

EXECUTIVE SUMMARY
Feasibility Report on Proposed Amtrak Service
Quad Cities-Chicago

Prepared By:

M.W. Franke
Assistant Vice President – State and Commuter Partnerships (Central)

R. P. Hoffman
Principal Officer – Midwest Corridors

B. E. Hillblom
Senior Director - State Partnerships

Amtrak
Chicago, Illinois
January 7, 2008



EXECUTIVE SUMMARY
Feasibility Report on Proposed Amtrak Service
Quad Cities-Chicago
Table of Contents

| | | |
|------|--------------------------------------------------------|-------|
| I. | Introduction and Background | 3 |
| | I.A. General Discussion | 3 |
| | I.B. Rolling Stock | 6 |
| | I.C. Station Facilities | 6 |
| II. | Discussion of Alternative Routes | 7 |
| | II.A. Route A (IAIS-BNSF-Amtrak) | 8 |
| | II.A.1. General Description | 8 |
| | II.A.2. Capital Requirements | 8 |
| | II.A.2.i. Recommended Track Upgrading | 8 |
| | II.A.2.ii. Proposed Construction of Connection Track | 8 |
| | II.A.2.iii. Order of Magnitude Summary of Capital Cost | 8 |
| | II.A.3. Schedules | 9-10 |
| | II.B. Route B (IAIS-CSXT-Metra-CN-Amtrak) | 10 |
| | II.B.1. General Description | 10 |
| | II.B.2. Capital Requirements | 11 |
| | II.B.2.i. Recommended Track Upgrading | 11 |
| | II.B.2.ii. Order of Magnitude Summary of Capital Cost | 13 |
| | II.B.3. Schedules | 14-15 |
| III. | Layover Facility | 15 |
| IV. | Ridership/Revenue Forecast Summary – All Routes | 15 |
| V. | Summary of Key Numbers – Proposed Chicago/Quad Cities | 15-16 |
| VI. | Mobilization Costs (one-time expense) | 16 |
| | Attachment: Acronyms | 17 |

EXECUTIVE SUMMARY
Feasibility Report on Proposed Amtrak Service
Quad Cities-Chicago

I. Introduction and Background

I.A. General Discussion

Since the introduction of expanded levels of intrastate service on October 30, 2006, Amtrak trains in Illinois have produced impressive gains in both ridership and ticket revenue. This success and continuing stakeholder support has given rise to a formal request from the Illinois Department of Transportation (“Ill. DOT”) to Amtrak to develop a feasibility study regarding possible service consisting of a morning and an evening train in each direction between Chicago and the Quad Cities.

The area between Chicago and the Quad Cities includes many rapidly growing communities. From Chicago toward the West and South, many towns and cities have experienced double digit growth increases in population since the year 2000. Southern DuPage, Cook and Will counties have seen especially strong growth, pressuring highway infrastructure, utilities, and schools. Community development and highway congestion are readily apparent when traveling the nearly 3 hour, 175 mile route between Chicago and the Quad Cities.

As information, there are only three weekday round trip bus frequencies available between Chicago and the Quad Cities. The Quad City International Airport offers a total of 10 daily scheduled round trip flights to Chicago's O'Hare International Airport via two separate carriers flying regional jets.

The Quad Cities (Davenport, Moline, Rock Island, and Bettendorf) are located along the Mississippi River. Nearly 60% of its visitors are from the Chicago area. With dozens of miles of scenic riverfront, river boating, casinos, and thousands of acres of expansive public spaces, the Quad Cities area is a major draw from both Iowa and Illinois. The huge Rock Island Arsenal, one of the largest military arsenals in the country and located along the river, is transitioning to become the headquarters of the United States First Army.

As will be discussed later in the report, there is only one logical rail route through the Quad Cities themselves. The Iowa Interstate Railroad operates through the Quad Cities along the river and heads west through Iowa. The Quad Cities are considering at least three potential locations for an Amtrak station. A study now underway supported by several local stakeholders will recommend a site which will then be considered, given available local and other financial support. If Amtrak service were to terminate in the Quad Cities, an overnight storage track of sufficient length along with ample parking and certain other requirements covered elsewhere in the report would be required.

Following receipt by Amtrak of the study request, alternative rail routes between Chicago and the Quad Cities were identified as potential candidates for this service. Physical evaluations of the routes were conducted with host railroad personnel, including hi-rail inspections, assessments of capital needs, and identification of operational challenges. Revenue/ridership forecasts were determined based on recommended schedules, and estimates of cost to operate the service were developed. The state and many of its communities have expressed the desire to establish Amtrak service in the most expeditious way possible. This study, therefore, has concentrated on incremental and focused improvements, including the possibility of raising the speeds on some of the route segments up to 79 mph. As directed by Ill. DOT, no "high-speed" (110 mph) scenarios were considered. The goal was to prepare a high-level and objective report of the findings for Ill. DOT's further consideration. The study included fact-finding discussions with the host railroad owners/operators of the trackage, local governmental representatives, and advocacy groups.

