

# **NWA MAINTENANCE & REPAIR FACILITIES**

**Report to the Governor**

**and**

**Legislative Update**

**Commissioner of Finance**

**State of Minnesota**

**March 17, 1992**

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## **SECTION A**

### **Introduction**

The Laws of Minnesota, 1991, Chapter 350, authorize the Commissioner of Finance to issue and sell up to \$350 million in revenue bonds. The proceeds of the bonds are to be used to finance the costs related to the planning, construction, improvement or equipping of a heavy maintenance facility for aircraft (and facilities subordinate and related to the facility) to be located at the Duluth International Airport and for the planning, construction, improvement, or equipping of an aircraft engine repair facility (and facilities subordinate and related to the facility) to be located at the Chisholm-Hibbing municipal airport.

Chapter 350, Article 1, Section 2, Subdivision 3(a), requires that prior to approving financial assistance or entering into a loan, lease or other revenue agreement for the projects, the Commissioner of Finance shall submit a report to the Governor regarding the matters discussed in this report. By law the report is required to be filed with the Legislature as provided in Minnesota Statutes Section 3.195. In response to Chapter 350, Article 3, Section 2, the Commissioner previously reported to the Legislative Commission on Planning and Fiscal Policy, which has a right to give advisory recommendations (with any recommendation being deemed positive if not received by the Commissioner within ten days following the report). This report will supplement such earlier report.

## **SECTION B**

### **Proposed Financing Commitments**

Representatives of the State and Northwest Airlines have reached proposed agreements on various basic documentation required for the financings described in this report and such agreement is intended to be embodied in a Master Financing Agreement (described in this report) which commits the State to use its best efforts to issue the revenue bonds described below in return for Northwest Airlines leasing the Duluth and Chisholm Hibbing facilities.

#### **All Proposed State, Metropolitan and Local Government Financial Commitments**

**Duluth Maintenance Facility.** Chapter 350 authorizes the Commissioner of Finance to sell up to \$250 million of State revenue bonds for the Duluth Facility. It is expected that the full \$250 million in revenue bonds will be sold. The bonds would be sold in more than one series to provide cash flow as needed for the design and construction of the facility.

The \$250 million of revenue bonds would be sold in four types:

1. \$125 million of bonds supported by a general obligation pledge of the State of Minnesota. (The State Guaranteed Bonds)
2. \$12.6 million of bonds supported by a general obligation pledge of St. Louis County. (The County Backed Bonds)
3. \$64.8 million of First Mortgage Bonds supported only by the lease payments of Northwest Airlines.
4. \$47.6 million of bonds supported by the City of Duluth. (The Duluth Backed Bonds)

Proceeds of the first three types will be loaned on a nonrecourse basis to the Metropolitan Airports Commission who will apply the proceeds (net of reserves, capitalized interest and cost of issuance) to costs of the Duluth Facility. MAC will lease the facility to Northwest Airlines. The first three types of bonds would first be supported from the lease payments by Northwest Airlines. In the event of a default by Northwest, the pledge of the State and St. Louis County would be drawn upon to make the payments of debt service to the holders of types 1 and 2 bonds. Proceeds of the First Mortgage Bonds would be granted to MAC and such bonds would be secured only by the lease payments of Northwest without any governmental credit support.

The bonds supported by the City of Duluth would not be supported by the lease payments from Northwest. Duluth will be providing for the full debt service on the \$47.6 million of bonds primarily from: (1) tax increment generated by the facility and, if such increment is insufficient, tax increment available from certain other tax increment financing districts in Duluth; (2) Duluth sales taxes; (3) a payment in lieu of taxes based on 5 percent of certain Duluth utility revenues; (4) franchise fee payable by Minnesota Power and Light Company; and (5) any other funds selected by the City of Duluth.

The Duluth Facility will be located on land owned by Duluth and leased pursuant to a ground lease to the Metropolitan Airports Commission, who will be obligated to construct the Duluth Facility to the extent the State or Northwest Airlines provides funds.

The Duluth Facility (subject to the ground lease) will be mortgaged to the bond holders as collateral in the following priority.

1. The First Mortgage Bonds.
2. The State Guaranteed Bonds.
3. The loan from the State to MAC of proceeds from the State Guaranteed Bonds.
4. The County Backed Bonds.
5. The obligation of Northwest Airlines (and its parents) to reimburse the County for payments by the County on the County Backed Bonds.
6. The Duluth Backed Bonds.

Chapter 350, Article 1, Section 2, Subdivision 2(b) requires the Commissioner of Finance to include in the financing arrangements a 125 percent collateral coverage test for the bonds secured by the State's general obligation bond pledge. This test has been met by a pledge from Northwest Airlines to maintain at all times following completion sufficient collateral to meet the 125 percent coverage. As described in the term sheets, the State will initially be secured by a pledge of \$65 million in additional collateral for the Duluth Facility and \$35 million for the Hibbing Facility. This collateral (international air route authority between Minneapolis and London and between Detroit and Paris) will only be released when development is completed, or after five years, but only when the value of the facilities and any other pledged collateral are determined to support the 125 percent coverage test. The collateral test may be met in part by a participating lien on the MAC collateral pool to the extent required to satisfy the 125 percent test.

To facilitate Northwest Airline's use of the Duluth Facility, the City of Duluth will commit in a Development Agreement to cause the clean up of certain environmental hazards existing at the site and to provide, at its cost, certain offsite improvements such as roadways and related intersection modifications, and water, sanitary sewer and gas mains brought to the boundaries of the land. The environmental clean up costs are expected to be funded by federal funds. The offsite developments are expected to cost \$8,388,000, which will be funded by \$4,588,500 of City funds and the balance from other sources. (See Section E)

**Chisholm Hibbing Repair Facility.** Chapter 350 authorizes the Commissioner of Finance to sell up to \$100 million of State revenue bonds for the Chisholm Hibbing Facility. The agreement would result in the full \$100 million in revenue bonds being sold. The bonds would be sold in more than one series to provide cash flow as needed for the design and construction of the facility.

The Chisholm Hibbing Facility will be located on land owned by Chisholm and Hibbing and ground leased to the Chisholm Hibbing Airports Commission (CHAC), who will be obligated to construct the facility to the extent the State or Northwest Airlines provides funds. CHAC will enter into a joint powers agreement with MAC pursuant to which MAC will assist CHAC. The \$100 million of revenue bonds would be sold in three types:

1. \$50 million of bonds supported by the general obligation pledge of the State of Minnesota.
2. \$15 million of bonds supported by St. Louis County.
3. \$35 million of bonds supported only by the lease payments of Northwest Airlines.

Proceeds of all bonds would be loaned on a nonrecourse basis to the CHAC who will apply the net proceeds to costs of the facility. The CHAC will lease the facility to Northwest Airlines. The three types of bonds would first be supported by the lease payments by Northwest Airlines. Upon a default by Northwest, the pledge of the State and St. Louis County would be drawn upon to make the payments of debt service to the bond holders of type 1 and type 2. The type 3 bonds are secured for payment only by the lease payments of Northwest.

The total costs of the facility are expected to exceed the \$100 million maximum. Northwest Airlines is responsible for funding any costs in excess of available bond proceeds. Such excess is presently expected to be approximately \$30 million. If necessary, it is expected that the IRRRB could be the issuer of additional type 3 bonds, which will be supported only by the lease payments of Northwest and the mortgage.

As a financial incentive to Northwest Airlines to locate the engine repair facility at the Chisholm Hibbing Airport, the IRRRB, St. Louis County, the City of Hibbing and the City of Chisholm have reached an understanding to pay the first 18 months of lease payments on the facility or an equivalent amount of construction costs for Northwest. This will be accomplished with two sources of funds. First, the IRRRB will make cash contributions of up to \$10 million. Second, a tax increment district will be established on the site of the facility and the incremental tax revenue will be used to pay the debt service on tax increment bonds having net proceeds of up to \$10 million. The proceeds of the tax increment bonds would be used in addition to the \$10 million contribution of IRRRB. The tax increment would be secured by general obligation pledges of St. Louis County (60%), the City of Hibbing (35%) and the City of Chisholm (5%). In the alternative, the IRRRB grant of \$10 million may be applied directly to construction costs.

The Chisholm Hibbing facility, subject to the ground lease, will be mortgaged to the bond holders in the following order:

1. The First Mortgage Bonds.
2. The State Guaranteed Bonds.
3. The loan from the State of proceeds from the State Guaranteed Bonds.
4. The County Backed Bonds.
5. The obligation of Northwest Airlines (and its parents) to reimburse the County for payments by the County on the County Backed Bonds.

Chapter 350, Article 1, Section 2, Subdivision 2(b) requires the Commissioner of Finance to include in the financing arrangements a 125 percent collateral coverage test for the bonds secured by the State's general obligation bond pledge. This test has been met by an initial collateral deposit and an on-going collateral pledge and other commitments by Northwest Airlines similar to that described for the Duluth Maintenance Facility.

To facilitate Northwest Airline's use of the Chisholm Hibbing Facility, Hibbing, Chisholm and St. Louis County will commit in a Development Agreement to certain offsite improvements such as waterline and sewerline improvements, road and drainage improvements and certain airport related improvements. These costs are estimated at \$7,906,360. (See Section E)

The IRRRB has committed to provide credit security to bonds or other debt to be issued by Northwest Airlines. The amount of the commitments is \$10 million. This commitment would be utilized, under certain circumstances, should Northwest Airlines default on these bonds.

### **Financial Assistance to be Provided**

In addition to the financial assistance discussed earlier, Northwest Airlines will receive financial assistance from certain job credits and sales tax exemptions.

**Duluth Maintenance Facility.** Most of the \$250 million of revenue bonds to be sold for the Duluth facility will qualify as tax exempt bonds under the federal tax code. The lower interest rate available on tax exempt bonding and as a result of a higher credit rating (except for the First Mortgage Bonds) will be passed on to Northwest in the form of lower lease payments. The difference between the cost of a tax exempt financing and a taxable financing represents a public subsidy. Based upon estimated interest rates and the proposed bond financing plan, the present value of this subsidy is estimated to be \$113 million.

Chapter 350, Article 1, Section 18, Subdivision 24 provides a credit for job creation at the Duluth facility. Based upon the 1000 minimum number of jobs expected to be ultimately maintained by Northwest, and the salary levels of these jobs, the maximum credit available to Northwest is \$25 million.

Chapter 350, Article 1, Section 19 provides for an exemption from the sales tax for materials, equipment, and supplies used in the construction of the Duluth Facility. Based upon the estimates of the dollar amount of materials, equipment and supplies, the maximum amount of the sales tax credit available to Northwest Airlines is estimated at \$7 million.

**Chisholm Hibbing Repair Facility.** The \$100 million of revenue bonds to be sold for the Chisholm Hibbing facility will be sold as taxable bonds. Therefore, there is no tax-related interest differential subsidy as with the Duluth facility. However, since a portion of the bonds are supported by the state and St. Louis County, the interest rate will be lower than if the bonds were sold directly by Northwest. Based upon estimated interest rates and the proposed bond financing plan, the present value of this subsidy is expected to be \$25 million.

Chapter 350, Article 1, Section 18, Subdivision 24 provides a credit for job creation at the Chisholm Hibbing facility. Based upon the 500 minimum number of jobs expected to be ultimately maintained by Northwest, and the salary levels of these jobs, the maximum credit available to Northwest is \$12.5 million.

Chapter 350, Article 1, Section 19 provides for an exemption from the sales tax for materials, equipment, and supplies used in the construction of the Chisholm Hibbing facility. Based upon the estimates of the dollar amount of materials, equipment and supplies, the maximum amount of the sales tax credit is estimated at \$2 million.



## **SECTION C**

### **Detailed Description of the Projects and Facilities to be Financed by the Bonds**

**Duluth Maintenance Facility.** The Project is a heavy maintenance facility for advanced generation wide and narrow body aircraft. The Project will be constructed in two phases.

The Project includes a total of four hangars designed to make use of flexible overhead maintenance docks and sized to accommodate aircraft as large as the 747-400. The hangars will be supported by shops included in the hangar areas and nonattached building areas. Shops for sheet metal, seats, parts storage, inspection and testing and engine staging and repair will be included in the hangars. The building areas that need not be included in the hangars include a machine shop, a composite shop, a component paint shop, a tool calibration shop, a rigging shop, an electronics/avionics shop, a radio/audio/instrument shop, a pneumatic/hydraulic shop, stores and office functions.

A schematic drawing of the hangars and other building areas is attached, which schematic drawing identifies the exterior structural areas to be included in Phase I.

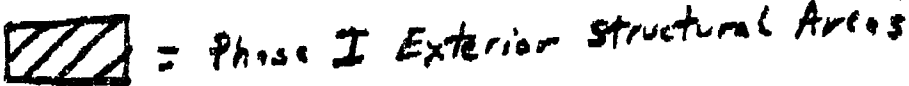
In addition to the hangars and support building areas, the land will be improved to include an aircraft ramp; fuel farm areas to handle storage of water, fuel and heating oil; waste treatment facilities for industrial waste treatment and collection and containment systems; and parking areas.


**Chisholm Hibbing Repair Facility.** The Project will be designed primarily for use as an aircraft engine facility. It may also be designed so as to be capable of use for component repairs and may include facilities subordinate and related to the above described facilities. The Project will consist of a single building with a footprint of approximately 345,000 square feet and encompassing approximately 375,000 gross square feet of work area.

A schematic drawing of the Project is attached, which schematic drawing identifies the key components of the Project, including the test cell, plating shop, machine shop and the heat treat, focused module, engine disassembly/assembly and storage areas.

In addition to the building, the land will be improved to include parking areas, central plant maintenance facilities, treatment facilities as necessary and fire protection and fuel storage facilities.

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 = Phase I Exterior Structural Areas



## **SECTION D**

### **Proposed Loan, Lease and Revenue Agreements**

**Duluth Maintenance Facility.** Bond proceeds other than from the Duluth Backed Bonds will be loaned to MAC on a non recourse basis. Each loan is intended to be repaid from Northwest Airlines payments under the Lease and MAC will not be liable for repayment. The loans will be made pursuant to loan agreements with terms that correspond to Northwest's obligations under the Lease. The loan of proceeds from the State Guaranteed Bonds will be secured by guaranties of the parents of Northwest Airlines and a mortgage on the MAC's interest in the Duluth Facility (and a corresponding assignment of leases and rents) which is subordinated to any mortgage securing the First Mortgage Bonds or State Guaranteed Bonds. MAC will enter into a lease and Northwest will be directed to deposit rent payments with the trustee to pay the bonds. A summary of the Lease is attached.

The Duluth Backed Bonds will be payable from City revenues pledged pursuant to a Payment-and-Pledge Agreement, a summary of which is attached.

The County Backed Bonds are secured by a back-up pledge of County credit pursuant to a County Guaranty Agreement, a summary of which is attached.

**Chisholm Hibbing Repair Facility.** Bond proceeds will be loaned to Chisholm Hibbing Airports Commission on a non recourse basis. Each loan is intended to be repaid from Northwest Airlines payments under the Lease and CHAC will not be liable for repayment. The loans will be made pursuant to loan agreements with terms that correspond to Northwest's obligations under the lease. The loan of proceeds from the State Guaranteed Bonds will be secured by guarantees of the parents of Northwest Airlines and a mortgage on the CHAC's interest in the Chisholm Hibbing Facility (and a corresponding assignment of leases and rents) which is subordinated to any mortgage securing the First Mortgage Bonds or State Guaranteed Bonds. Northwest will be directed to deposit rent payments with the trustee to pay the bonds. A summary of the Lease is attached.

The County Backed Bonds are secured by a back-up pledge of County credit pursuant to a County Guaranty Agreement, a summary of which is attached.

## SECTION E

### Other Arrangements Related to State and Local Debt, Taxes, Financing and Debt Service

**Duluth Maintenance Facility.** Additional financial arrangements include:

#### Funding Sources

	<u>Cost</u>	<u>Economic Development Administration Grant</u>	<u>City of Duluth/ St. Louis Co. Applicant</u>	<u>Federal Aviation Admin. Grant</u>	<u>Local Share</u>	<u>Gas Company</u>	<u>NWA</u>
Roadway	\$1,117,000	\$ 670,200	\$ 446,800	—	—	—	—
Sanitary Sewer	648,000	388,800	259,200	—	—	—	—
Water Main	536,000	321,600	214,400	—	—	—	—
Water Retention Basin	400,000	240,000	160,000	—	—	—	—
Intersection Modification	697,000	418,200	278,800	—	—	—	—
Holding Ramp	1,190,000	714,000	476,000	—	—	—	—
Access Taxi-way	2,200,000	—	—	\$1,980,000	\$220,000	—	—
Parking Lot	600,000	—	—	—	—	—	\$600,000
Gas Line	<u>1,000,000</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>500,000</u>	<u>500,000</u>	<u>—</u>
TOTAL	<u>\$8,388,000</u>	<u>\$2,752,800</u>	<u>\$1,835,200</u>	<u>\$1,980,000</u>	<u>\$720,000</u>	<u>\$500,000</u>	<u>\$600,000</u>

**Chisholm Hibbing Repair Facility.** Additional financial arrangements include:

**Funding Sources**

	<u>Cost</u>	<u>Economic Development Administration Grant</u>	<u>(Applicant) City of Hibbing Airport Authority/ MN DOT</u>	<u>Economic Recovery Grant</u>	<u>Local Bond Issue</u>	<u>Federal Aviation Administration Grant</u>
Waterline	\$1,242,000	\$ 745,200	\$ 332,575	\$164,225	---	---
Sewerline	980,600	588,360	262,575	129,665	---	---
Road & Drainage Improvements	900,000	540,000	240,995	119,005	---	---
Contingencies	343,760	206,256	92,049	45,455	---	---
Architect/Engineering	315,000	189,000	84,350	41,650	---	---
Gasline	1,800,000	---	---	---	\$1,800,000	---
Improve Taxi-way	1,700,000	---	---	---	170,000	\$1,530,000
Additional Hangers	350,000	---	---	---	35,000	315,000
Remodel Aviation Area	275,000	---	---	---	27,500	247,500
<b>TOTAL</b>	<b><u>\$7,906,360</u></b>	<b><u>\$2,268,816</u></b>	<b><u>\$1,012,344</u></b>	<b><u>\$500,000</u></b>	<b><u>\$2,032,500</u></b>	<b><u>\$2,092,500</u></b>

## **SECTION F**

### **Estimates of Economic Activity, Air Traffic and Other Factors That Have Been Used in Assessing Prospective Financial Condition of the Lessee or Lessees and any Related Person**

Chapter 350, Article 1, Section 2, Subdivision 3 requires the Commissioner of Finance to review the financial condition of the lessee (Northwest). The Commissioner is required to exercise due diligence in the review. The Commissioner is also required to engage an independent, nationally recognized consultant having special expertise with the airline industry and its financing to prepare a written report on the financial condition of the lessee.

The Commissioner of Finance hired the Arvai Group as the airline expert to provide information to complete the due diligence as required in Chapter 350. The Arvai Group completed their work on the financial condition of Northwest Airlines and submitted their report to the Commissioner of Finance on September 23, 1991. A copy of the Arvai Report is included in Section L.

The major findings of the Arvai Report are:

1. With the proper terms and conditions, the proposed transaction appears to be a "win-win" situation for the State and Northwest Airlines.
2. This transaction, however, is not without financial risk, even though it is probable that Northwest will survive and continue to make lease payments on the facility.
3. Northwest is well positioned for future growth in the airline industry.
4. Northwest has built a qualified management team.
5. Aggressive strategies for improvement will guide Northwest in the next 5 years.
6. Northwest's ability to achieve its goals may be determined by forces beyond its control.
7. Northwest's strategies and programs are ambitious.

The Commissioners of Trade and Economic Development and Finance have reviewed the current and prospective financial condition of the proposed lessee, Northwest Airlines Inc., and its related companies up to the holding company level of Wings Inc., and have also reviewed the Arvai Report and its findings. Based upon these reviews, the Commissioners have determined that the revenues estimated to be available to Northwest Airlines, Inc. and such related companies for payment under the proposed leases of the Duluth Facility and the Chisholm Hibbing Facility are at least sufficient during each year of the term of the proposed bonds to pay when due all financial obligations of Northwest Airlines Inc. under the terms of the proposed leases. A subsequent formal order of the Commissioners to the effect of the foregoing will be forthcoming. Commissioners of MAC are similarly expected to make the same determination as the foregoing with respect to the Duluth Facility. Such orders and determination will be promptly forwarded to the Governor as supplements to this report.

The Commissioner of Finance utilized the analysis of the Arvai Group on Economic Activity, Air Traffic and other factors in completing the due diligence requirement.

The Arvai Group's conclusion on Northwest's long term prospects and ability to make lease payments was:

"The proposed thirty year life of the bonds is too long a period over which to predict the financial future of an airline. Pan American World airways was the premier international flag carrier of the United States in 1961, and in a strong financial position. By 1991, thirty years later, it was in bankruptcy and had sold the majority of its international route structure.

Even in a worst case scenario, it appears clear to us that major portions of Northwest Airlines are likely to survive. Northwest has considerable value in its Asian routes, which, in a worst case, could be sold to a competitor or competitors. The implications of a worst case scenario on the utilization of the facilities in Duluth and Hibbing are impossible to predict.

On balance, our judgment is that Northwest Airlines is likely to survive, and be able to make lease payments on the proposed facilities."

The Arvai Group was hired in March 1992 to again review Northwest Airlines. The scope of their work included:

- o Review Northwest Airlines and Wings Holdings, Inc. year-end financial statements and compare them with prior company projections;
- o Examine current unaudited financial data for the first two months of 1992 to assess current trends and other factors;

- o Discuss the current financial situation, recent financial results, changes in major financial variables, and outlook with key Northwest officials in corporate finance and corporate financial planning;
- o Discuss with corporate officers the impact of recent events on Northwest's strategy and whether any changes in strategy or financial plans has resulted from those events;
- o Review the new 1992 forecasts released by Boeing, the FAA and other key industry participants to assess whether any changes in the long-term perspective could deleteriously impact Northwest;
- o Review recent publicly available information regarding Northwest Airlines and obtained reactions from management regarding issues raised in articles in the New York Times and Barron's, among others;
- o Analyze financial results for the airline industry as a whole, comparing the performance of Northwest Airlines to its competitors;
- o Analyze trends in Northwest Airlines financial performance to identify any new factors of risk to which the State of Minnesota should be alerted;
- o Prepare a brief report summarizing the findings of the subsequent analysis; and
- o Brief the Commissioner of Finance and his staff on the findings and conclusions and our recommendations for appropriate safeguards for the State of Minnesota.

After review of the year-end results, the Arvai Group found no basis to change the conclusions and recommendations in their September 1991 report.

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## **CHAPTER 350, ARTICLE 1, SECTION 2, SUBD 3 (c)**

(c) Before the commissioner issues bonds for a project, approves financial assistance, or enters into loan, lease, or other revenue agreements for the project, the commissioner shall submit a report on the proposed transaction to the governor. The report must describe: all proposed state, metropolitan, and local government financial commitments; the financial assistance proposed to be provided; the proposed loan, lease, and revenue agreements; any other arrangements related to state and local debt, taxes, financing, and debt service; and the estimates of economic activity, air traffic, and other factors that have been used in assessing the prospective financial condition of the lessee or lessees and any related person. The report must contain the following findings:

(1) that the commissioners of trade and economic development and finance and, for purposes of a project described in subdivision 5, the metropolitan airports commission have reviewed the current and prospective financial condition of each proposed lessee of the project or projects and any related person; and

(2) that, on the basis of their review, the commissioners and, for purposes of the project described in subdivision 5, the commission have determined that the revenues estimated to be available to the lessee or lessees for payments under the loan, lease, or other revenue agreements are at least sufficient during each year of the term of the proposed bonds to pay when due all financial obligations of the lessee or lessees under the terms of the proposed loan, lease, or other revenue agreements. Copies of the report must be filed at the legislature as provided in section 3.195 when the report is submitted to the governor.

## **CHAPTER 350, ARTICLE 3, SECTION 2**

### **Sec. 2. [STATE AND METROPOLITAN BONDS; REVIEW AND APPROVAL.]**

The metropolitan airports commission may not issue bonds authorized by this act without the approval of the commissioner of finance and the legislative commission on planning and fiscal policy, provided that the provisions of article 1, section 15, specifically apply to this approval requirement. Before the commissioner of finance issues bonds authorized by this act, the commissioner shall report the amount of bonds to be issued, a detailed description of the projects and facilities to be financed by the bonds, and the terms of the lease, loan, and revenue agreements to the legislative commission on planning and fiscal policy for its advisory recommendation. The recommendation is positive if not received by the commission or commissioner within ten days.

3/17/92

## SUMMARY OF MASTER FINANCING AGREEMENT

Background. On or before March 30, 1992, it is expected that a Master Financing Agreement will be entered into concurrently with the execution with respect to each of the Duluth Facility and Hibbing Facility of a Development Agreement, Ground Lease and Lease. These documents will evidence the basic commitment of all parties to go forward with the financings. The Ground Lease creates a long term lease of each airport site to the applicable airport commission. The Development Agreement evidences the obligations of Northwest Airlines, Inc. ("NAI") and the applicable airport commission to design, bid for contracts and to contract for the construction of the applicable facility. Each Lease between the applicable airport commission and NAI establishes the obligation of the airport commission to construct the applicable facility in accordance with plans and specifications developed according to the Development Agreement, provided that the airport commission has no obligation to construct the facility if amounts are not loaned or granted to the commission or NAI does not provide funds in addition to those contemplated to be available from Bond Proceeds. Finally, under the applicable Lease, NAI is required to pay rent ("Basic Rent") in amounts sufficient to timely pay all scheduled payments of principal and interest due on all State Guaranteed Bonds, County-Backed Bonds and First Mortgage Bonds.

The Master Financing Agreement will be entered into among the State of Minnesota, NAI, NWA, Inc. and Wings Holding Inc.

Concurrent Documents. The Master Financing Agreement acknowledges that on the same date of its execution, certain "Concurrent Documents" are issued, which documents include, among other documents, the Development Agreements, Ground Leases, and Leases.

Derivative Documents. The State is required to use its best efforts to cause certain "Derivative Documents" to be timely prepared. The Derivative Documents are documents which are to be derived from certain "Approved Forms" attached to the Master Financing Agreement, with such changes as are necessary or are reasonable to adapt the Derivative Document to the applicable transaction to which it relates, or to correct errors or inconsistencies. The State is required to use its best efforts to cause Derivative Documents to be executed and delivered by all parties (other than NAI, NWA and Wings) in accordance with closing dates set forth in a "Bond Closing Schedule" attached to the Agreement. NAI, NWA and Wings agree that they shall execute and deliver Derivative Documents on the applicable closing dates.

Non-Derivative Documents. The State is required to use its best efforts to cause "Non-Derivative Documents" to be prepared consistent in all material respects with the "Bond Term

Sheets" attached to the Agreement. The State is also required to use its best efforts to cause the Non-Derivative Documents to be executed by all parties (other than NAI, NWA and Wings) in accordance with the Bond Closing Schedule. NAI, NWA and Wings agree to execute such documents on the applicable closing dates.

Issuance of Bonds. The State agrees to use its best efforts to issue Bonds in accordance with the Bond Closing Schedule. If the State fails to issue Bonds in accordance with the schedule for any reason, other than an Excused Delay, NAI may give a notice to the State (a "NAI Notice"). An "Excused Delay" means, in general, a delay in issuance of the Bonds if (i) the delay is caused by an Unavoidable Delay (as defined in the applicable Development Agreement) not to exceed 90 days; (ii) the Bonds for which issuance is delayed are not then required for payment of Costs of Issuance or Project Costs as reasonably determined by NAI and the State; or (iii) the State has suspended performance or terminated its obligations under the Master Financing Agreement.

If the general obligation bonds in the amount of \$270,000,000 contemplated to be issued by the Metropolitan Airports Commission are not issued by April 30, 1992, or if the State does not issue any of the Bonds (or otherwise provide amounts in lieu of the proceeds thereof) within 90 days after the receipt of the NAI Notice described above, then NAI, NWA and Wings are excused from their obligations under all "Transaction Documents" relating to the Hibbing Facility and Duluth Facility, and such documents will be terminated, with certain exceptions.

