 10 | 0 | 0 | 0 |

Accurate Counts

978-664-2565

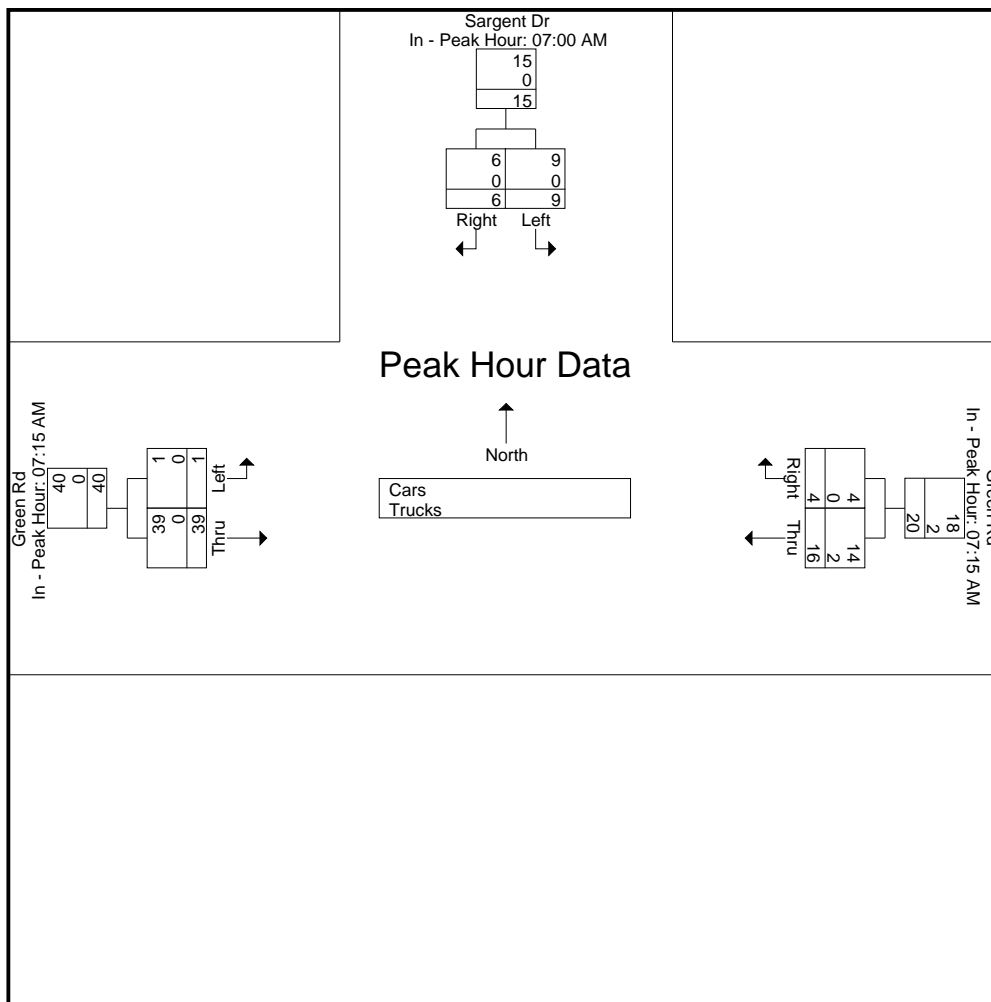
File Name : 98380001

Site Code : 98380001

Start Date : 10/3/2023

Page No : 3

N/S Street : Sargent Drive
 E/W Street : Green Road
 City/State : Raymond, NH
 Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Sargent Drive
 E/W Street : Green Road
 City/State : Raymond, NH
 Weather : Clear

File Name : 98380001
 Site Code : 98380001
 Start Date : 10/3/2023
 Page No : 4

Groups Printed- Cars

| Start Time | Sargent Dr From North | | Green Rd From East | | Green Rd From West | | Int. Total |
|--------------------|--------------------------|----------|-----------------------|----------|-----------------------|-----------|------------|
| | Left | Right | Thru | Right | Left | Thru | |
| 07:00 AM | 1 | 2 | 1 | 0 | 1 | 11 | 16 |
| 07:15 AM | 4 | 1 | 4 | 1 | 0 | 7 | 17 |
| 07:30 AM | 1 | 1 | 2 | 1 | 0 | 16 | 21 |
| 07:45 AM | 3 | 2 | 4 | 2 | 1 | 3 | 15 |
| Total | 9 | 6 | 11 | 4 | 2 | 37 | 69 |
| 08:00 AM | 2 | 1 | 4 | 0 | 0 | 13 | 20 |
| 08:15 AM | 0 | 0 | 2 | 0 | 1 | 4 | 7 |
| 08:30 AM | 1 | 0 | 4 | 0 | 0 | 8 | 13 |
| 08:45 AM | 0 | 0 | 3 | 1 | 0 | 4 | 8 |
| Total | 3 | 1 | 13 | 1 | 1 | 29 | 48 |
| Grand Total | 12 | 7 | 24 | 5 | 3 | 66 | 117 |
| Apprch % | 63.2 | 36.8 | 82.8 | 17.2 | 4.3 | 95.7 | |
| Total % | 10.3 | 6 | 20.5 | 4.3 | 2.6 | 56.4 | |

| Start Time | Sargent Dr From North | | | Green Rd From East | | | Green Rd From West | | | Int. Total |
|--|--------------------------|----------|------------|-----------------------|----------|------------|-----------------------|-----------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:15 AM | | | | | | | | | | |
| 07:15 AM | 4 | 1 | 5 | 4 | 1 | 5 | 0 | 7 | 7 | 17 |
| 07:30 AM | 1 | 1 | 2 | 2 | 1 | 3 | 0 | 16 | 16 | 21 |
| 07:45 AM | 3 | 2 | 5 | 4 | 2 | 6 | 1 | 3 | 4 | 15 |
| 08:00 AM | 2 | 1 | 3 | 4 | 0 | 4 | 0 | 13 | 13 | 20 |
| Total Volume | 10 | 5 | 15 | 14 | 4 | 18 | 1 | 39 | 40 | 73 |
| % App. Total | 66.7 | 33.3 | | 77.8 | 22.2 | | 2.5 | 97.5 | | |
| PHF | .625 | .625 | .750 | .875 | .500 | .750 | .250 | .609 | .625 | .869 |

Accurate Counts

978-664-2565

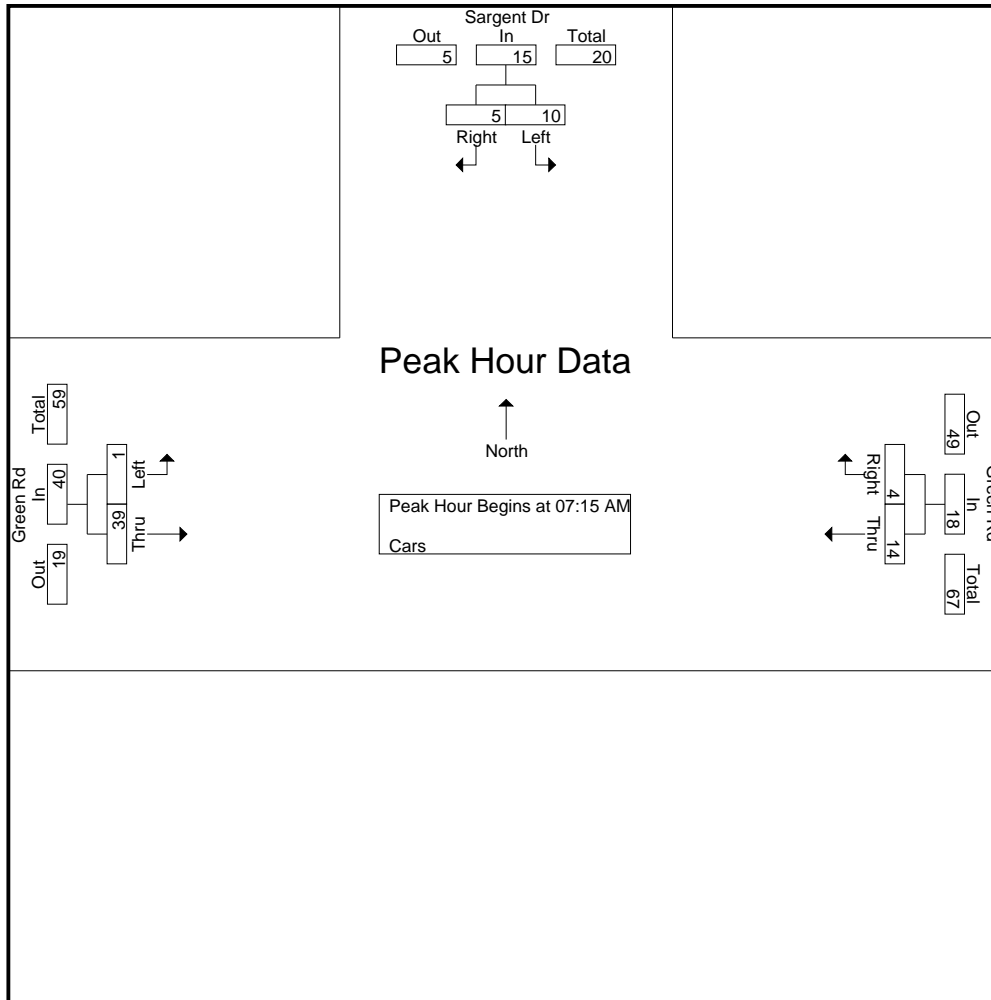
File Name : 98380001

Site Code : 98380001

Start Date : 10/3/2023

Page No : 5

N/S Street : Sargent Drive
 E/W Street : Green Road
 City/State : Raymond, NH
 Weather : Clear



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 07:00 AM | | | 07:15 AM | | | 07:15 AM | | |
|---------------------|----------|------|------|----------|------|------|----------|------|------|
| +0 mins. | 1 | 2 | 3 | 4 | 1 | 5 | 0 | 7 | 7 |
| +15 mins. | 4 | 1 | 5 | 2 | 1 | 3 | 0 | 16 | 16 |
| +30 mins. | 1 | 1 | 2 | 4 | 2 | 6 | 1 | 3 | 4 |
| +45 mins. | 3 | 2 | 5 | 4 | 0 | 4 | 0 | 13 | 13 |
| Total Volume | 9 | 6 | 15 | 14 | 4 | 18 | 1 | 39 | 40 |
| % App. Total | 60 | 40 | | 77.8 | 22.2 | | 2.5 | 97.5 | |
| PHF | .563 | .750 | .750 | .875 | .500 | .750 | .250 | .609 | .625 |

Accurate Counts

978-664-2565

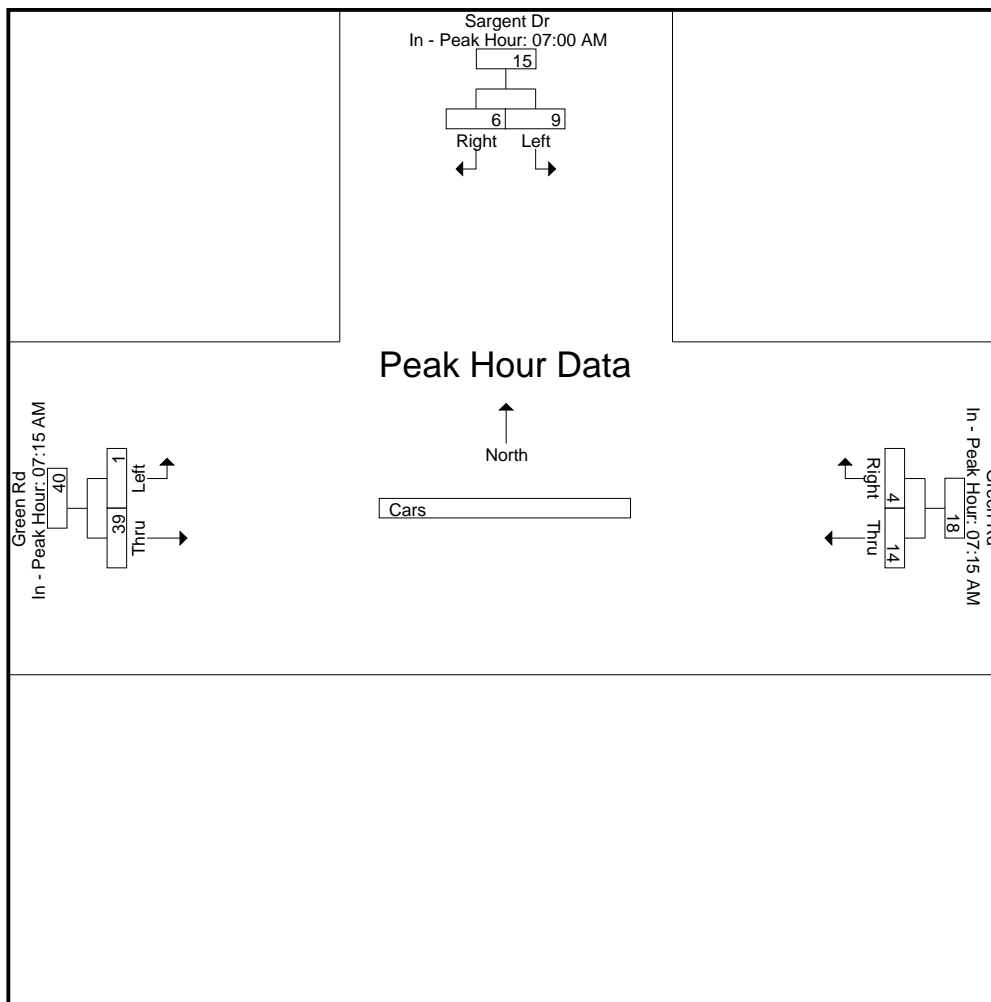
File Name : 98380001

Site Code : 98380001

Start Date : 10/3/2023

Page No : 6

N/S Street : Sargent Drive
E/W Street : Green Road
City/State : Raymond, NH
Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Sargent Drive
 E/W Street : Green Road
 City/State : Raymond, NH
 Weather : Clear

File Name : 98380001
 Site Code : 98380001
 Start Date : 10/3/2023
 Page No : 7

Groups Printed- Trucks

| Start Time | Sargent Dr From North | | Green Rd From East | | Green Rd From West | | Int. Total |
|--------------------|-----------------------|-------|--------------------|-------|--------------------|------|------------|
| | Left | Right | Thru | Right | Left | Thru | |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:15 AM | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:45 AM | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Total | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| 08:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:15 AM | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 08:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Grand Total | 0 | 0 | 2 | 0 | 0 | 1 | 3 |
| Apprch % | 0 | 0 | 100 | 0 | 0 | 100 | |
| Total % | 0 | 0 | 66.7 | 0 | 0 | 33.3 | |

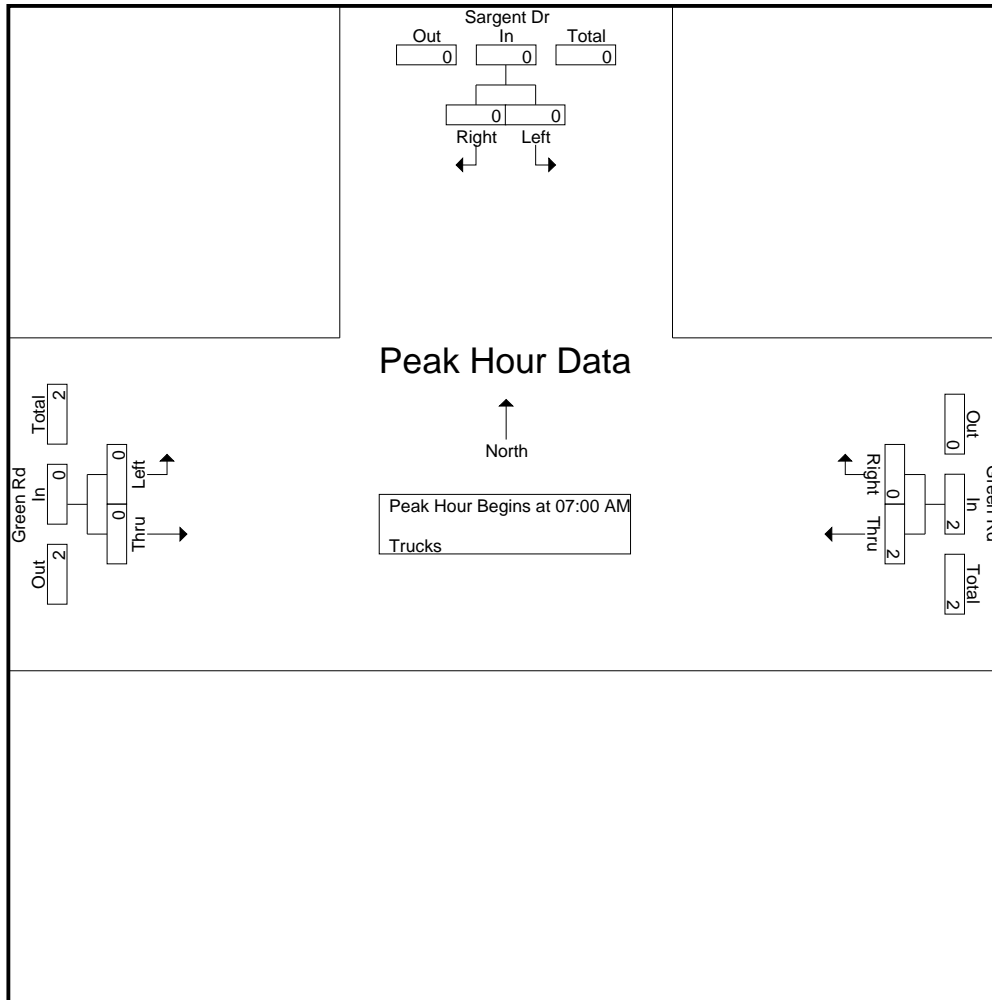
| Start Time | Sargent Dr From North | | | Green Rd From East | | | Green Rd From West | | | Int. Total |
|--|-----------------------|-------|------------|--------------------|-------|------------|--------------------|------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:00 AM | | | | | | | | | | |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:15 AM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:45 AM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| Total Volume | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 2 |
| % App. Total | 0 | 0 | | 100 | 0 | | 0 | 0 | | |
| PHF | .000 | .000 | .000 | .500 | .000 | .500 | .000 | .000 | .000 | .500 |

Accurate Counts

978-664-2565

N/S Street : Sargent Drive
 E/W Street : Green Road
 City/State : Raymond, NH
 Weather : Clear

File Name : 98380001
 Site Code : 98380001
 Start Date : 10/3/2023
 Page No : 8



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 07:00 AM | | | 07:00 AM | | | 07:30 AM | | |
|---------------------|----------|------|------|----------|------|------|----------|------|------|
| +0 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 |
| Total Volume | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 1 | 1 |
| % App. Total | 0 | 0 | 0 | 100 | 0 | 100 | 0 | 100 | 100 |
| PHF | .000 | .000 | .000 | .500 | .000 | .500 | .000 | .250 | .250 |

Accurate Counts

978-664-2565

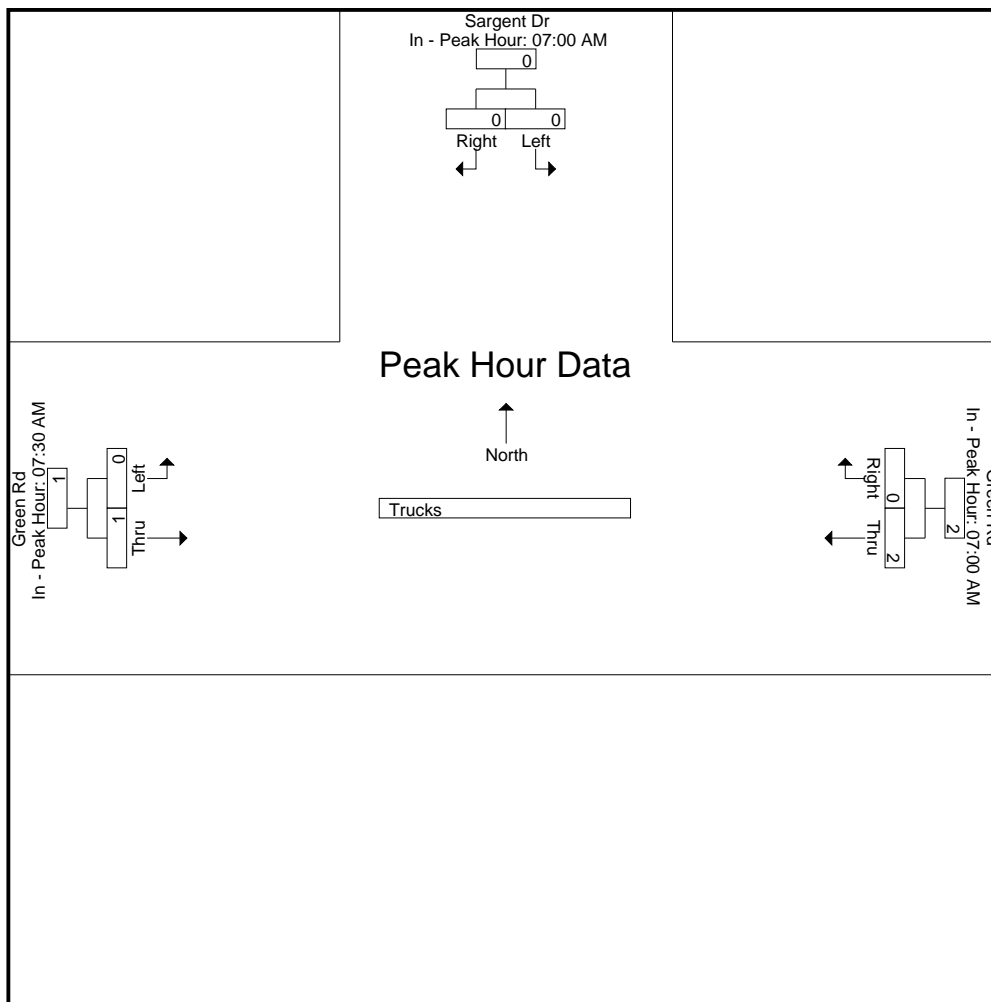
File Name : 98380001

Site Code : 98380001

Start Date : 10/3/2023

Page No : 9

N/S Street : Sargent Drive
E/W Street : Green Road
City/State : Raymond, NH
Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Sargent Drive
 E/W Street : Green Road
 City/State : Raymond, NH
 Weather : Clear

File Name : 98380001
 Site Code : 98380001
 Start Date : 10/3/2023
 Page No : 10

Groups Printed- Bikes Peds

| Start Time | Sargent Dr From North | | | Green Rd From East | | | Green Rd From West | | | Exclu. Total | Inclu. Total | Int. Total |
|--------------------|--------------------------|-------|------|-----------------------|-------|------|-----------------------|------|------|--------------|--------------|------------|
| | Left | Right | Peds | Thru | Right | Peds | Left | Thru | Peds | | | |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| 07:30 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 07:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 2 |
| 08:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 2 |
| Apprch % | 0 | 100 | | 0 | 0 | | 100 | 0 | | | | |
| Total % | 0 | 50 | | 0 | 0 | | 50 | 0 | | | 100 | |

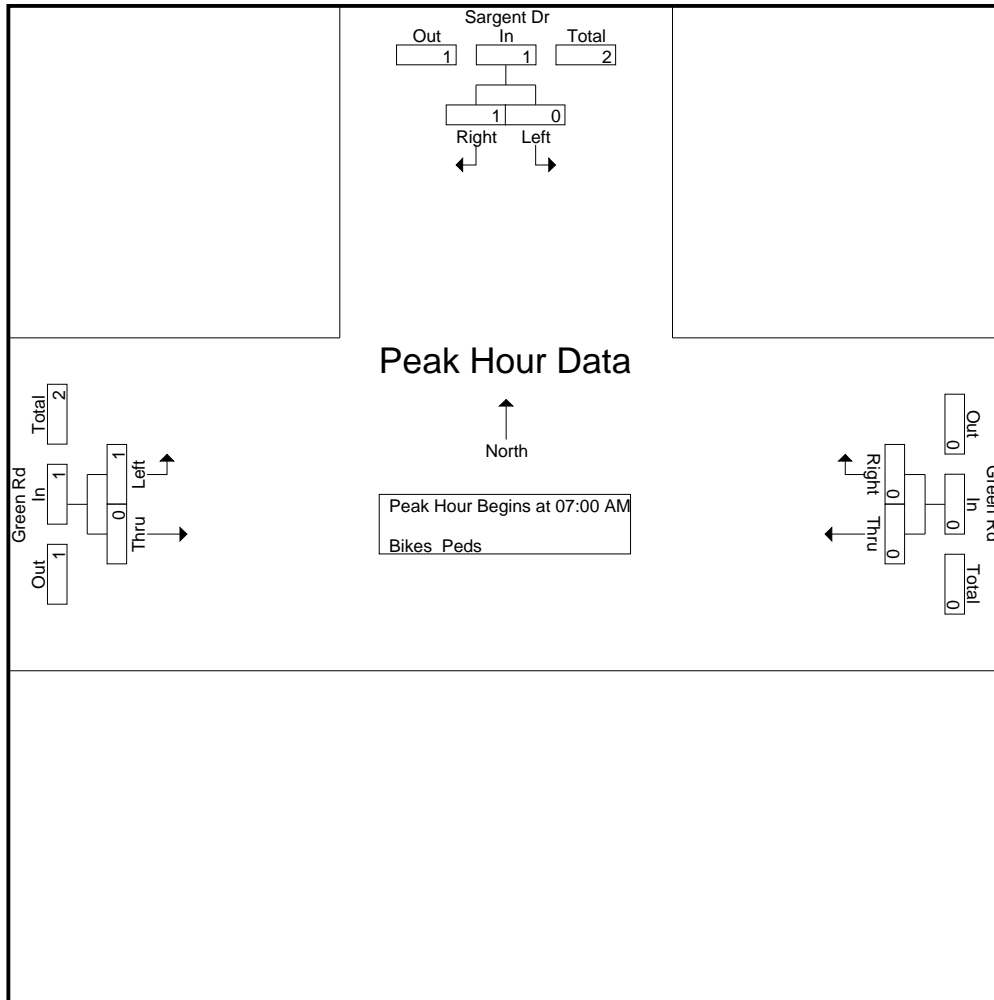
| Start Time | Sargent Dr From North | | | Green Rd From East | | | Green Rd From West | | | Int. Total |
|--|--------------------------|-------|------------|-----------------------|-------|------------|-----------------------|------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:00 AM | | | | | | | | | | |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 07:30 AM | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 07:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| % App. Total | 0 | 100 | | 0 | 0 | | 100 | 0 | | |
| PHF | .000 | .250 | .250 | .000 | .000 | .000 | .250 | .000 | .250 | .500 |

Accurate Counts

978-664-2565

N/S Street : Sargent Drive
 E/W Street : Green Road
 City/State : Raymond, NH
 Weather : Clear

File Name : 98380001
 Site Code : 98380001
 Start Date : 10/3/2023
 Page No : 11



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 07:00 AM | | | 07:00 AM | | | 07:00 AM | | |
|---------------------|----------|------|------|----------|------|------|----------|------|------|
| +0 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| +30 mins. | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| % App. Total | 0 | 100 | | 0 | 0 | | 100 | 0 | |
| PHF | .000 | .250 | .250 | .000 | .000 | .000 | .250 | .000 | .250 |

Accurate Counts

978-664-2565

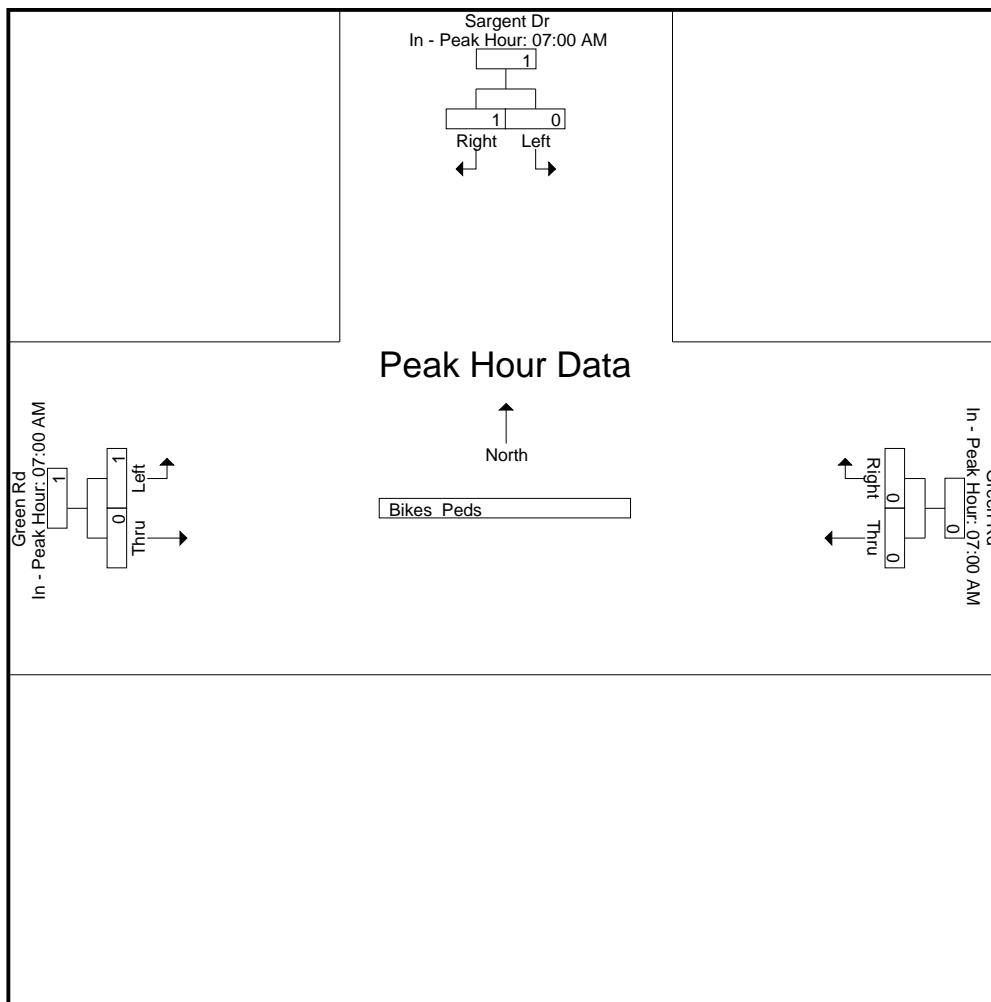
File Name : 98380001

Site Code : 98380001

Start Date : 10/3/2023

Page No : 12

N/S Street : Sargent Drive
E/W Street : Green Road
City/State : Raymond, NH
Weather : Clear



Accurate Counts

978-664-2565

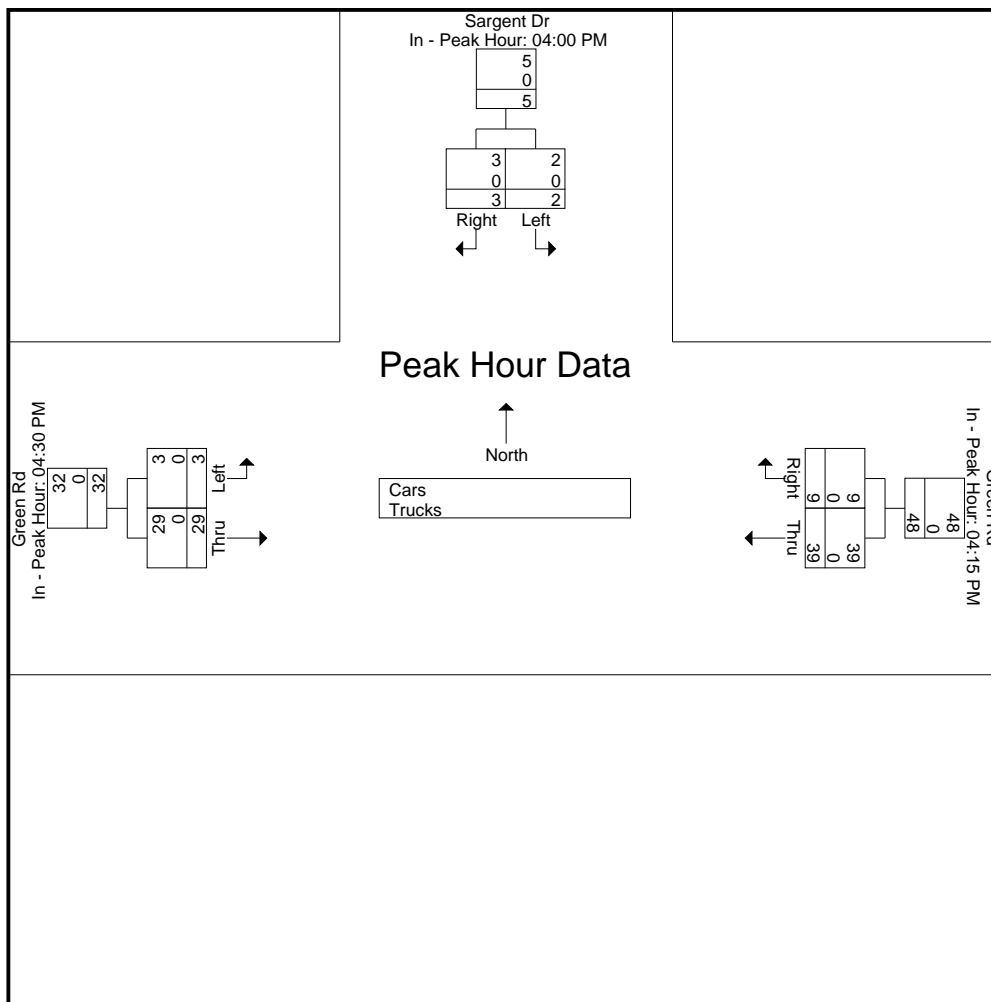
File Name : 98380001

Site Code : 98380001

Start Date : 10/3/2023

Page No : 3

N/S Street : Sargent Drive
 E/W Street : Green Road
 City/State : Raymond, NH
 Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Sargent Drive
 E/W Street : Green Road
 City/State : Raymond, NH
 Weather : Clear

File Name : 98380001
 Site Code : 98380001
 Start Date : 10/3/2023
 Page No : 4

Groups Printed- Cars

| Start Time | Sargent Dr From North | | Green Rd From East | | Green Rd From West | | Int. Total |
|--------------------|-----------------------|----------|--------------------|-----------|--------------------|-----------|------------|
| | Left | Right | Thru | Right | Left | Thru | |
| 04:00 PM | 1 | 0 | 7 | 1 | 1 | 4 | 14 |
| 04:15 PM | 1 | 0 | 8 | 3 | 0 | 7 | 19 |
| 04:30 PM | 0 | 2 | 10 | 2 | 0 | 7 | 21 |
| 04:45 PM | 0 | 1 | 10 | 2 | 1 | 6 | 20 |
| Total | 2 | 3 | 35 | 8 | 2 | 24 | 74 |
| 05:00 PM | 0 | 0 | 11 | 2 | 2 | 7 | 22 |
| 05:15 PM | 0 | 1 | 9 | 1 | 0 | 9 | 20 |
| 05:30 PM | 0 | 0 | 9 | 0 | 1 | 3 | 13 |
| 05:45 PM | 1 | 1 | 4 | 1 | 0 | 9 | 16 |
| Total | 1 | 2 | 33 | 4 | 3 | 28 | 71 |
| Grand Total | 3 | 5 | 68 | 12 | 5 | 52 | 145 |
| Apprch % | 37.5 | 62.5 | 85 | 15 | 8.8 | 91.2 | |
| Total % | 2.1 | 3.4 | 46.9 | 8.3 | 3.4 | 35.9 | |

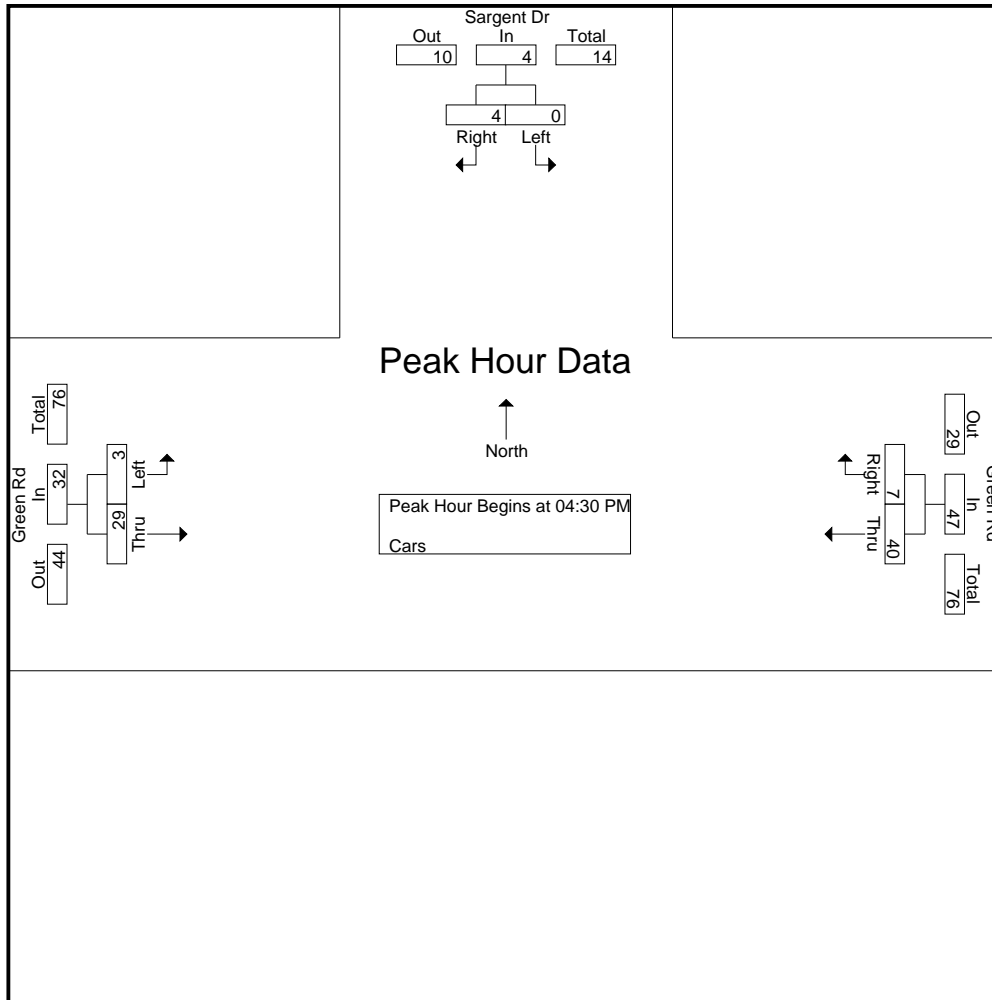
| Start Time | Sargent Dr From North | | | Green Rd From East | | | Green Rd From West | | | Int. Total |
|--|-----------------------|------------|------------|--------------------|-------------|------------|--------------------|-------------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:30 PM | | | | | | | | | | |
| 04:30 PM | 0 | 2 | 2 | 10 | 2 | 12 | 0 | 7 | 7 | 21 |
| 04:45 PM | 0 | 1 | 1 | 10 | 2 | 12 | 1 | 6 | 7 | 20 |
| 05:00 PM | 0 | 0 | 0 | 11 | 2 | 13 | 2 | 7 | 9 | 22 |
| 05:15 PM | 0 | 1 | 1 | 9 | 1 | 10 | 0 | 9 | 9 | 20 |
| Total Volume | 0 | 4 | 4 | 40 | 7 | 47 | 3 | 29 | 32 | 83 |
| % App. Total | 0 | 100 | 100 | 85.1 | 14.9 | 100 | 9.4 | 90.6 | 100 | 100 |
| PHF | .000 | .500 | .500 | .909 | .875 | .904 | .375 | .806 | .889 | .943 |

Accurate Counts

978-664-2565

N/S Street : Sargent Drive
 E/W Street : Green Road
 City/State : Raymond, NH
 Weather : Clear

File Name : 98380001
 Site Code : 98380001
 Start Date : 10/3/2023
 Page No : 5



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 04:00 PM | | | 04:15 PM | | | 04:30 PM | | |
|--------------|----------|------|------|----------|------|------|----------|------|------|
| +0 mins. | 1 | 0 | 1 | 8 | 3 | 11 | 0 | 7 | 7 |
| +15 mins. | 1 | 0 | 1 | 10 | 2 | 12 | 1 | 6 | 7 |
| +30 mins. | 0 | 2 | 2 | 10 | 2 | 12 | 2 | 7 | 9 |
| +45 mins. | 0 | 1 | 1 | 11 | 2 | 13 | 0 | 9 | 9 |
| Total Volume | 2 | 3 | 5 | 39 | 9 | 48 | 3 | 29 | 32 |
| % App. Total | 40 | 60 | | 81.2 | 18.8 | | 9.4 | 90.6 | |
| PHF | .500 | .375 | .625 | .886 | .750 | .923 | .375 | .806 | .889 |

Accurate Counts

978-664-2565

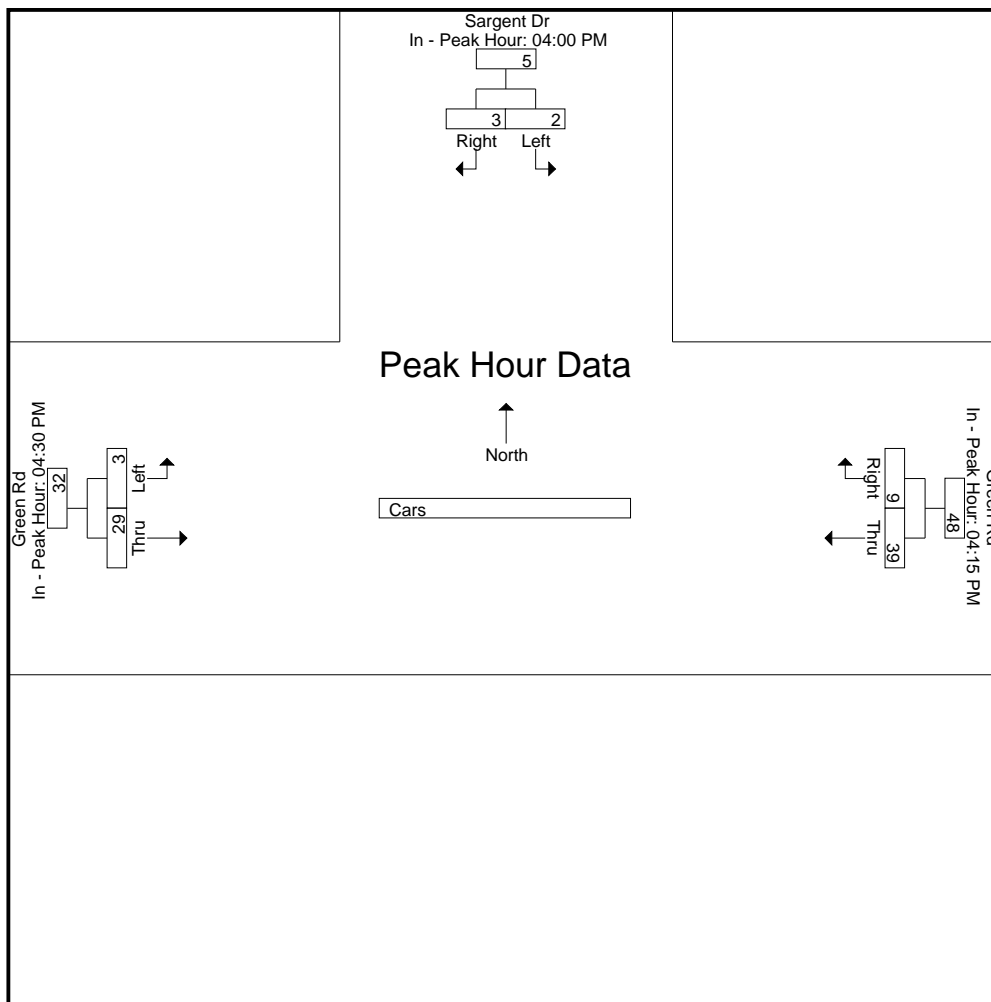
File Name : 98380001

Site Code : 98380001

Start Date : 10/3/2023

Page No : 6

N/S Street : Sargent Drive
E/W Street : Green Road
City/State : Raymond, NH
Weather : Clear

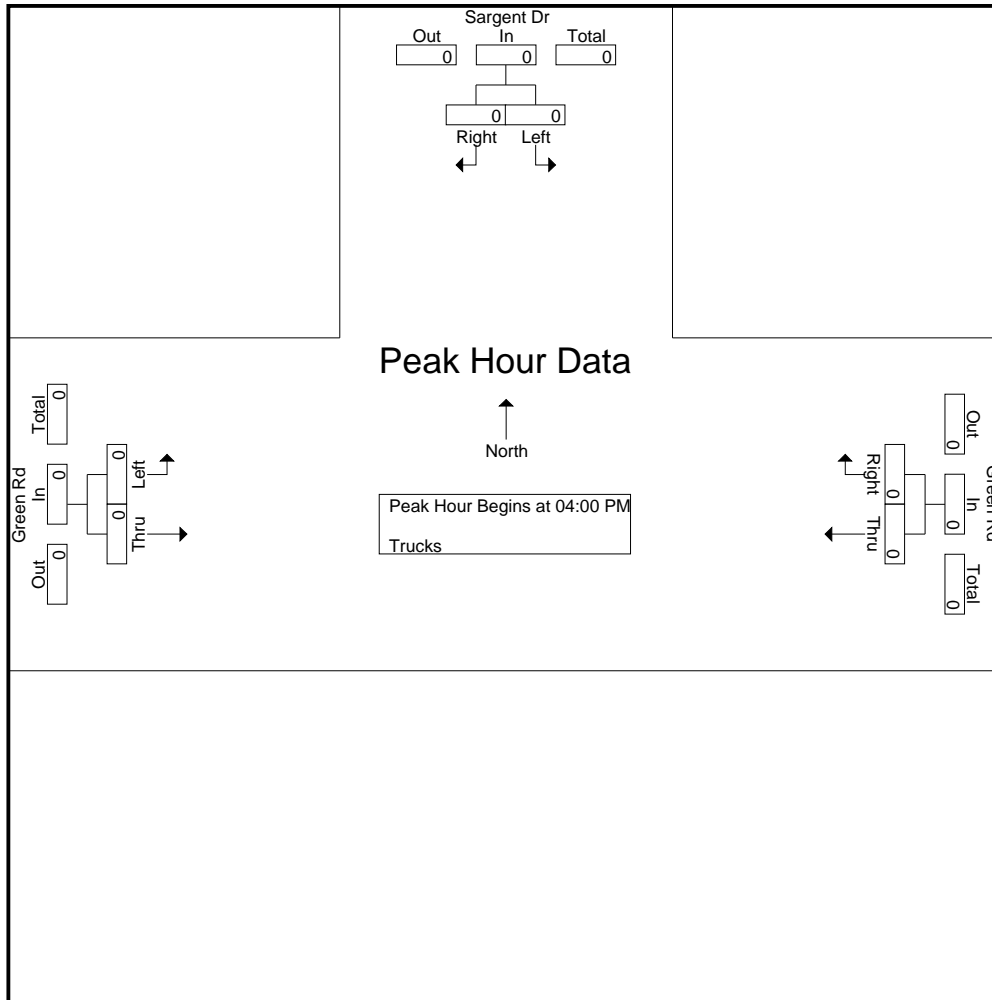


Accurate Counts

978-664-2565

N/S Street : Sargent Drive
 E/W Street : Green Road
 City/State : Raymond, NH
 Weather : Clear

