



A SPECIALTY CONCRETE DIVISION OF BACCO CONSTRUCTION



BUILDING  
MICHIGAN  
FOR **100** YEARS  
1915-2015



# HUMBOLDT MILL

FOUNDATION  
& BUILDING  
CONSTRUCTION  
IRON MOUNTAIN, MI 2012

Bacco Construction performed all site grading, underground pipe construction, and our Specialty Concrete Division constructed the foundations for the Concentrate Loadout Building, Secondary Crusher Building, Nickel and Tailings Thickener, Take Up Towers 2, 3, and 4, Fire Water Take Foundation, Reclaim Pump Station Foundation, Reclaim Tank Foundation, the Shore Vault Foundations, and Rail Scale Foundations at the Eagle Mine Humboldt Mill Site.



## SECONDARY CRUSHER BUILDING

The overall footprint of this building is 105' x 70'. Bacco Construction performed all of the site grading for this building and there Specialty Concrete Division performed all of the concrete foundation and floor slab work.



## NICKEL AND TAILINGS THICKENER (600 CYD MASS POUR)

Bacco Construction's Specialty Concrete Division performed all concrete forming, pouring, and finishing of the Nickel and Tailings Foundation as well as all concrete steel reinforcement placed in the pour. Building Footprint is 100' x 70'. Bacco utilized two pump trucks for this 600 CYD mass pour.

The Nickel and Tailing's Thickener is located just to the west of the Concentrate Load Out Building. You can see the CLO building poured concrete walls in this picture.



## LOAD OUT BUILDING

Bacco Construction's Specialty Concrete Division performed all of the concrete foundation work for this building along with the poured floor slab and all reinforcing steel involved in the construction of the foundations and floor pours. The overall footprint of

this building was 170' x 140'. The building consisted of three material bays with 20' high x 2.5' wide walls with in grade beam walls around the remaining perimeter of the building.



# USACE SOO LOCKS



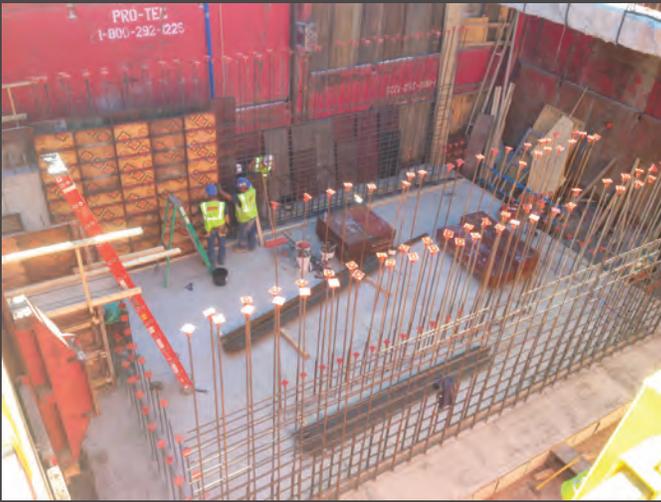
The top pictures show the construction process of the 2010 tunnel project and the bottom picture shows the completed tunnel with all of the mechanical and electrical components installed.



## COMPRESSED AIR DISTRIBUTION & TUNNEL

SAULT STE. MARIE, MI  
2010 & 2013

Bacco Construction's Specialty Concrete Division completed two separate projects at the Soo Locks. The first, which was completed in 2010, was the construction of a brand new tunnel to allow for a new underground walkway between the Poe and McArthur Locks in Sault Ste. Marie, Michigan. The 8' x 8' x 100' long tunnel also became a new compressed air mechanical piping corridor for all of the mechanical operations needed to keep the Locks running and up-to-date.



The second project, completed in 2013, encompassed another brand new underground tunnel and two story Compressed Air Building which updated the Mechanical Air Distribution System that runs beneath the Soo Locks. The new building and tunnel, constructed by our Specialty Concrete Division, was built between the Poe Lock and the Davis Lock.

