

Wiscasset, Waterville & Farmington Railway Museum

Sheepscot Station • P.O. Box 242 • Alna, Maine 04535-0242
(207) 882-4193

March 1, 2018

Planning Board
Town of Alna, Maine
1568 Alna Rd
Alna, ME 04535

Re: Five-Year Site Plan Under Subdivision Ordinance

Members of the Alna Planning Board,

Enclosed is an updated Site Plan and Five-Year Plan as requested by your committee. This plan covers the period July 2017 through June 2022, and represents the Wiscasset, Waterville & Farmington Railway Museum's anticipated expansions and operations. This plan also addresses areas of concern to the Planning Board, such as traffic and on-street parking, fire protection, benefits to the town, current and future railroad operations, and expansion of our railroad track and structures.

Where the WW&F Railway Museum is Today

A snapshot of the current state of the Museum as of July 2017:

- 2.5 miles of operable railroad track, to the so-called "Top of the Mountain", property purchased from David H. Clark II in 2015.
- 2 steam locomotives (one operable), 1 diesel locomotive, 2 other engines.
- 5 railroad passenger cars, 5 freight cars, 15 railroad maintenance cars, and 6 highway or construction vehicles.
- In 2016, we welcomed over 5700 riders, had 1100 members, and brought in nearly \$500,000 in donations, tickets, and gift shop sales.

The W W & F Railway Museum is a 501(C)3 organization
All dues and donations may be listed as charitable contributions on Federal
income tax returns to the extent allowed by law.

Visit our web page at: <http://www.wwfry.org>

- Our base of operations is at 97 Cross Rd, also called “Sheepscot Station” or the Sheepscot Campus. This is also our public entry point, and the location where much of our restoration and maintenance takes place.
- “Alna Center Station”, on the discontinued Averill Rd, is the destination for most of the special events that take place. It is approximately halfway along our active railroad line.
- We operate trains for the public Saturdays and Sundays during the operating season Memorial to Columbus Day Weekends, Saturdays only in May before Memorial and in October after Columbus weekend; additional days are by request or special arrangement.
- We host six special events throughout the year: Easter, 2 Ice Cream Socials, Annual Picnic, Fall Festival, and Christmas.
- We have a volunteer and/or paid contractual project management presence on site most days of the week all year long;
- We maintain an approximate 1-mile trail on our right of way from the north side of the Rt. 218 crossing to Head Tide Road.

Issues That the Planning Board Wish Addressed

On-street parking

On-street parking has been a major issue that past plans have hoped to address. Since the 2008 plan, the Museum added an approximate $\frac{1}{2}$ acre parking lot, west of the Percival House. This lot has done much to eliminate on-street parking during regular operating days, and during many of the special events. However, for the larger special events (such as Victorian Christmas), this continues to be an issue.

We are adopting several of the recommendations made by the traffic study. Specifically:

- *Extra parking* – we expect to construct a second parking lot, west of the existing lot and further up the hill. Please see our Site Plan application pages 2 and 23 for further details. This will be worked on over the next several years.
- *Special Event Crowd Control* – we have started on crowd control at special events by establishing better schedules, on-line ticketing, limiting capacity, and splitting some events into multiple days.
- *No Parking signs* – The traffic study recommended “No parking here to corner” at the corner of Cross Rd. and Rt. 218. We will work with the Town’s Road Commissioner to purchase and have the signs installed, at our cost; after installation we anticipate that maintenance costs and activities will be the responsibility of the Town. Additionally, we will post temporary “No parking signs” in the immediate vicinity of the parking lot entrance at events. We will do this in 2018.
- *Parking attendants* – For each event, we will provide parking attendants. These attendants will wear high-visibility vests and will use flags to further direct traffic.
- *Drop-off* – The area in front of the car shop (large yellow building by the road) is intended to function as a handicap drop-off and short-term parking area. The traffic study recommended that this should be more formally established, we will create signage

for this area. Please see our Site Plan application page 23 for further details. We will do this in 2018.

Other pedestrian safety items:

- *Defined pedestrian walkways* – Recommended by the traffic study in order to avoid having pedestrians walk on the road, we plan to establish define walkways between the parking lots and the board area. The walkways will also guide people around other areas of the campus. Please see our Site Plan application page 23 for further details as to location. These will be over the next several years.
- *Pedestrian Activity signs* – The traffic study recommended advance pedestrian warning signs on Cross Rd, outside of expected pedestrian walking zones. We will work with the Town's Road Commissioner to purchase and have the signs installed, at our cost; after installation we anticipate that maintenance costs and activities will be responsibility of the Town. We will do this in 2018

Traffic study recommendations we will not take:

- *Cross Road Sidewalk* – we will not ask the Town to put in a sidewalk.
- *Paving the parking lot* – we do not expect to the pave the lot.

Additionally, we have been granted permission by the owners of the Cross Rd./Rt. 218 corner lot (lot R-4-55) to have our volunteers park there on large event days. We hope that these mitigation efforts will greatly reduce the amount of on-street parking and enhance the safety of our guests and Cross Road drivers.

Further Sheepscot Construction activities

In the coming five years, there will be additional construction activities on the Sheepscot Campus. Most of these may be found on our Site Application on pages 44 and 45. Listed alphabetically, we anticipate these to be:

- Coal storage bin – This will replace the “temporary” storage bin with a more permanent structure, located behind the future roundhouse. This will occur 2018-2019.
- Enhanced fire protection/hydrant system – we are working on a plan to provide greater fire protection to the campus. We will have a buried hydrant system on the campus, fed from the fire pond on the south side of Cross Road. We are also planning to install a dry pipe system in many of our wooden buildings. Timeframe is unknown, we will be working with the Fire Department on this.
- Roundhouse – this will be a 3-stall building on the opposite side of the turntable from the road. This will remove operating locomotives from the car shop (big yellow building), dividing assets to reduce fire risk on the Sheepscot campus. Anticipated in the 2020-2023 timeframe.
- Utilities – we are constructing a central drop building between the car shop (big yellow building) and Percival House, next to the single utility pole. From this building, utilities will distribute across the campus underground. This will occur over 2018-2019.

Top of Mountain Construction activities

The “Top of the Mountain” location is approximately 23 acres of land. This property is bisected by the Trout Brook stream and valley, making the western half of the property unsuitable for railroad purposes. Please see our Site Plan application page 46 for further details. The eastern half will host:

- Saw mill – a building erected around an old-fashioned saw mill.
- Shingle mill – a building erected around the former R. E. Temm shingle mill, machinery that was rescued from an estate in Scarborough.
- Small passenger shelter – a small shelter erected for passenger comfort and some protection from the weather.
- Trail system – a short hiking/snowshoeing trail system will be built.
- Tree clearing – in order to facilitate construction of the mills and railroad track, another acre needs to be cleared.
- Restrooms – we will bring in a port-a-potty restroom.

Mountain Extension activities

The “Mountain Extension” encompasses railroad track from the “Top of the Mountain” down the hill, across Trout Brook, and terminating before Rt. 218. This section of track was called “The Mountain” by the original railroad, as it was the steepest southbound grade on the railroad as the track climbed out of the Sheepscot River valley onto the bluffs overlooking it. This is approximately 8/10^{ths} of a mile.

- Tree clearing – the track bed is mostly clear of trees already (from before the Museum was around), most tree clearing consists of cleaning trees from the remaining track bed, ditches, and several feet to the side; plus making sure there are no dangerous branches overhanging the track bed. This will be winters of 2018 and 2019.
- Track bed repair – this consists of removing topsoil, adding ditches and culverts for drainage, and any repairs that need to be done to the track bed and ditches themselves. This will be summers of 2018 and 2019.
- Trout Brook Bridge installation – As outlined in our Shoreland Zone application, during the summer of 2018 we will be constructing the in-ground structure to hold up the bridge, then in the late summer/early fall moving the bridge into place.
- Track construction – We will be building track from the current end of track down the hill, across the bridge, and terminating before Rt. 218. At the Rt. 218 terminus we’ll build a passing track so that locomotives may move to the other end of train. This will be completed by the end of 2021.
- Small passenger platform and shelter – a small platform and shelter erected for people to get out and stretch their legs at the northern end of the run. This will be complete by the end of 2021.
- Rt. 218 access: please note that many of our activities involving the Mountain Extension will be accessed from Rt. 218 at the site of the former railroad crossing about a mile south of Head Tide. We have obtained an MDOT driveway permit for this access point.

All parking will be off-road, and access is limited to our volunteers and contractors. Residents of Alna may witness a fair amount of activity at this location.

- In the summer of 2018 we anticipate moving the Trout Brook railroad bridge from our parking lot at Sheepscot Station to the bridge site via Rt. 218 (with appropriate MDOT permitting), and onto the right of way at the afore-mentioned access point.

Other Activity

- Train operations: we are exploring the potential of very limited weekday and winter public train operations. Scope is unknown, but probably would not exceed one day a month in the winter, and one weekday during the operating season.

Official Museum Point of Contact

Jason Lamontagne is the first point of contact. Jason is our Master Mechanic and is often on-site. His phone is 207-522-0735, email is jason.lamontagne@wwfry.org.

David Buczkowski is the second contact. Dave is President, and lives and works in Massachusetts, but does own a home in Alna. His phone is 617-592-4788, email is david.buczkowski@wwfry.org.

2017 Site Plan Submission to Alna Planning Board
Five Year Plan 2017 – 2022

A1: The Site Plan of Development Application shall include as a minimum: A map or maps prepared at a scale of not less than one (1) inch to 50 feet and shall include:

a. Name of the applicant, his authorized agent as appropriate, and name of proposed development and any land within 500 feet of the proposed development in which the applicant has title or interest.

Wiscasset, Waterville & Farmington Railway Museum

Agent: David J. Buczkowski, President

23 Downing Rd

Lexington, MA 02421-6918

Proposed Development: Rebuilding of the Wiscasset & Quebec Railroad/Wiscasset, Waterville & Farmington Railway on original roadbed extended north of Sheepscot Station on Cross Road in Alna. This plan pertains to construction of track from the current end of our passenger line at so-called Top of the Mountain on property formerly owned by David Clark II, down the hill and across Trout Brook to end at Route 218. It also pertains to plans for the Sheepscot Station campus and plans for the Top of the Mountain property.

The WW&F Railway Museum owns railroad right-of-way on the north side of Rt. 218, extending approximately one mile to near the old Head Tide Church. This is maintained as a trail. We have no other land with title or interest within 500 feet of our right of way.

A USGS map of the entire railroad, existing and proposed, has been included as a separate document.

b. Existing soil conditions as determined by a high intensity soil survey by a Certified Soil Scientist. At the discretion of the Planning Board the survey may be to 1/8 of an acre depending on the density of development.

Waived.

c. Municipal tax maps and lot numbers and names of abutting landowners:

See Exhibit A-1-c for Tax maps [R4](#), [R5](#) and [U2](#). Since the 2008 plan, map R-5 lots

- 1A (Michael & Amanda Averill),
- 7A (Erik & Maylene Mitchell),
- 9 (Owen & Laura Colomb),
- 9A (Donald & Marcia Lyons),
- 10 (Judith Fossell)
- 44 and 35 (both Midcoast Conservancy).

Future abutting landowners will be on map R-5 lots

- 14 and 16 (both Elizabeth Taliento),
- 35C and 35D (both Midcoast Conservancy).

d. Perimeter survey of the parcel made and certified by a registered land surveyor relating to reference points, showing true north point, graphic scale, corners of parcel and date of survey and total acreage. Areas within 250 feet of the proposed development site shall be included;

Waived.

e. Existing and proposed locations and dimensions of any utility lines, easements, drainage ways and public or private rights-of-way;

At Sheepscot Station, Cross Road is the only site with any utility lines and public rights-of-way. Utility lines currently come into both the main shop area and the Percival House; this will be changing within the next five years to a single utility drop pole midway between the two structures, with buried utilities across the campus.

Since 2008 elsewhere on the line, utility lines have crossed our track at Map R-4, lot 47, Brian Fanslau.

Route 218 is the only site of any utility lines and public rights-of-way for the northern aspect of our application.

On both sides of Trout Brook our right-of-way bisects the Midcoast Conservancy properties. We currently allow them to use our right-of-way for their trail system, and we will continue to do so as we construct track and will be in communication with them regarding this.

For drainage ways since 2008 to the end of this 5-year plan, see [Exhibit A-1-e](#) (overhead map for MP 7 north to Rt. 218 with culverts drawn in).

f. Location, ground floor area and elevation of buildings and other structures, septic systems and wells on parcels abutting the site;

The only structures, septic systems, or wells abutting the site since the 2008 plan are on map R-5 lots 1A (Michael & Amanda Averill), 7A (Erik & Maylene Mitchell), 9 (Owen & Laura Colomb), 9A (Donald & Marcia Lyons), 10 (Judith Fossell) 44, and 35 (both Midcoast Conservancy). Future abutting such structures will be on map R-5 lots 14 and 16 (Elizabeth Taliento), 35C and 35D (both Midcoast Conservancy). Any such structures are hundreds of feet away from the railroad line and would not be impacted by our activities.

g. Location and dimensions of on-site pedestrian and vehicular access ways, parking areas, loading and unloading facilities, ingress and egress points to and from the site onto public streets and curb and sidewalk lines;

See [Exhibit A-1-g](#) for pedestrian and vehicular access at Sheepscot Station. There is no public access to the Top of Mountain location. For purposes of this 5-year plan, there is no public access to the end of track once it reaches Rt. 218, excepting any trails that the Midcoast Conservancy may wish to put in to the platform.

h. Landscape plan showing location, type and approximate size of plantings and location and dimensions of all fencing and screening;

Not applicable.

i. Topography indicating contours at intervals as specified by the Planning Board.

Waived.

j. An indication of the type, and location, of water supply system(s) to be used in the development. When water is to be supplied by public water supply, a written statement from the servicing water district shall be submitted indicating there is adequate supply and pressure for the development.

Not applicable.

k. The number of acres within the proposed development, location of property lines, existing buildings, vegetative cover type, and other essential existing physical features. Also, the proposed lot lines with dimensions and lot areas, as applicable.

See Exhibit A-1-k for a current view with property lines of the [Top of Mountain](#) and of [Rt. 218](#).

Right of Way equals approximately eight (8) acres to the mile, so approximately 4 acres since 2008 to today, and approximately 8 acres for the next 5-year plan.

In 2014, we purchased approximately 23 acres of property from David H. Clark II, the so-called Top of the Mountain. We are planning to use approximately 2 acres for our shingle mill/saw mill display. To-date, slightly less than 1 acre has been cleared of trees, and we anticipate clearing another approximate acre. Additionally, we have added two track sidings at this location, and a 120-foot spur track. The spur track will need to be extended more to serve the display and could be extended another 500 feet or so to reach a scenic spot above Trout Brook, which would not see regular passenger service.

Currently, the roadbed between the Top of the Mountain and Rt. 218 is generally clear of trees. From Rt. 218 to the trestle area, the trees were previously cut back considerably, not by the WW&F.

l. The surveyed location of all rivers, streams, wetlands and brooks within or adjacent to the proposed development.

All proposed Shoreland Zone work has been applied for via our Shoreland Zone Permit application. We will not be performing any other work in the shoreland zone.

m. Location of any zoning boundaries affecting the development.

Trout Brook is noted as a Perennial Stream. Our extension intersects this zone at only two locations: at the bridge site, and one area ½ mile south of the bridge site, an area that will require stabilization work. Please see our Shoreland Zone Permit application for greater detail.

n. The location and size of existing and proposed sewers, water mains, culverts, and drainage ways on or adjacent to the development.

For existing (since 2008) and future culverts, bridges and drainage ways, see [Exhibit A-1-e](#). Any required permits will be done via a separate application to the Planning Board.

There are no existing or future planned sewers or water mains along our railroad right of way, nor on any adjacent properties.

On the Sheepscot campus, there is a septic holding tank and septic field north of the Percival house.

o. The location, names, and present widths of existing streets, highways, easements, building lines, parks and other open spaces on or adjacent to the development.

The Midcoast Conservancy's Trout Brook Preserve is bisected by the railroad right-of-way. We will be working with the Conservancy regarding their trail system to have it safely cross our railroad track.

Route 218 is at the end of the track anticipated in this five-year plan. We will not be crossing it in this plan.

p. All parcels of land proposed to be dedicated to public use and the conditions of such dedication. The location of any open space to be preserved and a description of proposed ownership, improvement and management.

Not applicable.

q. The area on each lot where existing forest cover will be permitted to be removed and converted to lawn, structures or other cover and any proposed restrictions to be placed on clearing existing vegetation.

At Sheepscot Station, the area to the west of the parking lot will undergo some clearing, in order to facilitate additional parking. We would remove less than 1 acre. See [Exhibit A-1-g](#).

On the Top of Mountain property, we have removed slightly under 1 acre of forest for our interpretive display, we anticipate removing another acre of trees (approximate), to the north and west of the area currently cleared. See [Exhibit A-1-q](#).

On our right of way between the Top of the Mountain and Trout Brook, the immediate railroad track path has no tree growth on it. We will clear all trees 10 feet to either side of the railroad centerline (20' total width). Additionally, where allowed by ordinance, we may judiciously limb and/or remove trees within 20 feet of the railroad centerline to reduce hazards and to improve sight lines, particularly on curves. Where required by ordinance, we will acquire permission to remove any trees needed for safe operation of the railroad.

Beyond Trout Brook to Rt. 218, as noted in section k) above, trees had been previously cleared to about 25-30' (not by the WW&F). We have increased the clearing in this area according to the conditions outlined in the previous paragraph. Where the siding will be located, on the West side, an additional 10-12 feet has been cleared to allow proper clearance and ditching of the siding. The siding was purposely located where existing tree growth was minimal.

r. If any portion of the development is in a flood-prone area, the boundaries of any flood hazard areas

See [Exhibit A-1-r](#) for the FEMA map. The only location that our railroad reconstruction intersects flood hazard areas is at the Trout Brook bridge, which will be above any flood zone. Our right-of-way actually provides the border for the flood zone as the railroad nears Rt. 218. Please see our Alna Shoreland Zone permit for the bridge, which also addresses our floodplain permit.

s. A hydro geologic assessment prepared by a Certified Geologist or Registered Professional Engineer, experienced in hydrogeology.

Waived.

t. An estimate of the amount and type of vehicular traffic to be generated on a daily basis and at peak hours.

Nearly every day of the week, there is a working presence on the Sheepscot campus. During the week, any traffic consists primarily of our contractor, volunteers, and the occasional visitor. Working trips beyond arriving and departing would be to get supplies at various local stores. The size of the work force generally varies between one and 10 people, potentially generating between 2 and 30 trips per day (assuming only one worker per vehicle).

On most weekends during the tourist season we have approximately 20 workers and 50 visitors, thus potentially generating between 45 and 70 trips (assuming 1 worker per vehicle and 2 visitors per vehicle).

At our large events, we will have between 200 and 1200 people, depending on the event, in addition to 20+ workers. Assuming 1 worker per vehicle, and 3 visitors per vehicle, this will generate between 175 and 840 trips. Our large events include:

- Easter Eggspress (Saturday before Easter).
- two Ice Cream Socials (2nd Saturday in July and last Saturday in August).
- Annual Picnic (2nd weekend of August).
- Fall Festival (last Saturday of September).
- Victorian Christmas (typically the Saturday before Christmas, this year we have two, two Saturdays before Christmas).

We would like to increase our ridership on non-event weekends to at least 100 visitors per day. We are also considering adding new events during the tourist season to attract more visitors.

Nearly all trips involved are passenger vehicles. We have infrequent (1/month on average) trips involving tractor-trailers for delivery or pick up of heavy equipment or supplies, and nearly weekly trips of light delivery trucks, such as for UPS.

u. For developments involving 40 or more parking spaces or projected to generate more than 400 vehicle trips per day, a traffic impact analysis, prepared by a Registered Professional Engineer with experience in traffic engineering

We engaged the services of Maine Traffic Resources, in Gardiner. They performed a traffic study for the 2017 Victorian Christmas. Their final report to us is included as a separate document; the summary may be found at [Exhibit A-1-u](#). Our responses to their suggestions may be found in our cover letter to this application.

v. Areas within or adjacent to the proposed development which have been identified as high or moderate value wildlife habitat by the Maine Department of Inland Fisheries and Wildlife.

According to the Maine State IF&W, we are in Wildlife Management District 22 (the eastern border of which is Rt. 218). Regarding wildlife habitats, see [Exhibit A-1-v](#). The nearest habitat of moderate value is some miles away.

w. A storm water management plan, prepared by a registered professional engineer in accordance with the *Stormwater Management for Maine: Best Management Practices*, published by the Maine Department of Environmental Protection (1995).

After researching the above-mentioned publication, it was determined that for our work at the Top of the Mountain, and our work in track construction to Rt. 218, that we will not reach the threshold of disturbance that would trigger the requirement for a storm water management plan.

At Sheepscot, we have surpassed the threshold of disturbance, so we commit to researching, preparing, and following a storm water management plan for the Sheepscot campus during the course of this 5-year plan.

x. An erosion and sedimentation control plan prepared in accordance with the *Maine Erosion and Sedimentation Control Handbook for Construction: Best Management Practices*, published by the Cumberland County Soil and Water Conservation District and the Maine Department of Environmental Protection, March 1991.

For our track extension to Rt. 218, we have researched and will follow best practices for erosion and sedimentation control, also as required by the Town, DEP and Army Corps of Engineers.

A2 A written statement by the applicant that shall consist of:

a. Evidence by the applicant of his title and interest in the land which the application covers;

See Exhibit [A-2-a](#), which consists of:

- Permanent easement over property of [A. Gordon Davis](#),
- Permanent easement over property of [Roswell Davis](#),
- Right-of-way purchase from [Ann Sutter](#),
- Parcel acquisition from [Wiscasset & Quebec Railroad Company](#) at Alna Center,
- Property purchase from [David Clark](#),
- Right-of-way lease from [Judy Fossell](#), and
- Right-of-way purchase from [Mellissa Kelly](#).

In addition, we have a previously established lease over various parts of the railroad right-of-way between Sheepscot and Top of the Mountain, and ownership of the railroad right-of-way from Kelly's to Rt. 218.

b. A description of the proposed uses to be located on the site, including quantity and type of residential unit, if any;

The WW&F Ry Museum is a tax-exempt, non-profit Maine corporation with the expressed mission of acquiring, restoring and preserving the narrow-gauge railroads of the Sheepscot Valley. We intend to offer our visitors, the surrounding community, and our members with a tangible representation of the original railway and its purpose in the Valley in the early 1900's, for their enlightenment, education and enjoyment.

On the Sheepscot campus (97 Cross Road) is our center for our restoration and reconstruction activity of railroad equipment, and is a delivery point for some supplies, such as rail and ties, and equipment. The area is used for storage of some materiel until it can be shipped north on the railroad for use or further storage. And, of course, it is the location from which visitors arrive, tour our facilities, and begin their railroad journey. On the campus is the former Harry Percival residence, which has been turned into Museum offices, and volunteer rest quarters. Volunteers do occasionally stay overnights in the building. We have had a caretaker stay in the house as a function of the museum operation and may do so in the future (such as for the summer season) but as of right now there is no such person.

At the Alna Center station (on the former Averill town road), this location is used for many of our events: Christmas, Easter, Ice Cream Social, and so forth. We have been allowed use of the fields on either side of our property. Additionally, on our property on the west side, we store some railroad construction and maintenance material, such as stone or gravel, waiting to be used. We do not intend to change this use.

At the Top of the Mountain property, use will be a shingle mill and saw mill display, occasionally operating. These operating events would be in addition to our other events, and not at the same time. Current use is where the locomotive switches ends of the train, with a small platform to allow passengers to disembark to take pictures. As there is no road access, a portion of the clearing will be available as a Lifeflight helipad, should it be needed.

At the end of track by Rt. 218, use will be to switch locomotives to the other end of the train, with a platform to allow passengers to disembark to take pictures.

Our public operating days are Saturdays in May to Memorial Day Weekend; Saturdays and Sundays from Memorial Day Weekend to Columbus Day Weekend (inclusive); Saturdays to the end of October. We also have additional events outside of this range, such as Victorian Christmas (Saturday before Christmas) and Easter Eggspress (Saturday before Easter). Trains operate on these days, usually on a fixed schedule.

One exception to this was in September 3 – 11, 2016, when we were open and operating for the public for that entire stretch of time. During part of this period a national railroad convention was at the Augusta Civic Center, so we were open for visitors before, during, and after the convention.

We may have other days outside of the weekends when we are operating, but these are typically for people or groups that have paid to have the railroad to themselves for part of or all the day.

Lastly, we operate sporadically at all other times of the week or year, depending on the needs of the railroad. These operations are for maintenance of the railroad or right-of-way, or new construction.

Operations are generally during daylight hours, between 10 AM and 4 PM. However, we may operate outside of these hours for special events.

c. Total floor area and ground coverage of each proposed building and structure and percentage of lot covered by each building or structure;

See Exhibit A-2-c for a map of the [Sheepscot Campus](#) and all current and future structures on it; a map of the [Top of the Mountain](#) area with future structures; and a map of the [Rt. 218 location](#) with future structures on it.

d. Summary of existing and proposed easements, restrictions and covenants placed on property;

The Percival House has two mortgages on it, one for the house and property that was once owned by Harry and Clarissa Percival, the other for the purchase of the Top of Mountain property.

e. Method of solid waste disposal;

All solid waste, excepting ash and septic, is collected weekly and delivered to the Wiscasset Transfer Station. Recyclables are collected and also delivered to the Wiscasset Transfer Station on a periodic basis.

Septic is disposed by a professional septic service, called in as needed.

Ash is being stored in a single location and will be delivered to the ash bin at the Wiscasset Transfer Station on a periodic basis.

We are considering adding a dumpster for a single trash collection point, however this is only under discussion.

f. Project notification letters by certified mail and receipt requested to all persons owning property within 2,000 feet of the location as indicated on the current tax maps of the Town of Alna and to the Selectmen, Road Commissioner, Fire Chief, Building Inspector/Code Enforcement Officer notifying them of the proposed development;

Will be needed.

g. Statement of financial capacity which should include the names and sources of the financing parties including banks, government agencies, private corporations, partnerships and limited partnerships and whether these sources of financing are for construction loans or long-term mortgages or both;

See [Exhibit A-2-g](#), the 2016 Treasurer's report to the Museum's 2017 Annual Meeting.

h. Filing dates, status and copies of approval letters for all Federal and State rules, regulation or laws which are applicable to the development.

