#### Washington, D.C. 20549

FORM 10-K

(X) ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 1997

or ( ) TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES

EXCHANGE ACT OF 1934 For the transition period from Commission file number to 1-3229

NORTHROP GRUMMAN CORPORATION (Exact name of registrant as specified in its charter)

DELAWARE (State or other jurisdiction of incorporation or organization)

1840 Century Park East Los Angeles, California (Address of principal executive offices)

90067 (Zip Code)

95-1055798

(I.R.S. Employer Identification No.)

Registrant's telephone number, including area code (310) 553-6262 Securities registered pursuant to Section 12(b) of the Act:

 Name of each exchange on which registered New York Stock Exchange Pacific Stock Exchange

Securities Registered pursuant to Section 12(g) of the Act:

None

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes X

No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. [X]

As of February 25, 1998, 67,448,258 shares of Common Stock were outstanding, and the aggregate market value of the Common Stock (based upon the closing price of the stock on the New York Stock Exchange) of the Registrant held by nonaffiliates was approximately \$9,017 million.

# DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Proxy Statement for the 1998 Annual Meeting of Stockholders. Part III  $\ensuremath{\mathsf{P}}$ 

# PART I

# ITEM 1. BUSINESS

Northrop Corporation was incorporated in Delaware in 1985. Effective May 18, 1994, Northrop Corporation was renamed Northrop Grumman Corporation. Northrop Grumman is an advanced technology company operating in the aircraft, electronics, and information technology and services industry segments of the broadly defined aerospace industry. The aircraft segment includes the design, development and manufacturing of aircraft and aircraft subassemblies. The electronics segment includes the design, development, manufacturing and integration of electronic systems and components for military and commercial use. The information technology and services segment includes the design, development, operation and support of computer systems for scientific and management information.

Additional information required by this Item is contained in Part II, Item 7 of this Annual Report on Form 10-K.

# Item 2. Properties

The major locations, general status of the company's interest in the property and identity of the industry segments that use the property described, are indicated in the following table.

Annapolis, Maryland (2) (b) (e)OwnedArlington, Virginia (2) (3) (4) (a) (c)LeasedAuburn, Washington (1) (c)LeasedAuburn, Washington (1) (c)LeasedBaltimore, Maryland (2) (a) (c)LeasedBenton, Pennsylvania (2) (b)Leased* Bethpage, New York (1) (2) (3) (4) (a) (c) (d) (e)Owned, LeasedBridgeport, West Virginia (2) (d)LeasedBridgeport, West Virginia (2) (a) (b) (d)Owned, LeasedBurlington, Canada (2) (a) (b) (d)OwnedCarson, California (1) (c)LeasedChandler, Arizona (1) (a) (b)OwnedCollege Station, Texas (a) (2) (b)LeasedCollege Station, Texas (a) (2) (b)OwnedCarson, California (1) (b) (c)OwnedCollege, Station, Texas (a) (2) (b)OwnedCarborn, California (1) (b) (c)OwnedCollege, Station, Texas (a) (2) (b)CollegeCompton, California (1) (b) (c)OwnedCasedCalifornia (1) (b) (c)Compton, California (1) (a) (b) (c) (d) (e)OwnedLeasedLeasedEl Segundo, California (1) (a) (b) (c) (c)OwnedElk Grove Village, Illinois (2) (c)Leased		Location	Property I	nterest
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Great River, New York (2) (a) (b) Owned				
				Leased
Hawthorne, California (1) (2) (3)(4) (a) (b) (c) (d) (e) Owned, Leased Herndon, Virginia (3) (a) Leased				Leased
* Hicksville, New York (2) (e) Owned, Leased	*			
				Leased
Hunt Valley, Maryland (2) (a) (b) (c) (d) Owned, Leased				
				Leased
				Leased
				Leased

Lake Charles, Louisiana (1) (a) (b) (c)		Leased
Lexington, South Carolina (2) (c)		Owned
Linthicum, Maryland (2) (a) (b) (c) (d)	Owned,	Leased
Los Angeles, California (1) (2) (3) (4) (a)		Leased
Melbourne, Florida (2) (a) (b) (c) (d) (e)	Owned,	Leased
Melville, New York (2) (a) (b) (d)		Leased
Middleton, Rhode Island (3) (a)	Owned,	Leased
Milledgeville, Georgia (1) (b) (c) (d) (e)	Owned,	Leased
Mojave, California (1) (e)	Owned,	Leased
New Town, North Dakota (1) (b) (c)	Owned,	Leased
Newbury Park, California (4) (a) (b) (c) (d)		Owned
Norwalk, Connecticut (2) (a) (b) (c) (d)		Leased
Norwood, Massachusetts (4) (a) (b)		Owned
Palmdale, California (1) (a) (b) (c) (d) (e)	Owned,	Leased
Perry, Georgia (1) (a) (b) (c) (d)		Owned
Pico Rivera, California (1) (a) (b) (c) (d)	Owned,	Leased
Pittsburgh, Pennsylvania (2) (a) (d)		Leased
Point Mugu, California (1) (a) (b) (c) (d)	Owned,	Leased
Portsmouth, Rhode Island (4) (b) (e)	Owned,	Leased
Reston, Virginia (3) (a)		Leased
Rolling Meadows, Illinois (2) (a) (b) (c)	Owned,	Leased
San Diego, California (1) (3) (a) (b) (c)	Owned,	Leased
San Pedro, California (3) (a)	Owned,	Leased
Santa Isabel, Puerto Rico (2) (a) (b) (c) (d)		Leased
St. Augustine, Florida (1) (a) (b) (c) (d)	Owned,	Leased
Stuart, Florida (1) (a) (b) (c)		Leased
Sunnyvale, California (2) (a) (b) (c) (d)	Owned,	Leased
Sykesville, Maryland (2) (b)		Owned
Torrance, California (1) (b) (c)	Owned,	Leased
Warner Robins, Georgia (2) (a)	Owned,	Leased
Warren, Michigan (4) (b)		Leased

\* Certain portions of the properties at each of these locations are leased or subleased to others. The company believes that in the aggregate the property covered by such leases or subleased to others is not material compared to the property actually utilized by the company in its business.

Following each described property are numbers indicating the industry segments utilizing the property:

- Aircraft
   Electronics
   Information Technology and Services
- (4) General Corporate Asset

Following each described property are letters indicating the types of facilities located at each location:

- (a) office
- (b) manufacturing
  (c) warehouse
- (d) research and testing
- (e) other

Government-owned facilities used or administered by the company consist of 9 million square feet at various locations across the United States.

The company believes its properties are well-maintained and in good operating condition. Under present business conditions and the company's volume of business, productive capacity is currently in excess of requirements.

#### Item 3. Legal Proceedings

# WALSH, ET AL. V. NORTHROP GRUMMAN CORPORATION

In November 1994, a class action complaint was filed against Northrop Grumman Corporation, Grumman Corporation, and four named individuals in the U.S. District Court for the Eastern District of New York, Case No. CV 94-5105 (Platt C.J.). A first amended complaint was filed on November 29, 1994 alleging that Grumman Corporation's March 8 and April 4, 1994 Form 14D-9 filings with the Securities and Exchange Commission incorporated a statement concerning the Grumman Severance Plan which violated Sections 10(b) and 14(e) of the Securities and Exchange Act of 1934, as amended (the "Act") and Rule 100-5 of the Rules and Regulations under the Act. The complaint also contains a cause of action for equitable estoppel based upon the same statement and plaintiffs' alleged reliance thereon. The complaint also alleges that the trustees of Grumman's Employee Investment Plan ("EIP") violated their fiduciary obligations by voting Northrop Corporation (the "Acquisition") without consulting the class members. The complaint seeks an order enjoining the defendants from amending or discontinuing the Grumman Severance Plan for a period of thirty (30) months from the date of the Acquisition and an order mandating that defendants permit class members who have accepted voluntary termination with severance pay to rescind their elections. On December 8, 1994, the court denied plaintiffs application for a preliminary injunction but declined to dismiss the action. On April 7, 1995, the court granted plaintiffs' motion to amend their complaint to add a claim for damages based on post Acquisition charges to Grumman benefit plans. In July 1995, the court certified a class of plaintiffs consisting of all employees who, at the time of the tender offer, were Grumman employees, owned Grumman stock either directly or beneficially through the EIP, and were injured as a result of defendants' conduct. The liability trial of this matter began in late 1997 and concluded in 1998. A decision is expected in the second quarter of 1998. If liability is found, the matter will proceed to a remedy phase. The company intends to vigorously defend this litigation and does not expect this matter to have a material adverse effect on its financial condition.

U.S. EX REL JORDAN V. NORTHROP GRUMMAN CORPORATION

In January 1998, the company was served with an amended complaint that was filed by the government in the U.S. District Court for the Central District of California. The complaint alleges that the company violated the False Claims Act by knowingly supplying BQM-74C aerial target drones that contained various defective components between 1992 and 1995. The government seeks to recover unspecified damages under theories of fraud, payment by mistake, unjust enrichment, breach of warranty and breach of contract. The company intends to vigorously defend this matter.

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U.S. v. Lockheed Martin Corporation and Northrop Grumman Corporation

On March 23, 1998, the United States, acting through the Department of Justice, filed a civil action in the United States District Court for the District of Columbia against Lockheed Martin and the company requesting that the acquisition of the company by Lockheed Martin be adjudged to violate Section 7 of the Clayton Act and that Lockheed Martin and the company be permanently enjoined and restrained from carrying out the Agreement and Plan of Merger dated July 2, 1997, or from entering into or carrying out any agreement, understanding or plan, the effect of which would be to combine the business or assets of Lockheed Martin and the company. The United States is also seeking costs of the action.

#### General

The company, as a government contractor, is from time to time subject to U.S. Government investigations relating to its operations. Government contractors that are found to have violated the False Claims Act, or are indicted or convicted for violations of other Federal laws, or are considered not to be responsible contractors may be suspended or debarred from government contracting for some period of time. Such convictions could also result in fines. Given the company's dependence on government contracting, suspension or debarment could have a material adverse effect on the company. The company is involved in certain other legal proceedings arising in the ordinary course of business, none of which the company's management believes will have a material adverse effect on the company's financial condition.

# Executive Officers of the Registrant

The following individuals were the elected officers of the company as of March 1998:

Name	Age	Office Held	Since	Business Experience Last Five Years
Kent Kresa	60	Chairman, President & CEO	1990	
Herbert W. Anderson	58	Corporate Vice President and General Manager, Data Systems & Services Division	1995	Vice President and Deputy General Manager, Data Systems and Services Division; Prior to 1994, Vice President and Center General Manager, Northrop Information Services Center
Ralph D. Crosby, Jr.	50	Corporate Vice President and General Manager, Commercial Aircraft Division	1996	Corporate Vice President and Deputy General Manager, Commercial Aircraft Division; Prior to March 1996, Corporate Vice President and Deputy General Manager, Military Aircraft Systems Division; Prior to January 1996 Corporate Vice President and General Manager, B-2 Division; Prior to 1994, Vice President Business and Advanced Systems Development at the B-2 Division
Marvin Elkin	61	Corporate Vice President and Chief Human Resources, Communications and Administrative Officer	1996	Corporate Vice President and Chief Human Resources and Administrative Officer; Prior to 1994, Corporate Vice President Administration and Services
Nelson F. Gibbs	60	Corporate Vice President and Controller	1991	
John E. Harrison	62	Corporate Vice President and General Manager, Electronics and Systems Integration Division	1994	Senior Vice President and General Manager, Electronics Programs, Aerospace and Electronics Group, Grumman Corporation
Robert W. Helm	46	Corporate Vice President, Government Relations	1994	Vice President, Legislative Affairs

Name 	Age	Office Held	Since	Business Experience Last Five Years
James C. Johnson	45	Corporate Vice President and Secretary and Assistant General Counsel	1996	Corporate Vice President and Secretary; Prior to 1995, Senior Corporate Counsel
Charles L. Jones, Jr.	56	Corporate Vice President and Chief Strategic Planning Advanced Development and Programs Officer	1996	Corporate Vice President, Quality Operations
William H. Lawler	57	Corporate Vice President and General Manager, Military Aircraft Systems Division	1997	Vice President and Deputy General Manager, Military Aircraft Systems Division; Prior to 1996, Vice President and Deputy General Manager, B-2 Division; Prior to 1995, Vice President and B-2 Program Manager; Prior to June 1994, Vice President, Business and Advanced Systems Development, B-2 Division; Prior to 1994, Vice President and Deputy Chief Engineer, Business and Advanced Systems Development, B-2 Division
Richard R. Molleur	65	Corporate Vice President and General Counsel	1991	
Albert F. Myers	52	Corporate Vice President and Treasurer	1994	Vice President, Business Strategy
James G. Roche	58	Corporate Vice President and General Manager, Electronic Sensors and Systems Division	1996	Corporate Vice President and Chief Advanced Development, Planning, and Public Affairs Officer; Prior to 1993, Corporate Vice President Advanced Development and Planning Officer
Richard B. Waugh, Jr.	54	Corporate Vice President and Chief Financial Officer	1993	

# ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

A special meeting of stockholders of Northrop Grumman was held on February 26, 1998, to approve the proposed merger with Lockheed Martin Corporation. The results of the vote are as follows:

Votes for	53,063,873
Votes against	1,035,488
Shares abstaining	171,003

# PART II

# ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

The information required by this Item is contained in Part II, Item 8 of this Annual Report on Form 10-K.

# ITEM 6. SELECTED FINANCIAL DATA

The information required by this Item is contained in Part II, Item 7 of this Annual Report on Form 10-K.

# ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE COMPANY'S FINANCIAL CONDITION AND RESULTS OF OPERATIONS

# BUSINESS CONDITIONS

Northrop Grumman's three industry segments-aircraft, electronics, and information technology and services-are each a factor in the broadly defined aerospace industry. While Northrop Grumman is subject to the usual vagaries of the marketplace, it is also affected by the unique characteristics of the aerospace industry and by certain elements peculiar to its own business mix.

Northrop Grumman is one of the major companies that competes in both the defense and commercial segments of the aerospace business. It is common in the aerospace industry for work on major programs to be shared between a number of companies. A company competing to be a prime contractor can turn out to be a subcontractor. It is not uncommon to compete with customers, and simultaneously to be both a supplier to and customer of a given competitor. Over the past several years the aerospace industry has been going through a consolidation process and, along with it, significant downsizing. These actions, in which Northrop Grumman has participated, have made competition even more intense than in the past. The nature of major aerospace programs, conducted under binding contracts, allows companies that perform well to benefit from a level of program continuity unknown in many industries. Lockheed Martin Corporation, The Boeing Company, and Raytheon Company are the largest companies in the aerospace industry at this time. Northrop Grumman competes against these and other companies for a number of large and smaller programs. Intense competition and long operating cycles are both characteristics of the industry's-and Northrop Grumman's-business.

The collapse of communism and the subsequent reductions in the U.S. defense budget have fundamentally altered the landscape of the global aerospace and defense industry. Consolidation has become the logical response by the industry, with nearly \$100 billion in U.S. mergers and acquisitions since 1990. Some thirty companies/subsidiaries that existed in the early 1990s have been combined-or are in the process of combining-into just three large companies.

The current composition of Northrop Grumman resulted from a series of strategic acquisitions by the former Northrop Corporation beginning in 1992, when the company acquired a 49 percent interest in the Vought Aircraft Company, a designer and builder of commercial and military aerostructures. In the second quarter of 1994, the company purchased the outstanding common stock of Grumman Corporation for \$2.1 billion.

Northrop Corporation was renamed Northrop Grumman Corporation on May 18, 1994. The new company purchased the remaining 51 percent interest in Vought Aircraft for \$130 million in August 1994. In the first quarter of 1996, Northrop Grumman acquired the defense electronic systems group (ESG) of Westinghouse Electric Corporation for \$2.9 billion. This business is being operated as a component of the electronics industry segment.

Effective August 1, 1997, the company consummated its merger with Logicon, Inc. (Logicon), a leading defense information technology company. The merger was accounted for as a pooling of interests. Accordingly, the accompanying financial statements have been retroactively restated for the merger with Logicon. The results of Logicon are included in the information technology and services industry segment along with similar Northrop Grumman business which previously had been classified in the aircraft and electronics industry segments. Logicon had previously acquired two defense information technology and services companies: Geodynamics Corporation (Geodynamics) in March 1996 for \$32 million and Syscon Corporation (Syscon) in February 1995 for \$45 million.

On July 3, 1997, the company announced that it had entered into a definitive agreement with Lockheed Martin Corporation to combine the companies. Under the terms of the agreement, 1.1923 shares of Lockheed Martin common stock would be exchanged for each share of Northrop Grumman common stock. On February 26, 1998, shareholders of Northrop Grumman approved the merger. On March 23, 1998, the United States, acting through the Department of Justice, filed a civil action in the United States District Court for the District of Columbia against Lockheed Martin and the company requesting that the acquisition of the company by Lockheed Martin be adjudged to violate Section 7 of the Clayton Act and that Lockheed Martin and the company be permanently enjoined and restrained from carrying out the Agreement and Plan of Merger dated July 2, 1997, or from entering into or carrying out any agreement, understanding or plan, the effect of which would be to combine the business or assets of Lockheed Martin and the company the business or assets of Lockheed Martin and the company. The United States is also seeking costs of the action. The outcome of this lawsuit cannot be predicted at this time.

The company will record a charge of \$180 million in the first quarter of 1998 for costs related to the proposed combination. The charge will cover vesting of restricted stock which became issuable following shareholder approval of the merger and other costs associated with the pending combination, such as investment banking fees, legal and accounting fees, and costs related to responding to the Government's request for information.

The B-2 bomber, for which the company is the prime contractor, is Northrop Grumman's largest program and is reported under the aircraft segment. In November 1997, the company delivered to the U.S. Air Force the last B-2 currently on order. At its Palmdale, California facility, the company continues to perform modifications to early Block 10 and Block 20 aircraft to bring them to the fully operational Block 30 configuration. The U.S. Air Force currently plans to operate two B-2 bomber squadrons of eight aircraft each with an additional five aircraft available to fill in for those in depot for periodic maintenance.

The company manufactures portions of the Boeing 737, 747, 757, 767 and 777 jetliners, the Gulfstream IV and V business jets, and the Boeing C-17 military transport. Northrop Grumman has been a principal airframe subcontractor for the Boeing 747 jetliner since the program began in 1966, producing the fuselage and aft body section for the 747 as well as cargo and passenger doors, the vertical and horizontal body stabilizers, floor beams and smaller structural components. The majority of the Boeing jetliner work is performed at the aircraft segment's production sites in Hawthorne, California and Grand Prairie, Texas.

Northrop Grumman manufactures engine nacelles for the Gulfstream IV and other business jets and produces the integrated wings for Gulfstream's newest business jet, the Gulfstream V. The company also produces the empennage, engine nacelles, and control surfaces for the C-17, the U.S. Air Force's most advanced airlifter. The work performed on the C-17, Gulfstream IV and V, 757, 767, 777 and some components of the 747 were added as a result of the Grumman and Vought acquisitions.

The company also is the principal subcontractor to The Boeing Company on the F/A-18 program. The F/A-18 is a fighter/ground-attack aircraft with configurations equipped for either one or two crew members. Principally deployed by the U.S. Navy on aircraft carriers, it also has been purchased by several other nations as a land-based combat aircraft. The company builds approximately 40 percent of the aircraft including the center and aft fuselage, vertical tails, and associated subsystems. Of the versions of the F/A-18 currently in production, the C is a single-seat combat aircraft that was first delivered to the U.S. Navy in 1987 and the D is a two-seat version principally used for training. The F/A-18 single-seat E and two-seat F are enhanced versions currently in the low rate initial production phase and will serve as the U.S. Navy's next-generation multimission aircraft.

The company serves as prime contractor for the E-8 Joint Surveillance Target Attack Radar System (Joint STARS), which is included in the electronics segment. Joint STARS detects, locates, classifies, tracks and targets potentially hostile ground movement in all weather conditions. It is designed to operate around the clock in constant communication through secure data links with Air Force command posts, Army mobile ground stations or centers of military analysis far from the point of conflict. The Joint STARS platform is a remanufactured Boeing 707-300 airframe. The 707 is remanufactured at Northrop Grumman's Lake Charles, Louisiana site. Final installation of electronics and testing are performed at the electronics segment integration and test facility in Melbourne, Florida.

Northrop Grumman also is a major producer of airborne early warning and control systems, including the all-weather E-2C Hawkeye aircraft. The E-2C, reported under the company's electronics segment, has been in active service with the U.S. Navy since 1973 and is employed by the air forces of five other nations.

The company's electronics segment also is a major producer of airborne radar systems. Included in this business area are the AN/APG-66 and AN/APG-68 fire control radars for the F-16 aircraft, of which more than six thousand have been produced since 1976. The AN/APG-66 is presently on 16 airborne platforms and is deployed in 20 countries. Northrop Grumman currently is leading a joint venture with Raytheon to develop the AN/APG-77 radar for the F-22 aircraft. The AN/APG-77 is designed for air-superiority and strike operations and features a low observable, active aperture, electronically-scanned array with multi-target, all-weather capability. The company's electronics segment also produces the AN/APY-1/2 surveillance radar system which provides air-to-air surveillance capability for the E-3 Airborne Warning And Control System (AWACS). AWACS is designed to detect and track both enemy and friendly aircraft throughout a large volume of airspace.

The company is a leader in producing marine machinery and advanced propulsion systems, missile launchers, shipboard instrumentation and control systems, mine countermeasures and undersea vehicles. Every Nimitz-class aircraft carrier is fitted with eight turbine generator sets that are produced at the electronics segment Sunnyvale, California site. Each shipset of these powerful generators develops enough power to supply a city of 75,000 people. The company also produces the main propulsion system for the Navy's Seawolf-class attack submarines.

ECM denotes electronic countermeasures equipment manufactured by the company's electronics segment. The company's Rolling Meadows, Illinois site produces the AN/ALQ-135, an internally mounted radar jammer deployed on F-15 fighter aircraft as part of that aircraft's tactical electronic warfare system. The AN/ALQ-162 Shadowbox, a jammer built specifically to counter continuous wave radars, has been installed on the AV-8B and certain foreign F/A-18 aircraft. It also is being deployed on U.S. Army helicopters and special mission aircraft and has been sold to the air forces of three other nations. The company is also under contract to develop and produce a directional infrared countermeasures (DIRCM) system for the United Kingdom and the U.S. Special Operations Command slated for use on British helicopters, transports, and U.S. Special Operations Command C-130 transports to reduce vulnerability to heatseeking missiles. DIRCM is designed to provide high-powered jamming to counter more advanced seekers expected in the twenty-first century. The company's Linthicum, Maryland site produces the Airborne Self-Protection Jammer (ASPJ) in a joint venture with ITT-Avionics. The ASPJ is an internally mounted system that protects tactical aircraft against numerous radar-guided threats. It currently is installed on selected F/A-18 and F-14 aircraft.

