MINUTES

TASK FORCE ON RAIL PASSENGER SERVICES IN KANSAS

September 29, 1999
Room 531-N—Statehouse

Members Present

Senator Nick Jordan
Senator Chris Steineger
Senator Robert Tyson
Representative Ed McKechnie
Mr. Nelson Mann
Ms. Ellen Samuelson
Mr. Richard Webb

Staff Present

Reed Holwegner, Kansas Legislative Research Department
Hank Avila, Kansas Legislative Research Department
Robert Waller, Kansas Legislative Research Department
Bruce Kinzie, Revisor of Statutes Office
Lisa Montgomery, Revisor of Statutes Office

The meeting was called to order by Mr. Mann, Temporary Chairman of the Task Force, at 9:05 a.m., in Room 531-N of the Capitol.

Chairman Mann recognized Reed Holwegner from the Kansas Legislative Research Department to brief the Task Force on its charge and organization (Attachments 1 and 2). The Temporary Chairman then opened the meeting for selection of a Chairman and a Vice Chairman. The Task Force selected Representative Ed McKechnie as Chairman and Senator Nick Jordan as Vice Chairman.

Mr. Mann then yielded the Chair to Representative McKechnie, who presided as Chairman for the duration of the meeting.

Chairman McKechnie addressed the Task Force on the potential for Kansas to become involved in rail passenger service. He noted that railroad technology has become greatly enhanced in the Northeast region of the United States with the use of faster trains. In the Midwest, nine states have entered into a compact with Amtrak to provide new or additional service. Oklahoma has also begun a rail passenger service initiative. The Chairman observed that the State of Kansas has the opportunity to view the activities of other states and to then decide whether or not to adopt a rail passenger policy.

Chairman McKechnie continued by noting the disparate cost associated with the construction of rail lines with other modes of transportation such as airstrips and highways. In addition to rail lines being relatively cheaper, improvements in Midwest rail service could decrease rail travel times (Attachment 3). The Chairman presented train schedules to the Task Force members to show that Kansas does have rail passenger service, but that it is offered to travelers at inconvenient times (Attachment 4). In May of this year, Oklahoma began rail service from Oklahoma City to Ft. Worth, Texas. The Chairman stated that there is an opportunity to link rail service in Kansas to Oklahoma, perhaps joining Wichita to Dallas (Attachment 5). There could be a potential for four different lines in Kansas.

The Chairman referred to other information that he had distributed to the members which they may wish to review at their leisure (Attachment 6). Chairman McKechnie concluded by saying there is an economic opportunity for enhanced service as federal law allows Amtrak to haul freight. This should not be considered as a competition to freight trucking but, rather, as an efficient use of trucking and highway resources.

The Chairman remarked that the Task Force may wish to:

- Discuss the Midwest Rail Initiative;
- Talk with representatives from Oklahoma on that state's rail program;
- Determine how cargo rail may coincide with rail passenger service; and
- Learn how states manage a rail program.

Chairman McKechnie called on Mr. Holwegner to brief the Task Force on the Oklahoma-Amtrak Study (Attachment 7). Last year the Special Committee on Rail Transportation was authorized by the Legislative Coordinating Council to send a letter to Amtrak requesting that the Oklahoma study also include rail lines in Kansas. The Kansas Legislative Research Department received a copy of the executive summary from the report. The summary includes two scenarios for passenger lines in Kansas. While both connect Kansas City to Oklahoma City, one line goes through southeast Kansas and the other goes through Newton, Kansas. The following information was given the Task Force.

Comparisons for Kansas City Options

Scenarios	Kansas City (KC) - Oklahoma City (OC) - Ft. Worth (FW)	Kansas City (KC) - Newton - Oklahoma City (OC) - Ft. Worth (FW)
Description	Extensive speed restrictions	
Service		
Total Travel Time: KC - FW	11:10	9:34
Total Distance: KC - FW	581.28	603.63
Avg. MPH: KC - FW	52.05	63.10
Operating Year 2000		
Annual Revenue	$ 6,649,000	$ 5,747,000
Rail Riders	132,500	158,006
Passenger Miles	36,643,000	32,762,000
Average Fare/Mile	$ 0.181	$ 0.175
Average Trip Length	276.6	207.3
Market Comparison Year 2000		
Corridor Travel: All Modes	95,871,000	81,209,000
Rail Market Share	0.138%	0.195%

Following Mr. Holwegner's presentation, the Task Force discussed its charge. Chairman McKechnie suggested that the Task Force travel to Chicago, Illinois, to meet with representatives of Amtrak and Illinois about the Midwest Rail Initiative.

Motion. *Senator Steineger moved that the Chairman ask the Legislative Coordinating Council for approval for the Task Force on Rail Passenger Services in Kansas to meet in Chicago, Illinois. The motion was seconded by Senator Jordan. The motion carried.*

Adjournment. Upon completion of business, the meeting adjourned at 10:00 a.m. The next meeting is tentatively scheduled for November 10.

Prepared by Reed Holwegner
Edited by Hank Avila and Robert Waller

Approved by Committee on:

November 10, 1999
(date)

#29349.01(12/2/99{9:23AM})

Session of 1999

House Concurrent Resolution No. 5004

By Special Committee on Rail Transportation

1-5

A CONCURRENT RESOLUTION establishing a task force to study rail passenger service in Kansas.

Be it resolved by the House of Representatives of the State of Kansas, the Senate concurring therein: That a task force on rail passenger service in Kansas be established to study the preservation, enhancement or establishment of rail passenger service, including the possibility of entering into rail passenger compacts with other states; and

Be it further resolved: That the task force on rail passenger service may cooperate with other states and specifically with the state of Oklahoma, in connection with the purpose of the task force study; and

Be it further resolved: That the task force shall consist of nine members appointed as follows: Two members appointed by the President of the Senate, two members appointed by the Speaker of the House of Representatives, one member appointed by the minority leader of the Senate, one member appointed by the minority leader of the House of Representatives, and three members appointed by the Governor; and

Be it further resolved: That the first meeting of the task force shall be called by the first person appointed by the Governor and shall meet at least quarterly thereafter; and

Be it further resolved: That the task force shall elect the chairperson and vice-chairperson from among the legislator members of the task force; and

Be it further resolved: That staffing shall be available from the legislative research department and the revisor of statutes office if authorized by the Legislative Coordinating Council; and

Be it further resolved: That members of the task force shall receive reimbursement for attending meetings of the task force authorized by the Legislative Coordinating Council consistent with the provisions of K.S.A. 46-1209 and amendments thereto; and

Be it further resolved: That the task force prepare and submit an interim report and recommendations to the 2000 Legislature and to the Governor and shall submit a final report and recommendations to the 2001 Legislature and to the Governor.

Task Force Rail Passenger Attachment 1
9-29-99

H.C.R. 5004 would establish a task force to study rail passenger service in Kansas. The task force would:

- study rail passenger service needs, including the possibility of entering into rail passenger compacts with other states;

- cooperate with other states and specifically with Oklahoma;

- consist of nine members appointed as follows: two members appointed by the President of the Senate, two members appointed by the Speaker of the House of Representatives, one member appointed by the minority leader of the Senate, one member appointed by the minority leader of the House of Representatives, and three members appointed by the Governor;

- be called to meet initially by the first person appointed by the Governor and meet at least quarterly thereafter;

- elect the chairperson and vice-chairperson from the legislator task force members;

- be staffed with Legislative Research Department and Revisor of Statutes Office personnel, if authorized by the Legislative Coordinating Council;

- provide reimbursement to task force members for attending task force meetings authorized by the Legislative Coordinating Council;

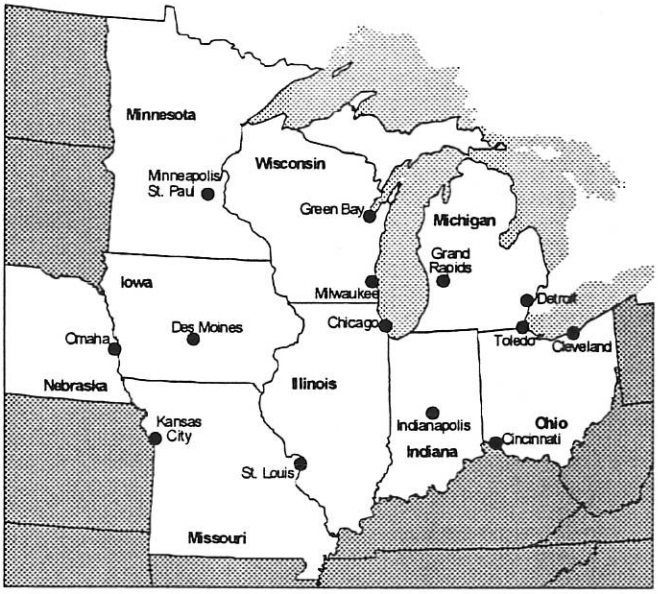
- submit an interim report and recommendations to the 2000 Legislature and to the Governor; and

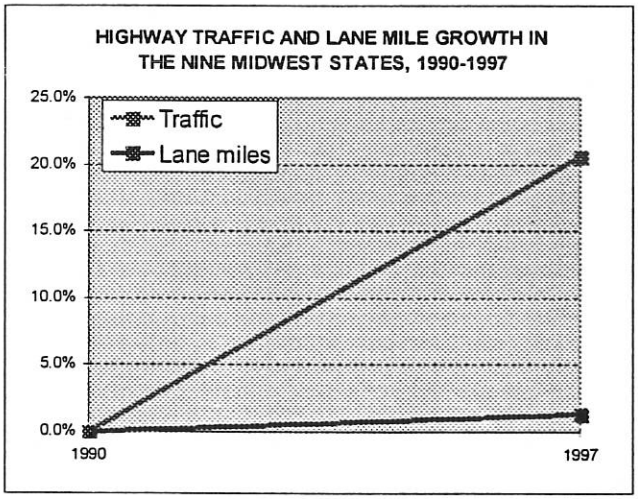
- submit a final report and recommendations to the 2001 Legislature and to the Governor.

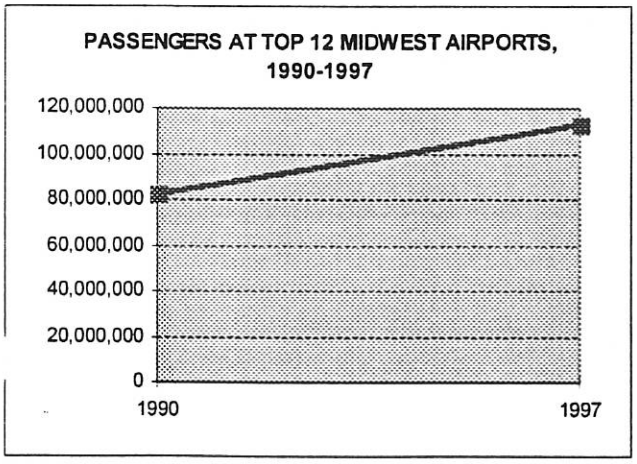
Attachment (2)
Task Force on Rail Passenger Service
9-29-99

THE MIDWEST REGIONAL RAIL INITIATIVE

Meeting regional travel needs in the Midwest through a visionary transportation plan







The Midwest needs better transportation choices to serve a growing economy

The nine states of Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, Nebraska and Wisconsin are home to 58 million people, 28 million jobs and a growing economy.

This vitality creates an attendant demand for transportation services, but the capacity of the transportation system has not matched the growth in demand:

- Since 1990, highway traffic in the Midwest has increased by 20%, but highway lane miles have increased by only 1%.

- Highway congestion is growing not only in large urban areas like Chicago, Detroit, Milwaukee and St. Louis, but also in smaller cities.

- Passenger enplanements at the Midwest's 12 busiest airports is up by 37% since 1990, with no major increases in infrastructure capacity.

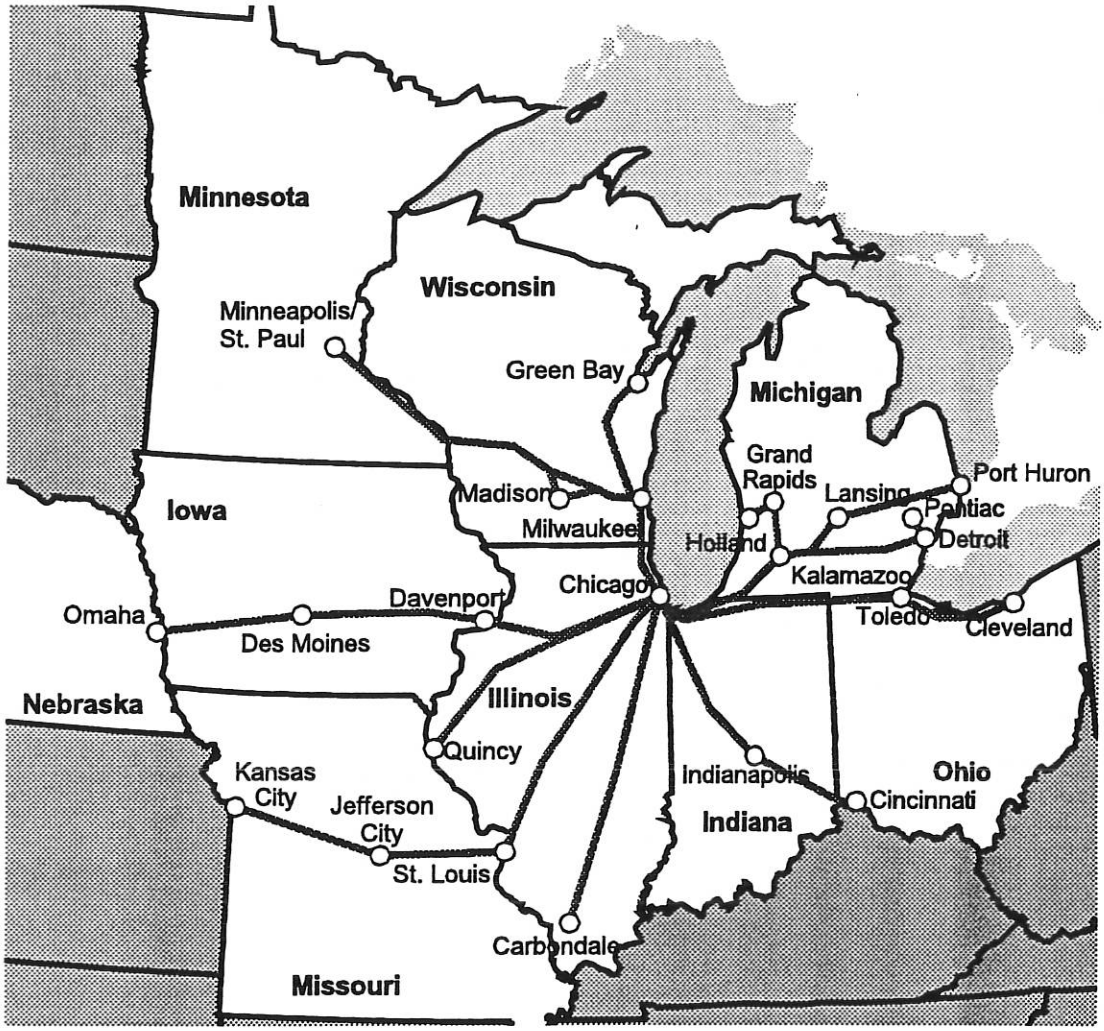
- Current Amtrak passenger rail service does not offer the frequencies or amenities needed to develop a strong ridership base.

Today in the Midwest, a traveler faces poor options for regional (100-400 mile) trips: a long drive through heavy congestion, a commercial air fare of several hundred dollars, or rail service that offers too few arrival and departure times.

But a new and better option is being planned...

Attachment (3)
Task Force on Rail Passenger Service
9-29-99

A new transportation option:
The Midwest Regional Rail Initiative



THE MIDWEST REGIONAL RAIL SYSTEM:

- A 3,000 mile proposed system of enhanced passenger rail service hubbed around Chicago.

- A cooperative effort involving Amtrak and nine states -- Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Nebraska, Ohio and Wisconsin.

- Features a speed level objective of 110 m.p.h., allowing travel time savings of 20-30% over existing passenger rail service.

- Will provide fast and easy access to downtown city centers, with service to other medium and small urban areas.

- Will utilize new train equipment offering first class amenities and services.

- Will provide the synergy of a true regional rail system by offering fast and easy train connections at the Chicago Union Station hub.

- Forecast to carry 8 million passengers under full system implementation, and earn enough operating revenue to cover operating costs.

- Will create 1,500 rail service operations jobs, and 4,000 temporary construction jobs.

Task Force on Rail
Passenger Service
September 29,
1999

Examples of Midwest Rail service improvements:

Corridor	Current rail daily trips	Midwest Rail daily trips	Current rail trip time	Midwest Rail trip time
Chicago - Carbondale	1	6	5:34	3:46
Chicago - Cincinnati	1*	5	8:48	4:09
Chicago - Cleveland	3*	8	6:32	3:46
Chicago - Detroit	3	10	5:46	3:41
Chicago - Milwaukee	6	14	1:32	1:05
Chicago - Minneapolis / St. Paul	1*	6	7:56	5:42
Chicago - Omaha	1*	4	9:11	7:11
Chicago - St. Louis	3	10	5:45	3:42
St. Louis - Kansas City	2	4	5:31	4:10

* corridor served only as part of a long-distance route

Costs for the system

The Midwest Regional Rail Initiative requires $3.5 billion in capital costs over nine years. The nine states are pursuing a federal partnership to implement this system that will also strengthen Amtrak's national passenger rail system.

Capital costs include about $3.0 billion for infrastructure improvements: track and signal upgrades, additional rail capacity, stations, and grade crossing improvements. About $0.5 billion is needed to purchase new train equipment.

Once fully operational, the Midwest Regional Rail Initiative is forecast to be operationally self-sufficient, meaning that operating revenues will equal or exceed operating costs.

How can Midwest Rail become a reality?

There are four major elements in seeing the plan become a reality: development, acquisition of funds, construction, and operation.

1. Development

In August of 1998, the nine states and Amtrak released an initial feasibility plan assisted by a consultant team led by Transportation Economics & Management Systems, Incorporated.