Although there have been general operational discussions and field inspections with the host freight railroads, the specific infrastructure improvement proposals, draft schedules and other railroad-related comments in this report have not been negotiated or agreed to with the host freight railroads and reflect only the findings and best judgment recommendations of the study team. Should further progression of one of the alternative proposals be desired, detailed discussion and formal negotiations will have to be initiated with those rail carriers. Implementation of service is also subject to the time required to procure rolling stock, complete the package of infrastructure improvements which are ultimately agreed to by the host freight railroads, and recruit and train additional personnel.

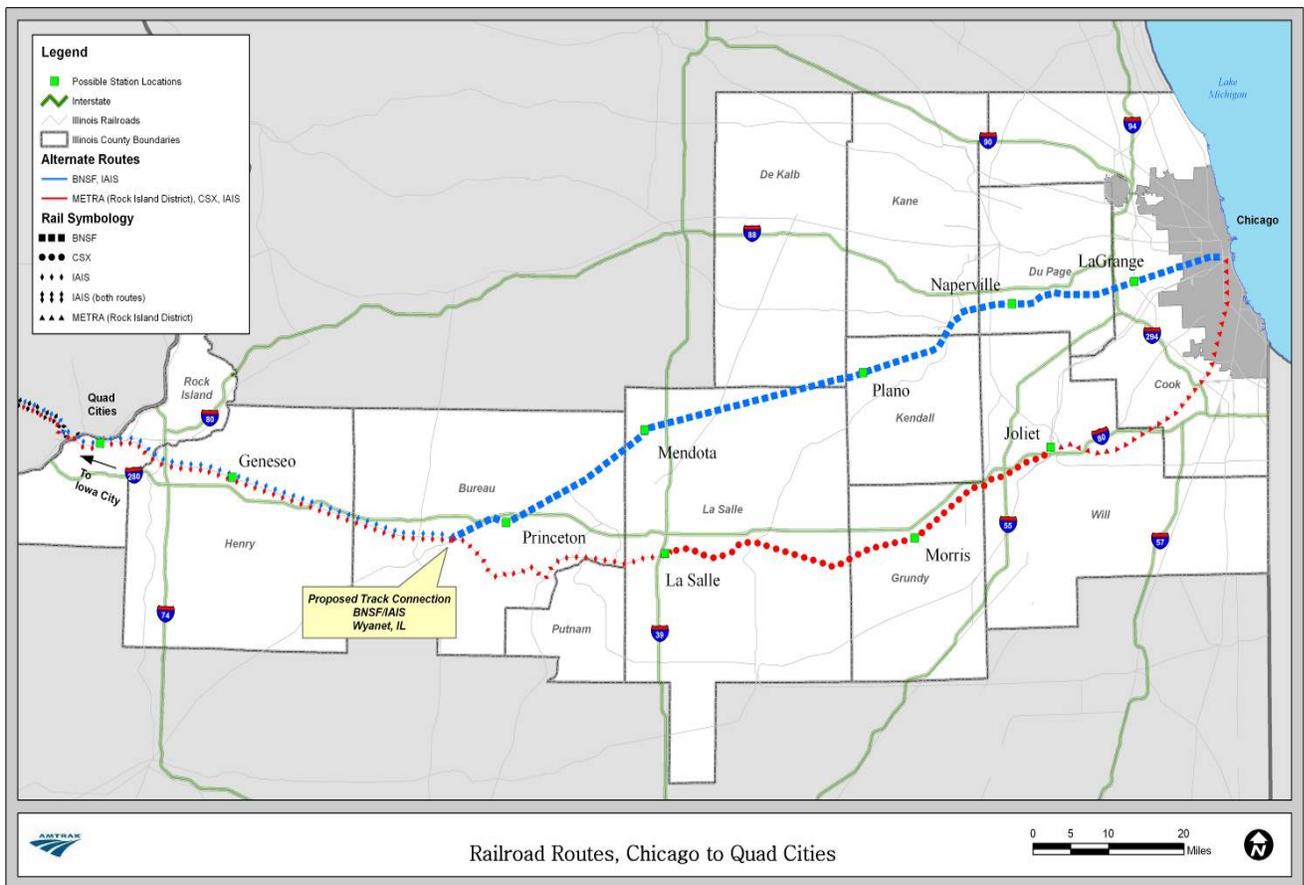
All proposed Amtrak train schedules shown in this feasibility study are dependent upon schedule timeslots made available to Amtrak by certain of the host railroads. Scheduled timeslots provided are subject to further discussion based on traffic volumes, operating conditions and other considerations in existence at the time of actual service commencement on either route. Given likely freight and/or passenger traffic growth and the possibility of changing operating conditions on either route at the time of service commencement, revisions to the proposed schedules shown in this study can be anticipated. What is particularly restrictive as to availability of time slots to run additional trains are the commuter territories around Chicago. In this study, the proposed schedules were driven in large part by the ability to enter/exit the route segments around Chicago.

