5. Transportation

Gaining an understanding of the current transportation system is vital to the planning process, in that the existing system forms the underlying structure/foundation for future system needs. The particular system needs for the study area are a function of the current and horizon-year traffic levels and patterns of travel throughout the region, relative to the transportation system in place.

The current transportation system for the area is composed of the following elements:

- State and Federal highways and local roadway systems
- A system of on-street and off-street multi-use trails
- Municipal airports
- Intra-area transit
- Intercity bus transportation
- Freight movement systems

The Des Moines Area Metropolitan Planning Organization has recently (December 16, 2004) adopted the 2030 Long Range Transportation Plan (LRTP). The plan was developed through a collaborative effort between the 15 member communities and three member counties in the region, including Polk County. The Recommended Plan projects included in the LRTP address the multimodal systems in the region (roadways, transit, non-motorized) and represents a plan that is financially constrained to the public/private sector transportation budget for the region.

5.1 State/Federal Highways and Local Roadway Systems

Functional Classification

The existing highway and roadway systems were categorized into a functional hierarchy based on the type of facility, facility ownership, and the role the facility serves in theCounty's and region's transportation system. Within the study area, the roadways are grouped into six general functional categories:

- Interstate
- Principal Arterial
- Minor Arterial
- Collector (Urban)
- Rural Major Collector

- Rural Minor Collector
- Local

The functional hierarchy of streets and highways was developed through a collaborative effort involving Polk County, the various cities and municipalities and the Iowa DOT. In general, a hierarchical classification system was developed by establishing a series of criteria that balanced differently the purposes of providing mobility for persons and goods and providing access to adjacent properties. At the upper end of the functional classification spectrum is the Interstate, the primary purpose of which is to provide mobility between regions nationwide and sub-areas of the Des Moines metro area. At the opposite end of the functional classification spectrum is the local street, the primary purpose of which is to provide access between higher classified routes and individual properties.

The current functional classification system is displayed in Figure 5.1.A. The facility mileage by functional class is documented in Table 5-1.

Table 5-1: System Mileage By Facility Classification

Functional Category	Mileage Outside Municipalities	Total Mileage in County
Interstate	24	61
Principal Arterial	42	135
Minor Arterial	93	315
Collector (Urban)	28	177
Rural Major Collector	133	138
Rural Minor Collector	110	114
Total	**430**	**940**

Source: URS Corporation

Traffic Volumes

Current average annual daily traffic volumes are an important input for the analysis of the current roadway system's operations. Count information for 2002 from Iowa DOT and county data sources is displayed in Figure 5.1.B. The data displayed represents the weighted daily average of traffic for weekdays and weekend days.

Measures of Corridor Operations/Roadway Capacity

Each intersection approach and the roadway links connecting the intersections have finite capacities. The maximum number of vehicles that *could* be accommodated on a link or through an intersection is generally greater than the number typically *acceptable* to the traveling public. Thus, for the purposes of the comprehensive plan, the concept of "acceptable" capacity has been used as the threshold for defining a roadway capacity deficiency.

In transportation studies, corridor/intersection quality of traffic flow is reported using a grading scale, termed "level of service" (LOS), that ranges from A through F (A being favorable and F reflecting failing conditions). There are generally two measures that determine LOS in urban streets:

- Average travel speed of vehicles through a corridor.
- Delay incurred at intersections.

The definitions/general criteria associated with each of the letter grades are outlined in Table 5-2. Within the Des Moines metro area and Polk County, level of service "D" operations are typically assumed to be the minimum acceptable quality of flow.[1]

[1] *2030 Long Range Transportation Plan*, (Draft) Future Conditions, Des Moines Area MPO, 2004 Current.

Table 5-2: Definition of Level of Service

Level of Service	Description
A	*Free Flow, Insignificant Delays.* Very little, if any, delay incurred at intersections (< 10 seconds per vehicle). Corridor travel speed is within 10% of the free-flow operating speed (travel speed without any outside influences controlling any one driver's decision as how fast to drive).
B	*Stable Operation, Minimal Delays*. Reasonably unimpeded operations. A driver's ability to maneuver within the traffic stream is only minimally restricted by other vehicles. Operating speeds are within approximately 30 percent of the free-flow speed. Typical intersection delay is between 10 and 20 seconds per vehicle.
C	*Stable Operation, Acceptable Delays.* Operations with the corridor are stable, however, a driver's ability to maneuver between lanes or make a turn, may be restricted due to needing to yield to other vehicles. Not all vehicles during every signal cycle clear the intersection (cycle failures). The average delay per vehicle at a controlled intersection ranges from 20 to 35 seconds.
D	*Restricted Flow, Regular Delays.* Reflects the limits of stable flow, and a slight change in vehicle flow may result in substantial increases in delay. The average vehicle travel speed is approximately 40 percent of the estimated free-flow speed. Queues may develop but dissipate rapidly, without excessive delays. The average intersection delay per vehicle ranges form 35 to 55 seconds.
E	*Maximum capacity, extended delays*. Volumes at or near the finite capacity. Vehicles may wait through several signal cycles. Long queues form upstream from intersection. Typical operating speeds in the corridor are less than 35 percent of the free-flow speed and intersection delay ranges from 55 to 80 seconds per vehicle.
F	*Forced flow, excessive delays*. Represents jammed conditions. Intersection operates below capacity with low volumes. Queues may block upstream intersections.