The initiative is currently in the middle of a $1.35 million study funded by the Federal Railroad Administration, Amtrak, and the nine states. The current planning effort is consultant-led study to develop a complete operational plan for the initiative. This plan will be completed in the fall, and the states will determine future actions based on the findings of the report.

The states have already developed a Phase 1 proposal that calls for incremental improvements to corridors extending from Chicago to Detroit, St. Louis, and Minneapolis/St. Paul. The states are seeking $7.5 million of federal funds in fiscal year 2000 to support engineering and design work for 110 m.p.h. rail service on these Phase 1 corridors. These funds would be matched by $7.5 million in state funds.

2. Acquisition of funds

The most significant action for the Midwest Regional Rail Initiative will be acquiring approximately $2.8 billion in federal funds, matched by $700 million of state, local and private funds.

Already, many of the nine states are working to improve rail service, following the basic structure of the Midwest Rail system outline. These efforts include operational support for Amtrak services, feasibility studies for new lines, and engineering and design work for Midwest Rail corridors. This year, Amtrak is investing $25 million in capital projects that support the goals of the Midwest Regional Rail Initiative.

But a solid, long-term federal partnership is needed to make the plan a reality. Right now, the federal TEA 21 legislation authorizes only $55 million per year for high speed rail, and the actual annual appropriations are much less. The Midwestern states are ready to work with Amtrak and states throughout the country to develop structured, long-term federal funding source.

This initiative is worthy of a federal financial partnership for several reasons:

- An improved regional passenger rail system can help provide transportation options to serve the Midwest economy when other modes are showing capacity constraints.

- Amtrak's national passenger rail network and financial future will be best built through corridor-based services that benefit from the synergy of regional connections, like the Midwest Regional Rail Initiative.

- The Midwest states are ready to proceed with the initiative, and have plans and processe in place to implement the system if funds are available.

3. Construction

With a federal funding stream available, construction on corridor improvements can begin. The initiative has estimated a phased, nine-year construction period during which some services will come on-line incrementally. The phasing includes construction of the new train equipment that will be evaluated, selected and purchased for the system.

4. Operation

The Midwest Regional Rail Initiative will phase in operations over a nine-year period, beginning about two years after construction commences. Certain corridors with existing service may see an incremental increase in frequencies before speeds are increased to 110 m.p.h.

For more information...

To learn more about the Midwest Regional Rail Initiative, please contact the appropriate state or Amtrak contact listed here:

Illinois Department of Transportation
Merrill Travis, (217) 782-2835

Indiana Department of Transportation
Tom Beck, (317) 232-1478

Iowa Department of Transportation
John Hey, (515) 239-1653

Michigan Department of Transportation
Tim Hoeffner, (517) 373-2835

Minnesota Department of Transportation
Dan Krom, (651) 296-1611

Missouri Department of Transportation
Customer service, (573) 751-2551

Nebraska Department of Roads
Dan Rosenthal, (402) 479-4438

Ohio Rail Development Commission
Tom O'Leary, (614) 644-0306

Wisconsin Department of Transportation
Randall Wade, (608) 266-9498

Amtrak Intercity Business Unit
James Wolfe, (312) 655-1333

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Office of Public Affairs
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Southwest Chief

Spring/Summer 1999 Effective May 16

Chicago... Albuquerque... Los Angeles

3	◄ Train Number ►					4
Daily	◄ Days of Operation ►					Daily
Read Down	Mile	▼		Symbol	▲	Read Up
3 20P	0	Dp	**Chicago, IL**–Union Sta. ✸ (CT) Madison—Call 1-800-USA-RAIL		Ar	4 05P
R 4 17P	29		**Naperville, IL**			D 2 33P
R 5 07P	83		**Mendota, IL**	●		1 39P
R 5 29P	104		**Princeton, IL**	●		1 17P
R 6 19P R 6 25P	163	Ar Dp	**Galesburg, IL**–S. Seminary St.		Dp Ar	12 26P 12 20P
7 26P	220		**Fort Madison, IA** (Keokuk)			11 26A
8 29P	298		**La Plata, MO** (Kirksville)	●		10 22A
11 05P	437	Ar	**Kansas City, MO** ✸		Dp	8 10A
303			*Connecting Train Number*			306
3 30P *9 10P*	*0* *282*	Dp Ar	*St. Louis, MO* ✸ (CT) *Kansas City, MO* ✸		Ar Dp	*9 10P* *3 30P*
11 20P	437	Dp	**Kansas City, MO** ✸		Ar	7 29A
1 06A	477		**Lawrence, KS**	●		5 50A
1 39A	503		**Topeka, KS**			5 19A
3 47A	638		**Newton, KS** (Wichita)			3 08A
4 24A	671		**Hutchinson, KS**	●		2 29A
6 13A	791		**Dodge City, KS**	●		12 44A
6 59A	842		**Garden City, KS** (CT)			11 53P
7 19A	941		**Lamar, CO** (MT)	●		9 32P
8 38A	993		**La Junta, CO**			8 44P
9 52A	1074		**Trinidad, CO**	●		7 01P
10 56A	1098		**Raton, NM** Denver—see other side	●		6 01P
12 39P	1208		**Las Vegas, NM**	●		4 14P
2 21P	1274	Dp	**Lamy, NM** Santa Fe—see other side		Dp	2 35P
3 53P 4 23P	1341	Ar Dp	**Albuquerque, NM** ✸ El Paso—see other side		Dp Ar	1 30P 1 05P
6 45P	1503		**Gallup, NM** (MT)	●		9 55A
[69] 7 25P	1630		**Winslow, AZ** (MST)	●		[69] 6 51A
[69] 8 43P [69] 8 49P	1687	Ar Dp	**Flagstaff, AZ** ✸ Grand Canyon, Phoenix—see other side		Dp Ar	[69] 5 52A [69] 5 46A
[69] 9 24P			**Williams Jct., AZ** (Gr. Cyn. Ry. [48])	●		[69] 5 00A
[69] 11 43P	1860		**Kingman, AZ** (MST)	●		[69] 2 57A
12 39A	1921		**Needles, CA** (PT) Las Vegas, Laughlin, Lake Havasu City—see other side	●		1 47A
4 20A	2090		**Barstow, CA**	●		11 19P
4 56A	2127		**Victorville, CA**	●		10 24P
6 21A	2174		**San Bernardino, CA**			9 18P
D 7 26A	2220		**Fullerton, CA**			8 16P
8 40A	2246	Ar	**Los Angeles, CA** ✸ (PT)		Dp	7 15P

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Spring/Summer 1999 Effective June 15

Oklahoma City... Fort Worth

821	◄ Train Number ►					822
Daily	◄ Days of Operation ►					Daily
Read Down	Mile	▼		Symbol	▲	Read Up
8 25A	0	Dp	**Oklahoma City, OK** (CT)	●	Ar	10 00P
8 54A	20		**Norman, OK**	●		9 21P
9 17A	35		**Purcell, OK**	●		8 57P
9 45A	57		**Pauls Valley, OK**	●		8 29P
10 44A	102		**Ardmore, OK**	●		7 33P
11 28A	141		**Gainesville, TX**	●		6 45P
1 00P	209	Ar	**Fort Worth, TX**		Dp	5 25P

Connecting Service Fort Worth... Chicago

22	◄ Train Number ►					21
As indicated in column	◄ Days of Operation ►					As indicated in column
Read Down	Mile	▼		Symbol	▲	Read Up
3 40P TuWeThSu	0	Dp	**Fort Worth, TX** (CT)		Ar	4 19P WeFrSaSu
4 45P TuWeThSu	31		**Dallas, TX** ✸			2 56P WeFrSaSu
12 49A WeThFrMo	392		**Little Rock, AR**			7 27A WeFrSaSu
8 07A WeThFrMo	741		**St. Louis, MO** ✸			11 59P TuThFrSa
2 45P WeThFrMo	1023	Ar	**Chicago, IL** ✸ –Union Sta.		Dp	5 55P TuThFrSa

Connecting Service Fort Worth... Los Angeles

21	◄ Train Number ►					22
As indicated in column	◄ Days of Operation ►					As indicated in column
Read Down	Mile	▼		Symbol	▲	Read Up
4 39P WeFrSaSu	0	Dp	**Fort Worth, TX** (CT)		Ar	3 10P TuWeThSu
9 09P WeFrSaSu	201		**Austin, TX**			10 26A TuWeThSu
11 59P WeFrSaSu 5 35A ThSaSuMo	285	Ar Dp	**San Antonio, TX** ✸		Dp Ar	7 45A TuWeThSu 3 21A
3 50P ThSaSuMo	889		**El Paso, TX** ✸ (MT)			3 05P MoTuWeSa
[69] 9 44P ThSaSuMo	1199		**Tucson, AZ** ✸ (MST)			[69] 7 35A MoTuWeSa
7 10A FrSuMoTu	1703	Ar	**Los Angeles, CA** ✸ (PT)		Dp	9 55P SuMoTuFr

Symbols and Reference Marks

A	Time Symbol for A.M.	**P**	Time Symbol for P.M.
CT	Central Time	**MT**	Mountain Time
PT	Pacific Time	**MST**	Mountain Standard Time

- Amtrak Express™ Shipping and Checked Baggage Service available at stations indicated.
- Barrier-free access between street, platform and trains; however, not all facilities within the station are fully accessible.
- ● Tickets cannot be purchased at station location. Contact Amtrak for more information.
- All station facilities are full accessible to persons who use wheelchairs.
- ✸ Amtrak Vacations package(s) available at this destination. Book your hotel and/or tour by calling 1-800-321-8684.
- [69] Arizona does not observe Daylight Savings Time. Time shown is Standard time, in effect form the first Sunday in April to the last Saturday in October. Thruway Motorcoach connection available at Tucson for Phoenix; contact Amtrak for details.

Services on this Train: Coaches – Reservations Required; food service vending machines.

Smoking is not permitted on Oklahoma Service train.

Service is financed through funds made available by the Oklahoma Department of Transportation. State supported trains are operated at the discretion of each state and their operation is dependent upon continued state financial support.

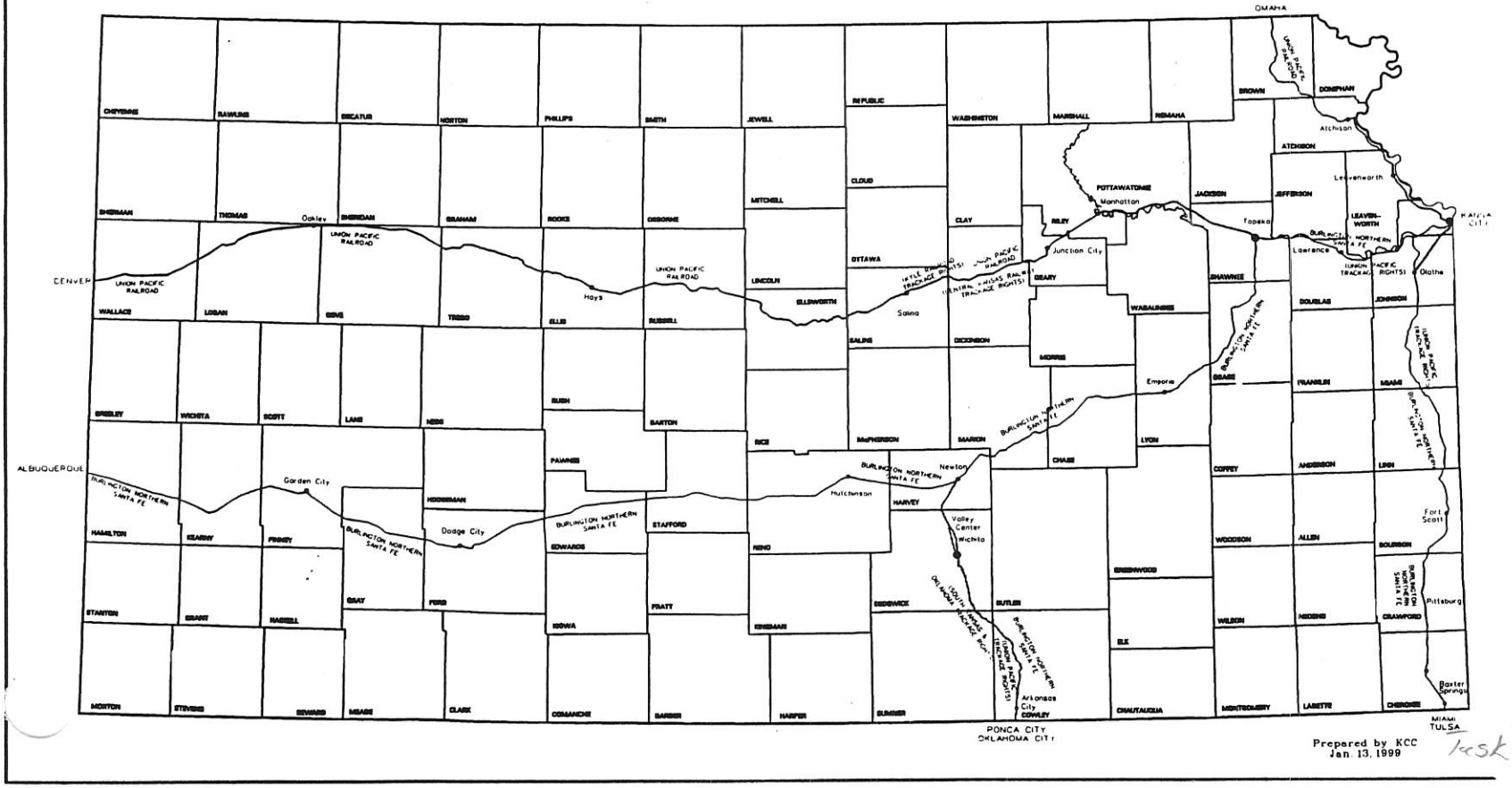
For reservations and information, call your travel agent or Amtrak at
1-800-USA-RAIL
or visit us at www.amtrak.com.

Amtrak Attachment (4)

Task Force on Rail Passenger Service
9-29-99

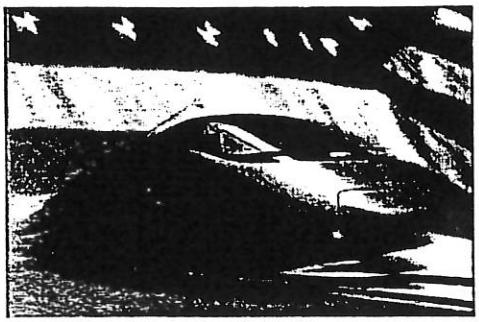
TASK FORCE ON RAIL PASSENGER SERVICE
9-29-99
ATTACHMENT 5

POTENTIAL PASSENGER RAIL TRANSPORTATION



Prepared by KCC
Jan. 13, 1999

Attachment 5
Task Force on Rail Passenger Service
9-29-99



Midwest High-Speed Rail: Benefits

Improved Mobility

- Faster and safer than auto travel, which kills 40,000 Americans each year.
- As fast as air travel on a door-to-door basis, but more affordable, convenient and comfortable.
- Keeps running in virtually all weather.
- A viable travel choice for an aging population.
- Projected to draw 8 million riders annually, making rail service almost as popular as regional air travel.

Complements other transportation modes.

- Convenient service to most of the region's major airports, allowing residents of smaller communities the benefits of affordable long-distance travel.
- Supports commuter and light rail. In Chicago, for example, high-speed trains will share Union Station with METRA commuter trains, increasing ridership on both.

Both American and Lufthansa Airlines have joint marketing programs with European high-speed railroads.

Less Congestion

- Americans waste $60 billion per year in time and fuel due to airport and road congestion.
- A single railroad track can carry as many people as a ten-lane highway at a fraction of the cost.

Cleaner Air and Less Sprawl

- **Trains use much less energy and cause less air pollution per passenger than cars or planes.**
- Downtown train stations will encourage development in city and town centers, counteracting suburban sprawl.
- Less need for new highways and airports

Paris' Saint-Lazare train station handles 2 ½ times as many passengers as Chicago's O'Hare airport using only a fraction of th space.

New Jobs and Economic Growth

- **15,000 jobs during construction, and 2,000 permanent jobs** during operation.
- **$9.1 billion in new economic activity**
- Stations become magnets for economic development
- Promotes tourism and intra-regional economy

Cost-Effective

- Costs just $1 million per mile – less than $1/10^{th}$ the cost of highway construction.
- Once built, high-speed rail in the Midwest will pay for itself.

Attachment 6
Task Force on Rail Passenger Service
9-29-99

Midwest Interstate Passenger Rail Compact

July 1999 Draft

A bill for an act

MIDWEST INTERSTATE PASSENGER RAIL COMPACT

The contracting states solemnly agree:

ARTICLE I

STATEMENT OF PURPOSE

The purposes of this compact are, through joint or cooperative action:

A) to promote development and implementation of improvements to intercity passenger rail service in the Midwest;

B) to coordinate interaction among Midwestern state elected officials and their designees on passenger rail issues;

C) to promote development and implementation of long-range plans for high speed rail passenger service in the Midwest and among other regions of the United States;

D) to work with the public and private sectors at the federal, state and local levels to ensure coordination among the various entities having an interest in passenger rail service and to promote Midwestern interests regarding passenger rail; and

E) to support efforts of transportation agencies involved in developing and implementing passenger rail service in the Midwest.

ARTICLE II

ESTABLISHMENT OF COMMISSION

To further the purposes of the compact, a Commission is created to carry out the duties specified in this compact.

ARTICLE III

COMMISSION MEMBERSHIP

The manner of appointment of Commission members, terms of office consistent with the terms of this compact, provisions for removal and suspension, and manner of appointment to fill vacancies shall be determined by each party state pursuant to its laws, but each commissioner shall be a resident of the state of appointment. Commission members shall serve without compensation from the Commission.

