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2005 DIGITAL ORTHOPHOTOGRAPHY

The Planning and Economic Development Committee recommends the adoption of the recommendations contained in the following report, October 7, 2004, from the Commissioner of Planning and Development Services:

1. RECOMMENDATIONS

It is recommended that:

1. Council authorize staff to extend the existing contract with J.D. Barnes Limited to 2008 to include a maintenance agreement as a means to acquire updated Orthophotography as outlined in this report, and that it be conditional on the approval of the 2005 budget.
2. Council authorize the Chair and Chief Administrative Officer to sign an amendment for a maintenance agreement upon the successful negotiation of the scope of work and the conditional approval of the 2005 budget.

2. PURPOSE

This report seeks authorization from Planning and Economic Development Committee and Regional Council to proceed with a new approach to acquire Orthophotography through a multi-year maintenance agreement rather than through a Request for Proposal (RFP) process every three years.

The request of authorization at this time is to ensure that the project would commence in a snow and leaf free environment in the spring of 2005. The additional budget implications are referred to the 2005 Budget process.

3. BACKGROUND

With the magnitude and pace of growth in the Region, digital Orthophotography has become essential information in the support of Regional operations, programs and strategies. These detailed digital aerial images and elevations have proved to be a high-impact tool that provides rich geographic context for infrastructure, community and long range planning activities, emergency response, and communication with the public.

Digital Orthophotography was acquired for York Region for 1995, 1999 and 2002. In 1999, the Planning and Development Services Department proposed through the Capital Plan that an update frequency of three years would be sufficient to serve the business requirements of the Region. Since the Orthophotography program began in 1995, usage in the Region has expanded, both in volume, application, and complexity. There is now

demand for more up-to-date data. Orthophotography is required for 2005, the next cycle update.

In 1999 and 2002, purchasing was done through joint investment partnerships with the neighbouring Regions, Conservation Authorities, and the Ministry of Natural Resources, which enabled subsidizing the full cost of the Orthophotography. Partnering with other agencies allowed for the additional collection of digital elevation data which depicts the changes in York Region's surface landscape and for a higher resolution digital product. The cost sharing model with MNR for the GTA and surrounds in 2002 will not occur for 2005 because MNR does not have the financial resources, nor a renewed mandate for partnering for 2005 data acquisition. Now that digital elevation data has been collected, elevation updates are required only for areas of change and therefore the total estimated cost for 2005 is less than the 2002 acquisition.

After a successful RFP (P-01-71) process, a purchase agreement for the 2002 Orthophotography was entered into with J.D. Barnes Limited on May 23, 2002. At that time, an offer of a maintenance agreement was made whereby York Region could receive scheduled updates in future years. The Region declined the opportunity as the existing contract included many partners from the GTA and adjacent region and the other partners were not prepared to sign an agreement for maintenance at that time. Peel Region, Durham Region, and Hamilton Region have now agreed or are considering entering into a maintenance agreement with J.D. Barnes Limited and its wholly owned subsidiary First Base Solutions Inc. mandated to deliver the Orthophotography business processed in its Markham offices. The existing contract with J.D. Barnes Limited expires on March 31, 2005.

4. ANALYSIS AND OPTIONS

There are two options for acquiring Orthophotography for 2005 and in the future. These options are:

1. RFP Process
2. Maintenance Agreement

4.1 Options

4.1.1 RFP Process

With the RFP option, an RFP will have to be issued for a one time purchase that will allow for the acquisition of the Orthophotography. The cost of this purchase could range from \$450,000 to \$1,000,000 based on estimates received from two vendors. The disadvantages to this process are higher product costs, as well as administrative and legal costs, lack of consistency between the surrounding Regions with whom we share data, and loss of economies of scale. This approach will also require an update in 2008 which will include the cost of acquisition at a higher price and will require an additional RFP process.

The business climate has changed in Orthophotography data acquisitions. Businesses offering Orthophotography products no longer fly on speculation and are bidding less often on RFPs. There are fewer companies in Ontario and Canada offering these services, and most of these go offshore for data processing with questionable results. It is important to note that for security reasons, many jurisdictions no longer allow sensitive information such as Orthophotography to be processed offshore.

4.1.2 Maintenance Agreement

The vendor first contracted in 2002, J.D. Barnes Limited/First Base Solutions Inc., continues to offer a maintenance agreement which will allow the Region to acquire Orthophotography in 2005 and 2007 for a fixed cost amortized over a two or four year period with the possibility of updates during this timeframe. No additional RFP process would be required, as the maintenance agreement is offered by only one vendor at this time with whom we have a current contract. The cost is significantly lower (estimated \$250,000) with a more frequent update of two rather than three years. In addition, the vendor has proposed a payment schedule that can be amortized over a two year period which allows for a consistent dollar amount in the annual budget. Therefore, Orthophotography updates would be delivered every two years at a cost of approximately \$125,000 a year. If the Region signs on for a four year period instead of two, then we would receive updates again in 2007, at a guaranteed cost of \$250,000 and amortized over another two year period. There will be no administrative or legal costs related to a second RFP.