Northrop Grumman, as prime contractor to the U.S. Army, is developing a "brilliant" anti-armor submunition, designated as BAT, with production scheduled to commence in 1998. BAT is a three-foot-long, forty-four pound, wide-areaattack submunition that will be used to disable and destroy armored vehicles and trucks. BATs are meant to be carried and dispensed by a larger missile and are designed to be ejected over an armored vehicle column or attacking formation. Each BAT has an acoustic sensor that can home in on the noise

created by a tank's or truck's engine and an infrared sensor that can home in on the heat generated by a vehicle's engine.

In addition, the company produces air defense and air traffic control radar systems for airspace management for domestic and international customers. The three-dimensional AN/TPS-70/75 radars and predecessor AN/TPS-43 are among the products in this business area. They have been the U.S. Air Force air defense system standard since 1968. These systems currently operate in more than 30 countries, supporting air defense, air sovereignty, air traffic control and counternarcotics needs. The ASR-12, a solid-state, next generation derivative of the company's ASR-9 Terminal Radar, is designed to detect and display aircraft and weather simultaneously, helping air traffic controllers guide aircraft through the crowded skies surrounding airports.

Northrop Grumman designs, develops, operates and supports computer systems for scientific and management information. This business is included in the information technology and services segment. Services provided include systems integration, systems service, information conversion, and training for federal, state and local governments and private industry. The company also provides military base support functions and aircraft maintenance at a number of U.S. Government facilities. Logicon, included in the information technology and services segment, provides advanced technology systems and services to support national security, civil and industrial needs in the following areas: command, control, communications and intelligence; information systems development and support; mission planning and battle management; training and simulation; and science and technology. Contracts with the U.S. Government account for most of Logicon's revenues.

Tables of contract acquisitions, net sales and funded order backlog follow and complement industry segment data. B-2, Boeing Jetliners (the 737, 747, 757, 767 and 777), F/A-18, and C-17 are currently the major programs of the aircraft industry segment. Surveillance Aircraft (the E-2C Hawkeye and E-8 Joint STARS), Airborne Radar, Marine, ECM, Space and Airspace Management are the major programs of the electronics industry segment.

In the following table of industry segment and major customer data, revenue from the United States Government includes revenue from contracts on which Northrop Grumman is the prime contractor as well as those on which the company is a subcontractor and the ultimate customer is the U.S. Government.

# RESULTS OF OPERATIONS BY INDUSTRY SEGMENT AND MAJOR CUSTOMER

/ear ended December 31, \$ in millions	1997	1996	1995
Revenue			
Aircraft			
United States Government	\$2,779	\$3,060	\$3,556
Other customers	1,313	798	835
Intersegment sales	313	254	187
	4,405	4,112	4,578
lectronics			
United States Government	3,547	3,336	1,831
Other customers	512	508	228
Intersegment sales	42	39	103
	4,101	3,883	2,162
nformation Technology and Services			
United States Government	884	828	761
Other customers	118	77	61
Intersegment sales	20	5	1
	1,022	910	823
ntersegment eliminations	(375)	(298)	(291)
otal revenue	\$9,153	\$8,607	\$7,272
		==========	
perating Profit Aircraft	¢ 654	¢ 400	¢ 465
Electronics	\$ 654 309	\$ 499 360	\$ 465 197
Information Technology and Services	95	49	58
Total operating profit	1,058	908	720
Adjustments to reconcile operating profit to operating		900	720
Other income included above	(6)	(17)	
State and local income taxes	(6)	(52)	(39)
General corporate expenses	(127)	(123)	(109)
Mark-to-market restricted stock rights	<b>`</b> (39)	(13)	. ,
Operating margin	\$ 880	\$ 703	\$ 572

Year ended December 31, \$ in millions	1997	1996	1995
Contract Acquisitions			
Aircraft	\$ 3,041	\$ 3,890	\$ 1,808
Electronics	4,369	\$ 3,890 6,228	\$ 1,808 2,408
Information Technology and Services	4,309 938	977	2,400
information recinology and services			
Total acquisitions	\$ 8,348	\$11,095	
Funded Order Backlog	¢ 5 000	¢ 7 044	¢ 7 010
Aircraft	\$ 5,993		,
Electronics	5,422	5,112	2,728
Information Technology and Services	447	511	439
Total backlog	\$11,862	,	
		=============	
Identifiable Assets			
Aircraft	\$ 2,386	\$ 2,357	\$ 2,481
Electronics	5,451	5,583	1,948
Information Technology and Services	559	640	662
- · · · · · · · · · · · · · · · · · · ·			
Operating assets		8,580	,
General corporate	1,281	1,065	551
Total assets	\$ 9,677	\$ 9,645	\$ 5,642
		=============	
Capital Expenditures	<b>A A A</b>		÷
Aircraft	\$ 93	\$ 84	\$ 85
Electronics	126	91	36
Information Technology and Services	17	22	16
General corporate	2	1	3
Total expenditures	\$ 238	\$ 198	\$ 140
Depreciation and Amortization			
Aircraft	\$ 126	\$ 117	\$ 172
Electronics	255	230	¢ 172 84
Information Technology and Services	35	230	33
General corporate	2	20	1
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Total depreciation and amortization	\$ 418	\$ 375	\$ 290

Individual companies prosper in the competitive aerospace/defense environment according to their ability to develop and market their products. They also must have the ability to provide the people, facilities, equipment and financial capacity needed to deliver those products with maximum efficiency. It is necessary to maintain, as the company has, sources for raw materials, fabricated parts, electronic components and major subassemblies. In this manufacturing and systems integration environment, effective oversight of subcontractors and suppliers is as

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vital to success as managing internal operations. Northrop Grumman's operating policies are designed to enhance these capabilities. The company also believes that it maintains good relations with its employees, approximately 12 percent of whom are covered by collective bargaining agreements.

U.S. Government programs in which Northrop Grumman either participates, or strives to participate, must compete with other programs for consideration during our nation's budget formulation and appropriation processes. As a consequence of the continued pressure to reduce the overall federal budget, the U.S. defense budget is not expected to increase substantially in the near term. Budget decisions made in this environment will have long-term consequences for the size and structure of Northrop Grumman and the entire defense industry. An important factor in determining Northrop Grumman's ability to compete successfully for future contracts will be its cost structure vis-a-vis other bidders.

Although the ultimate size of future defense budgets remains uncertain, the defense needs of the nation are expected to provide substantial research and development (R&D) funding and other business for the company to pursue well into the future.

Northrop Grumman has historically concentrated its efforts in such high technology areas as stealth, airborne surveillance, battle management, precision weapons and systems integration. Even though a high priority has been assigned by the Department of Defense to the company's major programs, there remains the possibility that one or more of them may be reduced, stretched or terminated.

Northrop Grumman, with its involvement on various Boeing jetliners, is optimistic about the long-term prospects for its commercial aerostructures business.

Northrop Grumman pursues new business opportunities when justified by acceptable financial returns and technological risks. The company examines opportunities to acquire or invest in new businesses and technologies to strengthen its traditional business areas. Northrop Grumman continues to capitalize on its technologies and skills by entering into joint ventures, partnerships or associations with other companies.

Northrop Grumman, as well as many other companies in the defense industry, suffered the effects of the Department of Defense's practice in the 1980s of structuring high-risk research and development contracts, such as the Tri-Service Standoff Attack Missile (TSSAM), as fixed-price or capped cost-reimbursement type contracts. Although Northrop Grumman has stopped accepting these types of contracts, it has experienced financial losses on TSSAM and other similar programs acquired under them in the past. In the event of termination for convenience, contractors are normally protected by provisions covering reimbursement for costs incurred subsequent to termination. The company received a termination for convenience notice on the TSSAM program in February 1995. In December 1996, the company filed a lawsuit against the U.S. Government in the U.S. Court of Federal Claims seeking the recovery of approximately \$750 million for uncompensated performance costs, investments, and a reasonable profit. In prior years, the company had charged to operations in excess of \$600 million related to this program. Northrop Grumman is unable to predict whether it will realize some or all of its claims against the U.S. Government from the TSSAM contract.

Prime contracts with various agencies of the U.S. Government and subcontracts with other prime contractors are subject to a profusion of procurement regulations, with noncompliance found by any one agency possibly resulting in fines, penalties, debarment or suspension from receiving additional contracts with all agencies. Given the company's dependence on U.S. Government business, suspension or debarment could have a material adverse affect on the company's future. Moreover, these contracts may be terminated at the U.S. Government's convenience as was done with the TSSAM program. While Northrop Grumman conducts most of its business with the U.S. Government, principally the Department of Defense, commercial sales still represent a significant portion of total revenue.

Federal, state and local laws relating to the protection of the environment affect the company's manufacturing operations. The company has provided for the estimated cost to complete remediation where it is probable that the company will incur such costs in the future, including those for which it has been named a Potentially Responsible Party (PRP) by the Environmental Protection Agency or similarly designated by other environmental agencies. The company has been designated a PRP under federal Superfund laws at 15 hazardous waste sites and under state Superfund laws at five sites. It is difficult to estimate the timing and ultimate amount of environmental cleanup costs to be incurred in the future due to the uncertainties regarding the extent of the required cleanup and the status of the law, regulations and their interpretations. Nonetheless, to assess the potential impact on the company's financial statements, management estimates the total reasonably possible remediation costs that could be incurred by the company. Such estimates take into consideration the professional judgment of the company's environmental engineers and, when necessary, consultation with outside environmental specialists. In most instances, only a range

of reasonably possible costs can be estimated. However, in the determination of accruals the most probable amount is used when determinable and the minimum is used when no single amount is more probable. The company records accruals for environmental cleanup costs in the accounting period in which the company's responsibility is established and the costs can be reasonably estimated. Management estimates that at December 31, 1997, the reasonable range of future costs for environmental remediation, including Superfund sites, is \$51 million to \$86 million, of which \$61 million has been accrued. The amount accrued has not been offset by potential recoveries from insurance carriers or other PRPs. Should other PRPs not pay their allocable share of remediation costs, the company may have to incur costs in addition to those already estimated and accrued. The company is making the necessary investments to comply with environmental laws; the amounts, while not insignificant, are not considered material to the company's financial position, results of operations, or cash flows.

The company has a program to identify, evaluate and implement changes to computer programs as necessary to address the year 2000 issue. The issue affects computer applications which may not properly recognize and process data for the year 2000 and beyond. The evaluation and the development of conversion plans where necessary are being performed in coordination with customers and suppliers. Based on information developed to date, management does not anticipate any significant impact on the company or that future expenditures for required modifications and conversions will have a material adverse effect on the company's financial position, results of operations, or cash flows.

# MEASURES OF VOLUME

Contract acquisitions tend to fluctuate and are determined by the size and timing of new and add-on orders. The effects of multiyear orders and/or funding can be seen in the highs and lows shown in the following table. The funded order backlog of ESG on the date the business was acquired is reflected as acquisitions in 1996. The Airborne Radar, Marine, Space and Airspace Management business areas were added as part of the ESG acquisition.

B-2 acquisitions in 1996 included \$453 million for the upgrade of test vehicle AV-1 to operational status increasing the program to 21 operational aircraft. The balance of B-2 acquisitions in 1996 and acquisitions for 1997 and 1995 include incremental funding for ongoing development work, spares and other customer support for the operational aircraft program. The company still stands to gain future new post production business, such as airframe depot maintenance, repair of components, operational software changes and product improvement modifications. The debate over the future of the B-2 continues. Without future production orders the nation's multibillion-dollar investment in the company's B-2 capability will be disassembled and become retrievable only at a large additional cost.

# Contract Acquisitions

\$ in millions	1997	1996	1995
B-2	\$ 710	\$ 1,682	\$ 475
Surveillance Aircraft	1,216	1,330	1,084
Boeing Jetliners	940	737	464
Airborne Radar	842	1,639	
Marine	577	901	
F/A-18	622	759	888
ECM	357	335	592
Space	318	414	
Airspace Management	388	629	
C-17	104	383	208
Information Technology and Services	938	977	836
All other	1,336	1,309	505
	\$ 8,348	\$11,095	\$ 5,052

In 1997, the company received orders for 12 F/A-18E/F shipsets. Acquisitions in 1996 included orders for 62 F/A-18C/D shipsets. In 1996 the company also received long-lead funding for the first phase of the Low Rate Initial Production (LRIP) of the F/A-18E/F along with continued funding of the engineering and manufacturing development (EMD) phase of the program. Orders for 128 F/A-18C/D shipsets were finalized in 1995.

The company received final authorization to produce 50 747 jetliner shipsets in each of the years 1997 and 1996.

The company recorded orders for 6, 18, and 16 wing shipsets for the Gulfstream V business jet in 1997, 1996 and 1995, respectively. Northrop Grumman is producing the Gulfstream V wings under a revenue-sharing agreement with Gulfstream Aerospace (Gulfstream). Northrop Grumman will recognize revenue for its proportionate share of the revenue of each business jet when they are delivered to the ultimate customer by Gulfstream. Northrop Grumman has received 76 orders for the Gulfstream V through December 1997. The Gulfstream V received aircraft certification in April 1997. The company is using program accounting for the Gulfstream V with an estimated 250 shipsets to be delivered over a ten-year period. Inventoried costs at December 31, 1997 include \$81 million of learning-curve costs

for this program. The learning-curve costs represent the excess of production cost of delivered and in-process items over the estimated average unit cost. This concept assumes that production cost per unit decreases over time due to efficiencies from continuous improvements in the performance of repetitive tasks. All nonrecurring costs for the development of the wings have been expensed as incurred.

ECM acquisitions for 1995 included an award of \$279 million from the United Kingdom Ministry of Defence to develop and produce the DIRCM systems.

The balance of ESG funded order backlog at the date of acquisition, for those programs not listed in the table, is included in the "all other" category. ESG accounts for the major increase in the "all other" category in 1996 over 1995.

Year-to-year sales vary less than contract acquisitions and reflect performance under new and ongoing contracts. The 1996 results of operations include ESG since the acquisition in March 1996. Comparative results for 1995 do not include ESG data.

Sales for 1997 were the highest in the company's history and were 6 percent higher than the previous record registered in 1996. Without the ESG acquisition, sales for 1996 would have declined 8 percent from the 1995 level.

# Net Sales

<pre>\$ in millions</pre>	1997	1996	1995
B-2	\$1,615	\$1,725	\$1,914
Surveillance Aircraft	1,073	1,104	1,179
Boeing Jetliners	858	569	569
Airborne Radar	668	560	
Marine	590	496	
F/A-18	551	715	822
ECM	384	398	351
Space	328	315	
Airspace Management	297	223	
C-17	276	249	244
Information Technology and Services	1,002	905	822
All other	1, 511	1,348	1,371
	\$9,153	\$8,607	\$7,272

The decreasing trend in the B-2 revenues from both EMD and production work continued in 1997. The level of EMD effort, included in amounts reported as contract R&D, constituted 19 percent of the total B-2 revenue, down from 33 percent in 1996 and 30 percent in 1995. Current planning data indicate that the level of overall B-2 revenue will decline roughly 20 percent in 1998 as compared to 1997.

Sales decreased in 1997 for the C/D version of the F/A-18 program with a decrease of deliveries to 35, as compared to 68 deliveries in 1996 and 56 deliveries in 1995. The company currently plans to deliver 33 F/A-18C/D shipsets in 1998. F/A-18E/F revenue increased in 1997 due to the acceleration of the program's LRIP phase, which began in late 1996. The final three shipsets for the EMD phase of the program were delivered in 1996. A total of seven shipsets were delivered under the F/A-18E/F EMD contract in 1995. In 1998 the company plans to deliver the first seven shipsets under the F/A-18E/F LRIP contract.

Deliveries of 747 shipsets were 46 in 1997, 28 in 1996, and 24 in 1995. Increased deliveries of all Boeing jetliner shipsets in 1997 resulted in a 51 percent increase in revenue from these programs. The change in the mix of Boeing jetliners delivered in 1996 resulted in the same level of sales as in 1995. Sixty-one 747 shipsets are currently expected to be delivered in 1998.

The electronics industry segment revenues increased 80 percent in 1996 as a result of the inclusion of the ESG operations, which more than offset the reduction in revenue on the company's other electronics programs.

The year-end funded order backlog is the sum of the previous year-end backlog plus the year's contract acquisitions minus the year's sales. Backlog is converted into the following years' sales as costs are incurred or deliveries are made. It is expected that approximately 60 percent of the 1997 year-end backlog will be converted into sales in 1998.

# Funded Order Backlog

\$ in millions	1997	1996	1995
B-2	\$ 2,788	\$ 3,693	\$ 3,736
Surveillance Aircraft	1,807	1,664	1,438
Boeing Jetliners Airborne Radar	1,562	1,480	1,312
Marine	1,253 392	1,079 405	
F/A-18	746	675	631
ECM	657	684	747
Space	89	99	
Airspace Management	497	406	
C-17	239	411	277
Information Technology and Services	447	511	439
All other	1,385	1,560	1,599
	\$11,862	\$12,667	\$10,179

Total U.S. Government orders, including those made on behalf of foreign governments (FMS), comprised 72 percent of the backlog at the end of 1997 compared with 76 percent at the end of 1996 and 77 percent at the end of 1995. Total foreign customer orders, including FMS, accounted for 17 percent of the backlog at the end of 1997 compared with 17 percent in 1996 and 13 percent in 1995. Domestic commercial business in backlog at the end of 1997 was 17 percent and at the end of both 1996 and 1995 was 16 percent.

#### MEASURES OF PERFORMANCE

The company's operating profit for 1997 was a record high. Company-wide efforts to reduce costs, install tighter business controls, improve cash management, dispose of excess assets and more effectively utilize productive assets are all goals aimed at contributing to the future success of Northrop Grumman. This financial report demonstrates the degree to which the accomplishment of these goals is being achieved.

Operating profit in the aircraft segment increased to its highest level ever in 1997 principally as a result of increased pension income, a \$55 million cumulative margin rate adjustment on the B-2 production contract, and higher levels of Boeing jetliner sales. The improvements were partially offset by lower F/A-18 operating margin on reduced sales. Aircraft segment operating profit in 1996 benefited from increased operating margin on the C-17 military transport and Boeing jetliners and the favorable settlement of a claim involving productivity

improvements on the F/A-18. These items offset the reduced operating margin on the B-2 program due to lower sales volume, a \$25 million charge related to the company's work for Fokker Aircraft N.V., which declared bankruptcy in March 1996, and \$22 million in charges related to plant closures. The amount and rate of operating margin recognized on the 747 increased in 1996 due to increased deliveries and higher operating margin on the deliveries of the last phase of a 300-shipset production contract. Aircraft segment operating profit in 1995 includes \$31 million in expenditures for company-sponsored research and development for commercial aerostructures.

Following the award of the last increment of production funding for the B-2, the company began recording future operating margin increases on all production aircraft as these units are delivered and accepted by the customer. At the time each unit is delivered, an assessment is made of the status of the production contract so as to estimate the amount of any probable additional margin available beyond that previously recognized. That unit's proportionate share of any such unrecognized remaining balance is then recorded. In this fashion it is believed that margin improvements will be recognized on a more demonstrable basis. All 15 production units have been initially delivered. Twelve units remain to be retrofitted with final deliveries scheduled for the year 2000.

Electronics segment operating profit in 1997 was reduced by cumulative margin rate adjustments of \$53 million on the E-8 Joint STARS and \$33 million on the DIRCM program. Both charges resulted from an increase in the cost estimate to complete the company's work on these two programs. Partially offsetting these downward adjustments was the settlement of a claim involving work performed in the 1980's on the MX missile Interface Test Adapter (ITA), which resulted in an \$8 million increase in operating margin and \$12 million in interest income.

Operating profit in the electronics segment in 1996 benefited from the addition of ESG, which more than offset the reductions in the company's other electronics programs. The reductions were primarily due to reduced volume and a \$29 million charge recorded as a result of the write-down of a claim related to avionics work performed by the former Grumman Corporation prior to its acquisition by Northrop in 1994.

Information technology and services segment operating profit improved in 1997 as a result of the return to profitability of the company's data systems activities and increased margin rates on higher sales at Logicon. The decrease in 1996 operating profit in the information technology and services segment resulted from increased costs in the data systems activities, partially offset by an increase in operating margin due to the acquisition of Geodynamics.

Operating margin in 1997 included \$133 million of pension income compared with \$39 million in 1996 and \$23 million in 1995. Also impacting operating margin is the cost of providing retiree health care and life insurance benefits-\$89 million in 1997, \$91 million in 1996 and \$87 million in 1995.

In 1996, the company recorded a \$90 million pretax charge related to the closure of four plants. The charge included \$30 million for costs related to the reduction of personnel and other closure activities, which lowered operating profit in the aircraft and electronics industry segments by \$22 million and \$8 million, respectively, and \$60 million for the write-down of facilities included in Other Deductions in the Consolidated Statements of Income. These charges were a result of the company's continuing efforts to reduce operating costs and dispose of assets that have become excess due to changes in the company's business strategy.

Interest expense decreased \$13 million in 1997, following an increase of \$133 million in 1996. The increase in 1996 came primarily from the issuance of debt to finance the ESG acquisition. Total debt at December 31, 1997, stood at \$2.8 billion compared to \$3.4 billion at the end of 1996 and \$1.4 billion at the end of 1995.

The company's effective federal income tax rate was 37.5 percent in 1997, 38.9 percent in 1996 and 38.2 percent in 1995.

#### MEASURES OF LIQUIDITY AND CAPITAL RESOURCES

The trend and relationship of sales volume with net accounts receivable and inventoried costs is a useful measure in assessing the company's liquidity. In 1997, the company's yearend net investment in these balances represented 30 percent of sales, approximately the same as in 1996 and 1995.

Cash flows from operations have averaged \$750 million annually over the last three years. The \$730 million of cash flow from operations in 1997 was a decrease of \$13 million from 1996 which was a decrease of \$34 million over 1995. These cash flows have been sufficient to service debt, finance capital expansion projects and continue paying dividends to shareholders.

The following table is a condensed summary of the detailed cash flow information contained in the Consolidated Statements of Cash Flows.

Year ended December 31	1997	1996	1995
Cach came from			
	0.1%	66%	96%
			2
Shareholders	- -	4	-
Cash came from Customers Lenders	2	1	2
	100%	100%	100%
	94%       66%         4       29         4       2         100%       100%         rs of services and materials       83%       58%         2       24       10       13		
Cash went to			
	83%	58%	84%
Sellers of assets	2	24	2
Lenders	10	13	10
Suppliers of facilities/other	4	4	3
Shareholders	1	1	1
	100%	100%	100%

The cash received from lenders in 1996 resulted from borrowing for the acquisition of ESG. The cash received from shareholders in 1996 was from a public stock offering in which the company issued approximately 8 million shares of common stock at \$63.25 per share. The net proceeds of \$493 million were used to pay down outstanding debt under the company's Credit Agreement.