File Name : 98380001
 Site Code : 98380001
 Start Date : 10/3/2023
 Page No : 8



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 04:00 PM | | | 04:00 PM | | | 04:00 PM | | |
|--------------|----------|------|------|----------|------|------|----------|------|------|
| +0 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PHF | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |

Accurate Counts

978-664-2565

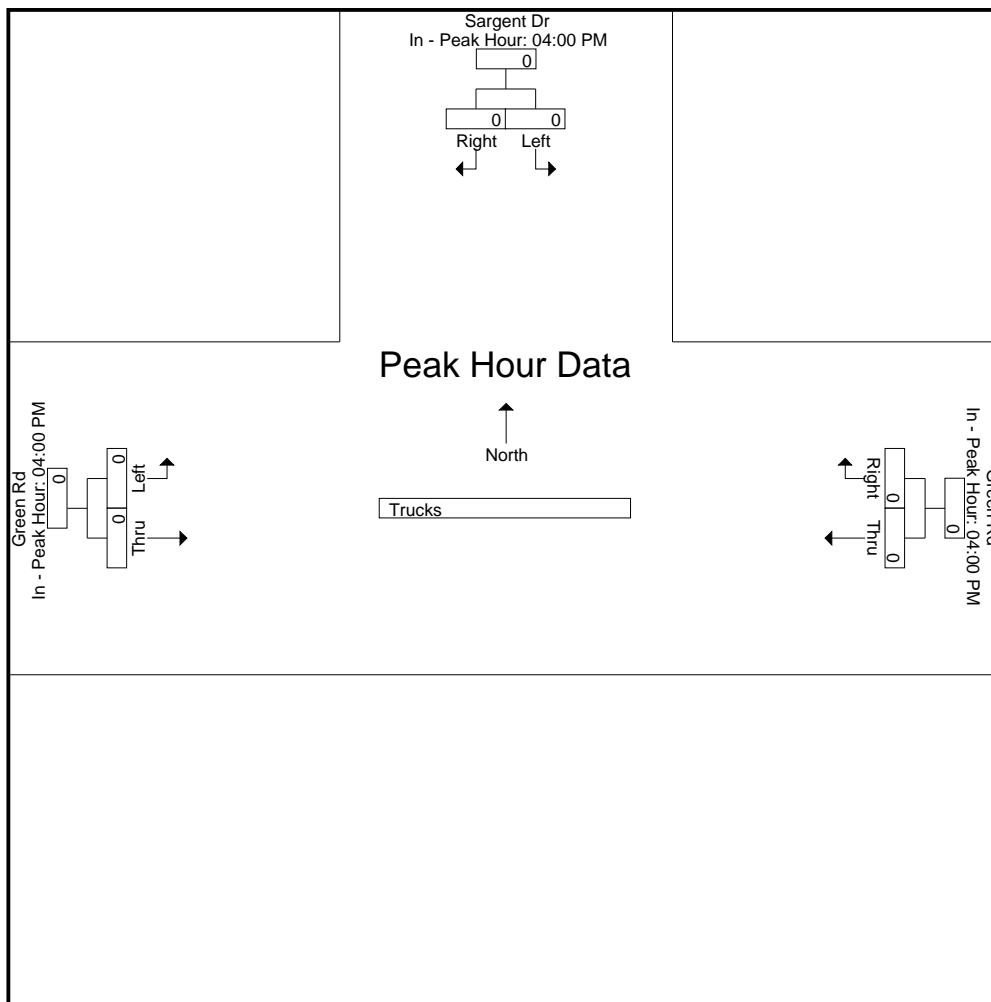
File Name : 98380001

Site Code : 98380001

Start Date : 10/3/2023

Page No : 9

N/S Street : Sargent Drive
E/W Street : Green Road
City/State : Raymond, NH
Weather : Clear



Accurate Counts

978-664-2565

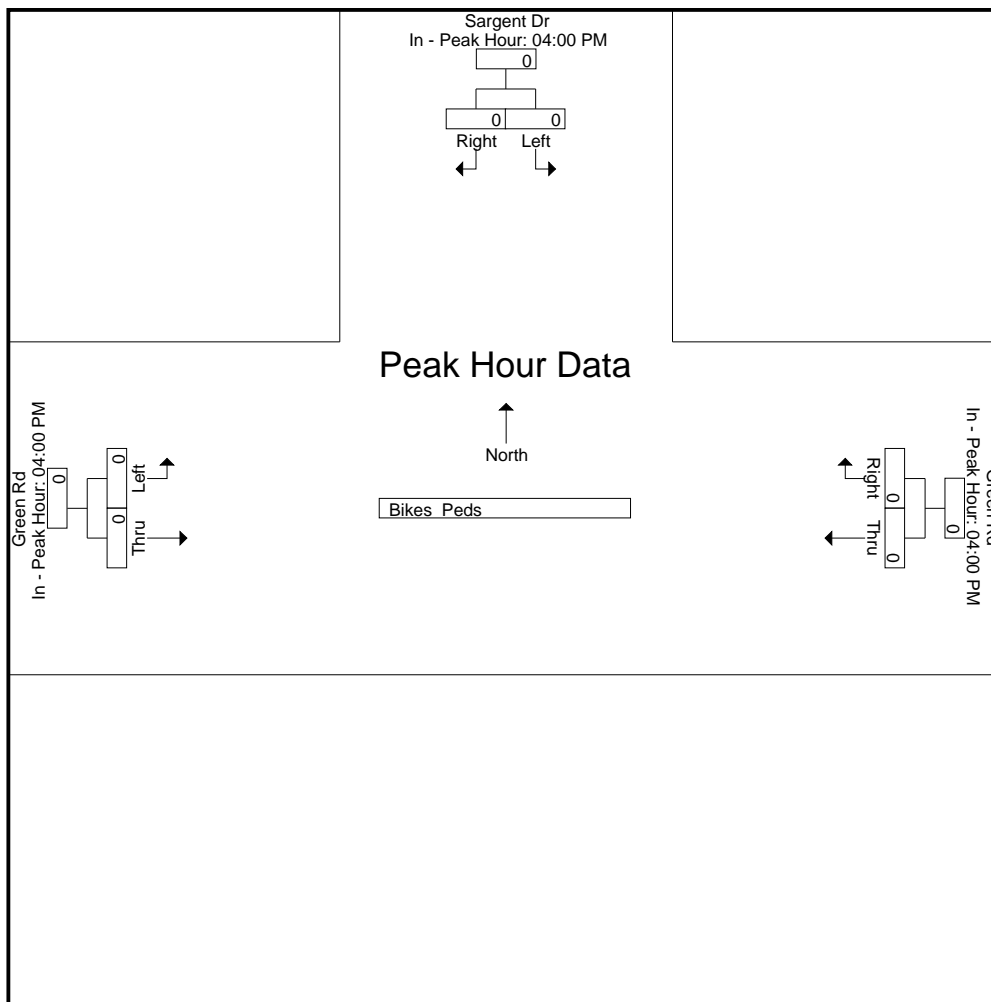
File Name : 98380001

Site Code : 98380001

Start Date : 10/3/2023

Page No : 12

N/S Street : Sargent Drive
E/W Street : Green Road
City/State : Raymond, NH
Weather : Clear



SEASONAL ADJUSTMENT DATA

Year 2019 Monthly Data

Town: Candia
Station: 02071090
Location: NH 101 at Raymond TL (Exit 3-4)
Group: 3

| <u>Month</u> | <u>ADT</u> | <u>Adjustment to Average</u> | <u>Adjustment to Peak</u> |
|--------------|------------|----------------------------------|-------------------------------|
| January | 36,493 | 1.21 | 1.43 |
| February | 38,272 | 1.15 | 1.37 |
| March | 39,851 | 1.11 | 1.31 |
| April | 42,655 | 1.03 | 1.23 |
| May | 46,412 | 0.95 | 1.13 |
| June | 49,295 | 0.89 | 1.06 |
| July | 51,629 | 0.85 | 1.01 |
| August | 52,308 | 0.84 | 1.00 |
| September | 47,294 | 0.93 | 1.11 |
| October | 45,996 | 0.96 | 1.14 |
| November | 41,476 | 1.06 | 1.26 |
| December | 36,831 | 1.20 | 1.42 |

AADT: 44,064
Peak Month: 52,308

COVID ADJUSTMENT DATA

2019 Average Count Data – Sta. 02071090

February ADT: 38,272

February Weekday Morning ADT: 3,431

February Weekday Evening ADT: 3,657

2023 Average Count Data – Sta. 02071090

February ADT: 35,706

February Weekday Morning ADT: 2,917

February Weekday Evening ADT: 3,293

COVID Adjustment

February Adjustment: $\frac{(38,272 - 35,706)}{35,706} = 0.072$

Weekday Morning Adjustment: $\frac{(3,431 - 2,917)}{2,917} = 0.176$

Weekday Evening Adjustment: $\frac{(3,657 - 3,293)}{3,293} = 0.111$

2019 Average Count Data – Sta. 02071090

September ADT: 47,294

September Weekday Morning ADT: 3,834

September Weekday Evening ADT: 4,274

2023 Average Count Data – Sta. 02071090

September ADT: 45,832

September Weekday Morning ADT: 3,425

September Weekday Evening ADT: 4,090

COVID Adjustment

September Adjustment: $\frac{(47,294 - 45,832)}{45,832} = 0.032$

Weekday Morning Adjustment: $\frac{(3,834 - 3,425)}{3,425} = 0.119$

Weekday Evening Adjustment: $\frac{(4,274 - 4,090)}{4,090} = 0.045$

September 2023 volumes appear to be approximately 3.2 percent below September 2019 daily traffic volumes, 11.9 percent below September 2019 weekday morning volumes, and 4.5 percent below September 2019 weekday evening volumes. Assuming that October 2023 volumes would follow a similar pattern, an adjustment to the raw traffic volume data to account for the COVID-19 pandemic was done using the calculated September adjustments.

VEHICLE TRAVEL SPEED DATA

Accurate Counts
978-664-2565

Location : Green Road
Location : North of Sargent Drive
City/State: Raymond, NH
Direction: NB

Site Code: 98380001

| 10/3/2023 | 0 - 15 | > 15 - | > 20 - | > 25 - | > 30 - | > 35 - | > 40 - | > 45 - | > 50 - | > 55 - | > 60 - | > 65 - | > 70 | Total |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|-------|
| Time | MPH | 20 MPH | 25 MPH | 30 MPH | 35 MPH | 40 MPH | 45 MPH | 50 MPH | 55 MPH | 60 MPH | 65 MPH | 70 MPH | MPH | |
| 12:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 3:00 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 4:00 | 0 | 0 | 6 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 5:00 | 0 | 0 | 4 | 6 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 6:00 | 0 | 2 | 6 | 7 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| 7:00 | 0 | 1 | 10 | 16 | 10 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 |
| 8:00 | 0 | 0 | 0 | 11 | 17 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 31 |
| 9:00 | 0 | 0 | 5 | 9 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 10:00 | 0 | 2 | 6 | 6 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| 11:00 | 0 | 0 | 4 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 12:00 PM | 0 | 0 | 4 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 1:00 | 0 | 0 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 2:00 | 0 | 1 | 5 | 3 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 3:00 | 0 | 2 | 3 | 10 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 4:00 | 0 | 1 | 2 | 5 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 5:00 | 0 | 3 | 9 | 5 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| 6:00 | 0 | 0 | 5 | 11 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| 7:00 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 8:00 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 9:00 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 10:00 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 11:00 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Total | 0 | 13 | 77 | 111 | 65 | 18 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 287 |

| | | | | |
|----------------------|-------|------|------|------|
| Percentile | 15th | 50th | 85th | 95th |
| Speed | 23 | 28 | 32 | 36 |
| Mean Speed (Average) | 27.7 | | | |
| 10 MPH Pace Speed | 20-29 | | | |
| Number in Pace | 186 | | | |
| Percent in Pace | 64.8% | | | |
| Number > 30 MPH | 86 | | | |
| Percent > 30 MPH | 30.0% | | | |

Accurate Counts
978-664-2565

Location : Green Road
Location : North of Sargent Drive
City/State: Raymond, NH
Direction: NB

Site Code: 98380001

| 10/4/2023 Time | 0 - 15 MPH | > 15 - 20 MPH | > 20 - 25 MPH | > 25 - 30 MPH | > 30 - 35 MPH | > 35 - 40 MPH | > 40 - 45 MPH | > 45 - 50 MPH | > 50 - 55 MPH | > 55 - 60 MPH | > 60 - 65 MPH | > 65 - 70 MPH | > 70 MPH | Total |
|-------------------|---------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------|------------|
| 12:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 4:00 | 0 | 1 | 1 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 5:00 | 0 | 0 | 2 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 6:00 | 0 | 1 | 4 | 7 | 6 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| 7:00 | 0 | 0 | 8 | 22 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 |
| 8:00 | 0 | 0 | 3 | 14 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| 9:00 | 0 | 1 | 7 | 8 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| 10:00 | 0 | 1 | 3 | 7 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 11:00 | 0 | 2 | 2 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 12:00 PM | 0 | 2 | 3 | 8 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 1:00 | 1 | 2 | 2 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 2:00 | 0 | 0 | 2 | 5 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 3:00 | 0 | 1 | 5 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 4:00 | 0 | 0 | 1 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 5:00 | 0 | 1 | 6 | 8 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| 6:00 | 0 | 4 | 5 | 5 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 7:00 | 0 | 0 | 2 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 8:00 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 9:00 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 10:00 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 11:00 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 1 | 18 | 61 | 114 | 48 | 18 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 263 |

| | | | | |
|----------------------|-------|------|------|------|
| Percentile | 15th | 50th | 85th | 95th |
| Speed | 22 | 27 | 32 | 37 |
| Mean Speed (Average) | 27.4 | | | |
| 10 MPH Pace Speed | 20-29 | | | |
| Number in Pace | 173 | | | |
| Percent in Pace | 65.8% | | | |
| Number > 30 MPH | 69 | | | |
| Percent > 30 MPH | 26.2% | | | |

| | | | | | | | | | | | | | | |
|----------------------|----------|-----------|------------|------------|------------|-----------|----------|----------|----------|----------|----------|----------|----------|------------|
| Grand Total | 1 | 31 | 138 | 225 | 113 | 36 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 550 |
| Percentile | 15th | 50th | 85th | 95th | | | | | | | | | | |
| Speed | 23 | 27 | 32 | 37 | | | | | | | | | | |
| Mean Speed (Average) | 27.5 | | | | | | | | | | | | | |
| 10 MPH Pace Speed | 20-29 | | | | | | | | | | | | | |
| Number in Pace | 359 | | | | | | | | | | | | | |
| Percent in Pace | 65.3% | | | | | | | | | | | | | |
| Number > 30 MPH | 155 | | | | | | | | | | | | | |
| Percent > 30 MPH | 28.2% | | | | | | | | | | | | | |

Accurate Counts
978-664-2565

Location : Green Road
Location : North of Sargent Drive
City/State: Raymond, NH
Direction: SB

Site Code: 98380001

| 10/3/2023 Time | 0 - 15 MPH | > 15 - 20 MPH | > 20 - 25 MPH | > 25 - 30 MPH | > 30 - 35 MPH | > 35 - 40 MPH | > 40 - 45 MPH | > 45 - 50 MPH | > 50 - 55 MPH | > 55 - 60 MPH | > 60 - 65 MPH | > 65 - 70 MPH | > 70 MPH | Total |
|-------------------|---------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------|------------|
| 12:00 AM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 3:00 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 6:00 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:00 | 1 | 0 | 0 | 6 | 6 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 18 |
| 8:00 | 0 | 0 | 1 | 5 | 4 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 9:00 | 0 | 0 | 0 | 3 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 10:00 | 0 | 1 | 1 | 3 | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| 11:00 | 0 | 1 | 0 | 4 | 10 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 12:00 PM | 1 | 0 | 0 | 5 | 7 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| 1:00 | 0 | 0 | 0 | 4 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 2:00 | 1 | 2 | 3 | 7 | 9 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| 3:00 | 0 | 1 | 2 | 4 | 20 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 30 |
| 4:00 | 0 | 0 | 0 | 11 | 17 | 9 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 43 |
| 5:00 | 0 | 0 | 1 | 5 | 24 | 5 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 38 |
| 6:00 | 0 | 0 | 1 | 6 | 16 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 30 |
| 7:00 | 0 | 0 | 1 | 6 | 9 | 7 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| 8:00 | 0 | 0 | 0 | 3 | 7 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 11 |
| 9:00 | 0 | 0 | 1 | 3 | 2 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 10:00 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 11:00 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 3 | 5 | 11 | 78 | 152 | 57 | 19 | 3 | 2 | 0 | 0 | 0 | 0 | 330 |

| | | | | |
|----------------------|-------|------|------|------|
| Percentile | 15th | 50th | 85th | 95th |
| Speed | 28 | 32 | 37 | 42 |
| Mean Speed (Average) | 32.3 | | | |
| 10 MPH Pace Speed | 25-34 | | | |
| Number in Pace | 227 | | | |
| Percent in Pace | 68.8% | | | |
| Number > 30 MPH | 233 | | | |
| Percent > 30 MPH | 70.6% | | | |

Accurate Counts
978-664-2565

Location : Green Road
Location : North of Sargent Drive
City/State: Raymond, NH
Direction: SB

Site Code: 98380001

| 10/4/2023 Time | 0 - 15 MPH | > 15 - 20 MPH | > 20 - 25 MPH | > 25 - 30 MPH | > 30 - 35 MPH | > 35 - 40 MPH | > 40 - 45 MPH | > 45 - 50 MPH | > 50 - 55 MPH | > 55 - 60 MPH | > 60 - 65 MPH | > 65 - 70 MPH | > 70 MPH | Total |
|-------------------|---------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------|------------|
| 12:00 AM | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 1:00 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:00 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:00 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 6:00 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:00 | 0 | 0 | 0 | 3 | 4 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 13 |
| 8:00 | 0 | 1 | 0 | 4 | 6 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| 9:00 | 0 | 0 | 1 | 3 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| 10:00 | 0 | 0 | 1 | 7 | 6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 11:00 | 1 | 0 | 1 | 7 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 12:00 PM | 0 | 0 | 7 | 4 | 12 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| 1:00 | 1 | 0 | 1 | 4 | 13 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| 2:00 | 0 | 0 | 0 | 12 | 6 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| 3:00 | 0 | 0 | 1 | 7 | 18 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 34 |
| 4:00 | 0 | 0 | 0 | 6 | 13 | 9 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 32 |
| 5:00 | 0 | 0 | 2 | 7 | 11 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 |
| 6:00 | 0 | 3 | 1 | 6 | 16 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 37 |
| 7:00 | 0 | 0 | 0 | 6 | 5 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 8:00 | 0 | 0 | 0 | 2 | 2 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 9:00 | 0 | 0 | 1 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 10:00 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 11:00 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 2 | 4 | 18 | 82 | 131 | 69 | 23 | 4 | 0 | 0 | 0 | 0 | 0 | 333 |

| | | | | |
|----------------------|-------|------|------|------|
| Percentile | 15th | 50th | 85th | 95th |
| Speed | 27 | 32 | 38 | 42 |
| Mean Speed (Average) | 32.4 | | | |
| 10 MPH Pace Speed | 25-34 | | | |
| Number in Pace | 211 | | | |
| Percent in Pace | 63.4% | | | |
| Number > 30 MPH | 227 | | | |
| Percent > 30 MPH | 68.2% | | | |

| | | | | | | | | | | | | | | |
|----------------------|----------|----------|-----------|------------|------------|------------|-----------|----------|----------|----------|----------|----------|----------|------------|
| Grand Total | 5 | 9 | 29 | 160 | 283 | 126 | 42 | 7 | 2 | 0 | 0 | 0 | 0 | 663 |
| Percentile | 15th | | | | 50th | 85th | 95th | | | | | | | |
| Speed | 28 | | | | 32 | 37 | 42 | | | | | | | |
| Mean Speed (Average) | 32.3 | | | | | | | | | | | | | |
| 10 MPH Pace Speed | 25-34 | | | | | | | | | | | | | |
| Number in Pace | 438 | | | | | | | | | | | | | |
| Percent in Pace | 66.1% | | | | | | | | | | | | | |
| Number > 30 MPH | 460 | | | | | | | | | | | | | |
| Percent > 30 MPH | 69.4% | | | | | | | | | | | | | |

Accurate Counts
978-664-2565

Location : Green Road
Location : North of Sargent Drive
City/State: Raymond, NH
Direction: Combined

Site Code: 98380001

| 10/3/2023 | 0 - 15 | > 15 - | > 20 - | > 25 - | > 30 - | > 35 - | > 40 - | > 45 - | > 50 - | > 55 - | > 60 - | > 65 - | > 70 | Total |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|-------|
| Time | MPH | 20 MPH | 25 MPH | 30 MPH | 35 MPH | 40 MPH | 45 MPH | 50 MPH | 55 MPH | 60 MPH | 65 MPH | 70 MPH | MPH | |
| 12:00 AM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 3:00 | 0 | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 4:00 | 0 | 0 | 6 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 5:00 | 0 | 0 | 4 | 6 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 6:00 | 0 | 2 | 6 | 7 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
| 7:00 | 1 | 1 | 10 | 22 | 16 | 8 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 61 |
| 8:00 | 0 | 0 | 1 | 16 | 21 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 45 |
| 9:00 | 0 | 0 | 5 | 12 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| 10:00 | 0 | 3 | 7 | 9 | 12 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 |
| 11:00 | 0 | 1 | 4 | 10 | 10 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| 12:00 PM | 1 | 0 | 4 | 10 | 9 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 32 |
| 1:00 | 0 | 0 | 2 | 7 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 2:00 | 1 | 3 | 8 | 10 | 11 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 40 |
| 3:00 | 0 | 3 | 5 | 14 | 22 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 48 |
| 4:00 | 0 | 1 | 2 | 16 | 21 | 11 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 57 |
| 5:00 | 0 | 3 | 10 | 10 | 28 | 6 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 60 |
| 6:00 | 0 | 0 | 6 | 17 | 18 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 49 |
| 7:00 | 0 | 1 | 3 | 8 | 10 | 7 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 32 |
| 8:00 | 0 | 0 | 0 | 5 | 7 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 13 |
| 9:00 | 0 | 0 | 2 | 3 | 2 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 10:00 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 11:00 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Total | 3 | 18 | 88 | 189 | 217 | 75 | 22 | 3 | 2 | 0 | 0 | 0 | 0 | 617 |

| | | | | |
|----------------------|-------|------|------|------|
| Percentile | 15th | 50th | 85th | 95th |
| Speed | 25 | 30 | 35 | 40 |
| Mean Speed (Average) | 30.1 | | | |
| 10 MPH Pace Speed | 25-34 | | | |
| Number in Pace | 403 | | | |
| Percent in Pace | 65.3% | | | |
| Number > 30 MPH | 319 | | | |
| Percent > 30 MPH | 51.7% | | | |

Accurate Counts
978-664-2565

Location : Green Road
Location : North of Sargent Drive
City/State: Raymond, NH
Direction: Combined

Site Code: 98380001

| 10/4/2023 | 0 - 15 | > 15 - | > 20 - | > 25 - | > 30 - | > 35 - | > 40 - | > 45 - | > 50 - | > 55 - | > 60 - | > 65 - | > 70 | Total |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|-------|
| Time | MPH | 20 MPH | 25 MPH | 30 MPH | 35 MPH | 40 MPH | 45 MPH | 50 MPH | 55 MPH | 60 MPH | 65 MPH | 70 MPH | MPH | |
| 12:00 AM | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 1:00 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 4:00 | 0 | 1 | 2 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 5:00 | 0 | 0 | 2 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 6:00 | 0 | 1 | 5 | 7 | 6 | 5 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 26 |
| 7:00 | 0 | 0 | 8 | 25 | 9 | 6 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 52 |
| 8:00 | 0 | 1 | 3 | 18 | 18 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 45 |
| 9:00 | 0 | 1 | 8 | 11 | 6 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 |
| 10:00 | 0 | 1 | 4 | 14 | 8 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 32 |
| 11:00 | 1 | 2 | 3 | 11 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| 12:00 PM | 0 | 2 | 10 | 12 | 15 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 43 |
| 1:00 | 2 | 2 | 3 | 7 | 13 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 33 |
| 2:00 | 0 | 0 | 2 | 17 | 9 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 35 |
| 3:00 | 0 | 1 | 6 | 8 | 19 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 42 |
| 4:00 | 0 | 0 | 1 | 12 | 15 | 9 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 41 |
| 5:00 | 0 | 1 | 8 | 15 | 17 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 |
| 6:00 | 0 | 7 | 6 | 11 | 18 | 10 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 54 |
| 7:00 | 0 | 0 | 2 | 9 | 6 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| 8:00 | 0 | 1 | 3 | 2 | 2 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 9:00 | 0 | 0 | 3 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 10:00 | 0 | 1 | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 11:00 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Total | 3 | 22 | 79 | 196 | 179 | 87 | 26 | 4 | 0 | 0 | 0 | 0 | 0 | 596 |

| | | | | |
|----------------------|-------|------|------|------|
| Percentile | 15th | 50th | 85th | 95th |
| Speed | 25 | 30 | 36 | 40 |
| Mean Speed (Average) | 30.2 | | | |
| 10 MPH Pace Speed | 25-34 | | | |
| Number in Pace | 373 | | | |
| Percent in Pace | 62.6% | | | |
| Number > 30 MPH | 296 | | | |
| Percent > 30 MPH | 49.7% | | | |

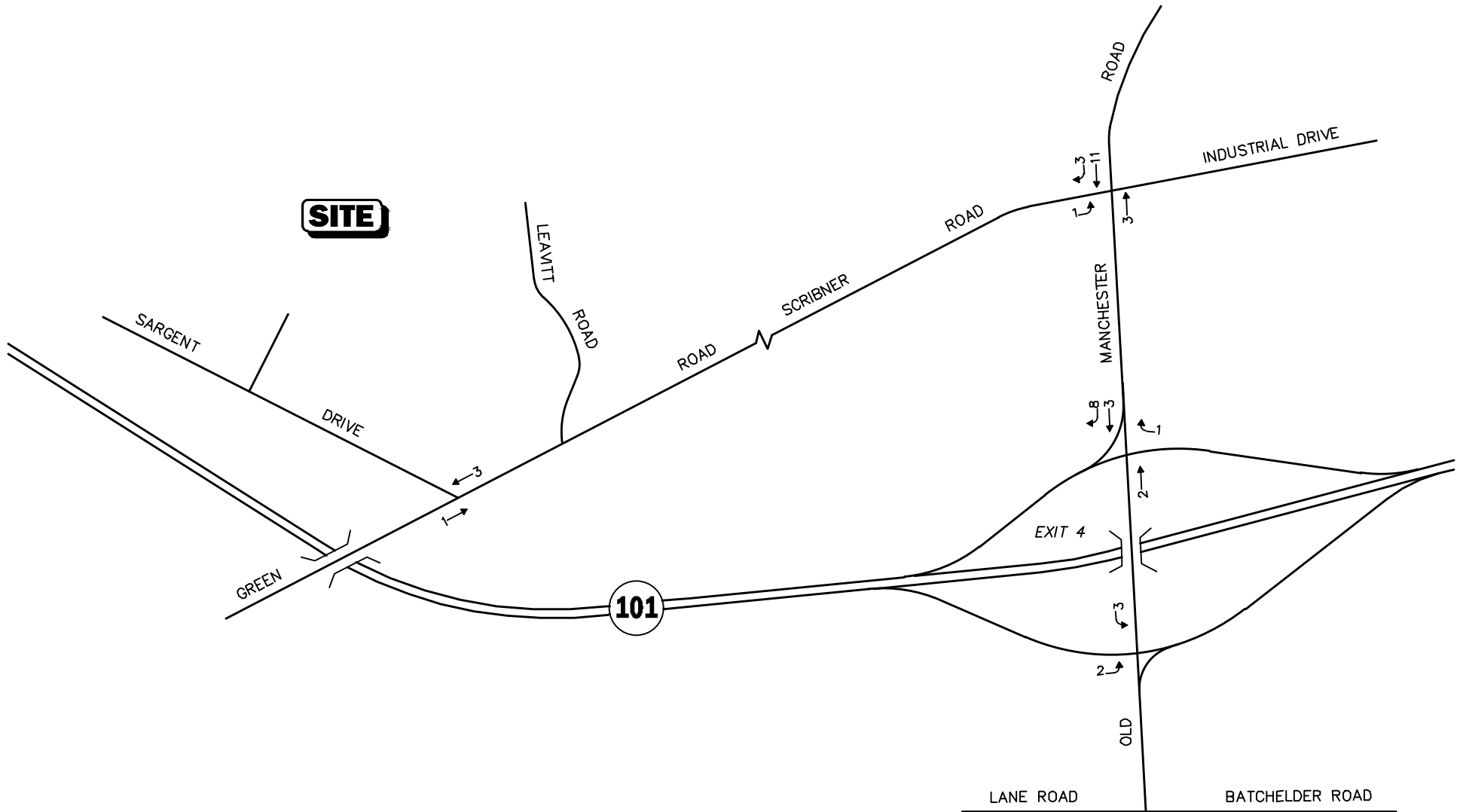
| | | | | | | | | | | | | | | |
|----------------------|---|----|-----|-------|------|------|------|---|---|---|---|---|---|------|
| Grand Total | 6 | 40 | 167 | 385 | 396 | 162 | 48 | 7 | 2 | 0 | 0 | 0 | 0 | 1213 |
| Percentile | | | | 15th | 50th | 85th | 95th | | | | | | | |
| Speed | | | | 25 | 30 | 36 | 40 | | | | | | | |
| Mean Speed (Average) | | | | 30.2 | | | | | | | | | | |
| 10 MPH Pace Speed | | | | 25-34 | | | | | | | | | | |
| Number in Pace | | | | 776 | | | | | | | | | | |
| Percent in Pace | | | | 64.0% | | | | | | | | | | |
| Number > 30 MPH | | | | 615 | | | | | | | | | | |
| Percent > 30 MPH | | | | 50.7% | | | | | | | | | | |

GENERAL BACKGROUND TRAFFIC GROWTH

General Background Traffic Growth - Daily Traffic Volumes

| CITY/TOWN | ROUTE/STREET | LOCATION | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | Annual Growth |
|-----------|---------------------|-----------------------|------|------|------|------|-------|-------|--------|--------|--------|--------|--------|---------------|
| Raymond | NH Route 101 | Exit 4 EB Off-Ramp | | | | | | | 1,200 | 1,224 | 1,248 | 1,267 | 1,282 | 1.67% |
| Raymond | NH Route 101 | Exit 4 WB Off-Ramp | | | | | | | 1,100 | 1,122 | 1,144 | 1,014 | 1,026 | -1.55% |
| Raymond | NH Route 101 | Exit 4 EB On-Ramp | | | | | | | 1,300 | 1,326 | 1,353 | 1,186 | 1,200 | -1.78% |
| Raymond | NH Route 101 | Exit 4 WB On-Ramp | | | | | | | 1,300 | 1,326 | 1,353 | 1,456 | 1,473 | 3.20% |
| Raymond | Scribner Road | east of Gile Road | | | | | 1,600 | 1,635 | 1,684 | 1,661 | 1,694 | 1,725 | 1,533 | -0.58% |
| Raymond | Old Manchester Road | west of Wight Street | | | | | | | 2,900 | 2,958 | 3,017 | 3,061 | 3,098 | 1.67% |
| Raymond | Main Street | over Lamprey River | | | | | 3,500 | 3,577 | 3,684 | 3,687 | 3,761 | 3,836 | 3,432 | -0.21% |
| Raymond | NH route 101 | between exits 4 and 5 | | | | | | | 41,000 | 41,820 | 42,656 | 43,951 | 44,478 | 2.06% |
| Raymond | Langford Road | over Lamprey River | | | | | 1,100 | 1,124 | 1,158 | 1,359 | 1,386 | 1,414 | 1,192 | 1.81% |
| | | | | | | | | | | | | | | 0.70% |

BACKGROUND DEVELOPMENT NETWORKS

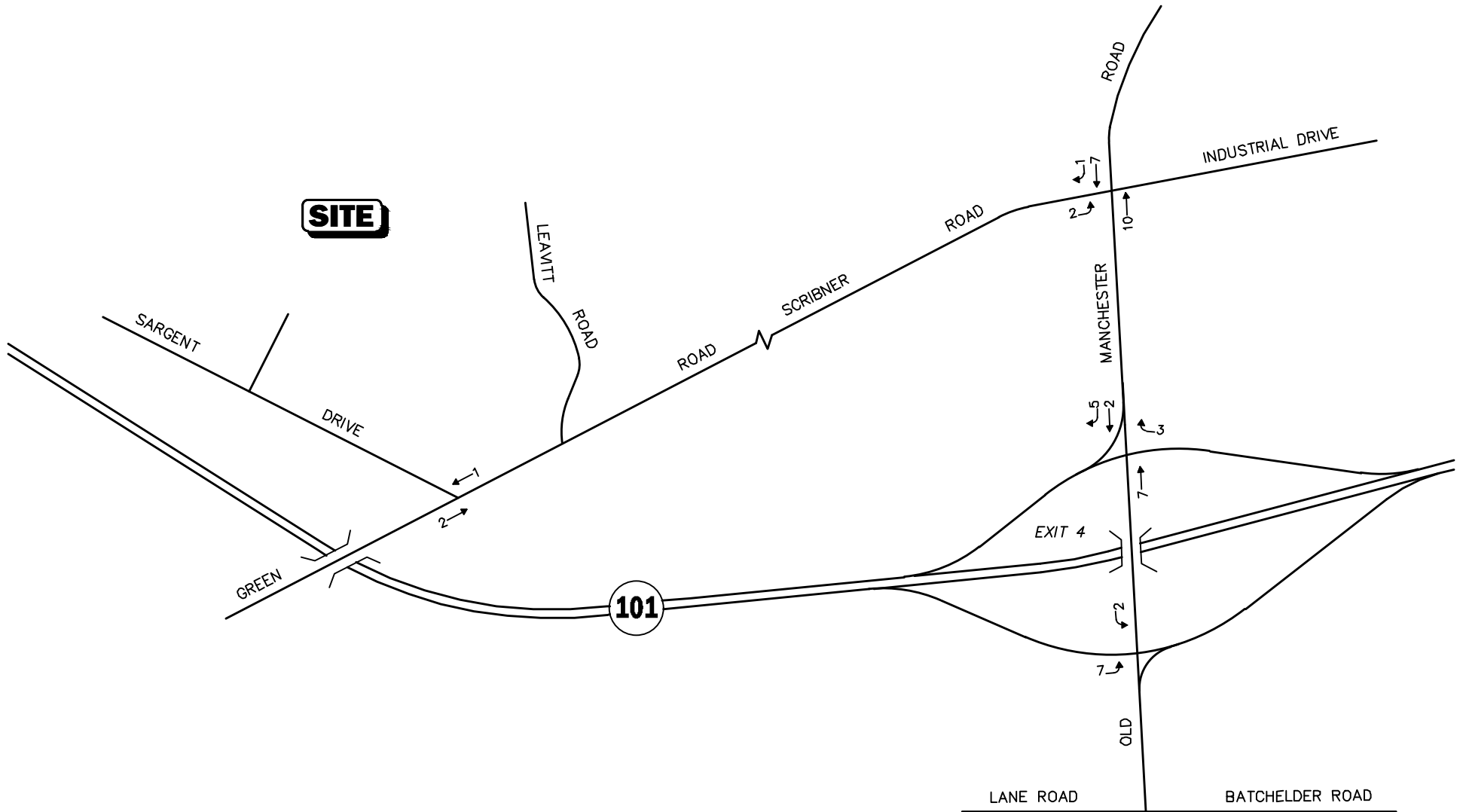


Not to Scale



Figure A-1
Proposed Residential Development
White Rock Place
Weekday Morning
Peak-Hour Traffic Volumes

R:\9838\9838NT1.dwg, 11/20/2023 5:00:54 PM

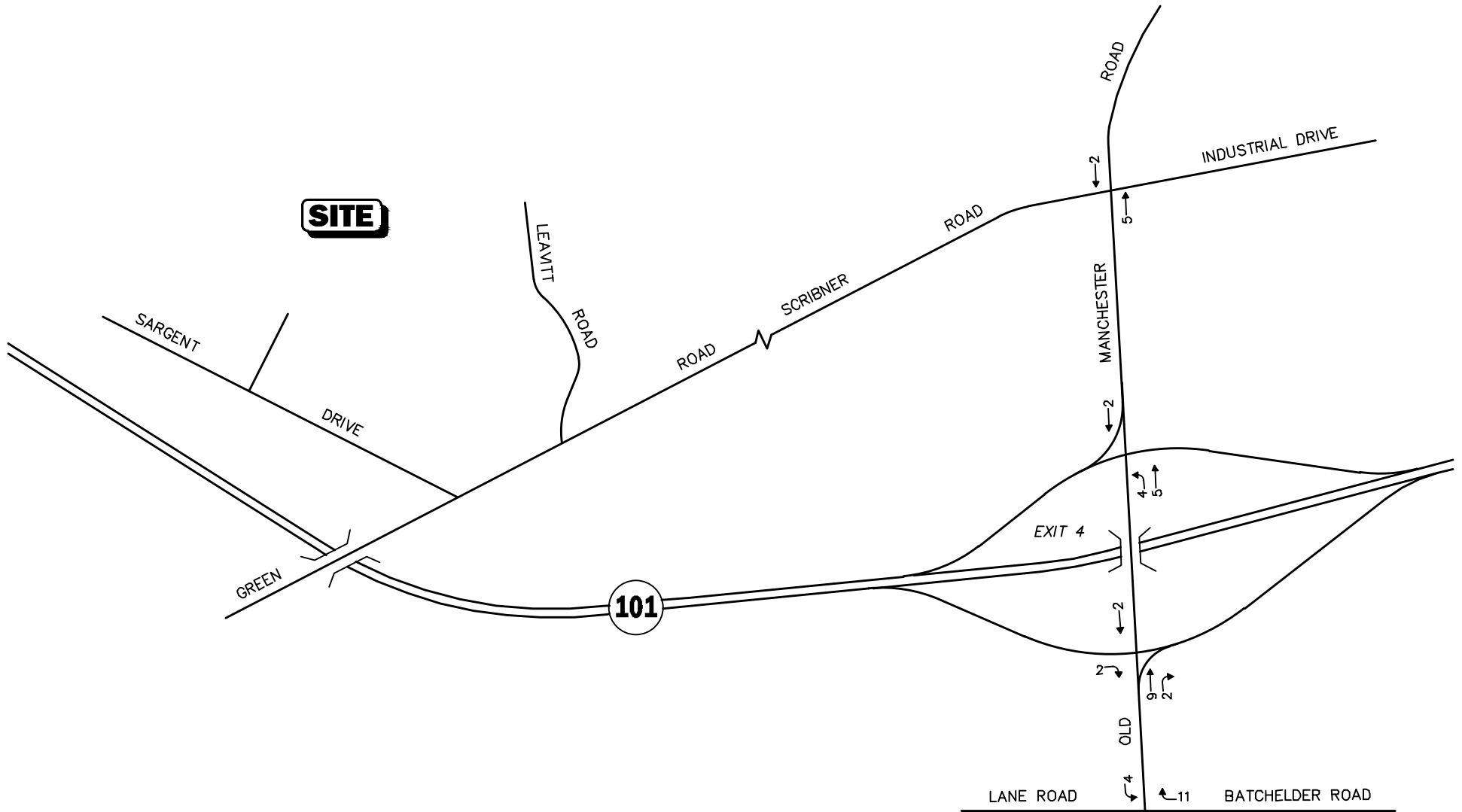


Not to Scale



Figure A-2
Proposed Residential Development
White Rock Place
Weekday Evening
Peak-Hour Traffic Volumes

R:\9838\9838NT1.dwg, 11/20/2023 5:01:12 PM

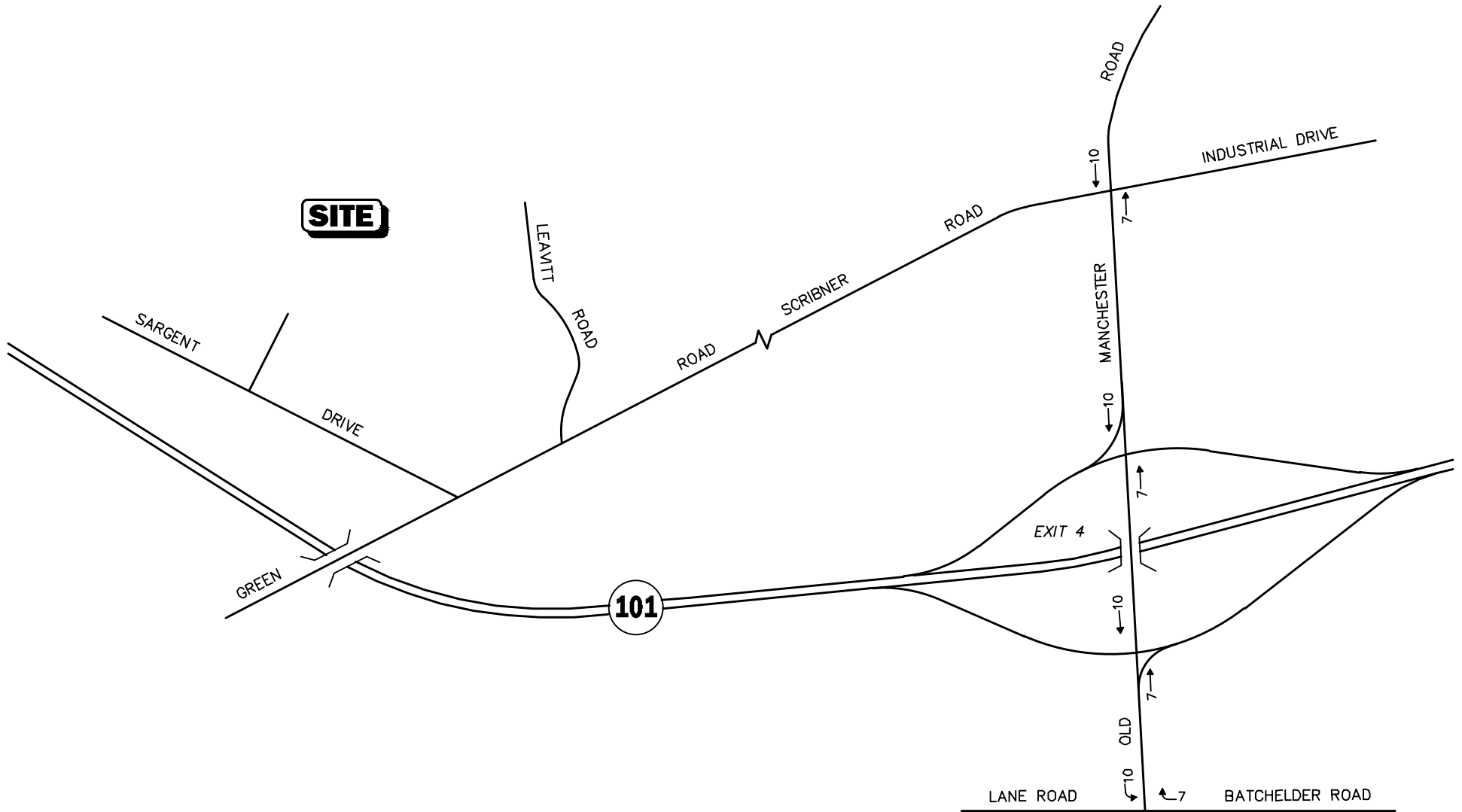


Not to Scale



Figure A-3
Proposed Residential Development
Batchelder Road
Weekday Morning
Peak-Hour Traffic Volumes