This approach is consistent with Peel Region, Durham Region and Hamilton Region who have all agreed or are considering signing a maintenance agreement with the vendor. Because J.D. Barnes Limited is willing to offer this approach it creates economies of scale for those who choose to participate and facilitates joint projects with the surrounding Regions (e.g. YDSS, Transit, EMS, Police, etc.). York Region would participate through amending the current contract with J.D. Barnes Limited to include a maintenance agreement and extend the term to 2008. This agreement would also allow for the sharing of data with the YorkInfo Partners. We will be on the same cycles for updates and will be using imagery of the same standards. Updated Orthophotography is essential to informed decision making in a rapidly growing region where imagery quickly becomes out-dated. These factors have proven to be significant in the support of such projects as the Oak Ridges Moraine Strategy and the recent Oak Ridges Moraine Conservation Plan Conformity Exercise.

4.1.3 Options Summary

The maintenance agreement offers cost savings through reduced price, amortized over two years and reduced corporate administrative and legal costs. York Region and the YorkInfo Partners will have access to imagery and a consistent geographic data product with improved accuracy and currency across multiple jurisdictions.

It is recommended that the Region acquire the 2005 and 2007 Orthophotography by developing a four year maintenance agreement of up to \$500,000 for four years with costs guaranteed. It is not recommended to acquire 2005 Orthophotography through an

RFP process at a cost ranging \$450,000 to \$1,000,000 and repeat that process for 2007 or 2008 at a higher cost. York Region's participation would be through an amendment of the existing contract with J.D. Barnes Limited.

4.2 Schedule

York Region Geomatics is currently investigating the options surrounding the negotiation of a 2005 Orthophotography maintenance agreement. This includes:

- establishing the detailed deliverables, cost and duration of the alternatives offered
- determining potential purchasing Partnerships (e.g. local area municipalities)
- signing of an amended agreement with the preferred vendor

4.3 Relationship to Vision 2026

Acquiring up-to-date Orthophotography would assist the Region toward meeting goals stated in Vision 2026 includes Enhanced Environment, Heritage and Culture; Managed and Balanced Growth; Infrastructure for a Growing Region; and Engaged Communities and a Responsive Region through infrastructure, heritage and planning programs that use Orthophotography.

5. FINANCIAL IMPLICATIONS

The recommended four year maintenance agreement option (2005 to 2008 inclusive), as outlined in Table 1, results in a minimum regional tax levy savings of \$400,000, over a four year period and provides earlier delivery of updated Orthophotography by one year from 2008 to 2007. This proposed maintenance agreement option minimizes 2005 tax levy pressures by \$325,000 (original estimate of \$450,000 less \$125,000 proposed maintenance agreement costs).

The proposed maintenance approach stabilizes costs for fiscal years 2005 through 2008, whereas acquisition through an RFP based on vendor estimates for 2005 range from \$450,000 to \$1,000,000 and undetermined higher cost for 2008 (impacted by higher airplane fuel and labour costs).

Table 1
Payment and Update Schedule

Options	2005 Estimated Cost	2006 Estimated Cost	2007 Estimated Cost	2008 Estimated Cost	Total Estimated Cost	Number of Updates
RFP Process	\$450,000*			\$450,000*	\$900,000	2
Maintenance Agreement	\$125,000*	\$125,000	\$125,000*	\$125,000	\$500,000	2
Regional Tax Levy Savings	\$325,000				\$400,000	

* Year the Region receives new Orthophotography

6. LOCAL MUNICIPAL IMPACT

If the Region acquires Orthophotography in 2005, the data would be made available to all YorkInfo Partners as part of a continued effort in facilitating geographic information initiatives and the sharing of data, applications, and resources. Several municipalities have also held discussions with the vendor related to acquisition of air photos or Orthophotography for 2005. The Geomatics Branch is in discussion with the YorkInfo Partners to discuss their requirements and opportunities for cost sharing and avoid duplication. This approach reduces the cost of acquisitions by individual municipalities. The local area municipalities have become more reliant on these images to promote and assist in them in their daily decision making processes, especially in the areas of planning and engineering. Availability of such data on user's desktops creates efficiency, reduces the need for offsite verifications and enhances informed decision making.

7. CONCLUSION

The acquisition of future digital Orthophotography through amending the current contract to include a maintenance agreement will ensure that York Region continues to have current information essential to deal with the business requirements of a rapidly growing and continually changing geographic area.

The Senior Management Group has reviewed this report.