

Northern Illinois Commuter Transportation Initiative (NICTI) Locally Preferred Alternative Briefing Paper

1. Background

Winnebago and Boone Counties established a coalition in 2003 to explore commuter connections to the Chicago area through a group originally known as the Northern Illinois Commuter Rail Initiative (NICRI). This group funded a commuter rail feasibility study in 2004 that identified a feasible connection between the end of the Metra Milwaukee West line, via the UP Belvidere subdivision and a connection to the CN into downtown Rockford. At the conclusion of the feasibility study, it was recommended that an Alternatives Analysis be completed to determine the feasibility of Federal funding for this unique commuter connection. The Alternatives Analysis started in August 2006. Many alternatives were studied and evaluated, including another rail corridor (IC&E / Illinois Railway). Recently, the NICTI Executive Committee¹ voted unanimously to select the UP Belvidere Subdivision route as the Locally Preferred Alternative (LPA). Through the Alternatives Analysis process, it became clear that the pursuit of New Starts funding was unlikely to be successful. The selected LPA is a line that performed best on ridership and had modest costs to upgrade to a commuter service. The selected alternative was also viewed as the line with the best potential for partnerships with others that have the potential to create a strong service that meets many needs.

2. Locally Preferred Alternative

The Locally Preferred Alternative is a 48 mile rail line that connects Rockford to the existing Metra service at the Elgin/Big Timber Station. The alternative utilizes the Union Pacific Railroad – Belvidere Subdivision and a small segment of the CN Freeport Subdivision. Stations are proposed in the communities of Elgin, Huntley, Marengo, Belvidere and Rockford.



Estimated corridor trip flows and potential ridership levels suggest that service should be planned to operate weekdays with three AM peak period inbound and outbound trains and three PM peak period inbound and outbound trains. Service could expand to include more trains in the future for peak periods, more for the reverse commute, and during weekends and holidays.

An operating plan is proposed where two of the three trains operate as shuttle trains and terminate in Elgin providing a cross-platform transfer to a scheduled inbound Metra train. The third train would operate as a through-route train continuing east of Big Timber Road with a stop at the Elgin-Chicago Street Station, the Medinah Station and then terminating at Bensenville.

¹ Growth Dimensions – NICTI Chair, City of Rockford, Winnebago County, City of Belvidere, Boone County, Rockford Mass Transit District, Rockford Area Economic Development Commission, IDOT-ex-officio

Travel time from Rockford to Elgin is 1 hour 5 minutes / Rockford to Bensenville is 1 hour 35 minutes.

The alternative is forecasted to serve just over 5,000 daily boardings (one-way trips).

The capital cost estimate is approximately \$247 million, (approximately \$3 million per mile). Capital costs include rolling stock (locomotives and passenger cars), track upgrades for commuter rail speeds – significant from Chrysler plant to Rockford, signal system, passing tracks, stations, parking lots, feeder bus vehicles, and junctions near Big Timber to access the UP and at Mulford Road to make a connection to the CN into Rockford. A summary of costs, aggregated by New Start cost categories, follows:

Element	Capital Cost (in million \$)	Percent of Cost
Guideway and Track	\$43.9	23%
Stations, Stops, Terminals	\$14.3	7%
Support Facilities	\$4.8	2%
Sitework and Special Conditions	\$16.6	9%
Systems	\$43.0	23%
Right of Way	\$3.2	2%
Vehicles	\$47.9	25%
Professional Services	\$16.3	9%
SUBTOTAL	\$190	100%
Contingency	\$57	
TOTAL	\$247	

The operating cost estimate is approximately \$10 million annually. Operating costs include operations (labor, overhead and fuel, and maintenance of way), protective bus service and feeder bus operating costs.

3. Amtrak Service to Rockford

Senator Durbin has been a strong advocate for Amtrak service being restored between Chicago, Rockford and Dubuque. IDOT has agreed to fund passenger service connecting these three communities. To determine the route that would be used, IDOT Bureau of Railroads funded Amtrak to conduct an analysis of several alternate routes. The report was finalized in June 2007. In this report, capital costs and ridership associated with each of four alternative alignments were presented. IDOT was responsible for selecting a route, and has selected Route C, the CN (old Blackhawk route) because the estimated ridership was highest of the four routes and it was seen as the easiest route to implement because of only involving one railroad. Currently funding for the capital upgrades is unavailable, and further development is on hold pending funding becoming available.