- Building permits: on file with Town of Alna.
- Shoreland Zone Permit: passed by the Planning Board in December 2017.
- Department of Environmental Protection – the following filings have been completed:
 - Permit by Rule [for culvert work](#) on extension in 2017. This was approved.
 - Permit by Rule [for bridge construction](#) in 2018. This was approved.
 - Individual Permit [for roadbed restoration](#) (see Map 4). This is in process.
- US Army Corps of Engineers permit [for culvert work](#) on extension in 2017. This was approved.

Please note that DEP and Army Corps links are just the filing notifications and not all of the paperwork that went with each filing. This information is available if requested.

There are additional permits that we will need that we will apply for at the time they are needed.

i. A statement from the Fire Chief as to the availability of fire hydrants and/or fire ponds, or provisions of fire protection services;

See [Exhibit A-2-i](#), a letter from the Alna Volunteer Fire Department regarding fire protection.

j. A statement from either the Road Commissioner or Selectmen that the proposed road or street construction will meet town specifications.

I met with the Select Board at their December 20, 2017 meeting, and requested a statement from them. This is an excerpt from their meeting minutes:

New Business:

WW&F 5-year Plan

James Patten from WW&F spoke about the 5-year plan and that they needed a statement from the selectmen about the road.

The Selectmen said they did not think that the requirement that a “road” be built to town standards applied to “rail-roads”. Selectman Baston moved that the selectmen decide that the section did not apply to railroads, and if we need a clean paper trail for some reason, that we believe that the WW&F will build a perfectly fine railroad. Selectman Spinney seconded and all voted in favor.

k. The schedule of construction of the development.

Schedule of construction: track and other structures to be constructed as funds and volunteer labor are available. Our goal is to reach Rt. 218 by the end of this five-year plan.

2018: Pending all regulatory approvals, construct abutments for bridge at Trout Brook, and placement of the bridge. Additional tree clearing at Top of Mountain, construction of shingle mill building at that location. Extend Top of Mountain track spur. Additional tree clearing at Sheepscot for the west parking lot. Construction of 1100 feet of mainline railroad track.

2019: Perform additional right of way stabilization, on either side of the Trout Brook bridge and north of the end of track. Construction of 1400 feet of mainline railroad track onto and beyond the bridge to satisfy the Shoreland Zone permit. If required, additional tree clearing at Top of Mountain (for the mill buildings) and at Sheepscot (for the parking).

2020: Additional right of way stabilization, and construction of 1000 feet of mainline railroad track. Construction of the additional parking lot at Sheepscot.

2021: Additional right of way stabilization (if any needed), and construction of run-around track and terminal facilities at Rt. 218, open Mountain Extension to the public. Construction of 3-bay roundhouse at Sheepscot.

2022: Construction of saw mill building at Top of the Mountain.

l. A list of construction and maintenance items, with both capital and annual operating cost estimates, that must be financed by the town. These lists shall include but not be limited to: Schools, including busing; Street maintenance and snow removal; Police and fire protection; Solid waste disposal; Recreation facilities and Storm water drainage. The applicant shall provide

an estimate of the net increase in taxable assessed valuation at the completion of the construction of the development.

Not applicable – however, as a reminder, the Great Salt Bay Consolidated School District uses the Sheepscot Station short term lot as a turn-around point for its busses, parents use the area between the street and car shop while they wait, and the Town plows this area during snow storms. Other than plowing, this area is maintained at our own expense.

m. An on-site soils investigation report by a State of Maine licensed site-evaluator or soil scientist shall be provided. The report shall contain the types of soil, location of test pits, and proposed location and design of the best practical subsurface disposal system(s) for the site;

Not applicable.

n. A list of construction and maintenance items, with both capital and annual operating cost estimates, that must be financed by the developer including a description of the method to be established to meet those costs by the developer and/or residents of the development.

The WW&F Railway Museum anticipated construction and maintenance list:

- Construction of a new passenger car (Coach 9) over the next 2 years.
- Restoration of Coach 3 to as-new condition once Coach 9 is complete, approximately 2 years.
- Beginning of the construction of another new passenger car (Combine 10) near the end of this plan.
- Construction of a new freight car, a tank car, during this plan.
- Construction of a new boiler for Locomotive 10 and returning it to service during this plan.
- Construction of a boiler for new Locomotive 11, and construction of various parts and pieces. The locomotive is not anticipated to be completed in this plan.
- Construction of a coal storage bin on Sheepscot campus over the next year.
- Construction of a 3-bay engine house on the Sheepscot campus towards the end of this plan.
- Construction of a drop building for utilities, and burial of utilities, on the Sheepscot campus over the next 3 years.
- Construction of handicap-friendly walkways around the Sheepscot campus during this plan.
- Construction of an additional parking area to the west of our current parking on the Sheepscot campus during this 5-year plan.
- Construction of a building for a shingle mill at the Top of the Mountain over the next 2 years.
- Construction of a building for a saw mill at the Top of the Mountain toward the end of this plan.
- Construction of approximately $\frac{3}{4}$ miles of railroad track from the current end of track to Route 218 by the end of this plan.
- Construction of a bridge over Trout Brook over the next 2 years.
- Construction of a passenger platform and shelter structure at both the Top of the Mountain and Rt. 218 locations.
- Maintenance of our existing fleet of steam and internal combustion locomotives, passenger cars, and freight cars on an as-needed basis.
- Maintenance of our existing buildings on an as-needed basis.
- Maintenance of our existing railroad track and keeping the right of way mowed on a yearly basis.

All capital funds are raised from our 1100+ membership from across the United States and the world, with occasional grants from grant-making foundations or other organizations. Maintenance funds are generated from general donations, ticket sales, and profits from our gift shop.

Exhibit A-1-c: Tax Map R-4

WW&F & W&Q properties in yellow. These are based on the tax maps found on the town website.

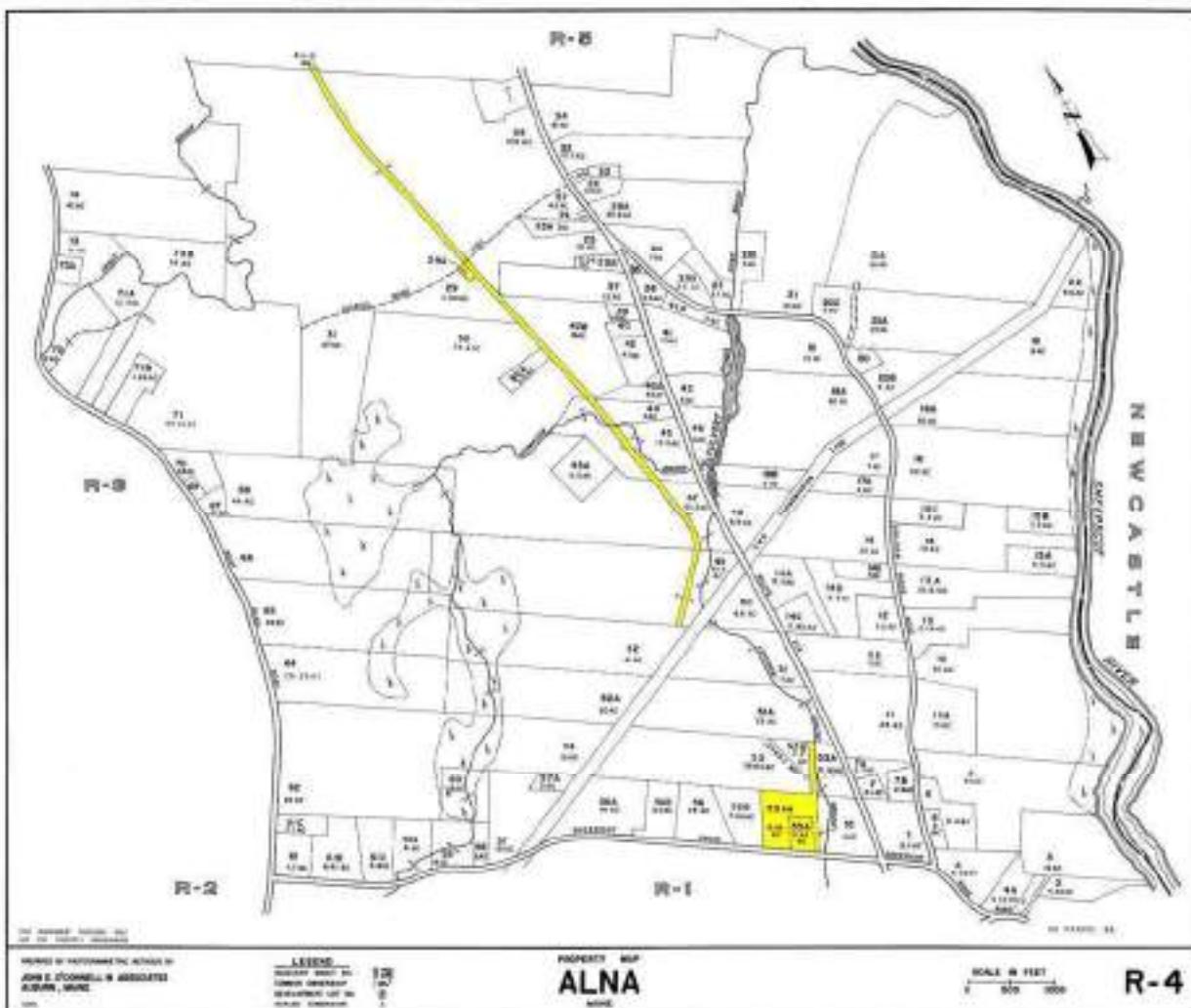


Exhibit A-1-c: Tax Map R-5

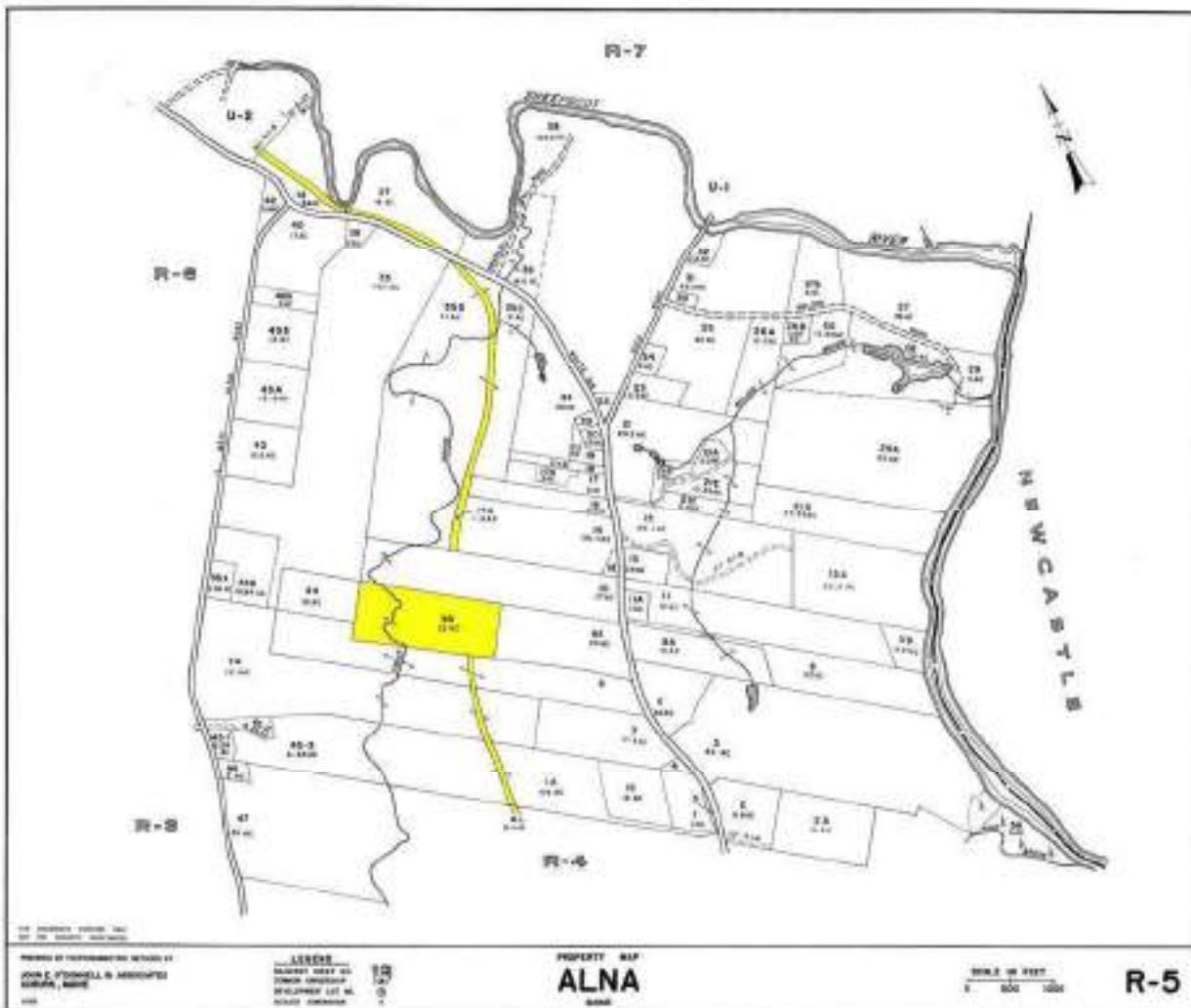


Exhibit A-1-c: Tax Map U-2

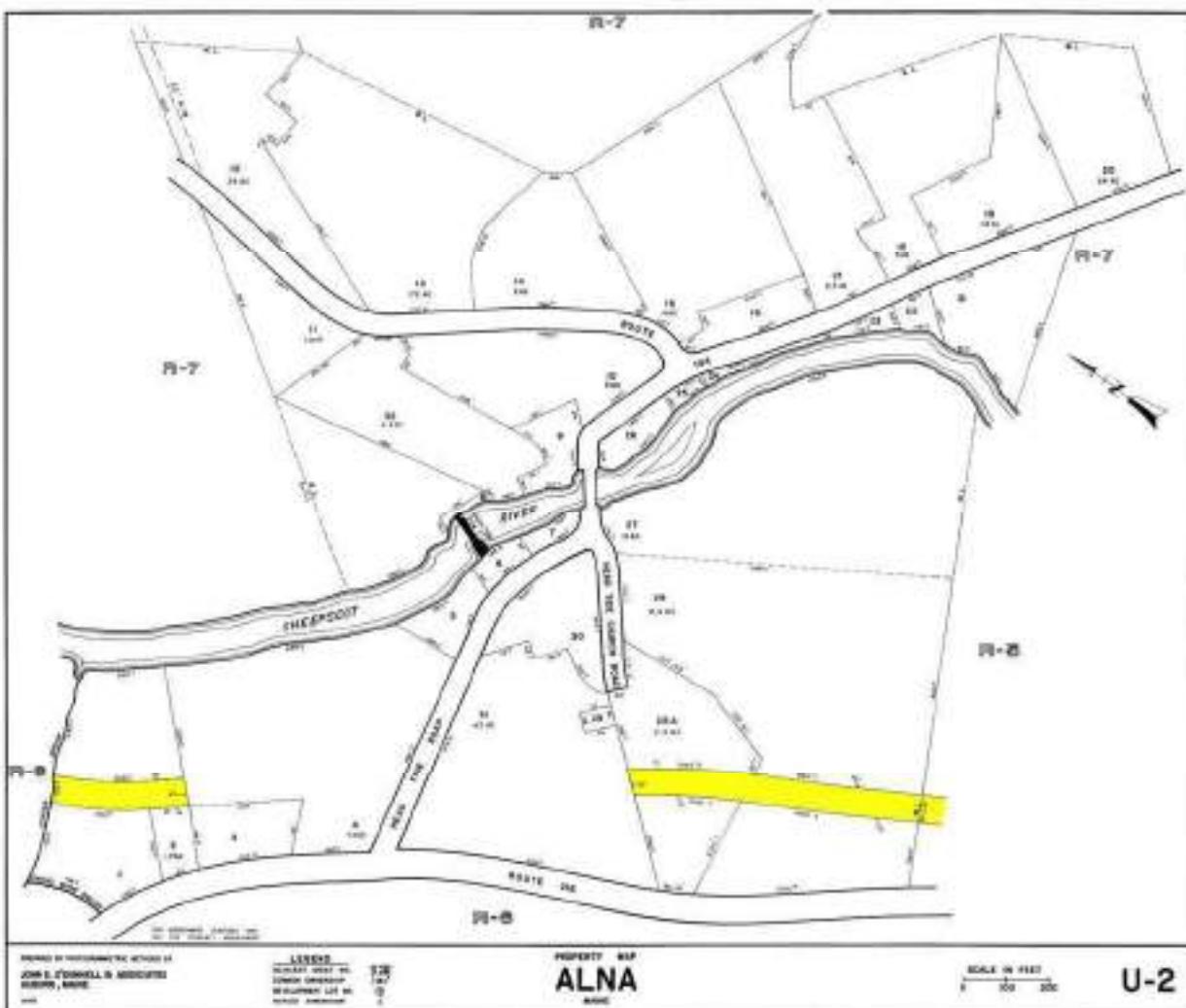


Exhibit A-1-e: Drainage Ways – Map 1



Google Earth

Exhibit [A-1-e](#): Drainage Ways – Map 2

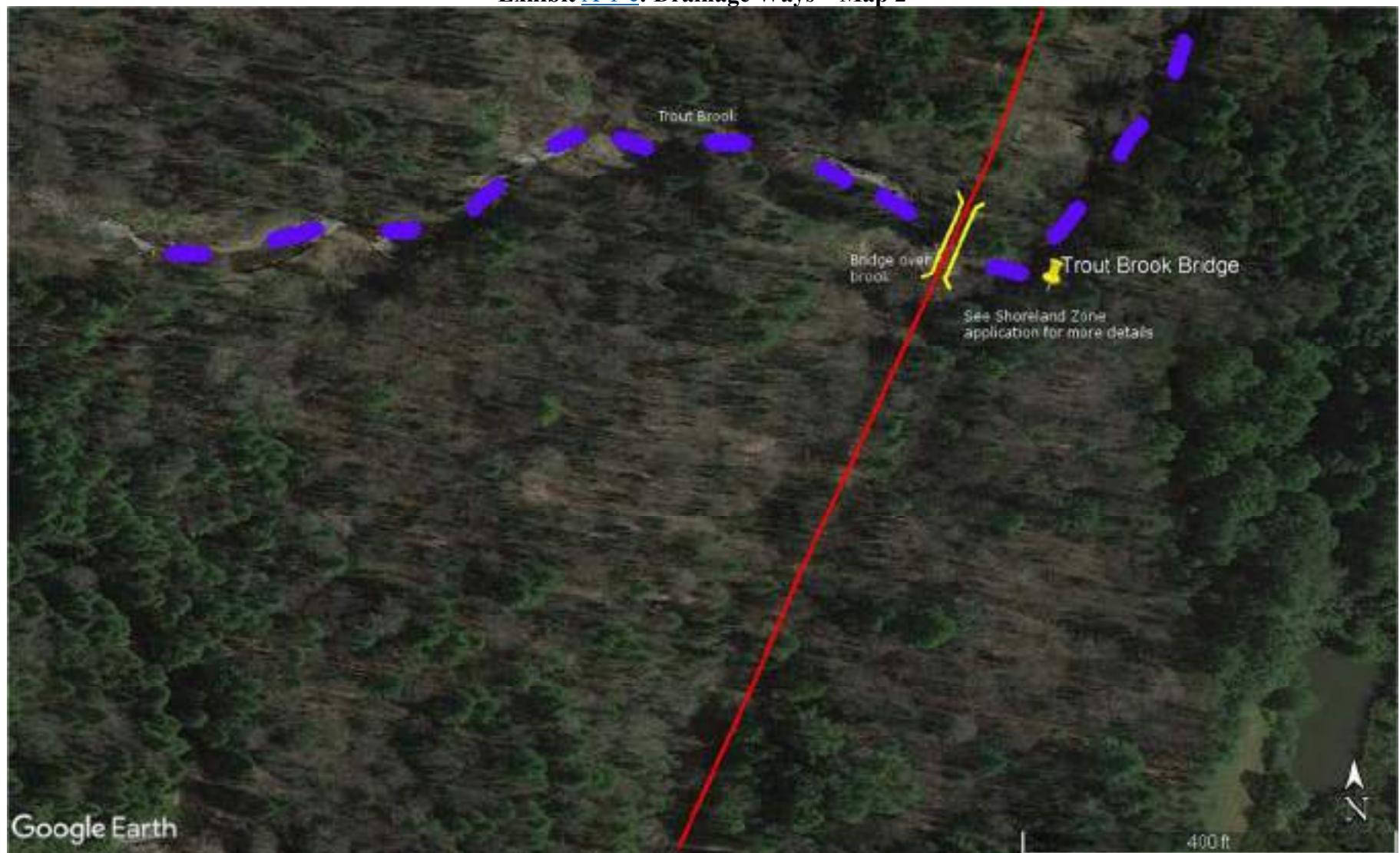


Exhibit [A-1-e](#): Drainage Ways – Map 3



Exhibit [A-1-e](#): Drainage Ways – Map 4

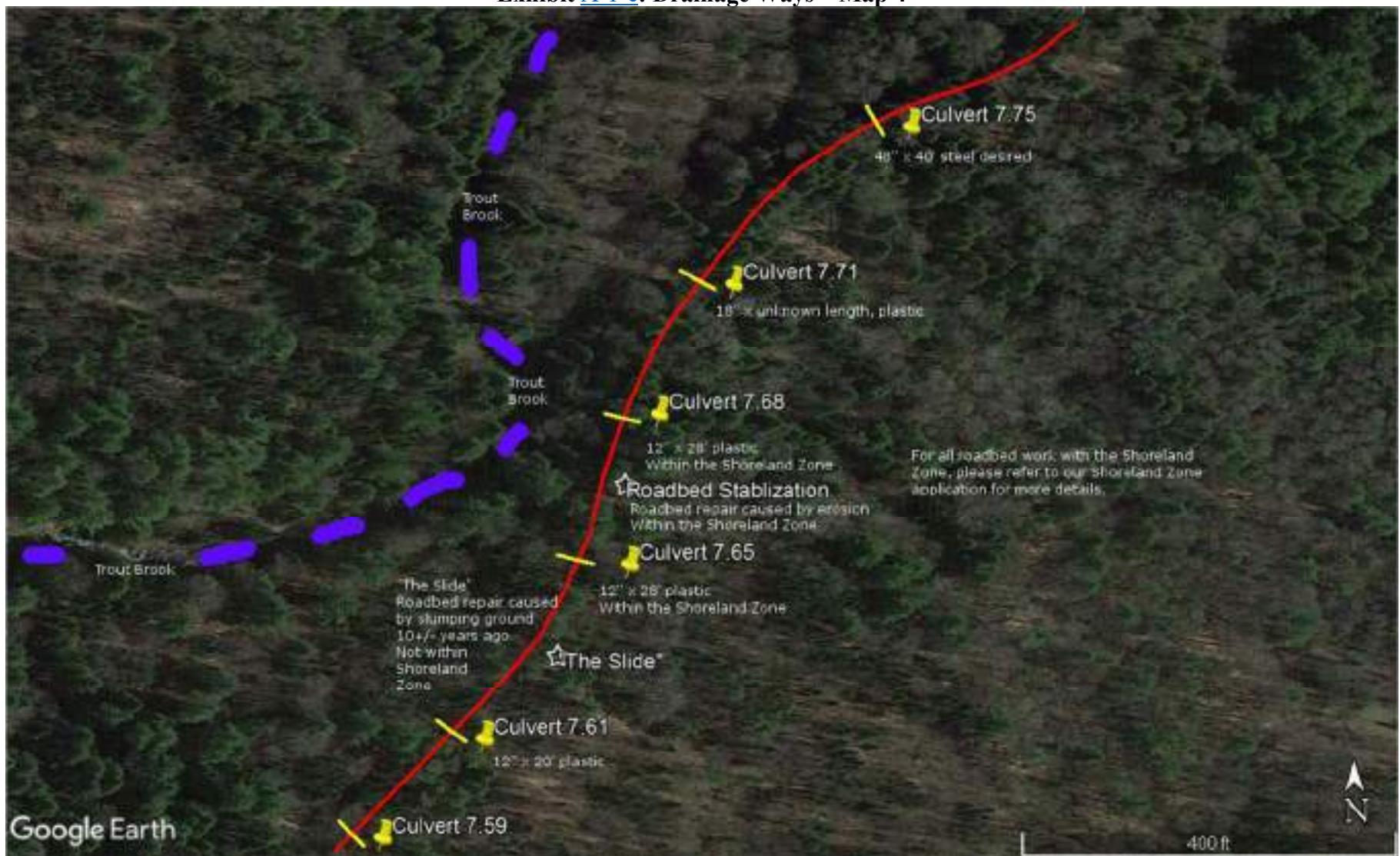
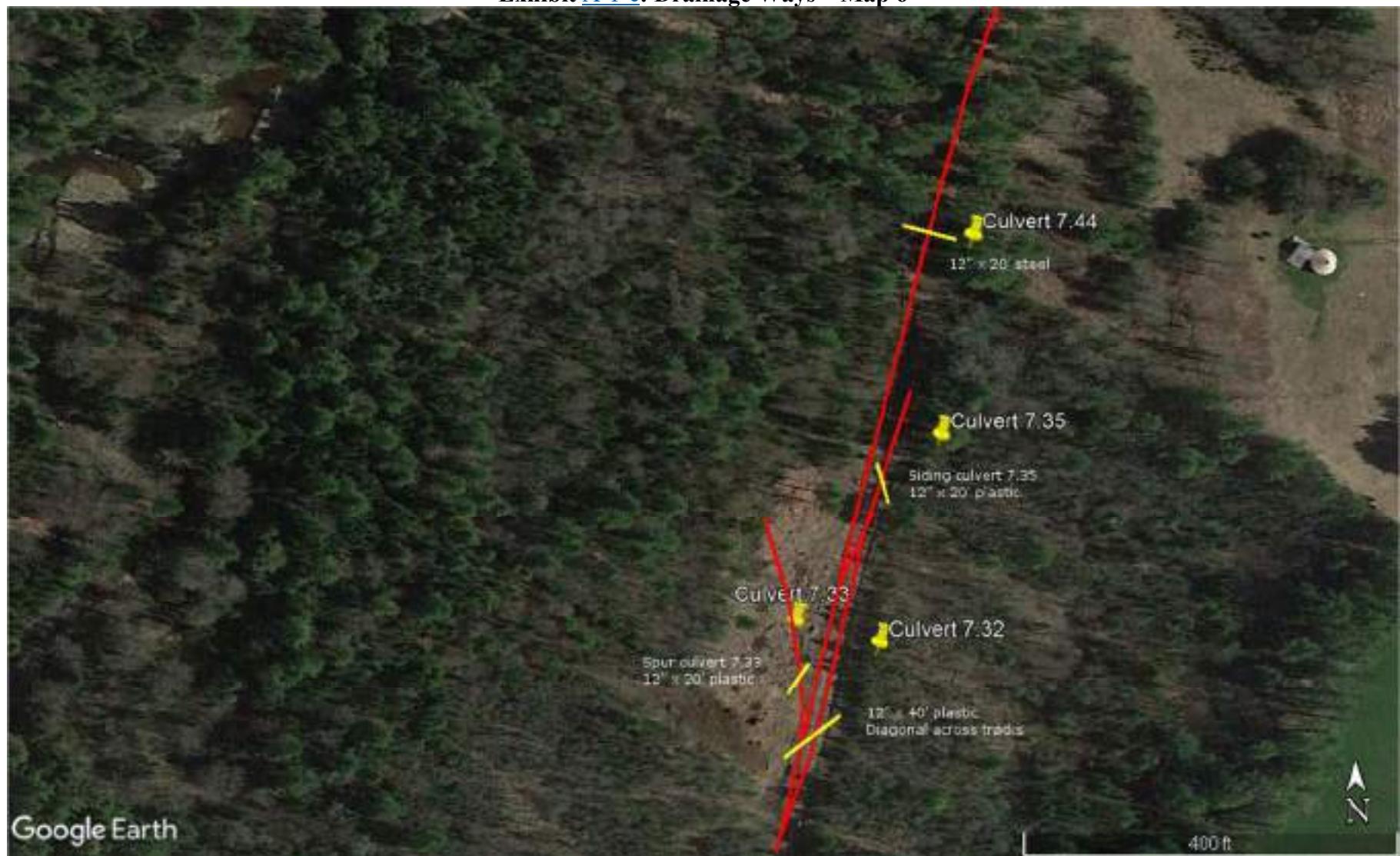