R:\9838\9838NT1.dwg, 11/20/2023 5:01:29 PM

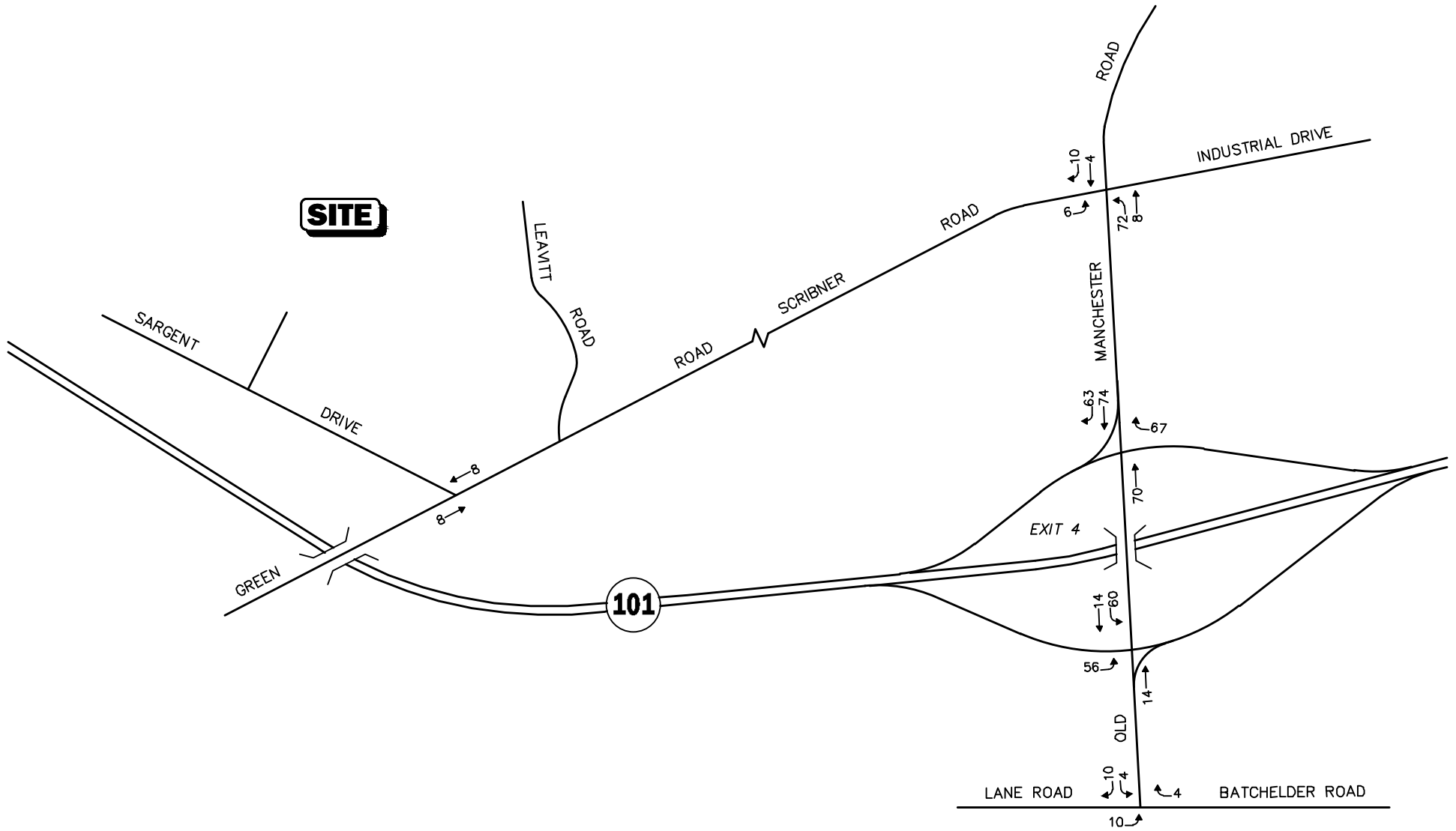


Not to Scale



Figure A-4
Proposed Residential Development
Batchelder Road
Weekday Evening
Peak-Hour Traffic Volumes

R:\9838\9838NT1.dwg, 11/20/2023 5:01:42 PM

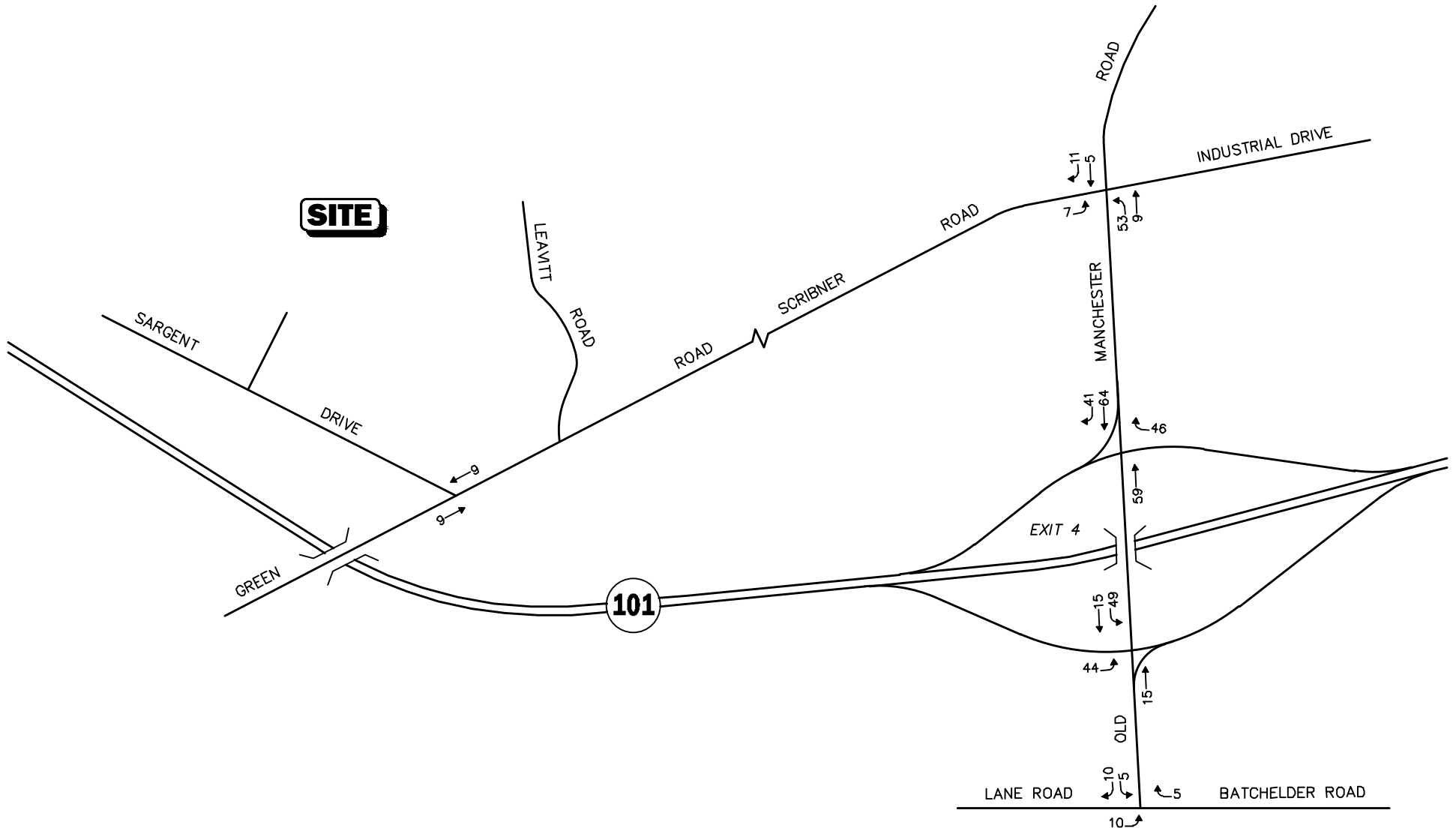


Not to Scale



Figure A-5
Proposed Mega-X Fueling Facility
Old Manchester Road
Weekday Morning
Peak-Hour Traffic Volumes

R:\9838\9838NT1.dwg, 11/20/2023 5:02:04 PM

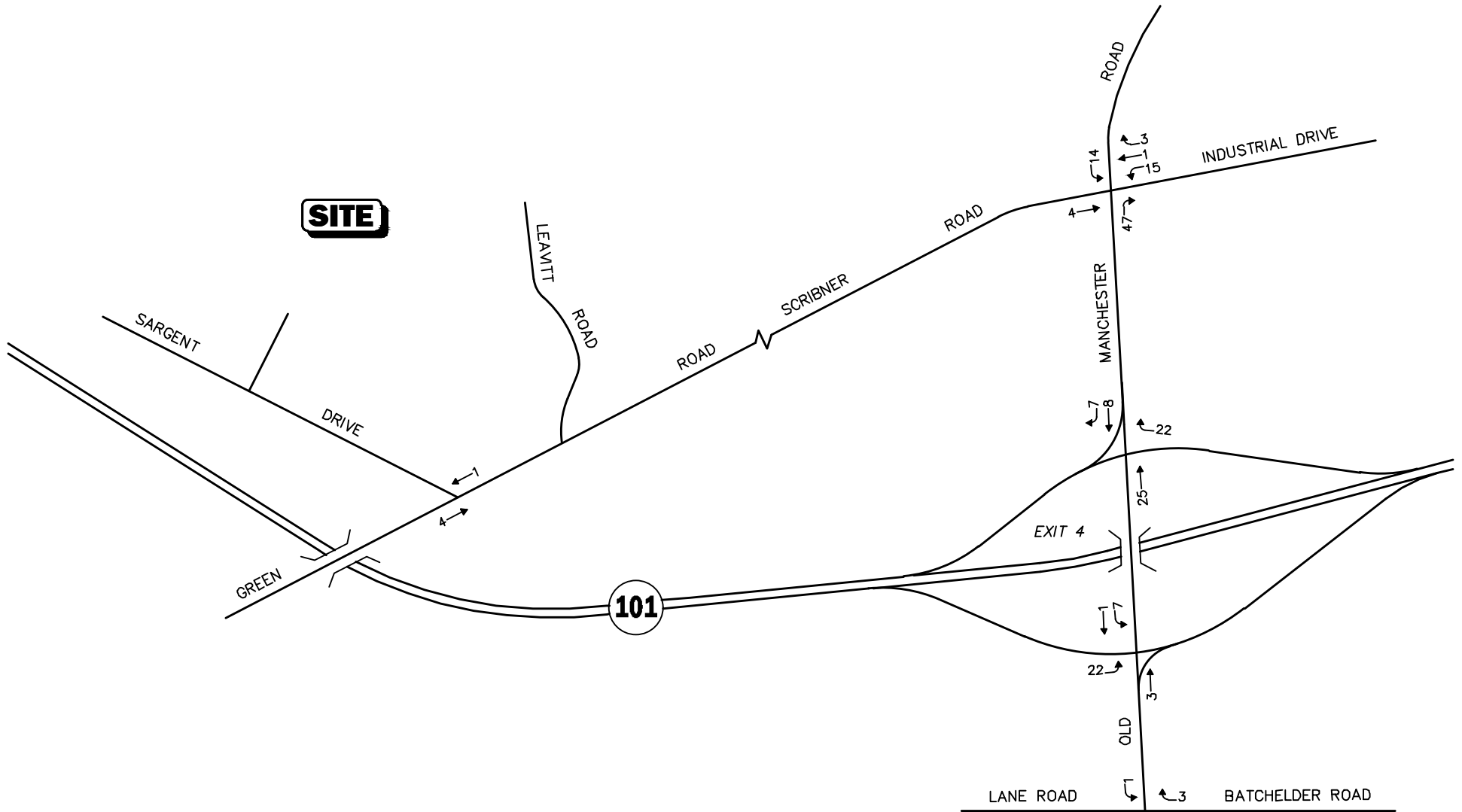


Not to Scale



Figure A-6
Proposed Mega-X Fueling Facility
Old Manchester Road
Weekday Evening
Peak-Hour Traffic Volumes

R:\9838\9838NT1.dwg, 11/20/2023 5:02:20 PM

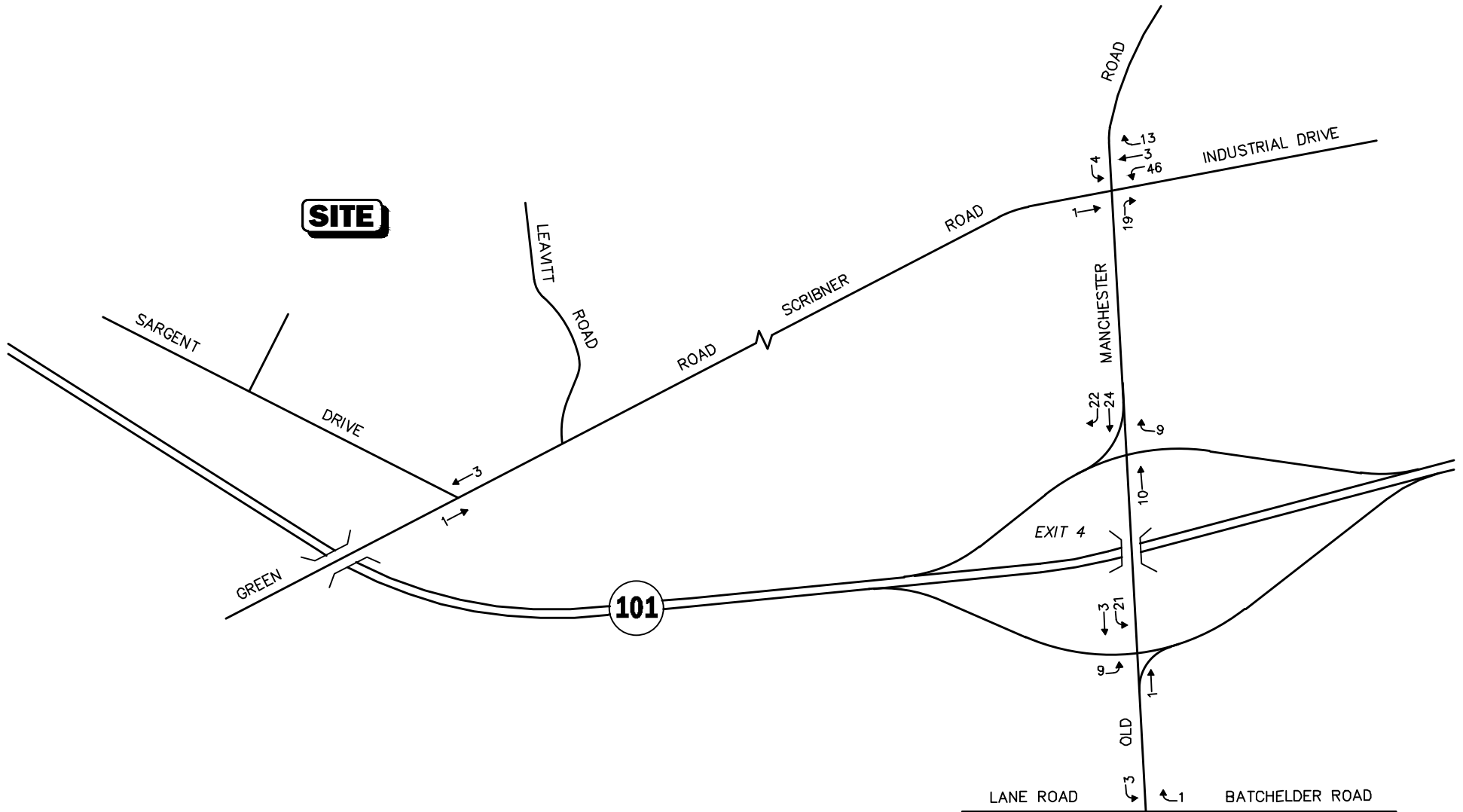


Not to Scale



Figure A-7
Proposed Warehouse Building
Industrial Avenue
Weekday Morning
Peak-Hour Traffic Volumes

R:\9838\9838NT1.dwg, 11/20/2023 5:02:38 PM

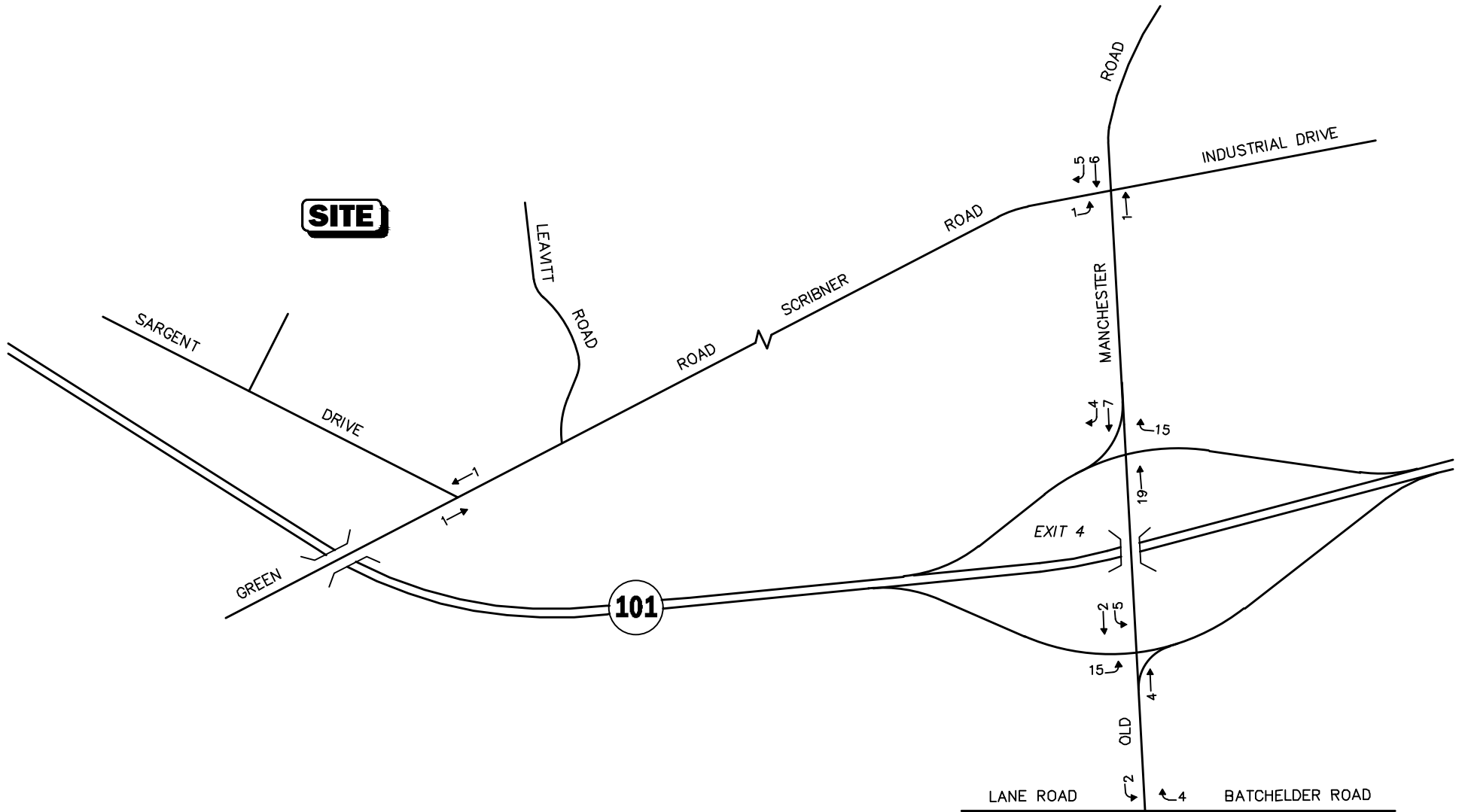


Not to Scale



Figure A-8
Proposed Warehouse Building
Industrial Avenue
Weekday Evening
Peak-Hour Traffic Volumes

R:\9838\9838NT1.dwg, 11/20/2023 5:02:53 PM

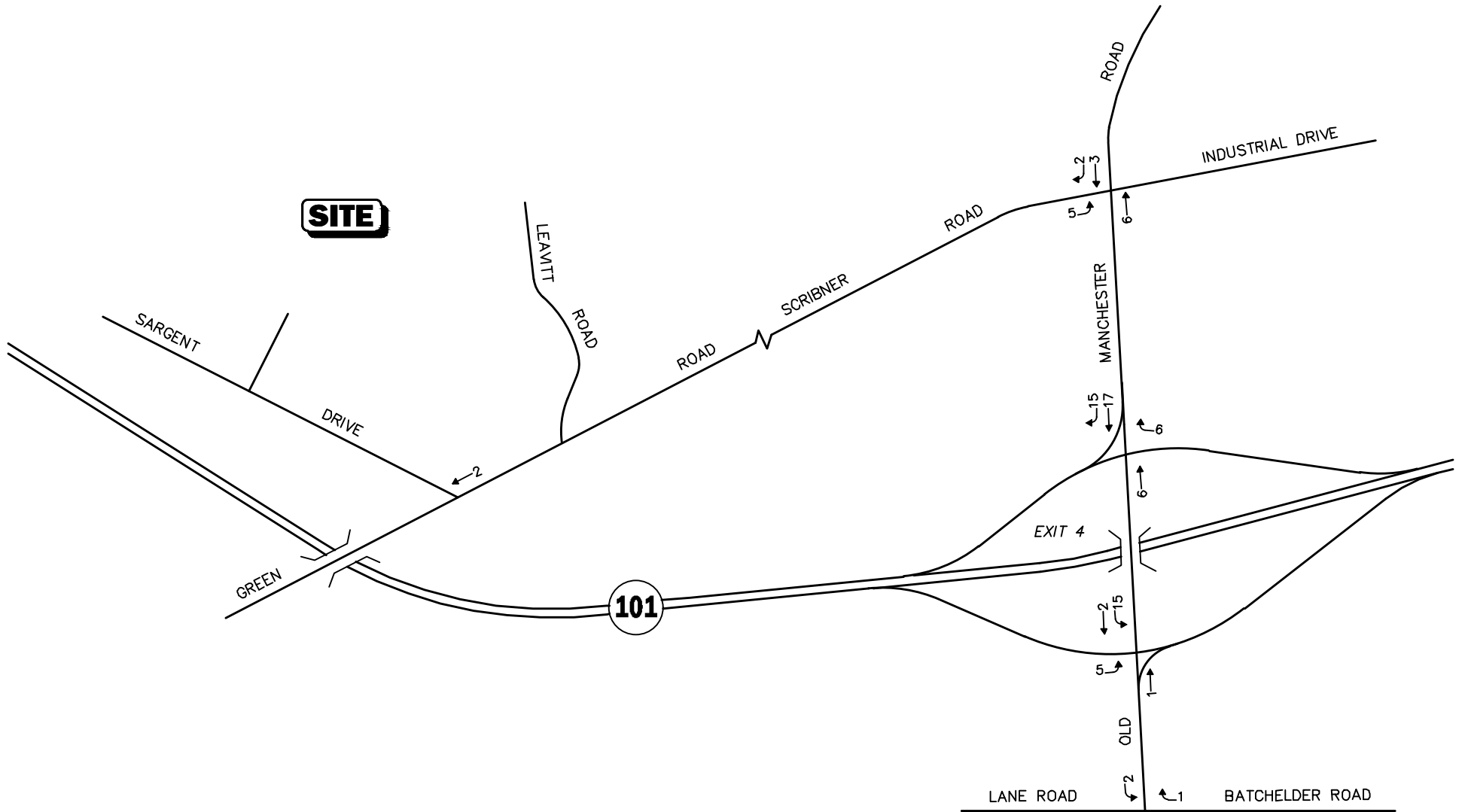


Not to Scale



Figure A-9
Proposed Warehouse Building
Scribner Road
Weekday Morning
Peak-Hour Traffic Volumes

R:\9838\9838NT1.dwg, 11/20/2023 5:03:09 PM



Not to Scale



Figure A-10
Proposed Warehouse Building
Scribner Road
Weekday Evening
Peak-Hour Traffic Volumes

R:\9838\9838NT1.dwg, 11/20/2023 5:03:26 PM

TRIP-GENERATION CALCUALTIONS

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DATA SOURCE:

Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:

210

LAND USE GROUP:

(200-299) Residential

LAND USE :

210 - Single-Family Detached Housing

LAND USE SUBCATEGORY:

All Sites

SETTING/LOCATION:

General Urban/Suburban

INDEPENDENT VARIABLE (IV):

Dwelling Units

TIME PERIOD:

Weekday

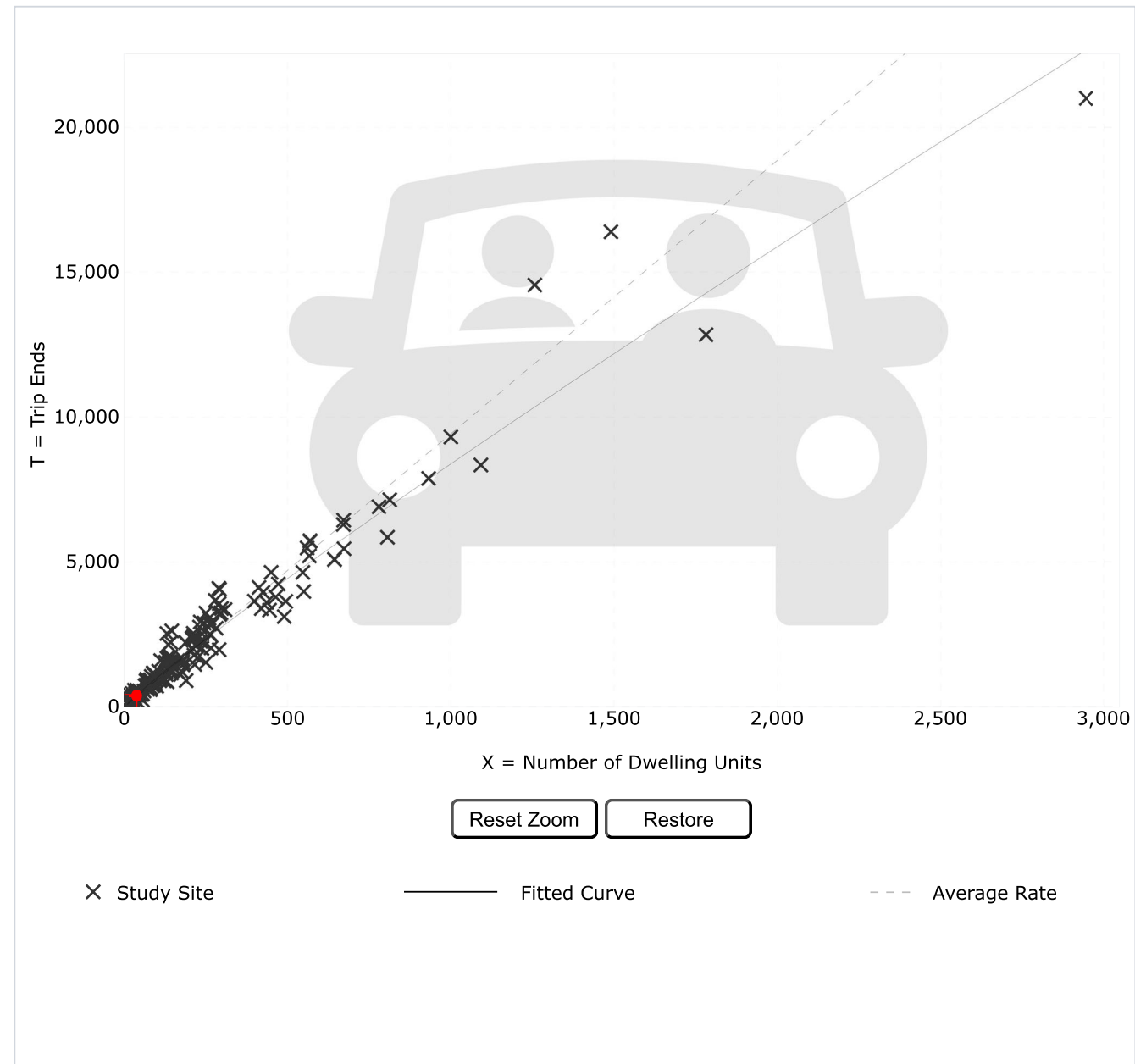
TRIP TYPE:

Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:

38 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Single-Family Detached Housing (210) [Click for Description and Data Plots](#)

Independent Variable:
Dwelling Units

Time Period:
Weekday

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
174

Avg. Num. of Dwelling Units:
246

Average Rate:
9.43

Range of Rates:
4.45 - 22.61

Standard Deviation:
2.13

Fitted Curve Equation:
 $\ln(T) = 0.92 \ln(X) + 2.68$

R²:
0.95

Directional Distribution:
50% entering, 50% exiting

Calculated Trip Ends:
Average Rate: 358 (Total), 179 (Entry), 179 (Exit)
Fitted Curve: 414 (Total), 207 (Entry), 207 (Exit)

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DATA SOURCE:

Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:

210

LAND USE GROUP:

(200-299) Residential

LAND USE :

210 - Single-Family Detached Housing

LAND USE SUBCATEGORY:

All Sites

SETTING/LOCATION:

General Urban/Suburban

INDEPENDENT VARIABLE (IV):

Dwelling Units

TIME PERIOD:

Weekday, Peak Hour of Adjacent Street Traffic

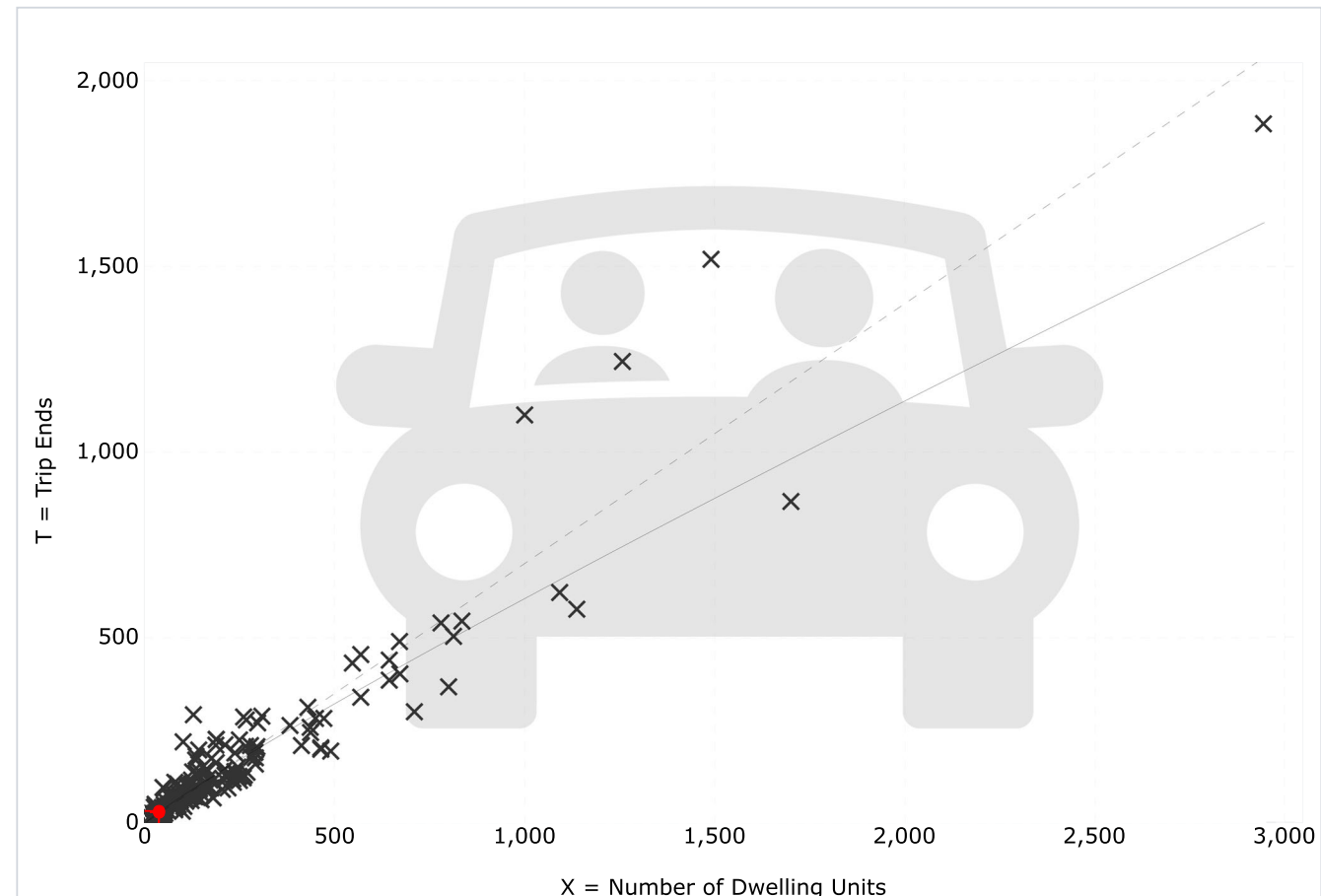
TRIP TYPE:

Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:

38 Calculate

Data Plot and Equation



Reset Zoom Restore

x Study Site — Fitted Curve - - - Average Rate

Use the mouse wheel to Zoom Out or Zoom In. Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use: Single-Family Detached Housing (210) [Click for Description and Data Plots](#)

Independent Variable: Dwelling Units

Time Period: Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Trip Type: Vehicle

Number of Studies: 192

Avg. Num. of Dwelling Units: 226

Average Rate: 0.70

Range of Rates: 0.27 - 2.27

Standard Deviation: 0.24

Fitted Curve Equation: $\ln(T) = 0.91 \ln(X) + 0.12$

R²: 0.90

Directional Distribution: 25% entering, 75% exiting

Calculated Trip Ends:
Average Rate: 27 (Total), 7 (Entry), 20 (Exit)
Fitted Curve: 31 (Total), 8 (Entry), 23 (Exit)

Add-ons to do more

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SEARCH BY LAND USE CODE:

210

LAND USE GROUP:

(200-299) Residential

LAND USE :

210 - Single-Family Detached Housing

LAND USE SUBCATEGORY:

All Sites

SETTING/LOCATION:

General Urban/Suburban

INDEPENDENT VARIABLE (IV):

Dwelling Units

TIME PERIOD:

Weekday, Peak Hour of Adjacent Street Traffic

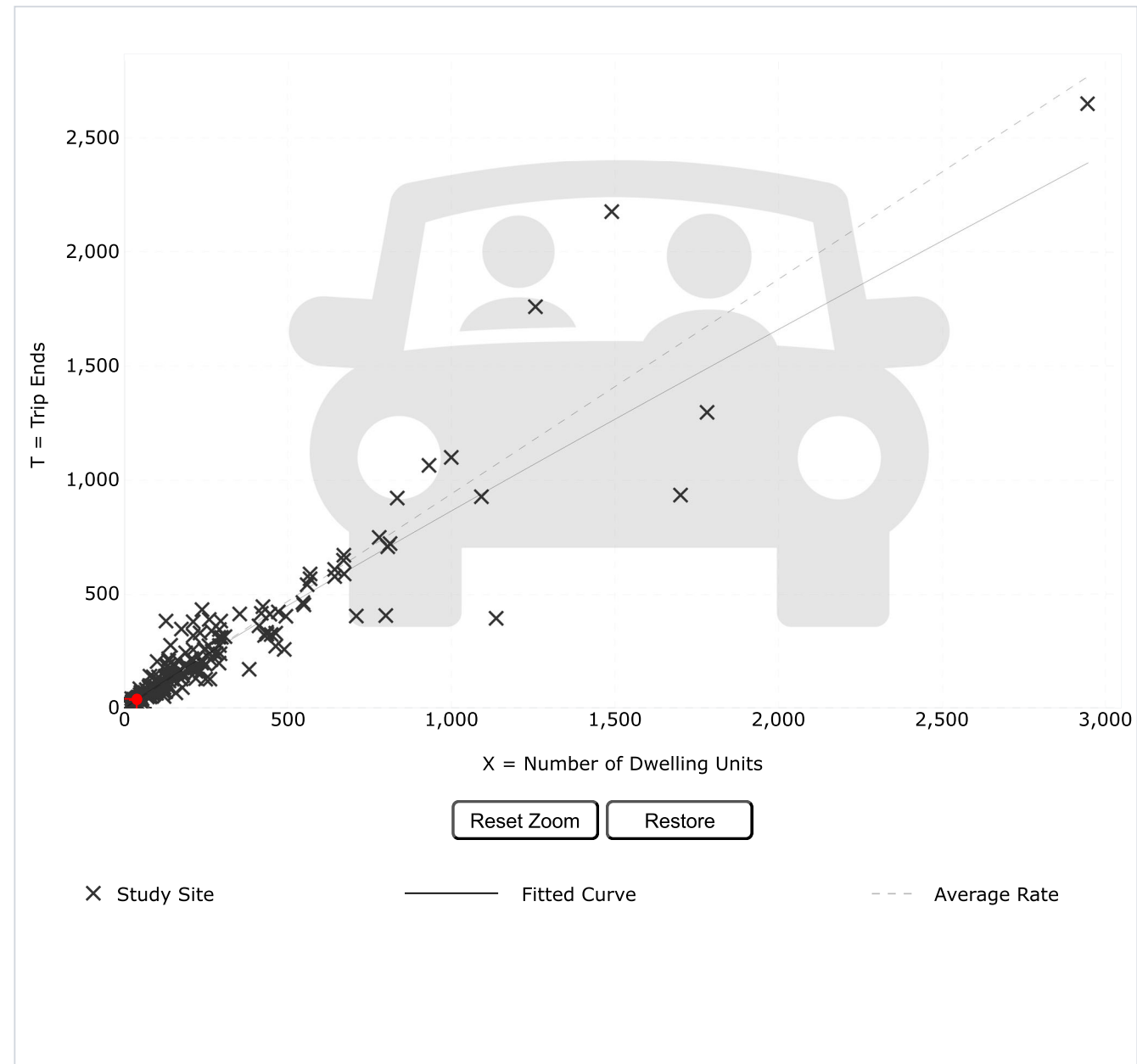
TRIP TYPE:

Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:

38 Calculate

Data Plot and Equation



x Study Site — Fitted Curve - - - Average Rate

Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Single-Family Detached Housing (210) [Click for Description and Data Plots](#)

Independent Variable:
Dwelling Units

Time Period:
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 4 and 6 p.m.

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
208

Avg. Num. of Dwelling Units:
248

Average Rate:
0.94

Range of Rates:
0.35 - 2.98

Standard Deviation:
0.31

Fitted Curve Equation:
 $\ln(T) = 0.94 \ln(X) + 0.27$

R²:
0.92

Directional Distribution:
63% entering, 37% exiting

Calculated Trip Ends:
Average Rate: 36 (Total), 23 (Entry), 13 (Exit)
Fitted Curve: 40 (Total), 25 (Entry), 15 (Exit)

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DATA SOURCE:

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SEARCH BY LAND USE CODE:

251

LAND USE GROUP:

(200-299) Residential

LAND USE :

251 - Senior Adult Housing - Single-Family

LAND USE SUBCATEGORY:

All Sites

SETTING/LOCATION:

General Urban/Suburban

INDEPENDENT VARIABLE (IV):

Dwelling Units

TIME PERIOD:

Weekday

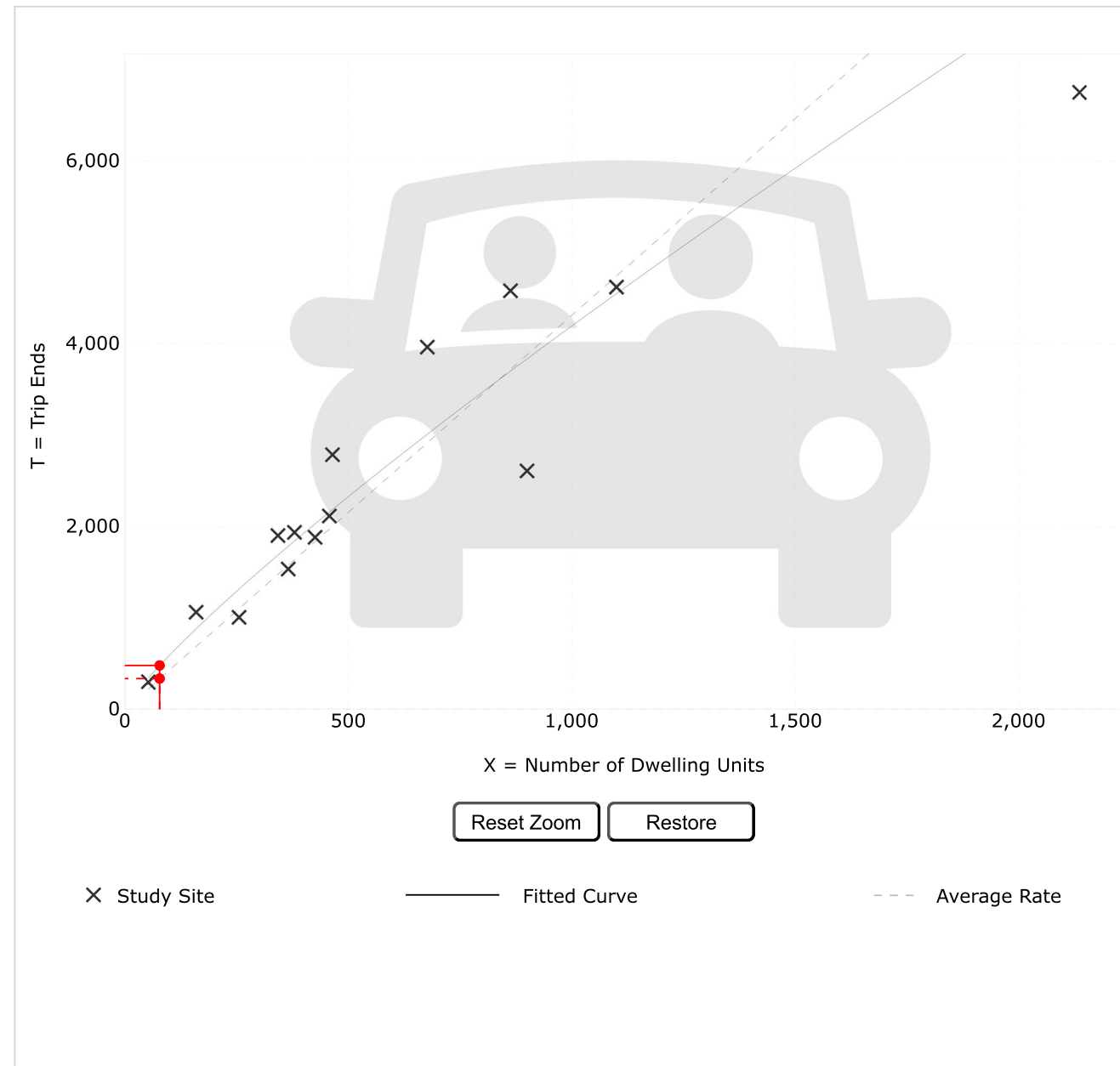
TRIP TYPE:

Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:

78 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
 Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
 Senior Adult Housing - Single-Family (251) [Click for Description and Data Plots](#)

Independent Variable:
 Dwelling Units

Time Period:
 Weekday

Setting/Location:
 General Urban/Suburban

Trip Type:
 Vehicle

Number of Studies:
 15

Avg. Num. of Dwelling Units:
 646

Average Rate:
 4.31

Range of Rates:
 2.90 - 6.66

Standard Deviation:
 1.07

Fitted Curve Equation:
 $\ln(T) = 0.85 \ln(X) + 2.47$

R²:
 0.94

Directional Distribution:
 50% entering, 50% exiting

Calculated Trip Ends:
 Average Rate: 336 (Total), 168 (Entry), 168 (Exit)
 Fitted Curve: 480 (Total), 240 (Entry), 240 (Exit)

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DATA SOURCE:
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SEARCH BY LAND USE CODE:
251

LAND USE GROUP:
(200-299) Residential

LAND USE :
251 - Senior Adult Housing - Single-Family

LAND USE SUBCATEGORY:
All Sites

SETTING/LOCATION:
General Urban/Suburban

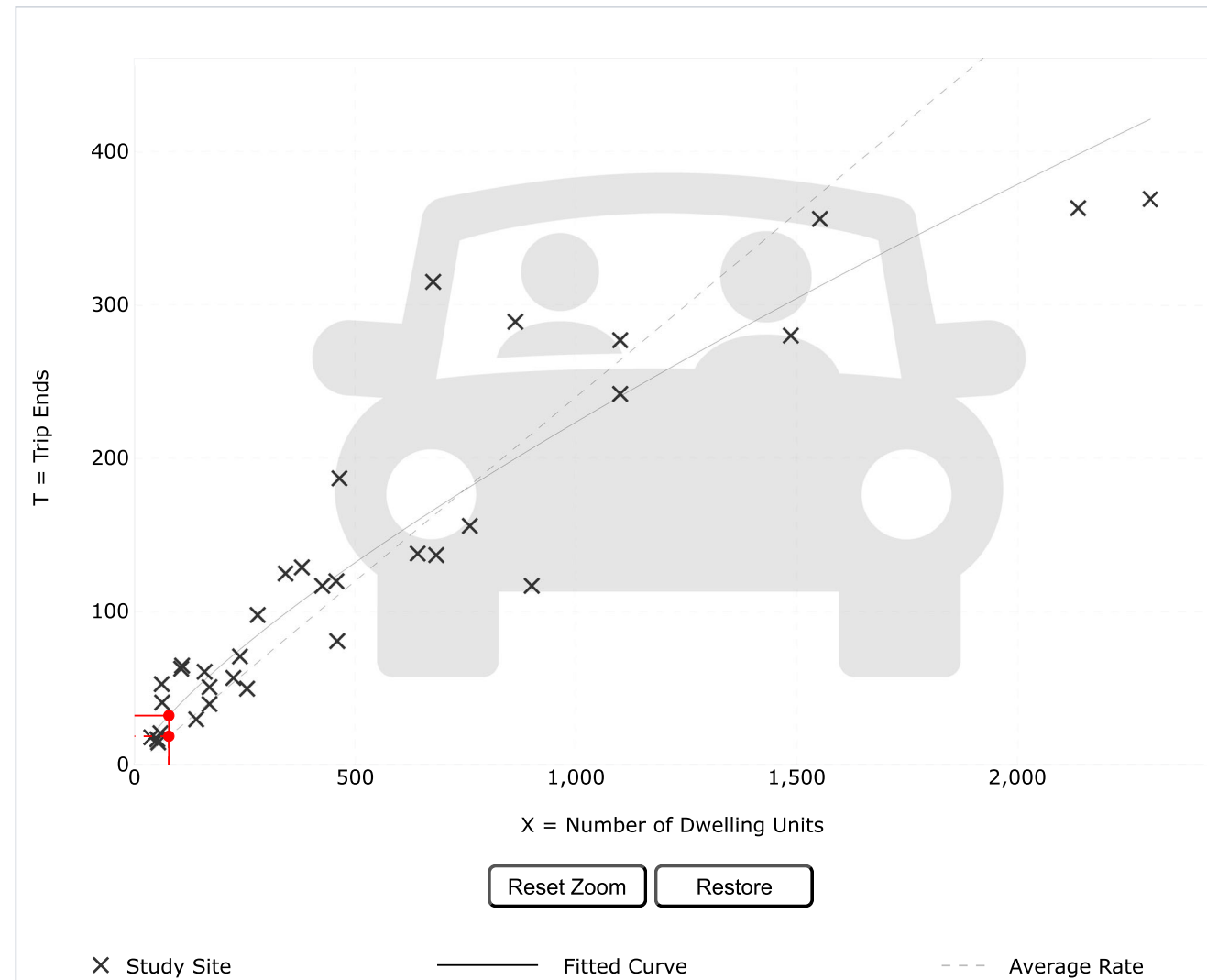
INDEPENDENT VARIABLE (IV):
Dwelling Units

TIME PERIOD:
Weekday, Peak Hour of Adjacent Street Traffic

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
78 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Senior Adult Housing - Single-Family (251) [Click for Description and Data Plots](#)

Independent Variable:
Dwelling Units

Time Period:
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 7 and 9 a.m.