Two alternative routes were identified as potentially feasible for establishment of Amtrak service between Chicago and the Quad Cities with the westernmost segment between Wyanet and the Quad Cities being common to both alternatives. These alternatives are shown on the map included as Exhibit 1. Each requires a different level of capital investment to make the service a practical reality. As detailed elsewhere, the report shows current operating speeds alongside goals of 60 to 79 mph where those speeds might be achieved with appropriate infrastructure upgrading. In general, operating at current slow freight speeds results in extremely long trip times and would not result in practical, attractive passenger service schedules. The routes studied were:

Route A: Quad Cities-Naperville-Chicago via IAIS-BNSF-Amtrak

Route B: Quad Cities-Joliet-Chicago via IAIS-CSXT-Metra/Rock Island District-CN-Amtrak

| | | |
|---------|--------|-----------------------------------------------------------------|
| Legend: | Amtrak | National Railroad Passenger Corporation |
| | BNSF | Burlington Northern Santa Fe Rwy |
| | CN | Canadian National Railways |
| | CSXT | CSX Transportation |
| | IAIS | Iowa Interstate Railroad |
| | Metra | Commuter Rail Division of the Regional Transportation Authority |



A third alternative routing was considered using Metra’s Southwest Service route from Chicago to New Lenox, where a connection would have to be constructed to Metra’s Rock Island District for operations to proceed toward Joliet. This route was eliminated from further consideration due to the land required for the connection track being public park property and indications from a local official that any effort to utilize this property would trigger a vigorous opposition by the public park agency. The two rail lines (Metra’s Southwest Service and Metra’s Rock Island District) are grade separated here, which would require significant taking of public park acreage to facilitate the connection.

I.B. Rolling Stock

All route alternatives assume that the train sets required for the service will operate in "push-pull mode," and will consist of 1 locomotive in each consist and 1 non-powered-control-unit (NPCU), or second locomotive, and will include provisions for food service. Because of varying ridership projections over the different route options, it would be prudent to size the number of coaches in the consist to reflect the anticipated patronage. The number of coaches required for Routes "A" and "B" is listed in Section VI, page 16. It should be understood that the current car supply situation at Amtrak is extremely tight and it is likely that equipment for this service would have to be generated from our bad order storage inventory, and scheduled for heavy repair in a car shop, thus requiring significant initial rehabilitation expenditures and time. The train consist can be modified as future demand dictates or as the State desires.

I.C. Station Facilities

The availability of station facilities varies considerably along both routes. For example, along Route A there are passenger station facilities already in use by Amtrak at LaGrange Road, Naperville, Mendota and Princeton. Investment would be required at Geneseo and there is not presently a readily-available station at Quad Cities, although a regional consultant study is currently underway reviewing possible station sites. Along Route B there is a station at Joliet, but all other stations to the Quad Cities are either in need of replacement or major rehabilitation. Some former stations facilities are privately owned. For purposes of this report, it is assumed that all station facilities will be provided by parties other than Amtrak, including platforms, parking, and waiting areas. The assumption is that local communities desiring a station stop will provide such facilities as well as ongoing maintenance.

Although the suggested station stops have been shown in the sample schedules, they can be modified depending upon the willingness and abilities of the communities to provide facilities and as Ill. DOT directs.

Regarding station platform design and construction, it should be noted that there is industry-wide discussion underway of the United States Department of Transportation's (USDOT) Notice of Proposed Rulemaking concerning amendments to the Department's Americans with Disabilities Act (ADA) regulations. In this notice, the DOT proposes that new commuter and intercity rail stations shall provide level-entry boarding to all accessible cars in each train using the station. Because this notice is still under consideration and no new rules have been promulgated, questions of station platform designs, dimensions and construction cannot be fully addressed and may therefore delay station (platform) development efforts.

II. Discussion of Alternative Routes

II.A. Route A – Moline-Geneseo-Princeton-Mendota-Naperville-Chicago via IAIS, BNSF and Amtrak

II.A.1. General Description

This proposed alternative would use the tracks of three carriers, as follows, and requires the construction of a single connection track between BNSF and IAIS (see "Capital Requirements, Section II.A.2.ii"):

| | <u>Miles</u> |
|--------|--------------|
| IAIS | 47.7 |
| BNSF | 110.1 |
| Amtrak | <u>0.8</u> |
| Total | <u>158.6</u> |

The short Amtrak portion of this route is the immediate area of the south train shed and includes lead tracks at Chicago Union Station. This portion of the route transitions onto the BNSF and continues westward on their route to Aurora. The BNSF route is very well-maintained and its 94 weekday commuter trains (47 in each direction) serve many communities between Chicago and Aurora. Amtrak operates two morning and two evening trains in each direction to Quincy on this route for Ill. DOT as well as two overnight trains via Galesburg: the *California Zephyr* and *Southwest Chief*. The route also carries a very high volume of freight to and from Chicago. Freight speeds generally range from 50-60 mph and maximum passenger train speed is 79 mph. This very busy route is mostly double and triple track, is signalized, and is operated under centralized traffic control from BNSF's dispatching center in Ft. Worth, Texas. The physical plant condition is excellent.

About 111 miles west of Chicago at Wyanet Illinois, the BNSF crosses over the IAIS Railroad. Described elsewhere is a proposed new track connection between the BNSF and the IAIS at this location so that the train service can continue westward on the IAIS to Quad Cities.

