

NICTI Alternatives Analysis

First Level Screening Report

Prepared for:



*Northern Illinois
Commuter Transportation Initiative*

Northern Illinois Commuter Transportation Initiative
City of Rockford, Illinois

Prepared by:



222 South Riverside Plaza, Suite 2320
Chicago, IL 60606
Phone: (312) 669-9601

In Association with

PB Americas, Inc
Images, Inc
TEMS, Inc
ETC Institute
Vandewalle & Associates
Vlecides-Schroeder Associates, Inc
Fish Transportation Group

February 14, 2007

TABLE OF CONTENTS

OVERVIEW OF FIRST LEVEL SCREENING PROCESS	1
BACKGROUND.....	1
FIRST LEVEL SCREENING	2
DESCRIPTION OF MEASURES OF EFFECTIVENESS (MOE)	4
COMMUNITIES SERVED (GOAL 1).....	4
PUBLIC COMMENTS (GOAL 1)	4
LOW-INCOME OR MINORITY POPULATION CONCENTRATIONS SERVED (GOAL 1)	5
SERVICE TO ACTIVITY CENTERS WITHIN STUDY AREA (GOAL 1, 4)	5
INTERMODAL CONNECTION OPPORTUNITIES (GOAL 1, 2).....	5
IMPACTS TO VEHICULAR TRAFFIC (GOAL 1, 4).....	5
QUALITY AND CONVENIENCE OF TRIP (GOAL 2).....	6
IMPACTS TO PLANNED TRANSPORTATION IMPROVEMENTS (GOAL 2)	6
CONSISTENCY WITH EXISTING INFRASTRUCTURE (GOAL 2).....	6
ORDER OF MAGNITUDE CAPITAL COSTS (GOAL 3).....	6
CONSISTENT WITH LOCAL ADOPTED FUTURE LAND USE PLANS/COMPREHENSIVE PLANS (GOAL 4, 5)	6
COMPATIBLE WITH EXISTING LAND USE (GOAL 5)	6
CONSISTENCY WITH REGIONAL AIR QUALITY PLANS (GOAL 6)	7
DISCUSSION OF KEY MEASURES	8
EVALUATION OVERVIEW.....	9
FIRST LEVEL SCREENING RECOMMENDATIONS.....	11
SUMMARY.....	11
RECOMMENDATIONS FROM FIRST LEVEL SCREENING	13
<i>Bus Rapid Transit Alternatives</i>	13
BRT1 - "BRT-Priority" operation on I-90.....	13
BRT2 - "BRT-Guideway" route.....	13
BRT3 - A "BRT-Guideway" route	13
BRT4 - A "BRT-Guideway" route	13
<i>Commuter Rail Alternatives</i>	13
CR1 - BNSF C&I Subdivision.....	13
CR2 - UP West Line	14
CR3 - CN Line	14
CR4 - IC&E and CN,	14
CR5 - IC&E and Illinois Railway.....	14
CR6 - UP Belvidere Subdivision	14
CR7 - New construction to Harvard	15
<i>Light Rail Alternatives</i>	15
LRT1 - Along I-90.....	15
LRT2 - Along UP Belvidere Subdivision.....	15
APPENDIX A	16
EVALUATION RESULTS	16
ADDENDUM	30
'ORDER OF MAGNITUDE' COST ESTIMATES	30

Overview of First Level Screening Process

Background

A full process for a three phased evaluation has been developed for the NICTI Alternatives Analysis. This process has been fully described in a technical memorandum entitled, *NICTI Alternatives Analysis: Evaluation Methodology*. This basis for evaluation allows the benefits and impacts of each alternative to be evaluated with an objective set of criteria that relate to the specific needs of this project. As the evaluation progresses, through a comparison of the performance of the alternatives with respect to these criteria, the most suitable, efficient transportation options will emerge for detailed analysis, eventually leading to the adoption of a Locally Preferred Alternative (LPA) by local transportation decision makers.

The evaluation criteria were selected to correspond to the identified needs within the study area and to address the following project goals:

Goal 1: Enhance Mobility Through and Within the Corridor

- Expand mobility opportunities for all users moving through and within the Elgin to Rockford Corridor.
- Provide access to jobs and job markets in the corridor.
- Provide for growth in travel demand.
- Reduce peak period traffic demands on I-90.
- Provide additional level of corridor/area security specifically relating to evacuation.

Goal 2: Provide Efficient, High Quality Transit Improvements

- Provide high quality modal alternatives.
- Attract new transit riders from private vehicles, particularly single-occupancy vehicles.

Goal 3: Develop a Cost Effective Transportation Solution

- Provide an efficient transit system that minimizes costs per new transit rider.
- Minimize construction, right-of-way and operating and maintenance costs.
- Leverage federal and state funding.

Goal 4: Support Business, Transportation and Residential Investments

- Support previous business investments in the Elgin to Rockford Corridor.
- Support previous public investment in transportation infrastructure.
- Support public and private investment in residential communities.
- Support connections between major transportation systems and job centers.

Goal 5: Support Effective Land Use and Development Patterns

- Promote a reliable transit system that allows efficient, effective land use development patterns and facilitates the highest and best use of properties adjacent to transit facilities.
- Provide consistency with Long Range Transportation Plans and land use plans.
- Encourage economic growth.
- Discourage unplanned growth.
- Enhance quality of life.

Goal 6: Provide a Cleaner, Safer Environment

- Support regional goals for: cleaner air and water, more efficient energy use and a safer and healthier environment.

- Increase the safety and security of the transportation system for motorized and non-motorized users.

The process begins with the project goals and objectives, and identifies criteria and measures of effectiveness¹ for each. A large number of alternatives are evaluated using a generalized set of criteria. As screening progresses, certain alternatives will be retained by virtue of successfully passing the screening and the number of alternatives will decrease. For the next level of screening, the MOEs and the definition of the alternatives both become more detailed. Each step in the evaluation process is thus designed to focus the analysis on progressively fewer alternatives.

First Level Screening

The intent of the initial screening evaluation is to compare the relative performance of a large number of alternatives using a small number of criteria. This level of analysis is intended to identify suitable modes and alignments from which alternatives are identified for further analysis and screening.

At this stage, all reasonable transit technologies or modes have been identified. Technologies have been assessed primarily on their suitability to the project area and whether they meet the purpose and need of the project. Similarly all reasonable alignments within the study area are identified. Alignments were identified to make the best possible use of existing transportation infrastructure. These alternatives are described in a technical memorandum entitled *NICTI Alternatives Analysis, Definition of Initial Alternatives*.

Table 1 summarizes the goals and evaluation measures that are included in the first level screening. At this level of analysis most measures are assessed qualitatively.

The first level screening is done to assess the general ability of the alternatives to serve the markets, have reasonable capital costs, be supportive of development patterns and local infrastructure. Any fatal flaws are to be identified as well.

Because the first level screening is qualitative in nature of the first level screening, general conclusions of the alternatives' ability to address the evaluation measures are typically used. For the NICTI Alternatives Analysis the following symbols indicating relative effectiveness in addressing evaluation measures are used to present the evaluation.

-  This symbol indicates an alternative fully addresses the measure, or is the "best" relative to the consideration.
-  This symbol indicates an alternative somewhat or partially addresses the measure. The alternative is acceptable but not preferred relative to the consideration.
-  This symbol indicates an alternative fails to address the measure. The alternative is not acceptable relative to the consideration.

¹ FTA requires evaluation criteria to address Social Factors, Economic Factors, Environmental Factors, and Transportation Factors.

Table 1 - First Level Screening Evaluation Measures

Goals	Measures of Effectiveness	First Screen
Goal 1 Enhance Mobility through and within the Corridor	Communities Served	X
	Public Comments	X
	Low-income or Minority Population Concentrations Served	X
	Service to Activity Centers within Study Area	X
	Intermodal Connection Opportunities	X
	Impacts to Vehicular Traffic	X
Goal 2 Provide Efficient, High Quality Transit Improvements	Quality and Convenience of Trip	X
	Intermodal Connection Opportunities	X
	Impacts to Planned Transportation Improvements	X
	Consistency with Existing Infrastructure	X
Goal 3 Develop a Cost Effective Transportation Solution	Order of Magnitude Capital Costs	X
Goal 4 Support Business, Transportation and Residential Investments	Consistent with Local Adopted Future Land Use Plans	X
	Consistent with Comprehensive Plans	X
	Service to Activity Centers within Study Area	X
	Impacts to Vehicular Traffic	X
Goal 5 Support Effective Land Use and Development Patterns	Compatible with Existing Land Use	X
	Consistent with Local Adopted Future Land Use Plans	X
	Consistent with Comprehensive Plans	X
Goal 6 Provide a Cleaner, Safer Environment	Consistency with Regional Air Quality Plans	X

Each alternative was evaluated against the measures in Table and given a rating using the symbols. This technique, sometimes referred to as the “Consumer Reports” method, is consistent with the level of detail and makes it visually apparent which alternatives meet the evaluation considerations. Alternatives with many “empty” symbols or empty symbols in critical areas, likely will not be recommended to be carried into the next level of screening. Alternatives therefore will either be carried into the second level of screening or will be eliminated from further consideration based on how they rate relative to the evaluation considerations.

Description of Measures of Effectiveness (MOE)

The “measures of effectiveness” (MOE) that were established as part of the evaluation criteria of each alternative are described below. The project goal that is addressed by the measures of effectiveness is listed in parenthesis; in some instances, more than one project goal is addressed.

By conducting a qualitative assessment, each alternative was assigned either a high ranking, medium ranking or low ranking for each MOE. These rankings are represented graphically in the screening matrix and verbally in the narrative below as either a ●, ◐, or ○ and are described as follows: A ● indicates that the alternative fully addresses the measure or is the “best” relative to the consideration. A ◐ indicates that the alternative somewhat or partially addresses the measure; the alternative is acceptable but not preferred relative to the consideration. A ○ indicates that the alternative fails to address the measure and is not acceptable relative to the consideration.

Four of the MOEs were determined to carry a greater factor in determining which alternatives will move to the Tier II level screening analysis: 1) communities served, 2) order of magnitude capital costs, 3) service to activity centers within study area, and 4) consistent with locally adopted future land use/comprehensive plans.

Communities Served (Goal 1)

For this measure, two types of data were used: number of communities served and the amount of population within these communities. For the first, the number of communities that were within three miles of the alternative was documented; if any portion of the community was within three miles it was considered to be “served” and counted in the total. The number of communities were added up and the alternatives were assigned a ranking from 1-13 (with 1 being the greatest with regard to number of communities). For the second part, the total population for each of the communities considered to be “served” by the alternative was obtained from Census Bureau data. Each community’s population was added together to get a total population served. The alternatives were then ranked 1-13 (with 1 being the highest with regard to total population).

The ranking that the alternative received for number of communities was added to the ranking that the alternative received for the population to get a total ranking number (e.g. if an alternative received a 1 in number of communities served and a 5 in total population, the total ranking number is 6). The alternatives were then ranked by order for the total number received.

