

Fort Frances
Transfer Station Upgrades

CIF Project 194

Final Report

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Disclaimer This report is provided as opinion for discussion only and is **not** designed to replace qualified engineering, architectural or legal advice in any way. Municipalities are cautioned to obtain qualified advice and certified/approved drawings and plans prior to undertaking or adopting any recommendations that may affect their programs or facilities.

Background

Preamble As part of the objectives of the CIF, which include a proactive approach to assisting municipalities to implement best practices in blue box recycling, the CIF has provided financial assistance for local transfer station upgrades and the acquisition of upgraded transfer equipment.

The final report will include details of the following:

1. Description of the activities (construction and operations) undertaken for the project;
2. Analysis of 2 months operations including operation of loading ramps, usage of public recycling depot;
3. Projections (estimations) of impact of improvements on the recycling program in 2011.

Project Summary This project consists of transfer station modifications including construction of a concrete loading ramp, installing an asphalt turn-a-round area with new entrances, supply and installation of chain link fencing, supply of 4 – 8 cu. yard recycling bins and directional signage.

The construction was completed by contractors during the months of October to November, 2010. Additionally the Town purchased 4-8 yard recycling bins directly from the manufacturer.

In December of 2010 staff installed the residential blue box recycling directional signage and the recycling drop-off service began operation on January 5th, 2011.

Goals & Objectives The upgrading of the loading ramp at the transfer facility is designed to improve the operation of the transfer of recyclables to the processing facility. These improvements are expected to yield operational savings in the amount of time needed to load trailers for transport and the new ramp will allow better compaction of materials during loading by increasing visibility and loader access. The overall number of trips needed to haul recycling for processing is expected to be reduced.

The installation of the public drop off depot will be a service enhancement for residents and will allow for the capture of materials that are currently

either ending up in the garbage or being taken to a private company. Both of these upgrades will result in greater program effectiveness through increased capture of materials and greater efficiency through reduced program costs.

Project Description/Results

Description In the spring of 2010 the Town instructed its' engineering consultant, Engineering Northwest Ltd. to prepare specifications, engineering drawings and a tender package for the civic works and new concrete ramp.

On August 20, 2010 Council awarded the recycling facility upgrades to Ed Kaun & Sons Ltd. at an estimated cost of \$144,568. The construction was completed during the months of October to November, 2010.

No major obstacles were encountered during the design and construction of the project. Images of the completed project and site plans are attached to this report under appendix "A".

The Town purchased the 4 – 8 cubic yard recycling bins directly from Bruder Built Mfg. Ltd. at a total cost of \$23,304.15. No major obstacles were encountered with the acquisition and commissioning of the bins. The Town purchased a set of mounting brackets directly from Caterpillar in order for the bin manufacturers to duplicate similar brackets to permit utilizing the Town's front-end loader without any modifications.

In December of 2010, staff installed the transfer station directional signage and the facility was opened for operations on January 5th, 2011.

Budget The project budget approved by CIF was 50% of \$148,758 for a total grant of \$74,379 plus tax. The actual project cost totalled \$164,517.53 resulting in a budget difference of \$15,759.53. This difference was the result of three main reasons;

1. One additional bin was purchased at a cost of \$5,826.03 required to provide surge/growth capacity and operational flexibility.
2. Unanticipated site conditions required \$5,734.82 for excavation of organic material and placement of granular "B" under the asphalt turn-a-round plus additional granular "A" material was supplied to adjust the angle of the loading ramp slope.

3. Site engineering costs totalled \$4,199.08 higher than original estimates.

Results

Following commissioning of the project and equipment, operating costs and tonnages delivered for processing were monitored. The year over year comparative results of the first three months of operations follow:

	Jan.-Apr. 2010	Jan.-Apr. 2011	% Change
Time/Load ¹	Avg. 60 min	Avg. 35 min	-42.00
Total Haul Costs	\$10,913.44	\$22,510.99	+106.27
Loads Shipped	9	17	+88.89
Tonnes Shipped	142.52	155.39	+9.03
Hauling Costs/tonne ²	\$76.57	\$144.87	+89.20

1. Labour costs have increased year over year incl. overtime costs to empty bins on weekends due to 24/7 operating schedule and more tonnes received.
2. Fuel costs have increased more than 30% and loads 89% year over year.