Exceptions to Issuance. The State will have no obligation to issue any Bonds or proceed with preparation of any documents if (i) a default by NAI, NWA or Wings has occurred under the Agreement, (ii) legal proceedings call into question the validity of any Bonds or the tax-exempt status of interest on any tax-exempt Bonds, (iii) any documents or proceedings are not satisfactory in all respects to bond counsel or the Attorney General, or (iv) bond counsel shall not deliver an unqualified opinion as to the validity of the Bonds. However, if the State does not issue any Bonds or deliver documents as a result of any foregoing exceptions (other than due to defaults), NAI will have the right to terminate its obligations under all Transaction Documents.

State as Beneficiary to Transaction Documents. The State is expressly declared to be a beneficiary of each and every Transaction Document and entitled to enforce any obligations of NAI, NWA or Wings thereunder or seek any other remedy available in law or in equity as though the State were an express signatory thereto.

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## SUMMARY OF LEASE (DULUTH FACILITY)

Capitalized terms not herein defined or required by proper grammar to be capitalized are used with the meanings ascribed thereto in the Lease.

Term of Lease. The lease of the Premises (buildings and land) will have an Initial Term equal to the term of the longest Outstanding Bonds. Each item of Leased Equipment will have a separate lease term which, due to tax law considerations, will not exceed 78% of the useful life of such item. Upon expiration of the term for the Premises, Northwest Airlines, Inc. ("NAI") has the option to extend the lease of the Premises for an additional 10 years by payment of rentals determined by negotiation or by a panel to be fair market rent.

Possession and Use. NAI may take possession of the Premises and the Leased Equipment financed by the Bonds upon completion of Phase I or any earlier date approved by the Metropolitan Airports Commission ("MAC").

Construction of the Project. MAC agrees to construct Phase I and Phase II of the Project as it relates to the Premises and Leased Equipment. However, such obligation is subject to acts of God and similar acts preventing construction, as well as the availability of proceeds from the Bonds ("Bond Proceeds") to pay Project Costs. MAC agrees to use its best efforts to obtain Bond Proceeds from the State.

NAI is required to pay all costs incurred for the Project to the extent any Bond Proceeds and investment income thereon are not sufficient to fund the Project. Further, if at any time MAC in good faith determines that undisbursed amounts of Bond Proceeds and anticipated investment income thereon are not sufficient to complete Phase II of the Project, NAI is required to pay the shortfall.

Rent Payments. After occupancy, NAI is required to pay Basic Rent on the second business day prior to each Scheduled Bond Payment Date in an amount equal to the bond payments due on such date, and an amount by which any Reserve Fund established for the Bonds is less than its required level. As Additional Rent, NAI is required to pay amounts required to be rebated of interest on Bond Proceeds, amounts due under the Ground Lease with Duluth, all taxes and fees of a trustee and the Servicer. All payments of Basic Rent to pay bonds will be deposited with the Servicer who will allocate such amounts for payment of the various classes of Bonds pursuant to the Servicing Agreement. The obligation of NAI to make such rent payment is absolute and unconditional.

Payment of Taxes. NAI must pay all taxes with respect to the Project. NAI will have the right to contest taxes under certain conditions.

Maintenance of Project. NAI is required at its own expense to maintain and service all Project Equipment and to keep the Premises in good condition and repair.

Alterations. NAI is required to make all modifications of the Project to the extent required by law. NAI may make modifications and replacements in addition to Leased Equipment which NAI deems desirable in a proper conduct of its business to the extent not inconsistent with the continuing operation of the equipment in accordance with the Act and does not reduce the economic life or value or utility of the Leased Equipment or the Project as a whole. NAI may also make changes to the Premises not inconsistent with the Act and the provisions of the Act which do not reduce the economic life of any buildings.

Insurance. NAI is required to maintain a variety of insurance policies insuring the Project. NAI is allowed to maintain deductibles on its insurance and self-insure its risks at specific levels in certain circumstances.

Damage or Destruction. In the event of damage or destruction to the Premises, any Net Proceeds received from insurance less than \$1,000,000 (adjusted for cost of living increases) are required to be applied to restore the Premises. In all other cases, such insurance proceeds must be deposited in an account held by Servicer for disbursement to restore the Premises. In the event of damage to Leased Equipment, Net Proceeds less than \$1,000,000 (adjusted for cost of living increases) may be retained by NAI and applied to restore such Leased Equipment. Net Proceeds in excess of such amount are required to be deposited in the Insurance and Award Account for payment of restoration costs.

Condemnation. If condemnation of all or a portion of the Project occurs, condemnation awards are required to be applied to restore the Project or to prepay rent. Proceeds in excess of \$1,000,000 (adjusted for cost of living increases) are required to be deposited in the Insurance and Award Fund for disbursement.

Additional Obligations of Northwest. NAI may not permit liens on the project to exist, except for certain exceptions. NAI must annually furnish to MAC and the Servicer certain information regarding maintenance of and alterations to the Premises and Leased Equipment, financial reports modeled after those required of a reporting company under the Securities Exchange Act of 1934, and a statement of compliance with NAI's obligations under the Lease. NAI is also required to comply with all its obligations under various documents related to the MAC financing.

Maintenance of NAI Existence. NAI has agreed that it shall remain throughout the lease term as a duly organized Minnesota corporation and that it shall not consolidate with or merge into another Person or dispose of all or substantially all of its assets unless the Person resulting from such consolidation or merger or who receives such assets has, immediately after the transaction, a net worth not less than 90% of the net worth of NAI immediately prior to the transaction and, among other things, the successor Person assumes in writing all obligations and agreements of NAI under the Lease and certain other documents.

Financial Covenants. So long as no Major Debt is owing, NAI is required to maintain tangible net worth (calculated on a fair market value basis) of not less than \$1,000,000,000. Major Debt includes the leverage buy-out debt and any other debt in excess of \$500,000,000.

All transactions between NAI and any of the Guarantors (NWA, Inc. and Wings Holdings Inc.) or Affiliates are required to be on terms no less favorable to NAI than would be available if the other Person were not a Guarantor or Affiliate. No payments may be made directly or indirectly by NAI (or any Guarantor) to Alfred Checci Associates, if a default is existing, if the payment exceeds operating cash flow for the immediately preceding fiscal year or if the payment would cause NAI and its Guarantors to have insufficient funds to pay the next installment of rent.

Neither NAI nor the Guarantors may make any Distribution except to the extent (a) current earnings for the immediate preceding fiscal year equal or exceed the Distribution, or (b) 50% of the Distribution is applied to prepay Basic Rent under the Lease or the lease for the Hibbing facility, or (c) the Operating Cash Flow to Fixed Charges Coverage (as defined in the Lease) for the period of four full consecutive quarters immediately preceding the distribution is at least 1.25, or (d) the Distribution is among NAI and the Guarantors.

NAI is also required to use its best efforts to seek persons with credit ratings superior to that of NAI to share NAI's financial responsibility under the Lease so long as any Bonds are Outstanding.

Assignment and Subleasing. NAI's interest in the Lease may be assigned only with the consent of MAC and the State (which consent shall not be unreasonably withheld and shall be deemed given if not withheld in writing by MAC and the State within 30 days after MAC and the State receive a written request for consent), but only if the recipient of the interest assumes all obligations of NAI under the Lease, immediately prior to and immediately after the assignment no default exists under the Lease as a result of any representation or obligation of NAI and no default occurs as a result of the assignment and the State receives a written opinion of Bond Counsel that the assignment

will not violate the Act or cause interest on any Tax Exempt Bonds to be taxable.

The Project may be subleased by NAI if NAI obtains the consent of MAC and the State, but only if immediately prior to and immediately after the sublease no default exists and if no default results from commencement of the sublease; provided the State must receive a written opinion of Bond Counsel that the sublease will not violate the Act or cause interest on any Tax Exempt Bonds to be taxable.

Mortgage of Leasehold Interest. With the consent of the State, MAC and the First Mortgage Trustee (which consent shall not be unreasonably withheld and shall be deemed given if not withheld in writing within 30 days of all parties receiving a written request for consent) NAI may mortgage or grant a security interest in its leasehold interest in the Project, provided the mortgage is subordinate to the terms of the Lease.

Events of Default. An Event of Default will occur under the Lease if (a) NAI fails to pay any Basic Rent when due or any Additional Rent (after five-day notice of nonpayment); (b) if any representation of NAI is untrue in any material respect; (c) a petition in bankruptcy is filed against NAI or the Guarantors or certain other acts of insolvency with respect to NAI and the Guarantors occur; (d) if the State declares an Event of Default (as defined in any guaranty agreement to the State regarding the State Guaranteed Bonds or in the County Reimbursement Agreement with respect to the County-Backed Bonds) and directs MAC to accelerate payment of Basic Rent; (e) the First Mortgage Trustee declares an Event of Default with respect to the First Mortgage Bonds; (f) the occurrence of any default resulting in Major Debt becoming due and owing prior to scheduled payment; (g) the occurrence of any default by NAI or the Guarantors under any MAC Documents (various documents related to the MAC financing); (h) the occurrence of any default with respect to any Related Documents (various documents related to the Duluth facility financing and the Hibbing facility financing); and (i) any other failure by NAI to observe their performance obligations under the Lease (except as to the public policy covenants).

Remedies on Default. If an Event of Default occurs because of direction of the State or First Mortgage Trustee to accelerate Basic Rent, MAC is required to immediately declare all Basic Rent due and owing in an amount sufficient to pay all Bonds and, if requested by the State or the First Mortgage Trustee, to terminate the Lease. If an Event of Default otherwise occurs, the MAC may take one or more actions, including declaration that all installments of Basic Rent are due in an amount sufficient to pay all Bonds and to terminate the Lease; provided that so long as any First Mortgage Bonds are Outstanding, such remedies may be taken only with the consent of the Trustee for such Bonds, and so

long as amounts are owing to the State for the State Guaranteed Bonds, MAC may take such action only with the approval of the State (except to the extent directed in writing by the First Mortgage Trustee). Upon any default, MAC may suspend its performance under the Lease and the Development Agreement (a) with the written consent of the State, or (b) without the consent of the State if MAC will incur any increased liability.

NAI Option to Terminate Lease or Prepay Rent. NAI will have the option to terminate the Lease at any time when no Bonds are Outstanding. NAI will have the right to prepay all Basic Rent in an amount sufficient to pay all Bonds and, as a result, be relieved from paying further Basic Rent for the remainder of the term of the Lease.

NAI Option to Purchase Project. If there is no default, NAI will have the option to purchase any Leased Equipment or MAC's interest in the Premises, provided that (a) all Bonds which financed such item of Leased Equipment or the Premises have been paid, or (b) MAC shall receive a written opinion of Bond Counsel that no interest on any Tax-Exempt Bonds shall become taxable as a result of any Bonds remaining unpaid. The purchase option may be exercised only at the end of the lease term with respect to the item of Leased Equipment or Premises to be purchased. The purchase price shall equal the Fair Market Purchase Value (defined in the lease to be, in general, the price at which NAI's interest in the Premises or item of Leased Equipment being sold at a private sale by a willing seller not compelled to sell to a willing buyer not compelled to buy). The purchase price may be payable in immediately available funds or pursuant to an installment sale contract containing terms and conditions MAC may reasonably require based on prevailing commercial practice and requiring approximately semi-annual payments of principal and interest over a period not exceeding the lesser of ten years or the remaining term for the premises at such interest rate or rates as NAI shall determine.

Non-recourse Against MAC. The MAC's obligations are made expressly subject to a non-recourse agreement limiting MAC's liabilities.

Public Policy Covenants. Attached hereto as Exhibit A is a copy of the Public Policy Covenants.

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## SUMMARY OF PAYMENT AND PLEDGE AGREEMENT

The Duluth-Backed Bonds will be secured by a Payment and Pledge Agreement from the City of Duluth to the State, and assigned by the State to the Bond Trustee, whereby the City of Duluth will agree to pay to the Bond Trustee all tax increment from the Duluth facility plus the sum of \$2.5 million per year. The City's payments will be used first to pay principal of and interest on the Duluth-Backed Bonds, and second to pay or defease all series of Duluth facility bonds, including the Duluth-Backed Bonds. In the event the annual tax increment from the Duluth facility is ever less than \$2.5 million or NWA otherwise defaults under its Development Agreement with the City, the City's payment obligation under the Payment and Pledge Agreement is reduced to the payment of debt service on the Duluth-Backed Bonds. The expected annual amount of Duluth facility tax increment is secured by a pledge of tax increment the City is receiving from four existing districts. The City's other payment obligations are secured by pledges of specified amounts of (i) the City's electric utility franchise fee, (ii) payments transferred by the City to its general fund in lieu of taxes on the City-owned gas utility, and (iii) City sales taxes.

MFF00A6B.WP5

## SUMMARY OF LEASE (HIBBING FACILITY)

Capitalized terms not herein defined or required by proper grammar to be capitalized are used with the meanings ascribed thereto in the Lease.

Term of Lease. The lease of the Premises (buildings and land) and Leased Equipment will have an Initial Term equal to the term of the longest Outstanding Bonds. Upon expiration of the Initial Term for the Premises and Leased Equipment, Northwest Airlines, Inc. ("NAI") has the option to extend the Lease for an additional 10 years by payment of rentals determined by negotiation or by a panel to be fair market rent or, if in the opinion of legal counsel such option to extend can be at other than fair market rent, such extension will be at a bargain rental rate.

Possession and Use. NAI may take possession of the Premises and the Leased Equipment financed by the Bonds upon completion of the Project or any earlier date approved by the Chisholm-Hibbing Airport Commission ("CHAC").

Construction of the Project. CHAC agrees to construct the Project as it relates to the Premises and Leased Equipment. However, such obligation is subject to acts of God and similar acts preventing construction, as well as the availability of proceeds from the Bonds ("Bond Proceeds") to pay Project Costs. CHAC agrees to use its best efforts to obtain Bond Proceeds from the State.

NAI is required to pay all costs incurred for the Project to the extent any Bond Proceeds and investment income thereon are not sufficient to fund the Project. Further, if at any time CHAC in good faith determines that undisbursed amounts of Bond Proceeds and anticipated investment income thereon are not sufficient to complete the Project, NAI is required to pay the shortfall.

Rent Payments. After occupancy, NAI is required to pay Basic Rent on the second business day prior to each Scheduled Bond Payment Date in an amount equal to the bond payments due on such date, and an amount by which any Reserve Fund established for the Bonds is less than its required level. As Additional Rent, NAI is required to pay amounts due under the Ground Lease with Hibbing, all taxes and fees of a trustee and the Servicer. All payments of Basic Rent to pay bonds will be deposited with the Servicer who will allocate such amounts for payment of the various classes of Bonds pursuant to the Servicing Agreement. The obligation of NAI to make such rent payment is absolute and unconditional.

Payment of Taxes. NAI must pay all taxes with respect to the Project. NAI will have the right to contest taxes under certain conditions.

Maintenance of Project. NAI is required at its own expense to maintain and service all Project Equipment and to keep the Premises in good condition and repair.

Alterations. NAI is required to make all modifications of the Project to the extent required by law. NAI may make modifications and replacements in addition to Leased Equipment which NAI deems desirable in a proper conduct of its business to the extent not inconsistent with the continuing operation of the equipment in accordance with the Act and does not reduce the value or utility of the Leased Equipment or the Project as a whole. NAI may also make changes to the Premises not inconsistent with the Act and the provisions of the Act which do not reduce the economic life of any buildings.

Insurance. NAI is required to maintain a variety of insurance policies insuring the Project. NAI is allowed to maintain deductibles on its insurance and self-insure its risks at specific levels in certain circumstances.

Damage or Destruction. In the event of damage or destruction to the Premises, any Net Proceeds received from insurance less than \$1,000,000 (adjusted for cost of living increases) are required to be applied to restore the Premises. In all other cases, such insurance proceeds must be deposited in an account held by Servicer for disbursement to restore the Premises. In the event of damage to Leased Equipment, Net Proceeds less than \$1,000,000 (adjusted for cost of living increases) may be retained by NAI and applied to restore such Leased Equipment. Net Proceeds in excess of such amount are required to be deposited in the Insurance and Award Account for payment of restoration costs.

Condemnation. If condemnation of all or a portion of the Project occurs, condemnation awards are required to be applied to restore the Project or to prepay rent. Proceeds in excess of \$1,000,000 (adjusted for cost of living increases) are required to be deposited in the Insurance and Award Fund for disbursement.

Additional Obligations of Northwest. NAI may not permit liens on the project to exist, except for certain exceptions. NAI must annually furnish to CHAC and the Servicer certain information regarding maintenance of and alterations to the Premises and Leased Equipment, financial reports modeled on those required of a reporting company under the Securities Exchange Act of 1934, and a statement of compliance with NAI's obligations under the Lease. NAI is also required to comply with all its obligations under various documents related to the Metropolitan Airports Commission ("MAC") financing.

Maintenance of NAI Existence. NAI has agreed that it shall remain throughout the lease term as a duly organized Minnesota corporation and that it shall not consolidate with or merge into another Person or dispose of all or substantially all of its assets unless the Person resulting from such consolidation or merger or who receives such assets has, immediately after the transaction, a net worth not less than 90% of the net worth of NAI immediately prior to the transaction and, among other things, the successor Person assumes in writing all obligations and agreements of NAI under the Lease and certain other documents.

Financial Covenants. So long as no Major Debt is owing, NAI is required to maintain tangible net worth (calculated on a fair market value basis) of not less than \$1,000,000,000. Major Debt includes the leverage buy-out debt and any other debt in excess of \$500,000,000.

All transactions between NAI and any of the Guarantors (NWA, Inc. and Wings Holdings Inc.) or Affiliates are required to be on terms no less favorable to NAI than would be available if the other Person were not a Guarantor or Affiliate. No payments may be made directly or indirectly by NAI (or any Guarantor) to Alfred Checchi Associates, if a default is existing, if the payment exceeds operating cash flow for the immediately preceding fiscal year or if the payment would cause NAI and its Guarantors to have insufficient funds to pay the next installment of rent.

Neither NAI nor the Guarantors may make any Distribution except to the extent (a) current earnings for the immediate preceding fiscal year equal or exceed the Distribution, or (b) 50% of the Distribution is applied to prepay Basic Rent under the Lease or the lease for the Duluth facility, or (c) the Operating Cash Flow to Fixed Charges Coverage (as defined in the Lease) for the period of four full consecutive quarters immediately preceding the distribution is at least 1.25, or (d) the Distribution is among NAI and the Guarantors.

Assignment and Subleasing. NAI's interest in the Lease may be assigned only with the consent of CHAC and the State (which consent shall not be unreasonably withheld and shall be deemed given if not withheld in writing by CHAC and the State within 30 days after CHAC and the State receive a written request for consent), but only if the recipient of the interest assumes all obligations of NAI under the Lease, immediately prior to and immediately after the assignment no default exists under the Lease as a result of any representation or obligation of NAI and no default occurs as a result of the assignment and the State receives a written opinion of Bond Counsel that the assignment will not violate the Act.

The Project may be subleased by NAI if NAI obtains the consent of CHAC and the State, but only if immediately prior to

and immediately after the sublease no default exists and if no default results from commencement of the sublease.

Mortgage of Leasehold Interest. With the consent of the State, CHAC and the First Mortgage Trustee (which consent shall not be unreasonably withheld and shall be deemed given if not withheld in writing within 30 days of all parties receiving a written request for consent) NAI may mortgage or grant a security interest in its leasehold interest in the Project, provided the mortgage is subordinate to the terms of the Lease.

Events of Default. An Event of Default will occur under the Lease if (a) NAI fails to pay any Basic Rent when due or any Additional Rent (after five-day notice of nonpayment); (b) if any representation of NAI is untrue in any material respect; (c) a petition in bankruptcy is filed against NAI or the Guarantors or certain other acts of insolvency with respect to NAI and the Guarantors occur; (d) if the State declares an Event of Default (as defined in any guaranty agreement to the State regarding the State Guaranteed Bonds or in the County Reimbursement Agreement with respect to the County-Backed Bonds) and directs CHAC to accelerate payment of Basic Rent; (e) the First Mortgage Trustee declares an Event of Default with respect to the First Mortgage Bonds; (f) the occurrence of any default resulting in Major Debt becoming due and owing prior to scheduled payment; (g) the occurrence of any default by NAI or the Guarantors under any MAC Documents (various documents related to the MAC financing); (h) the occurrence of any default with respect to any Related Documents (various documents related to the Hibbing facility financing and the Duluth facility financing); and (i) any other failure by NAI to observe their performance obligations under the Lease (except as to the public policy covenants).

Remedies on Default. If an Event of Default occurs because of direction of the State or First Mortgage Trustee to accelerate Basic Rent, CHAC is required to immediately declare all Basic Rent due and owing in an amount sufficient to pay all Bonds and, if requested by the State or the First Mortgage Trustee, to terminate the Lease. If an Event of Default otherwise occurs, CHAC may take one or more actions, including declaration that all installments of Basic Rent are due in an amount sufficient to pay all Bonds and to terminate the Lease; provided that so long as any First Mortgage Bonds are Outstanding, such remedies may be taken only with the consent of the Trustee for such Bonds, and so long as amounts are owing to the State for the State Guaranteed Bonds, CHAC may take such action only with the approval of the State (except to the extent directed in writing by the First Mortgage Trustee). Upon any default, CHAC may suspend its performance under the Lease and the Development Agreement (a) with the written consent of the State, or (b) without the consent of the State if CHAC will incur any increased liability.

NAI Option to Terminate Lease or Prepay Rent. NAI will have the option to terminate the Lease at any time when no Bonds are Outstanding. NAI will have the right to prepay all Basic Rent in an amount sufficient to pay all Bonds and, as a result, be relieved from paying further Basic Rent for the remainder of the term of the Lease.

NAI Option to Purchase Project. If there is no default, NAI will have the option to purchase the Leased Equipment and CHAC's interest in the Premises, provided that (a) all Bonds which financed the Leased Equipment and the Premises have been paid. The purchase option may be exercised only at the end of the lease term with respect to the Leased Equipment and Premises. The purchase price shall equal the Fair Market Purchase Value (defined in the lease to be, in general, the price at which NAI's interest in the Premises or item of Leased Equipment being sold at a private sale by a willing seller not compelled to sell to a willing buyer not compelled to buy) or, if in the opinion of legal counsel such purchase option can be at other than fair market value, it will be at a bargain purchase price. The purchase price may be payable in immediately available funds or pursuant to an installment sale contract containing terms and conditions CHAC may reasonably require based on prevailing commercial practice and requiring approximately semi-annual payments of principal and interest over a period not exceeding the lesser of ten years or the remaining term for the premises at such interest rate or rates as CHAC shall determine.

Non-recourse Against CHAC. CHAC's obligations are made expressly subject to a non-recourse agreement limiting CHAC's liabilities.

Public Policy Covenants. Attached hereto as Exhibit A is a copy of the Public Policy Covenants.

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## **SUMMARY OF ST. LOUIS COUNTY GUARANTY AGREEMENT**

The County Guaranteed Bonds will be secured by a County Guaranty Agreement from St. Louis County to the State, which will be assigned by the State to the Bond Trustee. The County Guaranty Agreement requires the Bond Trustee to make periodic reports to the County of the amounts and sufficiency of NWA's rent payments under the Facility Lease. In the event NWA's payments of rent under the Facility Lease are insufficient to pay principal of and interest on the County Guaranteed Bonds, the County may pay the amount of the deficiency from funds on hand, or the Bond Trustee may use the Reserve Fund held by the Bond Trustee to cover the deficiency. If the Reserve Fund is used, the County must levy taxes payable in the following year to replenish the Reserve Fund and to pay the amount of any anticipated shortfall of rent payments in that year.

MFF00A6B.WP5

**The Economics of  
the Airline Industry  
and the Financial  
Condition of  
Northwest Airlines**

**Report to:**

**State of Minnesota  
Department of Finance**

**September, 1991**

***The Arvai Group  
Tribeca Aviation  
Harbridge House, Inc***

This report was prepared by The Arvai Group for the account of the State of Minnesota, Department of Finance. The material in it reflects the best judgement of The Arvai Group in light of the information available at the time of preparation. Any use which a third party makes of this report, or any reliance or any decisions to be made based on it, are the responsibility of such third party. The Arvai Group accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions taken based on this report.

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## **I. Summary and Conclusions**

The State of Minnesota, through legislative action, is contemplating two bond financing transactions which support Northwest Airlines, a major employer headquartered in Eagan, including the construction of an airframe maintenance facility in Duluth and an engine repair facility in Hibbing. This report documents the findings of a "due diligence" study of the economics of the airline industry and the financial condition of Northwest Airlines conducted for the Minnesota Department of Finance.

### **Major Findings**

**The proposed transaction appears to be a "win-win" situation for the State and Northwest Airlines.** Northwest obtains low interest rate financing, regional subsidies and tax benefits for its new maintenance facilities in northern Minnesota while the State gains from increased employment and economic development in an area with a weak economy. This type of transaction is becoming common in the airline industry, as evidenced by recent State of Texas support of American Airlines maintenance facilities at Alliance Airport and State of Colorado support for new United Airlines facilities at Denver.

**This transaction, however, is not without financial risk, even though it is probable that Northwest will survive and continue to make lease payments on the facility.** While we believe Northwest will be one of the surviving U.S. carriers, it and its parent companies, are thinly capitalized and, with recent losses and poor industry conditions, continue to have a high debt load. While Northwest's strategies and business plans call for significant financial improvement, the carrier lacks the "financial safety net" a strong balance sheet would provide and could be more vulnerable than financially stronger carriers as it must rely on credit lines to weather unexpected events. The weakened financial position of the carrier in the post-Gulf War environment presents an element of risk which cannot be ignored with respect to its ability to make lease payments on the facilities. A sustained recession, fuel crisis, or deleterious price war could have a materially adverse impact on Northwest's financial results, and, in a worst case scenario, force the sale of assets or other harsh measures to be taken for survival.

**Northwest is well positioned for future growth in the airline industry.** Northwest has a good route structure, including potentially lucrative unused route authorities in the fast-growing Asian market, two strong dominant domestic hubs, an aggressive fleet modernization plan, and is attempting to capitalize on turbulence in the industry through selective acquisitions.

**Northwest has built a qualified management team.** More than half of Northwest's senior management team is new since the leveraged buy-out in 1989. On the whole, the new executives have strong track records and appear to be suitably qualified for their positions. While many members of the team are inexperienced in the airline industry and the team has not worked together for a long period, the strategies being developed at Northwest

appear to be reasonable and focus on key areas for improving its competitive position.

**Aggressive Strategies for Improvement will guide Northwest in the next 5 years.**

Northwest's stated strategy, since the leverage buy-out, is to create Northwest as the "airline of preference". This aggressive program of actions, many of which will be implemented during the fourth quarter of 1991, is designed to improve Northwest's service. This program requires investment, and despite recent losses, management is committed to completing the program and plans to continue to invest in training and capital improvements to implement this "service turnaround".

**Northwest's ability to achieve its goals may be determined by forces beyond its control.**

The airline industry is today, in a state of transition. With several U.S. carriers in bankruptcy, a repositioning of routes and assets is in process. Within the last year, United has purchased Pan Am's London routes, American has purchased TWA's London routes, and Delta has purchased a major portion of Pan Am, including its northeast shuttle and Frankfurt hub. The market power and economies of scale available to the major players have been increasing vis-a-vis Northwest and other participants.

Periodic shocks to the airline industry are common, and while their impact is not likely to be as great as the combined impacts of the Gulf War, fear of terrorism and economic recession just experienced, it is likely that periodically, major, unexpected events will play a role in the industry during the next 5 years. With its thin financial cushion, Northwest could be vulnerable to pricing and other competitive actions.

**Northwest's strategies and programs are ambitious.** Northwest's strategies for improvement impact the entire airline, and will require changes by each of the 45,000 employees of the airline in how they perform their duties. Major change always entails a degree of risk. Our assessment of the strategies of Northwest is that while they are achievable, not achieving them could place the carrier in jeopardy because of its lack of financial strength.