Source: Highway Capacity Manual (HCM 2000), Transportation Research Board, Washington, DC, 2000

Generalized acceptable capacities at intersections are documented in Table 5-3, which shows the thresholds of corridor capacity (LOS "F") and maximum acceptable flow rates (defined as LOS "D") by roadway type and number of intersection approach lanes.

Table 5-3: General Daily Roadway Capacity, By Number Of Lanes And Facility Type

Functional Classification/Lanes	Daily Capacity Level-of-Service E/F		Threshold ADT for Deficiencies [1]	
	CBD	Non-CBD	CBD	Non-CBD
- Freeway				
4-lane	88,900	88,900	71,100	71,100
6-Lane	133,300	133,300	106,600	106,600
- Arterial (Urban)				
2-lane	12,800	14,200	10,200	11,400
2-Lane/Left or Right [2]	17,200	18,900	13,800	15,100
2-Lane/Left/Right [2]	19,400	21,100	15,500	16,900
4-lane	28,600	31,800	22,900	25,400
4-Lane Left or Right [2]	32,300	35,900	25,800	28,700
4-Lane/Left/Right [3]	34,500	38,300	27,600	30,600
- Collector (Urban)				
2-Lane	6,500	7,200	5,200	5,800
2-Lane/Left or Right [2]	8,800	9,600	7,000	7,700
2-Lane/Left/Right [3]	10,000	10,800	8,000	8,600
4-lane	14,500	16,100	11,600	12,900
4-Lane Left or Right [2]	16,400	18,200	13,100	14,600
4-Lane/Left/Right [3]	17,600	19,500	14,100	15,600
- Arterial/Collector (Rural)				
2-Lane	NA	6,000	NA	4,800
2-Lane/Left or Right [2]	NA	6,600	NA	5,300
4-lane	NA	16,000	NA	12,800
4-Lane Left or Right [2]	NA	17,600	NA	14,100

Notes: 1 - Approaching capacity is assumed to be approximately 80% of LOS E/F capacity.

2 - Left and right turn lanes are assigned similar capacity for this macro-scale analysis. Right-turns-on-red are underestimated.

Capacity Deficiencies (2004)

For the purposes of the comprehensive plan, a capacity deficiency is defined as the condition where current average annual daily traffic volumes exceed the corridor's *acceptable* capacity. Based on current count data and the existing transportation network, the following corridor segments and intersections within the County (shown on

Figure 5.1.C) experience recurring congestion on a daily basis:

- Northeast 14th Street (US Highway 69) from NE 54th Avenue to north of NE 60th Avenue (Level-of-service E).
- Northwest 2nd Street from I-80/I-35 to NW 60th Avenue (Level-of-service E).
- Northwest 66th Avenue from NW Beaver Drive to NW 26th Street (Level-of-service E).
- Northwest 26th Street from NW 66th Avenue to approximately NW 70th Avenue (Level-of-service F).
- Northwest 66th Avenue intersection with NW 2nd Street (Level-of-service F).
- I-35 junction with East 1st Street/NE 94th Avenue in Ankeny (Level-of-service E).

Management Systems

Within Polk County, the Iowa DOT and the Des Moines Area Metropolitan Planning Organization, of which the county is a member, share responsibility for maintaining three management systems:

- **Congestion Management System:** Within the system there are three stages to management of recurring congestion:
  - Detection: The MPO is responsible for monitoring system performance and level of congestion. This task is completed through travel time studies covering 16 major corridors in the region and evaluations of the volume-to-capacity ratios along key corridors.
  - Identification and evaluation of strategies for alleviating congestion, by addressing both travel demand and system capacity. Travel demand management strategies include transit improvements, congestion pricing, growth management and carpool/vanpool programs. System capacity improvements include operational strategies like access management and capital intensive strategies such as construction of new lanes of roadway or transit facilities.
  - Implementation: Those strategies identified through the evaluation stage as providing benefit to the region are carried into the implementation process through incorporation in the MPO's regional Long-Range Transportation Plan and Transportation Improvement Plan (TIP).

- **Pavement Management System:** The goal of the Iowa Pavement Management Program (IPMP) is to maximize the effectiveness and maintenance efficiency of the existing system. Information on pavement cracking, patching and potholes are collected and evaluated for the IPMP, and is then used in setting priorities for pavement improvement projects.
- **Safety Management System:** Through evaluation of crash data the Safety Management Committee identifies issues that could be reduced or alleviated through implementation of operational and capital improvement projects. The Committee has developed a "toolbox" of strategies that have been proven to reduce crashes at intersections and along roadway segments.