The Iowa Interstate Railroad route segment between Wyanet and Quad Cities is dark (non-signalized) and employs a track warrant system for control of train operations. The current maximum speed on this segment is 40 mph. Freight traffic consists of one through train each way daily. Two locals operate between Rock Island and Silvis through Moline. There are sidings at Atkinson (5430 ft), Silvis (5500 ft.) and Moline (6000 ft.), although the Moline siding is for all practical purposes a yard track. Congestion at Quad Cities is heavy as a result of industry switching, train make-up activity, local train movements (3 times weekly) of the Iowa, Chicago and Eastern Railroad (ICE), and BNSF through and local trains, as well as the IAIS trains on the east end.

II.A.2. Capital Requirements

II.A.2.i. Recommended Track Upgrading

The BNSF portion of the route between Chicago and Wyanet is well-maintained and will not require any rehabilitation work, as the trackage is in a state of good repair and normal cyclical maintenance programs are adequate. In 2001, the consulting firm Design Nine, Inc. performed an inspection of the subject Iowa Interstate trackage between Wyanet and Quad Cities and developed a preliminary cost estimate for track rehabilitation to accommodate speed increases to 60 and 79 mph, respectively. As nearly seven years have passed since that time and the condition of the railroad has been improved significantly, especially as related to crosstie and surface conditions, we conducted another physical plant inspection and developed a revised list of recommended work, together with a capital cost estimate updated to current prices.

II.A.2.ii. Proposed Construction of Connection Track

At Wyanet, just west of Princeton, the BNSF's route is grade-separated over the Iowa Interstate's main track and there currently is no connection track between the two lines. To permit straightaway train movements, a connection track needs to be constructed in the northeast quadrant. In 2001, the Illinois Department of Transportation engaged the consulting firm of Design Nine, Inc. to prepare a plan and preliminary cost estimate for this proposed connection. The proposed design includes a crossover with powered switches between the two BNSF main tracks just east of the proposed turnout for the connection, and a turnout in the Iowa Interstate's main track. This design would accommodate a passenger train speed of 50 mph. We believe the preliminary design and assumptions made are still valid and inflated to today's prices, the total cost of this 4000-foot connection is estimated at approximately \$5.6 million in 2007 dollars. About seven acres of land would have to be acquired to accommodate the proposed connection track and it appears that there has been no commercial or residential development in the immediate area since the consultant's prior work. No environmental review has been conducted in the area of the proposed connection track.

II.A.2.iii. Order of Magnitude Summary of Capital Cost

| | <u>\$millions</u> | |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------|
| | <u>60 mph</u> | <u>79 mph</u> |
| a. Construction of connection track between BNSF and Iowa Interstate at Wyanet | \$5.6 | \$5.6 |
| b. Replace remaining jointed rail with continuous welded rail | 3.6 | 3.6 |
| c. Spot replacement of 15,000 crossties | 1.1 | 1.1 |
| d. Surfacing 25 miles | 0.4 | 0.4 |
| e. Misc. other track, bridge, culvert, drainage, and roadbed work | 1.0 | 1.0 |
| f. Extend grade crossing starts for higher speeds | 1.0 | 1.0 |
| g. Install wayside signal system, controlled switches at Atkinson, electric locks on switches, control console in dispatch center | — | 7.5 |
| h. Contingencies 15% on items b – g above | <u>1.1</u> | <u>2.2</u> |
| Total | <u>\$13.8</u> | <u>\$22.4</u> |

II.A.3. Schedules

Using Amtrak's standard methodology and reflecting the maximum authorized operating speeds, station dwell times, and 8% recovery time, "strawman" schedules were developed for Route A based on the current allowable speeds, as well as on upgraded conditions reflecting infrastructure improvement alternatives on the Iowa Interstate to permit maximum operating speeds of 60 and 79 mph, respectively. Only the latter two alternatives are considered viable and competitive for this corridor, although revenue/ridership forecasts have been developed for all three scenarios for comparative purposes.

Scenario: A2
Route: BNSF - IAIS
Daily

60 mph via BNSF-IAIS
Chicago...Naperville...Mendota...Princeton...Geneseo...Moline

| Morning Westbound | Evening Westbound | | | | | Morning Eastbound | Evening Eastbound | |
|--------------------------|--------------------------|---|----|--------------------|----|--------------------------|--------------------------|-----------|
| 9:30 AM | 6:30 PM | ↓ | Dp | Chicago, IL CT | Ar | ↑ | 12:00 PM | 10:00 PM |
| R 9:47 AM | R 6:47 PM | | Dp | La Grange Road, IL | Dp | | D 11:32 AM | D 9:32 PM |
| R 10:04 AM | R 7:04 PM | | Dp | Naperville, IL | Dp | | D 11:17 AM | D 9:17 PM |
| 10:29 AM | 7:29 PM | | Dp | Plano, IL | Dp | | 10:53 AM | 8:53 PM |
| 10:57 AM | 7:57 PM | | Dp | Mendota, IL | Dp | | 10:25 AM | 8:25 PM |
| 11:19 AM | 8:19 PM | | Dp | Princeton, IL | Dp | | 10:05 AM | 8:05 PM |
| 12:25 PM | 9:25 PM | | Dp | Geneseo, IL | Dp | | 9:01 AM | 7:01 PM |
| 1:05 PM | 10:05 PM | | Ar | Moline, IL | Dp | | 8:25 AM | 6:25 PM |

