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Memorandum

To	Chris Stilwell	Pages	7
CC	Valerie McGirr; Alex Dundon		
Subject	Bracebridge Transportation Corridor Options Assessment - Noise		
From	Atif Bokhari		
Date	October 2, 2013	Project Number	60241537

Chris,

The noise assessment of the proposed Bracebridge Transportation Corridor alternatives has been completed. The results of the assessment are summarized in this memorandum.

Assessment Method

The noise impacts due to each of the proposed roadway alternatives were predicted by comparing future ambient noise levels and future "With Improvements" noise levels due the roadways in the study area. Based on the population of the Town of Bracebridge (15, 409 in the year 2011[1]), the study area was deemed a Class 2 (Sub-urban) area as per the terms and definitions described in the Ontario Ministry of the Environment (MOE) noise guidelines. Where no dominant noise sources exist, the Ontario Ministry of Transportation (MTO) *Environmental Guide for Noise* suggests an ambient noise level of 50 dB(A) for Class 2 areas. Therefore, the future ambient noise levels in the study area were taken as the greater of 50 dB(A) or the future "No Build" noise emissions due to the existing roadways.

Noise mitigation investigations are typically required where the predicted noise impacts are greater than or equal to 5 dB(A). Therefore, the areas predicted to experience noise impacts between 5 to 10 dB(A), 10 to 15 dB(A), and 15 dB(A) or greater, were determined. The areas predicted to experience overall noise levels between 50 to 55 dB(A), 55 to 60 dB(A), 60 to 65 dB(A) and 65 dB(A) or greater, were also determined.

Results

The results of the options assessment, from a noise perspective, are summarized in Table 1. Noise level contours for the assessed alternatives are presented in Figure 1 to Figure 5.

[1] *Population estimate obtained from http://www.city-data.com/canada/Bracebridge-Town.html.*

Table 1. Summary of Options Assessment - Noise

	Preferred Route Alternatives	Route Noise Impacts (# Of Affected Residences)			Route Noise Levels (# Of Affected Residences)			Combination of Noise Impacts and Overall Noise Levels (# of Affected Residences)
		5 to 10 dB(A)	10 to 15 dB(A)	≥15 dB(A)	55 to 60 dB(A)	60 to 65 dB(A)	≥ 65 dB(A)	Noise Levels ≥ 55 dB(A) and Noise Impacts ≥ 5 dB(A)
North Route	N2B	22	10	4	15	13	1	25
	5B							
Middle Route	M3B	27	5	0	25	19	0	25
	5B							
South Route	S2D	***18***	***5***	***0***	***13***	***5***	***0***	***15***
	5B							
MTO-Middle Route	M3B	27	5	0	27	19	0	25
	5B							
	MTO							
MTO-South Route	S2D	18	5	0	15	5	0	15
	5B							
	MTO							

Based on the results presented in Table 1, the proposed South Route is the preferred option from a noise perspective.