Exhibit [A-1-e](#): Drainage Ways – Map 5



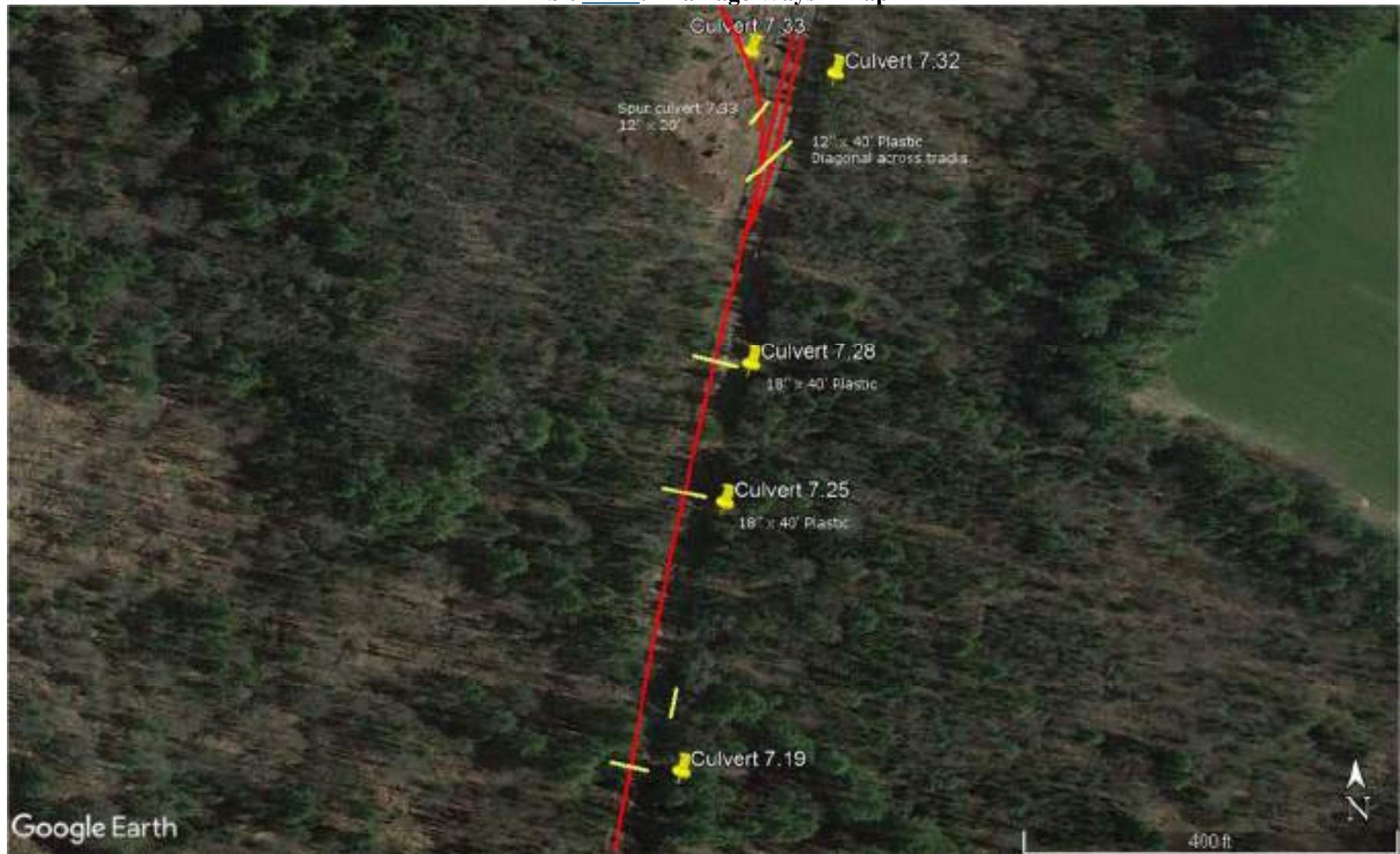
Google Earth

Exhibit [A-1-e](#): Drainage Ways – Map 6



Google Earth

Exhibit [A-1-e](#): Drainage Ways – Map 7



Google Earth

Exhibit [A-1-e](#): Drainage Ways – Map 8

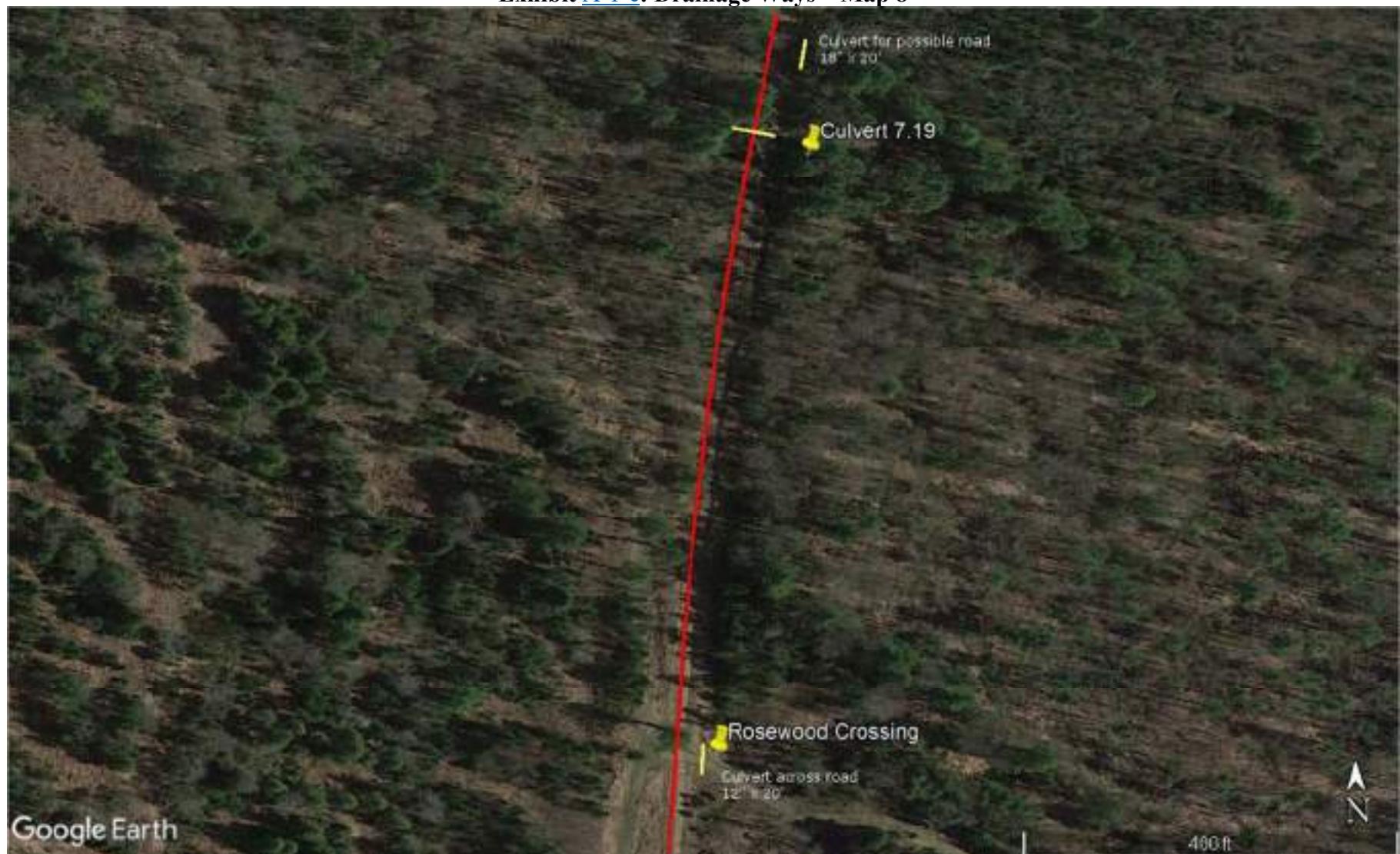


Exhibit A-1-g: Sheepscot Campus Vehicular/Pedestrian Access



Current and future parking lots and the handicap/15 min parking area are shown in yellow, as are proposed pedestrian pathways in green between the parking lot and the shop.

Exhibit A-1-k: View of property at Top of Mountain



Approximate property line is in white, existing railroad tracks are in red, future track is dashed red. This shows the eastern portion of the Top of Mountain property, to the stream.

Exhibit A-1-k: View of property at Route 218



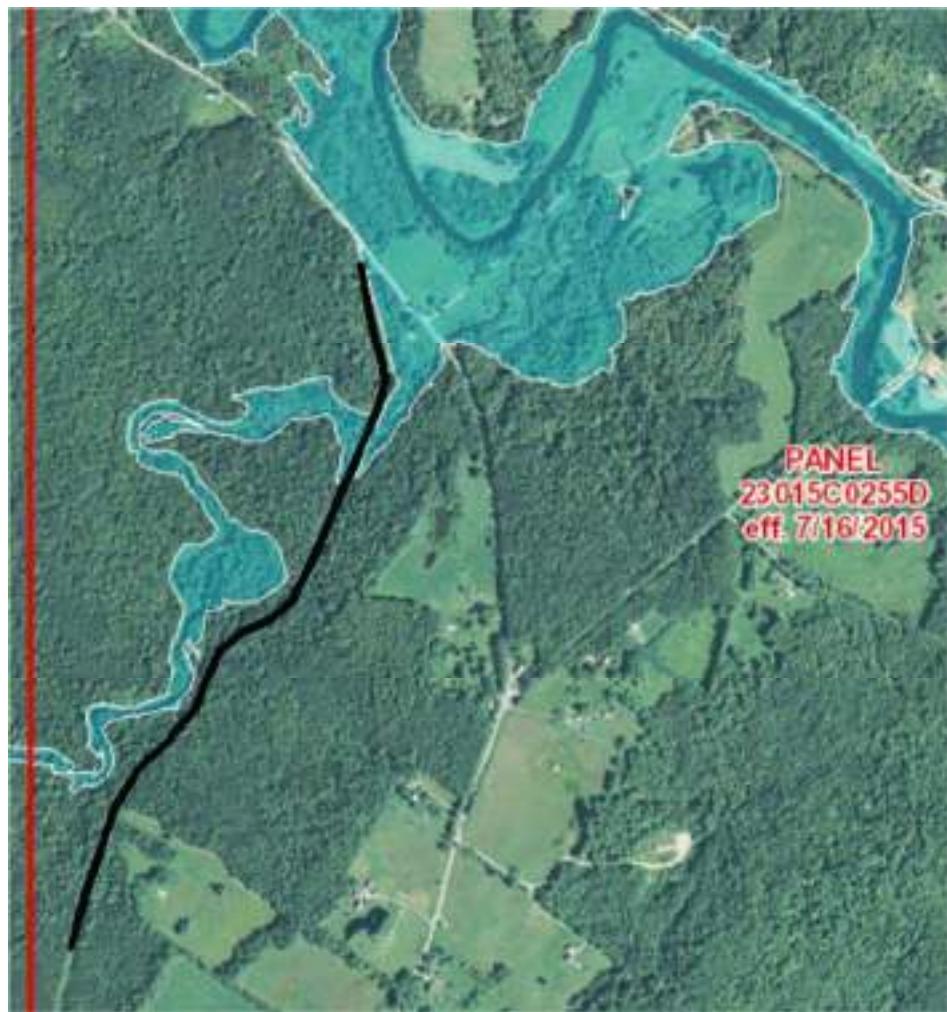
Approximate property lines are in white, future railroad track is in red. This shows the northern-most extent of our five-year plan, with the railroad reaching Rt. 218.

Exhibit [A-1-q](#): Clearing at Top of Mountain



Approximately 1 acre has been cleared, and another acre will be cleared in the next couple of years.

Exhibit A-1-r: FEMA Flood Map



The black line is the WW&F Railway mainline. This is panel 23015C0255D of the FEMA flood maps.

Exhibit A-1-u: Summary Page of Traffic Study

WWFRY, Alna

1/15/2018

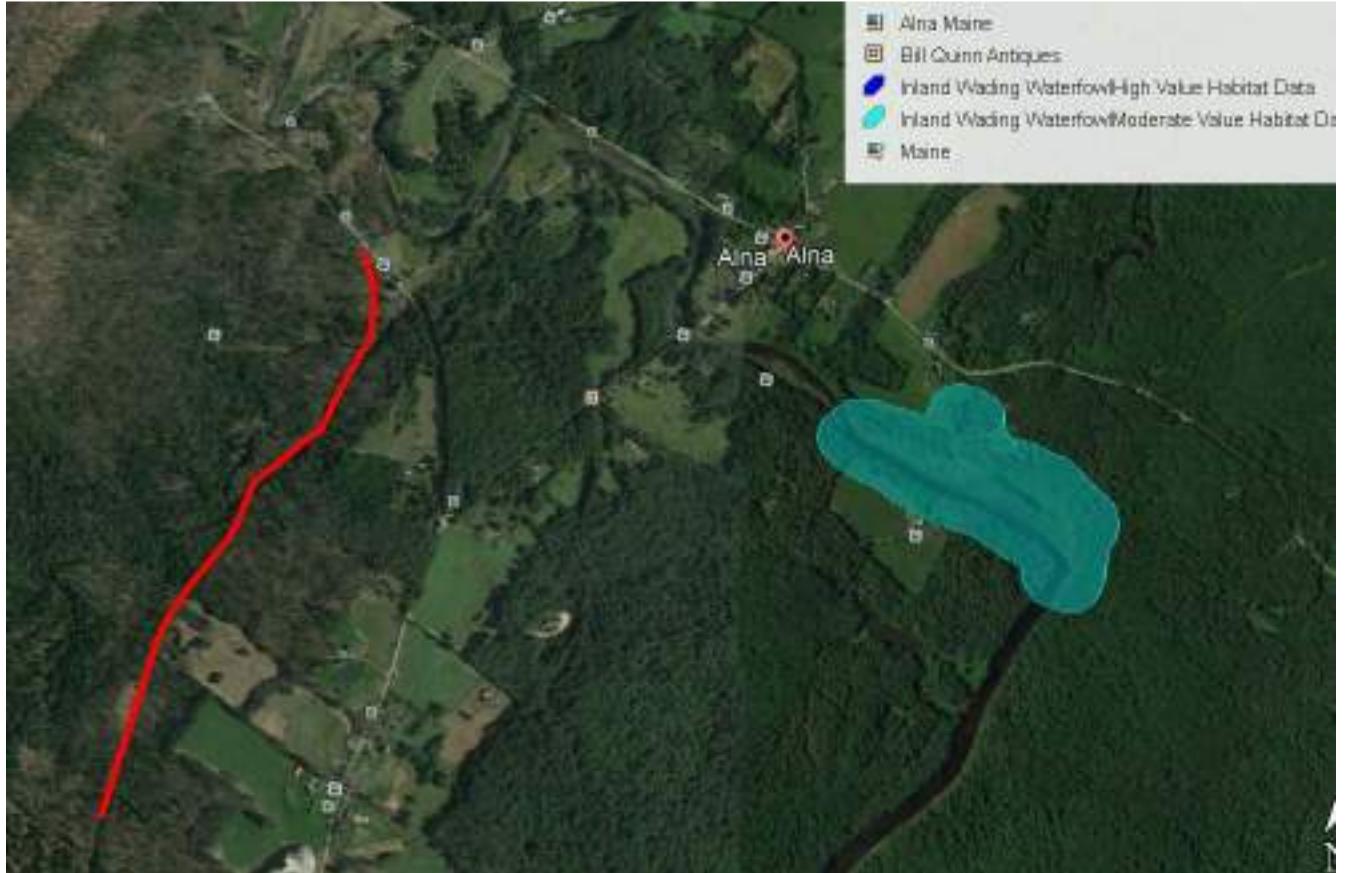
SUMMARY

To summarize, given the traffic volumes generated by the WWRY no off-site traffic impacts would be expected beyond the immediate site area. This was confirmed by the traffic analyses, which showed there are no level of service or capacity concerns at the nearby intersection of Cross Road and Route 218 (Alna Road) under either existing volumes or projected 2022 volumes, which allowed for high museum growth and also annual background traffic growth.

In terms of safety, the accident review did not identify any high crash or accident concerns in the vicinity of the WWF Railway museum. Sight distance from all three site drives exceeds the recommended minimum so there are no sight distance concerns.

While the museum has limited impact on traffic beyond the site, there are some recommendations, or options for improvements, to improve traffic flow and pedestrian safety on Cross Road, during special events if on-street parking is to be utilized. The Town and the museum should consider several of these more costly options in long range planning. Other more minor improvements, such as installation of "No Parking Here to Corner" and advance "Pedestrian" warning are recommended for immediate implementation to provide for increased safety.

Exhibit [A-1-v](#): Wildlife Habitat



The railroad right-of-way is the red line on the map. The pale area is IF&W's designation of a moderate value water fowl habitat. There are no high value water fowl habitats near this section of the railroad.

Exhibit A-2-a: Leases, Easements, Deed Transfers

Cessation of Lease and Start of Permanent Easement, Gordon Davis Property

01-03-2011 8:03:04a
FILED 1/3/11

EASEMENT AND TERMINATION OF LEASE

A. Gordon Davis, Jr. (a/k/a Albert G. Davis) and H. Elizabeth Davis (a/k/a Helen E. Davis), of Alma, Maine ("Grantor") for consideration paid, grants to the Wiscasset, Waterville & Farmington Railway Museum, a Maine nonprofit corporation, its successors and assigns whose mailing address is P.O. Box 242, Alma, ME 04535-0242 ("Grantee"), with quitclaim covenants, as appertaining to land owned and/or leased by the Grantor in Alma, Maine, the perpetual right and easement to use a portion of land described in the deed in Grantor recorded in Book 984, Page 154 in the Lincoln County Registry of Deeds of a strip of land four rods wide across the southerly portion of land conveyed to A. Gordon Davis and Rorwell T. Davis in the deed recorded in said Deeds in Book 1021, Page 178 in said Deeds, for the purpose of constructing, maintaining and operating a narrow gauge railroad, antique or tourist train line and appurtenances thereto including without limitation, communication lines.

Said easement to be four (4) rods wide with the center line thereof to be the center line of the historic corrected and perfected location of the Wiscasset, Waterville and Farmington Railway Company filed in the office of the Lincoln County Commissioners by the Wiscasset and Quebec Railroad Company.

With respect to said right and easement hereby conveyed, the Grantee by acceptance hereof, hereby for itself and its successors and assigns, hereby agrees as follows:

(a) The Grantee and its successors and assigns shall have the right to use and enjoy the foregoing right and easement for the purposes stated;

(b) The Grantee shall, upon request by Grantor, install one twelve (12) foot wide crossing over the right of way and tracks for the use of Grantor, his successors, invitees and assigns. The crossing shall be maintained by Grantee. The Grantor shall maintain the approaches to the crossing with proper grades and culverts to prevent damage to the track and roadbed.

(c) Grantee will indemnify and save harmless Grantor from and against any loss, damage, or liability arising out of its exercise of said easement;

(d) The Grantee shall name the Grantor as an additional insured on any insurance coverage obtained by the Grantee covering its activities on the rail road line which is accommodated by this easement.

(e) If said easement area shall cease for a period of ten (10) years to be used for the purpose of constructing, maintaining and operating a non-profit narrow gauge railroad, antique or tourist train and appurtenances thereto including without limitation, communication lines then said easement rights will, at the option of Grantor, his heirs or assigns, after notice to Grantee, revert to the Grantor, their heirs or assigns.

Gordon Davis Easement Page 1 of 2

By the execution hereof, this Easement and Termination of Lease terminates the lease between the Grantor and Grantee dated January 11, 1995 recorded in said Deeds in Book 2449, Page 219.

For Grantor's title see deed dated _____, 19____ recorded in the Lincoln County Registry of Deeds in Book 984, Page 154.

WITNESS the execution hereof under seal this 17 day of Dec, 2010.

Amy E. Warner
Witness

A. Gordon Davis, Jr.
A. Gordon Davis, Jr. (a/k/a Albert G. Davis)

Amy E. Warner
Witness

H. Elizabeth Davis
H. Elizabeth Davis (a/k/a Helen E. Davis)

STATE OF MAINE

Lincoln, ss

Then personally appeared the above named A. Gordon Davis, Jr. (a/k/a Albert G. Davis) and H. Elizabeth Davis (a/k/a Helen E. Davis) and acknowledged the foregoing instrument to be their free act and deed, before me,

Amy E. Warner
Notary Public
My Commission Expires: AMY E. WARNER
Notary Public, Maine
My Commission Expires July 23, 2011

WITNESS the execution hereof under seal this 17 day of Dec, 2010.

Wiscasset, Waterville & Farmington Railway Museum

Amy E. Warner
Witness

Stephen Zupp
Stephen Zupp
President

STATE OF MAINE

Lincoln, ss

Then personally appeared the above named Stephen Zupp and acknowledged the foregoing instrument to be his free act and deed, before me,

Amy E. Warner
Notary Public
My Commission Expires: AMY E. WARNER
Notary Public, Maine
My Commission Expires July 23, 2011

Gordon Davis Easement Page 2 of 2

Cessation of Lease and Start of Permanent Easement, Roswell Davis Property

EASEMENT AND TERMINATION OF LEASE

Roswell T. Davis and Rebecca Davis, of Meriden, Connecticut ("Grantor") for consideration paid, grants to the Wiscasset, Waterville & Farmington Railway Museum, a Maine nonprofit corporation, its successors and assigns whose mailing address is P.O. Box 242, Alma, ME 04535-0242 ("Grantee"), with quitclaim covenants, as appurtenant to land owned and/or leased by the Grantee in Alma, Maine, the perpetual right and easement to use a strip of land four rods wide described in the deed to the Wiscasset & Quebec Railroad Company recorded in Book 297, Page 4 in the Lincoln County Registry of Deeds across other lands of Grantor described in the deed recorded in said Deeds in Book 984, Page 153 in said Deeds, for the purpose of constructing, maintaining and operating a narrow gauge railroad, antique or tourist train line and appurteances thereto including without limitation, communication lines.

With respect to said right and easement hereby conveyed, the Grantee by acceptance hereof, hereby for itself and its successors and assigns, hereby agrees as follows:

- (a) The Grantee and its successors and assigns shall have the right to use and enjoy the foregoing right and easement for the purposes stated;
- (b) The Grantee shall, upon request by Grantor, install one twelve (12) foot wide crossing over the right of way and tracks for the use of Grantor, his successors, invitees and assigns. The crossing shall be maintained by Grantee. The Grantor shall maintain the approaches to the crossing with proper grades and culverts to prevent damage to the track and roadbed.
- (c) Grantee will indemnify and save harmless Grantor from and against any loss, damage, or liability arising out of its exercise of said easement;
- (d) The Grantee shall name the Grantor as an additional insured on any insurance coverage obtained by the Grantee covering its activities on the rail road line which is accommodated by this easement.
- (e) If said easement area shall cease for a period of ten (10) years to be used for the purpose of constructing, maintaining and operating a non-profit narrow gauge railroad, antique or tourist train and appurteances thereto including without limitation, communication lines then said easement rights will, at the option of Grantor, his heirs or assigns, after notice to Grantee, revert to the Grantor, their heirs or assigns.

By the execution hereof, this Easement and Termination of Lease terminates the lease between the Grantor and Grantee dated April 9, 1998 recorded in said Deeds in Book 2340, Page 57.

Roswell Davis Easement page 1 of 2

For Grantor's title see deed dated 1-26-1921 recorded in the Lincoln County Registry of Deeds in Book 984, Page 153.

WITNESS the execution hereof under seal this 15 day of April, 2010.