R - LaGrange Road and Naperville Westbound - Stops only to receive passengers
D - Naperville and LaGrange Road Eastbound - Stops only to discharge passengers

Scenario: A3
Route: BNSF - IAIS
Daily

79 mph via BNSF-IAIS
Chicago...Naperville...Mendota...Princeton...Geneseo...Moline

| Morning Westbound | Evening Westbound | | | | | Morning Eastbound | Evening Eastbound | |
|-------------------|-------------------|---|----|--------------------|----|-------------------|-------------------|-----------|
| 9:30 AM | 6:30 PM | ↓ | Dp | Chicago, IL CT | Ar | ↑ | 12:00 PM | 10:00 PM |
| R 9:47 AM | R 6:47 PM | | Dp | La Grange Road, IL | Dp | | D 11:32 AM | D 9:32 PM |
| R 10:04 AM | R 7:04 PM | | Dp | Naperville, IL | Dp | | D 11:17 AM | D 9:17 PM |
| 10:29 AM | 7:29 PM | | Dp | Plano, IL | Dp | | 10:53 AM | 8:53 PM |
| 10:57 AM | 7:57 PM | | Dp | Mendota, IL | Dp | | 10:25 AM | 8:25 PM |
| 11:19 AM | 8:19 PM | | Dp | Princeton, IL | Dp | | 10:05 AM | 8:05 PM |
| 12:14 PM | 9:14 PM | | Dp | Geneseo, IL | Dp | | 9:12 AM | 7:12 PM |
| 12:50 PM | 9:50 PM | | Ar | Moline, IL | Dp | | 8:40 AM | 6:40 PM |

R - LaGrange Road and Naperville Westbound - Stops only to receive passengers
D - Naperville and LaGrange Road Eastbound - Stops only to discharge passengers

The proposed station stops indicated above reflect our initial recommendations for this route based on discussions with various parties. These might change or other stations added if this route is selected for possible implementation of service. (See also general discussion on "Station Facilities," Section I.C.)

II.B. Route B – Moline-Geneseo-LaSalle-Morris-Joliet-Chicago via IAIS, CSXT, Metra/Rock Island District, CN and Amtrak

II.B.1. General Description

This proposed alternative would use the tracks of 5 carriers, as follows:

| | <u>Miles</u> |
|----------------------------|--------------|
| IAIS | 82.5 |
| CSXT | 54.3 |
| Metra/Rock Island District | 38.5 |
| CN (St. Charles Air Line) | 1.4 |
| Amtrak | <u>0.8</u> |
| Total | <u>177.5</u> |

As described in Route A, the short Amtrak portion of this route is the immediate area of the south train shed and includes lead tracks at Chicago Union Station. The proposed routing over CN's St. Charles Air Line then duplicates the "see-saw" move

required for today's operation of Amtrak's service between Chicago, Carbondale and New Orleans and is a route over which CN has indicated it will cease freight operations upon consummation of their proposed acquisition of the EJ&E railroad. The route would continue eastward to Metra's Clark St. Tower, where it turns south over a connection track onto Metra's Rock Island District toward Joliet. The Rock Island District operates 68 daily trains (34 trains each way) making more than 20 station stops Chicago – Blue Island – Joliet, including their local Beverly Sub District. The route portion from Clark Street to Joliet is double track under CTC control and Cab Signals with a top speed of 79 mph. There is minimal freight traffic on the Metra/Rock Island segment. Just beyond Joliet Union Depot, which is the south end of the Metra/Rock Island commuter district, the route crosses the Des Plaines River drawbridge and transitions onto the CSXT Railroad for the next 54 miles. The CSXT portion of the route is dispatched from their Calumet City center using TWC and DTC dispatcher authorizations for train movement. The current maximum speed on the CSXT segment is 40 mph with more than half of the route restricted to 25 mph or less. Sidings at Rockdale and Seneca provide some meeting and passing opportunities. Freight traffic on the CSXT consists of one through CSXT train in each direction and one through IAIS train in each direction over the route, and three locals that work various industries, especially several silica plants in this area, as well as an Ottawa yard job that works strictly within Ottawa yard limits. Traffic from five planned new ethanol plants, mostly located on the west end of the IAIS, will increase across the route as the new plants come on line between the second quarter of 2008 and the third quarter of 2009.

II.B.2. Capital Requirements

II.B.2.i. Recommended Track Upgrading

The Metra segment between Chicago and Joliet is a well-maintained route used primarily for commuter operations, in addition to a small complement of CSXT and Iowa Interstate freight trains via trackage rights. This segment will not require any rehabilitation work, as the physical plant condition is excellent and the normal cyclical maintenance programs performed by Metra are adequate.