  The Safety Management Committee compiles a list of improvement candidate locations (interstate interchange areas and intersections) and ranks the locations based on crash rates and severity. The vast majority of the candidate locations identified in the 2030 Long Range Transportation Plan are located within the city of Des Moines. One candidate location is located within the focus area of the county comprehensive plan (US Highway 65/Iowa 163).

5.2 Transit Service

Within Polk County, transit services are provided through a broad range of operating formats and programs, including:

- Fixed route bus service provided through the Des Moines Metropolitan Transit Authority (MTA). The MTA community members include the cities of Altoona, Ankeny, Clive, Des Moines, Urbandale, West Des Moines and Windsor Heights.
- Paratransit service, which provides door-to-door service for elderly, disabled and special needs individuals, provided by the Des Moines MTA and the Heart of Iowa Regional Transit Agency (HIRTA)
- Rideshare services managed by Central Iowa Rideshare, including carpool and vanpool programs.
- Participation in the Des Moines area Transportation Management Association.

Each of the agencies and government representatives/ liaisons to the identified agencies share a common goal of reducing peak hour travel time in the region by approximately 10 percent.

Through the Des Moines MTA three types of fixed route service are provided; all are displayed in Figure 5.2.A:

- **Regular Routes:** MTA operates on seven fixed routes within the member communities Monday through Saturday. Fixed route service is not provided on Sundays.

  In the period from the fourth quarter of 2003 through the first three quarters of 2004, the MTA fixed route service carried 3,699,000 passengers over a total of 24 million passenger miles.

  Fixed route service in the metro area links the member municipalities to the downtown Des Moines business core and to regional employment and retail centers throughout the area. Other than line haul service (non-stop service) fixed route service is not provided in portions of the County outside the member communities.

- **Commuter Routes:** Within the metro area, morning and evening weekday commuter service is provided on two routes, connecting Ankeny and Altoona to the Des Moines central business district. The Ankeny route offers five round-trips daily and the Altoona route offers three. Riders can board at park-and-ride lots and at selected stops within higher density residential areas, and ride to downtown Des Moines, with stops at the Capitol Complex, the Walnut Street Transit Mall, and other downtown stops.

- **Express Routes:** Limited stop or non-stop service is provided between the Des Moines CBD and suburban areas to the west, northwest and south. Service is limited to the morning and evening peak periods, with approximately 30 directional trips in the AM and PM weekday peaks.

Paratransit, consisting of door-to-door service dispatched on an individual user trip schedule, is provided to elderly, handicapped and special needs residents of the member communities and Polk County. The general public also has access to more limited paratransit services when their ride needs can be coordinated with trips for the primary users. Riders must schedule trips at least one business day in advance so that dispatching can be coordinated.

For eligible county residents, paratransit service is provided free of charge through a number of health and human services agencies, including Polk County Social Services, State of Iowa Human Services, Link Associates and others. For others within the County, service is provided on a pay per ride basis.

Carpool and vanpool programs within Polk County and central Iowa are coordinated by Central Iowa RideShare (RideShare) and are encouraged by MTA and the Des Moines Transportation Management Association (TMA) as keys to attaining the regional goal of a 10 percent reduction in traffic. The current RideShare programs include the following:

- **Carpool:** RideShare has developed and manages a program for matching persons in the region that desire to share commute or other trips with persons with similar origins, destinations and travel time schedules.[2]

- **Vanpool:** RideShare provides a program for organizing vanpool groups, providing vans for organized vanpools and maintaining vehicles for organized carpools. Through the RideShare program groups of five to 15 commuters are organized into vanpools that meet at a common park-and-ride or pick-up location and travel together to a common destination. Through the program a "guaranteed ride home" is provided for situations where a vanpool member must leave before or after the regularly scheduled time.

  Currently, the program includes over 55 vans and approximately 90 local businesses have employees enrolled in the vanpool program.

5.3 Transportation Management

The Des Moines Transportation Management Association (TMA) is a non-profit organization comprised of private and public agencies focused on the goals of:

- Reducing in traffic congestion.
- Improving mobility and air quality.

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[2] RideShare can be contacted through their web site (www.dmmta.com/rideshare) or by telephone at 515-288-RIDE (288-7433).

- Educating employers and their employees about transportation alternatives.
- Reducing the negative impact of construction on commuters through the region.

A key program organized and implemented by the TMA is the "Avoid the Rush" program, which focuses on alternatives for reducing peak hour travel demand in the region. Through the program, the TMA provides:

- Assistance to employers in initiating and maintaining commute alternatives programs. This includes presentations by TMA staff and educational materials.
- Information for commuters and employers on current construction projects that have the potential to impact commuter routes.

5.4 Pedestrian and Bike Trails System

While a relatively small percentage of all of the daily trips in the region are on bicycles or by foot, these travel modes are vitally important parts of Polk County transportation system. Facilities for these travel modes provide benefits for users in terms of physical fitness, enjoyment, and mobility while also benefiting the communities by decreasing traffic and air pollution.

