UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

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

For the Quarterly Period Ended June 30, 2022

or

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

Commission File Number 1-16411

NORTHROP GRUMMAN CORPORATION

(Exact name of registrant as specified in its charter)

Delaware	**80-0640649**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
2980 Fairview Park Drive **Falls Church, Virginia**	**22042**
(Address of principal executive offices)	(Zip Code)

(703) 280-2900
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock	NOC	New York Stock Exchange

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 for 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 ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act:

Large Accelerated Filer ☒ Accelerated Filer ☐

Non-accelerated Filer ☐ Smaller Reporting Company ☐

Emerging Growth Company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes ☐ No ☒

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.
As of July 25, 2022, 154,711,299 shares of common stock were outstanding.

NORTHROP GRUMMAN CORPORATION

TABLE OF CONTENTS

NORTHROP GRUMMAN CORPORATION

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

CONDENSED CONSOLIDATED STATEMENTS OF EARNINGS AND COMPREHENSIVE INCOME (Unaudited)

	Three Months Ended June 30		Six Months Ended June 30	
$ in millions, except per share amounts	**2022**	2021	**2022**	2021
Sales				
Product	**$ 6,779**	$ 7,193	**$ 13,620**	$ 14,215
Service	**2,022**	1,958	**3,978**	4,093
Total sales	**8,801**	9,151	**17,598**	18,308
Operating costs and expenses				
Product	**5,281**	5,620	**10,661**	11,310
Service	**1,561**	1,488	**3,105**	3,215
General and administrative expenses	**1,005**	999	**1,981**	1,897
Total operating costs and expenses	**7,847**	8,107	**15,747**	16,422
Gain on sale of business	**—**	—	**—**	1,980
Operating income	**954**	1,044	**1,851**	3,866
Other (expense) income				
Interest expense	**(131)**	(136)	**(264)**	(291)
Non-operating FAS pension benefit	**377**	367	**753**	734
Other, net	**(50)**	27	**(46)**	9
Earnings before income taxes	**1,150**	1,302	**2,294**	4,318
Federal and foreign income tax expense	**204**	265	**393**	1,086
Net earnings	**$ 946**	$ 1,037	**$ 1,901**	$ 3,232
Basic earnings per share	**$ 6.09**	$ 6.44	**$ 12.21**	$ 19.95
Weighted-average common shares outstanding, in millions	**155.4**	161.0	**155.7**	162.0
Diluted earnings per share	**$ 6.06**	$ 6.42	**$ 12.16**	$ 19.89
Weighted-average diluted shares outstanding, in millions	**156.0**	161.5	**156.3**	162.5
Net earnings (from above)	**$ 946**	$ 1,037	**$ 1,901**	$ 3,232
Other comprehensive loss, net of tax				
Change in unamortized prior service credit	**—**	(2)	**(1)**	(4)
Change in cumulative translation adjustment and other, net	**(13)**	1	**(15)**	—
Other comprehensive loss, net of tax	**(13)**	(1)	**(16)**	(4)
Comprehensive income	**$ 933**	$ 1,036	**$ 1,885**	$ 3,228

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

NORTHROP GRUMMAN CORPORATION

CONDENSED CONSOLIDATED STATEMENTS OF FINANCIAL POSITION
(Unaudited)

$ in millions, except par value	**June 30, 2022**	December 31, 2021
Assets		
Cash and cash equivalents	**$ 1,169**	$ 3,530
Accounts receivable, net	**2,387**	1,467
Unbilled receivables, net	**6,211**	5,492
Inventoried costs, net	**909**	811
Prepaid expenses and other current assets	**961**	1,126
Total current assets	**11,637**	12,426
Property, plant and equipment, net of accumulated depreciation of $7,099 for 2022 and $6,819 for 2021	**8,125**	7,894
Operating lease right-of-use assets	**1,669**	1,655
Goodwill	**17,518**	17,515
Intangible assets, net	**483**	578
Deferred tax assets	**239**	200
Other non-current assets	**2,243**	2,311
Total assets	**$ 41,914**	$ 42,579
Liabilities		
Trade accounts payable	**$ 2,098**	$ 2,197
Accrued employee compensation	**1,741**	1,993
Advance payments and billings in excess of costs incurred	**2,734**	3,026
Other current liabilities	**2,403**	2,314
Total current liabilities	**8,976**	9,530
Long-term debt, net of current portion of $14 for 2022 and $6 for 2021	**12,834**	12,777
Pension and other postretirement benefit plan liabilities	**2,692**	3,269
Operating lease liabilities	**1,654**	1,590
Deferred tax liabilities	**131**	490
Other non-current liabilities	**1,976**	1,997
Total liabilities	**28,263**	29,653
Commitments and contingencies (Note 6)		
Shareholders' equity		
Preferred stock, $1 par value; 10,000,000 shares authorized; no shares issued and outstanding	**—**	—
Common stock, $1 par value; 800,000,000 shares authorized; issued and outstanding: 2022—154,876,753 and 2021—156,284,423	**155**	156
Paid-in capital	**—**	—
Retained earnings	**13,655**	12,913
Accumulated other comprehensive loss	**(159)**	(143)
Total shareholders' equity	**13,651**	12,926
Total liabilities and shareholders' equity	**$ 41,914**	$ 42,579

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

NORTHROP GRUMMAN CORPORATION

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

$ in millions	Six Months Ended June 30 2022	2021
Operating activities		
Net earnings	**$ 1,901**	$ 3,232
Adjustments to reconcile to net cash (used in) provided by operating activities:		
Depreciation and amortization	**633**	594
Stock-based compensation	**42**	40
Deferred income taxes	**(399)**	(121)
Gain on sale of business	**—**	(1,980)
Net periodic pension and OPB income	**(597)**	(546)
Pension and OPB contributions	**(71)**	(74)
Changes in assets and liabilities:		
Accounts receivable, net	**(920)**	(453)
Unbilled receivables, net	**(719)**	(312)
Inventoried costs, net	**(98)**	(104)
Prepaid expenses and other assets	**114**	26
Accounts payable and other liabilities	**(724)**	(202)
Income taxes payable, net	**86**	881
Other, net	**67**	(19)
Net cash (used in) provided by operating activities	**(685)**	962
Investing activities		
Divestiture of IT services business	**—**	3,400
Capital expenditures	**(507)**	(435)
Proceeds from sale of equipment to a customer	**—**	56
Other, net	**39**	1
Net cash (used in) provided by investing activities	**(468)**	3,022
Financing activities		
Payments of long-term debt	**—**	(2,236)
Common stock repurchases	**(640)**	(2,143)
Cash dividends paid	**(519)**	(486)
Payments of employee taxes withheld from share-based awards	**(48)**	(31)
Other, net	**(1)**	(54)
Net cash used in financing activities	**(1,208)**	(4,950)
Decrease in cash and cash equivalents	**(2,361)**	(966)
Cash and cash equivalents, beginning of year	**3,530**	4,907
Cash and cash equivalents, end of period	**$ 1,169**	$ 3,941

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

NORTHROP GRUMMAN CORPORATION

CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
(Unaudited)

	Three Months Ended June 30		Six Months Ended June 30	
$ in millions, except per share amounts	**2022**	2021	**2022**	2021
Common stock				
Beginning of period	**$ 156**	$ 161	**$ 156**	$ 167
Common stock repurchased	**(1)**	(1)	**(2)**	(7)
Shares issued for employee stock awards and options	**—**	—	**1**	—
End of period	**155**	160	**155**	160
Paid-in capital				
Beginning of period	**—**	8	**—**	58
Common stock repurchased	**—**	(21)	**—**	(60)
Stock compensation	**—**	13	**—**	2
End of period	**—**	—	**—**	—
Retained earnings				
Beginning of period	**13,277**	10,487	**12,913**	10,482
Common stock repurchased	**(323)**	(134)	**(638)**	(2,089)
Net earnings	**946**	1,037	**1,901**	3,232
Dividends declared	**(270)**	(254)	**(516)**	(489)
Stock compensation	**25**	8	**(5)**	8
End of period	**13,655**	11,144	**13,655**	11,144
Accumulated other comprehensive loss				
Beginning of period	**(146)**	(131)	**(143)**	(128)
Other comprehensive loss, net of tax	**(13)**	(1)	**(16)**	(4)
End of period	**(159)**	(132)	**(159)**	(132)
Total shareholders' equity	**$ 13,651**	$ 11,172	**$ 13,651**	$ 11,172
Cash dividends declared per share	**$ 1.73**	$ 1.57	**$ 3.30**	$ 3.02

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

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

1. BASIS OF PRESENTATION

Principles of Consolidation and Reporting

These unaudited condensed consolidated financial statements (the "financial statements") include the accounts of Northrop Grumman Corporation and its subsidiaries and joint ventures or other investments for which we consolidate the financial results (herein referred to as "Northrop Grumman," the "company," "we," "us," or "our"). Intercompany accounts, transactions and profits are eliminated in consolidation. Investments in equity securities and joint ventures where the company has significant influence, but not control, are accounted for using the equity method.

Effective January 30, 2021 (the "Divestiture date"), we completed the sale of our IT and mission support services business (the "IT services divestiture") for $3.4 billion in cash and recorded a pre-tax gain on sale of $2.0 billion. The IT and mission support services business was comprised of the majority of the former Information Solutions and Services (IS&S) division of Defense Systems (excluding the Vinnell Arabia business); select cyber, intelligence and missions support programs, which were part of the former Cyber and Intelligence Mission Solutions (CIMS) division of Mission Systems; and the former Space Technical Services business unit of Space Systems. Operating results include sales and operating income for the IT and mission support services business prior to the Divestiture date. Sales and pre-tax profit for the IT and mission support services business were $162 million and $20 million for the six months ended June 30, 2021, respectively.

These financial statements are prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP" or "FAS") and in accordance with the rules of the Securities and Exchange Commission (SEC) for interim reporting. The financial statements include adjustments of a normal recurring nature considered necessary by management for a fair presentation of the company's unaudited condensed consolidated financial position, results of operations and cash flows.

Results reported in these financial statements are not necessarily indicative of results that may be expected for the entire year. These financial statements should be read in conjunction with the information contained in the company's 2021 Annual Report on Form 10-K.

Quarterly information is labeled using a calendar convention; that is, first quarter is consistently labeled as ending on March 31, second quarter as ending on June 30 and third quarter as ending on September 30. It is the company's long-standing practice to establish actual interim closing dates using a "fiscal" calendar, in which we close our books on a Friday near these quarter-end dates in order to normalize the potentially disruptive effects of quarterly closings on business processes. This practice is only used at interim periods within a reporting year.

Accounting Estimates

Preparation of the financial statements requires management to make estimates and judgments 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 sales and expenses during the reporting period. Estimates have been prepared using the most current and best available information; however, actual results could differ materially from those estimates.

Revenue Recognition

Contract Estimates

We recognize changes in estimated contract sales or costs and the resulting changes in contract profit on a cumulative basis. Cumulative estimate-at-completion (EAC) adjustments represent the cumulative effect of the changes on current and prior periods; sales and operating margins in future periods are recognized as if the revised estimates had been used since contract inception. If it is determined that a loss is expected to result on an individual performance obligation, the entire amount of the estimable future loss, including an allocation of general and administrative expense, is charged against income in the period the loss is identified.

The following table presents the effect of aggregate net EAC adjustments:

	Three Months Ended June 30		Six Months Ended June 30	
$ in millions, except per share data	**2022**	2021	**2022**	2021
Revenue	**$ 95**	$ 160	**$ 304**	$ 362
Operating income	**92**	154	**265**	344
Net earnings[(1)]	**73**	122	**209**	272
Diluted earnings per share[(1)]	**0.47**	0.76	**1.34**	1.67

(1) Based on a 21 percent statutory tax rate.

EAC adjustments on a single performance obligation can have a significant effect on the company's financial statements. When such adjustments occur, we generally disclose the nature, underlying conditions and financial impact of the adjustments. During the three months ended March 31, 2022, we recorded a $67 million favorable EAC adjustment on the engineering, manufacturing and development phase of the B-21 program at Aeronautics Systems largely related to performance incentives. No such adjustments were material to the financial statements during the three months ended June 30, 2022 and 2021.

Backlog
Backlog represents the future sales we expect to recognize on firm orders received by the company and is equivalent to the company's remaining performance obligations at the end of each period. It comprises both funded backlog (firm orders for which funding is authorized and appropriated) and unfunded backlog. Unexercised contract options and indefinite delivery indefinite quantity (IDIQ) contracts are not included in backlog until the time an option or IDIQ task order is exercised or awarded.

Company backlog as of June 30, 2022 was $80.0 billion. Of our June 30, 2022 backlog, we expect to recognize approximately 40 percent as revenue over the next 12 months and 60 percent as revenue over the next 24 months, with the remainder to be recognized thereafter.

Contract Assets and Liabilities
For each of the company's contracts, the timing of revenue recognition, customer billings, and cash collections results in a net contract asset or liability at the end of each reporting period. Contract assets are equivalent to and reflected as Unbilled receivables in the unaudited condensed consolidated statements of financial position and are primarily related to long-term contracts where revenue recognized under the cost-to-cost method exceeds amounts billed to customers. Contract liabilities are equivalent to and reflected as Advance payments and billings in excess of costs incurred in the unaudited condensed consolidated statements of financial position. The amount of revenue recognized for the three and six months ended June 30, 2022 that was included in the December 31, 2021 contract liability balance was $466 million and $1.9 billion, respectively. The amount of revenue recognized for the three and six months ended June 30, 2021 that was included in the December 31, 2020 contract liability balance was $482 million and $1.5 billion, respectively.

Disaggregation of Revenue
See Note 9 for information regarding the company's sales by customer type, contract type and geographic region for each of our segments. We believe those categories best depict how the nature, amount, timing and uncertainty of our revenue and cash flows are affected by economic factors.

Property, Plant, and Equipment

During the six months ended June 30, 2022, the company acquired $46 million of internal use software through long-term financing directly with the supplier. The software was recorded in PP&E as a non-cash investing activity and the related liability was recorded in long-term debt as a non-cash financing activity. During the six months ended June 30, 2022, the company received lease incentives for landlord funded leasehold improvements of $63 million related to a Space Systems real estate lease, which were recorded in PP&E and included in non-cash investing activities. Non-cash investing activities also include capital expenditures incurred but not yet paid of $73 million and $56 million as of June 30, 2022 and 2021, respectively.