Emily J. Kelly
Witness Emily J. Kelly

Roswell T. Davis
Roswell T. Davis

Michael Lomando
Witness Michael Lomando

Rebecca Davis
Rebecca Davis

NEW
HAVEN

Lincoln, ss MECIDEN

CONNECTICUT
STATE OF MAINE

Lincoln, ss MECIDEN

Then personally appeared the above named Roswell T. Davis and Rebecca Davis and acknowledged the foregoing instrument to be their free act and deed, before me,

Minerva I. Cardona
Notary Public
My Commission Expires: MINERVA I. CARDONA
NOTARY PUBLIC
MY COMMISSION EXPIRES JUNE 2016

WITNESS the execution hereof under seal this 15 day of April/2010,

Wiscasset, Waterville & Farmington Railway Museum

Amy G. Zappa
Witness

Stephen Zappa
President

Lincoln, ss

STATE OF MAINE

Then personally appeared the above named Stephen Zappa and acknowledged the foregoing instrument to be his free act and deed, before me,

Amy G. Zappa
Notary Public
My Commission Expires:
07/25/2016

Roswell Davis Easement page 2 of 2

Right of Way Purchase from Anne Sutter

QUITCLAIM DEED With Covenant

ANN T. SUTTER, of Boothbay Harbor, Lincoln County, Maine, for consideration paid,
GRANTS TO WISCASSET, WATERVILLE, & FARMINGTON RAILWAY MUSEUM,
a non-profit corporation organized and existing in the State of Maine, whose mailing
address is PO Box 242, Alma, ME 04535, with Quitclaim Covenant, a certain lot or
parcel of land, with improvements located thereon, on Alma Road, Alma, Lincoln
County, Maine, and being more particularly bounded and described as follows:

BEING a four (4) rod wide parcel of land being two (2) rods wide on either side of the
centerline of the railroad bed originally constructed by the Wiscasset & Quebec
Railroad Company in 1894 as currently occupied and used by the Wiscasset, Waterville
& Farmington Railway Museum (WW&F) running north to south along the entire
length of the premises described in the deed recorded in Book 1014, Page 92 in the
Lincoln County Registry of Deeds and connecting to other land of the grantee at both
the northerly and southerly ends of the premises conveyed herein.

Excepting and reserving to Grantor, her heirs, successors, and assigns, an access right of
way for pedestrian and vehicular access and egress and easements for all purposes,
including electric, communications, water, sewer, utilities, and for all other purposes,
residential or commercial, on, over, and under a fifty foot (50') wide area, with the
centerline being the centerline of the existing sixteen 16 foot wide crossing near the
south side of the four (4) rod wide land conveyed above. If, however, the centerline of
the existing access driveway is less than twenty-five feet (25') from Grantor's south line,
Grantor can unilaterally relocate said fifty foot (50') wide access area so that it would
comply with Alma subdivision ordinances and any other town zoning requirements
with the likely result being that the Grantor's south line would comprise at least part of
the south side of said fifty foot (50') wide access area, resulting in more than half of said
access area being northerly of the centerline of said existing access driveway. Said rights
of way and easements shall be appurtenant to remaining land of Grantor and also to
any abutting property to Grantor's remaining property, and to any division or
subdivision of remaining land of Grantor or any division or subdivision of any abutting
property to Grantor's remaining property. Reasonable advance notice shall be provided
to WW&F, its successors and assigns, prior to any relocation or expansion of the said
right of way, and reasonable consultation should be exchanged before any work
commences on the physical plant of WW&F.

Also excepting and reserving to Grantor, her heirs, successors, and assigns, an access
right of way for pedestrian and vehicular access and egress and easements for all
purposes, including electric, communications, water, sewer, utilities, and for all other
purposes, residential or commercial, on, over, and under a fifty foot (50') wide area,
crossing nearer the north side of the four (4) rod wide land conveyed above, the precise

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GRIFFIN LAW OFFICES 59 ATLANTIC AVENUE / P.O. BOX 4956 BOOTHBAY HARBOR, MAINE 04536
(207) 633-6300 (207) 431-6307 Fax

Anne Sutter Deed page 1 of 2

location to be established by the then owner of Grantor's remaining property in that location, but which location shall be reasonable, be mutually agreeable, and satisfy reasonable safety and maintenance obligations of WW&F, its successors and assigns. Said rights of way and easements shall be appurtenant to remaining land of Grantor and also to any abutting property to Grantor's remaining property, and to any division or subdivision of remaining land of Grantor or any division or subdivision of any abutting property to Grantor's remaining property. Reasonable advance notice shall be provided to WW&F, its successors and assigns, prior to any relocation or expansion of the said right of way, and reasonable consultation should be exchanged before any work commences on the physical plant of WW&F.

BY ACCEPTANCE OF THIS DEED the Grantee, its heirs and assigns, agree that if any utility requires a confirmatory utility easement for the benefit of some or all of the remaining land or abutting land to the grantor, her heirs, successors, and assigns, the Grantee, its successors and assigns, will execute the public utility's standard easement deed for the purposes set forth and referenced therein.

REFERENCE IS MADE TO Warranty Deed from Kenneth P. Chaney to Robert E. Sutter and Ann T. Sutter dated November 2, 1979 and recorded in Book 1014, Page 092, Lincoln County Registry of Deeds. See also Abstract of Divorce between Robert E. Sutter and Ann T. Sutter dated January 12, 2006 and recorded in Book 3619, Page 231; and Release from Robert E. Sutler to Ann T. Sutler dated March 7, 2011 and recorded in Book 4381, Page 062, Lincoln County Registry of Deeds.

WITNESS my hand and seal this 23 day of March, 2011.

SIGNED SEALED AND DELIVERED
IN THE PRESENCE OF:

Melinda M. Brewer
Witness

Ann T. Sutter

Ann T. Sutter

STATE OF MAINE
LINCOLN, SS.

3/23, 2011

Then personally appeared the above named Ann T. Sutter and acknowledged the foregoing instrument to be her free act and deed.

Before me,

Melinda M. Brewer

Notary Public
Printed Name: Melinda M. Brewer
Commission expires: My Commission Expirs. 10/18/2015

NOTARY PUBLIC

State of Maine

GRIFFIN LAW OFFICE 39 ATLANTIC AVENUE / P.O. Box 668
Received (207) 633-6300 Boothbay Harbor, Maine 04536
(207) 633-6307 FAX
LINCOLN COUNTY REGISTRY OF DEEDS
REBECCA S. WOTTON, REGISTER

Anne Sutter Deed page 2 of 2

Property Deed for W&Q Property at Alna Center

WARRANTY DEED

Know all men by these presents, that the Wiscasset & Quebec Railroad Company, a Maine corporation whose mailing address is P.O. Box 252, Alna, ME 04535 for consideration paid by the Wiscasset, Waterville & Farmington Railway Museum, a nonprofit corporation organized and existing under the laws of the State of Maine having a place of business at Alna, ME whose mailing address is 97 Cross Road, Alna, ME 04535-0242 the receipt of which is hereby acknowledged, does hereby grant with **WARRANTY COVENANTS** unto the said Wiscasset, Waterville and Farmington Railway Museum, its successors and assigns forever,

A certain lot or parcel of land situated in the Town of Alna, County of Lincoln and State of Maine being bounded and described as follows:

Beginning at a 5/8" capped (#1323) rebar set at a point on the southerly side of the "Cross Road" so-called (and known as Averill Road) at its intersection with land now or formerly of Wiscasset & Quebec Railroad Company at point "6" on survey entitled "Standard Boundary survey of land belonging to Austin E. Trask and Coleen D. Trask" dated October 26, 2004 by McConnell Associates (hereafter "the plan");

Thence S 6° 32' 43" W by said Railroad land, 200' to a 5/8" capped (#1323) rebar set at point "7" on the plan;

Thence N 86° 23' 47" W by remaining land of Trask, 100' to a 5/8" capped (#1323) rebar set at point "8" on the plan;

Thence N 6° 32' 43" E by remaining land of Trask, 200' to a 5/8" capped (#1323) rebar set at point "5" on the plan and on the southerly side of said Cross Road;

Thence S 86° 23' 47" E by said Cross Road, 100' to the point of beginning.

Wiscasset & Quebec RR Company Deed page 1 of 2

For Grantor's title see deed dated January 7, 2005 recorded in the Lincoln County Registry of Deeds in Book 3425, Page 274.

Witness the execution hereof, under seal, this ____ day of May, 2013

Wiscasset & Quebec Railroad Company

Witness

By: _____
John E. Christopher, President

Lincoln, ME

STATE OF MAINE

May ___, 2013

Then personally appeared John E. Christopher, President and acknowledged the foregoing to be his free act and deed and the free act and deed of the Wiscasset & Quebec Railroad Company, before me,

Notary Public
My Commission Expires:

Wiscasset & Quebec RR Company Deed page 2 of 2

Property Acquisition of David Clark

WARRANTY DEED

I, DAVID H. CLARK, II, whose mailing address is 1788 Alma Road, Alma, Maine 04535, for consideration paid, grants to WISCASSET, WATERVILLE & FARMINGTON RAILWAY, a Maine Non-Profit Corporation with a mailing address of P.O. Box 242, Alma, Maine 04535, with WARRANTY COVENANTS, the following described premises situated in the Town of Alma, County of Lincoln and State of Maine, bounded and described as follows:

A certain lot or parcel of land lying northwesterly of Alma Road, so-called, in the town of Alma, county of Lincoln, State of Maine, being bounded and described as follows:

BEGINNING at a point (monument to be set) North 40° 33' 53" West one thousand two hundred fifteen and four tenths feet more or less (1215.4') from a 5/8" rebar and cap (PLS # 1188) at an angle point in the boundary between the Grantor herein and land now or formerly of Columb, said Columb land being described in deed dated July 20, 2001 and recorded in Book 2711, pg. 211 of the Lincoln County Registry of Deeds, said rebar being North 35° 01' 27" West five hundred forty five and forty eight hundredths feet (545.48') from a similar rebar on the northwesterly side of said Alma Road;

THENCE North 40° 33' 53" West, along land of said Columb to land of the Grantee herein as described in deed dated April 26, 2004 and recorded in Book 3279, page 25 of said Registry;

THENCE continuing North 40° 33' 53" West along said land of the Grantee, crossing the railroad bed, to said land of Columb;

THENCE continuing North 40° 33' 53" West along said land of Columb, crossing Trout Brook, so-called, to a similar 5/8" rebar and cap (PLS # 1188) at land of now or formerly of Sheepscot Valley Conservation Association, said Sheepscot Valley Conservation Association property being described in deed dated June 11, 2010 and recorded in Book 4285, page 180 of said Registry, said rebar being shown on plan entitled: *Standard Boundary Survey for Myron S. & Lillian M. Long*, Dated August, 30, 1985, By North By East Assoc, and recorded in Plan book 36, page 21 of said Registry, the total distance between said rebar and the point of beginning being one thousand six hundred forty three and one tenth feet, more or less (1643.1');

THENCE North 49° 43' 30" East along land of said Sheepscot Valley Conservation Association and land of now or formerly Maxine P. Tornell six hundred fifty three and six tenths feet (653.6') to a similar 5/8" rebar and cap (PLS # 1188), shown on said plan, at land of now or formerly Judith W. Fassel, said Fassel land being described in deed dated November 6, 1990 and recorded in Book 1660, page 35 of said Registry;

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Clark Deed page 1 of 2

THENCE South 38° 09' 20" East one hundred forty seven and eight tenths feet (147.8') to a similar 5/8" rebar and cap (PLS #1188) shown on said plan;

THENCE continuing South 38° 09' 20" East, crossing said Trout Brook, one hundred fifty one and two tenths feet (151.2) to a similar 5/8" rebar and cap (PLS #1188) shown on said plan;

THENCE continuing South 38° 09' 20" East two hundred sixteen and eight tenths feet (219.8') to a similar 5/8" rebar and cap (PLS #1188) shown on said plan;

THENCE continuing South 38° 09' 20" East four hundred eighteen and five tenths feet (418.5') to a similar 5/8" rebar and cap (PLS #1188) shown on said plan;

THENCE continuing South 38° 09' 20" East four hundred sixty three and nine tenths feet (463.9') to a similar 5/8" rebar and cap (PLS #1188) shown on said plan;

THENCE continuing South 38° 09' 20" East two hundred forty feet (240.0) to a point (monument to be set), the last six (6) courses herein being along land of said Fossil;

THENCE South 49° 26' 07" West five hundred eighty four and six tenths feet (584.6') to the point of beginning.

Containing twenty three acres, more or less (23± ac.)

Bearings being Magnetic 1985.

For source of title reference is made to deed dated May 22, 1998 and recorded in Book 2343, page 134 of said Registry. Reference is also made to deed dated March 16, 2004 and recorded in Book 3252, page 201 of said Registry.

Witness my hand and seal this 11th day of April, 2014.

Melinda M. Brewer
Witness

David H. Clark, II
David H. Clark, II

State of Maine
Lincoln, ss.

4/16, 2014

Personally appeared the above named David H. Clark, II and acknowledged the foregoing instrument to be his free act and deed.

Before me,

Received
LINCOLN COUNTY REGISTRY OF DEEDS Melinda M. Brewer
REBECCA S. MULFORD, REGISTRAR Notary Public/Attorney at Law Melinda M. Brewer
NOTARY PUBLIC

Clark Deed page 2 of 2

Judy Fossell Right-of-way Lease

LEASE

Judith W. Fossel of Alna, Lincoln County, Maine ("Lessor") and being the owner of land shown on a deed recorded in the Lincoln County Registry of Deeds in Book 1660, Page 35, for consideration paid of one dollar and other good and valuable consideration, hereby leases to the Wiscasset, Waterville & Farmington Railway Museum, a Maine nonprofit corporation whose mailing address is P.O. Box 342, Alna, ME 04535-0242 ("Lessee") under the terms and conditions set forth herein.

Premises: That portion of land owned by the Lessor described in the attached Exhibit A, for the purpose of constructing, maintaining and operating a narrow gauge railroad, antique, tourist or amusement train line and appurtenances thereto including without limitation, communication lines.

Said lease to be four (4) rods wide with the center line thereof to be the center line of the historic corrected and perfected location of the Wiscasset, Waterville and Farmington Railway Company filed in the office of the Lincoln County Commissioners by the Wiscasset and Quebec Railroad Company.

Term: The term of said lease is 25 years from the date hereof.

Conditions:

(a) The Lessee and its successors and assigns shall have the right to use and enjoy the foregoing lease for the purposes stated;

(b) The Lessee shall, upon request by Lessor, install one twelve (12) foot wide crossing over the right of way and tracks for the use of Lessor, her successors, invitees and assigns. The crossing shall be maintained by Lessee. The Lessor shall maintain the approaches to the crossing with proper grades and culverts to prevent damage to the track and roadbed.

(c) The Lessee will indemnify and save harmless Lessor from and against any loss, damage, or liability arising out of its use of the leased premises;

(d) The Lessee shall name the Lessor as an additional insured on any insurance coverage obtained by the Lessee covering its activities on the rail road line which is accommodated by this lease.

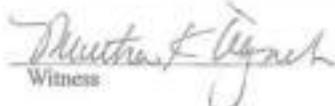
Default: The Lessors retain the right to terminate this lease upon the failure of the Lessee to cure a breach within sixty (60) days of receipt of a written notice from the Lessor of any breach of the covenants of this lease.

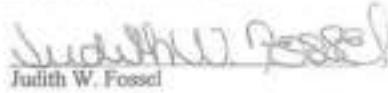
Renewal: The parties hereto may renew this lease at the end of the term thereof on such terms as they may find mutually satisfactory at the time of renewal.

Fossell Lease page 1 of 2

For Lessor's title see deed dated November 6, 1990 recorded in the Lincoln County Registry of Deeds in Book 1660, Page 35.

WITNESS the execution hereof under seal this 29 day of February, 2012.

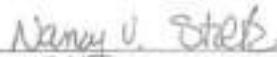

Witness


Judith W. Fossel

Lincoln, ss

STATE OF MAINE

Then personally appeared the above named Judith W. Fossel and acknowledged the foregoing instrument to be her free act and deed, before me,


Nancy V. Stoltz
Notary Public
My Commission Expires: Nancy V. Stoltz, Notary Public
State of Maine
My Commission Expires: 7/26/2014

WITNESS the execution hereof under seal this ____ day of February, 2012.


Witness
Robert T. Gammie


Stephen Zuppa
Its President

Lincoln, ss

STATE OF MAINE

Then personally appeared the above named Stephen Zuppa and acknowledged the foregoing instrument to be his free act and deed, before me,


Katelyn M. Pendleton
Notary Public
My Commission Expires:
Katelyn M. Pendleton
Notary Public
My Commission Expires October 24, 2012

Fossell Lease Page 2 of 2

Right of Way Purchase from Melissa Kelly

WARRANTY DEED

KNOW ALL BY THESE PRESENTS, THAT I, Melian J. Kelly, of 1328 Alma Road, Aira, ME 04535, for consideration paid, grant to Wiscasset Waterville & Farmington Railway Museum a Maine corporation with a place of business in Alma, County of Lincoln and State of Maine, whose mailing address is PO Box 242, Alma, ME 04535, with Warranty Covenants, a certain lot or parcel of land located westerly of Route 218 in the Town of Alma, County of Lincoln and State of Maine, being a strip of land four (4) rods wide (66 feet), bounded and described as follows:

BEGINNING at a 5/8" rebar and cap (PLS#225) on the westerly side of the former railroad right of way at the northeasterly corner of Lot 3 of the Alma Trust Subdivision plan recorded in Plan Book 47, Page 66 in the Lincoln County Registry of Deeds, said rebar being labeled "A" on a plan entitled: *Amendment to Alma Trust Subdivision of Part of Property Belonging to Kelly Showing Proposed Conveyance to Wiscasset, Waterville & Farmington Railway Museum*, dated May 6, 2013, scale: 1" = 56', by McCosell & Associates, file #758A, to be recorded in the Lincoln County Registry of Deeds; said rebar being at land of now or formerly Sheepscot Valley Conservation Association described in a deed dated July 10, 2007 and recorded in Book 3878, Page 21 in the Lincoln County Registry of Deeds; thence in a southwesterly direction a distance of 87.68 feet in a counterclockwise direction along a curve with a radius of six hundred sixty nine and sixty hundredths (669.69) feet to a point; thence South 37° 39' 11" West a distance of 127.20 feet to a point; thence in a southwesterly direction a distance of 285.08 feet in a clockwise direction along a curve with a radius of five hundred thirty nine and ninety six hundredths (539.96) feet to a point; thence South 67° 54' 10" West a distance of 54.10 feet to a point; thence in a southwesterly direction 288.42 feet in a counterclockwise direction along a curve with a radius of nine hundred eighty seven and ninety three hundredths (987.93) feet to a 5/8" rebar and cap (PLS #225), labeled "B" on said plan at land of now or formerly Judith W. Fossell described in a deed dated November 6, 1990 and recorded in Book 1600, Page 33 in the Lincoln County Registry of Deeds, a straight line tie from "A" to "B" being South 52° 36' 13" West a distance of 828.10 feet, the last five (5) courses described herein being along said land of Sheepscot Valley Conservation Association; thence South 38° 13' 05" East along said land of Fossell a distance of 66.00 feet to a 5/8" rebar and cap (PLS # 1323) at land retained by the Grusters herein; thence in a northeasterly directly a distance of 269.85 feet in a clockwise direction along a curve with a radius of nine hundred twenty one and ninety three hundredths (921.93) feet to a point; thence North 67° 54' 10" East a distance of 54.10 feet to a point; thence in a northeasterly direction a distance of 294.92 feet in a counterclockwise direction along a curve with a radius of six hundred five and ninety six hundredths (605.96) feet to a 5/8" rebar and cap, labeled "D" on said plan at land of now or formerly Susan R. Marcus described in deed dated December 11, 2003 and recorded in Book 3206, Page 128 in the Lincoln County Registry of Deeds, a straight line tie from "C" to "D" being North 57° 36' 38" East a distance of 613.46 feet; thence continuing northeasterly a distance of 24.94 feet in a counterclockwise direction along a curve with a radius of six hundred five

Kelly Deed Page 1 of 2

and ninety six hundredths (605.96) feet to a point; thence North 37° 39' 11" East a distance of 127.20 feet to a point; thence in a northeasterly direction a distance of 72.11 feet in a clockwise direction along a curve with a radius of six hundred three and sixty hundredths (603.60) feet to a 5/8" rebar and cap (PLS #225) labeled "E" on said plan at said land of Steepacot Valley Conservation Association; thence North 38° 51' 11" West along land of the Wiscasset, Waterville & Farmington Railway Museum described in a deed dated December 12, 2001 and recorded in Book 2787, Page 142 in the Lincoln County Registry of Deeds a distance of 66.40 feet to the point of beginning. Bearings are Magnetic 1984. Containing 1.3 acres, more or less.

Being a portion of the premises described in a deed of Jacqueline C. Curley to Kevin H. Kelly and Melissa J. Kelly, dated January 18, 2000 and recorded in Book 2534, Page 89 in the Lincoln County Registry of Deeds.

Witness my hand and seal this 17th day of May, 2013.

SIGNED, SEALED and DELIVERED
in presence of:

Melinda M. Brewer
Witness

Melissa J. Kelly
Melissa J. Kelly

STATE OF MAINE
Lincoln, ME

May 17, 2013

Personally appeared the above named *Melissa J. Kelly* and acknowledged the foregoing instrument to be her free act and deed.

Before me,

Melinda M. Brewer
Notary Public/Attorney at Law
Print Name:

Melinda M. Brewer
NOTARY PUBLIC
State of Maine
My Commission Expires 10/16/2016

Kelly Deed Page 2 of 2

Exhibit A-2-c.1: Sheepscot Structures



Letters over buildings or locations denote present or future buildings. The solid red lines are existing or future railroad tracks.

Buildings are as follows:

- A:** Replica of Sheepscot station building; 196 sf.
- B:** Replica of Weeks Mills Freight shed, storage closet, and passenger shelter; 800 sf.
- C:** Replica of Head Tide Water Tower; 144 sf.
- D:** Car and machine shop; 4700 sf.
- E:** Fuel shed; 50 sf;
- F:** Original Sheepscot tool shed; 180 sf.
- G:** Future utility drop shed; not more than 100 sf.
- H:** Turntable (not a building but it is a structure), constructed 2016.
- I:** Future 3-stall roundhouse; approx. 1800 sf. Two additional tracks will be built for this building.
- J:** Future coal storage structure; size not known.
- K:** Percival House offices and volunteer rest quarters; 1500 sf.
- L:** Restrooms, constructed 2009; 1000 sf.
- M:** Car storage shed, constructed 2015; 4060 sf.

N: Replica of Whitefield tool shed, constructed 2015;

O: 3-stall garage, constructed 2010;

P: Shipping container storage shed;

Exhibit A-2-c.2: Top of Mountain Structures and Plans



Google Earth

©2017 Google

The blue boxes represent the probable locations of future structures. From L-R: sawmill, shingle mill, and passenger platform and shelter. The yellow lines represent current and future clearing boundaries. The solid red lines are existing railroad track, the dashed red lines represent likely future railroad track. Exact locations and sizes are not known and building permits will be applied for when the time comes.

Exhibit [A-2-c.3](#): Rt. 218 Terminus



Represented here are the approximate locations of the run-around siding and passenger platform and shelter structure at Rt. 218. Exact sizes are unknown, and appropriate permits will be applied for when the time comes.

Exhibit [A-2-g](#): Financials for 2016
As presented at the Museum's 2017 Annual Meeting

Annual Meeting 2017 Treasurer's Report

Financially, the WW&F in 2016 had a *great* year. There were many things contributing to this, over multiple fronts.

First, ridership was highest since 2007. Ticketed ridership was the highest ever, thanks in part to the National Narrow Gauge Convention in September, and well attended special events such as Easter. A snowy Victorian Christmas kept the numbers down, so we did not get the highest ever total ridership. We had 4567 paid riders, and a total ridership of 5730 (highest was 6017 in 2005). Contributing to the ridership were two photographer events in the Spring.

We also have returned to a pre-Recession level of membership, with 1115 members at the end of the year. We added 82 members, upgraded 27, and lost 57 to death and non-payment of dues. We had the same number at the end of 2007.

We also were able to pull off two separate major fund raisers in one year – the 21 Campaign, to build boilers for Locomotives 10 and 11; and the Annual Fund Drive. The 21 Campaign was aimed at the railroad enthusiast community to get them interested in our efforts. The Annual Fund drive continues to fund only capital expansion or substantial repairs, and not operating expenses.

Lastly, we were given a generous donation by one of members which will enable us to start building a replica of Coach 3. The donation also will cover the restoration of Coach 3 to its as-built grandeur and will provide seed money for another new coach in the future.

Mortgages and Loans

We hold 2 mortgages and 2 multi-year loans. One mortgage is for the Percival House for \$86,456, the other for the Clark property at \$70,000. The loans are for rail purchased from a seller in the US Midwest, each for \$13,814, payable over 3 years (first payment was through last year's annual fund). Our total indebtedness is \$184, 085, or 8.7% of our assets.