Route A, evaluated as one of the alternatives for the Amtrak service to Rockford / Dubuque is the same alignment that was selected as the Locally Preferred Alternative in the NICTI Alternatives Analysis. Capital costs listed in the Amtrak report for this route cover primarily track upgrades. Cost for vehicles, stations and other elements are *not* included in the Amtrak estimates. There is enough information in the report to be able to make a valid comparison between the Amtrak and the NICTI reports on a comparable basis for the track upgrade. There is one major difference between the track related costs. The NICTI costs assume an upgrade of all track being used to a quality that would allow speeds up to 79 miles per hour (Class IV). The Amtrak report states that they do not make this investment because of the limited frequency (one train per day in each direction). For commuter service, this higher speed is essential to be able to compete with the travel speed of traveling by automobile.

4. Benefits of Co-Location of Commuter and Intercity Service

There are potentially many benefits to be realized if commuter and intercity service were to co-locate on the NICTI Locally Preferred Alternative / Amtrak Route A alignment.

- Benefits to intercity service would be improved speed, frequency, ridership and reliability.
- The commuter service would benefit from capital cost savings.
- Both the intercity and commuter service would see reduced operating costs.

It is recommended that more serious thought be given to this co-location to enable both the commuter service and the intercity service to be able to achieve synergies over and above the plans that each are currently considering on their own.

Metra has done some preliminary analysis of extending their service beyond Big Timber to Huntley and Marengo. While this is not currently under active consideration, the prospect of a partnership between NICTI, Amtrak and Metra could be an impetus to reconsider this extension if the right benefits or influence can be demonstrated.

This table summarizes the benefits that could be realized from intercity and commuter service operating on the same line. Improvements are noted by and upward arrow. A horizontal arrow is denotes no change. Details are described in the text below the table.

Benefit	Amtrak	NICTI
<i>Frequency</i>	↑	↔
<i>Speed and Reliability</i>	↑	↔
<i>Ridership</i>	↑	↔
<i>Operating Cost Savings</i>	↑	↑
<i>Capital Cost Savings</i>	↔	↑

Frequency

The additional frequencies that the commuter service provides (at least as far as Rockford) would be expected to create ridership enhancements on the Amtrak train, and possibly the commuter train as well. This effect would be similar to the Amtrak / Metrolink synergies that were experienced when the Rail2Rail program was implemented in the Los Angeles region. By honoring each other's tickets, the ridership on both lines grew based on the fact that riders perceived more options to meet their travel needs. The Chicago to Rockford intercity corridor would undoubtedly benefit from additional frequencies beyond the single inbound and outbound trips currently proposed.

Speed and Reliability

Co-locating on a common alignment provides the opportunity for the Amtrak service to achieve speed increases from the higher quality track bed that the commuter service requires. The commuter rail service would upgrade track to Class IV, allowing for higher operating speeds. The NICTI Locally Preferred Alternative estimates a travel time of 1 hour 35 minutes between Bensenville and Rockford. This is compared to an Amtrak travel time estimate between the same locations of 2 hours 19 minutes. This time savings comes from higher quality track and signal system.

Reliability of intercity service would also be enhanced. The current Amtrak proposal provides for one passing siding, while the commuter service plan provides for four passing sidings. This allows for more reliable travel times because train conflicts are reduced with more sidings. Additionally, this alternative for Amtrak provides Union Station access from the north versus the south which will also enhance speed and reliability.

Ridership

This route travels through key population centers between Chicago and Rockford, serving the fast growing Boone County area as well as southern McHenry County communities of Huntley and Marengo. This provides a stronger potential market to the Amtrak service as compared to the alternative that has currently been selected. This market alone should provide additional ridership, but increased ridership is virtually assured when paired with the frequency and speed improvements that would come from co-location with the commuter service. It is estimated that Amtrak ridership would increase to nearly 42,000 annually due to the faster travel times that the higher quality track would provide if co-located with commuter service. Additional ridership would also be realized due to the enhanced frequencies available to the intercity commuter between Chicago and Rockford.