Accumulated Other Comprehensive Loss

The components of accumulated other comprehensive loss, net of tax, are as follows:

$ in millions	**June 30, 2022**	December 31, 2021
Unamortized prior service credit	**$ 1**	$ 2
Cumulative translation adjustment and other, net	**(160)**	(145)
Total accumulated other comprehensive loss	**$ (159)**	$ (143)

Related Party Transactions

For all periods presented, the company had no material related party transactions.

Accounting Standards Updates

Accounting standards updates adopted and/or issued, but not effective until after June 30, 2022, are not expected to have a material effect on the company's unaudited condensed consolidated financial position, annual results of operations and/or cash flows.

2. EARNINGS PER SHARE, SHARE REPURCHASES AND DIVIDENDS ON COMMON STOCK

Basic Earnings Per Share

We calculate basic earnings per share by dividing net earnings by the weighted-average number of shares of common stock outstanding during each period.

Diluted Earnings Per Share

Diluted earnings per share include the dilutive effect of awards granted to employees under stock-based compensation plans. The dilutive effect of these securities totaled 0.6 million shares for the three and six months ended June 30, 2022 and 0.5 million shares for the three and six months ended June 30, 2021.

Share Repurchases

On December 4, 2018, the company's board of directors authorized a share repurchase program of up to $3.0 billion of the company's common stock (the "2018 Repurchase Program"). Repurchases under the 2018 Repurchase Program commenced in March 2020 and were completed in October 2021.

On January 25, 2021, the company's board of directors authorized a share repurchase program of up to an additional $3.0 billion in share repurchases of the company's common stock (the "2021 Repurchase Program"). Repurchases under the 2021 Repurchase Program commenced in October 2021 upon the completion of the 2018 Repurchase Program. As of June 30, 2022, repurchases under the 2021 Repurchase Program totaled $1.5 billion; $1.5 billion remained under this share repurchase authorization. By its terms, the 2021 Repurchase Program is set to expire when we have used all authorized funds for repurchases.

On January 24, 2022, the company's board of directors authorized a new share repurchase program of up to an additional $2.0 billion in share repurchases of the company's common stock (the "2022 Repurchase Program"). By its terms, repurchases under the 2022 Repurchase Program will commence upon completion of the 2021 Repurchase Program and will expire when we have used all authorized funds for repurchases. As of June 30, 2022, there have been no repurchases under the 2022 Repurchase Program and the company's total outstanding share repurchase authorization was $3.5 billion.

During the first quarter of 2021, the company entered into an accelerated share repurchase (ASR) agreement with Goldman Sachs & Co. LLC (Goldman Sachs) to repurchase $2.0 billion of the company's common stock as part of the 2018 Repurchase Program. Under the agreement, we made a payment of $2.0 billion to Goldman Sachs and received an initial delivery of 5.9 million shares valued at $1.7 billion that were immediately canceled by the company. The remaining balance of $300 million was settled on June 1, 2021 with a final delivery of 0.2 million shares from Goldman Sachs. The final average purchase price was $327.29 per share.

During the fourth quarter of 2021, the company entered into an ASR agreement with Goldman Sachs to repurchase $500 million of the company's common stock as part of the 2021 Repurchase Program. Under the agreement, we made a payment of $500 million to Goldman Sachs and received an initial delivery of 1.2 million shares valued at $425 million that were immediately canceled by the company. The remaining balance of $75 million was settled on February 1, 2022 with a final delivery of 0.1 million shares from Goldman Sachs. The final average purchase price was $374.79 per share.

Share repurchases take place from time to time, subject to market conditions and management's discretion, in the open market or in privately negotiated transactions. The company retires its common stock upon repurchase and, in the periods presented, has not made any purchases of common stock other than in connection with these publicly announced repurchase programs. During the six months ended June 30, 2022, the company repurchased $640 million of its outstanding shares.

The table below summarizes the company's share repurchases to date under the authorizations described above:

Repurchase Program Authorization Date	Amount Authorized (in millions)	Total Shares Retired (in millions)	Average Price Per Share[1]	Date Completed	Shares Repurchased (in millions) Six Months Ended June 30 **2022**	2021
December 4, 2018	$ 3,000	8.9	$ 337.18	October 2021	—	6.5
January 25, 2021	$ 3,000	3.8	393.76		**1.6**	—
January 24, 2022	$ 2,000	—	—		—	—

[1] Includes commissions paid.

Dividends on Common Stock

In May 2022, the company increased the quarterly common stock dividend 10 percent to $1.73 per share from the previous amount of $1.57 per share.

3. INCOME TAXES

	Three Months Ended June 30		Six Months Ended June 30	
$ in millions	**2022**	2021	**2022**	2021
Federal and foreign income tax expense	**$ 204**	$ 265	**$ 393**	$ 1,086
Effective income tax rate	**17.7 %**	20.4 %	**17.1 %**	25.2 %

Current Quarter

The second quarter 2022 effective tax rate (ETR) decreased to 17.7 percent from 20.4 percent in the prior year period. The company's second quarter 2022 ETR includes benefits of $41 million for research credits and $15 million for foreign derived intangible income (FDII), which were partially offset by nondeductible losses on certain of the company's marketable securities. The company's second quarter 2021 ETR included benefits of $48 million for research credits and $10 million for FDII. The second quarter 2021 ETR was impacted by a change made in tax revenue recognition on certain long term contracts, which increased taxable income in years prior to the 2017 Tax Cuts and Jobs Act at a rate above the current statutory rate.

Year to Date

The year to date 2022 ETR decreased to 17.1 percent from 25.2 percent in the prior year period. The company's year to date 2022 ETR includes benefits of $82 million for research credits and $29 million for FDII. The company's year to date 2021 ETR included benefits of $99 million for research credits and $20 million for FDII. The year to date 2021 ETR was impacted by additional federal income taxes resulting from the IT services divestiture, as well as the change in tax revenue recognition on certain contracts described above.

The company has recorded unrecognized tax benefits related to our methods of accounting associated with the timing of revenue recognition and related costs and the 2017 Tax Cuts and Jobs Act, which includes related final revenue recognition regulations issued in December 2020 under IRC Section 451(b) and procedural guidance issued in August 2021. As of June 30, 2022, we have approximately $1.7 billion in unrecognized tax benefits, including $458 million related to our position on IRC Section 451(b). If these matters, including our position on IRC Section 451(b), are unfavorably resolved, there could be a material impact on our future cash flows. It is reasonably possible that within the next 12 months our unrecognized tax benefits related to these matters may increase by approximately $120 million.

Our current unrecognized tax benefits, which are included in Other current liabilities in the unaudited condensed consolidated statements of financial position, were $659 million and $590 million as of June 30, 2022 and December 31, 2021, respectively, with the remainder of our unrecognized tax benefits included within Other non-current liabilities.

We file income tax returns in the U.S. federal jurisdiction and in various state and foreign jurisdictions. The Northrop Grumman 2014-2018 federal tax returns and refund claims related to its 2007-2016 federal tax returns are currently under Internal Revenue Service (IRS) examination. This quarter, the company's 2014-2016 federal income tax returns and refund claims related to its 2007-2016 federal tax returns reverted back from IRS Appeals to IRS examination for additional factual review. In addition, legacy Orbital ATK (OATK) federal tax returns for the years ended March 31, 2014 and 2015, the nine-month transition period ended December 31, 2015 and calendar years 2016-2017 are currently under review by the IRS Appeals Office. It is reasonably possible that within the next twelve months, unrecognized tax benefits claimed in legacy OATK's 2014 to 2017 tax years may decline by up to $110 million through administrative resolution with IRS Appeals.

4. FAIR VALUE OF FINANCIAL INSTRUMENTS

The company holds a portfolio of marketable securities to partially fund non-qualified employee benefit plans. A portion of these securities are held in common/collective trust funds and are measured at fair value using net asset value (NAV) per share as a practical expedient; and therefore are not required to be categorized in the fair value hierarchy table below. Marketable securities are included in Other non-current assets in the unaudited condensed consolidated statements of financial position.

The company's derivative portfolio consists primarily of foreign currency forward contracts. Where model-derived valuations are appropriate, the company utilizes the income approach to determine the fair value using internal models based on observable market inputs.

The following table presents the financial assets and liabilities the company records at fair value on a recurring basis identified by the level of inputs used to determine fair value:

	June 30, 2022				December 31, 2021			
$ in millions	**Level 1**	**Level 2**	**Level 3**	**Total**	Level 1	Level 2	Level 3	Total
Financial Assets								
Marketable securities	**$ 328**	**$ —**	**$ 8**	**$ 336**	$ 393	$ 1	$ 7	$ 401
Marketable securities valued using NAV				**14**				17
Total marketable securities	**328**	**—**	**8**	**350**	393	1	7	418
Derivatives	**—**	**(1)**	**—**	**(1)**	—	(1)	—	(1)

The notional value of the company's foreign currency forward contracts at June 30, 2022 and December 31, 2021 was $114 million and $120 million, respectively. At June 30, 2022 and December 31, 2021, no portion of the notional value was designated as a cash flow hedge.

The derivative fair values and related unrealized gains/losses at June 30, 2022 and December 31, 2021 were not material.

There were no transfers of financial instruments into or out of Level 3 of the fair value hierarchy during the six months ended June 30, 2022.

The carrying value of cash and cash equivalents and commercial paper approximates fair value.

Long-term Debt

The estimated fair value of long-term debt was $12.8 billion and $15.1 billion as of June 30, 2022 and December 31, 2021, respectively. We calculated the fair value of long-term debt using Level 2 inputs, based on interest rates available for debt with terms and maturities similar to the company's existing debt arrangements. The current portion of long-term debt is recorded in Other current liabilities in the unaudited condensed consolidated statements of financial position.

On September 2, 2021, the company completed an exchange offer to eligible holders of the outstanding notes of our direct wholly owned subsidiary, Northrop Grumman Systems Corporation ("NGSC") maturing through 2036. An aggregate principal amount of $422 million of the NGSC notes was exchanged for $422 million of unregistered Northrop Grumman Corporation notes (the "Unregistered Notes") with the same interest rates and maturity dates as the NGSC notes exchanged. Because the debt instruments are not substantially different, the exchange was treated as a debt modification for accounting purposes with no gain or loss recognized.

On June 15, 2022, the company completed a registered exchange offer pursuant to which the company exchanged an aggregate principal amount of $414 million of the Unregistered Notes for $414 million of new notes registered under the Securities Act of 1933, as amended, (the "Registered Notes") with the same interest rates and maturity dates as the Unregistered Notes.

Because the debt instruments were not substantially different in either of the exchange offers, both exchanges were treated as debt modifications for accounting purposes with no gain or loss recognized.

Repayments of Senior Notes

In March 2021, the company repaid $700 million of 3.50 percent unsecured notes upon maturity.

In March 2021, the company redeemed $1.5 billion of 2.55 percent unsecured notes due October 2022. The company recorded a pre-tax charge of $54 million principally related to the premium paid on the redemption, which was recorded in Other, net in the unaudited condensed consolidated statements of earnings and comprehensive income.

5. INVESTIGATIONS, CLAIMS AND LITIGATION

On May 4, 2012, the company commenced an action, *Northrop Grumman Systems Corp. v. United States*, in the U.S. Court of Federal Claims. This lawsuit relates to an approximately $875 million firm fixed-price contract awarded to the company in 2007 by the U.S. Postal Service (USPS) for the construction and delivery of flats sequencing systems (FSS) as part of the postal automation program. The FSS were delivered. The company's lawsuit seeks approximately $63 million for unpaid portions of the contract price, and approximately $115 million based on the company's assertions that, through various acts and omissions over the life of the contract, the USPS adversely affected the cost and schedule of performance and materially altered the company's obligations under the contract. The United States responded to the company's complaint with an answer, denying most of the company's claims, and counterclaims seeking approximately $410 million, less certain amounts outstanding under the contract. In the course of the litigation, the United States subsequently amended its counterclaim, reducing it to seek approximately $193 million. The principal counterclaim alleges that the company delayed its performance and caused damages to the USPS because USPS did not realize certain costs savings as early as it had expected. On February 3, 2020, after extensive discovery and motions practice, the parties commenced what was expected to be a seven-week trial. After COVID-19-related interruptions, trial concluded on March 5, 2021. On October 12, 2021, the parties completed post-trial briefing, and on December 8, 2021 the court held a post-trial oral argument. On June 27, 2022, the judge issued a decision concluding that the company was entitled to approximately $63 million for unpaid portions of the contract price and $5 million in additional damages, as well as interest, which the company estimates is approximately $15 million (as of June 30, 2022) and such additional interest as may accrue until the date the government makes payment. The judge also concluded that the government was entitled to approximately $1 million in off-setting damages. On July 18, 2022, the government filed a motion for reconsideration, arguing that the government is entitled to damages of approximately $57 million for particular periods of delay. Ultimately, after the court enters judgment, the parties will also have 60 days to file an appeal.

The company is engaged in remediation activities relating to environmental conditions allegedly resulting from historic operations at the former United States Navy and Grumman facilities in Bethpage, New York. For over 20 years, the company has worked closely with the United States Navy, the United States Environmental Protection Agency, the New York State Department of Environmental Conservation (NYSDEC), the New York State Department of Health and other federal, state and local governmental authorities, to address legacy environmental conditions in Bethpage. In December 2019, the State of New York issued an Amended Record of Decision seeking to impose additional remedial requirements beyond measures the company previously had been taking; the State also communicated that it was assessing potential natural resource damages. In December 2020, the parties reached a tentative agreement regarding the steps the company will take to implement the State's Amended Record of Decision and to resolve certain potential other claims, including for natural resource damages. On September 22, 2021, the State of New York issued for public comment a new consent decree reflecting the agreement. On December 7, 2021, the public comment period closed. On July 13, 2022, the State filed a motion seeking court approval of the consent decree. We have also reached agreements with the Department of Defense and the Bethpage Water District to resolve claims involving these parties. On May 24, 2022, the court approved the agreement with the Bethpage Water District. On July 18, 2022, the government filed a motion seeking court approval of the agreement with the Department of Defense. We are in discussions with the South Farmingdale Water District to explore whether we can also resolve their claims at this stage.