During the first quarter of 1996, the company sold to institutional investors \$400 million of 7 percent notes due in 2006, \$300 million of 7 3/4 percent debentures due in 2016 and \$300 million of 7 7/8 percent debentures due in 2026. The proceeds from these issuances were used to finance a portion of the purchase price of ESG. The debt indenture contains restrictions relating to limitations on liens, sale and leaseback arrangements and funded debt of subsidiaries.

To finance the balance of the purchase price of ESG, in 1996, the company amended its Credit Agreement with a group of domestic and foreign banks to provide for three credit facilities: \$1.8 billion available on a revolving credit basis through March 2002; a variable interest rate \$500 million two-year term loan due March 1, 1998, which was repaid in July 1996; and a variable interest rate \$1.5 billion six-year term loan due in 24 quarterly installments of \$62.5 million plus interest beginning June 1996. Effective November 1, 1996, the Credit

Agreement was further amended to reduce the \$1.5 billion term loan to \$1.05 billion payable in 21 quarterly installments of \$50 million plus interest beginning March 1, 1997. Cash flow from operations in 1997 was sufficient to allow the company to make the \$200 million required term loan payment as well as to reduce borrowings under the revolving credit facility by \$250 million.

To provide for long-term liquidity the company believes it can obtain additional capital from such sources as: the public or private capital markets; the further sale of assets; sale and leaseback of operating assets; and leasing rather than purchasing new assets.

The cost reduction and cash improvement programs underway throughout the company have produced favorable results, with the expectation that further efforts will result in minimizing the need to incur additional borrowings during 1998. Cash generated from operations is expected to be sufficient in 1998 to service debt, finance capital expansion projects and continue paying dividends to the shareholders.

Capital expenditure commitments at December 31, 1997 were approximately \$170 million including \$3 million for environmental control and compliance purposes.

The company will continue to provide the productive capacity to perform its existing contracts, dispose of assets no longer needed to fulfill operating requirements, prepare for future contracts and conduct R&D in the pursuit of developing opportunities. While these expenditures tend to limit short-term liquidity, they are made with the intention of improving the long-term growth and profitability of the company.

#### MARKET RISK

The company has fixed-rate long-term debt obligations, most of which are not callable until maturity. The company also has financial instruments that are subject to interest rate risk, principally variable-rate short-term debt outstanding under the Credit Agreement. The company may enter into interest rate swap agreements to offset the variable-rate characteristics of these loans. At December 31, 1997, no interest rate swap agreements were in effect.

Only a small portion of the company's transactions are contracted in foreign currencies. The company does not consider the market risk exposure relating to foreign currency exchange to be material.

### NEW ACCOUNTING STANDARDS

In June 1997, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 131 - Disclosures about Segments of an Enterprise and Related Information. This standard changes and expands operating segment disclosure requirements for interim and annual periods. The Statement is effective for fiscal years beginning after December 15, 1997; however, application is not required for interim periods of 1998. The adoption of this standard will have no effect on the company's results of operations, financial position or cash flows. Management has not yet determined the extent to which adoption of this standard will effect operating segment disclosures.

# FORWARD-LOOKING INFORMATION

Certain statements and assumptions in Management's Discussion and Analysis contain or are based on "forward-looking" information (as defined in the Private Securities Litigation and Reform Act of 1995) that involves risk and uncertainties, including statements and assumptions with respect to future revenues, program performance and cash flows, the outcome of contingencies including litigation and environmental remediation, and anticipated costs of capital investments and planned dispositions. The company's operations are necessarily subject to various risks and uncertainties; actual outcomes are dependent upon many factors, including, without limitation, the company's successful performance of internal plans; government customers' budgetary restraints; customer changes in short-range and long-range plans; domestic and international competition in both the defense and commercial areas; product performance; continued development and acceptance of new products; performance issues with key suppliers and subcontractors; government import and export policies; termination of government contracts; the outcome of political and legal processes; legal, financial, and governmental risks related to international transactions and global needs for military and commercial aircraft and electronic systems and support; as well as other economic, political and technological risks and uncertainties.

Selected Financial Data

Year ended December 31, \$ in millions, except per share	1997	1996	1995	1994	1993
Net sales to					
United States Government	\$ 7,210	\$ 7,224	\$ 6,148	\$ 5,980	\$ 4,800
The Boeing Company	858	569	569		531
Other customers	1,085	814	555	562	54
Total net sales	9,153	8,607	555 7,272	7,025	5,385
Net income	407	264	277	53	116
Basic earnings per share	6.10	4.22	4.79		2.04
Diluted earnings per share	5.98	4.15	4.71	.91	2.01
Cash dividends per share	1.60	1.60	1.60	1.60	1.60
Net working capital	221	106	435	533	567
Current ratio	1.08 to 1	1.04 to 1	1.25 to 1		
Total assets			\$ 5,642		
Long-term debt	2,500	2,950	1,163	1,633	160
Total long-term obligations	4,339	4,694	2,281	2,793	
Long-term debt as a percentage of	.,	.,	=,===	_,	
shareholders' equity	95.3%	129.3%	73.3%	116.8%	11.3%
Operating margin as a percentage of					
Net sales	9.6	8.2	7.9	3.2	4.1
Average operating assets	10.7	10.3		5.5	8.8
Not income on a newspaper of					
Net income as a percentage of Net sales	4.5	3.1	3.8	.8	2.2
Average assets	4.3	3.5	4.7		
Average shareholders' equity	16.6		18.5		8.4
Research and development expenses	<b>*</b> 4 070	<b>*</b> 4 000	<b>.</b>	<b>.</b>	<b>*</b> 4 000
Contract			\$ 1,179		
Noncontract	256	255	164	121	97
Payroll and employee benefits	3,504	3,378	2,883	2,827	2,058
Number of employees at year-end	52,000	51,600	42,300 17,834	46,900	32,830
Number of shareholders at year-end	10,683	17,136	17,834	18,241	13,118
Depreciation	\$ 232	\$ 210	\$ 231	\$ 231	\$ 217
Amortization of					
Goodwill	94	83	38	28	
Other purchased intangibles	92	82	21		
Maintenance and repairs	107	93	80		87
Rent expense	108	110	106	99	64
Floor area (millions of square feet)					
Owned	20.5	22.5	20.1		
Commercially leased	10.0	9.9	8.2	8.5	3.9
Leased from United States Government	8.8	9.0	10.2	9.4	2.1

# Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

# CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

December 31, \$ in millions	1997	1996
Assets:		
Current assets		
Cash and cash equivalents	\$ 63	\$ 123
Accounts receivable	1,441	1,453
Inventoried costs	1,283	1,053
Deferred income taxes	82	78
Prepaid expenses	67	68
Total current assets	2,936	2,775
Property, plant and equipment at cost		
Land and land improvements	201	207
Buildings	769	806
Machinery and other equipment	2,063	2,114
Leasehold improvements	76	68
	3,109	3,195
Accumulated depreciation	(1,763)	
	1,346	1,412
Other assets	a	
Goodwill, net of accumulated amortization of \$244 in 1997 and \$150 in 1996	3,421	3,470
Other purchased intangibles, net of accumulated		
amortization of \$208 in 1997 and \$116 in 1996	896	988
Prepaid pension cost, intangible	150	
pension asset and benefit trust fund	452	229
Deferred income taxes Investments in and advances to	485	520
affiliates and sundry assets	141	251
	5,395	5,458
	\$ 9,677	\$ 9,645

December 31, \$ in millions	1997	1996
Liabilities and Shareholders' Equity:		
Current liabilities		
Notes payable to banks	\$ 91	\$ 228
Current portion of long-term debt	200	200
Trade accounts payable	463	477
Accrued employees' compensation	366	357
Advances on contracts	410	230
Income taxes payable	16	25
Deferred income taxes	717	621
Other current liabilities	452	531
Total current liabilities	2,715	2,669
Long-term debt	2,500	2,950
Accrued retiree benefits	1,716	1,624
Other long-term liabilities	48	59
Deferred income taxes	75	61
Shareholders' equity		
Paid-in capital		
Preferred stock, 10,000,000 shares authorized;		
none issued		
Common stock, 200,000,000 shares authorized;		
issued and outstanding 1997 - 67,278,876		
1997 - 67,278,876	020	784
Retained earnings		1,502
Unfunded pension losses, net of taxes	(22)	(4)
		2,282
	\$9,677	\$9,645

The accompanying notes are an integral part of these consolidated financial statements.

# CONSOLIDATED STATEMENTS OF INCOME

Year ended December 31, \$ in millions, except per share	1997	1996	1995
Net sales	\$9,153	\$8,607	\$7,272
Cost of sales			
Operating costs	7,040	6,658	
Administrative and general expenses	1,233	1,246	1,003
Operating margin	880	703	572
Other income(deductions)	47	10	
Interest income Other, net	17 11	12 (13)	4 9
Interest expense	(257)	( )	
	(257)	(270)	(137)
Income before income taxes	651	432	448
Federal and foreign income taxes	244	168	171
Net income	\$ 407	\$ 264	\$ 277
Weighted average common shares			
outstanding, in millions	66.7	62.6	57.8
Basic earnings per share	\$ 6.10	\$ 4.22	\$ 4.79
Diluted earnings per share	5.98	4.15	4.71

The accompanying notes are an integral part of these consolidated financial statements.

# CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

Year ended December 31, \$ in millions, except per share	1997	1996	1995
Paid-in Capital At beginning of year Stock issuance	\$ 784	\$   273 493	\$ 261
Employee stock awards and options exercised, net of forfeitures Treasury stock transactions	60 (6)	23 (5)	12
At end of year	838	784	273
Retained Earnings At beginning of year Net income Cash dividends	1,502 407 (102)	1,325 264 (87)	1,130 277 (82)
At end of year		1,502	1,325
Unfunded Pension Losses, Net of Taxes At beginning of year Change in excess of additional minimum liability over unrecognized prior service costs	(4) (18)	(12) 8	(12)
At end of year	(22)	(4)	(12)
Total shareholders' equity	\$2,623	\$2,282	\$1,586
Book value per share	\$38.99	\$34.30	\$27.34
Cash dividends per share	\$ 1.60	\$ 1.60	\$ 1.60

The accompanying notes are an integral part of these financial statements.

# CONSOLIDATED STATEMENTS OF CASH FLOWS

ar ended December 31, \$ in millions	1997	1996	1995
erating Activities			
Sources of Cash			
Cash received from customers			
Progress payments	\$ 2,264	\$ 2,226	\$ 2,289
Other collections	7,050	6,372	4,818
Interest received	17	13	3
Income tax refunds received	13	12	48
Other cash receipts	7	8	7
Cash provided by operating activities	9,351	8,631	7,165
Uses of Cash			
Cash paid to suppliers and employees	8,280	7,528	6,168
Interest paid	251	219	144
Income taxes paid	64	141	73
Other cash payments	26		3
Cash used in operating activities	8,621	7,888	6,388
Net cash provided by operating activities	730	743	777
vesting Activities			
Payment for businesses purchased, net of cash acquired		(2,886)	(23
Additions to property, plant and equipment	(238)	(198)	(140
Proceeds from sale of property, plant and equipment	106	58	34
Proceeds from sale of affiliates/operations	19	45	5
Proceeds from sale of marketable securities, net of purchases		9	1
Funding of retiree benefit trust		(25)	( -
Other investing activities		4	(21
Net cash used in investing activities	(113)	(2,993)	(144
nancing Activities			
Borrowings under lines of credit	422	2,734	153
Repayment of borrowings under lines of credit	(808)	(635)	(259
Proceeds from issuance of long-term debt	()	1,000	<i>.</i>
Principal payments of long-term debt/capital leases	(200)	(1,090)	(446
Proceeds from issuance of stock Dividends paid	17 (102)	502 (87)	8
Other financing activities	(102)	(107)	(82
Net cash provided by (used in) financing activities	(677)	2,317	
proce(decrease) in each and each equivalents	(60)	67	
crease(decrease) in cash and cash equivalents sh and cash equivalents balance at beginning of year	(60) 123	67 56	7 49
sh and cash equivalents balance at end of year	\$ 63	\$ 123	 \$ 56

\$ 407 232 186	\$	264 210	\$ 277
\$ 232	\$		\$ 277
\$ 232	\$		\$ 277
		210	
		210	
186			231
		165	59
23		10	
(6)		32	34
(44)		52	64
( )			
(81)		(111)	186
(147)		` 7´	426
<b>2</b>		13	(14)
			`84´
66		84	(282)
91		36	(102)
(30)		2	(143)
<b>`</b> 16´		50	<b>`</b> (8)
188		126	86
(9)		(33)	1
(180)		(170)	(114)
`16´		` 6´	`(8)́
\$ 730	\$	743	\$ 777
\$	(81) (147) 2 66 91 (30) 16 188 (9) (180) 16	(81) (147) 2 66 91 (30) 16 188 (9) (180) 16	$\begin{pmatrix} (11) \\ (147) \\ 2 \\ 13 \\ 66 \\ 84 \\ 91 \\ 36 \\ (30) \\ 2 \\ 16 \\ 50 \\ 188 \\ 126 \\ (9) \\ (33) \\ (180) \\ (170) \\ 16 \\ 6 \\ \end{pmatrix}$

The accompanying notes are an integral part of these consolidated financial statements.

# SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

#### PRINCIPLES OF CONSOLIDATION

The consolidated financial statements include the accounts of the corporation and its subsidiaries. All material intercompany accounts, transactions and profits are eliminated in consolidation.

The company's financial statements are in conformity with generally accepted accounting principles. The preparation thereof requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingencies at the date of the financial statements as well as the reported amounts of revenues and expenses during the reporting period. Estimates have been prepared on the basis of the most current and best available information and actual results could differ from those estimates.

#### NATURE OF OPERATIONS

Northrop Grumman is a major producer of military and commercial aircraft subassemblies and defense electronics and is the prime contractor on the U.S. Air Force B-2 Stealth Bomber. The company operates in the aircraft, electronics and information technology and services industry segments within the broadly defined aerospace industry. The majority of the company's products and services are ultimately sold to the U.S. Government and the company is therefore affected by, among other things, the federal budget process.

Sales to the U.S. Government (including foreign military sales) are reported within each industry segment and in total in the Selected Financial Data. The company does not conduct a significant volume of activity through foreign operations or in foreign currencies.

Descriptions of the company's principal products and services along with industry segment data, which is considered to be an integral part of these financial statements, can be found in the Management's Discussion and Analysis section of this report. Intersegment sales are transacted at cost incurred with no profit added. Operating profit is defined to include the Other Income earned by each industry segment, but to exclude costs allocated to

segments for General Corporate Expenses and State and Local Income Taxes. General corporate assets include cash and cash equivalents, corporate office furnishings and equipment, other unallocable property, investments in affiliates, prepaid pension cost, intangible pension asset, benefit trust fund assets, deferred tax assets and certain assets held for sale.

#### SALES

Sales under cost-reimbursement, service, research and development, and construction-type contracts are recorded as costs are incurred and include estimated earned fees or profits calculated on the basis of the relationship between costs incurred and total estimated costs (cost-to-cost type of percentage-of-completion method of accounting). Construction-type contracts embrace those fixed-price type contracts that provide for the delivery at a low volume per year or a small number of units after a lengthy period of time over which a significant amount of costs have been incurred. Sales under other types of the estimated final average unit cost plus profit (units-of-delivery type of percentage-of-completion method of accounting).

Certain contracts contain provisions for price redetermination or for cost and/or performance incentives. Such redetermined amounts or incentives are included in sales when the amounts can reasonably be determined. In the case of the B-2 bomber production contract, future changes in operating margin will be recognized on a units-of-delivery basis and recorded as each equivalent production unit is delivered. Amounts representing contract change orders, claims or limitations in funding are included in sales only when they can be reliably estimated and realization is probable. In the period in which it is determined that a loss will result from the performance of a contract, the entire amount of the estimated ultimate loss is charged against income. Loss provisions are first offset against costs that are included in assets, with any remaining amount reflected in Other Current Liabilities. Other changes in estimates of sales, costs, and profits are recognized using the cumulative catch-up method of accounting. This method recognizes in the current period the cumulative effect of the changes on current and prior periods. Hence, the effect of the changes on future periods of contract performance is recognized as if the revised estimates had been the original estimates.

## CONTRACT RESEARCH AND DEVELOPMENT

Customer-sponsored research and development costs (direct and indirect costs incurred pursuant to contractual arrangements) are accounted for like other contracts.

## NONCONTRACT RESEARCH AND DEVELOPMENT

This category includes independent research and development costs and company-sponsored research and development costs (direct and indirect costs not recoverable under contractual arrangements). Independent research and development (IR&D) costs are included in administrative and general expenses (indirect costs allocable to U.S. Government contracts) whereas company-sponsored research and development costs are charged against income as incurred.

### ENVIRONMENTAL COSTS

Environmental liabilities are accrued when the company determines it is responsible for remediation costs and such amounts are reasonably estimable. When only a range of amounts is established and no amount within the range is better than another, the minimum amount in the range is recorded. The company does not anticipate and record insurance recoveries before collection is probable.

### INTEREST RATE SWAP AGREEMENTS

The company may enter into interest rate swap agreements to offset the variable-rate characteristic of certain variable-rate term loans outstanding under the company's Credit Agreement. Interest on these interest rate swap agreements is recognized as an adjustment to interest expense in the period incurred.

# INCOME TAXES

Provisions for federal, state and local income taxes are calculated on reported financial statement pretax income based on current tax law and also include, in the current period, the cumulative effect of any changes in tax rates from those used previously in determining deferred tax assets and liabilities. Such provisions differ from the amounts currently payable because certain items of income and expense are recognized in different time periods for financial reporting purposes than for income tax purposes.

The company accounts for certain contracts in process using different methods of accounting for financial statements and tax reporting and thus provides deferred taxes on the difference between the financial and taxable income reported during the performance of such contracts.

In accordance with industry practice, state and local income and franchise tax provisions are included in administrative and general expenses.

# EARNINGS PER SHARE

Effective December 31, 1997, the company adopted Statement of Financial Accounting Standards No. 128 - Earnings per Share. This standard establishes new standards for computing and disclosing earnings per share. Dual presentation of "basic" and "diluted" earning per share for all periods presented is required. Accordingly, earnings per share amounts have been restated to conform with the provisions of the new standard.

Basic earnings per share are calculated using the weighted average number of shares of common stock outstanding during each period, after giving recognition to stock splits and stock dividends. Diluted earnings per share reflect the dilutive effect of stock options and other stock awards granted to employees under stock-based compensation plans.

Basic and diluted earnings per share are calculated as follows:

	Net Income	Shares	Earnings per share
	(millions)	(millions)	
1997			
Basic EPS	\$407	66.72	\$6.10
Dilutive effect of stock options and awards		1.32	
Diluted EPS	\$407	68.04	\$5.98
	====	=====	=====
1996			
Basic EPS	\$264 ====	62.60	\$4.22
Dilutive effect of stock options and awards		1.09	
Diluted EPS	\$264	63.69	\$4.15
Difuteu EFS	\$204 ====	=====	=====
1995			
Basic EPS	\$277	57.77	\$4.79
Dilutive effect of stock options and awards		0.89	
Diluted EPS	\$277 ====	58.66 =====	\$4.71 =====

# CASH AND CASH EQUIVALENTS

Cash and cash equivalents include interest-earning debt instruments that mature in three months or less from the date purchased.

## ACCOUNTS RECEIVABLE

Accounts receivable include amounts billed and currently due from customers, amounts currently due but unbilled (primarily related to contracts accounted for under the cost-to-cost type of percentage-of-completion method of accounting), certain estimated contract changes, claims in negotiation and amounts retained by the customer pending contract completion.

## INVENTORIED COSTS

Inventoried costs primarily relate to work in process under fixed-price type contracts (excluding those included in unbilled accounts receivable as previously described). They represent accumulated contract costs less the portion of such costs allocated to delivered items. Accumulated contract costs include direct production costs, factory and engineering overhead, production tooling costs, and allowable administrative and general expenses (except for general corporate expenses and IR&D allocable to commercial contracts, which are charged against income as incurred).

In accordance with industry practice, inventoried costs are classified as a current asset and include amounts related to contracts having production cycles longer than one year.

## DEPRECIABLE PROPERTIES

Property, plant and equipment owned by the company are depreciated over the estimated useful lives of individual assets. Capital leases providing for the transfer of ownership upon their expiration or containing bargain purchase options are amortized over the estimated useful lives of individual assets. Most of these assets are depreciated using declining-balance methods, with the remainder using the straight-line method, with the following lives:

	Years
Land improvements	5-20
Buildings	5-45
Machinery and other equipment	1-18
Leasehold improvements	Length of lease

#### GOODWILL AND OTHER PURCHASED INTANGIBLE ASSETS

Goodwill and other purchased intangible assets are amortized on a straight-line basis over periods of 40 years and a weighted average 15 years, respectively. Goodwill and other purchased intangibles balances are included in the identifiable assets of the industry segment to which they have been assigned and amortization is charged against the respective industry segment operating profit. The recoverability of goodwill and other purchased intangibles is evaluated at least annually considering the projected future profitability and cash flow at the operations to which they relate. When it is determined that an impairment has occurred, an appropriate charge to operations is recorded.

## BUSINESS COMBINATIONS

Effective August 1, 1997, the company consummated the merger of its wholly owned acquisition subsidiary with and into Logicon, Inc., a leading defense information technology and services company. Each share of Logicon's common stock was converted to .6161 of a share of the company's common stock. Approximately 8.6 million shares of the company's common stock were issued for Logicon's common stock. The merger is accounted for as a pooling of interests.

## ACQUISITIONS

On March 28, 1996, Logicon acquired Geodynamics Corporation (Geodynamics) for a cash purchase price of \$32 million. Geodynamics specializes in remote sensing, geographic information systems, modeling and simulation, software development, and systems engineering and integration for the Department of Defense and other government agencies. The operations of Geodynamics since the acquisition date are included in the information technology and services segment.

On March 1, 1996 the company purchased substantially all of the defense and electronics systems business (ESG) of Westinghouse Electric Corporation at a cost of \$2.9 billion and financed the transaction with new borrowings. The operations of ESG have been consolidated with Northrop Grumman effective March 1, 1996 and are included in the electronics industry segment.

On February 16, 1995, Logicon acquired Syscon Corporation (Syscon), which operated as an indirectly wholly owned subsidiary of Harnischfeger Industries, Inc., for a cash purchase price of \$45 million. Syscon is engaged principally in the business of providing systems development, systems integration and systems services to the U.S. government and commercial enterprises. The operations of Syscon since the acquisition date are included in the information technology and services segment.