The Commission shall consist of four resident members of each state as follows: The governor or the governor's designee who shall serve during the tenure of office of the governor, or until a successor is named; one member of the private sector who shall be appointed by the governor and shall serve during the tenure of office of the governor, or until a successor is named; and two legislators, one from each legislative chamber (or two legislators from any unicameral legislature), who shall serve two-year terms, or until successors are appointed, and who shall be appointed by the appropriate appointing authority in each legislative chamber. All vacancies shall be filled in accordance with the laws of the appointing states. Any commissioner appointed to fill a vacancy shall serve until the end of the incomplete term. Each member state shall have equal voting privileges, as determined by the Commission bylaws.

ARTICLE IV

POWERS AND DUTIES OF THE COMMISSION

The duties of the Commission are to:

1) advocate for the funding and authorization necessary to make passenger rail improvements a reality for the region;
2) identify and seek to develop ways that states can form partnerships, including with rail industry and labor, to implement improved passenger rail in the region;

3) seek development of a long-term, interstate plan for high speed rail passenger service implementation;
4) cooperate with other agencies, regions and entities to ensure that the Midwest is adequately represented and integrated into national plans for passenger rail development;
5) adopt bylaws governing the activities and procedures of the Commission and addressing, among other subjects: the powers and duties of officers; the voting rights of Commission members, voting procedures, Commission business, and any other purposes necessary to fulfill the duties of the Commission;
6) expend such funds as required to carry out the powers and duties of the Commission; and
7) report on the activities of the Commission to the legislatures and governor of the member states on an annual basis.

In addition to its exercise of these duties, the Commission is empowered to:

1) provide multistate advocacy necessary to implement passenger rail systems or plans, as approved by the Commission;
2) work with local elected officials, economic development planning organizations, and similar entities to raise the visibility of passenger rail service benefits and needs;
3) educate other state officials, federal agencies, other elected officials and the public on the advantages of passenger rail as an integral part of an intermodal transportation system in the region;
4) work with federal agency officials and Members of Congress to ensure the funding and authorization necessary to develop a long-term, interstate plan for high speed rail passenger service implementation.
5) make recommendations to member states;

6) if requested by each state participating in a particular project and under the terms of a formal agreement approved by the participating states and the Commission, implement or provide oversight for specific rail projects;

7) establish an office and hire staff as necessary;

8) contract for or provide services;

9) assess dues, in accordance with the terms of this compact;

10)conduct research; and

11)establish committees.

ARTICLE V
OFFICERS

The Commission shall annually elect from among its members a chair, a vice-chair who shall not be a resident of the state represented by the chair, and others as approved in the Commission bylaws. The officers shall perform such functions and exercise such powers as are specified in the Commission bylaws.

ARTICLE VI
MEETINGS AND COMMISSION ADMINISTRATION

The Commission shall meet at least once in each calendar year, and at such other times as may be determined by the Commission. Commission business shall be conducted in accordance with the procedures and voting rights specified in the bylaws.

ARTICLE VII
FINANCE

Except as otherwise provided for, the monies necessary to finance the general operations of the Commission in carrying forth its duties, responsibilities and powers as stated herein shall be appropriated to the Commission by the compacting states, when authorized by the respective legislatures, by equal apportionment among the compacting

states. Nothing in this compact shall be construed to commit a member state to participate in financing a rail project except as provided by law of a member state.

The Commission may accept, for any of its purposes and functions, donations, gifts, grants, and appropriations of money, equipment, supplies, materials and services from the federal government, from any party state or from any department, agency, or municipality thereof, or from any institution, person, firm, or corporation. All expenses incurred by the Commission in executing the duties imposed upon it by this compact shall be paid by the Commission out of the funds available to it. The Commission shall not issue any debt instrument. The Commission shall submit to the officer designated by the laws of each party state, periodically as required by the laws of each party state, a budget of its actual past and estimated future expenditures.

ARTICLE VIII
ENACTMENT, EFFECTIVE DATE AND AMENDMENTS

The states of Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio and Wisconsin are eligible to join this compact. Upon approval of the Commission, according to its bylaws, other states may also be declared eligible to join the compact. As to any eligible party state, this compact shall become effective when its legislature shall have enacted the same into law; provided that it shall not become initially effective until enacted into law by any three (3) party states incorporating the provisions of this compact into the laws of such states. Amendments to the compact shall become effective upon their enactment by the legislatures of all compacting states.

ARTICLE IX
WITHDRAWAL, DEFAULT AND TERMINATION

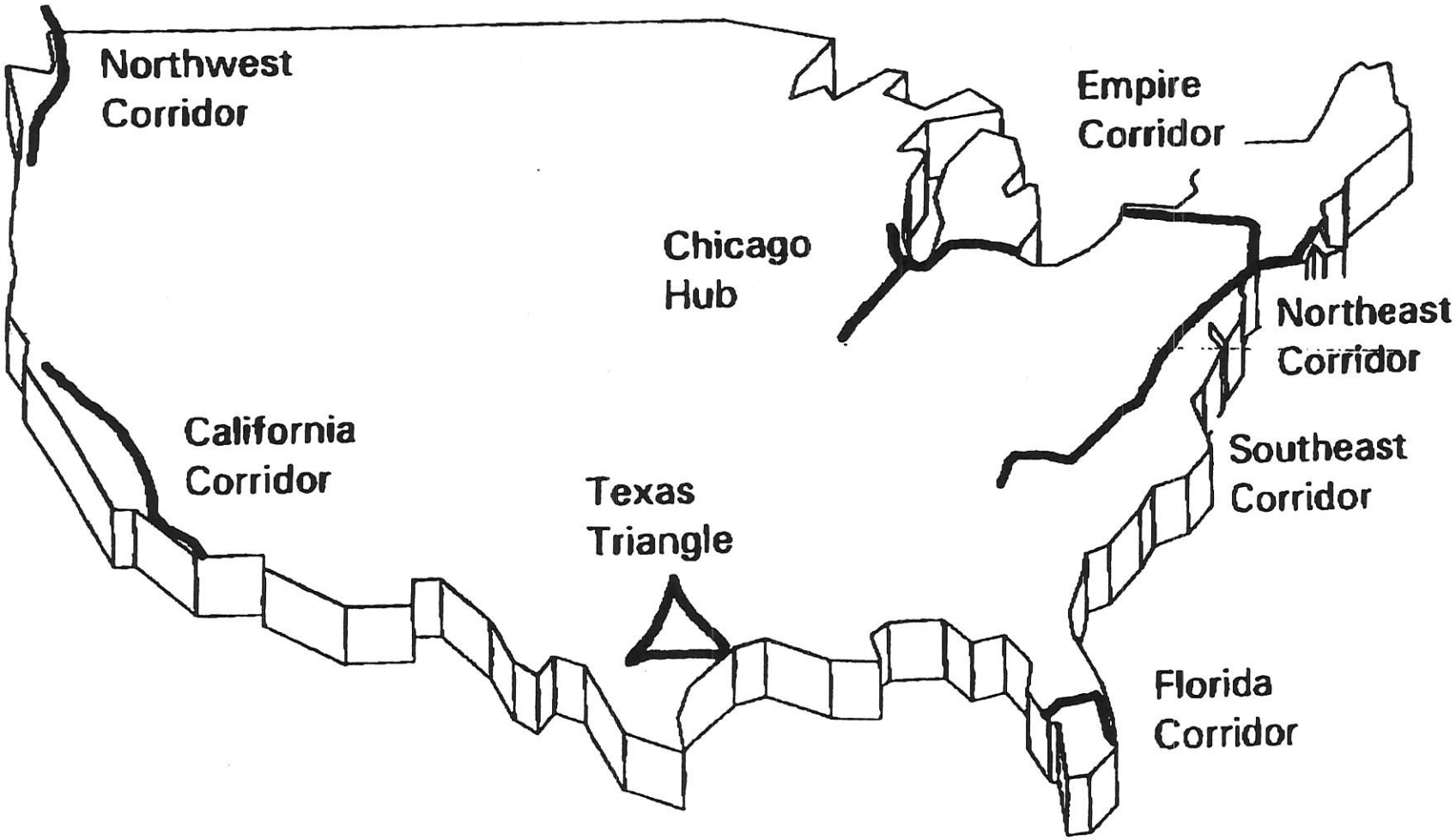
Withdrawal from this compact shall be by enactment of a statute repealing the same and shall take effect one year after the effective date of such statute. A withdrawing state shall be liable for any obligations which it may have incurred prior to the effective date of withdrawal.

If any compacting state shall at any time default in the performance of any of its obligations, assumed or imposed, in accordance with the provisions of this compact, all rights, privileges and benefits conferred by this compact or agreements hereunder shall be suspended from the effective date of such default as fixed by the Commission, and the Commission shall stipulate the conditions and maximum time for compliance under which the defaulting state may resume its regular status. Unless such default shall be remedied under the stipulations and within the time period set forth by the Commission, this compact may be terminated with respect to such defaulting state by affirmative vote of a majority of the other Commission members. Any such defaulting state may be reinstated, upon vote of the Commission, by performing all acts and obligations as stipulated by the Commission.

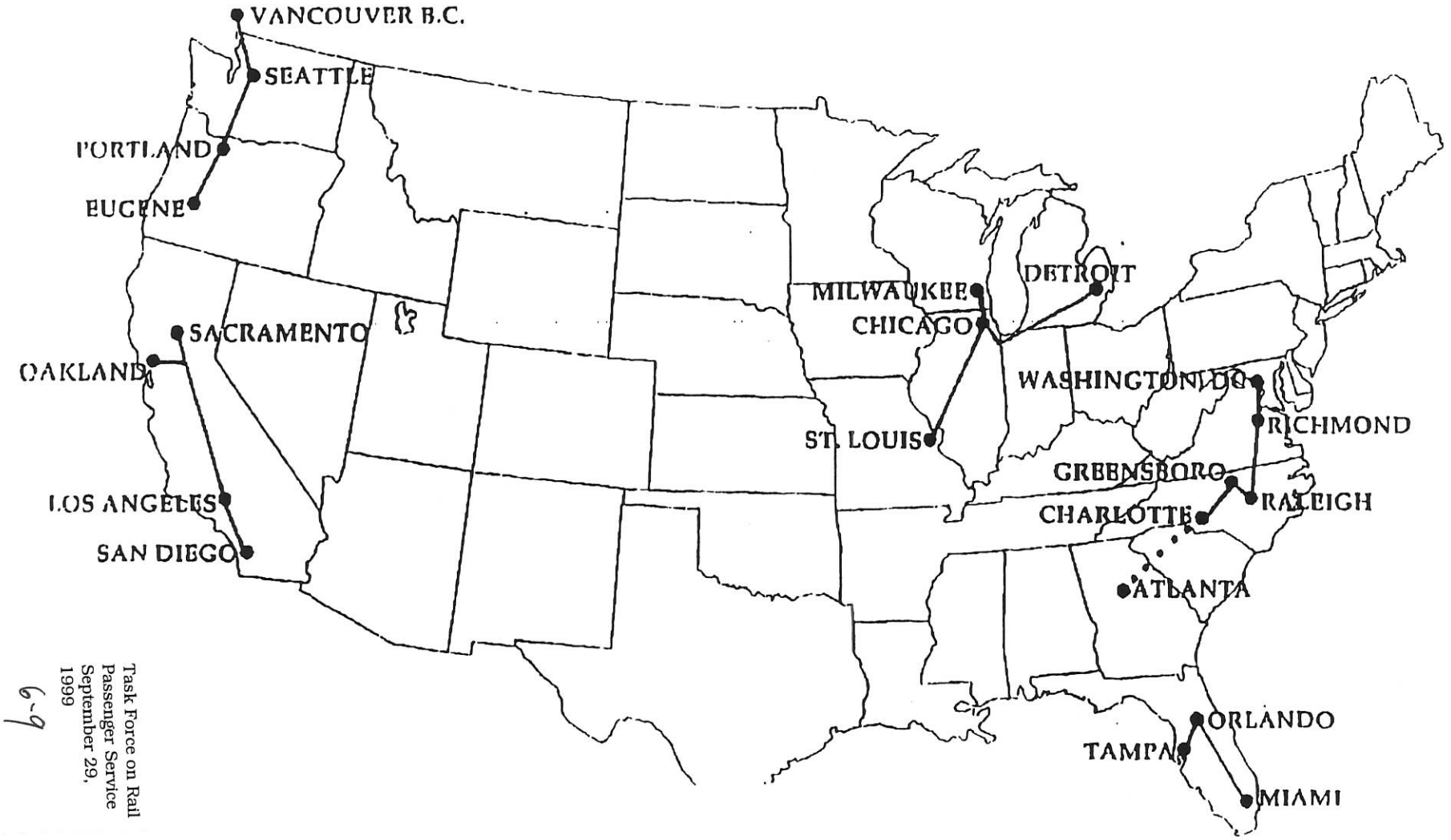
ARTICLE X
CONSTRUCTION AND SEVERABILITY

The provisions of this compact entered into hereunder shall be severable and if any phrase, clause, sentence or provision of this compact is declared to be contrary to the constitution of any compacting state or of the United States or the applicability thereof to any government, agency, person or circumstance is held invalid, the validity of the remainder of this compact and the applicability thereof to any government, agency, person or circumstance shall not be affected hereby. If this compact entered into hereunder shall be held contrary to the constitution of any compacting state, the compact shall remain in full force and effect as to the remaining states and in full force and effect as to the state affected as to all severable matters. The provisions of this compact entered into pursuant hereto shall be liberally construed to effectuate the purposes thereof.

Illustrative Corridors

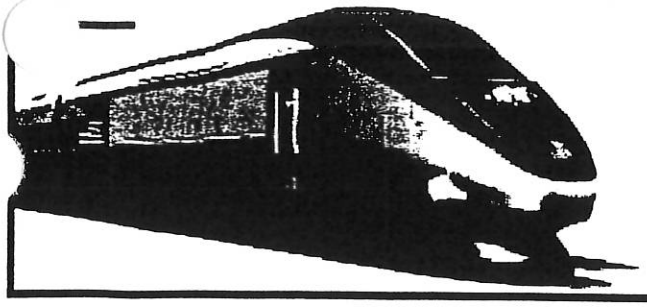


SECTION 1010-HIGH SPEED RAIL CORRIDORS



Task Force on Rail Passenger Service
September 29, 1999

U.S. DEPARTMENT
OF TRANSPORTATION



HIGH SPEED NON-ELECTRIC LOCOMOTIVE

Facts

- **Derived from electric Northeast Corridor (American Flyer) power car**
- **Designed for high speed operation (up to 150 mph) on existing non-electrified corridors**
- **Lightweight locomotive and low dynamic (P2) track forces**
- **Designed to meet all North American safety standards as well as FRA's upcoming Tier II Passenger Equipment Safety Standards**
- **High power to weight ratio**
- **Low exhaust emissions**

Technical Features

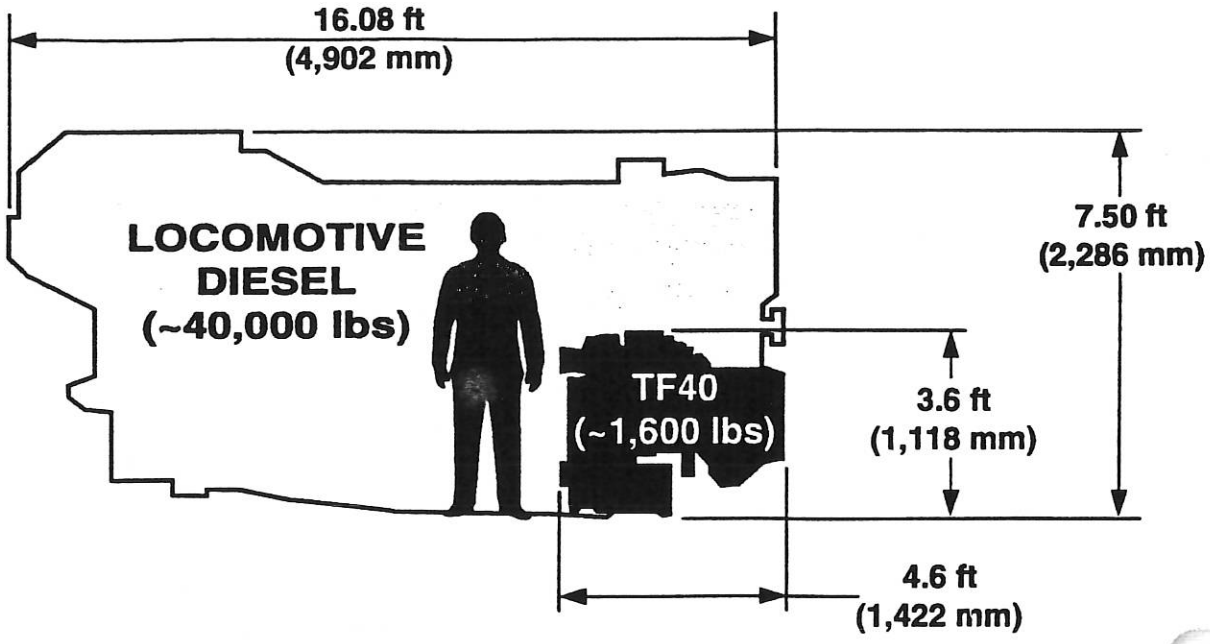
- **Propulsion:**
  TF 40 (4000 hp) or
  TF50 (5000 hp) turbine engine
- **Traction control:**
  State-of-the-art IGBT
  (Insulated Gate Bipolar Transistor)
  inverter-type water-cooled system
- **Transmission:**
  Fully truck-suspended gear box and motor assembly
- **Motors:**
  Four asynchronous (AC) motors
  (1100 hp each)
- **Brakes:**
  Blended regenerative rheostatic and friction braking
- **Auxiliary power:**
  350 kW head-end power
- **Computerized monitoring system:**
  Controls, diagnoses and monitors every system and subsystem for optimum safety and reliability
- **Car body:**
  Stainless steel with FRA compliant crash absorption capability
- **Truck type:**
  Outboard bearing, fabricated frame
- **Suspension:**
  Helicoil springs for primary and secondary suspension