We have incurred, and expect to continue to incur, as included in Note 6, substantial remediation costs related to the legacy Bethpage environmental conditions. It is also possible that applicable remediation, allocation and allowability standards and other requirements to which we are subject may continue to change, and our costs may increase materially. In addition to disputes and legal proceedings related to environmental conditions at the site (including remediation, allocation and allowability), we are a party to various individual lawsuits and a putative class action alleging personal injury and property damage in the Eastern District of New York. The filed individual lawsuits have been stayed, pending a court decision on class certification. We are also a party, and may become a party, to other lawsuits brought by insurance carriers and other parties. We cannot at this time predict or reasonably estimate the potential cumulative outcomes or ranges of possible liability of these Bethpage lawsuits.

In June 2018, the FTC issued a Decision and Order enabling the company's acquisition of OATK to proceed and providing generally for the company to continue to make solid rocket motors available to competing missile primes on a non-discriminatory basis. The company has taken and continues to take robust actions to help ensure compliance with the terms of the Order. Similarly, the Compliance Officer, appointed under the Order, and the FTC have taken and continue to take various actions to oversee compliance. In October 2019, the company received a civil investigative demand from the FTC requesting certain information relating to a potential issue regarding the company's compliance with the Order in connection with a then pending missile competition. The company promptly provided information in response to the request. The company has resumed discussions with staff at the FTC regarding our response and their views on compliance issues. We cannot predict the outcome of those discussions, but we do not believe they are likely to have a material adverse effect on the company's unaudited condensed consolidated financial position as of June 30, 2022, or its annual results of operations and/or cash flows. We believe the company has been and continues to be in compliance with the Order.

The company is a party to various other investigations, lawsuits, arbitration, claims, enforcement actions and other legal proceedings, including government investigations and claims, that arise in the ordinary course of our business. The nature of legal proceedings is such that we cannot assure the outcome of any particular matter. However, based on information available to the company to date, the company does not believe that the outcome of any of these other matters pending against the company is likely to have a material adverse effect on the company's unaudited condensed consolidated financial position as of June 30, 2022, or its annual results of operations and/or cash flows.

6. COMMITMENTS AND CONTINGENCIES

U.S. Government Cost Claims and Contingencies

From time to time, the company is advised of claims by the U.S. government concerning certain potential disallowed costs, plus, at times, penalties and interest. When such findings are presented, the company and U.S. government representatives engage in discussions to enable the company to evaluate the merits of these claims, as well as to assess the amounts being claimed. Where appropriate, provisions are made to reflect the company's estimated exposure for such potential disallowed costs. Such provisions are reviewed periodically using the most recent information available. The company believes it has adequately reserved for disputed amounts that are probable and reasonably estimable, and that the outcome of any such matters would not have a material adverse effect on its unaudited condensed consolidated financial position as of June 30, 2022, or its annual results of operations and/or cash flows.

The U.S. government has raised questions about an interest rate assumption used by the company to determine our CAS pension expense. On June 1, 2020, the government provided written notice that the assumptions the company used during the period 2013-2019 were potentially noncompliant with CAS. We submitted a formal response on July 31, 2020, which we believe demonstrates the appropriateness of the assumptions used. On November 24, 2020, the government replied to the company's response, disagreeing with our position and requesting additional input, which we provided on February 22, 2021 and further discussed with the government. We continue to exchange correspondence and engage with the government on this matter. The sensitivity to changes in interest rate assumptions makes it reasonably possible the outcome of this matter could have a material adverse effect on our financial position, results of operations and/or cash flows, although we are not currently able to estimate a range of any potential loss.

Environmental Matters

The table below summarizes the amount accrued for environmental remediation costs, management's estimate of the amount of reasonably possible future costs in excess of accrued costs and the deferred costs expected to be recoverable through overhead charges on U.S. government contracts as of June 30, 2022 and December 31, 2021:

$ in millions	Accrued Costs(1)(2)	Reasonably Possible Future Costs in Excess of Accrued Costs(2)	Deferred Costs(3)
June 30, 2022	**$ 574**	**$ 363**	**$ 486**
December 31, 2021	572	363	486

(1) As of June 30, 2022, $187 million is recorded in Other current liabilities and $387 million is recorded in Other non-current liabilities.

(2) Estimated remediation costs are not discounted to present value. The reasonably possible future costs in excess of accrued costs do not take into consideration amounts expected to be recoverable through overhead charges on U.S. government contracts.

(3) As of June 30, 2022, $162 million is deferred in Prepaid expenses and other current assets and $324 million is deferred in Other non-current assets. These amounts are evaluated for recoverability on a routine basis.

Although management cannot predict whether (i) new information gained as our environmental remediation projects progress, (ii) changes in remediation standards or other requirements to which we are subject, or (iii) other changes in facts and circumstances will materially affect the estimated liability accrued, we do not anticipate that future remediation expenditures associated with our currently identified projects will have a material adverse effect on the company's unaudited condensed consolidated financial position as of June 30, 2022, or its annual results of operations and/or cash flows.

Financial Arrangements
In the ordinary course of business, the company uses standby letters of credit and guarantees issued by commercial banks and surety bonds issued principally by insurance companies to guarantee the performance on certain obligations. At June 30, 2022, there were $370 million of stand-by letters of credit and guarantees and $78 million of surety bonds outstanding.

Commercial Paper
The company maintains a commercial paper program that serves as a source of short-term financing with capacity to issue unsecured commercial paper notes up to $2.0 billion. At June 30, 2022, there were no commercial paper borrowings outstanding.

Credit Facilities
The company maintains a five-year senior unsecured credit facility in an aggregate principal amount of $2.0 billion (the "2018 Credit Agreement") that matures in August 2024 and is intended to support the company's commercial paper program and other general corporate purposes. Commercial paper borrowings reduce the amount available for borrowing under the 2018 Credit Agreement. At June 30, 2022, there was no balance outstanding under this facility.

At June 30, 2022, the company was in compliance with all covenants under its credit agreements.

7. RETIREMENT BENEFITS

The cost to the company of its pension and other postretirement benefit (OPB) plans is shown in the following table:

	Three Months Ended June 30				Six Months Ended June 30			
	Pension Benefits		OPB		Pension Benefits		OPB	
$ in millions	**2022**	2021	**2022**	2021	**2022**	2021	**2022**	2021
Components of net periodic benefit cost (benefit)								
Service cost	**$ 92**	$ 103	**$ 2**	$ 4	**$ 184**	$ 207	**$ 4**	$ 8
Interest cost	**284**	264	**12**	14	**568**	527	**24**	27
Expected return on plan assets	**(661)**	(629)	**(27)**	(27)	**(1,321)**	(1,257)	**(55)**	(53)
Amortization of prior service (credit) cost	**—**	(2)	**(1)**	(1)	**—**	(4)	**(1)**	(1)
Net periodic benefit cost (benefit)	**$ (285)**	$ (264)	**$ (14)**	$ (10)	**$ (569)**	$ (527)	**$ (28)**	$ (19)

Employer Contributions
The company sponsors defined benefit pension and OPB plans, as well as defined contribution plans. We fund our defined benefit pension plans annually in a manner consistent with the Employee Retirement Income Security Act of 1974, as amended by the Pension Protection Act of 2006.

Contributions made by the company to its retirement plans are as follows:

	Three Months Ended June 30		Six Months Ended June 30	
$ in millions	**2022**	2021	**2022**	2021
Defined benefit pension plans	**$ 25**	$ 26	**$ 51**	$ 53
OPB plans	**10**	10	**20**	21
Defined contribution plans	**122**	111	**321**	377

8. STOCK COMPENSATION PLANS AND OTHER COMPENSATION ARRANGEMENTS

Stock Awards

The following table presents the number of restricted stock rights (RSRs) and restricted performance stock rights (RPSRs) granted to employees under the company's long-term incentive stock plan and the grant date aggregate fair value of those stock awards for the periods presented:

	Six Months Ended June 30	
in millions	**2022**	2021
RSRs granted	**0.1**	0.1
RPSRs granted	**0.2**	0.2
Grant date aggregate fair value	**$ 93**	$ 88

RSRs typically vest on the third anniversary of the grant date, while RPSRs generally vest and pay out based on the achievement of certain performance metrics over a three-year period.

Cash Awards

The following table presents the minimum and maximum aggregate payout amounts related to cash units (CUs) and cash performance units (CPUs) granted to employees in the periods presented:

	Six Months Ended June 30	
$ in millions	**2022**	2021
Minimum aggregate payout amount	**$ 32**	$ 31
Maximum aggregate payout amount	**183**	178

CUs typically vest and settle in cash on the third anniversary of the grant date, while CPUs generally vest and pay out in cash based on the achievement of certain performance metrics over a three-year period.

9. SEGMENT INFORMATION

The following table presents sales and operating income by segment:

	Three Months Ended June 30		Six Months Ended June 30	
$ in millions	**2022**	2021	**2022**	2021
Sales				
Aeronautics Systems	**$ 2,534**	$ 2,913	**$ 5,237**	$ 5,903
Defense Systems	**1,294**	1,427	**2,577**	2,989
Mission Systems	**2,516**	2,588	**5,013**	5,177
Space Systems	**2,979**	2,748	**5,834**	5,269
Intersegment eliminations	**(522)**	(525)	**(1,063)**	(1,030)
Total sales	**8,801**	9,151	**17,598**	18,308
Operating income				
Aeronautics Systems	**258**	300	**565**	608
Defense Systems	**168**	177	**323**	354
Mission Systems	**413**	408	**798**	805
Space Systems	**310**	301	**571**	577
Intersegment eliminations	**(76)**	(69)	**(147)**	(132)
Total segment operating income	**1,073**	1,117	**2,110**	2,212
FAS/CAS operating adjustment	**(51)**	18	**(97)**	37
Unallocated corporate (expense) income	**(68)**	(91)	**(162)**	1,617
Total operating income	**$ 954**	$ 1,044	**$ 1,851**	$ 3,866

FAS/CAS Operating Adjustment

For financial statement purposes, we account for our employee pension plans in accordance with FAS. However, the cost of these plans is charged to our contracts in accordance with applicable Federal Acquisition Regulation (FAR) and U.S. Government Cost Accounting Standards (CAS) requirements. The FAS/CAS operating adjustment reflects the difference between CAS pension expense included as cost in segment operating income and the service cost component of FAS expense included in total operating income.

Unallocated Corporate (Expense) Income

Unallocated corporate (expense) income includes the portion of corporate costs not considered allowable or allocable under the applicable FAR and CAS requirements, and therefore not allocated to the segments, such as changes in deferred state income taxes and a portion of management and administration, legal, environmental, compensation, retiree benefits, advertising and other corporate unallowable costs. Unallocated corporate (expense) income also includes costs not considered part of management's evaluation of segment operating performance, such as amortization of purchased intangible assets and the additional depreciation expense related to the step-up in fair value of property, plant and equipment acquired through business combinations, as well as certain compensation and other costs.

During the first quarter of 2021, the $2.0 billion pre-tax gain on the sale of our IT services business and $192 million of unallowable state taxes and transaction costs associated with the divestiture were recorded in Unallocated corporate (expense) income.

Disaggregation of Revenue

Sales by Customer Type	Three Months Ended June 30				Six Months Ended June 30			
	2022		2021		**2022**		2021	
$ in millions	**$**	**%[3]**	$	%[3]	**$**	**%[3]**	$	%[3]
Aeronautics Systems								
U.S. government[1]	**$ 2,134**	**84 %**	$ 2,513	86 %	**$ 4,426**	**85 %**	$ 5,054	86 %
International[2]	**328**	**13 %**	351	12 %	**671**	**13 %**	750	12 %
Other customers	**14**	**1 %**	4	— %	**17**	**— %**	10	— %
Intersegment sales	**58**	**2 %**	45	2 %	**123**	**2 %**	89	2 %
Aeronautics Systems sales	**2,534**	**100 %**	2,913	100 %	**5,237**	**100 %**	5,903	100 %
Defense Systems								
U.S. government[1]	**774**	**61 %**	879	62 %	**1,549**	**61 %**	1,872	63 %
International[2]	**328**	**25 %**	335	23 %	**621**	**24 %**	686	22 %
Other customers	**18**	**1 %**	18	1 %	**34**	**1 %**	51	2 %
Intersegment sales	**174**	**13 %**	195	14 %	**373**	**14 %**	380	13 %
Defense Systems sales	**1,294**	**100 %**	1,427	100 %	**2,577**	**100 %**	2,989	100 %
Mission Systems								
U.S. government[1]	**1,802**	**72 %**	1,901	73 %	**3,596**	**72 %**	3,735	72 %
International[2]	**415**	**16 %**	419	16 %	**848**	**17 %**	921	18 %
Other customers	**40**	**2 %**	14	1 %	**64**	**1 %**	30	1 %
Intersegment sales	**259**	**10 %**	254	10 %	**505**	**10 %**	491	9 %
Mission Systems sales	**2,516**	**100 %**	2,588	100 %	**5,013**	**100 %**	5,177	100 %
Space Systems								
U.S. government[1]	**2,798**	**94 %**	2,568	93 %	**5,506**	**94 %**	4,894	93 %
International[2]	**84**	**3 %**	104	4 %	**156**	**3 %**	209	4 %
Other customers	**66**	**2 %**	45	2 %	**110**	**2 %**	96	2 %
Intersegment sales	**31**	**1 %**	31	1 %	**62**	**1 %**	70	1 %
Space Systems sales	**2,979**	**100 %**	2,748	100 %	**5,834**	**100 %**	5,269	100 %
Total								
U.S. government[1]	**7,508**	**85 %**	7,861	86 %	**15,077**	**86 %**	15,555	85 %
International[2]	**1,155**	**13 %**	1,209	13 %	**2,296**	**13 %**	2,566	14 %
Other customers	**138**	**2 %**	81	1 %	**225**	**1 %**	187	1 %
Total Sales	**$ 8,801**	**100 %**	$ 9,151	100 %	**$ 17,598**	**100 %**	$ 18,308	100 %

[1] Sales to the U.S. government include sales from contracts for which we are the prime contractor, as well as those for which we are a subcontractor and the ultimate customer is the U.S. government. Each of the company’s segments derives substantial revenue from the U.S. government.

