

Attachment J

Map and Description of Existing Transportation Infrastructure Routes, Impacts and Improvements

Description of Proposed Transportation Infrastructure Routes, Impacts and Improvements

The following transportation evaluation describes the proposed route to be used by trucks carrying mineral concentrate from the proposed Pickett Mountain site to the US – Canadian border, the level of additional traffic, potential impacts and potential improvements to promote safety. The proposed route is dependent on the final locations where mineral concentrate will be shipped for further processing (smelting) in Canada. The processing locations have not been finalized and therefore the proposed route could be subject to change.

Transportation Need

The proposed mining activity has an anticipated mill feed rate of 1,000 tonnes/day with anticipated metal recoveries, total concentrate yields will be approximately 160 tonnes/day of concentrate for shipment (352,740 lbs). Typical tractor trailer tare weights (empty weight including driver and fuel) vary and range from 26,000 to 37,000 lbs. Using an average of 32,000 lbs tare weight allows 48,000 lbs for cargo; requiring approximately 7 shipments/day.

Roads within the area will also be used for employee travel to and from the mine site and discussed later in this section.

Route Description

The proposed truck route consists of gravel roads on private property from the Pickett Mountain site to public roads that include three rural state highways, and one US Interstate Highway (See **Figure Attachment J** for locations and sections). From the mine site, trucks will travel on private gravel roads to Maine (ME) State Route 11 (ME SR-11), then northeast to the intersection of ME SR-212. Trucks will travel southeast along ME SR-212 to Oakfield, (where it turns into Smyrna – Oakfield Road) and enter Interstate 95 (I-95) traveling east to Houlton and the Canadian-US border and proceed to the Canadian National Highway in Woodstock New Brunswick. These roads are more specifically described below:

- 5.1 miles of gravel roads (consisting of an unnamed road, Pleasant Lane Road, and Bear Mountain Road). Elevations from the Pickett Mountain site to Maine (ME) state route (SR)-11 drop from approximately 1200 to 850 feet mean sea level (MSL) from west to east.
 - Existing gravel roads are currently in good condition, and well maintained for logging operations conducted on and around the property. An agreement is in place with land owning neighbors to allow right of way using this set of gravel roads outside of the Wolfden property boundary. Confirmation of this is in the form of a letter within this report.

- The gravel roads are single lane varying in width from 10 to 15 feet with drainage ditches where elevated. One bridge crossing is present.
 - The permanent bridge crossing east of the Pickett Pond outlet, consists of concrete abutments with two layers of wood decking and steel beams for support. The bridge deck is approximately 15 feet wide with a 20 foot span. The bridge appears to be in good structural condition.
 - Intersection of the gravel road with ME SR-11 has a good turning radius. The gravel road width at the shoulder of SR-11 is approximately 55 feet.
 - There is no available traffic data for the gravel roads mostly used for logging traffic in addition to access to a seasonal camp on the south side of Pleasant Lake.
 - The gravel roads are also used for recreational purposes by the public including all-terrain vehicles (ATVs) and snowmobiles.
- 19 miles of 2-lane rural state highway from the intersection of Bear Mountain Road with ME SR-11 to the intersection of Smyrna – Oakfield Road with I-95 (including 7.3 miles along ME SR-11 and 10.3 miles along ME SR-212, and 1.4 miles along the Smyrna – Oakfield Road). ME SR-11 and ME SR-212 are characterized by rolling hills ranging in elevation from approximately 550 to 1150 feet MSL. Posted speed limits are 50 MPH on ME SR-11 and 45 MPH on ME SR-212, and 35 MPH on the Smyrna-Oakfield Road. Each road has an approximate 11-foot-wide travel lane with 3-foot shoulder in both directions.
 - Roads are in good to fair condition and include bridge crossings over West Branch of Mattawamkeag River on ME SR-11 and over East Hastings Brook on ME SR-212.
 - Average Annual Daily Traffic (AADT) presented on Maine Department of Transportation (Maine DOT) website ranged from 470-1270 along ME SR-11 and ME SR-212 in 2015. Ten crashes were reported from 2017-2019 at intersection of Clark Road and SR-212 in town of Merrill according to Maine DOT Crash Portal. The Level of Service is A (light & free flowing) on all state roads within the route.
 - Intersections along state routes have good turning radiuses.
- 9.1 miles of US Interstate Highway (I-95) from SR-212 to US-Canada border, with a posted speed of 75 MPH, 10-foot right shoulder both directions.
 - Road is in good condition.
 - AADT data from Maine DOT website ranged from 1480-2470 in 2015, 78 crashes along I-95 section from 2017-2019 according to Maine DOT Crash Portal with most assumed as animal collisions, with a Level of Service of C (stable).
 - On-ramps to be used along proposed route have good turning radiuses.