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
34

Avg. Num. of Dwelling Units:
557

Average Rate:
0.24

Range of Rates:
0.13 - 0.84

Standard Deviation:
0.10

Fitted Curve Equation:
 $\ln(T) = 0.76 \ln(X) + 0.16$

R²:
0.88

Directional Distribution:
33% entering, 67% exiting

Calculated Trip Ends:
Average Rate: 19 (Total), 6 (Entry), 13 (Exit)
Fitted Curve: 32 (Total), 11 (Entry), 21 (Exit)

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SEARCH BY LAND USE CODE:

251

LAND USE GROUP:

(200-299) Residential

LAND USE :

251 - Senior Adult Housing - Single-Family

LAND USE SUBCATEGORY:

All Sites

SETTING/LOCATION:

General Urban/Suburban

INDEPENDENT VARIABLE (IV):

Dwelling Units

TIME PERIOD:

Weekday, Peak Hour of Adjacent Street Traffic

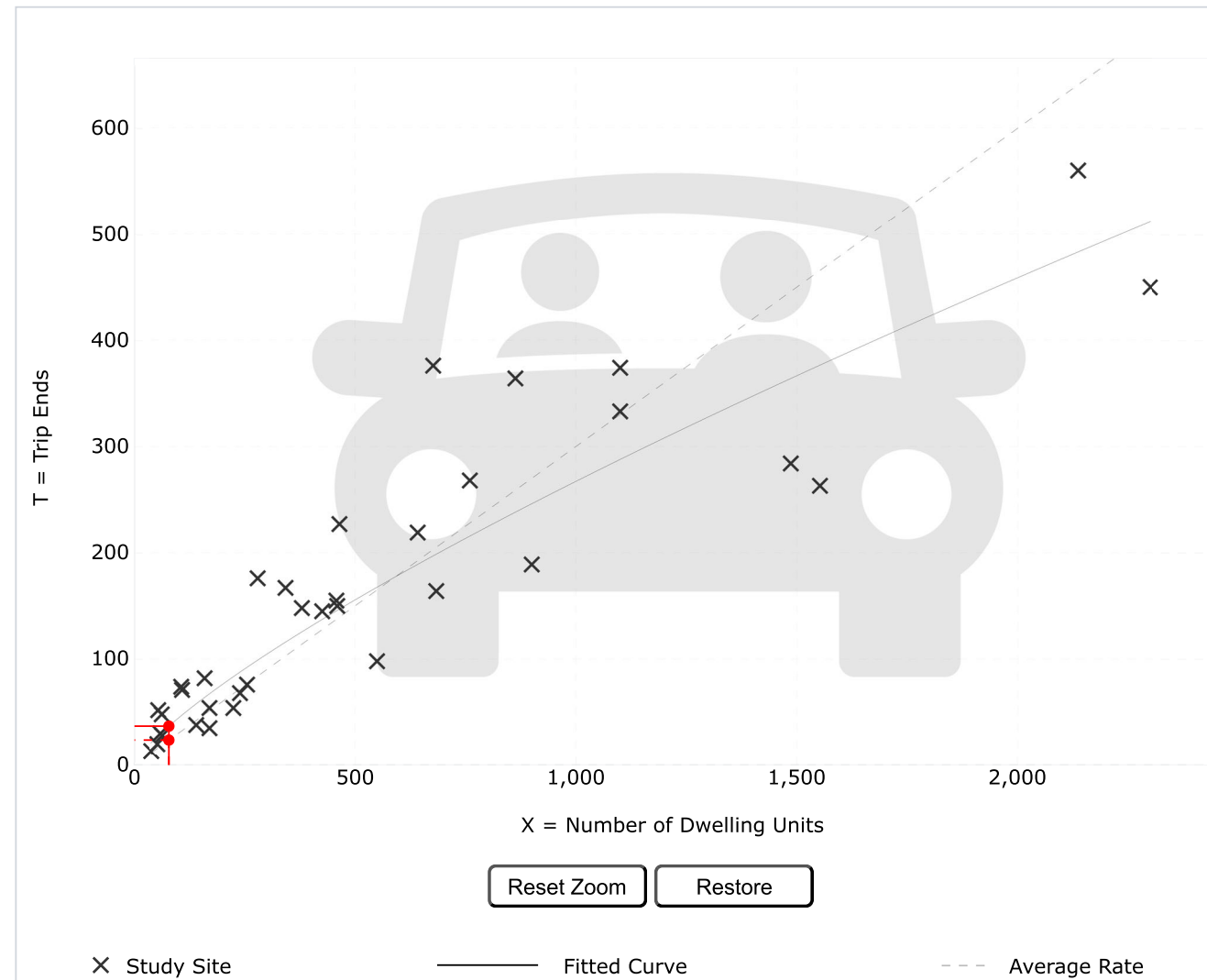
TRIP TYPE:

Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:

78 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Senior Adult Housing - Single-Family (251) [Click for Description and Data Plots](#)

Independent Variable:
Dwelling Units

Time Period:
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 4 and 6 p.m.

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
35

Avg. Num. of Dwelling Units:
556

Average Rate:
0.30

Range of Rates:
0.17 - 0.95

Standard Deviation:
0.12

Fitted Curve Equation:
 $\ln(T) = 0.78 \ln(X) + 0.20$

R²:
0.86

Directional Distribution:
61% entering, 39% exiting

Calculated Trip Ends:
Average Rate: 23 (Total), 14 (Entry), 9 (Exit)
Fitted Curve: 37 (Total), 22 (Entry), 15 (Exit)

Add-ons to do more

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DATA SOURCE:

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SEARCH BY LAND USE CODE:

251

LAND USE GROUP:

(200-299) Residential

LAND USE :

251 - Senior Adult Housing - Single-Family

LAND USE SUBCATEGORY:

All Sites

SETTING/LOCATION:

General Urban/Suburban

INDEPENDENT VARIABLE (IV):

Dwelling Units

TIME PERIOD:

Weekday

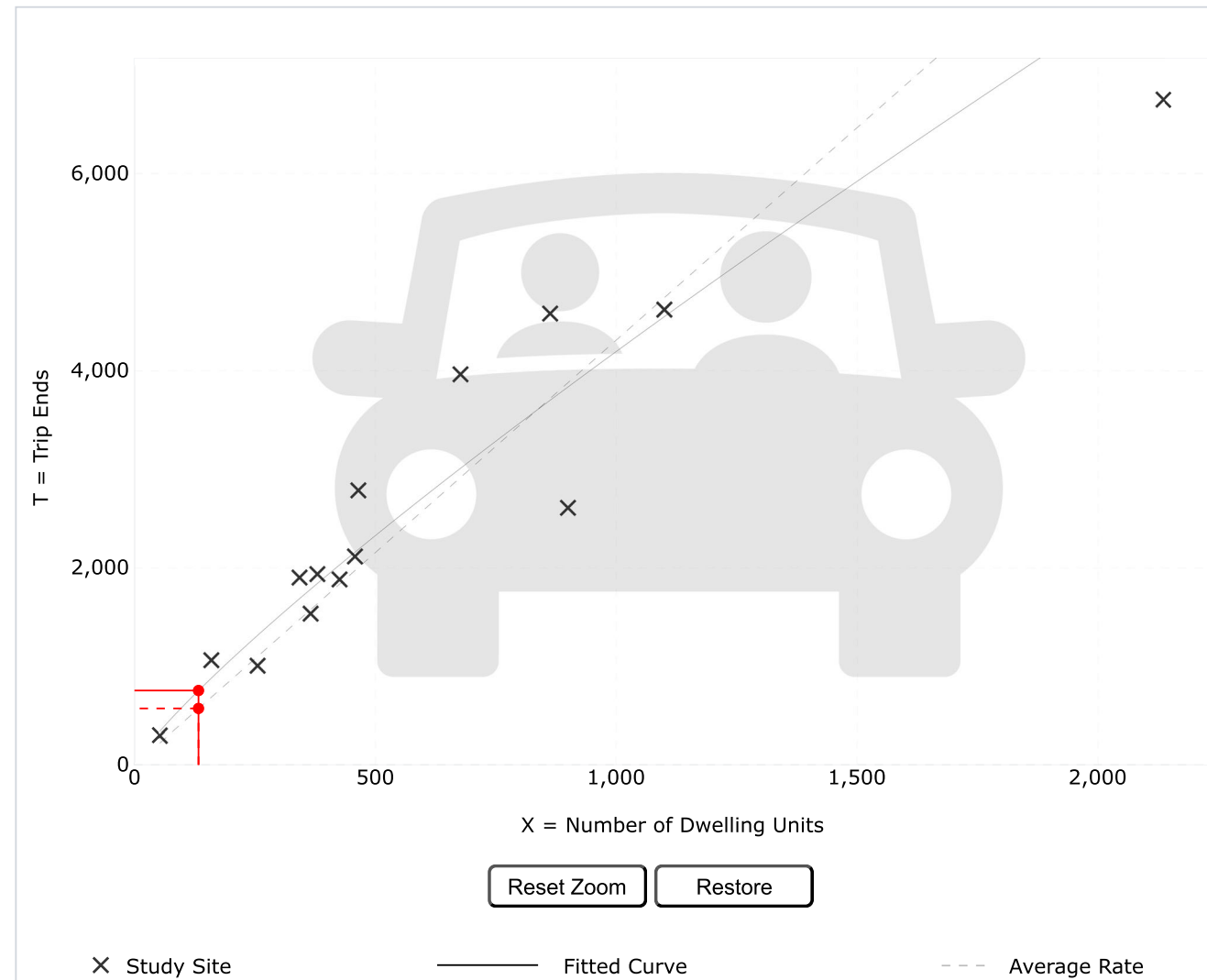
TRIP TYPE:

Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:

133 Calculate

Data Plot and Equation



DATA STATISTICS

Land Use:
Senior Adult Housing - Single-Family (251) [Click for Description and Data Plots](#)

Independent Variable:
Dwelling Units

Time Period:
Weekday

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
15

Avg. Num. of Dwelling Units:
646

Average Rate:
4.31

Range of Rates:
2.90 - 6.66

Standard Deviation:
1.07

Fitted Curve Equation:
 $\ln(T) = 0.85 \ln(X) + 2.47$

R²:
0.94

Directional Distribution:
50% entering, 50% exiting

Calculated Trip Ends:
Average Rate: 573 (Total), 287 (Entry), 286 (Exit)
Fitted Curve: 755 (Total), 378 (Entry), 377 (Exit)

Add-ons to do more

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DATA SOURCE:
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SEARCH BY LAND USE CODE:
251

LAND USE GROUP:
(200-299) Residential

LAND USE :
251 - Senior Adult Housing - Single-Family

LAND USE SUBCATEGORY:
All Sites

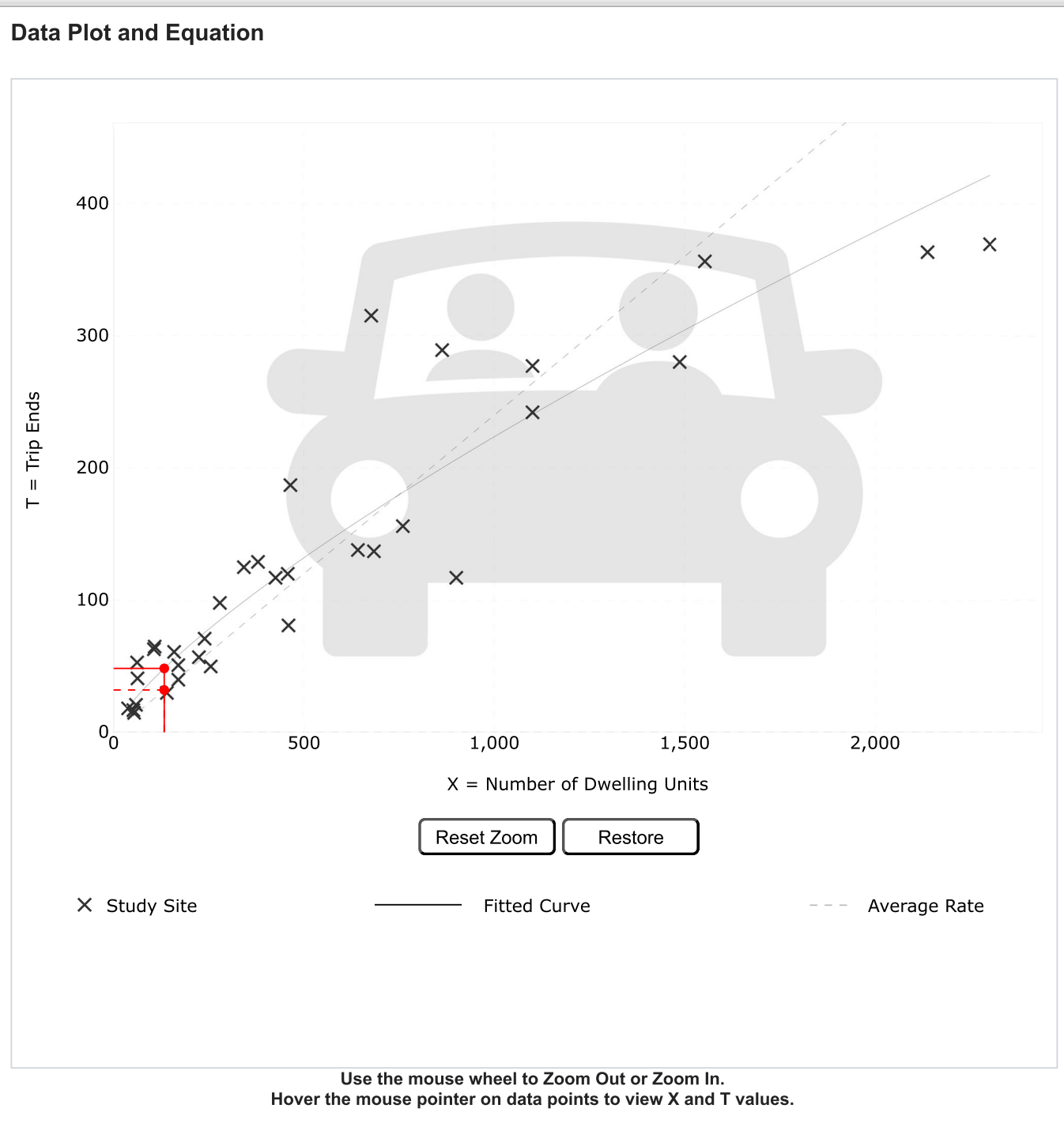
SETTING/LOCATION:
General Urban/Suburban

INDEPENDENT VARIABLE (IV):
Dwelling Units

TIME PERIOD:
Weekday, Peak Hour of Adjacent Street Traffic

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
133 Calculate



DATA STATISTICS

Land Use:
Senior Adult Housing - Single-Family (251) [Click for Description and Data Plots](#)

Independent Variable:
Dwelling Units

Time Period:
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 7 and 9 a.m.

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
34

Avg. Num. of Dwelling Units:
557

Average Rate:
0.24

Range of Rates:
0.13 - 0.84

Standard Deviation:
0.10

Fitted Curve Equation:
 $\ln(T) = 0.76 \ln(X) + 0.16$

R²:
0.88

Directional Distribution:
33% entering, 67% exiting

Calculated Trip Ends:
 Average Rate: 32 (Total), 11 (Entry), 21 (Exit)
 Fitted Curve: 48 (Total), 16 (Entry), 32 (Exit)

Add-ons to do more

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SEARCH BY LAND USE CODE:

251

LAND USE GROUP:

(200-299) Residential

LAND USE :

251 - Senior Adult Housing - Single-Family

LAND USE SUBCATEGORY:

All Sites

SETTING/LOCATION:

General Urban/Suburban

INDEPENDENT VARIABLE (IV):

Dwelling Units

TIME PERIOD:

Weekday, Peak Hour of Adjacent Street Traffic

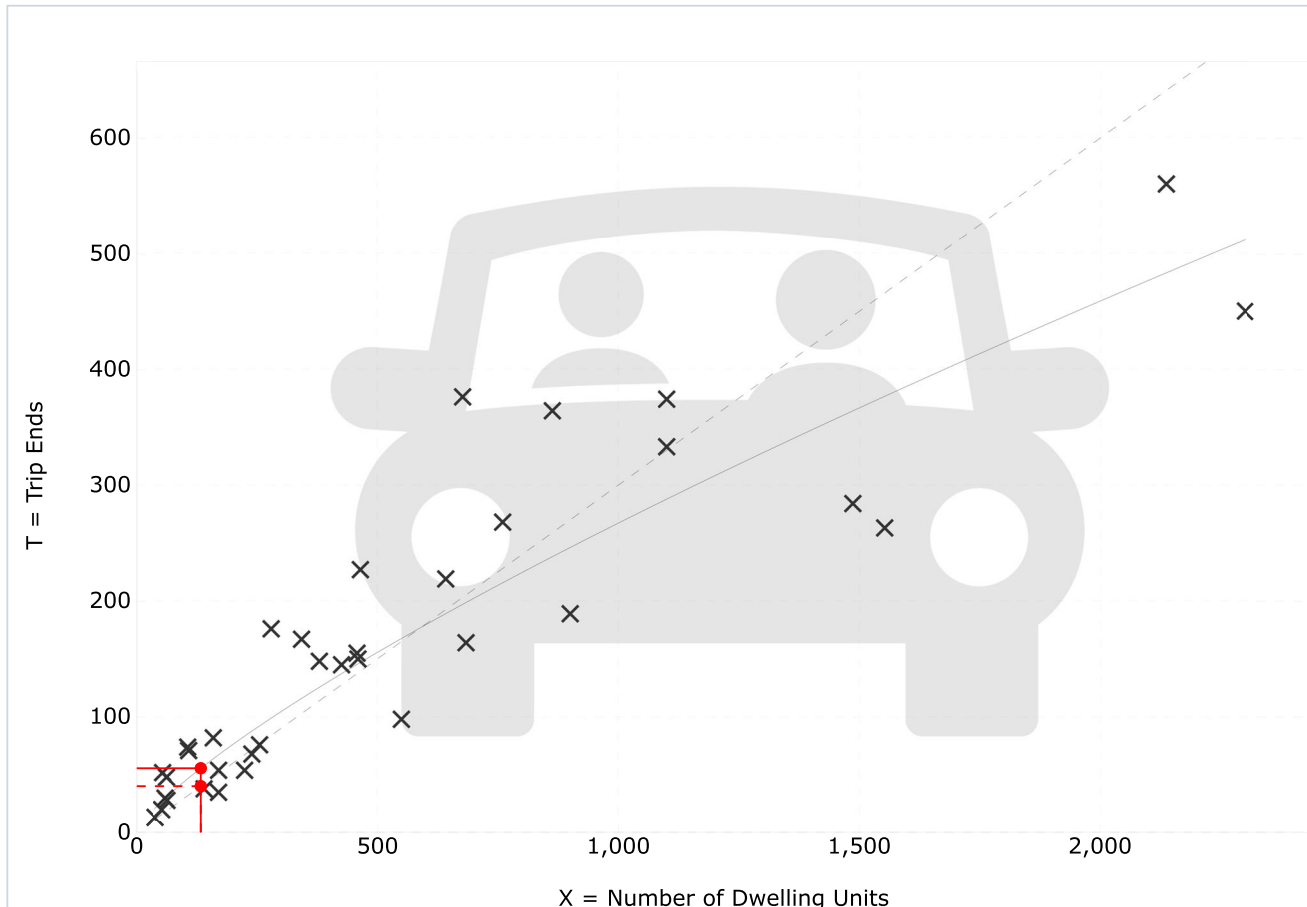
TRIP TYPE:

Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:

133 Calculate

Data Plot and Equation



x Study Site — Fitted Curve - - - Average Rate

Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Senior Adult Housing - Single-Family (251) [Click for Description and Data Plots](#)

Independent Variable:
Dwelling Units

Time Period:
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 4 and 6 p.m.

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
35

Avg. Num. of Dwelling Units:
556

Average Rate:
0.30

Range of Rates:
0.17 - 0.95

Standard Deviation:
0.12

Fitted Curve Equation:
 $\ln(T) = 0.78 \ln(X) + 0.20$

R²:
0.86

Directional Distribution:
61% entering, 39% exiting

Calculated Trip Ends:
Average Rate: 40 (Total), 24 (Entry), 16 (Exit)
Fitted Curve: 55 (Total), 34 (Entry), 21 (Exit)

Add-ons to do more

Try OTISS Pro

TRIP-DISTRIBUTION DATA

Onway Lake
Raymond, New Hampshire

| Residence | Workplace | Number | Old Manchester Road (Northeast) | | NH Route 101 (East) | | NH Route 101 (West) | | Batchelder Road (East) | | Green Road (Southwest) | |
|--------------|------------------|------------|------------------------------------|------------|------------------------|------------|------------------------|------------|---------------------------|------------|---------------------------|------------|
| | | | | | | | | | | | | |
| Raymond town | Raymond town | 694 | 80% | 555 | 10% | 69 | | 0 | 10% | 69 | 0% | 0 |
| Raymond town | Manchester city | 524 | | 0 | | 0 | 85% | 445 | | 0 | 15% | 79 |
| Raymond town | Epping town | 311 | 25% | 78 | 75% | 233 | | 0 | | 0 | | 0 |
| Raymond town | Exeter town | 303 | | 0 | 100% | 303 | | 0 | | 0 | | 0 |
| Raymond town | Portsmouth city | 299 | | 0 | 100% | 299 | | 0 | | 0 | | 0 |
| Raymond town | Londonderry town | 200 | | 0 | | 0 | 85% | 170 | | 0 | 15% | 30 |
| Raymond town | Nashua city | 139 | | 0 | | 0 | 85% | 118 | | 0 | 15% | 21 |
| Raymond town | Hampton town | 111 | | 0 | 100% | 111 | | 0 | | 0 | | 0 |
| Raymond town | Salem town | 110 | | 0 | | 0 | | 0 | | 0 | 100% | 110 |
| Raymond town | Concord city | 108 | | 0 | | 0 | 85% | 92 | | 0 | 15% | 16 |
| Raymond town | Bedford town | 105 | | 0 | | 0 | 85% | 89 | | 0 | 15% | 16 |
| Raymond town | Merrimack town | 98 | | 0 | | 0 | 85% | 83 | | 0 | 15% | 15 |
| Raymond town | Boston city, MA | 96 | | 0 | 20% | 19 | 70% | 67 | | 0 | 10% | 10 |
| Raymond town | Hooksett town | 94 | | 0 | | 0 | 75% | 71 | | 0 | 25% | 24 |
| Raymond town | Fremont town | 89 | | 0 | | 0 | | 0 | 100% | 89 | | 0 |
| Raymond town | Plaistow town | 88 | | 0 | 25% | 22 | | 0 | 75% | 66 | | 0 |
| Raymond town | Seabrook town | 85 | | 0 | 100% | 85 | | 0 | | 0 | | 0 |
| Raymond town | Kingston town | 77 | | 0 | 25% | 19 | | 0 | 75% | 58 | | 0 |
| Raymond town | Derry town | 74 | | 0 | | 0 | 40% | 30 | | 0 | 60% | 44 |
| Raymond town | Candia town | 72 | | 0 | | 0 | | 0 | | 0 | 100% | 72 |
| Raymond town | Auburn town | 69 | | 0 | | 0 | 40% | 28 | | 0 | 60% | 41 |
| Raymond town | Hudson town | 65 | | 0 | | 0 | 100% | 65 | | 0 | | 0 |
| Raymond town | Brentwood town | 50 | | 0 | 60% | 30 | | 0 | 40% | 20 | | 0 |
| | | 3,861 | | 633 | | 1,191 | | 1,258 | | 302 | | 477 |
| | | | | 16.4% | | 30.8% | | 32.6% | | 7.8% | | 12.4% |
| | | <u>SAY</u> | | 20% | | 30% | | 30% | | 10% | | 10% |

CAPACITY ANALYSIS WORKSHEETS

Old Manchester Road at Scribner Road and Industrial Drive

Old Manchester Road at Route 101 Westbound Ramps

Old Manchester Road at Route 101 Eastbound Ramps

















Old Manchester Road at Lane Road and Batchelder Road

Green Road at Sargent Drive

Old Manchester Road at Scribner Road and Industrial Drive

2023 Existing Weekday Morning
 1: Old Manchester Road & Scribner Road/Industrial Drive

11/08/2023

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | | |  | |
| Traffic Volume (vph) | 68 | 3 | 158 | 19 | 0 | 3 | 21 | 227 | 44 | 5 | 237 | 29 |
| Future Volume (vph) | 68 | 3 | 158 | 19 | 0 | 3 | 21 | 227 | 44 | 5 | 237 | 29 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.907 | | | 0.981 | | | 0.980 | | | 0.986 | |
| Flt Protected | | 0.985 | | | 0.959 | | | 0.996 | | | 0.999 | |
| Satd. Flow (prot) | 0 | 1622 | 0 | 0 | 1210 | 0 | 0 | 1997 | 0 | 0 | 2026 | 0 |
| Flt Permitted | | 0.985 | | | 0.959 | | | 0.996 | | | 0.999 | |
| Satd. Flow (perm) | 0 | 1622 | 0 | 0 | 1210 | 0 | 0 | 1997 | 0 | 0 | 2026 | 0 |
| Adj. Flow (vph) | 79 | 3 | 184 | 43 | 0 | 7 | 22 | 239 | 46 | 7 | 329 | 40 |
| Lane Group Flow (vph) | 0 | 266 | 0 | 0 | 50 | 0 | 0 | 307 | 0 | 0 | 376 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Intersection Summary | | | | | | | | | | | | |
| Control Type: Unsignalized | | | | | | | | | | | | |

2023 Existing Weekday Morning
1: Old Manchester Road & Scribner Road/Industrial Drive

11/08/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 6.5 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 68 | 3 | 158 | 19 | 0 | 3 | 21 | 227 | 44 | 5 | 237 | 29 |
| Future Vol, veh/h | 68 | 3 | 158 | 19 | 0 | 3 | 21 | 227 | 44 | 5 | 237 | 29 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 44 | 44 | 44 | 95 | 95 | 95 | 72 | 72 | 72 |
| Heavy Vehicles, % | 2 | 50 | 0 | 67 | 2 | 0 | 8 | 1 | 26 | 0 | 4 | 11 |
| Mvmt Flow | 79 | 3 | 184 | 43 | 0 | 7 | 22 | 239 | 46 | 7 | 329 | 40 |

















| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|------|--------|-------|--------|-----|--------|---|---|------|---|---|
| Conflicting Flow All | 673 | 692 | 349 | 763 | 689 | 262 | 369 | 0 | 0 | 285 | 0 | 0 |
| Stage 1 | 363 | 363 | - | 306 | 306 | - | - | - | - | - | - | - |
| Stage 2 | 310 | 329 | - | 457 | 383 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 7 | 6.2 | 7.77 | 6.52 | 6.2 | 4.18 | - | - | 4.1 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 6 | - | 6.77 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 6 | - | 6.77 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.45 | 3.3 | 4.103 | 4.018 | 3.3 | 2.272 | - | - | 2.2 | - | - |
| Pot Cap-1 Maneuver | 369 | 313 | 699 | 253 | 369 | 782 | 1157 | - | - | 1289 | - | - |
| Stage 1 | 656 | 548 | - | 585 | 662 | - | - | - | - | - | - | - |
| Stage 2 | 700 | 569 | - | 477 | 612 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 358 | 304 | 699 | 181 | 358 | 782 | 1157 | - | - | 1289 | - | - |
| Mov Cap-2 Maneuver | 358 | 304 | - | 181 | 358 | - | - | - | - | - | - | - |
| Stage 1 | 641 | 544 | - | 572 | 647 | - | - | - | - | - | - | - |
| Stage 2 | 678 | 556 | - | 347 | 608 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|------|--|-----|--|-----|--|
| HCM Control Delay, s | 18.1 | | 28.6 | | 0.6 | | 0.1 | |
| HCM LOS | C | | D | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1157 | - | - | 538 | 202 | 1289 | - | - |
| HCM Lane V/C Ratio | 0.019 | - | - | 0.495 | 0.248 | 0.005 | - | - |
| HCM Control Delay (s) | 8.2 | 0 | - | 18.1 | 28.6 | 7.8 | 0 | - |
| HCM Lane LOS | A | A | - | C | D | A | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 2.7 | 0.9 | 0 | - | - |

2023 Existing Weekday Evening
 1: Old Manchester Road & Scribner Road/Industrial Drive

11/08/2023

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | | |  | |
| Traffic Volume (vph) | 33 | 2 | 47 | 30 | 5 | 11 | 132 | 221 | 17 | 2 | 190 | 56 |
| Future Volume (vph) | 33 | 2 | 47 | 30 | 5 | 11 | 132 | 221 | 17 | 2 | 190 | 56 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.923 | | | 0.968 | | | 0.994 | | | 0.970 | |
| Flt Protected | | 0.980 | | | 0.968 | | | 0.983 | | | | |
| Satd. Flow (prot) | 0 | 1661 | 0 | 0 | 1899 | 0 | 0 | 2078 | 0 | 0 | 2089 | 0 |
| Flt Permitted | | 0.980 | | | 0.968 | | | 0.983 | | | | |
| Satd. Flow (perm) | 0 | 1661 | 0 | 0 | 1899 | 0 | 0 | 2078 | 0 | 0 | 2089 | 0 |
| Adj. Flow (vph) | 46 | 3 | 66 | 44 | 7 | 16 | 140 | 235 | 18 | 3 | 275 | 81 |
| Lane Group Flow (vph) | 0 | 115 | 0 | 0 | 67 | 0 | 0 | 393 | 0 | 0 | 359 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Intersection Summary | | | | | | | | | | | | |
| Control Type: Unsignalized | | | | | | | | | | | | |

2023 Existing Weekday Evening
1: Old Manchester Road & Scribner Road/Industrial Drive

11/08/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 5.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 33 | 2 | 47 | 30 | 5 | 11 | 132 | 221 | 17 | 2 | 190 | 56 |
| Future Vol, veh/h | 33 | 2 | 47 | 30 | 5 | 11 | 132 | 221 | 17 | 2 | 190 | 56 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 71 | 71 | 71 | 68 | 68 | 68 | 94 | 94 | 94 | 69 | 69 | 69 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 0 |
| Mvmt Flow | 46 | 3 | 66 | 44 | 7 | 16 | 140 | 235 | 18 | 3 | 275 | 81 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-----|--------|-----|--------|-----|--------|---|---|------|---|---|
| Conflicting Flow All | 858 | 855 | 316 | 880 | 886 | 244 | 356 | 0 | 0 | 253 | 0 | 0 |
| Stage 1 | 322 | 322 | - | 524 | 524 | - | - | - | - | - | - | - |
| Stage 2 | 536 | 533 | - | 356 | 362 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | - | - | 4.1 | - | - |
| Critical Hdwy Stg 1 | 6.1 | 5.5 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.1 | 5.5 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 | 2.2 | - | - | 2.2 | - | - |
| Pot Cap-1 Maneuver | 279 | 298 | 729 | 270 | 286 | 800 | 1214 | - | - | 1324 | - | - |
| Stage 1 | 694 | 655 | - | 540 | 533 | - | - | - | - | - | - | - |
| Stage 2 | 532 | 528 | - | 666 | 629 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 239 | 257 | 729 | 218 | 247 | 800 | 1214 | - | - | 1324 | - | - |
| Mov Cap-2 Maneuver | 239 | 257 | - | 218 | 247 | - | - | - | - | - | - | - |
| Stage 1 | 600 | 653 | - | 467 | 461 | - | - | - | - | - | - | - |
| Stage 2 | 444 | 457 | - | 601 | 627 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|------|--|----|--|-----|--|
| HCM Control Delay, s | 18.1 | | 22.9 | | 3 | | 0.1 | |
| HCM LOS | C | | C | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1214 | - | - | 390 | 268 | 1324 | - | - |
| HCM Lane V/C Ratio | 0.116 | - | - | 0.296 | 0.252 | 0.002 | - | - |
| HCM Control Delay (s) | 8.4 | 0 | - | 18.1 | 22.9 | 7.7 | 0 | - |
| HCM Lane LOS | A | A | - | C | C | A | A | - |
| HCM 95th %tile Q(veh) | 0.4 | - | - | 1.2 | 1 | 0 | - | - |

2024 No-Build Weekday Morning
 1: Old Manchester Road & Scribner Road/Industrial Drive

11/10/2023



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|-------|------|-------|-------|------|-------|-------|------|------|-------|------|
| Lane Configurations | | ↕ | | ↖ | ← | | ↖ | ↑ | | | ↕ | |
| Traffic Volume (vph) | 77 | 7 | 160 | 34 | 1 | 6 | 93 | 246 | 91 | 19 | 262 | 47 |
| Future Volume (vph) | 77 | 7 | 160 | 34 | 1 | 6 | 93 | 246 | 91 | 19 | 262 | 47 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.912 | | | 0.869 | | | 0.959 | | | 0.981 | |
| Flt Protected | | 0.984 | | 0.950 | | | 0.950 | | | | 0.997 | |
| Satd. Flow (prot) | 0 | 1615 | 0 | 1081 | 1647 | 0 | 1671 | 1691 | 0 | 0 | 2010 | 0 |
| Flt Permitted | | 0.984 | | 0.950 | | | 0.950 | | | | 0.997 | |
| Satd. Flow (perm) | 0 | 1615 | 0 | 1081 | 1647 | 0 | 1671 | 1691 | 0 | 0 | 2010 | 0 |
| Adj. Flow (vph) | 90 | 8 | 186 | 77 | 2 | 14 | 98 | 259 | 96 | 26 | 364 | 65 |
| Lane Group Flow (vph) | 0 | 284 | 0 | 77 | 16 | 0 | 98 | 355 | 0 | 0 | 455 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Control Type: Unsignalized

2024 No-Build Weekday Morning
 1: Old Manchester Road & Scribner Road/Industrial Drive

11/10/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 16.5 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | ↕ | ↕ | | ↕ | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 77 | 7 | 160 | 34 | 1 | 6 | 93 | 246 | 91 | 19 | 262 | 47 |
| Future Vol, veh/h | 77 | 7 | 160 | 34 | 1 | 6 | 93 | 246 | 91 | 19 | 262 | 47 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | 100 | - | - | 150 | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 44 | 44 | 44 | 95 | 95 | 95 | 72 | 72 | 72 |
| Heavy Vehicles, % | 2 | 50 | 0 | 67 | 2 | 0 | 8 | 1 | 26 | 0 | 4 | 11 |
| Mvmt Flow | 90 | 8 | 186 | 77 | 2 | 14 | 98 | 259 | 96 | 26 | 364 | 65 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|------|--------|-------|--------|-----|--------|---|---|------|---|---|
| Conflicting Flow All | 960 | 1000 | 397 | 1049 | 984 | 307 | 429 | 0 | 0 | 355 | 0 | 0 |
| Stage 1 | 449 | 449 | - | 503 | 503 | - | - | - | - | - | - | - |
| Stage 2 | 511 | 551 | - | 546 | 481 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 7 | 6.2 | 7.77 | 6.52 | 6.2 | 4.18 | - | - | 4.1 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 6 | - | 6.77 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 6 | - | 6.77 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.45 | 3.3 | 4.103 | 4.018 | 3.3 | 2.272 | - | - | 2.2 | - | - |
| Pot Cap-1 Maneuver | 236 | 202 | 657 | 156 | 248 | 738 | 1099 | - | - | 1215 | - | - |
| Stage 1 | 589 | 499 | - | 448 | 541 | - | - | - | - | - | - | - |
| Stage 2 | 545 | 445 | - | 422 | 554 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 210 | 179 | 657 | 99 | 219 | 738 | 1099 | - | - | 1215 | - | - |
| Mov Cap-2 Maneuver | 210 | 179 | - | 99 | 219 | - | - | - | - | - | - | - |
| Stage 1 | 537 | 485 | - | 408 | 493 | - | - | - | - | - | - | - |
| Stage 2 | 485 | 405 | - | 289 | 538 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 38.7 | 97.6 | 1.9 | 0.5 |
| HCM LOS | E | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | WBLn2 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1099 | - | - | 376 | 99 | 551 | 1215 | - | - |
| HCM Lane V/C Ratio | 0.089 | - | - | 0.755 | 0.781 | 0.029 | 0.022 | - | - |
| HCM Control Delay (s) | 8.6 | - | - | 38.7 | 115.3 | 11.7 | 8 | 0 | - |
| HCM Lane LOS | A | - | - | E | F | B | A | A | - |
| HCM 95th %tile Q(veh) | 0.3 | - | - | 6 | 4.2 | 0.1 | 0.1 | - | - |

2024 No-Build Weekday Evening
 1: Old Manchester Road & Scribner Road/Industrial Drive

11/10/2023



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|-------|------|-------|-------|------|-------|-------|------|------|-------|------|
| Lane Configurations | | ↕ | | ↗ | ↘ | | ↗ | ↘ | | | ↕ | |
| Traffic Volume (vph) | 47 | 3 | 47 | 76 | 8 | 24 | 186 | 255 | 36 | 6 | 217 | 71 |
| Future Volume (vph) | 47 | 3 | 47 | 76 | 8 | 24 | 186 | 255 | 36 | 6 | 217 | 71 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.934 | | | 0.888 | | | 0.982 | | | 0.967 | |
| Flt Protected | | 0.976 | | 0.950 | | | 0.950 | | | | 0.999 | |
| Satd. Flow (prot) | 0 | 1674 | 0 | 1805 | 1687 | 0 | 1805 | 1806 | 0 | 0 | 2080 | 0 |
| Flt Permitted | | 0.976 | | 0.950 | | | 0.950 | | | | 0.999 | |
| Satd. Flow (perm) | 0 | 1674 | 0 | 1805 | 1687 | 0 | 1805 | 1806 | 0 | 0 | 2080 | 0 |
| Adj. Flow (vph) | 66 | 4 | 66 | 112 | 12 | 35 | 198 | 271 | 38 | 9 | 314 | 103 |
| Lane Group Flow (vph) | 0 | 136 | 0 | 112 | 47 | 0 | 198 | 309 | 0 | 0 | 426 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Control Type: Unsignalized

2024 No-Build Weekday Evening
 1: Old Manchester Road & Scribner Road/Industrial Drive

11/10/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 13.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | ↕ | ↕ | | ↕ | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 47 | 3 | 47 | 76 | 8 | 24 | 186 | 255 | 36 | 6 | 217 | 71 |
| Future Vol, veh/h | 47 | 3 | 47 | 76 | 8 | 24 | 186 | 255 | 36 | 6 | 217 | 71 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | 100 | - | - | 150 | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 71 | 71 | 71 | 68 | 68 | 68 | 94 | 94 | 94 | 69 | 69 | 69 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 0 |
| Mvmt Flow | 66 | 4 | 66 | 112 | 12 | 35 | 198 | 271 | 38 | 9 | 314 | 103 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|------|--------|------|--------|-----|------|--------|---|------|---|---|
| Conflicting Flow All | 1094 | 1089 | 366 | 1105 | 1121 | 290 | 417 | 0 | 0 | 309 | 0 | 0 |
| Stage 1 | 384 | 384 | - | 686 | 686 | - | - | - | - | - | - | - |
| Stage 2 | 710 | 705 | - | 419 | 435 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | - | - | 4.1 | - | - |
| Critical Hdwy Stg 1 | 6.1 | 5.5 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.1 | 5.5 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 | 2.2 | - | - | 2.2 | - | - |
| Pot Cap-1 Maneuver | 193 | 217 | 684 | 190 | 208 | 754 | 1153 | - | - | 1263 | - | - |
| Stage 1 | 643 | 615 | - | 441 | 451 | - | - | - | - | - | - | - |
| Stage 2 | 428 | 442 | - | 616 | 584 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 151 | 178 | 684 | 145 | 171 | 754 | 1153 | - | - | 1263 | - | - |
| Mov Cap-2 Maneuver | 151 | 178 | - | 145 | 171 | - | - | - | - | - | - | - |
| Stage 1 | 532 | 609 | - | 365 | 373 | - | - | - | - | - | - | - |
| Stage 2 | 327 | 366 | - | 548 | 579 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|----|------|-----|-----|
| HCM Control Delay, s | 37 | 63.8 | 3.4 | 0.2 |
| HCM LOS | E | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | WBLn2 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1153 | - | - | 244 | 145 | 407 | 1263 | - | - |
| HCM Lane V/C Ratio | 0.172 | - | - | 0.56 | 0.771 | 0.116 | 0.007 | - | - |
| HCM Control Delay (s) | 8.8 | - | - | 37 | 84.4 | 15 | 7.9 | 0 | - |
| HCM Lane LOS | A | - | - | E | F | C | A | A | - |
| HCM 95th %tile Q(veh) | 0.6 | - | - | 3.1 | 4.7 | 0.4 | 0 | - | - |

2024 Build Weekday Morning

1: Old Manchester Road & Scribner Road/Industrial Drive

11/10/2023



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|-------|------|-------|-------|------|-------|-------|------|------|-------|------|
| Lane Configurations | | ↕ | | ↖ | ↗ | | ↖ | ↗ | | | ↕ | |
| Traffic Volume (vph) | 92 | 7 | 213 | 34 | 1 | 6 | 118 | 246 | 91 | 19 | 262 | 54 |
| Future Volume (vph) | 92 | 7 | 213 | 34 | 1 | 6 | 118 | 246 | 91 | 19 | 262 | 54 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.908 | | | 0.869 | | | 0.959 | | | 0.978 | |
| Flt Protected | | 0.985 | | 0.950 | | | 0.950 | | | | 0.997 | |
| Satd. Flow (prot) | 0 | 1615 | 0 | 1081 | 1647 | 0 | 1671 | 1691 | 0 | 0 | 2001 | 0 |
| Flt Permitted | | 0.985 | | 0.950 | | | 0.950 | | | | 0.997 | |
| Satd. Flow (perm) | 0 | 1615 | 0 | 1081 | 1647 | 0 | 1671 | 1691 | 0 | 0 | 2001 | 0 |
| Adj. Flow (vph) | 107 | 8 | 248 | 77 | 2 | 14 | 124 | 259 | 96 | 26 | 364 | 75 |
| Lane Group Flow (vph) | 0 | 363 | 0 | 77 | 16 | 0 | 124 | 355 | 0 | 0 | 465 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Control Type: Unsignalized

2024 Build Weekday Morning
 1: Old Manchester Road & Scribner Road/Industrial Drive

11/10/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 34.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | ↕ | ↕ | | ↕ | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 92 | 7 | 213 | 34 | 1 | 6 | 118 | 246 | 91 | 19 | 262 | 54 |
| Future Vol, veh/h | 92 | 7 | 213 | 34 | 1 | 6 | 118 | 246 | 91 | 19 | 262 | 54 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | 100 | - | - | 150 | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 44 | 44 | 44 | 95 | 95 | 95 | 72 | 72 | 72 |
| Heavy Vehicles, % | 2 | 50 | 0 | 67 | 2 | 0 | 8 | 1 | 26 | 0 | 4 | 11 |
| Mvmt Flow | 107 | 8 | 248 | 77 | 2 | 14 | 124 | 259 | 96 | 26 | 364 | 75 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|------|--------|-------|--------|-----|--------|---|---|------|---|---|
| Conflicting Flow All | 1017 | 1057 | 402 | 1137 | 1046 | 307 | 439 | 0 | 0 | 355 | 0 | 0 |
| Stage 1 | 454 | 454 | - | 555 | 555 | - | - | - | - | - | - | - |
| Stage 2 | 563 | 603 | - | 582 | 491 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 7 | 6.2 | 7.77 | 6.52 | 6.2 | 4.18 | - | - | 4.1 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 6 | - | 6.77 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 6 | - | 6.77 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.45 | 3.3 | 4.103 | 4.018 | 3.3 | 2.272 | - | - | 2.2 | - | - |
| Pot Cap-1 Maneuver | 216 | 186 | 653 | 135 | 228 | 738 | 1090 | - | - | 1215 | - | - |
| Stage 1 | 586 | 496 | - | 417 | 513 | - | - | - | - | - | - | - |
| Stage 2 | 511 | 420 | - | 402 | 548 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 188 | 160 | 653 | ~ 72 | 196 | 738 | 1090 | - | - | 1215 | - | - |
| Mov Cap-2 Maneuver | 188 | 160 | - | ~ 72 | 196 | - | - | - | - | - | - | - |
| Stage 1 | 519 | 482 | - | 369 | 455 | - | - | - | - | - | - | - |
| Stage 2 | 442 | 372 | - | 238 | 532 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|-------|--|-----|--|-----|--|
| HCM Control Delay, s | 81.6 | | 190.9 | | 2.3 | | 0.5 | |
| HCM LOS | F | | F | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | WBLn2 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1090 | - | - | 363 | 72 | 529 | 1215 | - | - |
| HCM Lane V/C Ratio | 0.114 | - | - | 0.999 | 1.073 | 0.03 | 0.022 | - | - |
| HCM Control Delay (s) | 8.7 | - | - | 81.6 | 227.7 | 12 | 8 | 0 | - |
| HCM Lane LOS | A | - | - | F | F | B | A | A | - |
| HCM 95th %tile Q(veh) | 0.4 | - | - | 11.7 | 5.7 | 0.1 | 0.1 | - | - |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2024 Build Weekday Evening