**Recommendations to the State of Minnesota**

**The proposed Duluth and Hibbing financing transactions entail significant risk.** We therefore recommend a series of actions to better secure the State's position as a guarantor. We recommend:

- That the State obtain marketable collateral to further secure its position, which could be in the form of international route authorities or take-off and landing slots which act as underlying security. As Northwest frees up collateral from its current indentures, it can provide additional coverage for the State in the form of "hard assets".
- That the State work with Northwest to attract additional participants to the

party maintenance facilities to ensure a degree of continuity at the facilities should Northwest be unable to continue to meet its lease obligations. The possibility of attracting Airbus Industrie or its member companies to co-locate a North American maintenance facility with Northwest should be aggressively pursued.

- That the State ensure that the design and layout of the facilities are appropriate for possible use by a party other than Northwest, and that provisions for a full complement of maintenance shops, appropriately sized for growth, are included in the facility plans and approvals.
- That the State include appropriate terms and conditions to further secure its interests as a part of the transaction, including parity with the LBO banks on debt covenants and conditions.
- That in the event of default by Northwest, the state obtain assignments of any third party rental or use payments for the facilities.

## II. Study Objectives and Scope

The Arvai Group has been engaged by the State of Minnesota, Department of Finance to conduct due diligence with respect to a proposed transaction involving a bond issue for the construction of airframe and engine maintenance facilities for Northwest Airlines. The Commissioner of Finance of the State of Minnesota has been authorized by the legislature to issue up to \$350 million of state revenue bonds covering two separate maintenance facilities within the state. An aircraft maintenance facility initially estimated to cost \$250 million is proposed for Duluth and an engine repair facility initially estimated to cost \$100 million is proposed for Hibbing. It is anticipated that Northwest Airlines will lease each of these facilities for a term of 30 years.

In its enabling legislation, the 1991 Minnesota Legislature required the Commissioner of Finance to engage an independent nationally recognized consultant having special expertise with the airline industry and its financing to prepare a written report on the financial condition of the lessee of the aircraft maintenance facility and the engine maintenance facility. The legislation specified that the report should include assessments of the current economics of the airline industry, the future economics of the airline industry, the current financial condition of Northwest Airlines, a forecast of Northwest Airlines future position in the industry, and a projection of its financial condition with respect to its ability to make the required lease payments.

The objective of our study is straightforward, and entails providing a thorough due diligence analysis of Northwest Airlines, in which we raise issues or "red flags" in areas in which could materially impact Northwest's future ability to fulfill its lease commitments for the proposed aircraft maintenance and engine repair facilities. The scope of our analysis entails an overview of the airline industry, specifically its current and likely future economic states and the factors which impact it; as well as an assessment of Northwest Airlines' current and future competitive position and financial condition.

More specifically, our review includes:

- The current economics of the airline industry
- The future economics of the airline industry
- The current financial condition of Northwest Airlines and its affiliates
- A forecast of where Northwest will be in the future economics of the industry
- A review of Northwest's projected financial condition
- Advice to the state on the value of the proposed projects under various industry scenarios

- Advice to the state on terms and conditions and the need for collateral
- A review of Northwest's need for the projects.

This report summarizes our due diligence activities.

### **III. Study Team and Activities**

This section of the report documents the activities undertaken by The Arvai Group in its review of Northwest Airlines and the background of each member of the study team.

#### **Study Team**

For this study, The Arvai Group assembled a team of industry experts to analyze the current and future prospects of Northwest Airlines. The team leader, Mr. Ernest S. Arvai, President of The Arvai Group, formerly directed the Airline and Aviation Industries consulting practice at Arthur D. Little, Inc. and has more than 20 years professional experience. He has worked with a number of airline clients in the United States and abroad and is a widely quoted expert on the industry.

Mr. Thomas J. Flanagan, formerly Senior Vice President - Operations for Pan American World Airways was the primary reviewer of Northwest's airline operations, the need for the maintenance facilities and Northwest's fleet plan. Mr. Flanagan has more than 40 years airline management experience.

Ms. Laura A. Poler, formerly Manager- Business Development for American Express Travel Related Services, was the primary reviewer of Northwest's marketing and customer service functions. She has extensive experience in travel distribution and promotion, and has worked with airlines to develop travel promotions.

Tribeca Aviation, Ltd. was responsible for the financial aspects of the due diligence assignment. Tribeca Aviation provides financial consulting and investment banking services to the airline and aviation industry, and two members of the its staff participated in this assignment.

Mr. Gerald L. Gitner, former Vice Chairman of Pan American World Airways and former President of Texas Air Corporation, reviewed Northwest's overall strategy and served as a quality reviewer for the other functional areas. He is Chairman of Tribeca Aviation, has served in various senior management positions at several companies and has participated in numerous public and private financings.

Dr. William C. Farrell, Vice President and formerly Vice President - Planning for Western Air Lines and formerly Vice President with the investment bank Kidder Peabody focused on Northwest's current and future financial condition. Mr. Farrell has extensive air finance experience.

Harbridge House, Inc., a noted Boston-based consulting firm, is also a subcontractor to The Arvai Group for this assignment. Mr. Daniel M. Kasper, formerly Director of International Aviation for the United States Civil Aeronautics Board, focused on the analysis of the airline industry. He is widely recognized on industry affairs and his regulatory

background in international aviation provided a perspective on Northwest's international operations.

### **Study Activities**

Our study activities can be summarized into three major areas, data gathering, interviews and analysis.

### **Data Gathering**

Our data collection efforts concentrated on gathering relevant information pertaining to Northwest Airlines financial and competitive position within the industry, and entailed a number of sources beyond the airline itself. For our industry and airline analyses, we spoke with individuals at airframe manufacturers, engine manufacturers, aircraft lessors, financial institutions, economic forecasters, aircraft leasing companies, Wall Street analysts, former Northwest employees, the Department of Transportation, the Air Transport Association and other industry opinion leaders. We also discussed Northwest with a geographically mixed sample of travel agencies to obtain market information and customer insights.

We conducted a literature search on Northwest, covering both industry publications and major journals and newspapers, and gathered papers relevant to the future of the industry presented at several recent industry conferences as well as publicly available testimony to various governmental bodies. Combined with the information gathered from Northwest on the airline's financial condition, fleet, strategy and budgets, maintenance and key operating statistics, marketing plans and other information, we assembled a comprehensive database on Northwest Airlines.

### **Interviews**

We completed a comprehensive interview program of Northwest Airline's most senior management, and its staff below the senior management level. Matching our experts to their counterpart areas of Northwest, we interviewed virtually the entire executive team, as shown in Exhibit III-1. In addition to interviews at Northwest, we spoke with leaders of the Air Line Pilots Association (ALPA) and the Teamsters unions representing flight attendants, Banker's Trust, the lead bank for Northwest's LBO debt, a number of travel agencies who distribute tickets for Northwest (on a not for attribution basis) to assess the travel agency industry view of the carrier, and other industry participants and opinion leaders, including aircraft manufacturing and leasing firms.

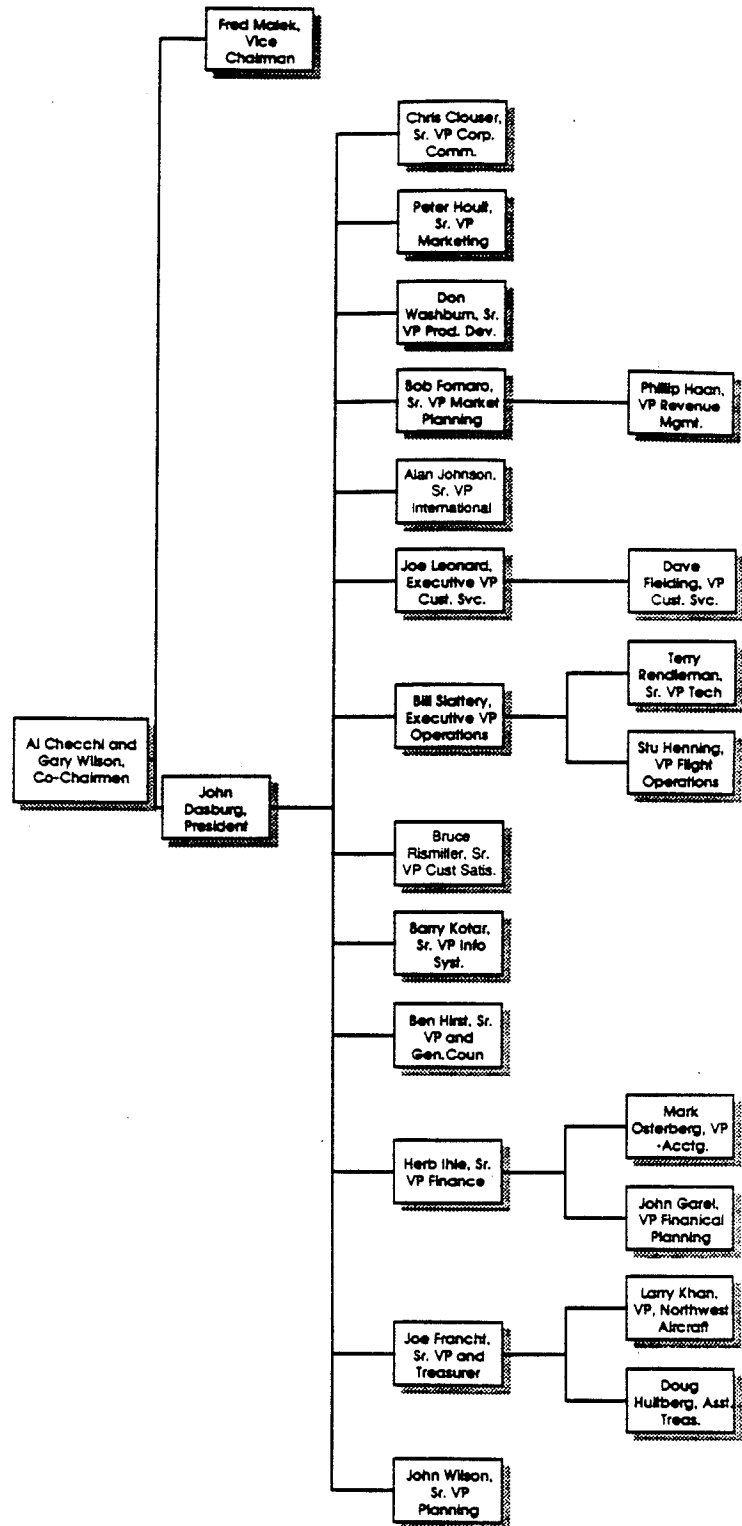
### **Analysis**

After completion of our interviews and data gathering, we analyzed each functional area of the company and reviewed, in detail, their strategic plan and financial projections. We examined the assumptions behind those projections, and examined the sensitivity of those

assumptions on the projected financial results of the airline. Once our analyses of Northwest's financial condition and assessment of risk were completed, we developed our conclusions and recommendations for the State.

# Exhibit III-1 Northwest Executive Team Interviews

Interviewed executives in **bold type**



## **IV. The Maintenance and Engine Repair Facilities Market**

A major concern of the State in entering this transaction is the potential re-marketability of the facilities in Northern Minnesota should Northwest be unable to make required lease payments. In this section of the report, we will address the nature of the facilities, Northwest's need for the facilities, the marketability of the facilities, and the market for maintenance services.

### **The Facilities to be Financed**

An aircraft maintenance base is proposed for Duluth to maintain Northwest's new high technology Airbus A-320 and future A-330 and A-340 aircraft. The facility, for which the legislature has authorized up to \$250 million in revenue bonds to finance, is planned in several phases, incorporating narrow and wide-body hangars while maintaining the maximum flexibility for future needs.

While the facility has not as yet been designed, several innovative concepts are being considered. One entails the development of a hexagonal shaped building, in which six aircraft bays surround a center core of component shops. In such a design, the distance from any single shop to an aircraft would be shorter and the overall productive space for the facility maximized. Other, more traditional layouts, which may be more suitable for future expansion, are also being considered.

It is anticipated that the maintenance base will be approximately 875,000 square feet in size once the first phases are completed. Potential for additional growth, and doubling the size of the base, could be accommodated easily on the site at Duluth International Airport. Employment for the maintenance base is estimated to reach 1,500 workers when the facility is operating at full capacity.

The engine repair facility planned for Hibbing will focus on large engines for Northwest Airlines. Candidates for repair in Hibbing include the CFM International CFM-56 series of engines. CFM International is a joint venture between General Electric in the U.S. and SNECMA in France, and the CFM-56, with minor variations, powers the Airbus A-320 and future A-321 and A-340 models as well as the existing Boeing 737-300, -400 and -500. The engine has also been used in re-engining programs for the DC-8-60 series and KC-135 (Boeing 707 variant) tankers for the U.S. military. Other engines, including the Pratt & Whitney JT8D (Boeing 727 and Douglas DC-9) and JT9D (Boeing 747 and Douglas DC-10) are also being considered for repair at this facility.

This facility, for which funding of up to \$100 million has been authorized by the legislature, could cost up to \$130 million to build, with \$30 million provided by Northwest or other parties. The facility will be a modern, environmentally compatible, state-of-the art engine repair center located at the Chiselm-Hibbing Airport. Northwest expects that this facility will employ 400 when fully operational.

## **Northwest's Need for the Facilities**

Northwest's current plans call for significant fleet growth between now and the end of the decade. Currently, Northwest operates 345 aircraft and estimates its current maintenance capacity at 350 aircraft. With a fleet of 509 aircraft planned by 2000, a shortfall in capacity to accommodate over 150 aircraft is projected, approximately 43% of today's capacity. In addition, due to increasing maintenance requirements for aging aircraft, Northwest's maintenance workload for its existing fleet will continue to grow.

The A-320 and forthcoming A-330 and A-340 aircraft utilize new technologies, in particular, fly-by-wire controls (in which ailerons and rudders are electronically controlled by computer rather than through hydraulics). Therefore, maintenance requirements and mechanic training for these aircraft will be quite different than for more conventional aircraft. This provides an opportunity for Northwest to re-examine maintenance procedures and to utilize advanced manufacturing techniques at the new facility. Management plans to utilize Total Quality Management (TQM) and employee participative management techniques to focus on continuous cycle time improvement, high quality and low cost through scale economies. These plans appear to be sensible and in line with current and projected industry practices.

Current plans for the base include a narrow-body hangar module, a wide body hangar module, a complement of attached support shops, a complement of remote support shops, airside tankage and utilities, and waste treatment and containment areas which will allow aircraft painting. We concur with and stress the importance of Northwest's decision to size the wide-body maintenance bays to be large enough to accommodate the 747-400. This will provide the maximum flexibility for potential third-party maintenance opportunities as well as for any subsequent user.

Northwest contemplates utilizing the facility for third-party maintenance, that is, maintaining aircraft for other operators. To accomplish this, Northwest has had discussions regarding potential joint ventures with several third party maintenance providers for both airframe and engine maintenance, and has also had discussions about joint participation by member companies within Airbus Industrie. The establishment of joint ventures and development of capabilities to market maintenance services in Northern Minnesota to others in the aviation industry will significantly reduce risk over the longer term.

## **The Marketability and Value of Facilities in Northern Minnesota**

In a worst case scenario, in which Northwest disappears from the picture, the value of maintenance facilities in Northern Minnesota would likely be significantly lower than their construction cost unless a viable, cost competitive third party maintenance business, with trained employees, was well established. If the facility had a third party maintenance partner, its use as an airline maintenance facility as a going concern would be significantly more likely. This might entail a separate corporate structure to insulate the facility from potential financial difficulties at Northwest. Projection of fair market value for the proposed

maintenance facilities into the future would be speculative, and only an appraisal taking into account the then current market conditions could provide an accurate picture. Nonetheless, without Northwest Airlines or third-party marketing expertise, a maintenance business using the facilities would likely face severe difficulties in competing in the marketplace.

Should the facility need to be leased to another entity in the event of a default, we would not assume that market lease rates could recover construction costs. Today, a significant number of attractive facilities are available, including the ex-Boeing facilities at Lake Charles, Louisiana and a number of sites at military bases designated for closing; these could compete with Duluth and Hibbing and are located in more hospitable climates. With the closest other airline hubs at Chicago, about a one-hour flight away, the likelihood of a major U.S. airline acquiring all the facilities in the event of a Northwest default is small, as other locations would better fit their route structures.

### **The Market for Aircraft Maintenance**

The market for aircraft maintenance is growing, and should parallel growth in the commercial aircraft fleet. Today, with the recession in the industry and a significant number of new and used commercial airliners in desert storage facilities, excess capacity in maintenance facilities exists. Several major aerospace firms, including Lockheed and Rockwell, have entered the commercial aircraft maintenance and modification business, and additional facilities, including the ex-Boeing facility at Lake Charles, remain unused. With a return to growth and profitability projected for the airline industry, and additional deliveries of aircraft continuing from the major manufacturers, the maintenance market should rebound, and a shake-out of some third party competitors may occur during the next three years.

The market for engine maintenance, with fewer new entrants, also offers growth opportunities, but faces the same market conditions in the industry as for airframe maintenance. Market prospects for engine maintenance are promising as growth in engine deliveries continues in the 1990s.

The recent announcement by American Airlines of a delay of aircraft deliveries and rescheduling of capital expenses reflects the current depressed financial conditions in the industry. The facilities proposed for Northern Minnesota are projected to be completed during a period which will likely be in the midst of the next upturn of the highly cyclical airline industry in 1993 and 1994.

### **A Shortage of Trained Mechanics is Forecast**

The Air Transport Association recently predicted that there will be a shortfall of 65,000 airframe and powerplant (A&P) mechanics by 1995. Because this number considers the approximately 18,000 new air frame and power plant mechanic licenses that are issued annually, the shortage of experienced mechanics will be even more pronounced.

Northwest recognized this potential shortfall early on among the major carriers and developed relationships with local trade schools to provide for airframe and powerplant mechanics. The ability to train and retain experienced mechanics in Northern Minnesota will be critical factors to the success of third party maintenance efforts and the marketability of the facility in the event of a default.

When the locations for the facilities were posted at Northwest for personnel bids, with the understanding that the company would not pay moving expenses, a significant number of employees from the Twin Cities applied for the Duluth and Hibbing facilities, indicating a positive attraction to the region. If the facilities can attract a stable work force committed to the Northern Minnesota area, they will be attractive to third party maintenance providers (who face shortages themselves in trained mechanics) and thus enhance the future market value of the facilities. State and local government support for training of aviation mechanics in local technical institutes and colleges in Northern Minnesota would help assure the availability of an adequate work force as the facilities expand, while helping to address the career aspirations of the local populace.

## **V. Economics of the Airline Industry**

Northwest's principal business is the provision of commercial airline services to passengers and shippers in both domestic and international markets. The long term growth prospects for these markets are generally regarded as quite positive. Virtually all major forecasts project continued healthy long term growth in the demand for both domestic and international air passengers and cargo.

### **Factors Underlying the Demand for Commercial Airline Services**

Historically, changes in the demand for passenger air transportation have been closely linked to two principal factors:

- Changes in the rate of growth experienced by the underlying economy; and
- Changes in the cost of air travel

In addition, in international markets, the political process for governmental approval of route authorities is also critical.

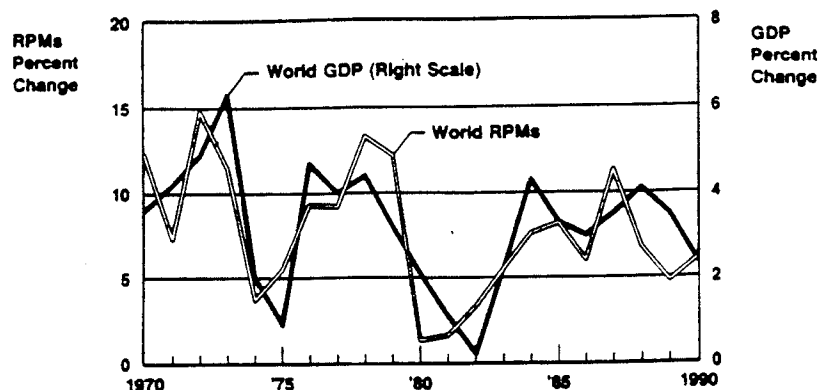
### **Economic Growth is closely related to both business and leisure air traffic demand.**

Business related air travel is a direct function of the level of economic activity. Thus, vigorous growth in incomes (GDP) typically translates directly into increased business travel. Similarly, recessions reduce the need for business travel, thereby reducing demand for commercial airline services. Likewise, changes in economic growth rates affect discretionary travel by impacting disposable personal incomes.

Overall, the demand for world air travel has tracked closely the underlying performance of the world economy, as shown in Exhibit V-1. The exhibit also illustrates that, like the underlying level of economic activity, passenger demand for air services displays significant cyclicity.

Long term economic forecasts for the U.S. and world economies indicate continued (and healthy) levels of economic growth, albeit at rates lower than those experienced in the preceding decade. Although precise long range forecasting is notoriously difficult, the fact that long term economic growth rates change slowly tends to make economic forecasts more reliable for projections covering reasonably long periods (e.g., ten or more years). This is illustrated by Exhibit V-2 which contains both historic growth rates and the projected rates used in a recent McDonnell Douglas traffic forecast.

### Exhibit V-1 World RPMs Versus World Economic Growth



Source: Boeing Commercial Airplane Company.

### Exhibit V-2 Long-Term World Economic Growth

Region	Annual Percent Change		
	1969-1979	1979-1989	1989-2010
North America	2.9	2.7	2.5
Latin America	5.8	1.6	3.6
Europe	3.5	2.1	2.3
Middle East	7.1	0.8	3.4
Africa	5.5	1.3	2.8
Asia/Pacific	5.4	5.1	4.4
USSR	3.8	2.0	1.4
<b>World</b>	<b>3.9</b>	<b>2.8</b>	<b>2.9</b>

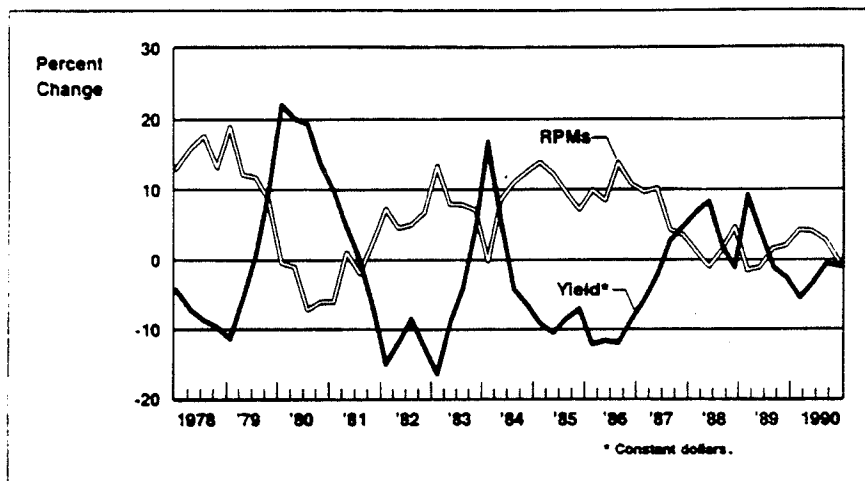
Source: McDonnell Douglas

For the period of 1990-2000, the widely used Boeing industry forecast projects an average growth rate of 2.5 percent per year for the U.S. economy and 3.0 percent for the world economy. Likewise, Douglas forecasts through 2010 project U.S. annual average growth in GDP of 2.5 percent, with world growth at 2.9 percent. Both are generally consistent with other widely-used long range economic forecasts, and we believe that they provide a reasonable basis for assessing the economic climate within which Northwest is likely to be operating over the coming two decades.

**The cost of air travel also impacts demand.** The demand for air transportation is also affected by changes in cost of air travel relative to other goods and services in the economy. Simply stated, if the price of air travel increases faster than for other goods and services in the economy, demand for commercial airline services will suffer. The standard measure of the cost of commercial airline travel is yield, which is the measure of how much, on average, airlines receive for each mile a (paying) passenger is carried. Yields are typically measured on the basis of so many cents per revenue passenger mile (RPM). Exhibit V-3 depicts the performance of the U.S. domestic market since 1978 to illustrate the inverse relationship between changes in the demand for air service and the cost of that service paid by travelers.

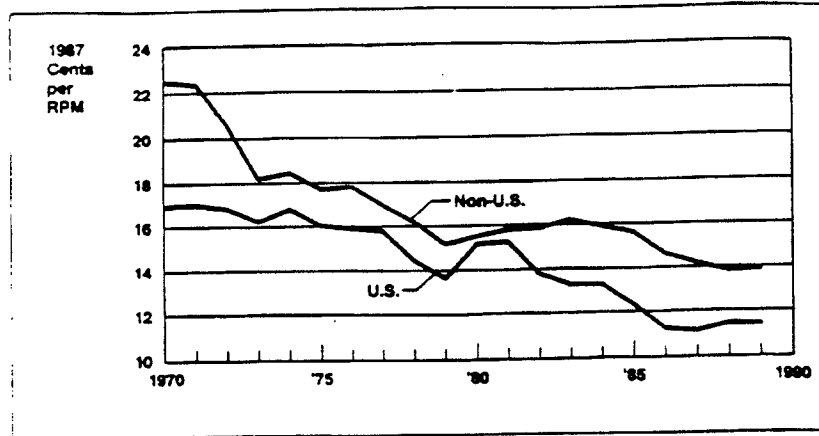
Notwithstanding the gyrations in both the direction and rates of change for airline yields reflected in Exhibit V-3, airline industry yields in real terms have declined sharply since 1970, as shown in Exhibit V-4. Moreover, most industry forecasts project that world airline yields will continue to decline, albeit more modestly, for at least the next decade. Boeing's yield forecast is shown in Exhibit V-5. For that same period, U.S. airline yields are expected to increase slightly.

**Exhibit V-3  
U.S. Domestic RPMs Versus Yield  
Quarterly Growth**



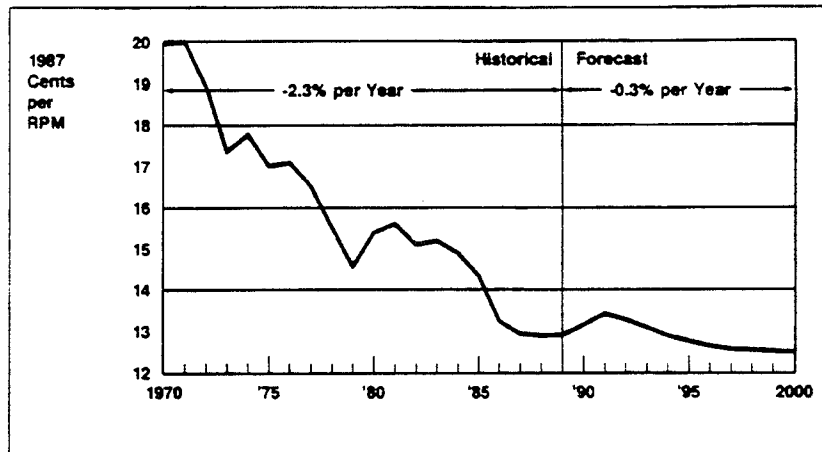
Source: Boeing Commercial Airplane Company.

### Exhibit V-4 U.S. Versus Non U.S. Airline Yields



Source: Boeing Commercial Airplane Company.

### Exhibit V-5 World Airline Yields



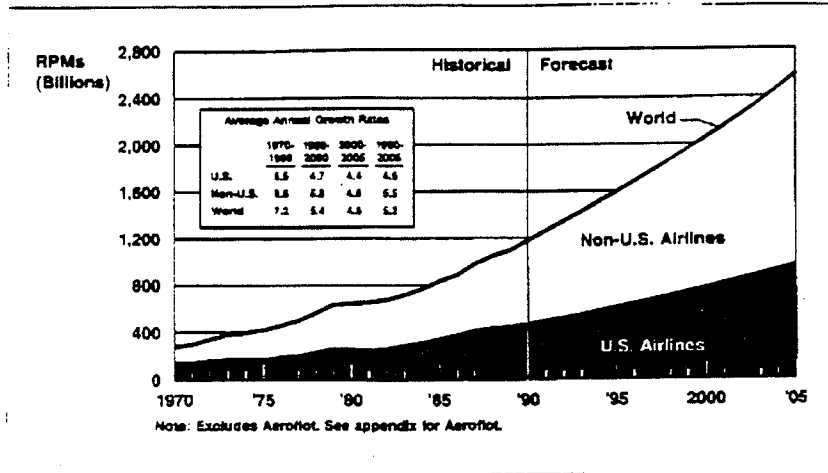
Source: Boeing Commercial Airplane Company.