Walking and bicycling trips are accommodated through sidewalks and multi-use trails. The trend in Polk County and surrounding areas is to accommodate bicycling through multi-use trails instead of using on-street bicycle facilities (i.e., bike routes and bike lanes). Communities within the Polk County region have made significant investments for construction of new multi-use trails over the last twenty years. A list of the major multi-use trails within and/or connecting to Polk County communities is provided in Table 5-4. There are several other trails that cover short distances or are located in parks that are not included in Table 5-4. Within the metropolitan region, each of the communities and Polk County maintain responsibility for planning, construction and maintenance of the non-motorized trails. The Des Moines Area MPO serves as the coordinator and maintains an inventory of the cumulative system.

Table 5-4 Major Multi-Use Trails in Polk County

Trail	Communities Served	Existing Miles
John Pat Dorrian Trail [a]	Des Moines	2.2
Neal Smith Trail [a]	Des Moines	4.0
Bill Riley Trail [b]	Des Moines	1.6
Gay Lea Wilson Trail	Des Moines, Pleasant Hill, Altoona (3 segments)	6.0
InterUrban Trail	Des Moines	3.6
Kruidenier Trail	Des Moines	2.0
Jordan Creek Trail	West Des Moines	12.0
Four Mile Greenway Trail [b]	Pleasant Hills, Altoona	6.5
Clive Greenbelt Trail	Clive	8.5
Windsor Heights Trail	Windsor Heights	2.0
Colby Trail	West Des Moines, Clive	2.2
Sycamore Trail	Des Moines to Johnston	6.5
Great Western Trail	Des Moines to Martensdale	16.5
Saylorville (East River) Trail [a]	Des Moines to Big Creek S.P.	19.3
Raccoon River Valley Trail	Clive to Jefferson	56.0
Chichaqua Valley Trail	Bondurant to Baxter	20.0
Highway 330 Trail [b]	Melbourne to Marshalltown	5.5
Summerfest Trail	Carlisle to Indianola	11.0

Sources: Iowa Department of Transportation website; Iowa Natural Heritage Foundation website; Polk County Conservation Board website; City of Des Moines website; City of West Des Moines website; City of Clive website; City of Altoona website; City of Pleasant Hills website; City of Windsor Heights website; and the Des Moines Area Metropolitan Planning Organization website.

Notes:

a – These trails connect downtown Des Moines to Big Creek State Park. Dorrian and Neal Smith Trails are segments of the Saylorville (East River) Trail

b – These trails connect Des Moines to Marshalltown (a few trail segments still need to be constructed)

Bicycle and pedestrian usage within Polk County and the Des Moines metropolitan area is becoming more popular for recreation and other non-work trip purposes. The level of usage for recreational and non-work purposes is difficult to measure, however, the level of walking and bicycling for work trip purposes can be determined from the Census Journey to Work documents. The pedestrian share of commute trips in Polk County was 2.0 percent in 2000, down from 2.7 percent in 1990. Bicyclists represent a small percentage of commuters with approximately 0.2 percent of

trips to work. Expansion of the current system through construction of new facilities and improvements to existing facilities for pedestrian and bicyclists will encourage an increase in the use of these modes for both work and recreational trip purposes. As gaps in the pedestrian and bike facilities system are closed through new projects, this will create greater connectivity that is needed to serve transportation commuting purposes.

Each of the communities within Polk County currently plans, constructs, and maintains their own pedestrian and bicycle facilities. The Des Moines Area MPO coordinates the planning, mapping, and inventory activities for bicycle and pedestrian facilities. The Des Moines Area MPO has an advisory committee called the Metropolitan Trails Planning Committee. This committee is responsible for matters related to trails funding and promotion of a coordinated system of trails between communities. Additional trail system coordination for a larger eight county region is provided through the Central Iowa Bicycle and Pedestrian Roundtable held in 2004. Proposed pedestrian and bicycle facilities are shown on maps produced by the Des Moines Area MPO. These maps show numerous new sidewalks, multi-use trails, and on-street bicycle facilities.

The current Des Moines Area MPO *2005-2007 Transportation Improvement Program* includes eleven trail projects.

Funding for the regional system is coordinated through the Metropolitan Trails Planning Committee. The Committee is made up of parks and recreation staff from each of the communities and staff from the Polk County Conservation Board, as well as Conservation Board staff from adjacent central Iowa counties.

In 2004, the Central Iowa Bicycle and Pedestrian Roundtable was formed by the MPO and the Trails Planning Committee as a regional coordinating body for the non-motorized system.