Figure 1. North Route

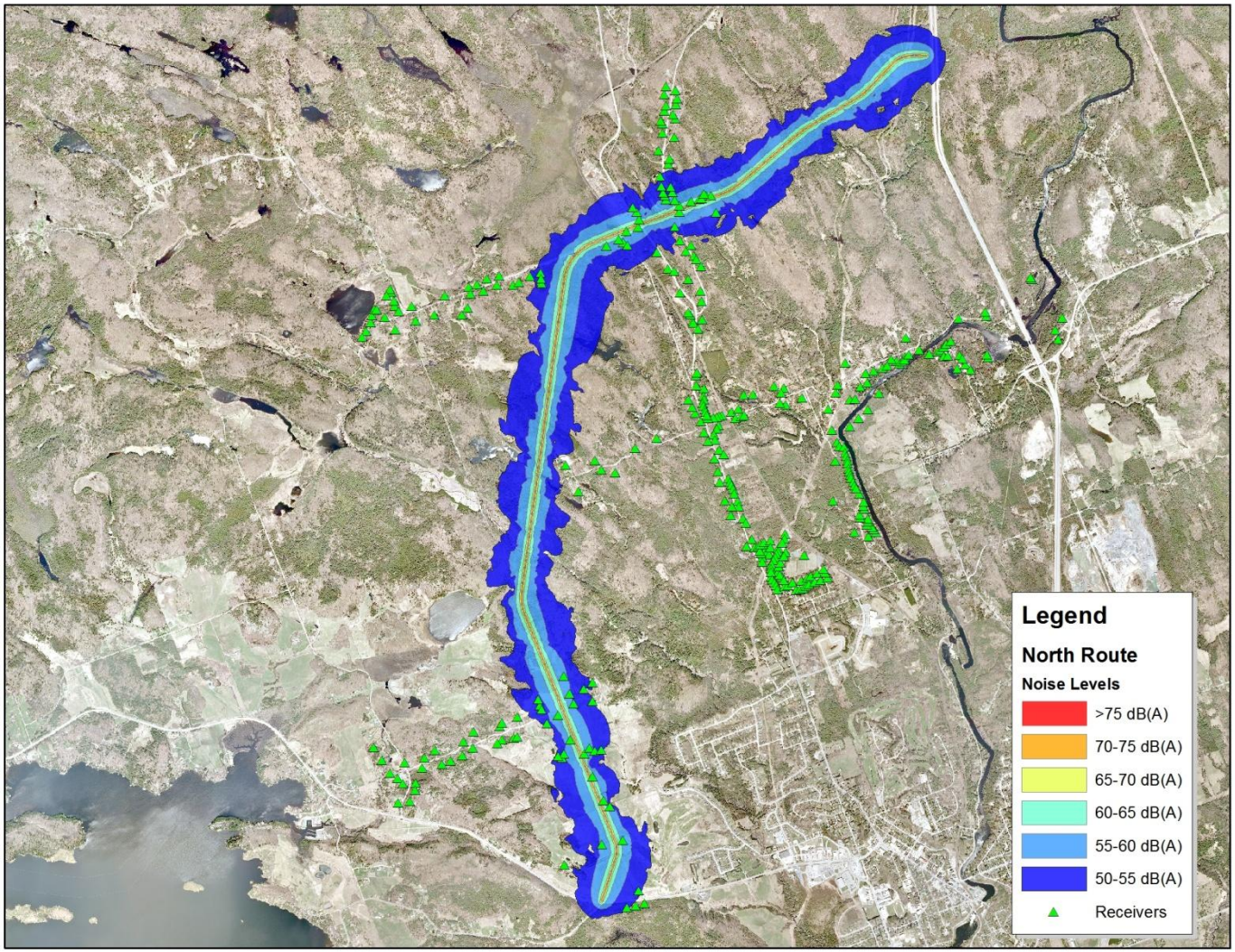

Figure 2. Middle Route