### Projected Increases in Airline Traffic

World airline traffic, based on the anticipated growth in the world economy and on moderating declines in world airline yields, is projected to grow at an average of 5 to 7 percent per year over the coming decade. Exhibit V-6 graphically depicts Boeing's forecast

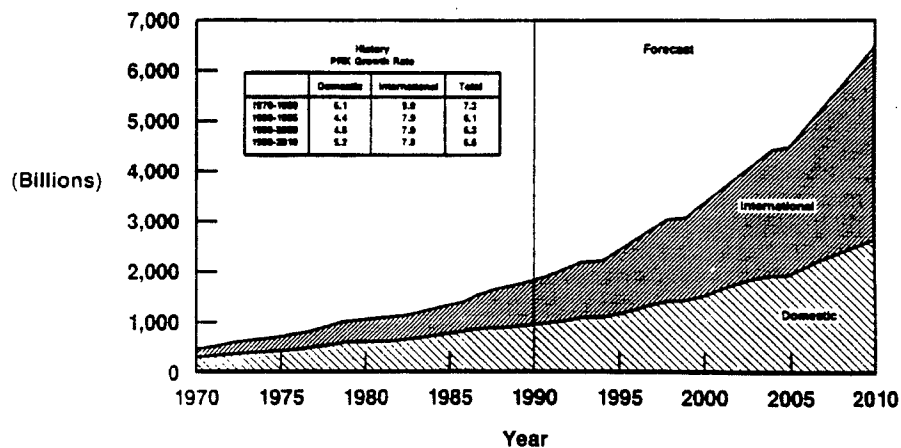
as well as historical industry growth trends. Exhibit V-7 depicts McDonnell Douglas forecast. (Note that Boeing and McDonnell Douglas aggregate categories of airline traffic on slightly different bases.)

**Exhibit V-6**  
**World Revenue Passenger Miles**  
**All Services**



Source: Boeing Commercial Airplane Company.

**Exhibit V-7**  
**Total World Passenger Traffic**  
**Revenue Passenger Kilometers**



Source: McDonnell Douglas.

Domestic growth in the United States, the world's largest and most well-developed air transportation market, is expected to be somewhat lower than the world average; most forecasts put it in the range of 4 to 5 percent per year, although the McDonnell Douglas forecast, shown in Exhibit V-8, through 2010 projects North American traffic growth at a significantly higher rate.

**Exhibit V-8**  
**Long-Term World Passenger Traffic Growth**

Region	Annual Percent Change		
	1969-1979	1979-1989	1989-2010
North America	8.3	4.9	5.8
Latin America	12.8	3.4	7.3
Western/Eastern Europe	11.2	5.3	6.0
Middle East	18.5	1.3	4.8
Africa	11.7	3.7	7.2
Asia/Pacific	15.9	8.6	9.4
USSR	7.0	4.1	2.6
World	9.9	5.3	6.5

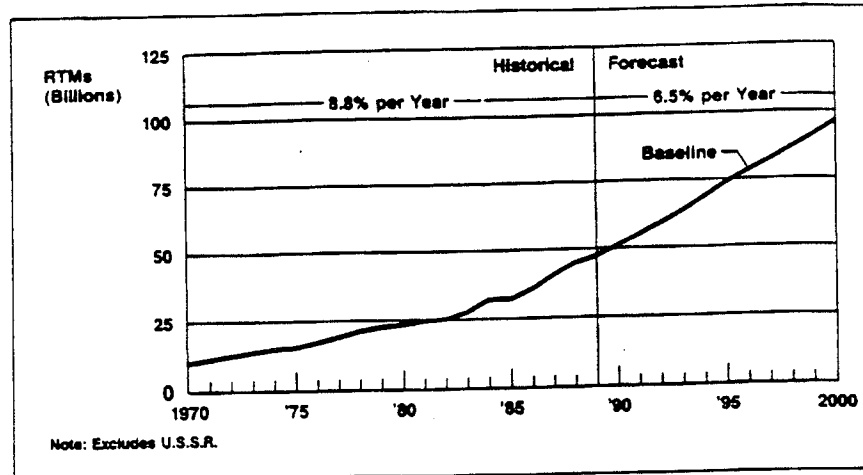
source: McDonnell Douglas

In addition to the generally positive prospects for growth both worldwide and in U.S. domestic markets, Northwest stands to benefit substantially from the even higher levels of economic and traffic growth forecast for Asia, where it has a well established market position and extensive route system. As illustrated in Exhibit V-2, forecast economic growth rates in the Asia/Pacific region are substantially higher than those projected for other regions. As shown in Exhibit V-8, the higher rates of economic growth are expected to generate correspondingly faster rates of growth in passenger traffic for the Asia/Pacific region.

### **Demand for Air Cargo**

As in the case of passenger traffic, the demand for air cargo services is a function of both the level of economic activity and the price of air transportation. In addition, air cargo demand is stimulated by increases in the level and rate of growth of international trade, by changes in production methods (e.g., just-in-time manufacturing), and by increases in the cost of capital which increase the cost of maintaining inventories. As shown in Exhibit V-9, the demand for air cargo is expected to increase at a rate equal to or greater than that projected for passenger traffic.

### Exhibit V-9 World Air Cargo Forecast Freight and Mail



#### Possible Constraints on Future Economic Growth

Several factors could constrain future economic growth, including unusually severe economic conditions, oil prices, and infrastructure constraints.

The economic growth and traffic projections described in the preceding sections assume that the world economy will experience "normal" cyclical fluctuations of growth and recession. Those forecasts do not anticipate a major worldwide depression or other economic cataclysm. We do not believe such an event is probable, but if one should occur, it could be expected to depress traffic growth below forecast levels.

Sharp increases in oil prices adversely affect both the demand for air transportation and the cost of air travel. Higher oil prices depress airline demand by slowing world economic growth which, in turn, leads to even more pronounced slowdowns in the growth of air traffic. At the same time, higher oil prices translate directly into higher airline costs and, ultimately, to increases in the cost of air travel relative to other goods and services in the economy. Since fuel costs are a significant fraction of total airline operating costs, oil prices have a particularly large impact on the industry. Barring a major disruption of supplies from the Middle East, we believe that oil and jet fuel prices will rise at or slightly above the levels of inflation over the next two decades. Moreover, even modest increases in fuel prices are likely to be offset by improvements in fuel efficiency and productivity resulting from fleet modernization.

Infrastructure constraints may pose the most serious threat to the future growth of commercial air services. Although the problem of airport and airway congestion in the

United States is currently limited to a handful of major airports, Europe and Japan are already plagued by widespread and severe capacity problems. With the projected increases in air travel over the next decade and the limited plans for infrastructure expansion, the severity of the congestion caused by inadequate infrastructure is likely to increase. The resulting flight delays will increase the costs of travel for both airlines and their customers. Nonetheless, because the major forecasts of air traffic growth have taken account of infrastructural constraints in their forecasts, we do not believe the existence of such constraints requires further changes in traffic projections.

Even if infrastructure constraints lead to increased operational restrictions, however, we believe that the impact on Northwest would be substantially mitigated as a result of its large slot holdings at the capacity constrained airports that are crucial to its operations; these airports include Narita (Tokyo), and Washington National. In addition to its position at these key slot-constrained airports, Northwest conducts a significant number of operations at other airports that could become capacity constrained; in the event limits are imposed at these airports, Northwest's existing operations are likely to be preserved through "grandfathering."

**Environmental Constraints.** Concern about adverse environmental impacts in general, and about aircraft noise in particular, also pose a potential threat to the growth of commercial air service. The possibility of noise-based operational restrictions is particularly acute at several large airports in major metropolitan areas. Indeed, strong political support from airports and local communities concerned about aircraft noise has already provided the impetus for the enactment of legislation that requires airlines to eliminate older, noisier aircraft from their fleets over the next decade.

Concerns over noise pose a potential threat to commercial air services in two additional respects. First, they can lead to the imposition of curfews or other measures that interfere with the economic operation of commercial aircraft fleets. Second, community concerns about noise have become a major barrier to the expansion of existing airports and to the construction of new facilities.

Notwithstanding these concerns, however, we do not believe environmental constraints will depress the growth in airline traffic below the forecast levels described above. We base this conclusion on three principal reasons. First, the impact of environmental protection measures has already been factored into those forecasts. Second, the legislation that requires airlines to eliminate noisy aircraft from their fleets by the end of the century also restricts the ability of state and local authorities to impose more restrictive requirements. Finally, the fleet modernization programs now underway at most major airlines will reduce both the single event noise levels and the size of the noise impacted area adjacent to airports. As a result, it should be possible for airlines to increase the level of operations while maintaining the noise impact at or below current levels.

## **The Impact of Deregulation on the Airline Industry**

The airline industry has been transformed by deregulation. From an industry of many airlines each operating a series of largely disjointed routes on which competition was either nonexistent or strictly limited, the industry today is increasingly characterized by the emergence of a small number of mega-carriers, each operating an extensive route network of domestic and, increasingly, international routes, emanating from a core of hubs. The result is an industry with fewer but substantially larger carriers that compete with each other for traffic in an expanding number of city pair markets.

From the passage of the Civil Aeronautics Act in 1938 until enactment of the Airline Deregulation Act of 1978, the U.S. Civil Aeronautics Board regulated U.S. domestic airlines like public utilities strictly limiting competition by controlling entry, pricing, and route selection. Once able to obtain operating authority, carriers effectively enjoyed franchises to serve certain specified markets but not others. Both actual and potential competition were strictly limited. Prices were set on the basis of overall industry profitability rather than the relationship of fares and costs in specific markets. Although the Civil Aeronautics Act did not preclude price competition, in practice the CAB severely constrained such competition.

As the trunk airlines—those initially licensed by the CAB in the late 1930s—gradually acquired larger, longer range aircraft (DC-3s to DC-6s and Constellations to B-707s, DC-8s, etc.), the CAB permitted these carriers to serve the types of longer haul routes better suited to the new aircraft. The CAB then authorized local service or “feeder” airlines to serve the shorter haul routes abandoned by the trunks with other smaller capacity hand-me-down equipment no longer utilized by the trunks. Over time, as “feeders” acquired larger equipment and routes, the CAB permitted third-level air taxis to provide service over routes such as Harrisburg-Pittsburgh which were too small for (or otherwise unserved by) the larger airlines. Today’s U.S. commuter airlines are the direct descendants of those third-level carriers.

The integration of three levels of carrier services into a national air transportation system was carried out by means of CAB route awards to trunks and feeders. Third-level carriers operating small aircraft were generally exempt from CAB route and rate regulation. The basic notion was that trunks would carry the vast majority of the traffic on their services between major traffic generating points. For passengers originating in and/or destined to smaller cities, second-level carriers would carry them or transfer them to/from those points into the trunk system. Third-level carriers were expected to fill any remaining gaps with small equipment.

Historically, the trunk airlines have dominated the U.S. airline industry. For most of the 1970s, 11 trunks collectively held 88 percent or more of the U.S. domestic passenger market. Although the CAB permitted two carriers to serve the same route in some cases,

most routes were monopolies. Only one U.S. airline - United - had a route structure extensive enough to approach a truly national status. Most U.S. airlines had, in reality, a crazy quilt of route rights which often had little or no resemblance to an economically efficient route structure.

Trunks also dominated in the U.S. international market. One, Pan American, operated exclusively international services and held virtually worldwide operating authority. Three other trunks held international authority (not counting transborder services to Canada and Mexico): TWA had rights to serve a number of destinations in Europe; Northwest held rights to Japan and points in Asia; and Braniff held rights to serve Latin America. International traffic accounted for about 10 percent of the total passenger traffic carried by U.S. airlines.

The 40 year reign of the Civil Aeronautics Board ended with the passage of the Airline Deregulation Act of 1978 (A.D.A.). For air cargo, deregulation came a year earlier. The A.D.A. dismantled the system of economic regulation under which U.S. airlines had operated. Regulation of the industry was explicitly left to the forces of marketplace competition. (Regulation of safety matters was retained under the U.S. Federal Aviation Administration.)

The elimination of entry, pricing, route and other restrictions which prevented or impaired competition in U.S. domestic airline markets transformed the U.S. air transportation industry. Once freed from CAB control, airlines radically realigned their route structures, explored dramatically new pricing strategies, adjusted their aircraft fleets, developed a range of new competitive weapons including computerized reservations systems and frequent flier programs, and consummated a rash of mergers and acquisitions. Several of the more significant changes precipitated by deregulation are examined below.

### **Route Systems**

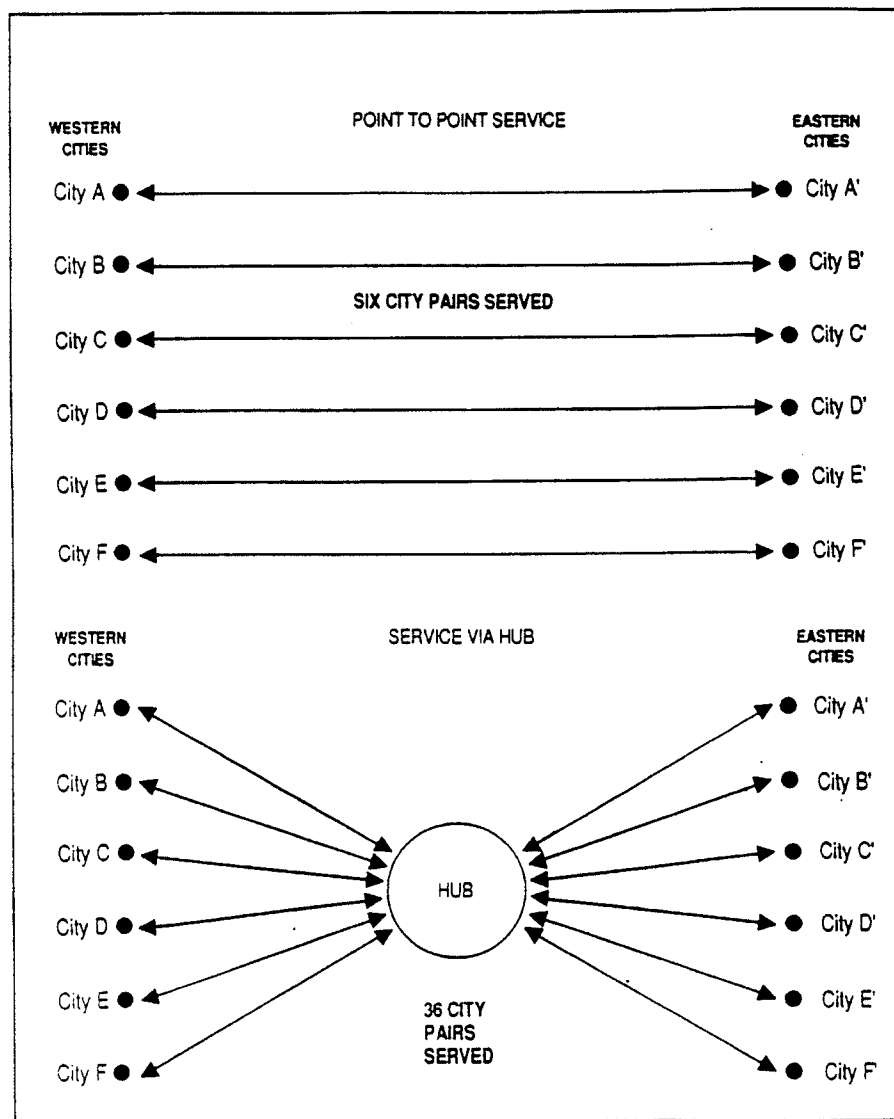
Deregulation set-off a dramatic change in airline route structures and service patterns. Perhaps the most dramatic change has been the rapid growth of hub and spoke operations by U.S. airlines.

Hubbing, a process by which an airline operates "banks" of arrivals and departures at selected airports, allows passengers (and cargo) to move conveniently between connecting flights on the same carrier with a minimum of delay. By flowing passengers from many points through an intermediate connecting point (i.e., a hub), an airline can combine passengers with different origins and destinations and thereby increase the number of city-pairs served (see Exhibit V-10) as well as the average number of passengers (and revenue) per flight.

Hub systems permit airlines to combine on a single flight not only passengers destined to a connecting hub but also those traveling to numerous other destinations beyond the hub. As

a result, hub systems make it possible for airlines to provide more frequent service to more points that was possible with the linear route systems used prior to deregulation. Because the value of a hub to both travelers and the hub operator increases — over a substantial range — with its size and scope (i.e., more flights to more points), airlines have strong incentives to develop large hubs serving an extensive array of destinations. Except for a few of the largest cities, however, the combination of local and connecting traffic is insufficient to support more than a single airline hub operation.

### Exhibit V-10 Leverage of HUB Connections



A successful hub does not require a large local population base. Charlotte, North Carolina, for example, enplanes approximately 1.25 percent of total U.S. enplanements with only 0.40 percent of the U.S. population. TWA's operations at St. Louis' Lambert International Airport provide an excellent example of the economic advantages of hubbing.

Exhibit V-11 is a flight matrix extracted from TWA's schedule at the St. Louis hub which illustrates the connecting bank of flights moving through the hub and onward to their final destinations. By scheduling banks of arriving and departing flights within a small "window" of time, TWA is able to maximize the number of connecting flights — and, hence, services — available to its customers. Thus, a single flight (155) can provide on-line connections from Chicago to 33 destinations.

**Exhibit V-11**  
**Matrix of TWA Flight Connections Through Its St. Louis Hub**

Flight	Origin	St. Louis Hub		Depart	Destination
		Arrive	Connect with		
155	Chicago	9:45 am	10:48 am		
			7011	11:30 am	Lake of the Ozarks
			7045	11:35 am	Springfield, MO
			7023	11:35 am	Columbia, MO
			7053	11:40 am	Joplin
			419	11:45 am	Las Vegas
			123	11:50 am	Albuquerque
			561	11:50 am	Denver
			131	11:50 am	Oklahoma City
			509	11:50 am	Phoenix
			155	11:50 am	Tucson
			27	11:50 am	Tulsa
			489	11:55 am	Little Rock
			273	12:00 noon	Colorado Springs
			91	12:00 noon	Los Angeles
			221	12:00 noon	San Antonio
			177	12:00 noon	San Francisco
			405	12:00 noon	Wichita
			451	12:05 pm	Austin
			451	12:05 pm	Dallas/Ft Worth
			525	12:05 pm	Houston
			259	12:05 pm	Omaha
			245	12:05 pm	Salt Lake City
			7032	1:15 pm	Carbondale, IL
			335	1:16 pm	Des Moines
			168	1:30 pm	Atlanta
			20	1:30 pm	Nassau/Freeport
			528	1:30 pm	Pittsburgh
			892	1:30 pm	Washington National
			208	1:45 pm	Memphis
			406	1:45 pm	Nashville
			590	1:50 pm	Baltimore
			30	1:55 pm	Louisville
			18	1:55 pm	San Juan, PR

Source: TWA Flight Guide.

The elimination of government restrictions on airline entry and route selection coupled with the underlying economics of hub and spoke operations have heightened the importance of — and competition for — traffic to support hub and spoke operations. In an effort to increase the effectiveness of their hubs and to offer a wide array of on-line services to attract customers, U.S. airlines have aggressively sought new traffic sources.

Thus, large U.S. airlines have expanded operations out of existing hubs, established new hubs in places such as Salt Lake City, Nashville, Raleigh-Durham and Cincinnati, acquired other airlines with existing hub and spoke operations, and acquired effective control over the small regional airlines which serve thin routes (i.e., those with light traffic) to and from the major carrier hubs. As shown in Exhibit V-12, the result has been a substantial increase in the percentage of air travelers that fly their complete journey on line (i.e., on a single airline). Concomitantly, the percentage of travelers interlining between airlines has declined.

Likewise, multihub route networks appear to generate important economic advantages for airlines. Among others, it permits more efficient utilization of both capital (principally aircraft) and labor. In addition, multiple hubs permit an airline to offer more service in many important connecting markets; for example, American Airlines can offer a full daily schedule of West Coast service from Boston, New York, and Washington by combining nonstop services with one-stop and connecting services through its hubs in Chicago and Dallas. United can do the same via its hubs at Chicago and Denver, but with only a single domestic hub at St. Louis, TWA finds it difficult to match the full schedule array offered by its larger rivals.

**Exhibit V-12**  
**Decline of Interlining on U.S. Domestic Scheduled Services (%)**

	<b>On-Line</b>	<b>Interline</b>
1973	77.1	22.9
1974	76.7	23.2
1975	76.4	23.6
1976	76.0	24.0
1977	75.4	24.6
1978	76.8	23.2
1979	78.9	21.1
1980	81.9	18.1
1981	84.6	15.4
1982	87.1	12.9
1983	89.1	10.9
1984	89.6	10.4

**Source:** Interline Practices in the Airline Industry, U.S. Department of Transportation, January 1986.

## **Computerized Ticketing and Reservations Systems**

The proliferation of, and rapid changes in, fare types, levels, and conditions since deregulation has complicated immensely the task of marketing airline services. One result has been the increased importance of travel agents in airline distribution systems. In the United States today, for example, the vast majority of all airline tickets are written by travel agents.

As both passengers and airlines increased their reliance on travel agents to handle their reservations and ticketing requirements, an airline's ability to effectively access travel agencies became a critical competitive variable. To strengthen and expand their access to travel agencies, several airlines developed computerized reservation systems (CRS) which automated many travel agency functions and reduced an agency's unit costs for booking reservations and issuing tickets.

Large economies of scope, the cost of developing such systems, and the difficulty of getting travel agents to switch systems appear to preclude a large number of CRS vendors. Of the top six U.S. airlines, each owns all or part of a major CRS.

Major airlines have also been able to use the data generated by their CRS networks to develop sophisticated yield and inventory management (seat allocation) capabilities. As a result, major airlines have introduced a host of capacity controlled fares, each subject to different conditions, and all tailored to generate traffic without diverting higher fare, on-demand traffic to the lower fare offerings.

A CRS can also generate valuable information regarding travel agency bookings. Such information can be used to develop marketing programs aimed at inducing travel agencies to book more reservations on flights offered by an airline.

## **Frequent Flier Programs**

Frequent traveler programs have proven to be extremely effective marketing tools in the deregulated U.S. air services market. These programs seek to develop "brand loyalty" among airline passengers by rewarding travelers with bonuses based on mileage flown and fare paid. To encourage loyalty, these programs provide larger bonuses the greater the travel credits accumulated. Since the bonuses accrue as nontaxable income to the individual traveler (not to the employer who paid the ticket), these programs also reduce the business traveler's incentive to utilize other airline's services even if those services are less expensive.

The more extensive a carrier's route system, the easier it is for travelers to earn bonuses. In addition, the prospect of free flights becomes more attractive the greater the number of destinations to which the free travel can be used. This characteristic makes frequent traveler programs particularly advantageous to larger airlines which serve extensive route

systems and offer numerous destinations. The success of such programs in attracting the patronage of high-frequency travelers fuels further expansion of services via existing and new hubs.

### **Overall Impact of Deregulation on Passenger Airlines**

The U.S. airline industry structure which has emerged from a decade of deregulated competition is characterized by the development of a more than small number of truly national, increasingly international single carrier air transportation networks. These multihub networks appear to produce the type of large economies of scale and scope which often characterize multiproduct firms. To expand their networks, major airlines are extending their control to include the small aircraft operations which provide service to their hubs from "thin" traffic points. Through acquisition and internal growth, a handful of U.S. megacarriers, each with national — and increasingly international — route networks emanating from its domestic hub(s), now dominate the U.S. airline industry.

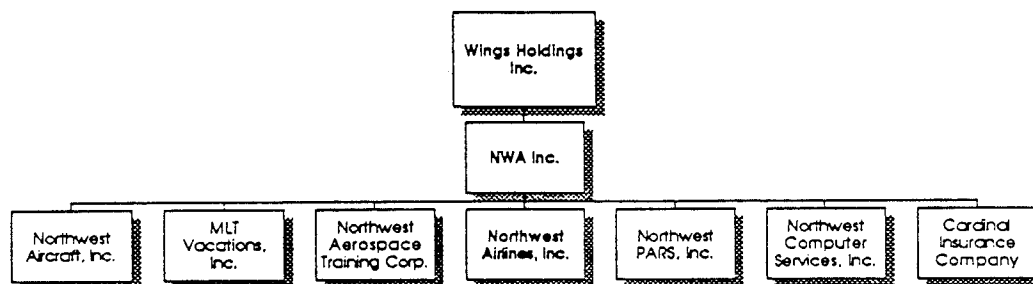
## VI. Northwest Airlines Current Position

This chapter describes the current competitive and financial condition of Northwest Airlines and its affiliated entities, NWA Inc. and Wings Holdings Inc. The following sections describe Northwest's route structure, fleet, market strength, management team, financial condition and competitive position in the industry.

### Northwest Airlines Corporate Structure and Ownership

Northwest Airlines must be considered as three hierarchical companies, Northwest Airlines, which is a subsidiary of NWA Inc. (the pre-buyout holding company), which in turn, is a subsidiary of Wings Holdings Inc. (the post-buyout holding company). Because Wings Holdings Inc. fundamentally holds only companies affiliated with the operations of the airline, it is the relevant entity for evaluating the financial condition of the airline. The entities, other than Northwest Airlines which are consolidated into NWA Inc. include MLT Vacations Inc., a tour wholesaler, Northwest Aerospace Training Corp., a training company, Northwest Aircraft Inc., an aircraft trading and leasing entity, Northwest PARS Inc., the computer reservation system interests, Northwest Computer Service Inc., a computer services entity, and Cardinal Insurance Company, which provides self-insurance for Northwest. The latter two entities are quite small. The organization for Northwest Airlines and its affiliate companies is shown graphically in Exhibit VI-1.

**Exhibit VI-1**  
**Northwest Airlines and Related Entities**



As a certificated carrier, Northwest Airlines as an entity is required to report financial results periodically to the Department of Transportation (who continued the Form 41 reporting requirements of the former Civil Aeronautics Board). These results, do not reflect the impact of a significant element of long-term debt which is recorded at the NWA Inc. level. As a result, publicly reported figures for Northwest Airlines may not match those cited in this report at the Wings Holdings, Inc. level.

Wings Holdings Inc. has several shareholders, for both common and preferred equity, as shown in Exhibit VI-2. The Series A preferred stock is a 14% preferred issue which pays cash dividends and is redeemable after 10 years. The Series B preferred stock is also 14% preferred, but accrues its dividends in additional shares. No dividends have been paid on common equity.

## Exhibit VI-2 Northwest Airlines (Wings Holdings Inc.) Shareholdings

	Common Shares	Preferred Stock		Board Seats
		Series A	Series B	
Checchi Group	45%	0%	0%	7
Elders Finance Group	14%	0%	25.20%	2
Blum & Associates	10%	0%	25.20%	2
KLM Royal Dutch Airlines	20%	100%	24.40%	3
Bankers Trust Co.	11%	0%	25.20%	1
Total	100%	100%	100%	

The only outstanding common stock options are for senior management, and amount to approximately 1,500 shares at varying strike prices. These options were provided as a part of the executive compensation programs in 1989 and 1990. No single manager has options for more than 1% of the common equity of the corporation, and Messrs. Checchi, Malek, and Wilson hold no options.

### Northwest Airlines Current Financial Position

Northwest Airlines, at the consolidated Wings Holdings, Inc. level, is a thinly capitalized company, as illustrated in the Wings Consolidated Comparative Balance Sheets for July 31, 1991 (unaudited), December 31, 1990 and December 31, 1989 in Exhibit VI-3. Retained earnings for the firm show a deficit of nearly \$600 million as of July 31, 1991, reflecting significant losses during the last year during the Gulf War crisis and economic recession. With only a small equity position, long term debt to equity ratios for the company are quite high, in excess of 20:1.