[2] International sales include sales from contracts for which we are the prime contractor, as well as those for which we are a subcontractor and the ultimate customer is an international customer. These sales include foreign military sales contracted through the U.S. government.

[3] Percentages calculated based on total segment sales.

Sales by Contract Type	Three Months Ended June 30				Six Months Ended June 30			
	2022		2021		**2022**		2021	
$ in millions	**$**	**%[1]**	$	%[1]	**$**	**%[1]**	$	%[1]
Aeronautics Systems								
Cost-type	**$ 1,217**	**49 %**	$ 1,341	47 %	**$ 2,493**	**49 %**	$ 2,752	47 %
Fixed-price	**1,259**	**51 %**	1,527	53 %	**2,621**	**51 %**	3,062	53 %
Intersegment sales	**58**		45		**123**		89	
Aeronautics Systems sales	**2,534**		2,913		**5,237**		5,903	
Defense Systems								
Cost-type	**373**	**33 %**	434	35 %	**709**	**32 %**	943	36 %
Fixed-price	**747**	**67 %**	798	65 %	**1,495**	**68 %**	1,666	64 %
Intersegment sales	**174**		195		**373**		380	
Defense Systems sales	**1,294**		1,427		**2,577**		2,989	
Mission Systems								
Cost-type	**875**	**39 %**	808	35 %	**1,710**	**38 %**	1,673	36 %
Fixed-price	**1,382**	**61 %**	1,526	65 %	**2,798**	**62 %**	3,013	64 %
Intersegment sales	**259**		254		**505**		491	
Mission Systems sales	**2,516**		2,588		**5,013**		5,177	
Space Systems								
Cost-type	**2,096**	**71 %**	2,025	75 %	**4,079**	**71 %**	3,869	74 %
Fixed-price	**852**	**29 %**	692	25 %	**1,693**	**29 %**	1,330	26 %
Intersegment sales	**31**		31		**62**		70	
Space Systems sales	**2,979**		2,748		**5,834**		5,269	
Total								
Cost-type	**4,561**	**52 %**	4,608	50 %	**8,991**	**51 %**	9,237	50 %
Fixed-price	**4,240**	**48 %**	4,543	50 %	**8,607**	**49 %**	9,071	50 %
Total Sales	**$ 8,801**		$ 9,151		**$ 17,598**		$ 18,308	

[1] Percentages calculated based on external customer sales.

NORTHROP GRUMMAN CORPORATION

Sales by Geographic Region	Three Months Ended June 30				Six Months Ended June 30			
	2022		2021		**2022**		2021	
$ in millions	**$**	**%**[2]	$	%[2]	**$**	**%**[2]	$	%[2]
Aeronautics Systems								
United States	**$ 2,148**	**87 %**	$ 2,517	88 %	**$ 4,443**	**86 %**	$ 5,064	87 %
Asia/Pacific	**205**	**8 %**	204	7 %	**395**	**8 %**	483	8 %
Europe	**113**	**5 %**	127	4 %	**250**	**5 %**	227	4 %
All other[1]	**10**	**— %**	20	1 %	**26**	**1 %**	40	1 %
Intersegment sales	**58**		45		**123**		89	
Aeronautics Systems sales	**2,534**		2,913		**5,237**		5,903	
Defense Systems								
United States	**792**	**71 %**	897	73 %	**1,583**	**72 %**	1,923	73 %
Asia/Pacific	**123**	**11 %**	126	10 %	**228**	**10 %**	229	9 %
Europe	**95**	**8 %**	79	6 %	**196**	**9 %**	155	6 %
All other[1]	**110**	**10 %**	130	11 %	**197**	**9 %**	302	12 %
Intersegment sales	**174**		195		**373**		380	
Defense Systems sales	**1,294**		1,427		**2,577**		2,989	
Mission Systems								
United States	**1,842**	**81 %**	1,915	82 %	**3,660**	**81 %**	3,765	80 %
Asia/Pacific	**137**	**6 %**	98	4 %	**276**	**6 %**	258	6 %
Europe	**219**	**10 %**	242	11 %	**444**	**10 %**	511	11 %
All other[1]	**59**	**3 %**	79	3 %	**128**	**3 %**	152	3 %
Intersegment sales	**259**		254		**505**		491	
Mission Systems sales	**2,516**		2,588		**5,013**		5,177	
Space Systems								
United States	**2,864**	**97 %**	2,614	97 %	**5,616**	**97 %**	4,990	96 %
Asia/Pacific	**24**	**1 %**	13	— %	**53**	**1 %**	29	1 %
Europe	**56**	**2 %**	89	3 %	**96**	**2 %**	177	3 %
All other[1]	**4**	**— %**	1	— %	**7**	**— %**	3	— %
Intersegment sales	**31**		31		**62**		70	
Space Systems sales	**2,979**		2,748		**5,834**		5,269	
Total								
United States	**7,646**	**87 %**	7,943	86 %	**15,302**	**87 %**	15,742	86 %
Asia/Pacific	**489**	**6 %**	441	5 %	**952**	**5 %**	999	5 %
Europe	**483**	**5 %**	537	6 %	**986**	**6 %**	1,070	6 %
All other[1]	**183**	**2 %**	230	3 %	**358**	**2 %**	497	3 %
Total Sales	**$ 8,801**		$ 9,151		**$ 17,598**		$ 18,308	

[1] All other is principally comprised of the Middle East.

[2] Percentages calculated based on external customer sales.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of
Northrop Grumman Corporation
Falls Church, Virginia

Results of Review of Interim Financial Information

We have reviewed the accompanying condensed consolidated statement of financial position of Northrop Grumman Corporation and subsidiaries (the “Company”) as of June 30, 2022, and the related condensed consolidated statements of earnings and comprehensive income and changes in shareholders’ equity for the three-month and six-month periods ended June 30, 2022 and 2021, and of cash flows for the six-month periods ended June 30, 2022 and 2021 and the related notes (collectively referred to as the “interim financial information”). Based on our review, we are not aware of any material modifications that should be made to the accompanying interim financial information for it to be in conformity with accounting principles generally accepted in the United States of America.

We have previously audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated statement of financial position of Northrop Grumman Corporation and subsidiaries as of December 31, 2021, and the related consolidated statements of earnings and comprehensive income, changes in shareholders’ equity, and cash flows for the year then ended (not presented herein); and in our report dated January 26, 2022, we expressed an unqualified opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying condensed consolidated statement of financial position as of December 31, 2021, is fairly stated, in all material respects, in relation to the audited consolidated statement of financial position from which it has been derived.

Basis for Review Results

This interim financial information is the responsibility of the Company’s management. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our reviews in accordance with standards of the PCAOB. A review of interim financial information consists principally of applying analytical procedures and making inquiries of persons responsible for financial and accounting matters. It is substantially less in scope than an audit conducted in accordance with the standards of the PCAOB, the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.

/s/ Deloitte & Touche LLP
McLean, Virginia
July 27, 2022

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

OVERVIEW

Northrop Grumman Corporation (herein referred to as "Northrop Grumman," the "company," "we," "us," or "our") is a leading global aerospace and defense company. We deliver a broad range of products, services and solutions to United States (U.S.) and international customers, and principally to the U.S Department of Defense (DoD) and intelligence community. Our broad portfolio is aligned to support national security priorities and our solutions equip our customers with capabilities they need to connect, protect and advance humanity.

The company is a leading provider of space systems, advanced aircraft, missile defense, advanced weapons and long-range fires capabilities, mission systems, networking and communications, strategic deterrence systems, and breakthrough technologies, such as artificial intelligence, advanced computing and cyber. We are focused on competing and winning programs that enable continued growth, performing on our commitments and affordably delivering capability our customers need. With the investments we've made in advanced technologies, combined with our talented workforce and digital transformation capabilities, Northrop Grumman is well positioned to meet our customers' needs today and in the future.

The following discussion should be read along with the financial statements included in this Form 10-Q, as well as our 2021 Annual Report on Form 10-K, which provides additional information on our business and the environment in which we operate and our operating results.

Disposition of IT and Mission Support Services Business

Effective January 30, 2021 (the "Divestiture date"), we completed the sale of our IT and mission support services business (the "IT services divestiture") for $3.4 billion in cash and recorded a pre-tax gain of $2.0 billion. The IT and mission support services business was comprised of the majority of the former IS&S division of Defense Systems (excluding the Vinnell Arabia business); select cyber, intelligence and missions support programs, which were part of the former CIMS division of Mission Systems; and the former Space Technical Services business unit of Space Systems. Operating results include sales and operating income for the IT and mission support services business prior to the Divestiture date.

COVID-19

In March 2020, the World Health Organization characterized COVID-19 as a global pandemic, and the President declared a national emergency concerning the COVID-19 outbreak. In the more than two years since then, the pandemic (including the first and subsequent variants of COVID-19) has dramatically impacted the global health and economic environment, including millions of confirmed cases and deaths, business slowdowns or shutdowns, labor shortfalls, supply chain challenges, regulatory challenges, and market volatility. We discussed in some detail in our Annual Report on Form 10-K for the fiscal years ended December 31, 2020 and 2021, as well as interim Form 10-Qs, the pandemic, its impacts and risks, and actions taken up to the time of each filing. In this Form 10-Q, we provide a further update.

At a macro level, the number of hospitalizations and deaths, in the U.S. in particular, have generally eased in 2022, as more people are fully vaccinated, and communities have continued to open up. It, of course, remains unclear whether that trajectory will continue, but there is some reason for optimism. The company continues to work to monitor and address the pandemic and related developments, including the impact on our company, our employees, our customers, our suppliers and our communities. Our goals have been, and continue to be, to lessen the potential adverse impacts, both health and economic, and to continue to position the company for long-term success. Like the communities in which we operate, our actions have varied, and will continue to vary, depending on the spread of COVID-19 and applicable government requirements, and the needs of our stakeholders.

During the second quarter of 2022, COVID-19 case rates and the health and economic impacts of the pandemic fluctuated in different communities in the U.S. and globally, particularly with the spread of new variants. We continued to see a prolonged impact on the economy, our industry, and our company, with ongoing labor shortages, supply chain challenges, and inflation, among other impacts. Although direct COVID-19-related impacts on our business generally declined this quarter, including in the areas of employee absenteeism and leave-taking, the company's second quarter 2022 revenue and operating income were reduced by the broader macroeconomic environment, including a tight labor market and extended material lead times, which we expect to continue. While we cannot predict the future course of the pandemic, we are not currently assuming significant additional direct COVID-19-related impacts on our 2022 financial results.

For further information on the pandemic and the potential impact to the company of COVID-19, see "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Liquidity and Capital Resources" below and “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our 2021 Annual Report on Form 10-K.

Global Security and Economic Environment

The U.S. and its allies continue to face a global security environment of heightened tensions and instability, threats from state and non-state actors, including major global powers, as well as terrorist organizations, emerging nuclear tensions, diverse regional security concerns and political instability. The conflict in Ukraine has increased those tensions and instability, and highlighted threats, as well as disrupted supply chains and added costs. The market for defense products, services and solutions globally is driven by these complex and evolving security challenges, considered in the broader context of political and socioeconomic circumstances and priorities.

Our operations and financial performance, as well as demand for our products and services, are impacted by global events, including violence and unrest. The same is true for our suppliers and other business partners. We continue to experience an increased demand for certain of our goods and services related to the conflict in the Ukraine, in particular, but we have not seen a significant increase to date. We also continue to experience modest disruption to some of our programs and supply chain, including with unanticipated cost growth, as a result of the conflict, particularly with respect to our Commercial Resupply Services contract. We do not have sizable business dealings in Russia or Ukraine, and do not anticipate significant adverse impacts. We are actively monitoring the situation and exploring both opportunities and risks, including measures to mitigate the risk of future disruption and costs to our programs.

The global geopolitical and economic environments also continue to be impacted by uncertainty and stress, and global inflationary pressures. Geopolitical relationships have changed and are continuing to change. Global economic growth is expected to remain in the low single digits in 2022, reflecting, among other things, the continued impact of and uncertainty surrounding geopolitical tensions globally, financial market volatility, inflation and the COVID-19 pandemic. We expect still further impacts related to the conflict in Ukraine and economic sanctions imposed on Russia. The global economy may also be affected by the residual legal, regulatory and economic impacts of Britain’s exit from the European Union. Rising inflation has led to higher costs of various commodities and supplier products. Increased interest rates, raising the cost of borrowing for the federal government, could impact other spending priorities. Economic tensions and changes in international trade policies, including higher tariffs on imported goods and materials and renegotiation of free trade agreements, could also impact the global market for defense products, services and solutions.

U.S. Political and Economic Environment

On March 15, 2022, the President signed into law the Consolidated Appropriations Act for FY 2022, which provides full-year funding through September 30, including $782 billion for national defense. This represents nearly $30 billion more than the Administration initially requested for FY 2022, and approximately 6 percent, or $42 billion higher than it was in FY 2021. The Pentagon’s portion of the overall national defense budget is $743 billion. In March 2022, Congress also approved $14 billion in emergency aid to support security, economic, and humanitarian assistance for Ukraine and Central European partners. An additional $40 billion in emergency supplemental appropriations was approved by Congress in May 2022. Current and future spending in connection with the conflict in Ukraine and other priorities, global inflation, the national debt and the costs of the pandemic, among other things, will continue to impact our customers’ budgets and priorities, and our industry. We expect the government, our customers and our industry will also continue to face challenges from the macroeconomic environment, including a tight labor market and supply chain disruptions.

The Administration’s current budget for FY 2023 proposes $813 billion for national defense programs, and the Pentagon’s portion of the overall defense budget is $773 billion. On July 18, 2022, the Senate Armed Services Committee released its annual defense bill, which authorizes $847 billion in defense spending, an increase over the Administration’s budget request. It is difficult to predict the specific course of future defense budgets. However, we believe the ongoing conflict in Ukraine has highlighted some of the national security threats to our nation and our allies, and the need for strong deterrence and a robust defense capability, as well as impacting our political and economic environment. More generally, the threat to U.S. national security remains very substantial and we believe that our capabilities, particularly in space, missiles, missile defense, hypersonics, counter-hypersonics, survivable aircraft and mission systems should help our customers defend against current and future threats and, as a result, continue to allow for long-term profitable business growth.