By virtue of the total ranking number they received, the alternatives fell into three groups. The alternatives receiving a total score of 9 or under received a ● on the screening matrix. The alternatives receiving a score between 10 and 14 received a ◐. For those alternatives receiving a score of 15 or over received a ○.

Public Comments (Goal 1)

Public comments from a variety of sources were reviewed to determine which alternatives have better public support. Source data included comment sheets from the November 15-16, 2006 public meeting, verbal comments recorded from the same public meeting and written comments received on the project website, www.NICTI.net.

The majority of comments received to date state a preference for commuter rail between Rockford and Chicago. Subsequently, specific commuter rail alignments that were commented favorably on received a ● in the screening matrix. Other commuter rail alignments that did not receive specific supportive public comment received a ◐ in the screening matrix. A few comments support some type of express bus service so all BRT alternatives received a ◐. Since LRT was not mentioned as a choice alternative, the two LRT alternatives received a ○.

Low-Income or Minority Population Concentrations Served (Goal 1)

Information from the Census Bureau was utilized to identify and map all census tracts within a mile of each alternative. The percentage of low income population and minority population as compared to total population within the census tract was recorded. The size of the census tract is based on population; census tracts with lower population encompass a larger geographical area than those tracts with greater population. Subsequently, for those alternatives that go thru more urban areas, more census tracts needed to be analyzed.

Alternatives that contained census tracts with a minority and/or low income population were further analyzed and assigned a ranking according to the percentage of low income and/or minority population compared to total population as follows: alternatives that served none or few census tracts with 30% or lower received an ○, alternatives mostly serving census tracts with 30% received a ◐, alternatives serving tracts with 30-50% and/or greater than 50% received a ●.

Service to Activity Centers within Study Area (Goal 1, 4)

Population centers, centers of employment, universities, airports and transportation centers are all considered to be “major activity centers” for this screening measure. The number of major activity centers within one mile of each alternative was recorded. The alternatives could be separated into three categories by virtue of the number of activities served. The alternatives that served or connected the most activity centers between the Chicago suburbs and Rockford were documented with a ●. Alternatives that served or connected the second highest number of activity centers were documented with a ◐. Alternatives that served or connected the fewest number of activity centers were given a ○.

Intermodal Connection Opportunities (Goal 1, 2)

The intermodal connection opportunities describes whether there is a direct connection between the alternative and various existing transportation services, including local bus routes operated by Rockford Mass Transit District (RMTD), Chicago Transit Authority bus and train service, Metra commuter rail service, Pace suburban bus services, airports, Amtrak, and express bus.. The alternative is considered to have an intermodal connection if the service directly meets or intersects the alternative at some point along the corridor. Alternatives where there was the most direct connection to other transportation services received a ●. Other alternatives received either a ◐ or a ○ depending on the amount of intermodal connections.

Impacts to Vehicular Traffic (Goal 1, 4)

The relative location of each alternative was examined to determine if the proposed alternative could help alleviate traffic congestion along Interstate 90 (I-90). If the alternative was proximate to I-90, it was assumed that there would be some traffic relief along I-90 and subsequently, alternative was given a ◐. If the alternative was located closer to Interstate 88, it was assume that there would be no impact to I-90 traffic congestion, and therefore, the alternative received a ○. No alternative received a ● as it could not be determined at the initial screening level if the traffic relief on I-90 would be significant.

Quality and Convenience of Trip (Goal 2)

Estimated travel time from downtown Rockford to downtown Chicago was analyzed for each alternative. This information was provided in the *Initial Alternatives Report* (January 11, 2007). In addition, frequency of service was considered. Those alternatives having the shortest commute time and the most frequent service compared to the others received a ●, those alternatives that had “reasonable” travel time and frequency of service in relation to other alternatives were given a ◐. No alternative received a ○.

Impacts to Planned Transportation Improvements (Goal 2)

Transportation plans obtained from the counties and the municipalities were collected and reviewed to determine if there were any planned roadway or other transportation improvements within the study area. Depending on the time frame of the plan, data was analyzed for a five year time frame, for example 2005-2010, or was available long range, for example year 2035. Only those planned improvements that could improve access on major roadways leading to an alternative were considered and documented. The alternatives that had the greatest number of access improvements received a ●, alternatives that had some planned access improvements received a ◐. No alternative received a ○ as there were planned transportation improvements for all the alternatives.

Consistency with Existing Infrastructure (Goal 2)

Each alternative was assessed based on whether the existing infrastructure was sufficient and/or in place for that alternative. As an example, street right-of-way, the presence of existing track, and the condition of railroad signals was reviewed. If the alternative required a significant infrastructure upgrade such as the construction of new track or the purchase of new right-of way on private property, a ○ was assigned to that alternative. If there was an improvement required rather than new construction, a ◐ was assigned. If the infrastructure was in place, the alternative received a ●.

Order of Magnitude Capital Costs (Goal 3)

Grand scale capital costs were assigned to each alternative. Capital costs were estimated for infrastructure including track, signal, grade crossing, traffic signals, and electrification; right-of-way, parking facilities; maintenance and storage facilities; stations; and rolling stock. Those alternatives that had the highest capital costs as compared to other alternatives received a ○. Those alternatives that had mid-range capital costs received a ◐. If capital costs were expected to be low in relation to other alternatives, the alternative received a ●.

Consistent with Local Adopted Future Land Use Plans/Comprehensive Plans (Goal 4, 5)

Locally adopted future land use plans were collected from each of the communities and counties in the study area. In the event a plan was not available, a conversation was held with the municipal planner. The plans were reviewed to assess whether the alternative met the intent of the future land use and transportation goals as stated in the plans, and a qualitative assessment was made. For those alternatives that best meet the plan goals, a ● was assigned. Those alternatives that didn't endorse the future land use plans to the same degree were assigned a ◐. Those alternatives which contradicted the identified goals in the future land use plans were assigned a ○.

Compatible with Existing Land Use (Goal 5)

Existing land use maps provided by the municipalities in the study area were reviewed. If an existing land use map was not available, aerial maps were utilized. A qualitative assessment was made for each alternative to determine what the potential impact would be of the alternative

on existing land use within one-half mile of the alternative. The alternatives were then given a ● or ○ depending if they had less impact, moderate impact or greatest impact accordingly on existing land use patterns.

Consistency with Regional Air Quality Plans (Goal 6)

For this level of analysis, it was assumed that each alternative would improve air quality on an equal basis. Therefore, each alternative was assigned a ● for this screening measure.

Discussion of Key Measures

In moving from an evaluation of individual criteria to overall ranking of an alternative, it is important to determine an approach for combining the criteria ranking. The Alternatives Analysis requires a systematic, even-handed review of alternatives. Each level of screening is intended to sharpen the focus of the analysis and eliminate alternatives that do not perform as well as others. This permits subsequent screenings to focus in on greater detail and analysis to move forward to a Locally Preferred Alternative.

In thinking of how to move from criteria measure to an overall ranking for an alternative, it is essential to keep in mind what the FTA is looking for through the Alternatives Analysis process. Projects that are successful in obtaining New Starts funding have low cost per new rider statistics. They also are looking for projects with strong local support.

The balance that needs to be struck in each step of the screening process is to address FTA's requirement that many different criteria are evaluated with the fact that the bottom line of the Alternatives Analysis process is focuses on a few key measurements only. Using this duality of the process, it suggests that some measures should weigh more heavily than others.

In order to provide a framework to interpret the many measures and translate the performance into an overall evaluation for the alternative, we have identified measures that will be interpreted to carry more 'weight' in the qualitative evaluation than others. These include:

- Communities / Population Served
- Public Comments
- Order of Magnitude Capital Costs
- Consistent with Local Adopted Land Use / Comprehensive Plans
- Service to Activity Centers within the Study Area

The reason that these have been identified as a more important group of is that they best represent the ultimate goals that the FTA has for recommending projects for New Start funding. They include population near the alignment and service to activity centers can be used as a proxy for ridership potential at this stage of analysis. Public support is represented through public comments and land use and comprehensive plans. Low capital costs are viewed to be critical in developing a viable project in this corridor.

Evaluation Overview

The TranSystems team conducted the first level screening evaluation using the qualitative evaluation protocol described earlier in this technical memorandum. A matrix displaying the performance of all 13 alternatives on all evaluation measures is attached.

To assist with the review of this table, the Key Measures described in the previous section are highlighted (in yellow). These represent the characteristics that should be given more weight in the development of an overall rating for an alternative because of their importance or priority in identifying projects that will successfully compete for New Starts funding.

First Level Screening Summary

Goals	Measures of Effectiveness	BRT1	BRT2	BRT3	BRT4	CR1	CR2	CR3	CR4	CR5	CR6	CR7	LRT1	LRT2
Goal 1: Enhance Mobility through and within the Corridor	Communities Served	●	●	●	●	●	●	●	●	●	●	●	●	●
	Public Comments	●	●	●	●	●	●	●	●	●	●	●	●	●
	Low-income or Minority Population Concentrations Served	●	●	●	●	●	●	●	●	●	●	●	●	●
	Service to Activity Centers within Study Area	●	●	●	●	●	●	●	●	●	●	●	●	●
	Intermodal Connection Opportunities	●	●	●	●	●	●	●	●	●	●	●	●	●
	Impacts to Vehicular Traffic	●	●	●	●	●	●	●	●	●	●	●	●	●
Goal 2: Provide Efficient, High Quality Transit Improvements	Quality and Convenience of Trip	●	●	●	●	●	●	●	●	●	●	●	●	●
	Intermodal Connection Opportunities	●	●	●	●	●	●	●	●	●	●	●	●	●
	Impacts to Planned Transportation Improvements	●	●	●	●	●	●	●	●	●	●	●	●	●
	Consistency with Existing Infrastructure	●	●	●	●	●	●	●	●	●	●	●	●	●
	Order of Magnitude Capital Costs	●	●	●	●	●	●	●	●	●	●	●	●	●
Goal 3: Develop a Cost Effective Transportation Solution	Consistent with Local Adopted Future Land Use / Comp. Plans	●	●	●	●	●	●	●	●	●	●	●	●	●
	Service to Activity Centers within Study Area	●	●	●	●	●	●	●	●	●	●	●	●	●
	Impacts to Vehicular Traffic	●	●	●	●	●	●	●	●	●	●	●	●	●
Goal 4: Support Business, Transportation and Residential Investments	Compatible with Existing Land Use	●	●	●	●	●	●	●	●	●	●	●	●	●
	Consistent with Local Adopted Future Land Use / Comp. Plans	●	●	●	●	●	●	●	●	●	●	●	●	●
Goal 5: Support Effective Land Use and Development Patterns	Consistency with Regional Air Quality Plans	●	●	●	●	●	●	●	●	●	●	●	●	●
	Overall Ranking	In	In	Out	Out	Out	Out	Out	Out	In	In	Out	Out	Out

●	This symbol indicates an alternative fully addresses the measure, or is the "best" relative to the consideration.
●	This symbol indicates an alternative somewhat or partially addresses the measure. The alternative is acceptable but not preferred relative to the consideration.
○	This symbol indicates an alternative fails to address the measure. The alternative is not acceptable relative to the consideration.