Thank you, everyone, for your continuing support of your railroad museum.

| Statement of Financial Position | | | |
|--|--|----------------|-----------------------|
| December 31, 2016 | | | |
| ASSETS | | | |
| Current Assets | | | |
| Cash and Cash Equivalents | | | |
| Museum General Checking Account | | \$152,853.89 | |
| Museum Store Checking Account | | \$6,796.60 | |
| Passenger Car Fund CD | | \$100,058.51 | |
| Petty Cash (including cash for deposit) | | \$431.53 | |
| | Total Cash and Cash Equivalents | | \$260,140.53 |
| Accounts Receivable | | | \$51.11 |
| Other Current Assets | | | |
| Inventory - Prepaid | | \$36.00 | |
| Inventories For Sale | | \$77,849.95 | |
| Undeposited Funds | | \$2,046.18 | |
| | Total Other Current Assets | | \$79,932.13 |
| Total Current Assets | | | \$340,123.77 |
| Non-Current Assets | | | |
| Property and equipment, net | | \$1,885,445.22 | |
| Investments (Endowment) | | \$165,564.59 | |
| Total Non-Current Assets | | | \$2,051,009.81 |
| TOTAL ASSETS | | | \$2,391,133.58 |
| LIABILITIES & EQUITY | | | |
| Liabilities | | | |
| Current & Accrued Liabilities | | | |
| Accounts Payable | | \$8,218.80 | |
| Sales Tax Payable | | \$228.98 | |
| Other Accrued Expenses | | \$35.00 | |
| Credit Line | | \$41.74 | |
| | Total Current & Accrued Liabilities | | \$8,524.52 |
| Long Term Liabilities | | | |
| Percival House Mortgage | | \$88,237.41 | |
| Clark Property Mortgage | | \$70,000.00 | |
| Midwest Rail Loan | | \$27,629.48 | |
| | Total Long Term Liabilities | | \$185,866.89 |
| Total Liabilities | | | \$194,391.41 |
| Equity | | | |
| Equity | | \$1,834,805.35 | |
| Net Income | | \$361,936.82 | |
| Total Equity | | | \$2,196,742.17 |
| TOTAL LIABILITIES & EQUITY | | | \$2,391,133.58 |

| Statement of Financial Income and Expense | | |
|--|------------------------------|---------------------|
| For the Year Ended December 31, 2016 | | |
| Ordinary Income/Expense | | |
| Income | | |
| | Direct Contributions | \$341,511.65 |
| | Donated Goods & Services | \$22,365.17 |
| | Non-Government Grants | \$17,465.00 |
| | Tickets and Other Fees | \$39,685.38 |
| | Membership Dues | \$21,330.00 |
| | Investments | \$786.76 |
| | Revenue from Other Sources | \$41,678.07 |
| | Special Events Income | \$15,755.00 |
| Total Income | | \$500,577.03 |
| Cost of Goods Sold | | |
| | Inventory Adjustments | \$2,597.85 |
| | Cost of Goods Sold | \$15,517.42 |
| Total COGS | | \$18,115.27 |
| Gross Profit | | \$482,461.76 |
| Expense | | |
| | Reconciliation Discrepancies | -\$784.14 |
| | Grants & Contracts | \$6,071.99 |
| | Personnel & Related Expenses | \$350.00 |
| | Contract Services | \$13,983.11 |
| | Nonpersonnel Expenses | \$40,009.58 |
| | Facilities and Equipment | \$37,139.82 |
| | Travel and Meetings | \$3,386.00 |
| | Other Expenses | \$29,700.23 |
| | Business Expenses | \$616.23 |
| Total Expense | | \$130,472.82 |
| Net Ordinary Income | | \$351,988.94 |
| Other Income/Expense | | |
| Other Income | | |
| | Unrealized Gain (Loss) | \$9,947.88 |
| Total Other Income | | \$9,947.88 |
| Net Other Income | | \$9,947.88 |
| Net Income | | \$361,936.82 |

| Statement of Cash Flows | | |
|--|--|----------------------|
| For the Year Ending December 31, 2016 | | |
| OPERATING ACTIVITIES | | |
| | Net Income | \$361,217.47 |
| | Adjustments to reconcile Net Income to net cash provided by operations: | |
| | Inventory | -\$9,375.03 |
| | Accounts Payable | \$4,446.43 |
| | Accrued Sales Tax | -\$48.07 |
| | Net cash provided by Operating Activities | \$356,240.80 |
| INVESTING ACTIVITIES | | |
| | Buildings - Operating | -\$4,499.22 |
| | Construction in Progress | -\$60,367.05 |
| | Furniture and Fixtures | -\$8,375.50 |
| | Land Improvements | -\$2,615.44 |
| | Leasehold Improvements | -\$836.48 |
| | Railroad Equipment | -\$966.00 |
| | Railroad Track and Track Parts | -\$130,218.36 |
| | Tools and Machinery | -\$2,972.01 |
| | Vehicles | -\$751.00 |
| | Endowment Principle | -\$670.00 |
| | Endowment Interest/Fees | \$508.38 |
| | Endowment Growth/Shrinkage | -\$10,684.46 |
| | Net cash provided by Investing Activities | -\$222,447.14 |
| FINANCING ACTIVITIES | | |
| | Percival House Mortgage | -\$5,193.68 |
| | Clark Property Mortgage | -\$10,000.00 |
| | Midwest Rail Loan | \$27,629.48 |
| | Net cash provided by Financing Activities | \$12,435.80 |
| | Net cash increase for period | \$146,229.46 |
| | Cash at beginning of period | \$115,957.25 |
| | Cash at end of period | \$262,186.71 |

Exhibit A-2-h Permitting
DEP Permit by Rule for 2017 Culvert work

11/14/2013

DEPARTMENT OF ENVIRONMENTAL PROTECTION

NRPA PERMIT BY RULE NOTIFICATION FORM

(For use with DEP Regulation, Natural Resources Protection Act—Permit by Rule Standards, Chapter 305)

PLEASE TYPE OR PRINT IN **BLACK INK ONLY**

| | | | | | | | |
|---|---|---|--------|--|---------------|-------------------------|----------|
| Name of Applicant: (owner) | Wiscasset, Waterville & Farmington Railway Museum | | | Name of Agent: | Mike Fox | | |
| Applicant Mailing Address: | P.O. Box 242 | | | Agent Phone # (include area code): | (207)515-1004 | | |
| Town/City: | Alna | | | PROJECT Information Name of Town/City: | Alna, Me | | |
| State and Zip code: | Me. 04535 | | | Name of Wetland or Waterbody: | | | |
| Daytime Phone # (include area code): | (207)882-4193 | | Map #: | R-5 | Lot #: | 10 & 14A | |
| Detailed Directions to Site: | Located on the old Railroad Grade, at the current end of track. No easy direct access, best to make arrangements with the Railroad. | | | | | | |
| | | | | UTM Northing: (if known) | 44.09755 | UTM Easting: (if known) | 69.23543 |
| Description of Project: | Installing a 48"X45' culvert in an active washout to rebuild the right of way. Also installing 2 smaller cross pipes to control erosion, one will require fill to replace what has eroded | | | | | | |
| Part of a larger project? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | After the Fact? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Check one → This project <input type="checkbox"/> does (or) <input checked="" type="checkbox"/> does not involve work below mean low water (average low water). | | | | | |

NRPA PERMIT BY RULE (PBR) SECTIONS: (Check at least one)

I am filing notice of my intent to carry out work which meets the requirements for Permit By Rule (PBR) under DEP Rules, Chapter 305. I and my agents, if any, have read and will comply with all of the standards in the Sections checked below.

- | | | |
|---|---|--|
| <input type="checkbox"/> Sec. (2) Act. Adj. to Protected Natural Res. <input type="checkbox"/> Sec. (3) Intake Pipes <input type="checkbox"/> Sec. (4) Replacement of Structures <input type="checkbox"/> Sec. (5) REPEALED <input type="checkbox"/> Sec. (6) Movement of Rocks or Vegetation <input type="checkbox"/> Sec. (7) Outfall Pipes <input type="checkbox"/> Sec. (8) Shoreline stabilization <input type="checkbox"/> Sec. (9) Utility Crossing | <input checked="" type="checkbox"/> Sec. (10) Stream Crossing <input type="checkbox"/> Sec. (11) State Transportation Facil. <input type="checkbox"/> Sec. (12) Restoration of Natural Areas <input type="checkbox"/> Sec. (13) F&W Creation/Enhance/Water Quality Improvement <input type="checkbox"/> Sec. (14) REPEALED <input type="checkbox"/> Sec. (15) Public Boat Ramps <input type="checkbox"/> Sec. (16) Coastal Sand Dune Projects | <input type="checkbox"/> Sec. (17) Transfers/Permit Extension <input type="checkbox"/> Sec. (18) Maintenance Dredging <input type="checkbox"/> Sec. (19) Activities in/on/over significant vernal pool habitat <input type="checkbox"/> Sec. (20) Activities located in/on/over high or moderate value inland waterfowl & wading bird habitat or shorebird feeding & roosting areas |
|---|---|--|

NOTIFICATION FORMS CANNOT BE ACCEPTED WITHOUT THE NECESSARY ATTACHMENTS:

- Attach a check for the correct fee, payable to: "Treasurer, State of Maine". The current fee for NRPA PBR Notifications can be found at the Department's website: <http://www.maine.gov/dep/feesched.pdf>
- Attach a U.S.G.S. topo map or Maine Atlas & Gazetteer map with the project site clearly marked.
- Attach Proof of Legal Name if applicant is a corporation, LLC, or other legal entity. Provide a copy of Secretary of State's registration information (available at <http://icrs.informe.org/nei-sos-icrs/ICRS?MainPage=x>) Individuals and municipalities are not required to provide any proof of identity.
- Attach photos of the proposed site where activity will take place as required in PBR Sections checked above.
- Attach all other required submissions as outlined in the PBR Sections checked above.

I authorize staff of the Departments of Environmental Protection, Inland Fisheries & Wildlife, and Marine Resources to access the project site for the purpose of determining compliance with the rules. I also understand that this permit is not valid until approved by the Department or 14 days after receipt by the Department, whichever is less.

By signing this Notification Form, I represent that the project meets all applicability requirements and standards in the rule and that the applicant has sufficient title, right, or interest in the property where the activity takes place.

| | | | | | |
|----------------------------------|---|--|--|-------|---------|
| Signature of Agent or Applicant: | <i>L. Charles Bach V. Seaside 4NAT RR</i> | | | Date: | 5/27/17 |
|----------------------------------|---|--|--|-------|---------|

Keep a copy as a record of permit. Send the form with attachments via certified mail or hand deliver to the Maine Dept. of Environmental Protection at the appropriate regional office listed below. The DEP will send a copy to the Town Office as evidence of the DEP's receipt of notification. No further authorization by DEP will be issued after receipt of notice. Permits are valid for two years. **Work carried out in violation of any standard is subject to enforcement action.**

AUGUSTA DEP

17 STATE HOUSE STATION
AUGUSTA, ME 04333-0017
(207)287-3901

PORLTAND DEP

312 CANCO ROAD
PORTLAND, ME 04103
(207)622-6300

BANGOR DEP

108 HOGAN ROAD
BANGOR, ME 04401
(207)941-4570

PRESQUE ISLE DEP

1235 CENTRAL DRIVE
PRESQUE ISLE, ME 04769
(207)764-0477

| | | | | | |
|--------------------|-------------------|--------------------|-------------------------|-----------|--------------|
| OFFICE USE ONLY | CK# <i>2478</i> | Date <i>6/5/17</i> | Staff <i>22</i> | Staff | |
| PBR # <i>63870</i> | FP <i>\$75.00</i> | Date <i>6/9/17</i> | Acc. Date <i>6/9/17</i> | Def. Date | After Photos |

DEPLW0311-Q2013

Exhibit A-2-h Permitting
US Army Corps of Engineers Permit for 2017 Culvert work



Appendix B: Self-Verification Notification Form
(for all tidal and non-tidal projects in Maine subject to Corps jurisdiction)

**US Army Corps
of Engineers®**

New England District

At least two weeks before work commences, complete all fields (write "none" if applicable) below or use the fillable form at www.nae.usace.army.mil/missions/regulatory.aspx. Send this form, a location map, any project plans, and an Official Species List (See GC 8) to the address noted below; fax to (207) 623-8206; or email to jay.l.clement@usace.army.mil. The two-week lead time is not required for emergency situations (see page 4 for definition). Please call (207) 623-8367 with questions.

Maine Project Office
U.S. Army Corps of Engineers
New England District
675 Western Avenue #3
Manchester, Maine 04351

State Permit Number: _____
Date of State Permit: _____
State Project Manager: _____

Permittee: Wiscasset, Waterville & Farmington Railway Museum

Address, City, State & Zip: 97 Cross Rd, Alna, Me. 04535
Phone(s) and Email: (207) 882-4193 (207) 515-1004 (Mike Cell) mjf2@roadrunner.com

Contractor: NONE
Address, City, State & Zip: _____
Phone(s) and Email: _____

Consultant/Engineer/Designer: NONE
Address, City, State & Zip: _____
Phone(s) and Email: _____

Wetland/Vernal Pool Consultant: NONE
Address, City, State & Zip: _____
Phone(s) and Email: _____

Project Location/Description: Alna, Me. Culvert installation in a washout on the existing Right of Way
Address, City, State & Zip: Same as above
Latitude/Longitude Coordinates: 44.097586, -69.623463 Tax Map/Lot: R-5, Lot 10 & Lot 14A
Waterway Name: _____
Work Description: Install new Culverts, repair a washout and improve drainage to prevent future Washouts. See attached maps for location and drawings.

Provide any prior Corps permit numbers: _____
Proposed Work Dates: Start: 1 Jun 2017 Finish: 1 Oct 2017
Area of wetland impact: 0 SF (leave blank if work involves structures & no fill in Navigable Waters)
Area of waterway impact: 0 SF (leave blank if work involves structures & no fill in Navigable Waters)
Area of compensatory mitigation provided: 0 SF

Work will be done under the following Appendix A categories (circle all that apply):
I. Inland Waters and wetlands: 1 2 3 4 5 6 7 8 9 **10** 11 12 13 14 15 16 17 18 19 20 21 22 **23** 24
II. Navigable Waters: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Your name/signature below, as permittee, indicates that you accept and agree to comply with the terms, eligibility criteria, and general conditions of Category 1 of the Maine General Permit.

Permittee Printed Name: Stephen Zuppa, Pres. Wiscasset, Waterville, & Farmington Railway Museum.
Permittee Signature: _____ Date: _____

Exhibit A-2-h Permitting
DEP Individual Permit for Roadbed Stabilization "Intent to File"

08/08

**PUBLIC NOTICE:
NOTICE OF INTENT TO FILE**

Please take notice that:

Wiscasset, Waterville & Farmington Railway Museum

97 Cross Rd, Alna, Me. 04535 (207) 882-4193

is intending to file a Natural Resources Protection Act permit application with the Maine Department of Environmental Protection pursuant to the provisions of 38 M.R.S.A. §§ 480-A thru 480-BB on or about

January 1, 2018

(anticipated filing date)

The application is for

Construct a Precast Concrete Retaining Wall and install related drainage to stop
erosion into Trout Brook, and reconstruct the Railroad through this section.

at the following location:

2.75 Miles North of 97 Cross Rd, at 44.0996176, -69.6215247

A request for a public hearing or a request that the Board of Environmental Protection assume jurisdiction over this application must be received by the Department in writing, no later than 20 days after the application is found by the Department to be complete and is accepted for processing. A public hearing may or may not be held at the discretion of the Commissioner or Board of Environmental Protection. Public comment on the application will be accepted throughout the processing of the application.

The application will be filed for public inspection at the Department of Environmental Protection's office in (Portland, Augusta, or Bangor)(circle one) during normal working hours. A copy of the application may also be seen at the municipal offices in Alna, Maine.

Written public comments may be sent to the regional office in Portland, Augusta, or Bangor where the application is filed for public inspection:

MDEP, Central Maine Regional Office, 17 State House Station, Augusta, Maine 04333
MDEP, Southern Maine Regional Office, 312 Canco Road, Portland, Maine 04103
MDEP, Eastern Maine Regional Office, 106 Hogan Road, Bangor, Maine 04401

Exhibit A-2-h Permitting
 DEP Permit by Rule for Trout Brook Bridge construction 2018

11/14/2013

DEPARTMENT OF ENVIRONMENTAL PROTECTION

NRPA PERMIT BY RULE NOTIFICATION FORM

(For use with DEP Regulation, Natural Resources Protection Act-Permit by Rule Standards, Chapter 305)

PLEASE TYPE OR PRINT IN BLACK INK ONLY

| | | | | | | | |
|---|--|---|--|--|------------------|----------------------------|------------|
| Name of Applicant: (owner) | Wiscasset, Waterville & Farmington Railway Museum | | | Name of Agent: | Jason Lamontagne | | |
| Applicant Mailing Address: | PO Box 242 | | | Agent Phone # (include area code): | 207-522-0735 | | |
| Town/City: | Alna | | | PROJECT Information Name of Town/City: Name of Wetland or Waterbody: | Alna, Maine | | |
| State and Zip code: | Maine 04535 | | | | Trout Brook | | |
| Daytime Phone # (include area code): | 207-882-4193 | | | Map #: | R-5 | Lot #: | M-L-R1-5 |
| Detailed Directions to Site: | Park at Trout Brook Preserve Lot, walk in to railroad roadbed, walk south on roadbed about 500 feet to bridge site. | | | | | | |
| | | | | UTM Northing: (if known) | 44.103599 | UTM Easting: (if known) | -69.617741 |
| Description of Project: | Install 47' truss bridge, and two 12' approach spans over brook. Install pre-cast concrete retaining wall on bridge approaches to raise grade. Construct railroad track. | | | | | | |
| Part of a larger project? (check one) <input type="checkbox"/> Yes <input type="checkbox"/> No | After the Fact? <input type="checkbox"/> Yes <input type="checkbox"/> No | Check one → This project <input type="checkbox"/> does (or) <input checked="" type="checkbox"/> does not involve work below mean low water (average low water). | | | | | |

NRPA PERMIT BY RULE (PBR) SECTIONS: (Check at least one)

I am filing notice of my intent to carry out work which meets the requirements for Permit By Rule (PBR) under DEP Rules, Chapter 305. I and my agents, if any, have read and will comply with all of the standards in the Sections checked below.

- | | | |
|---|--|--|
| <input type="checkbox"/> Sec. (2) Act. Adj. to Protected Natural Res. <input type="checkbox"/> Sec. (3) Intake Pipes <input type="checkbox"/> Sec. (4) Replacement of Structures <input type="checkbox"/> Sec. (5) REPEALED <input type="checkbox"/> Sec. (6) Movement of Rocks or Vegetation <input type="checkbox"/> Sec. (7) Outfall Pipes <input type="checkbox"/> Sec. (8) Shoreline stabilization <input type="checkbox"/> Sec. (9) Utility Crossing | <input type="checkbox"/> Sec. (10) Stream Crossing <input type="checkbox"/> Sec. (11) State Transportation Facil. <input type="checkbox"/> Sec. (12) Restoration of Natural Areas <input type="checkbox"/> Sec. (13) F&W Creation/Enhance/Water Quality Improvement <input type="checkbox"/> Sec. (14) REPEALED <input type="checkbox"/> Sec. (15) Public Boat Ramps <input type="checkbox"/> Sec. (16) Coastal Sand Dune Projects | <input type="checkbox"/> Sec. (17) Transfers/Permit Extension <input type="checkbox"/> Sec. (18) Maintenance Dredging <input type="checkbox"/> Sec. (19) Activities in/on/over significant vernal pool habitat <input type="checkbox"/> Sec. (20) Activities located in/on/over high or moderate value inland waterfowl & wading bird habitat or shorebird feeding & roosting areas |
|---|--|--|

NOTIFICATION FORMS CANNOT BE ACCEPTED WITHOUT THE NECESSARY ATTACHMENTS:

- Attach a check for the correct fee, payable to: "Treasurer, State of Maine". The current fee for NRPA PBR Notifications can be found at the Department's website: <http://www.maine.gov/dep/feesched.pdf>
- Attach a U.S.G.S. topo map or Maine Atlas & Gazetteer map with the project site clearly marked.
- Attach Proof of Legal Name if applicant is a corporation, LLC, or other legal entity. Provide a copy of Secretary of State's *registration information* (available at <http://icrs.informe.org/nel-sos-icrs/ICRS?MainPage=x>). Individuals and municipalities are not required to provide any proof of identity.
- Attach photos of the proposed site where activity will take place as required in PBR Sections checked above.
- Attach all other required submissions as outlined in the PBR Sections checked above.

I authorize staff of the Departments of Environmental Protection, Inland Fisheries & Wildlife, and Marine Resources to access the project site for the purpose of determining compliance with the rules. I also understand that *this permit is not valid until approved by the Department or 14 days after receipt by the Department, whichever is less.*

By signing this Notification Form, I represent that the project meets all applicability requirements and standards in the rule and that the applicant has sufficient title, right, or interest in the property where the activity takes place.

| | | | |
|-------------------------------------|--|-------|--|
| Signature of Agent or Applicant: | | Date: | |
|-------------------------------------|--|-------|--|

Keep a copy as a record of permit. Send the form with attachments via certified mail or hand deliver to the Maine Dept. of Environmental Protection at the appropriate regional office listed below. The DEP will send a copy to the Town Office as evidence of the DEP's receipt of notification. No further authorization by DEP will be issued after receipt of notice. Permits are valid for two years. Work carried out in violation of any standard is subject to enforcement action.

| | | | |
|--|---|---|---|
| AUGUSTA DEP 17 STATE HOUSE STATION AUGUSTA, ME 04333-0017 (207)287-3901 | PORTLAND DEP 312 CANCO ROAD PORTLAND, ME 04103 (207)822-6300 | BANGOR DEP 106 HOGAN ROAD BANGOR, ME 04401 (207)941-4570 | PRESQUE ISLE DEP 1235 CENTRAL DRIVE PRESQUE ISLE, ME 04769 (207)764-0477 |
|--|---|---|---|

| | | | | | |
|-----------------|------|------|-----------|-----------|--------------|
| OFFICE USE ONLY | Ck.# | Date | Staff | Staff | After Photos |
| PBR # | FP | | Acc. Date | Def. Date | |

DEPLW0311-02013

Exhibit A-2-i: Alna Fire Department Statement

Michael Trask, Chief
Mike Averill, Captain

Roger Whitney, Assistant Chief
Stewart Rhine, Captain

Alna Volunteer Fire Department
P.O. Box 267, Alna Maine 04535
207-586-5555

December 6, 2017

To whom it may concern,

The Alna Volunteer Fire Department is a fully functional volunteer fire service which includes a new 2015 pumper, 1995 pumper-tanker, 2006 brush truck and a 2006 utility truck. The department currently has 18 members. It has the authority to call all the surrounding towns' fire companies and their equipment for mutual aid in the event of a major fire.

The department maintains seven dry hydrants. Dry hydrants are non-pressurized water sources where the fire truck draws the water instead of town water pressure. They are inspected and tested once a year. These hydrants are located at various fire ponds around town, one of which is across from the WW&F museum.

A hydrant system is being designed for the museum grounds as of the fall of 2017.

Sincerely,



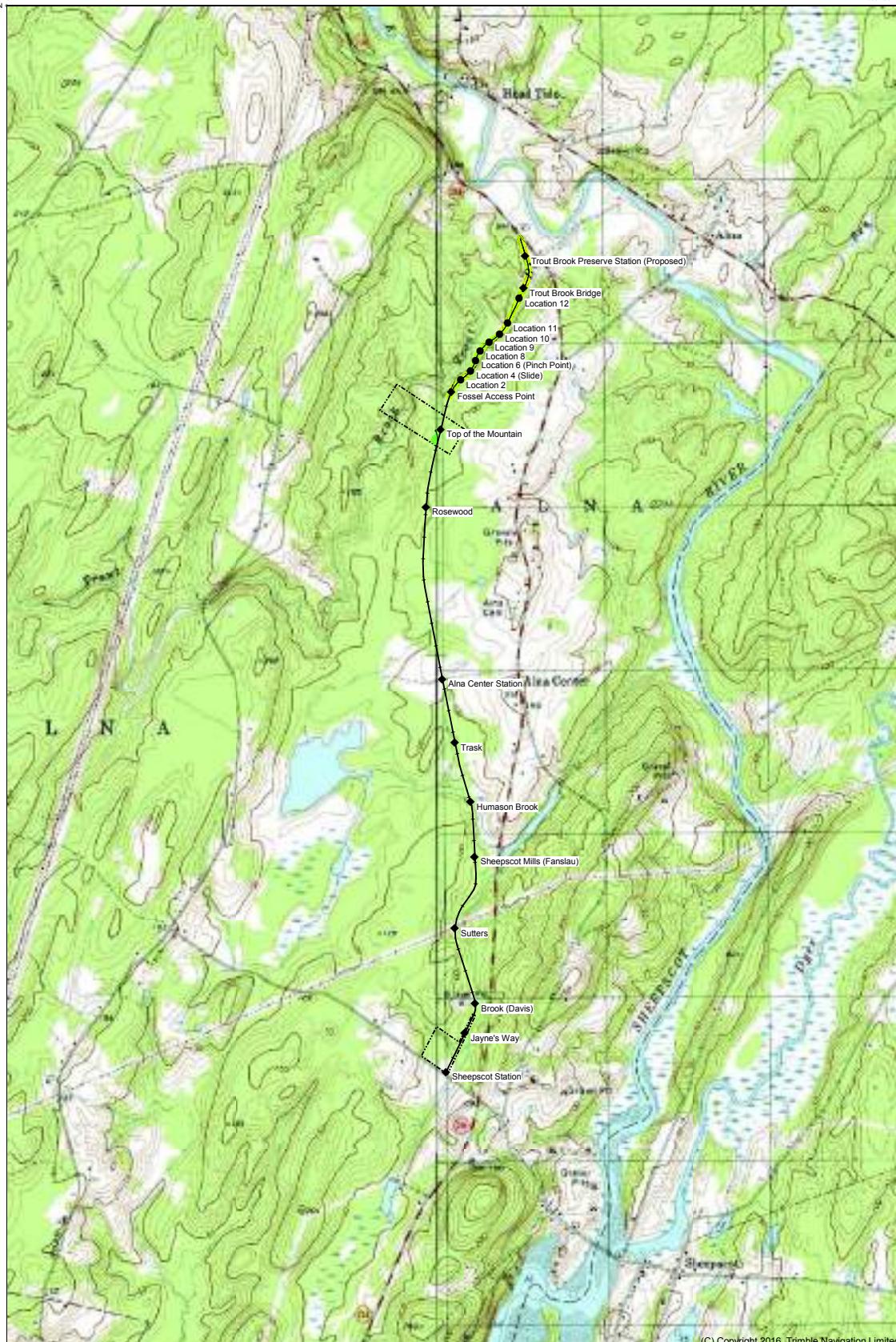
Roger Whitney, Asst. Chief

Beth Whitney, President
Herman Lovejoy, Vice President

Walter Vietz, Treasurer
Marcie Lovejoy, Secretary

069° 39' 26.2247" W
044° 07' 08.7214" N

069° 35' 19.1845" W
044° 02' 42.5483" N



(C) Copyright 2016, Trimble Navigation Limited

Printed: Thu Feb 15, 2018

069° 35' 19.1845" W

044° 02' 42.5483" N
069° 39' 26.2247" W

Declination

MN GN

GN 0° 26' W
MN 15° 40' E

SCALE 1:24000

0 1
Mile

0 1000 2000
Yards

0 1
Kilometer

CONTOUR INTERVAL 10 FT

Produced by Trimble Terrain Navigator Pro
Topography based on USGS 1:24,000 Maps
North American 1983 Datum (NAD83)

To place on the predicted North American 1927 move the
projection lines 8M N and 41M E

44069-A4-TM-024
DAMARISCOTTA, ME

TRAFFIC IMPACT STUDY
Wiscasset, Waterville & Farmington Railway
Museum
Alna, Maine

January 15, 2018

Prepared for:

**WWFRY
97 Cross Road
Alna, Maine 04535**



Prepared by:

**Maine
Traffic
Resources**

25 Vine Street Gardiner, ME 04345
(207) 582-5252 FAX (207) 582-1677
mainetrafficresources.com

Introduction

The purpose of this study is to assess the traffic impacts of the existing Wiscasset, Waterville & Farmington Railway Museum (WWFRY) in Alna, Maine. The site is located at 97 Cross Road, as shown on the map in Figure 1. Existing access to the site is provided by three curb cuts to Alna Road, two of which connect to the primary parking lot. The speed limit is posted on Cross Road in the vicinity of the museum at 25 miles per hour. The speed limit increases to 35 just northwest of the site.