The purchase method of accounting was used to record all three acquisitions with estimated fair values being assigned to assets and liabilities. The excess of the purchase price over the net tangible assets acquired was assigned to identifiable intangible assets and the remaining balance to goodwill.

The following unaudited pro forma financial information combines Northrop Grumman's, ESG's, Geodynamics' and Syscon's results of operations, as if the acquisitions had taken place on January 1, 1995, and is not necessarily indicative of future operating results of Northrop Grumman.

Year ended December 31, \$ in millions except per share	1996	1995
Sales	\$8,907	\$9,777
Net income	244	160
Basic earnings per share	3.90	2.77
Diluted earnings per share	3.82	2.73

## MERGER AGREEMENT

On July 3, 1997, the company announced that it had entered into a definitive agreement with Lockheed Martin Corporation to combine the companies. Under the terms of the agreement, 1.1923 shares of Lockheed Martin common stock would be exchanged for each share of Northrop Grumman common stock. On February 26, 1998, shareholders of Northrop Grumman approved the merger. Subsequently, the Department of Justice filed suit to block the combination. The outcome cannot be predicted at this time.

The Company will record a charge of \$180 million in the first quarter of 1998 for costs related to the proposed combination. The charge will cover vesting of restricted stock which became issuable following shareholder approval of the merger and other costs associated with the pending combination, such as investment banking fees, legal and accounting fees, and costs related to responding to the Government's request for information.

## ACCOUNTS RECEIVABLE

Unbilled amounts represent sales for which billings have not been presented to customers at year end, including differences between actual and estimated overhead and margin rates. These amounts are usually billed and collected within one year. Progress payments are, however, received on a number of fixed-price contracts accounted for using the cost-to-cost type percentage-of-completion method.

Accounts receivable at December 31, 1997, are expected to be collected in 1998 except for approximately \$127 million due in 1999 and \$38 million due in 2000 and later. These amounts principally relate to long-term contracts with the U.S. Government.

Allowances for doubtful amounts represent mainly estimates of overhead type costs which may not be successfully negotiated and collected.

Accounts receivable were comprised of the following:

\$ in millions	1997	1996
Due from U.S. Government, long-term contracts Current accounts Billed Unbilled Progress payments received	\$  408 3,481 (2,772)	\$ 460 3,493 (2,721)
	1,117	1,232
Due from other customers, long-term contracts Current accounts Billed Unbilled	87 133	78 47
	220	125
Total due, long-term contracts	1,337	1,357
Trade and other accounts receivable Due from U.S. Government Due from other customers	87 72	75 76
Total due, trade and other	159	151
Allowances for doubtful amounts	1,496 (55)	1,508 (55)
	\$ 1,441	\$ 1,453

# INVENTORIED COSTS

Inventoried costs were comprised of the following:

\$ in millions	1997	1996
Production costs of contracts in process Excess of production cost of delivered items	\$1,396	\$1,169
over the estimated average unit cost	141	105
Administrative and general expenses	222	199
	1,759	1,473
Progress payments received	(495)	(533)
	1,264	940
Product inventories - at the lower of	19	113
average cost or market	 Tà	113
	\$1,283	\$1,053

Inventoried costs relate to long-term contracts in process and include expenditures for raw materials and work in process beyond what is required for recorded orders. These expenditures are incurred to help maintain stable and efficient production schedules. The excess of production costs of delivered and in process items over the estimated average costs is carried in inventory under the learning curve concept. Under this concept, production costs per unit are expected to decrease over time due to efficiencies arising from continuous improvement in the performance of repetitive tasks. However, no material amount representing claims, unamortized tooling or other deferred costs is included in inventoried costs.

The ratio of inventoried administrative and general expenses to total inventoried costs is estimated to be the same as the ratio of total administrative and general expenses incurred to total contract costs incurred.

According to the provisions of U.S. Government contracts, the customer has title to, or a security interest in, substantially all inventories related to such contracts.

# INCOME TAXES

Income tax expense, both federal and foreign (which arises primarily from work performed abroad by domestic operations), was comprised of the following:

<pre>\$ in millions</pre>	1997	1996	1995
Currently payable			
Federal income taxes Foreign income taxes	\$ 26 3	\$ 60 2	\$89 1
	 29	 62	 90
Change in deferred federal income taxes	29	106	90 81
	\$244	\$168	\$171

Income tax expense differs from the amount computed by multiplying the statutory federal income tax rate times the income before income taxes due to the following:

\$ in millions	1997	1996	1995
Income tax expense at statutory rate	\$228	\$151	\$157
Goodwill amortization	17	16	13
Provision for nondeductible expenses	2	4	4
Benefit from ESOP dividends	(3)	(3)	(3)
	\$244	\$168	\$171

Deferred income taxes arise because of differences in the treatment of income and expense items for financial reporting and income tax purposes. The principal type of temporary difference stems from the recognition of income on contracts being reported under different methods for tax purposes than for financial reporting.

The tax effects of significant temporary differences and carryforwards that gave rise to year-end deferred federal and state tax balances, as categorized in the Consolidated Statements of Financial Position, were as follows:

\$ in millions	1997	1996
Deferred tax assets		
Deductible temporary differences		
Retiree benefit plan expense	\$ 558	\$ 602
Provision for estimated expenses	60	79
Income on contracts	41	49
Other	37	41
	696	771
Taxable temporary differences	(450)	(110)
Purchased intangibles Excess tax over book depreciation	(152)	(110)
	(53)	(64)
	(205)	(174)
	\$ 491	\$ 597
<pre>Deferred tax liabilities</pre>		
Taxable temporary differences		
Income on contracts	\$ 771	\$ 873
Administrative and general expenses		
period costed for tax purposes	8	1
Retiree benefit plan income	28	1
Excess tax over book depreciation	14	9
Other	22	14
	843	898
Deductible temporary differences		
Provision for estimated expenses	(3)	(86)
Retiree benefit plan expense	(12)	(1)
		(+)
	(15)	(87)
Tax carryforwards		
Tax credits	(22)	(39)
Alternative minimum tax credit	(90)	(90)
	(112)	(129)
	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
	\$ 716	\$ 682
Net deferred tax liability		
Total deferred tax liabilities (taxable		
temporary differences above)	\$1,048	\$1,072
Less total deferred tax assets (deductible		
temporary differences and tax carryforwards above)	823	987
	\$ 225	\$ 85
		============

The tax carryforward benefits are expected to be used in the periods in which net deferred tax liabilities mature. These tax credit carryforwards are in various amounts and expire over the years 1998 through 2007. The alternative minimum tax credit can be carried forward indefinitely.

## NOTES PAYABLE TO BANKS AND LONG-TERM DEBT

The company has available short-term credit lines in the form of money market facilities with several banks. The amount and conditions for borrowing under these credit lines depend on the availability and terms prevailing in the marketplace. No fees or compensating balances are required for these credit facilities. At December 31, 1997, \$87 million was outstanding at a weighted average interest rate of 6.51 percent. At December 31, 1996, \$226 million was outstanding at a weighted average interest rate of 6.44 percent.

Additionally, the company has a credit agreement with a group of domestic and foreign banks to provide for three credit facilities: \$1.8 billion available on a revolving credit basis through March 2002; a variable interest rate \$500 million two-year term loan due March 1, 1998, that was repaid in July 1996; and a variable interest rate \$1.5 billion six-year term loan due in 24 quarterly installments of \$62.5 million plus interest beginning June 1996. Effective November 1, 1996, the Credit Agreement was further amended to reduce the \$1.5 billion term loan to \$1.05 billion payable in 21 quarterly installments of \$50 million plus interest beginning March 1, 1997. The company pays, at least quarterly, interest on the outstanding debt under the Credit Agreement at rates that vary based in part on the company's credit rating and leverage ratio. At December 31, 1997, \$850 million under the term loan was outstanding at a weighted average interest rate of 6.24 percent. At December 31, 1996, \$1.05 billion was outstanding at a weighted average interest rate of 5.97 percent. Principal payments permanently reduce the amount available under this agreement as well as the debt outstanding.

At December 31, 1997, \$250 million at a weighted average interest rate of 6.17 percent was outstanding under the company's revolving credit facility. At December 31, 1996, \$500 million at a weighted average interest rate of 5.79 percent was outstanding. Under these agreements, in the event of a "change in control," the banks are relieved of their commitments. Compensating balances are not required under these agreements.

The company's credit agreements contain restrictions relating to the payment of dividends, acquisition of the company's stock, aggregate indebtedness for borrowed money and interest coverage. At December 31, 1997, \$572 million of retained earnings were unrestricted as to the payment of dividends. Total indebtedness for all types of borrowed money is limited under the company's credit agreement covenants. At December 31, 1997, indebtedness was limited to \$6.6 billion.

Long-term debt consisted of the following:

\$ in millions	1997	1996
Notes due 2004, 8.625%	\$350	\$350
Notes due 2006, 7%	400	400
Debentures due 2016, 7.75%	300	300
Debentures due 2024, 9.375%	250	250
Debentures due 2026, 7.875%	300	300
Revolving credit facility	250	500
Term loans payable to banks due in quarterly		
installments through 2002 at floating rates	850	1,050
	2,700	3,150
Less current portion	200	200
	\$2,500	\$2,950
	================	

During the first quarter of 1996, the company sold to institutional investors \$400 million of 7 percent notes due in 2006, \$300 million of 7 3/4 percent debentures due in 2016 and \$300 million of 7 7/8 percent debentures due in 2026. The proceeds from these issuances were used to finance a portion of the purchase price of ESG. The debt indenture contains restrictions relating to limitations on liens, sale and leaseback arrangements and funded debt of subsidiaries.

The principal amount of long-term debt outstanding at December 31, 1997, due in each of the years 1998 through 2001 is \$200 million with \$50 million due in 2002 and \$1,850 million due thereafter.

## FAIR VALUE OF FINANCIAL INSTRUMENTS

The following methods and assumptions were used by the company in estimating its fair value disclosures for financial instruments:

The carrying amount reported in the Consolidated Statements of Financial Position for Cash and Cash Equivalents, Accounts Receivable and amounts borrowed under the company's short-term credit lines approximate their fair value.

The fair value of the long-term debt at the respective yearends was calculated based on interest rates available for debt with terms and due dates similar to the company's existing debt arrangements.

The company has limited involvement with derivative financial instruments and does not use them for trading purposes. To mitigate the variable rate characteristic of its term loans, the company has from time to time entered into interest rate swap agreements. At December 31, 1997, no interest rate swap agreements were in effect. At December 31, 1996, interest rate swap agreements resulted in a fixed interest rate of 6.23 percent on a notional amount of \$425 million. Unrealized gains (losses) on interest rate swap agreements are calculated based upon the amounts at which they could have been settled at then current interest rates. The market loss on interest rate swaps was \$1 million at December 31, 1996.

Carrying amounts and the related estimated fair values of the company's financial instruments at December 31 of each year are as follows:

\$ in millions	1997	1996
Long-term debt Carrying amount Fair value	\$2,700 2,856	\$3,150 3,221
Interest rate swap agreements Notional amount Losses		425 (1)

## RETIREMENT BENEFITS

The company sponsors several defined-benefit pension plans covering substantially all employees. Pension benefits for most employees are based on the employee's years of service and compensation during the last ten years before retirement. It is the policy of the company to fund at least the minimum amount required for all qualified plans, using actuarial cost methods and assumptions acceptable under U.S. Government regulations, by making payments into a trust separate from the company. Five of the company's fifteen qualified plans which cover more than 65 percent of all employees, were in a legally defined full-funding limitation status at December 31, 1997.

The company and subsidiaries also sponsor defined-contribution plans in which most employees are eligible to participate. Company contributions, up to 4 percent of compensation, are based on a matching of employee contributions.

In addition, the company and its subsidiaries provide certain health care and life insurance benefits for retired employees. Employees achieve eligibility to participate in these contributory plans upon retirement from active service and if they meet specified age and years of service requirements. Election to participate must be made at the date of retirement. Qualifying dependents are also eligible for medical coverage. Approximately 70 percent of the company's current retirees participate in the medical plans. The cost and funded status for the medical and life benefits are combined in the tables that follow because (1) life benefits constitute an insignificant amount of the combined cost, and (2) for those plans with assets, the assets in trust for each plan can be used to pay benefits under either plan. Plan documents reserve the company's right to amend or terminate the plans at any time. Premiums charged retirees for medical coverage are based on years of service and are adjusted annually for changes in the cost of the plans as determined by an independent actuary. In addition to this medical inflation cost-sharing feature, the plans also have provisions for deductibles, copayments, coinsurance percentages, out-of-pocket limits, schedule of reasonable fees, managed care providers, maintenance of benefits with other plans, Medicare carve-out and a maximum lifetime benefit of from \$250,000 to \$1,000,000 per covered individual. It is the policy of the company to fund the maximum amount deductible for income taxes into the VEBA trust established for the Northrop Retiree Health Care Plan for Retired Employees for payment of benefits.

The cost to the company of these plans in each of the last three years is shown in the following table.

\$ in millions	1	L997	:	1996	:	1995
Defined benefit pension plans Actual return on assets Deferral of actual return on assets	\$(1	L,804) 970	\$(1	1,379) 618	•	1,856) 1,233
Expected return on assets Service cost Interest cost Amortization of unrecognized items Transition asset, net Prior service costs Net gain from previous years		(834) 162 618 (42) 34 (71)		(761) 174 570 (42) 41 (21)		(623) 125 520 (42) 31 (34)
Net periodic pension income	\$	(133)	\$	(39)	\$	(23)
Defined contribution plans	\$	84	\$	84	\$	63 ======
Retiree health care and life insurance benefit plans Actual return on assets Deferral of actual return on assets	\$	(68) 42	\$	(60) 38	\$	(95) 76
Expected return on assets Service cost Interest cost Amortization of unrecognized gain from		(26) 27 98		(22) 27 91		(19) 20 89
previous years		(10)		(5)		(3)
Net periodic postretirement benefit cost	\$	89	\$	91	\$	87

Major assumptions as of each year-end used in the accounting for the defined-benefit plans are shown in the following table. Pension cost is determined using all three factors as of the end of the preceding year, whereas the funded status of the plans, shown later, uses only the first two factors as of the end of each year.

	1997	1996	1995
Discount rate for obligations	7.00%	7.50%	7.00%
Rate of increase for compensation	4.50	4.50	5.00
Expected long-term rate of return on plan assets	9.50	9.00	9.00

These assumptions also were used in retiree health care and life insurance benefit calculations with one modification. Since, unlike the pension trust, the earnings of the VEBA trust are taxable, the above 9 percent expected rate of return on plan assets was reduced accordingly to 5.25 percent after taxes. A significant factor used in estimating future per capita cost of covered health care benefits for the company and its retirees is the health care cost trend rate assumption. The rate used was 7 percent for 1997 and is assumed to decrease gradually to 6 percent for 2006 and remain at that level thereafter. An additional one-percentage-point of increase each year in that rate would result in a \$14 million annual increase in the aggregate of the service and interest cost components of net periodic postretirement benefit cost and a \$121 million increase in the accumulated postretirement benefit obligation at December 31, 1997.

The following tables set forth the funded status and amounts recognized in the Consolidated Statements of Financial Position at each year-end for the company's defined-benefit pension and retiree health care and life insurance benefit plans. The summary showing pension plans whose accumulated benefits are in excess of assets at December 31, 1997, is comprised of seven qualified plans along with twelve unfunded nonqualified plans for benefits provided to directors, officers and employees either beyond those provided by, or payable under, the company's main plans.

The company revised its estimate of the discount rate for obligations and rate of increase for compensation assumptions in calculating the funded status of the plans at December 31, 1997. The changes resulted in a \$498 million increase in the projected benefit obligation for pension plans and a \$74 million increase in the accumulated postretirement benefit obligation.

\$ in millions	1997	1996
Pension plans whose assets exceed accumulated benefits Actuarial present value of benefit obligations Vested benefits Nonvested benefits	\$ 6,932 381	\$ 6,255 328
Accumulated benefit obligations Effect of assumed salary rate increases	7,313 459	6,583 391
Projected benefit obligations Less market value of plan assets	7,772 10,246	6,974 9,184
Excess of assets over projected benefit obligations Unrecognized items Net transition asset Prior service costs Net gain	(2,474) 205 (217) 2,120	(2,210) 247 (248) 2,067
Accrued retiree benefits pension asset included in Consolidated Statements of Financial Position Pension plans whose accumulated benefits exceed assets Actuarial present value of benefit obligations Vested benefits	\$ (366)  \$ 1,002	\$ (144) ===================================
Nonvested benefits	120	51
Accumulated benefit obligations Effect of assumed salary rate increases	1,122 162	890 145
Projected benefit obligations Less market value of plan assets	1,284 586	1,035 436
Excess of projected benefit obligations over assets Unrecognized items Net transition obligation Prior service costs Net gain(loss) Additional minimum liability	698 (2) (14) (109) 54	599 (3) (16) (10) 22
Accrued retiree benefits liability included in Consolidated Statements of Financial Position	\$ 627	\$ 592

Pension plan assets at December 31, 1997, comprised 51 percent domestic equity type investments in listed companies (including 4 percent in Northrop Grumman common stock); 16 percent equity investments listed on international exchanges; 26 percent in fixed income type investments; principally U.S. Government securities; 3 percent in venture capital and real estate investments; and 4 percent in cash. The investment in Northrop Grumman represents 4,125,187 shares, or 6 percent of the company's total shares outstanding.

\$ in millions	1997	1996	
Retiree health care and life insurance benefit plans Accumulated postretirement benefit obligation (APBO) Retirees Fully eligible active employees Active employees not yet eligible	\$ 870 163 410	\$ 841 81 383	
Less market value of plan assets	1,443 538	1,305 468	
Excess of APBO over assets Unrecognized items Prior service cost Net gain(loss)	905 (2) 181	837 (2) 191	
Accrued retiree benefits liability included in Consolidated Statements of Financial Position	\$1,084	\$ 1,026	

Retiree health care and life insurance plan assets at December 31, 1997, comprised 72 percent equity type investments in listed companies and 28 percent in cash and equivalents.

## CONTINGENCIES

The corporation and its subsidiaries have been named as defendants in various legal actions. Based upon available information, it is the company's expectation that those actions are either without merit or will have no material adverse effect on the company's results of operations or financial position.

In accordance with company policy on environmental remediation, the estimated cost to complete remediation has been accrued where it is probable that the company will incur such costs in the future, including those for which it has been named a Potentially Responsible Party by the Environmental Protection Agency or similarly designated by other environmental agencies. To assess the potential impact on the company's financial statements, management estimates the total reasonably possible remediation costs that could be incurred by the company, taking into account currently available facts on each site as well as the current state of technology and prior experience in remediating contaminated sites. These estimates are reviewed periodically and adjusted to reflect changes in facts and technical and legal circumstances. Management estimates that at December 31, 1997, the reasonable range of future costs for environmental remediation, including those sites acquired in the purchase of ESG, is \$51 million to \$86 million, of which \$61 million has been accrued. Although management cannot predict whether new information gained as projects progress will materially affect the estimated liability accrued, management does not anticipate that future remediation expenditures will have a material adverse effect on the company's results of operations, financial position, or cash flows.

Minimum rental commitments under long-term noncancellable operating leases total \$366 million which is payable as follows: 1998 - \$82 million, 1999 - \$66 million, 2000 - \$53 million, 2001 - \$41 million, 2002 - \$34 million, and 2003 and thereafter - \$90 million.

## STOCK RIGHTS

The company has a Common Stock Purchase Rights plan with one right issued in tandem with each share of common stock. The rights will become exercisable on the tenth business day after a person or group has acquired 15 percent or more of the general voting power of the company, or announces an intention to make a tender offer for 30 percent or more of such voting power, without the prior consent of the Board of Directors. If the rights become exercisable, a holder will be entitled to purchase one share of common stock from the company at an initial exercise price of \$105.

If a person acquires more than 15 percent of the then outstanding voting power of the company or if the company is combined with an acquiror, each right will entitle its holder to receive, upon exercise, shares of the company's or the acquiror's (depending upon which is the surviving company) common stock having a value equal to two times the exercise price of the right.

The company will be entitled to redeem the rights at \$.02 per right at any time prior to the earlier of the date that a person has acquired or obtained the right to acquire 15 percent of the general voting power of the company or the expiration of the rights in October 1998. The rights are not exercisable until after the date on which the company's prerogative to redeem the rights has expired. The rights do not have voting or dividend privilege and cannot be traded independently from the company's common stock until such time as they become exercisable. The rights do not and will not become exercisable because of the pending Lockheed Martin transaction.

## STOCK COMPENSATION PLANS

At December 31, 1997, Northrop Grumman had two stock-based compensation plans the 1993 Long-Term Incentive Stock Plan (LTISP) applicable to employees and the 1995 Stock Option Plan for Non-Employee Directors (SOPND), and Logicon had two stock-based compensation plans the 1992 Employee Incentive Stock Option Plan (LEISOP) and the 1991 Stock Option Plan for Non-Employee Directors (LSOPND). Each unexercised option granted under the Logicon stock-based compensation plans was converted to .6161 options for the company's common stock and the option price was adjusted accordingly. Under terms of the merger agreement between the company and Logicon, substantially all of the approximately 300,000 unexercised options (in Northrop Grumman shares) granted under the Logicon plans became vested and exercisable upon consummation of the merger.

The LTISP permits grants to key employees of three general types of stock incentive awards: stock options, stock appreciation rights (SARs) and stock awards. Under the LTISP each grant of a stock option is made at the closing market price on the date of grant. Options generally vest in 25 percent increments, two, three, four and five years from the grant date and expire ten years after the grant date. No SARs have been granted under the LTISP. Stock awards, in the form of restricted performance stock rights, are granted to key employees without payment to the company. Recipients of the rights earn shares of stock based on a total-shareholder-return measure of performance over a five-year period with interim distributions three and four years after grant. If at the end of the five-year period the performance objectives have not been met, up to 70 percent of the original grant will be forfeited. Termination of employment can result in forfeiture of some or all of the benefits extended under the plan. At December 31, 1997, 1,245,016 shares remained available for future grants under the LTISP.

The SOPND permits grants of stock options to nonemployee directors. Each grant of a stock option is made at the closing market price on the date of the grant, is immediately exercisable and expires ten years after the grant date. At December 31, 1997, 274,500 shares were available for future grants under the SOPND.

The LEISOP provided for grants of options to key employees to purchase shares of the company's common stock at prices not less than market value at date of grant. The exercise period is 10 years or less from the date of the grant of the option.

The LSOPND provided the ability to grant non-employee directors options to purchase common stock of the company. Options were granted according to a formula contained in the LSOPND at prices not less than the fair market value at date of grant and expire five years from the date of grant.