First Level Screening Recommendations

Summary

The Alternatives Analysis process requires subsequent screening phases to compare 'build' alternatives to 'no build' or 'transportation system management' alternatives. In the initial screening, only the build alternatives are evaluated. Thirteen different 'build' alternatives were approved by the NICTI Executive Committee at the January 17, 2007 meeting for evaluation in the First Level Screening of Alternatives. The alternatives include BRT (bus rapid transit), Commuter Rail and Light Rail alternatives. The map on the following page is a graphical depiction of the alternatives.

The alternatives were evaluated in accordance with the Evaluation Methodology approved by the Executive Committee at their January 17, 2007 meeting.

This memorandum summarizes the conclusions and recommendations from the First Level Screening of Alternatives.

Four build alternatives are recommended for further study during the Detailed Screening of Alternatives phase of the project:

- BRT Priority" operation on I-90 (BRT1)
- BRT-Guideway" route on I-90 (BRT2)
- Commuter Rail on the IC&E and Illinois Railway (CR5)
- Commuter Rail on the UP Belvidere Subdivision (CR6)

The two BRT alternatives requiring the construction of new exclusive busways are not recommended for further study. (BRT3 and BRT4)

All other Commuter Rail alternatives are not recommended for further study. (CR1, CR2, CR3, CR4 and CR7)

Both of the Light Rail alternatives are not recommended for further study.

The rationale for the recommendations follow.

Recommendations from First Level Screening

The following is a discussion of the results and conclusions of the First Level Screening.

Bus Rapid Transit Alternatives

BRT1 - "BRT-Priority" operation on I-90, with transit priority treatments, including authority to operate on the shoulders in case of congestion on the Tollway.

Recommendation: Retain for further study. Generally this alternative is rated positive in all areas; the measure of *Quality and Convenience of Trip* requires further study to determine the effectiveness of various lower cost bus priority measures and the extent of future traffic congestion on the Tollway. This alternative may be combined with BRT2 because the only difference is how separation from traffic is achieved.

BRT2 - "BRT-Guideway" route, with construction of a dedicated lane, alongside I-90.

Recommendation: Retain for further study. Generally this alternative is rated positive in all areas; the *Quality and Convenience of Trip* is thought to be better than BRT1 because reserved lanes (transit lanes or HOV lanes) are regarded as a more effective means to achieve transit priority. This alternative may be combined with BRT1 because the only difference is how separation from traffic is achieved.

BRT3 - A "BRT-Guideway" route, with construction of a 2 lane busway alongside the UP Belvidere Subdivision alignment.

Recommendation: Do not retain for further study. This alternative has a "fatal flaw" because capital costs are significantly higher than for the BRT1 and BRT2 alternatives, and there is no corresponding improvement in service or benefits.

BRT4 - A "BRT-Guideway" route, with construction of a 2 lane busway alongside the CN/IC&E alignment.

Recommendation: Do not retain for further study. This alternative has a "fatal flaw" because capital costs are significantly higher than for the BRT1 and BRT2 alternatives, and there is no corresponding improvement in service or benefits. In fact this alternative is rated below BRT1 and BRT2 in several areas.

Commuter Rail Alternatives

CR1 - BNSF C&I Subdivision using the Illinois Railway from Rockford to Rochelle (passing near the Rockford Airport), connecting with the Metra BNSF route at Aurora.

Recommendation: Do not retain for further study. This alternative has a "fatal flaw" because capital costs are significantly greater than for other commuter rail alternatives, and there is not a commensurate improvement in service or benefits. It does not serve key Study Area Activity Centers, nor does it provide relief for I-90 congestion. While evaluation of population served ranked high, it is due to the population of Aurora rather than population in the corridor of interest.

CR2 - UP West Line using the Illinois Railway from Rockford to Rochelle (passing near the Rockford Airport), where it connects with the UP's Geneva Subdivision main line. Connection to the recently-extended Metra UP West route would be made at Elburn.

Recommendation: Do not retain for further study. This alternative has a "fatal flaw" because capital costs are significantly greater than for other commuter rail alternatives, and there is not a commensurate improvement in service or benefits. It does not provide relief for I-90 congestion.

CR3 - CN Line along the route used by Rockford's last passenger train service, Amtrak's Blackhawk. It uses track now owned by CN (previously Illinois Central), virtually all the way from Downtown Rockford to Chicago Union Station, with no opportunity to transfer to Metra.

Recommendation: Do not retain for further study. This alternative does not appear to have a definite "fatal flaw", but the alternative does not offer advantages over other commuter rail alternatives and is not consistent with local land use and comprehensive plans. It does not serve key communities in the study area, thus does not address a fundamental project objective. In addition, although operating costs were not considered at this screening level, operating costs will be substantially higher because there is not opportunity to integrate with current Metra service and service will have to be extended to downtown Chicago.

CR4 - IC&E and CN, a hybrid of two alternatives (CR3 and CR5) using a combination of the CN and the IC&E/Illinois Railway to connect with the Metra Milwaukee West Service at Big Timber.

Recommendation: Do not retain for further study This alternative does not appear to have a definite "fatal flaw", but the alternative does not offer advantages over other commuter rail alternatives; it does not serve key Study Area Activity Centers. The capital cost for this alternative is estimated to higher than other alternatives in the moderate range than for other commuter rail alternatives because of the need to create a connection between the IC&E and the CN in Genoa. No identifiable community support for this alternative has been identified.

CR5 - IC&E and Illinois Railway using the Illinois Railway from Rockford (passing near the Rockford Airport) and the IC&E to connect with the Metra Milwaukee West Service at Big Timber.

Recommendation: Retain for further study. Generally this alternative is not rated as high as others, but it does not have any "fatal flaws." Also, it is the most attractive of the commuter rail alignments that directly serve the Chicago / Rockford International Airport. This alternative does not serve Belvidere, but has considerable support in the community. Capital cost estimates are evaluated as moderate, but they are higher than other alternatives.

CR6 - UP Belvidere Subdivision connecting with the Metra Milwaukee West Service at Big Timber, this alternative would use the UP Belvidere subdivision to connect the Elgin area with Belvidere and Rockford.

Recommendation: Retain for further study. Generally this alternative is rated positive in all areas except the opportunity for intermodal connections. Capital costs for this alternative are estimated in the low end of the moderate range. This alternative has considerable support in the community.

CR7 - New construction to Harvard using UP Industrial track from Rockford to Loves Park and new construction along the right-of-way of an abandoned railroad to Harvard, where it would connect with the Metra UP Northwest service.

Recommendation: Do not retain for further study. This alternative has a “fatal flaw” because capital costs are anticipated to be significantly greater than for other commuter rail alternatives, and there is not a commensurate improvement in service or benefits. The alternative does not serve Study Area communities well and does not offer viable connections in the northwest suburban job center and O’Hare Airport area.

Light Rail Alternatives

LRT1 - Along I-90 this alternative involves a single track light rail route, with passing sidings, would be constructed alongside I-90, the Illinois Tollway.

Recommendation: Do not retain for further study. This alternative has a “fatal flaw” because capital costs are estimated to be significantly greater than for other viable alternatives, and there is not a commensurate improvement in service or benefits.

LRT2 - Along UP Belvidere Subdivision this alternative involves a single track light rail route, with passing sidings, would be constructed on a route along the corridor of the UP Belvidere Subdivision.

Recommendation: Do not retain for further study. This alternative has a “fatal flaw” because capital costs are estimated to be significantly greater than for other viable alternatives, and there is not a commensurate improvement in service or benefits.

APPENDIX A

Evaluation Results

Alternative: BRT1 - A "BRT-Priority" operation on I-90, with transit priority treatments, including authority to operate on the shoulders in areas of congestion on the Tollway.

Goals	Measures of Effectiveness	First Screen	Comments
Goal 1: Enhance Mobility through and within the Corridor	Communities Served		12 Communities; Total population = 312,001
	Public Comments		Some support for BRT
	Low-income or Minority Population Concentrations Served		Serves a high number of census tracts with large percentages of low-income and minority population
	Service to Activity Centers within Study Area		Connects some of the key activity centers among all of those located along the alternative routes, including Belvidere and its major employer, Chrysler; the urbanized area between Belvidere and downtown Rockford; Elgin; and the growing area west of Elgin within Kane County.
	Intermodal Connection Opportunities		Multiple RMTD routes at different locations, Milwaukee District - West Line
	Impacts to Vehicular Traffic		Traffic relief on I-90
	Quality and Convenience of Trip		More frequent trips
	Intermodal Connection Opportunities		Multiple RMTD routes at different locations, Milwaukee District - West Line
	Impacts to Planned Transportation Improvements		Planned widening of: Alpine Road, US 20, IL 173, IL 2, I-39, I-90; new interchange at I-90/IL173, I-90/Irene Road, I-90/IL 39 and I-90/Perry Creek; new Meridian Road Bridge; full interchange at I-90/IL 47
	Consistency with Existing Infrastructure		Uses mostly existing infrastructure
Goal 3: Develop a Cost Effective Transportation Solution	Order of Magnitude Capital Costs		Requires minimal construction: upgrade I-90 shoulders and construct stations & parking lots.
Goal 4: Support Business, Transportation and Residential Investments	Consistent with Local Adopted Future Land Use/Comp. Plans		Location along I-90 supports future land use plans and growth trends along this corridor. Specifically, this alternative supports the transit goals and future land use plans identified by Cherry Valley, Boone County, Belvidere, Kane County, Elgin, and McHenry County.
	Service to Activity Centers within Study Area		Connects some of the key activity centers among all of those located along the alternative routes, including Belvidere and its major employer, Chrysler; the urbanized area between Belvidere and downtown Rockford; Elgin; and the growing area west of Elgin within Kane County.
	Impacts to Vehicular Traffic		Traffic relief on I-90
Goal 5: Support Effective Land Use and Development Patterns	Compatible with Existing Land Use		Consistent with existing land use patterns due to its location along I-90, the current existing primary commuter transportation corridor between Rockford and Chicago.
	Consistent with Local Adopted Future Land Use/Comp. Plans		Location along I-90 supports future land use plans and growth trends along this corridor. Specifically, this alternative supports the transit goals and future land use plans identified by Cherry Valley, Boone County, Belvidere, Kane County, Elgin, and McHenry County.
Goal 6: Provide a Cleaner, Safer Environment	Consistency with Regional Air Quality Plans		Improves air quality

	This symbol indicates an alternative fully addresses the measure, or is the "best" relative to the consideration.
	This symbol indicates an alternative somewhat or partially addresses the measure. The alternative is acceptable but not preferred relative to the consideration.
	This symbol indicates an alternative fails to address the measure. The alternative is not acceptable relative to the consideration.



Alternative: BRT2 - A "BRT-guideway" route, with construction of a dedicated lane, alongside I-90.