Projected annual program impacts are:

- 42% (\$45.02) loader/operator time/fuel saved.
- Haul cost increase/load partially resulting from over 30% fuel cost increase (additional savings may be achieved when new equipment permitting more compaction is installed by Oct/11.)
- 3% to 5% (12 to 21 tonnes) increase in material shipped expected annually due to enhanced access and increased use by residents.

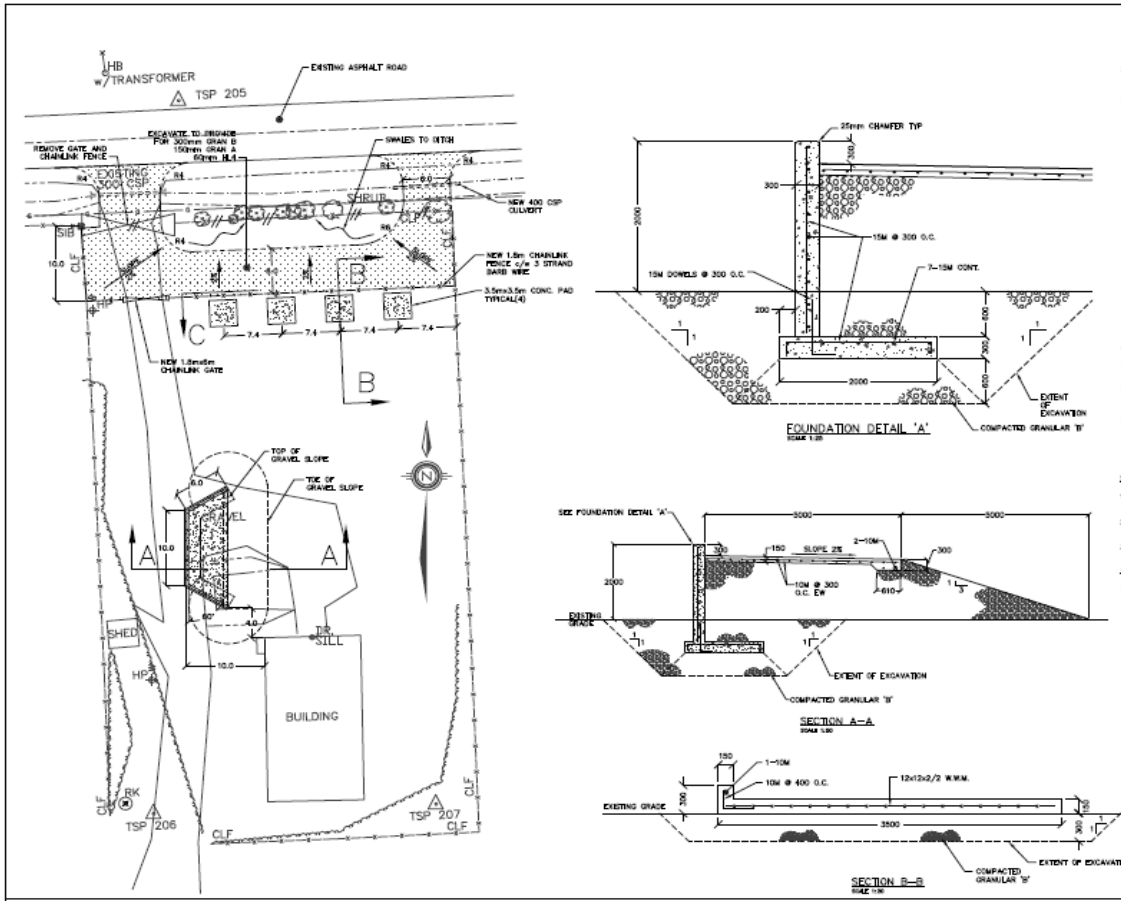
Best Practices

This project fits within the following fundamental best practices as identified by the Blue Box Program Enhancement and Best Practices Assessment Project (2007).

- Optimization of operations in collections and processing

Appendix "A"

Site Plan



**Appendix “B”
Project Cost Summary**

Description	Cost	% Budget
4 – 8 cubic yard Recycling Bins	23,304.15	14.17%
General Contractor – Ramp & Civic Works	127,386.48	77.43%
Supply and Install Signs and Markers	1,429.39	00.87%
Engineering Specifications & Tender Package	12,397.51	07.53%
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Total	\$ 164,517.53	100%

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