

## Antigonish Arena Ice Surface Replacement

Built in 1969 the Antigonish Arena is jointly owned by the Town of Antigonish and the Municipality of the County of Antigonish . In 2009 the arena completed an Aging Building Audit outlining a number of upgrades that would be necessary . Concrete surface , boards and glass were identified in that report . In the Fall of 2014 the Antigonish Arena hired CJ MacLellan & Associates to prepare the documents for the Tender Phase and the Construction Phase . In May 2015 we received three tenders and the contract was awarded to Higgins Construction of Trenton , Nova Scotia . Total estimated cost was \$1,149,000.00 for the contract plus additional cost outside of the contract .

We received funding commitments from

Town of Antigonish \$437,000.00

Municipality of the County of Antigonish \$437,000.00

ACOA ( CIP 150 ) \$250,000.00

Province of Nova Scotia \$25,000.00

We also received a funding commitment from Antigonish Minor Hockey for \$100,000.00 over the next 5 years

On June 1st demolition of the old floor , boards and glass began . Boards and glass were removed and demolition of the floor had to be completed in sections because of tie rods holding the building together under the surface . This meant 20% of the floor was removed at a time , six feet of earth under the surface removed down to the natural undisturbed clay soil . Then new gravel and new tie rods installed before the same process for the next 20% of the floor until all five sections were completed .

The old header was removed and Cimco started installing the new three inch warm floor header and the heat piping on the new earth just under the new tie rods . Six inches of crusher dust was then put on top of the heat piping and tie rods . The next part of the project was to install four inches of star foam insulation over the crusher dust and heat piping . A slip sheet was then installed over the insulation and the wire chairs for holding the cooling pipe were put in place . Nine and a half miles of cooling pipe were then installed on the chairs and connected to the new six inch header going to the refrigeration plant . Wire mess was then installed over the cooling pipes and tied to the metal chairs . Cimco then installed a new Seasonal Controller in the plant room .

On September 2nd a pre pour meeting was held with representatives from Higgins , CJ MacLellan , Precision Concrete , Casey Concrete , Cimco , Welmar and the Arena to go over everyone's responsibility the day of the pour . On September 10th the cement pour took place . Twelve cement trucks feed a pumper truck from 9:00 am till completed at 4:00 pm . Precision Concrete then worked till midnight finishing the cement floor . The floor was then covered with water and a fabric to hold the



moisture on the new cement floor for the one week wet cure process . The floor must cure for at least twenty eight days before the plant can be turned on .

On Oct 1st the new boards and glass started to be installed by Welmar . The glass on the ends and behind the benches is eight feet high and five feet high along the sides . The ice plant was turned on for the gradual cool down on October 15th . The floor temperature was low enough to start making ice on October 23rd and the ice completed on the 27th . The odd size glass that was on back order arrived on October 28th and was installed the next couple of days . Our first ice rental on the new surface was at 5:00 pm on October 30th .

Costs that are not included in the contract price are

CJ MacLellan for engineering \$ 20,000.00

Logan Drilling for test holes \$ 6,300.00

Permits \$ 2,700.00

New Advertising signs and logos for the new size boards \$ 5,000.00

Electricity for the 4 1/2 months \$ 9,000.00

Stantec for geotechnical and materials testing \$ 3,000.00

In the end the project was on budget and on schedule with the cost of the contract \$ 1,168,338.28 plus other cost \$ 46,000.00 for a total of \$ 1,214,338.28 . We were expecting 1.2 million and that's where it ending up . We have been up and running for a month now and for the month of November we saved \$ 72.00 per day on our electric bill because of the insulated floor , level floor and new seasonal controller . All our user groups are very happy with the new floor , boards , glass and ice condition .

Yours truly

Bud MacInnis

Antigonish Arena Manager