Goals	Measures of Effectiveness	First Screen	Comments
Goal 1: Enhance Mobility through and within the Corridor	Communities Served		12 Communities; Total population = 312,001
	Public Comments		Some support for BRT
	Low-income or Minority Population Concentrations Served		Serves a high number of census tracts with large percentages of low-income and minority population
	Service to Activity Centers within Study Area		Connects some of the key activity centers among all of those located along the alternative routes, including Belvidere and its major employer, Chrysler; the urbanized area between Belvidere and downtown Rockford; Elgin; and the growing area west of Elgin within Kane County.
	Intermodal Connection Opportunities		Multiple RMTD routes at different locations, Milwaukee District - West Line
	Impacts to Vehicular Traffic		Traffic relief on I-90
	Quality and Convenience of Trip		Frequent trips
	Intermodal Connection Opportunities		Multiple RMTD routes at different locations, Milwaukee District - West Line
	Impacts to Planned Transportation Improvements		Planned widening of: Alpine Road, US 20, IL 173 IL 2, I-39, I-90; new interchange at I-90/IL 173, I-90/Irene Road, I-90/IL 39 and I-90/Perry Creek; new Meridian Road Bridge; full interchange at I-90/IL 47
	Consistency with Existing Infrastructure		Uses some existing infrastructure
Goal 3: Develop a Cost Effective Transportation Solution	Order of Magnitude Capital Costs		Major cost is from the construction of 2 lane roadway along I-90 right of way
Goal 4: Support Business, Transportation and Residential Investments	Consistent with Local Adopted Future Land Use/Comp. Plans		Location along I-90 supports future land use plans and growth trends along this corridor. Specifically, this alternative supports the transit goals and future land use plans identified by Cherry Valley, Boone County, Belvidere, Kane County, Elgin, and McHenry County.
	Service to Activity Centers within Study Area		Connects some of the key activity centers among all of those located along the alternative routes, including Belvidere and its major employer, Chrysler; the urbanized area between Belvidere and downtown Rockford; Elgin; and the growing area west of Elgin within Kane County.
	Impacts to Vehicular Traffic		Traffic relief on I-90
Goal 5: Support Effective Land Use and Development Patterns	Compatible with Existing Land Use		Consistent with existing land use patterns due to its location along I-90; the current existing primary commuter transportation corridor between Rockford and Chicago.
	Consistent with Local Adopted Future Land Use/Comp. Plans		Location along I-90 supports future land use plans and growth trends along this corridor. Specifically, this alternative supports the transit goals and future land use plans identified by Cherry Valley, Boone County, Belvidere, Kane County.
Goal 6: Provide a Cleaner, Safer Environment	Consistency with Regional Air Quality Plans		Improves air quality

	This symbol indicates an alternative fully addresses the measure, or is the "best" relative to the consideration.
	This symbol indicates an alternative somewhat or partially addresses the measure. The alternative is acceptable but not preferred relative to the consideration.
	This symbol indicates an alternative fails to address the measure. The alternative is not acceptable relative to the consideration.



Alternative: BRT3 - A "BRT-Gateway" route, with construction of a 2 lane busway alongside the UP Belvidere Subdivision alignment.

Goals	Measures of Effectiveness	First Screen	Comments
Goal 1: Enhance Mobility through and within the Corridor	Communities Served	●	14 communities: Total population = 339,308
	Public Comments	◐	Some support for BRT
	Low-income or Minority Population Concentrations Served	●	Serves a high number of census tracts with large percentages of low-income and minority population
	Service to Activity Centers within Study Area	●	Connects some of the key activity centers among all of those located along the alternative routes, including Belvidere and its major employer, Chrysler; the urbanized area between Belvidere and downtown Rockford; Huntley, Marengo; and Elgin.
	Intermodal Connection Opportunities	●	Multiple RMTD routes at different locations, Milwaukee District - West Line
	Impacts to Vehicular Traffic	◐	Traffic relief on I-90
	Quality and Convenience of Trip	◐	Reasonable travel time; Frequency of vehicles
	Intermodal Connection Opportunities	●	Multiple RMTD routes at different locations, Milwaukee District - West Line
	Impacts to Planned Transportation Improvements	◐	Planned widening of Alpine Road, US 20, IL 173, IL 2, I-39, I-90, full interchange at I-90/IL 39, I 90/IL 47
	Consistency with Existing Infrastructure	○	Uses limited existing infrastructure
Goal 3: Develop a Cost Effective Transportation Solution	Order of Magnitude Capital Costs	○	Major cost is from the construction of 2 lane roadway on private property
Goal 4: Support Business, Transportation and Residential Investments	Consistent with Local Adopted Future Land Use/Comp. Plans	●	Supports growth in already urbanized and growing areas, as opposed to growth in new areas that are currently primarily rural. Specifically, this alternative supports the transit goals and future land use plans identified by Cherry Valley, Boone County, Belvidere, Garden Prairie, McHenry County, Marengo, Huntley, Kane County, and Elgin.
	Service to Activity Centers within Study Area	●	Connects some of the key activity centers among all of those located along the alternative routes, including Belvidere and its major employer, Chrysler; the urbanized area between Belvidere and downtown Rockford; Huntley, Marengo; and Elgin.
	Impacts to Vehicular Traffic	◐	Traffic relief on I-90
Goal 5: Support Effective Land Use and Development Patterns	Compatible with Existing Land Use	◐	Alternative is consistent with existing land use patterns, connecting several of the most urbanized and growing areas between Chicago and Rockford, including Belvidere, Marengo, Huntley, and Elgin. Where sufficient right-of-way does not appear to exist for a busway immediately adjacent to the UP Belvidere Subdivision, alternative may or may not disrupt existing land use patterns, where constructed.
	Consistent with Local Adopted Future Land Use/Comp. Plans	●	Supports growth in already urbanized and growing areas, as opposed to growth in new areas that are currently primarily rural. Specifically, this alternative supports the transit goals and future land use plans identified by Cherry Valley, Boone County, Belvidere, Garden Prairie, McHenry County, Marengo, Huntley, Kane County, and Elgin.
	Consistency with Regional Air Quality Plans	●	Improves air quality

●	This symbol indicates an alternative fully addresses the measure, or is the "best" relative to the consideration.
◐	This symbol indicates an alternative somewhat or partially addresses the measure. The alternative is acceptable but not preferred relative to the consideration.
○	This symbol indicates an alternative fails to address the measure. The alternative is not acceptable relative to the consideration.



Alternative: BRT4 - A "BRT-Guideway" route, with construction of a 2 lane busway alongside the CW/IC&E alignment.

Goals	Measures of Effectiveness	First Screen	Comments
Goal 1: Enhance Mobility through and within the Corridor	Communities Served	<input type="radio"/>	11 communities: Total population = 262,844
	Public Comments	<input checked="" type="radio"/>	Some support for BRT
	Low-income or Minority Population Concentrations Served	<input checked="" type="radio"/>	Serves a high number of census tracts with large percentages of low-income population
	Service to Activity Centers within Study Area	<input type="radio"/>	This alternative connects the fewest number of activity centers between the Chicago suburbs and Rockford.
	Intermodal Connection Opportunities	<input checked="" type="radio"/>	Multiple RMTD routes at different locations. Milwaukee District - West Line
	Impacts to Vehicular Traffic	<input checked="" type="radio"/>	Traffic relief on I-90
Goal 2: Provide Efficient, High Quality Transit Improvements	Quality and Convenience of Trip	<input checked="" type="radio"/>	Reasonable travel time to Big Timber. Frequency of vehicles
	Intermodal Connection Opportunities	<input checked="" type="radio"/>	Multiple RMTD routes at different locations. Milwaukee District - West Line
	Impacts to Planned Transportation Improvements	<input checked="" type="radio"/>	Planned widening of: Alpine Road, US 20, IL 173 IL 2, I-39 I-90; New interchange at I-90/IL 39; new Meridian Road Bridge
	Consistency with Existing Infrastructure	<input type="radio"/>	Uses limited existing infrastructure
	Order of Magnitude Capital Costs	<input type="radio"/>	Major cost is from the construction of 2 lane roadway on private property
	Consistent with Local Adopted Future Land Use/Comp. Plans	<input checked="" type="radio"/>	This alternative illustrates the potential to disturb land use patterns that are currently rural and proposed to be preserved. While this alternative is consistent with transit goals in Cherry Valley, Elgin, and DeKalb County transit goals, it is inconsistent with Bevidere and Boone County's goals. The Genoa Future Land Use Map does not address the potential for transit service.
Goal 3: Develop a Cost Effective Transportation Solution	Service to Activity Centers within Study Area	<input type="radio"/>	This alternative connects the fewest number of activity centers between the Chicago suburbs and Rockford.
	Impacts to Vehicular Traffic	<input checked="" type="radio"/>	Traffic relief on I-90
	Compatible with Existing Land Use	<input checked="" type="radio"/>	Somewhat consistent with existing land use patterns, as the alternative is located along an existing rail line (formerly used for Amtrak passenger rail) and connects the highly urbanized areas of the eastern Rockford metro-area and Elgin. However, this alternative could potentially disrupt existing land use patterns where a) sufficient right-of-way does not appear to exist within urbanized areas for a busway immediately adjacent to the rail line and b) where the route extends through predominantly rural land use between western Kane County and Cherry Valley, potentially spurring unplanned growth if a stop was located along this segment.
	Consistent with Local Adopted Future Land Use/Comp. Plans	<input checked="" type="radio"/>	This alternative illustrates the potential to disturb land use patterns that are currently rural and proposed to be preserved. While this alternative is consistent with transit goals in Cherry Valley, Elgin, and DeKalb County transit goals, it is inconsistent with Bevidere and Boone County's goals. The Genoa Future Land Use Map does not address the potential for transit service.
	Consistency with Regional Air Quality Plans	<input checked="" type="radio"/>	Improves air quality
	Goal 6: Provide a Cleaner, Safer Environment		

<input checked="" type="radio"/>	This symbol indicates an alternative fully addresses the measure, or is the "best" relative to the consideration.
<input checked="" type="radio"/>	This symbol indicates an alternative somewhat or partially addresses the measure. The alternative is acceptable but not preferred relative to the consideration.
<input type="radio"/>	This symbol indicates an alternative fails to address the measure. The alternative is not acceptable relative to the consideration.