Income Statements for Wings Holdings Inc. showing year to date results through June 30, 1991 (unaudited) and annual results for 1990 and the post buy-out period of 1989 are shown in Exhibit VI-4. Year to date, pre-tax losses for Wings Holdings, Inc. as of July 31, 1991 amount to \$263.9 million, and compare to \$152.1 million in losses for the comparable first seven months of 1990.

Statements of Cash Flow for Wings Holdings, Inc., showing year to date results through June 30, 1991 (unaudited) and annual results for 1990 and the post buy-out period of 1989 are shown in Exhibit VI-5. The July 31, 1991 results indicate a net cash usage of \$174.5 million during the first 7 months of the year. Operations provided cash of \$149.8 million during that period.

The current financial condition of Northwest and its affiliates has been influenced by the Gulf War and industry conditions, which engendered record losses for the industry. The U.S. airline industry lost more than \$4 billion in 1990, and more than \$1 billion

## Exhibit VI-3

## Wings Holdings Inc. Consolidated Balance Sheet

source: Wings Holdings Inc. Note 1991 statement is unaudited

\$ in millions

	Dec. 31, 1989	Dec. 31, 1990	Jul. 31, 1991		Dec. 31, 1989	Dec. 31, 1990	Jul. 31, 1991
ASSETS				LIABILITIES AND EQUITY			
Cash and Cash Equivalents	307.2	187.1	12.6	Short-Term Borrowings	0.0	20.1	40.3
Short-Term Investments	37.0	13.3	23.2	Accts. Payable & Other	1085.4	1274.1	1319.9
Accounts Receivable - Net	559.1	638.5	678.3	Air Traffic Liability	497.4	496.9	605.6
Flight Equipment Spare Parts - Net	145.9	193.0	193.6	Total Current Liabilities	1582.8	1793.1	1965.8
Prepaid Expenses and Other Current Assets	139.5	178.6	160.6				
Total Current Assets	1188.7	1210.5	1068.3	Long-Term Debt	2968.3	2471.9	2782.6
Owned Property - Net	4195.3	4209.9	4581.8	Capital Leases	577.7	1000.4	970.2
Capital Leased Property - Net	479.7	902.8	878.5	Deferred Income Taxes	1296.8	1240.9	1149.4
Total Property and Equipment	4675.0	5112.7	5460.3	Other Liabilities	256.6	824.7	862.3
Investments in Affiliated Companies	201.6	187.6	187.3	Redeemable Preferred Stock	507.1	486.0	502.0
International Route Authorities - Net	894.8	836.3	832.8	Common Equity (Deficit)	165.9	(153.3)	(372.2)
Prepaid Expenses & Other Assets	395.1	316.6	311.4	Total Shareholders Equity	673.0	332.7	129.8
Total Other Assets	1491.5	1340.5	1331.5				
TOTAL ASSETS	7355.2	7663.7	7860.1	TOTAL LIABILITIES AND EQUITY	7355.2	7663.7	7860.1

Note: As of 12/31/90, Wings Holdings Inc. had non-cancellable operating lease commitments as follows: (\$000)

1991	361,904
1992	359,451
1993	334,787
1994	314,006
1995	297,956
Thereafter	4,102,001

**Exhibit VI-4**  
**Consolidated Statement of Operations**  
**Wings Holdings Inc.**  
 results for 1991 are unaudited  
 \$ in millions

	2/23-12/31 1989	Year Ended 12/31/90	1/1-7/31 1991
<b>Operating Revenues</b>			
Passenger	2,486.2	6,335.0	3,601.2
Cargo	307.0	655.4	371.4
Other	131.5	436.0	348.1
Total Operating Revenues	<b>2,924.7</b>	<b>7,426.4</b>	<b>4,320.7</b>
<b>Operating Expenses</b>			
Salaries and Benefits	823.4	2,153.3	1,328.2
Fuel, Oil and Taxes	476.8	1,412.9	712.6
Commissions	444.7	1,192.2	725.2
Depreciation and Amortization	148.9	373.0	211.7
Other	931.0	2,430.0	1,423.4
Total Operating Expenses	<b>2,824.8</b>	<b>7,561.4</b>	<b>4,401.1</b>
<b>Operating Income (Loss)</b>	<b>99.9</b>	<b>(135.0)</b>	<b>(80.4)</b>
<b>Other Income (Expense)</b>			
Interest Expense - net	(182.6)	(339.9)	(195.4)
Other - net	58.1	9.7	12.0
<b>Loss Before Income Taxes</b>	<b>(24.6)</b>	<b>(465.2)</b>	<b>(263.8)</b>
<b>Income Tax Benefit</b>	<b>(14.5)</b>	<b>(162.7)</b>	<b>(91.2)</b>
<b>Net Loss</b>	<b>(10.1)</b>	<b>(302.5)</b>	<b>(172.6)</b>

**Exhibit VI-5**  
**Consolidated Statements of Cash Flow**  
**Wings Holdings Inc.**

\$ in millions

	<b>2/23/89 - 12/31/89</b>	<b>Year Ending 12/31/90</b>	<b>1/1/91 - 7/31/91</b>
<b>Cash Flows from Operating Activities</b>			
Adjustments to reconcile net loss to net cash provided by operating activities			
Net Loss	(10.1)	(302.5)	(172.6)
Depreciation and Amortization	148.9	373.0	211.7
Changes in Working Capital	138.7	142.0	60.0
Other	(107.3)	(19.9)	50.7
<b>Net Cash Provided by Operating Activities</b>	<b>170.2</b>	<b>192.6</b>	<b>149.8</b>
<b>Cash Flows from Investing Activities</b>			
Payment for NWA shares, net of cash acquired	(3,368.8)	0.0	0.0
Additions to property and equipment	(252.0)	(772.6)	(445.6)
Other investing activities	(111.3)	28.7	(90.1)
<b>Net Cash Used in Investing Activities</b>	<b>(3,732.1)</b>	<b>(743.9)</b>	<b>(535.7)</b>
<b>Cash Flows from Financing Activities</b>			
Proceeds from financing activities	4,405.9	2,022.3	281.4
Payment of financing obligations	(536.8)	(1,591.1)	(70.0)
<b>Net Cash Provided by Financing Activities</b>	<b>3,869.1</b>	<b>431.2</b>	<b>211.4</b>
<b>Increase (Decrease) in Cash and Cash Equivalents</b>	<b>307.2</b>	<b>(120.1)</b>	<b>(174.5)</b>
Cash and Cash Equivalents, beginning of period	0.0	307.2	187.1
Cash and Cash Equivalents, end of period	307.2	187.1	12.6

during the first half of 1991. The post-Gulf War rebound expected for the industry has been slowed by economic recession. Nonetheless, Wings Holdings, Inc. was profitable in June, July, and August of 1991, hopefully indicating the beginning of a return to more normal conditions. Although the industry is recovering, the recovery has been delayed until the beginning of the traditionally weaker winter months, and additional monthly losses are likely for Northwest and other airlines during the winter season.

Northwest has considerable hidden value in its asset base (as discussed below), marketable assets, and access to more than \$600 million in credit lines which should allow it to survive in a short-term crisis. This position, which is weaker than that of its three major competitors, could make Northwest more vulnerable to events beyond its control, such as a sustained fuel crisis or prolonged industry fare war. Even if the high loss levels during the Gulf War were to continue, Northwest's credit reserves theoretically could sustain the carrier for 2-3 years. Northwest would likely survive one major industry crisis without having to resort to asset sales or downsizing the airline, even if performance remains at below industry average yields (revenue per passenger mile) and higher costs per available seat mile.

As a highly leveraged transaction, Northwest is positively regarded by Bankers Trust, its lead bank for the leveraged buy-out debt, currently at \$1.4 billion, and the \$600 million line of credit (presently unused). The LBO debt, the credit line, and a \$500 million loan from Airbus Industrie and CFM International share a long list of covenants, among which are debt to equity and fixed charge coverage ratios. These two ratios are presently very close to their default point, and there is a potential that Northwest could breach those covenants by year end should present trends continue. Those covenants would be subject to renegotiation with Bankers Trust and the bank group. Bankers Trust expresses positive support of Wings Holdings Inc., terming it one of the best performing highly leveraged transactions. While Bankers Trust indicated that it cannot speak for all of the syndicate banks, and while another industry catastrophe such as the Gulf War could create difficulties, they would be favorably disposed to relaxing those requirements based on recent discussions. The proposed financing transactions by the State and MAC will have a favorable impact on several financial ratios.

Often in an LBO transaction, undervalued assets are sold to pay down LBO debt and the organization is rebuilt from a smaller core. In the case of the Northwest transaction, the company has added a significant number of new aircraft (worth more than \$1.5 billion), acquired Honolulu-Sydney rights from Hawaiian Airlines, acquired the Washington National hub from the Eastern Airlines bankruptcy estate, and entered into a joint marketing agreement, including advancing debtor in possession financing, with America West Airlines. Northwest did sell and lease back a number of aircraft (which many carriers did during the same period to capture high market values for aircraft in the high 1989 market) and mortgaged a small parcel of Japanese Real Estate for \$379 million, but has not disposed of any significant airline assets or downsized, as often occurs in an LBO. These moves have added critical mass to the airline and are consistent with a strategy calling for continued long term growth.

Northwest has paid down \$1.673 billion of its LBO debt to date, the cash for which has come from the following sources:

Cash on hand / Cash from operations	\$ 588 million
Supplier Financings (primarily Airbus and CFM)	\$ 503 million
Tokyo Real Estate Financing	\$ 379 million
Aircraft Sale/Leaseback Financing	\$ 203 million

### **Northwest's Comparative Financial Position**

Northwest, as fourth largest U.S. carrier, is most often compared to the big 3, American, Delta and United. Exhibit VI-6 highlights some comparative data among the major carriers, including Northwest as publicly reported and Wings Holdings, Inc. at year end 1990. Northwest's Net Margin of -4.2% at the Wings Holdings, Inc. level, while significantly better than US Air, America West and TWA, trailed American, United and Delta. If the impact of the LBO debt (reported in the parent companies) is not considered, the comparative financial results for the operating entity appear quite favorable. The level of interest expense, which are at \$2,060 per employee at Northwest and rise to \$7,835 at Wings Holdings, Inc., represent the most significant difference between Northwest and its big 3 competitors.

In examining several productivity measures within the industry, Northwest has fewer employees per aircraft than the big 3, generates more revenue passenger miles per employee, but falls below industry average in terms of yield and cost per available seat mile. If Northwest had performed at industry average yields and costs in 1990, its operating results would have improved by \$1.05 billion in earnings, indicating the potential leverage in operation improvements yet to be achieved by the company.

If Northwest, without the NWA Inc. and Wings Holdings debt load, had operated its 77 billion available seat miles and 51 billion revenue passenger miles at the cost and yield structures of American, Delta and United during 1990, the differential impact on results would be as follows:

#### **Revenue increase (decrease)**

American	12.66 cent yield versus Northwest's 12.31 = \$ 180 million
Delta	13.82 cent yield versus Northwest's 12.31 = \$ 778 million
United	12.55 cent yield versus Northwest's 12.31 = \$ 124 million

**Exhibit VI-6**  
**Comparative Airline Financial Performance - 1990**

	AMR Corp.	Delta	UAL Corp.	TWA	US Air Group	Wings Hldgs.
Revenue (\$000)	11,719,600	8,707,400	11,037,477	4,606,082	6,558,606	7,426,429
Operating Expenses (\$000)	11,595,600	8,934,600	11,073,754	4,768,384	7,059,729	7,561,421
Operating Profit (\$000)	124,000	-227,200	-36,277	-162,302	-501,123	-134,992
Operating Margin - %	1.06	-2.61	-0.33	-3.52	-7.64	-1.82
Interest Expense-net (\$000)	221,200	58,400	120,905	302,818	225,600	339,919
Net Profit (\$000)	-39,600	-154,000	-200,645	-237,564	-454,448	-302,498
Yield (cents)	12.66	13.82	12.55	11.24	16.18	12.31
Cost per ASM (cents)	8.87	9.00	9.60	8.68	9.40	9.57
RPMs (000)	76,878,044	58,982,446	75,944,415	34,236,401	35,548,997	51,490,193
ASMs (000)	123,382,264	99,778,914	114,654,089	54,958,188	59,480,298	77,317,424
Load Factor (%)	62.31	59.11	66.24	62.30	59.77	66.60
Employees	87300	62900	75025	31798	44667	43386
Interest Burden per Empl. (\$)	2533.79	928.46	1611.53	9523.18	5050.71	7834.76
ASM per Employee	1,413,313	1,586,310	1,528,212	1,728,354	1,331,639	1,782,082
Employee per Aircraft	158	142	162	154	106	136

### **Cost decrease (increase)**

American	8.87 cent cost/asm versus Northwest's 9.57 = \$541 million
Delta	9.00 cent cost/asm versus Northwest's 9.57 = \$441 million
United	9.60 cent cost/asm versus Northwest's 9.57 = (\$ 23 million)

### **Total Impact**

Northwest operating at the cost and yield structures of competitors would have had the following improvements in operating results:

American	\$ 721 million in increased margin
Delta	\$ 1.219 billion in increased margin
United	\$ 101 million in increased margin

A clear potential for significant profit improvement is present at Northwest, and is being addressed by the new management team. The operating profit differential from a small movement in costs and yields is significant, and could significantly impact earnings in future years if successful. The leverage in yields and costs cuts both ways, however, and lower yields and higher costs have similar impact in the opposite direction.

### **Northwest's Competitive Position**

Northwest's competitive position in the industry is dependent on a number of factors, including its route structure, fleet, market strength, management team, asset base, computer reservation system, customer service programs and marketing actions. Northwest's position today, and plans for future improvement, along with industry conditions and competitor actions, form the base for Northwest's future financial condition and ability to pay down debt.

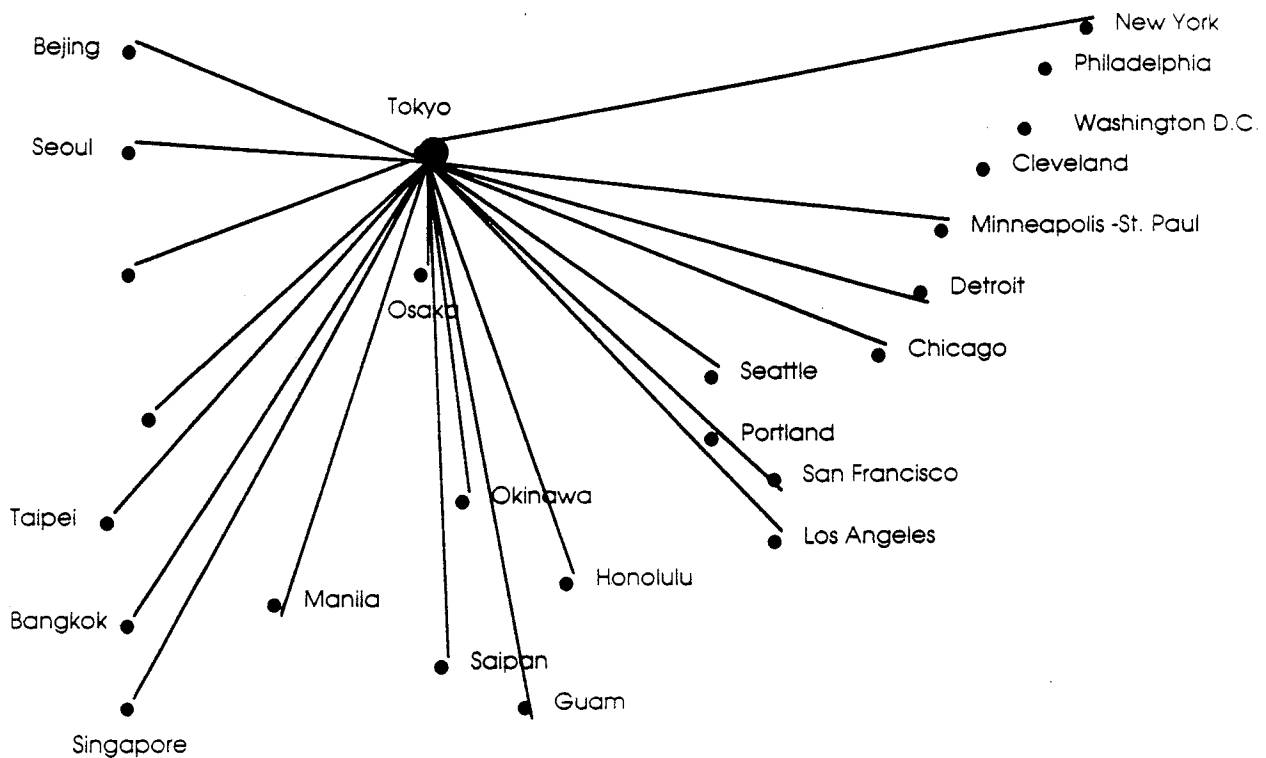
Comments from Wall St. analysts were generally favorable. At the same time, these analysts were cautious due to the fact that full financial information is unavailable because the company is privately held. (Northwest Airlines files DOT reports but because debt is held at the parent company levels, the data are incomplete.)

### **Route Structure**

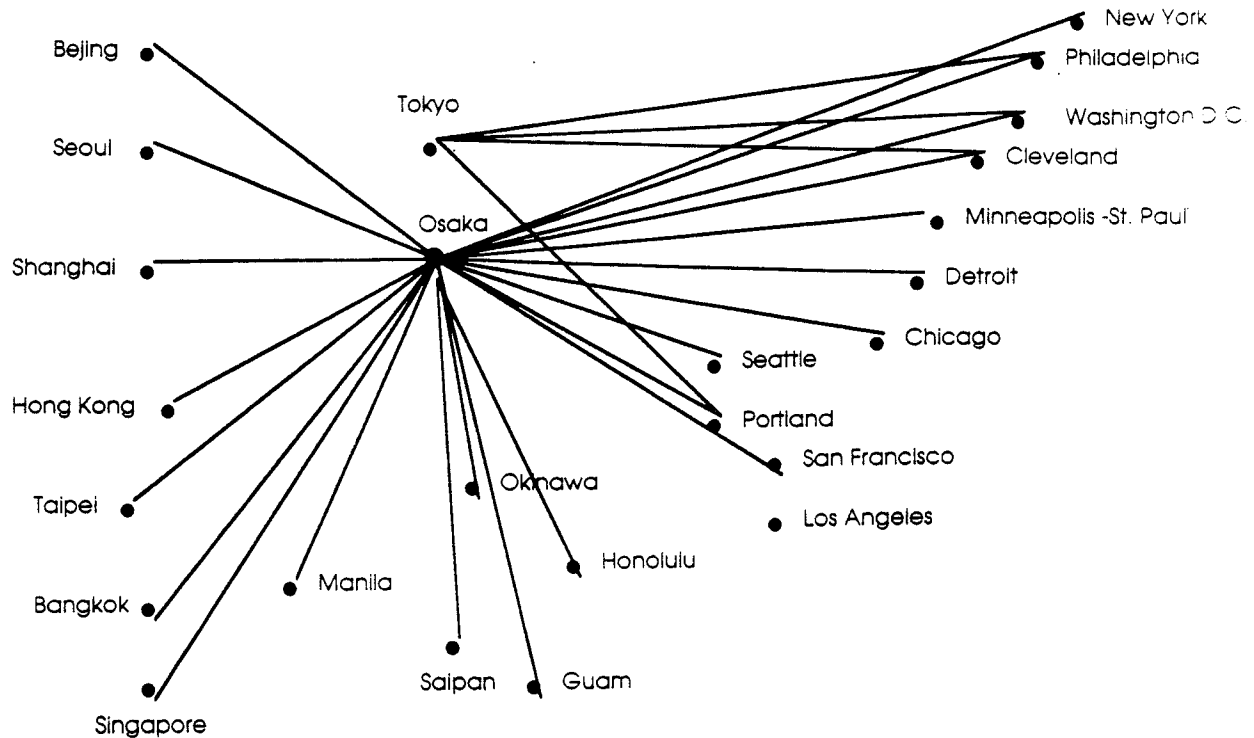
Northwest Airlines has a long history and significant international route authorities in Asia, including a major hub in Tokyo, Japan. These rights include the ability to carry local traffic from Tokyo to other cities in Asia, including Seoul, Beijing, Taipei, Manila, Hong Kong, Bangkok, Kuala Lumpur, Singapore and other major destinations. Granted by treaty after World War II, they are grandfathered and provide Northwest (and United,

who purchased similar authority from Pan American World Airways) a strong position in the Japanese market. Northwest holds similar rights at Osaka, but is currently unable to fully utilize them because of airport constraints. With the opening of the new Kansai airport in Osaka in the mid 1990s, these rights could potentially be quite valuable. Recently, Northwest has entered the Australian market after acquiring Honolulu-Sydney rights from Hawaiian Airlines. This route, and forthcoming operations from Los Angeles and New York to Sydney, provide Northwest full coverage of the Pacific Basin. Exhibit VI-7 shows Northwest's current and Exhibit VI-8 Northwest's unused Pacific route authorities.

**Exhibit VI-7  
Northwest's Current Pacific Routes**



### Exhibit VI-8 Northwest's Unused Pacific Route Authorities



In the Atlantic, Northwest has a small presence, serving London's Gatwick airport, Glasgow, Paris, Frankfurt and Amsterdam, operating a mini-hub for European flights from Boston. This thin route structure in Europe is much smaller than those of United, Delta and American in terms of frequency and cities covered and is a small portion of Northwest's overall route system.

Domestically, Northwest dominates two major hubs in Minneapolis-St. Paul and Detroit. Northwest dwarfs other carriers in these cities, and operates many profitable routes with little or no direct competition. Northwest also has a modest southern hub in Memphis and has just opened a small hub in Washington D.C. The hub in Memphis, which is not as strong an origin-destination city as Atlanta, is not as successful as the northern hubs. It is premature to judge the success of the new Washington D.C. hub.

Northwest's domestic presence is geographically unbalanced, when compared to its competitors. Delta has a strong presence in the South (Atlanta), Southwest (Dallas) Northeast (Boston) and West (Salt Lake City) and has built a strong presence in Cincinnati. American is strong in Chicago and Dallas, and has hubs in Nashville, Raleigh-Durham, Miami and San Jose. United is strong in Chicago, Washington Dulles, Denver and San Francisco, and is building a southern presence in Orlando. To effectively compete with the "big 3", Northwest needs to expand its presence on the east and west coasts and in the Southwest.

Northwest's recent opening of Washington D.C. as a hub and the new marketing agreements with America West Airlines, which is based in Phoenix and has primarily a western route structure, should help Northwest build additional national presence.

Overall, Northwest has a good — but not great— domestic route system. We believe that to ensure its long-term viability, Northwest will need to develop a stronger route system and market presence across the southern tier of the United States and along the eastern seaboard. We also believe, however, that the continued economic problems plaguing a number of weaker carriers may provide Northwest with opportunities to significantly strengthen its route system in these regions.

## **Fleet**

Northwest currently operates 345 aircraft, and plans to grow the fleet to 509 aircraft by the year 2000. Northwest's fleet includes two wide body types today, the Boeing 747 (in -100, -200 and -400 variants) and the McDonnell Douglas DC-10 (in -30 and -40 variants). Two additional wide body aircraft types are on order, the Airbus A-330 (twin engine for domestic and international service) and the Airbus A-340 (four engine long-range international service). Northwest's narrow body fleet includes the advanced technology Airbus A-320, the Boeing 757 as well as older Boeing 727 and Douglas DC-9 models (including -10, -30, -40, -50 and -80 variants). By the late 1990s, Northwest plans to acquire a number of "new 110 seat" aircraft to replace DC-9 models which do not meet stage 3 noise requirements.

At the end of 1990, 114 of Northwest's 332 aircraft (34%) met stage 3 requirements. By 1995, 276 of 426 aircraft will meet stage 3 (65%), and by 1999, 409 of 509 will meet stage 3 requirements. Northwest's 37 Boeing 727s and a portion of the Douglas DC-9 fleet will need modification to meet stage 3 noise requirements to continue to operate after the year 2000, at an estimated cost of \$2-3 million per aircraft in 1991 dollars.

In addition, older models of the 747, DC-10, 727 and DC-9 will likely require additional aging aircraft modifications as they reach critical points in their service lives. Structural repair and corrosion control provisions require upwards of \$1 million per aircraft, underscoring Northwest's need for maintenance capacity as its fleet ages.

Northwest is also the only U.S. based passenger carrier to operate dedicated freighters, (Boeing 747-200F) which allows the carrier to participate in the profitable international air freight markets in Europe and the Far East. Cargo capacity was a strong consideration in Northwest's selection of the Airbus A-330 and A-340 models over competing types, as they can accommodate side-by-side industry standard LD-3 containers in the cargo hold.

Our assessment of Northwest's fleet plan summarized in Exhibit VI-9 is that the fleet will be competitive as deliveries of the remaining A-320 and Boeing 757s are completed. With the exception of small jet aircraft (110 seat), Northwest's fleet should then be modern and current.

### **Market Strength**

Northwest's market strength is becoming more competitive with its big 3 competitors, but has not yet reached comparable levels.

Worldspan, the computer reservation system in which Northwest, Delta and TWA participate, is third in market share and has not reached the travel agency penetration of Sabre (American) or Apollo (United). Additionally, Northwest's lack of geographic balance has made Worldspan penetration more difficult in a number of markets, including both the east and west coasts.

Northwest has a competitive frequent flyer program although it has fewer members than its competitors, particularly in the South and Southwest. American's program, which was the first in the industry, has more members than Northwest's. United's program, which also has more participants, offers a much larger number of participating carriers to choose from in redeeming rewards, an attractive feature.

With a smaller size and presence, Northwest has less ability to influence travel agencies, and major corporate accounts and must work harder to secure a stable customer base outside of its dominant domestic hubs than American, United or Delta.

Northwest has also reversed its history of aloofness with respect to the Federal political establishment in Washington, D.C. Its new political ties should assist the company in getting a fair hearing in international route allocations.

### **Management Team**

Northwest's senior management team has changed significantly since the LBO transaction. Fifty of the seventy most senior managers are new to the organization, and additional managers have been hired at lower levels in the organization. Overall, our impression of the management team is favorable.

An upgrading of the financial function in several key positions has occurred. Several managers have been hired from other airlines, including American and United, and based

## Exhibit VI-9 Northwest Fleet Plan

<b>Aircraft Type</b>	<b>1991</b>	<b>Year 1996</b>	<b>1999</b>
Boeing 727	62	37	37
Boeing 747-100/200	32	32	32
Boeing 747F	8	8	8
Boeing 747-400	10	16	20
Boeing 757	33	62	95
Airbus A-320	20	100	120
Airbus A-330	0	10	16
Airbus A-340	0	20	24
Douglas DC-9	148	113	73
Douglas DC-10	28	28	28
New DC-9 replacement	0	0	56
<b>Total Aircraft</b>	<b>341</b>	<b>426</b>	<b>509</b>

on our discussions and interviews, a strong commitment to turning around the carrier exists among the management team. Stock options in Wings Holdings Inc. are awarded to Vice Presidents and above, based on performance, and provide a strong performance incentive.

Two characteristics of the new management team stand out. First, the team is young in age, and second, the team has set a wide agenda for aggressive improvements within the operation. The degree to which the team can quickly come together and implement cultural change throughout the organization will be a key determinant in Northwest's future success.

### **Northwest's Asset Base**

Northwest has a strong base of valuable assets, which, in a worst case, could be sold to pay down debt or generate cash. In addition to aircraft and flight equipment on the balance sheet, Northwest's international route authorities have considerable value. A recent appraisal of Northwest's fleet showed value in excess of the balance sheet of more than \$871 million. In addition, Northwest estimates of the value of route authorities in excess of book value by approximately \$4 billion. Several individual routes, such as Chicago-Tokyo, and New York-Tokyo, would be of particular interest to some of the "big 3" competitors, as they would complement existing route structures, and are quite salable. Additionally, a parcel of land at Tokyo's Narita Airport is owned by the company and is recorded at well below current market value on the books. While these values are not liquid, they indicate a substantial potential hidden value in the company.

Northwest management prepared a "current value" balance sheet at the end of 1990 reflecting their estimates of the current market value of assets. That balance sheet, along with the year end 1990 balance sheet for Wings Holdings Inc. are shown in Exhibit VI-10. While we are not in a position to provide a route by route appraisal of Northwest's international routes, we believe that a substantial hidden value of over book value exists. The realization of any or all of that hidden value will only be known if and when Northwest markets these authorities.