Traffic Increases

- Proposed traffic to the Pickett Mountain site includes a peak 30 workers per shift with two shifts per day offset by one hour. This results in a maximum of 60 peak hour trip/hour during shift changes on ME SR-11. It is expected that the majority of workers employed at the mine will be from the local work force, many of whom may currently use portions of this route for current employment.
- Maine DOT requires a traffic permit to be obtained if traffic to be added to a route is greater than or equal to 100/hour. Proposed traffic increase will not require a traffic permit.
- The daily traffic to and from the site (assuming 30 workers and two shifts/day plus 7 shipments of concentrate) results in 134 additional trips/day on ME SR-11 (an average of 5.6 vehicles/hour). The road has an hourly capacity of 1800 vehicles and its use is currently well under that capacity.
- Shipping of concentrate via trucks will only occur during daytime hours.

Impacts

The proposed route for hauling concentrate consists of state and federal highways. The weight limit will be restricted by the Federal Interstate which allows a maximum of 80,000 pounds (lbs) for both five and six axel tractor trailer configurations. State roads allow up to 88,000 lbs for 5 axel configurations for certain commodities including unconsolidated rock material. Planned weight load will be 80,000 lbs. The private gravel roads are constructed for logging trucks with the similar weight constraints.

As identified previously, on average seven truck shipments of concentrate will occur daily. This small level of increased traffic will not burden or impact proposed traffic route.

As discussed in previous sections, the additional volume of traffic will not require a traffic permit nor represent a burden or impact on the existing traffic capacity of the proposed route.

Anticipated Improvements

Unimproved Gravel Roads

Improvements on existing gravel roads will be conducted to improve year round use, safe passage of vehicles on a single lane road and public safety.

- Maintenance of spring thaw impacts along the gravel roads will be undertaken by Wolfden. Wolfden will evaluate the scope of maintenance and improvements during the design analysis for the mine under the mining application (mine design and permitting phase).
- During the mine design analysis widening of the gravel roads will be evaluated for safe passage of logging trucks, concentrate trucks, and workers. A maximum width between

22 and 25 feet to the road shoulder should be sufficient for safe passage of large vehicles and recreational traffic (ATVs and snowmobiles in winter).

- During that analysis, consideration will also be given to providing a separate lane for safe passage of recreational vehicular traffic (ATVs and snowmobiles).
- Maintenance of bridge decking at Pickett Pond outlet crossing, may include improvement or replacement of the wood decking as dictated by normal wear and tear of truck traffic. During the mine design analysis, widening of the bridge will also be evaluated for safety considerations. If widening of the bridge is proposed during mine design and permitting phase the replacement will be a similar structure with concrete abutment and footings allowing the natural streambed to be maintained. A replacement structure would be designed to accommodate a 25-year frequency storm event with arches located landward 1.2 times the channel width at normal high water. Work in the stream would be minimized allowing the streams natural structure and integrity to remain intact.
- A cooperative road maintenance agreement, in general, will be established between Wolfden and commercial loggers whom access their own private property as well the Wolfden property.

