

Mike Dickie

From: Mike Dickie
Sent: Friday, May 11, 2018 8:52 AM
To: 'PDTighe@sturgeoncounty.ca'
Cc: 'wbokenfohr@sturgeoncounty.ca'
Subject: Use of Geocell Road Construction Technology at ProNorth Park

Hello Councillor Tighe:

Re- Geocell Road Construction Technology at ProNorth Park

We are currently in discussions with Stratum Logics and Paradox Access Solutions regarding use of cellular confinement road building technology for various road requirements relating to our Industrial Park expansion project at ProNorth. I understand that you met and spoke with Richard Hoffart of Paradox at a recent AAMD&C event and are generally familiar with their innovative road construction technique.

We initially sought out Stratum/Paradox as we were looking for local expertise in value-engineered rural roads. Since having engaged with these firms we are persuaded that the confined cellular technology that is their expertise is particularly appropriate for our development project at ProNorth Park.

Ordinarily, transportation engineers and road builders focus almost exclusively on choosing from a prepared list of road structure types as set out in a General Municipal Service Standards (GMSS) manual and then building accordingly. While this approach can be attractive for its simplicity, in many cases it encourages situationally inappropriate road structures and unnecessarily high road maintenance expense. By contrast, the Stratum/Paradox approach to engineering and constructing and rehabilitating roads emphasizes custom designed road structures that are responsive to sponsor requirements and feature low-cost maintenance.

In our case, our expansion project for the ProNorth Industrial Park has several challenging road infrastructure situations – both on-site and off-site; specifically,

- (a) the poor quality soils and relatively high water table characteristics of the ProNorth development site itself – requiring a durable industrial road structure to be constructed over land with less than ideal ground conditions.
- (b) the long standing structural inadequacies of TR544 that necessitate an annual 8 month road ban for heavier industrial traffic;
- (c) the continuing poor performance of RR260 (between TR544 & Hwy 37) owing to its designation as the 'TR544 alternate' heavy-haul route for ProNorth industrial traffic; and
- (d) increasing volumes of cut-thru traffic on RR255, RR260 and RR261 between Hwy 633 and Hwy 37 associated with vehicles using Ray Gibbon Drive and wishing to avoid traffic congestion on Hwy 2.

Overlaid onto these road issues is the situation of the timing uncertainty associated with the further extension of Ray Gibbon Drive north from Hwy 633 and the situation of annexation discussions currently proceeding between the County and St. Albert – which colours all of the above-cited road infrastructure matters with the certainty that St. Albert, as part of the annexation process, will ultimately become the road authority for TR544 (between Hwy 2 and RR261) and the portions of the three range roads that are south of TR544.

As you will recall, we had earlier hoped to avoid many of the above-noted issues by orienting ProNorth industrial expansion (and related traffic) northward to Hwy 37.

However, in our most recent re-engagement with County Planning & Development to try to expedite subdivision approval for the re-zoned former St Albert airport site it appears that the off-site road infrastructure focus must first be put on subdivision industrial traffic using a TR544 / Hwy 2 orientation. And this brings up the industrial inadequacy of TR544, and this, in turn, brings up our search for local expertise in value-engineered rural roads – ie. Stratum/Paradox and the use of its road building technology for our Project's on-site road requirements, for local range road improvements as may be required, and for a prospective reconstruction of TR544 to industrial use capacity.

Specifically regarding TR544, we believe that employing cellular confinement road building technology will permit this roadway to be cost-effectively reconstructed to a structural standard sufficient for all ProNorth industrial traffic (both the future traffic load from our new subdivision and from the present traffic load from the existing industrial subdivision) and the full built-out traffic load of Northern Lights Estates (133 residential lots).

We understand that Stratum/Paradox is intending a presentation of their geocell technology and capabilities to County Council and engineering staff later this month. We are hoping that, as a follow-up to that presentation, we might ourselves have an opportunity to address Council to express our support for this road building technology and to detail our intended immediate use of cellular confinement for the internal subdivision roads of our development. This development represents an ideal local situation where the engineering and construction benefits of geocell technology can be demonstrated and evaluated not only for use in difficult road rehabilitation projects across the County's 1800 kms of rural roads but also as a prospective cost-effective means to rehabilitate TR544 to year round industrial traffic capacity.

We are currently reaching out to you in the hope that you are able to assist with arrangements to permit a representative from ProNorth to have a few minutes with Council following the Stratum/Paradox presentation.

Please feel free to discuss this matter and our current request with us at any time and please further advise that we will be able to supplement the Stratum/Paradox presentation with our own views on the value of the technology.

Sincerely yours,
Michael Dickie
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