5.5 Goods Movement

Truck Freight Traffic

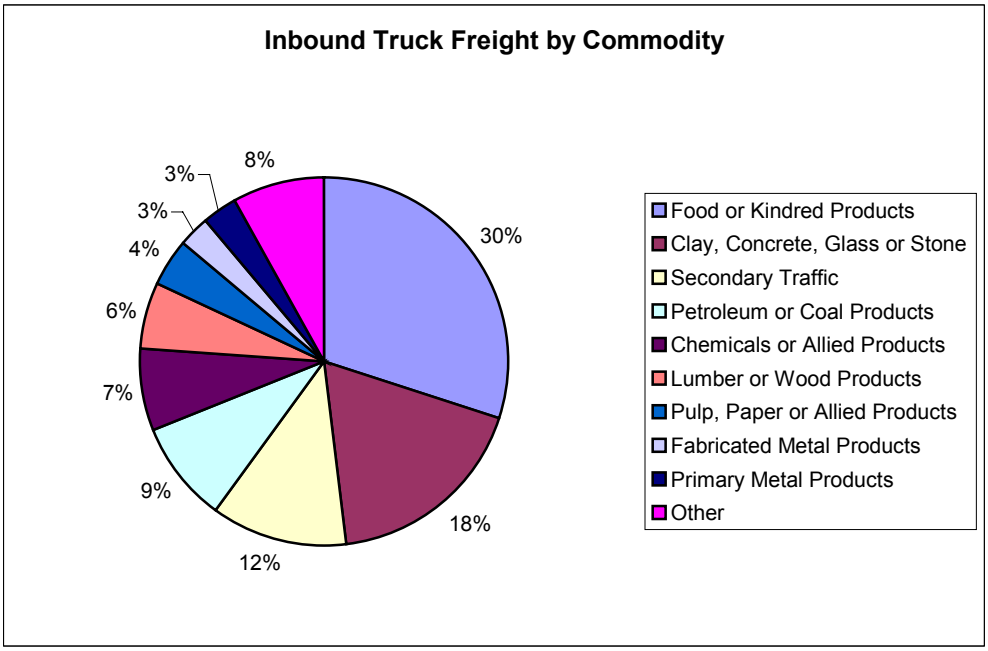
The location of Polk County and its extensive transportation network underscores the importance of transportation not only in the state, but nationwide. The interstate corridors of I-35 and I-80 are critical trade corridors for national freight movements. Many other U.S. and state highways within Polk County and throughout the eight county area that comprise the Central Iowa Regional Transportation

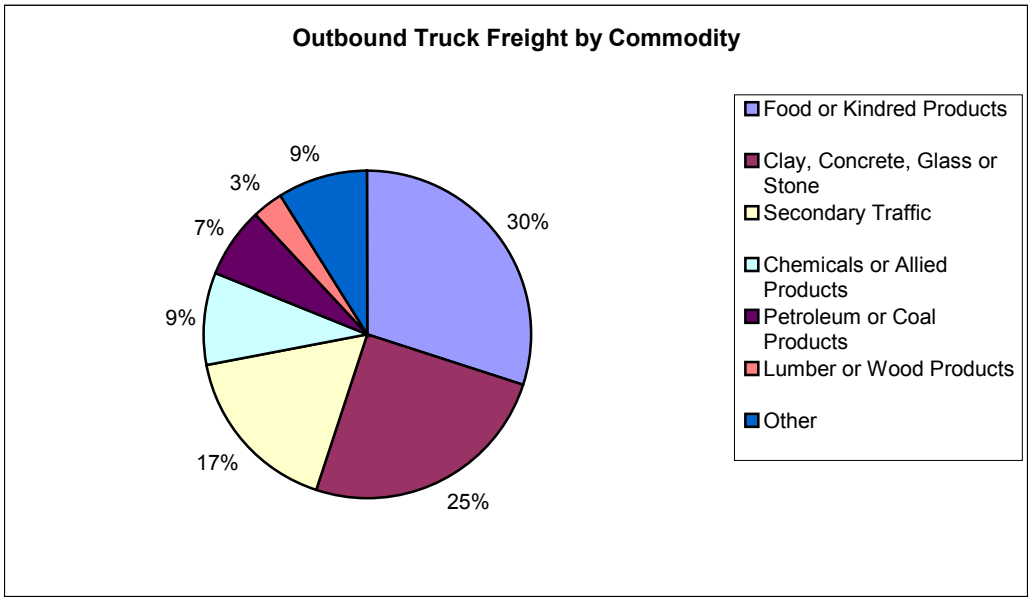
Planning Alliance (CIRTPA) also play an important role in freight movement across Iowa and the nation.

The segments of I-35 and I-80 within Polk County and the Des Moines metropolitan area all have truck traffic counts above 13,000 vehicles per day. Outside of the Des Moines metropolitan area the truck counts on I-80 are approximately 9,000 vehicles per day in Jasper County and between 7,000 and 9,000 vehicles per day in Dallas County. Daily truck counts on I-35 in Story and Warren County are approximately 5,000 and 4,500 vehicles per day, respectively. Other roadways within this area that experience higher truck volumes include U.S. 6, Iowa 141, and Iowa 160. These traffic volumes come from the Iowa DOT counts conducted in 2000 for the Des Moines Area Metropolitan Planning Organization.

The amount of inbound freight delivered by trucks to the eight-county CIRTPA area in the year 2000 was 30,687,148 short tons. The amount of freight moved out of this region by truck during the same year was 19,165,276 short tons. Freight movement by trucking is the primary means of moving commodities in or out of the CIRTPA area. A breakdown of the types of commodities that are delivered and exported to/from this region by trucks is provided in Figure 5.5.1. Approximately 50 percent of all inbound and 42 percent of outbound freight delivered by truck originate or end in one of the other Iowa counties outside the CIRTPA area.