Beginning at Joliet, the 54-mile CSXT trackage segment is in various states of condition. There is a mixture of continuous welded rail as well as jointed rail, with weights ranging from 115-pound to 141-pound. The majority of the line has 132-pound jointed rail. The tie condition, although adequate for today's relatively slow maximum operating freight train speeds, is not sufficient for operations at the higher speeds necessary for the proposed passenger operations. Some of the jointed rail is surface-bent and there are segments of track with significant stretches of severe muddy ballast conditions, together with pumping joints. For reasons of providing higher speeds, good ride quality conditions for passengers, and for ease of maintenance in the future, it is recommended that all of the remaining jointed rail be replaced with continuous welded rail, that a heavy crosstie renewal be undertaken, and that the entire line be surfaced. This would include increasing the superelevation in curves for higher speeds and modification of curve spirals as required.

On the 20-mile segment of trackage between Milepost 95 and 114.9 (Bureau), which is leased by Iowa Interstate from CSXT, the observations regarding recommended rail, crosstie, and surfacing programs are similar as for the CSXT segment. The related costs for all of the recommended work have been incorporated in the summary table.

Between Bureau and Milepost 129.5 (Wyanet), the condition of the rail improves significantly. With the exception of a short segment of jointed rail at Bureau, this portion of the route consists of continuous welded rail ranging in size from 119-pound to 132-pound and is adequate to accommodate the proposed higher speeds. A major crosstie renewal program was carried out in the recent past but it was noted during the inspection trip that some additional crosstie work is warranted for the proposed higher speed scenarios. This cost has also been included in the summary tables, as has the cost of surfacing and other miscellaneous work. The capital infrastructure work required between Wyanet and Quad Cities was developed for the alternative route (Route A) and is again summarized in the table for this route option.

The cost estimate for upgrading the Joliet to Wyanet trackage includes extension of grade crossing warning device circuitry to permit higher speeds and, with the 79 mph scenario, the installation of a wayside signal system and remote control for turnouts at key sidings. With the 60 mph proposal, the grade crossing circuitry upgrading work is included, but it is presumed that the line operations would still be carried out as a “dark” railroad, i.e., with no wayside signal system, as currently permitted by federal law. There is, however, one exception for which we recommend wayside signals under both speed options. The CSXT portion of the route between Joliet and MP 95 has a heavy concentration of rail customers, including industrial plants and bulk shippers, which necessitates the operation of local trains to serve these facilities. There are numerous turnouts along the route to provide direct track access and it is not unusual for the trains performing the facility switching to leave a portion of their train on the main track or in existing sidings. In order to provide an added measure of protection, we recommend the inclusion of a wayside signal system on this route segment for both speed options due to the nature of the freight operations, including the remote controlling of ten turnouts at sidings. An additional comment on the CSXT trackage pertains to potential capacity degradation with the introduction of the proposed passenger trains. Given the intensity of switching operations in addition to the through freight movements, it is recommended that if this option is determined to be the preferred routing for the passenger service, a train traffic flow simulation study be conducted to ascertain if additional line or switching capacity may be required. Although it is recognized that no such detailed modeling was performed for purposes of this feasibility study, we have concern about this issue and have included a placeholder in the capital cost summary to cover the potential construction of additional trackage to provide an offset to any capacity degradation or loss of operational flexibility. Therefore, a lump sum of \$5 million has been added as a line item in the capital cost table.

II.B.2.ii. Order of Magnitude Summary of Capital Cost**\$millions****CSXT Segment**

| | <u>60 mph</u> | <u>79 mph</u> |
|-------------------------------------------------------------------------------------------------------|---------------|---------------|
| a Replace remaining jointed rail with continuous welded rail | \$19.4 | \$19.4 |
| b Crosstie renewal – 51,000 ties | 3.7 | 3.7 |
| c Surfacing 54 miles | 0.8 | 0.8 |
| d Misc. other track, bridge, culvert, drainage, and roadbed work. | 2.0 | 2.0 |
| e Extend grade crossing starts for higher speeds | 1.8 | 1.8 |
| f Install wayside signal system, remote control sidings, electric locks on switches, control console. | 14.1 | 14.1 |
| g Placeholder for capacity mitigation | 5.0 | 5.0 |
| h Contingencies 15% on items a – g, above | <u>7.0</u> | <u>7.0</u> |
| Subtotal: | <u>\$53.8</u> | <u>\$53.8</u> |

Milepost 95-114.9 (Leased by Iowa Interstate from CSXT)

| | <u>60 mph</u> | <u>79 mph</u> |
|-------------------------------------------------------------------------------------|---------------|---------------|
| a Replace remaining jointed rail with continuous welded rail | \$8.1 | \$8.1 |
| b Crosstie renewal – 30,000 ties | 2.2 | 2.2 |
| c Surfacing 20 miles | 0.3 | 0.3 |
| d Misc. other track, bridge, culvert, drainage, and roadbed work | 0.8 | 0.8 |
| e Extend grade crossing starts for higher speeds | 0.4 | 0.4 |
| f Install wayside signal system, remote control sidings, electric locks on switches | — | 3.5 |
| g Contingencies 15% on items a – f, above | <u>1.8</u> | <u>2.3</u> |
| Subtotal: | <u>\$13.6</u> | <u>\$17.6</u> |