Alternative: CR1 - Commuter Rail on BNSF Aurora Subdivision

Goals	Measures of Effectiveness	First Screen	Comments
Goal 1: Enhance Mobility through and within the Corridor	Communities Served	<input checked="" type="radio"/>	17 communities; Total population =354,659; over 40% of population is in Aurora
	Public Comments	<input checked="" type="radio"/>	Greater support for commuter rail
	Low-income or Minority Population Concentrations Served	<input checked="" type="radio"/>	Serves a high number of census tracts with large percentages of low-income and minority populations
	Service to Activity Centers within Study Area	<input type="radio"/>	The only activity centers of note between Aurora and downtown Rockford that could be served by this alternative are Rochelle and the Rockford Airport. By comparing these activity centers to those served by other alternatives, this alternative is not considered acceptable for its service to activity centers.
	Intermodal Connection Opportunities	<input checked="" type="radio"/>	One RMTD Route, potential to modify other RMTD routes, service to Chicago Rockford International Airport, Pace routes in Aurora, Greyhound in Aurora, BNSF trains
	Impacts to Vehicular Traffic	<input type="radio"/>	No impact on I-90
Goal 2: Provide Efficient, High Quality Transit Improvements	Quality and Convenience of Trip	<input checked="" type="radio"/>	Long travel time to Aurora, but reasonable time to downtown Chicago
	Intermodal Connection Opportunities	<input checked="" type="radio"/>	One RMTD Route, potential to modify other RMTD routes, service to Chicago Rockford International Airport, Pace routes in Aurora, Greyhound in Aurora, BNSF trains
	Impacts to Planned Transportation Improvements	<input checked="" type="radio"/>	Planned widening of Alpine Road, Flagg Road, US 20, IL 173, IL 2, I-39, I-90, new Meridian Road bridge
	Consistency with Existing Infrastructure	<input checked="" type="radio"/>	Uses some existing infrastructure
Goal 3: Develop a Cost Effective Transportation Solution	Order of Magnitude Capital Costs	<input checked="" type="radio"/>	Requires upgrading track, signal system and grade crossing protection. Construct passing sidings, third main, stations and parking lots.
Goal 4: Support Business, Transportation and Residential Investments	Consistent with Local Adopted Future Land Use/Comp. Plans	<input type="radio"/>	This alternative demonstrates the potential to potentially spur unwanted/unplanned growth should a stop be located between Aurora and Rockford. While Montgomery and Sugar Grove in Kane County, Rochelle in Ogle County, and DeKalb County support an extension of Meira service, it is not addressed by Lee or Ogle Counties. West of Sugar Grove, the majority of this route extends through agricultural land and very small towns. Consequently, growth along this corridor could work against broader regional growth management efforts.
	Service to Activity Centers within Study Area	<input type="radio"/>	The only activity centers of note between Aurora and downtown Rockford that could be served by this alternative are Rochelle and the Rockford Airport. By comparing these activity centers to those served by other alternatives, this alternative is not considered acceptable for its service to activity centers.
	Impacts to Vehicular Traffic	<input type="radio"/>	No impact on I-90
Goal 5: Support Effective Land Use and Development Patterns	Compatible with Existing Land Use	<input type="radio"/>	Although this alternative is located along an existing rail line and along an existing commuter route, Hwy. 30, it is found to be on the whole inconsistent with existing land use patterns due to its route through predominantly rural areas between Aurora and Rockford, potentially spurring unwanted/unplanned growth should a stop be located between these two endpoints.
	Consistent with Local Adopted Future Land Use/Comp. Plans	<input type="radio"/>	This alternative demonstrates the potential to potentially spur unwanted/unplanned growth should a stop be located between Aurora and Rockford. While Montgomery and Sugar Grove in Kane County, Rochelle in Ogle County, and DeKalb County support an extension of Meira service, it is not addressed by Lee or Ogle Counties. West of Sugar Grove, the majority of this route extends through agricultural land and very small towns. Consequently, growth along this corridor could work against broader regional growth management efforts.
Goal 6: Provide a Cleaner, Safer Environment	Consistency with Regional Air Quality Plans	<input checked="" type="radio"/>	Improves air quality

<input checked="" type="radio"/>	This symbol indicates an alternative fully addresses the measure, or is the "best" relative to the consideration.
<input checked="" type="radio"/>	This symbol indicates an alternative somewhat or partially addresses the measure. The alternative is acceptable but not preferred relative to the consideration.
<input type="radio"/>	This symbol indicates an alternative fails to address the measure. The alternative is not acceptable relative to the consideration.



Alternative: CR2 - Commuter Rail on UP Geneva Subdivision

Goals	Measures of Effectiveness	First Screen	Comments	
<p>Goal 1: Enhance Mobility through and within the Corridor</p> <p>Goal 2: Provide Efficient, High Quality Transit Improvements</p> <p>Goal 3: Develop a Cost Effective Transportation Solution</p> <p>Goal 4: Support Business, Transportation and Residential Investments</p> <p>Goal 5: Support Effective Land Use and Development Patterns</p> <p>Goal 6: Provide a Cleaner, Safer Environment</p>	Communities Served	○	20 communities; Total population = 226,206	
	Public Comments	◐	Greater support for commuter rail	
	Low-income or Minority Population Concentrations Served	◑	Serves a high number of census tracts with large percentages of low-income and minority population	
	Service to Activity Centers within Study Area	◐	The activity centers of note between Elburn and downtown Rockford that could be served by this alternative are DeKalb, Rochelle, and the Rockford Airport. By comparing these activity centers to those served by other alternatives, this alternative is considered somewhat acceptable, but not preferable, for its service to activity centers.	
	Intermodal Connection Opportunities	◐	One RTMTD Route, potential to modify other RTMTD routes, Chicago Rockford International Airport, Union Pacific West Line trains	
	Impacts to Vehicular Traffic	○	No impact traffic on I-90	
	Quality and Convenience of Trip	◑	Short travel time to Elburn and downtown Chicago	
	Intermodal Connection Opportunities	◐	One RTMTD Route, potential to modify other RTMTD routes, Chicago Rockford International Airport, Union Pacific West Line trains	
	Impacts to Planned Transportation Improvements	◐	Planned widening of Alpine Road, Flagg Road, US 20, IL 173 IL 2, I-39 I-90; new Meridian Road Bridge	
	Consistency with Existing Infrastructure	○	Uses limited existing infrastructure	
<p>Goal 3: Develop a Cost Effective Transportation Solution</p> <p>Goal 4: Support Business, Transportation and Residential Investments</p> <p>Goal 5: Support Effective Land Use and Development Patterns</p> <p>Goal 6: Provide a Cleaner, Safer Environment</p>	Order of Magnitude Capital Costs	○	Needs extensive infrastructure. Requires constructing passing sidings, connection between BNSF & UP, third main track along UP, stations and parking lots. Upgrades to track and signal system needed.	
	Consistent with Local Adopted Future Land Use/Comp. Plans	◐	This alternative demonstrates the potential to potentially spur unplanned growth should a stop be located in the predominantly rural areas that dominate the majority of the line. While Rochelle, DeKalb, and Elburn support an extension of Metra service, outside of these cities the majority of the route extends through agricultural land and very small towns. Consequently, growth along this corridor could work against broader regional growth management efforts.	
	Service to Activity Centers within Study Area	◐	The activity centers of note between Elburn and downtown Rockford that could be served by this alternative are DeKalb, Rochelle, and the Rockford Airport. By comparing these activity centers to those served by other alternatives, this alternative is considered somewhat acceptable, but not preferable, for its service to activity centers.	
	Impacts to Vehicular Traffic	○	No impact traffic on I-90	
	Compatible with Existing Land Use	◐	Somewhat consistent with existing land use due to its location on an existing rail line and its service to the urbanized areas of DeKalb and Rochelle. However, this alternative does pass through a considerable amount of rural areas, potentially spurring unwanted/unplanned growth should a stop be located within these segments.	
	Consistent with Local Adopted Future Land Use/Comp. Plans	◐	This alternative demonstrates the potential to potentially spur unplanned growth should a stop be located in the predominantly rural areas that dominate the majority of the line. While Rochelle, DeKalb, and Elburn support an extension of Metra service, outside of these cities the majority of the route extends through agricultural land and very small towns. Consequently, growth along this corridor could work against broader regional growth management efforts.	
	Consistency with Regional Air Quality Plans	◑	Improves air quality	
	<p>Goal 1: Enhance Mobility through and within the Corridor</p> <p>Goal 2: Provide Efficient, High Quality Transit Improvements</p> <p>Goal 3: Develop a Cost Effective Transportation Solution</p> <p>Goal 4: Support Business, Transportation and Residential Investments</p> <p>Goal 5: Support Effective Land Use and Development Patterns</p> <p>Goal 6: Provide a Cleaner, Safer Environment</p>		◑	This symbol indicates an alternative fully addresses the measure, or is the "best" relative to the consideration.
			◐	This symbol indicates an alternative somewhat or partially addresses the measure. The alternative is acceptable but not preferred relative to the consideration.
			○	This symbol indicates an alternative fails to address the measure. The alternative is not acceptable relative to the consideration.



Alternative: CR3 - Commuter Rail on CN to Rockford

Goals	Measures of Effectiveness	First Screen	Comments
Goal 1: Enhance Mobility through and within the Corridor	Communities Served	<input type="radio"/>	12 communities; Total population = 280,991
	Public Comments	<input checked="" type="radio"/>	Greater support for commuter rail
	Low-income or Minority Population Concentrations Served	<input checked="" type="radio"/>	Serves census tracts with low-income and minority population only in Rockford & near Elgin
	Service to Activity Centers within Study Area	<input type="radio"/>	Connects the fewest number of activity centers between the Chicago suburbs and Rockford.
	Intermodal Connection Opportunities	<input type="radio"/>	RM/MTD routes at two locations, Amtrak at Union Station
	Impacts to Vehicular Traffic	<input checked="" type="radio"/>	Traffic relief on I-90
Goal 2: Provide Efficient, High Quality Transit Improvements	Quality and Convenience of Trip	<input checked="" type="radio"/>	Reasonable travel time to downtown Chicago
	Intermodal Connection Opportunities	<input type="radio"/>	RM/MTD routes at two locations, Amtrak at Union Station
	Impacts to Planned Transportation Improvements	<input checked="" type="radio"/>	Planned widening of: Alpine Road, US 20, IL 173, IL 2, I-39, I-90; new interchange at I-90/IL 39; new Meridian Road Bridge
	Consistency with Existing Infrastructure	<input checked="" type="radio"/>	Uses some existing infrastructure
Goal 3: Develop a Cost Effective Transportation Solution	Order of Magnitude Capital Costs	<input checked="" type="radio"/>	Requires some track upgrade along entire route, CTC signal system, freight mitigation passing sidings, grade crossing protection, stations and parking lots
Goal 4: Support Business, Transportation and Residential Investments	Consistent with Local Adopted Future Land Use/Comp. Plans	<input type="radio"/>	This alternative illustrates the potential to disturb rural land use patterns that are currently rural and proposed to be preserved. While this alternative is consistent with the transit goals of Cherry Valley, Burlington, South Elgin, and DeKalb County, it is inconsistent with the goals of Belvidere, Boone County, and Kane County for agricultural land preservation. The Genoa Future Land Use Map does not address the potential for transit service.
	Service to Activity Centers within Study Area	<input type="radio"/>	Connects the fewest number of activity centers between the Chicago suburbs and Rockford.
	Impacts to Vehicular Traffic	<input checked="" type="radio"/>	Traffic relief on I-90
Goal 5: Support Effective Land Use and Development Patterns	Compatible with Existing Land Use	<input checked="" type="radio"/>	Somewhat consistent with existing land use patterns as it is located on an existing rail line (formerly used for Amtrak passenger rail) and connects the highly urbanized areas of the eastern Rockford metro-area and the northwest Chicago area. However, this alternative could potentially disrupt existing land use patterns where the route extends through predominantly rural land use between western Kane County and Cherry Valley, potentially spurring unwanted/unplanned growth should a stop be located along this segment.
	Consistent with Local Adopted Future Land Use/Comp. Plans	<input type="radio"/>	This alternative illustrates the potential to disturb rural land use patterns that are currently rural and proposed to be preserved. While this alternative is consistent with the transit goals of Cherry Valley, Burlington, South Elgin, and DeKalb County, it is inconsistent with the goals of Belvidere, Boone County, and Kane County for agricultural land preservation. The Genoa Future Land Use Map does not address the potential for transit service.
Goal 6: Provide a Cleaner, Safer Environment	Consistency with Regional Air Quality Plans	<input checked="" type="radio"/>	Improves air quality

<input checked="" type="radio"/>	This symbol indicates an alternative fully addresses the measure, or is the "best" relative to the consideration.
<input checked="" type="radio"/>	This symbol indicates an alternative somewhat or partially addresses the measure. The alternative is acceptable but not preferred relative to the consideration.
<input type="radio"/>	This symbol indicates an alternative fails to address the measure. The alternative is not acceptable relative to the consideration.