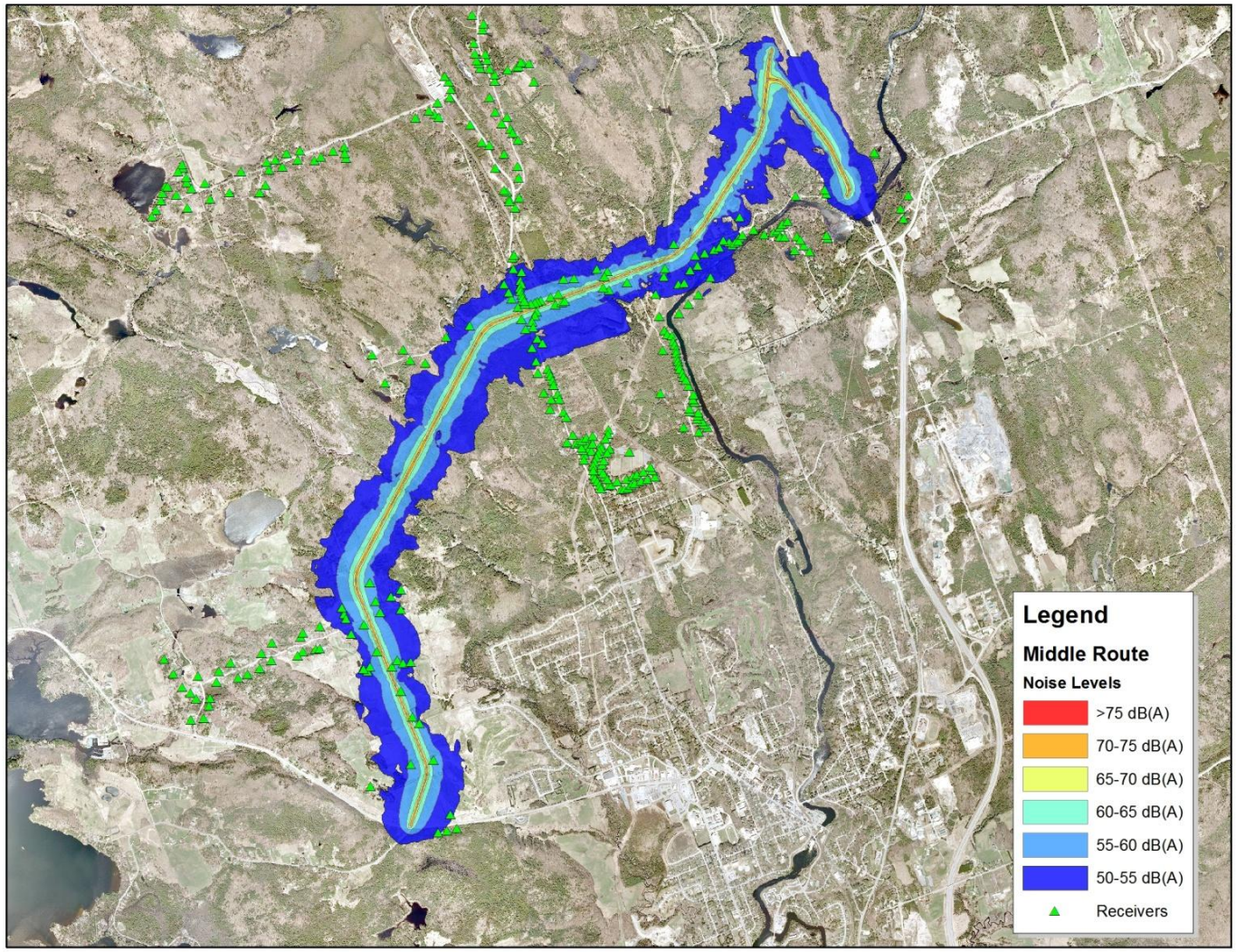

Figure 3. South Route (Preferred Option for Noise)