The Bipartisan Budget Act of 2019 suspended the debt ceiling through July 31, 2021. In October 2021, the statutory debt limit was increased by $480 billion and, in December 2021, was further increased by $2.5 trillion, which is currently expected to allow the Treasury Department to finance the government into 2023.

The political environment, federal budget and debt ceiling are expected to continue to be the subject of considerable debate, especially in light of the ongoing conflict in Ukraine and the inflationary environment, which could have material impacts on defense spending broadly and the company's programs in particular.

For further information on the risks we face from the current political and economic environment, see "Risk Factors" in our 2021 Annual Report on Form 10-K.

CONSOLIDATED OPERATING RESULTS

For purposes of the operating results discussion below, we assess our performance using certain financial measures that are not calculated in accordance with GAAP. Organic sales is defined as total sales excluding sales attributable to the company's IT services divestiture. This measure may be useful to investors and other users of our financial statements as a supplemental measure in evaluating the company's underlying sales growth as well as in providing an understanding of our ongoing business and future sales trends by presenting the company's sales before the impact of divestiture activity.

Transaction-adjusted net earnings and transaction-adjusted earnings per share (transaction-adjusted EPS) exclude impacts related to the IT services divestiture, including the gain on sale of the business, associated federal and state income tax expenses, transaction costs, and the make-whole premium for early debt redemption. They also exclude the impact of mark-to-market pension and OPB ("MTM") benefit/(expense) and related tax impacts, which are generally only recognized during the fourth quarter. These non-GAAP measures may be useful to investors and other users of our financial statements as supplemental measures in evaluating the company's underlying financial performance by presenting the company's operating results before the non-operational impact of divestiture activity and pension and OPB actuarial gains and losses. These measures are also consistent with how management views the underlying performance of the business as the impact of the IT services divestiture and MTM accounting are not considered in management's assessment of the company's operating performance or in its determination of incentive compensation awards.

We reconcile these non-GAAP financial measures to their most directly comparable GAAP financial measures below. These non-GAAP measures may not be defined and calculated by other companies in the same manner and should not be considered in isolation or as an alternative to operating results presented in accordance with GAAP.

Selected financial highlights are presented in the table below:

	Three Months Ended June 30		%	Six Months Ended June 30		%
$ in millions, except per share amounts	**2022**	2021	**Change**	**2022**	2021	**Change**
Sales	**$ 8,801**	$ 9,151	**(4)%**	**$ 17,598**	$ 18,308	**(4)%**
Operating costs and expenses	**7,847**	8,107	**(3)%**	**15,747**	16,422	**(4)%**
Operating costs and expenses as a % of sales	***89.2 %***	*88.6 %*		***89.5 %***	*89.7 %*	
Gain on sale of business	**—**	—	**— %**	**—**	1,980	**NM**
Operating income	**954**	1,044	**(9)%**	**1,851**	3,866	**(52)%**
Operating margin rate	***10.8 %***	*11.4 %*		***10.5 %***	*21.1 %*	
Federal and foreign income tax expense	**204**	265	**(23)%**	**393**	1,086	**(64)%**
Effective income tax rate	***17.7 %***	*20.4 %*		***17.1 %***	*25.2 %*	
Net earnings	**946**	1,037	**(9)%**	**1,901**	3,232	**(41)%**
Diluted earnings per share	**$ 6.06**	$ 6.42	**(6)%**	**$ 12.16**	$ 19.89	**(39)%**

Sales

The table below reconciles sales to organic sales for the six months ended June 30, 2022. Sales for the three months ended June 30, 2022 and 2021 were not impacted by the sale of the company's IT services business:

	Six Months Ended June 30						
	2022			2021			
$ in millions	**Sales**	**IT services sales**	**Organic sales**	Sales	IT services sales	Organic sales	**Organic sales % change**
Aeronautics Systems	**$ 5,237**	**$ —**	**$ 5,237**	$ 5,903	$ —	$ 5,903	**(11)%**
Defense Systems	**2,577**	**—**	**2,577**	2,989	(106)	2,883	**(11)%**
Mission Systems	**5,013**	**—**	**5,013**	5,177	(42)	5,135	**(2)%**
Space Systems	**5,834**	**—**	**5,834**	5,269	(16)	5,253	**11 %**
Intersegment eliminations	**(1,063)**	**—**	**(1,063)**	(1,030)	2	(1,028)	
Total	**$ 17,598**	**$ —**	**$ 17,598**	$ 18,308	$ (162)	$ 18,146	**(3)%**

Current Quarter

Second quarter 2022 sales decreased $350 million due to lower sales at Aeronautics Systems, Defense Systems and Mission Systems, partially offset by 8 percent growth at Space Systems. Second quarter 2022 sales reflect continued headwinds from the macroeconomic environment, including a tight labor market and extended material lead times, which are affecting the timing of sales.

Year to Date

Year to date 2022 sales decreased $710 million due, in part, to a $162 million reduction in sales related to the IT services divestiture. Year to date 2022 organic sales decreased $548 million, or 3 percent, primarily due to lower sales at Aeronautics Systems and Defense Systems, partially offset by 11 percent growth at Space Systems.

See “Segment Operating Results” below for further information by segment and “Product and Service Analysis” for product and service detail. See Note 9 to the financial statements for information regarding the company’s sales by customer type, contract type and geographic region for each of our segments.

Operating Income and Margin Rate

Current Quarter

Second quarter 2022 operating income decreased $90 million, or 9 percent, primarily due to a $69 million reduction in the FAS/CAS operating adjustment and lower sales. Second quarter 2022 operating margin rate declined to 10.8 percent due to the lower FAS/CAS operating adjustment, partially offset by lower unallocated corporate expense.

Second quarter 2022 general and administrative (G&A) costs as a percentage of sales increased to 11.4 percent from 10.9 percent in the prior year period primarily due to an increase in investments for future business opportunities.

Year to date

Year to date 2022 operating income decreased $2.0 billion, or 52 percent, primarily due to a $2.0 billion pre-tax gain on sale and $192 million of unallocated corporate expenses recognized in the prior year associated with the IT services divestiture. Operating income also decreased due to a $134 million reduction in the FAS/CAS operating adjustment and lower sales. Year to date 2022 operating margin rate declined to 10.5 percent, largely due to the prior year gain on sale of the IT services business.

Year to date 2022 G&A costs as a percentage of sales increased to 11.3 percent from 10.4 percent in the prior year period primarily due to an increase in investments for future business opportunities.

See “Segment Operating Results” below for further information by segment. For information regarding product and service operating costs and expenses, see “Product and Service Analysis” below.

Federal and Foreign Income Taxes

Current Quarter

The second quarter 2022 ETR decreased to 17.7 percent from 20.4 percent in the prior year period. The second quarter 2021 ETR was impacted by a change made in tax revenue recognition on certain long term contracts, which increased taxable income in years prior to the 2017 Tax Cuts and Jobs Act at a rate above the current statutory rate.See Note 3 to the financial statements for additional information.

Year to Date
The year to date 2022 ETR decreased to 17.1 percent from 25.2 percent in the prior year period. The year to date 2021 ETR was impacted by additional federal income taxes resulting from the IT services divestiture, as well as the change in tax revenue recognition on certain contracts described above. See Note 3 to the financial statements for additional information.

Net Earnings
The table below reconciles net earnings to transaction-adjusted net earnings:

	Three Months Ended June 30		%	Six Months Ended June 30		%
$ in millions	**2022**	2021	**Change**	**2022**	2021	**Change**
Net earnings	**$ 946**	$ 1,037	**(9)%**	**$ 1,901**	$ 3,232	**(41)%**
Gain on sale of business	—	—	**NM**	—	(1,980)	**NM**
State tax impact[1]	—	—	**NM**	—	160	**NM**
Transaction costs	—	—	**NM**	—	32	**NM**
Make-whole premium	—	—	**NM**	—	54	**NM**
Federal tax impact of items above[2]	—	—	**NM**	—	614	**NM**
Transaction adjustment, net of tax	**$ —**	$ —	**NM**	**$ —**	$ (1,120)	**NM**
Transaction-adjusted net earnings	**$ 946**	$ 1,037	**(9)%**	**$ 1,901**	$ 2,112	**(10)%**

(1) The state tax impact includes $62 million of incremental tax expense related to $1.2 billion of nondeductible goodwill in the divested business.

(2) The federal tax impact was calculated by applying the 21 percent federal statutory rate to the adjustment items and also includes $250 million of incremental tax expense related to $1.2 billion of nondeductible goodwill in the divested business.

Current Quarter
Second quarter 2022 net earnings decreased $91 million, or 9 percent, primarily due to the lower operating income described above and $60 million of lower returns on marketable securities related to our non-qualified benefit plans and other non-operating assets, partially offset by a lower effective tax rate.

Year to Date
Year to date 2022 net earnings decreased $1.3 billion, or 41 percent, primarily due to a $1.1 billion after-tax decline associated with the IT services divestiture. Transaction-adjusted net earnings decreased $211 million, or 10 percent, primarily due to the lower operating income described above and $93 million of lower returns on marketable securities related to our non-qualified benefit plans and other non-operating assets, partially offset by a lower effective tax rate.

Diluted Earnings Per Share
The table below reconciles diluted earnings per share to transaction-adjusted EPS:

	Three Months Ended June 30		%	Six Months Ended June 30		%
	2022	2021	**Change**	**2022**	2021	**Change**
Diluted EPS	**$ 6.06**	$ 6.42	**(6)%**	**$ 12.16**	$ 19.89	**(39)%**
Gain on sale of business per share	—	—	**NM**	—	(12.18)	**NM**
State tax impact per share[1]	—	—	**NM**	—	0.98	**NM**
Transaction costs per share	—	—	**NM**	—	0.20	**NM**
Make-whole premium per share	—	—	**NM**	—	0.33	**NM**
Federal tax impact of line items above per share[2]	—	—	**NM**	—	3.78	**NM**
Transaction adjustment per share, net of tax	**$ —**	$ —	**NM**	**$ —**	$ (6.89)	**NM**
Transaction-adjusted EPS	**$ 6.06**	$ 6.42	**(6)%**	**$ 12.16**	$ 13.00	**(6)%**

(1) The state tax impact includes $62 million of incremental tax expense related to $1.2 billion of nondeductible goodwill in the divested business.

(2) The federal tax impact was calculated by applying the 21 percent federal statutory rate to the adjustment items and also includes $250 million of incremental tax expense related to $1.2 billion of nondeductible goodwill in the divested business.

Current Quarter
Second quarter 2022 diluted earnings per share decreased 6 percent, reflecting a 9 percent decrease in net earnings and a 3 percent reduction in weighted-average diluted shares outstanding.

Year to Date
Year to date 2022 diluted earnings per share decreased 39 percent, principally due to a $6.89 after-tax decrease associated with the IT services divestiture. Transaction-adjusted earnings per share decreased $0.84, or 6 percent, reflecting a 10 percent decrease in transaction-adjusted net earnings and a 4 percent reduction in weighted-average diluted shares outstanding.

SEGMENT OPERATING RESULTS

Basis of Presentation
The company is aligned in four operating sectors, which also comprise our reportable segments: Aeronautics Systems, Defense Systems, Mission Systems and Space Systems. We present our sectors in the following business areas, which are reported in a manner reflecting core capabilities:

Aeronautics Systems	Defense Systems	Mission Systems	Space Systems
Autonomous Systems	Battle Management & Missile Systems	Airborne Multifunction Sensors	Launch & Strategic Missiles
Manned Aircraft	Mission Readiness	Maritime/Land Systems & Sensors	Space
		Navigation, Targeting & Survivability	
		Networked Information Solutions	

This section discusses segment sales, operating income and operating margin rates. In evaluating segment operating performance, we look primarily at changes in sales and operating income. Where applicable, significant fluctuations in operating performance attributable to individual contracts or programs, or changes in a specific cost element across multiple contracts, are described in our analysis. Based on this approach and the nature of our operations, the discussion of results of operations below first focuses on our four segments before distinguishing between products and services. Changes in sales are generally described in terms of volume, while changes in margin rates are generally described in terms of performance and/or contract mix. For purposes of this discussion, volume generally refers to increases or decreases in sales or cost from production/service activity levels and performance generally refers to non-volume related changes in profitability. Contract mix generally refers to changes in the ratio of contract type and/or lifecycle (e.g., cost-type, fixed-price, development, production, and/or sustainment).

Segment Operating Income and Margin Rate

Segment operating income, as reconciled in the table below, and segment operating margin rate (segment operating income divided by sales) are non-GAAP measures that reflect the combined operating income of our four segments less the operating income associated with intersegment sales. Segment operating income includes pension expense allocated to our sectors under FAR and CAS and excludes FAS pension service expense and unallocated corporate items (certain corporate-level expenses, which are not considered allowable or allocable under applicable FAR and CAS requirements, and costs not considered part of management's evaluation of segment operating performance). These non-GAAP measures may be useful to investors and other users of our financial statements as supplemental measures in evaluating the financial performance and operational trends of our sectors. These measures may not be defined and calculated by other companies in the same manner and should not be considered in isolation or as alternatives to operating results presented in accordance with GAAP.

	Three Months Ended June 30		%	Six Months Ended June 30		%
$ in millions	**2022**	2021	**Change**	**2022**	2021	**Change**
Operating income	**$ 954**	$ 1,044	**(9)%**	**$ 1,851**	$ 3,866	**(52)%**
Reconciliation to segment operating income:						
CAS pension expense	**$ (41)**	$ (121)	**(66)%**	**$ (87)**	$ (244)	**(64)%**
FAS pension service expense	**92**	103	**(11)%**	**184**	207	**(11)%**
FAS/CAS operating adjustment	**51**	(18)	**NM**	**97**	(37)	**NM**
Gain on sale of business	**—**	—	**— %**	**—**	(1,980)	**NM**
IT services divestiture – unallowable state taxes and transaction costs	**—**	—	**— %**	**—**	192	**NM**
Intangible asset amortization and PP&E step-up depreciation	**61**	64	**(5)%**	**121**	129	**(6)%**
Other unallocated corporate expense	**7**	27	**(74)%**	**41**	42	**(2)%**
Unallocated corporate expense (income)	**68**	91	**(25)%**	**162**	(1,617)	**NM**
Segment operating income	**$ 1,073**	$ 1,117	**(4)%**	**$ 2,110**	$ 2,212	**(5)%**
Segment operating margin rate	***12.2 %***	*12.2 %*		***12.0 %***	*12.1 %*	

Current Quarter

Second quarter 2022 segment operating income decreased $44 million, or 4 percent due to lower sales. Second quarter 2022 segment operating margin rate was comparable to the prior year period and reflects higher operating margin rates at Mission Systems and Defense Systems, offset by lower operating margin rates at Space Systems and Aeronautics Systems.