The company applies Accounting Principles Board Opinion 25 - Accounting for Stock Issued to Employees and related Interpretations in accounting for awards made under the plans. When stock options are exercised, the amount of the cash proceeds to the company is recorded as an increase to paid-in capital. No compensation expense is recognized in connection with stock options. Compensation expense for restricted performance stock rights is estimated and accrued over the vesting period. The fixed 30 percent minimum distribution portion is recorded at grant value and the variable portion is recorded at market value. Compensation expense recognized for stock awards was \$57 million in 1997, \$25 million in 1996, and \$4 million in 1995.

Stock option activity for the last three years is summarized below:

	Shares Under Option	Weighted- Average Exercise Prices	Shares Exercisable	
Outstanding at January 1, 1995	3,128,538	\$ 27	1,114,703	
Granted	899,757	53		
Cancelled	(418,365)	15		
Exercised	(180,249)	22		
Dutstanding at December 31, 1995	3,429,681	35	1,212,290	
Granted	1,048,640	76		
Cancelled	(190,041)	31		
Exercised	(261,008)	28		
utstanding at December 31, 1996	4,027,272	47	1,384,026	
Granted	15,000	85		
Cancelled	(100,932)	58		
Exercised	(570,182)	34		
Dutstanding at December 31, 1997	3,371,158	49	1,556,475	

Had compensation expense been determined based on the fair value at the grant dates for stock option awards granted in 1997, 1996 and 1995, consistent with the method of Financial Accounting Standards Board Statement 123 - Accounting for Stock Based Compensation, net income, basic earnings per share, and diluted earnings per share in 1997 would have been lower by \$5 million, eight cents and eight cents, respectively. For 1996 net income, basic earnings per share and diluted earnings per share would have been lower by \$2 million,

three cents, and four cents, respectively. For 1995 net income would have been unchanged, basic earnings per share would have been lower by one cent, and diluted earnings per share would have been unchanged. These amounts were determined using weighted-average per share fair values of options granted in 1997, 1996 and 1995 of \$25, \$24 and \$17, respectively. The fair value of each option grant was estimated on the date of grant using the Black-Scholes option-pricing model based on an expected life of six years and for 1997, 1996, and 1995, respectively, the following additional assumptions: dividend yield -1.9 percent, 2.1 percent and 2.8 percent; expected volatility - 22 percent, 28 percent and 31 percent; and risk-free interest rate - 6.7 percent, 6.2 percent and 5.8 percent.

At December	er 31, 1997, the following stock options were outstanding: Options Outstanding Options Exercisable				ercisable
Range of Exercise Prices	Number Outstanding at 12/31/97	Weighted- Average Remaining Contractual Life	Weighted- Average Exercise Prices	Number Exercisable at 12/31/97	Weighted- Average Exercise Prices
\$16 to 25 26 to 40 41 to 55 56 to 70 71 to 86	694,926 549,760 569,578 703,144 853,750 	2.8 years 5.8 years 7.1 years 7.9 years 9.0 years	\$ 19 33 43 58 81	694,926 437,628 269,053 133,218 21,650 	\$ 19 32 44 56 84

Restricted performance stock rights were granted with weighted-average grant-date fair values per share as follows: 1997 - 7,700 at \$80; 1996 - 802,800 at \$81; and 1995 - 22,660 at \$53.

# UNAUDITED SELECTED QUARTERLY DATA

Quarterly financial results are set forth in the following tables together with dividend and common stock price data.

1997 Quarters \$ in millions, except per share	4	3	2	1
Net sales	\$ 2,510	\$ 2,297	\$ 2,228	\$ 2,118
Operating margin	246	205	233	196
Net income	117	98	108	84
Basic earnings per share	1.75	1.46	1.62	1.27
Diluted earnings per share	1.71	1.44	1.59	1.25
Dividend per share	.40	.40	.40	.40
Stock price:				
High	123 13/16	127 7/8	89 3/4	82 5/8
Low	100 7/8	87 1/2	71 7/8	71 3/8

Operating margin in the fourth quarter of 1997 includes a \$55 million positive cumulative margin rate adjustment on the B-2 production contract and a \$27 million mark-to-market charge for restricted performance stock rights. Charges of \$20 million and \$13 million were recorded in the fourth and first quarters, respectively, related to increases in the cost estimate to complete the company's work on the Directional Infrared Countermeasures (DIRCM) program. In the third quarter, operating margin was reduced by a \$53 million cumulative margin rate adjustment on the E-8 Joint STARS program.

1996 Quarters \$ in millions, except per share	4	3	2	1	
					-
Net sales	\$ 2,413	\$ 2,172	\$ 2,291	\$ 1,731	
Operating margin	159	176	219	149	
Net income	24	78	94	68	
Basic earnings per share	. 38	1.18	1.58	1.17	
Diluted earnings per share	. 38	1.14	1.55	1.15	
Dividend per share	.40	.40	.40	.40	
Stock price:					
High	84 1/4	80 1/4	69 1/4	67 3/8	
Low	76 3/8	63 3/4	57 3/4	58 3/8	
					-

The fourth quarter of 1996 includes a \$90 million pretax charge related to the closure of four plants. The charge included \$30 million for costs related to the reduction of personnel and other closure activities and \$60 million for the write-down of facilities. The sale of shares owned by the company in ETEC Systems, Inc. generated pretax gains of \$10 million, \$6 million and \$12 million in the fourth, third and second quarters, respectively. The first quarter includes a \$25 million charge related to nacelles work the company performed for Fokker Aircraft N.V., which declared bankruptcy in March 1996.

The sum of quarterly earnings per share for 1996 does not equal earnings per share for the year because the average number of common shares outstanding for the second half of 1996 was disproportionately higher than the full year average due to the issuance in June of approximately 8 million shares of common stock in a public stock offering.

The corporation's common stock is traded on the New York and Pacific Stock Exchanges (trading symbol NOC). The approximate number of holders of record of the corporation's common stock at January 31, 1998, was 10,736.

INDEPENDENT AUDITORS' REPORT

Board of Directors and Shareholders Northrop Grumman Corporation Los Angeles, California

We have audited the accompanying consolidated statements of financial position of Northrop Grumman Corporation and Subsidiaries as of December 31, 1997 and 1996, and the related consolidated statements of income, changes in shareholders' equity, and cash flows for each of the three years in the period ended December 31, 1997. Our audit also included the financial statement schedule listed in the Index at Item 14. These financial statements and financial statement schedule are the responsibility of the company's management. Our responsibility is to express an opinion on these financial statements and financial statement schedule based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Northrop Grumman Corporation and Subsidiaries at December 31, 1997 and 1996, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 1997 in conformity with generally accepted accounting principles. Also, in our opinion, such financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

Deloitte & Touche LLP Los Angeles, California January 21, 1998

(except for the information described in the note to the consolidated financial statements captioned "Merger Agreement" as to which the date is March 25, 1998)

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE No information is required in response to this Item.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information as to Directors will be incorporated herein by reference to the Proxy Statement for the 1998 Annual Meeting of Stockholders to be filed within 120 days after the end of the company's fiscal year.

ITEM 11. EXECUTIVE COMPENSATION

The information as to Executive Compensation will be incorporated herein by reference to the Proxy Statement for the 1998 Annual Meeting of Stockholders to be filed within 120 days after the end of the company's fiscal year.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information as to Security Ownership of Certain Beneficial Owners and Management will be incorporated herein by reference to the Proxy Statement for the 1998 Annual Meeting of Stockholders to be filed within 120 days after the end of the company's fiscal year.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information as to Certain Relationships and Related Transactions will be incorporated herein by reference to the Proxy Statement for the 1998 Annual Meeting of Stockholders to be filed within 120 days after the end of the company's fiscal year.

Item 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULES AND REPORTS ON FORM 8-K

- (a) 1. Financial Statements Consolidated Statements of Financial Position Consolidated Statements of Income Consolidated Statements of Changes in Shareholders' Equity Consolidated Statements of Cash Flows Notes to Consolidated Financial Statements Independent Auditors' Report
  - 2. Financial Statement Schedule Schedule II - Valuation and Qualifying Accounts

All other schedules are omitted either because they are not applicable or not required or because the required information is included in the financial statements or notes thereto.

Separate financial statements of the parent company are omitted since it is primarily an operating company and minority equity interests in and/or nonguaranteed long-term debt of subsidiaries held by others than the company are in amounts which together do not exceed 5 percent of the total consolidated assets at December 31, 1997.

(b) A report on Form 8-K was filed with the Securities and Exchange Commission on November 14, 1997, regarding the acquisition of Logicon, Inc.

A report on Form 8-K was filed with the Securities and Exchange Commission on January 21, 1998, regarding the press release on results of operations for the fourth quarter and the year ended December 31, 1997. Exhibits

- 2(a) Agreement and Plan of Merger among Northrop Grumman Corporation, NG Acquisition, Inc. and Logicon, Inc., dated as of May 4, 1997 (incorporated by reference to Form 8-K filed August 29, 1997)
- 2(b) Agreement and Plan of Merger, dated as of July 2, 1997, as amended and restated as of September 29, 1997, by and among Northrop Grumman Corporation, Lockheed Martin Corporation and Hurricane Sub, Inc. (incorporated by reference to Report on Form 10-Q, filed November 7, 1997)
- 3(a) Certificate of Incorporation, as amended (incorporated by reference to Form S-3 Registration Statement, filed August 18, 1994)
- 3(b) Northrop Grumman Corporation Bylaws, amended and restated as of July 30, 1997
- 4(a) Common Stock Purchase Rights Agreement (incorporated by reference to Form 8-A filed September 22, 1988), amended on August 2, 1991 (incorporated by reference to Form 8 filed August 2, 1991) and amended on September 28, 1994 (incorporated by reference to Form 8/A-A filed October 7, 1994)
- 4(b) Indenture Agreement dated as of October 15, 1994 (incorporated by reference to Form 8-K filed October 25, 1994)
- 4(c) Form of Officer's Certificate (without exhibits) establishing the terms of Northrop Grumman Corporation's 7% Notes Due 2006, 7 3/4% Debentures Due 2016 and 7 7/8% Debentures Due 2026 (incorporated by reference to Form S-4 Registration Statement, filed April 19, 1996)
- 4(d) Form of Northrop Grumman Corporation's 7% Notes Due 2006 (incorporated by reference to Form S-4 Registration Statement, filed April 19, 1996)
- 4(e) Form of Northrop Grumman Corporation's 7 3/4% Debentures Due 2016 (incorporated by reference to Form S-4 Registration Statement, filed April 19, 1996)
- 4(f) Form of Northrop Grumman Corporation's 7 7/8% Debentures Due 2026 (incorporated by reference to Form S-4 Registration Statement, filed April 19, 1996)
- 10(a) Second Amended and Restated Credit Agreement dated as of April 15, 1994, Amended and Restated as of March 1, 1996 among Northrop Grumman Corporation, Bank of American National Trust and Savings Association, as Documentation Agent, Chemical Securities, Inc., as Syndication Agent, The Chase Manhattan Bank (National Association), as Administrative Agent, and the Banks Signatories thereto (incorporated by reference to Form 8-K, filed March 18, 1996), and amended as of November 1, 1996 (incorporated by reference to Form 10-K filed February 25, 1997)
- 10(b) Uncommitted Credit Facility dated October 10, 1994, between Northrop Grumman Corporation and Wachovia Bank of Georgia, N.A., which is substantially identical to facilities between Northrop Grumman Corporation and certain banks some of which are parties to the Credit Agreement filed as Exhibit 10(a) hereto (incorporated by reference to Form 10-K filed February 22, 1996)
- \*10(c) 1973 Incentive Compensation Plan (incorporated by reference to Form 8-B filed June 21, 1985)
- \*10(d) 1973 Performance Achievement Plan (incorporated by reference to Form 8-B filed June 21, 1985)

- \*10(e) Northrop Supplemental Plan 2 (incorporated by reference to Form 10-K filed February 22, 1996), and amended as of June 19, 1996
- \*10(f) Northrop Grumman Corporation ERISA Supplemental Plan 1 (incorporated by reference to Form 10-K filed February 28, 1994)
- \*10(g) Retirement Plan for Independent Outside Directors (incorporated by reference to Form SE filed March 29, 1991), amended September 21, 1994 (incorporated by reference to Form 10-K filed March 21, 1995)
- \*10(h) 1987 Long-Term Incentive Plan, as amended (incorporated by reference to Form SE filed March 30, 1989)
- \*10(i) Executive Life Insurance Policy (incorporated by reference to Form 10-K filed February 22, 1996)
- \*10(j) Executive Accidental Death, Dismemberment and Plegia Insurance Policy (incorporated by reference to Form 10-K filed February 22, 1996)
- \*10(k) Executive Long-Term Disability Insurance Policy (incorporated by reference to Form 10-K filed February 22, 1996)
- \*10(1) Key Executive Medical Plan Benefit Matrix (incorporated by reference to Form 10-K filed February 22, 1996)
- \*10(m) Executive Dental Insurance Policy Group Numbers 5134 and 5135 (incorporated by reference to Form 10-K filed February 22, 1996)
- \*10(n) Group Excess Liability Policy (incorporated by reference to Form 10-K filed February 22, 1996)
- \*10(o) Northrop Grumman 1993 Long-Term Incentive Stock Plan, as amended and restated (incorporated by reference to Northrop Grumman Corporation Proxy Statement filed April 3, 1997) and amended on August 20, 1997
- \*10(p) Northrop Corporation 1993 Stock Plan for Non-Employee Directors (incorporated by reference to Northrop Corporation 1993 Proxy Statement filed March 30, 1993), amended as of September 21, 1994 (incorporated by reference to Form 10-K filed March 21, 1995)
- \*10(q) Northrop Grumman Corporation 1995 Stock Option Plan for Non-Employee Directors (incorporated by reference to 1995 Proxy Statement filed March 30, 1995)
- \*10(r) Form of Northrop Grumman Corporation Special Agreement (incorporated by reference to Form 10-K filed February 25, 1997), as amended August 1997, December 1997 (with respect to Richard B. Waugh, Jr.) and February 1998

- \*10(s) Executive Deferred Compensation Plan (effective December 29, 1994) (incorporated by reference to Form 10-K filed February 25, 1997)
- 10(t) Memorandum of Agreement dated December 16, 1996 (W. C. Solberg Retirement Arrangements) and Release Agreement between Northrop Grumman Corporation and W. C. Solberg (incorporated by reference to Form 10-K filed February 25, 1997)
- 10(u) CPC Supplemental Executive Retirement Program
- Independent Auditors' Consent Power of Attorney Financial Data Schedule 23
- 24 27

\* Listed as Exhibits pursuant to Item 601(b)(10) of Regulation S-K

# SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on the 25th day of March 1998.

# NORTHROP GRUMMAN CORPORATION

By: Nelson F. Gibbs Nelson F. Gibbs Corporate Vice President and Controller (Principal Accounting Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed on behalf of the registrant this 25th day of March 1998, by the following persons and in the capacities indicated.

Signature	Title
Kent Kresa*	Chairman of the Board, President and Chief Executive Officer and Director (Principal Executive Officer)
Jack R. Borsting* John T. Chain, Jr.* Jack Edwards* Phillip Frost* Robert A. Lutz* Aulana L. Peters* John E. Robson* Richard R. Rosenberg* John Brooks Slaughter* Richard J. Stegemeier* Richard B. Waugh, Jr.*	Director Director Director Director Director Director Director Director Director Director Director Corporate Vice President and Chief Financial Officer

\*By James C. Johnson James C. Johnson, Attorney-in-Fact pursuant to a power of attorney

# SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS (DOLLARS IN THOUSANDS)

COL. A	COL. B	COL. C	COL. D	COL. E
Classification	Balance at Beginning of Period	Additions At Cost(2)	Other Changes Add (Deduct)(1)	Balance at End of Period
Description:				
Year ended December 31, 1995 Reserves and allowances deducted from asset accounts: Allowances for doubtful amounts	\$66,913	\$ 9,892	\$ (2,231)	\$74,574
Year ended December 31, 1996 Reserves and allowances deducted from asset accounts: Allowances for doubtful amounts	\$74,574	\$21,929	\$(41,058)	\$55,445
Year ended December 31, 1997 Reserves and allowances deducted from asset accounts: Allowances for doubtful amounts	\$55,445	\$17,279	\$(17,746)	\$54,978

Uncollectible amounts written off, net of recoveries. Additions include allowances for bad debts from acquired companies - \$2,163 in 1995 and \$5,951 in 1996. (1) (2)

# EXHIBIT 3(b)

# BYLAWS

#### OF NORTHROP GRUMMAN CORPORATION (A Delaware Corporation)

## ARTICLE I

#### OFFICES

Section 1.01. REGISTERED OFFICE. The registered office of Northrop Grumman Corporation (the "Corporation") in the State of Delaware shall be at Corporation Trust Center, 1209 Orange Street, City of Wilmington, County of New Castle, and the name of the registered agent at that address shall be The Corporation Trust Company.

Section 1.02. PRINCIPAL EXECUTIVE OFFICE. The principal executive office of the Corporation shall be located at 1840 Century Park East, Los Angeles, California 90067. The Board of Directors of the Corporation (the "Board of Directors") may change the location of said principal executive office.

Section 1.03. OTHER OFFICES. The Corporation may also have an office or offices at such other place or places, either within or without the State of Delaware, as the Board of Directors may from time to time determine or as the business of the Corporation may require.

## ARTICLE II

#### MEETINGS OF STOCKHOLDERS

Section 2.01. ANNUAL MEETINGS. The annual meeting of stockholders of the Corporation shall be held between May 1 and July 1 of each year on such date and at such time as the Board of Directors shall determine. At each annual meeting of stockholders, directors shall be elected in accordance with the provisions of Section 3.04 hereof and any other proper business may be transacted.

Section 2.02. SPECIAL MEETINGS. Special meetings of stockholders for any purpose or purposes may be called at any time by a majority of the Board of Directors, the Chairman of the Board, or by the President and Chief Executive Officer. Special meetings may not be called by any other person or persons. Each special meeting shall be held at such date and time as is requested by the person or persons calling the meeting, within the limits fixed by law.

Section 2.03. PLACE OF MEETINGS. Each annual or special meeting of stockholders shall be held at such location as may be determined by the Board of Directors or, if no such determination is made, at such place as may be determined by the Chairman of the Board. If no location is so determined, any annual or special meeting shall be held at the principal executive office of the Corporation.

Section 2.04. NOTICE OF MEETINGS. Written notice of each annual or special meeting of stockholders stating the date and time when, and the place where, it is to be held shall be delivered either personally or by mail to stockholders entitled to vote at such meeting not less than ten (10) nor more than sixty (60) days before the date of the meeting. The purpose or purposes for which the meeting is called may, in the case of an annual meeting, and shall, in the case of a special meeting, also be stated. If mailed, such notice shall be directed to a stockholder at his address as it shall appear on the stock books of the Corporation, unless he shall have filed with the Secretary of the Corporation a written request that notices intended for him be mailed to some other address, in which case such notice shall be mailed to the address designated in such request.

Section 2.05. CONDUCT OF MEETINGS. All annual and special meetings of stockholders shall be conducted in accordance with such rules and procedures as the Board of Directors may determine subject to the requirements of applicable law and, as to matters not governed by such rules and procedures, as the chairman of such meeting shall determine. The chairman of any annual or special meeting of stockholders shall be the Chairman of the Board. The Secretary, or in the absence of the Secretary, a person designated by the Chairman of the Board, shall act as secretary of the meeting.

Section 2.06. NOTICE OF BUSINESS. At any meeting of stockholders, only such business shall be conducted as shall be a proper matter for stockholder action under the laws of the State of Delaware and as shall have been brought before the meeting (a) by or at the direction of the Board of Directors or (b) by any stockholder of the Corporation who is a stockholder of record at the time of giving of the notice provided for in this Section 2.06 who shall be entitled to vote at such meeting and who complies with the notice procedures set forth in this Section 2.06. For business to be properly brought before a meeting of stockholders by a stockholder, the stockholder shall have given timely notice thereof in writing to the Secretary. To be timely, a stockholder's notice shall be delivered to or mailed and received at the principal executive office of the Corporation not less than sixty (60) days nor more than ninety (90) days prior to the meeting: provided, however, that in the event that less than seventy (70) days' notice or prior public disclosure of the date of the meeting is given or made to stockholders, notice by the stockholder to be timely must be so received not later than the close of business on the 10th day following the date on which such notice of the date of the meeting was mailed or such public disclosure was made, whichever first occurs. Such stockholder's notice to the Secretary shall set forth as to each matter the stockholder proposes to bring before the meeting (a) a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting, and, in the event that such business includes a proposal to amend either the Certificate of Incorporation or these Bylaws, the language of the proposed amendment, (b) the name and address as they appear on the Corporation's books of the stockholder proposing such business, (c) the class and number of shares of capital stock of the Corporation which are beneficially owned by such stockholder and (d) any material interest of such stockholder in such business. Notwithstanding anything in these Bylaws to the contrary, no business shall be conducted at a stockholder meeting except in accordance with the procedures set forth in this Section 2.06. The chairman of the meeting shall, if the facts warrant, determine and declare to the meeting that business was not properly brought before the meeting and in accordance with the provisions of these Bylaws and if he should so determine, he shall so declare to the meeting and any such business not properly brought before the meeting shall not be transacted. Notwithstanding the foregoing provisions of this Section 2.06, a stockholder shall also comply with all applicable requirements of the Securities Exchange Act of 1934 as amended and the rules and regulations thereunder with respect to the matters set forth in this Section 2.06. Nothing in this Bylaw shall be deemed to affect any rights of stockholders or the Corporation under Rule 14a-8 of the Securities Exchange Act of 1934 with respect to proposals which are requested to be included in the Corporation's proxy statement.

Section 2.07. QUORUM. At any meeting of stockholders, the presence, in person or by proxy, of the holders of record of a majority of shares then issued and outstanding and entitled to vote at the meeting shall constitute a quorum for the transaction of business; provided,

however, that this Section 2.07 shall not affect any different requirement which may exist under statute, pursuant to the rights of any authorized class or series of stock, or under the Certificate of Incorporation of the Corporation (the "Certificate") for the vote necessary for the adoption of any measure governed thereby. In the absence of a quorum, the stockholders present in person or by proxy, by majority vote and without further notice, may adjourn the meeting from time to time until a quorum is attained. At any reconvened meeting following such an adjournment at which a quorum shall be present, any business may be transacted which might have been transacted at the meeting as originally notified.

Section 2.08. VOTES REQUIRED. A majority of the votes cast at a duly called meeting of stockholders, at which a quorum is present, shall be sufficient to take or authorize action upon any matter which may properly come before the meeting, unless the vote of a greater or different number thereof is required by statute, by the rights of any authorized class of stock or by the Certificate. Unless the Certificate or a resolution of the Board of Directors adopted in connection with the issuance of shares of any class or series of stock provides for a greater or lesser number of votes per share, or limits or denies voting rights, each outstanding share of stock, regardless of class, shall be entitled to one vote on each matter submitted to a vote at a meeting of stockholders.