Figure 5.5.1 Inbound and Outbound Truck Freight by Commodity





Source: "Goods Movement in the Des Moines Metropolitan Area" report by the Des Moines Area Metropolitan Planning Organization, June 2002.

Freight Rail

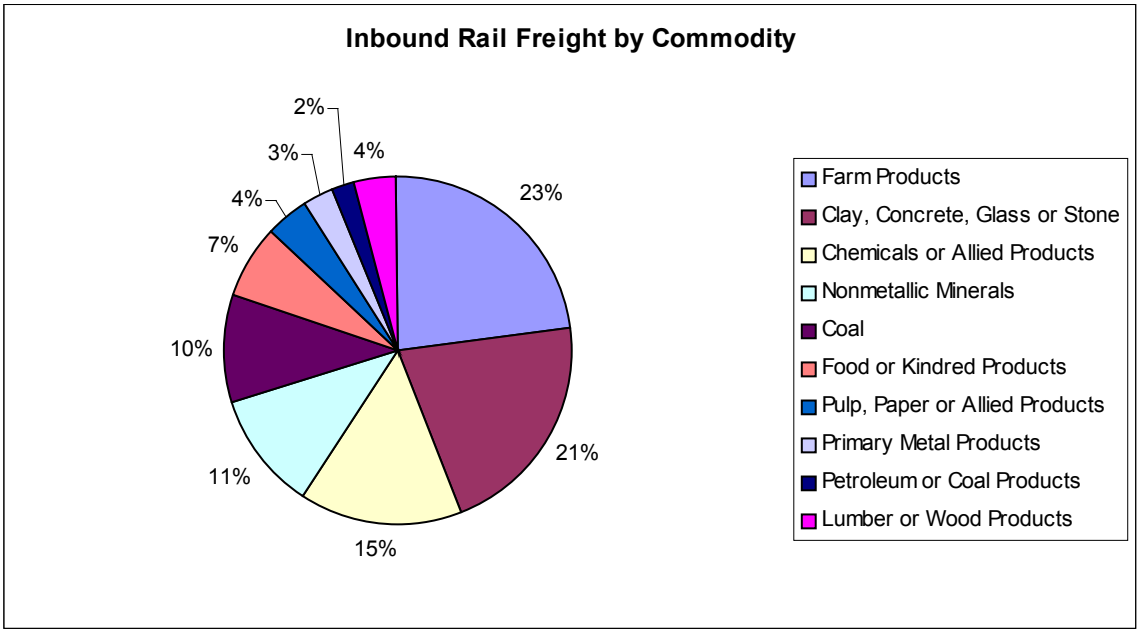
Four freight railroad companies operate in the eight-county area composing the CIRTPA[3]. This area is served by three Class I railroads:

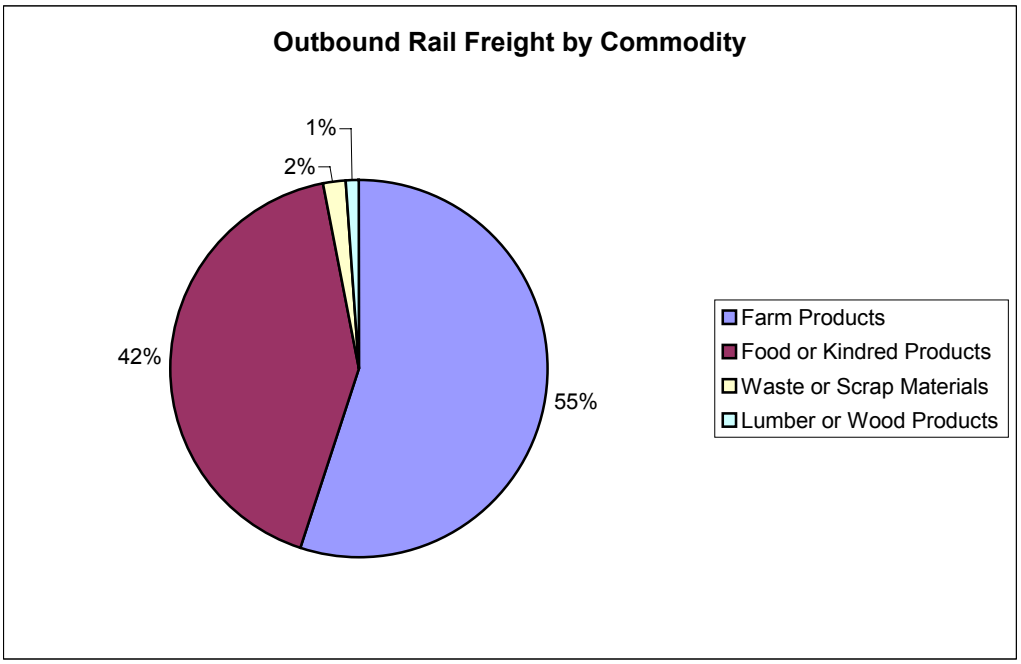
- Burlington Northern Santa Fe (BNSF) Railroad, which operates 56.8 miles of track within the study area.
- Norfolk Southern (NS) Railroad, which operates seven miles of track within the study area.
- Union Pacific (UP) Railroad, which operates 270.3 miles of track within the study area.