Year to Date

Year to date 2022 segment operating income decreased $102 million, or 5 percent. Year to date 2021 segment operating income included $20 million from the IT services business, as well as a benefit of approximately $100 million due to the impact of lower overhead rates on the company's fixed price contracts. Year to date 2022 segment operating margin rate decreased to 12.0 percent from 12.1 percent and reflects a lower operating margin rate at Space Systems, partially offset by higher operating margin rates at each of the other sectors.

<u>FAS/CAS Operating Adjustment</u>

Second quarter 2022 and year to date 2022 FAS/CAS operating adjustment decreased primarily due to lower CAS pension expense resulting from favorable plan asset returns in 2021 and changes in certain CAS actuarial assumptions as of December 31, 2021.

<u>Unallocated Corporate Expense (Income)</u>

Current Quarter

The decrease in second quarter 2022 unallocated corporate expense is primarily due to a reduction in corporate unallowable costs.

Year to Date
The change in year to date 2022 unallocated corporate expense (income) is primarily due to the $2.0 billion pre-tax gain on sale and $192 million of unallowable state taxes and transaction costs recognized in the prior year associated with the IT services divestiture.

Net EAC Adjustments - We record changes in estimated contract earnings at completion (net EAC adjustments) using the cumulative catch-up method of accounting. Net EAC adjustments can have a significant effect on reported sales and operating income and the aggregate amounts are presented in the table below:

	Three Months Ended June 30		Six Months Ended June 30	
$ in millions	**2022**	2021	**2022**	2021
Favorable EAC adjustments	**$ 317**	$ 309	**$ 674**	$ 657
Unfavorable EAC adjustments	**(225)**	(155)	**(409)**	(313)
Net EAC adjustments	**$ 92**	$ 154	**$ 265**	$ 344

Net EAC adjustments by segment are presented in the table below:

	Three Months Ended June 30		Six Months Ended June 30	
$ in millions	**2022**	2021	**2022**	2021
Aeronautics Systems	**$ (9)**	$ 32	**$ 94**	$ 69
Defense Systems	**50**	28	**75**	58
Mission Systems	**29**	61	**86**	149
Space Systems	**31**	33	**23**	70
Eliminations	**(9)**	—	**(13)**	(2)
Net EAC adjustments	**$ 92**	$ 154	**$ 265**	$ 344

For purposes of the discussion in the remainder of this Segment Operating Results section, references to operating income and operating margin rate reflect segment operating income and segment operating margin rate, respectively.

AERONAUTICS SYSTEMS	Three Months Ended June 30		**%**	Six Months Ended June 30		**%**
$ in millions	**2022**	2021	**Change**	**2022**	2021	**Change**
Sales	**$ 2,534**	$ 2,913	**(13)%**	**$ 5,237**	$ 5,903	**(11)%**
Operating income	**258**	300	**(14)%**	**565**	608	**(7)%**
Operating margin rate	***10.2 %***	*10.3 %*		***10.8 %***	*10.3 %*	

Sales
Current Quarter
Second quarter 2022 sales decreased $379 million, or 13 percent, due to lower volume in both Manned Aircraft and Autonomous Systems, including restricted programs, F-35, Global Hawk, and the NATO Alliance Ground Surveillance (AGS) program, as Full System Handover occurred early in the second quarter of 2022.

Year to Date
Year to date 2022 sales decreased $666 million, or 11 percent, due to lower volume in both Manned Aircraft and Autonomous Systems, including restricted programs and the E-2, Global Hawk, F-35 and Triton programs.

Operating Income
Current Quarter
Second quarter 2022 operating income decreased $42 million, or 14 percent, primarily due to lower sales. Operating margin rate decreased to 10.2 percent from 10.3 percent primarily due to lower net EAC adjustments, principally associated with restricted work and close-out of an international program, partially offset by a $38 million gain on a property sale.

Year to Date
Year to date 2022 operating income decreased $43 million, or 7 percent, due to lower sales, partially offset by a higher operating margin rate. Operating margin rate increased to 10.8 percent from 10.3 percent primarily due to a $38 million gain on a property sale and higher net favorable EAC adjustments. Higher net favorable EAC adjustments reflect a $67 million favorable EAC adjustment on the engineering, manufacturing and development phase of the B-21 program largely related to performance incentives, partially offset by lower net EAC adjustments associated with other restricted work. Prior year results include the previously described overhead rate benefit to fixed price contracts.

DEFENSE SYSTEMS	Three Months Ended June 30		**%**	Six Months Ended June 30		**%**
$ in millions	**2022**	2021	**Change**	**2022**	2021	**Change**
Sales	**$ 1,294**	$ 1,427	**(9)%**	**$ 2,577**	$ 2,989	**(14)%**
Operating income	**168**	177	**(5)%**	**323**	354	**(9)%**
Operating margin rate	***13.0 %***	*12.4 %*		***12.5 %***	*11.8 %*	

Sales
Current Quarter
Second quarter 2022 sales decreased $133 million, or 9 percent, primarily due to completion of a Joint Services support program, lower scope on an international training program, and wind down of the UKAWACS and JSTARS programs.

Year to Date
Year to date 2022 sales decreased $412 million, or 14 percent, due, in part, to a $106 million reduction in sales related to the IT services divestiture. Year to date 2022 organic sales decreased $306 million, or 11 percent, principally due to lower scope on an international training program, completion of a Joint Services support program, and lower volume on the Advanced Anti-Radiation Guided Missile (AARGM).

Operating Income
Current Quarter
Second quarter 2022 operating income decreased $9 million, or 5 percent, due to lower sales, partially offset by a higher operating margin rate. Operating margin rate increased to 13.0 percent from 12.4 percent primarily due to improved performance in Battle Management and Missile Systems.

Year to Date
Year to date 2022 operating income decreased $31 million, or 9 percent, due, in part, to a $14 million reduction in operating income related to the IT services divestiture. Lower organic sales volume was partially offset by a higher operating margin rate, which increased to 12.5 percent from 11.8 percent primarily due to improved performance in Battle Management and Missile Systems.

MISSION SYSTEMS	Three Months Ended June 30		**%**	Six Months Ended June 30		**%**
$ in millions	**2022**	2021	**Change**	**2022**	2021	**Change**
Sales	**$ 2,516**	$ 2,588	**(3)%**	**$ 5,013**	$ 5,177	**(3)%**
Operating income	**413**	408	**1 %**	**798**	805	**(1)%**
Operating margin rate	***16.4 %***	*15.8 %*		***15.9 %***	*15.5 %*	

Sales
Current Quarter
Second quarter 2022 sales decreased $72 million, or 3 percent, primarily due to lower volume on Navigation, Targeting and Survivability programs, the Joint Counter Radio-Controlled Improvised Explosive Device Electronic Warfare (JCREW) program, and airborne radar programs. These decreases were partially offset by an increase in restricted sales in the Networked Information Solutions business area and higher volume on Ground/Air Task-Oriented Radar (G/ATOR) and Surface Electronic Warfare Improvement Program (SEWIP).

Year to Date
Year to date 2022 sales decreased $164 million, or 3 percent, due, in part, to a $42 million reduction in sales related to the IT services divestiture. Year to date 2022 organic sales decreased $122 million, or 2 percent, primarily due to lower volume on Navigation, Targeting and Survivability programs, the JCREW program and airborne radar programs. These decreases were partially offset by an increase in restricted sales in the Networked Information Solutions business area and higher volume on G/ATOR and SEWIP.

Operating Income
Current Quarter
Second quarter 2022 operating income increased $5 million, or 1 percent, due to a higher operating margin rate. Operating margin rate increased to 16.4 percent from 15.8 percent principally due to a $33 million benefit recognized in connection with a contract-related legal matter, partially offset by lower net EAC adjustments at Maritime/Land Systems and Sensors.

Year to Date
Year to date 2022 operating income decreased $7 million, or 1 percent, principally due to lower sales, partially offset by a higher operating margin rate. Operating margin rate increased to 15.9 percent from 15.5 percent principally due to a $33 million benefit recognized in connection with a contract-related legal matter, partially offset by the previously described overhead rate benefit to fixed price contracts in the prior year.

SPACE SYSTEMS	Three Months Ended June 30		%	Six Months Ended June 30		%
$ in millions	**2022**	2021	**Change**	**2022**	2021	**Change**
Sales	**$ 2,979**	$ 2,748	**8 %**	**$ 5,834**	$ 5,269	**11 %**
Operating income	**310**	301	**3 %**	**571**	577	**(1)%**
Operating margin rate	***10.4 %***	*11.0 %*		***9.8 %***	*11.0 %*	

Sales
Current Quarter
Second quarter 2022 sales increased $231 million, or 8 percent, primarily due to higher sales in the Launch & Strategic Missiles business area due to ramp-up on development programs, including a $123 million increase on the Next Generation Interceptor (NGI) program and a $95 million increase on the Ground Based Strategic Deterrent (GBSD) program. Sales in the Space business area were comparable with the prior year period and reflect higher volume on restricted programs and the Space Development Agency (SDA) Tranche 1 Transport Layer (T1TL) program, partially offset by lower volume on the James Webb Space Telescope after its successful launch in December 2021.

Year to Date
Year to date 2022 sales increased $565 million, or 11 percent, and includes a $16 million reduction in sales related to the IT services divestiture. Year to date 2022 organic sales increased $581 million, or 11 percent, due to higher sales in both the Launch & Strategic Missiles and Space business areas. Launch & Strategic Missiles sales increased primarily due to ramp-up on development programs, including a $253 million increase on NGI and a $212 million increase on GBSD. Sales in the Space business area were driven by higher volume on restricted programs, SDA T1TL, and the Commercial Resupply Services program, partially offset by lower volume on the James Webb Space Telescope and other commercial space programs.

Operating Income
Current Quarter
Second quarter 2022 operating income increased $9 million, or 3 percent, due to higher sales, partially offset by a lower operating margin rate. Operating margin rate decreased to 10.4 percent from 11.0 percent primarily due to higher volume on early-stage development programs, such as NGI and GBSD.

Year to Date
Year to date 2022 operating income decreased $6 million, or 1 percent, due to a lower operating margin rate, partially offset by higher sales. Operating margin rate decreased to 9.8 percent from 11.0 percent primarily due to lower net EAC adjustments and higher volume on early-stage development programs. Prior year results include the previously described overhead rate benefit to fixed price contracts.

PRODUCT AND SERVICE ANALYSIS

The following table presents product and service sales and operating costs and expenses by segment:

	Three Months Ended June 30				Six Months Ended June 30			
$ in millions	**2022**		2021		**2022**		2021	
Segment Information:	**Sales**	**Operating Costs and Expenses**	Sales	Operating Costs and Expenses	**Sales**	**Operating Costs and Expenses**	Sales	Operating Costs and Expenses
Aeronautics Systems								
Product	**$ 1,916**	**$ 1,733**	$ 2,484	$ 2,230	**$ 3,961**	**$ 3,537**	$ 5,008	$ 4,504
Service	**560**	**497**	384	342	**1,153**	**1,030**	806	711
Intersegment eliminations	**58**	**46**	45	41	**123**	**105**	89	80
Total Aeronautics Systems	**2,534**	**2,276**	2,913	2,613	**5,237**	**4,672**	5,903	5,295
Defense Systems								
Product	**598**	**515**	641	560	**1,208**	**1,042**	1,321	1,155
Service	**522**	**457**	591	517	**996**	**882**	1,288	1,141
Intersegment eliminations	**174**	**154**	195	173	**373**	**330**	380	339
Total Defense Systems	**1,294**	**1,126**	1,427	1,250	**2,577**	**2,254**	2,989	2,635
Mission Systems								
Product	**1,748**	**1,473**	1,774	1,515	**3,510**	**2,982**	3,534	3,008
Service	**509**	**412**	560	451	**998**	**808**	1,152	948
Intersegment eliminations	**259**	**218**	254	214	**505**	**425**	491	416
Total Mission Systems	**2,516**	**2,103**	2,588	2,180	**5,013**	**4,215**	5,177	4,372
Space Systems								
Product	**2,517**	**2,250**	2,294	2,045	**4,941**	**4,445**	4,352	3,874
Service	**431**	**391**	423	374	**831**	**762**	847	755
Intersegment eliminations	**31**	**28**	31	28	**62**	**56**	70	63
Total Space Systems	**2,979**	**2,669**	2,748	2,447	**5,834**	**5,263**	5,269	4,692
Segment Totals								
Total Product	**$ 6,779**	**$ 5,971**	$ 7,193	$ 6,350	**$ 13,620**	**$ 12,006**	$ 14,215	$ 12,541
Total Service	**2,022**	**1,757**	1,958	1,684	**3,978**	**3,482**	4,093	3,555
Total Segment[1]	**$ 8,801**	**$ 7,728**	$ 9,151	$ 8,034	**$ 17,598**	**$ 15,488**	$ 18,308	$ 16,096

[1] A reconciliation of segment operating income to total operating income is included in “Segment Operating Results.”

Product Sales and Costs

Current Quarter

Second quarter 2022 product sales decreased $414 million, or 6 percent, primarily due to a decrease in product sales at Aeronautics Systems, partially offset by an increase in product sales at Space Systems. The decrease at Aeronautics Systems was principally due to lower volume on restricted programs, as well as the F-35, Global Hawk and NATO AGS programs. The increase at Space Systems was driven by ramp-up on development programs including NGI and GBSD.

Second quarter 2022 product costs decreased $379 million, or 6 percent, consistent with the lower product sales.