1: Old Manchester Road & Scribner Road/Industrial Drive

11/10/2023



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|-------|------|-------|-------|------|-------|-------|------|------|-------|------|
| Lane Configurations | | ↕ | | ↗ | ↘ | | ↗ | ↘ | | | ↕ | |
| Traffic Volume (vph) | 57 | 3 | 83 | 76 | 8 | 24 | 243 | 255 | 36 | 6 | 217 | 87 |
| Future Volume (vph) | 57 | 3 | 83 | 76 | 8 | 24 | 243 | 255 | 36 | 6 | 217 | 87 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.921 | | | 0.888 | | | 0.982 | | | 0.962 | |
| Flt Protected | | 0.980 | | 0.950 | | | 0.950 | | | | 0.999 | |
| Satd. Flow (prot) | 0 | 1658 | 0 | 1805 | 1687 | 0 | 1805 | 1806 | 0 | 0 | 2069 | 0 |
| Flt Permitted | | 0.980 | | 0.950 | | | 0.950 | | | | 0.999 | |
| Satd. Flow (perm) | 0 | 1658 | 0 | 1805 | 1687 | 0 | 1805 | 1806 | 0 | 0 | 2069 | 0 |
| Adj. Flow (vph) | 80 | 4 | 117 | 112 | 12 | 35 | 259 | 271 | 38 | 9 | 314 | 126 |
| Lane Group Flow (vph) | 0 | 201 | 0 | 112 | 47 | 0 | 259 | 309 | 0 | 0 | 449 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Control Type: Unsignalized

2024 Build Weekday Evening
 1: Old Manchester Road & Scribner Road/Industrial Drive

11/10/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 32.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | ↕ | ↕ | | ↕ | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 57 | 3 | 83 | 76 | 8 | 24 | 243 | 255 | 36 | 6 | 217 | 87 |
| Future Vol, veh/h | 57 | 3 | 83 | 76 | 8 | 24 | 243 | 255 | 36 | 6 | 217 | 87 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | 100 | - | - | 150 | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 71 | 71 | 71 | 68 | 68 | 68 | 94 | 94 | 94 | 69 | 69 | 69 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 0 |
| Mvmt Flow | 80 | 4 | 117 | 112 | 12 | 35 | 259 | 271 | 38 | 9 | 314 | 126 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|------|--------|------|--------|-----|------|--------|---|------|---|---|
| Conflicting Flow All | 1227 | 1222 | 377 | 1264 | 1266 | 290 | 440 | 0 | 0 | 309 | 0 | 0 |
| Stage 1 | 395 | 395 | - | 808 | 808 | - | - | - | - | - | - | - |
| Stage 2 | 832 | 827 | - | 456 | 458 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | - | - | 4.1 | - | - |
| Critical Hdwy Stg 1 | 6.1 | 5.5 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.1 | 5.5 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 | 2.2 | - | - | 2.2 | - | - |
| Pot Cap-1 Maneuver | 157 | 181 | 674 | 148 | 171 | 754 | 1131 | - | - | 1263 | - | - |
| Stage 1 | 634 | 608 | - | 378 | 397 | - | - | - | - | - | - | - |
| Stage 2 | 366 | 389 | - | 588 | 570 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 114 | 138 | 674 | ~98 | 130 | 754 | 1131 | - | - | 1263 | - | - |
| Mov Cap-2 Maneuver | 114 | 138 | - | ~98 | 130 | - | - | - | - | - | - | - |
| Stage 1 | 489 | 602 | - | 291 | 306 | - | - | - | - | - | - | - |
| Stage 2 | 259 | 300 | - | 478 | 564 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|------|-------|-----|-----|
| HCM Control Delay, s | 84.3 | 155.8 | 4.2 | 0.2 |
| HCM LOS | F | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | WBLn2 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1131 | - | - | 222 | 98 | 343 | 1263 | - | - |
| HCM Lane V/C Ratio | 0.229 | - | - | 0.907 | 1.14 | 0.137 | 0.007 | - | - |
| HCM Control Delay (s) | 9.1 | - | - | 84.3 | 214.2 | 17.2 | 7.9 | 0 | - |
| HCM Lane LOS | A | - | - | F | F | C | A | A | - |
| HCM 95th %tile Q(veh) | 0.9 | - | - | 7.5 | 7.4 | 0.5 | 0 | - | - |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2034 No-Build Weekday Morning
 1: Old Manchester Road & Scribner Road/Industrial Drive

11/10/2023



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|-------|------|-------|-------|------|-------|-------|------|------|-------|------|
| Lane Configurations | | ↕ | | ↕ | ↕ | | ↕ | ↕ | | | ↕ | |
| Traffic Volume (vph) | 84 | 7 | 176 | 34 | 1 | 6 | 95 | 270 | 91 | 19 | 287 | 50 |
| Future Volume (vph) | 84 | 7 | 176 | 34 | 1 | 6 | 95 | 270 | 91 | 19 | 287 | 50 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.911 | | | 0.869 | | | 0.962 | | | 0.981 | |
| Flt Protected | | 0.984 | | 0.950 | | | 0.950 | | | | 0.997 | |
| Satd. Flow (prot) | 0 | 1615 | 0 | 1081 | 1647 | 0 | 1671 | 1703 | 0 | 0 | 2010 | 0 |
| Flt Permitted | | 0.984 | | 0.950 | | | 0.950 | | | | 0.997 | |
| Satd. Flow (perm) | 0 | 1615 | 0 | 1081 | 1647 | 0 | 1671 | 1703 | 0 | 0 | 2010 | 0 |
| Adj. Flow (vph) | 98 | 8 | 205 | 77 | 2 | 14 | 100 | 284 | 96 | 26 | 399 | 69 |
| Lane Group Flow (vph) | 0 | 311 | 0 | 77 | 16 | 0 | 100 | 380 | 0 | 0 | 494 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Control Type: Unsignalized

2034 No-Build Weekday Morning
 1: Old Manchester Road & Scribner Road/Industrial Drive

11/10/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 24.6 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | ↕ | ↕ | | ↕ | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 84 | 7 | 176 | 34 | 1 | 6 | 95 | 270 | 91 | 19 | 287 | 50 |
| Future Vol, veh/h | 84 | 7 | 176 | 34 | 1 | 6 | 95 | 270 | 91 | 19 | 287 | 50 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | 100 | - | - | 150 | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 44 | 44 | 44 | 95 | 95 | 95 | 72 | 72 | 72 |
| Heavy Vehicles, % | 2 | 50 | 0 | 67 | 2 | 0 | 8 | 1 | 26 | 0 | 4 | 11 |
| Mvmt Flow | 98 | 8 | 205 | 77 | 2 | 14 | 100 | 284 | 96 | 26 | 399 | 69 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|------|--------|-------|--------|-----|--------|---|---|------|---|---|
| Conflicting Flow All | 1026 | 1066 | 434 | 1124 | 1052 | 332 | 468 | 0 | 0 | 380 | 0 | 0 |
| Stage 1 | 486 | 486 | - | 532 | 532 | - | - | - | - | - | - | - |
| Stage 2 | 540 | 580 | - | 592 | 520 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 7 | 6.2 | 7.77 | 6.52 | 6.2 | 4.18 | - | - | 4.1 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 6 | - | 6.77 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 6 | - | 6.77 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.45 | 3.3 | 4.103 | 4.018 | 3.3 | 2.272 | - | - | 2.2 | - | - |
| Pot Cap-1 Maneuver | 213 | 183 | 626 | 138 | 227 | 714 | 1063 | - | - | 1190 | - | - |
| Stage 1 | 563 | 479 | - | 430 | 526 | - | - | - | - | - | - | - |
| Stage 2 | 526 | 431 | - | 396 | 532 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 188 | 161 | 626 | 81 | 200 | 714 | 1063 | - | - | 1190 | - | - |
| Mov Cap-2 Maneuver | 188 | 161 | - | 81 | 200 | - | - | - | - | - | - | - |
| Stage 1 | 510 | 465 | - | 390 | 477 | - | - | - | - | - | - | - |
| Stage 2 | 465 | 390 | - | 254 | 516 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|-------|--|-----|--|-----|--|
| HCM Control Delay, s | 61.1 | | 149.3 | | 1.8 | | 0.4 | |
| HCM LOS | F | | F | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | WBLn2 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1063 | - | - | 346 | 81 | 522 | 1190 | - | - |
| HCM Lane V/C Ratio | 0.094 | - | - | 0.897 | 0.954 | 0.03 | 0.022 | - | - |
| HCM Control Delay (s) | 8.7 | - | - | 61.1 | 177.6 | 12.1 | 8.1 | 0 | - |
| HCM Lane LOS | A | - | - | F | F | B | A | A | - |
| HCM 95th %tile Q(veh) | 0.3 | - | - | 8.8 | 5.2 | 0.1 | 0.1 | - | - |

2034 No-Build Weekday Evening

1: Old Manchester Road & Scribner Road/Industrial Drive

11/10/2023



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|-------|------|-------|-------|------|-------|-------|------|------|------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 51 | 3 | 52 | 76 | 8 | 24 | 200 | 279 | 36 | 6 | 237 | 76 |
| Future Volume (vph) | 51 | 3 | 52 | 76 | 8 | 24 | 200 | 279 | 36 | 6 | 237 | 76 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.934 | | | 0.888 | | | 0.983 | | | | 0.968 |
| Flt Protected | | 0.976 | | 0.950 | | | 0.950 | | | | | 0.999 |
| Satd. Flow (prot) | 0 | 1674 | 0 | 1805 | 1687 | 0 | 1805 | 1812 | 0 | 0 | 2082 | 0 |
| Flt Permitted | | 0.976 | | 0.950 | | | 0.950 | | | | | 0.999 |
| Satd. Flow (perm) | 0 | 1674 | 0 | 1805 | 1687 | 0 | 1805 | 1812 | 0 | 0 | 2082 | 0 |
| Adj. Flow (vph) | 72 | 4 | 73 | 112 | 12 | 35 | 213 | 297 | 38 | 9 | 343 | 110 |
| Lane Group Flow (vph) | 0 | 149 | 0 | 112 | 47 | 0 | 213 | 335 | 0 | 0 | 462 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | | Free |

Intersection Summary

Control Type: Unsignalized

2034 No-Build Weekday Evening
 1: Old Manchester Road & Scribner Road/Industrial Drive

11/10/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 19.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | ↕ | ↕ | | ↕ | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 51 | 3 | 52 | 76 | 8 | 24 | 200 | 279 | 36 | 6 | 237 | 76 |
| Future Vol, veh/h | 51 | 3 | 52 | 76 | 8 | 24 | 200 | 279 | 36 | 6 | 237 | 76 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | 100 | - | - | 150 | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 71 | 71 | 71 | 68 | 68 | 68 | 94 | 94 | 94 | 69 | 69 | 69 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 0 |
| Mvmt Flow | 72 | 4 | 73 | 112 | 12 | 35 | 213 | 297 | 38 | 9 | 343 | 110 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|------|--------|------|--------|-----|------|--------|---|------|---|---|
| Conflicting Flow All | 1182 | 1177 | 398 | 1197 | 1213 | 316 | 453 | 0 | 0 | 335 | 0 | 0 |
| Stage 1 | 416 | 416 | - | 742 | 742 | - | - | - | - | - | - | - |
| Stage 2 | 766 | 761 | - | 455 | 471 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | - | - | 4.1 | - | - |
| Critical Hdwy Stg 1 | 6.1 | 5.5 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.1 | 5.5 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 | 2.2 | - | - | 2.2 | - | - |
| Pot Cap-1 Maneuver | 168 | 193 | 656 | 164 | 183 | 729 | 1118 | - | - | 1236 | - | - |
| Stage 1 | 618 | 595 | - | 411 | 425 | - | - | - | - | - | - | - |
| Stage 2 | 398 | 417 | - | 589 | 563 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 128 | 155 | 656 | 121 | 147 | 729 | 1118 | - | - | 1236 | - | - |
| Mov Cap-2 Maneuver | 128 | 155 | - | 121 | 147 | - | - | - | - | - | - | - |
| Stage 1 | 500 | 589 | - | 332 | 344 | - | - | - | - | - | - | - |
| Stage 2 | 296 | 337 | - | 514 | 557 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|------|--|-----|--|-----|--|
| HCM Control Delay, s | 53.9 | | 96.4 | | 3.5 | | 0.1 | |
| HCM LOS | F | | F | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | WBLn2 | SBL | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1118 | - | - | 213 | 121 | 366 | 1236 | - | - |
| HCM Lane V/C Ratio | 0.19 | - | - | 0.701 | 0.924 | 0.129 | 0.007 | - | - |
| HCM Control Delay (s) | 9 | - | - | 53.9 | 130.1 | 16.3 | 7.9 | 0 | - |
| HCM Lane LOS | A | - | - | F | F | C | A | A | - |
| HCM 95th %tile Q(veh) | 0.7 | - | - | 4.5 | 5.9 | 0.4 | 0 | - | - |

2034 Build Weekday Morning

1: Old Manchester Road & Scribner Road/Industrial Drive

11/10/2023



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|-------|------|-------|-------|------|-------|-------|------|------|-------|------|
| Lane Configurations | | ↕ | | ↕ | ↕ | | ↕ | ↕ | | | ↕ | |
| Traffic Volume (vph) | 99 | 7 | 229 | 34 | 1 | 6 | 120 | 270 | 91 | 19 | 287 | 57 |
| Future Volume (vph) | 99 | 7 | 229 | 34 | 1 | 6 | 120 | 270 | 91 | 19 | 287 | 57 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.908 | | | 0.869 | | | 0.962 | | | 0.979 | |
| Flt Protected | | 0.985 | | 0.950 | | | 0.950 | | | | 0.997 | |
| Satd. Flow (prot) | 0 | 1616 | 0 | 1081 | 1647 | 0 | 1671 | 1703 | 0 | 0 | 2004 | 0 |
| Flt Permitted | | 0.985 | | 0.950 | | | 0.950 | | | | 0.997 | |
| Satd. Flow (perm) | 0 | 1616 | 0 | 1081 | 1647 | 0 | 1671 | 1703 | 0 | 0 | 2004 | 0 |
| Adj. Flow (vph) | 115 | 8 | 266 | 77 | 2 | 14 | 126 | 284 | 96 | 26 | 399 | 79 |
| Lane Group Flow (vph) | 0 | 389 | 0 | 77 | 16 | 0 | 126 | 380 | 0 | 0 | 504 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Control Type: Unsignalized

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 55.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | ↕ | ↕ | | ↕ | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 99 | 7 | 229 | 34 | 1 | 6 | 120 | 270 | 91 | 19 | 287 | 57 |
| Future Vol, veh/h | 99 | 7 | 229 | 34 | 1 | 6 | 120 | 270 | 91 | 19 | 287 | 57 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | 100 | - | - | 150 | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 44 | 44 | 44 | 95 | 95 | 95 | 72 | 72 | 72 |
| Heavy Vehicles, % | 2 | 50 | 0 | 67 | 2 | 0 | 8 | 1 | 26 | 0 | 4 | 11 |
| Mvmt Flow | 115 | 8 | 266 | 77 | 2 | 14 | 126 | 284 | 96 | 26 | 399 | 79 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|------|--------|-------|--------|-----|--------|---|---|------|---|---|
| Conflicting Flow All | 1083 | 1123 | 439 | 1212 | 1114 | 332 | 478 | 0 | 0 | 380 | 0 | 0 |
| Stage 1 | 491 | 491 | - | 584 | 584 | - | - | - | - | - | - | - |
| Stage 2 | 592 | 632 | - | 628 | 530 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 7 | 6.2 | 7.77 | 6.52 | 6.2 | 4.18 | - | - | 4.1 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 6 | - | 6.77 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 6 | - | 6.77 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.45 | 3.3 | 4.103 | 4.018 | 3.3 | 2.272 | - | - | 2.2 | - | - |
| Pot Cap-1 Maneuver | 195 | 169 | 622 | 118 | 208 | 714 | 1054 | - | - | 1190 | - | - |
| Stage 1 | 559 | 476 | - | 401 | 498 | - | - | - | - | - | - | - |
| Stage 2 | 493 | 407 | - | 377 | 527 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 168 | 144 | 622 | ~ 57 | 178 | 714 | 1054 | - | - | 1190 | - | - |
| Mov Cap-2 Maneuver | 168 | 144 | - | ~ 57 | 178 | - | - | - | - | - | - | - |
| Stage 1 | 492 | 462 | - | 353 | 438 | - | - | - | - | - | - | - |
| Stage 2 | 424 | 358 | - | 205 | 511 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|-------|----------|-----|-----|
| HCM Control Delay, s | 138.6 | \$ 300.8 | 2.2 | 0.4 |
| HCM LOS | F | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | WBLn2 | SBL | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1054 | - | - | 333 | 57 | 499 | 1190 | - | - |
| HCM Lane V/C Ratio | 0.12 | - | - | 1.17 | 1.356 | 0.032 | 0.022 | - | - |
| HCM Control Delay (s) | 8.9 | - | - | 138.6 | 360.2 | 12.5 | 8.1 | 0 | - |
| HCM Lane LOS | A | - | - | F | F | B | A | A | - |
| HCM 95th %tile Q(veh) | 0.4 | - | - | 16.1 | 6.8 | 0.1 | 0.1 | - | - |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2034 Build Weekday Evening

1: Old Manchester Road & Scribner Road/Industrial Drive

11/10/2023



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|-------|------|-------|-------|------|-------|-------|------|------|-------|------|
| Lane Configurations | | ↕ | | ↗ | ↘ | | ↗ | ↘ | | | ↕ | |
| Traffic Volume (vph) | 61 | 3 | 88 | 76 | 8 | 24 | 257 | 279 | 36 | 6 | 237 | 92 |
| Future Volume (vph) | 61 | 3 | 88 | 76 | 8 | 24 | 257 | 279 | 36 | 6 | 237 | 92 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.922 | | | 0.888 | | | 0.983 | | | 0.963 | |
| Flt Protected | | 0.980 | | 0.950 | | | 0.950 | | | | 0.999 | |
| Satd. Flow (prot) | 0 | 1660 | 0 | 1805 | 1687 | 0 | 1805 | 1812 | 0 | 0 | 2072 | 0 |
| Flt Permitted | | 0.980 | | 0.950 | | | 0.950 | | | | 0.999 | |
| Satd. Flow (perm) | 0 | 1660 | 0 | 1805 | 1687 | 0 | 1805 | 1812 | 0 | 0 | 2072 | 0 |
| Adj. Flow (vph) | 86 | 4 | 124 | 112 | 12 | 35 | 273 | 297 | 38 | 9 | 343 | 133 |
| Lane Group Flow (vph) | 0 | 214 | 0 | 112 | 47 | 0 | 273 | 335 | 0 | 0 | 485 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Control Type: Unsignalized

2034 Build Weekday Evening
 1: Old Manchester Road & Scribner Road/Industrial Drive

11/10/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 49.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | ↕ | ↕ | | ↕ | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 61 | 3 | 88 | 76 | 8 | 24 | 257 | 279 | 36 | 6 | 237 | 92 |
| Future Vol, veh/h | 61 | 3 | 88 | 76 | 8 | 24 | 257 | 279 | 36 | 6 | 237 | 92 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | 100 | - | - | 150 | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 71 | 71 | 71 | 68 | 68 | 68 | 94 | 94 | 94 | 69 | 69 | 69 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 0 |
| Mvmt Flow | 86 | 4 | 124 | 112 | 12 | 35 | 273 | 297 | 38 | 9 | 343 | 133 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|------|--------|------|--------|-----|--------|---|---|------|---|---|
| Conflicting Flow All | 1314 | 1309 | 410 | 1354 | 1356 | 316 | 476 | 0 | 0 | 335 | 0 | 0 |
| Stage 1 | 428 | 428 | - | 862 | 862 | - | - | - | - | - | - | - |
| Stage 2 | 886 | 881 | - | 492 | 494 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | - | - | 4.1 | - | - |
| Critical Hdwy Stg 1 | 6.1 | 5.5 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.1 | 5.5 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 | 2.2 | - | - | 2.2 | - | - |
| Pot Cap-1 Maneuver | 136 | 161 | 646 | 128 | 151 | 729 | 1097 | - | - | 1236 | - | - |
| Stage 1 | 609 | 588 | - | 353 | 375 | - | - | - | - | - | - | - |
| Stage 2 | 342 | 367 | - | 562 | 550 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 96 | 120 | 646 | ~81 | 112 | 729 | 1097 | - | - | 1236 | - | - |
| Mov Cap-2 Maneuver | 96 | 120 | - | ~81 | 112 | - | - | - | - | - | - | - |
| Stage 1 | 457 | 582 | - | 265 | 282 | - | - | - | - | - | - | - |
| Stage 2 | 234 | 276 | - | 446 | 545 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|-------|--|-----|--|-----|--|-----|--|
| HCM Control Delay, s | 152.3 | | 232 | | 4.2 | | 0.1 | |
| HCM LOS | F | | F | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | WBLn2 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1097 | - | - | 191 | 81 | 307 | 1236 | - | - |
| HCM Lane V/C Ratio | 0.249 | - | - | 1.121 | 1.38 | 0.153 | 0.007 | - | - |
| HCM Control Delay (s) | 9.4 | - | - | 152.3 | 321.7 | 18.8 | 7.9 | 0 | - |
| HCM Lane LOS | A | - | - | F | F | C | A | A | - |
| HCM 95th %tile Q(veh) | 1 | - | - | 10.5 | 8.7 | 0.5 | 0 | - | - |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Old Manchester Road at Route 101 Westbound Ramps

2023 Existing Weekday Morning
2: Old Manchester Road & Route 101 WB

11/08/2023



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|------|------|------|-------|------|-------|------|------|------|-------|------|
| Lane Configurations | | | | | ↕ | | ↗ | ↑ | | | ↖ | |
| Traffic Volume (vph) | 0 | 0 | 0 | 29 | 2 | 47 | 106 | 245 | 0 | 0 | 237 | 177 |
| Future Volume (vph) | 0 | 0 | 0 | 29 | 2 | 47 | 106 | 245 | 0 | 0 | 237 | 177 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | 0.919 | | | | | | 0.942 | |
| Flt Protected | | | | | 0.982 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1727 | 0 | 1711 | 1845 | 0 | 0 | 1652 | 0 |
| Flt Permitted | | | | | 0.982 | | 0.950 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1727 | 0 | 1711 | 1845 | 0 | 0 | 1652 | 0 |
| Adj. Flow (vph) | 0 | 0 | 0 | 47 | 3 | 76 | 128 | 295 | 0 | 0 | 296 | 221 |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 126 | 0 | 128 | 295 | 0 | 0 | 517 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Control Type: Unsignalized

2023 Existing Weekday Morning
2: Old Manchester Road & Route 101 WB

11/08/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Int Delay, s/veh | 2.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | ↕ | | ↕ | ↑ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 29 | 2 | 47 | 106 | 245 | 0 | 0 | 237 | 177 |
| Future Vol, veh/h | 0 | 0 | 0 | 29 | 2 | 47 | 106 | 245 | 0 | 0 | 237 | 177 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | Yield |
| Storage Length | - | - | - | - | - | - | 300 | - | - | - | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 62 | 62 | 62 | 83 | 83 | 83 | 80 | 80 | 80 |
| Heavy Vehicles, % | 2 | 2 | 2 | 6 | 0 | 17 | 2 | 3 | 2 | 2 | 6 | 3 |
| Mvmt Flow | 0 | 0 | 0 | 47 | 3 | 76 | 128 | 295 | 0 | 0 | 296 | 221 |

| Major/Minor | Minor1 | Major1 | Major2 | | | | |
|----------------------|--------|--------|--------|-------|---|---|---|
| Conflicting Flow All | 847 | 847 | 295 | 296 | 0 | - | - |
| Stage 1 | 551 | 551 | - | - | - | - | - |
| Stage 2 | 296 | 296 | - | - | - | - | - |
| Critical Hdwy | 6.46 | 6.5 | 6.37 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.46 | 5.5 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.46 | 5.5 | - | - | - | - | - |
| Follow-up Hdwy | 3.554 | 4 | 3.453 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 327 | 301 | 710 | 1265 | - | 0 | 0 |
| Stage 1 | 569 | 519 | - | - | - | 0 | 0 |
| Stage 2 | 746 | 672 | - | - | - | 0 | 0 |
| Platoon blocked, % | | | | | - | - | - |
| Mov Cap-1 Maneuver | 294 | 0 | 710 | 1265 | - | - | - |
| Mov Cap-2 Maneuver | 294 | 0 | - | - | - | - | - |
| Stage 1 | 512 | 0 | - | - | - | - | - |
| Stage 2 | 746 | 0 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 15.7 | 2.5 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBTWBLn1 | SBT | SBR |
|-----------------------|-------|----------|-------|-----|
| Capacity (veh/h) | 1265 | - | 461 | - |
| HCM Lane V/C Ratio | 0.101 | - | 0.273 | - |
| HCM Control Delay (s) | 8.2 | - | 15.7 | - |
| HCM Lane LOS | A | - | C | - |
| HCM 95th %tile Q(veh) | 0.3 | - | 1.1 | - |

2023 Existing Weekday Evening
 2: Old Manchester Road & Route 101 WB

11/08/2023



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|------|------|------|-------|------|-------|------|------|------|-------|------|
| Lane Configurations | | | | | ↔ | | ↗ | ↑ | | | ↖ | |
| Traffic Volume (vph) | 0 | 0 | 0 | 157 | 3 | 120 | 37 | 250 | 0 | 0 | 186 | 81 |
| Future Volume (vph) | 0 | 0 | 0 | 157 | 3 | 120 | 37 | 250 | 0 | 0 | 186 | 81 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | 0.942 | | | | | | 0.959 | |
| Flt Protected | | | | | 0.973 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1940 | 0 | 1745 | 1881 | 0 | 0 | 1761 | 0 |
| Flt Permitted | | | | | 0.973 | | 0.950 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1940 | 0 | 1745 | 1881 | 0 | 0 | 1761 | 0 |
| Adj. Flow (vph) | 0 | 0 | 0 | 183 | 3 | 140 | 42 | 281 | 0 | 0 | 242 | 105 |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 326 | 0 | 42 | 281 | 0 | 0 | 347 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Control Type: Unsignalized

2023 Existing Weekday Evening
2: Old Manchester Road & Route 101 WB

11/08/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Int Delay, s/veh | 7.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | ↕ | | ↕ | ↑ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 157 | 3 | 120 | 37 | 250 | 0 | 0 | 186 | 81 |
| Future Vol, veh/h | 0 | 0 | 0 | 157 | 3 | 120 | 37 | 250 | 0 | 0 | 186 | 81 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | Yield |
| Storage Length | - | - | - | - | - | - | 300 | - | - | - | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 86 | 86 | 86 | 89 | 89 | 89 | 77 | 77 | 77 |
| Heavy Vehicles, % | 2 | 2 | 2 | 0 | 50 | 3 | 0 | 1 | 2 | 2 | 0 | 0 |
| Mvmt Flow | 0 | 0 | 0 | 183 | 3 | 140 | 42 | 281 | 0 | 0 | 242 | 105 |

| Major/Minor | Minor1 | | Major1 | | Major2 | | |
|----------------------|--------|------|--------|------|--------|---|---|
| Conflicting Flow All | 607 | 607 | 281 | 242 | 0 | - | - |
| Stage 1 | 365 | 365 | - | - | - | - | - |
| Stage 2 | 242 | 242 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 7 | 6.23 | 4.1 | - | - | - |
| Critical Hdwy Stg 1 | 5.4 | 6 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | 6 | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4.45 | 3.327 | 2.2 | - | - | - |
| Pot Cap-1 Maneuver | 463 | 353 | 755 | 1336 | - | 0 | 0 |
| Stage 1 | 707 | 547 | - | - | - | 0 | 0 |
| Stage 2 | 803 | 625 | - | - | - | 0 | 0 |
| Platoon blocked, % | | | | | - | - | - |
| Mov Cap-1 Maneuver | 449 | 0 | 755 | 1336 | - | - | - |
| Mov Cap-2 Maneuver | 449 | 0 | - | - | - | - | - |
| Stage 1 | 685 | 0 | - | - | - | - | - |
| Stage 2 | 803 | 0 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 20.9 | 1 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBTWBLn1 | SBT | SBR |
|-----------------------|-------|----------|-------|-----|
| Capacity (veh/h) | 1336 | - | 545 | - |
| HCM Lane V/C Ratio | 0.031 | - | 0.597 | - |
| HCM Control Delay (s) | 7.8 | - | 20.9 | - |
| HCM Lane LOS | A | - | C | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 3.9 | - |

2024 No-Build Weekday Morning
 2: Old Manchester Road & Route 101 WB

11/10/2023



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|------|------|------|-------|------|-------|------|------|------|-------|------|
| Lane Configurations | | | | | ↔ | | ↗ | ↑ | | | ↖ | |
| Traffic Volume (vph) | 0 | 0 | 0 | 29 | 2 | 152 | 111 | 368 | 0 | 0 | 335 | 261 |
| Future Volume (vph) | 0 | 0 | 0 | 29 | 2 | 152 | 111 | 368 | 0 | 0 | 335 | 261 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | 0.888 | | | | | | 0.941 | |
| Flt Protected | | | | | 0.992 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1648 | 0 | 1711 | 1845 | 0 | 0 | 1651 | 0 |
| Flt Permitted | | | | | 0.992 | | 0.950 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1648 | 0 | 1711 | 1845 | 0 | 0 | 1651 | 0 |
| Adj. Flow (vph) | 0 | 0 | 0 | 47 | 3 | 245 | 134 | 443 | 0 | 0 | 419 | 326 |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 295 | 0 | 134 | 443 | 0 | 0 | 745 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Control Type: Unsignalized

2024 No-Build Weekday Morning
2: Old Manchester Road & Route 101 WB

11/10/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Int Delay, s/veh | 5.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | ↕ | | ↕ | ↑ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 29 | 2 | 152 | 111 | 368 | 0 | 0 | 335 | 261 |
| Future Vol, veh/h | 0 | 0 | 0 | 29 | 2 | 152 | 111 | 368 | 0 | 0 | 335 | 261 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | Yield |
| Storage Length | - | - | - | - | - | - | 300 | - | - | - | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 62 | 62 | 62 | 83 | 83 | 83 | 80 | 80 | 80 |
| Heavy Vehicles, % | 2 | 2 | 2 | 6 | 0 | 17 | 2 | 3 | 2 | 2 | 6 | 3 |
| Mvmt Flow | 0 | 0 | 0 | 47 | 3 | 245 | 134 | 443 | 0 | 0 | 419 | 326 |

| Major/Minor | Minor1 | | Major1 | | Major2 | | |
|----------------------|--------|------|--------|-------|--------|---|---|
| Conflicting Flow All | 1130 | 1130 | 443 | 419 | 0 | - | 0 |
| Stage 1 | 711 | 711 | - | - | - | - | - |
| Stage 2 | 419 | 419 | - | - | - | - | - |
| Critical Hdwy | 6.46 | 6.5 | 6.37 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.46 | 5.5 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.46 | 5.5 | - | - | - | - | - |
| Follow-up Hdwy | 3.554 | 4 | 3.453 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 221 | 205 | 584 | 1140 | - | 0 | 0 |
| Stage 1 | 480 | 439 | - | - | - | 0 | 0 |
| Stage 2 | 655 | 593 | - | - | - | 0 | 0 |
| Platoon blocked, % | | | | | - | - | - |
| Mov Cap-1 Maneuver | 195 | 0 | 584 | 1140 | - | - | - |
| Mov Cap-2 Maneuver | 195 | 0 | - | - | - | - | - |
| Stage 1 | 423 | 0 | - | - | - | - | - |
| Stage 2 | 655 | 0 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 27.9 | 2 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBL | NBTWBLn1 | SBT | SBR |
|-----------------------|-------|----------|-------|-----|
| Capacity (veh/h) | 1140 | - | 443 | - |
| HCM Lane V/C Ratio | 0.117 | - | 0.666 | - |
| HCM Control Delay (s) | 8.6 | - | 27.9 | - |
| HCM Lane LOS | A | - | D | - |
| HCM 95th %tile Q(veh) | 0.4 | - | 4.8 | - |

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 2: Old Manchester Road & Route 101 WB

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| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|------|------|------|-------|------|-------|------|------|------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 0 | 0 | 159 | 3 | 185 | 37 | 342 | 0 | 0 | 305 | 165 |
| Future Volume (vph) | 0 | 0 | 0 | 159 | 3 | 185 | 37 | 342 | 0 | 0 | 305 | 165 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | 0.928 | | | | | | 0.953 | |
| Flt Protected | | | | | 0.978 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1917 | 0 | 1745 | 1881 | 0 | 0 | 1750 | 0 |
| Flt Permitted | | | | | 0.978 | | 0.950 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1917 | 0 | 1745 | 1881 | 0 | 0 | 1750 | 0 |
| Adj. Flow (vph) | 0 | 0 | 0 | 185 | 3 | 215 | 42 | 384 | 0 | 0 | 396 | 214 |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 403 | 0 | 42 | 384 | 0 | 0 | 610 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Control Type: Unsignalized

2024 No-Build Weekday Evening
2: Old Manchester Road & Route 101 WB

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| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Int Delay, s/veh | 16.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | ↕ | | ↕ | ↑ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 159 | 3 | 185 | 37 | 342 | 0 | 0 | 305 | 165 |
| Future Vol, veh/h | 0 | 0 | 0 | 159 | 3 | 185 | 37 | 342 | 0 | 0 | 305 | 165 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | Yield |
| Storage Length | - | - | - | - | - | - | 300 | - | - | - | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 86 | 86 | 86 | 89 | 89 | 89 | 77 | 77 | 77 |
| Heavy Vehicles, % | 2 | 2 | 2 | 0 | 50 | 3 | 0 | 1 | 2 | 2 | 0 | 0 |
| Mvmt Flow | 0 | 0 | 0 | 185 | 3 | 215 | 42 | 384 | 0 | 0 | 396 | 214 |

| Major/Minor | Minor1 | Major1 | Major2 | | | | | | |
|----------------------|--------|--------|--------|------|---|---|---|---|---|
| Conflicting Flow All | 864 | 864 | 384 | 396 | 0 | - | - | - | 0 |
| Stage 1 | 468 | 468 | - | - | - | - | - | - | - |
| Stage 2 | 396 | 396 | - | - | - | - | - | - | - |
| Critical Hdwy | 6.4 | 7 | 6.23 | 4.1 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 5.4 | 6 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | 6 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4.45 | 3.327 | 2.2 | - | - | - | - | - |
| Pot Cap-1 Maneuver | 327 | 245 | 661 | 1174 | - | 0 | 0 | - | - |
| Stage 1 | 634 | 488 | - | - | - | 0 | 0 | - | - |
| Stage 2 | 684 | 529 | - | - | - | 0 | 0 | - | - |
| Platoon blocked, % | | | | | - | | | - | - |
| Mov Cap-1 Maneuver | 315 | 0 | 661 | 1174 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 315 | 0 | - | - | - | - | - | - | - |
| Stage 1 | 611 | 0 | - | - | - | - | - | - | - |
| Stage 2 | 684 | 0 | - | - | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 56.5 | 0.8 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBL | NBTWBLn1 | SBT | SBR |
|-----------------------|-------|----------|-------|-----|
| Capacity (veh/h) | 1174 | - | 438 | - |
| HCM Lane V/C Ratio | 0.035 | - | 0.921 | - |
| HCM Control Delay (s) | 8.2 | - | 56.5 | - |
| HCM Lane LOS | A | - | F | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 10.3 | - |

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| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|------|------|------|-------|------|-------|------|------|------|-------|------|
| Lane Configurations | | | | | ↔ | | ↗ | ↑ | | | ↖ | |
| Traffic Volume (vph) | 0 | 0 | 0 | 29 | 2 | 163 | 111 | 382 | 0 | 0 | 365 | 284 |
| Future Volume (vph) | 0 | 0 | 0 | 29 | 2 | 163 | 111 | 382 | 0 | 0 | 365 | 284 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | 0.887 | | | | | | 0.941 | |
| Flt Protected | | | | | 0.993 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1647 | 0 | 1711 | 1845 | 0 | 0 | 1651 | 0 |
| Flt Permitted | | | | | 0.993 | | 0.950 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1647 | 0 | 1711 | 1845 | 0 | 0 | 1651 | 0 |
| Adj. Flow (vph) | 0 | 0 | 0 | 47 | 3 | 263 | 134 | 460 | 0 | 0 | 456 | 355 |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 313 | 0 | 134 | 460 | 0 | 0 | 811 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Control Type: Unsignalized

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2: Old Manchester Road & Route 101 WB

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| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Int Delay, s/veh | 6.6 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | ↕ | | ↕ | ↑ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 29 | 2 | 163 | 111 | 382 | 0 | 0 | 365 | 284 |
| Future Vol, veh/h | 0 | 0 | 0 | 29 | 2 | 163 | 111 | 382 | 0 | 0 | 365 | 284 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | Yield |
| Storage Length | - | - | - | - | - | - | 300 | - | - | - | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 62 | 62 | 62 | 83 | 83 | 83 | 80 | 80 | 80 |
| Heavy Vehicles, % | 2 | 2 | 2 | 6 | 0 | 17 | 2 | 3 | 2 | 2 | 6 | 3 |
| Mvmt Flow | 0 | 0 | 0 | 47 | 3 | 263 | 134 | 460 | 0 | 0 | 456 | 355 |

| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1184 | 1184 | 460 |
| Stage 1 | 728 | 728 | - |
| Stage 2 | 456 | 456 | - |
| Critical Hdwy | 6.46 | 6.5 | 6.37 |
| Critical Hdwy Stg 1 | 5.46 | 5.5 | - |
| Critical Hdwy Stg 2 | 5.46 | 5.5 | - |
| Follow-up Hdwy | 3.554 | 4 | 3.453 |
| Pot Cap-1 Maneuver | 205 | 191 | 571 |
| Stage 1 | 471 | 432 | - |
| Stage 2 | 630 | 572 | - |
| Platoon blocked, % | | | |
| Mov Cap-1 Maneuver | 180 | 0 | 571 |
| Mov Cap-2 Maneuver | 180 | 0 | - |
| Stage 1 | 414 | 0 | - |
| Stage 2 | 630 | 0 | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 32.7 | 2 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBL | NBTWBLn1 | SBT | SBR |
|-----------------------|-------|----------|-------|-----|
| Capacity (veh/h) | 1105 | - | 430 | - |
| HCM Lane V/C Ratio | 0.121 | - | 0.728 | - |
| HCM Control Delay (s) | 8.7 | - | 32.7 | - |
| HCM Lane LOS | A | - | D | - |
| HCM 95th %tile Q(veh) | 0.4 | - | 5.8 | - |

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| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|------|------|------|-------|------|-------|------|------|------|-------|------|
| Lane Configurations | | | | | ↔ | | ↗ | ↑ | | | ↖ | |
| Traffic Volume (vph) | 0 | 0 | 0 | 159 | 3 | 209 | 37 | 375 | 0 | 0 | 325 | 181 |
| Future Volume (vph) | 0 | 0 | 0 | 159 | 3 | 209 | 37 | 375 | 0 | 0 | 325 | 181 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | 0.924 | | | | | | 0.952 | |
| Flt Protected | | | | | 0.979 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1909 | 0 | 1745 | 1881 | 0 | 0 | 1749 | 0 |
| Flt Permitted | | | | | 0.979 | | 0.950 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1909 | 0 | 1745 | 1881 | 0 | 0 | 1749 | 0 |
| Adj. Flow (vph) | 0 | 0 | 0 | 185 | 3 | 243 | 42 | 421 | 0 | 0 | 422 | 235 |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 431 | 0 | 42 | 421 | 0 | 0 | 657 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Control Type: Unsignalized

2024 Build Weekday Evening
2: Old Manchester Road & Route 101 WB

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| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Int Delay, s/veh | 23.9 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | ↕ | | ↕ | ↑ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 159 | 3 | 209 | 37 | 375 | 0 | 0 | 325 | 181 |
| Future Vol, veh/h | 0 | 0 | 0 | 159 | 3 | 209 | 37 | 375 | 0 | 0 | 325 | 181 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | Yield |
| Storage Length | - | - | - | - | - | - | 300 | - | - | - | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 86 | 86 | 86 | 89 | 89 | 89 | 77 | 77 | 77 |
| Heavy Vehicles, % | 2 | 2 | 2 | 0 | 50 | 3 | 0 | 1 | 2 | 2 | 0 | 0 |
| Mvmt Flow | 0 | 0 | 0 | 185 | 3 | 243 | 42 | 421 | 0 | 0 | 422 | 235 |

| Major/Minor | Minor1 | | Major1 | | Major2 | | |
|----------------------|--------|------|--------|------|--------|---|---|
| Conflicting Flow All | 927 | 927 | 421 | 422 | 0 | - | 0 |
| Stage 1 | 505 | 505 | - | - | - | - | - |
| Stage 2 | 422 | 422 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 7 | 6.23 | 4.1 | - | - | - |
| Critical Hdwy Stg 1 | 5.4 | 6 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | 6 | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4.45 | 3.327 | 2.2 | - | - | - |
| Pot Cap-1 Maneuver | 300 | 224 | 630 | 1148 | - | 0 | 0 |
| Stage 1 | 610 | 469 | - | - | - | 0 | 0 |
| Stage 2 | 666 | 514 | - | - | - | 0 | 0 |
| Platoon blocked, % | | | | | - | - | - |
| Mov Cap-1 Maneuver | 289 | 0 | 630 | 1148 | - | - | - |
| Mov Cap-2 Maneuver | 289 | 0 | - | - | - | - | - |
| Stage 1 | 587 | 0 | - | - | - | - | - |
| Stage 2 | 666 | 0 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 85.3 | 0.7 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBL | NBTWBLn1 | SBT | SBR |
|-----------------------|-------|----------|-------|-----|
| Capacity (veh/h) | 1148 | - | 417 | - |
| HCM Lane V/C Ratio | 0.036 | - | 1.035 | - |
| HCM Control Delay (s) | 8.3 | - | 85.3 | - |
| HCM Lane LOS | A | - | F | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 13.7 | - |

2034 No-Build Weekday Morning
 2: Old Manchester Road & Route 101 WB

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| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|------|------|------|-------|------|-------|------|------|------|-------|------|
| Lane Configurations | | | | | ↔ | | ↗ | ↑ | | | ↖ | |
| Traffic Volume (vph) | 0 | 0 | 0 | 32 | 2 | 157 | 122 | 394 | 0 | 0 | 358 | 279 |
| Future Volume (vph) | 0 | 0 | 0 | 32 | 2 | 157 | 122 | 394 | 0 | 0 | 358 | 279 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | 0.889 | | | | | | 0.941 | |
| Flt Protected | | | | | 0.992 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1652 | 0 | 1711 | 1845 | 0 | 0 | 1651 | 0 |
| Flt Permitted | | | | | 0.992 | | 0.950 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1652 | 0 | 1711 | 1845 | 0 | 0 | 1651 | 0 |
| Adj. Flow (vph) | 0 | 0 | 0 | 52 | 3 | 253 | 147 | 475 | 0 | 0 | 448 | 349 |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 308 | 0 | 147 | 475 | 0 | 0 | 797 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Control Type: Unsignalized

2034 No-Build Weekday Morning
2: Old Manchester Road & Route 101 WB

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| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Int Delay, s/veh | 7.5 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | ↕ | | ↕ | ↑ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 32 | 2 | 157 | 122 | 394 | 0 | 0 | 358 | 279 |
| Future Vol, veh/h | 0 | 0 | 0 | 32 | 2 | 157 | 122 | 394 | 0 | 0 | 358 | 279 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | Yield |
| Storage Length | - | - | - | - | - | - | 300 | - | - | - | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 62 | 62 | 62 | 83 | 83 | 83 | 80 | 80 | 80 |
| Heavy Vehicles, % | 2 | 2 | 2 | 6 | 0 | 17 | 2 | 3 | 2 | 2 | 6 | 3 |
| Mvmt Flow | 0 | 0 | 0 | 52 | 3 | 253 | 147 | 475 | 0 | 0 | 448 | 349 |

| Major/Minor | Minor1 | | Major1 | | Major2 | | |
|----------------------|--------|------|--------|-------|--------|---|---|
| Conflicting Flow All | 1217 | 1217 | 475 | 448 | 0 | - | 0 |
| Stage 1 | 769 | 769 | - | - | - | - | - |
| Stage 2 | 448 | 448 | - | - | - | - | - |
| Critical Hdwy | 6.46 | 6.5 | 6.37 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.46 | 5.5 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.46 | 5.5 | - | - | - | - | - |
| Follow-up Hdwy | 3.554 | 4 | 3.453 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 196 | 182 | 560 | 1112 | - | 0 | 0 |
| Stage 1 | 450 | 413 | - | - | - | 0 | 0 |
| Stage 2 | 635 | 576 | - | - | - | 0 | 0 |
| Platoon blocked, % | | | | | - | - | - |
| Mov Cap-1 Maneuver | 170 | 0 | 560 | 1112 | - | - | - |
| Mov Cap-2 Maneuver | 170 | 0 | - | - | - | - | - |
| Stage 1 | 391 | 0 | - | - | - | - | - |
| Stage 2 | 635 | 0 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 37.6 | 2.1 | 0 |
| HCM LOS | E | | |

| Minor Lane/Major Mvmt | NBL | NBTWBLn1 | SBT | SBR |
|-----------------------|-------|----------|-------|-----|
| Capacity (veh/h) | 1112 | - | 403 | - |
| HCM Lane V/C Ratio | 0.132 | - | 0.764 | - |
| HCM Control Delay (s) | 8.7 | - | 37.6 | - |
| HCM Lane LOS | A | - | E | - |
| HCM 95th %tile Q(veh) | 0.5 | - | 6.3 | - |

2034 No-Build Weekday Evening
 2: Old Manchester Road & Route 101 WB

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| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|------|------|------|-------|------|-------|------|------|------|-------|------|
| Lane Configurations | | | | | ↔ | | ↗ | ↑ | | | ↘ | |
| Traffic Volume (vph) | 0 | 0 | 0 | 175 | 3 | 198 | 41 | 368 | 0 | 0 | 325 | 173 |
| Future Volume (vph) | 0 | 0 | 0 | 175 | 3 | 198 | 41 | 368 | 0 | 0 | 325 | 173 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | 0.929 | | | | | | 0.953 | |
| Flt Protected | | | | | 0.977 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1917 | 0 | 1745 | 1881 | 0 | 0 | 1750 | 0 |
| Flt Permitted | | | | | 0.977 | | 0.950 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1917 | 0 | 1745 | 1881 | 0 | 0 | 1750 | 0 |
| Adj. Flow (vph) | 0 | 0 | 0 | 203 | 3 | 230 | 46 | 413 | 0 | 0 | 422 | 225 |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 436 | 0 | 46 | 413 | 0 | 0 | 647 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Control Type: Unsignalized