A Class I railroad is defined as a long-haul rail carrier with operating revenue in excess of $258.5 million in 1999. The fourth railroad company serving this area is the Iowa Interstate Railroad (IAIS) with 131.9 miles of track within the study area. The IAIS is a Class II railroad, which is defined as line-haul railroads operating 350 or more miles of track and/or with revenue of at least $40 million in 1999. There are also several Class III railroad, also known as "short-lines," operating in the state of Iowa but none serve Polk County directly. Additional information on these four railroads pertaining to their operations nationwide and in Iowa is provided in Table 5-5.

[3] "Goods Movement in the Des Moines Metropolitan Area" report by the Des Moines Area Metropolitan Planning Organization, June 2002.

Figure 5.5.2 Inbound and Outbound Railroad Freight by Commodity





Source: "Goods Movement in the Des Moines Metropolitan Area" report by the Des Moines Area Metropolitan Planning Organization, June 2002.

Table 5-5 Study Area Freight Railroads

Data Item	Railroad							
	BNSF		NS		UP		IAIS	
	System	Iowa	System	Iowa	System	Iowa	System	Iowa
States Operated In	28		22		24		2	
Miles Operated	33,353	710	14,423	44	33,706	1,752	643	432
Operating Revenues (millions)	$8,936	$221	$4,221	$0.9	$9,198	$573	$29.4	$16.4
Ton-Miles (millions)	473,898	19,861	133,727	2.3	436,688	27,843	964	537
Tons Hauled (millions)	499	128	306	0.1	508	107	5.0	4.6
Locomotives	5,031		2,261		7,085		35	
Employment	42,887		24,668		52,897	1,941	176	136

Source: "Rail Systems Plan" report by the Iowa Department of Transportation, February 20

Air Travel and Freight

Polk County and central Iowa are served by the Des Moines International Airport and eight regional airports and airfields that are located within the county borders. The location of each of the airport facilities is displayed in Figure 5.5.3.

The Des Moines International Airport is owned by the City of Des Moines and is governed through a seven member Airport Board of Trustees. The Board is comprised of Des Moines citizens appointed by the Des Moines City Council. The Des Moines International Airport serves as the major air passenger and airfreight center for an 18-county area of central Iowa, with its primary service area being Polk, Dallas, and Warren Counties.

The Ankeny Regional Airport is the principal reliever facility for the Des Moines International Airport. Currently, the Ankeny Regional Airport Master plan is being updated; the findings of that plan will be considered as part of this Comprehensive Plan process.

Other regional airports and local airfields in Polk Count are:

- Morningstar Field
- Todd Field
- Robel Field
- DeLouis Field
- Day Field
- Kern Field
- Tuinstra Airfield

Three airports in Polk County help serve the travel and freight needs of area residents and businesses. The primary airport is the Des Moines International Airport (DMIA). The other two airports are the Ankeny Regional Airport and Morningstar Field Airport. Other airports within the eight-county CIRTPA area are listed below:

- Ames Municipal Airport
- Boone Municipal Airport
- Nash Field Indianola Airport
- Knoxville Municipal Airport
- Newton Municipal Airport
- Pella Municipal Airport
- Perry Airport