### **Northwest's Image and Customer Service**

In the last two years, Northwest's customer service has improved considerably, according to DOT statistics and surveys conducted for Northwest by independent firms which we reviewed. This area is a current focus of Northwest management. A launch of the "Northwest for the 1990s" is planned for later this year, highlighting many of the planned improvements in customer service, including reconfigured aircraft interiors, new passenger service standards, new crew uniforms, improved meal service, improved entertainment systems, and advanced baggage handling capabilities. Significant training expenditures, including more than \$9 million in the fourth quarter of 1991, will provide impetus to the new programs as Northwest attempts a cultural transformation to achieve its goal of becoming the most preferred airline.

## Exhibit VI-10

## Northwest Airlines Current Value Estimates of Wings Holdings Inc. Assets as of 12/31/90

Source: Northwest Airlines

Assets - Partial Schedule of Items with differences	Thousands of dollars		
	Book Value	Estimated FMV	Difference
Flight Equipment, Net (Owned, Capital Leased and Spare Parts)	3,446,249	4,758,235	1,311,986
Delivery Positions	518,247	2,736,000	2,217,753
International Route Authorities	836,294	5,155,178	4,318,884
Other	1,389,201	2,032,667	643,466
Total Assets	7,663,667	16,155,756	8,492,089

As shown in Exhibit VI-11, Northwest's on-time performance, ranks consistently higher than its major competitors. Exhibit VI-12, which shows airlines ranked by customer complaints, demonstrates that there is still considerable room for improvement.

Northwest has technologically leapfrogged its competitors in baggage handling through the introduction of automated baggage tag printers at its major ticket counters, and soon to be introduced at curbside for use by skycaps. This system, which automatically prints a baggage claim ticket to match the customers flight itinerary as stored in the reservations computer, eliminates agent mistakes in which the wrong city tag is attached to a passenger's luggage. In addition, the system prints the name of the customer on the baggage tag, aiding positive identification at the destination, and a bar code which ensures that the automated baggage handling system directs the bag to the proper flight. The system, now used for 40% of Northwest bags, has already reduced Northwest's lost baggage rate close to that of industry leaders, and should, when fully implemented, reduce lost luggage to a handful of bags per day. Exhibit VI-13 highlights Northwest's baggage mishandling performance ranking in the industry.

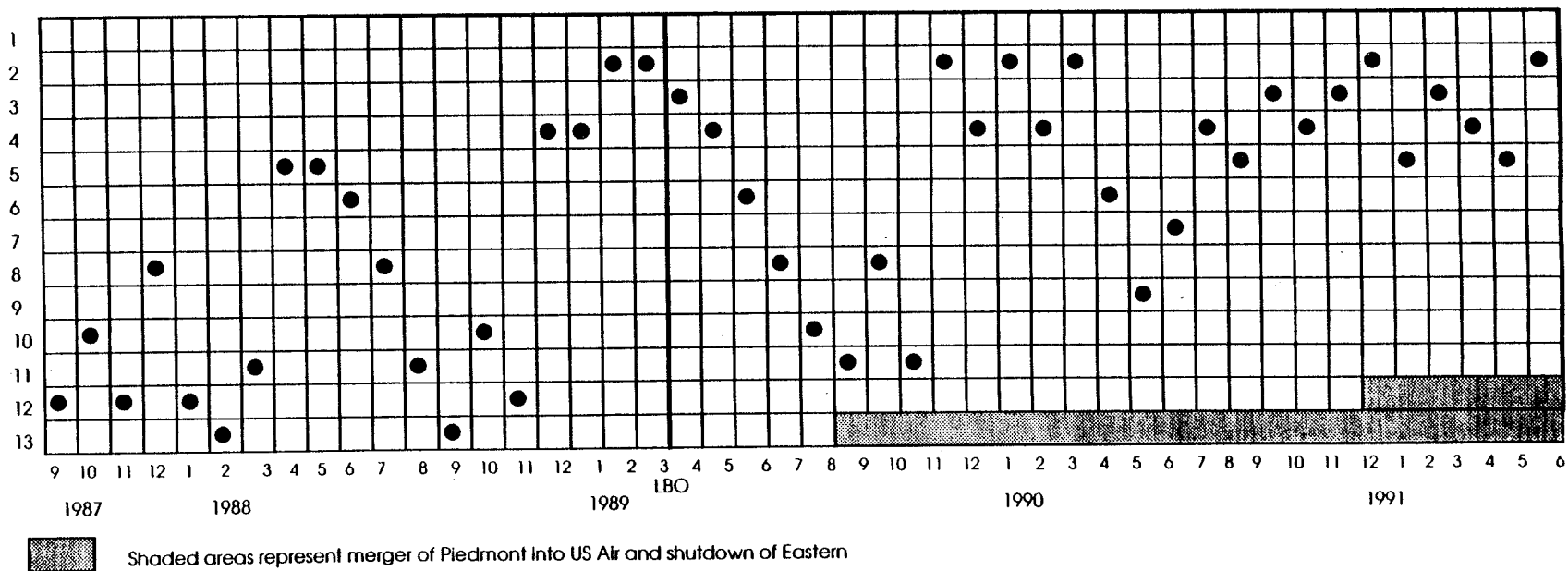
If Northwest's customer service initiatives are successful in differentiating the airline from its competitors and making Northwest a preferred carrier, yields and load factors should rise, providing a significant improvement in revenue.

### **Computer Reservation Systems**

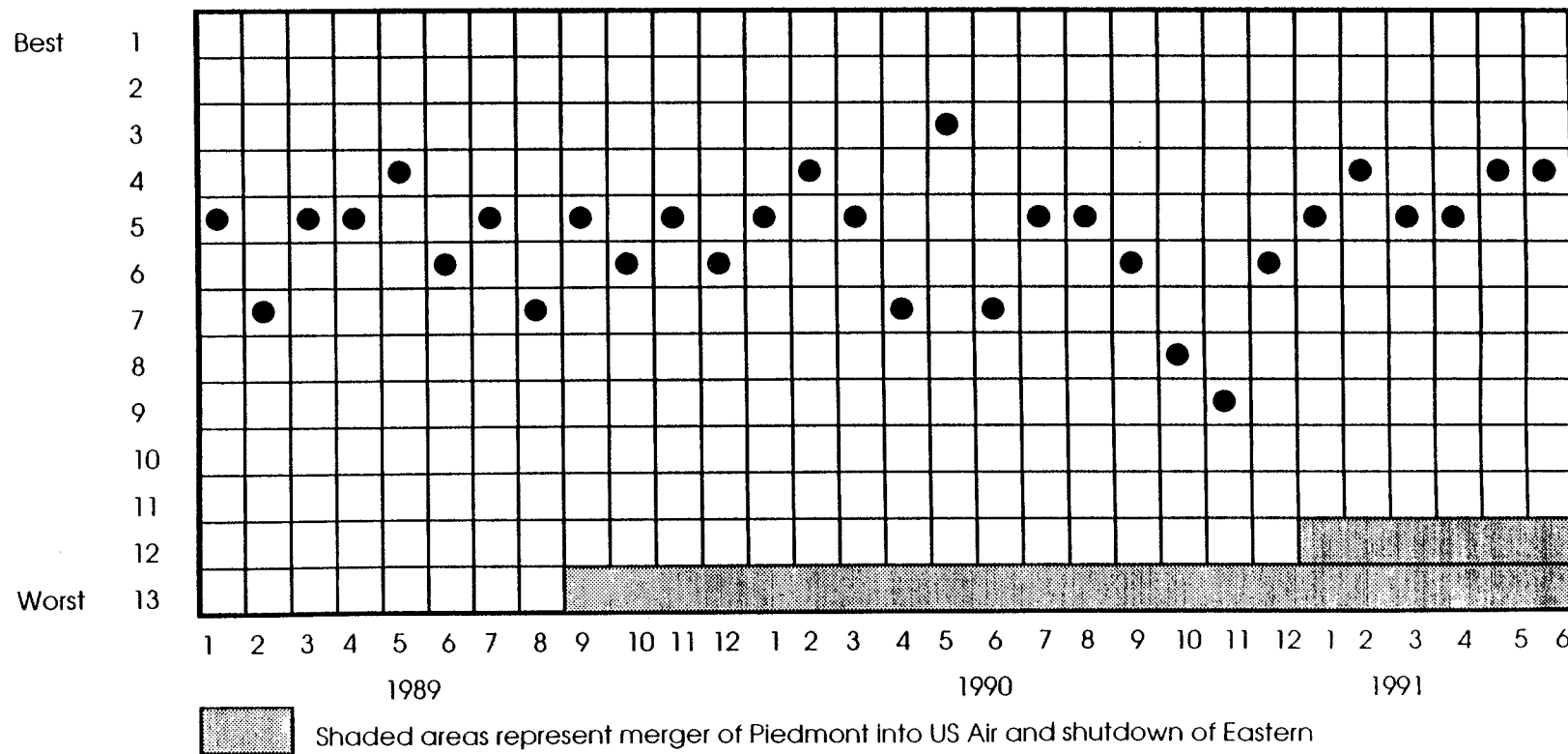
Northwest participates with Delta and TWA in Worldspan, a computer reservation system for travel agencies. While that system is currently third in both market share and in technological sophistication, behind American's SABRE and United's Apollo, its competitive position is improving both in market share and functionality. With technological and regulatory changes imminent which will allow "seamless availability", that is, an agent on one CRS can obtain "last seat availability" and on-line information from other CRS systems in the same manner as a user of their system, the relative advantage of one system over another is waning as a competitive tool. In addition, standard CRS contract periods have been reduced from 5 years to 3 years which allows travel agencies additional flexibility in switching CRS systems without paying liquidated damages to the CRS vendor for lost revenues. This is leveling the playing field in CRS marketing, and the importance of CRS as a strategic weapon is decreasing. (The "halo effect" of an agent booking a higher number of flights on the carrier supplying the CRS system he or she is working with still exists, but is waning somewhat as bias is removed from the systems).

From a financial perspective, CRS systems charge a fee for each airline segment (flight) booked through their system. Generally, these fees are approximately \$1.85 per segment. American Airlines is a net beneficiary of segment fees, receiving more than it pays out. Northwest is a net payer of segment fees, and is likely to be so for the near future.

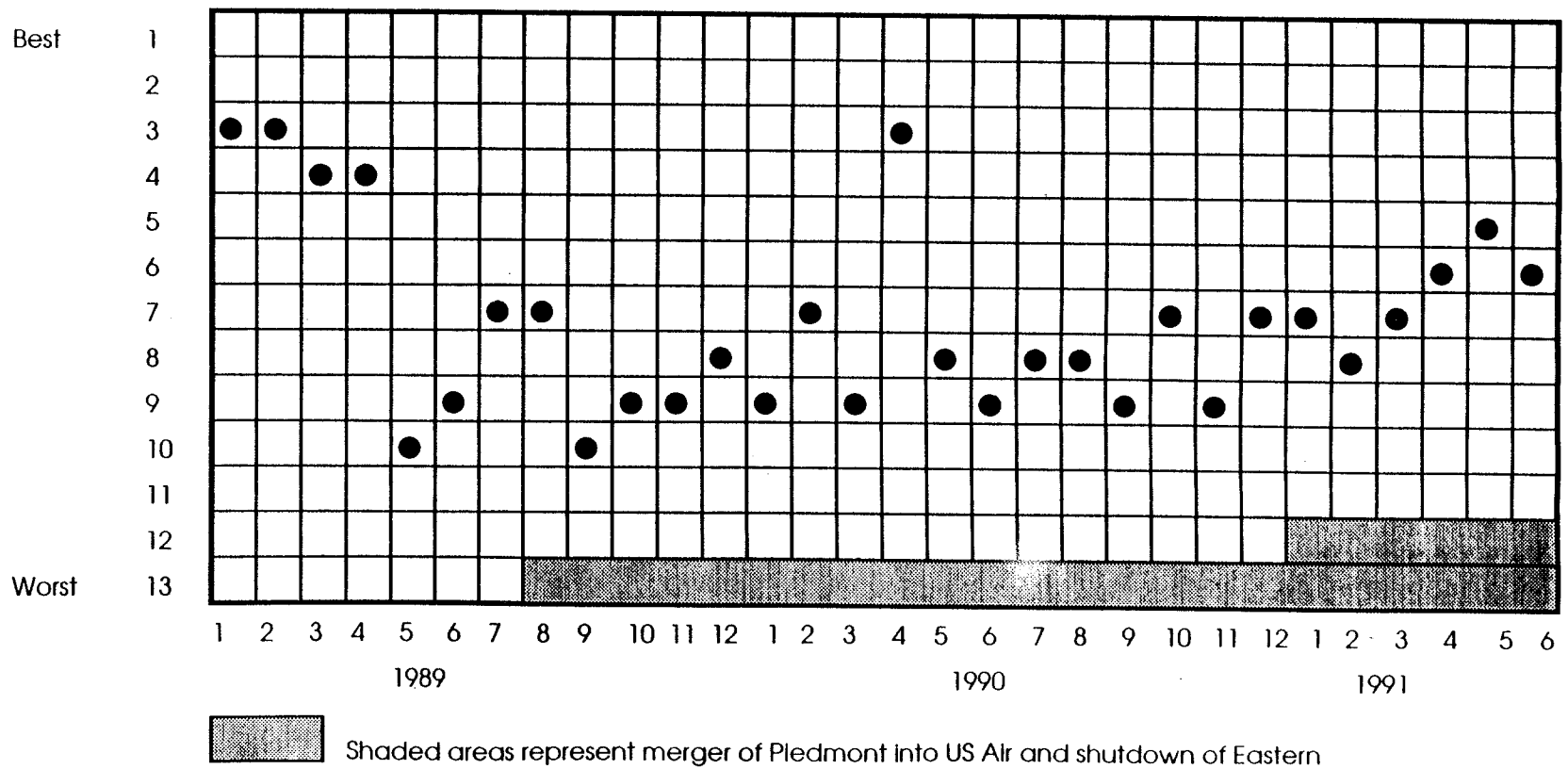
Exhibit VI-11  
Northwest's On-Time Performance Rankings Among 13 Major Carriers



# Exhibit VI-12 Northwest Customer Complaints Ranking Among 13 Major Carriers



# Exhibit- VI-13 Northwest Baggage Handling Ranking Among 13 Major Carriers



## **Marketing Directly to Corporations**

In an effort to build customer loyalty, many airlines are offering "corporate discounts" to key customers (and travel agencies). These special fares, unavailable to the general public, are called unpublished fares and are negotiated by the airline sales force and the corporate customer. Northwest's management, many of whom have experience in the hotel industry, are familiar with such pricing mechanisms and understand the dynamics of "corporate rates". These types of fares reduce yields, but build volume if corporations direct their travelers to the carriers on which they receive a discount. The difficulty with unpublished fares is that competitive actions are difficult to track, and difficult to price vis-a-vis competitors.

With a changes in the industry from marketing strictly to travel agencies to marketing to corporations — in conjunction with or separately from travel agents — the nature of airline marketing is changing. The degree to which Northwest can quickly adapt to the new market realities may significantly impact its profitability.

## **Northwest Today is at a Critical Juncture**

Northwest, being smaller and lacking the financial strength of its big 3 competitors, faces significant hurdles. Northwest management has recognized that growth is essential to match the scale economies of the big 3, and has negotiated several strategic expansions to its route structure. Additional acquisitions are being considered, some of a magnitude that might require a significant capital infusion. Management has firmly indicated that it would not attempt to grow without adequate capital resources on hand.

In repositioning itself against its competitors, Northwest faces perhaps its greatest challenge, changing its corporate culture. Historically, Northwest was known to be the most adversarial carrier with respect to labor relations, always being the first to take a strike. While management has identified a sound course of action, changing the attitudes and behavior of 45,000 employees is not an insignificant task.

Northwest Airlines management has outlined a strategy to turn around the carrier from its current position of neutral to negative customer preference (depending on market) to one of positive preference. The success or failure of this strategy will determine the ultimate survival and future financial condition of Northwest Airlines and its place within the U.S. and world airline industry.

## **VII. Northwest Airlines Future Condition**

The future condition of Northwest Airlines will depend on three major elements; the degree of success in implementing its strategies; the evolving competitive environment; and external events.

### **Northwest's Strategies**

Northwest's strategic plans call for growth and improved profitability over the next five years as a result of a set of key actions. These proposed actions deal with a number of key factors. Northwest's strategies center about creating customer preference for the carrier. A number of proprietary and innovative improvements are planned to differentiate the carrier from its competitors. Northwest plans to continue to grow as appropriate situations present themselves, and is examining alliances and acquisitions on a number of fronts. The press has reported that "Northwest has kicked every tire in the industry" and the recent acquisitions of routes from Hawaiian, gates and slots from the Eastern bankruptcy estate and the new agreements with America West underscore management attention to potentially profitable expansion opportunities.

Other important elements of Northwest's strategy include further strengthening of its strategic alliance with KLM Royal Dutch Airlines, a major shareholder, improving profitability through both yields and costs, and paying off the LBO debt by 1995.

Several key elements are essential in executing these strategies, including, but not limited to, the cooperation of organized labor as fundamental changes are made in airline operating procedures, the ability of management to work as a team to implement cultural change, access to resources to allow a significant investment in the planned improvements and the time required for the changes to take hold.

### **Labor Relations**

Northwest's relationship with its labor unions has dramatically improved since the LBO, moving away from confrontational relationships. While labor-management relations must remain somewhat adversarial with respect to economic issues, current access to senior management and frequent discussions between management and labor are unprecedented at Northwest and reflect a change in corporate culture at the most senior level.

In the last year, Northwest's labor unions have been quite constructive. The Air Line Pilots Association suggested a program of flight operations efficiency improvements which were implemented. They also offered to provide an equity infusion to the carrier, if needed, during the of Gulf War crisis. Such events are encouraging, and indicate a willingness on the part of organized labor to participate in quality improvement programs and to implement the changes in service needed to turnaround the airline's image and ensure Northwest's survival as one of the "big 4" airlines.

## **Managing the Cultural Change**

Changing the work habits of 45,000 employees is a massive undertaking. Using similar transformations at SAS and British Airways as models, Northwest is working from the top down and the bottom up to implement behavioral and attitudinal change. A key element in the process will be middle management, who supervise day-to-day activities. An outside observer commented to us during our due diligence that "the gap between senior management and the old, heavy handed Northwest middle managers we deal with is immense". Northwest's ability to close that gap rapidly will be essential to its short-term financial success and long-term strategic position.

## **Investment in the Airline**

Northwest plans to continue to invest heavily in customer service improvements for the airline. A customer service training program in the fourth quarter of 1991 will cost \$9 million. Exhibit VII-1 highlights additional planned expenditures in customer service. Northwest plans to continue to upgrade its products and services. When combined with deliveries of additional new aircraft, as outlined in the fleet plan, this should help Northwest attain its customer preference objectives.

**Exhibit VII-1**  
**Northwest Airlines Planned Expenditures for Customer Service Improvements**

\$ in millions

Area	1991	1992	1993	1994	1995	Total
Additional Employee Payroll	26	72	80	88	97	363
Training	5	19	19	17	17	77
Other	24	71	73	49	51	268
Total	55	162	172	154	165	708

## **Timing of Results will have a Major Financial Impact**

The speed with which Northwest can improve customer preference, improve yields, reduce costs and improve quality will have a significant impact on its financial condition. Northwest's current plans call for aggressive product and marketing actions which, within two years, are expected to provide a significant improvement in performance. We believe

that a portion of the gains is attainable within that time frame, however, implementing a complete change of culture in an airline could require from five to ten years or longer.

Northwest is making major investments in improving its financial, planning and yield management capabilities. The degree to which these improvements pay off in the short term will determine the carrier's success over the next three years and beyond.

### **Northwest's Resources and Operations are being Repositioned for Future Growth**

A number of aspects of Northwest's operations are undergoing major change, upgrading and improvement in efforts to improve the profitability and financial position of the airline. These include the new management team, customer preference and quality programs, a re-orientation of marketing and distribution, improvements in operations, and a top-level focus on changing the corporate culture.

#### **Management Team**

The Northwest management team is new and qualified, although inexperienced in the industry and in working with each other. We are impressed with the credentials and knowledge of many of the new managers hired by Northwest. While several are unfamiliar with the industry and face a significant learning curve, most have significant service industry experience. The nucleus for a strong team has been assembled.

#### **Customer Preference and Quality Programs**

Northwest management has set a goal to become the most preferred carrier in the industry. This would be a dramatic turnaround in image, and will require a concerted effort. Within the last decade major image changes have been successfully accomplished by 2 major carriers, Scandinavian Airlines System, and British Airways. Each of these programs dramatically improved the financial performance of the carriers. Northwest is modeling its program on the best elements of each as well as adding its own proprietary innovations.

Today, Northwest is generally preference neutral in the United States (while its major competitors are positive) and neutral to slightly negative in the service intensive Asian markets. We believe that when the improvements Northwest plans are consistently implemented throughout its worldwide system, the carrier will improve its preference among consumers. Major elements of that program focus on on-time performance, new aircraft interiors, new meal services, new entertainment systems, new high density market shuttle services, and other innovative programs.

#### **Marketing and Distribution Re-Orientation**

With the selection of new leadership for the marketing and corporate communications functions, Northwest's external image is being re-oriented. A new advertising campaign, and a new "product focused" marketing organization are being created. Plans to upgrade

the skills of the marketing staff and the creation of an agency advisory council with the travel agency community should help as the company focuses on meeting the needs of both the end customer and its distributors.

### **Improvements in Operations**

Northwest's operations appear to be fundamentally sound, but there are opportunities for improvements in productivity and efficiency. ALPA is working with management to suggest improvements in flight operations. Airframe and engine maintenance operations, while constrained, continue to meet the needs of the carrier. Ground service enhancements and training are planned to provide a higher level of consistency in passenger service.

### **Changing Corporate Culture**

Northwest plans to change culture through a simultaneous top-down and bottom-up approach, using senior management leadership and lowest level employee training to implement change. Management estimates range from 18 months to 36 months or more to successfully re-orient the corporate culture of Northwest Airlines to a customer-focused organization.

### **Northwest's Current 5 Year Plan**

Exhibit VII-2 highlights projected revenues and earnings at the Wings Holdings Inc. level for the next five years. For competitive disclosure reasons, we have not provided the detailed assumptions behind these plans. Our assessment of the projections is that while they are aggressive and attainable, they present a "best case" scenario. Sensitivity analyses of the plans show that should the carrier fail to achieve its goals in yield by 1995, significantly lower earnings would result.

#### **Exhibit VII-2 Wings Holdings Inc. Highlights of Five Year Financial Plan**

\$ millions	1991	1992	1993	1994	1995
Projected Income Statement					
Operating Revenues	7,784	8,980	10,388	12,507	14,795
Operating Expenses	7,212	7,994	8,948	10,442	12,115
Income Contribution	571	986	1,440	2,065	2,681
Ownership Costs	976	1,057	1,210	1,473	1,702
Other Income/Expense	19	(18)	(4)	23	49
Earnings Before Taxes	(386)	(89)	227	615	1,027
Net Earnings	(253)	(60)	140	385	647

### Exhibit VII-3 Bankers Trust Debt Repayment Plans

\$ millions

	1991	1992	1993	1994	1995
Interest Rate		8.60%	9.80%	11.30%	12.30%
Interest Expense		119	115	81	25
Total Payments		(94)	(310)	(613)	(410)
Current Portion	94	310	613	410	0
Long-Term Portion	1333	1023	410	0	0
Year End Balance	1427	1333	1023	410	0

Northwest's current financial structure includes a number of significant liabilities at the Wings Holdings Inc. level, including the LBO debt, for which repayment plans are shown in Exhibit VII-3. Should financial performance not meet expectations, the company may need to restructure some of its obligations over a longer term. Because the company has a high percentage of owned aircraft, selling assets may be an alternative.

Another key to Northwest's future financial success lies improving capabilities in yield management. A small change in yield, as discussed earlier in this report, has a significant impact on earnings. An 8% improvement in yields in 1990 would have yielded \$510 million in increased revenues. Modern yield management systems can provide incremental increases in revenues of between 10-20% over conventional pricing, depending on their level of sophistication and the ability to accurately track and implement customer, booking and load information. Northwest is making significant investments in upgrading their existing yield management function which, if successful, could provide a significant improvement in earnings.

#### Competitive Reactions will Impact Northwest's Financial Position

Although competitive with American, Delta and United in many ways, Northwest lacks their financial strength due to its high debt load. Recent acquisitions by the "big 3", future aircraft deliveries, expense for aging aircraft and other expenditures will tend to increase debt at the major carriers at a faster rate than at Northwest (at least through 1993 as Northwest has no substantive LBO payment due nor significant influx of aircraft in 1992) placing upward pressure on prices. Should the other major airlines be able to increase prices significantly, the impact of this movement would be positive for Northwest.

A price war on transcontinental routes was begun last week by TWA, impacting industry yields and forcing most carriers to match the \$198 round-trip fare levels. With several carriers operating in Chapter 11 and others in economic difficulty, the potential for price cuts being made to increase traffic is significant until the restructuring of these carriers is completed. American, Delta and United are in positions of financial strength to withstand prolonged price wars (albeit at losses) which could place the remaining carriers, including Northwest, in some jeopardy. While we believe it would be unlikely, such pricing, the use of unpublished fares with major corporations in key Northwest cities and other competitive actions, in combination and for a long period, could have a deleterious impact on Northwest's financial condition.

### **External Events**

Unforeseen events seem to play a regular role in the airline industry. Since 1978, we have had the second Arab fuel crisis, deregulation by the U.S. government, the 1980 economic recession, the 1981 Air Traffic Controllers strike, noise regulation, and within the last five years, the stock market's 1987 black Monday, growing airport and airways congestion, Lockerbie and terrorism, the Aloha incident and resultant aging aircraft regulations, and the recent combined fuel price run-up, recession and Gulf War. It seems that every few years an external event reshapes the environment in which airlines operate.

Events such as a fuel crisis are particularly hard hitting, in that they rapidly increase airline costs and have a significant downward impact on the economy. When airlines attempt to recover additional costs by belatedly increasing prices, the demand elasticity impact further reduces demand and creates a downward spiral. In the last 5 years, the number of external events, including terrorism, maintenance issues, congestion, bankruptcies and a war combined to create a turbulent environment for the industry. We do not foresee a diminishing of turbulence in the near future, as deregulation in Europe, the opening of the Soviet Union, continued tension in the Middle East and a slowing of the Japanese economy could all significantly impact elements of the industry. Northwest's weaker balance sheet is likely to place it in a more vulnerable position than its larger competitors.

### **Key Factors for Northwest's Future Financial Success**

Northwest, given its current highly leveraged financial position, may not receive a second chance if its improvement program falters. For example, the result of the Gulf War, during which all airlines cut expenditures, was to delay Northwest's improvement efforts by six months. Northwest's future will depend on its ability to change its image with the traveling public from an "also ran" carrier to one which passengers "prefer" to fly. If the industry remains relatively calm, the prospects for Northwest meeting its objectives are reasonable. If a deep and prolonged fare war breaks out, or a fuel crisis occurs, Northwest may need to sell assets, restructure some of this debt load, or raise equity capital.

Major change presents a more difficult financial challenge to a highly leveraged company than for a company with financial depth. Additional capital, some of which would be provided by the proposed transactions, would reduce financial risk, making the company's success more likely.

### **Risk Factors for Northwest**

The major risks facing Northwest Airlines today are, to a great degree, beyond the control of Northwest management - the economic conditions of the industry in which they must operate, and the actions of their industry competitors. A sustained, or "double-dip" recession, in which traffic failed to return to normal levels, would provide an additional financial drain to Northwest which would force the carrier to draw down additional debt, push back capital expenditures, or obtain additional equity capital in order to continue its improvement program.

1992 and 1993 will be critical for Northwest. During this period, Northwest has minimal debt repayment requirements, few new aircraft deliveries to finance, and a good economic environment could provide an opportunity to rebuild financial strength. If management's strategies are successful, Northwest should be in a reasonable competitive position within the industry.