Section 2.09. PROXIES. A stockholder may vote the shares owned of record by him either in person or by proxy executed in writing (which shall include writings sent by telex, telegraph, cable or facsimile transmission) by the stockholder himself or by his duly authorized attorney-in-fact. No proxy shall be valid after three (3) years from its date, unless the proxy provides for a longer period. Each proxy shall be in writing, subscribed by the stockholder or his duly authorized attorney-in-fact, and dated, but it need not be sealed, witnessed or acknowledged.

Section 2.10. STOCKHOLDER ACTION. Any action required or permitted to be taken by the stockholders of the Corporation must be effected at a duly called annual meeting or special meeting of stockholders of the Corporation, unless such action requiring or permitting shareholder approval is approved by a majority of the Continuing Directors (as defined in the Certificate), in which case such action may be authorized or taken by the written consent of the holders of outstanding shares of stock having not less than the minimum voting power that would be necessary to authorize or take such action at a meeting of stockholders at which all shares entitled to vote thereon were present and voted, provided all other requirements of applicable law and the Certificate have been satisfied.

Section 2.11. LIST OF STOCKHOLDERS. The Secretary of the Corporation shall prepare and make (or cause to be prepared and made), at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order and showing the address of, and the number of shares registered in the name of, each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten (10) days prior to the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the duration thereof, and may be inspected by any stockholder who is present.

Section 2.12. INSPECTORS OF ELECTION. In advance of any meeting of stockholders, the Board of Directors may appoint Inspectors of Election to act at such meeting or at any adjournment or adjournments thereof. If such Inspectors are not so appointed or fail or refuse to act, the chairman of any such meeting may (and, upon the demand of any stockholder or stockholder's proxy, shall) make such an appointment.

The number of Inspectors of Election shall be one (1) or three (3). If there are three (3) Inspectors of Election, the decision, act or certificate of a majority shall be effective and shall represent the decision, act or certificate of all. No such Inspector need be a stockholder of the Corporation.

The Inspectors of Election shall determine the number of shares outstanding, the voting power of each, the shares represented at the meeting, the existence of a quorum and the authenticity, validity and effect of proxies; they shall receive votes, ballots or consents, hear and determine all challenges and questions in any way arising in connection with the right to vote, count and tabulate all votes or consents, determine when the polls shall close and determine the result; and finally, they shall do such acts as may be proper to conduct the election or vote with fairness to all stockholders. On request, the Inspectors shall make a report in writing to the secretary of the meeting concerning any challenge, question or other matter as may have been determined by them and shall execute and deliver to such secretary a certificate of any fact found by them.

# ARTICLE III

# DIRECTORS

Section 3.01. POWERS. The business and affairs of the Corporation shall be managed by and be under the direction of the Board of Directors. The Board of Directors shall exercise all the powers of the Corporation, except those that are conferred upon or reserved to the stockholders by statute, the Certificate or these Bylaws.

Section 3.02. NUMBER. Except as otherwise fixed pursuant to the provisions of Section 2 of Article Fourth of the Certificate in connection with rights to elect additional directors under specified circumstances which may be granted to the holders of any class or series of Preferred Stock, par value One Dollar (\$1.00) per share of the Corporation ("Preferred Stock"), the number of directors shall be fixed from time to time by resolution of the Board of Directors but shall not be less than three (3). The Board of Directors, as of May 17, 1989, and thereafter, shall consist of fourteen (14) directors until changed as herein provided.

Section 3.03. INDEPENDENT OUTSIDE DIRECTORS. At least sixty percent (60%) of the members of the Board of Directors of the Corporation shall at all times be "Independent Outside Directors", which term is hereby defined to mean any director who:

1. has not in the last five (5) years been an officer or employee of the Corporation or any of its subsidiaries or affiliates; and

2. is not related to an officer of the Corporation (or an officer of any of the Corporation's parents, subsidiaries or affiliates) by blood, marriage or adoption (except relationships more remote than first cousin); and

3. is not, and has not within the last two (2) years been, an officer, director or employee of, and does not own, and has not within the last two (2) years owned, directly or indirectly, in excess of one percent (1%) of any firm, corporation or other business or professional entity which has made or proposes to make during either the Corporation's or such entity's last or next fiscal year payments for property or services in excess of one percent (1%) of the gross revenues either of the Corporation for its last fiscal year or of such entity for its last fiscal year, but excluding payments determined by competitive bids, public utility services at rates set by law or government authority, or payments arising solely from the ownership of securities, or to which the Corporation was indebted at any time

during the Corporation's last fiscal year in an aggregate amount in excess of one percent (1%) of the Corporation's total assets at the end of such fiscal year or Five Million Dollars (\$5,000,000), whichever is less, but excluding debt securities which have been publicly offered or which are publicly traded; and

4. is not a director, partner, officer or employee of an investment banking firm which has performed services for the Corporation in the last two (2) years or which the Corporation proposes to have perform services in the next year other than as a participating underwriter in a syndicate; and

5. is not a control person of the Corporation (other than as a director of the Corporation) as defined by the regulations of the Securities and Exchange Commission.

Section 3.04. ELECTION AND TERM OF OFFICE. Except as provided in Section 3.07 hereof and subject to the right to elect additional directors under specified circumstances which may be granted, pursuant to the provisions of Section 2 of Article Fourth of the Certificate, to the holders of any class or series of Preferred Stock, directors shall be elected by the stockholders of the Corporation. The Board of Directors shall be and is divided into three classes: Class I, Class II and Class III. The number of directors in each class shall be the whole number contained in the quotient obtained by dividing the authorized number of directors (fixed pursuant to Section 3.02 hereof) by three. If a fraction is also contained in such quotient, then additional directors shall be apportioned as follows: if such fraction is one-third, the additional director shall be a member of Class I; and if such fraction is two-thirds, one of the additional directors shall be a member of Class I and the other shall be a member of Class II. Each director shall serve for a term ending on the date of the third annual meeting of stockholders of the Corporation following the annual meeting at which such director was elected; provided, however, that the directors first elected to Class I shall serve for a term ending on the date of the annual meeting next following the end of the calendar year 1985, the directors first elected to Class II shall serve for a term ending on the date of the second annual meeting next following the end of the calendar year 1985 and the directors first elected to Class III shall serve for a term ending on the date of the third annual meeting next following the end of the calendar year 1985.

Notwithstanding the foregoing provisions of this Section 3.04: each director shall serve until his successor is elected and qualified or until his death, resignation or removal; no decrease in the authorized number of directors shall shorten the term of any incumbent director; and additional directors, elected pursuant to Section 2 of Article Fourth of the Certificate in connection with rights to elect such additional directors under specified circumstances which may be granted to the holders of any class or series of Preferred Stock, shall not be included in any class, but shall serve for such term or terms and pursuant to such other provisions as are specified in the resolution of the Board of Directors establishing such class or series.

Nominations for the election of directors may be made by the Board or a committee thereof or by any stockholder entitled to vote in the election of directors; provided, however, that a stockholder may nominate a person for election as a director at a meeting only if written notice of such stockholder's intent to make such nomination has been given by such stockholder to, and received by, the Secretary of the Corporation at the principal executive offices of the Corporation not less than sixty (60) days nor more than ninety (90) days prior to the meeting; provided, however, that (a) in the event that less than seventy (70) days' notice or prior public disclosure of the date of the meeting is given or made to stockholders, notice by the stockholder to be timely must be so received not later than the close of business on the 10th day following the date on which such notice of the date of the meeting was mailed or such public disclosure was made, whichever first occurs; and (b) in the event that less than seventy

(70) days shall remain from the date of public disclosure of the adoption of this bylaw provision to the date of any meeting, notice by the stockholder to be timely with respect to such meeting must be so received not later than the close of business on the 10th day following the date on which such public disclosure was made. Each such notice shall set forth: (a) the name and address of the stockholder intends to make the nomination and of the person or persons to be nominated; (b) the name and address as they appear on the Corporation's books of the stockholder intending to make such nomination; (c) the class and number of shares of capital stock of the Corporation which are beneficially owned by such stockholder and each nominee and any other person or persons (naming such person or persons) pursuant to which the nomination or nominations are to be made by the stockholder; (e) the occupations and business history for the previous five years, other directorships, names of business entities of which the proposed nominee owns a 10 percent or more equity interest, a list of any criminal convictions, including federal and state securities violations and such other information regarding each proposed nominee as may be required by the federal proxy rules in effect at the time the notice is submitted and (f) the consent of each nominee to serve as a director of the Corporation if so elected. No person shall be eligible for election as a director of the Corporation unless nominated in accordance with the procedures set forth in this Section 3.04. The Chairman of any meeting of stockholders be disregarded.

Section 3.05. ELECTION OF CHAIRMAN OF THE BOARD. At the organizational meeting immediately following the annual meeting of stockholders, the directors shall elect a Chairman of the Board from among the directors who shall hold office until the corresponding meeting of the Board of Directors in the next year and until his successor shall have been elected or until his earlier resignation or removal. Any vacancy in such office may be filled for the unexpired portion of the term in the same manner by the Board of Directors at any regular or special meeting.

Section 3.06. REMOVAL. Subject to the right to elect directors under specified circumstances which may be granted pursuant to Section 2 of Article Fourth of the Certificate to the holders of any class or series of Preferred Stock, any director may be removed from office only as provided in Article Tenth of the Certificate.

Section 3.07. VACANCIES AND ADDITIONAL DIRECTORSHIPS. Except as otherwise provided pursuant to Section 2 of Article Fourth of the Certificate in connection with rights to elect additional directors under specified circumstances which may be granted to the holders of any class or series of Preferred Stock, newly created directorships resulting from any increase in the number of directors and any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal or other cause shall be filled solely by the affirmative vote of a majority of the remaining directors then in office, even though less than a quorum of the Board of Directors. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the class of directors in which the new directorship was created or the vacancy occurred and until such director's successor shall have been elected and qualified. No decrease in the number of directors.

Section 3.08. REGULAR AND SPECIAL MEETINGS. Promptly after, and on the same day as, each annual election of directors by the shareholders, the Board shall, if a quorum be present, meet in an organizational meeting to elect a chairman, appoint members of the standing committees of the Board, elect officers of the Corporation and conduct other business as appropriate. Additional notice of such meeting need not be given if such meeting is conducted promptly after the annual meeting to elect directors and if the meeting is held in the same location where the election of directors was conducted. Regular meetings of the Board

shall be held at such times and places as the Board shall determine. Notice of regular meetings shall be mailed to each director at least five days before the meeting, addressed to the director's usual place of business or to his or her residence address or to an address specifically designated by the director.

Section 3.09. QUORUM. At all meetings of the Board of Directors, a majority of the fixed number of directors shall constitute a quorum for the transaction of business, except that when the Board of Directors consists of one director, then the one director shall constitute a quorum. In the absence of a quorum, the directors present, by majority vote and without notice other than by announcement, may adjourn the meeting from time to time until a quorum shall be present. At any reconvened meeting following such an adjournment at which a quorum shall be present, any business may be transacted which might have been transacted at the meeting as originally notified.

Section 3.10. VOTES REQUIRED. Except as otherwise provided by applicable law or by the Certificate, the vote of a majority of the directors present at a meeting duly held at which a quorum is present shall be sufficient to pass any measure.

Section 3.11. PLACE AND CONDUCT OF MEETINGS. Each regular meeting and special meeting of the Board of Directors shall be held at a location determined as follows: The Board of Directors may designate any place, within or without the State of Delaware, for the holding of any meeting. If no such designation is made: (i) any meeting called by a majority of the directors shall be held at such location, within the county of the Corporation's principal executive office, as the directors calling the meeting shall designate; and (ii) any other meeting shall be held at such location, within the county of the Board may designate or, in the absence of such designation, at the Corporation's principal executive office. Subject to the requirements of applicable law, all regular and special meetings of the Board of Directors shall be conducted in accordance with such rules and procedures as the Board of Directors may approve and, as to matters not governed by such rules and procedures, as the chairman of such meeting shall be the Chairman of the Board of Directors. The Secretary, or in the absence of the Secretary a person designated by the chairman of the meeting, shall act as secretary of the meeting.

Section 3.12. FEES AND COMPENSATION. Directors shall be paid such compensation as may be fixed from time to time by resolutions of the Board of Directors (a) for their usual and contemplated services as directors, (b) for their services as members of committees appointed by the Board of Directors, including attendance at committee meetings as well as services which may be required when committee members must consult with management staff, and (c) for extraordinary services as directors or as members of committees appointed by the Board of Directors, over and above those services for which compensation is fixed pursuant to items (a) and (b) in this Section 3.12. Compensation may be in the form of an annual retainer fee or a fee for attendance at meetings, or both, or in such other form or on such basis as the resolutions of the Board of Directors shall fix. Directors shall be reimbursed for all reasonable expenses incurred by them in attending meetings of the Board of Directors and committees appointed by the Board of Directors and in performing compensable extraordinary services. Nothing contained herein shall be construed to preclude any director from serving the Corporation in any other capacity, such as an officer, agent, employee, consultant or otherwise, and receiving compensation therefor.

Section 3.13. COMMITTEES OF THE BOARD OF DIRECTORS. Subject to the requirements of applicable law, the Board of Directors may from time to time establish committees, including standing or special committees, which shall have such duties and

powers as are authorized by these Bylaws or by the Board of Directors. Committee members, and the chairman of each committee, shall be appointed by the Board of Directors. The Chairman of the Board, in conjunction with the several committee chairmen, shall make recommendations to the Board of Directors for its final action concerning members to be appointed to the several committees of the Board of Directors. Any member of any committee may be removed at any time with or without cause by the Board of Directors. Vacancies which occur in any committee shall be filled by a resolution of the Board of Directors. If any vacancy shall occur in any committee by reason of death, resignation, disqualification, removal or otherwise, the remaining members of such committee, so long as a quorum is present, may continue to act until such vacancy is filled by the Board of Directors. The Board of Directors may, by resolution, at any time deemed desirable, discontinue any standing or special committee. Members of standing committees, and their chairmen, shall be elected yearly at the organizational meeting of the Board of Directors which is held immediately following the annual meeting of stockholders.

Section 3.14. AUDIT COMMITTEE. There shall be an Audit Committee of the Board of Directors which shall serve at the pleasure of the Board of Directors and be subject to its control. The Committee shall have the following membership and powers:

1. The Committee shall have at least three (3) members. All members of the Committee shall be Independent Outside Directors.

2. The Committee shall recommend to the Board of Directors for its action the appointment or discharge of the Corporation's independent auditors, based upon the Committee's judgment of the independence of the auditors (taking into account the fees charged both for audit and non-audit services) and the quality of its audit work. Ratification by the stockholders of the Board of Directors' appointment of the Corporation's independent auditors may be sought in conjunction with management's solicitation of proxies for the annual meeting of stockholders, if so determined by the Board of Directors. If the auditors must be replaced, the Committee shall recommend to the Board of Directors for its action the appointment of new auditors until the next annual meeting of stockholders.

3. The Committee shall review and approve the scope and plan of the audit.

4. The Committee shall meet with the independent auditors at appropriate times to review, among other things, the results of the audit and any certification, report or opinion which the auditors propose to render in connection with the Corporation's financial statements.

5. The Committee shall review and approve each professional service of a non-audit nature to be provided by the auditors.

6. The Committee shall meet with the Corporation's chief internal auditor at least once a year to review his comments concerning the adequacy of the Corporation's system of internal accounting controls and such other matters as the Committee may deem appropriate.

7. The Committee shall have the power to direct the auditors and the internal audit staff to inquire into and report to it with respect to any of the Corporation's contracts, transactions or procedures, or the conduct of the Corporate Office, or any division, profit center, subsidiary or other unit, or any other matter having to do with the Corporation's business and affairs. If authorized by the Board of Directors, the Committee may initiate special investigations in these regards.

8. The Committee shall have such other duties as may be lawfully delegated to it from time to time by the Board of Directors.

Section 3.15. COMPENSATION AND MANAGEMENT DEVELOPMENT COMMITTEE. There shall be a Compensation and Management Development Committee of the Board of Directors which shall serve at the pleasure of the Board of Directors and be subject to its control. The Committee shall have the following membership and powers:

1. The Committee shall be composed of at least three (3) members. All members of the Committee shall be Independent Outside Directors. The principal Human Resources officer of the Corporation shall be a non-voting member of the Committee.

2. The Committee shall recommend to the Board of Directors for its action the amount to be appropriated for awards to be made each year to elected officers under the Corporation's incentive compensation plan.

3. The Committee shall establish the Corporation's annual performance objectives under the Corporation's incentive compensation plans.

4. The Committee shall make recommendations to the Board of Directors with respect to the base salary and incentive compensation of the elected officers. The Committee shall take final action with respect to the base salary and incentive compensation of all other officers and employees receiving a base salary over an amount as shall be determined from time to time either by the Committee or the Board of Directors.

5. The Committee shall review management's recommendations and take final action with respect to all awards to be made under the Corporation's long-term incentive plans or other similar benefit plans which may be adopted by the Board of Directors or the stockholders and in which corporate officers or directors are eligible to participate, provided however that all such awards relative to the five (5) most highly compensated officers must be reported to the Board of Directors.

6. The Committee shall review on a continuing basis the Corporation's general compensation policies and practices, fringe benefits and the Corporation's compliance with its various affirmative action plans and programs. The committee shall also review and recommend to the Board of Directors for its final action all compensation plans in which elected officers or directors are eligible to participate.

7. The Committee shall review from time to time and report to the Board of Directors actions taken by management concerning the Corporation's overall executive structure and the steps being taken to assure the succession of qualified management.

8. The Committee shall have such other duties as may be lawfully delegated to it from time to time by the Board of Directors.

Section 3.16. EXECUTIVE AND PUBLIC POLICY COMMITTEE. There shall be an Executive and Public Policy Committee of the Board of Directors which shall serve at the pleasure of the Board of Directors and be subject to its control. The Committee shall have the following membership and powers:

1. The Committee shall have at least five (5) members. At least sixty percent (60%) of the members shall be Independent Outside Directors.

2. The Committee shall review, approve and monitor the policy, organization, charter and implementation of the Northrop Grumman Employees Political Action Committee.

3. The Committee shall review and approve the policy of the Corporation for engaging the services of Consultants and Commission Agents.

4. The Committee shall review and report to the Board of Directors from time to time concerning the Corporation's compliance with the Corporation's policies, practices and procedures with respect to consultants and commission agents.

5. The Committee shall review and make policy and budget recommendations to the Board of Directors for its actions concerning proposed charitable contributions and aid to higher education to be given by the Corporation each year.

6. The Committee shall have such other duties as lawfully may be delegated to it from time to time by the Board of Directors.

Section 3.17. FINANCE COMMITTEE. There shall be a Finance Committee of the Board of Directors which shall serve at the pleasure of the Board of Directors and be subject to its control. The Committee shall have the following membership and powers:

1. The Committee shall have at least five (5) members. At least fifty percent (50%) of the members of the Committee shall be Independent Outside Directors. The chief financial officer of the Corporation shall be a non-voting member of the Committee.

2. The Committee shall review and give consideration to management requests for required specific new financing of a long-term nature, whether debt or equity, and make recommendations to the Board of Directors for its final action.

3. The Committee shall review the current financial condition of the Company and planned financial requirements.

4. The Committee shall review periodically the Corporation's dividend policy in connection with dividend declarations and make recommendations to the Board of Directors for its final action.

5. The Committee shall consider management's recommendations concerning acquisitions, mergers or divestments which management has determined to be of an unusual or material nature and shall make recommendations to the Board of Directors for its final action.

6. The Committee shall consider management's recommendations concerning contracts or programs which management has determined to be of an unusual or material nature and shall make recommendations to the Board of Directors for its final action.

7. The Committee shall periodically review the investment performance of the employee benefit plans, capital asset requirements and short-term investment policy when appropriate. 8. The Committee shall have such other duties as lawfully may be delegated to it from time to time by the Board of Directors.

Section 3.18. NOMINATING COMMITTEE. There shall be a Nominating Committee of the Board of Directors which shall serve at the pleasure of the Board of Directors and be subject to its control. The Committee shall have the following membership and powers:

1. The Committee shall have at least three (3) members. All members of the Committee shall be Independent Outside Directors.

2. The Committee shall review candidates to serve as directors and shall recommend nominees to the Board of Directors for election at each annual meeting of stockholders or other special meetings where directors are to be elected and shall recommend persons to serve as proxies to vote proxies solicited by management in connection with such meetings.

3. The Committee shall cause the names of all director candidates that are approved by the Board of Directors to be listed in the Corporation's proxy materials and shall support the election of all candidates so nominated by the Board of Directors to the extent permitted by law.

4. The Committee shall review and make recommendations to the Board of Directors for its final action concerning the composition and size of the Board of Directors, its evaluation of the performance of incumbent directors, its recommendations concerning the compensation of the Directors, its recommendations concerning directors to fill vacancies and its evaluation and recommendations concerning potential candidates to serve in the future on the Board of Directors to assure the Board's continuity and succession.

5. The Committee shall have such other duties as lawfully may be delegated to it from time to time by the Board of Directors.

Section 3.19. MEETINGS OF COMMITTEES. Each committee of the Board of Directors shall fix its own rules of procedure consistent with the provisions of applicable law and of any resolutions of the Board of Directors governing such committee. Each committee shall meet as provided by such rules or such resolution of the Board of Directors, and shall also meet at the call of its chairman or any two (2) members of such committee. Unless otherwise provided by such rules or by such resolution, the provisions of these Bylaws under Article III entitled "Directors" relating to the place of holding meetings and the notice required for meetings of the Board of Directors shall govern the place of meetings and notice of meetings for committees of the Board of Directors. A majority of the members of each committee shall constitute a quorum thereof, except that when a committee consists of one (1) member, then the one (1) members present at the time and place of any meeting may adjourn the meeting from time to time until a quorum shall be present and the meeting may be held as adjourned without further notice or waiver. Except in cases where it is otherwise provided by the rules of such committee or by a resolution of the Board of Directors, the vote of a majority of the members present at a duly constituted meeting at which a quorum is present shall be sufficient to pass any measure by the committee.

ARTICLE IV

OFFICERS

Section 4.01. DESIGNATION, ELECTION AND TERM OF OFFICE. The Corporation shall have a Chairman of the Board and/or a President either of whom may be designated Chief Executive Officer by the Board of Directors, such Vice Presidents (each of whom may be assigned by the Board of Directors or the Chief Executive Officer an additional title descriptive of the functions assigned to him and one or more of whom may be designated Executive, Group or Senior Vice President) as the Board of Directors deems appropriate, a Secretary and a Treasurer. These officers shall be elected annually by the Board of Directors at the organizational meeting immediately following the annual meeting of stockholders, and each such officer shall hold office until the corresponding meeting of the Board of Directors in the next year or until his earlier resignation, death or removal. Any vacancy in any of the above offices may be filled for an unexpired portion of the term by the Board of Directors at any regular special meeting. The Chief Executive Officer may, by a writing filed with the Secretary, designate titles for employees and agents, as, from time to time, may appear necessary or advisable in the conduct of the affairs of the Corporation and, in the same manner, terminate or change such titles.