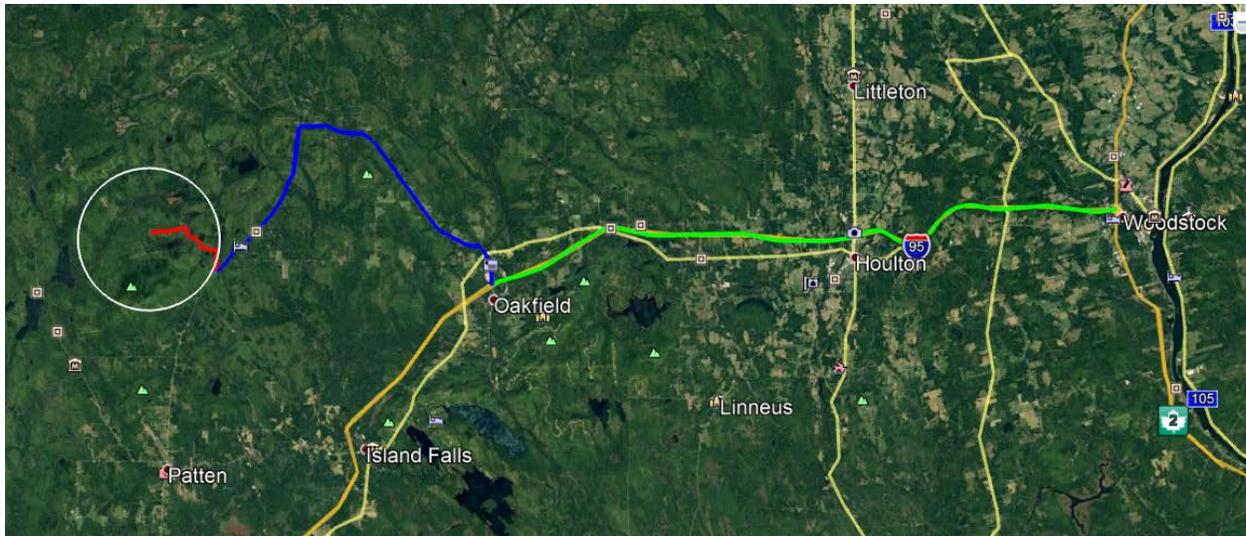
Rural State Highways

Potential Improvements to state highways will be for traffic safety. Wolfden will hire an MEDOT approved transportation engineer familiar with the area to consider, evaluate and design improvements, as needed, during the mine design and permitting phase. These improvements may include:

- Signage and lighting at intersection of Bear Mountain Road and ME SR-11 indicating truck entering and leaving Bear Mountain Road (i.e. "Trucks Entering").
- Addition of deceleration and acceleration lanes at the intersection of Bear Mountain Road and ME SR-11 for trucks to avoid obstruction of traffic during acceleration and deceleration periods.
- Widening right shoulder at intersection of ME SR-11 and ME SR-212 in Moro Plantation to facilitate right turning truck traffic.

Summary

The proposed traffic route (Appendix J and below) and additional traffic levels do not constitute an impact on the existing road infrastructure. Wolfden will work with stakeholders (LUPC, the public, commercial loggers, and MEDOT) to accommodate modifications to ensure public safety and recreational access along the proposed private and state highway routes.



Proposed Truck Route from Pickett Mountain Site with unimproved gravel roads in red, 2-lane rural state highways in blue, and US Interstate Highway in Green. An approximate three-mile radius is drawn around the site (white)

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March 17, 2020

Ron Little
President and CEO
Wolfden Mt. Chase LLC
101 Gardner Street
Patten, Maine 04765

Re: Wolfden T6 T6 Road Access and Easement to Route 11 in Hersey, Maine
Our File No.: 0008/2653

Dear Ron:

As you know, I represent Herbert C. Haynes, Inc., and Lakeville Shores, Inc., concerning the property owned by those companies in Moro and Hersey.

My clients' property is bordered on the west by the property owned by Wolfden Mt. Chase LLC in T6 R6 and the access to your property is a road system crossing my clients' land from Route 11 in the northwest corner of Hersey.

The purpose of this letter is to confirm that your company has permission from Herbert C. Haynes, Inc., and Lakeville Shores, Inc., to access your property over the road system and to provide utilities as well if that should become necessary.

I further confirm that my clients have agreed to convey an easement to Wolfden for access and utilities over their property, the easement is being drafted and I expect the easement to be executed and recorded in the registry of deeds within the next 30 days which will give you formal deeded access over my clients' property to your company's property. The location of the easement is shown on the attached exhibit which has been prepared for attachment to the formal easement.