US Department of Transportation
Federal Railroad Administration

Task Force on Rail Passenger Service
September 29, 1999

BOMBARDIER *TRANSPORTATION*

HIGH SPEED GAS TURBINE LOCOMOTIVE ADVANTAGES OVER DIESELS



- Substantially reduced weight and unsprung mass
- Capable of operation up to 150 mph
- Lower dynamic track forces exerted at 150 mph than a standard North American locomotive at 90 mph
- High cant deficiency (tilt) operation to maximize synergy with tilting passenger cars
- Improved aerodynamic design
- Turbine engine is less than one-tenth the size of, and approximately 38,000 lbs lighter than, a typical North American railway diesel engine

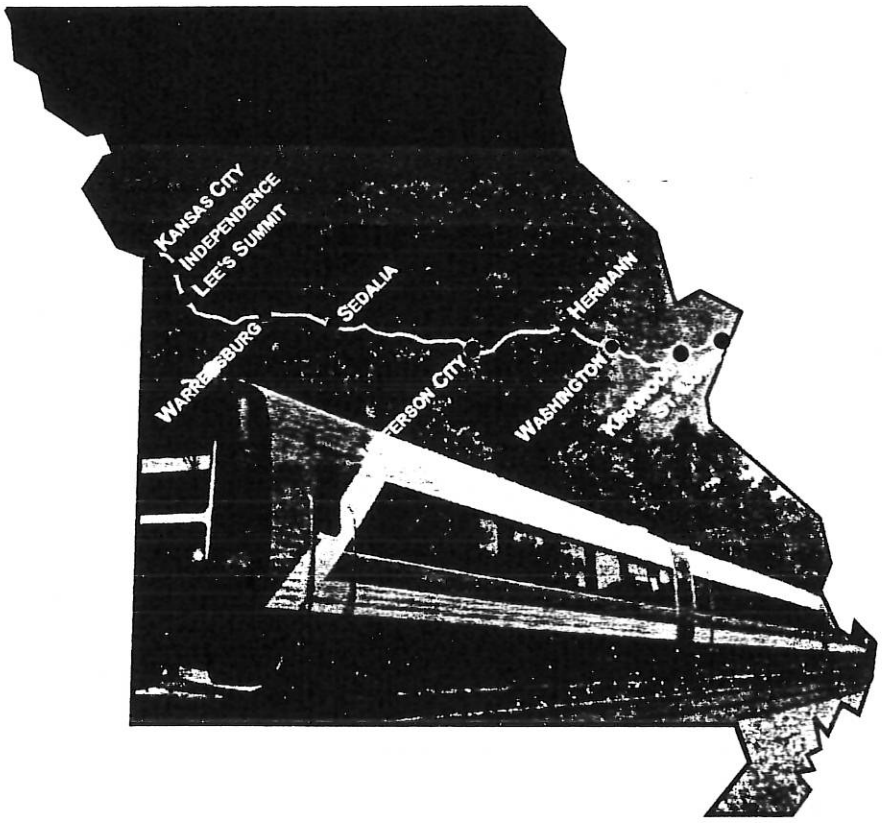
US Department of Transportation
Federal Railroad Administration

Task Force on Rail Passenger Service
September 29, 1999

BOMBARDIER TRANSPORTATION

6-11

MISSOURI DEPARTMENT OF TRANSPORTATION



EVALUATION OF PASSENGER RAIL SERVICE: ST. LOUIS TO KANSAS CITY

EXECUTIVE SUMMARY

December 1998

Prepared by:

CSI Corporate Strategies, Inc.

In Association with:

Science Applications International Corporation
An Employee-Owned Company

Task Force on Rail Passenger Service
September 29, 1999

6-12

csi
CORPORATE STRATEGIES, INC.

December 31, 1998

Mr. Joe Mickes, Director
Missouri Department of Transportation
105 West Capitol Ave
PO Box 270
Jefferson City, MO 65102

Dear Mr. Mickes:

Corporate Strategies, Inc. (CSI) is pleased to submit the enclosed Executive Summary of its December 31, 1998 report entitled "Evaluation of Passenger Rail Service: St. Louis to Kansas City." The study and this Executive Summary provide state legislative guidance regarding future options for state supported passenger rail service between St. Louis and Kansas City. It also includes recommendations related to current Amtrak rail passenger services contract negotiations.

This study examined existing services, market potential, and current and future passenger service demand. It also examined alternatives to reduce costs to the state and improve benefits to its taxpayers. The study concludes with specific recommendations and a detailed action plan.

This study could not have been accomplished without significant support from MoDOT staff, who provided the study team with considerable material directly relevant to this effort. MoDOT staff also conducted the Community and the On-Board Passenger surveys, each of which were most useful in our analysis. The study team is also very appreciative of the excellent cooperation provided by Amtrak, which made considerable effort to answer all questions and provide material used in our analysis.

We believe the collective efforts of the study team, MoDOT staff, Amtrak, Union Pacific Railroad, suppliers, and labor can help MoDOT and the state legislature accomplish study objectives to improve the efficiency and attractiveness of state supported rail passenger services.

Some of the recommendations made by the study team are innovative, and perhaps even considered to be aggressive. Some may not be practical in the long run, but at least will serve as a framework for future planning efforts.

We would be pleased to answer questions concerning the enclosed report.

Very truly yours,

Robert H. Leilich
President

RHL:jlm
Encl.

Task Force on Rail Passenger Service
September 29, 1999
6-13

5415-A BACKLICK ROAD • SPRINGFIELD, VIRGINIA 22151 • (703) 941-0560 • FAX: (703) 642-8998
E-MAIL: csi@rails.com • WEB SITE: www.rails.com

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EXHIBITS

EVALUATION OF PASSENGER RAIL SERVICE: ST. LOUIS TO KANSAS CITY

EXECUTIVE SUMMARY

OVERVIEW

In August 1998, the Missouri Department of Transportation (MoDOT) contracted with Corporate Strategies, Inc. (CSI), in association with Science Applications International Corporation (SAIC), to evaluate state supported passenger rail options between St. Louis and Kansas City.

The purpose of the study is to stem rising subsidy costs for these operations and to provide the legislature with guidance for future investments in Missouri rail passenger services. A valuable by-product of this study is information useful in current negotiations with Amtrak concerning subsidy payments for Fiscal Year 2000, commencing July 1, 1999.

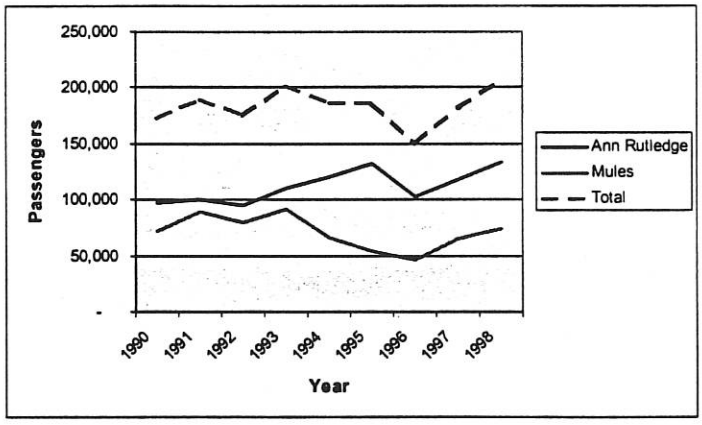
This Executive Summary highlights key findings from each chapter in the full report, including principal study conclusions and recommendations (action plan).

I. INTRODUCTION

Review of Passenger Service

Amtrak, under contract with the State of Missouri, provides two daily round trips between Kansas City and St. Louis. These two round trips are represented by the Mules (train numbers 301/306) which operate between St. Louis and Kansas City and the Ann Rutledge (train numbers 303/304) which operate between Chicago and Kansas City via St. Louis. While traffic has grown in recent years, significant ridership declines between 1994 and 1996 have only recently been recouped. Ridership in 1998 (boardings and de-boardings in Missouri) is only marginally higher than in 1993.

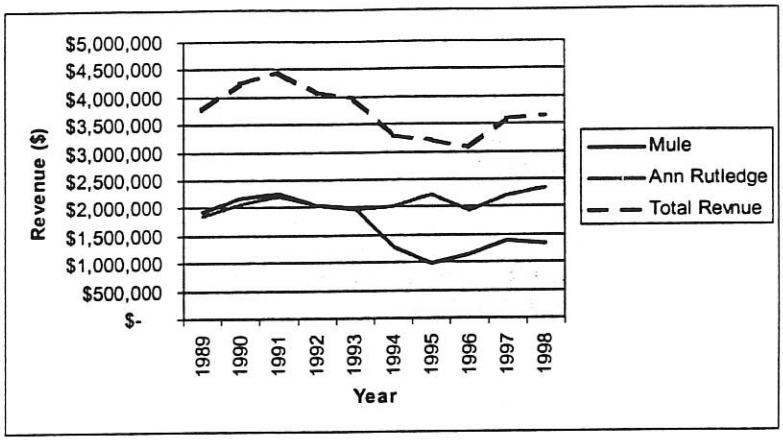
EXHIBIT 1
ST. LOUIS – KANSAS CITY RIDERSHIP



Source: Amtrak

The pattern in revenue is similar to the ridership pattern. The following chart summarizes revenues for the two trains.

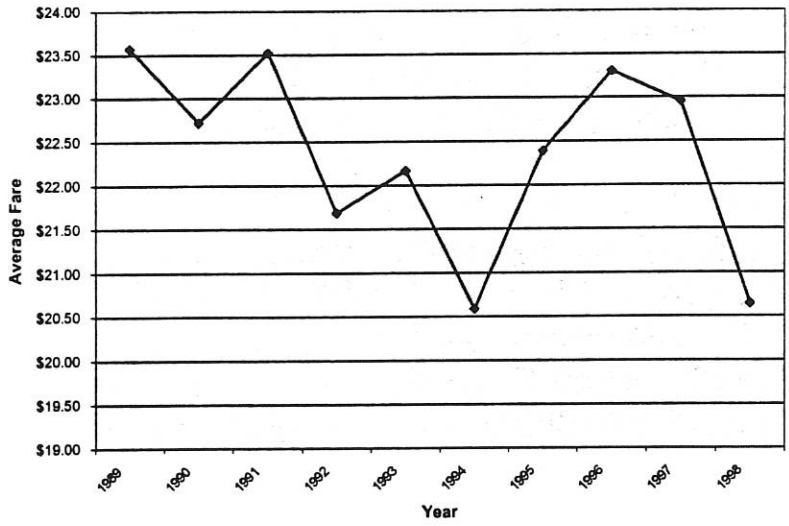
EXHIBIT 2
MISSOURI ATTRIBUTABLE REVENUES



Source: Amtrak

Even though ridership is approximately at its historical peak, revenues are only about 80 percent of their 1991 peak. Though ridership is again rising, average fares are lower, as shown in Exhibit 3.

EXHIBIT 3
AVERAGE FARES: ST. LOUIS – KANSAS CITY SERVICE



Source: Amtrak

Under its December 1994 Strategic Business Plan, driven by a Congressional mandate to phase out all operating subsidies, Amtrak began a program to obtain full cost recovery on

state supported trains. As a result, payments to Amtrak by Missouri (and other states) have risen sharply in recent years.

Missouri State Support

In fiscal year 1997, Missouri's support for Amtrak service was $3.52 million. In FY 1998, that support increased to $4.59 million. In Fiscal Year 2000, Amtrak is requesting that Missouri pay $6.5 million to continue state supported services, based on full cost recovery.

While Amtrak's costs are substantially greater than the "best practice" a third party operator might be able to achieve, it has some capabilities that are difficult for other providers to match. For example, Amtrak brings guaranteed right of access to freight lines provided by the Rail Passenger Services Act (1971). They have an existing reservation system, provide connections to other trains, provide nationwide marketing, and have limited liability. Amtrak also has national recognition.

Study Objectives

The Missouri Department of Transportation needs to improve the benefit/cost ratio of state supported passenger services. Accordingly, the study objectives are to:

- Review current state supported operations;
- Review Amtrak rates, charges, and costs;
- Examine existing market and future market opportunities;
- Examine equipment, schedule, and third party alternatives; and,
- Prepare recommendation for implementing improved, more cost effective services.

II. MARKET IDENTIFICATION AND ANALYSIS

On-Board Survey

An on-board passenger survey was conducted over an eight day period in September, 1998. Based on the survey, the median age of rail passengers was in the mid-40's. Median family income is around $45,000 per year. About half of all passengers are taking their first rail trip in the Missouri corridor in more than three years. More than 80 percent of travelers are on vacation/leisure trips or conducting personal/family business.

Among passengers surveyed, the largest occupation group was professional/managerial, at 25 percent of all respondents. The next group was students at 19 percent, retirees/not working at 18 percent and homemakers at 10 percent. Over 45 percent of passengers learned of Missouri Rail service via word of mouth, 20 percent through advertising, and

10 percent through travel agents. The remaining 25 percent could not recall or learned of the service from another source.

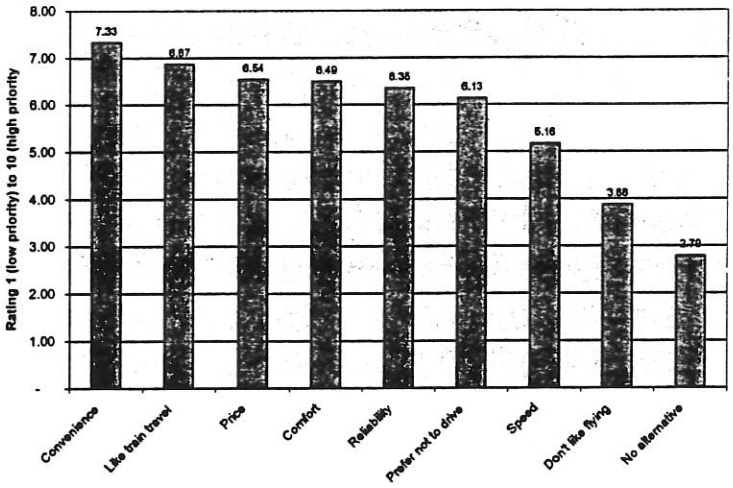
Not surprisingly, the train diverts mainly automobile traffic. Survey responses imply that 67 percent of travelers would travel by auto if the train was not available, 22 percent would fly, 7 percent would ride the bus and 4 percent would not travel. This heavy diversion from automobile is reflective of the concentration of leisure travelers on the Missouri trains.[1]

Service Evaluation by Passengers

The service is well liked. The most general question asked passengers to rate overall service on a scale of 1 (poor) to 10 (excellent). The average response was over 8.4 indicating a service well suited to the passengers served by it. Since nearly half of all passengers surveyed are taking their first trip in over three years, Amtrak is impressing the majority of new passengers.

People choose modes of transport based on numerous criteria which typically vary in importance from trip to trip. The perceived value or benefit encompasses all the attributes of a trip including price, convenience (schedules), trip times (speed), trip time variability (reliability), comfort, and general preference. The following table summarizes the priorities of surveyed passengers on the Missouri trains.

EXHIBIT 4
PASSENGER REASONS FOR CHOOSING TRAIN



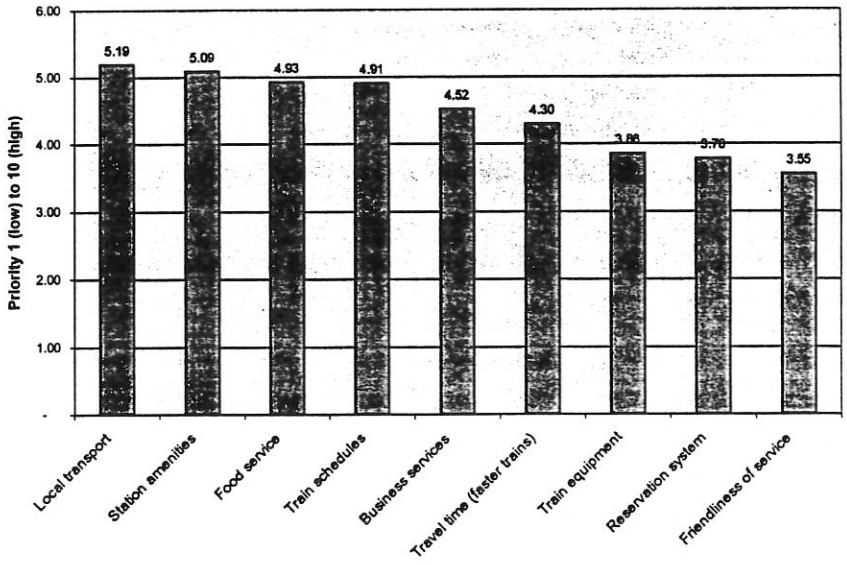
The experiences of passengers help to suggest what should be emphasized and avoided in order to secure repeat patronage, but it does not provide a true picture of what to do to attract new ridership.

[1] Business passengers are much more likely to be airline passengers or drive due to their sensitivity to travel time and insensitivity to cost.

Ratings on station amenities seems high given the relatively poor condition of many stations, suggesting that passengers are more tolerant of (or used to) poorly maintained or marginal facilities.

Passengers were also asked what areas require improvements and to assign priorities to them. Priorities listed by survey respondents are summarized in Exhibit 5.

EXHIBIT 5
PASSENGER PRIORITY FOR IMPROVEMENTS



In general, passengers are satisfied with current service. They enjoy train travel and this service lives up to their expectations. The majority of passengers are leisure travelers and the survey responses reflect the satisfaction of those passengers. Amtrak's performance on the route appears to satisfy the demands of most passengers. Passengers believe that the top three items requiring improvements are; 1) availability of local transportation at stations, 2) station facilities, and 3) food service.

Community Survey

A broad based community survey was conducted to gauge attitudes about Missouri train service in the communities along the St. Louis to Kansas City corridor. Over eight thousand surveys were mailed.

Response to the survey was surprisingly strong with about 1400 surveys returned – a response rate of almost 18 percent. Not only are citizens interested in rail passenger service, the responses were highly favorable with nearly 80 percent of respondents believing that Amtrak service was a community asset.

It is not known whether citizens who returned surveys were predisposed toward train travel[2] but, even if every non-respondent thought rail service was not an asset (highly unlikely), 15 percent of the total population would still support the service – a significant constituency. Not only are community respondents positive toward passenger rail service, 90 percent of those would consider taking the train for some purpose. The interest and inclination is there, but there is clearly a wide gulf between those who support the service and those that actually use it.