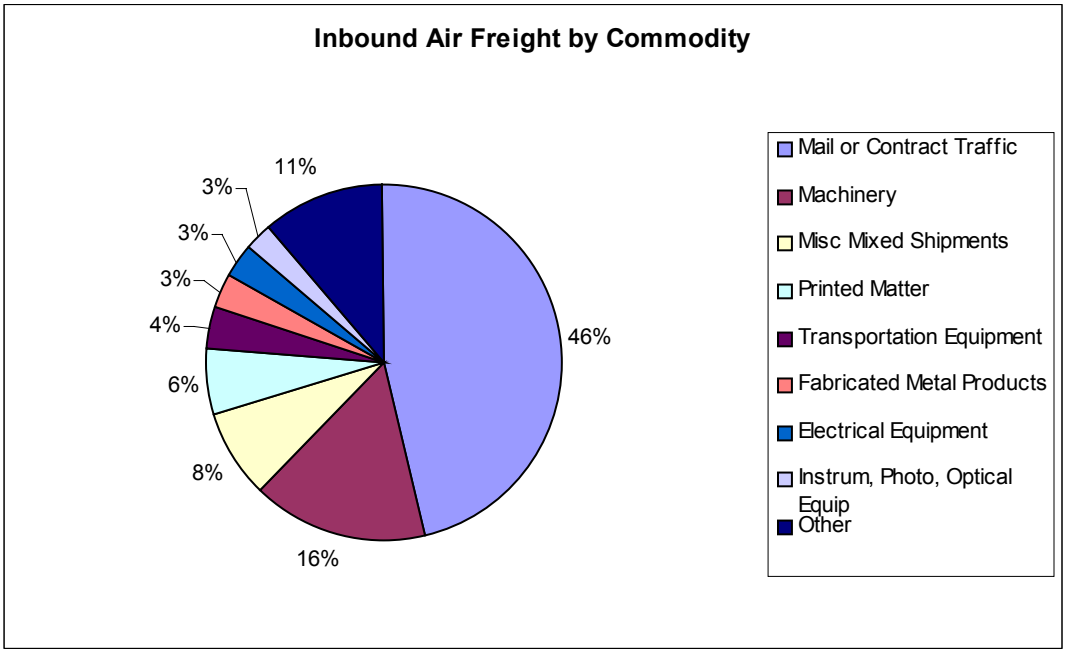
Prairie City (Krohn) Airport

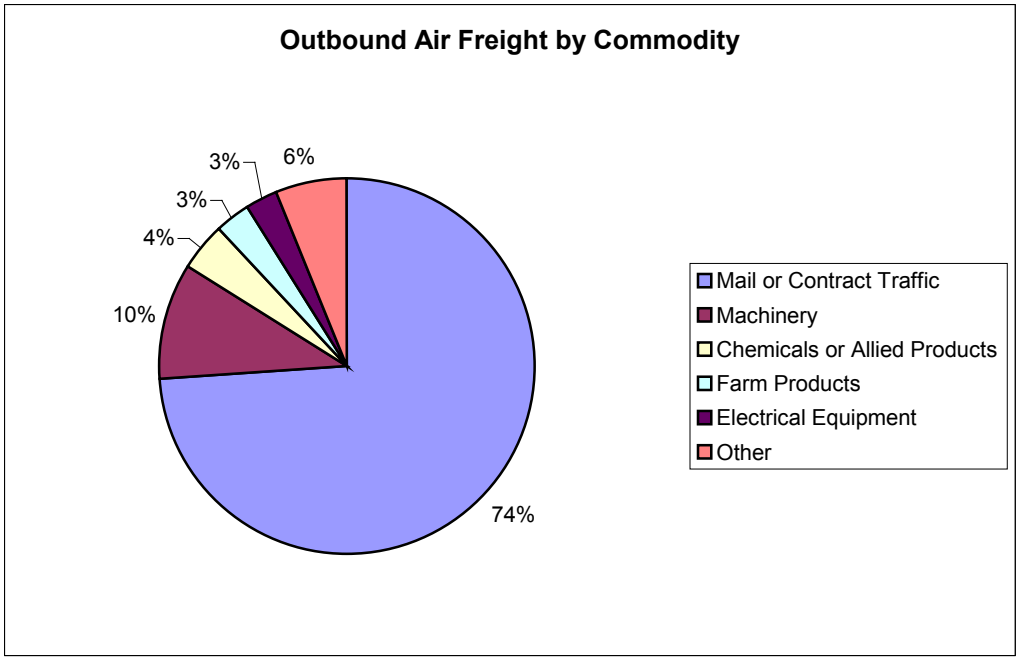
- Sully Municipal Airport
- Vermeer Airport
- Winterset-Madison County Airport

As Iowa's largest airport, DMIA handles a great deal of passengers and goods. The number of passengers using DMIA is approximately 1.7 to 1.8 million per year. Freight that is moved through the DMIA include mail and cargo such as bulk freight and express/small packages. The amount of mail typically sent through the DMIA range from 15 to 22 tons per year. The amount of cargo/freight shipped by air through DMIA ranged from 115 to 140 tons per year[i]. A breakdown by type of commodity for air freight traffic at DMIA is provided in Figure XX. The DMIA is ranked among the top 50 airports in the nation in terms of the amount of cargo shipped.

The other airports within the CIRTPA area are all classified as general aviation airports with no commercial air service.

Figure 5.5.4 Inbound and Outbound Air Freight by Commodity





Source: "Goods Movement in the Des Moines Metropolitan Area" report by the Des Moines Area Metropolitan Planning Organization, June 2002.

Intermodal Facilities

Intermodal facilities serve an important role in the transportation of goods. More than one mode of transportation is often used to move goods from their origin to destination. Within the CIRTPA area the following major intermodal facilities were identified[i]:

- Des Moines International Airport – air/truck intermodal facility
- Ankeny Regional Airport – air/truck intermodal facility
- Rail Intermodal Specialist, Des Moines – railroad/truck intermodal facility
- Williams Pipeline Company Terminal, Des Moines – pipeline/railroad/truck intermodal facility
- Amoco Oil Company Terminal, Clive – pipeline/railroad/truck intermodal facility
- Iowa Interstate Intermodal Facility, Newton – railroad/truck intermodal facility

In addition, grain elevators also qualify as intermodal facilities since they typically interact with trucks and railroads.