2034 No-Build Weekday Evening
2: Old Manchester Road & Route 101 WB

11/10/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Int Delay, s/veh | 28.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | ↕ | | ↕ | ↑ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 175 | 3 | 198 | 41 | 368 | 0 | 0 | 325 | 173 |
| Future Vol, veh/h | 0 | 0 | 0 | 175 | 3 | 198 | 41 | 368 | 0 | 0 | 325 | 173 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | Yield |
| Storage Length | - | - | - | - | - | - | 300 | - | - | - | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 86 | 86 | 86 | 89 | 89 | 89 | 77 | 77 | 77 |
| Heavy Vehicles, % | 2 | 2 | 2 | 0 | 50 | 3 | 0 | 1 | 2 | 2 | 0 | 0 |
| Mvmt Flow | 0 | 0 | 0 | 203 | 3 | 230 | 46 | 413 | 0 | 0 | 422 | 225 |

| Major/Minor | Minor1 | | Major1 | | Major2 | | |
|----------------------|--------|------|--------|------|--------|---|---|
| Conflicting Flow All | 927 | 927 | 413 | 422 | 0 | - | 0 |
| Stage 1 | 505 | 505 | - | - | - | - | - |
| Stage 2 | 422 | 422 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 7 | 6.23 | 4.1 | - | - | - |
| Critical Hdwy Stg 1 | 5.4 | 6 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | 6 | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4.45 | 3.327 | 2.2 | - | - | - |
| Pot Cap-1 Maneuver | 300 | 224 | 637 | 1148 | - | 0 | 0 |
| Stage 1 | 610 | 469 | - | - | - | 0 | 0 |
| Stage 2 | 666 | 514 | - | - | - | 0 | 0 |
| Platoon blocked, % | | | | | - | - | - |
| Mov Cap-1 Maneuver | 288 | 0 | 637 | 1148 | - | - | - |
| Mov Cap-2 Maneuver | 288 | 0 | - | - | - | - | - |
| Stage 1 | 586 | 0 | - | - | - | - | - |
| Stage 2 | 666 | 0 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|----|-----|----|
| HCM Control Delay, s | 99 | 0.8 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBL | NBTWBLn1 | SBT | SBR |
|-----------------------|------|----------|-------|-----|
| Capacity (veh/h) | 1148 | - | 406 | - |
| HCM Lane V/C Ratio | 0.04 | - | 1.077 | - |
| HCM Control Delay (s) | 8.3 | - | 99 | - |
| HCM Lane LOS | A | - | F | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 14.9 | - |

2034 Build Weekday Morning
 2: Old Manchester Road & Route 101 WB

11/10/2023



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|------|------|------|-------|------|-------|------|------|------|-------|------|
| Lane Configurations | | | | | ↔ | | ↗ | ↑ | | | ↖ | |
| Traffic Volume (vph) | 0 | 0 | 0 | 32 | 2 | 168 | 122 | 408 | 0 | 0 | 388 | 302 |
| Future Volume (vph) | 0 | 0 | 0 | 32 | 2 | 168 | 122 | 408 | 0 | 0 | 388 | 302 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | 0.888 | | | | | | 0.941 | |
| Flt Protected | | | | | 0.992 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1648 | 0 | 1711 | 1845 | 0 | 0 | 1651 | 0 |
| Flt Permitted | | | | | 0.992 | | 0.950 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1648 | 0 | 1711 | 1845 | 0 | 0 | 1651 | 0 |
| Adj. Flow (vph) | 0 | 0 | 0 | 52 | 3 | 271 | 147 | 492 | 0 | 0 | 485 | 378 |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 326 | 0 | 147 | 492 | 0 | 0 | 863 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Control Type: Unsignalized

2034 Build Weekday Morning
 2: Old Manchester Road & Route 101 WB

11/10/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Int Delay, s/veh | 8.9 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | ↕ | | ↕ | ↑ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 32 | 2 | 168 | 122 | 408 | 0 | 0 | 388 | 302 |
| Future Vol, veh/h | 0 | 0 | 0 | 32 | 2 | 168 | 122 | 408 | 0 | 0 | 388 | 302 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | Yield |
| Storage Length | - | - | - | - | - | - | 300 | - | - | - | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 62 | 62 | 62 | 83 | 83 | 83 | 80 | 80 | 80 |
| Heavy Vehicles, % | 2 | 2 | 2 | 6 | 0 | 17 | 2 | 3 | 2 | 2 | 6 | 3 |
| Mvmt Flow | 0 | 0 | 0 | 52 | 3 | 271 | 147 | 492 | 0 | 0 | 485 | 378 |

| Major/Minor | Minor1 | | Major1 | | Major2 | | |
|----------------------|--------|------|--------|-------|--------|---|---|
| Conflicting Flow All | 1271 | 1271 | 492 | 485 | 0 | - | 0 |
| Stage 1 | 786 | 786 | - | - | - | - | - |
| Stage 2 | 485 | 485 | - | - | - | - | - |
| Critical Hdwy | 6.46 | 6.5 | 6.37 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.46 | 5.5 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.46 | 5.5 | - | - | - | - | - |
| Follow-up Hdwy | 3.554 | 4 | 3.453 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 182 | 169 | 548 | 1078 | - | 0 | 0 |
| Stage 1 | 442 | 406 | - | - | - | 0 | 0 |
| Stage 2 | 611 | 555 | - | - | - | 0 | 0 |
| Platoon blocked, % | | | | | - | - | - |
| Mov Cap-1 Maneuver | 157 | 0 | 548 | 1078 | - | - | - |
| Mov Cap-2 Maneuver | 157 | 0 | - | - | - | - | - |
| Stage 1 | 382 | 0 | - | - | - | - | - |
| Stage 2 | 611 | 0 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 46 | 2 | 0 |
| HCM LOS | E | | |

| Minor Lane/Major Mvmt | NBL | NBTWBLn1 | SBT | SBR |
|-----------------------|-------|----------|-------|-----|
| Capacity (veh/h) | 1078 | - | 392 | - |
| HCM Lane V/C Ratio | 0.136 | - | 0.831 | - |
| HCM Control Delay (s) | 8.9 | - | 46 | - |
| HCM Lane LOS | A | - | E | - |
| HCM 95th %tile Q(veh) | 0.5 | - | 7.7 | - |

2034 Build Weekday Evening
 2: Old Manchester Road & Route 101 WB

11/10/2023



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|------|------|------|-------|------|-------|------|------|------|-------|------|
| Lane Configurations | | | | | ↔ | | ↗ | ↑ | | | ↖ | |
| Traffic Volume (vph) | 0 | 0 | 0 | 175 | 3 | 222 | 41 | 401 | 0 | 0 | 345 | 189 |
| Future Volume (vph) | 0 | 0 | 0 | 175 | 3 | 222 | 41 | 401 | 0 | 0 | 345 | 189 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | 0.925 | | | | | | 0.952 | |
| Flt Protected | | | | | 0.979 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1912 | 0 | 1745 | 1881 | 0 | 0 | 1749 | 0 |
| Flt Permitted | | | | | 0.979 | | 0.950 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1912 | 0 | 1745 | 1881 | 0 | 0 | 1749 | 0 |
| Adj. Flow (vph) | 0 | 0 | 0 | 203 | 3 | 258 | 46 | 451 | 0 | 0 | 448 | 245 |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 464 | 0 | 46 | 451 | 0 | 0 | 693 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Control Type: Unsignalized

2034 Build Weekday Evening
2: Old Manchester Road & Route 101 WB

11/10/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Int Delay, s/veh | 41 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | ↕ | | ↕ | ↑ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 175 | 3 | 222 | 41 | 401 | 0 | 0 | 345 | 189 |
| Future Vol, veh/h | 0 | 0 | 0 | 175 | 3 | 222 | 41 | 401 | 0 | 0 | 345 | 189 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | Yield |
| Storage Length | - | - | - | - | - | - | 300 | - | - | - | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 86 | 86 | 86 | 89 | 89 | 89 | 77 | 77 | 77 |
| Heavy Vehicles, % | 2 | 2 | 2 | 0 | 50 | 3 | 0 | 1 | 2 | 2 | 0 | 0 |
| Mvmt Flow | 0 | 0 | 0 | 203 | 3 | 258 | 46 | 451 | 0 | 0 | 448 | 245 |

| Major/Minor | Minor1 | | Major1 | | Major2 | | |
|----------------------|--------|------|--------|------|--------|---|---|
| Conflicting Flow All | 991 | 991 | 451 | 448 | 0 | - | 0 |
| Stage 1 | 543 | 543 | - | - | - | - | - |
| Stage 2 | 448 | 448 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 7 | 6.23 | 4.1 | - | - | - |
| Critical Hdwy Stg 1 | 5.4 | 6 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | 6 | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4.45 | 3.327 | 2.2 | - | - | - |
| Pot Cap-1 Maneuver | 275 | 204 | 606 | 1123 | - | 0 | 0 |
| Stage 1 | 586 | 449 | - | - | - | 0 | 0 |
| Stage 2 | 648 | 499 | - | - | - | 0 | 0 |
| Platoon blocked, % | | | | | - | - | - |
| Mov Cap-1 Maneuver | 264 | 0 | 606 | 1123 | - | - | - |
| Mov Cap-2 Maneuver | 264 | 0 | - | - | - | - | - |
| Stage 1 | 562 | 0 | - | - | - | - | - |
| Stage 2 | 648 | 0 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-------|-----|----|
| HCM Control Delay, s | 145.2 | 0.8 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBL | NBTWBLn1 | SBT | SBR |
|-----------------------|-------|----------|-------|-----|
| Capacity (veh/h) | 1123 | - | 386 | - |
| HCM Lane V/C Ratio | 0.041 | - | 1.205 | - |
| HCM Control Delay (s) | 8.3 | - | 145.2 | - |
| HCM Lane LOS | A | - | F | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 19 | - |

Old Manchester Road at Route 101 Eastbound Ramps

2023 Existing Weekday Morning
 3: Old Manchester Road & Route 101 EB

11/08/2023



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|-------|------|------|------|------|------|-------|------|-------|------|------|
| Lane Configurations | | ↕ | | | | | | ↕ | | ↕ | ↕ | |
| Traffic Volume (vph) | 116 | 0 | 24 | 0 | 0 | 0 | 0 | 235 | 163 | 150 | 116 | 0 |
| Future Volume (vph) | 116 | 0 | 24 | 0 | 0 | 0 | 0 | 235 | 163 | 150 | 116 | 0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.977 | | | | | | 0.945 | | | | |
| Flt Protected | | 0.960 | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1955 | 0 | 0 | 0 | 0 | 0 | 2015 | 0 | 1687 | 1717 | 0 |
| Flt Permitted | | 0.960 | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1955 | 0 | 0 | 0 | 0 | 0 | 2015 | 0 | 1687 | 1717 | 0 |
| Adj. Flow (vph) | 159 | 0 | 33 | 0 | 0 | 0 | 0 | 247 | 172 | 183 | 141 | 0 |
| Lane Group Flow (vph) | 0 | 192 | 0 | 0 | 0 | 0 | 0 | 419 | 0 | 183 | 141 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Control Type: Unsignalized

2023 Existing Weekday Morning
3: Old Manchester Road & Route 101 EB

11/08/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|-------|------|------|------|
| Int Delay, s/veh | 6.9 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | | | | ↕ | | ↕ | ↕ | |
| Traffic Vol, veh/h | 116 | 0 | 24 | 0 | 0 | 0 | 0 | 235 | 163 | 150 | 116 | 0 |
| Future Vol, veh/h | 116 | 0 | 24 | 0 | 0 | 0 | 0 | 235 | 163 | 150 | 116 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | Yield | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | 200 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 73 | 73 | 73 | 92 | 92 | 92 | 95 | 95 | 95 | 82 | 82 | 82 |
| Heavy Vehicles, % | 4 | 2 | 0 | 2 | 2 | 2 | 2 | 1 | 1 | 7 | 7 | 2 |
| Mvmt Flow | 159 | 0 | 33 | 0 | 0 | 0 | 0 | 247 | 172 | 183 | 141 | 0 |

| Major/Minor | Minor2 | | | Major1 | | | Major2 | | |
|----------------------|--------|-------|-----|--------|---|---|--------|---|---|
| Conflicting Flow All | 754 | 754 | 141 | - | 0 | 0 | 247 | 0 | 0 |
| Stage 1 | 507 | 507 | - | - | - | - | - | - | - |
| Stage 2 | 247 | 247 | - | - | - | - | - | - | - |
| Critical Hdwy | 6.44 | 6.52 | 6.2 | - | - | - | 4.17 | - | - |
| Critical Hdwy Stg 1 | 5.44 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.44 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.536 | 4.018 | 3.3 | - | - | - | 2.263 | - | - |
| Pot Cap-1 Maneuver | 374 | 338 | 912 | 0 | - | - | 1290 | - | 0 |
| Stage 1 | 601 | 539 | - | 0 | - | - | - | - | 0 |
| Stage 2 | 789 | 702 | - | 0 | - | - | - | - | 0 |
| Platoon blocked, % | | | | | | | | | |
| Mov Cap-1 Maneuver | 321 | 0 | 912 | - | - | - | 1290 | - | - |
| Mov Cap-2 Maneuver | 321 | 0 | - | - | - | - | - | - | - |
| Stage 1 | 601 | 0 | - | - | - | - | - | - | - |
| Stage 2 | 677 | 0 | - | - | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 25.7 | 0 | 4.7 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBT | NBR | EBLn1 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-----|
| Capacity (veh/h) | - | - | 361 | 1290 | - |
| HCM Lane V/C Ratio | - | - | 0.531 | 0.142 | - |
| HCM Control Delay (s) | - | - | 25.7 | 8.3 | - |
| HCM Lane LOS | - | - | D | A | - |
| HCM 95th %tile Q(veh) | - | - | 3 | 0.5 | - |

2023 Existing Weekday Evening
 3: Old Manchester Road & Route 101 EB

11/08/2023



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|-------|------|------|------|------|------|-------|------|-------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 174 | 2 | 110 | 0 | 0 | 0 | 0 | 113 | 75 | 65 | 278 | 0 |
| Future Volume (vph) | 174 | 2 | 110 | 0 | 0 | 0 | 0 | 113 | 75 | 65 | 278 | 0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.948 | | | | | | 0.946 | | | | |
| Flt Protected | | 0.970 | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1968 | 0 | 0 | 0 | 0 | 0 | 2037 | 0 | 1805 | 1837 | 0 |
| Flt Permitted | | 0.970 | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1968 | 0 | 0 | 0 | 0 | 0 | 2037 | 0 | 1805 | 1837 | 0 |
| Adj. Flow (vph) | 202 | 2 | 128 | 0 | 0 | 0 | 0 | 122 | 81 | 81 | 348 | 0 |
| Lane Group Flow (vph) | 0 | 332 | 0 | 0 | 0 | 0 | 0 | 203 | 0 | 81 | 348 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary
 Control Type: Unsignalized

2023 Existing Weekday Evening
3: Old Manchester Road & Route 101 EB

11/08/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|-------|------|------|------|
| Int Delay, s/veh | 9.5 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕↔ | | | | | | ↔ | | ↔ | ↕ | |
| Traffic Vol, veh/h | 174 | 2 | 110 | 0 | 0 | 0 | 0 | 113 | 75 | 65 | 278 | 0 |
| Future Vol, veh/h | 174 | 2 | 110 | 0 | 0 | 0 | 0 | 113 | 75 | 65 | 278 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | Yield | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | 200 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 92 | 92 | 92 | 93 | 93 | 93 | 80 | 80 | 80 |
| Heavy Vehicles, % | 1 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 2 |
| Mvmt Flow | 202 | 2 | 128 | 0 | 0 | 0 | 0 | 122 | 81 | 81 | 348 | 0 |

| Major/Minor | Minor2 | | | Major1 | | | Major2 | | |
|----------------------|--------|-----|-----|--------|---|---|--------|---|---|
| Conflicting Flow All | 632 | 632 | 348 | - | 0 | 0 | 122 | 0 | 0 |
| Stage 1 | 510 | 510 | - | - | - | - | - | - | - |
| Stage 2 | 122 | 122 | - | - | - | - | - | - | - |
| Critical Hdwy | 6.41 | 6.5 | 6.2 | - | - | - | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.41 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.41 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.509 | 4 | 3.3 | - | - | - | 2.2 | - | - |
| Pot Cap-1 Maneuver | 446 | 400 | 700 | 0 | - | - | 1478 | - | 0 |
| Stage 1 | 605 | 541 | - | 0 | - | - | - | - | 0 |
| Stage 2 | 906 | 799 | - | 0 | - | - | - | - | 0 |
| Platoon blocked, % | | | | | | | | | |
| Mov Cap-1 Maneuver | 421 | 0 | 700 | - | - | - | 1478 | - | - |
| Mov Cap-2 Maneuver | 421 | 0 | - | - | - | - | - | - | - |
| Stage 1 | 605 | 0 | - | - | - | - | - | - | - |
| Stage 2 | 856 | 0 | - | - | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 25.6 | 0 | 1.4 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBT | NBR | EBLn1 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-----|
| Capacity (veh/h) | - | - | 498 | 1478 | - |
| HCM Lane V/C Ratio | - | - | 0.668 | 0.055 | - |
| HCM Control Delay (s) | - | - | 25.6 | 7.6 | - |
| HCM Lane LOS | - | - | D | A | - |
| HCM 95th %tile Q(veh) | - | - | 4.9 | 0.2 | - |

2024 No-Build Weekday Morning
 3: Old Manchester Road & Route 101 EB

11/10/2023



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|-------|------|------|------|------|------|-------|------|-------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 212 | 0 | 26 | 0 | 0 | 0 | 0 | 267 | 167 | 227 | 137 | 0 |
| Future Volume (vph) | 212 | 0 | 26 | 0 | 0 | 0 | 0 | 267 | 167 | 227 | 137 | 0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.985 | | | | | | 0.948 | | | | |
| Flt Protected | | 0.957 | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1960 | 0 | 0 | 0 | 0 | 0 | 2021 | 0 | 1687 | 1717 | 0 |
| Flt Permitted | | 0.957 | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1960 | 0 | 0 | 0 | 0 | 0 | 2021 | 0 | 1687 | 1717 | 0 |
| Adj. Flow (vph) | 290 | 0 | 36 | 0 | 0 | 0 | 0 | 281 | 176 | 277 | 167 | 0 |
| Lane Group Flow (vph) | 0 | 326 | 0 | 0 | 0 | 0 | 0 | 457 | 0 | 277 | 167 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary
 Control Type: Unsignalized

2024 No-Build Weekday Morning
3: Old Manchester Road & Route 101 EB

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| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|-------|------|------|------|
| Int Delay, s/veh | 71.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕↔ | | | | | | ↔ | | ↔ | ↕ | |
| Traffic Vol, veh/h | 212 | 0 | 26 | 0 | 0 | 0 | 0 | 267 | 167 | 227 | 137 | 0 |
| Future Vol, veh/h | 212 | 0 | 26 | 0 | 0 | 0 | 0 | 267 | 167 | 227 | 137 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | Yield | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | 200 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 73 | 73 | 73 | 92 | 92 | 92 | 95 | 95 | 95 | 82 | 82 | 82 |
| Heavy Vehicles, % | 4 | 2 | 0 | 2 | 2 | 2 | 2 | 1 | 1 | 7 | 7 | 2 |
| Mvmt Flow | 290 | 0 | 36 | 0 | 0 | 0 | 0 | 281 | 176 | 277 | 167 | 0 |

| Major/Minor | Minor2 | | | Major1 | | | Major2 | | |
|----------------------|--------|-------|-----|--------|---|---|--------|---|---|
| Conflicting Flow All | 1002 | 1002 | 167 | - | 0 | 0 | 281 | 0 | 0 |
| Stage 1 | 721 | 721 | - | - | - | - | - | - | - |
| Stage 2 | 281 | 281 | - | - | - | - | - | - | - |
| Critical Hdwy | 6.44 | 6.52 | 6.2 | - | - | - | 4.17 | - | - |
| Critical Hdwy Stg 1 | 5.44 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.44 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.536 | 4.018 | 3.3 | - | - | - | 2.263 | - | - |
| Pot Cap-1 Maneuver | ~ 266 | 242 | 882 | 0 | - | - | 1253 | - | 0 |
| Stage 1 | 478 | 432 | - | 0 | - | - | - | - | 0 |
| Stage 2 | 762 | 678 | - | 0 | - | - | - | - | 0 |
| Platoon blocked, % | | | | | | | | | |
| Mov Cap-1 Maneuver | ~ 207 | 0 | 882 | - | - | - | 1253 | - | - |
| Mov Cap-2 Maneuver | ~ 207 | 0 | - | - | - | - | - | - | - |
| Stage 1 | 478 | 0 | - | - | - | - | - | - | - |
| Stage 2 | 594 | 0 | - | - | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-------|----|-----|
| HCM Control Delay, s | 262.8 | 0 | 5.4 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBR | EBLn1 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-----|
| Capacity (veh/h) | - | - | 226 | 1253 | - |
| HCM Lane V/C Ratio | - | - | 1.443 | 0.221 | - |
| HCM Control Delay (s) | - | - | 262.8 | 8.7 | - |
| HCM Lane LOS | - | - | F | A | - |
| HCM 95th %tile Q(veh) | - | - | 19 | 0.8 | - |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

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| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|-------|------|------|------|------|------|-------|------|-------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 241 | 2 | 111 | 0 | 0 | 0 | 0 | 138 | 76 | 153 | 311 | 0 |
| Future Volume (vph) | 241 | 2 | 111 | 0 | 0 | 0 | 0 | 138 | 76 | 153 | 311 | 0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.958 | | | | | | 0.952 | | | | |
| Flt Protected | | 0.967 | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1981 | 0 | 0 | 0 | 0 | 0 | 2050 | 0 | 1805 | 1837 | 0 |
| Flt Permitted | | 0.967 | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1981 | 0 | 0 | 0 | 0 | 0 | 2050 | 0 | 1805 | 1837 | 0 |
| Adj. Flow (vph) | 280 | 2 | 129 | 0 | 0 | 0 | 0 | 148 | 82 | 191 | 389 | 0 |
| Lane Group Flow (vph) | 0 | 411 | 0 | 0 | 0 | 0 | 0 | 230 | 0 | 191 | 389 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Control Type: Unsignalized

2024 No-Build Weekday Evening
3: Old Manchester Road & Route 101 EB

11/10/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|-------|------|------|------|
| Int Delay, s/veh | 60.9 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕↔ | | | | | | ↔ | | ↔ | ↕ | |
| Traffic Vol, veh/h | 241 | 2 | 111 | 0 | 0 | 0 | 0 | 138 | 76 | 153 | 311 | 0 |
| Future Vol, veh/h | 241 | 2 | 111 | 0 | 0 | 0 | 0 | 138 | 76 | 153 | 311 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | Yield | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | 200 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 92 | 92 | 92 | 93 | 93 | 93 | 80 | 80 | 80 |
| Heavy Vehicles, % | 1 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 2 |
| Mvmt Flow | 280 | 2 | 129 | 0 | 0 | 0 | 0 | 148 | 82 | 191 | 389 | 0 |

| Major/Minor | Minor2 | | | Major1 | | | Major2 | | |
|----------------------|--------|-----|-----|--------|---|---|--------|---|---|
| Conflicting Flow All | 919 | 919 | 389 | - | 0 | 0 | 148 | 0 | 0 |
| Stage 1 | 771 | 771 | - | - | - | - | - | - | - |
| Stage 2 | 148 | 148 | - | - | - | - | - | - | - |
| Critical Hdwy | 6.41 | 6.5 | 6.2 | - | - | - | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.41 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.41 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.509 | 4 | 3.3 | - | - | - | 2.2 | - | - |
| Pot Cap-1 Maneuver | 302 | 273 | 664 | 0 | - | - | 1446 | - | 0 |
| Stage 1 | 458 | 413 | - | 0 | - | - | - | - | 0 |
| Stage 2 | 882 | 779 | - | 0 | - | - | - | - | 0 |
| Platoon blocked, % | | | | | | | | | |
| Mov Cap-1 Maneuver | ~ 262 | 0 | 664 | - | - | - | 1446 | - | - |
| Mov Cap-2 Maneuver | ~ 262 | 0 | - | - | - | - | - | - | - |
| Stage 1 | 458 | 0 | - | - | - | - | - | - | - |
| Stage 2 | 766 | 0 | - | - | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-------|----|-----|
| HCM Control Delay, s | 177.2 | 0 | 2.6 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBR | EBLn1 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-----|
| Capacity (veh/h) | - | - | 324 | 1446 | - |
| HCM Lane V/C Ratio | - | - | 1.27 | 0.132 | - |
| HCM Control Delay (s) | - | - | 177.2 | 7.9 | - |
| HCM Lane LOS | - | - | F | A | - |
| HCM 95th %tile Q(veh) | - | - | 19.1 | 0.5 | - |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

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| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|-------|------|------|------|------|------|-------|------|-------|------|------|
| Lane Configurations | | ↕ | | | | | | ↕ | | ↕ | ↕ | |
| Traffic Volume (vph) | 223 | 0 | 26 | 0 | 0 | 0 | 0 | 270 | 167 | 250 | 144 | 0 |
| Future Volume (vph) | 223 | 0 | 26 | 0 | 0 | 0 | 0 | 270 | 167 | 250 | 144 | 0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.986 | | | | | | 0.948 | | | | |
| Flt Protected | | 0.957 | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1962 | 0 | 0 | 0 | 0 | 0 | 2021 | 0 | 1687 | 1717 | 0 |
| Flt Permitted | | 0.957 | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1962 | 0 | 0 | 0 | 0 | 0 | 2021 | 0 | 1687 | 1717 | 0 |
| Adj. Flow (vph) | 305 | 0 | 36 | 0 | 0 | 0 | 0 | 284 | 176 | 305 | 176 | 0 |
| Lane Group Flow (vph) | 0 | 341 | 0 | 0 | 0 | 0 | 0 | 460 | 0 | 305 | 176 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary
 Control Type: Unsignalized

2024 Build Weekday Morning
 3: Old Manchester Road & Route 101 EB

11/10/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|-------|------|------|------|
| Int Delay, s/veh | 102 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | | | | ↔ | | ↔ | ↕ | |
| Traffic Vol, veh/h | 223 | 0 | 26 | 0 | 0 | 0 | 0 | 270 | 167 | 250 | 144 | 0 |
| Future Vol, veh/h | 223 | 0 | 26 | 0 | 0 | 0 | 0 | 270 | 167 | 250 | 144 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | Yield | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | 200 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 73 | 73 | 73 | 92 | 92 | 92 | 95 | 95 | 95 | 82 | 82 | 82 |
| Heavy Vehicles, % | 4 | 2 | 0 | 2 | 2 | 2 | 2 | 1 | 1 | 7 | 7 | 2 |
| Mvmt Flow | 305 | 0 | 36 | 0 | 0 | 0 | 0 | 284 | 176 | 305 | 176 | 0 |

| Major/Minor | Minor2 | | | Major1 | | | Major2 | | |
|----------------------|--------|-------|-----|--------|---|---|--------|---|---|
| Conflicting Flow All | 1070 | 1070 | 176 | - | 0 | 0 | 284 | 0 | 0 |
| Stage 1 | 786 | 786 | - | - | - | - | - | - | - |
| Stage 2 | 284 | 284 | - | - | - | - | - | - | - |
| Critical Hdwy | 6.44 | 6.52 | 6.2 | - | - | - | 4.17 | - | - |
| Critical Hdwy Stg 1 | 5.44 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.44 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.536 | 4.018 | 3.3 | - | - | - | 2.263 | - | - |
| Pot Cap-1 Maneuver | ~ 243 | 221 | 872 | 0 | - | - | 1250 | - | 0 |
| Stage 1 | 446 | 403 | - | 0 | - | - | - | - | 0 |
| Stage 2 | 760 | 676 | - | 0 | - | - | - | - | 0 |
| Platoon blocked, % | | | | | | | | | |
| Mov Cap-1 Maneuver | ~ 184 | 0 | 872 | - | - | - | 1250 | - | - |
| Mov Cap-2 Maneuver | ~ 184 | 0 | - | - | - | - | - | - | - |
| Stage 1 | 446 | 0 | - | - | - | - | - | - | - |
| Stage 2 | 575 | 0 | - | - | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-------|----|-----|
| HCM Control Delay, s | 375.4 | 0 | 5.6 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBR | EBLn1 | SBL | SBT |
|-----------------------|-----|-----|----------|-------|-----|
| Capacity (veh/h) | - | - | 201 | 1250 | - |
| HCM Lane V/C Ratio | - | - | 1.697 | 0.244 | - |
| HCM Control Delay (s) | - | - | \$ 375.4 | 8.8 | - |
| HCM Lane LOS | - | - | F | A | - |
| HCM 95th %tile Q(veh) | - | - | 23.1 | 1 | - |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2024 Build Weekday Evening
 3: Old Manchester Road & Route 101 EB

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| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|-------|------|------|------|------|------|-------|------|-------|------|------|
| Lane Configurations | | ↕ | | | | | | ↕ | | ↕ | ↕ | |
| Traffic Volume (vph) | 266 | 2 | 111 | 0 | 0 | 0 | 0 | 146 | 76 | 168 | 316 | 0 |
| Future Volume (vph) | 266 | 2 | 111 | 0 | 0 | 0 | 0 | 146 | 76 | 168 | 316 | 0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.960 | | | | | | 0.954 | | | | |
| Flt Protected | | 0.966 | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1983 | 0 | 0 | 0 | 0 | 0 | 2054 | 0 | 1805 | 1837 | 0 |
| Flt Permitted | | 0.966 | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1983 | 0 | 0 | 0 | 0 | 0 | 2054 | 0 | 1805 | 1837 | 0 |
| Adj. Flow (vph) | 309 | 2 | 129 | 0 | 0 | 0 | 0 | 157 | 82 | 210 | 395 | 0 |
| Lane Group Flow (vph) | 0 | 440 | 0 | 0 | 0 | 0 | 0 | 239 | 0 | 210 | 395 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary
 Control Type: Unsignalized

2024 Build Weekday Evening
3: Old Manchester Road & Route 101 EB

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| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|-------|------|------|------|
| Int Delay, s/veh | 94.5 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | | | | ↔ | | ↔ | ↕ | |
| Traffic Vol, veh/h | 266 | 2 | 111 | 0 | 0 | 0 | 0 | 146 | 76 | 168 | 316 | 0 |
| Future Vol, veh/h | 266 | 2 | 111 | 0 | 0 | 0 | 0 | 146 | 76 | 168 | 316 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | Yield | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | 200 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 92 | 92 | 92 | 93 | 93 | 93 | 80 | 80 | 80 |
| Heavy Vehicles, % | 1 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 2 |
| Mvmt Flow | 309 | 2 | 129 | 0 | 0 | 0 | 0 | 157 | 82 | 210 | 395 | 0 |

| Major/Minor | Minor2 | | | Major1 | | | Major2 | | |
|----------------------|--------|-----|-----|--------|---|---|--------|---|---|
| Conflicting Flow All | 972 | 972 | 395 | - | 0 | 0 | 157 | 0 | 0 |
| Stage 1 | 815 | 815 | - | - | - | - | - | - | - |
| Stage 2 | 157 | 157 | - | - | - | - | - | - | - |
| Critical Hdwy | 6.41 | 6.5 | 6.2 | - | - | - | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.41 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.41 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.509 | 4 | 3.3 | - | - | - | 2.2 | - | - |
| Pot Cap-1 Maneuver | ~281 | 254 | 659 | 0 | - | - | 1435 | - | 0 |
| Stage 1 | 437 | 394 | - | 0 | - | - | - | - | 0 |
| Stage 2 | 874 | 772 | - | 0 | - | - | - | - | 0 |
| Platoon blocked, % | | | | | | | | | |
| Mov Cap-1 Maneuver | ~240 | 0 | 659 | - | - | - | 1435 | - | - |
| Mov Cap-2 Maneuver | ~240 | 0 | - | - | - | - | - | - | - |
| Stage 1 | 437 | 0 | - | - | - | - | - | - | - |
| Stage 2 | 746 | 0 | - | - | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-------|----|-----|
| HCM Control Delay, s | 271.7 | 0 | 2.8 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBR | EBLn1 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-----|
| Capacity (veh/h) | - | - | 295 | 1435 | - |
| HCM Lane V/C Ratio | - | - | 1.494 | 0.146 | - |
| HCM Control Delay (s) | - | - | 271.7 | 7.9 | - |
| HCM Lane LOS | - | - | F | A | - |
| HCM 95th %tile Q(veh) | - | - | 24.9 | 0.5 | - |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2034 No-Build Weekday Morning
 3: Old Manchester Road & Route 101 EB

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| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|-------|------|------|------|------|------|-------|------|-------|------|------|
| Lane Configurations | | ↕ | | | | | | ↕ | | ↕ | ↕ | |
| Traffic Volume (vph) | 224 | 0 | 29 | 0 | 0 | 0 | 0 | 292 | 184 | 242 | 148 | 0 |
| Future Volume (vph) | 224 | 0 | 29 | 0 | 0 | 0 | 0 | 292 | 184 | 242 | 148 | 0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.984 | | | | | | 0.948 | | | | |
| Flt Protected | | 0.958 | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1961 | 0 | 0 | 0 | 0 | 0 | 2021 | 0 | 1687 | 1717 | 0 |
| Flt Permitted | | 0.958 | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1961 | 0 | 0 | 0 | 0 | 0 | 2021 | 0 | 1687 | 1717 | 0 |
| Adj. Flow (vph) | 307 | 0 | 40 | 0 | 0 | 0 | 0 | 307 | 194 | 295 | 180 | 0 |
| Lane Group Flow (vph) | 0 | 347 | 0 | 0 | 0 | 0 | 0 | 501 | 0 | 295 | 180 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Control Type: Unsignalized

2034 No-Build Weekday Morning
3: Old Manchester Road & Route 101 EB

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| Intersection | | | | | | | | | | | | |
|--------------------------|-------|------|------|------|------|------|------|------|-------|------|------|------|
| Int Delay, s/veh | 104.4 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕↔ | | | | | | ↔ | | ↕ | ↕ | |
| Traffic Vol, veh/h | 224 | 0 | 29 | 0 | 0 | 0 | 0 | 292 | 184 | 242 | 148 | 0 |
| Future Vol, veh/h | 224 | 0 | 29 | 0 | 0 | 0 | 0 | 292 | 184 | 242 | 148 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | Yield | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | 200 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 73 | 73 | 73 | 92 | 92 | 92 | 95 | 95 | 95 | 82 | 82 | 82 |
| Heavy Vehicles, % | 4 | 2 | 0 | 2 | 2 | 2 | 2 | 1 | 1 | 7 | 7 | 2 |
| Mvmt Flow | 307 | 0 | 40 | 0 | 0 | 0 | 0 | 307 | 194 | 295 | 180 | 0 |

| Major/Minor | Minor2 | | | Major1 | | | Major2 | | |
|----------------------|--------|-------|-----|--------|---|---|--------|---|---|
| Conflicting Flow All | 1077 | 1077 | 180 | - | 0 | 0 | 307 | 0 | 0 |
| Stage 1 | 770 | 770 | - | - | - | - | - | - | - |
| Stage 2 | 307 | 307 | - | - | - | - | - | - | - |
| Critical Hdwy | 6.44 | 6.52 | 6.2 | - | - | - | 4.17 | - | - |
| Critical Hdwy Stg 1 | 5.44 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.44 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.536 | 4.018 | 3.3 | - | - | - | 2.263 | - | - |
| Pot Cap-1 Maneuver | ~ 240 | 219 | 868 | 0 | - | - | 1226 | - | 0 |
| Stage 1 | 453 | 410 | - | 0 | - | - | - | - | 0 |
| Stage 2 | 742 | 661 | - | 0 | - | - | - | - | 0 |
| Platoon blocked, % | | | | | | | | | |
| Mov Cap-1 Maneuver | ~ 182 | 0 | 868 | - | - | - | 1226 | - | - |
| Mov Cap-2 Maneuver | ~ 182 | 0 | - | - | - | - | - | - | - |
| Stage 1 | 453 | 0 | - | - | - | - | - | - | - |
| Stage 2 | 563 | 0 | - | - | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|----------|----|-----|
| HCM Control Delay, s | \$ 390.9 | 0 | 5.5 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBR | EBLn1 | SBL | SBT |
|-----------------------|-----|-----|----------|-------|-----|
| Capacity (veh/h) | - | - | 200 | 1226 | - |
| HCM Lane V/C Ratio | - | - | 1.733 | 0.241 | - |
| HCM Control Delay (s) | - | - | \$ 390.9 | 8.9 | - |
| HCM Lane LOS | - | - | F | A | - |
| HCM 95th %tile Q(veh) | - | - | 23.8 | 0.9 | - |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2034 No-Build Weekday Evening
 3: Old Manchester Road & Route 101 EB

11/10/2023



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|-------|------|------|------|------|------|-------|------|-------|------|------|
| Lane Configurations | | ↕ | | | | | | ↕ | | ↕ | ↕ | |
| Traffic Volume (vph) | 259 | 2 | 123 | 0 | 0 | 0 | 0 | 150 | 84 | 160 | 340 | 0 |
| Future Volume (vph) | 259 | 2 | 123 | 0 | 0 | 0 | 0 | 150 | 84 | 160 | 340 | 0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.957 | | | | | | 0.952 | | | | |
| Flt Protected | | 0.967 | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1979 | 0 | 0 | 0 | 0 | 0 | 2050 | 0 | 1805 | 1837 | 0 |
| Flt Permitted | | 0.967 | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1979 | 0 | 0 | 0 | 0 | 0 | 2050 | 0 | 1805 | 1837 | 0 |
| Adj. Flow (vph) | 301 | 2 | 143 | 0 | 0 | 0 | 0 | 161 | 90 | 200 | 425 | 0 |
| Lane Group Flow (vph) | 0 | 446 | 0 | 0 | 0 | 0 | 0 | 251 | 0 | 200 | 425 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Control Type: Unsignalized

2034 No-Build Weekday Evening
3: Old Manchester Road & Route 101 EB

11/10/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|-------|------|------|------|
| Int Delay, s/veh | 94.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | | | | ↔ | | ↔ | ↕ | |
| Traffic Vol, veh/h | 259 | 2 | 123 | 0 | 0 | 0 | 0 | 150 | 84 | 160 | 340 | 0 |
| Future Vol, veh/h | 259 | 2 | 123 | 0 | 0 | 0 | 0 | 150 | 84 | 160 | 340 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | Yield | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | 200 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 92 | 92 | 92 | 93 | 93 | 93 | 80 | 80 | 80 |
| Heavy Vehicles, % | 1 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 2 |
| Mvmt Flow | 301 | 2 | 143 | 0 | 0 | 0 | 0 | 161 | 90 | 200 | 425 | 0 |

| Major/Minor | Minor2 | | | Major1 | | | Major2 | | |
|----------------------|--------|-----|-----|--------|---|---|--------|---|---|
| Conflicting Flow All | 986 | 986 | 425 | - | 0 | 0 | 161 | 0 | 0 |
| Stage 1 | 825 | 825 | - | - | - | - | - | - | - |
| Stage 2 | 161 | 161 | - | - | - | - | - | - | - |
| Critical Hdwy | 6.41 | 6.5 | 6.2 | - | - | - | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.41 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.41 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.509 | 4 | 3.3 | - | - | - | 2.2 | - | - |
| Pot Cap-1 Maneuver | ~ 276 | 250 | 634 | 0 | - | - | 1430 | - | 0 |
| Stage 1 | 432 | 390 | - | 0 | - | - | - | - | 0 |
| Stage 2 | 870 | 769 | - | 0 | - | - | - | - | 0 |
| Platoon blocked, % | | | | | | | | | |
| Mov Cap-1 Maneuver | ~ 237 | 0 | 634 | - | - | - | 1430 | - | - |
| Mov Cap-2 Maneuver | ~ 237 | 0 | - | - | - | - | - | - | - |
| Stage 1 | 432 | 0 | - | - | - | - | - | - | - |
| Stage 2 | 748 | 0 | - | - | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-------|----|-----|
| HCM Control Delay, s | 275.4 | 0 | 2.5 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBR | EBLn1 | SBL | SBT |
|-----------------------|-----|-----|-------|------|-----|
| Capacity (veh/h) | - | - | 297 | 1430 | - |
| HCM Lane V/C Ratio | - | - | 1.503 | 0.14 | - |
| HCM Control Delay (s) | - | - | 275.4 | 7.9 | - |
| HCM Lane LOS | - | - | F | A | - |
| HCM 95th %tile Q(veh) | - | - | 25.3 | 0.5 | - |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2034 Build Weekday Morning
 3: Old Manchester Road & Route 101 EB

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| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|-------|------|------|------|------|------|-------|------|-------|------|------|
| Lane Configurations | | ↕ | | | | | | ↕ | | ↕ | ↕ | |
| Traffic Volume (vph) | 235 | 0 | 29 | 0 | 0 | 0 | 0 | 295 | 184 | 265 | 155 | 0 |
| Future Volume (vph) | 235 | 0 | 29 | 0 | 0 | 0 | 0 | 295 | 184 | 265 | 155 | 0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.985 | | | | | | 0.948 | | | | |
| Flt Protected | | 0.957 | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1960 | 0 | 0 | 0 | 0 | 0 | 2021 | 0 | 1687 | 1717 | 0 |
| Flt Permitted | | 0.957 | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1960 | 0 | 0 | 0 | 0 | 0 | 2021 | 0 | 1687 | 1717 | 0 |
| Adj. Flow (vph) | 322 | 0 | 40 | 0 | 0 | 0 | 0 | 311 | 194 | 323 | 189 | 0 |
| Lane Group Flow (vph) | 0 | 362 | 0 | 0 | 0 | 0 | 0 | 505 | 0 | 323 | 189 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary
 Control Type: Unsignalized

2034 Build Weekday Morning
 3: Old Manchester Road & Route 101 EB

11/10/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|-------|------|------|------|------|------|------|------|-------|------|------|------|
| Int Delay, s/veh | 143.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | | | | ↕ | | ↕ | ↕ | |
| Traffic Vol, veh/h | 235 | 0 | 29 | 0 | 0 | 0 | 0 | 295 | 184 | 265 | 155 | 0 |
| Future Vol, veh/h | 235 | 0 | 29 | 0 | 0 | 0 | 0 | 295 | 184 | 265 | 155 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | Yield | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | 200 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 73 | 73 | 73 | 92 | 92 | 92 | 95 | 95 | 95 | 82 | 82 | 82 |
| Heavy Vehicles, % | 4 | 2 | 0 | 2 | 2 | 2 | 2 | 1 | 1 | 7 | 7 | 2 |
| Mvmt Flow | 322 | 0 | 40 | 0 | 0 | 0 | 0 | 311 | 194 | 323 | 189 | 0 |

| Major/Minor | Minor2 | | | Major1 | | | Major2 | | |
|----------------------|--------|-------|-----|--------|---|---|--------|---|---|
| Conflicting Flow All | 1146 | 1146 | 189 | - | 0 | 0 | 311 | 0 | 0 |
| Stage 1 | 835 | 835 | - | - | - | - | - | - | - |
| Stage 2 | 311 | 311 | - | - | - | - | - | - | - |
| Critical Hdwy | 6.44 | 6.52 | 6.2 | - | - | - | 4.17 | - | - |
| Critical Hdwy Stg 1 | 5.44 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.44 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.536 | 4.018 | 3.3 | - | - | - | 2.263 | - | - |
| Pot Cap-1 Maneuver | ~ 218 | 199 | 858 | 0 | - | - | 1222 | - | 0 |
| Stage 1 | 422 | 383 | - | 0 | - | - | - | - | 0 |
| Stage 2 | 738 | 658 | - | 0 | - | - | - | - | 0 |
| Platoon blocked, % | | | | | | | | | |
| Mov Cap-1 Maneuver | ~ 160 | 0 | 858 | - | - | - | 1222 | - | - |
| Mov Cap-2 Maneuver | ~ 160 | 0 | - | - | - | - | - | - | - |
| Stage 1 | 422 | 0 | - | - | - | - | - | - | - |
| Stage 2 | 543 | 0 | - | - | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-------|----|-----|
| HCM Control Delay, s | 537.1 | 0 | 5.7 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBR | EBLn1 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-----|
| Capacity (veh/h) | - | - | 176 | 1222 | - |
| HCM Lane V/C Ratio | - | - | 2.055 | 0.264 | - |
| HCM Control Delay (s) | - | - | 537.1 | 9 | - |
| HCM Lane LOS | - | - | F | A | - |
| HCM 95th %tile Q(veh) | - | - | 28 | 1.1 | - |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2034 Build Weekday Evening
 3: Old Manchester Road & Route 101 EB

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| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|------|-------|------|------|------|------|------|-------|------|-------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 284 | 2 | 123 | 0 | 0 | 0 | 0 | 158 | 84 | 175 | 345 | 0 |
| Future Volume (vph) | 284 | 2 | 123 | 0 | 0 | 0 | 0 | 158 | 84 | 175 | 345 | 0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.959 | | | | | | 0.953 | | | | |
| Flt Protected | | 0.966 | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1981 | 0 | 0 | 0 | 0 | 0 | 2052 | 0 | 1805 | 1837 | 0 |
| Flt Permitted | | 0.966 | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1981 | 0 | 0 | 0 | 0 | 0 | 2052 | 0 | 1805 | 1837 | 0 |
| Adj. Flow (vph) | 330 | 2 | 143 | 0 | 0 | 0 | 0 | 170 | 90 | 219 | 431 | 0 |
| Lane Group Flow (vph) | 0 | 475 | 0 | 0 | 0 | 0 | 0 | 260 | 0 | 219 | 431 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary
 Control Type: Unsignalized