Section 4.02. CHAIRMAN OF THE BOARD. The Board of Directors shall designate the Chairman of the Board from among its members. The Chairman of the Board of Directors shall preside at all meetings of the Board and the Shareholders, and shall perform such other duties as shall be delegated to him by the Board or the officer designated as chief executive.

Section 4.03. PRESIDENT. The President shall perform such duties and have such responsibilities as may from time to time be delegated or assigned to him by the Board of Directors or the officer designated as chief executive.

Section 4.04. CHIEF EXECUTIVE. The Board of Directors shall designate either the Chairman of the Board or the President to be the chief executive of the Corporation. The officer so designated shall be responsible for the general supervision, direction and control of the business and affairs of the Corporation.

Section 4.05. CHIEF FINANCIAL OFFICER. The Chief Financial Officer of the Corporation shall be responsible to the Chief Executive Officer for the management and supervision of all financial matters and to provide for the financial growth and stability of the Corporation. He shall attend all regular meetings of the Board of Directors and keep the Directors currently informed concerning all significant financial matters that could impact upon the business or affairs of the Corporation. He shall also perform such additional duties as may be assigned to him from time to time by the Board of Directors or the Chief Executive Officer.

Section 4.06. EXECUTIVE VICE PRESIDENTS, SENIOR VICE PRESIDENTS AND VICE PRESIDENTS. Executive vice presidents, senior vice presidents and vice presidents of the Corporation that are elected by the Board of Directors shall perform such duties as may be assigned to them from time to time by the Chief Executive Officer.

Section 4.07. CHIEF LEGAL OFFICER. The chief legal officer of the Corporation shall be the General Counsel who shall be responsible to the Chief Executive Officer for the management and supervision of all legal matters. The General Counsel shall attend all regular meetings of the Board of Directors and shall keep the Directors currently informed concerning all significant legal matters, particularly those involving important business, legal, moral or ethical issues that could impact upon the business or affairs of the Corporation.

Section 4.08. SECRETARY. The Secretary shall keep the minutes of the meetings of the stockholders, the Board of Directors and all committee meetings. The Secretary shall be the custodian of the corporate seal and shall affix it to all documents which he is authorized by

law or the Board of Directors to sign and seal. The Secretary also shall perform such other duties as may be assigned from time to time by the Chief Executive Officer.

Section 4.09. TREASURER. The Treasurer shall be accountable to the Senior Vice President, Finance, and shall perform such duties as may be assigned to the Treasurer from time to time by the Senior Vice President, Finance.

Section 4.10. APPOINTED OFFICERS. The Chief Executive Officer may appoint one or more Corporate Staff Vice Presidents, officers of groups or divisions or assistant secretaries, assistant treasurers and such other assistant officers as the business of the Corporation may require, each of whom shall hold office for such period, have such authority and perform such duties as may be specified from time to time by the Chief Executive Officer.

Section 4.11. ABSENCE OR DISABILITY OF AN OFFICER. In the case of the absence or disability of an officer of the Corporation the Board of Directors, or any officer designated by it, or the Chief Executive Officer may, for the time of the absence or disability, delegate such officer's duties and powers to any other officer of the Corporation.

Section 4.12. OFFICERS HOLDING TWO OR MORE OFFICES. The same person may hold any two or more of the above-mentioned offices. However, no officer shall execute, acknowledge or verify any instrument in more than one capacity, if such instrument is required by law, by the Certificate or by these Bylaws, to be executed, acknowledged or verified by any two or more officers.

Section 4.13. COMPENSATION. The Board of Directors shall have the power to fix the compensation of all officers and employees of the Corporation.

Section 4.14. RESIGNATIONS. Any officer may resign at any time by giving written notice to the Board of Directors, to the Chief Executive Officer, or to the Secretary of the Corporation. Any such resignation shall take effect at the time specified therein unless otherwise determined by the Board of Directors. The acceptance of a resignation by the Corporation shall not be necessary to make it effective.

Section 4.15. REMOVAL. Any officer of the Corporation may be removed, with or without cause, by the affirmative vote of a majority of the entire Board of Directors. Any assistant officer of the Corporation may be removed, with or without cause, by the Chief Executive Officer, or by the Board of Directors.

#### ARTICLE V

### INDEMNIFICATION OF DIRECTORS, OFFICERS, EMPLOYEES AND AGENTS

Section 5.01. RIGHT TO INDEMNIFICATION. Each person who was or is made a party, or is threatened to be made a party, to any actual or threatened action, suit, or proceeding, whether civil, criminal, administrative, or investigative (hereinafter a "proceeding"), by reason of the fact that he or she is or was a director, officer, employee, or agent of the Corporation (hereinafter an "indemnitee") shall be indemnified and held harmless by the Corporation to the fullest extent authorized by the Delaware General Corporation Law, as the same exists or may hereafter be amended, or by other applicable law as then in effect, against all expense, liability, and loss (including attorneys' fees, judgments, fines, ERISA excise taxes or penalties, and amounts paid in settlement) actually and reasonably incurred or suffered by such indemnitee in connection therewith. Any person who was or is made a party, or is threatened to be made a party, to any proceeding by reason of the fact that he or she is or was serving at the request of

an executive officer of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, trust or other enterprise, including service with respect to an employee benefit plan, shall also be considered an indemnitee for the purposes of this Article. The right to indemnification provided by this Article shall apply whether or not the basis of such proceeding is alleged action in an official capacity as such director, officer, employee or agent or in any other capacity while serving as such director, officer, employee or agent. Notwithstanding anything in this Section 5.01 to the contrary, except as provided in Section 5.03 of this Article with respect to proceedings to enforce rights to indemnification, the Corporation shall indemnify any such indemnitee only if such proceeding (or part thereof) initiated by such indemnitee only if such proceeding (or part thereof) was authorized by the Corporation.

Section 5.02. ADVANCEMENT OF EXPENSES. (a) The right to indemnification conferred in Section 5.01 shall include the right to have the expenses incurred in defending or preparing for any such proceeding in advance of its final disposition (hereinafter an "advancement of expenses") paid by the Corporation; provided, however, that an advancement of expenses incurred by an indemnitee in his or her capacity as a director or officer (and not in any other capacity in which service was or is to be rendered by such indemnitee, including, without limitation, service to an employee benefit plan) shall be made only upon delivery to the Corporation of an undertaking containing such terms and conditions, including the requirement of security, as the Board of Directors deems appropriate (hereinafter an "undertaking"), by or on behalf of such indemnitee, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal that such indemnitee is not entitled to be indemnified for such expenses under this Article or otherwise; and provided, further, that an advancement of expenses shall not be made if the Corporation's Board of Directors makes a good faith determination that such payment would violate any applicable law. The Corporation shall not be obligated to advance fees and expenses to a director, officer, employee or agent in connection with a proceeding instituted by the 5.02(a) to the contrary, the right of employees or agents to advancement of expenses shall be at the discretion of the Board of Directors and on such terms and conditions, including the requirement of security, as the Board of Directors deems appropriate. The Corporation may, by action of its Board of Directors, authorize one or more executive officers to grant rights for the advancement of expenses to employees and agents of the Corporation on such terms and conditions as such officers deem appropriate.

Section 5.03. RIGHT OF INDEMNITEE TO BRING SUIT. If a claim under Section 5.01 is not paid in full by the Corporation within sixty (60) calendar days after a written claim has been received by the Corporation, except in the case of a claim for an advancement of expenses under Section 5.02 in which case the applicable period shall be thirty (30) calendar days, the indemnitee may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim. If the indemnitee is successful in whole or in part in any such suit, the indemnitee shall also be entitled to be paid the expense of prosecuting or defending such suit.

Section 5.04. NONEXCLUSIVITY OF RIGHTS. (a) The rights to indemnification and to the advancement of expenses conferred in this Article shall not be exclusive of any other right which any person may have or hereafter acquire under any statute, provisions of the Certificate of Incorporation, Bylaw, agreement, vote of stockholders or disinterested directors, or otherwise. Notwithstanding any amendment to or repeal of this Article, any indemnitee shall be entitled to indemnification in accordance with the provisions hereof with respect to any acts or omissions of such indemnitee occurring prior to such amendment or repeal. (b) The Corporation may maintain insurance, at its expense, to protect itself and any past or present director, officer, employee, or agent of the Corporation or another corporation, partnership, joint venture, trust, or other enterprise against any expense, liability, or loss, whether or not the Corporation would have the power to indemnify such person against such expense, liability, or loss under the Delaware General Corporation Law. The Corporation may enter into contracts with any indemnitee in furtherance of the provisions of this Article and may create a trust fund, grant a security interest or use other means (including, without limitation, a letter of credit) to ensure the payment of such amounts as may be necessary to effect indemnification as provided in this Article. (c) The Corporation may without reference to Sections 5.01 through 5.04 (a) and (b) hereof, pay the expenses, including attorneys fees, incurred by any director, officer, employee or agent of the Corporation who is subpoenaed, interviewed or deposed as a witness or otherwise incurs expenses in connection with any civil, arbitration, criminal, or administrative proceeding or governmental or internal investigation to which the Corporation is a party, target, or potentially a party or target, or of any such individual who appears as a witness at any trial, proceeding or hearing to which the Corporation is a party, if the Corporation determines that such payments will benefit the Corporation and if, at the time such expenses are incurred by such individual and paid by the Corporation, such individual is not a party, and is not threatened to be made a party, to such proceeding or investigation.

### ARTICLE VI

### STOCK

Section 6.01. CERTIFICATES. Except as otherwise provided by law, each stockholder shall be entitled to a certificate or certificates which shall represent and certify the number and class (and series, if appropriate) of shares of stock owned by him in the Corporation. Each certificate shall be signed in the name of the Corporation by the Chairman of the Board, or the President, or a Vice President, together with the Secretary, or an Assistant Secretary, or the Treasurer or Assistant Treasurer. Any or all of the signatures on any certificate may be facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if such person were an officer, transfer agent or registrar at the date of issue.

Section 6.02. TRANSFER OF SHARES. Shares of stock shall be transferable on the books of the Corporation only by the holder thereof, in person or by his duly authorized attorney, upon the surrender of the certificate representing the shares to be transferred, properly endorsed, to the Corporation's registrar if the Corporation has a registrar. The Board of Directors shall have power and authority to make such other rules and regulations concerning the issue, transfer and registration of certificates of the Corporation's stock as it may deem expedient.

Section 6.03. TRANSFER AGENTS AND REGISTRARS. The Corporation may have one or more transfer agents and one or more registrars of its stock whose respective duties the Board of Directors or the Secretary may, from time to time, define. No certificate of stock shall be valid until countersigned by a transfer agent, if the Corporation has a transfer agent, or until registered by a registrar, if the Corporation has a registrar. The duties of transfer agent and registrar may be combined.

Section 6.04. STOCK LEDGERS. Original or duplicate stock ledgers, containing the names and addresses of the stockholders of the Corporation and the number of shares of each class of stock held by them, shall be kept at the principal executive office of the Corporation or at the office of its transfer agent or registrar.

Section 6.05. RECORD DATES. The Board of Directors shall fix, in advance, a date as the record date for the purpose of determining stockholders entitled to notice of, or to vote at,

any meeting of stockholders or any adjournment thereof, or stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock, or in order to make a determination of stockholders for any other proper purpose. Such date in any case shall be not more than sixty (60) days, and in case of a meeting of stockholders, not less than ten (10) days, prior to the date on which the particular action, requiring such determination of stockholders is to be taken. Only those stockholders of record on the date so fixed shall be entitled to any of the foregoing rights, notwithstanding the transfer of any such stock on the books of the Corporation after any such record date fixed by the Board of Directors.

Section 6.06. NEW CERTIFICATES. In case any certificate of stock is lost, stolen, mutilated or destroyed, the Board of Directors may authorize the issuance of a new certificate in place thereof upon such terms and conditions as it may deem advisable; or the Board of Directors may delegate such power to any officer or officers or agents of the Corporation; but the Board of Directors or such officer or officers or agents, in their discretion, may refuse to issue such a new certificate unless the Corporation is ordered to do so by a court of competent jurisdiction.

### ARTICLE VII

### RESTRICTIONS ON SECURITIES REPURCHASES

### Section 7.01. RESTRICTIONS ON SECURITIES REPURCHASES.

Vote required for certain acquisition of securities. Except as set 1. forth in Subsection 2 of this Section 7.01, in addition to any affirmative vote of stockholders required by any provision of law, the Certificate of Incorporation or Bylaws of this Corporation, or any policy adopted by the Board of Directors, neither the Corporation nor any Subsidiary shall knowingly effect any direct or indirect purchase or other acquisition of any equity security of a class of securities which is registered pursuant to Section 12 of the /Securities Exchange Act of 1934, as amended (the "Exchange Act"), issued by the Corporation at a price which is in excess of the highest Market Price of such equity security on the largest principal national securities exchange in the United States on which such security is listed for trading on the date that the understanding to effect such transaction is entered into by the Corporation (whether or not such transaction is concluded or a written agreement relating to such transaction is executed on such date, and such date to be conclusively established by determination of the Board of Directors), from any Interested Person, without the affirmative vote of the holders of the Voting Shares representing at least a majority of the aggregate voting power of all outstanding voting shares, excluding Voting Shares beneficially owned by such Interested Person, voting together as a single class. Such affirmative vote shall be required notwithstanding the fact that no vote may be required, or that a lesser percentage may be specified, by law or any agreement with any national securities exchange, or otherwise.

2. When A Vote Is Not Required. The provisions of Subsection 1 of this Section 7.01 shall not be applicable with respect to:

 any purchase, acquisition, redemption or exchange of such equity securities, the purchase, acquisition, redemption or exchange of which is provided for in the Corporation's Certificate of Incorporation;

b. any purchase or other acquisition of equity securities made as part of a tender or exchange offer by the Corporation to purchase securities of the same class made on the same terms to all holders of such securities and complying with the applicable requirements of the Exchange Act of 1934, as amended and the rules and regulations thereunder (or any successor provisions to such Act, rules or regulations);

c. any purchase or acquisition of equity securities made pursuant to an open market purchase program which has been approved by the Board of Directors.

3. Certain definitions. For the purpose of this Section:

a. "Affiliate" and "Associate" shall have their respective meanings ascribed to such terms in Rule 12b-2 of the General Rules and Regulations under the Exchange Act, as in effect on January 1, 1991.

b. "Beneficial Owner" and "Beneficial Ownership" shall have the meanings ascribed to such terms in Rule 13d-3 and Rule 13d-5 of the General Rules and Regulations under the Exchange Act, as in effect on January 1, 1991.

c. "Interested person" shall mean any person (other than the Corporation or any subsidiary) that is the direct or indirect Beneficial Owner of five percent (5%) or more of the aggregate voting power of the Voting Shares, and any Affiliate or Associate of any such person. For the purpose of determining whether a person is an Interested Person, the outstanding Voting Shares include unissued shares of voting stock of the Corporation of which the Interested Person is the Beneficial Owner, but shall not include any other shares of voting stock of the Corporation which may be issuable pursuant to any agreement, arrangement or understanding, or upon exercise or conversion of rights, warrants or options, or otherwise to any person who is not the Interested Person.

d. "Market Price" of shares of the class of equity security of the Corporation on any day shall mean the highest sale price (regular way) of shares of such class of such equity security on such day, or, if that day is not a trading day, on the trading day immediately preceding such day, on the largest principal national securities exchange on which such class of stock is then listed or admitted to trading, or if not listed or admitted to trading on any national securities exchange, then the highest reported sale price for such shares in the over-the-counter market as reported on the NASDAQ National Market System, or if such sale price shall not be reported thereon, the highest bid price so reported, or, of such price shall not be reported thereon, as the same shall be reported by the National Quotation Bureau, Incorporated, or if the price is not determinable as set forth above, as determined in good faith by the Board of Directors.

e. "Person" shall mean any individual, partnership, firm, corporation, association, trust, unincorporated organization or other entity, as well as any syndicate or group deemed to be a person pursuant to Section 13(d)(3) of the Exchange Act, as in effect on January 1, 1991.

f. "Subsidiary" shall mean any company or entity of which the Corporation owns, directly or indirectly, (i) a majority of the outstanding shares of equity securities, or (ii) shares having a majority of the voting power represented by all of the outstanding Voting Stock of such company entitled to vote generally in the election of directors. For the purpose of determining whether a company is a Subsidiary, the outstanding voting stock and shares of equity securities thereof shall include unissued shares of which The Corporation is the beneficial owner but, except for the purpose of determining whether a company is a Subsidiary for the purpose of Subsection 3(c) hereof shall not include any shares which may be issuable pursuant to any agreement, arrangement, or understanding, or upon the exercise of conversion rights, warrants or options, or otherwise to any Person who is not the Corporation.

g. "Voting shares" shall mean the outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors.

# ARTICLE VIII

#### SUNDRY PROVISIONS

Section 8.01. FISCAL YEAR. The fiscal year of the Corporation shall end on the 31st day of December of each year.

Section 8.02. SEAL. The seal of the Corporation shall bear the name of the Corporation and the words "Delaware" and "Incorporated March 12, 1985."

Section 8.03. VOTING OF STOCK IN OTHER CORPORATIONS. Any shares of stock in other corporations or associations, which may from time to time be held by the Corporation, may be represented and voted at any of the stockholders' meetings thereof by the Chief Executive Officer or his designee. The Board of Directors, however, may by resolution appoint some other person or persons to vote such shares, in which case such person or persons shall be entitled to vote such shares upon the production of a certified copy of such resolution.

Section 8.04. AMENDMENTS. These Bylaws may be adopted, repealed, rescinded, altered or amended only as provided in Articles Fifth and Sixth of the Certificate.

July 30, 1997

# EXHIBIT 10(0)

AMENDMENT TO NORTHROP GRUMMAN 1993 LONG-TERM INCENTIVE SOTCK PLAN (THE "PLAN")

This amendment to the Northrop Grumman 1993 Long-Term Incentive Stock Plan (the "Plan"), as described below, is intended to supply a clause inadvertently omitted with respect to the designation of Peer Companies:

The last sentence of Section 8 will be revised to read as follows:

Peer Companies shall consist of a group of companies designated by the Committee within the first 90 days of the Performance Period with respect to a grant.

#### EXHIBIT 10(r)

### FIRST AMENDMENT TO NORTHROP GRUMMAN CORPORATION SPECIAL AGREEMENT

THIS FIRST AMENDMENT to the Northrop Grumman Corporation Special Agreement is made and entered into by and between Northrop Grumman Corporation, a Delaware corporation (hereinafter, the "Company"), and [insert name], (hereinafter, the "Executive").

Pursuant to Section 9.6 of the Special Agreement, which allows modification of the Agreement as agreed to in writing and signed by the Executive and by an authorized member of the Committee, and pursuant to delegation of the Committee's authority to Messrs. Kresa and Elkin by the Board of Directors of the Company at its meeting on July 2, 1997, the Company and the Executive agree to amend the Special Agreement as follows:

Section 2.4(e) shall be amended in its entirety to state as follows:

A lump-sum cash payment of the actuarial present value equivalent of the aggregate benefits accrued by the Participant as of the Effective Date of Termination under the qualified defined benefit pension plan or plans in which the Participant participates (the 'qualified plan"), and under any and all supplemental retirement plans in which the Participant participates. For this purpose, such benefits shall be calculated as if the Participant's employment continued for three full years following the Effective Date of Termination (i.e., the Participant receives three additional years of vesting and benefit accruals, and his age is also increased three years from his age as of the Effective Date of Termination for all purposes under such plans, including any and all early retirement subsidies); provided, however, that for purposes of determining "Final Average Pay" under such plans, the Participant's actual pay history as of the Effective Date of Termination shall be used, except that such pay shall include the higher of (x) the average of the last three bonuses received by the Executive, or (y) the Executive's target bonus for the year in which the Effective Date of Termination occurs. In addition, for this purpose there shall be offset from the lump sum payment the actuarial present value equivalent of benefits payable to the Participant from the qualified plan as actually accrued by the Participant through the Effective Date of Termination under the qualified plan (or such other date as determined under the terms of the qualified plan); the intent of this provision being that the qualified plan benefits will be paid in the normal course under the terms of the qualified plan or plans, with additional benefits payable as a result of the imputation of age and service under this provision being paid from this Plan.

A new second paragraph of Section 2.4(d) shall be substituted for the existing second paragraph of that Section, as follows:

The welfare benefits described in this Subsection 2.4(d) shall continue for three years following the Effective Date of Termination for the Executive and his spouse; provided, however, that such welfare benefits that are medical benefits shall be continued for the life of the Executive and the life of his spouse, and may be coordinated with and paid secondary to any benefits that the Executive or his spouse receives from another employer or from Medicare (following the Executive and/or his spouse's entitlement to Medicare benefits).

IN WITNESS WHEREOF, the parties have executed this First Amendment to the Special Agreement on the \_\_\_\_\_ day of August, 1997.

Northrop Grumman Corporation

Executive

Marvin Elkin, Corporate Vice President and Chief Human Resources Officer [insert name]

### SECOND AMENDMENT TO NORTHROP GRUMMAN CORPORATION SPECIAL AGREEMENT

THIS SECOND AMENDMENT to the Northrop Grumman Corporation Special Agreement is made by Northrop Grumman Corporation, a Delaware corporation (hereinafter, the "Company").

WHEREAS, Northrop Grumman Corporation (the "Company") and Richard B. Waugh, Jr. (the "Executive") have previously entered into an agreement known as the Northrop Grumman Corporation Special Agreement dated , 1997 and subsequently amended (the "Agreement"), and

WHEREAS, pursuant to Section 9.6 of the Agreement, the Company may modify the Agreement with the written consent of the Executive, and

WHEREAS, the Executive has given the Company written consent to amend the Agreement with respect to certain payout provisions and such consent is attached hereto, and

WHEREAS, the Company now wishes to amend such payout provisions,

NOW THEREFORE, the Agreement shall be amended as follows:

Section 2.4(e) shall be amended to replace the "A" at the beginning with the following:

"Except as provided in Appendix A, a"

A new Appendix A shall be added as follows:

### APPENDIX A

# Manner of Payment of Benefits

 Coverage: This Appendix applies only to the payment of benefits under the Executive's nonqualified supplemental retirement plans. It does not cover "3+3" benefits under this Special Agreement. The covered benefits are referred to for purposes of this Appendix as the "Supplemental Retirement Benefits".