The museum is currently only open on Saturdays and Sundays. It is understood that typical daily attendance averages from 20 to 80 persons. Greater attendance occurs during the following special events: Easter Eggspress, Ice Cream Socials in July and August, Annual Picnic in Mid-August, Fall Festival in late September and the Victorian Christmas, held on two Saturdays in December. Both existing conditions and projected growth over a five-year period for the WWFRY will be analyzed. As such, 2022 will be utilized for the study year for traffic analysis purposes.

Existing Trip Generation

The number of trips generated by the WWFRY was estimated based upon actual traffic counts conducted during the peak Victorian Christmas event and daily visitor information provided by the museum. Traffic counts were conducted on Saturday, December 16th at the site as well as at the intersection of Cross Road and Route 218 (Alna Road) to capture and observe peak conditions. The WWFRY had approximately 675 riders on December 16th, the date counted. Fewer than 300 people attended the Victorian Christmas event on December 23rd so Maine Traffic Resources recorded and observed the maximum event of the year.

Counts were conducted during the period from 9:15 AM through 3:15 PM when activities and associated traffic were slowing down. The peak hour for the site occurred from 12:00 to 1:00 PM with a peak hour volume of 89 vehicles recorded, 32 entering the site and 57 exiting the site.

The peak hour volume, based upon 675 daily riders, equates to a factor of 0.13 of daily riders. The WWFRY provided ridership records for the past several years. Peak summer daily ridership during peak summer Maine traffic conditions, which occur in July and August, was 259 in July and 284 in August. Applying the 0.13 factor provides a summer peak hour traffic volume of 37 one-way trips. This level of traffic, when divided between entering and exiting vehicles, would have no significant impact off-site on traffic operations. Generally, a project needs to generate in excess of 25 to 35 lane hour trips to have any noticeable impact on off-site traffic operations.

Since peak hour trip generation is under 100 one-way trips, including during a maximum special event (the Victorian Christmas), it does not appear that a Traffic Movement Permit (TMP) is required from the Maine Department of Transportation (MaineDOT). It is recommended that at some time in the near future that trip generation information be provided to the MaineDOT Mid-Coast Region 2 Traffic Engineer to inform them of the museum and to confirm that a TMP is not required and that the few special events would be considered exempt.

Traffic Volumes

Turning movement/classification counts were conducted by Maine Traffic Resources on Saturday, December 16, 2017 during the Victorian Christmas from 9:30 AM to 3:00 PM at the nearby intersection of Route 218 and Cross Road. The peak hour for the intersection occurred from 2:00 to 3:00 PM. As previously noted, the site traffic peaked from 12:00 to 1:00 PM. During the 2:00 to 3:00 PM peak hour for the Route 218 intersection, the WWFRY site generated 57 one-way trips, 18 entering and 39 exiting. The count records are included in the appendix of this report.

The winter counts for the intersection of Route 218 were factored to peak summer conditions using the Maine Department of Transportation group mean factors. Peak summer volumes, or 30th highest hour volumes, are used for design and traffic analysis purposes and generally occur in Maine in late July or early August. The existing 2017 volumes for both winter and peak summer conditions are shown in Figure 2. Since the summer counts were derived from counts performed during the Victorian Christmas event, by factoring them up to increased summer volumes, these summer counts are expected to be highly conservative since actual museum attendance will be less in summer than during the Victorian Christmas count date.

Existing average annual daily traffic (AADT) data for the vicinity of the site was obtained from "Traffic Volume Counts, 2016, 2014, 2009 and 2006 Annual Reports", published by MaineDOT. This data is summarized below:

| <u>Location Description</u> | Average Annual Daily Traffic | | | | |
|--|-------------------------------------|-------------|-------------|-------------|-------------|
| | <u>2005</u> | <u>2007</u> | <u>2010</u> | <u>2013</u> | <u>2014</u> |
| West Alna Road, Southwest of Route 218 | --- | --- | --- | 170 | --- |
| Route 218, Northwest of West Alna Road | 1,410 | 1,430 | --- | --- | 990 |
| Route 218, South of Golden Ridge Road | --- | --- | --- | --- | 1,070 |
| Route 218, South of Dock Road | 1,420 | 1,530 | --- | 1,070 | --- |
| Route 218, Southwest of Sheepscot Road | 1,890 | 1,870 | 1,510 | 1,690 | 1,500 |
| Route 218, North of Cross Road | 1,450 | 1,520 | --- | --- | --- |

As seen in the preceding table, traffic volumes in the area during the long-term period from 2005 to 2014 have declined. During the most recent short-term period, from 2010 to 2014, volumes held steady. Given this historical growth data for area roadways, a 1 % annual traffic growth rate was used to project non-WWFRY 2017 volumes to base 2022 conditions, to be conservative.

In terms of projected museum growth, it is understood that the museum would like to see their average daily summer ridership grow to 100 persons per day. As previously noted, the highest volumes in Maine occur during the summer months of July and August, which is the typical traffic analysis period. A review of the museum's August 2017 ridership shows an average of 68 daily riders, excluding one high day. The existing 2017 volumes would need to be increased by 47 % to arrive at 100 daily riders. To be conservative, it was assumed that the museum grows by 10 % per year, by 50 % total, over the next five years. To be conservative it was assumed that all Cross Road movements were associated with the museum while some were simply through movements not associated with the museum. The resulting projected 2022 volumes for both summer and winter conditions are shown in Figure 3. Again, these volumes are expected to be highly conservative since they were derived from counts during the highest day for the museum.

Traffic Analysis

Traffic operations are evaluated in terms of level of service (LOS). Level of service is a qualitative measure that describes operations by letter designation. The levels range from A - very little delay to F - extreme delays. Level of service "D" is generally considered acceptable in urban locations while LOS "E" is generally considered the capacity of a facility and the minimum tolerable level. The level of service for unsignalized intersections is based upon average control delay per vehicle for each minor, opposed movement, as defined in the following table excerpted from the 2010 "Highway Capacity Manual":

Unsignalized Intersection Level of Service

| <u>LOS</u> | <u>Delay Range</u> |
|------------|--------------------|
| A | <= 10.0 seconds |
| B | > 10.0 and <= 15.0 |
| C | > 15.0 and <= 25.0 |
| D | > 25.0 and <= 35.0 |
| E | > 35.0 and <= 50.0 |
| F | > 50.0 |

Unsignalized Intersection Analysis

The level of service was calculated using Synchro 9 for the unsignalized intersection of Alna Road (Route 218) and Cross Road to determine if there are any delay or congestion concerns off-site. The results for the Saturday PM peak hour are provided in the appendix and are summarized in the following table with the level of service followed by the delay, in seconds, in parentheses:

| <u>Approach/Movement</u> | Alna Road and Cross Road | | | |
|---------------------------------------|---|-----------------------------------|------------------------------------|------------------------------------|
| | Saturday Peak Hour Levels of Service | | | |
| | 2017 Existing <u>Winter</u> | 2017 Existing <u>Summer</u> | 2022 Projected <u>Winter</u> | 2022 Projected <u>Summer</u> |
| Eastbound Cross Road Overall | A (9.9) | B (10.2) | B (10.5) | B (11.0) |
| Westbound Cross Road Overall | A (9.8) | B (10.0) | B (10.3) | B (10.4) |
| Northbound Alna Road Lefts onto Cross | A (2.7) | A (2.5) | A (3.4) | A (3.2) |
| Southbound Alna Road Lefts onto Cross | A (1.3) | A (1.2) | A (1.1) | A (1.1) |

As can be seen above, Cross Road movements currently operate at LOS “A” under winter volumes and at LOS “B” under peak summer volumes. Again, these results are expected to be highly conservative since the analysis increased the winter counts to summer conditions when in actuality the museum’s volumes (and associated Cross Road and Route 218 movements) will be less in summer. Under projected 2022 conditions, Cross Road operates at a high LOS “B” during both summer and winter conditions, allowing for both high museum growth and annual background traffic growth. These results show that there are no capacity concerns in the area and that both Cross Road and Route 218 have the capacity to accommodate the WWFRY trips with no off-site congestion concerns.

Safety Analysis

Accident Review

The Maine Department of Transportation (MaineDOT) uses two criteria to determine high crash locations (HCLs). The first is the critical rate factor (CRF), which is a measure of the accident rate. A CRF greater than one indicates a location which has a higher than expected accident rate. The expected rate is calculated as a statewide average of similar facilities.

The second criterion, which must also be met, is based upon the number of accidents that occur at a particular location. Eight or more accidents must occur over the three-year study period for the location to be considered a high crash location. Accident data for the vicinity of the WWFRY was obtained from MaineDOT and is included in the appendix. The CRF and number of accidents are summarized by location for the most recent three-year period, 2014 to 2016, as follows:

| <u>Alna Road (Route 218) Location Description</u> | <u># of Acc.</u> | <u>CRF</u> |
|---|------------------|------------|
| Intersection of Sheepscot Road | 1 | 1.02 |
| Between Sheepscot Road and Cross Road | 2 | 0.90 |
| Intersection of Cross Road | 1 | 0.98 |
| Between Cross Road and Golden Ridge Road | 4 | 0.51 |
| Between Golden Ridge Road and Sand Shed Road | 1 | 0.17 |
| Between Dock Road and W Alna Road | 3 | 0.66 |
| Intersection of West Alna Road | 2 | 3.08 |

| <u>West Alna Road Location Description</u> | <u># of Acc.</u> | <u>CRF</u> |
|--|------------------|------------|
| Between Alna and Wiscasset Townline and Cross Road | 3 | 0.61 |
| Between Cross Road and Lathrop Road | 1 | 0.26 |

| <u>Cross Road Location Description</u> | <u># of Acc.</u> | <u>CRF</u> |
|--|------------------|------------|
| Between Alna and West Alna Roads | 0 | 0.00 |

As can be seen in the above tables, there are no high crash locations, or locations approaching the high crash criteria, within the vicinity of the WWFRY. Therefore, no additional accident review or evaluation is necessary.

Driveway Sight Distance

One of the most important safety factors to consider for a project is sight distance from the access drives. This sight distance is measured ten feet back from the edge of travel way at a driver's eye height of 3.5 feet to an object height of 4.25 feet. Maine Traffic Resources recommends 10 feet of sight distance for every posted mile of speed limit. Given the posted 25 mile per hour speed limit, a minimum of 250' of driveway sight distance is recommended. The sight distances were measured in the field and are summarized in the following table:

| <u>Driveway Description</u> | <u>Required</u> | <u>To Left</u> | <u>To Right</u> |
|-----------------------------|-----------------|----------------|-----------------|
| Southerly Station Area | 250' | 300'+ | 300'+ |
| Center Drive | 250' | 300'+ | 300'+ |
| Parking Lot Access Drive | 250' | 400'+ | 300'+ |

As seen above, sight distances from the three existing drives exceed the recommended 250' minimum in both directions. Hence, there are no sight distance concerns.

Site Observations and Recommendations

Site observations were performed during the traffic counts on December 16th during the peak Victorian Christmas event, the busiest museum event of the year. While no concerns are shown by either the capacity analysis or by the accident review, the typical items addressed in a Traffic Impact Study, the following traffic observations were made:

- Volunteers did a good job making sure parking on Cross Road was limited to one side of the road in appropriate locations. When parking on Cross Road approached the Route 218 intersection a volunteer went to the back of the parking queue and directed additional arriving vehicles to the on-site lot to assure no interference with Route 218 traffic.

Consideration should be given to the installation of permanent “No Parking Here to Corner” signage on Cross Road to assure no parking in the immediate vicinity of Route 218. This would also ease the burden on parking volunteers attempting to keep the intersection free of parking.

- The volunteer parking attendants were noted to be appropriately be wearing high visibility vests to make them visible to motorists. It may also be helpful for them to have flags to direct traffic since they were often see directing motorists.
- When parking is located on one side of Cross Road, and pedestrians are walking along Cross Street from on-street parking locations to the site, travel is often restricted to one direction in one-travel lane. Long term consideration should be given by the Town and museum to ultimately provide a sidewalk along Cross Road to provide for improved pedestrian safety if on-street parking is expected to be utilized long-term for frequent event purposes.

- Given the noted pedestrian activity on Cross Road and the resulting limited roadway width, some advance notice to motorists of pedestrians is recommended if on-street parking is to be used for events. Advance pedestrian warning signs should be located on Cross Road, one in each direction, prior to the expected pedestrian activity area.
- Future expansion of on-site parking spaces would allow for parking and associated pedestrian activity to be confined to the site. Under this option, there would be no need for sidewalk or advance pedestrian warning or “no parking here to corner” signs along Cross Road.
- The existing parking lot is gravel. Parking is often maximized when a lot is paved and parking spaces are defined by pavement markings. Long term consideration should be given to paving the parking lot if it is determined that on-site parking could be increased by this means.
- A clearly defined path from the on-site parking lot to the activity/boarding area is recommended in front of the shingled building. Many visitors used Cross Road to walk from the parking lot to the train boarding area. It would be safer if a visible sidewalk or path connection was made from the parking lot to the activity area on site so that these visitors would not need to walk on Cross Road.
- Some on-street parkers were noted to use private drives to reverse their direction. This should be discouraged. An expansion of on-site parking facilities would eliminate the need for motorists to reverse direction.
- There was a plow truck and trailer parked in front of the yellow building for the duration of the December 16th Victorian Christmas event. This area could be made better use of for pedestrian and visitor activity and would limit the need for visitors to be immediately adjacent to the street and travelling motorists.
- Drop offs for handicapped and disabled persons occurred at several locations on Cross Road randomly. Establishment of a more formal drop-off area for elderly and disabled persons should be considered in long range museum planning.
- Cars parking on Cross Road in the immediate vicinity of the parking lot exit were noted to obstruct sight distance. Parking attendants often directed vehicles out of the lot but were not always available. It is recommended that parking in the immediate vicinity of the drive be restricted to assure proper sight distance for motorists exiting the parking lot. Formal permanent “no parking signs” could be located on Cross Road in this area or the museum could install temporary signs as they did for Victorian Christmas.

SUMMARY

To summarize, given the traffic volumes generated by the WWRY no off-site traffic impacts would be expected beyond the immediate site area. This was confirmed by the traffic analyses, which showed there are no level of service or capacity concerns at the nearby intersection of Cross Road and Route 218 (Alna Road) under either existing volumes or projected 2022 volumes, which allowed for high museum growth and also annual background traffic growth.

In terms of safety, the accident review did not identify any high crash or accident concerns in the vicinity of the WWF Railway museum. Sight distance from all three site drives exceeds the recommended minimum so there are no sight distance concerns.

While the museum has limited impact on traffic beyond the site, there are some recommendations, or options for improvements, to improve traffic flow and pedestrian safety on Cross Road, during special events if on-street parking is to be utilized. The Town and the museum should consider several of these more costly options in long range planning. Other more minor improvements, such as installation of “No Parking Here to Corner” and advance “Pedestrian” warning are recommended for immediate implementation to provide for increased safety.

 North
Apprx.



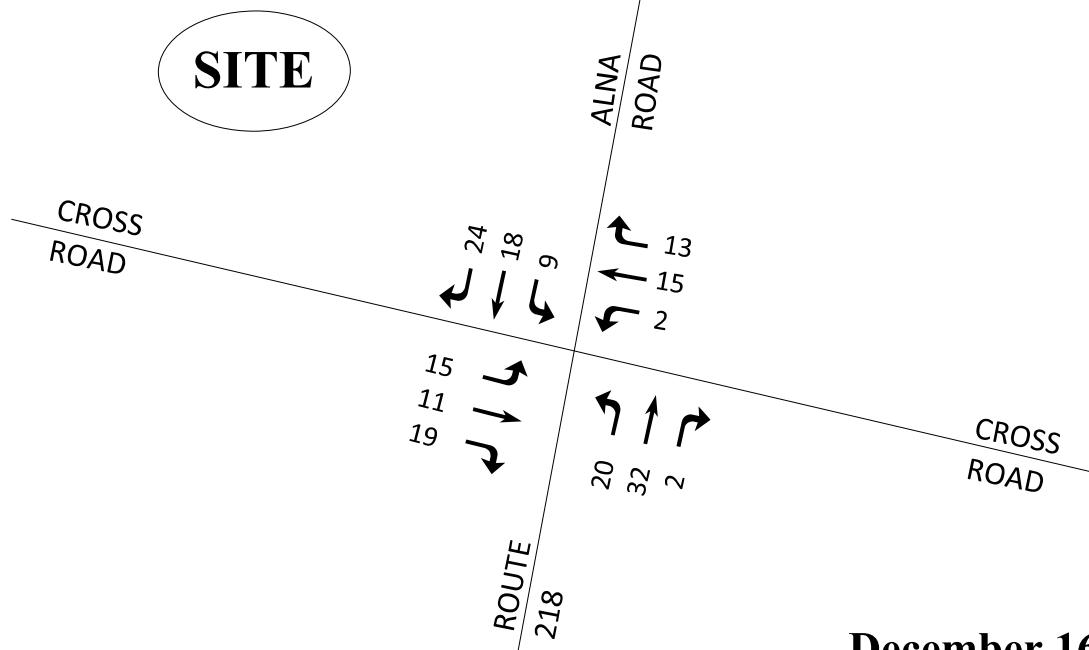
Figure 1

**Site Location Map
WW&F Railway Museum
Alna, Maine**

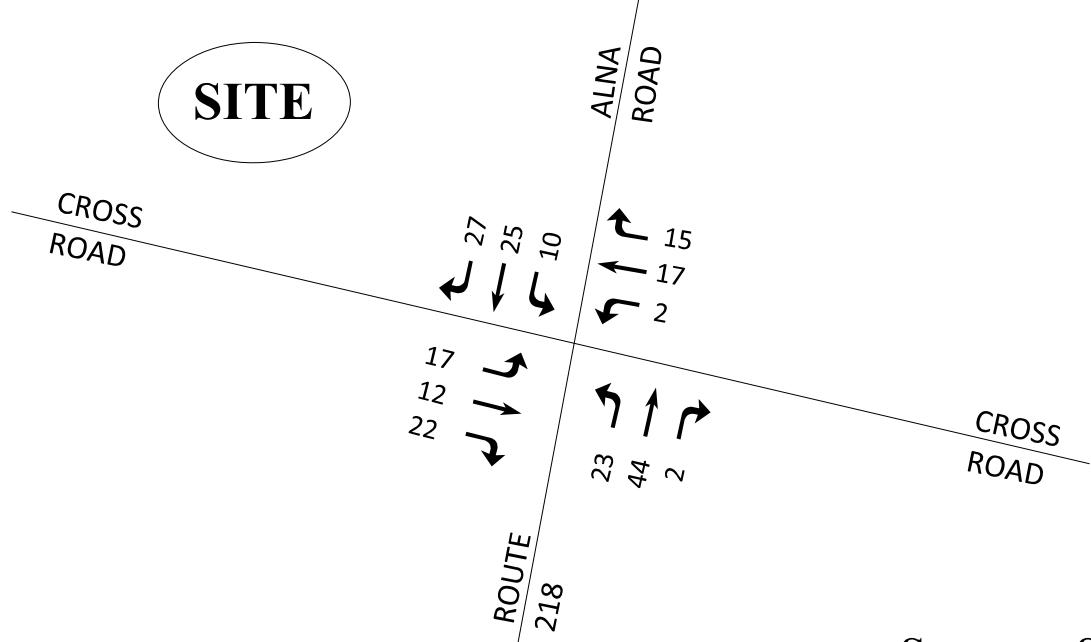
Maine Traffic Resources
25 Vine Street
Gardiner, ME 04345
tel: (207) 582-5252
fax: (207) 582-1677

Approx.
North

XX = PM Trips



December 16, 2017
Peak Victorian Christmas



Summer Saturday

Figure 2
2017 Existing Peak Hour Volumes
WW&F Railway Museum
Alna, Maine

Maine
Traffic
Resources

25 Vine Street
Gardiner, ME
04345
tel: (207) 582-5252
fax: (207) 582-1677

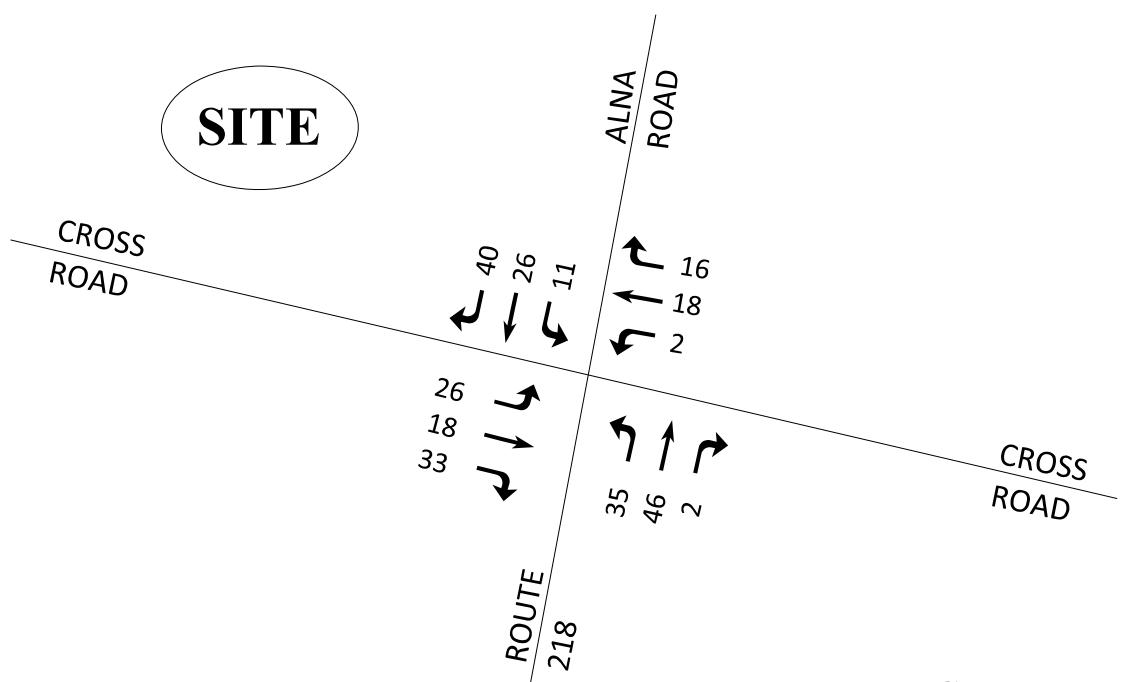
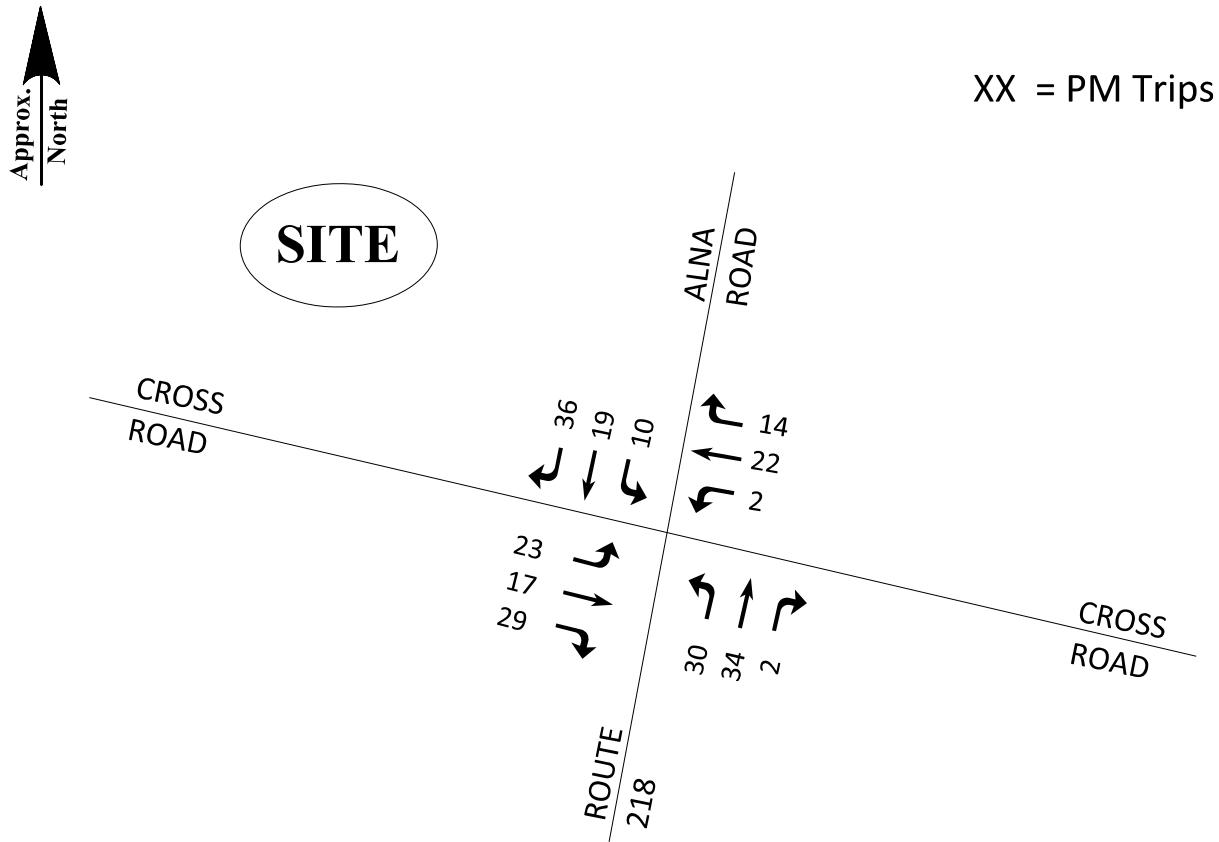