2034 Build Weekday Evening
 3: Old Manchester Road & Route 101 EB

11/10/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|-------|------|------|------|------|------|------|------|-------|------|------|------|
| Int Delay, s/veh | 133.9 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | | | | ↔ | | ↔ | ↕ | |
| Traffic Vol, veh/h | 284 | 2 | 123 | 0 | 0 | 0 | 0 | 158 | 84 | 175 | 345 | 0 |
| Future Vol, veh/h | 284 | 2 | 123 | 0 | 0 | 0 | 0 | 158 | 84 | 175 | 345 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | Yield | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | 200 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 92 | 92 | 92 | 93 | 93 | 93 | 80 | 80 | 80 |
| Heavy Vehicles, % | 1 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 2 |
| Mvmt Flow | 330 | 2 | 143 | 0 | 0 | 0 | 0 | 170 | 90 | 219 | 431 | 0 |

| Major/Minor | Minor2 | | | Major1 | | | Major2 | | |
|----------------------|--------|------|-----|--------|---|---|--------|---|---|
| Conflicting Flow All | 1039 | 1039 | 431 | - | 0 | 0 | 170 | 0 | 0 |
| Stage 1 | 869 | 869 | - | - | - | - | - | - | - |
| Stage 2 | 170 | 170 | - | - | - | - | - | - | - |
| Critical Hdwy | 6.41 | 6.5 | 6.2 | - | - | - | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.41 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.41 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.509 | 4 | 3.3 | - | - | - | 2.2 | - | - |
| Pot Cap-1 Maneuver | ~ 257 | 232 | 629 | 0 | - | - | 1420 | - | 0 |
| Stage 1 | 412 | 372 | - | 0 | - | - | - | - | 0 |
| Stage 2 | 862 | 762 | - | 0 | - | - | - | - | 0 |
| Platoon blocked, % | | | | | | | | | |
| Mov Cap-1 Maneuver | ~ 217 | 0 | 629 | - | - | - | 1420 | - | - |
| Mov Cap-2 Maneuver | ~ 217 | 0 | - | - | - | - | - | - | - |
| Stage 1 | 412 | 0 | - | - | - | - | - | - | - |
| Stage 2 | 729 | 0 | - | - | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-------|----|-----|
| HCM Control Delay, s | 386.5 | 0 | 2.7 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBR | EBLn1 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-----|
| Capacity (veh/h) | - | - | 271 | 1420 | - |
| HCM Lane V/C Ratio | - | - | 1.755 | 0.154 | - |
| HCM Control Delay (s) | - | - | 386.5 | 8 | - |
| HCM Lane LOS | - | - | F | A | - |
| HCM 95th %tile Q(veh) | - | - | 31.3 | 0.5 | - |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Old Manchester Road at Lane Road and Batchelder Road

2023 Existing Weekday Morning
 4: Lane Road/Batchelder Road & Old Manchester Road

11/08/2023



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------|------|-------|-------|------|-------|------|
| Lane Configurations | | ↕ | ↔ | | ↕ | |
| Traffic Volume (vph) | 266 | 16 | 3 | 132 | 61 | 79 |
| Future Volume (vph) | 266 | 16 | 3 | 132 | 61 | 79 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.868 | | 0.924 | |
| Flt Protected | | 0.955 | | | 0.979 | |
| Satd. Flow (prot) | 0 | 2026 | 1649 | 0 | 1863 | 0 |
| Flt Permitted | | 0.955 | | | 0.979 | |
| Satd. Flow (perm) | 0 | 2026 | 1649 | 0 | 1863 | 0 |
| Adj. Flow (vph) | 286 | 17 | 3 | 132 | 75 | 98 |
| Lane Group Flow (vph) | 0 | 303 | 135 | 0 | 173 | 0 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary

Control Type: Unsignalized

2023 Existing Weekday Morning
4: Lane Road/Batchelder Road & Old Manchester Road

11/08/2023

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 7.9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 266 | 16 | 3 | 132 | 61 | 79 |
| Future Vol, veh/h | 266 | 16 | 3 | 132 | 61 | 79 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 100 | 100 | 81 | 81 |
| Heavy Vehicles, % | 1 | 10 | 0 | 0 | 0 | 8 |
| Mvmt Flow | 286 | 17 | 3 | 132 | 75 | 98 |

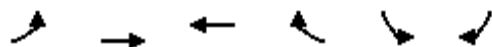
| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-----------|
| Conflicting Flow All | 135 | 0 | - | 0 | 658 69 |
| Stage 1 | - | - | - | - | 69 - |
| Stage 2 | - | - | - | - | 589 - |
| Critical Hdwy | 4.11 | - | - | - | 6.4 6.28 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 - |
| Follow-up Hdwy | 2.209 | - | - | - | 3.5 3.372 |
| Pot Cap-1 Maneuver | 1456 | - | - | - | 432 977 |
| Stage 1 | - | - | - | - | 959 - |
| Stage 2 | - | - | - | - | 558 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1456 | - | - | - | 346 977 |
| Mov Cap-2 Maneuver | - | - | - | - | 346 - |
| Stage 1 | - | - | - | - | 769 - |
| Stage 2 | - | - | - | - | 558 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 7.6 | 0 | 14.7 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1456 | - | - | - | 544 |
| HCM Lane V/C Ratio | 0.196 | - | - | - | 0.318 |
| HCM Control Delay (s) | 8.1 | 0 | - | - | 14.7 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0.7 | - | - | - | 1.4 |

2023 Existing Weekday Evening
 4: Lane Road/Batchelder Road & Old Manchester Road

11/08/2023



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------|------|-------|-------|------|-------|------|
| Lane Configurations | | ↶ | ↶ | | ↶ | |
| Traffic Volume (vph) | 120 | 20 | 30 | 68 | 140 | 248 |
| Future Volume (vph) | 120 | 20 | 30 | 68 | 140 | 248 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.906 | | 0.914 | |
| Flt Protected | | 0.959 | | | 0.982 | |
| Satd. Flow (prot) | 0 | 2065 | 1695 | 0 | 1933 | 0 |
| Flt Permitted | | 0.959 | | | 0.982 | |
| Satd. Flow (perm) | 0 | 2065 | 1695 | 0 | 1933 | 0 |
| Adj. Flow (vph) | 141 | 24 | 37 | 84 | 173 | 306 |
| Lane Group Flow (vph) | 0 | 165 | 121 | 0 | 479 | 0 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary

Control Type: Unsignalized

2023 Existing Weekday Evening
4: Lane Road/Batchelder Road & Old Manchester Road

11/08/2023

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 12 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 120 | 20 | 30 | 68 | 140 | 248 |
| Future Vol, veh/h | 120 | 20 | 30 | 68 | 140 | 248 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 85 | 85 | 81 | 81 | 81 | 81 |
| Heavy Vehicles, % | 0 | 0 | 5 | 0 | 0 | 0 |
| Mvmt Flow | 141 | 24 | 37 | 84 | 173 | 306 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|---------|
| Conflicting Flow All | 121 | 0 | - | 0 | 385 79 |
| Stage 1 | - | - | - | - | 79 - |
| Stage 2 | - | - | - | - | 306 - |
| Critical Hdwy | 4.1 | - | - | - | 6.4 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.5 3.3 |
| Pot Cap-1 Maneuver | 1479 | - | - | - | 622 987 |
| Stage 1 | - | - | - | - | 949 - |
| Stage 2 | - | - | - | - | 751 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1479 | - | - | - | 562 987 |
| Mov Cap-2 Maneuver | - | - | - | - | 562 - |
| Stage 1 | - | - | - | - | 857 - |
| Stage 2 | - | - | - | - | 751 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 6.6 | 0 | 16.9 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1479 | - | - | - | 775 |
| HCM Lane V/C Ratio | 0.095 | - | - | - | 0.618 |
| HCM Control Delay (s) | 7.7 | 0 | - | - | 16.9 |
| HCM Lane LOS | A | A | - | - | C |
| HCM 95th %tile Q(veh) | 0.3 | - | - | - | 4.3 |

2024 No-Build Weekday Morning
 4: Lane Road/Batchelder Road & Old Manchester Road

11/10/2023



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------|------|-------|-------|------|-------|------|
| Lane Configurations | | ↕ | ↔ | | ↕ | |
| Traffic Volume (vph) | 279 | 16 | 3 | 155 | 73 | 90 |
| Future Volume (vph) | 279 | 16 | 3 | 155 | 73 | 90 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.868 | | 0.925 | |
| Flt Protected | | 0.955 | | | 0.978 | |
| Satd. Flow (prot) | 0 | 2026 | 1649 | 0 | 1866 | 0 |
| Flt Permitted | | 0.955 | | | 0.978 | |
| Satd. Flow (perm) | 0 | 2026 | 1649 | 0 | 1866 | 0 |
| Adj. Flow (vph) | 300 | 17 | 3 | 155 | 90 | 111 |
| Lane Group Flow (vph) | 0 | 317 | 158 | 0 | 201 | 0 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary

Control Type: Unsignalized

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| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 8.5 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 279 | 16 | 3 | 155 | 73 | 90 |
| Future Vol, veh/h | 279 | 16 | 3 | 155 | 73 | 90 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 100 | 100 | 81 | 81 |
| Heavy Vehicles, % | 1 | 10 | 0 | 0 | 0 | 8 |
| Mvmt Flow | 300 | 17 | 3 | 155 | 90 | 111 |

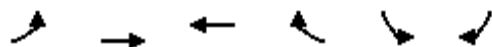
| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-----------|
| Conflicting Flow All | 158 | 0 | - | 0 | 698 81 |
| Stage 1 | - | - | - | - | 81 - |
| Stage 2 | - | - | - | - | 617 - |
| Critical Hdwy | 4.11 | - | - | - | 6.4 6.28 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 - |
| Follow-up Hdwy | 2.209 | - | - | - | 3.5 3.372 |
| Pot Cap-1 Maneuver | 1428 | - | - | - | 410 963 |
| Stage 1 | - | - | - | - | 947 - |
| Stage 2 | - | - | - | - | 542 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1428 | - | - | - | 323 963 |
| Mov Cap-2 Maneuver | - | - | - | - | 323 - |
| Stage 1 | - | - | - | - | 746 - |
| Stage 2 | - | - | - | - | 542 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 7.7 | 0 | 16.6 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h) | 1428 | - | - | - | 510 |
| HCM Lane V/C Ratio | 0.21 | - | - | - | 0.395 |
| HCM Control Delay (s) | 8.2 | 0 | - | - | 16.6 |
| HCM Lane LOS | A | A | - | - | C |
| HCM 95th %tile Q(veh) | 0.8 | - | - | - | 1.9 |

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| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------|------|-------|-------|------|-------|------|
| Lane Configurations | | ↔ | ↔ | | ↔ | |
| Traffic Volume (vph) | 131 | 20 | 30 | 83 | 161 | 261 |
| Future Volume (vph) | 131 | 20 | 30 | 83 | 161 | 261 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.901 | | 0.917 | |
| Flt Protected | | 0.959 | | | 0.981 | |
| Satd. Flow (prot) | 0 | 2065 | 1689 | 0 | 1937 | 0 |
| Flt Permitted | | 0.959 | | | 0.981 | |
| Satd. Flow (perm) | 0 | 2065 | 1689 | 0 | 1937 | 0 |
| Adj. Flow (vph) | 154 | 24 | 37 | 102 | 199 | 322 |
| Lane Group Flow (vph) | 0 | 178 | 139 | 0 | 521 | 0 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary

Control Type: Unsignalized

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 14.2 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 131 | 20 | 30 | 83 | 161 | 261 |
| Future Vol, veh/h | 131 | 20 | 30 | 83 | 161 | 261 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 85 | 85 | 81 | 81 | 81 | 81 |
| Heavy Vehicles, % | 0 | 0 | 5 | 0 | 0 | 0 |
| Mvmt Flow | 154 | 24 | 37 | 102 | 199 | 322 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|---------|
| Conflicting Flow All | 139 | 0 | - | 0 | 420 88 |
| Stage 1 | - | - | - | - | 88 - |
| Stage 2 | - | - | - | - | 332 - |
| Critical Hdwy | 4.1 | - | - | - | 6.4 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.5 3.3 |
| Pot Cap-1 Maneuver | 1457 | - | - | - | 594 976 |
| Stage 1 | - | - | - | - | 940 - |
| Stage 2 | - | - | - | - | 731 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1457 | - | - | - | 530 976 |
| Mov Cap-2 Maneuver | - | - | - | - | 530 - |
| Stage 1 | - | - | - | - | 839 - |
| Stage 2 | - | - | - | - | 731 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 6.7 | 0 | 20.6 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1457 | - | - | - | 739 |
| HCM Lane V/C Ratio | 0.106 | - | - | - | 0.705 |
| HCM Control Delay (s) | 7.8 | 0 | - | - | 20.6 |
| HCM Lane LOS | A | A | - | - | C |
| HCM 95th %tile Q(veh) | 0.4 | - | - | - | 5.9 |



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------|------|-------|-------|------|-------|------|
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Volume (vph) | 279 | 16 | 3 | 158 | 80 | 90 |
| Future Volume (vph) | 279 | 16 | 3 | 158 | 80 | 90 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.868 | | 0.929 | |
| Flt Protected | | 0.955 | | | 0.977 | |
| Satd. Flow (prot) | 0 | 2026 | 1649 | 0 | 1875 | 0 |
| Flt Permitted | | 0.955 | | | 0.977 | |
| Satd. Flow (perm) | 0 | 2026 | 1649 | 0 | 1875 | 0 |
| Adj. Flow (vph) | 300 | 17 | 3 | 158 | 99 | 111 |
| Lane Group Flow (vph) | 0 | 317 | 161 | 0 | 210 | 0 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary

Control Type: Unsignalized

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 8.9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 279 | 16 | 3 | 158 | 80 | 90 |
| Future Vol, veh/h | 279 | 16 | 3 | 158 | 80 | 90 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 100 | 100 | 81 | 81 |
| Heavy Vehicles, % | 1 | 10 | 0 | 0 | 0 | 8 |
| Mvmt Flow | 300 | 17 | 3 | 158 | 99 | 111 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-----------|
| Conflicting Flow All | 161 | 0 | - | 0 | 699 82 |
| Stage 1 | - | - | - | - | 82 - |
| Stage 2 | - | - | - | - | 617 - |
| Critical Hdwy | 4.11 | - | - | - | 6.4 6.28 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 - |
| Follow-up Hdwy | 2.209 | - | - | - | 3.5 3.372 |
| Pot Cap-1 Maneuver | 1424 | - | - | - | 409 961 |
| Stage 1 | - | - | - | - | 946 - |
| Stage 2 | - | - | - | - | 542 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1424 | - | - | - | 322 961 |
| Mov Cap-2 Maneuver | - | - | - | - | 322 - |
| Stage 1 | - | - | - | - | 745 - |
| Stage 2 | - | - | - | - | 542 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 7.8 | 0 | 17.4 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1424 | - | - | - | 497 |
| HCM Lane V/C Ratio | 0.211 | - | - | - | 0.422 |
| HCM Control Delay (s) | 8.2 | 0 | - | - | 17.4 |
| HCM Lane LOS | A | A | - | - | C |
| HCM 95th %tile Q(veh) | 0.8 | - | - | - | 2.1 |

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| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------|------|-------|-------|------|-------|------|
| Lane Configurations | | ↔ | ↔ | | ↔ | |
| Traffic Volume (vph) | 131 | 20 | 30 | 91 | 166 | 261 |
| Future Volume (vph) | 131 | 20 | 30 | 91 | 166 | 261 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.899 | | 0.918 | |
| Flt Protected | | 0.959 | | | 0.981 | |
| Satd. Flow (prot) | 0 | 2065 | 1687 | 0 | 1939 | 0 |
| Flt Permitted | | 0.959 | | | 0.981 | |
| Satd. Flow (perm) | 0 | 2065 | 1687 | 0 | 1939 | 0 |
| Adj. Flow (vph) | 154 | 24 | 37 | 112 | 205 | 322 |
| Lane Group Flow (vph) | 0 | 178 | 149 | 0 | 527 | 0 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary

Control Type: Unsignalized

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| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 14.8 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 131 | 20 | 30 | 91 | 166 | 261 |
| Future Vol, veh/h | 131 | 20 | 30 | 91 | 166 | 261 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 85 | 85 | 81 | 81 | 81 | 81 |
| Heavy Vehicles, % | 0 | 0 | 5 | 0 | 0 | 0 |
| Mvmt Flow | 154 | 24 | 37 | 112 | 205 | 322 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|---------|
| Conflicting Flow All | 149 | 0 | - | 0 | 425 93 |
| Stage 1 | - | - | - | - | 93 - |
| Stage 2 | - | - | - | - | 332 - |
| Critical Hdwy | 4.1 | - | - | - | 6.4 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.5 3.3 |
| Pot Cap-1 Maneuver | 1445 | - | - | - | 590 970 |
| Stage 1 | - | - | - | - | 936 - |
| Stage 2 | - | - | - | - | 731 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1445 | - | - | - | 526 970 |
| Mov Cap-2 Maneuver | - | - | - | - | 526 - |
| Stage 1 | - | - | - | - | 835 - |
| Stage 2 | - | - | - | - | 731 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 6.8 | 0 | 21.7 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1445 | - | - | - | 730 |
| HCM Lane V/C Ratio | 0.107 | - | - | - | 0.722 |
| HCM Control Delay (s) | 7.8 | 0 | - | - | 21.7 |
| HCM Lane LOS | A | A | - | - | C |
| HCM 95th %tile Q(veh) | 0.4 | - | - | - | 6.3 |

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| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------|------|-------|-------|------|-------|------|
| Lane Configurations | | ↕ | ↔ | | ↕ | |
| Traffic Volume (vph) | 307 | 18 | 3 | 169 | 79 | 98 |
| Future Volume (vph) | 307 | 18 | 3 | 169 | 79 | 98 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.867 | | 0.925 | |
| Flt Protected | | 0.955 | | | 0.978 | |
| Satd. Flow (prot) | 0 | 2026 | 1647 | 0 | 1866 | 0 |
| Flt Permitted | | 0.955 | | | 0.978 | |
| Satd. Flow (perm) | 0 | 2026 | 1647 | 0 | 1866 | 0 |
| Adj. Flow (vph) | 330 | 19 | 3 | 169 | 98 | 121 |
| Lane Group Flow (vph) | 0 | 349 | 172 | 0 | 219 | 0 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary

Control Type: Unsignalized

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 4: Lane Road/Batchelder Road & Old Manchester Road

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| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 9.5 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 307 | 18 | 3 | 169 | 79 | 98 |
| Future Vol, veh/h | 307 | 18 | 3 | 169 | 79 | 98 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 100 | 100 | 81 | 81 |
| Heavy Vehicles, % | 1 | 10 | 0 | 0 | 0 | 8 |
| Mvmt Flow | 330 | 19 | 3 | 169 | 98 | 121 |

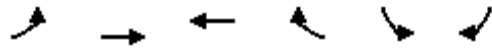
| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-----------|
| Conflicting Flow All | 172 | 0 | - | 0 | 767 88 |
| Stage 1 | - | - | - | - | 88 - |
| Stage 2 | - | - | - | - | 679 - |
| Critical Hdwy | 4.11 | - | - | - | 6.4 6.28 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 - |
| Follow-up Hdwy | 2.209 | - | - | - | 3.5 3.372 |
| Pot Cap-1 Maneuver | 1411 | - | - | - | 373 954 |
| Stage 1 | - | - | - | - | 940 - |
| Stage 2 | - | - | - | - | 507 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1411 | - | - | - | 285 954 |
| Mov Cap-2 Maneuver | - | - | - | - | 285 - |
| Stage 1 | - | - | - | - | 718 - |
| Stage 2 | - | - | - | - | 507 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 7.9 | 0 | 19.4 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1411 | - | - | - | 466 |
| HCM Lane V/C Ratio | 0.234 | - | - | - | 0.469 |
| HCM Control Delay (s) | 8.3 | 0 | - | - | 19.4 |
| HCM Lane LOS | A | A | - | - | C |
| HCM 95th %tile Q(veh) | 0.9 | - | - | - | 2.5 |

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| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------|------|-------|-------|------|-------|------|
| Lane Configurations | | ↕ | ↔ | | ↕ | |
| Traffic Volume (vph) | 144 | 22 | 33 | 90 | 176 | 287 |
| Future Volume (vph) | 144 | 22 | 33 | 90 | 176 | 287 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.901 | | 0.916 | |
| Flt Protected | | 0.958 | | | 0.981 | |
| Satd. Flow (prot) | 0 | 2063 | 1689 | 0 | 1935 | 0 |
| Flt Permitted | | 0.958 | | | 0.981 | |
| Satd. Flow (perm) | 0 | 2063 | 1689 | 0 | 1935 | 0 |
| Adj. Flow (vph) | 169 | 26 | 41 | 111 | 217 | 354 |
| Lane Group Flow (vph) | 0 | 195 | 152 | 0 | 571 | 0 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary

Control Type: Unsignalized

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| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 18.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 144 | 22 | 33 | 90 | 176 | 287 |
| Future Vol, veh/h | 144 | 22 | 33 | 90 | 176 | 287 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 85 | 85 | 81 | 81 | 81 | 81 |
| Heavy Vehicles, % | 0 | 0 | 5 | 0 | 0 | 0 |
| Mvmt Flow | 169 | 26 | 41 | 111 | 217 | 354 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|---------|
| Conflicting Flow All | 152 | 0 | - | 0 | 461 97 |
| Stage 1 | - | - | - | - | 97 - |
| Stage 2 | - | - | - | - | 364 - |
| Critical Hdwy | 4.1 | - | - | - | 6.4 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.5 3.3 |
| Pot Cap-1 Maneuver | 1441 | - | - | - | 562 965 |
| Stage 1 | - | - | - | - | 932 - |
| Stage 2 | - | - | - | - | 707 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1441 | - | - | - | 495 965 |
| Mov Cap-2 Maneuver | - | - | - | - | 495 - |
| Stage 1 | - | - | - | - | 821 - |
| Stage 2 | - | - | - | - | 707 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 6.8 | 0 | 27.7 |
| HCM LOS | | | D |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1441 | - | - | - | 709 |
| HCM Lane V/C Ratio | 0.118 | - | - | - | 0.806 |
| HCM Control Delay (s) | 7.8 | 0 | - | - | 27.7 |
| HCM Lane LOS | A | A | - | - | D |
| HCM 95th %tile Q(veh) | 0.4 | - | - | - | 8.4 |

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| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------|------|-------|-------|------|-------|------|
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Volume (vph) | 307 | 18 | 3 | 172 | 86 | 98 |
| Future Volume (vph) | 307 | 18 | 3 | 172 | 86 | 98 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.867 | | 0.928 | |
| Flt Protected | | 0.955 | | | 0.977 | |
| Satd. Flow (prot) | 0 | 2026 | 1647 | 0 | 1872 | 0 |
| Flt Permitted | | 0.955 | | | 0.977 | |
| Satd. Flow (perm) | 0 | 2026 | 1647 | 0 | 1872 | 0 |
| Adj. Flow (vph) | 330 | 19 | 3 | 172 | 106 | 121 |
| Lane Group Flow (vph) | 0 | 349 | 175 | 0 | 227 | 0 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary
 Control Type: Unsignalized

2034 Build Weekday Morning
 4: Lane Road/Batchelder Road & Old Manchester Road

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| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 9.9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 307 | 18 | 3 | 172 | 86 | 98 |
| Future Vol, veh/h | 307 | 18 | 3 | 172 | 86 | 98 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 100 | 100 | 81 | 81 |
| Heavy Vehicles, % | 1 | 10 | 0 | 0 | 0 | 8 |
| Mvmt Flow | 330 | 19 | 3 | 172 | 106 | 121 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-----------|
| Conflicting Flow All | 175 | 0 | - | 0 | 768 89 |
| Stage 1 | - | - | - | - | 89 - |
| Stage 2 | - | - | - | - | 679 - |
| Critical Hdwy | 4.11 | - | - | - | 6.4 6.28 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 - |
| Follow-up Hdwy | 2.209 | - | - | - | 3.5 3.372 |
| Pot Cap-1 Maneuver | 1407 | - | - | - | 373 953 |
| Stage 1 | - | - | - | - | 940 - |
| Stage 2 | - | - | - | - | 507 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1407 | - | - | - | 285 953 |
| Mov Cap-2 Maneuver | - | - | - | - | 285 - |
| Stage 1 | - | - | - | - | 717 - |
| Stage 2 | - | - | - | - | 507 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 7.9 | 0 | 20.5 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1407 | - | - | - | 455 |
| HCM Lane V/C Ratio | 0.235 | - | - | - | 0.499 |
| HCM Control Delay (s) | 8.3 | 0 | - | - | 20.5 |
| HCM Lane LOS | A | A | - | - | C |
| HCM 95th %tile Q(veh) | 0.9 | - | - | - | 2.7 |

2034 Build Weekday Evening
 4: Lane Road/Batchelder Road & Old Manchester Road

11/10/2023



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------|------|-------|-------|------|-------|------|
| Lane Configurations | | ↔ | ↔ | | ↔ | |
| Traffic Volume (vph) | 144 | 22 | 33 | 98 | 181 | 287 |
| Future Volume (vph) | 144 | 22 | 33 | 98 | 181 | 287 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.899 | | 0.917 | |
| Flt Protected | | 0.958 | | | 0.981 | |
| Satd. Flow (prot) | 0 | 2063 | 1687 | 0 | 1937 | 0 |
| Flt Permitted | | 0.958 | | | 0.981 | |
| Satd. Flow (perm) | 0 | 2063 | 1687 | 0 | 1937 | 0 |
| Adj. Flow (vph) | 169 | 26 | 41 | 121 | 223 | 354 |
| Lane Group Flow (vph) | 0 | 195 | 162 | 0 | 577 | 0 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary

Control Type: Unsignalized

2034 Build Weekday Evening
 4: Lane Road/Batchelder Road & Old Manchester Road

11/10/2023

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 19.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 144 | 22 | 33 | 98 | 181 | 287 |
| Future Vol, veh/h | 144 | 22 | 33 | 98 | 181 | 287 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 85 | 85 | 81 | 81 | 81 | 81 |
| Heavy Vehicles, % | 0 | 0 | 5 | 0 | 0 | 0 |
| Mvmt Flow | 169 | 26 | 41 | 121 | 223 | 354 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|---------|
| Conflicting Flow All | 162 | 0 | - | 0 | 466 102 |
| Stage 1 | - | - | - | - | 102 - |
| Stage 2 | - | - | - | - | 364 - |
| Critical Hdwy | 4.1 | - | - | - | 6.4 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.5 3.3 |
| Pot Cap-1 Maneuver | 1429 | - | - | - | 559 959 |
| Stage 1 | - | - | - | - | 927 - |
| Stage 2 | - | - | - | - | 707 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1429 | - | - | - | 492 959 |
| Mov Cap-2 Maneuver | - | - | - | - | 492 - |
| Stage 1 | - | - | - | - | 816 - |
| Stage 2 | - | - | - | - | 707 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 6.8 | 0 | 29.5 |
| HCM LOS | | | D |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1429 | - | - | - | 701 |
| HCM Lane V/C Ratio | 0.119 | - | - | - | 0.824 |
| HCM Control Delay (s) | 7.9 | 0 | - | - | 29.5 |
| HCM Lane LOS | A | A | - | - | D |
| HCM 95th %tile Q(veh) | 0.4 | - | - | - | 8.9 |

Green Road at Sargent Drive

2023 Existing Weekday Morning
5: Green Road & Sargent Drive

11/08/2023



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------|------|-------|-------|------|-------|------|
| Lane Configurations | | ↔ | ↔ | | ↔ | |
| Traffic Volume (vph) | 1 | 50 | 20 | 5 | 13 | 6 |
| Future Volume (vph) | 1 | 50 | 20 | 5 | 13 | 6 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.973 | | 0.957 | |
| Flt Protected | | 0.999 | | | 0.967 | |
| Satd. Flow (prot) | 0 | 1898 | 1730 | 0 | 1758 | 0 |
| Flt Permitted | | 0.999 | | | 0.967 | |
| Satd. Flow (perm) | 0 | 1898 | 1730 | 0 | 1758 | 0 |
| Adj. Flow (vph) | 2 | 79 | 28 | 7 | 17 | 8 |
| Lane Group Flow (vph) | 0 | 81 | 35 | 0 | 25 | 0 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary

Control Type: Unsignalized

2023 Existing Weekday Morning
5: Green Road & Sargent Drive

11/08/2023

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 1 | 50 | 20 | 5 | 13 | 6 |
| Future Vol, veh/h | 1 | 50 | 20 | 5 | 13 | 6 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 63 | 63 | 71 | 71 | 75 | 75 |
| Heavy Vehicles, % | 0 | 0 | 13 | 0 | 0 | 0 |
| Mvmt Flow | 2 | 79 | 28 | 7 | 17 | 8 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|----------|
| Conflicting Flow All | 35 | 0 | - | 0 | 115 32 |
| Stage 1 | - | - | - | - | 32 - |
| Stage 2 | - | - | - | - | 83 - |
| Critical Hdwy | 4.1 | - | - | - | 6.4 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.5 3.3 |
| Pot Cap-1 Maneuver | 1589 | - | - | - | 886 1048 |
| Stage 1 | - | - | - | - | 996 - |
| Stage 2 | - | - | - | - | 945 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1589 | - | - | - | 885 1048 |
| Mov Cap-2 Maneuver | - | - | - | - | 885 - |
| Stage 1 | - | - | - | - | 995 - |
| Stage 2 | - | - | - | - | 945 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 0.1 | 0 | 9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1589 | - | - | - | 931 |
| HCM Lane V/C Ratio | 0.001 | - | - | - | 0.027 |
| HCM Control Delay (s) | 7.3 | 0 | - | - | 9 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.1 |

2023 Existing Weekday Evening
5: Green Road & Sargent Drive

11/08/2023



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------|------|-------|-------|------|-------|------|
| Lane Configurations | | ↕ | ↔ | | ↕ | |
| Traffic Volume (vph) | 4 | 35 | 48 | 8 | 0 | 5 |
| Future Volume (vph) | 4 | 35 | 48 | 8 | 0 | 5 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.980 | | 0.865 | |
| Flt Protected | | 0.995 | | | | |
| Satd. Flow (prot) | 0 | 1890 | 1924 | 0 | 1644 | 0 |
| Flt Permitted | | 0.995 | | | | |
| Satd. Flow (perm) | 0 | 1890 | 1924 | 0 | 1644 | 0 |
| Adj. Flow (vph) | 4 | 39 | 53 | 9 | 0 | 10 |
| Lane Group Flow (vph) | 0 | 43 | 62 | 0 | 10 | 0 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary

Control Type: Unsignalized

2023 Existing Weekday Evening
5: Green Road & Sargent Drive

11/08/2023

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 4 | 35 | 48 | 8 | 0 | 5 |
| Future Vol, veh/h | 4 | 35 | 48 | 8 | 0 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 89 | 89 | 90 | 90 | 50 | 50 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 2 | 0 |
| Mvmt Flow | 4 | 39 | 53 | 9 | 0 | 10 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-----------|
| Conflicting Flow All | 62 | 0 | - | 0 | 105 58 |
| Stage 1 | - | - | - | - | 58 - |
| Stage 2 | - | - | - | - | 47 - |
| Critical Hdwy | 4.1 | - | - | - | 6.42 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.518 3.3 |
| Pot Cap-1 Maneuver | 1554 | - | - | - | 893 1014 |
| Stage 1 | - | - | - | - | 965 - |
| Stage 2 | - | - | - | - | 975 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1554 | - | - | - | 890 1014 |
| Mov Cap-2 Maneuver | - | - | - | - | 890 - |
| Stage 1 | - | - | - | - | 962 - |
| Stage 2 | - | - | - | - | 975 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.8 | 0 | 8.6 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1554 | - | - | - | 1014 |
| HCM Lane V/C Ratio | 0.003 | - | - | - | 0.01 |
| HCM Control Delay (s) | 7.3 | 0 | - | - | 8.6 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 |

2024 No-Build Weekday Morning
5: Green Road & Sargent Drive

11/10/2023



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------|------|-------|-------|------|-------|------|
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Volume (vph) | 1 | 65 | 33 | 5 | 13 | 6 |
| Future Volume (vph) | 1 | 65 | 33 | 5 | 13 | 6 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.982 | | 0.957 | |
| Flt Protected | | 0.999 | | | 0.967 | |
| Satd. Flow (prot) | 0 | 1898 | 1733 | 0 | 1758 | 0 |
| Flt Permitted | | 0.999 | | | 0.967 | |
| Satd. Flow (perm) | 0 | 1898 | 1733 | 0 | 1758 | 0 |
| Adj. Flow (vph) | 2 | 103 | 46 | 7 | 17 | 8 |
| Lane Group Flow (vph) | 0 | 105 | 53 | 0 | 25 | 0 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary
Control Type: Unsignalized

2024 No-Build Weekday Morning
5: Green Road & Sargent Drive

11/10/2023

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.3 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 1 | 65 | 33 | 5 | 13 | 6 |
| Future Vol, veh/h | 1 | 65 | 33 | 5 | 13 | 6 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 63 | 63 | 71 | 71 | 75 | 75 |
| Heavy Vehicles, % | 0 | 0 | 13 | 0 | 0 | 0 |
| Mvmt Flow | 2 | 103 | 46 | 7 | 17 | 8 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|----------|
| Conflicting Flow All | 53 | 0 | - | 0 | 157 50 |
| Stage 1 | - | - | - | - | 50 - |
| Stage 2 | - | - | - | - | 107 - |
| Critical Hdwy | 4.1 | - | - | - | 6.4 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.5 3.3 |
| Pot Cap-1 Maneuver | 1566 | - | - | - | 839 1024 |
| Stage 1 | - | - | - | - | 978 - |
| Stage 2 | - | - | - | - | 922 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1566 | - | - | - | 838 1024 |
| Mov Cap-2 Maneuver | - | - | - | - | 838 - |
| Stage 1 | - | - | - | - | 977 - |
| Stage 2 | - | - | - | - | 922 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.1 | 0 | 9.2 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1566 | - | - | - | 889 |
| HCM Lane V/C Ratio | 0.001 | - | - | - | 0.028 |
| HCM Control Delay (s) | 7.3 | 0 | - | - | 9.2 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.1 |

2024 No-Build Weekday Evening
5: Green Road & Sargent Drive

11/10/2023



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------|------|-------|-------|------|-------|------|
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Volume (vph) | 4 | 47 | 63 | 8 | 0 | 5 |
| Future Volume (vph) | 4 | 47 | 63 | 8 | 0 | 5 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.985 | | 0.865 | |
| Flt Protected | | 0.997 | | | | |
| Satd. Flow (prot) | 0 | 1894 | 1934 | 0 | 1644 | 0 |
| Flt Permitted | | 0.997 | | | | |
| Satd. Flow (perm) | 0 | 1894 | 1934 | 0 | 1644 | 0 |
| Adj. Flow (vph) | 4 | 53 | 70 | 9 | 0 | 10 |
| Lane Group Flow (vph) | 0 | 57 | 79 | 0 | 10 | 0 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary
Control Type: Unsignalized

2024 No-Build Weekday Evening
5: Green Road & Sargent Drive

11/10/2023

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.8 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↶ | ↷ | | ↶ | |
| Traffic Vol, veh/h | 4 | 47 | 63 | 8 | 0 | 5 |
| Future Vol, veh/h | 4 | 47 | 63 | 8 | 0 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 89 | 89 | 90 | 90 | 50 | 50 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 2 | 0 |
| Mvmt Flow | 4 | 53 | 70 | 9 | 0 | 10 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-----------|
| Conflicting Flow All | 79 | 0 | - | 0 | 136 75 |
| Stage 1 | - | - | - | - | 75 - |
| Stage 2 | - | - | - | - | 61 - |
| Critical Hdwy | 4.1 | - | - | - | 6.42 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.518 3.3 |
| Pot Cap-1 Maneuver | 1532 | - | - | - | 857 992 |
| Stage 1 | - | - | - | - | 948 - |
| Stage 2 | - | - | - | - | 962 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1532 | - | - | - | 854 992 |
| Mov Cap-2 Maneuver | - | - | - | - | 854 - |
| Stage 1 | - | - | - | - | 945 - |
| Stage 2 | - | - | - | - | 962 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.6 | 0 | 8.7 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1532 | - | - | - | 992 |
| HCM Lane V/C Ratio | 0.003 | - | - | - | 0.01 |
| HCM Control Delay (s) | 7.4 | 0 | - | - | 8.7 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 |

2024 Build Weekday Morning
5: Green Road & Sargent Drive

11/10/2023



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------|------|-------|-------|------|-------|------|
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Volume (vph) | 4 | 65 | 33 | 37 | 81 | 14 |
| Future Volume (vph) | 4 | 65 | 33 | 37 | 81 | 14 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.928 | | 0.980 | |
| Flt Protected | | 0.997 | | | 0.959 | |
| Satd. Flow (prot) | 0 | 1894 | 1717 | 0 | 1786 | 0 |
| Flt Permitted | | 0.997 | | | 0.959 | |
| Satd. Flow (perm) | 0 | 1894 | 1717 | 0 | 1786 | 0 |
| Adj. Flow (vph) | 6 | 103 | 46 | 52 | 108 | 19 |
| Lane Group Flow (vph) | 0 | 109 | 98 | 0 | 127 | 0 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary

Control Type: Unsignalized

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 4 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 4 | 65 | 33 | 37 | 81 | 14 |
| Future Vol, veh/h | 4 | 65 | 33 | 37 | 81 | 14 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 63 | 63 | 71 | 71 | 75 | 75 |
| Heavy Vehicles, % | 0 | 0 | 13 | 0 | 0 | 0 |
| Mvmt Flow | 6 | 103 | 46 | 52 | 108 | 19 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|---------|
| Conflicting Flow All | 98 | 0 | - | 0 | 187 72 |
| Stage 1 | - | - | - | - | 72 - |
| Stage 2 | - | - | - | - | 115 - |
| Critical Hdwy | 4.1 | - | - | - | 6.4 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.5 3.3 |
| Pot Cap-1 Maneuver | 1508 | - | - | - | 807 996 |
| Stage 1 | - | - | - | - | 956 - |
| Stage 2 | - | - | - | - | 915 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1508 | - | - | - | 804 996 |
| Mov Cap-2 Maneuver | - | - | - | - | 804 - |
| Stage 1 | - | - | - | - | 952 - |
| Stage 2 | - | - | - | - | 915 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.4 | 0 | 10.1 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1508 | - | - | - | 828 |
| HCM Lane V/C Ratio | 0.004 | - | - | - | 0.153 |
| HCM Control Delay (s) | 7.4 | 0 | - | - | 10.1 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.5 |

2024 Build Weekday Evening
5: Green Road & Sargent Drive

11/10/2023



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------|------|-------|-------|------|-------|------|
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Volume (vph) | 12 | 47 | 63 | 81 | 46 | 10 |
| Future Volume (vph) | 12 | 47 | 63 | 81 | 46 | 10 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.924 | | 0.976 | |
| Flt Protected | | 0.990 | | | 0.961 | |
| Satd. Flow (prot) | 0 | 1881 | 1814 | 0 | 1753 | 0 |
| Flt Permitted | | 0.990 | | | 0.961 | |
| Satd. Flow (perm) | 0 | 1881 | 1814 | 0 | 1753 | 0 |
| Adj. Flow (vph) | 13 | 53 | 70 | 90 | 92 | 20 |
| Lane Group Flow (vph) | 0 | 66 | 160 | 0 | 112 | 0 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary
Control Type: Unsignalized

2024 Build Weekday Evening
5: Green Road & Sargent Drive

11/10/2023

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.6 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 12 | 47 | 63 | 81 | 46 | 10 |
| Future Vol, veh/h | 12 | 47 | 63 | 81 | 46 | 10 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 89 | 89 | 90 | 90 | 50 | 50 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 2 | 0 |
| Mvmt Flow | 13 | 53 | 70 | 90 | 92 | 20 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 160 | 0 | - | 0 | 194 |
| Stage 1 | - | - | - | - | 115 |
| Stage 2 | - | - | - | - | 79 |
| Critical Hdwy | 4.1 | - | - | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 |
| Follow-up Hdwy | 2.2 | - | - | - | 3.518 |
| Pot Cap-1 Maneuver | 1432 | - | - | - | 795 |
| Stage 1 | - | - | - | - | 910 |
| Stage 2 | - | - | - | - | 944 |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1432 | - | - | - | 788 |
| Mov Cap-2 Maneuver | - | - | - | - | 788 |
| Stage 1 | - | - | - | - | 902 |
| Stage 2 | - | - | - | - | 944 |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 1.5 | 0 | 10.1 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1432 | - | - | - | 812 |
| HCM Lane V/C Ratio | 0.009 | - | - | - | 0.138 |
| HCM Control Delay (s) | 7.5 | 0 | - | - | 10.1 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.5 |

2034 No-Build Weekday Morning
5: Green Road & Sargent Drive

11/10/2023



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------|------|-------|-------|------|-------|------|
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Volume (vph) | 1 | 70 | 35 | 5 | 13 | 6 |
| Future Volume (vph) | 1 | 70 | 35 | 5 | 13 | 6 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.983 | | 0.957 | |
| Flt Protected | | 0.999 | | | 0.967 | |
| Satd. Flow (prot) | 0 | 1898 | 1733 | 0 | 1758 | 0 |
| Flt Permitted | | 0.999 | | | 0.967 | |
| Satd. Flow (perm) | 0 | 1898 | 1733 | 0 | 1758 | 0 |
| Adj. Flow (vph) | 2 | 111 | 49 | 7 | 17 | 8 |
| Lane Group Flow (vph) | 0 | 113 | 56 | 0 | 25 | 0 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary

Control Type: Unsignalized

2034 No-Build Weekday Morning
5: Green Road & Sargent Drive

11/10/2023

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.3 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↶ | ↷ | | ↶ | ↷ |
| Traffic Vol, veh/h | 1 | 70 | 35 | 5 | 13 | 6 |
| Future Vol, veh/h | 1 | 70 | 35 | 5 | 13 | 6 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 63 | 63 | 71 | 71 | 75 | 75 |
| Heavy Vehicles, % | 0 | 0 | 13 | 0 | 0 | 0 |
| Mvmt Flow | 2 | 111 | 49 | 7 | 17 | 8 |

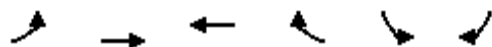
| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|----------|
| Conflicting Flow All | 56 | 0 | - | 0 | 168 53 |
| Stage 1 | - | - | - | - | 53 - |
| Stage 2 | - | - | - | - | 115 - |
| Critical Hdwy | 4.1 | - | - | - | 6.4 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.5 3.3 |
| Pot Cap-1 Maneuver | 1562 | - | - | - | 827 1020 |
| Stage 1 | - | - | - | - | 975 - |
| Stage 2 | - | - | - | - | 915 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1562 | - | - | - | 826 1020 |
| Mov Cap-2 Maneuver | - | - | - | - | 826 - |
| Stage 1 | - | - | - | - | 974 - |
| Stage 2 | - | - | - | - | 915 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.1 | 0 | 9.2 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1562 | - | - | - | 879 |
| HCM Lane V/C Ratio | 0.001 | - | - | - | 0.029 |
| HCM Control Delay (s) | 7.3 | 0 | - | - | 9.2 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.1 |

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5: Green Road & Sargent Drive

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| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------|------|-------|-------|------|-------|------|
| Lane Configurations | | ↔ | ↔ | | ↔ | |
| Traffic Volume (vph) | 4 | 51 | 69 | 8 | 0 | 5 |
| Future Volume (vph) | 4 | 51 | 69 | 8 | 0 | 5 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.986 | | 0.865 | |
| Flt Protected | | 0.997 | | | | |
| Satd. Flow (prot) | 0 | 1894 | 1936 | 0 | 1644 | 0 |
| Flt Permitted | | 0.997 | | | | |
| Satd. Flow (perm) | 0 | 1894 | 1936 | 0 | 1644 | 0 |
| Adj. Flow (vph) | 4 | 57 | 77 | 9 | 0 | 10 |
| Lane Group Flow (vph) | 0 | 61 | 86 | 0 | 10 | 0 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary
Control Type: Unsignalized

2034 No-Build Weekday Evening
5: Green Road & Sargent Drive

11/10/2023

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 4 | 51 | 69 | 8 | 0 | 5 |
| Future Vol, veh/h | 4 | 51 | 69 | 8 | 0 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 89 | 89 | 90 | 90 | 50 | 50 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 2 | 0 |
| Mvmt Flow | 4 | 57 | 77 | 9 | 0 | 10 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-----------|
| Conflicting Flow All | 86 | 0 | - | 0 | 147 82 |
| Stage 1 | - | - | - | - | 82 - |
| Stage 2 | - | - | - | - | 65 - |
| Critical Hdwy | 4.1 | - | - | - | 6.42 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.518 3.3 |
| Pot Cap-1 Maneuver | 1523 | - | - | - | 845 983 |
| Stage 1 | - | - | - | - | 941 - |
| Stage 2 | - | - | - | - | 958 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1523 | - | - | - | 842 983 |
| Mov Cap-2 Maneuver | - | - | - | - | 842 - |
| Stage 1 | - | - | - | - | 938 - |
| Stage 2 | - | - | - | - | 958 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.5 | 0 | 8.7 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1523 | - | - | - | 983 |
| HCM Lane V/C Ratio | 0.003 | - | - | - | 0.01 |
| HCM Control Delay (s) | 7.4 | 0 | - | - | 8.7 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 |

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| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------|------|-------|-------|------|-------|------|
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Volume (vph) | 4 | 70 | 35 | 37 | 81 | 14 |
| Future Volume (vph) | 4 | 70 | 35 | 37 | 81 | 14 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.930 | | 0.980 | |
| Flt Protected | | 0.997 | | | 0.959 | |
| Satd. Flow (prot) | 0 | 1894 | 1718 | 0 | 1786 | 0 |
| Flt Permitted | | 0.997 | | | 0.959 | |
| Satd. Flow (perm) | 0 | 1894 | 1718 | 0 | 1786 | 0 |
| Adj. Flow (vph) | 6 | 111 | 49 | 52 | 108 | 19 |
| Lane Group Flow (vph) | 0 | 117 | 101 | 0 | 127 | 0 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary

Control Type: Unsignalized

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 4 | 70 | 35 | 37 | 81 | 14 |
| Future Vol, veh/h | 4 | 70 | 35 | 37 | 81 | 14 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 63 | 63 | 71 | 71 | 75 | 75 |
| Heavy Vehicles, % | 0 | 0 | 13 | 0 | 0 | 0 |
| Mvmt Flow | 6 | 111 | 49 | 52 | 108 | 19 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|---------|
| Conflicting Flow All | 101 | 0 | - | 0 | 198 75 |
| Stage 1 | - | - | - | - | 75 - |
| Stage 2 | - | - | - | - | 123 - |
| Critical Hdwy | 4.1 | - | - | - | 6.4 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.5 3.3 |
| Pot Cap-1 Maneuver | 1504 | - | - | - | 795 992 |
| Stage 1 | - | - | - | - | 953 - |
| Stage 2 | - | - | - | - | 907 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1504 | - | - | - | 792 992 |
| Mov Cap-2 Maneuver | - | - | - | - | 792 - |
| Stage 1 | - | - | - | - | 949 - |
| Stage 2 | - | - | - | - | 907 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.4 | 0 | 10.2 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1504 | - | - | - | 816 |
| HCM Lane V/C Ratio | 0.004 | - | - | - | 0.155 |
| HCM Control Delay (s) | 7.4 | 0 | - | - | 10.2 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.5 |

2034 Build Weekday Evening
5: Green Road & Sargent Drive

11/10/2023



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------|------|-------|-------|------|-------|------|
| Lane Configurations | | ↔ | ↔ | | ↔ | |
| Traffic Volume (vph) | 12 | 51 | 69 | 81 | 46 | 10 |
| Future Volume (vph) | 12 | 51 | 69 | 81 | 46 | 10 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.927 | | 0.976 | |
| Flt Protected | | 0.991 | | | 0.961 | |
| Satd. Flow (prot) | 0 | 1883 | 1820 | 0 | 1753 | 0 |
| Flt Permitted | | 0.991 | | | 0.961 | |
| Satd. Flow (perm) | 0 | 1883 | 1820 | 0 | 1753 | 0 |
| Adj. Flow (vph) | 13 | 57 | 77 | 90 | 92 | 20 |
| Lane Group Flow (vph) | 0 | 70 | 167 | 0 | 112 | 0 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary

Control Type: Unsignalized

2034 Build Weekday Evening
5: Green Road & Sargent Drive

11/10/2023

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.6 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 12 | 51 | 69 | 81 | 46 | 10 |
| Future Vol, veh/h | 12 | 51 | 69 | 81 | 46 | 10 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 89 | 89 | 90 | 90 | 50 | 50 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 2 | 0 |
| Mvmt Flow | 13 | 57 | 77 | 90 | 92 | 20 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 167 | 0 | - | 0 | 205 |
| Stage 1 | - | - | - | - | 122 |
| Stage 2 | - | - | - | - | 83 |
| Critical Hdwy | 4.1 | - | - | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 |
| Follow-up Hdwy | 2.2 | - | - | - | 3.518 |
| Pot Cap-1 Maneuver | 1423 | - | - | - | 783 |
| Stage 1 | - | - | - | - | 903 |
| Stage 2 | - | - | - | - | 940 |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1423 | - | - | - | 776 |
| Mov Cap-2 Maneuver | - | - | - | - | 776 |
| Stage 1 | - | - | - | - | 895 |
| Stage 2 | - | - | - | - | 940 |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 1.4 | 0 | 10.2 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1423 | - | - | - | 800 |
| HCM Lane V/C Ratio | 0.009 | - | - | - | 0.14 |
| HCM Control Delay (s) | 7.6 | 0 | - | - | 10.2 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.5 |

Memorandum



To: Joseph Coronati, P.E.