Alternative: CR4 - Commuter Rail on IC&E and CN

Goals	Measures of Effectiveness	First Screen	Comments
Goal 1: Enhance Mobility through and within the Corridor	Communities Served	<input checked="" type="radio"/>	15 communities: Total population = 287,557
	Public Comments	<input checked="" type="radio"/>	Greater support of commuter rail
	Low-income or Minority Population Concentrations Served	<input checked="" type="radio"/>	Serves a high number of census tracts with large percentages of low-income population
	Service to Activity Centers within Study Area	<input type="radio"/>	Connects the fewest number of activity centers between the Chicago suburbs and Rockford.
	Intermodal Connection Opportunities	<input checked="" type="radio"/>	RM/TD at two locations, Chicago Rockford International Airport, Milwaukee District West Line
	Impacts to Vehicular Traffic	<input checked="" type="radio"/>	Traffic relief on I-90
Goal 2: Provide Efficient, High Quality Transit Improvements	Quality and Convenience of Trip	<input checked="" type="radio"/>	Short travel time to Big Timber and downtown Chicago
	Intermodal Connection Opportunities	<input checked="" type="radio"/>	RM/TD at two locations, Chicago Rockford International Airport, Milwaukee District West Line
	Impacts to Planned Transportation Improvements	<input checked="" type="radio"/>	Planned widening of: Alpine Road, US 20, IL 173, IL 2, I-39, I-90; new interchange at I-90/IL 39; new Meridian Road Bridge/full interchange at I-90/IL 47
	Consistency with Existing Infrastructure	<input checked="" type="radio"/>	Uses some existing infrastructure
Goal 3: Develop a Cost Effective Transportation Solution	Order of Magnitude Capital Costs	<input checked="" type="radio"/>	Requires determining the feasibility of connecting the CN to the IC&E and construction of lengthy new railroad track
Goal 4: Support Business, Transportation and Residential Investments	Consistent with Local Adopted Future Land Use/Comp. Plans	<input checked="" type="radio"/>	This alternative illustrates the potential to disturb land use patterns that are currently rural and proposed to be preserved. This alternative is consistent with transit goals in Cherry Valley, Elgin, and DeKalb County, but is inconsistent with Belvidere and Boone County's goals. The Genoa Future Land Use Map does not address the potential for transit service.
	Service to Activity Centers within Study Area	<input type="radio"/>	Connects the fewest number of activity centers between the Chicago suburbs and Rockford.
	Impacts to Vehicular Traffic	<input checked="" type="radio"/>	Traffic relief on I-90
Goal 5: Support Effective Land Use and Development Patterns	Compatible with Existing Land Use	<input checked="" type="radio"/>	Somewhat consistent with existing land use patterns as it is located on an existing rail line (formerly used for Amtrak passenger rail) and connects the highly urbanized areas of the eastern Rockford metro-area and Elgin. However, this alternative could potentially disrupt existing land use patterns where the route extends through predominantly rural land use between western Kane County and Cherry Valley, potentially spurring unwanted/unplanned growth should a stop be located along this segment.
	Consistent with Local Adopted Future Land Use/Comp. Plans	<input checked="" type="radio"/>	This alternative illustrates the potential to disturb land use patterns that are currently rural and proposed to be preserved. This alternative is consistent with transit goals in Cherry Valley, Elgin, and DeKalb County, but is inconsistent with Belvidere and Boone County's goals. The Genoa Future Land Use Map does not address the potential for transit service.
Goal 6: Provide a Cleaner, Safer Environment	Consistency with Regional Air Quality Plans	<input checked="" type="radio"/>	Improves air quality

<input checked="" type="radio"/>	This symbol indicates an alternative fully addresses the measure, or is the "best" relative to the consideration.
<input checked="" type="radio"/>	This symbol indicates an alternative somewhat or partially addresses the measure. The alternative is acceptable but not preferred relative to the consideration.
<input type="radio"/>	This symbol indicates an alternative fails to address the measure. The alternative is not acceptable relative to the consideration.



Alternative: CR5 - Commuter Rail on IC&E and IL Railway

Goals	Measures of Effectiveness	First Screen	Comments
Goal 1: Enhance Mobility through and within the Corridor	Communities Served		17 communities: Total population = 289,214
	Public Comments		Greater support for commuter rail
	Low-income or Minority Population Concentrations Served		Serves census tracts with low-income and minority population only in Rockford & near Elgin
	Service to Activity Centers within Study Area		Connects the fewest number of activity centers between the Chicago suburbs and Rockford, although it does connect to Rockford Airport.
	Intermodal Connection Opportunities		One RMTD, potential to modify others, Chicago Rockford International Airport, Milwaukee District West Line
	Impacts to Vehicular Traffic		Traffic relief on I-90
Goal 2: Provide Efficient, High Quality Transit Improvements	Quality and Convenience of Trip		Comparable travel times
	Intermodal Connection Opportunities		One RMTD, potential to modify others, Chicago Rockford International Airport, Milwaukee District West Line
	Impacts to Planned Transportation Improvements		Planned widening of: Alpine Road, Flagg Road, US 20, IL 173, IL 2, I-39, I-90; new interchange at, I-90/IL 39; new Meridian Road Bridge; full interchange at I-90/IL 47
	Consistency with Existing Infrastructure		Uses some existing infrastructure
Goal 3: Develop a Cost Effective Transportation Solution	Order of Magnitude Capital Costs		Requires track connection to access downtown Rockford station, upgrades to track, installation of signal system, and additional passing sidings.
Goal 4: Support Business, Transportation and Residential Investments	Consistent with Local Adopted Future Land Use/Comp. Plans		This alternative supports land use plans in winnebago County, but has the potential to disturb land use patterns in other areas that are currently rural and proposed to be preserved. While this alternative is consistent with Elgin and DeKalb County's transit goals, it is not addressed by Genoa, Davis Junction, or Ogle County.
	Service to Activity Centers within Study Area		Connects the fewest number of activity centers between the Chicago suburbs and Rockford, although it does connect to Rockford Airport.
	Impacts to Vehicular Traffic		Traffic relief on I-90
Goal 5: Support Effective Land Use and Development Patterns	Compatible with Existing Land Use		Somewhat consistent with existing land use patterns as it is located on an existing rail line and connects the urbanized areas of downtown Rockford and Elgin. However, this alternative could potentially disrupt existing land use patterns where the route extends through predominantly rural land use between western Kane County and southern Winnebago County, potentially spurring unplanned growth should a stop be located along this segment.
	Consistent with Local Adopted Future Land Use/Comp. Plans		This alternative supports land use plans in winnebago County, but has the potential to disturb land use patterns in other areas that are currently rural and proposed to be preserved. While this alternative is consistent with Elgin and DeKalb County's transit goals, it is not addressed by Genoa, Davis Junction, or Ogle County.
Goal 6: Provide a Cleaner, Safer Environment	Consistency with Regional Air Quality Plans		Improves air quality

	This symbol indicates an alternative fully addresses the measure, or is the "best" relative to the consideration.
	This symbol indicates an alternative somewhat or partially addresses the measure. The alternative is acceptable but not preferred relative to the consideration.
	This symbol indicates an alternative fails to address the measure. The alternative is not acceptable relative to the consideration.



Alternative: CR6 - Commuter Rail on UP Belvidere Subdivision

Goals	Measures of Effectiveness	First Screen	Comments
Goal 1: Enhance Mobility through and within the Corridor	Communities Served	●	16 communities: Total population - 342,186
	Public Comments	●	Greater support for commuter rail
	Low-income or Minority Population Concentrations Served	●	Serves a high number of census tracts with large percentages of low-income and minority populations
	Service to Activity Centers within Study Area	●	Connects some of the key activity centers among all of those located along the alternative routes, including Belvidere and its major employer, Chrysler; the urbanized area between Belvidere and downtown Rockford; Huntley; Marengo; and Elgin.
	Intermodal Connection Opportunities	○	RMTD at two locations, Milwaukee District West Line
	Impacts to Vehicular Traffic	◐	Traffic relief on I-90
Goal 2: Provide Efficient, High Quality Transit Improvements	Quality and Convenience of Trip	●	Short travel time to Big Timber and downtown Chicago
	Intermodal Connection Opportunities	○	RMTD at two locations, Milwaukee District West Line
	Impacts to Planned Transportation Improvements	●	Planned widening of: Alpine Road, US 20, IL 173, IL 2, I-39, I-90; new interchange at I-90/Irene Road, I-90/L 39, and I-90/Perry Creek; new Meridian Road Bridge; full interchange at I-90/L 47
	Consistency with Existing Infrastructure	●	Uses mostly existing infrastructure
Goal 3: Develop a Cost Effective Transportation Solution	Order of Magnitude Capital Costs	◐	Moderate track upgrade and trackage rights on moderately busy railroad. Forty miles of track is set for 70 MPH service.
Goal 4: Support Business, Transportation and Residential Investments	Consistent with Local Adopted Future Land Use/Comp. Plans	●	By connecting several of the larger communities between Rockford and the Chicago-area, this alternative supports growth in already urbanized and growing areas, as opposed to growth in new areas that are currently primarily rural. Specifically, this alternative supports the transit goals and future land use plans identified by Cherry Valley, Boone County, Belvidere, Garden Prairie, McHenry County, Marengo, Huntley, Kane County, and Elgin.
	Service to Activity Centers within Study Area	●	Connects some of the key activity centers among all of those located along the alternative routes, including Belvidere and its major employer, Chrysler; the urbanized area between Belvidere and downtown Rockford; Huntley; Marengo; and Elgin.
	Impacts to Vehicular Traffic	◐	Traffic relief on I-90
Goal 5: Support Effective Land Use and Development Patterns	Compatible with Existing Land Use	●	Consistent with existing land use patterns as it connects several of the most urbanized and growing areas between Chicago and Rockford, including Belvidere, Marengo, Huntley, and Elgin.
	Consistent with Local Adopted Future Land Use/Comp. Plans	●	By connecting several of the larger communities between Rockford and the Chicago-area, this alternative supports growth in already urbanized and growing areas, as opposed to growth in new areas that are currently primarily rural. Specifically, this alternative supports the transit goals and future land use plans identified by Cherry Valley, Boone County, Belvidere, Garden Prairie, McHenry County, Marengo, Huntley, Kane County, and Elgin.
Goal 6: Provide a Cleaner, Safer Environment	Consistency with Regional Air Quality Plans	●	Improves air quality

●	This symbol indicates an alternative fully addresses the measure, or is the "best" relative to the consideration.
◐	This symbol indicates an alternative somewhat or partially addresses the measure. The alternative is acceptable but not preferred relative to the consideration.
○	This symbol indicates an alternative fails to address the measure. The alternative is not acceptable relative to the consideration.