Both of the 2010 and 2013 projects used a Slide Rail Shoring System for development of the new structures. Both tunnels were built as open excavations and backfilled as the shoring systems were removed.

# LAC DU FLAMBEAU

## BOARDWALK & FISHING PIER

LAC DU FLAMBEAU, WI  
2009 & 2012





## ≡ BOARDWALK CONSTRUCTION (2009)

The 2009 project consisted of constructing a new Boardwalk. Bacco's Specialty Concrete Division built the new boardwalk and set the con-span and pedestrian bridge that the boardwalk ties into. This was constructed on the Lac Du Flambeau Indian Reservation to be used as a walking trail along the shoreline.

## ≡ BOARDWALK & FISHING PIER (2012)

In 2012, Bacco Construction's Specialty Concrete Division completed another boardwalk project on the Lac Du Flambeau Indian Reservation. This project consisted of a new boardwalk leading from to Lac Du Flambeau Ojibwe Museum & Cultural Center to a brand new fishing pier.



# BROCKWAY MOUNTAIN

## SCENIC OVERLOOK

COPPER HARBOR, MI 2011

This project consisted of building a new pedestrian viewing area from the ground up. Bacco Construction's Specialty Concrete Division constructed stone mason walls with walking paths and benches to fully appreciate the picturesque views from the top of Brockway Mountain.





# RAVINE RIVER BRIDGE

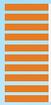
## RAVINE RIVER BRIDGE & CON-SPAN CONSTRUCTION

SKANEE, MI 2011

This project was completed in 2011 and encompassed the removal of an existing bridge over the Ravine River in Skanee, Michigan and installing a new con-span in place of the old bridge. Bacco Construction along with our Specialty Concrete Division performed all of the work for this project, which included sheeting and dewatering areas for new concrete placement, the construction of four new cast-in-place wing walls and the setting of the new con-span.







# EAGLE MINE



## VENT RAISE & ESCAPE SHAFT BIG BAY, MI 2013

Bacco Construction's Specialty Concrete Division constructed the foundations for both the Vent Raise and Escape Shaft at the Eagle Mine Site. Each foundation consisted of three concrete pours. After each pour, the formwork was removed and backfilled. The reinforcing steel and next set of formwork was then constructed. Both foundations were poured according to the engineer's specifications, using this three step process. The total thickness of the poured concrete around a solid rock core was 14'.



## PORTAL ENTRY CONSTRUCTION

BIG BAY, MI 2013

Bacco Construction performed all site grading, underground pipe construction, landfill development (TDRSA and Contact Water Basins), and asphalt paving. Our Specialty Concrete Division performed all concrete paving, construction of three leachate vaults (one at the North end of the TDRSA and two at the North endz of each of the contact water basins), construction of the Vent Raise and Escape shafts, and Portal Entry Construction for the Eagle Mine Project in Big Bay, Michigan.

RETAINING WALLS  
& CONCRETE

UPPER PENINSULA, MI



≡ HUMBOLT MILL SITE

The picture above is of a stone filled gabion basket retaining wall set on concrete foundation.



≡ SILVER LAKE BASIN

Pictures above show the Silver Lake basin splash wall formwork and finished product.



Super One Foods Retaining Wall  
Iron Mountain, MI



KFC Retaining Wall  
Iron Mountain, MI



Wal-Mart Retaining Wall  
Iron Mountain, MI

## CONCRETE FLATWORK



Concrete Pavement - Eagle Mine Site



Concrete paving and pouring of apron - Eagle Mine Site



Poured concrete floor  
Pine River Saw Mill - Amasa, MI



POURING CURB - MENOMINEE, MI



## ≡ TAMARACK CITY, MI

Pouring sidewalk against our poured curb



## ≡ HOUGHTON, MI

Pouring thickened edge sidewalk



## ≡ GWINN, MI

Curb and sidewalk work completed

## CONCRETE STRUCTURES



Eagle Mine Communications Building  
Big Bay, MI



Leachate Vault At NewPage Mill  
Escanaba, MI



Leachate Vault At Wood Island Landfill  
Munising, MI

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