From: Jason Cleghorn, Community Development Director

Date: 30 October 23

Re: 2023-008 Onway Lake Village Planning and Community Development Comments

-
1. Given the complexities of the project and that it is contemplated in phases, it is recommended that the project's terminus at the end of Phase 1 be constructed to stand alone in the event that subsequent phases do not occur. A cul-de-sac, even if somewhat temporary in nature but stabilized and able to meet Police and Fire requirements regarding turnaround radii and pavement stabilization should be constructed at the northern extent of Phase 1.
 2. Requested waiver(s) should be added to the plan.
 3. What is the plan regarding the vernal pools found within the Phase 1 development area? Are they proposed to be filled and related to this, has a wetlands permit been applied for at this juncture?
 4. As mentioned in the application, a Wetlands Permit, Alteration of Terrain Permit, and Special Permit for wetlands impacts will be required to accompany this application as well as a Lot Line Adjustment.
 5. Note 4 on the Phasing Plan refers to the Zoning District incorrectly. The zoning of the property is Residential B.
 6. Information about the product intended to be developed would also benefit the application. The application only refers to bedrooms and the project would benefit from more clarity around individual project types.
 7. To ascertain compatibility, the project's narrative should provide clarity about abutting uses, lot sizes and the general development pattern.
 8. The absence of a traffic study unfortunately in the opinion of CDD staff renders the application incomplete. Staff will not recommend that the Planning Board accept the application as complete until the Traffic Study has been completed.
 9. Please clarify the setbacks in Note 4 on the Phasing Plan. Setbacks should also comply with § 6.8.3 of the Zoning Ordinance.
 10. Note 5 on the Phasing Plan could be clearer regarding the density of the project. Phase 1 also does not show a density calculation.
 11. What are the total wetland impacts in acres?
 12. Plan should contain the limits of clearing/limits of development.
 13. Given the results of the Traffic Study, off-site improvements may be necessary.
 14. A chart on the Phasing Plan Sheet with calculations regarding all of the acreages broken down by zoning district, amount of Zone G lands, steep slopes, open space would perhaps be more helpful than the way that the notes are currently worded.
 15. Please amend the Soil Legend chart to reflect which ones are defined as poorly drained soils.
 16. Narrative description of the proposed Lot Line Adjustment and how it affects the density and development pattern would be beneficial to the application.
 17. Will the project have any internal recreational or public use amenities?
 18. A Written Narrative addressing many of the Section 6.8 Conservation Development of the Zoning Ordinance would assist the Board and the application.



3293937P
October 23, 2023

Mr. Jason Cleghorn, Director
Raymond Community Development
4 Epping Street
Raymond, New Hampshire 03077

Subject: Onway Lake Village Development
Conservation Subdivision
Tax Map 20, Lot 58 & Tax Map 26, Lot 1
15 Sargent Drive
Raymond Project # 2023-008
Engineering Review Services

Dear Mr. Cleghorn:

As requested, we have completed our review of the plans and materials submitted for the above referenced project. The submitted materials consist of the following:

- Submittal Letter, prepared by Jones & Beach Engineers, Inc., and dated September 7, 2023.
- Subdivision Application with Attachments, prepared by Jones & Beach Engineers, Inc., and dated September 7, 2023.
- Conservation Subdivision Plans Set, prepared by Jones & Beach Engineers, Inc., consisting of 34 sheets, dated September 7, 2023.
- Drainage Analysis, prepared by Jones & Beach Engineers, Inc., dated September 7, 2023.

The following were comments noted during the review.

Traffic Impact Analysis

1. We recommend the Applicant provide a Traffic Impact Analysis for the proposed industrial development, in accordance with Town of Raymond, Site Plan Review Regulations, Section 5.03.13.

Phasing Plan (PH1)

1. We recommend the Applicant revise the minimum zoning requirements listed on the plan to match the Town of Raymond, Zoning Ordinance Regulations, Article 15.1, including naming convention (Zone B).

2. We recommend the Applicant revise the density calculations for Phases 2 and 3 regarding the number of the bedrooms allowed (719 total bedrooms, 359 2-bed units). Additionally, density calculations for Phase 1 should be provided.
3. We recommend the Applicant show the locations of the 75 additional parking spaces that are referenced in note 7 (on sheet PH1) on the plan.

Existing Conditions Plans (C1 to C5)

1. The scale of the plans should be 1" = 20' up to 1" = 50', in accordance with Town of Raymond, Site Plan Review Regulations, Section 5.02.03.
2. We recommend the Applicant add the following to the text boxes on the plan view: the address, lot size, and current name and address of the owner of record for Map 20, Lot 58 and Map 26, Lot 1. (Sheet C1)
3. It appears that Map 26, Lot 1 is not depicted entirely on the Overview Existing Conditions Plan. (Sheet C1)
4. We recommend the Applicant depict the boundary lines of all lots included in the project. Metes and bounds, dimensions, and lot area should be notated on the plan in accordance with Town of Raymond, Site Plan Review Regulations, Section 5.02.04.
5. Adjacent streets, including their widths, and structures within 200 feet of the site boundaries should be shown on the plan in accordance with Town of Raymond, Site Plan Review Regulations, Section 5.02.06.
6. The footprint and height of the existing buildings on the site and within 200 feet of the site boundaries should be shown in accordance with Town of Raymond, Site Plan Review Regulations, Section 5.02.07.
7. The use of the abutting buildings should be identified on the plans in accordance with Town of Raymond, Site Plan Review Regulations, Section 5.02.09.
8. All building setbacks should be shown on the plans in accordance with Town of Raymond, Site Plan Review Regulations, Section 5.02.13.

Conventional Subdivision Plan (C6 to C8)

1. The scale of the plans should be 1" = 20' up to 1" = 50', in accordance with Town of Raymond, Site Plan Review Regulations, Section 5.02.01.
2. In accordance with Section 5.02.04, Site Plan Review Regulations, all boundary lines shall indicate the bearings and distance.
3. Building setbacks (front, side and rear) should be shown on all plans in accordance with Town of Raymond, Site Plan Review Regulations, Section 5.02.13.
4. The annotation for setback lines (building and wetlands) for Lot 6 and 7 should be revised. (Sheet C6)
5. Wetland setbacks have not been shown for Lots 28-31.
6. The length, width and names of the proposed streets should be shown on plans.
7. If wetlands are crossed or infringed upon, wetland mitigation must be provided and shown on the plans as to achieve no net loss within the boundaries of the proposed development area and within the Town of Raymond boundaries in accordance with Town of Raymond, Zoning Ordinance, Section 2.0.1.1.
8. The overlapping text should be corrected on sheet C7.
9. There is an unidentified line between Lot 7 and Lot 33 on sheet C7.

10. We recommend the Applicant revise the minimum zoning requirements listed on the plan to match the Town of Raymond, Zoning Ordinance Regulations, Article 15.1, including naming convention (Zone B).
11. The total acreage for the 38 lots (93.16ac) is not equal to the total acreage of Phase 1 (100.96ac). The yield areas calculation should be reviewed and revised as necessary. (Sheet C6)

Conservation Subdivision Plans (Sheets A1 to A9)

1. The scale of the plans should be 1" = 20' up to 1" = 50', in accordance with Town of Raymond, Site Plan Review Regulations, Section 5.02.01.
2. In accordance with Section 5.02.04, Site Plan Review Regulations, all boundary lines shall indicate the bearings and distance. (Sheet A3 and A5)
3. We recommend that the Applicant show the location and width of all existing and proposed streets on the plans. Additionally, points for future right-of-way and/or street access to abutting parcels to accommodate the continuation of future development (Phases 2 and 3) should be shown on the plans.
4. If wetlands are crossed or infringed upon, a dredge and fill permit shall be required from the State Wetland Board. In addition, wetland mitigation must be provided and shown on the plans as to achieve no net loss within the boundaries of the proposed development area and within the Town of Raymond boundaries in accordance with Town of Raymond, Zoning Ordinance, Section 2.0.1.1.. We are concerned about the composition of Lot 29, which will require a wetland permit to provide access to the lot. If a wetland permit is not granted, this subdivision will have essentially created an unbuildable lot.
5. Building setbacks (front, side and rear) should be shown on all plans in accordance with Town of Raymond, Site Plan Review Regulations, Section 5.02.13.
6. We recommend that the Applicant annotate proposed road and right of way dimensions on the plans.
7. We recommend the Applicant annotate the vegetative buffer that is required at all side and rear exterior boundaries of the original parcel.
8. We recommend the Applicant revise the zoning requirements listed on the plan to match the Town of Raymond, Zoning Ordinance Regulations, Article 15.1, including naming convention (Zone B).

Grading and Drainage Plans (Sheets C9 to C15)

1. We recommend the Applicant review the existing and proposed contours on the east side of Fox Run Road. (Sta. 0+50 to 1+25)
2. On the east side of Fox Run Road, at Sta. 3+00, we recommend that the Applicant show more proposed contours. Additionally, the invert for the proposed culvert should be clarified and/or revised.
3. We recommend the Applicant verify the slope for the proposed driveways at the following stations: 6+50, 8+75 and 11+00.
4. It appears that the proposed road slope is 10% or greater from Sta. 14+00 to 15+50 which exceeds the maximum 8% slope in accordance with the Town regulations.
5. We recommend adding the length and slope for the proposed 30" culvert at Sta. 23+00.

6. On sheet C-12 (cul-de-sac area), it appears that the call-outs for the proposed pipe and headwall are missing. There are many cut off callouts along the left side of the plan sheet.
7. In the proposed cul-de-sac areas for proposed Road A and B, we recommend checking and reviewing the proposed driveway slopes.
8. On sheet C-15, for Bioretention Pond 2 and 3, we recommend annotating the type, size, length and slope for the proposed pipes. Additionally, we recommend adding invert elevations for the proposed outlet structures and proposed headwalls and rip-rap apron sizes.
9. All test pits locations should be inside the proposed septic areas.
10. We recommend that a 10-foot wide gravel access road to each bioretention area be shown on the plans to accommodate vehicles and equipment for maintenance activities, particularly Bioretention Pond 3.

Plan and Profile Plans (Sheets P1 to P2)

1. We recommend the Applicant submit a plan and profile for Fox Run Road.
2. The submitted plans do not meet the scale requirements (maximum 1"= 40' (horizontal) and 1"=4' (vertical)) as specified in the Town of Raymond Site Plan Regulations, Section 5.03.14.b.
3. The k-value for public roads (collector rural) should be 30 for crest curves and 35 for sag curves in accordance with the Town regulations.
4. Each lot shall be provided with two independent access routes from the Raymond Fire Station and/or otherwise shall not be located more than 1,000 feet from a point with two such access routes. Phase 1 exceeds this requirement from the Town regulations. We recommend that this issue be addressed.

Detail Plans (Sheets D1 to D4)

1. We recommend that the Applicant revise the typical roadway sections on sheet D-1 to match the typical pavement repair detail on sheet D-2, in accordance with the Standards for Construction, Town of Raymond, Section 6 and 6.1.
2. We recommend that the Applicant provide length, width and size for all proposed rip-rap aprons.
3. We recommend that the Applicant provide details for all proposed stormwater features (bioretention ponds, sediment forebays) including outlet structures and pipes (i.e. invert elevations, sizes).

Truck Turning Plans

1. We recommend that the Applicant submit a Truck Turning Plan for the proposed roads.

Drainage Analysis Report and Existing Watershed Plan (Sheets W1)

1. We recommend that the Applicant submit plans with a graphic scale of 1" = 20' up to 1" = 50' in accordance with Town of Raymond, Site Plan Review Regulations, Section 5.02.03.

2. On the existing watershed plan, it is unclear how the runoff flows from the 15" RCP culvert (2R) to analysis point 1R. Additionally, it appears that the stormwater flow is routed through two 30" HDPE culverts from subcatchment 4S to analysis point 1R. Please clarify.
3. We recommend the Applicant submit a complete summary for the 25-year storm.

Drainage Analysis Report and Proposed Watershed Plan (Sheets W2)

1. We recommend Applicant submit plans with a graphic scale of 1" = 20' up to 1" = 50' in accordance with Town of Raymond, Site Plan Review Regulations, Section 5.02.03.
2. All subcatchments should have a time of concentration (Tc) path shown on the plans.
3. It appears that the runoff from subcatchment 40S is routed through two 30" pipes to analysis point 1R. Additionally, runoff from Pond 3P appears to flow through subcatchment 40S before reaching 1R. We recommend revising the drainage diagram.
4. We recommend showing Pond 5P: Culvert, on the plan.
5. We recommend reviewing the plans and drainage report for inconsistencies and revising as necessary. (i.e. on the plan the runoff flow is from DMH to CB 7 to DMH 1 towards HW 4. Drainage report shows a flow from DMH to CB 6 and 7 to DMH 1 towards HW 1. Additionally, it appears that runoff is flowing from HW 1 to HW 2, through a 40' – 18" HDPE before reaching Bioretention Pond 2P.)
6. In multiple locations, it appears that the culvert outflow is higher than the inflow. Please review and correct.
7. The pipe size for Reach 3R appears to differ between the plans and drainage analysis. We recommend this be reviewed and revised as necessary.
8. Rip-rap calculations for the 25-year storm were not included in the submitted drainage report.
9. Based on the drainage report, DMH1 is surcharged during the 25 year storm and overtops during the 50 year storm.
10. We recommend that the Applicant submit a complete summary for the 25 year storm.

Other

We recommend that documentation in the record be very clear that no review (drainage, roadway) was performed for Phases 2 or 3 of the proposed project as no plans or drainage analysis for Phases 2 or 3 were submitted by the applicant.

Mr. Cleghorn, Raymond Community Development
October 23, 2023
Page 6 of 6

If you have any questions or comments, please do not hesitate to contact us.

Very truly yours,

DuBOIS & KING, Inc.

A handwritten signature in black ink, appearing to read "Jeffrey Adler". The signature is written in a cursive style with a large initial "J".

Jeffrey A. Adler, P.E.

Senior Project Manager

Placeholder for the 1/4/2024 Meeting Minutes Draft. Planning staff will let the Board know when this is available.

Thank you for your flexibility.



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1 **Pledge of Allegiance:** Recited by all in attendance.

2

3 **Meeting called to order:**

4 The meeting started at approximately 7:00 pm.

5

6 **Roll Call:**

7 Bob McDonald, Planning Board; Dee Luszcz, Planning Board Chair; Jim McLeod,
8 Vice-Chair; Trisha Bridgeo, Board of Selectmen; Gretchen Gott, Planning Board.

9

10 **Absent:**

11 Tom Daigle, Planning Board; Jason Cleghorn, Community Development Director.

12

13 **Public Meeting:**

14

15 **Application # 2023-007 Meindl Road Subdivision:** A subdivision application is
16 being submitted by Joseph Falzone and Beals Associates PLLC on behalf of
17 Frances and Raymond Scanlon. The intent of this application is to subdivide a 10
18 +/- acre lot on Meindl Road into 3 individual lots. The parcel is Map 41/Lot 47, Zone
19 B with associated Zone G lands and located on Meindl Road in Raymond NH.
20 (continued from 10-12-23, 11-2-23, and 12-7-23)

21

22 Tim Phoenix from legal counsel, Joseph Falzone who is the developer for the
23 project, and Scott Cole from Beals Associates came before the Board. They
24 decided to continue with their application tonight even though a member of the
25 Board is absent.

26

27 After confirming that the maps the Board received are correct with the same
28 information for Zone G land, but it is just displayed slightly different with the plans
29 the applicant is presenting, a poll was taken on whether or not to proceed with the
30 presentation.

31

32 Mr. McDonald – Yes

33 Ms. Gott – Yes

34 Ms. Bridgeo – Yes

35 Mr. McLeod – Yes

36 Ms. Luszcz – Yes

37

38 The Board continued to hear the presentation.

39

40 Mr. McLeod asked about the dam in the plans and if a permit was necessary. Mr.
41 Falzone said that per DES, a permit was not required as he was not building the



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42 dam, it already exists on the property. Ms. Luszczyk said that this will have to be
43 resolved at a later date.

44

45 Ms. Bridgeo brought up concerns about the flood zones in the property. However,
46 Mr. Cole pointed out that on the local GIS map layers, it is for the 500-year
47 floodplain, which will not affect the plans. This will have to be investigated later.

48

49 Ms. Bridgeo asked about what the distance was between the wetland buffer and the
50 boundary line for Lot 2. Mr. Cole said it's about 50 feet. He said that a driveway is
51 allowed since it isn't a permanent structure. However, Ms. Bridgeo's concern was
52 that the driveway will be an impervious surface. This will be investigated.

53

54 The ZBA approved the variances for the standard 200-foot frontage. Ms. Luszczyk
55 asked if the plans would have any measurements listed. Mr. Cole said that they are
56 listed on the survey plan, and they weren't changed. Mr. McLeod asked whether a
57 special use permit was needed and if a driveway permit would be needed to
58 proceed.

59

60 Ms. Luszczyk brought up the topic of emergency service access to the property. As it
61 is a private road, Ms. Bridgeo said they would need written confirmation from
62 emergency services stating that they can access the property. Mr. Falzone stated
63 that there is an easement as Nottingham emergency services access houses on
64 the road already. Ms. Bridgeo noted that since it is not Raymond services, the
65 Board still needs information from the Town's emergency services.

66

67 **Public Comment:**

68 David Suminsby, owner of Map 43 Lot 3, came to the stand. Mr. Suminsby's
69 concern is for potential future development for the drainage off driveways as it is a
70 gravel driveway, he hopes that the driveways will slope away from the main road.
71 Ms. Luszczyk stated that DPW will be addressing the issue. Other than that, he did
72 not have any objections to the plans. Mr. Falzone said that a culvert will be put
73 underneath the driveway to ensure the flow of the water goes to the ditch line. Ms.
74 Luszczyk commented that this should be added to the plans once the time comes.

75

76 Public comment came to a close at approximately 7:44 PM

77

78 **Motion:**

79

80 **Mr. McLeod made a motion to continue application 2023-007 Meindl**
81 **Road Subdivision until January 25, 2024, at the Raymond High**
82 **School Media Center, 45 Harriman Hill Road at 7:00pm; Mr.**
83 **McDonald seconded the motion.**



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A roll call vote was taken,
Mr. McDonald – Yes
Ms. Gott – Yes
Ms. Bridgeo – Yes
Mr. McLeod – Aye
Ms. Luszcz – Aye

The motion passed with a unanimous vote of 5 in favor, 0 opposed, and 0 abstention.

Application # 2022-009 Jewett Warehouse: A site plan application is being submitted by Greg DiBona of Bohler Engineers on behalf of Jewett Construction. The applicant proposes a 200,000 SF industrial warehouse with applicable access, parking, loading, landscaping, lighting, stormwater management, utilities, and erosion mitigation. The property is located on Route 27 and is identified as Raymond Tax Map 28 / Lots 9, 10, & 11. (continued from 10-5-23)

Dan Ray from Jewett Construction, Brandon Walden from Gold Environmental, and Austin Turner from Bohler came before the Board. They decided to continue with their application tonight even though a member of the Board is absent. Mr. Turner went over the topics that the Board requested in the prior meeting, 11 separate topics. Please see the attachment at the end of the notes for the topics discussed.

Ms. Bridgeo asked for the applicant to write down DOT 6383004 in regard to topic #7 as it is the 10-year plan that the Rockingham Planning Commission looks at, but it was not referenced in the comments. Mr. McLeod noticed at the turn lane there is a speed limit increase which he asked if the applicant took that into consideration. Mr. Turner said that DOT does look into the surrounding traffic for the plans.

Ms. Bridgeo asked about the floodplain for the property. Mr. McLeod added that as #9 stated that the property will have a conservation area that would then be handled by the Town's Conservation Committee, an engineer will have to research the area before accepting it to prevent any liability areas. This engineer could then research the floodplains as well. Mr. Turner clarified that since per FEMA said this was Zone AE designation which means that there will be compensatory storage, mandatory per FEMA and NHDES, which will substantially exceed the floodplain volume. Ms. Luszcz stated that DuBois and King would review these plans again. Ms. Gott asked about what the elevation was originally versus the new elevation of the property. Mr. Turner said the elevation is 190 feet for both the original and new area. The compensatory storage area will be at the same elevation to allow for flood flow. Mr. McDonald clarified Ms. Gott's question and wanted to ensure that the



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126 elevation of the compensatory storage was at the same elevation as Route 127
127 which Mr. Turner confirmed that yes, it will be.

128

129 Mr. McLeod wished that EPA 535 or 5371B testing on the PFAS which could then
130 be reproduced in the future as it is a standardized test. He suggested a "Raymond
131 Panel" that would have all the testing that they want done. Mr. McLeod asked about
132 the water demand on the plans as they did not show the NHDES calculations which
133 he thought were required. Mr. Turner said that the project is over the Underwood
134 projections. Mr. McLeod pointed out that the calculations are not a multiple of 10,
135 which are the calculations per NHDES. Ms. Gott wanted clarification on number of
136 employees, how many employees per shift, and time for the shifts as this would
137 play a factor in water distribution.

138

139 **Public Comment:**

140 Kathy McDonald asked if the Conservation Committee received the updated
141 Special Permit per #7's topic. Ms. Luszcz said that if the Town staff have it, they will
142 send it to the Conservation Committee for review.

143

144 **Motion:**

145

146 **Mr. McLeod made a motion to continue application 2022-009 Jewett**
147 **Warehouse until February 15, 2024, at the Raymond High School**
148 **Media Center, 45 Harriman Hill Road at 7:00pm; Mr. McDonald**
149 **seconded the motion.**

150

151 **A roll call vote was taken,**

152 **Ms. Gott – Yes**

153 **Ms. Bridgeo – Yes**

154 **Mr. Mcleod – Aye**

155 **Ms. Luszcz – Aye**

156 **Mr. McDonald – Yes**

157

158 **The motion passed with a unanimous vote of 5 in favor, 0 opposed, and 0**
159 **abstention.**

160

161 **Application #2022-015 White Rock Place LLA:** A Lot Line Adjustment has been
162 submitted by Joseph Coronati of Jones and Beach Engineers, Inc. on behalf of
163 Tuck Realty Corp. The applicant is proposing to adjust the lot line configuration
164 between Tax Map 23 Lots 24, 25, 28, and 29, located at 109 Main Street in
165 Raymond NH. Lots 24 and 25 are located within Zone D (Industrial) and Lots 28
166 and 29 are in Zone B (Residential). (continued from 11-16-23)

167



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168 Tim Phoenix legal counsel to Tuck Realty, Mike Garrepy of Tuck Realty, and
169 Joseph Coronati of Jones and Beach Engineers came before the Board. They
170 decided to continue with their application tonight even though a member of the
171 Board is absent. The applicant did not present anything new as they feel that their
172 application is complete, and they opened the floor up for discussion from the Board.

173

174 Mr. McLeod had a question about the mention of the sewer overlay district which
175 would not play a factor in lot line adjustments and would like it to be removed from
176 the cover letter. Mr. Coronati said it was added per request. However, Ms. Luszc
177 said that in the approved meeting minutes, there was miscommunication, and it
178 should be removed.

179

180 Mr. McDonald asked since the original application from 2021 has fewer lots listed
181 than what is on the most recent information, does the applicant need to refile a new
182 application. Ms. Luszc clarified that there is a more recent application from 2022
183 with the updated lot numbers. Mr. McDonald then asked that with the lot line
184 adjustment where a lot changes to Zone D, would that mean it is in violation of the
185 original intent of the sewer overlay district. Ms. Luszc clarified that changing a lot
186 line does not necessarily change the zone so it could have 2 different zones in 1 lot.
187 The sewer overlay district did not exist in 2022 so it needs to be removed from the
188 plans.

189

190 Ms. Luszc asked if the applicant has verified if all the lots after the lot line
191 adjustment will be in conformance with the Town's zoning. Mr. Garrepy confirmed
192 that the plans have been reviewed by at least one of the planning staff at the
193 Rockingham Planning Commission and they agree that the lot line adjustment is in
194 conformance with the ordinance. Review comments from the Town staff are to be
195 determined.

196

197 Mr. Garrepy asked why the Board couldn't approve the application with conditions
198 of approval that they would get the correct information regarding if there were any
199 mortgages on the merging lots. A poll was done if the Board would want to see the
200 information before approving the application.

201

202 A roll call vote was taken,

203

204 Mr. McDonald – Yes

205 Ms. Gott – Yes

206 Ms. Bridgeo – Yes

207 Mr. McLeod – Yes

208 Ms. Luszc – Yes

209



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210 The poll is unanimously agreed upon that the Board would want documentation
211 before approving the application.

212

213 **Motion:**

214

215 **Mr. McLeod made a motion to continue application 2022-015 White**
216 **Rock Place LLA until February 15, 2024, at the Raymond High**
217 **School Media Center, 45 Harriman Hill Road at 7:00pm; Ms. Bridgeo**
218 **seconded the motion.**

219

220 **A roll call vote was taken,**

221 **Ms. Gott – Yes**

222 **Ms. Bridgeo – Yes**

223 **Mr. McLeod – Aye**

224 **Ms. Luszcz – Aye**

225 **Mr. McDonald – Yes**

226

227 **The motion passed with a unanimous vote of 5 in favor, 0 opposed, and 0**
228 **abstention.**

229

230 **Application #2021-018 White Rock Place:** A Site Plan Application has been
231 submitted by Joseph Coronati of Jones and Beach Engineers, Inc. on behalf of
232 Tuck Realty Corp. The applicant is proposing 156 market rate apartments of three 4
233 story buildings on slabs with elevators, mix of 1- and 2-bedroom units with an open
234 space preserved, recreation trails and parking. Access will be from Main Street. The
235 property is identified as Raymond Tax Map 23 Lots 25 & 29, located at 109A & C
236 Main Street, Raymond NH, 03077 and are within Zones B & D. (continued from 11-
237 16-23)

238

239 Tim Phoenix legal counsel to Tuck Realty, Mike Garrepy of Tuck Realty, and
240 Joseph Coronati of Jones and Beach Engineers came before the Board. They
241 decided to continue with their application tonight even though a member of the
242 Board is absent. The applicant did not present anything new as they feel that their
243 application is complete, and they opened the floor up for discussion from the Board.

244

245 Mr. McLeod read a memo for the record which is attached to the end of the
246 minutes.

247

248 **Motion:**

249

250 **Mr. McLeod made a motion per the listed reasons deny Application**
251 **#2021-018 White Rock Place because no application is vested**



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beyond 12 months from the close of a design review as stated in RSA 676:4 part 2B and that multi residential units are not allowed in Zone D per the Town of Raymond Zoning Ordinance; Mr. McDonald seconded the motion.

Mr. McDonald wanted to emphasize that per the Sewer Overlay Districts under Section 5.3.4 Special Provisions it says, “All new development, change of use subdivision site review, or development requiring a building permit must be connected to both water and sewer services” and the word “must” is there.

Mr. McLeod wanted to reiterate that the purpose of the memo was to save time.

**A roll call vote was taken,
Ms. Gott – Yes, because the vesting has never settled in her mind
Ms. Bridgeo – Yes, because the vesting is not properly addressed
Mr. McLeod – Aye, for the reasons stated previously
Mr. McDonald – Yes
Ms. Luszcz – Yes, because of the reasons stated previously**

The motion passed with a unanimous vote of 5 in favor, 0 opposed, and 0 abstention. This application is denied and it is not vested.

Public Comment

Cathy McDonald made a quick comment to say that someone on the Board did not explain why they voted yes. Ms. Luszcz said that as the applicant has left, they can't really discuss the voting further. She pointed out that this will be clarified in the Notice of Decision and Town Staff will review the video and ensure all votes are notated accordingly.

Approval of Minutes:

December 21, 2023

Motion:

Ms. Gott made a motion to defer the December 21 meeting minutes until the next available time to do them; Mr. McLeod seconded the motion.

**A roll call vote was taken,
Ms. Gott – Yes
Ms. Bridgeo – Yes
Mr. McLeod – Aye**



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Ms. Luszcz – Aye
Mr. McDonald – Yes

The motion passed with a unanimous vote of 5 in favor, 0 opposed, and 0 abstention.

Other Business:

Staff Updates:

No staff were present at the request of Ms. Luszcz.

Board Member Updates:

Ms. Luszcz went over the discussion of changing from the Rockingham Planning Commission to the Strafford Planning Commission. The dues are due on July 1. The cost per resident is the same across the state - \$1.2874 per capita to a population of 5,000; persons thereafter the additional population is assessed at basically 60 cents. No refund was requested for RPC. The Strafford Planning Commission meets every third Friday at 9 AM in Rochester. She then discussed the steps the Town will need to take to change planning commissions.

Ms. Bridgeo quickly mentioned a CIP meeting will be on January 10th at 6 PM and they are looking for three more members-at-large.

Chair Luszcz announced the next meeting will be on Thursday January 11, 2024 at 7:00 PM for the Public Hearing on the Zoning Amendment Warrant Articles which has been posted in the newspaper, Town website, bulletin boards, etc.

Any other business:

None

Adjournment:

Motion:

Mr. McLeod made a motion adjourn; Mr. McDonald seconded the motion.

A roll call vote was taken,
Ms. Gott – Yes
Ms. Bridgeo – Yes
Mr. McLeod – Aye



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Ms. Luszczyk – Aye
Mr. McDonald – Yes

The motion passed with a unanimous vote of 5 in favor, 0 opposed, and 0 abstention.

Chair Luszczyk announced the next meeting will be on Thursday January 11, 2024 at 7:00 PM and adjourned the meeting at approximately 10:00 PM.

Respectfully submitted,

Christine M. Aiello

The video of this meeting is to be preserved for 5 years, attached to these minutes and made part of the permanent record.

Attachments:

Jewett Comments:

1. During the November hearing, the Applicant's environmental consultant, John Turner Consulting ("JTC") provided testimony to the Board regarding additional environmental testing results which were obtained by JTC immediately before the November hearing.
 - a. To supplement this testimony, and the rest of the environmental analysis already provided to the Board, please find enclosed herewith a letter from JTC.
2. Over the last few Planning Board meetings, the issue of Project water usage and demand has been discussed and a question was raised regarding the Applicant's calculations for usage. During the November meeting, Mark Schow, PE of Elevated Design, Inc., provided testimony regarding the basis for the Applicant's projections.
 - a. To further clarify this issue, the Applicant provides the enclosed letter from Mr. Schow dated December 15, 2023 which elaborated on the water demand calculations.
3. At the November hearing a question was posed regarding the nature of the Applicant's proposed "warehouse" use.
 - a. In response to that series of questions, the Applicant provides the enclosed analysis Target End User Narrative dated December 14, 2023.



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- 376 4. At the November hearing, there was a question regarding MS4
377 implications and whether the Project will be adding any stormwater to the
378 Town's infrastructure.
379 a. Town of Raymond is covered by an active MS4 permit. The
380 requirements of this permit state that the Town must establish
381 stormwater management plan requirements. Our project is
382 following the applicable local and state guidelines regarding
383 stormwater management and groundwater protection criteria. The
384 proposed stormwater system will provide the necessary volume
385 and rate reductions and will not provide an increase to the
386 municipal system.
- 387 5. The Applicant and Planning Board have had a continuing discussion of
388 the location and Project implications regarding the location of a municipal
389 well on school-owned property. The Applicant provides the following
390 analysis regarding same and welcomes any additional comments or
391 questions from the Board.
392 a. Per the permit documents that were provided to us by Mr. Unger
393 we have been able to locate the new Well #4 and evaluate
394 information presented with that application. It is understood that
395 the municipal well was approved with a 360,000 GPD capacity and
396 that the source water supplying this well includes areas
397 approximately 1,500'-2,000' from the well. The well has a sanitary
398 protective are radius of 400' and notes a wellhead protection area
399 as defined within the Figure 15 they supplied with the report. It is
400 worth noting that this well head protection area noted on figure 15
401 does encroach onto our lot, but terminates around the vernal pool
402 area. The proposed well that is depicted on the Bohler plans is
403 located outside this well head protection limit and will be designed
404 with a capacity of only 1,430 GPD.
- 405 6. In recent hearings, a question has come up regarding the hydrogeologic
406 implications of the Project.
407 a. In response to these questions, the Applicant provides the
408 following memo from Hydro-Geochemical Solutions, LLC. The
409 Applicant also provides the enclosed Blasting Plan document and
410 corresponding plan prepared by Maine Drilling & Blasting, Inc., for
411 Severino Trucking.
- 412 7. At the November hearing, a question regarding the Traffic Impact
413 Analysis prepared by Vanesse & Associates and the potential for a
414 dedicated turn lane into the Project was raised. That specific question
415 appears to have been fully addressed at the last hearing, but by this
416 letter, the Applicant wanted to acknowledge the comment and reintroduce
417 Vanesse & Associates as its traffic engineer, who is available to answer



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- 418 any questions the Board may have. It is worth noting that VAI is still
419 coordinating with NHDOT for the driveway access permit and we do
420 anticipate the permit being issued this Spring.
- 421 8. At the November hearing, the Applicant indicated that it would submit an
422 updated Wetlands Impact Plan and corresponding Special Permit and
423 Special Permit and Conditional Use Permit narrative analysis.
- 424 a. In response, please find attached a letter from DTC Lawyers dated
425 December 14, 2023 and its enclosures.
- 426 9. At the last hearing, the Planning Board raised the question of whether the
427 Applicant would be willing to consider the permanent conservation of
428 areas of the Property which will not be required for the Project.
- 429 a. In response, the Applicant is happy to consider conveying to the
430 Town, for management by the Town's Conservation Commission,
431 several acres of land which will not be disturbed by the Project,
432 and which could be permanently conserved. In that context, and to
433 begin the discussion with the Board, the Applicant provides the
434 enclosed DRAFT Conservation Area Exhibit from Bohler to begin
435 the discussion.
- 436 10. With regard to the status of the Applicant's various state permits, the
437 Applicant received a Request for More Information from New Hampshire
438 Fish & Game regarding the Applicant's Dredge & Fill Application as well
439 as an Army Corps of Engineers/New Hampshire Division of Historical
440 Resources inquiry regarding the Project.
- 441 a. The project team is working on the additional studies that have
442 been requested by the agencies noted above. These evaluations
443 will carry into the spring as the climate will impact the habitat
444 evaluations required.
- 445 11. Finally, you and the Board requested a chart regarding the status of all
446 permits/approvals needed for the Project.
- 447 a. Enclosed please find the Permitting Outline prepared by Bohler
448 Engineering that notes the outstanding permit that the Applicant is
449 current pursuing for the project.

450
451 **Application #2021-018 White Rock Place Mr. McLeod Memo:**

452
453 The Applicant contemplates in their testimony at a Public Hearing on 10/5/2023
454 and in the Acceptance of Application & Vesting Against Zoning Changes
455 Memorandum dated September 26, 2023 (Exhibit F) that a "formal application" is
456 no more than a placeholder that allows an unlimited amount of time for
457 additional design change and review prior to submitting to the Planning Board
458 as a complete application for acceptance. Not only is this interpretation refuted
459 by published Planning Board educational material issued by the New Hampshire



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460 Office of Planning and Development (NHODP) and presented by New
461 Hampshire Municipal Association (NHMA) annually that instructs members on
462 Planning Board Basics (Exhibit G), but also negatively impacts the health and
463 welfare of the Town of Raymond (TOR) by circumventing sewage related zoning
464 regulations designed to be protective of both.
465

466 In the Applicants Vesting section the word “thus” implies that, if the application is
467 vested then the application is “thus” complete for acceptance. It was discussed
468 by both parties during the 10/5/2023 public hearing that, while vesting may have
469 an effect on acceptance, the question of vesting is separate from the question of
470 if the application is currently complete enough for acceptance. The applicant
471 continues that their position is based in part on “...prior determinations by the
472 Town’s then legal counsel(s) on two occasions...”. The exhibits provided by the
473 applicant clearly show that neither counsel had sufficient information to make an
474 informed legal opinion for the Planning Department (PD) or PB. Additionally, the
475 framing of the question and the information provided to legal was tainted by
476 language that presupposes compliance. Initially, in the email from then Planning
477 Technician Christina McCarthy (CMC) to Laura Spector Morgan, Esquire (LSM)
478 on June 16th, 2022 (Exhibit D), the information is qualified as “According to Chris
479 “; it is further noted that the “Chris” referred to is not identified and may be a
480 third person reference to CMC herself or may be some other homonymous
481 party.

482 The email continues “Based on that information, I believe...” now starting down
483 a path that leads to continued presupposition that the information “according to
484 Chris” is infallible and beyond scrutiny. In her reply to CMC and Madeleine
485 Dilonno (MD) on June 17, 2023 LSM mitigates her response with “Yes, As long
486 as...”. Monica Keiser, representing the Applicant at the Public Hearing on
487 October 5, 2023 refers to the “facts at hand”, however, these purported facts
488 were not made available to LSM at that time in order to produce an informed
489 opinion.

490 Subsequently, in the February 3, 2023 email (Exhibit E) from CMC to Tom
491 Quarles, Jr. Esq. (TQ) the presupposition is evident in the phrase “...given the
492 timetable below...” inferring that the information provided must be accepted
493 without documentation or any “facts at hand” as a “given”. It is also noted that
494 the timeline states that the project was only “...ready to move to the TRC
495 (Technical Review Committee) and PB” in February 2023, far outside the 12
496 month deadline to file a “Formal Application” as contemplated in RSA 676:12,
497 VI, which states:

498
499 “No proposed subdivision or site plan review or zoning ordinance or amendment
500 thereto shall affect a plat or plan or application which has been the subject of
501 notice by the planning board pursuant to RSA 676:4, I(d) so long as said plat or



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502 application was the subject of notice prior to the first legal notice of said change
503 or amendment. The provisions of this paragraph shall also apply to proposals
504 submitted to a planning board for design review pursuant to RSA
505 676:4,II(b), provided that a formal application is filed with the planning board
506 within 12 months of the end of the design review process.”

507
508 In one of multiple instances questioning the validity of a determination that a
509 “formal application” must by law and definition be a “completed application”, at
510 approximate timestamp 00:42:35 from the published recording of the 10-5-23
511 Public Hearing on Raymond Community Television (RCTV) MK states, “...and I
512 would suggest there is no information that would support a determination that
513 “formal application” means a complete application because the statute says a
514 formal application must be filed it does not say an application has to be deemed
515 complete in order to be vested.” However, as seen on Exhibit G page 24 of 46, it
516 is in fact considered to be a basic tenant of planning board procedures that a
517 formal application is one that is first of all complete as the first two qualifications
518 for a “Formal
519 Application” are a Completed application and that Regulations specify what is
520 completed application.

521
522 A completed application is defined by statute in Raymond’s Site Plan Regulation
523 Article II-Definitions 2.01(05) as:

524
525 **COMPLETED APPLICATION:** A final site plan and application form submitted
526 with all other information and materials required by the Board to make an
527 informed decision, plus the required site plan review fees.

528
529 Another citation, further reinforcing that the condition of an application to be
530 considered formally submitted is one that is complete and ready for notice, is
531 from the NH-OPD PB Handbook (Exhibit I) on page V-6 explains in part, the
532 trigger for starting the application process as:

533
534 **STEP 1: FILE THE APPLICATION (RSA 676:4,I(b))**

535 The applicant triggers the review process by filing an application. State
536 statutes require the filing to be done at least 21 days before the public meeting
537 of the planning board at which the application will be formally submitted.

538
539 The submission filed by the Applicant was not a final site plan and
540 application, it also did not include all the information needed to make an
541 informed decision. In fact the final plan was not ready for submission to the PB
542 until at least February 2023 as indicated by the email from CMC (Exhibit E) and
543 is further directly contradicted by the cover letter for the 11-4-2021 submission



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544 (Exhibit B) where it states in part the intent of the application is, "...in order to
545 advance our design review...". Not only did the Applicant not submit a complete
546 application as required, but the Applicants cover letter specifically states that the
547 project is not even out of the design phase, much less a complete application,
548 though the official design process had closed a year before (Exhibit A). There
549 was no Unified Development Plan, Traffic analysis, Community Impact analysis,
550 or complete letters of authorization in the 11-4-21 submission; all of which are
551 compulsory data. Because the Applicant did not meet the requisite conditions of
552 a "formal application" the project is not vested under RSA 676:12,VI.
553

554 Further, in the August 17,2023 application re-submission letter from
555 Jones & Beach Engineers Inc. it states, in part "We have obtained letters of
556 authorization from the sellers of the properties and therefore we are now ready
557 to move forward with this application.", a tacit admission that the project did not
558 meet the requirement of a "formal application" until 21 months after the official
559 close of design review.
560

561 There is additional guidance on what happens when one is submitted that
562 suggests a formal application is synonymous with a completed application. NH
563 OPD Planning Handbook page V-3 guidance states in part " Design review
564 applications are required to be noticed in the same way a formal application
565 would be according to RSA 672:3 676:4.(d)1".
566

567 While the Applicant has emphasized the applicability of the RSA to their
568 project, they have not addressed the other "provisions of this paragraph" which
569 must be pursuant to RSA 676:4, I(d) that states, in part "The planning board
570 shall notify abutters...of the date upon which the application will be formally
571 submitted to the board." No such notification was made in the 12 months
572 following the close of the design review process on 11-5-2020 nor was any
573 notification made in at least the subsequent 100 days after the submission by
574 the Applicant on 11-4-2021 as shown by PB agenda postings (Exhibit H). As
575 this condition was not met, the Application does not meet the notice
576 requirements of a "formal submission" pursuant to RSA 676:4, I(d) and is
577 therefore not subject to the provisions of RSA 676:12,VI.
578

579 Allowing an applicant to file any submission as a "Formal Application"
580 effectively gives a project indefinite vesting which would have a negative effect
581 on the health and welfare of the municipality by circumventing the vote of the
582 electorate. The Planning Board contemplates that the 12-month provision
583 allowed is, in fairness, meant to protect the application from subsequent zoning
584 and regulation changes so long as the final and complete application is
585 submitted to the PB for notice and determination of completeness for



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586 acceptance and review, AKA a “formal application” as the PB has been trained
587 to recognize for the past two years by the NHODP and NHMA.

588

589 A (disputed) vesting determination was not issued to the Community
590 Development Department by MD until February 14, 2023 (Exhibit C), months
591 after the vesting window had closed.

592

593 Finally, RSA 674:39 clearly states, in part, that there is an exemption from
594 protection from subsequent ZO requirements, “...except those regulations and
595 ordinances which expressly protect public health standards, such as water
596 quality and sewage treatment requirements ...”. The requirement of the SOD is
597 that Multi-Res units be connected to a WWTF (as not doing so violates the
598 underlying dimensional requirements that prevent septic issues in non-approved
599 zones), thus RSA 674:39 codifies our local regulation which prevents the PB
600 from approving any application that will negatively affect the health and welfare
601 of the municipality, and so any vesting provision would not include the zoning
602 relief associated with the SOD as the ZO were adopted in order to be protective
603 of the sanitary health of the community.