Alternative: CR7 - Connection to UP Northwest Line

Goals	Measures of Effectiveness	First Screen	Comments
Goal 1: Enhance Mobility through and within the Corridor	Communities Served	<input type="radio"/>	9 communities; Total Population = 187,762
	Public Comments	<input checked="" type="radio"/>	Greater support for commuter rail
	Low-income or Minority Population Concentrations Served	<input checked="" type="radio"/>	Serves the most census tracts with large percentages of low-income and minority populations
	Service to Activity Centers within Study Area	<input checked="" type="radio"/>	This alternative could serve several activity centers within the northern Rockford metro area, including Loves Park, Machesney Park, Roscoe, Rockton, and South Beloit but not serve any major activity centers between these communities and Harvard.
	Intermodal Connection Opportunities	<input type="radio"/>	One RMTD, potential to modify other routes, Union Pacific Northwest Line
	Impacts to Vehicular Traffic	<input checked="" type="radio"/>	Traffic relief on I-90
Goal 2: Provide Efficient, High Quality Transit Improvements	Quality and Convenience of Trip	<input checked="" type="radio"/>	Short trip to Harvard and downtown Chicago
	Intermodal Connection Opportunities	<input type="radio"/>	One RMTD, potential to modify other routes, Union Pacific Northwest Line
	Impacts to Planned Transportation Improvements	<input checked="" type="radio"/>	Planned widening of: Alpine Road, US 20, IL 173, IL 2, I-39, I-90, new interchange at I-90/Irene Road, I-90/IL 39, and I-90/Perry Creek; new Meridian Road Bridge
	Consistency with Existing Infrastructure	<input type="radio"/>	Uses limited existing infrastructure
Goal 3: Develop a Cost Effective Transportation Solution	Order of Magnitude Capital Costs	<input checked="" type="radio"/>	Requires acquiring 20+ miles of abandoned right of way and constructing railroad to Harvard.
Goal 4: Support Business, Transportation and Residential Investments	Consistent with Local Adopted Future Land Use/Comp. Plans	<input type="radio"/>	This alternative connects an urbanized corridor containing several mid-size communities within the northern Rockford metro area and supports Loves Park's and Machesney Park's goals of regional transit connectivity. However, this alternative is, on the whole, inconsistent with future land use due to its location along a rail line that has already been converted to a recreational trail and is proposed to remain a trail through Boone and Winnebago Counties.
	Service to Activity Centers within Study Area	<input checked="" type="radio"/>	This alternative could serve several activity centers within the northern Rockford metro area, including Loves Park, Machesney Park, Roscoe, Rockton, and South Beloit but not serve any major activity centers between these communities and Harvard.
	Impacts to Vehicular Traffic	<input checked="" type="radio"/>	Traffic relief on I-90
Goal 5: Support Effective Land Use and Development Patterns	Compatible with Existing Land Use	<input type="radio"/>	Although this alternative connects an urbanized corridor containing several mid-size communities within the northern Rockford metro area, this alternative is on the whole inconsistent with existing land use due to its location along a rail line that has already been converted to a recreational trail through Boone and Winnebago Counties.
	Consistent with Local Adopted Future Land Use/Comp. Plans	<input type="radio"/>	This alternative connects an urbanized corridor containing several mid-size communities within the northern Rockford metro area and supports Loves Park's and Machesney Park's goals of regional transit connectivity. However, this alternative is, on the whole, inconsistent with future land use due to its location along a rail line that has already been converted to a recreational trail and is proposed to remain a trail through Boone and Winnebago Counties.
Goal 6: Provide a Cleaner, Safer Environment	Consistency with Regional Air Quality Plans	<input checked="" type="radio"/>	Improves air quality

<input checked="" type="radio"/>	This symbol indicates an alternative fully addresses the measure, or is the "best" relative to the consideration.
<input checked="" type="radio"/>	This symbol indicates an alternative somewhat or partially addresses the measure. The alternative is acceptable but not preferred relative to the consideration.
<input type="radio"/>	This symbol indicates an alternative fails to address the measure. The alternative is not acceptable relative to the consideration.



Alternative: LRT1 - LRT along I-90

Goals	Measures of Effectiveness	First Screen	Comments
<p>Goal 1: Enhance Mobility through and within the Corridor</p>	Communities Served	<input type="radio"/>	11 communities: Total population = 283,871
	Public Comments	<input type="radio"/>	Little support for LRT
	Low-income or Minority Population Concentrations Served	<input checked="" type="radio"/>	Serves a high number of census tracts with large percentages of low-income and minority population
	Service to Activity Centers within Study Area	<input checked="" type="radio"/>	Connects some of the key activity centers among all of those located along the alternative routes, including Belvidere and its major employer, Chrysler; the urbanized area between Belvidere and downtown Rockford; Elgin; and the growing area west of Elgin within Kane County.
	Intermodal Connection Opportunities	<input checked="" type="radio"/>	Multiple RMTD routes at different locations, Milwaukee District - West Line
	Impacts to Vehicular Traffic	<input type="radio"/>	Traffic relief on I-90
	Quality and Convenience of Trip	<input type="radio"/>	Average trip length
	Intermodal Connection Opportunities	<input checked="" type="radio"/>	Multiple RMTD routes at different locations, Milwaukee District - West Line
	Impacts to Planned Transportation Improvements	<input checked="" type="radio"/>	Planned widening of: Alpine Road, US 20, IL 173, IL 2, I-39, I-90; new interchange at I-90/Irene Road, I-90/IL 39, and I-90/Perry Creek; new Meridian Road Bridge; full interchange at I-90/IL 47
	Consistency with Existing Infrastructure	<input type="radio"/>	Uses limited existing infrastructure
<p>Goal 3: Develop a Cost Effective Transportation Solution</p>	Order of Magnitude Capital Costs	<input type="radio"/>	Requires extensive new infrastructure: track, crossing protection, overhead wires, power substations, and maintenance facility
	Consistent with Local Adopted Future Land Use/Comp. Plans	<input checked="" type="radio"/>	Location along I-90 supports future land use plans and growth trends along this corridor. Specifically, this alternative supports the transit goals and future land use plans identified by Cherry Valley, Boone County, Belvidere, Kane County, and Elgin.
<p>Goal 4: Support Business, Transportation and Residential Investments</p>	Service to Activity Centers within Study Area	<input checked="" type="radio"/>	Connects some of the key activity centers among all of those located along the alternative routes, including Belvidere and its major employer, Chrysler; the urbanized area between Belvidere and downtown Rockford; Elgin; and the growing area west of Elgin within Kane County.
	Impacts to Vehicular Traffic	<input type="radio"/>	Traffic relief on I-90
	Compatible with Existing Land Use	<input checked="" type="radio"/>	Consistent with existing land use patterns due to its location along I-90, the current existing primary commuter transportation corridor between Rockford and Chicago.
<p>Goal 5: Support Effective Land Use and Development Patterns</p>	Consistent with Local Adopted Future Land Use/Comp. Plans	<input checked="" type="radio"/>	Location along I-90 supports future land use plans and growth trends along this corridor. Specifically, this alternative supports the transit goals and future land use plans identified by Cherry Valley, Boone County, Belvidere, Kane County, and Elgin.
	Consistency with Regional Air Quality Plans	<input checked="" type="radio"/>	Improves air quality

<input checked="" type="radio"/>	This symbol indicates an alternative fully addresses the measure, or is the "best" relative to the consideration.
<input type="radio"/>	This symbol indicates an alternative somewhat or partially addresses the measure. The alternative is acceptable but not preferred relative to the consideration.
<input type="radio"/>	This symbol indicates an alternative fails to address the measure. The alternative is not acceptable relative to the consideration.