Year to Date

Year to date 2022 product sales decreased $595 million, or 4 percent, primarily due to a decrease in product sales at Aeronautics Systems, partially offset by an increase in product sales at Space Systems. The decrease at Aeronautics Systems was principally due to lower volume on restricted programs, as well as the E-2, Global Hawk, and F-35 programs. The increase at Space Systems is principally related to ramp-up on development programs including NGI and GBSD, as well as higher volume on restricted space programs.

Year to date 2022 product costs decreased $535 million, or 4 percent, consistent with the lower product sales.

Service Sales and Costs

Current Quarter

Second quarter 2022 service sales increased $64 million, or 3 percent, primarily due to an increase in service sales at Aeronautics Systems, partially offset by a decrease in service sales at Defense Systems. The increase at Aeronautics Systems was principally due to higher service volume on restricted programs. The decrease at Defense Systems was primarily driven by the completion of a Joint Services support program and lower volume on an international training program.

Second quarter 2022 service costs increased $73 million, or 4 percent, due to higher service sales, partially offset by lower margins on Space Systems service programs.

Year to Date

Year to date 2022 service sales decreased $115 million, or 3 percent, primarily due to the IT services divestiture as well as lower volume on an international training program and completion of a Joint Services support program at Defense Systems. Sales from the divested IT services business, which were largely included in service sales, were $162 million in the prior year period. The decreases were partially offset by higher service volume on restricted programs at Aeronautics Systems.

Year to date 2022 service costs decreased $73 million, or 2 percent, due to lower services sales, partially offset by higher margins on Mission Systems service programs.

BACKLOG

Backlog represents the future sales we expect to recognize on firm orders received by the company and is equivalent to the company's remaining performance obligations at the end of each period. It comprises both funded backlog (firm orders for which funding is authorized and appropriated) and unfunded backlog. Unexercised contract options and indefinite delivery indefinite quantity (IDIQ) contracts are not included in backlog until the time an option or IDIQ task order is exercised or awarded. Backlog is converted into sales as costs are incurred or deliveries are made.

Backlog consisted of the following as of June 30, 2022 and December 31, 2021:

	June 30, 2022			December 31, 2021	
$ in millions	**Funded**	**Unfunded**	**Total Backlog**	Total Backlog	% Change in 2022
Aeronautics Systems	**$ 9,466**	**$ 10,482**	**$ 19,948**	$ 18,277	**9 %**
Defense Systems	**5,522**	**826**	**6,348**	6,349	**— %**
Mission Systems	**10,557**	**4,224**	**14,781**	14,306	**3 %**
Space Systems	**8,850**	**30,054**	**38,904**	37,114	**5 %**
Total backlog	**$ 34,395**	**$ 45,586**	**$ 79,981**	$ 76,046	**5 %**

New Awards

Second quarter and year to date 2022 net awards totaled $13.0 billion and $21.5 billion, respectively, and backlog totaled $80.0 billion. Significant second quarter new awards include $3.5 billion for F-35 at Aeronautics Systems, largely related to Lots 15-17, $2.2 billion for restricted programs (at Aeronautics Systems, Space Systems and Mission Systems), $2.1 billion for GEM63 solid rocket boosters, largely related to Amazon's Project Kuiper, and $0.5 billion for Triton.

LIQUIDITY AND CAPITAL RESOURCES

We are focused on the efficient conversion of operating income into cash and to provide for the company's material cash requirements, including working capital needs, satisfaction of contractual commitments, funding of our pension and OPB plans, investment in our business through capital expenditures, and shareholder return through dividend payments and share repurchases.

At June 30, 2022, we had $1.2 billion in cash and cash equivalents. We expect cash and cash equivalents and cash generated from operating activities, supplemented by borrowings under credit facilities, commercial paper and/or in the capital markets through our shelf registration with the SEC, if needed, to be sufficient to provide liquidity to the company in the short-term and long-term. The company has a five-year senior unsecured credit facility in an aggregate principal amount of $2.0 billion, and in April 2022, we renewed our one-year $500 million uncommitted credit facility. At June 30, 2022, there was no balance outstanding under these credit facilities.

Effective January 30, 2021, we completed the IT services divestiture for $3.4 billion cash. Proceeds were primarily used in the first quarter of 2021 for a $2.0 billion accelerated share repurchase and to fund redemption of $1.5 billion of the company's 2.55 percent unsecured notes due October 2022.

COVID-19 and the CARES Act

The Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") established a program with provisions to allow U.S. companies to defer the employer's portion of social security taxes between March 27, 2020 and December 31, 2020 and pay such taxes in two installments in 2021 and 2022. Our first installment of deferred social security taxes of $200 million was paid in the fourth quarter of 2021 and the second installment of $200 million is due in the fourth quarter of 2022. Under Section 3610, the CARES Act also authorized the government to reimburse qualifying contractors for certain costs of providing paid leave to employees as a result of COVID-19. The company continues to seek, and anticipates continuing to seek, recovery for certain COVID-19-related costs under Section 3610 of the CARES Act and through our contract provisions, though it is unclear how much we will be able to recover. In addition, the U.S. Department of Defense (DoD) has, to date, taken steps to increase the rate for certain progress payments from 80 percent to 90 percent for costs incurred and work performed on relevant contracts; it is unclear what steps the DoD will continue to take.

Internal Revenue Code (IRC) Section 174

Beginning in 2022, the Tax Cuts and Jobs Act of 2017 ("TCJA") eliminates the option to deduct research and development expenditures currently and requires taxpayers to amortize them over five years pursuant to IRC Section 174. Congress is considering, but has not passed, legislation that would defer the amortization requirement to later years. If legislation is not passed and made effective retroactively to January 1, 2022, we estimate the provisions currently in effect will reduce cash from operations for the year ended December 31, 2022 by approximately $1 billion. The actual impact on 2022 cash from operations will depend on if and when Congress passes additional legislation, whether such legislation is made effective retroactively, the amount of research and development expenditures incurred and paid by the company during 2022, and whether the IRS issues guidance on the provision which differs from our current interpretation. We have made federal tax payments of approximately $450 million related to Section 174 during the six months ended June 30, 2022.

Cash Flow Measures

In addition to our cash position, we consider various cash flow measures in capital deployment decision-making, including cash provided by operating activities and adjusted free cash flow, a non-GAAP measure described in more detail below.

Operating Cash Flow

The table below summarizes key components of cash (used in) provided by operating activities:

	Six Months Ended June 30		%
$ in millions	**2022**	2021	**Change**
Net earnings	**$ 1,901**	$ 3,232	**(41)%**
Gain on sale of business	**—**	(1,980)	**NM**
Non-cash items[1]	**(321)**	(33)	**873 %**
Pension and OPB contributions	**(71)**	(74)	**(4)%**
Changes in trade working capital	**(2,261)**	(164)	**1,279 %**
Other, net	**67**	(19)	**(453)%**
Net cash (used in) provided by operating activities	**$ (685)**	$ 962	**(171)%**

[1] Includes depreciation and amortization, non-cash lease expense, stock based compensation expense, deferred income taxes and net periodic pension and OPB income.

Year to date 2022 net cash used in operating activities was $685 million compared to net cash provided by operating activities of $962 million in the prior year period. This change reflects increases in trade working capital due, in part, to unexpected delays in the timing of customer payments near the end of the quarter, which pushed certain cash receipts into the early part of the third quarter. In the second quarter of 2022, the company made $450 million of federal tax payments related to the current provisions of IRC Section 174. In the second quarter of 2021, the company made $390 million of tax payments related to the IT services divestiture.

Adjusted Free Cash Flow

Adjusted free cash flow, as reconciled in the table below, is a non-GAAP measure defined as net cash provided by or used in operating activities, less capital expenditures, plus proceeds from the sale of equipment to a customer (not otherwise included in net cash provided by or used in operating activities) and the after-tax impact of discretionary pension contributions. Adjusted free cash flow includes proceeds from the sale of equipment to a customer as such proceeds were generated in a customer sales transaction. It also includes the after-tax impact of discretionary pension contributions for consistency and comparability of financial performance. This measure may not be defined and calculated by other companies in the same manner. We use adjusted free cash flow as a key factor in our planning for, and consideration of, acquisitions, the payment of dividends and stock repurchases. This non-GAAP measure may be useful to investors and other users of our financial statements as a supplemental measure of our cash performance, but should not be considered in isolation, as a measure of residual cash flow available for discretionary purposes, or as an alternative to operating cash flows presented in accordance with GAAP.

The table below reconciles net cash used in operating activities to adjusted free cash flow:

	Six Months Ended June 30		%
$ in millions	**2022**	2021	**Change**
Net cash (used in) provided by operating activities	**$ (685)**	$ 962	**(171)%**
Capital expenditures	**(507)**	(435)	**17 %**
Proceeds from sale of equipment to a customer	**—**	56	**NM**
Adjusted free cash flow	**$ (1,192)**	$ 583	**(304)%**

Year to date 2022 adjusted free cash flow decreased $1.8 billion, as compared with the same period in 2021, due to higher net cash used in operating activities and an increase in capital expenditures.

Investing Cash Flow

Year to date 2022 net cash used in investing activities was $468 million compared to net cash provided by investing activities of $3.0 billion in the prior year period, principally due to $3.4 billion in cash received from the sale of our IT services business during the first quarter of 2021.

Financing Cash Flow

Year to date 2022 net cash used in financing activities decreased $3.7 billion, as compared with the same period in 2021, principally due to a $2.2 billion decrease in debt repayments and a $1.5 billion reduction in share repurchases.

Credit Facilities, Commercial Paper and Financial Arrangements - See Note 6 to the financial statements for further information on our credit facilities, commercial paper and our use of standby letters of credit and guarantees.

Share Repurchases - See Note 2 to the financial statements for further information on our share repurchase programs.

Long-term Debt - See Note 4 to the financial statements for further information.

CRITICAL ACCOUNTING POLICIES, ESTIMATES AND JUDGMENTS

There have been no material changes to our critical accounting policies, estimates or judgments from those discussed in our 2021 Annual Report on Form 10-K.

ACCOUNTING STANDARDS UPDATES

See Note 1 to our financial statements for further information on accounting standards updates.

FORWARD-LOOKING STATEMENTS AND PROJECTIONS

This Form 10-Q and the information we are incorporating by reference contain statements that constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as "will," "expect," "anticipate," "intend," "may," "could," "should," "plan," "project," "forecast," "believe," "estimate," "outlook," "trends," "goals" and similar expressions generally identify these forward-looking statements. Forward-looking statements include, among other things, statements relating to our future financial condition, results of operations and/or cash flows. Forward-looking statements are based upon assumptions, expectations, plans and projections that we believe to be reasonable when made, but which may change over time. These statements are not guarantees of future performance and inherently involve a wide range of risks and uncertainties that are difficult to predict. Specific risks that could cause actual results to differ materially from those expressed or implied in these forward-looking statements include, but are not limited to, those identified and discussed more fully in the section entitled "Risk Factors" in our 2021 Annual Report on Form 10-K and from time to time in our other filings with the Securities and Exchange Commission (SEC). These risks and uncertainties are amplified by the global COVID-19 pandemic and the related effects on the broader economic environment, which have caused and will continue to cause significant challenges, instability and uncertainty. They include:

Industry and Economic Risks

- our dependence on the U.S. government for a substantial portion of our business
- significant delays or reductions in appropriations for our programs, and U.S. government funding and program support more broadly, including related to hostilities and other global events
- the use of estimates when accounting for our contracts and the effect of contract cost growth and/or changes in estimated contract revenues and costs, including as a result of labor shortages and/or inflationary pressures
- increased competition within our markets and bid protests

Legal and Regulatory Risks

- investigations, claims, disputes, enforcement actions, litigation and/or other legal proceedings
- the improper conduct of employees, agents, subcontractors, suppliers, business partners or joint ventures in which we participate and the impact on our reputation and our ability to do business
- changes in procurement and other laws, SEC and other regulations, contract terms and practices applicable to our industry, findings by the U.S. government as to our compliance with such requirements, and changes in our customers' business practices globally
- environmental matters, including unforeseen environmental costs and government and third party claims
- unanticipated changes in our tax provisions or exposure to additional tax liabilities

Business and Operational Risks

- impacts of the COVID-19 pandemic (or future health epidemics, pandemics or similar outbreaks), including potential new variants, case surges or prolonged recovery periods, their effects on the broader environment, and varying related government requirements, on: our business, our ability to maintain a qualified and productive workforce, work slowdowns or stoppages, labor shortages, supply chain and logistics challenges, costs we cannot recover and liabilities for which we are not compensated, performance challenges (including cost and schedule), government funding, changes in government acquisition priorities and processes, government payment rules and practices, insurance challenges, and potential impacts on access to capital, the markets and the fair value of our assets
- cyber and other security threats or disruptions faced by us, our customers or our suppliers and other partners, and changes in related regulations
- our ability to attract and retain a qualified workforce with the required security clearances and requisite skills to meet our performance obligations
- the performance and viability of our subcontractors and suppliers and the availability and pricing of raw materials and components
- climate change, its impacts on our company, our operations and our stakeholders (employees, suppliers, customers, shareholders and regulators), and changes in laws, regulations and priorities related to greenhouse gas emissions and other climate change related concerns
- our exposure to additional risks as a result of our international business, including risks related to geopolitical and economic factors, suppliers, laws and regulations

- our ability to meet performance obligations under our contracts, including obligations that require innovative design capabilities, are technologically complex, require certain manufacturing expertise or are dependent on factors not wholly within our control
- natural disasters
- products and services we provide related to hazardous and high risk operations, including the production and use of such products, which subject us to various environmental, regulatory, financial, reputational and other risks
- our ability appropriately to exploit and/or protect intellectual property rights
- our ability to develop new products and technologies and maintain technologies, facilities, and equipment to win new competitions and meet the needs of our customers

General and Other Risk Factors

- the adequacy and availability of our insurance coverage, customer indemnifications or other liability protections
- the future investment performance of plan assets, gains or losses associated with changes in valuation of marketable securities related to our non-qualified benefit plans, changes in actuarial assumptions associated with our pension and other postretirement benefit plans and legislative or other regulatory actions impacting our pension and postretirement benefit obligations
- changes in business conditions that could impact business investments and/or recorded goodwill or the value of other long-lived assets

We urge you to consider the limitations on, and risks associated with, forward-looking statements and not unduly rely on the accuracy of forward-looking statements. These forward-looking statements speak only as of the date this report is first filed or, in the case of any document incorporated by reference, the date of that document. We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

There have been no material changes to our market risks from those discussed in our 2021 Annual Report on Form 10-K.

