



December 11, 2019

Ms. Marcia Gasses, Town Planner
Town of Barrington
P.O. Box 660
Barrington, New Hampshire 03825

Subject: River's Peak – Map 215 / Lot 1
Wearing Course Pavement

Dear Ms. Gasses:

As the Planning Board is aware, DuBois & King performed a wearing course pavement observation of the above-referenced project's subdivision roadway (Overlook Drive) from Boulder Drive to end (approx. Sta. 30+54.85) on 11/07/19. DuBois & King submitted a detail account of this construction activity for the Board's review. We recommend the Board review the Field Report associated with the above-referenced project dated 11/07/19.

Summarized in our Milestone Letter dated 11/24/19, the placement of the wearing course pavement did not meet surface temperature requirements as specified within the New Hampshire Department of Transportation (NHDOT) Standard Specifications for Road and Bridge Construction; dated 2010. Meeting all pavement requirements detailed within the NHDOT specifications is important for proper placement and compaction to improve pavement stability and longevity. Not meeting the surface temperature requirement results in a faster heat transfer from the wearing course to the colder binder course; thus, significantly reducing the time of and uniform compaction. Results of shortened and non-uniform compaction could result in the following:

- Fissure Cracks – hairline cracks evident on the surface of the pavement course as a result of compaction activities when the lower portion of the pavement course is colder / stiffer than the top portion.
- Reduced Pavement Strength – inadequate uniform pavement density.
- Raveling – dislodgement of pavement aggregates as a result of water infiltration and freeze/thaw cycles due to poor compaction.
- Binder Aging – oxygen reaction to bituminous concrete within the pavement course due to poor compaction.

It is our understanding the Developer is requesting the Town of Barrington accept ownership / responsibility of Overlook Drive. We recommend that the Developer either

- A. Mill, tack-coat, and pave a new 1-inch wearing course surface prior to the Town accepting ownership; or,
- B. Post a surety bond in the amount of \$232,000 (see attached) to be held for six (6) years at which if no defects are found as a result of this construction activity, the surety would be released in full.

If you have any questions or concerns, please do not hesitate to contact us.

Very truly yours,
DuBOIS & KING, Inc.

Scott M. Bourcier, P.E.
Project Manager



ENGINEERING • PLANNING • MANAGEMENT • DEVELOPMENT

Project: River's Peak Bond Estimate

Calculated By: DC

Date: 12/8/2019

Checked By: SMB

Date: 12/11/2019

NOTE: In providing opinions of probable construction costs, the Client understands that DuBois & King, Inc. has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's methods of pricing, and that our Opinion of Probable Construction Costs are made on the basis of our professional judgment and experience. DuBois & King, Inc. makes no warranty, expressed or implied, that the bids or the negotiated costs of the Work will not vary from the Opinion of Probable Construction Cost provided herein.

OPINION OF PROBABLE CONSTRUCTION COST

UNIT NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE*	AMOUNT
403.112	Hot Bitum. Pave., Machine Method, 9.5mm	TON	575	\$75.00	\$ 43,125.00
403.12	Hot Bituminous Pavement, Hand Method	TON	60	\$110.00	\$ 6,600.00
410.22	Asphalt Emulsion for Tack Coat	GAL	240	\$5.00	\$ 1,200.00
417	Cold Planing Surface	SY	9,540	\$12.00	\$ 114,480.00
692	Mobilization	U	1	\$20,000.00	\$ 20,000.00
Sub-Total					\$ 185,405.00
25% Contingency					\$ 46,351.25
Sub-Total					\$ 231,756.25

ESTIMATE

\$ 232,000.00