Figure 3

2022 Projected Peak Hour Volumes
WW&F Railway Museum
Alna, Maine

Maine Traffic Resources | 25 Vine Street
Gardiner, ME 04345
tel: (207) 582-5252
fax: (207) 582-1677

APPENDIX

TURNING MOVEMENT COUNTS

CAPACITY ANALYSIS

ACCIDENT DATA

Maine Traffic Resources

25 Vine Street

Gardiner, Maine 04345

www.mainetrafficresources.com

Title: WWF RR Victorian Christmas

Town: Alna

Counter: DWM

Weather: Sunny

Groups Printed- Passenger Vehicles - Light Trucks - Heavy Trucks

| Start Time | Cross Road From North | | | | WWF site From East | | | | Cross Road From South | | | | From West | | | | Avl. Time | Int. Total |
|------------|--------------------------|------|------|------|-----------------------|------|------|------|--------------------------|------|------|------|-----------|------|------|------|-----------|------------|
| | Right | Thru | Left | Peds | Right | Thru | Left | Peds | Right | Thru | Left | Peds | Right | Thru | Left | Peds | | |
| 09:00 AM | 0 | 3 | 1 | 1 | 5 | 0 | 0 | 5 | 0 | 3 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 22 |
| 09:15 AM | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 4 | 1 | 5 | 18 | 2 | 0 | 20 | 0 | 0 | 0 | 29 |
| 09:30 AM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 2 | 11 | 1 | 0 | 12 | 0 | 0 | 0 | 15 |
| 09:45 AM | 0 | 1 | 4 | 0 | 5 | 2 | 0 | 0 | 0 | 2 | 14 | 3 | 0 | 17 | 0 | 0 | 0 | 24 |
| Total | 0 | 9 | 5 | 1 | 15 | 2 | 0 | 11 | 1 | 14 | 52 | 9 | 0 | 61 | 0 | 0 | 0 | 90 |
| 10:00 AM | 0 | 2 | 5 | 0 | 7 | 2 | 0 | 3 | 0 | 5 | 7 | 3 | 0 | 10 | 0 | 0 | 0 | 22 |
| 10:15 AM | 0 | 2 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 3 | 15 | 4 | 0 | 19 | 0 | 0 | 0 | 24 |
| 10:30 AM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 2 | 14 | 0 | 0 | 14 | 0 | 0 | 0 | 17 |
| 10:45 AM | 0 | 2 | 2 | 0 | 4 | 0 | 0 | 1 | 0 | 1 | 11 | 0 | 0 | 11 | 0 | 0 | 0 | 16 |
| Total | 0 | 7 | 7 | 0 | 14 | 5 | 0 | 6 | 0 | 11 | 47 | 7 | 0 | 54 | 0 | 0 | 0 | 79 |
| 11:00 AM | 0 | 2 | 3 | 0 | 5 | 1 | 0 | 6 | 0 | 7 | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 21 |
| 11:15 AM | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 16 | 0 | 16 | 3 | 2 | 0 | 5 | 0 | 0 | 0 | 24 |
| 11:30 AM | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 6 | 0 | 6 | 9 | 3 | 0 | 12 | 0 | 0 | 0 | 20 |
| 11:45 AM | 0 | 1 | 1 | 0 | 2 | 1 | 0 | 4 | 0 | 5 | 10 | 2 | 0 | 12 | 0 | 0 | 0 | 19 |
| Total | 0 | 7 | 5 | 0 | 12 | 2 | 0 | 32 | 0 | 34 | 31 | 7 | 0 | 39 | 0 | 0 | 0 | 84 |
| 12:00 PM | 0 | 2 | 2 | 0 | 4 | 3 | 0 | 2 | 0 | 5 | 9 | 2 | 0 | 11 | 0 | 0 | 0 | 20 |
| 12:15 PM | 0 | 3 | 1 | 0 | 4 | 2 | 0 | 20 | 0 | 22 | 8 | 2 | 0 | 10 | 0 | 0 | 0 | 36 |
| 12:30 PM | 0 | 3 | 0 | 0 | 3 | 1 | 0 | 8 | 0 | 9 | 7 | 2 | 0 | 9 | 0 | 0 | 0 | 21 |
| 12:45 PM | 0 | 1 | 1 | 0 | 2 | 3 | 0 | 18 | 0 | 21 | 4 | 4 | 0 | 8 | 0 | 0 | 0 | 31 |
| Total | 0 | 9 | 4 | 0 | 13 | 9 | 0 | 48 | 0 | 57 | 28 | 10 | 0 | 38 | 0 | 0 | 0 | 108 |
| 01:00 PM | 0 | 2 | 1 | 0 | 3 | 0 | 0 | 7 | 0 | 7 | 8 | 2 | 0 | 10 | 0 | 0 | 0 | 20 |
| 01:15 PM | 0 | 3 | 1 | 0 | 4 | 2 | 0 | 2 | 0 | 4 | 16 | 5 | 0 | 21 | 0 | 0 | 0 | 29 |
| 01:30 PM | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 8 | 0 | 9 | 13 | 3 | 0 | 16 | 0 | 0 | 0 | 26 |
| 01:45 PM | 0 | 3 | 1 | 0 | 4 | 1 | 0 | 3 | 0 | 4 | 8 | 2 | 0 | 10 | 0 | 0 | 0 | 18 |
| Total | 0 | 8 | 4 | 0 | 12 | 4 | 0 | 20 | 0 | 24 | 45 | 12 | 0 | 57 | 0 | 0 | 0 | 93 |
| 02:00 PM | 0 | 6 | 1 | 0 | 7 | 1 | 0 | 12 | 0 | 13 | 7 | 4 | 0 | 11 | 0 | 0 | 0 | 31 |
| 02:15 PM | 0 | 2 | 1 | 0 | 3 | 1 | 0 | 3 | 0 | 4 | 6 | 4 | 0 | 10 | 0 | 0 | 0 | 17 |
| 02:30 PM | 0 | 4 | 0 | 0 | 4 | 3 | 0 | 10 | 0 | 13 | 1 | 4 | 0 | 5 | 0 | 0 | 0 | 22 |
| 02:45 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 9 | 0 | 9 | 2 | 1 | 0 | 3 | 0 | 0 | 0 | 13 |
| Total | 0 | 13 | 2 | 0 | 15 | 5 | 0 | 34 | 0 | 39 | 16 | 13 | 0 | 29 | 0 | 0 | 0 | 83 |

Maine Traffic Resources

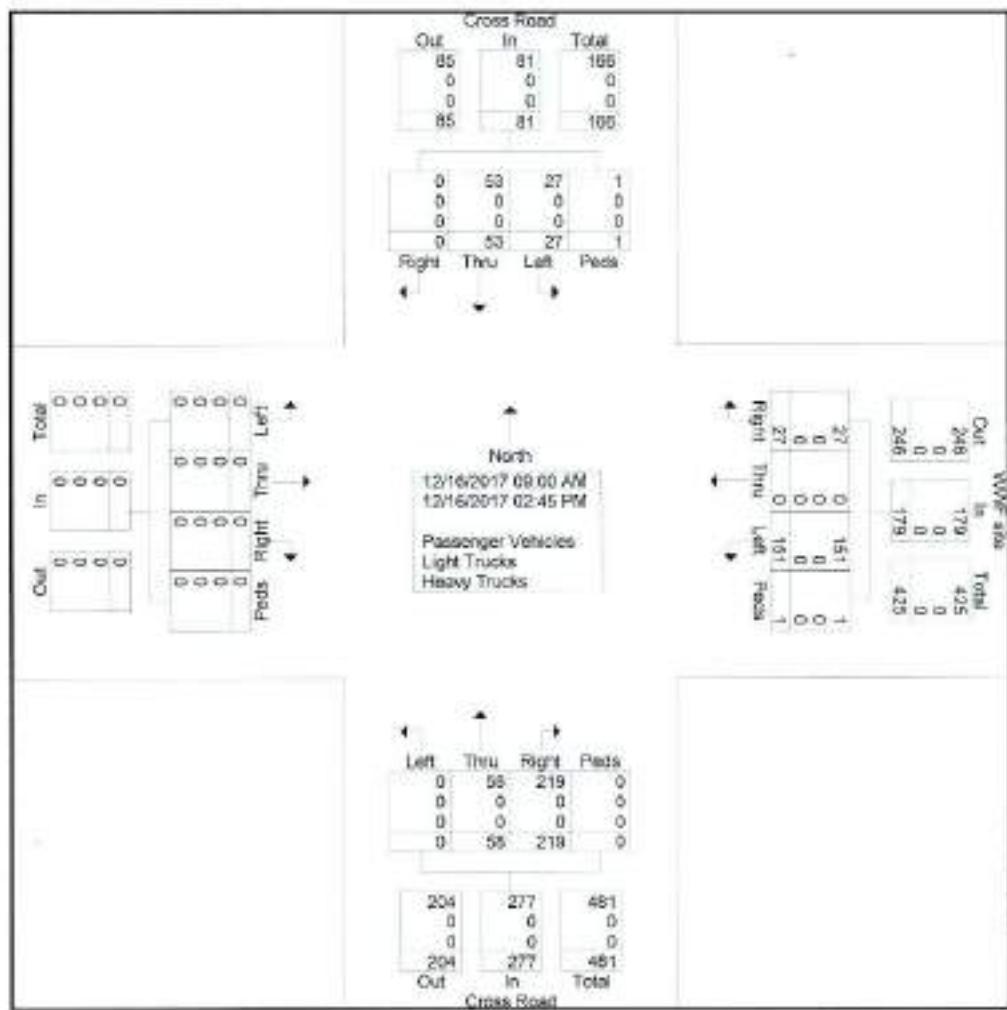
25 Vine Street

Gardiner, Maine 04345

www.mainetrafficresources.com

Groups Printed- Passenger Vehicles - Light Trucks - Heavy Trucks

| | Cross Road From North | | | | WWF site From East | | | | Cross Road From South | | | | From West | | | | W. Total | |
|--------------------|--------------------------|------|------|------|-----------------------|-------|------|------|--------------------------|------------|-------|------|-----------|------|------------|---|----------|-----|
| | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | | | |
| Grand Total | 0 | 53 | 27 | 1 | 81 | 27 | 0 | 151 | 1 | 179 | 219 | 58 | 0 | 0 | 277 | 0 | 0 | 537 |
| Apprch % | 0 | 65.4 | 33.3 | 1.2 | | 15.1 | 0 | 84.4 | 0.6 | | 79.1 | 20.9 | 0 | 0 | | 0 | 0 | 0 |
| Total % | 0 | 9.9 | 5 | 0.2 | 15.1 | 5 | 0 | 28.1 | 0.2 | 33.3 | 40.8 | 10.8 | 0 | 0 | 51.6 | 0 | 0 | 0 |
| Passenger Vehicles | 0 | 53 | 27 | 1 | 81 | 27 | 0 | 151 | 1 | 179 | 219 | 58 | 0 | 0 | 277 | 0 | 0 | 537 |
| Passenger Vehicles | 0 | 100 | 100 | 100 | 100 | 100 | 0 | 100 | 100 | 100 | 100 | 100 | 0 | 0 | 100 | 0 | 0 | 100 |
| Light Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Light Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Heavy Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Heavy Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



Maine Traffic Resources

25 Vine Street
 Gardiner, Maine 04345
www.mainetrafficresources.com

Title: Route 218 and Cross Road

Town: Alna

Counter: NLS

Weather: Sunny

Groups Printed- Passenger Vehicles - Light Trucks - Heavy Trucks

| Start Time | Cross Road From North | | | | | Route 218 (Alna Road) From East | | | | | Cross Road From South | | | | | Route 218 (Alna Road) From West | | | | | |
|------------|-----------------------|------|------|------|-----------|---------------------------------|------|------|------|-----------|-----------------------|------|------|------|-----------|---------------------------------|------|------|------|-----------|-----------|
| | Right | Thru | Left | Peds | App Total | Right | Thru | Left | Peds | App Total | Right | Thru | Left | Peds | App Total | Right | Thru | Left | Peds | App Total | Int Total |
| 09:30 AM | 3 | 3 | 2 | 0 | 8 | 5 | 8 | 1 | 1 | 15 | 0 | 2 | 0 | 0 | 2 | 0 | 3 | 9 | 0 | 12 | 37 |
| 09:45 AM | 0 | 2 | 1 | 0 | 3 | 6 | 5 | 1 | 0 | 12 | 0 | 4 | 0 | 0 | 4 | 0 | 3 | 4 | 0 | 7 | 26 |
| Total | 3 | 5 | 3 | 0 | 11 | 11 | 13 | 2 | 1 | 27 | 0 | 6 | 0 | 0 | 6 | 0 | 5 | 13 | 0 | 19 | 63 |
| 10:00 AM | 0 | 1 | 0 | 0 | 1 | 3 | 15 | 0 | 0 | 18 | 1 | 4 | 2 | 0 | 7 | 0 | 4 | 7 | 0 | 11 | 37 |
| 10:15 AM | 0 | 3 | 2 | 0 | 5 | 4 | 9 | 1 | 0 | 14 | 0 | 3 | 2 | 0 | 5 | 0 | 4 | 5 | 0 | 9 | 33 |
| 10:30 AM | 0 | 1 | 0 | 0 | 1 | 5 | 12 | 2 | 0 | 19 | 2 | 4 | 1 | 0 | 7 | 0 | 4 | 9 | 0 | 13 | 40 |
| 10:45 AM | 0 | 0 | 1 | 0 | 1 | 3 | 8 | 3 | 0 | 12 | 2 | 2 | 0 | 0 | 4 | 0 | 2 | 7 | 0 | 9 | 26 |
| Total | 0 | 5 | 3 | 0 | 8 | 15 | 42 | 6 | 0 | 63 | 5 | 13 | 5 | 0 | 23 | 0 | 14 | 28 | 0 | 42 | 136 |
| 11:00 AM | 2 | 1 | 0 | 0 | 3 | 3 | 5 | 1 | 0 | 9 | 2 | 4 | 0 | 0 | 6 | 1 | 6 | 2 | 0 | 9 | 27 |
| 11:15 AM | 5 | 2 | 1 | 0 | 8 | 3 | 7 | 2 | 0 | 12 | 0 | 2 | 0 | 0 | 2 | 0 | 4 | 5 | 0 | 9 | 31 |
| 11:30 AM | 9 | 3 | 5 | 0 | 17 | 4 | 4 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 1 | 1 | 12 | 1 | 0 | 14 | 40 |
| 11:45 AM | 3 | 1 | 4 | 0 | 8 | 3 | 5 | 2 | 0 | 10 | 4 | 1 | 0 | 0 | 5 | 1 | 4 | 7 | 0 | 12 | 35 |
| Total | 19 | 7 | 10 | 0 | 36 | 13 | 21 | 5 | 0 | 39 | 7 | 7 | 0 | 0 | 14 | 3 | 25 | 15 | 0 | 44 | 133 |
| 12:00 PM | 2 | 2 | 0 | 0 | 4 | 4 | 3 | 1 | 0 | 8 | 3 | 1 | 0 | 0 | 4 | 1 | 6 | 8 | 0 | 15 | 31 |
| 12:15 PM | 4 | 2 | 1 | 0 | 7 | 2 | 8 | 0 | 0 | 10 | 3 | 3 | 0 | 0 | 6 | 2 | 13 | 5 | 0 | 20 | 43 |
| 12:30 PM | 14 | 3 | 5 | 0 | 22 | 3 | 5 | 3 | 0 | 11 | 3 | 3 | 0 | 0 | 8 | 0 | 3 | 6 | 0 | 9 | 48 |
| 12:45 PM | 4 | 2 | 5 | 0 | 11 | 3 | 9 | 1 | 0 | 13 | 0 | 2 | 4 | 0 | 6 | 2 | 6 | 2 | 0 | 10 | 40 |
| Total | 24 | 9 | 11 | 0 | 44 | 12 | 25 | 5 | 0 | 42 | 9 | 9 | 4 | 0 | 22 | 5 | 28 | 21 | 0 | 54 | 162 |
| 01:00 PM | 10 | 7 | 3 | 0 | 20 | 3 | 6 | 5 | 0 | 14 | 4 | 2 | 0 | 0 | 6 | 1 | 4 | 1 | 0 | 8 | 46 |
| 01:15 PM | 4 | 1 | 4 | 0 | 9 | 3 | 5 | 3 | 0 | 11 | 3 | 7 | 1 | 0 | 11 | 1 | 2 | 6 | 0 | 9 | 40 |
| 01:30 PM | 2 | 2 | 2 | 0 | 6 | 8 | 4 | 0 | 0 | 12 | 2 | 3 | 0 | 0 | 5 | 0 | 10 | 8 | 0 | 18 | 41 |
| 01:45 PM | 3 | 1 | 6 | 0 | 10 | 10 | 3 | 1 | 1 | 15 | 4 | 3 | 1 | 0 | 8 | 0 | 16 | 5 | 0 | 21 | 54 |
| Total | 19 | 11 | 15 | 0 | 45 | 24 | 18 | 9 | 1 | 52 | 13 | 15 | 2 | 0 | 30 | 2 | 32 | 20 | 0 | 54 | 181 |
| 02:00 PM | 2 | 2 | 2 | 0 | 6 | 1 | 8 | 4 | 0 | 13 | 0 | 5 | 0 | 0 | 5 | 0 | 7 | 6 | 0 | 13 | 37 |
| 02:15 PM | 8 | 3 | 8 | 0 | 17 | 2 | 7 | 0 | 0 | 9 | 4 | 4 | 0 | 0 | 8 | 0 | 4 | 3 | 0 | 7 | 41 |
| 02:30 PM | 4 | 2 | 0 | 0 | 6 | 1 | 6 | 2 | 0 | 9 | 3 | 3 | 0 | 0 | 6 | 0 | 5 | 3 | 0 | 8 | 29 |
| 02:45 PM | 4 | 4 | 6 | 0 | 14 | 0 | 5 | 1 | 0 | 6 | 1 | 2 | 0 | 0 | 3 | 0 | 4 | 3 | 0 | 7 | 30 |
| Total | 18 | 11 | 14 | 0 | 43 | 4 | 26 | 7 | 0 | 37 | 8 | 14 | 0 | 0 | 22 | 0 | 20 | 15 | 0 | 35 | 137 |

Maine Traffic Resources

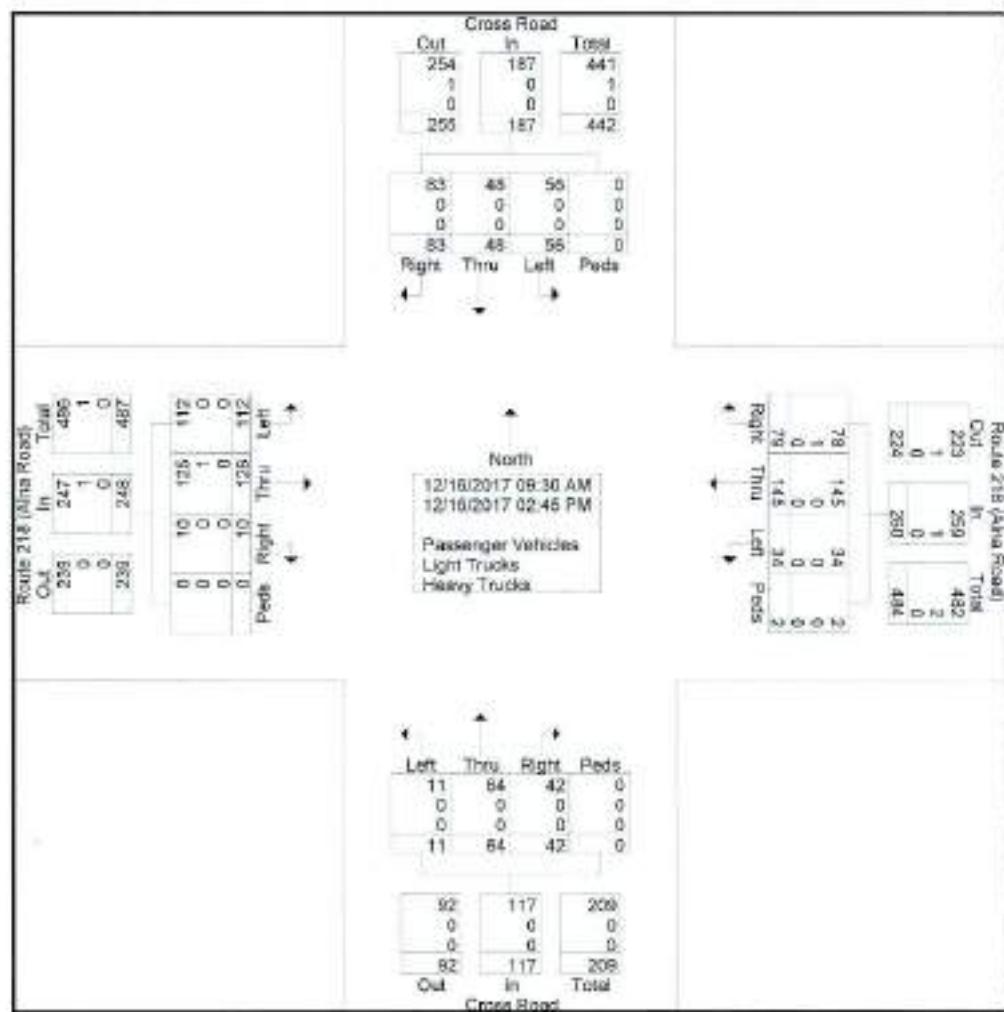
25 Vine Street

Gardiner, Maine 04345

www.mainetrafficresources.com

Groups Printed- Passenger Vehicles - Light Trucks - Heavy Trucks

| | Cross Road From North | | | | Route 218 (Alna Road) From East | | | | Cross Road From South | | | | Route 218 (Alna Road) From West | | | | | | | | |
|----------------------|--------------------------|------|------|------|------------------------------------|-------|------|------|--------------------------|-----------|-------|------|------------------------------------|------|-----------|-----------|------|------|---|------|------|
| | Right | Thru | Left | Peds | App Total | Right | Thru | Left | Peds | App Total | Right | Thru | Left | Peds | App Total | Int Total | | | | | |
| Grand Total | 83 | 48 | 56 | 0 | 187 | 79 | 145 | 34 | 2 | 260 | 42 | 64 | 11 | 0 | 117 | 10 | 126 | 112 | 0 | 248 | 812 |
| Approch % | 44.4 | 25.7 | 28.9 | 0 | | 30.4 | 55.8 | 13.1 | 0.8 | | 35.9 | 54.7 | 9.4 | 0 | | 4 | 50.8 | 45.2 | 0 | | |
| Total % | 10.2 | 5.9 | 6.9 | 0 | 23 | 9.7 | 17.9 | 4.2 | 0.2 | 32 | 5.2 | 7.9 | 1.4 | 0 | 14.4 | 1.2 | 15.5 | 13.8 | 0 | 30.5 | |
| Passenger Vehicles | 83 | 48 | 56 | 0 | 187 | 78 | 145 | 34 | 2 | 259 | 42 | 64 | 11 | 0 | 117 | 10 | 125 | 112 | 0 | 247 | 810 |
| % Passenger Vehicles | 100 | 100 | 100 | 0 | 100 | 98.7 | 100 | 100 | 0 | 99.6 | 100 | 100 | 0 | 0 | 100 | 100 | 99.2 | 100 | 0 | 99.6 | 99.8 |
| Light Trucks | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 |
| % Light Trucks | 0 | 0 | 0 | 0 | 0 | 1.3 | 0 | 0 | 0 | 0.4 | 0 | 0 | 0 | 0 | 0 | 0 | 0.8 | 0 | 0 | 0.4 | 0.2 |
| Heavy Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Heavy Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 15 | 11 | 19 | 2 | 15 | 13 | 20 | 32 | 2 | 9 | 18 | 24 |
| Future Volume (vph) | 15 | 11 | 19 | 2 | 15 | 13 | 20 | 32 | 2 | 9 | 18 | 24 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 | | | 0.995 | | | 0.936 |
| Fit Protected | | | | | | 0.997 | | | 0.982 | | | 0.992 |
| Satd. Flow (prot) | 0 | 1677 | 0 | 0 | 1699 | 0 | 0 | 1751 | 0 | 0 | 1680 | 0 |
| Fit Permitted | | | | | | 0.997 | | | 0.982 | | | 0.992 |
| Satd. Flow (perm) | 0 | 1677 | 0 | 0 | 1699 | 0 | 0 | 1751 | 0 | 0 | 1680 | 0 |
| Link Speed (mph) | | | | | | 25 | | | 25 | | | 30 |
| Link Distance (ft) | | | | | | 200 | | | 170 | | | 778 |
| Travel Time (s) | | | | | | 5.5 | | | 4.6 | | | 21.2 |
| Peak Hour Factor | 0.60 | 0.60 | 0.60 | 0.68 | 0.68 | 0.68 | 0.65 | 0.65 | 0.65 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 5% | 5% | 5% | 5% | 5% | 5% | 6% | 6% | 6% | 5% | 5% | 5% |
| Adj. Flow (vph) | 25 | 18 | 32 | 3 | 22 | 19 | 31 | 49 | 3 | 10 | 21 | 28 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 75 | 0 | 0 | 44 | 0 | 0 | 83 | 0 | 0 | 59 | 0 |
| Enter Blocked Intersection | No | No | No |
| Lane Alignment | Left | Left | Right |
| Median Width(ft) | 0 | | | | 0 | | | 0 | | | 0 | |
| Link Offset(ft) | 0 | | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | 16 | | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 19.5%