2. Override: The provisions of this Appendix override any inconsistent provisions in Section 2.4(e) of this Special Agreement with respect to the manner of payment of Supplemental Retirement Benefits.

3. Basic Form Of Payment: The Supplemental Retirement Benefits will be paid to the Executive in the form of a 100% contingent annuitant annuity, except as provided below.

(a) Payment will be made to the Executive with his spouse as the contingent annuitant.

(b) The Executive's spouse will be his spouse at the date of the adoption of this Appendix ("Spouse").

4. Calculation Of Annuity: The calculation of the 100% contingent annuitant option will be made using the factors applicable for that payment form under the Northrop Grumman Retirement Plan.

5. Commencement Of Annuity: The effective annuity starting date will be the first of the month following the Executive's termination of employment with the Company's affiliated group (which may include Lockheed Martin Corporation and its affiliates if Lockheed Martin Corporation has merged with or acquired Northrop Grumman Corporation at the time of the Executive's termination). Actual payment will commence as soon as practicable on or after the annuity starting date, but no more than 30 days after the Executive's Effective Date of Termination.

6. Lump Sum In Certain Cases: If the Executive's Spouse should die prior to the annuity starting date described in paragraph 5, or if the Spouse's life expectancy should become shortened as a result of illness diagnosed or an injury occurring after the date of adoption of this Appendix, payment will be made to the Executive in a single lump sum.

(a) The payment will be the present value of the Executive's entire accrued benefit (but only with respect to the Supplemental Retirement Benefits).

(b) The procedure for calculating the lump sum, including the applicable actuarial factors, will be the same as that used by the Company for making lump sum payments of Supplemental Retirement Benefits under the Northrop Grumman Corporation change-in-control Special Agreements with its elected officers.

(c) Payment will be made as soon as practicable following the Executive's termination of employment as described in paragraph 5, but no more than 30 days after the Executive's Effective Date of Termination.

(d) If the Company and the Executive cannot agree as to whether the life expectancy of the Spouse has become shortened as a result of an illness diagnosed or an injury occurring after the date of adoption of this Appendix, the issue will be determined by two doctors designated by the Executive. If the designated doctors cannot agree, payment will be made in annuity form under paragraph 3.

7. No Vesting: This Appendix is intended only to describe the manner of payment of benefits to which the Executive may become entitled under other provisions of this Special Agreement. This Appendix is not intended to confer any additional right to benefits not derived from such other provisions.

IN WITNESS WHEREOF, the Company has executed this Second Amendment to the Special Agreement on the day of December, 1997.

NORTHROP GRUMMAN CORPORATION

By:

Attest:

#### Waiver Under Northrop Grumman Corporation Special Agreement

1. This constitutes a waiver of any right the undersigned Executive may have to object to a modification (as described in paragraph 3 below) of the Northrop Grumman Corporation Special Agreement (the "Agreement") between the undersigned Executive and Northrop Grumman Corporation (the "Company") entered into on

 This waiver is only effective until the date that is 10 days before the date of the vote by Northrop Grumman shareholders on the proposed merger with Lockheed Martin ("Final Date").

3. This waiver permits only the following modification to the Agreement: in lieu of the lump sum payout described in Section 2.4(e) of the Agreement of supplemental retirement benefits, such benefits would be paid in the form of an annuity (or installments), assuming such an option is available to the Executive in the underlying plan or agreement on which the supplemental benefits are based (such as the Northrop Corporation ERISA Supplemental Plan 1, ERISA Supplemental Program 2, etc.) This will not apply to 3+3 benefits provided under the Agreement or benefits under the CPC Supplemental Executive Retirement Program.

The Company will determine the form of annuity (or installments) in its sole discretion. With respect to an amount attributable to a particular plan or agreement (such as the Northrop Corporation ERISA Supplemental Plan 1, ERISA Supplemental Program 2, etc.), the Company will only select among the options available under that particular plan or agreement, as to both form and timing of payment.

4. The Company does not promise to make the foregoing amendment, but may do so at its option during the period of the waiver.

5. The undersigned Executive understands that the Company will incur expenses in reliance upon this waiver and the Executive therefore agrees that this waiver cannot be revoked before the Final Date except as provided in 6.

6. This waiver may be revoked before the Company amends the Agreement if the Executive suffers from (a) an unanticipated emergency that is caused by an event beyond the control of the Executive and that would result in severe financial hardship to the Executive if revocation were not permitted, or (b) an illness or injury which severely reduces the Executive's life expectancy.

Executed this day of December, 1997.

Attest:

### AMENDMENT TO THE NORTHROP GRUMMAN CORPORATION SPECIAL AGREEMENTS

WHEREAS, Northrop Grumman Corporation (the "Company") and its elected officers have previously entered into a series of agreements known as the Northrop Grumman Corporation Special Agreements which provide change in control benefits (the "Agreements"), and

WHEREAS, pursuant to Section 9.6 of those Agreements, the Company may modify the Agreements with the written consent of the officers, and

WHEREAS, the officers listed in Exhibit A hereto (the "Waiving Officers") have given the Company written consent to amend the Agreement with respect to certain payout provisions, and

WHEREAS, the Company now wishes to amend such payout provisions,

NOW THEREFORE, the Agreements of the Waiving Officers shall be amended as follows:

1. Section 2.4(e) shall be amended to replace the "A" at the beginning with the following:

"Except as provided in Appendix A, a"

2. A new Appendix A shall be added as follows:

APPENDIX A

#### Manner of Payment of Benefits

1. Rescission of Lump Sum Payout: Section 2.4(e) of this Agreement contains a provision for a lump sum cash payout of the actuarial present value equivalent of the aggregate benefits accrued by the Executive under supplemental nonqualified retirement plans. That lump sum override of the form of payment provisions of other plans is rescinded. Accordingly, the form of payment of benefits under those plans will be determined in accordance with the provisions of those plans.

2. 3+3 Benefits: The rescission in paragraph 1 is not meant to have any effect on the lump sum payout provision in Section 2.4(e) with respect to the 3+3 benefits (i.e., the imputed three additional years of vesting and benefit accruals and three years of age).

3. Coordination of Benefits: If the payout provisions in other supplemental nonqualified retirement plans made operative by the rescission in paragraph 1 contain reduction in benefit provisions (such as forfeitures or penalties attached to a lump sum election), the reduced amounts will not be restored by this Plan.

Adopted this 13th day of February, 1998.

NORTHROP GRUMMAN CORPORATION

By:

Marvin Elkin

Attest:

Anderson	Herbert W.
Crosby, Jr.	Ralph D.
Elkin	Marvin
Harrison	John E.
Helm	Robert
Jones, Jr.	Charles L.
Kresa	Kent
Lawler	William H.
Molleur	Richard R.
Myers	Albert F.
Roche	James G.

EXHIBIT 10(u)

CPC SUPPLEMENTAL EXECUTIVE RETIREMENT PROGRAM

# 2/25/98

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### APPENDIX F

CPC Supplemental Executive Retirement Program

F.01 Purpose. The purpose of this Program is to give enhanced retirement benefits to eligible elected officers of the Company's Corporate Policy Council.

. . . . . . . . . . . . . .

- F.02 Definitions and Construction.
  - (a) Capitalized terms used in this Appendix which are not defined in this Appendix or Article 1 of the Plan are taken from the Northrop Grumman Retirement Plan, the Northrop Grumman Retirement Plan--Rolling Meadows Site, and the Grumman Pension Plan (collectively, the "Qualified Plans") and are intended to have the same meaning as under the Qualified Plans.
  - (b) The benefits under this Program are designed to mimic and supplement the post-1994 benefits under the Qualified Plans and are therefore to be construed

utilizing the same principles and benefit calculation methodologies applicable under the Qualified Plans except where expressly modified below.

- (c) Benefits under this Program will be determined with reference to the terms of the Qualified Plans (including Final Average Salary and Months of Benefit Service) even if Participants are transferred to positions with the Affiliated Companies in which they are no longer covered by the Qualified Plans.
  - (1) That is, if such a transfer occurs, for purposes of the formula under this Program, Participants will continue to earn deemed compensation and service credits as if they were still participating under the Qualified Plans.
  - (2) Notwithstanding (1), such deemed compensation and service credits will not be considered as earned under the Qualified Plans for purposes of determining:
    - 2

- (A) benefits under the Qualified Plans or supplements to the Qualified Plans other than this Program, or
- (B) the offset under Section F.05(a)(2)(A) below.
- (d) Affiliated Companies: If Northrop Grumman Corporation is merged into the Lockheed Martin affiliated group, "Affiliated Companies" will be determined after that point by reference to Lockheed Martin Corporation and entities affiliated with it under the rules of sections 414(b), (c), (m) and (o) of the Code.
- F.03 Eligibility. Eligibility for benefits under this Program will be limited to those elected officers of the Company's Corporate Policy Council listed in Exhibit A. Officers may be added or removed from Exhibit A in accordance with the amendment provisions of the Plan.
- F.04 Benefit Amount.

- (a) The benefit formula under this Program with respect to a Participant equals 1-2/3% x his Final Average Salary x his Months of Benefit Service / 12.
- (b) The benefit payable is the present value of a single, straight life annuity benefit for the Participant commencing on his Normal Retirement Date (except as provided in (g)), assuming an annual benefit equal to the benefit formula amount in (a).
- (c) Only Months of Benefit Service after the commencement of a Participant's tenure on the Corporate Policy Council will be counted, as set forth in Exhibit A.
- (d) Months of Benefit Service will continue to be counted for a Participant until the earlier of (1) and (2):

- (1) The date the Participant ceases to earn benefit accrual service under either the Qualified Plans or some other defined benefit plan of the Affiliated Companies which is qualified under section 401(a) of the Code.
- (2) The later of:

- (A) cessation of the officer's membership on the Corporate Policy Council (whether because of termination of his membership or dissolution of the Council), and
- (B) two years from the effective date of the merger of Northrop Grumman Corporation into the Lockheed Martin Corporation affiliated companies, pursuant to the Merger Agreement dated July 2, 1997.
- (3) Examples: The following examples assume that the effective

date of the merger (i.e., the closing) is March 10, 1998 and that the Participant continues to earn Months of Benefit Service under the Qualified Plans or a Successor Qualified Plan until termination of employment with the Affiliated Companies.

Example 1: Officer A terminates employment with the

Affiliated Companies on March 31, 1998. At that time, he is still a member of the CPC. His

service under this Program ceases to accrue on March 31.

Example 2: The CPC is never dissolved after the merger, and

Officer B continues to be a member of the CPC until December 31, 2005, though continuing to work for the Affiliated Companies. His service under this Program ceases to accrue on December 31, 2005.

Example 3: The CPC is dissolved by order of an authorized

officer on March 11, 1998. Officer C continues to work for the Affiliated Companies until December 31, 2005. His service under this Program ceases to accrue on March 10, 2000, two years after the closing.

(e) Months of Benefit Service will be determined under the rules of the Qualified Plans for determining service after 1994, even with respect to pre-1995 periods of service counted under this Program.

- (f) Benefits will be calculated without regard to the limits in sections 401(a)(17) and 415 of the Code.
- (g) If a Participant's benefit is paid under this Program before his Normal Retirement Date, the benefit will be adjusted for early commencement as if it were a post-1994 benefit under the Qualified Plans.
  - (1) To determine whether the Early Retirement Benefit provisions apply and to calculate the early retirement reduction, the Participant's Vesting Service and Months of Points Service earned under the Qualified Plans (or deemed earned under F.02(c)) will be utilized.
  - (2) For purposes of calculating present value and the appropriate early retirement subsidy, the assumed annuity benefit will be deemed to commence as of the first of the month following Termination of Employment or, if later, the earliest date payment could be made for benefits after 1994 under the Qualified Plans.

05 Benefit Limit. Accruals under Section F.04 will be limited as provided in this Section.

- (a) Accruals for a Participant under this Program may not exceed the greater of:
- (1) 10% of Final Average Salary, or
- (2) 50% of Final Average Salary minus the Participant's combined accrued benefits under the following:
  - (A) the Qualified Plans and any other defined benefit plan qualified under section 401(a) of the Code which is maintained by the Affiliated Companies;
  - (B) the Northrop Corporation ERISA Supplemental Plan 1;
  - (C) the ERISA Supplemental Program 2 under the Northrop Supplemental Plan 2;
  - (D) the Grumman Corporation Supplemental Retirement Plan;

F.05

- (E) the "3+3" benefit under the change-in-control Special Agreements that Participants have entered into with the Company ("Special Agreements") for those entitled to it; and
- (F) any other Company plan, program, arrangement or individual contract which provides a nonqualified, defined benefit pension supplement.
- (b) The limits in (a) may not be exceeded even after the benefits under this Program have been enhanced by the "3+3" benefit under the Special Agreements. See the examples in (c).
- (c) Examples of the effect of the 3+3 benefit for those Participants who receive that benefit:

Example 1: A Participant has a 33% of Final Average Salary accrued benefit under one of the Qualified Plans (including the supplemental plans under (a)(2)(B) and (C) above) and a 9% of Final Average Salary accrued

benefit under this Program before the application of the limits of this Section or the 3+3 benefit. The Participant's final benefit, including the 3+3, would be calculated as follows:

- (1) The 33% benefit would be enhanced by the effect of the 3+3 benefit (adding 5%) giving a total of 38%.
- (2) The benefit under this Program would also be enhanced by the effect of the 3+3 benefit, giving 9% + 5% = 14%.
- (3) The initial benefit calculation would then be 38% + 14% = 52%.
- (4) The 50% limit would be applied to the enhanced Qualified Plan benefit as follows: 50% - 38% = 12%.
- (5) Since the limit in #4 is greater than the 10% limit of (a)(1), the benefit under this Program (enhanced by the 3+3 benefit) would be limited to 12%. The

Participant would have a combined benefit from the Qualified Plan, this Program and 3+3 of 50%.

Example 2: A Participant has a 37% of Final Average Salary

accrued benefit under one of the Qualified Plans (including the supplemental plans under (a)(2)(B) and (C) above) and a 9% of Final Average Salary accrued benefit under this Program before the application of the limits of this Section or the 3+3 benefit. The Participant's final benefit, including the 3+3, would be calculated as follows:

- (1) The 37% benefit would be enhanced by the effect of the 3+3 benefit (adding 5%) giving a total of 42%.
- (2) The benefit under this Program would also be enhanced by the effect of the 3+3 benefit, giving 9% + 5% = 14%.
- (3) The initial benefit calculation would then be 42% + 14% = 56%.

- (4) The 50% limit would be applied to the enhanced Qualified Plan benefit as follows: 50% 42% = 8%.
- (5) Since the limit in #4 is less than the 10% limit of (a)(1), the benefit under this Program (enhanced by the 3+3 benefit) would be limited to 10%. The Participant would have a combined benefit from the Qualified Plan, this Program and 3+3 of 52%.
- (d) For purposes of the offset in (a)(2):
  - benefits under all the plans will be compared on the basis of a single, straight life annuity commencing at Normal Retirement Date;
  - (2) accrued benefits under (A)-(E) and (F), both past and present, will be counted (i.e., prior accruals which may have been paid out previously will be counted);
  - (3) benefits accrued under (A)-(E) and (F) will be counted for purposes of the offset even if they are forfeited for any reason.

<sup>12</sup> 

- (e) For purposes of this Section, Final Average Salary will be calculated without regard to the limits in section 401(a)(17) of the Code.
- F.06 Payment of Benefits.
  - (a) Benefits will be paid in a lump sum as soon as practicable following Termination of Employment.
  - (b) If a Participant dies after Termination of Employment but before receipt of payment, payment will be made to his estate. If a Participant dies prior to Termination of Employment, payment will be made under Section F.07.
- F.07 Preretirement Death Benefits: If a Participant dies before Termination

of Employment, preretirement surviving spouse benefits will be payable under this Program on behalf of the Participant if his surviving spouse is eligible for a qualified preretirement survivor annuity (as required under section 401(a)(11) of the Code) from a Qualified Plan.

- (a) A preretirement death benefit will be calculated for a Participant's surviving spouse in the same manner as if the benefits earned under this Program were benefits under the Qualified Plan from which the Participant retired. In the usual case, therefore, the death benefit will be the survivor benefit portion of a 50% joint-and-survivor annuity based on the benefit in F.04 (as limited by F.05).
- (b) The present value of the amount in (a) will be paid to the surviving spouse in a single lump sum as soon as practicable after the Company is properly notified of the Participant's death.
  - (1) For purposes of calculating present value and the appropriate early retirement subsidy, the assumed spousal annuity benefit will be deemed to commence as of the first of the month following the Participant's death or, if later, the earliest date payment could be made for qualified preretirement survivor benefits under the Qualified Plans.

- (2) The Company may delay payment in the event there is a dispute as to whom payment is due until the dispute is settled.
- (c) The calculations in (a) will be made without regard to the limits in sections 401(a)(17) and 415 of the Code.
- (d) No benefit will be payable under this Program with respect to a spouse after the death of that spouse.
- F.08 Individual Arrangements: This Section applies to a Participant who has an individually-negotiated arrangement with the Company for supplemental retirement benefits.
  - (a) Intent: It is the intent of this Section to coordinate the benefits under this Program with those of any individuallynegotiated arrangement. Participants with such arrangements will be paid the better of the benefits under the arrangement or under Sections F.04 or F.07 (as limited by F.05).
  - (b) No duplication of benefits: In no case will duplicate benefits be paid under this Program and such an

individual arrangement. Any payments under this Program will be counted toward the Company's obligations under an individual arrangement, and vice-versa.

- (c) If the individually-negotiated arrangement provides a benefit in excess of the one payable under this Program, then the individual benefit will be substituted as the benefit payable under this Program (even if it exceeds the limit under F.05).
- (d) In order to determine which benefit is greater, all benefits will be compared on the basis of an actuarial equivalent single, straight life annuity commencing at the Participant's Normal Retirement Date.
- (e) For purposes of (d), the individually-negotiated benefit will be determined in accordance with all of its terms and conditions. Nothing in this Section is meant to alter any of those terms and conditions.
- (f) This Section does not apply to the Special Agreements.

F.09 Actuarial Assumptions: The following defined terms and actuarial assumptions will be used in calculating and comparing benefits under this Program:

Defined Terms: - - - - - - - - - -Earliest Starting Date: The earliest date payment could be made to the Participant for benefits accrued after 1994 under the Qualified Plans. Deferral Period: The period between the Date Payable and the Earliest Starting Date. Date Payable: A lump sum to a Participant is payable for calculation purposes as of the first of the month following his date of Termination of Employment. A lump sum is payable to a surviving spouse for calculation purposes as of the first of the month following the Participant's death.

Actuarial Assumptions: 

> Interest: The Pension Benefit Guaranty Corporation (PBGC) interest rate (or rates) that would be used to

calculate a lump sum value for an immediate annuity under the Northrop Grumman Retirement  ${\rm Plan}{\mspace{-}}$ 

- (A) using 120% of the PBGC immediate annuity rate for both the Deferral Period and after the Earliest Starting Date, and
- (B) substituting that PBGC rate (or rates) in effect for the month preceding the Date Payable (even if actual payment is delayed for some reason) instead of the rate for the first day of the calendar year of distribution.

Mortality: (A) During the Deferral Period, none; (B) after the

Earliest Starting Date, UP-1984 Unisex.

Increase in Code Section 415 Limit: 2.8% per year.

Age: Age rounded to the nearest month on the date of Termination

of Employment.

Variable Unit Values: Variable Unit Values are presumed not to increase for future periods after the Date Payable.

Eligible Officer	Election Date
R. Molleur	2/4/91
M. Elkin	5/20/92
C. Jones	5/20/92
J. Roche	5/20/92
R. Waugh	11/18/92
R. Helm	12/15/93
R. Crosby	6/15/94
J. Harrison	6/15/94
H. Anderson	12/21/94
W. Lawler	12/17/96

# EXHIBIT 23

# INDEPENDENT AUDITORS' CONSENT

We consent to the incorporation by reference in Registration Statements Nos. 33-15764, 33-49667, 33-55141, 33-59815, 33-59853, 333-03959, 333-02653, 333-02453, and 333-34717 of Northrop Grumman Corporation on Form S-8 of our report dated January 21, 1998 (except for the information described in the note to the consolidated financial statements captioned "Merger Agreement" as to which the date is March 25, 1998) appearing in this Annual Report on Form 10-K of Northrop Grumman Corporation for the year ended December 31, 1997.

DELOITTE & TOUCHE LLP Los Angeles, California March 25, 1998

#### EXHIBIT 24

# POWER OF ATTORNEY IN CONNECTION WITH THE

### 1997 ANNUAL REPORT ON FORM 10-K

 ${\sf KNOW}$  ALL MEN BY THESE PRESENTS, that each of the undersigned directors and officers of NORTHROP GRUMMAN CORPORATION, a Delaware corporation, does hereby appoint RICHARD R. MOLLEUR and JAMES C. JOHNSON, and each of them as his agents and attorneys-in-fact (the "Agents"), in his or her respective name and in the capacity or capacities indicated below to execute and/or file the Annual Report on Form 10-K for the fiscal year ended December 31, 1997 (the "Report") under the Securities Exchange Act of 1934, as amended (the "Act"), and any one or more amendments to any part of the Report that may be required to be filed under the Act (including the financial statements, schedules and all exhibits and other documents filed therewith or constituting a part thereof) and to any part or all of any amendment(s) to the Report, whether executed and filed by the undersigned or by any of the Agents. Further, each of the undersigned does hereby authorize and direct the Agents to take any and all actions and execute and file any and all documents with the Securities and Exchange Commission (the "Commission"), which they deem necessary or advisable to comply with the Act and the rules and regulations or orders of the Commission adopted or issued pursuant thereto, to the end that the Report shall be properly filed under the Act. Finally, each of the undersigned does hereby ratify each and every act and documents which the Agents may take, execute or file pursuant thereto with the same force and effect as though such action had been taken or such document had been executed or filed by the undersigned, respectively.

This Power of Attorney shall remain in full force and effect until revoked or superseded by written notice filed with the Commission.

IN WITNESS THEREOF, each of the undersigned has subscribed these presents this 18th day of March, 1998.

	Chairman of the Board, President
and Chief Executive Kent Kresa Executive Officer)	Officer and Director (Principal
Jack R. Borsting	Director
John T. Chain, Jr.	Director
Jack Edwards	Director
Phillip Frost	Director
Robert A. Lutz	Director
Aulana L. Peters	Director
John E. Robson	Director
Richard M. Rosenberg	Director
John Brooks Slaughter	Director
Richard J. Stegemeier	Director
Richard B. Waugh, Jr.	Corporate Vice President and Chief Financial Officer (Principal Financial Officer)
Nelson F. Gibbs	Corporate Vice President and Controller (Principal Accounting Officer)