Milepost 114.9 – Wyanet MP 129.5 (Iowa Interstate)

| | <u>60 mph</u> | <u>79 mph</u> |
|-------------------------------------------------------------------------------------|---------------|---------------|
| a Replace remaining jointed rail with continuous welded rail | \$0.5 | \$0.5 |
| b Crosstie renewal – 8,200 ties | 0.6 | 0.6 |
| c Surfacing 15 miles | 0.3 | 0.3 |
| d Misc. other track, bridge, culvert, drainage, and roadbed work | 0.6 | 0.6 |
| e Extend grade crossing starts for higher speeds | 0.2 | 0.2 |
| f Install wayside signal system, remote control sidings, electric locks on switches | — | 2.4 |
| g Contingencies 15% on items a – f, above | <u>0.3</u> | <u>0.7</u> |
| Subtotal: | <u>\$2.5</u> | <u>\$5.3</u> |

Wyanet MP 129.5 to Quad Cities

Summary of capital upgrading cost shown in the alternative routing option BNSF/Iowa Interstate

| | | |
|---------------------|----------------------|----------------------|
| Subtotal: | <u>\$8.5</u> | <u>\$17.1</u> |
| Grand Total: | <u>\$78.4</u> | <u>\$93.8</u> |

II.B.3. Schedules

Using Amtrak's standard methodology and reflecting the maximum authorized operating speeds, station dwell times, and 8% recovery time, "strawman" schedules were developed for Route B based on the current allowable speeds, as well as on upgraded conditions reflecting infrastructure improvement alternatives on CSXT and Iowa Interstate to permit maximum operating speeds of 60 and 79 mph, respectively. Only the latter two alternatives are considered viable and competitive for this corridor, although revenue/ridership forecasts have been developed for all three scenarios for comparative purposes.

Scenario: B2
Route: Metra - CSXT - IAIS
Daily

60 mph via Metra-CSXT-IAIS
Chicago...Joliet...Morris...LaSalle...Geneseo...Moline

| <u>Morning Westbound</u> | <u>Evening Westbound</u> | | | | | <u>Morning Eastbound</u> | <u>Evening Eastbound</u> | |
|--------------------------|--------------------------|---|----|----------------|----|--------------------------|--------------------------|------------|
| 9:22 AM | 6:35 PM | ↓ | Dp | Chicago, IL CT | Ar | ↑ | 1:54 PM | 11:59 PM |
| R 10:43 AM | R 7:56 PM | | Dp | Joliet, IL | Dp | | D 12:35 PM | D 10:40 PM |
| 11:26 AM | 8:39 PM | | Dp | Morris, IL | Dp | | 11:44 AM | 9:49 PM |
| 12:48 PM | 10:01 PM | | Dp | LaSalle, IL | Dp | | 10:21 AM | 8:26 PM |
| 2:04 PM | 11:17 PM | | Dp | Geneseo, IL | Dp | | 9:05 AM | 7:10 PM |
| 2:47 PM | 12:00 AM | | Ar | Moline, IL | Dp | | 8:29 AM | 6:34 PM |

R - Joliet Westbound - Stops only to receive passengers
D - Joliet Eastbound - Stops only to discharge passengers

Scenario: B3
Route: Metra - CSXT - IAIS
Daily

79 mph via Metra-CSXT-IAIS
Chicago...Joliet...Morris...LaSalle...Geneseo...Moline

| <u>Morning Westbound</u> | <u>Evening Westbound</u> | | | | | <u>Morning Eastbound</u> | <u>Evening Eastbound</u> | |
|--------------------------|--------------------------|---|----|----------------|----|--------------------------|--------------------------|------------|
| 9:22 AM | 6:35 PM | ↓ | Dp | Chicago, IL CT | Ar | ↑ | 1:54 PM | 11:59 PM |
| R 10:43 AM | R 7:56 PM | | Dp | Joliet, IL | Dp | | D 12:35 PM | D 10:40 PM |
| 11:20 AM | 8:33 PM | | Dp | Morris, IL | Dp | | 11:52 AM | 9:57 PM |
| 12:31 PM | 9:44 PM | | Dp | LaSalle, IL | Dp | | 10:38 AM | 8:43 PM |
| 1:29 PM | 10:42 PM | | Dp | Geneseo, IL | Dp | | 9:40 AM | 7:45 PM |
| 2:08 PM | 11:21 PM | | Ar | Moline, IL | Dp | | 9:08 AM | 7:13 PM |

R - Joliet Westbound - Stops only to receive passengers
D - Joliet Eastbound - Stops only to discharge passengers

The proposed station stops indicated above reflect our initial recommendations for this route based on discussions with various parties. These might change or other stations added if this route is selected for possible implementation of service. (See also general discussion on "Station Facilities," Section I.C.)

III. Layover Facility

Presuming the service terminates in the Quad Cities, an overnight train consist storage track location will need to be identified. In addition, a small building facility will be needed for use by train crews, as well as for storage of cleaning equipment and for communications facilities. A standby 480 volt power unit as well as potable water unit needs to be provided. A line item of \$300,000 is recommended for the layover facility. This amount has been added to the capital cost of each route alternative as reflected in Section V below.

