

FREIGHT SERVICES AND SAFETY DIVISION

Rail Infrastructure Improvement Preliminary Estimate

Ann Arbor to Howell

Revised: February 21, 2008

Line Description

The rail segment from Ann Arbor to Howell consists of 26.90 miles of single line track from MP 47.50, north of Barton Road in Ann Arbor, to MP 74.40, Riddle Street in Howell. The existing track consists of 110#, 112#, and 115# rail with single and double shoulder tie plates and four and six hole-joint bars. The ends of the rail with four hole joint bars are bent. There are three passing tracks between Ann Arbor and Howell: Osmer 3,775 feet long, Whitmore Lake 1750 feet long and Chilson 3950 feet long. However, there aren't any sidings for midday or night time storage on either end of the proposed corridor. These existing sidings could best serve the corridor for freight and commuter if they were brought up to mainline standards during the rehab, which would add an additional 1.8 miles to the proposed rehab plan. A majority of the 34 public crossings are signalized. Any rail to be replaced within the rehab limits would be replaced with 115# rail, 600 ties per mile would be replaced, and 1000 tons of ballast per mile would be placed. Every public and private crossing surface would be rebuilt. There are three new passing and/or storage tracks proposed, locations to be determined by train schedules and depot locations. Passing tracks should be a minimum of 1000 feet in length and passing/storage tracks should be a minimum of 2000 feet in length to accommodate the cars and locomotives.

Taking into consideration that this is a passenger operation along with the frequency of train meets it is strongly recommended that the entire rail segment between Ann Arbor and Howell be operated on a Train Control System with power switches.

<u>Basic Unit Costs *</u>	<u>Unit</u>	<u>Unit Cost</u>
Power Switch/Turnout	Each	\$110,000
Standard Switch/Turnout	Each	50,000
Gravel Crossing Rebuild	Each	30,000
Paved Crossing Rebuild	Each	45,000
Private Crossing Rebuild	Each	5,000
Basic Rehab	Mile	150,000
Rail Replacement	Mile	350,000
Construct Track	Foot	150

Ann Arbor (MP 47.5) to Howell (MP 74.4)

Track	26.9 miles
Paved crossings	26 each
Gravel crossings	8 each
Private crossings	13 each
Switches/turnouts	10 each

Sidings (4) 2 miles

Track Construction/Rehabilitation Estimate

Ann Arbor to Howell:	3 new passing sidings +	\$ 1.41M
	10% rail replacement ++	\$ 8.41M
	75% rail replacement +++	\$15.69M
	100% rail replacement	\$18.50M

- * Unit prices reflect ongoing track rehabilitation project.
- + Includes 5000' of new track and 6 power turnouts
- ++ Replacing only worn out rail (addresses structural deficiencies only).
- +++ Replacing worn-out rail and bent-end rail (addresses structural deficiencies AND ride quality issues).

Train Controls

A separate estimate for a Train Control System is being prepared.

Public Highway-Railroad Crossing Warning Device Enhancement Options

There are 34 at-grade public highway-railroad crossings between Ann Arbor and Howell. Twelve have passive warning devices, twelve have flashing lights and ten are equipped with flashing lights and gates. Train speeds of 40mph will not require modifications to any warning devices. Train speeds above 40 mph will require circuitry adjustments to certain crossings with active warning devices.** Circuitry adjustments cost roughly \$3,000 per crossing. Installing or upgrading to new warning systems with gates costs approximately \$135,000 per crossing.

To accommodate 40 mph passenger trains

Install lights & gates at all 12 crossings currently equipped with passive warning devices: \$1.62M (optional)
Install gates at all 12 crossings currently equipped with flashing lights: \$1.62M (optional)

To accommodate 59 mph passenger trains

Adjust circuitry at 12 crossings currently equipped with flashing lights and/or gates: \$36,000 (required)
Install lights & gates at all 12 crossings currently equipped with passive warning devices: \$1.62M (optional)
Install gates at all 12 crossings currently equipped with flashing lights: \$1.62M (optional)

**crossings in speed-restricted track do NOT require circuitry adjustments, as they are already set for track speed.