Not surprisingly, most survey respondents were interested in taking the train to St. Louis and Kansas City or adjacent suburban stations. Jefferson City was a close third while Hermann, with its strong tourist attractiveness, was fourth.

Community survey respondents were more likely than on-board passenger survey respondents to consider the train for business use. Only nine percent of surveyed on-board passengers used the train for business travel while 17 percent of community survey respondents were interested in this type of travel.

Results of the community survey suggest that leisure travelers will continue to dominate travel on the St. Louis – Kansas City route. The business market, however, offers a growth opportunity. Business travelers, however, will not be as forgiving as leisure travelers of inconveniences or failure to perform as advertised.

Leisure travelers are generally not very sensitive to time of day and trip speeds while business travelers are much more sensitive to these attributes. Any rearrangement of schedules to facilitate business travel is not likely to drive away many leisure travelers as long as departures and arrivals are not too early in the morning or late at night.

Survey responses offering reasons for not using the train illuminate some areas that should be improved. Needing a personal vehicle at the final destination is a major impediment to intercity train travel. This concern can be mitigated partially by providing convenient taxi services, car rentals, or public transit directly to/from the station at the time of arrival.

Intermodal connections between intercity rail and rail transit systems have proven highly advantageous in other cities around the country. Plans to integrate the St. Louis passenger rail station with the expanding light rail system and local transportation services has a strong potential to build ridership. Kansas City's evolving plans for light rail and the renovation of Union Station present an excellent opportunity to build ridership through providing intermodal connections. Union Station itself could even be a significant trip generator.

[2] The community survey was not a random sample since respondents could choose to ignore the survey. Presumably, citizens indifferent to the service would tend to ignore the survey. The sample is expected to be biased toward those who feel strongly (positive or negative) about Amtrak or passenger rail service generally.

When asked what would make the St. Louis to Kansas City trains more attractive, the large majority of survey respondents suggested, not surprisingly, promotional fares. The other top suggestions reinforce the need for transportation services at destinations and hotels and shopping near the stations. These items should be priorities for improving the total rail travel experience in Missouri. Tie-in's with car rental agencies, taxi companies, and other services could benefit both the rail passenger operator and the service company. It represents an unexplored opportunity.

Amtrak Station Assessment

Although mentioned much more by current passengers than those in the community surveys, station amenities are important for building and maintaining a viable passenger rail service. They offer comfort, services demanded by passengers, and a high degree of local visibility both positive and negative. Stations can be a focus of community involvement and a highly effective advertisement for the passenger rail service.

Overall, the condition and suitability of the stations is poor and very poor in some cases. A noticable exception is Kirkwood station, which meets most of the study team's view of a well-appointed rail passenger station. The quality of this station and the community pride that has gone into its maintenance and grounds keeping is undoubtedly contributing to the ridership through this station[3].

The condition of many stations is attributable to the legacy of most being no longer needed by the UP, and neither deeded to or maintained by Amtrak or the communities. Communities are beginning to respond, however, and several have taken positive steps to make improvements that present a positive image.

Experience in other communities suggests that station improvements have an effect on ridership and build awareness of rail service. In small towns, stations can be a source of civic pride while in major destinations, stations are vital to broad based success of the service.

Some Missouri station facilities should be demolished. Others should be scheduled for renovation. In the already renovated facilities, it is a matter of posting better information, properly maintaining and cleaning the facilities and adding basic amenities. The single most important facility recommendation is the need for minimum standards for the entire corridor.

A dilapidated station communicates to potential riders that rail is a "second class" mode. A well-maintained and attractive station beckons potential riders and indicates a quality service.

[3] The only real negative was a concern that the track surface has been raised too high to permit easy alighting or disembarking for older passengers.

Past research by others and the study team's analysis suggest that a route-wide station improvement program could result in roughly 15,000 new riders being attracted to try the train.

III. OPERATIONS EVALUATION

As part of the study effort, on and off train inspections of passenger operations were made, including conversations with Amtrak crews, supervisors, managers, and Chicago based staff.

Field Observations

Members of the study team rode in the cab of the locomotive on the Kansas City Mule (train number 301) from St. Louis to Kansas City on Monday, September 21, 1998. The objective of the trip was to gain direct insight of the infrastructure, operations, and interactions with Union Pacific (UP) freight traffic.

The portion of the Sedalia subdivision from St. Louis to Jefferson City is a double track line with a few single track bridges. The line is entirely under Centralized Traffic Control, controlled from Omaha, Nebraska. Westbound trains generally travel on Track 1 (closest to the Missouri River) until just east of Jefferson City. Eastbound trains generally follow Track 2. Trains occasionally switch tracks for operating reasons. Westbound passenger trains cross-over to Track 2 for the Jefferson City stop. All passenger trains follow the Sedalia subdivision, which becomes single track west of Jefferson City to Kansas City. Most freight traffic is westbound on the single track portions of the Sedalia Sub. Most eastbound freight trains run on the more northern River Subdivision between west of Jefferson City and Kansas City.

Passenger trains have priority over freight trains, but on the single track portion of the route the train dispatcher will often put a passenger train into a siding behind a freight train in order to meet an opposing freight or passenger train.

Defining Alternatives for Study

The baseline against which operating alternatives are evaluated is the existing service of two daily round trips. Operating alternatives examined included combinations of changes in fares, service frequencies, and schedules. The development of alternative services focused on filling real or perceived gaps in current service or to serve market segments that are under-represented or offer potential traffic.

Trip times between St. Louis – Kansas City are too slow for the typical business passenger. Air service is, and will continue to be, preferred by time sensitive business travelers. The benefit of train service to the business traveler lies in its direct and close access to the central business districts of each city along the route, service to and from intermediate points, and amenities or travel pleasures that train service can provide. Airports near the major Missouri cities tend to be located far outside of the central cities. Specifically, Kansas City International Airport is about 20 miles from the Central

Business District (CBD), St. Louis International Airport is 12 miles from CBD, and Jefferson City/Columbia Airport is 20 miles from the State Capital.

These distances can add up to between thirty minutes and an hour (depending on connections/access to car rentals, etc..) of additional time at each end point for access and egress to the airports. It means that a 40 minute flight can become a 2 hr and 40 minute trip. Trains offer much quicker access and egress from the CBD's (5 to 10 minutes in most cases). In addition, trains offer First Class size seats and comfort (compared to planes) in coach areas and provide a better opportunity to conduct business and work while riding. What is needed to build business passenger patronage includes:

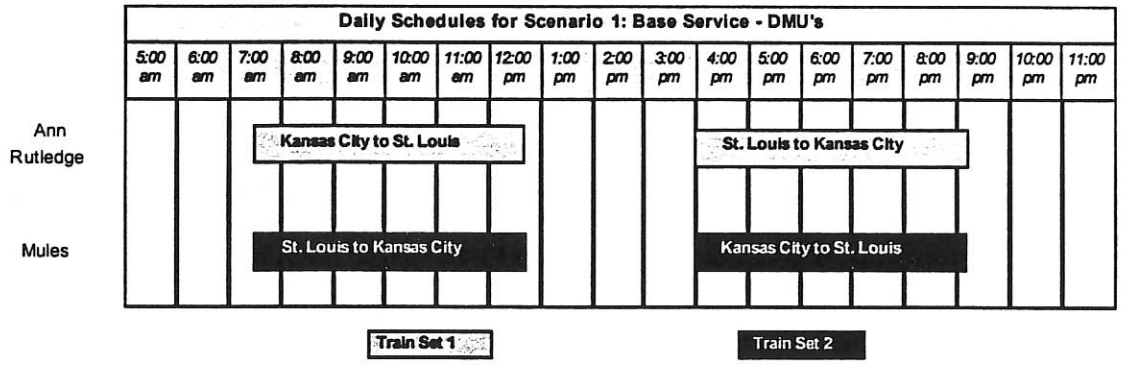
- Business-oriented arrival and departure times
- Quick access and egress to CBD
- Competitive total trip times (including access/egress)
- Comfortable and accessible stations
- Business services at stations and on-board
- Reasonable last minute, mid-week fares
- Good local transportation options at both origins and destinations
- Reliable on-time performance
- A marketing program designed to reach the business traveler

Early in the study, four alternative operating scenarios were defined.

Scenario 1: Optimize Schedules and Increase Speed Limits to 79 MPH

This scenario attempts to build on the base service with the fewest cost implications. Exhibit 6 illustrates a feasible schedule with DMU equipment, higher speeds, and 15 minutes of recovery time.

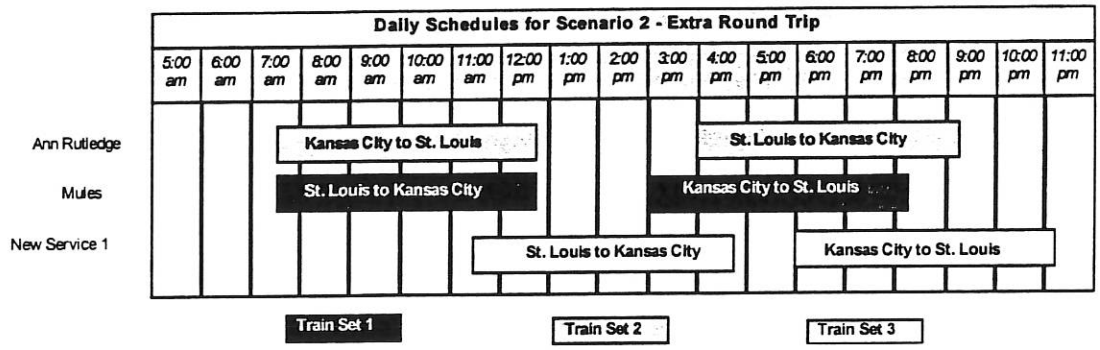
EXHIBIT 6
SCENARIO 1 SCHEDULE



Scenario 2: One Additional Round Trip

This scenario focuses on improving schedule convenience and facilitating day trips between intermediate stations and Kansas City or St. Louis. This scenario envisions three daily round trips beginning early in the morning from each end point and concluding with schedules later than currently offered. The added service could draw additional riders from all passenger types, but the most growth would likely come from business passengers for whom frequencies and convenience are paramount.

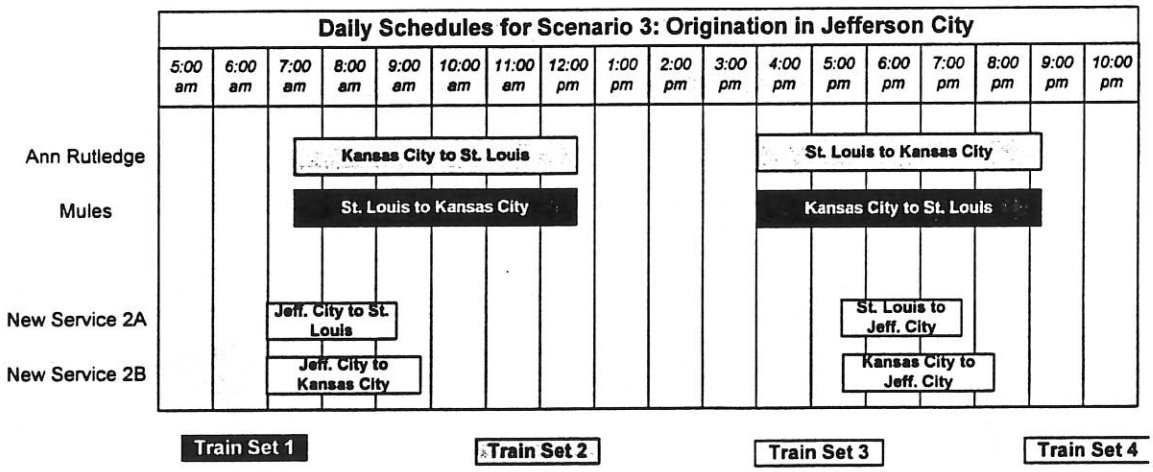
EXHIBIT 7
SCENARIO 2 SCHEDULE



Scenario 3: Originating Daily Trains from Jefferson City to KC and St. Louis

This scenario attempts to build a more business oriented clientele by offering a service that facilitates easy day trips between the third largest trip generator, Jefferson City, and the endpoints (Kirkwood and St. Louis are in the same metro area, as are Kansas City, Lee's Summit, and Independence). The Jefferson City to St. Louis trip can be made in about two hours, one-way, while the trip to Kansas City would require about three hours. These could be easy day trips and help build daily business traffic to the large cities.

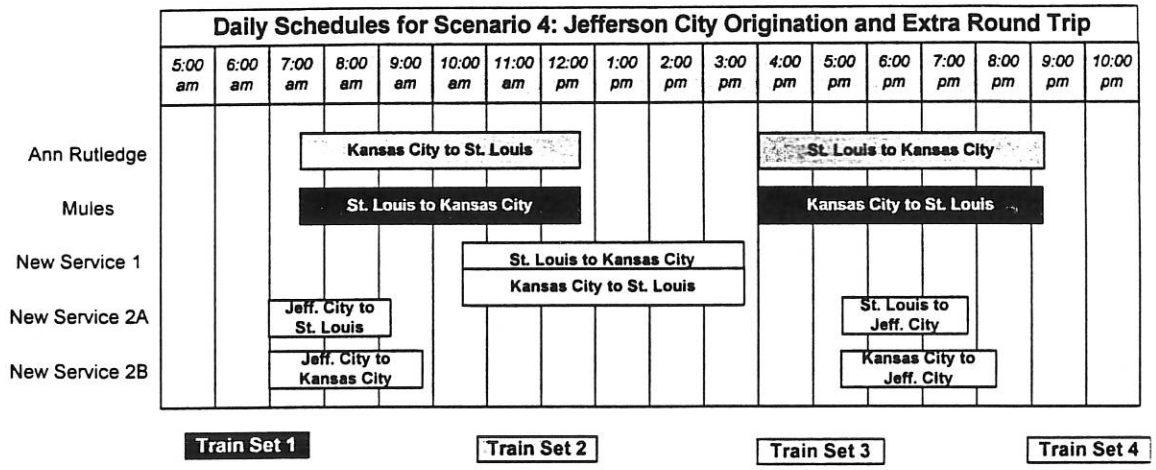
EXHIBIT 8
SCENARIO 3 SCHEDULE



Scenario 4: Combining Scenario's 2 and 3

This scenario attempts to offer a full range of departure and arrival times in St. Louis and Kansas City as well as a business oriented service originating in Jefferson City.

EXHIBIT 9
SCENARIO 4 SCHEDULE



Equipment Operating Evaluation

Equipment evaluation for state owned/leased or contracted service requires a detailed review of performance, suitability to market conditions, acquisition cost and operating and maintenance expenses. Different types of equipment offer different benefits and lend themselves to different services and markets. The Missouri corridor is suitable to several equipment alternatives. Trade-offs between equipment types include operating performance, operating efficiency in terms of fuel consumption and labor, suitability to market-driven services, capital costs of equipment, maintenance costs, and equipment availability. Safety is another issue that should be considered.

Equipment types evaluated included:

- Traditional Amtrak intercity train – Diesel electric locomotive with 4 short distance Horizon Fleet or Amfleet passenger cars/cafés.

- Self propelled equipment – Adtranz Flexliner equipment from Europe (2 Diesel Multiple Unit (DMU) passenger cars with up to 2 non-powered passenger cars).

- Tilting equipment – Diesel electric locomotive with 6 Talgo passenger cars (the minimum consist). This train has a passive tilt capability with the ability to operate at higher speeds through curves.

All of the equipment named above is capable of much higher speeds than the current maximum speed limit of 75 mph. The following table summarizes general advantages and disadvantages of alternative equipment.

EXHIBIT 10
GENERAL COMPARISON OF EQUIPMENT ALTERNATIVES

Equipment Type	*Advantages*	*Disadvantages*
Base Equipment	Proven in service	Highest fuel consumption
Locomotive, three cars, one café car	Matches Amtrak fleet	Staff of four required.
Self Propelled (DMU)	Highly fuel efficient	Not yet FRA compliant Multiple Engines
Adtranz Flexliner	Light weight Reduced crew needs	Not fully tested in U.S.
Siemans VT628	Reduced crew needs	Unproven
Tilt	FRA compliant[5]	High fuel consumption
Locomotive, Talgo, or Pendolino cars[4]	Lighter than base equip. Higher speed in curves Talgo equipment is proven in U.S.	

Current Amtrak equipment may be less efficient than the alternatives because:

- The number of cars in the present train set is small for the locomotive's capabilities, resulting in unnecessarily high power to weight ratios. Consequently, the trains consume large quantities of fuel unnecessarily (about 400 gallons per one-way trip).
- Present equipment has higher gross weight per seat than some alternatives.
- Present equipment is not maintained at a convenient location to the corridor, requiring equipment to be cycled in and out of Chicago for maintenance purposes.

Track Speed Limits

Except in terminal areas, the current track infrastructure permits a maximum speed of 79 mph. The study team could not identify any compelling reasons for not increasing maximum passenger train operating speeds to 79 mph. The time benefit of raising limits are as follows:

[4] Pendolino cars are not certified as FRA compliant.
[5] Current designs will not be compliant for Stage II requirements without some modifications.

EXHIBIT 11
EFFECT OF INCREASING SPEED LIMITS – PRESENT EQUIPMENT

Station	Base Case Trip Time	Trip Time – 79 mph
St. Louis	00:00	00:00
Kirkwood	00:25	00:25
Washington	01:03	01:02
Hermann	01:35	01:32
Jefferson City	02:20	02:16
Sedalia	03:25	03:20
Warrensburg	03:54	03:47
Lee's Summit	04:35	04:25
Independence	04:49	04:38
Kansas City	05:10	05:00

Operational Trade-Offs: Tilt vs. Self-Propelled (DMU)

CSI's Train Performance Calculator (TPC) estimated trip time improvements based on the ability of tilt equipment to navigate curves at speeds producing up to 5 inches of cant deficiency (compared to FRA's regulations for traditional equipment which allows only 3 inches of cant deficiency).[6]

The following table presents the impact of curve restrictions.