ICU Level of Service A

Analysis Period (min) 15

Intersection

Int Delay, s/veh 5.7

| Movement | EBL | EBT | EBC | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 15 | 11 | 19 | 2 | 15 | 13 | 20 | 32 | 2 | 9 | 18 | 24 |
| Future Vol, veh/h | 15 | 11 | 19 | 2 | 15 | 13 | 20 | 32 | 2 | 9 | 18 | 24 |
| 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 |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 60 | 60 | 60 | 68 | 68 | 68 | 65 | 65 | 65 | 87 | 87 | 87 |
| Heavy Vehicles, % | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 5 | 5 | 5 |
| Mvmt Flow | 25 | 18 | 32 | 3 | 22 | 19 | 31 | 49 | 3 | 10 | 21 | 28 |

| Major/Minor | Minor2 | Minor1 | | | Major1 | | | Major2 | | | | |
|----------------------|--------|--------|-------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 188 | 169 | 34 | 192 | 181 | 51 | 48 | 0 | 0 | 52 | 0 | 0 |
| Stage 1 | 55 | 55 | - | 112 | 112 | - | - | - | - | - | - | - |
| Stage 2 | 133 | 114 | - | 80 | 69 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.15 | 6.55 | 6.25 | 7.15 | 6.55 | 6.25 | 4.16 | - | - | 4.15 | - | - |
| Critical Hdwy Stg 1 | 6.15 | 5.55 | - | 6.15 | 5.55 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.15 | 5.55 | - | 6.15 | 5.55 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.545 | 4.045 | 3.345 | 3.545 | 4.045 | 3.345 | 2.254 | - | - | 2.245 | - | - |
| Pot Cap-1 Maneuver | 766 | 718 | 1031 | 761 | 708 | 1009 | 1534 | - | - | 1535 | - | - |
| Stage 1 | 950 | 843 | - | 886 | 797 | - | - | - | - | - | - | - |
| Stage 2 | 863 | 795 | - | 921 | 832 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | | | | | |
| Mov Cap-1 Maneuver | 718 | 698 | 1031 | 708 | 688 | 1009 | 1534 | - | - | 1535 | - | - |
| Mov Cap-2 Maneuver | 718 | 698 | - | 708 | 688 | - | - | - | - | - | - | - |
| Stage 1 | 930 | 837 | - | 867 | 780 | - | - | - | - | - | - | - |
| Stage 2 | 805 | 778 | - | 867 | 826 | - | - | - | - | - | - | - |

| Approach | EB | WB | | | NB | | | SB | | |
|----------------------|-----|-----|--|--|-----|--|--|-----|--|--|
| HCM Control Delay, s | 9.9 | 9.8 | | | 2.7 | | | 1.3 | | |
| HCM LOS | A | A | | | - | | | - | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1534 | - | - | 817 | 800 | 1535 | - | - |
| HCM Lane V/C Ratio | 0.02 | - | - | 0.092 | 0.055 | 0.007 | - | - |
| HCM Control Delay (s) | 7.4 | 0 | - | 9.9 | 9.8 | 7.4 | 0 | - |
| HCM Lane LOS | A | A | - | A | A | A | A | - |
| HCM 95th Ntile Q(veh) | 0.1 | - | - | 0.3 | 0.2 | 0 | - | - |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 17 | 12 | 22 | 2 | 17 | 15 | 23 | 44 | 2 | 10 | 25 | 27 |
| Future Volume (vph) | 17 | 12 | 22 | 2 | 17 | 15 | 23 | 44 | 2 | 10 | 25 | 27 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 | | 0.941 | | | 0.941 | | | 0.996 | | | 0.941 | |
| Flt Protected | | 0.984 | | | 0.997 | | | 0.984 | | | 0.992 | |
| Satd. Flow (prot) | 0 | 1676 | 0 | 0 | 1698 | 0 | 0 | 1757 | 0 | 0 | 1689 | 0 |
| Flt Permitted | | 0.984 | | | 0.997 | | | 0.984 | | | 0.992 | |
| Satd. Flow (perm) | 0 | 1676 | 0 | 0 | 1698 | 0 | 0 | 1757 | 0 | 0 | 1689 | 0 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 30 | |
| Link Distance (ft) | | 200 | | | 170 | | | 778 | | | 2256 | |
| Travel Time (s) | | 5.5 | | | 4.6 | | | 21.2 | | | 51.3 | |
| Peak Hour Factor | 0.60 | 0.60 | 0.60 | 0.68 | 0.68 | 0.68 | 0.65 | 0.65 | 0.65 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 5% | 5% | 5% | 5% | 5% | 5% | 6% | 6% | 6% | 5% | 5% | 5% |
| Adj. Flow (vph) | 28 | 20 | 37 | 3 | 25 | 22 | 35 | 68 | 3 | 11 | 29 | 31 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 85 | 0 | 0 | 50 | 0 | 0 | 106 | 0 | 0 | 71 | 0 |
| Enter Blocked Intersection | No | No | No |
| Lane Alignment | Left | Left | Right |
| Median Width(ft) | 0 | | | | 0 | | | 0 | | | 0 | |
| Link Offset(ft) | 0 | | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | 16 | | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 22.4%

ICU Level of Service A

Analysis Period (min) 15

| Intersection | | | | | | | | | | | | |
|--------------------------|--------|-------|-------|--------|-------|-------|--------|------|------|--------|------|------|
| Int Delay, s/veh | 5.5 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 17 | 12 | 22 | 2 | 17 | 15 | 23 | 44 | 2 | 10 | 25 | 27 |
| Future Vol, veh/h | 17 | 12 | 22 | 2 | 17 | 15 | 23 | 44 | 2 | 10 | 25 | 27 |
| 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 | 60 | 60 | 60 | 68 | 68 | 68 | 65 | 65 | 65 | 87 | 87 | 87 |
| Heavy Vehicles, % | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 5 | 5 | 5 |
| Mvmt Flow | 28 | 20 | 37 | 3 | 25 | 22 | 35 | 68 | 3 | 11 | 29 | 31 |
| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
| Conflicting Flow All | 231 | 209 | 44 | 236 | 223 | 69 | 60 | 0 | 0 | 71 | 0 | 0 |
| Stage 1 | 67 | 67 | - | 140 | 140 | - | - | - | - | - | - | - |
| Stage 2 | 164 | 142 | - | 96 | 83 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.15 | 6.55 | 6.25 | 7.15 | 6.55 | 6.25 | 4.16 | - | - | 4.15 | - | - |
| Critical Hdwy Stg 1 | 6.15 | 5.55 | - | 6.15 | 5.55 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.15 | 5.55 | - | 6.15 | 5.55 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.545 | 4.045 | 3.345 | 3.545 | 4.045 | 3.345 | 2.254 | - | - | 2.245 | - | - |
| Pot Cap-1 Maneuver | 718 | 683 | 1018 | 712 | 671 | 986 | 1518 | - | - | 1510 | - | - |
| Stage 1 | 936 | 833 | - | 856 | 775 | - | - | - | - | - | - | - |
| Stage 2 | 831 | 774 | - | 903 | 820 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | | | | | |
| Mov Cap-1 Maneuver | 665 | 661 | 1018 | 654 | 650 | 986 | 1518 | - | - | 1510 | - | - |
| Mov Cap-2 Maneuver | 665 | 661 | - | 654 | 650 | - | - | - | - | - | - | - |
| Stage 1 | 914 | 826 | - | 835 | 756 | - | - | - | - | - | - | - |
| Stage 2 | 767 | 755 | - | 843 | 813 | - | - | - | - | - | - | - |
| Approach | EB | | | WB | | | NB | | | SB | | |
| HCM Control Delay, s | 10.2 | | | 10 | | | 2.5 | | | 1.2 | | |
| HCM LOS | B | | | B | | | | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | | SBL | SBT | SBR | | | |
| Capacity (veh/h) | 1518 | - | - | 781 | 765 | 1510 | - | - | - | - | - | - |
| HCM Lane V/C Ratio | 0.023 | - | - | 0.109 | 0.065 | 0.008 | - | - | - | - | - | - |
| HCM Control Delay (s) | 7.4 | 0 | - | 10.2 | 10 | 7.4 | 0 | - | - | - | - | - |
| HCM Lane LOS | A | A | - | B | B | A | A | - | - | - | - | - |
| HCM 95th %ile Q(veh) | 0.1 | - | - | 0.4 | 0.2 | 0 | - | - | - | - | - | - |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SSR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 23 | 17 | 29 | 2 | 22 | 14 | 30 | 34 | 2 | 10 | 19 | 36 |
| Future Volume (vph) | 23 | 17 | 29 | 2 | 22 | 14 | 30 | 34 | 2 | 10 | 19 | 36 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 | | 0.943 | | | 0.949 | | | 0.996 | | | 0.925 | |
| Flt Protected | | 0.984 | | | 0.997 | | | 0.978 | | | 0.993 | |
| Satd. Flow (prot) | 0 | 1679 | 0 | 0 | 1712 | 0 | 0 | 1746 | 0 | 0 | 1662 | 0 |
| Flt Permitted | | 0.984 | | | 0.997 | | | 0.978 | | | 0.993 | |
| Satd. Flow (perm) | 0 | 1679 | 0 | 0 | 1712 | 0 | 0 | 1746 | 0 | 0 | 1662 | 0 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 30 | |
| Link Distance (ft) | | 200 | | | 170 | | | 778 | | | 2256 | |
| Travel Time (s) | | 5.5 | | | 4.8 | | | 21.2 | | | 51.3 | |
| Peak Hour Factor | 0.60 | 0.60 | 0.60 | 0.68 | 0.68 | 0.68 | 0.65 | 0.65 | 0.65 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 5% | 5% | 5% | 5% | 5% | 5% | 6% | 6% | 6% | 5% | 5% | 5% |
| Adj. Flow (vph) | 38 | 28 | 48 | 3 | 32 | 21 | 46 | 52 | 3 | 11 | 22 | 41 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 114 | 0 | 0 | 56 | 0 | 0 | 101 | 0 | 0 | 74 | 0 |
| Enter Blocked Intersection | No | No | No |
| Lane Alignment | Left | Left | Right |
| Median Width(ft) | 0 | | | | 0 | | | 0 | | | 0 | |
| Link Offset(ft) | 0 | | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | 16 | | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 25.7%

ICU Level of Service A

Analysis Period (min) 15

| Intersection | | | | | | | | | | | | |
|--------------------------|--------|-------|-------|--------|-------|-------|--------|------|------|--------|------|------|
| Int Delay, s/veh | 6.4 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 23 | 17 | 29 | 2 | 22 | 14 | 30 | 34 | 2 | 10 | 19 | 36 |
| Future Vol, veh/h | 23 | 17 | 29 | 2 | 22 | 14 | 30 | 34 | 2 | 10 | 19 | 36 |
| 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 | 60 | 60 | 60 | 68 | 68 | 68 | 65 | 65 | 65 | 87 | 87 | 87 |
| Heavy Vehicles, % | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 5 | 5 | 5 |
| Mvmt Flow | 38 | 28 | 48 | 3 | 32 | 21 | 46 | 52 | 3 | 11 | 22 | 41 |
| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
| Conflicting Flow All | 239 | 214 | 43 | 250 | 232 | 54 | 63 | 0 | 0 | 55 | 0 | 0 |
| Stage 1 | 66 | 66 | - | 146 | 146 | - | - | - | - | - | - | - |
| Stage 2 | 173 | 148 | - | 104 | 86 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.15 | 6.55 | 6.25 | 7.15 | 6.55 | 6.25 | 4.16 | - | - | 4.15 | - | - |
| Critical Hdwy Stg 1 | 6.15 | 5.55 | - | 6.15 | 5.55 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.15 | 5.55 | - | 6.15 | 5.55 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.545 | 4.045 | 3.345 | 3.545 | 4.045 | 3.345 | 2.254 | - | - | 2.245 | - | - |
| Pot Cap-1 Maneuver | 709 | 678 | 1019 | 697 | 663 | 1005 | 1514 | - | - | 1531 | - | - |
| Stage 1 | 937 | 834 | - | 850 | 770 | - | - | - | - | - | - | - |
| Stage 2 | 822 | 769 | - | 894 | 818 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | | | | | |
| Mov Cap-1 Maneuver | 648 | 652 | 1019 | 624 | 638 | 1005 | 1514 | - | - | 1531 | - | - |
| Mov Cap-2 Maneuver | 648 | 652 | - | 624 | 638 | - | - | - | - | - | - | - |
| Stage 1 | 908 | 828 | - | 824 | 746 | - | - | - | - | - | - | - |
| Stage 2 | 746 | 745 | - | 817 | 812 | - | - | - | - | - | - | - |
| Approach | EB | | | WB | | | NB | | | SB | | |
| HCM Control Delay, s | 10.5 | | | 10.3 | | | 3.4 | | | 1.1 | | |
| HCM LOS | B | | | B | | | | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SSR | | | | |
| Capacity (veh/h) | 1514 | - | - | 766 | 736 | 1531 | - | - | | | | |
| HCM Lane V/C Ratio | 0.03 | - | - | 0.15 | 0.076 | 0.008 | - | - | | | | |
| HCM Control Delay (s) | 7.5 | 0 | - | 10.5 | 10.3 | 7.4 | 0 | - | | | | |
| HCM Lane LOS | A | A | - | B | B | A | A | - | | | | |
| HCM 95th Ntile Q(veh) | 0.1 | - | - | 0.5 | 0.2 | 0 | - | - | | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 26 | 18 | 33 | 2 | 18 | 16 | 35 | 46 | 2 | 11 | 26 | 40 |
| Future Volume (vph) | 26 | 18 | 33 | 2 | 18 | 16 | 35 | 46 | 2 | 11 | 26 | 40 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Fit | | 0.942 | | | 0.939 | | | 0.997 | | | 0.930 | |
| Fit Protected | | 0.983 | | | 0.997 | | | 0.979 | | | 0.993 | |
| Satd. Flow (proj) | 0 | 1676 | 0 | 0 | 1694 | 0 | 0 | 1750 | 0 | 0 | 1671 | 0 |
| Fit Permitted | | 0.983 | | | 0.997 | | | 0.979 | | | 0.993 | |
| Satd. Flow (perm) | 0 | 1676 | 0 | 0 | 1694 | 0 | 0 | 1750 | 0 | 0 | 1671 | 0 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 30 | |
| Link Distance (ft) | | 200 | | | 170 | | | 778 | | | 2256 | |
| Travel Time (s) | | 5.5 | | | 4.6 | | | 21.2 | | | 51.3 | |
| Peak Hour Factor | 0.60 | 0.60 | 0.60 | 0.68 | 0.68 | 0.68 | 0.65 | 0.65 | 0.65 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 5% | 5% | 5% | 5% | 5% | 5% | 6% | 6% | 6% | 5% | 5% | 5% |
| Adj. Flow (vph) | 43 | 30 | 55 | 3 | 26 | 24 | 54 | 71 | 3 | 13 | 30 | 46 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 128 | 0 | 0 | 53 | 0 | 0 | 128 | 0 | 0 | 89 | 0 |
| Enter Blocked Intersection | No | No | No |
| Lane Alignment | Left | Left | Right |
| Median Width(ft) | 0 | | | | 0 | | | 0 | | | 0 | |
| Link Offset(ft) | 0 | | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | 16 | | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 28.1%

ICU Level of Service A

Analysis Period (min) 15

| Intersection | | | | | | | | | | | | |
|--------------------------|--------|-------|-------|--------|-------|-------|--------|------|------|--------|------|------|
| Int Delay, s/veh | 6.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 26 | 18 | 33 | 2 | 18 | 16 | 35 | 46 | 2 | 11 | 26 | 40 |
| Future Vol, veh/h | 26 | 18 | 33 | 2 | 18 | 16 | 35 | 46 | 2 | 11 | 26 | 40 |
| 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 | 60 | 60 | 60 | 68 | 68 | 68 | 65 | 65 | 65 | 87 | 87 | 87 |
| Heavy Vehicles, % | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 5 | 5 | 5 |
| Mvmt Flow | 43 | 30 | 55 | 3 | 26 | 24 | 54 | 71 | 3 | 13 | 30 | 46 |
| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
| Conflicting Flow All | 283 | 280 | 53 | 301 | 281 | 72 | 76 | 0 | 0 | 74 | 0 | 0 |
| Stage 1 | 78 | 78 | - | 180 | 180 | - | - | - | - | - | - | - |
| Stage 2 | 205 | 182 | - | 121 | 101 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.15 | 6.55 | 6.25 | 7.15 | 6.55 | 6.25 | 4.16 | - | - | 4.15 | - | - |
| Critical Hdwy Stg 1 | 6.15 | 5.55 | - | 6.15 | 5.55 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.15 | 5.55 | - | 6.15 | 5.55 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.545 | 4.045 | 3.345 | 3.545 | 4.045 | 3.345 | 2.254 | - | - | 2.245 | - | - |
| Pot Cap-1 Maneuver | 663 | 639 | 1006 | 645 | 622 | 982 | 1498 | - | - | 1507 | - | - |
| Stage 1 | 923 | 824 | - | 815 | 745 | - | - | - | - | - | - | - |
| Stage 2 | 790 | 743 | - | 876 | 806 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | | | | | |
| Mov Cap-1 Maneuver | 603 | 609 | 1006 | 566 | 593 | 982 | 1498 | - | - | 1507 | - | - |
| Mov Cap-2 Maneuver | 603 | 609 | - | 566 | 593 | - | - | - | - | - | - | - |
| Stage 1 | 888 | 817 | - | 784 | 717 | - | - | - | - | - | - | - |
| Stage 2 | 714 | 715 | - | 791 | 799 | - | - | - | - | - | - | - |
| Approach | EB | | | WB | | | NB | | | SB | | |
| HCM Control Delay, s | 11 | | | 10.4 | | | 3.2 | | | 1.1 | | |
| HCM LOS | B | | | B | | | | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR | | | | |
| Capacity (veh/h) | 1498 | - | - | 730 | 717 | 1507 | - | - | | | | |
| HCM Lane V/C Ratio | 0.036 | - | - | 0.176 | 0.074 | 0.008 | - | - | | | | |
| HCM Control Delay (s) | 7.5 | D | - | 11 | 10.4 | 7.4 | 0 | - | | | | |
| HCM Lane LOS | A | A | - | B | B | A | A | - | | | | |
| HCM 95th %ile Q(veh) | 0.1 | - | - | 0.6 | 0.2 | 0 | - | - | | | | |

Maine Department Of Transportation - Traffic Engineering, Crash Records Section
Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

Crash Summary I Section Detail Crash Summary II 1320 Public 1320 Private 1320 Summary

REPORT DESCRIPTION

Rte 218 West Aina Rd area in Aina

REPORT PARAMETERS

Year 2014, Start Month 1 through Year 2016 End Month: 12

| | | | |
|----------------|-------------------|-----------------|--|
| Route: 1500368 | Start Node: 31174 | Start Offset: 0 | <input checked="" type="checkbox"/> Exclude First Node |
| | End Node: 32299 | End Offset: 0 | <input checked="" type="checkbox"/> Exclude Last Node |
| Route: 0218X | Start Node: 32298 | Start Offset: 0 | <input type="checkbox"/> Exclude First Node |
| | End Node: 32303 | End Offset: 0 | <input type="checkbox"/> Exclude Last Node |
| Route: 1500367 | Start Node: 31173 | Start Offset: 0 | <input type="checkbox"/> Exclude First Node |
| | End Node: 32303 | End Offset: 0 | <input checked="" type="checkbox"/> Exclude Last Node |

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary |

| Node | Route - MP | Node Description | Nodes | | | Percent Annual M | | | Crash Rate | Critical Rate | CRF | |
|--------------|----------------|-------------------------------|-------|---------------|---|------------------|-------|---|------------|---------------|----------------|------|
| | | | U/R | Total Crashes | K | Injury Crashes | A | B | C | PD | Injury Ent-Veh | |
| 32298 | 0218X - 4.33 | Int of ALNARD SHEEPSOT RD | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 100.0 | 0.599 | 0.56 |
| 32299 | 0218X - 4.58 | Int of ALNARD CROSS RD | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0.631 | 0.53 |
| 32300 | 0218X - 6.04 | Int of ALNARD GOLDEN RIDGE RD | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.432 | 0.00 |
| 32535 | 0218X - 7.26 | Int of ALNARD SAND SHED RD | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.198 | 0.00 |
| 32301 | 0218X - 7.41 | Int of ALNARD DOCK RD | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.434 | 0.00 |
| 32303 | 0218X - 8.32 | Int of ALNARD WALNA RD | 1 | 2 | 0 | 0 | 0 | 0 | 2 | 0.0 | 0.385 | 1.73 |
| 31173 | 1500367 - 1.89 | TL - Ains, W/cessell | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.096 | 0.00 |
| 31174 | 1500367 - 3.59 | Int of CROSS RD WALNA RD | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.191 | 0.00 |
| 31176 | 1500367 - 5.69 | Int of LATHROP RD WALNA RD | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.108 | 0.00 |
| 31177 | 1500367 - 6.26 | Int of COLDIT RD WALNA RD | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.072 | 0.00 |
| Study Years: | | | 3.00 | NODE TOTALS: | | | 4 | 0 | 0 | 1 | 3 | 25.0 |
| | | | | | | | 3.146 | | | 0.42 | 0.39 | 1.09 |
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Crash Summary |

| Start Node | End Node | Element | Offset | Route • MP Begin - End | Section U/R Length | Total Crashes | Injury Crashes | | | Percent Injury | Annual HMVM | Crash Rate | Critical Rate | CRF | | |
|--------------------------------|-------------|---------|----------|--------------------------------|-----------------------|---------------|----------------|----------|----------|----------------|-------------|------------------------------|------------------------------|------------------------------|-------------|------|
| | | | | | | | K | A | B | | | | | | | |
| 31174 | 32299 | 200089 | 0 - 1.36 | 1500368 - 0 RD INV 15 00368 | 1.36 | 1 | 0 | 0 | 0 | 0.0 | 0.00112 | Statewide Crash Rate: 227.11 | 748.54 | 0.00 | | |
| Int of CROSS RD W ALNA RD | | | | 0218X - 4.33 | 0.25 | 1 | 2 | 0 | 0 | 2 | 0.0 | 0.00124 | Statewide Crash Rate: 173.03 | 593.76 | 0.90 | |
| 32298 | 32299 | 3131971 | 0 - 0.25 | ST RTE 218 | | | | | | | | | | | | |
| Int of ALNA RD SHEEPSOOT RD | | | | | | | | | | | | | | | | |
| 32299 | 32300 | 3109518 | 0 - 1.46 | 0218X - 4.58 | 1.46 | 1 | 4 | 0 | 0 | 4 | 0.0 | 0.00683 | Statewide Crash Rate: 173.03 | 385.40 | 0.51 | |
| Int of ALNA RD CROSS RD | | | | ST RTE 218 | | | | | | | | | | | | |
| 32300 | 32535 | 3109519 | 0 - 1.22 | 0218X - 6.04 | 1.22 | 1 | 1 | 0 | 0 | 1 | 0.0 | 0.00470 | Statewide Crash Rate: 173.03 | 70.89 | 0.17 | |
| Int of ALNA RD GOLDEN RIDGE RD | | | | ST RTE 218 | | | | | | | | | | | | |
| 32535 | 32535 | 3109520 | 0 - 0.15 | 0218X - 7.26 | 0.15 | 1 | 0 | 0 | 0 | 0 | 0.0 | 0.00058 | Statewide Crash Rate: 173.03 | 698.38 | 0.00 | |
| Int of ALNA RD DOCK RD | | | | ST RTE 218 | | | | | | | | | | | | |
| 32301 | 32303 | 3943511 | 0 - 0.91 | 0218X - 7.41 | 0.91 | 1 | 3 | 0 | 0 | 3 | 0.0 | 0.00328 | Statewide Crash Rate: 173.03 | 305.03 | 0.66 | |
| Int of ALNA RD DOCK RD | | | | ST RTE 218 | | | | | | | | | | | | |
| 31173 | 31174 | 3109210 | 0 - 1.80 | 1500367 - 1.99 | 1.80 | 1 | 3 | 0 | 0 | 1 | 2 | 33.3 | 0.00307 | Statewide Crash Rate: 203.36 | 326.16 | 0.61 |
| TL - Alma (Weston) | | | | RD INV 15 00367 | | | | | | | | | | | | |
| 31174 | 31176 | 3944320 | 0 - 2.10 | 1500367 - 3.59 | 2.10 | 1 | 1 | 0 | 0 | 1 | 0.0 | 0.00226 | Statewide Crash Rate: 203.36 | 147.42 | 0.26 | |
| Int of CROSS RD W ALNA RD | | | | RD INV 15 00367 | | | | | | | | | | | | |
| 31176 | 31177 | 3109212 | 0 - 0.57 | 1500367 - 5.89 | 0.57 | 1 | 0 | 0 | 0 | 0 | 0.0 | 0.00045 | Statewide Crash Rate: 203.36 | 832.33 | 0.00 | |
| Int of LATHROP RD W ALNA RD | | | | RD INV 15 00367 | | | | | | | | | | | | |
| 31177 | 32303 | 3109214 | 0 - 0.63 | 1500367 - 6.26 | 0.63 | 1 | 0 | 0 | 0 | 0 | 0.0 | 0.00036 | Statewide Crash Rate: 203.36 | 857.89 | 0.00 | |
| Int of GOLPIT RD W ALNA RD | | | | RD INV 15 00367 | | | | | | | | | | | | |
| Study Years: | 3.00 | | | Section Totals: | - 10.25 | 14 | 0 | 0 | 1 | 13 | 7.1 | 0.02369 | 195.38 | 306.68 | 0.64 | |
| Grand Totals: | | | | | 10.25 | 18 | 0 | 0 | 2 | 16 | 11.1 | 0.02369 | 251.20 | 346.15 | 0.73 | |



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0.25
Miles
1 inch = 0.28 miles

Date: 10/10/2017

Time: 11:31:08 AM



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0.25 Miles
1 inch = 0.28 miles

Date: 10/10/2017
Time: 11:33:14 AM



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0.25

1 Miles
1 inch = 0.28 miles

Date: 10/10/2017
Time: 11:34:29 AM