### **Northwest's Long-Term Prospects and Ability to Make Lease Payments**

The proposed thirty year life of the bonds is too long a period over which to predict the financial future of an airline. Pan American World Airways was the premier international flag carrier of the United States in 1961, and in a strong financial position. By 1991, thirty years later, it was in bankruptcy and had sold the majority of its international route structure.

Even in a worst case scenario, it appears clear to us that major portions of Northwest Airlines are likely to survive. Northwest has considerable value in its Asian routes, which, in a worst case, could be sold to a competitor or competitors. The implications of a worst case scenario on the utilization of the facilities in Duluth and Hibbing are impossible to predict.

On balance, our judgement is that Northwest Airlines is likely to survive, and be able to make lease payments on the proposed facilities.

**Bond Finance Plan**

**DULUTH AIRCRAFT MAINTENANCE BASE  
NORTHWEST AIRLINES, INC.**

***REVISED DRAFT: March 17, 1992***

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| 4 | Breakdown of Proposed Construction Draw Schedule |
| 5 | Debt Service Tables                              |

*Section 1:*

## **PRINCIPLES OF BOND ISSUANCE**

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The State of Minnesota (the "State") has determined the following principles applicable to the sequence of bond issues:

1. The lease payments of Northwest Airlines, Inc. ("NAI") will be structured to approximately level annual installments for the term of the lease, with a final lease payment required to pay the debt service due on August 1, 2021.
2. With all \$250 million in bonds sold, the breakdown will be:
  - \$47.6 million of Duluth Backed Bonds
  - \$125 million of State Guaranteed Bonds
  - \$12.6 million of St. Louis County Backed Bonds
  - \$64.8 million of First Mortgage Bonds
3. The amortization of the State Guaranteed Bonds will be based on a 30 year amortization. The 20 year maximum maturity required by the State Constitution causes a balloon payment in the 20th year of each issue of State Guaranteed Bonds. A refunding of the State Guaranteed Bonds will be necessary prior to the December 1, 2010 and 2011 debt service transfers which include the balloon payments.
4. The St. Louis County Backed Bonds will be amortized by 2002. The First Mortgage Bonds, the State Guaranteed Bonds and the St. Louis County Backed Bonds each will have principal repayments each year.
5. While the First Mortgage Bonds are amortized over a 30 year period, it is expected that the maximum maturity will occur in an earlier year. We anticipate that a balloon maturity will occur in such year, if acceptable to the market.

Certain other assumptions guiding the bond sequence and the net proceeds available also flow from relevant market factors and factual aspects of the construction of the project.

- A. The proceeds needed for construction are assumed to be the amounts listed on the table provided by NAI attached to this section.
- B. Proceeds of the Duluth Backed Bonds will be expended on a ratio with the expenditure of proceeds State Guaranteed Bonds of 1:1.75.

C. Debt service reserve funds are included in issues as follows:

First Mortgage Bonds .....	10%	of	principal
State Guaranteed Bonds .....	Maximum amount		
	sufficient to pay debt		
	service as of any		
	December 1 through the		
	July 1 of the second		
	succeeding year.		
St. Louis County Backed Bonds .....	10%	of	principal
Duluth Backed Bonds .....	10%	of	principal

The debt service reserve fund for the State Guaranteed Bonds has been sized to provide the maximum amount of the December 1 transfer prior to retirement of the St. Louis County Backed Bonds. Interest earnings on the debt service reserve fund will be retained until the fund is equal to the maximum transfer payment on the State Guaranteed Bonds.

- D. The State Guaranteed Bonds are designed to be issued in series of taxable and tax exempt bonds. The taxable bonds are intended to provide only funds to fully fund the debt service reserve fund for State Guaranteed Bonds and pay the costs of issuance of the taxable State Guaranteed Bonds.
- E. All funds on hand were assumed to earn interest at rates between 4.00% to 5.50%, depending upon the average life of the investment. In general, interest earnings have been calculated on amounts held in the construction fund and the capitalized interest fund. For the Duluth Backed Bonds, interest has not been calculated on the capitalized interest fund.
- F. Capitalized interest for each series is based on the following: For all bonds except Duluth Backed Bonds interest is capitalized through October 1, 1994. For all Duluth Backed Bonds capitalized interest is equal to \$5,413,000, representing the position of the City of Duluth in negotiations with NAI. Any decrease in capitalized interest will result in a direct increase (net of anticipated investment earnings on capitalized interest) in funds available for the project.
- G. Issuance costs payable from bond proceeds are capped at 2% by the Internal Revenue Code.
- H. Bond insurance is expected to be obtained for the Duluth Backed Bonds to provide an investment grade rating. The insurance premium is estimated to be 0.75% of total debt service.

Calculations regarding the Duluth Backed Bonds are based upon figures supplied by the City and the senior managing underwriter for the Duluth Backed Bonds, Piper, Jaffray & Hopwood, Inc.

**STATE OF MINNESOTA**  
**Duluth Facility**

**Schedule of Disbursements by Month**

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<u>Month</u>	<u>Estimated Disbursement</u>
<u>1992</u>	
May	-0-
June	\$ 500,000
July	2,000,000 (1)
August	2,000,000
September	2,000,000
October	4,195,000 (2)
November	4,195,000
December	7,695,000
<u>1993</u>	
January	10,695,000
February	12,195,000
March	12,695,000
April	11,695,000
May	11,195,000
June	10,195,000
July	10,195,000
August	11,945,000
September	11,445,000
October	10,445,000
November	8,445,000
December	6,945,000
<u>1994</u>	
January	6,945,000
February	6,145,000
March	5,445,000
April	4,695,000
May	4,195,000
June	3,695,000
July	3,445,000
August	3,195,000 (3)
September	1,015,000
October	<u>500,000</u>
Total	<u>\$190,000,000</u>

- (1) Design start.
- (2) Construction start.
- (3) Construction complete.

**STATE OF MINNESOTA  
Duluth Facility  
(Revised March 14, 1992)**

**Bond Issuance Sequence**

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<u>Participant</u>	<u>Par Amount of Bonds</u>	<u>Project Proceeds</u>
Year: 1992		
City of Duluth	\$ 47,600,000	\$ 37,918,061
State of Minnesota (1)	<u>60,475,000</u>	<u>42,601,412</u>
	<u>\$108,075,000</u>	<u>\$ 80,519,473</u>
Year: 1993		
St. Louis County	\$ 12,600,000	\$ 10,031,250
State of Minnesota	64,525,000	53,434,280
Northwest Airlines	<u>64,800,000</u>	<u>51,255,000</u>
	<u>\$141,925,000</u>	<u>\$114,720,530</u>
Grand Total	<u>\$250,000,000</u>	<u>\$195,240,003</u>

(1) Includes taxable issue of \$5,000,000 for Debt Service Reserve Fund requirements.

STATE OF MINNESOTA  
 PROJECT: DULUTH FACILITY  
 PRELIMINARY SOURCES AND USES OF FUNDS

<u>SOURCES OF FUNDS:</u>	STATE OF MINNESOTA	NORTHWEST AIRLINES	ST. LOUIS COUNTY	CITY OF DULUTH	<u>TOTAL</u>
PAR AMOUNT OF BONDS	\$125,000,000	\$64,800,000	\$12,600,000	\$47,600,000	\$250,000,000
INVESTMENT EARNINGS:					
CONSTRUCTION FUND	\$2,245,693	\$1,256,928	\$43,331	\$1,488,538	\$5,034,490
CAPITALIZED INTEREST FUND	\$1,930,508	\$589,341	\$142,488	\$0	\$2,662,336
<b>TOTAL SOURCES OF FUNDS</b>	<b><u>\$129,176,201</u></b>	<b><u>\$66,646,269</u></b>	<b><u>\$12,785,818</u></b>	<b><u>\$49,088,538</u></b>	<b><u>\$257,696,826</u></b>
 <u>USES OF FUNDS:</u>					
MAINTENANCE FACILITY PROJECT	\$96,035,692	\$51,255,000	\$10,031,250	\$37,918,061	\$195,240,003
CAPITALIZED INTEREST	\$16,967,110	\$7,614,000	\$1,239,409	\$5,413,000	\$31,233,519
RESERVE FUND	\$13,665,910	\$6,480,000	\$1,260,000	\$3,875,350	\$25,281,260
COST OF ISSUANCE (2% of PAR)	\$2,500,000	\$1,296,000	\$252,000	\$952,000	\$5,000,000
BOND INSURANCE (0.75%)	\$0	\$0	\$0	\$926,191	\$926,191
MISCELLANEOUS (i.e. rounding)	\$7,489	\$1,269	\$3,160	\$3,936	\$15,853
<b>TOTAL USES OF FUNDS</b>	<b><u>\$129,176,201</u></b>	<b><u>\$66,646,269</u></b>	<b><u>\$12,785,818</u></b>	<b><u>\$49,088,538</u></b>	<b><u>\$257,696,826</u></b>

STATE OF MINNESOTA  
DULUTH FACILITY  
BREAKDOWN OF PROPOSED CONSTRUCTION DRAW SCHEDULE

MONTH #	DATE	TOTAL CONSTRUCTION DRAW SCHEDULE	CITY OF DULUTH	STATE OF MINNESOTA	ST. LOUIS COUNTY	NORTHWEST AIRLINES	CUMULATIVE DRAW
1	01-May-92	0	0	0	0	0	0
2	01-Jun-92	500,000	181,800	318,200	0	0	500,000
3	01-Jul-92	2,000,000	727,200	1,272,800	0	0	2,500,000
4	01-Aug-92	2,000,000	727,200	1,272,800	0	0	4,500,000
5	01-Sep-92	2,000,000	727,200	1,272,800	0	0	6,500,000
6	01-Oct-92	4,195,000	1,525,302	2,669,698	0	0	10,695,000
7	01-Nov-92	4,195,000	1,525,302	2,669,698	0	0	14,890,000
8	01-Dec-92	7,695,000	2,797,902	4,897,098	0	0	22,585,000
9	01-Jan-93	10,695,000	3,888,702	6,806,298	0	0	33,280,000
10	01-Feb-93	12,195,000	4,434,102	7,760,898	0	0	45,475,000
11	01-Mar-93	12,695,000	4,615,902	8,079,098	0	0	58,170,000
12	01-Apr-93	11,695,000	3,189,227	5,582,024	2,923,750	0	69,865,000
13	01-May-93	11,195,000	3,052,877	5,343,374	2,798,750	0	81,060,000
14	01-Jun-93	10,195,000	2,780,177	4,866,074	2,548,750	0	91,255,000
15	01-Jul-93	10,195,000	3,066,966	5,368,034	1,760,000	0	101,450,000
16	01-Aug-93	11,945,000	4,343,202	7,601,798	0	0	113,395,000
17	01-Sep-93	11,445,000	335,000	11,110,000	0	0	124,840,000
18	01-Oct-93	10,445,000	0	10,445,000	0	0	135,285,000
19	01-Nov-93	8,445,000	0	8,445,000	0	0	143,730,000
20	01-Dec-93	6,945,000	0	255,000	0	6,690,000	150,675,000
21	01-Jan-94	6,945,000	0	0	0	6,945,000	157,620,000
22	01-Feb-94	6,195,000	0	0	0	6,195,000	163,815,000
23	01-Mar-94	5,445,000	0	0	0	5,445,000	169,260,000
24	01-Apr-94	4,695,000	0	0	0	4,695,000	173,955,000
25	01-May-94	4,195,000	0	0	0	4,195,000	178,150,000
26	01-Jun-94	3,695,000	0	0	0	3,695,000	181,845,000
27	01-Jul-94	3,445,000	0	0	0	3,445,000	185,290,000
28	01-Aug-94	3,195,000	0	0	0	3,195,000	188,485,000
29	01-Sep-94	1,015,000	0	0	0	1,015,000	189,500,000
30	01-Oct-94	500,000	0	0	0	500,000	190,000,000
		190,000,000	37,918,060	96,035,691	10,031,250	46,015,000	

STATE OF MINNESOTA  
\$202,400,000 STATE REVENUE BONDS, SERIES 1992-1993  
(DULUTH FACILITY - ALL PARTICIPANTS)

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DEBT SERVICE SCHEDULE

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DATE	PRINCIPAL	INTEREST	PERIOD TOTAL	FISCAL TOTAL
2/ 1/93		3,313,614.58	3,313,614.58	
8/ 1/93		3,824,985.42	3,824,985.42	7,138,600.00
2/ 1/94		7,281,393.75	7,281,393.75	
8/ 1/94		8,550,393.75	8,550,393.75	15,831,787.50
2/ 1/95		8,550,393.75	8,550,393.75	
8/ 1/95	2,350,000.00	8,550,393.75	10,900,393.75	19,450,787.50
2/ 1/96		8,469,381.25	8,469,381.25	
8/ 1/96	2,510,000.00	8,469,381.25	10,979,381.25	19,448,762.50
2/ 1/97		8,379,686.25	8,379,686.25	
8/ 1/97	2,690,000.00	8,379,686.25	11,069,686.25	19,449,372.50
2/ 1/98		8,281,081.25	8,281,081.25	
8/ 1/98	2,885,000.00	8,281,081.25	11,166,081.25	19,447,162.50
2/ 1/99		8,173,243.75	8,173,243.75	
8/ 1/99	3,105,000.00	8,173,243.75	11,278,243.75	19,451,487.50
2/ 1/ 0		8,054,886.25	8,054,886.25	
8/ 1/ 0	3,340,000.00	8,054,886.25	11,394,886.25	19,449,772.50
2/ 1/ 1		7,925,490.00	7,925,490.00	
8/ 1/ 1	3,595,000.00	7,925,490.00	11,520,490.00	19,445,980.00
2/ 1/ 2		7,783,940.00	7,783,940.00	
8/ 1/ 2	3,885,000.00	7,783,940.00	11,668,940.00	19,452,880.00
2/ 1/ 3		7,628,470.00	7,628,470.00	
8/ 1/ 3	4,190,000.00	7,628,470.00	11,818,470.00	19,446,940.00
2/ 1/ 4		7,468,715.00	7,468,715.00	
8/ 1/ 4	4,510,000.00	7,468,715.00	11,978,715.00	19,447,430.00
2/ 1/ 5		7,293,932.50	7,293,932.50	
8/ 1/ 5	4,860,000.00	7,293,932.50	12,153,932.50	19,447,865.00
2/ 1/ 6		7,102,656.25	7,102,656.25	
8/ 1/ 6	5,245,000.00	7,102,656.25	12,347,656.25	19,450,312.50
2/ 1/ 7		6,892,993.75	6,892,993.75	
8/ 1/ 7	5,665,000.00	6,892,993.75	12,557,993.75	19,450,987.50
2/ 1/ 8		6,663,146.25	6,663,146.25	
8/ 1/ 8	6,120,000.00	6,663,146.25	12,783,146.25	19,446,292.50
2/ 1/ 9		6,412,392.50	6,412,392.50	
8/ 1/ 9	6,625,000.00	6,412,392.50	13,037,392.50	19,449,785.00
2/ 1/10		6,138,240.00	6,138,240.00	
8/ 1/10	7,175,000.00	6,138,240.00	13,313,240.00	19,451,480.00
2/ 1/11		5,838,391.25	5,838,391.25	
8/ 1/11	7,770,000.00	5,838,391.25	13,608,391.25	19,446,782.50
2/ 1/12		5,511,338.75	5,511,338.75	
8/ 1/12	8,430,000.00	5,511,338.75	13,941,338.75	19,452,677.50
2/ 1/13		5,153,808.75	5,153,808.75	
8/ 1/13	9,145,000.00	5,153,808.75	14,298,808.75	19,452,617.50
2/ 1/14		4,762,250.00	4,762,250.00	
8/ 1/14	9,925,000.00	4,762,250.00	14,687,250.00	19,449,500.00
2/ 1/15		4,335,040.00	4,335,040.00	
8/ 1/15	10,780,000.00	4,335,040.00	15,115,040.00	19,450,080.00
2/ 1/16		3,868,608.75	3,868,608.75	
8/ 1/16	11,715,000.00	3,868,608.75	15,583,608.75	19,452,217.50
2/ 1/17		3,358,946.25	3,358,946.25	
8/ 1/17	12,735,000.00	3,358,946.25	16,093,946.25	19,452,892.50
2/ 1/18		2,801,876.25	2,801,876.25	
8/ 1/18	13,845,000.00	2,801,876.25	16,646,876.25	19,448,752.50
2/ 1/19		2,192,947.50	2,192,947.50	
8/ 1/19	15,060,000.00	2,192,947.50	17,252,947.50	19,445,895.00
2/ 1/20		1,527,007.50	1,527,007.50	
8/ 1/20	16,395,000.00	1,527,007.50	17,922,007.50	19,449,015.00
2/ 1/21		798,060.00	798,060.00	
8/ 1/21	17,850,000.00	798,060.00	18,648,060.00	19,446,120.00

Prepared by Evensen Dodge, Inc.

RUNDATE: 03-17-1992 @ 10:22:27      FILENAME:      KEY:

STATE OF MINNESOTA  
\$202,400,000 STATE REVENUE BONDS, SERIES 1992-1993  
(DULUTH FACILITY - ALL PARTICIPANTS)

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DEBT SERVICE SCHEDULE

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DATE	PRINCIPAL	INTEREST	PERIOD TOTAL	FISCAL TOTAL
-----	-----	-----	-----	-----
	202,400,000.00	345,704,235.00	548,104,235.00	
ACCRUED				
	202,400,000.00	345,704,235.00	548,104,235.00	
	=====	=====	=====	

Dated 4/ 1/92 with Delivery of 4/ 1/92

Prepared by Evensen Dodge, Inc.

RUNDATE: 03-17-1992 @ 10:22:29      FILENAME:      KEY:

STATE OF MINNESOTA  
\$125,000,000 STATE REVENUE BONDS, SERIES 1992-1993  
(DULUTH FACILITY - STATE)

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DEBT SERVICE SCHEDULE

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DATE	PRINCIPAL	INTEREST	PERIOD TOTAL	FISCAL TOTAL
2/ 1/93		3,313,614.58	3,313,614.58	
8/ 1/93		3,549,561.25	3,549,561.25	6,863,175.83
2/ 1/94		4,330,257.50	4,330,257.50	
8/ 1/94		4,330,257.50	4,330,257.50	8,660,515.00
2/ 1/95		4,330,257.50	4,330,257.50	
8/ 1/95	695,000.00	4,330,257.50	5,025,257.50	9,355,515.00
2/ 1/96		4,310,395.00	4,310,395.00	
8/ 1/96	730,000.00	4,310,395.00	5,040,395.00	9,350,790.00
2/ 1/97		4,288,562.50	4,288,562.50	
8/ 1/97	775,000.00	4,288,562.50	5,063,562.50	9,352,125.00
2/ 1/98		4,264,612.50	4,264,612.50	
8/ 1/98	825,000.00	4,264,612.50	5,089,612.50	9,354,225.00
2/ 1/99		4,238,293.75	4,238,293.75	
8/ 1/99	875,000.00	4,238,293.75	5,113,293.75	9,351,587.50
2/ 1/ 0		4,209,620.00	4,209,620.00	
8/ 1/ 0	935,000.00	4,209,620.00	5,144,620.00	9,354,240.00
2/ 1/ 1		4,178,340.00	4,178,340.00	
8/ 1/ 1	995,000.00	4,178,340.00	5,173,340.00	9,351,680.00
2/ 1/ 2		4,144,371.25	4,144,371.25	
8/ 1/ 2	1,065,000.00	4,144,371.25	5,209,371.25	9,353,742.50
2/ 1/ 3		4,107,288.75	4,107,288.75	
8/ 1/ 3	3,220,000.00	4,107,288.75	7,327,288.75	11,434,577.50
2/ 1/ 4		4,004,521.25	4,004,521.25	
8/ 1/ 4	3,425,000.00	4,004,521.25	7,429,521.25	11,434,042.50
2/ 1/ 5		3,893,482.50	3,893,482.50	
8/ 1/ 5	3,650,000.00	3,893,482.50	7,543,482.50	11,436,965.00
2/ 1/ 6		3,773,293.75	3,773,293.75	
8/ 1/ 6	3,890,000.00	3,773,293.75	7,663,293.75	11,436,587.50
2/ 1/ 7		3,643,237.50	3,643,237.50	
8/ 1/ 7	4,150,000.00	3,643,237.50	7,793,237.50	11,436,475.00
2/ 1/ 8		3,502,396.25	3,502,396.25	
8/ 1/ 8	4,430,000.00	3,502,396.25	7,932,396.25	11,434,792.50
2/ 1/ 9		3,350,930.00	3,350,930.00	
8/ 1/ 9	4,735,000.00	3,350,930.00	8,085,930.00	11,436,860.00
2/ 1/10		3,187,815.00	3,187,815.00	
8/ 1/10	5,060,000.00	3,187,815.00	8,247,815.00	11,435,630.00
2/ 1/11		3,012,222.50	3,012,222.50	
8/ 1/11	5,410,000.00	3,012,222.50	8,422,222.50	11,434,445.00
2/ 1/12		2,823,820.00	2,823,820.00	
8/ 1/12	5,790,000.00	2,823,820.00	8,613,820.00	11,437,640.00
2/ 1/13		2,621,390.00	2,621,390.00	
8/ 1/13	6,195,000.00	2,621,390.00	8,816,390.00	11,437,780.00
2/ 1/14		2,403,143.75	2,403,143.75	
8/ 1/14	6,630,000.00	2,403,143.75	9,033,143.75	11,436,287.50
2/ 1/15		2,169,515.00	2,169,515.00	
8/ 1/15	7,100,000.00	2,169,515.00	9,269,515.00	11,439,030.00
2/ 1/16		1,919,283.75	1,919,283.75	
8/ 1/16	7,600,000.00	1,919,283.75	9,519,283.75	11,438,567.50
2/ 1/17		1,651,377.50	1,651,377.50	
8/ 1/17	8,135,000.00	1,651,377.50	9,786,377.50	11,437,755.00
2/ 1/18		1,364,557.50	1,364,557.50	
8/ 1/18	8,705,000.00	1,364,557.50	10,069,557.50	11,434,115.00
2/ 1/19		1,057,603.75	1,057,603.75	
8/ 1/19	9,320,000.00	1,057,603.75	10,377,603.75	11,435,207.50
2/ 1/20		728,888.75	728,888.75	
8/ 1/20	9,980,000.00	728,888.75	10,708,888.75	11,437,777.50
2/ 1/21		376,822.50	376,822.50	
8/ 1/21	10,680,000.00	376,822.50	11,056,822.50	11,433,645.00

Prepared by Evensen Dodge, Inc.

RUNDATE: 03-17-1992 @ 10:14:19      FILENAME:      KEY:

STATE OF MINNESOTA  
\$125,000,000 STATE REVENUE BONDS, SERIES 1992-1993  
(DULUTH FACILITY - STATE)

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DEBT SERVICE SCHEDULE

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DATE	PRINCIPAL	INTEREST	PERIOD TOTAL	FISCAL TOTAL
-----	-----	-----	-----	-----
	125,000,000.00	182,635,775.83	307,635,775.83	
ACCRUED				
	125,000,000.00	182,635,775.83	307,635,775.83	
	=====	=====	=====	

Dated 4/ 1/92 with Delivery of 4/ 1/92

Prepared by Evensen Dodge, Inc.

RUNDATE: 03-17-1992 @ 10:14:20      FILENAME:      KEY:

STATE OF MINNESOTA  
\$64,800,000 STATE REVENUE BONDS, SERIES 1993  
(DULUTH FACILITY - NORTHWEST AIRLINES)

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DEBT SERVICE SCHEDULE

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DATE	PRINCIPAL	INTEREST	PERIOD TOTAL	FISCAL TOTAL
2/ 1/94		2,538,000.00	2,538,000.00	
8/ 1/94		3,807,000.00	3,807,000.00	6,345,000.00
2/ 1/95		3,807,000.00	3,807,000.00	
8/ 1/95	400,000.00	3,807,000.00	4,207,000.00	8,014,000.00
2/ 1/96		3,783,500.00	3,783,500.00	
8/ 1/96	445,000.00	3,783,500.00	4,228,500.00	8,012,000.00
2/ 1/97		3,757,356.25	3,757,356.25	
8/ 1/97	500,000.00	3,757,356.25	4,257,356.25	8,014,712.50
2/ 1/98		3,727,981.25	3,727,981.25	
8/ 1/98	555,000.00	3,727,981.25	4,282,981.25	8,010,962.50
2/ 1/99		3,695,375.00	3,695,375.00	
8/ 1/99	625,000.00	3,695,375.00	4,320,375.00	8,015,750.00
2/ 1/ 0		3,658,656.25	3,658,656.25	
8/ 1/ 0	695,000.00	3,658,656.25	4,353,656.25	8,012,312.50
2/ 1/ 1		3,617,825.00	3,617,825.00	
8/ 1/ 1	775,000.00	3,617,825.00	4,392,825.00	8,010,650.00
2/ 1/ 2		3,572,293.75	3,572,293.75	
8/ 1/ 2	870,000.00	3,572,293.75	4,442,293.75	8,014,587.50
2/ 1/ 3		3,521,181.25	3,521,181.25	
8/ 1/ 3	970,000.00	3,521,181.25	4,491,181.25	8,012,362.50
2/ 1/ 4		3,464,193.75	3,464,193.75	
8/ 1/ 4	1,085,000.00	3,464,193.75	4,549,193.75	8,013,387.50
2/ 1/ 5		3,400,450.00	3,400,450.00	
8/ 1/ 5	1,210,000.00	3,400,450.00	4,610,450.00	8,010,900.00
2/ 1/ 6		3,329,362.50	3,329,362.50	
8/ 1/ 6	1,355,000.00	3,329,362.50	4,684,362.50	8,013,725.00
2/ 1/ 7		3,249,756.25	3,249,756.25	
8/ 1/ 7	1,515,000.00	3,249,756.25	4,764,756.25	8,014,512.50
2/ 1/ 8		3,160,750.00	3,160,750.00	
8/ 1/ 8	1,690,000.00	3,160,750.00	4,850,750.00	8,011,500.00
2/ 1/ 9		3,061,462.50	3,061,462.50	
8/ 1/ 9	1,890,000.00	3,061,462.50	4,951,462.50	8,012,925.00
2/ 1/10		2,950,425.00	2,950,425.00	
8/ 1/10	2,115,000.00	2,950,425.00	5,065,425.00	8,015,850.00
2/ 1/11		2,826,168.75	2,826,168.75	
8/ 1/11	2,360,000.00	2,826,168.75	5,186,168.75	8,012,337.50
2/ 1/12		2,687,518.75	2,687,518.75	
8/ 1/12	2,640,000.00	2,687,518.75	5,327,518.75	8,015,037.50
2/ 1/13		2,532,418.75	2,532,418.75	
8/ 1/13	2,950,000.00	2,532,418.75	5,482,418.75	8,014,837.50
2/ 1/14		2,359,106.25	2,359,106.25	
8/ 1/14	3,295,000.00	2,359,106.25	5,654,106.25	8,013,212.50
2/ 1/15		2,165,525.00	2,165,525.00	
8/ 1/15	3,680,000.00	2,165,525.00	5,845,525.00	8,011,050.00
2/ 1/16		1,949,325.00	1,949,325.00	
8/ 1/16	4,115,000.00	1,949,325.00	6,064,325.00	8,013,650.00
2/ 1/17		1,707,568.75	1,707,568.75	
8/ 1/17	4,600,000.00	1,707,568.75	6,307,568.75	8,015,137.50
2/ 1/18		1,437,318.75	1,437,318.75	
8/ 1/18	5,140,000.00	1,437,318.75	6,577,318.75	8,014,637.50
2/ 1/19		1,135,343.75	1,135,343.75	
8/ 1/19	5,740,000.00	1,135,343.75	6,875,343.75	8,010,687.50
2/ 1/20		798,118.75	798,118.75	
8/ 1/20	6,415,000.00	798,118.75	7,213,118.75	8,011,237.50
2/ 1/21		421,237.50	421,237.50	
8/ 1/21	7,170,000.00	421,237.50	7,591,237.50	8,012,475.00

Prepared by Evensen Dodge, Inc.