EXHIBIT 12
TRIP TIMES – NON TILTING VS TILTING EQUIPMENT

Station	Trip Times (Base Equipment & Flexliner) – 79 mph	Talgo Trip Time – 79 mph + Faster Curves
St. Louis	00:00	00:00
Kirkwood	00:25	00:21
Washington	01:02	00:57
Hermann	01:32	01:26
Jefferson City	02:16	02:08
Sedalia	03:20	03:07
Warrensburg	03:47	03:32
Lee's Summit	04:25	04:08
Independence	04:38	04:22
Kansas City	05:00	04:43

While trip times with the Talgo equipment are shorter, the time savings of 17 minutes is not large relative to the total trip. Travel time is reduced by about 5 percent using the

[6] Cant deficiency, or "imbalance", refers to the number of inches of superelevation required to maintain equilibrium through a curve. If a curve has a superelevation of four inches (the outside rail being four inches higher than the inside rail) but requires seven inches of superelevation to maintain equilibrium at a designated speed, then three inches of cant deficiency (imbalance) is observed. FRA regulations limit cant deficiency to three inches although four inches is currently under consideration. Passive tilt equipment has been granted a waiver to allow five inches of cant deficiency in the Pacific Northwest. Tilting equipment can operate at greater cant deficiencies by converting some side thrust to a force perpendicular to the floor of the car. This vertical force component is hardly or not even noticed by passengers.

Talgo sets which may draw small numbers of added passengers. Experience from around the country suggests that a 5 percent reduction in travel time will produce an approximately 4 percent increase in ridership, all else being equal.[7] The Flexliner, with steerable trucks, can produce additional time savings approaching those of the Talgo, if federal permission to operate at higher unbalanced speeds can be obtained.

Preferred Equipment

From an operating standpoint, self propelled equipment (DMU's) is preferred to the base equipment for a variety of reasons, subject to some caveats. The preferability of DMU's is based on operating flexibility and efficiency.

The DMU, with its low weight, can save significant amounts of fuel over both the base equipment and the Talgo option. It has lower operating and maintenance costs and can be operated more efficiently.

DMU's allow the operator to match the train consist to the demand by removing or adding powered or non-powered units. Traditional equipment and Talgo consists have one powered locomotive with 4000 hp. Locomotive power and weight remains constant whether or not cars are removed (or deadheaded) so fuel consumption savings associated with removing cars is not proportional to train size. DMU's can be assembled to match power requirements with the size of the train.

The fuel consumption rates for potential equipment sets is given in Exhibit 13.

EXHIBIT 13
FUEL COST COMPARISON

Train Set	Trip Time - STL-KCU (hh:mm:ss)	Fuel Consumed (annual gal)	Annual Cost ($0.74/gal)
Base Equipment	5:00:16	604,659	$447,448
Self-Propelled (Flexliner)	4:57:33	342,662	$253,570
Passive Tilt Equipment (Talgo Pendular)	4:43:25	548,960	$406,230

Current Operations

Currently there are about 34 through freight trains per day operating over the line between St. Louis and Jefferson City. West of Jefferson City, trains operate over two different routes to and from Kansas City. Twenty two of the 34 trains remain on the Sedalia Subdivision. The other 12 operate via the River Subdivision.

CSI simulated the operations of the Union Pacific and Amtrak over the Sedalia subdivision to assess the capacity of the rail line under current levels of service and for each scenario. Simulation results indicate that the Sedalia subdivision has adequate

[7] This calculation is based on a travel time elasticity of approximately –0.8 which implies that for every 1 percent reduction in travel time, 0.8 percent more passengers result.

capacity to handle each passenger scenario studied without requiring costly changes to the rail infrastructure to increase capacity.

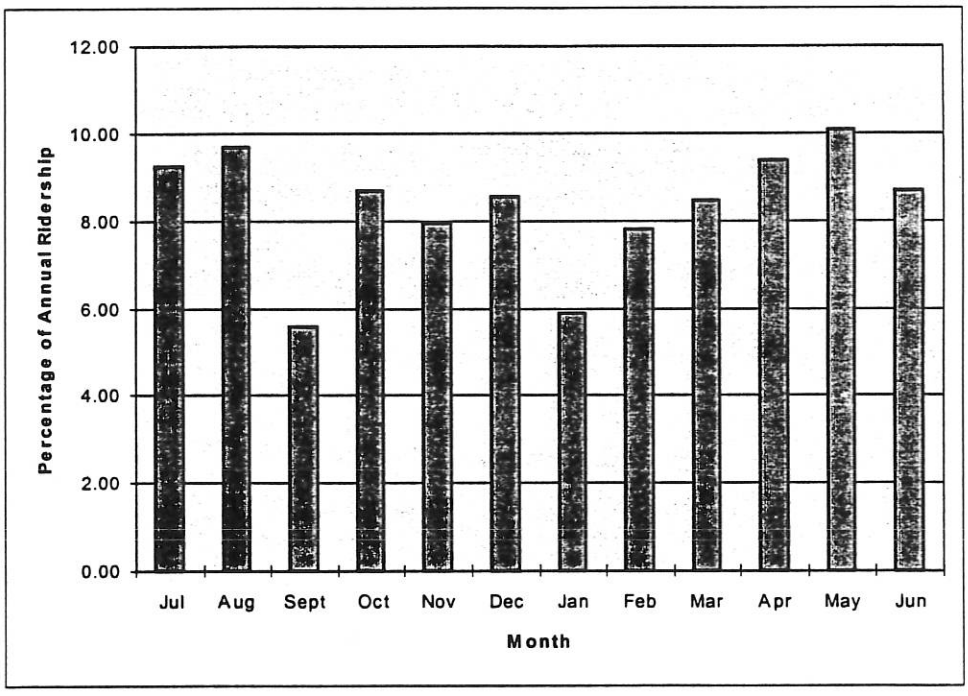
Travel Demand Model

Currently, average daily ridership is about 560 people[8] with about 9 percent of the trips representing business related travel. The average annual ridership on these services has remained relatively steady over the last 10 years in spite of the region experiencing an average annual population and employment growth rate of 0.7 percent. This indicates that competing modes are capturing the increase in total travel demand and that the rail market share is declining.

Ridership on Missouri trains is seasonal. Ridership levels in September and January are much lower than the other months. Peak ridership occurs during the summer months of April through August, as illustrated in Exhibit 14.

Ridership exhibits variations by day of the week, increasing toward the end of the workweek. Weekend travel peaks occur on Fridays and Sundays as shown in Exhibit 15, suggesting a strong non-work travel demand for the services.

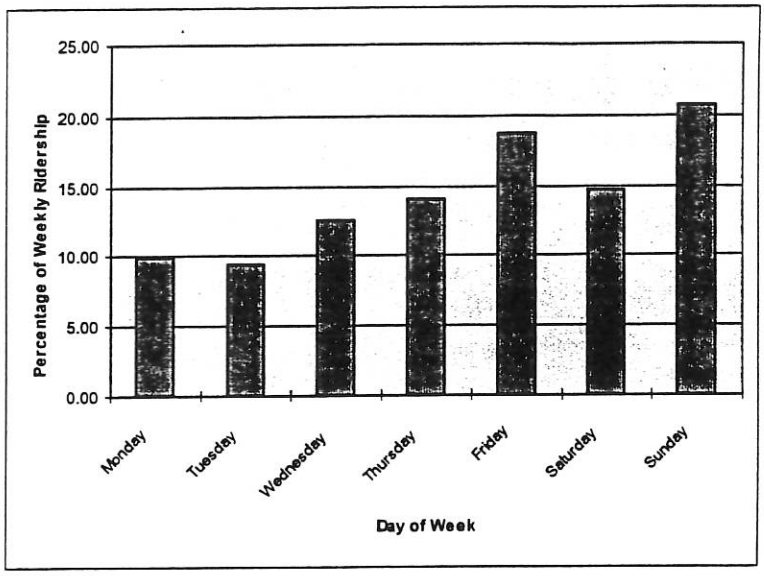
EXHIBIT 14
DISTRIBUTION OF ANNUAL RIDERSHIP BY MONTH



Source: Amtrak

[8] Based on the Amtrak report of 16,771 riders in June 1998 on train numbers 301, 303, 304, and 306.

EXHIBIT 15
DISTRIBUTION OF WEEKLY RIDERSHIP BY DAY



Source: Amtrak

Ridership and Revenue Results

Exhibit 16 summarizes the results of ridership and revenue forecasts for each scenario.

A primary conclusion from this analysis is that limited new frequencies do not create large increases in ridership. New equipment, optimized schedules, and slightly higher speeds combine to produce the largest available ridership gain compared to expanded services. The results do not necessarily mean that adding a round trip is not warranted, however. Due to the potential for reduced train staffing with Flexliners, three round trips could be provided with only marginally higher costs than two round trips. Additional focused marketing efforts could create new demands not considered by the forecast model.

Ridership and revenue forecasts lead to the following conclusions:

- Socio-economic growth in the St. Louis –Kansas City corridor and a quality rail transportation service makes it possible to improve rail passenger travel in the corridor at the rate of approximate 2 percent annually. Excess capacity in the present service provides important opportunities for increasing ridership and revenue.

- Without special promotional efforts, reduction in travel time through higher speed limits combined with better equipment will increase ridership more than adding more frequency in the corridor. According to the modeled forecast, operating faster Flexliner schedules with no additional trips, will lead to a 7.8 percent traffic growth compared to only a 5.2 percent increase in ridership with an additional round trip (Scenario 2).

- Jefferson City Originations (Scenario 3) are estimated to attract a higher level of ridership than the extra round trip (Scenario 2), but only estimated to generate marginally higher revenues. This is attributable to the fare structure of Amtrak that charges slightly higher fares on a passenger mile basis for longer distance trips.

- Revenue increases from traffic growth are generally forecast to be higher than ridership increases, attributable to longer average trip lengths.

- Growth in ridership on the Kansas City end of the corridor will be stronger than the St. Louis end due to faster economic growth around Kansas City.

EXHIBIT 16
RIDERSHIP MODEL RESULTS
(RIDERSHIP IN THOUSANDS; REVENUE AND PASSENGER MILES IN MILLIONS)

Results	1998	2000	2005	2010
Base Case - Two Round Trips				
Ridership	207.3	215.3	236.6	260.0
Revenue	$3.6	$3.8	$4.2	$4.6
Passenger Miles	37.9	39.4	43.3	47.6
Scenario 1 - Base Case + Flexliner + 79 MPH where Feasible + Optimized Schedules				
Ridership	223.5	232.1	255.1	280.4
Revenue	$4.0	$4.1	$4.6	$5.0
Passenger Miles	42.0	43.6	47.9	52.6
Scenario 2 - Scenario 1 + One Daily Round Trip				
Ridership	226.4	235.1	258.4	284.0
Revenue	$4.0	$4.2	$4.6	$5.1
Passenger Miles	42.4	44.1	48.4	53.2
Scenario 3 - Scenario 1 + Two Jefferson City Originated Round Trips				
Ridership	228.0	236.8	260.2	286.0
Revenue	$4.0	$4.2	$4.6	$5.1
Passenger Miles	42.3	44.0	48.3	53.1
Scenario 4 - Scenario 2 + Scenario 3				
Ridership	228.4	237.2	260.7	286.5
Revenue	$4.1	$4.2	$4.6	$5.1
Passenger Miles	42.5	44.1	48.5	53.3

Socio-Economic Growth Assumptions

The growth projections in population, employment and per-capita income are shown in Exhibit 17. The values in the table represent the average annual rate of growth in employment, population, and per capita income during the periods 1998-2000, 2000-2005 and 2005-2010. For example, the table indicates that employment in Missouri is expected to grow at an annual rate of 1.1 percent until 2005, and then expected to slow down to an 0.8 percent annual rate after 2005.

EXHIBIT 17
ANNUAL RATE OF MISSOURI SOCIO-ECONOMIC GROWTH

	1998 - 2000	2000-2005	2005-2010
Employment	1.1%	1.1%	0.8%
Population	0.8%	0.7%	0.7%
Per Capita Income	1.6%	1.9%	1.7%

Source: Bureau of Economic Analysis, US Department of Commerce.

V. ECONOMIC AND FINANCIAL ANALYSIS

The economic (cost) aspect of the service is a critical determinant of future rail passenger services in the St. Louis – Kansas City corridor. This chapter examines operating costs in some detail.

Amtrak Cost Models

Amtrak submitted results from two costing models to MoDOT and the study team in support of its justification for increased state subsidy. These models are the State Supported Service Pricing Model and the Intercity Forecast Model.

The Intercity Forecast Model report summarized costs for Fiscal Year 1998 which ended on June 30, 1998. The Service Pricing Model report is for Fiscal Year 2000, beginning on July 1, 1999. The one year difference is not a factor in disqualifying comparison between the two models.

While the two models yield similar bottom line results regarding total revenues and expenses, components of revenue and expense differ significantly between the two models. The differences raise questions as to what costs are appropriate and assignable to the present two trains for purpose of establishing the route deficit upon which contract subsidy payments are estimated. Differences among cost components are large enough to raise credibility questions with one or both models. Discussions with Amtrak did not explain or justify the differences. Amtrak emphasized, however, that it was making considerable efforts to improve its cost accounting procedures to more accurately estimate assignable avoidable costs and fairly apportioned joint and common costs. Of the two models, the Service Pricing Model provides more supporting detail.

Examining certain components of cost for reasonableness, the study team noted that total train and engine (T&E) crew costs were, on a daily basis, approximately 50 percent higher than the basic hourly rate for T&E personnel. Part of this can be explained by allowances for relief crews, overtime, holiday pay, sick days, jury duty, personal reasons, etc., and additional costs for maintaining an "extra board" for crew layoffs. However, the most important factor responsible for high T&E cost is a large guaranteed "extra board" pool of personnel. The guarantee amounts to payment of about 178 days pay for no work

for each T&E employee. Without state supported services, guaranteed extra board costs would not only increase, but must be borne entirely by Amtrak[9].

In the study team's opinion, the penalty cost of a guaranteed extra board is not an attributable cost that should automatically be factored in state contract (subsidy) payments. In return for certain labor work rule concessions, Amtrak agreed to a special arrangement of guaranteed employment for T&E crews. Although labor work rule concessions provide a net cost benefit in the long run, paying for a guaranteed extra board is a separate issue more properly a subject for negotiations.

Extra labor costs represented by guaranteed extra board labor payments are increased by fringe benefits and G&A (General and Administrative) costs. Combined, the total cost to the state for unneeded labor is at least $666,000 per year.

There are several other cost areas that the study team could not audit as part of this study. The following areas need to be examined (audited) more thoroughly prior to concluding negotiations with Amtrak:

- Attributable revenues;
- Contract railroad payments (particularly incentives); and,
- Fuel costs (based on differences between study team estimates and Amtrak estimates, discussed later).

Other cost areas, if only because of their large dollar amount, need to be carefully reviewed. They include:

- Insurance and property damage; and,
- Station services.

Other high cost areas, specifically equipment related costs (capital and maintenance) and on-board services (OBS), are excluded from the above list because the study team is proposing alternatives in these two major cost categories.

OBS Services

According to Amtrak supplied information, Amtrak spends $3.73 for every $1 in food and beverage revenue it earns. And, this does not include the cost of train fuel to haul the car or contract and incentive payments to Union Pacific which may be associated with the café car.

[9] As regular bid jobs are annulled, crews drop back to the guaranteed extra board as a result of an Amtrak labor agreement with the Brotherhood of Locomotive Engineers and the United Transportation Union.

The availability of food and beverage service is a very important part of passenger amenities (affirmed by the on-board survey). The study team is of the opinion, however, that food quality and service can be maintained more effectively if the service is privatized. To help ensure revenues to the private contractor, a coupon for a beverage and snack (peanuts or pretzels) could be included (added) in the ticket price, similar to airline practices. Eliminating the café car could save up to $830,000 in annual subsidy costs. Marketing this new "feature" could help mask a nominal increase in ticket price (greater than the cost of the coupon).

Crew Wages

Though T&E crew levels are the same in the Base Case and Scenario 1, CSI has adopted a more reasonable (but still high) daily rate for T&E crew members. This change will produce a direct savings of almost $500,000 per year, which when increased for overhead and G&A, produce a total savings of approximately $573,000. Most, if not all, of this lower labor cost assumption assignable to reductions in guaranteed extra board labor costs, previously discussed[10].

Fuel

The gross train weight of a three-car DMU consist is only 40 percent that of a four car locomotive pulled train. Because of lighter weight, the DMU train will consume only about 60 percent of the fuel of a four car locomotive hauled train. This reduction in fuel consumption yields savings of approximately $180,000 which, increased for G&A totals about $216,500.

Railroad Contract Payments

Though the exact formula for determining railroad contract payments is not known, assumptions made by the study team suggests a potential savings in railroad contract payments of approximately $100,000 per year for three-car DMU's.

Equipment Maintenance

Savings in equipment maintenance are uncertain, since there is insufficient history or experience with modern DMU cars in the United States. Based on the best estimates provided by Adtranz, third party maintenance costs compared to present Amtrak reported maintenance costs produce savings of approximately $450,000 per year, which increased for G&A amounts to approximately $538,000.

Total Operating Expenses Before Capital Charges

Under the assumptions outlined, including an allowance for overhead and G&A, the use of DMU's and three man T&E crew would save approximately $2.1 million per year in

[10] Crew wage savings and elimination of extra board guaranteed wage costs should not be added, as it represents double counting.

operating costs (assuming break even food service), a reduction of approximately 19 percent over Amtrak's forecast Fiscal Year 2000 full operating costs.

Equipment Costs

A major disadvantage of DMU's is the higher first cost for new equipment compared to the continued use of older, lower cost conventional locomotives and passenger cars. Purchase costs for three unit DMU's are difficult to estimate since final specifications for FRA compliant cars have not been translated into construction costs. Adtranz is also reluctant to provide estimates with current negotiations with prospective buyers currently underway. The study team's best estimate is $6.2 million for a three-car set. This very high cost can be reduced significantly if this equipment is produced in greater volume.