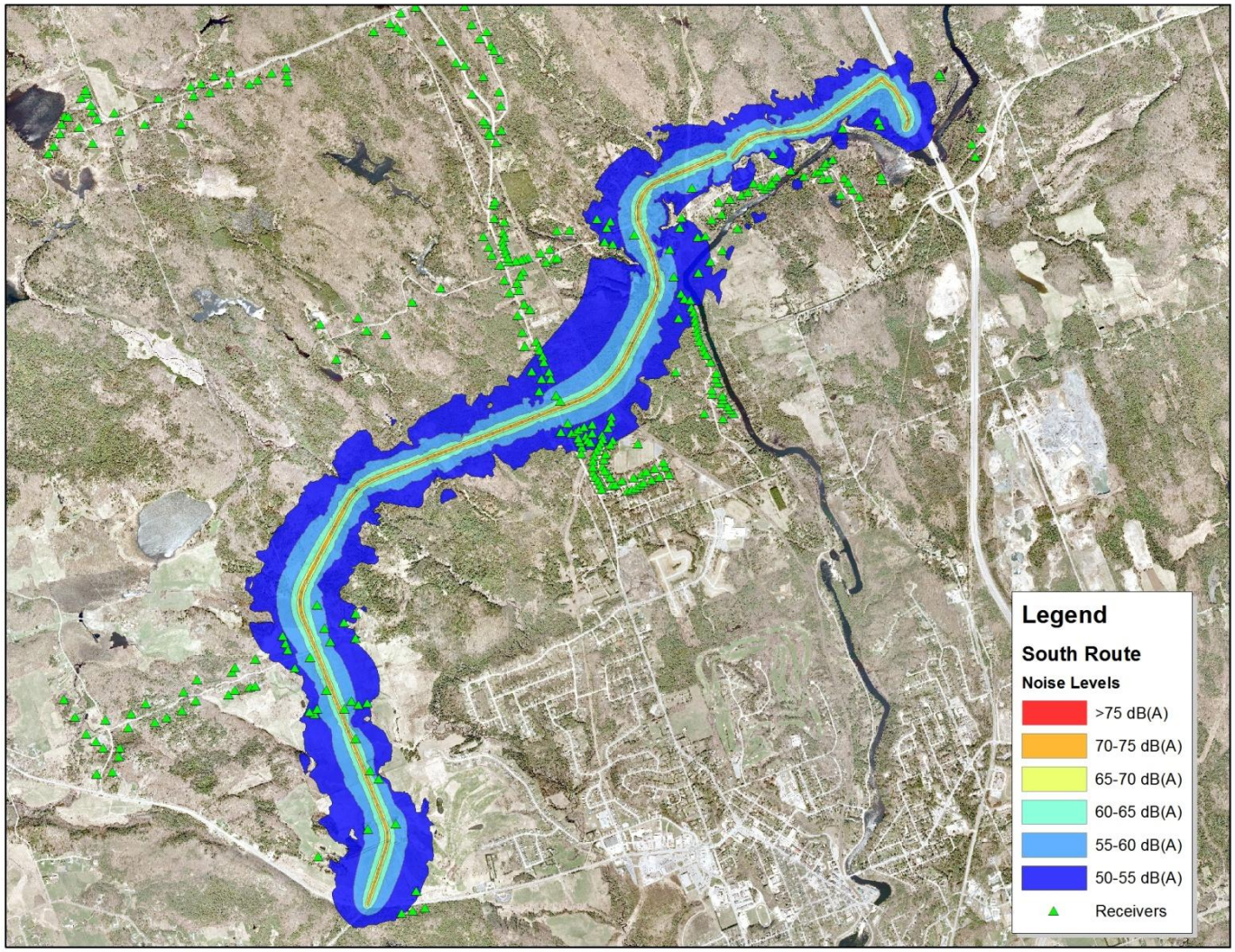

Figure 4. MTO Middle Route

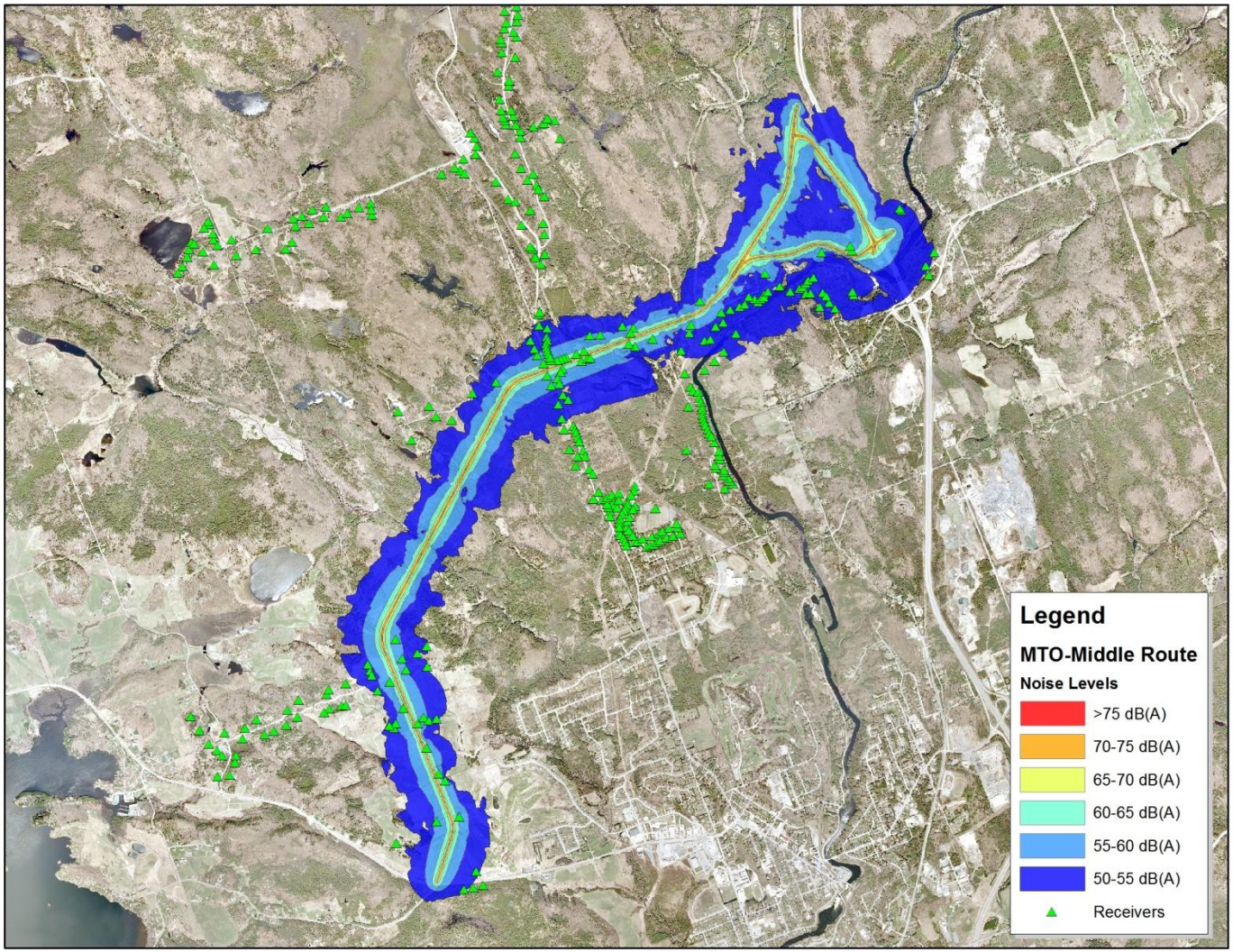

Figure 5. MTO South Route