Alternative: LRT2 - LRT along UP Belvidere Subdivision

Goals	Measures of Effectiveness	First Screen	Comments	
<p>Goal 1: Enhance Mobility through and within the Corridor</p> <p>Goal 2: Provide Efficient, High Quality Transit Improvements</p> <p>Goal 3: Develop a Cost Effective Transportation Solution</p> <p>Goal 4: Support Business, Transportation and Residential Investments</p> <p>Goal 5: Support Effective Land Use and Development Patterns</p> <p>Goal 6: Provide a Cleaner, Safer Environment</p>	Communities Served	<input type="radio"/>	10 communities: Total population = 280,971	
	Public Comments	<input type="radio"/>	Little support for light rail	
	Low-income or Minority Population Concentrations Served	<input checked="" type="radio"/>	Serves a high number of census tracts with large percentages of low-income and minority population	
	Service to Activity Centers within Study Area	<input checked="" type="radio"/>	Connects some of the key activity centers among all of those located along the alternative routes, including Belvidere and its major employer, Chrysler; the urbanized area between Belvidere and downtown Rockford; Huntley, Marengo, and Elgin	
	Intermodal Connection Opportunities	<input checked="" type="radio"/>	Multiple RMTD routes at different locations, Milwaukee District - West Line	
	Impacts to Vehicular Traffic	<input type="radio"/>	Traffic relief on I-90	
	Quality and Convenience of Trip	<input type="radio"/>	Reasonable travel time to Big Timber.	
	Intermodal Connection Opportunities	<input checked="" type="radio"/>	Multiple RMTD routes at different locations, Milwaukee District - West Line	
	Impacts to Planned Transportation Improvements	<input checked="" type="radio"/>	Planned widening of Alpine Road, US 20, IL 173, IL 2, I-39, I-90; New interchange at I-90/Irene Road, I-90/IL 39, and I-90/Perry Creek; new Meridian Road Bridge/full interchange at I-90/IL 47	
	Consistency with Existing Infrastructure	<input type="radio"/>	Uses limited existing infrastructure	
<p>Goal 3: Develop a Cost Effective Transportation Solution</p> <p>Goal 4: Support Business, Transportation and Residential Investments</p> <p>Goal 5: Support Effective Land Use and Development Patterns</p> <p>Goal 6: Provide a Cleaner, Safer Environment</p>	Order of Magnitude Capital Costs	<input type="radio"/>	Requires purchase of railroad and extensive new infrastructure: track, crossing protection, overhead wires, power substations, and maintenance facility	
	Consistent with Local Adopted Future Land Use/Comp. Plans	<input checked="" type="radio"/>	Supports growth in already urbanized and growing areas, as opposed to growth in new areas that are currently primarily rural. Specifically, this alternative supports the transit goals and future land use plans identified by Cherry Valley, Boone County, Belvidere, Garden Prairie, McHenry County, Marengo, Huntley, Kane County, and Elgin.	
	Service to Activity Centers within Study Area	<input checked="" type="radio"/>	Connects some of the key activity centers among all of those located along the alternative routes, including Belvidere and its major employer, Chrysler; the urbanized area between Belvidere and downtown Rockford; Huntley, Marengo, and Elgin	
	Impacts to Vehicular Traffic	<input type="radio"/>	Traffic relief on I-90	
	Compatible with Existing Land Use	<input type="radio"/>	For the most part, consistent with existing land use patterns as it connects several of the most urbanized and growing areas between Chicago and Rockford, including Belvidere, Marengo, Huntley, and Elgin. If this alternative is not located on the existing railway, and if sufficient right-of-way does not exist to construct the track immediately adjacent to the UP Belvidere Subdivision through areas where development abuts the existing rail, it may or may not disrupt existing land use patterns, where constructed.	
	Consistent with Local Adopted Future Land Use/Comp. Plans	<input checked="" type="radio"/>	Supports growth in already urbanized and growing areas, as opposed to growth in new areas that are currently primarily rural. Specifically, this alternative supports the transit goals and future land use plans identified by Cherry Valley, Boone County, Belvidere, Garden Prairie, McHenry County, Marengo, Huntley, Kane County, and Elgin.	
	Consistency with Regional Air Quality Plans	<input checked="" type="radio"/>	Improves air quality	
	<p>Goal 3: Develop a Cost Effective Transportation Solution</p> <p>Goal 4: Support Business, Transportation and Residential Investments</p> <p>Goal 5: Support Effective Land Use and Development Patterns</p> <p>Goal 6: Provide a Cleaner, Safer Environment</p>	Order of Magnitude Capital Costs	<input type="radio"/>	Requires purchase of railroad and extensive new infrastructure: track, crossing protection, overhead wires, power substations, and maintenance facility
		Consistent with Local Adopted Future Land Use/Comp. Plans	<input checked="" type="radio"/>	Supports growth in already urbanized and growing areas, as opposed to growth in new areas that are currently primarily rural. Specifically, this alternative supports the transit goals and future land use plans identified by Cherry Valley, Boone County, Belvidere, Garden Prairie, McHenry County, Marengo, Huntley, Kane County, and Elgin.
		Service to Activity Centers within Study Area	<input checked="" type="radio"/>	Connects some of the key activity centers among all of those located along the alternative routes, including Belvidere and its major employer, Chrysler; the urbanized area between Belvidere and downtown Rockford; Huntley, Marengo, and Elgin

<input checked="" type="radio"/>	This symbol indicates an alternative fully addresses the measure, or is the "best" relative to the consideration.
<input type="radio"/>	This symbol indicates an alternative somewhat or partially addresses the measure. The alternative is acceptable but not preferred relative to the consideration.
<input type="radio"/>	This symbol indicates an alternative fails to address the measure. The alternative is not acceptable relative to the consideration.



ADDENDUM

'Order of Magnitude' Cost Estimates

**NICTI Alternatives Analysis
First Level Screening Report Addendum
'Order of Magnitude' Capital Cost Estimates**

This memorandum documents the capital cost estimates prepared for the initial alternatives considered during the first level screening. The purpose of these cost estimates was to provide an "order of magnitude" estimate of the total cost to develop each of the thirteen alternatives. Capital cost was one of the key criteria used for the first level screening. This memorandum is an addendum to the First Level Screening report dated February 7, 2007.

The estimates were developed without the benefit of engineering assessments of the alternatives. Rather, the estimates were based on information available to the consultant team from various sources and the team's experience with bus and rail transit systems.

The capital cost estimates include the following:

- Guideway construction (track and related systems, bus way, etc.).
- Stations
- Storage and maintenance facilities
- Rolling stock (locomotives, passenger cars, buses)
- Design costs

In addition, the estimates include a 30% contingency reflecting the uncertainty associated with this type of conceptual cost estimation. The cost estimates are sufficient for the purpose of differentiating among the alternatives at the initial screen level.

The following is a list of the initial alternatives. Additional information on these alternatives is available in the NICTI Initial Alternatives report dated January 17, 2007.

Table 1. Initial Build Alternatives

Alternative	Mode	Alignment
BRT1	BRT - Priority	I-90 – transit priority
BRT2	BRT - Guideway	I-90 – dedicated lane
BRT3	BRT - Guideway	UP – Belvidere exclusive busway
BRT4	BRT - Guideway	CN/IC&E – exclusive busway
CR1	Commuter Rail	BNSF Aurora Subdivision
CR2	Commuter Rail	UP Geneva Subdivision
CR3	Commuter Rail	Canadian National to Rockford
CR4	Commuter Rail	IC&E to CN to Rockford
CR5	Commuter Rail	IC&E to Illinois Railway
CR6	Commuter Rail	UP Belvidere Subdivision
CR7	Commuter Rail	UP Harvard Subdivision
LRT1	Light Rail Transit	I-90
LRT2	Light Rail Transit	UP Belvidere Subdivision

There are varying levels of development required for the alternatives.

BRT1 assumes limited construction to provide priority for buses operating along I-90. The work assumes upgrading the existing shoulders for use as queue jumper lanes, construction of

exclusive bus ramps for access and egress to I-90 and a new busway from I-90 to the Big Timber Metra station. BRT2 assumes the construction of a one-lane reversible busway or HOV lane on I-90. The BRT3 and BRT4 alternatives that require a new guideway assume the construction of a two-lane busway with ramps and other connections for access and egress. The cost estimates include 20 bus stop “stations” on routes leading to the Tollway or busway, and three major stations on the guideway with park and ride lots. A fleet of 48 buses is included along with an operating and maintenance facility for the bus fleet.

The commuter rail alternatives assume track upgrades and capacity improvements sufficient to support passenger rail service at 79 MPH. This includes necessary signals and crossing protection. The commuter rail costs also include stations with park and ride lots.

In general, the assumption relative to operations was that semi-express trains would operate east of Big Timber and this would require four additional sets of equipment. Each equipment set would consist of one locomotive, five bi-level trailer cars and one bi-level cab car to provide sufficient seating (850+) and would be utilized easily for other runs without switching. The cost per train would be \$15.3M; four sets would be \$61.2M. This figure would apply to all CR Alternatives.

The light rail alternatives assume the construction of a single track line, with passing sidings, from Big Timber to Rockford. The cost estimates include stations, a fleet of 30 LRVs and a storage and maintenance facility.

Table 2 shows the order of magnitude capital costs for the thirteen initial alternatives.

Table 2. Preliminary Order of Magnitude Capital Costs

Alternative	Mode	Cost
BRT1	BRT - Priority	\$87,200,000
BRT2	BRT - Guideway	\$278,393,000
BRT3	BRT - Guideway	\$568,001,000
BRT4	BRT - Guideway	\$549,380,000
CR1	Commuter Rail	\$243,331,000
CR2	Commuter Rail	\$314,789,000
CR3	Commuter Rail	\$263,814,000
CR4	Commuter Rail	\$237,583,000
CR5	Commuter Rail	\$223,611,000
CR6	Commuter Rail	\$202,703,000
CR7	Commuter Rail	\$275,747,000
LRT1	Light Rail Transit	\$594,991,000
LRT2	Light Rail Transit	\$528,795,000

Table 3 shows additional detail on the bus rapid transit alternatives.

Table 3. Preliminary Order of Magnitude Capital Costs - BRT Alternatives

Cost Item	BRT1	BRT2	BRT3	BRT4
Guidway	\$29,077,273	\$176,148,485	\$398,523,636	\$388,160,000
Facilities	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000
Stations	\$8,800,000	\$8,800,000	\$9,200,000	\$5,240,000
Rollingstock	\$19,200,000	\$19,200,000	\$19,200,000	\$19,200,000
Subtotal	\$67,077,273	\$214,148,485	\$436,923,636	\$422,600,000
Contingency	\$20,123,182	\$64,244,545	\$131,077,091	\$126,780,000
Design	\$7,181,591	\$29,242,273	\$62,658,545	\$60,510,000
TOTAL	\$87,200,000	\$278,393,000	\$568,001,000	\$549,380,000

Table 4 shows additional information on the commuter rail alternatives.

Table 4. Preliminary Order of Magnitude Capital Costs - Commuter Rail Alternatives

Cost Item	CR1	CR2	CR3	CR4	CR5	CR6	CR7
Guidway	\$106,945,965	\$164,963,965	\$61,502,240	\$98,499,283	\$91,776,325	\$67,493,616	\$127,856,680
Facilities	\$4,181,780	\$4,181,780	\$4,181,780	\$4,181,780	\$4,181,780	\$4,181,780	\$4,181,780
Stations	\$14,850,000	\$11,800,000	\$14,850,000	\$18,875,000	\$14,850,000	\$23,050,000	\$18,875,000
Rollingstock	\$61,200,000	\$61,200,000	\$122,400,000	\$61,200,000	\$61,200,000	\$61,200,000	\$61,200,000
Subtotal	\$187,177,745	\$242,145,745	\$202,934,020	\$182,756,063	\$172,008,105	\$155,925,396	\$212,113,460
Contingency	\$56,153,324	\$72,643,724	\$60,880,206	\$54,826,819	\$51,602,432	\$46,777,619	\$63,634,038
Design	\$18,896,662	\$27,141,862	\$12,080,103	\$18,233,409	\$16,621,216	\$14,208,809	\$22,637,019
TOTAL	\$243,331,000	\$314,789,000	\$263,814,000	\$237,583,000	\$223,611,000	\$202,703,000	\$275,747,000

Table 5 shows additional detail on the light rail transit alternatives.

Table 5. Preliminary Order of Magnitude Capital Costs - LRT Alternatives

Cost Item	LRT1	LRT2
Guidway	\$351,385,000	\$306,765,000
Facilities	\$15,500,000	\$15,500,000
Stations	\$19,300,000	\$13,000,000
Rollingstock	\$71,500,000	\$71,500,000
Subtotal	\$457,685,000	\$406,765,000
Contingency	\$137,305,500	\$122,029,500
Design	\$57,927,750	\$50,289,750
TOTAL	\$594,991,000	\$528,795,000

Capital costs will be estimated in greater detail for the alternatives that are selected to advance to the detailed screening phase.