A rough estimate of annual capital lease cost was based on amortizing $6.2 million dollars over 15 years at 12 percent interest, with no salvage. Assuming that only one additional spare powered and non-powered car is needed to protect the service, total equipment capital costs of the DMU alternative to the Base Case represent a cost increase of approximately $1 million per year, reducing grand total operating cost savings to approximately $1 million. The bottom line is still a nine percent reduction over Fiscal Year 2000 full costs. These cost savings do not reflect additional cost savings that we believe are possible, as discussed later.

MoDOT has indicated the state might be able to issue tax-exempt bonds, currently at interest rates of around five percent, to purchase DMU's. Under these conditions, DMU costs would be about $597,300 per year ($6.2 million amortized over 15 years at five percent) versus an estimate annual lease cost of $910,300. Multiplied by 2.7 sets required to protect services in Scenario 1, additional savings of $845,000 could be realized. This would help reduce total operating costs by over $1.8 million per year – a 16 percent reduction over the Service Pricing model Fiscal Year 2000 forecast cost of $11.0 million.

Net Subsidy Requirements

Total revenue for proposed DMU operations with Base Case schedules are estimated to be approximately the same, at least based on the present fare schedule. Though the new DMU's would, in their own right, attract additional ticket revenues, these additional revenues are offset by the loss of food and beverage income attributable to present services. Under the DMU *lease* option, the overall reduction in subsidy requirements, however, is still positive at approximately $1.18 million. Even with these cost savings, subsidy costs would increase from Fiscal Year 1998's cost of $4.5 million to approximately $5.5 million for Fiscal Year 2000.

Purchasing instead of leasing DMU's, would add another $.85 million in savings, reducing total subsidy costs by $2.03 million compared to the Base Case. Under this option, subsidy payments would be $4.6 million – on par with current Fiscal Year 2000 subsidy costs.

The conclusion of the financial analysis is that, at current Amtrak cost levels, the use of state arranged DMU equipment, and third party equipment maintenance, subsidy cost savings of at least $2 million can be realized, compared to Amtrak's requested $6.5 million subsidy for continued "business as usual" operations.

Pro Formas

A summary of pro formas for the Base Case and each scenario is summarized in Exhibit 18.

EXHIBIT 18
SUMMARY OF ANNUAL OPERATING EXPENSES, REVENUES, AND SUBSIDY

	MILLIONS OF DOLLARS				
	Base Case	Scenario 1	Scenario 2	Scenario 3	Scenario 4
ITEM	Present Service	Present Service (DMU's)	Third Round Trip (DMU's)	Scenario 1 + New Jefferson City Service (DMU's)	Scenario 2 + New Jefferson City Service (DMU's)
Direct Costs					
Total T&E Crew Costs	$2.02	$1.54	$1.68	$1.96	$2.49
Total Cafe Car & OBS Expense	$0.64	$0.00	$0.00	$0.00	$0.00
Total Fuel Costs	$0.44	$0.26	$0.39	$0.39	$0.52
Switching Costs	$0.05	$0.02	$0.03	$0.04	$0.05
Total Railroad Contract Payments	$1.69	$1.59	$2.39	$2.39	$3.18
Total Insurance	$0.60	$0.59	$0.74	$0.75	$0.92
Total Equipment Maintenance	$0.99	$0.54	$0.81	$0.81	$1.08
All Other Costs	$1.13	$1.30	$1.30	$1.30	$1.39
Total Train and Route Expense	$7.56	$5.83	$7.32	$7.63	$9.63
Overhead and G&A	$1.51	$1.17	$1.46	$1.53	$1.93
Total Oper. Exp Before Capital Charges	$9.07	$7.00	$8.79	$9.16	$11.56
Capital Charge - Current Equipment (1)	$1.44	$0.00	$0.00	$0.00	$0.00
DMU's - Lease Option (2)	$0.00	$2.46	$3.37	$4.28	$4.28
DMU's - Purchase Option (3)	$0.00	$1.61	$2.21	$2.81	$2.81
Grand Total Oper. Costs w/DMU Lease	$10.51	$9.45	$12.16	$13.44	$15.84
Grand Total Oper. Costs w/DMU Purch.	$10.51	$8.61	$11.00	$11.97	$14.36
Attributable Transportation Rev (FY98)	$3.87	$3.99	$4.04	$4.04	$4.05
Net Subsidy Required w/DMU Lease	$6.64	$5.47	$8.12	$9.40	$11.78
Net Subsidy Required w/DMU Purchase	$6.64	$4.62	$6.96	$7.93	$10.31

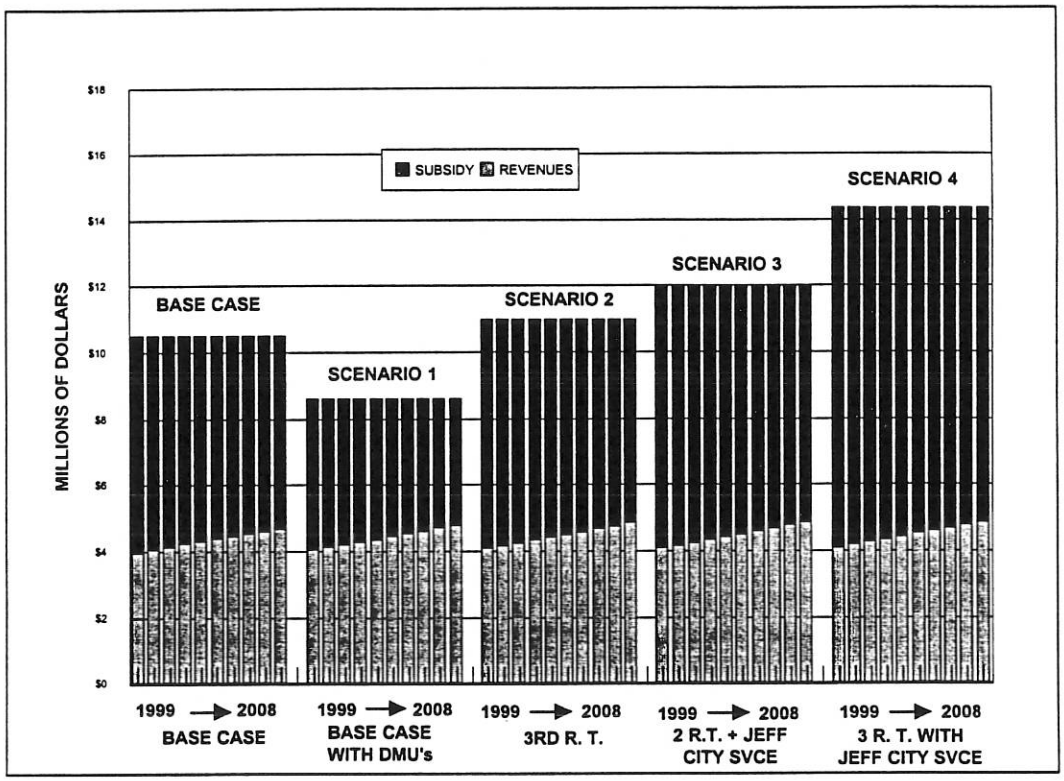
Notes: (1) Amtrak Capital (Depreciation plus Interest) Charge
(2) Estimated at $6.2 million per trainset, amortized at 12 percent over 15 years.
(3) Same as (2), except a 5 percent interest rate is used.

The buy versus lease option for DMU's produces a constant annual savings across each of ten years, summarized as follows:

- Scenario 1 - Substitute DMU's for present equipment; $845,000
- Scenario 2 - Third round trip; $1,158,000
- Scenario 3 - Two round trips and new Jefferson City service; $1,471,044
- Scenario 4 - Three round trips and new Jefferson City service; $1,471,044

Forecast revenue, costs, and subsidy requirements for the ten year period beginning in 1999 are summarized in the bar graph shown in Exhibit 19. This excludes yet additional steps which might be taken to reduce costs and increase revenues, discussed in a following section. In this exhibit, the DMU purchase option is used in the calculation of required subsidy costs.

EXHIBIT 19
SUMMARY OF REVENUES PLUS SUBSIDY EQUAL CONSTANT LEVEL COSTS
(DMU PURCHASE OPTION)



Privatization

A significant factor in the expansion, or even continuation of present rail services between St. Louis and Kansas City is whether the relationship between revenues and costs can be improved. Privatization of all or some portion of Amtrak services, will provide cost savings with no reductions in service quality.

Principal areas or functions which may be privatized include:

- Train operations;
- Equipment ownership and maintenance;
- Insurance;
- Station services;

- Reservations, information, and marketing; and,
- On-board services.

Train Operations

Including overhead and G&A, train crew expenses make up, by far, the largest single cost component of train operations. According to Amtrak, total train and engine crew expenses exceed $2 million which, when marked up for overhead and G&A, total approximately $2.4 million.

To reduce these expenses, there are three options, not all of which may be feasible or practical:

- Contract with UP to provide T&E crews;
- Contract with a third party to provide T&E crews; or,
- Renegotiate wage payments with Amtrak.

Among the three options, Exhibit 20, below, summarizes base rate labor costs among the three alternatives.

EXHIBIT 20
COMPARISON OF CREW WAGE ALTERNATIVES PER TRIP

	BASE WAGE RATES		
	AMTRAK	UNION PACIFIC	THIRD PARTY*
Engineers	$241.50	$285.00	$176.00
Conductors	$179.44	$233.50	$176.00
Assistant Conductors	$153.60	$214.81	$160.00

**If crews are not subject to Federal regulations regarding Federal Employees Liability Act (FELA) and Railroad retirement, additional fringe costs for Health & Welfare, Pension, Workmen's Compensation, etc. may be 25 - 30 percent compared to Amtrak and UP's approximate 42 percent.*

Equipment Ownership and Maintenance

This is clearly an area where MoDOT can achieve major cost savings producing direct and ancillary cost reductions in many areas, as previously discussed.

A major issue is the portion of Ann Rutledge schedule which operates between St. Louis and Chicago. If Amtrak could jointly agree with Missouri to provide DMU's on this train, it could work to the mutual advantage of both parties. Failing that, a determination would need to be made of whether to have through passengers change trains at St. Louis or to continue the use of existing equipment. The value of this trade off cannot be evaluated in this study.

Insurance

The total direct insurance and property damage cost to the state is approximately $580,000 (Service Pricing Model for Fiscal Year 2000). Including overhead and G&A, the total cost is approximately $700,000. This is a significant expense. Marked up for overhead and G&A, total insurance and property damage costs translate to approximately $3.38 per passenger carried or $18.46 per 1,000 passenger miles. The direct cost of the state providing equivalent coverage may be less than Amtrak costs assigned to Missouri on a pro rata basis. At least this bears further investigation by MoDOT.

Station Services

Station services is another area subject to privatization, at least for staffed stations such as Jefferson City and Kirkwood. A third party may be able to employ lower cost labor. Third party labor also may not be subject to FELA or Railroad Retirement costs.

Reservations, Information, and Marketing

Prior to Amtrak, each railroad had its own reservation, information, and marketing system, not unlike the more modern systems maintained by airlines. If a third party operator cannot provide these services directly, there are other organizations that might provide a competitive alternative when compared to the present $248,000 annual cost included in the Amtrak Service Pricing Model.

On-Board Services

This is clearly an area that warrants change. Though precedent may make it difficult to discontinue on-board services on trains as they are presently operated, eliminating the café car through the use of DMU's may make it easier to introduce third party services whose costs are likely to be much more in line with revenues.

Other Savings Potential

Privatization, or the threat of privatization of one or more of the above categories may help the state negotiate more favorable terms with Amtrak as an alternative to losing whatever contribution the state would otherwise be willing to make.

Lodging and meals currently cost an estimated $114,000 per year (Service Pricing Model). Presently, on-time passenger trains meet on the single track line west of Jefferson City, it means that one train is stopped in a siding waiting for the other to pass. With DMU's, there may be justification to stop the other train to swap crews – a practice that has some precedent both in the U.S. and abroad. While this might add three to five minutes of delay, it has the advantage of allowing crews to return home each night, improving both crew morale and saving in lodging and meals[11]. If scheduled departures from St. Louis and Kansas City are not equalized, this arrangement may not be workable

[11] Crews should occasionally run through, however, to maintain their familiarity of the territory in which they are certified to operate.

if it results in engineers operating more than six hours on continuous duty (at least under the present labor contract).

In summary, the use of purchased DMU's in present operations and discontinuing on-board services would yield savings over the present Base Case of at least $2 million. More aggressively pursuing some of the other cost areas discussed above could provide further savings and still result in the provision of equal or higher quality service in the corridor.

VI. COST BENEFIT ANALYSIS

The cost-benefit analysis ranks the net benefits of the base service and four rail service alternatives[12]. The base case against which the alternatives are evaluated is the existing service of two daily round trips. The cost-benefit analysis model measures the benefits and financial returns to the state of Missouri, and public (social) benefits to its residents. These benefits are compared to the costs of purchasing/financing new equipment and operating and maintaining the passenger rail system to determine which alternative produces the most value.

Methodology

The cost-benefit analysis is compatible with models used by the US Department of Transportation, including the Federal Railroad Administration (FRA), for evaluating transportation improvements.

Exhibit 21 describes and identifies the source for the major assumptions in the analysis. The assumptions are consistent with standard practice and those used in the cost-benefit analysis conducted in the Midwest Regional Rail Initiative study (1998).

Cost-Benefit Analysis

The benefits and costs of each service option are presented in Exhibit 22. Notice that the base case accounts for most of the benefits and costs since the ridership and revenue changes estimated in the demand analysis are small relative to the base case.

The results show that each scenario, except for Scenario 4 under the lease option, produce benefits in excess of costs. Scenario 1 stands out as the preferred alternative. This is intuitive since Scenario 1 features reduced annual expenditures while attaining ridership gains nearly as large as the other alternatives. On purely economic grounds, assuming no other changes in the future, this alternative maximizes benefits net of costs to the state of Missouri. This does not necessarily mean additional services (Scenario 2 or 3) should not be considered, for reasons previously discussed.

[12] Note: The distinction between economic and financial feasibility is that economic feasibility includes the full range of benefits (i.e., including safety, environment) whereas financial feasibility is concerned only with the returns from operations.

EXHIBIT 21
DESCRIPTION AND SOURCES OF KEY ASSUMPTIONS

Variable	Assumption
Travel Demand	Demand estimates projected over a 20-year period using elasticities developed by the Midwest Regional Rail Initiative.
Analysis Period	20 years. This time frame is standard in the cost-benefit analysis of capital projects. The period is chosen to reflect the nominal useful life of the project.
Discount Rate	Rate is assumed constant at 4 percent in real terms. The standard discount rate suggested by the Office of Management and Budget is seven percent nominal. Our discount rate is identical after subtracting an assumed three percent inflation rate.
Operating Costs	Derived from Amtrak operating cost analysis. Costs are assumed constant in real terms over the analysis period.
Value of Time	$15.00 per hour. This value is the approximate average wage of travelers.
(1998$)	All values are in constant 1998 dollars.

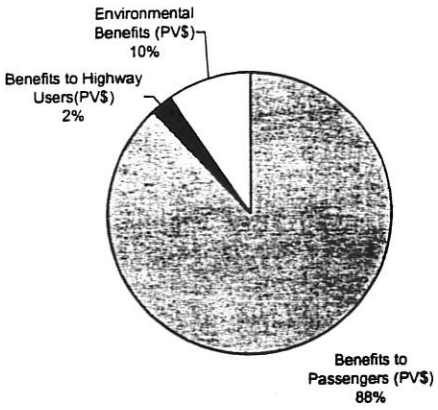
EXHIBIT 22
COST BENEFIT ANALYSIS RESULTS, PRESENT VALUE OVER 20 YEARS ($ MILLIONS)

Primary Evaluation Criteria	*Scenario*				
	Base Case	*1*	*2*	*3*	*4*
Passenger Benefits (PV$)	$114.2	$116.8	$117.1	$117.1	$117.1
Benefits to Hwy Users (PV$)	$3.1	$3.4	$3.5	$3.4	$3.5
Environmental Benefits (PV$)	$12.3	$13.7	$13.8	$13.8	$13.8
Total Benefits (PV$)	$129.6	$133.9	$134.4	$134.3	$134.4
Subsidy Costs -Lease (PV$)	$(78.3)	$(64.0)	$(102.6)	$(117.4)	$(149.8)
Subsidy Costs -Purchase (PV$)	NA	($52.6)	($84.3)	($97.4)	($129.8)
Net Benefits -Lease (PV$)	***$51.3***	***$69.9***	***$31.8***	***$16.9***	***($15.4)***
Net Benefits -Purchase (PV$)	***NA***	***$81.3***	***$50.1***	***$36.9***	***$4.6***

Passengers derive the vast majority of total benefits, followed by environmental benefits and benefits to highway users respectively. Exhibit 23 presents the distribution of benefits.

The analysis highlights the fact that rail passenger service, even as it stands, is highly beneficial to the state of Missouri. It is a fairly low cost alternative that is valued highly by a significant portion of the Missouri public. The cost benefit results confirm findings from the rail passenger survey and community survey that found strong support for passenger rail service. MoDOT's challenge is to find more cost effective means of providing high quality rail service to the citizens of Missouri.

EXHIBIT 23
DISTRIBUTION OF TOTAL BENEFITS



VII. CONCLUSIONS AND RECOMMENDATIONS

For the St. Louis – Kansas City rail corridor to succeed, the State of Missouri must commit to ensuring its success. Rail is a valued link in the transportation system for a large number of people. Current passengers are pleased with the service, the communities surveyed along the route value the service, and the cost-benefit analysis finds that benefits to residents in the State of Missouri exceed its public costs. Despite this solid foundation, passenger service has deficiencies that can be remedied by a firm commitment. This commitment can lead to improving passenger rail services, patronage, revenues, and reducing costs, reinforcing all of this study's positive findings.

The state, as the main funding source for the Ann Rutledge and Missouri Mules, can exert much more control over Missouri passenger rail services.