RUNDATE: 03-17-1992 @ 10:21:26      FILENAME: DUL-A      KEY: NWA

STATE OF MINNESOTA  
\$64,800,000 STATE REVENUE BONDS, SERIES 1993  
(DULUTH FACILITY - NORTHWEST AIRLINES)

=====

DEBT SERVICE SCHEDULE

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DATE	PRINCIPAL	INTEREST	PERIOD TOTAL	FISCAL TOTAL
-----	-----	-----	-----	-----
	64,800,000.00	157,899,437.50	222,699,437.50	
ACCRUED				
	64,800,000.00	157,899,437.50	222,699,437.50	
	=====	=====	=====	

Dated 10/ 1/93 with Delivery of 10/ 1/93

Prepared by Evensen Dodge, Inc.

RUNDATE: 03-17-1992 @ 10:21:27      FILENAME: DUL-A      KEY: NWA

STATE OF MINNESOTA  
\$12,600,000 STATE REVENUE BONDS, SERIES 1993  
(DULUTH FACILITY - ST. LOUIS COUNTY)

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DEBT SERVICE SCHEDULE

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DATE	PRINCIPAL	INTEREST	PERIOD TOTAL	FISCAL TOTAL
8/ 1/93		275,424.17	275,424.17	275,424.17
2/ 1/94		413,136.25	413,136.25	
8/ 1/94		413,136.25	413,136.25	826,272.50
2/ 1/95		413,136.25	413,136.25	
8/ 1/95	1,255,000.00	413,136.25	1,668,136.25	2,081,272.50
2/ 1/96		375,486.25	375,486.25	
8/ 1/96	1,335,000.00	375,486.25	1,710,486.25	2,085,972.50
2/ 1/97		333,767.50	333,767.50	
8/ 1/97	1,415,000.00	333,767.50	1,748,767.50	2,082,535.00
2/ 1/98		288,487.50	288,487.50	
8/ 1/98	1,505,000.00	288,487.50	1,793,487.50	2,081,975.00
2/ 1/99		239,575.00	239,575.00	
8/ 1/99	1,605,000.00	239,575.00	1,844,575.00	2,084,150.00
2/ 1/ 0		186,610.00	186,610.00	
8/ 1/ 0	1,710,000.00	186,610.00	1,896,610.00	2,083,220.00
2/ 1/ 1		129,325.00	129,325.00	
8/ 1/ 1	1,825,000.00	129,325.00	1,954,325.00	2,083,650.00
2/ 1/ 2		67,275.00	67,275.00	
8/ 1/ 2	1,950,000.00	67,275.00	2,017,275.00	2,084,550.00
-----				
	12,600,000.00	5,169,021.67	17,769,021.67	
ACCRUED				
	12,600,000.00	5,169,021.67	17,769,021.67	
=====				

Dated 4/ 1/93 with Delivery of 4/ 1/93

Prepared by Evensen Dodge, Inc.

RUNDATE: 03-17-1992 @ 07:56:37      FILENAME: DUL-A      KEY: SLC-92A

**Bond Finance Plan**

**HIBBING ENGINE REPAIR FACILITY  
NORTHWEST AIRLINES, INC.**

***REVISED DRAFT: March 17, 1992***

## Table of Contents

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| 1 | Principles of Bond Issuance        |
| 2 | Bond Issuance Sequence             |
| 3 | Combined Sources and Uses of Funds |
| 4 | Debt Service Tables                |

*Section 1:*

## **PRINCIPLES OF BOND ISSUANCE**

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The State of Minnesota (the "State") has determined the following principles applicable to the sequence of bond issues:

1. The lease payments of Northwest Airlines, Inc. ("NAI") will be structured to approximately level annual installments for the term of the lease, with a final lease payment required to pay the debt service due on August 1, 2021.
2. The construction costs will be funded up to the level of available bond proceeds. Additional construction funds required will be provided from additional bond financing, if feasible, cash contributions of NAI, the grant from the Iron Range Resources and Rehabilitation Board, and any available governmental incentive funds.
3. With all \$100 million in bonds sold, the breakdown will be:
  - \$50 million of State Guaranteed Bonds
  - \$15 million of St. Louis County Backed Bonds
  - \$35 million of First Mortgage Bonds
4. The First Mortgage Bonds, the State Guaranteed Bonds and the St. Louis County Backed Bonds each will have principal repayments each year to the extent possible within a level payment structure.
5. The amortization of the State Guaranteed Bonds will be based on a 30 year amortization. The 20 year maximum maturity required by the State Constitution causes a balloon payment in the 20th year. A refunding of the State Guaranteed Bonds will be necessary prior to the December 1, 2011 debt service transfer which includes the balloon payment.
6. The St. Louis County Backed Bonds will be amortized by 2008 in order to allow overall level lease payments.

Certain other assumptions guiding the bond sequence and the net proceeds available also flow from relevant market factors and factual aspects of the construction of the project.

- A. While the First Mortgage Bonds are amortized over a period ending August 1, 2021, it is expected that the maximum maturity may occur in some earlier year. In that event, we anticipate that a balloon maturity will occur in such year.
- B. The construction funds will be used in equal monthly installments over an 18 month period.
- C. Debt service reserve funds are included in issues as follows:

First Mortgage Bonds .....	Maximum annual debt service
State Guaranteed Bonds .....	Maximum amount sufficient to pay debt service, as of any December 1 through the July 1 of the second succeeding year
St. Louis County Backed Bonds .....	Maximum annual debt service
- D. All funds on hand were assumed to earn interest at rates between 5.50% to 6.50% depending upon the average life of the investment. In general, interest earnings have been calculated on amounts held in the construction fund and the capitalized interest fund.
- E. For the State Guaranteed Bonds and the St. Louis County Backed Bonds interest is capitalized through August 1, 1994. For the First Mortgage Bonds interest is capitalized through October 1, 1994.
- F. Issuance costs payable from bond proceeds are capped at 2%.

**STATE OF MINNESOTA**  
**Hibbing Facility**  
**Bond Issuance Sequence**

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<u>Participant</u>	<u>Par Amount of Bonds</u>	<u>Project Proceeds</u>
Year: 1993		
St. Louis County	\$ 15,000,000	\$ 11,605,000
State of Minnesota	<u>50,000,000</u>	<u>36,665,000</u>
	<u>\$ 65,000,000</u>	<u>\$ 48,270,000</u>
Year: 1994		
Northwest Airlines	<u>\$ 35,000,000</u>	<u>\$ 25,995,000</u>
<b>Total</b>	<b><u>\$100,000,000</u></b>	<b><u>\$ 74,265,000</u></b>
Iron Range Resource and Rehabilitation Board Grant		\$ 10,000,000
Northwest Airlines Equity Contribution		<u>20,735,000</u>
<b>Grand Total</b>		<b><u>\$105,000,000</u></b>

**STATE OF MINNESOTA  
PROJECT: HIBBING FACILITY  
REVISED SOURCES AND USES OF FUNDS**

<u>SOURCES OF FUNDS:</u>	<u>STATE OF MINNESOTA</u>	<u>NORTHWEST AIRLINES</u>	<u>ST. LOUIS COUNTY</u>	<u>TOTAL</u>
PAR AMOUNT OF BONDS	\$50,000,000	\$35,000,000	\$15,000,000	\$100,000,000
INVESTMENT EARNINGS:				
CONSTRUCTION FUND	\$896,183	\$291,417	\$283,655	\$1,471,254
CAPITALIZED INTEREST FUND	<u>\$1,002,029</u>	<u>\$183,072</u>	<u>\$223,215</u>	<u>\$1,408,316</u>
TOTAL SOURCES OF FUNDS	<u>\$51,898,212</u>	<u>\$35,474,489</u>	<u>\$15,506,870</u>	<u>\$102,879,570</u>
 <u>USES OF FUNDS:</u>				
MAINTENANCE FACILITY PROJECT	\$36,665,000	\$25,995,000	\$11,605,000	\$74,265,000
CAPITALIZED INTEREST	\$5,847,080	\$2,887,500	\$1,702,500	\$10,437,080
RESERVE FUND	\$8,383,178	\$5,888,450	\$1,896,875	\$16,168,503
COST OF ISSUANCE (2% of PAR)	\$1,000,000	\$700,000	\$300,000	\$2,000,000
BOND INSURANCE (0.75%)	\$0	\$0	\$0	\$0
MISCELLANEOUS (i.e. rounding)	<u>\$2,954</u>	<u>\$3,539</u>	<u>\$2,495</u>	<u>\$8,988</u>
TOTAL USES OF FUNDS	<u>\$51,898,212</u>	<u>\$35,474,489</u>	<u>\$15,506,870</u>	<u>\$102,879,570</u>

STATE OF MINNESOTA  
\$100,000,000 STATE REVENUE BONDS, SERIES 1992-1994  
(HIBBING FACILITY - ALL PARTICIPANTS)

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DEBT SERVICE SCHEDULE

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DATE	PRINCIPAL	INTEREST	PERIOD TOTAL	FISCAL TOTAL
2/ 1/94		4,718,487.50	4,718,487.50	
8/ 1/94		4,756,092.50	4,756,092.50	9,474,580.00
2/ 1/95		5,718,592.50	5,718,592.50	
8/ 1/95	695,000.00	5,718,592.50	6,413,592.50	12,132,185.00
2/ 1/96		5,695,230.00	5,695,230.00	
8/ 1/96	855,000.00	5,695,230.00	6,550,230.00	12,245,460.00
2/ 1/97		5,659,068.75	5,659,068.75	
8/ 1/97	925,000.00	5,659,068.75	6,584,068.75	12,243,137.50
2/ 1/98		5,617,451.25	5,617,451.25	
8/ 1/98	1,010,000.00	5,617,451.25	6,627,451.25	12,244,902.50
2/ 1/99		5,570,586.25	5,570,586.25	
8/ 1/99	1,100,000.00	5,570,586.25	6,670,586.25	12,241,172.50
2/ 1/ 0		5,518,117.50	5,518,117.50	
8/ 1/ 0	1,210,000.00	5,518,117.50	6,728,117.50	12,246,235.00
2/ 1/ 1		5,459,138.75	5,459,138.75	
8/ 1/ 1	1,330,000.00	5,459,138.75	6,789,138.75	12,248,277.50
2/ 1/ 2		5,392,897.50	5,392,897.50	
8/ 1/ 2	1,455,000.00	5,392,897.50	6,847,897.50	12,240,795.00
2/ 1/ 3		5,319,632.50	5,319,632.50	
8/ 1/ 3	1,605,000.00	5,319,632.50	6,924,632.50	12,244,265.00
2/ 1/ 4		5,237,315.00	5,237,315.00	
8/ 1/ 4	1,770,000.00	5,237,315.00	7,007,315.00	12,244,630.00
2/ 1/ 5		5,145,540.00	5,145,540.00	
8/ 1/ 5	1,955,000.00	5,145,540.00	7,100,540.00	12,246,080.00
2/ 1/ 6		5,042,792.50	5,042,792.50	
8/ 1/ 6	2,155,000.00	5,042,792.50	7,197,792.50	12,240,585.00
2/ 1/ 7		4,928,151.25	4,928,151.25	
8/ 1/ 7	2,390,000.00	4,928,151.25	7,318,151.25	12,246,302.50
2/ 1/ 8		4,798,987.50	4,798,987.50	
8/ 1/ 8	2,645,000.00	4,798,987.50	7,443,987.50	12,242,975.00
2/ 1/ 9		4,654,215.00	4,654,215.00	
8/ 1/ 9	2,940,000.00	4,654,215.00	7,594,215.00	12,248,430.00
2/ 1/10		4,494,735.00	4,494,735.00	
8/ 1/10	3,255,000.00	4,494,735.00	7,749,735.00	12,244,470.00
2/ 1/11		4,316,482.50	4,316,482.50	
8/ 1/11	3,610,000.00	4,316,482.50	7,926,482.50	12,242,965.00
2/ 1/12		4,115,485.00	4,115,485.00	
8/ 1/12	4,015,000.00	4,115,485.00	8,130,485.00	12,245,970.00
2/ 1/13		3,889,545.00	3,889,545.00	
8/ 1/13	4,465,000.00	3,889,545.00	8,354,545.00	12,244,090.00
2/ 1/14		3,635,720.00	3,635,720.00	
8/ 1/14	4,975,000.00	3,635,720.00	8,610,720.00	12,246,440.00
2/ 1/15		3,350,022.50	3,350,022.50	
8/ 1/15	5,545,000.00	3,350,022.50	8,895,022.50	12,245,045.00
2/ 1/16		3,028,272.50	3,028,272.50	
8/ 1/16	6,190,000.00	3,028,272.50	9,218,272.50	12,246,545.00
2/ 1/17		2,665,245.00	2,665,245.00	
8/ 1/17	6,915,000.00	2,665,245.00	9,580,245.00	12,245,490.00
2/ 1/18		2,255,302.50	2,255,302.50	
8/ 1/18	7,730,000.00	2,255,302.50	9,985,302.50	12,240,605.00
2/ 1/19		1,792,175.00	1,792,175.00	
8/ 1/19	8,660,000.00	1,792,175.00	10,452,175.00	12,244,350.00
2/ 1/20		1,267,722.50	1,267,722.50	
8/ 1/20	9,705,000.00	1,267,722.50	10,972,722.50	12,240,445.00
2/ 1/21		673,805.00	673,805.00	
8/ 1/21	10,895,000.00	673,805.00	11,568,805.00	12,242,610.00

Prepared by Evensen Dodge, Inc.

RUNDATE: 03-17-1992 @ 09:52:04      FILENAME:      KEY:

STATE OF MINNESOTA  
\$100,000,000 STATE REVENUE BONDS, SERIES 1992-1994  
(HIBBING FACILITY - ALL PARTICIPANTS)

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DEBT SERVICE SCHEDULE

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DATE	PRINCIPAL	INTEREST	PERIOD TOTAL	FISCAL TOTAL
-----	-----	-----	-----	-----
	100,000,000.00	239,959,037.50	339,959,037.50	
ACCRUED				
	100,000,000.00	239,959,037.50	339,959,037.50	
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Dated 4/ 1/93 with Delivery of 4/ 1/93

Prepared by Evensen Dodge, Inc.

RUNDATE: 03-17-1992 @ 09:52:05      FILENAME:      KEY:

STATE OF MINNESOTA  
\$15,000,000 STATE REVENUE BONDS, SERIES 1993  
(HIBBING FACILITY - ST. LOUIS COUNTY)

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DEBT SERVICE SCHEDULE

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DATE	PRINCIPAL	INTEREST	PERIOD TOTAL	FISCAL TOTAL
2/ 1/94		1,064,062.50	1,064,062.50	
8/ 1/94		638,437.50	638,437.50	1,702,500.00
2/ 1/95		638,437.50	638,437.50	
8/ 1/95	620,000.00	638,437.50	1,258,437.50	1,896,875.00
2/ 1/96		617,512.50	617,512.50	
8/ 1/96	660,000.00	617,512.50	1,277,512.50	1,895,025.00
2/ 1/97		593,422.50	593,422.50	
8/ 1/97	705,000.00	593,422.50	1,298,422.50	1,891,845.00
2/ 1/98		565,927.50	565,927.50	
8/ 1/98	760,000.00	565,927.50	1,325,927.50	1,891,855.00
2/ 1/99		535,337.50	535,337.50	
8/ 1/99	825,000.00	535,337.50	1,360,337.50	1,895,675.00
2/ 1/ 0		501,306.25	501,306.25	
8/ 1/ 0	890,000.00	501,306.25	1,391,306.25	1,892,612.50
2/ 1/ 1		463,926.25	463,926.25	
8/ 1/ 1	965,000.00	463,926.25	1,428,926.25	1,892,852.50
2/ 1/ 2		422,672.50	422,672.50	
8/ 1/ 2	1,050,000.00	422,672.50	1,472,672.50	1,895,345.00
2/ 1/ 3		377,522.50	377,522.50	
8/ 1/ 3	1,140,000.00	377,522.50	1,517,522.50	1,895,045.00
2/ 1/ 4		327,932.50	327,932.50	
8/ 1/ 4	1,240,000.00	327,932.50	1,567,932.50	1,895,865.00
2/ 1/ 5		273,682.50	273,682.50	
8/ 1/ 5	1,345,000.00	273,682.50	1,618,682.50	1,892,365.00
2/ 1/ 6		214,502.50	214,502.50	
8/ 1/ 6	1,465,000.00	214,502.50	1,679,502.50	1,894,005.00
2/ 1/ 7		149,676.25	149,676.25	
8/ 1/ 7	1,595,000.00	149,676.25	1,744,676.25	1,894,352.50
2/ 1/ 8		78,300.00	78,300.00	
8/ 1/ 8	1,740,000.00	78,300.00	1,818,300.00	1,896,600.00
	15,000,000.00	13,222,817.50	28,222,817.50	
ACCRUED	15,000,000.00	13,222,817.50	28,222,817.50	
	=====	=====	=====	

Dated 4/ 1/93 with Delivery of 4/ 1/93

Prepared by Evensen Dodge, Inc.

RUNDATE: 03-17-1992 @ 09:47:06      FILENAME: HIBB      KEY: SLC

STATE OF MINNESOTA  
\$50,000,000 STATE REVENUE BONDS, SERIES 1993  
(HIBBING FACILITY - STATE)

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DEBT SERVICE SCHEDULE

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DATE	PRINCIPAL	INTEREST	PERIOD TOTAL	FISCAL TOTAL
2/ 1/94		3,654,425.00	3,654,425.00	
8/ 1/94		2,192,655.00	2,192,655.00	5,847,080.00
2/ 1/95		2,192,655.00	2,192,655.00	
8/ 1/95	75,000.00	2,192,655.00	2,267,655.00	4,460,310.00
2/ 1/96		2,190,217.50	2,190,217.50	
8/ 1/96	85,000.00	2,190,217.50	2,275,217.50	4,465,435.00
2/ 1/97		2,187,221.25	2,187,221.25	
8/ 1/97	90,000.00	2,187,221.25	2,277,221.25	4,464,442.50
2/ 1/98		2,183,823.75	2,183,823.75	
8/ 1/98	100,000.00	2,183,823.75	2,283,823.75	4,467,647.50
2/ 1/99		2,179,923.75	2,179,923.75	
8/ 1/99	100,000.00	2,179,923.75	2,279,923.75	4,459,847.50
2/ 1/ 0		2,175,923.75	2,175,923.75	
8/ 1/ 0	115,000.00	2,175,923.75	2,290,923.75	4,466,847.50
2/ 1/ 1		2,171,237.50	2,171,237.50	
8/ 1/ 1	125,000.00	2,171,237.50	2,296,237.50	4,467,475.00
2/ 1/ 2		2,166,050.00	2,166,050.00	
8/ 1/ 2	130,000.00	2,166,050.00	2,296,050.00	4,462,100.00
2/ 1/ 3		2,160,622.50	2,160,622.50	
8/ 1/ 3	140,000.00	2,160,622.50	2,300,622.50	4,461,245.00
2/ 1/ 4		2,154,707.50	2,154,707.50	
8/ 1/ 4	155,000.00	2,154,707.50	2,309,707.50	4,464,415.00
2/ 1/ 5		2,148,120.00	2,148,120.00	
8/ 1/ 5	170,000.00	2,148,120.00	2,318,120.00	4,466,240.00
2/ 1/ 6		2,140,852.50	2,140,852.50	
8/ 1/ 6	180,000.00	2,140,852.50	2,320,852.50	4,461,705.00
2/ 1/ 7		2,133,112.50	2,133,112.50	
8/ 1/ 7	200,000.00	2,133,112.50	2,333,112.50	4,466,225.00
2/ 1/ 8		2,124,412.50	2,124,412.50	
8/ 1/ 8	210,000.00	2,124,412.50	2,334,412.50	4,458,825.00
2/ 1/ 9		2,115,277.50	2,115,277.50	
8/ 1/ 9	2,130,000.00	2,115,277.50	4,245,277.50	6,360,555.00
2/ 1/10		2,022,622.50	2,022,622.50	
8/ 1/10	2,315,000.00	2,022,622.50	4,337,622.50	6,360,245.00
2/ 1/11		1,921,920.00	1,921,920.00	
8/ 1/11	2,515,000.00	1,921,920.00	4,436,920.00	6,358,840.00
2/ 1/12		1,811,260.00	1,811,260.00	
8/ 1/12	2,735,000.00	1,811,260.00	4,546,260.00	6,357,520.00
2/ 1/13		1,690,920.00	1,690,920.00	
8/ 1/13	2,975,000.00	1,690,920.00	4,665,920.00	6,356,840.00
2/ 1/14		1,560,020.00	1,560,020.00	
8/ 1/14	3,240,000.00	1,560,020.00	4,800,020.00	6,360,040.00
2/ 1/15		1,417,460.00	1,417,460.00	
8/ 1/15	3,525,000.00	1,417,460.00	4,942,460.00	6,359,920.00
2/ 1/16		1,262,360.00	1,262,360.00	
8/ 1/16	3,835,000.00	1,262,360.00	5,097,360.00	6,359,720.00
2/ 1/17		1,093,620.00	1,093,620.00	
8/ 1/17	4,170,000.00	1,093,620.00	5,263,620.00	6,357,240.00
2/ 1/18		910,140.00	910,140.00	
8/ 1/18	4,535,000.00	910,140.00	5,445,140.00	6,355,280.00
2/ 1/19		710,600.00	710,600.00	
8/ 1/19	4,935,000.00	710,600.00	5,645,600.00	6,356,200.00
2/ 1/20		493,460.00	493,460.00	
8/ 1/20	5,370,000.00	493,460.00	5,863,460.00	6,356,920.00
2/ 1/21		257,180.00	257,180.00	
8/ 1/21	5,845,000.00	257,180.00	6,102,180.00	6,359,360.00

Prepared by Evensen Dodge, Inc.

RUNDATE: 03-17-1992 @ 09:47:37      FILENAME: HIBB      KEY: MN

STATE OF MINNESOTA  
\$50,000,000 STATE REVENUE BONDS, SERIES 1993  
(HIBBING FACILITY - STATE)

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DEBT SERVICE SCHEDULE

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DATE	PRINCIPAL	INTEREST	PERIOD TOTAL	FISCAL TOTAL
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	50,000,000.00	100,998,520.00	150,998,520.00	
ACCRUED				
	50,000,000.00	100,998,520.00	150,998,520.00	
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Dated 4/ 1/93 with Delivery of 4/ 1/93

Prepared by Evensen Dodge, Inc.

RUNDATE: 03-17-1992 @ 09:47:38      FILENAME: HIBB      KEY: MN

STATE OF MINNESOTA  
\$35,000,000 STATE REVENUE BONDS, SERIES 1994  
(HIBBING FACILITY - NORTHWEST AIRLINES)

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DEBT SERVICE SCHEDULE

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DATE	PRINCIPAL	INTEREST	PERIOD TOTAL	FISCAL TOTAL
8/ 1/94		1,925,000.00	1,925,000.00	1,925,000.00
2/ 1/95		2,887,500.00	2,887,500.00	
8/ 1/95		2,887,500.00	2,887,500.00	5,775,000.00
2/ 1/96		2,887,500.00	2,887,500.00	
8/ 1/96	110,000.00	2,887,500.00	2,997,500.00	5,885,000.00
2/ 1/97		2,878,425.00	2,878,425.00	
8/ 1/97	130,000.00	2,878,425.00	3,008,425.00	5,886,850.00
2/ 1/98		2,867,700.00	2,867,700.00	
8/ 1/98	150,000.00	2,867,700.00	3,017,700.00	5,885,400.00
2/ 1/99		2,855,325.00	2,855,325.00	
8/ 1/99	175,000.00	2,855,325.00	3,030,325.00	5,885,650.00
2/ 1/ 0		2,840,887.50	2,840,887.50	
8/ 1/ 0	205,000.00	2,840,887.50	3,045,887.50	5,886,775.00
2/ 1/ 1		2,823,975.00	2,823,975.00	
8/ 1/ 1	240,000.00	2,823,975.00	3,063,975.00	5,887,950.00
2/ 1/ 2		2,804,175.00	2,804,175.00	
8/ 1/ 2	275,000.00	2,804,175.00	3,079,175.00	5,883,350.00
2/ 1/ 3		2,781,487.50	2,781,487.50	
8/ 1/ 3	325,000.00	2,781,487.50	3,106,487.50	5,887,975.00
2/ 1/ 4		2,754,675.00	2,754,675.00	
8/ 1/ 4	375,000.00	2,754,675.00	3,129,675.00	5,884,350.00
2/ 1/ 5		2,723,737.50	2,723,737.50	
8/ 1/ 5	440,000.00	2,723,737.50	3,163,737.50	5,887,475.00
2/ 1/ 6		2,687,437.50	2,687,437.50	
8/ 1/ 6	510,000.00	2,687,437.50	3,197,437.50	5,884,875.00
2/ 1/ 7		2,645,362.50	2,645,362.50	
8/ 1/ 7	595,000.00	2,645,362.50	3,240,362.50	5,885,725.00
2/ 1/ 8		2,596,275.00	2,596,275.00	
8/ 1/ 8	695,000.00	2,596,275.00	3,291,275.00	5,887,550.00
2/ 1/ 9		2,538,937.50	2,538,937.50	
8/ 1/ 9	810,000.00	2,538,937.50	3,348,937.50	5,887,875.00
2/ 1/10		2,472,112.50	2,472,112.50	
8/ 1/10	940,000.00	2,472,112.50	3,412,112.50	5,884,225.00
2/ 1/11		2,394,562.50	2,394,562.50	
8/ 1/11	1,095,000.00	2,394,562.50	3,489,562.50	5,884,125.00
2/ 1/12		2,304,225.00	2,304,225.00	
8/ 1/12	1,280,000.00	2,304,225.00	3,584,225.00	5,888,450.00
2/ 1/13		2,198,625.00	2,198,625.00	
8/ 1/13	1,490,000.00	2,198,625.00	3,688,625.00	5,887,250.00
2/ 1/14		2,075,700.00	2,075,700.00	
8/ 1/14	1,735,000.00	2,075,700.00	3,810,700.00	5,886,400.00
2/ 1/15		1,932,562.50	1,932,562.50	
8/ 1/15	2,020,000.00	1,932,562.50	3,952,562.50	5,885,125.00
2/ 1/16		1,765,912.50	1,765,912.50	
8/ 1/16	2,355,000.00	1,765,912.50	4,120,912.50	5,886,825.00
2/ 1/17		1,571,625.00	1,571,625.00	
8/ 1/17	2,745,000.00	1,571,625.00	4,316,625.00	5,888,250.00
2/ 1/18		1,345,162.50	1,345,162.50	
8/ 1/18	3,195,000.00	1,345,162.50	4,540,162.50	5,885,325.00
2/ 1/19		1,081,575.00	1,081,575.00	
8/ 1/19	3,725,000.00	1,081,575.00	4,806,575.00	5,888,150.00
2/ 1/20		774,262.50	774,262.50	
8/ 1/20	4,335,000.00	774,262.50	5,109,262.50	5,883,525.00
2/ 1/21		416,625.00	416,625.00	
8/ 1/21	5,050,000.00	416,625.00	5,466,625.00	5,883,250.00
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	35,000,000.00	125,737,700.00	160,737,700.00	
ACCRUED				
	35,000,000.00	125,737,700.00	160,737,700.00	
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Prepared by Evensen Dodge, Inc.

RUNDATE: 03-17-1992 @ 09:48:03      FILENAME: HIBB      KEY: NWA

STATE OF MINNESOTA  
\$35,000,000 STATE REVENUE BONDS, SERIES 1994  
(HIBBING FACILITY - NORTHWEST AIRLINES)  
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DEBT SERVICE SCHEDULE  
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Dated 4/ 1/94 with Delivery of 4/ 1/94

Prepared by Evensen Dodge, Inc.

RUNDATE: 03-17-1992 @ 09:48:04      FILENAME: HIBB      KEY: NWA

## **ATTACHMENTS**

1. Chapter 350, Article 1, Section 2, Subd 3(c)
2. Chapter 350, Article 3, Section 2
3. Summary of Master Financing Agreement
4. Lease Agreement - Duluth
5. Summary of Payment and Pledge Agreement
6. Summary of County Guaranty
7. Lease Agreement - Chisholm Hibbing
8. Bond Financing Plan
9. Arvai Group Report