IV. Ridership/Revenue Forecast Summary – All Routes

See tables in following section. Estimates based on two daily round-trips.

V. Summary – Proposed Chicago-Quad Cities

This section summarizes key elements of each route alternative between Chicago and Quad Cities.

Route A – Quad Cities-Naperville-Chicago via IAIS-BNSF-Amtrak

| | | | |
|----------------------------------------------------|--------------|---------------|---------------|
| Length of Route (miles) | 158.6 | | |
| No. Rail Carriers | 3 | | |
| | A1 | A2 | A3 |
| | <u>As-is</u> | <u>60 mph</u> | <u>79 mph</u> |
| Proposed Scheduled Running Time (hr:min) | 4:00 | 3:35 | 3:20 |
| "Order of Magnitude" Capital Cost (\$millions) (1) | \$0.3 | \$14.1 | \$22.7 |
| Estimated Annual Ridership (two daily round-trips) | 90,000 | 102,700 | 110,800 |
| Estimated Annual Revenue (\$millions) | \$2.1 | \$2.4 | \$2.6 |
| Estimated Annual Operating Expense (\$millions) | \$8.4 | \$8.4 | \$8.5 |
| Estimated Annual State Contract Cost (\$millions) | \$6.3 | \$6.0 | \$5.9 |

Route B – Quad Cities-Joliet-Chicago via IAIS-CSXT-Metra/Rock Island District-CN-Amtrak

| | | | |
|----------------------------------------------------|--------------|---------------|---------------|
| Length of Route (miles) | 177.5 | | |
| No. Rail Carriers | 5 | | |
| | B1 | B2 | B3 |
| | <u>As-is</u> | <u>60 mph</u> | <u>79 mph</u> |
| Proposed Scheduled Running Time (hr:min) | 7:05 | 5:25 | 4:46 |
| "Order of Magnitude" Capital Cost (\$millions) (1) | \$0.3 | \$78.7 | \$94.1 |
| Estimated Annual Ridership (two daily round-trips) | 40,300 | 69,900 | 84,300 |
| Estimated Annual Revenue (\$millions) | \$0.9 | \$1.7 | \$2.1 |
| Estimated Annual Operating Expense (\$millions) | \$8.4 | \$8.5 | \$8.4 |
| Estimated Annual State Contract Cost (\$millions) | \$7.5 | \$6.8 | \$6.3 |

Footnote (1): Includes \$0.3 million for a recommended Quad Cities layover facility

VI. Mobilization Costs (one-time expense)

There are a number of up-front expenses that would be incurred by Amtrak should any of the route alternatives be funded. These include coach rehabilitation, personnel recruitment and training, radio equipment, uniforms for on-board personnel, etc. A summary of significant items is presented below:

| Quad Cities- Chicago One Time Costs | Route A | | | Route B | | |
|------------------------------------------------|----------------|-----------|-----------|----------------|-----------|-----------|
| | <u>A1</u> | <u>A2</u> | <u>A3</u> | <u>B1</u> | <u>B2</u> | <u>B3</u> |
| Coach Rehabilitation (\$millions) | \$4.2 | \$4.2 | \$4.2 | \$2.8 | \$2.8 | \$2.8 |
| Coach cars per train | 2 | 2 | 2 | 1 | 1 | 1 |
| Food service cars per train | 1 | 1 | 1 | 1 | 1 | 1 |
| Training (\$millions) | \$1.05 | \$1.05 | \$1.05 | \$1.05 | \$1.05 | \$1.05 |

Attachment
Acronyms

| | |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ABS | - Automatic Block Signals – On a specific section or length of track, an arrangement of automatic signals governing each block. |
| BNSF | - Burlington Northern Santa Fe Railway Company |
| Cab Signals | - Signals that are located in the engine control compartment and which indicate track occupancy or condition. Cab signals are used in conjunction with interlocking signals and with or in lieu of block signals. |
| CN | - Canadian National Railways |
| CSXT | - CSX Transportation (includes former Rock Island Railroad) |
| CTC | - Centralized Traffic Control – A term applied to a system of railroad operation by means of which the movement of trains over routes and through blocks on a designated section of track or tracks is directed by signals controlled from a designated control point. |
| CWR | - Continuous Welded Rail |
| DTC | - Direct Traffic Control – A block or series of blocks or sections of track where a train dispatcher authorizes track occupancy. |
| EJ&E | Elgin, Joliet & Eastern Railway Co. |
| FRA Class of Track | - Federal Railroad Administration classification of track based on physical conditions and geometry, which determines maximum train speeds that can be operated. |
| ICE | - Iowa, Chicago, & Eastern Railroad |
| IAIS | - Iowa Interstate Railroad (includes former Rock Island Railroad) |
| Ill. DOT | - Illinois Department of Transportation |
| Metra | - Commuter Rail Division of the Regional Transportation Authority, a division of an Illinois Municipal Corporation (includes former Rock Island Railroad) |
| TWC | - Track Warrant Control – A method to authorize train movement to protect men or machines on a main track within specified limits in a territory designated by the timetable. |