Study Conclusions

Study conclusions are summarized as follows:

- Rail passenger transportation services are valued by communities adjacent to the St. Louis – Kansas City transportation corridor;
- In spite of some observed problem areas, users of the train services give high marks for trip experiences;
- Ticket prices are reasonable and probably lower than they need to be;
- The market for rail passenger services is generally for the leisure, less time sensitive passenger;
- Business travel is limited, but a promising market for development;

- Marketing/advertising was not a major factor influencing travel decisions among on-board passengers surveyed, meaning that the message or media used was not highly effective;

- A very high percentage of passengers are first time rail travelers (or more than three years since they previously rode the train);

- Amtrak costs of providing train services show large variations among reported costs versus modeled costs, creating questions about the validity of its forecasting, costing and/or accounting procedures;

- Because of so many vagaries in Amtrak's cost accountability, the state needs assurance that future subsidies will be consistent with decisions based on a present understanding of costs;

- Privatization and use of DMU equipment in the present service is overwhelmingly a key to reducing labor and other operating costs;

- The ability of the state to utilize low cost, tax-exempt financing makes acquisition superior to leasing DMU's, even if the state loses the tax benefits of depreciation;

- About 2.7 DMU sets (2 full sets, plus one extra powered and non-powered unit) are minimum requirements to protect existing traffic and service levels;

- To convert the Ann Rutledge to DMU's requires that Amtrak purchase additional DMU sets to protect the Illinois portion of that service. Failing that, interstate passengers moving to or from points east of St. Louis would need to change trains in St. Louis (an undesirable choice);

- Optimized schedules, faster speeds, and DMU trainsets (Scenario 1) offer the most attractive cost-benefit results, though adding a third round trip (Scenario 2) is nearly as good as the Base Case;

- Missouri must be very aggressive in promoting labor efficiency and productivity in the services it sponsors. It cannot be held fully accountable for labor guarantees if the alternative is to discontinue support of present services which will only increase Amtrak's costs of labor guarantees;

- All areas of cost discussed in this report can either be privatized, renegotiated, or reduced. Only in areas where Amtrak cannot be more cost effective and competitive, should the state seek a privatized alternative. Equipment ownership and maintenance is clearly one area. T&E labor costs are a second, fertile area. If T&E costs cannot be reduced, there may be some justification to privatizing the entire service, with Amtrak being offered the opportunity to compete for components of the service.

- Privatizing the whole service, however, adds considerable burden to the state and introduces uncertainties with respect to payments to the UP, liability, and jurisdictional issues. Totally privatizing intercity passenger services now provided by Amtrak would make Missouri a pioneer in uncharted waters. Though state supported services are not a part of Amtrak's "core routes," they still affect the company's economies of scale, management, marketing, equipment standardization, maintenance, and the appearance of a nationwide network.

Recommendations

Based on study conclusions, the following study recommendations are made:

Station Improvements

Stations are the first and last impression that riders have of a rail trip. The appearance and function of stations should support the impression of quality and accessibility. High quality stations advertise the rail service, help to build ridership, can be a source of community pride, and are a service attraction (advertisement) in their own right. The state should ensure a quality station building with minimum amenity attributes.

In addition, the state should strongly support the development of new station facilities for St. Louis and Kansas City. These stations should serve a local transit hub, contain car rental and taxi services, and be within walking distance of some downtown destinations.

Ticketing and Reservations

Obtaining tickets and reservations should be made as simple as possible. Signs posted at each unstaffed station stating that the trains are now "reservation only" are unclear and uninviting. Each unstaffed station should have a clearly marked direct phone to Amtrak reservations with clear instructions for making reservations and purchasing a ticket. Trains should be equipped with on-board (portable) off-the-shelf equipment to receive reservations and print tickets and receipts for boarding passengers using the reservation phone.

By eliminating on-board fare collection (except, perhaps at a premium charge) it helps justify the use of a two man train crew for a three-car DMU. By having Amtrak (or third party) reservation clerk handle the fare collection by credit card and transmitting the ticket directly to the train, the conductor's ticket workload can be reduced[13]. Passengers also can be given a verbal confirmation number that contains a fare code and payment validation as an aid to the conductor and as an emergency backup in case of communication or equipment problems. Details and procedures need to be developed.

[13] An assistant conductor may be needed on heavy travel days when train utilization is expected to be high, or cars are added to the consist.

Train Operations and Equipment

Missouri should purchase Diesel Multiple Units (DMU's) to service the Kansas City – St. Louis corridor. The state should join in the Pennsylvania DOT's planned acquisition of FRA compliant Adtranz Flexliner equipment though its train configuration requirements will be different than Pennsylvania's. Maintenance should be contracted out to a third party (where Amtrak could also be a bidder).

Converting the Ann Rutledge to DMU's will require a cooperative agreement with Amtrak to cover the St. Louis to Chicago leg. Requiring passengers to switch trainsets at St. Louis is an unattractive option. Amtrak would need to procure additional DMU sets to seamlessly operate the Ann Rutledge from Kansas City through St. Louis to Chicago. Amtrak can derive some of the same economic benefits from DMU operation as Missouri would enjoy.

Speeds should be increased to 79 mph where feasible. This will require cooperation from the UP. The state, or operator, should also explore an FRA waiver of unbalance regulations to allow four inches of cant deficiency to further increase speeds around curves. Flexliner DMU's have steerable trucks and can safely operate at 4 inch unbalance (as they do in Europe). Increasing speeds to 79 mph can shorten schedules by 15 to 20 minutes while allowing a four inch unbalance could shorten schedules up to 10 more minutes.

Renegotiate T & E Labor Rates

T&E labor costs paid by Missouri are excessive. If Amtrak cannot reduce T&E expenses to a more competitive level through the use of two man crews at unburdened rates, Missouri should invite a third party to provide train operations, contracting with Amtrak only for services it can most economically and efficiently provide. Labor costs should be based only on employees actually working, in accordance with standard labor agreement rates, with only acceptable levels of payments at premium rates. Anything more is a negotiation issue.

On Board Services (OBS)

Food and beverage service could be provided via pushcart as airlines and some foreign rail passenger operators now do. Alternatively, or perhaps in addition to carts, a small service galley could be provided in one of the DMU's. The service should be provided by a private outside contractor. The cost of one beverage and a snack could be included into the price of a ticket to help guarantee a level of revenue to the OBS contractor and could be marketed as a new service feature.

Trainsets should be configured to include a private (perhaps glassed in) business service area available at a premium price. The area should include amenities useful to conduct

business, including at least several outlets for personal computers[14]. If business passengers are going to be drawn to this service, adequate business amenities must be provided to make productive use of on-board time. No other form of commercial domestic transportation could advertise this level of service amenities to the business traveler.

Marketing

The State of Missouri should expand and/or increase its marketing efforts to support the service through the development of marketing materials and brochures. These should be distributed to travel agents, chambers of commerce, and in each station. Better media selection is required to increase public awareness in the corridor.

Third Round Trip (Optional)

The cost benefit analysis favors Scenario 1 – the substitution of DMU's for existing operations and schedules. Scenario 2 (third round trip) is less favorable than Scenario 1, but still almost as favorable than the Base Case. Some serious thought should be given to adopting Scenario 2 if it facilitates a better labor arrangement and a greater state commitment to providing rail passenger services.

Adding a third schedule is a powerful sign to the public of Missouri's commitment to rail passenger service. Properly marketed and advertised, it could well build traffic above forecast expectations.

The improvements recommended in this report will support continued growth in ridership over the next several years until peak weekend demand outstrips the capacity of three-car trainsets. Additional cars or additional frequencies would then become necessary.

Initially, an additional round trip could be added for Friday through Sunday service to provide capacity for peak demand. This would require use of reserve equipment plus one additional power unit at a minimum. Adding a third train may not result in a proportionate increase in costs if the new service utilizes reserve equipment and all trains operate with two man crews (instead of three man crews for only Scenario 1).

[14] Telephone and modem connections for wireless E-Mail of Fax could be provided if demand and revenues justify it.

Transportation Economics & Management Systems, Inc.

Oklahoma – Amtrak Study

Interim Report :
Operating Times and Demand Forecasts

Attachment ①
Task Force on Rail
Passenger Service
9-29-99

Executive Summary

Study Purpose and Process

Amtrak and Oklahoma are investigating the potential for restoring passenger rail service between Oklahoma City and Fort Worth, TX. Passenger rail service may also be desirable and feasible between Tulsa and Oklahoma City, via either Sapulpa or Perry. In addition, there may be market potential for passenger rail between Kansas City, Oklahoma City and Ft. Worth, through either Tulsa or Newton and Perry. Exhibit 1 provides a schematic map of the route options for investigation.

Exhibit 1. Route Alternatives

Transportation Economics & Management Systems, Inc. (TEMS) was requested to prepare operating timetables and to estimate ridership demand and operating revenue for the above scenarios. Amtrak provided the track diagrams representing the current track condition and described proposed infrastructure and signal changes on a broad scale for the Oklahoma City- Ft. Worth and Oklahoma City- Tulsa options. No changes were proposed for the Kansas City- Oklahoma City segments.

TEMS reproduced the track diagrams for each rail corridor on its proprietary *TRACKMAN©* system, which creates an electronic replica of track conditions, complete with curves, superelevations, crossings, yards, signals and speed restrictions. Appendix 1 provides a description of the *TRACKMAN©* and *LOCOMOTION©* programs. The track files for each scenario are individually bound and provided separately, and were reviewed by Amtrak. TEMS then introduced the changes in speed restrictions at crossings or along the track, as directed by Amtrak. TEMS next ran its *LOCOMOTION©* program for each track segment, using the acceleration and deceleration characteristics provided by Amtrak for an F40 locomotive with a cab car and two Superliner cars. *LOCOMOTION©* works interactively with *TRACKMAN©* to simulate actual running times for a given train technology, based on given track conditions, stopping patterns, curves and other speed restrictions. *LOCOMOTION©* output includes summary timetables, speed profiles, and milepost by milepost descriptions of the infrastructure, maximum speed, and simulated speed based on track curves, acceleration, and other conditions. Appendix 2 provides the detailed *LOCOMOTION©* output for each corridor scenario.

The ridership demand forecast and revenue estimates for each corridor scenario are developed based on TEMS' *COMPASS©* model. *COMPASS©* is a sophisticated and powerful modeling system that builds from extensive databases to deliver ridership, revenue, passenger mile and market share forecasts for scenarios varying in fare levels, travel times, and other significant factors.

The databases for the Oklahoma study include:

- A comprehensive zone system,
- Base year travel demand patterns for business and non-business travelers among the zones in the corridor along the road and air networks of the region, Travel demand for the base year is estimated based on auto counts and survey data, samples of air travelers, and bus schedules.
- Socioeconomic characteristics of population, employment and income for each zone, and
- The full network of travel times and travel characteristics for each mode for each link between each zone pair.

Appendix 3 provides a comprehensive description of the *COMPASS*© model as applied in this study.

Study Findings

Total travel demand in a corridor, such as Ft. Worth to Oklahoma City, is influenced by a variety of factors, including population, income, distance among attractions, and travel mode options available. Travel time and cost are among the key factors influencing ridership levels and choices in a given corridor.

The rail ridership forecast for each scenario option is presented below. Note that ridership and revenue for a full corridor will be greater than the sum of the individual portions of the larger corridor.

Figure 2. Comparisons for Oklahoma City- Ft. Worth (Tier I)

Service Route	Oklahoma City-Ft. Worth	Oklahoma City-Ft. Worth
Description	Crossings @ 70 mph	Crossings @ 79 mph
Service		
Stations	Ok.City, Flynn, Purcell, Pauls Valley, Wynnewood, Dougherty, Ardmore, Gainesville, Saginaw, N. Ft. Worth, Ft. Worth	Ok.City, Flynn, Purcell, Pauls Valley, Wynnewood, Dougherty, Ardmore, Gainesville, Saginaw, N. Ft. Worth, Ft. Worth
Travel Time	3:29	3:23
Distance	205.2	205.2
Avg. MPH	58.9	60.7
Round Trips/Day	1	1
Operating Year 2000		
Annual Revenue	$ 1,340,000	$ 1,380,000
Rail Riders	60,000	62,000
Pass. Miles	6,965,000	7,157,000
Avg. Fare/ Mile	$ 0.193	$ 0.193
Avg. Trip Length	114.9	115.4
Market Comparison Year 2000		
Corridor Travel: All Modes	52,300,000	52,330,000
Rail Market Share	0.116%	0.118%
Operating Year 2005		
Annual Revenue	$1,486,623	$1,531,000
Rail Riders	66,900	68,400
Pass. Miles	7,724,000	7,937,000
Avg. Fare/ Mile	$ 0.193	$ 0.193
Avg. Trip Length	115.5	116.0
Market Comparison Year 2005		
Corridor Travel: All Modes	58,950,000	58,987,000
Rail Market Share	0.113%	0.116%

Figure 3. Comparisons for Tulsa –Oklahoma City and Through Service to Ft. Worth (Tier II)

Service Route	Tulsa – Oklahoma City via Sapulpa Base Case	Tulsa-Oklahoma City via Sapulpa	Tulsa- Ok.City-Ft. Worth via Sapulpa	Tulsa-Ok.City-Ft. Worth via Perry
Description	No improvements	Improve to achieve 59 mph speed restriction	59 mph speed restriction Tulsa to Oklahoma City	
Service				
Stations	Tulsa, Sapulpa, Bristow, Stroud, Chandler, Oklahoma City	Tulsa, Sapulpa, Bristow, Stroud, Chandler, Oklahoma City	Tulsa, Sapulpa, Bristow, Stroud, Chandler, Oklahoma City, Flynn...Ft. Worth	Tulsa, Pawnee, Perry, Guthrie, Edmond, Oklahoma City, Flynn... Ft. Worth
Travel Time	4:15	2:24	2:24 to O.C. 5:49 to F.W.	2:41 to O.C. 6:06 to F.W.
Distance	113.4	113.4	318.6	351.5
Avg. MPH	26.6	47.25	54.77	57.62
Round Trips/Day	1	1	1	1
Operating Year 2000				
Annual Revenue	$ 155,000	$ 520,000	$ 3,036,000	$ 2,366,000
Rail Riders	7,800	26,034	95,541	87,932
Pass. Miles	801,800	2,677,000	16,827,000	13,355,000
Avg. Fare/ Mile	$ 0.194	$ 0.194	$ 0.180	$ 0.177
Avg. Trip Length	102.8	102.8	176.1	151.9
Market Comparison Year 2000				
Corridor Travel: All Modes	19,300,000	19,313,000	84,203,000	85,616,000
Rail Market Share	0.04%	0.135%	0.113%	0.103%
Operating Year 2005				
Annual Revenue	$170,000	$ 570,000	$ 3,342,000	$ 2,607,000
Rail Riders	8,500	28,400	105,100	96,700
Pass. Miles	874,000	2,919,000	18,515,000	14,705,000
Avg. Fare/ Mile	$ 0.195	$ 0.195	$ 0.181	$ 0.177
Avg. Trip Length	102.8	102.8	176.2	152.1
Market Comparison Year 2005				
Corridor Travel: All Modes	21,470,000	21,477,000	94,444,000	96,005,000
Rail Market Share	0.04%	0.132%	0.111%	0.101%

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September 29, 1999

7-6

Analysis Highlights: Tulsa, Oklahoma City and Ft. Worth

Oklahoma City – Ft. Worth- stand-alone service. Signal modifications will permit service to operate at 79 mph through crossings throughout the corridor, maintaining improved travel speeds. These modifications permit a very reasonable timetable of 3 hours 23 minutes, averaging over 60 miles per hour. One round trip per day has been proposed and tested for this scenario; additional frequencies would increase ridership and revenue, as well as operating cost. Rail ridership is estimated at 60,000 for the year 2000, with associated passenger revenue at $1.38 million.

Tulsa – Oklahoma City – stand-alone service. The base case for Tulsa – Oklahoma via Sapulpa, assuming no infrastructure improvements, yields a timetable of 4 hours, 15 minutes, due to the extensive sections of track with speed restrictions of 20 or 40 miles per hour. Ridership demand is very limited under such an option, to perhaps 7,800 riders per year. Average operating speed is less than 30 miles per hour.

Amtrak proposes significant improvements to the line, to permit operation at 59 mph (not including slower speeds required for curves). With these changes, travel time between the two cities is estimated at 2 hours 24 minutes, averageing 47 mph. With one frequency per day, it is estimated that 26,000 riders would use the service in the year 2000, generating $520,000 in revenue.

Tulsa – Oklahoma City – Ft. Worth – coordinated service. When improved Tulsa service is linked to Ft. Worth via Oklahoma City, it is estimated that riders and revenue on the corridor will increase significantly. Ridership increases to approximately 95,500 per year, while revenue increases to approximately $3 million per year, or about 60 percent greater than the services operated individually. The combined service carries riders from Tulsa to Ft. Worth, or to other points beyond Oklahoma City. Many of these riders would not have traveled on rail if the full route were not available. It is estimated that approximately 40,000 patrons per year would travel through Oklahoma City under this option. These Tulsa- Oklahoma City- Ft. Worth patrons also have significantly longer trips than the average of the stand-alone services, which is reflected in the increased passenger miles and revenue figures.

Figure 4. Comparisons for Kansas City (Tier III) Options

Tier III Scenarios	Kansas City (KC)- Tulsa-Oklahoma City (OC) -Ft. Worth (FW)	Kansas City- Newton-Ok.City-Ft. Worth
Description	Extensive speed restrictions Kansas City-Tulsa	
Service		
Travel Time: KC-OC	7:47	6:11
Travel Time: OC-FW	3:23	3:23
Total Travel Time-KC-FW	**11:10**	**9:34**
Distance- KC-OC	376.08	398.43
Distance-OC-FW	205.2	205.2
Total Distance- KC-FW	**581.28**	**603.63**
Avg. MPH- KC-OC	48.32	64.44
Avg. MPH- OC-FW	60.66	60.66
Avg. MPH- KC-FW	**52.05**	**63.10**
Round Trips/Day	1	1
Operating Year 2000		
Annual Revenue	$ 6,649,000	$ 5,747,000
Rail Riders	132,500	158,006
Pass. Miles	36,643,000	32,762,000
Avg. Fare/ Mile	$ 0.181	$ 0.175
Avg. Trip Length	276.6	207.3
Market Comparison Year 2000		
Corridor Travel: All Modes	95,871,000	81,209,000
Rail Market Share	0.138%	0.195%

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