Cordially,


Dean A. Beaupain

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Houlton

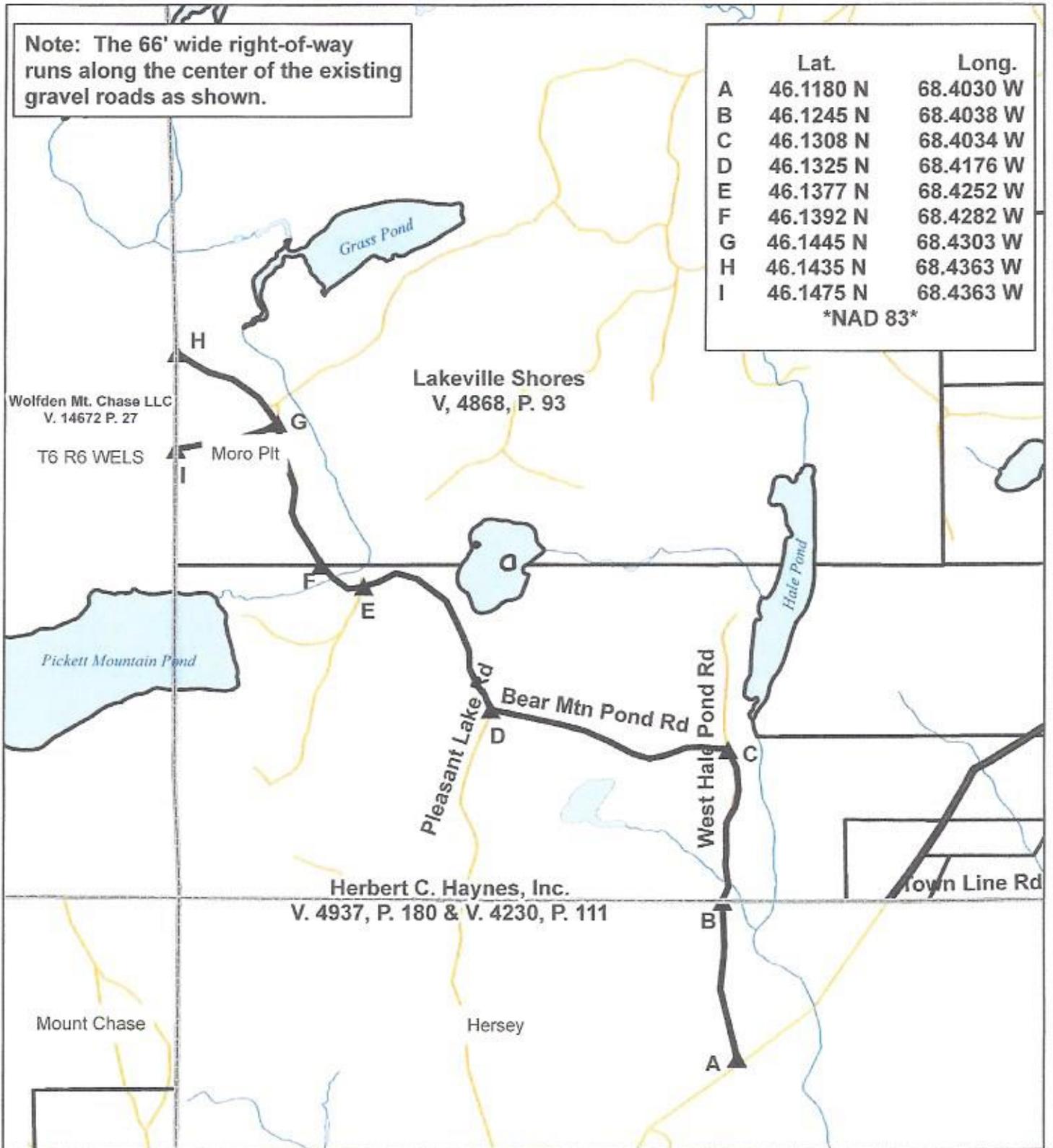
77 Main Street
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Exhibit A

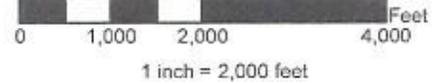
Note: The 66' wide right-of-way runs along the center of the existing gravel roads as shown.

	Lat.	Long.
A	46.1180 N	68.4030 W
B	46.1245 N	68.4038 W
C	46.1308 N	68.4034 W
D	46.1325 N	68.4176 W
E	46.1377 N	68.4252 W
F	46.1392 N	68.4282 W
G	46.1445 N	68.4303 W
H	46.1435 N	68.4363 W
I	46.1475 N	68.4363 W

NAD 83



T6-R6 Wels ROW



Drawn By: Bruce Stevens
January 23, 2020