Operating Cost Savings

There are operating cost savings that could be realized through co-location of commuter and intercity rail service. The commuter rail service could start service with fewer trains than are currently budgeted, and have the Amtrak train provide late AM inbound service and late evening outbound service. The same level of service would be provided to customers, but there would be two providers 'sharing' the operating costs. Both Amtrak and NICTI would be able to share operating costs such as station maintenance and other on-going operating expenses. Co-location would also make it easier for Amtrak to be the potential contract operator for NICTI service.

Capital Cost Savings

Co-location of the Amtrak service on the Locally Preferred Alternative alignment (UP Belvidere Subdivision/CN) for the commuter service would serve to defray capital costs that are currently anticipated to be borne by the commuter service alone. It would be a strong example of coordinating scarce public funding to serve a greater market. Benefits of co-location on capital costs are further addressed in Section 6 of this paper.

5. Timing

Senator Durbin has encouraged Amtrak and IDOT to pursue implementation of the intercity service as soon as possible. It should be noted that any plans for co-locating commuter and intercity service should not have a negative effect on the early implementation of intercity service. It is assumed that intercity service would be operating prior to the commuter service coming on line.

Depending on the timing of decisions about governance and funding locally, it is assumed that commuter service would follow the implementation of the Amtrak service by 1-2 years.

6. Financial Impact

In the summary table on the following page, four scenarios for NICTI are presented.

- *Scenario 1:* NICTI funds the capital costs of commuter service connecting Rockford, Belvidere with Elgin on their own. This totals \$247.1 million as presented in the capital cost estimates in the Second Level Screening Report.
- *Scenario 2:* NICTI partners with IDOT/Amtrak through co-location. This scenario illustrates that the costs identified for the selected NICTI corridor in the Amtrak report could defray the Guideway/Track and Systems elements of the NICTI project, reducing the NICTI responsibility for capital costs to \$209.3 million.
- *Scenario 3:* NICTI partners with RTA. This scenario is developed because nearly half of the alignment travels through the RTA service area. Costs are allocated on a geographic basis. NICTI responsibility for capital costs in this scenario is \$155.9 million. The RTA region is responsible for \$91.3 million.
- *Scenario 4:* NICTI partners with both RTA and IDOT/Amtrak. This scenario shows how IDOT/Amtrak co-location provides capital cost savings benefit to both NICTI and the RTA region, while Amtrak is able to benefit from increased speeds and reliability as well as improved frequency. The NICTI capital cost responsibility in this scenario is \$130.1 million, while RTA's is reduced to \$79.2 million.

Summary of Financial Partnership Scenarios

Element	Capital Cost (in million \$)	% of Total Cost	Scenario 1			Scenario 2			Scenario 3			Scenario 4		
			NICTI Alone			NICTI Partners w/ Amtrak & IDOT			NICTI Partners w/ RTA			NICTI Partners w/ Amtrak, IDOT & RTA		
			NICTI	IDOT/Amtrak	RTA	NICTI	IDOT/Amtrak	RTA	NICTI	IDOT/Amtrak	RTA	NICTI	IDOT/Amtrak	RTA
Vehicles	47.8	19%	47.8	-	-	47.8	0.0	-	23.9	-	23.9	23.9	0.0	23.9
Guideway & Track	44.0	18%	44.0	-	-	28.9	15.1	-	29.1	-	14.9	16.9	15.1	12.0
Systems	43.0	17%	43.0	-	-	29.0	14.0	-	23.3	-	19.7	15.7	14.0	13.3
Stations, Terminals & Sitework	31.0	13%	31.0	-	-	31.0	0.0	-	25.2	-	5.8	25.2	0.0	5.8
Support, ROW, Prof Services	24.3	10%	24.3	-	-	24.3	0.0	-	18.4	-	5.9	18.4	0.0	5.9
SUBTOTAL	190.1	77%	190.1	-	-	161.0	29.1	-	119.9	-	70.2	100.1	29.1	60.9
Contingency	57.0	23%	57.0	-	-	48.3	8.7	-	36.0	-	21.0	30.0	8.7	18.3
TOTAL	247.1	100%	247.1	-	-	209.3	37.8	-	155.9	-	91.2	130.1	37.8	79.2

NOTES: These numbers assume no change in number of vehicles purchased. In practice, however, the planned 3 trains in each peak period could be shared between NICTI and Amtrak. (NICTI = 2, Amtrak = 1)

Contingency is 30% of subtotal