Item 4. Controls and Procedures

DISCLOSURE CONTROLS AND PROCEDURES

Our principal executive officer (Chair, Chief Executive Officer and President) and principal financial officer (Corporate Vice President and Chief Financial Officer) have evaluated the company's disclosure controls and procedures (as defined in Rule 13a-15(e) and Rule 15d-15(e) of the Securities Exchange Act of 1934 (the Exchange Act)) as of June 30, 2022, and have concluded that these controls and procedures are effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. These disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed in the reports that we file or submit is accumulated and communicated to management, including the principal executive officer and the principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

During the three months ended June 30, 2022, no changes occurred in our internal control over financial reporting that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

We have provided information about certain legal proceedings in which we are involved in Notes 5 and 6 to the financial statements.

We are a party to various investigations, lawsuits, arbitration, claims, enforcement actions and other legal proceedings, including government investigations and claims, that arise in the ordinary course of our business. These types of matters could result in administrative, civil or criminal fines, penalties or other sanctions (which terms include judgments or convictions and consent or other voluntary decrees or agreements); compensatory, treble or other damages; non-monetary relief or actions; or other liabilities. Government regulations provide that certain allegations against a contractor may lead to suspension or debarment from future government contracts or suspension of export privileges for the company or one or more of its components. The nature of legal proceedings is such that we cannot assure the outcome of any particular matter. For additional information on pending matters, please see Notes 5 and 6 to the financial statements, and for further information on the risks we face from existing and future investigations, lawsuits, arbitration, claims, enforcement actions and other legal proceedings, please see “Risk Factors” in our 2021 Annual Report on Form 10-K.

Consistent with SEC Regulation S-K Item 103, we have elected to disclose those environmental proceedings with a governmental entity as a party where the company reasonably believes such proceeding would result in monetary sanctions, exclusive of interest and costs, of $1.0 million or more.

Item 1A. Risk Factors

For a discussion of our risk factors please see the section entitled “Risk Factors” in our 2021 Annual Report on Form 10-K.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

The table below summarizes our repurchases of common stock during the three months ended June 30, 2022.

Period	Total Number of Shares Purchased	Average Price Paid per Share[1]	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased under the Plans or Programs ($ in millions)
April 2, 2022 - April 29, 2022	187,598	$ 456.67	187,598	$ 3,732
April 30, 2022 - May 27, 2022	253,224	455.19	253,224	3,617
May 28, 2022 - July 1, 2022	265,638	463.38	265,638	3,494
Total	706,460	$ 458.66	706,460	$ 3,494

[1] Includes commissions paid.

Share repurchases take place from time to time, subject to market conditions and management’s discretion, in the open market or in privately negotiated transactions. The company retires its common stock upon repurchase and, in the periods presented, has not made any purchases of common stock other than in connection with these publicly announced repurchase programs.

See Note 2 to the financial statements for further information on our share repurchase programs.

NORTHROP GRUMMAN CORPORATION

Item 6. Exhibits

*+10.1	Non-Employee Director Compensation Term Sheet, effective May 18, 2022
*+10.2	Consultant Contract dated as of April 11, 2022 by and between Northrop Grumman Systems Corporation and Blake E. Larson
*15	Letter from Independent Registered Public Accounting Firm
*31.1	Certification of Kathy J. Warden pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
*31.2	Certification of David F. Keffer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
**32.1	Certification of Kathy J. Warden pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
**32.2	Certification of David F. Keffer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
*101	Northrop Grumman Corporation Quarterly Report on Form 10-Q for the quarter ended June 30, 2022, formatted as inline XBRL (Extensible Business Reporting Language): (i) the Cover Page, (ii) Condensed Consolidated Statements of Earnings and Comprehensive Income, (iii) Condensed Consolidated Statements of Financial Position, (iv) Condensed Consolidated Statements of Cash Flows, (v) Condensed Consolidated Statements of Changes in Shareholders' Equity, and (vi) Notes to Condensed Consolidated Financial Statements. The instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
*104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

+	Management contract or compensatory plan or arrangement
*	Filed with this report
**	Furnished with this report

NORTHROP GRUMMAN CORPORATION

SIGNATURES

Pursuant to the requirements 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.

NORTHROP GRUMMAN CORPORATION
(Registrant)

By: **/s/ Michael A. Hardesty**

Michael A. Hardesty
Corporate Vice President, Controller and
Chief Accounting Officer
(Principal Accounting Officer)

Date: July 27, 2022

Fees and Expenses

(effective as of May 18, 2022)

Retainer: Retainer fees are paid quarterly, at the end of each quarter. Fees are as follows:

Annual cash retainer: $140,000
Additional retainer for Lead Independent Director: $50,000
Additional retainer for Audit Committee: $15,000
Additional retainer for Audit Committee chair: $25,000
Additional retainer for Comp Committee chair: $25,000
Additional retainer for Gov Committee chair $25,000
Additional retainer for Policy Committee chair $25,000

Equity Grant: Directors are awarded an annual equity grant of $175,000 in deferred stock units ("Automatic Stock Units"), awarded annually on the day of the Company's Annual Meeting of Shareholders. The Automatic Stock Units will vest on the one year anniversary of the grant date. Directors may elect to have all or any portion of their Automatic Stock Units paid on (A) the earlier of (i) the beginning of a specified calendar year after the vesting date or (ii) their separation from service as a member of the Board or (B) the vesting date.

Deferral of Cash Retainer: Directors may elect to defer payment of all or a portion of their cash retainer fees and any other committee retainer fees into a deferred stock unit account ("Elective Stock Units"). Elective Stock Units are awarded on a calendar quarterly basis. Directors may elect to have all or a portion of their Elective Stock Units paid on the earlier of (i) the beginning of a specified calendar year or (ii) their separation from service as a member of the Board.

Elective Deferral Program: Directors may elect to defer to a later year all or a portion of their annual cash retainer and any other fees payable for their Board service into alternative investment options similar to the options available under Northrop Grumman's Savings Excess Plan.

Stock Ownership: All directors are required to own Company stock in an amount equal to five times the annual cash retainer, with such ownership to be achieved within five years of the director's election to the Board. Deferred stock units and Company stock owned outright by the director will count towards this requirement.

Expenses: <u>Transportation</u>

Ordinary and necessary business expenses will be reimbursed to traveling directors after presentation of original receipts to the company. Directors will be reimbursed for round trip first class air travel from the director's regular place of business or residence. Whenever possible, directors will be transported to board meetings by our own company aircraft. Surface travel will be reimbursed at the current mileage allowance for traveling executives.

Currently, that rate is 55 cents per mile, if the director is driving locally. Taxi service will be reimbursed upon presentation of a receipt. Northrop Grumman arranges drivers from an executive security service to transport directors between the airport and the hotel currently in use and Northrop Grumman drivers transport directors from the hotel to the meeting location.

Hotels

The Corporate Secretary’s office will make hotel arrangements for directors in connection with the board and committee meetings. Drivers are available to transport directors to the board and committee meetings. Directors may bill their room charges directly to the Northrop Grumman master account that has been established for director visits.

Exhibit 10.2

CONSULTANT CONTRACT

BLAKE E. LARSON

This agreement for consulting services ("Agreement") is between **Northrop Grumman Systems Corporation,** a Delaware corporation whose principal place of business is located at 2980 Fairview Park Drive, Falls Church, VA ("NGSC" or "the Company") and **Blake E. Larson** of Naples, FL ("Consultant" or "Mr. Larson") (each "a party", collectively "the parties").

I. ENGAGEMENT

NGSC hereby retains Consultant to provide such advice and participate in such meetings and events for the benefit of the Company and its affiliates, as may be requested by the Company. Such representation may include, but is not limited to, the provision of technical advice and assistance. Consultant shall serve at NGSC's call. Consultant's principal point of contact at the Company with respect to the specific nature and scope of the services to be provided hereunder is Northrop Grumman's Chief Executive Officer, a Corporate Vice President, or their designees ("POC"). In any month Consultant provides consulting services, Consultant shall submit monthly written reports to NGSC, in the format described in **Attachment B,** setting forth the actions taken on behalf of NGSC and such other reports as NGSC may require.

II. PLACE OF ENGAGEMENT

Consultant shall perform the services called for under this Agreement at Consultant's place of business and at such other places as NGSC may reasonably require.

Ill. TERM OF ENGAGEMENT

Unless earlier terminated pursuant to this Agreement, the term of this Agreement shall be for one year, commencing upon execution and terminating one year thereafter. This Agreement may be renewed or extended for such time as Northrop Grumman and the Consultant may agree upon in writing.

IV. COMPENSATION

A. **Fee.** NGSC shall pay Consultant and Consultant shall accept from NGSC in full payment for services hereunder, compensation at the rate of **Five Hundred Dollars ($500.00) per hour,** upon submittal of an invoice, provided however, Consultant shall not provide services in excess of **One Hundred and**
Twenty (120) hours per 3-month quarter. Payment shall be made only to the extent that Consultant satisfactorily performs services pursuant to this Agreement and substantiates such performance in the monthly activity report. In the event services are not required or performed in a given month, NGSC shall be under no obligation to pay any compensation for that month as otherwise provided herein. If Consultant fails to substantiate any invoice for services, NGSC shall have no obligation to compensate Consultant for such claimed services. In no event shall Northrop Grumman be obligated during the term of this agreement to pay fees of more than **Two Hundred Forty Thousand Dollars ($240,000.00).**

B. **Expenses.** NGSC shall reimburse Consultant in accordance with NGSC policy and procedures for all reasonable and necessary expenses incurred by Consultant in connection with the rendering of services hereunder, provided that all such expenses are approved in advance by the POC. Expenses shall not exceed **Thirty-Three Thousand Dollars ($33,000.00)** during the term of this agreement. Claims for expenses must be in accordance with NGSC's established policies and limitations pertaining to allowable expenses and documented pursuant with FAR 31.205-46, Travel Costs, and Corporate/sector guidelines.

C. **Maximum Compensation.** Notwithstanding any other provisions of this Agreement to the contrary, NGSC shall not be obligated to request or to pay Consultant for any minimum amount of services, and in no event shall NGSC be obligated during the term of this Agreement for consulting fees and expenses of more than **Two Hundred Seventy-Three Thousand Dollars ($273,000.00) in the aggregate.**

D. **Full Extent of Compensation.** Unless otherwise specifically stated in writing, this Section IV represents the full extent of compensation under this Agreement and Consultant shall not be entitled by virtue of this Agreement to be paid a commission or to participate in any insurance , saving, retirement or other benefit programs, including, without limitation, stock ownership plans, offered by NGSC to its employees, nor shall this Agreement in any way modify any other agreement that Consultant may have with NGSC or any benefit Consultant may receive or be entitled to receive from NGSC or in connection with his prior employment.

E. **Warranty.** Consultant certifies and warrants that in the course of performing services under this Agreement, no payments will be made to government officials or customer representatives, that no government official or customer representative has any direct or indirect investment interest or interest in the revenues or profits of Consultant, and that no expenditure for other than lawful purposes will be made.

F. **Limitations on Activities .** Consultant shall not contact U.S. Government officials or employees at the Senior Executive Service (SES) or Executive (EX) levels, or U.S. military officers above the rank of 0-6, on behalf of NGSC, without the prior approval of Consultant's POC. Consultant shall perform all reasonable tasks required to assist the POC in issuing the approval, including, but not limited to, briefing other Northrop Grumman Government Relations personnel on the nature and purpose of the contact when specifically requested by the POC.

Consultant is not authorized to and shall not engage in any of the following activities in his performance of this Agreement: (i) Any lobbying activity as defined in the Federal Lobbying Disclosure Act of 1995, Public Law 104-65; (ii) Any activities covered by the Byrd Amendment (31 United States Code Section 1352). Therefore, Consultant shall not influence or attempt to influence an officer or employee of any federal agency , Member of Congress, officer or employee of Congress or employee of a Member of Congress, in connection with the awarding, extension, continuation , renewal, amendment or modification of any federal contract or cooperative agreement; (iii) Legislative lobbying activities deemed unallowable under Federal Acquisition Regulation (FAR) Section 31.205-22. Therefore, Consultant shall not attempt to influence the introduction, enactment, or modification of any federal or state legislation either through communication, directly or indirectly, with any member, officer, or employee of any branch or department of the federal or any state or local government; through urging action by the public; or through activity (such as attending legislative sessions or hearings, or gathering information about or analyzing the effect of legislation) to support or prepare for such an effort by or on behalf of Northrop Grumman; (iv) Actions regarding procurement information that are prohibited under FAR Section 3.104-3. Therefore, Consultant shall not solicit or obtain, directly or indirectly, from any officer or employee of a federal agency , or disclose to Northrop Grumman, any proprietary or source selection information regarding procurement during the conduct of that procurement; (v) Any meetings or direct or indirect contact, within or outside the United States, with any foreign government official, foreign government employee, foreign military member, or representative acting on behalf of any of the preceding. Any travel outside the United States.

G. **Exclusion of Lobbying Costs from Overhead Rates.** NGSC is prohibited from charging directly or indirectly, costs associated with lobbying activities to its contracts with the United States Government. Unallowable costs associated with lobbying activities are defined at Federal Acquisition Regulation (FAR) 31.205-22, effective as of the date of this Agreement. By entering into this Agreement with NGSC Consultant agrees that: In the event that lobbying activity is one of Consultant's responsibilities, a detailed accounting of time expended, individual agency/congressional employees contacted, and NGSC programs discussed will be included in the required activity report.

V. TRADE SECRETS AND PROPRIETARY INFORMATION

A. **Use and Disclosure to Third Parties Prohibited.** Consultant shall not divulge, duplicate, disclose or communicate any information concerning any matters affecting or relating to the business of NGSC without the express prior written consent of NGSC. Information shall include, but is not limited to, documents, electronic data in any form, and oral and visual disclosures. Consultant shall exercise all reasonable care to keep NGSC information confidential and shall not use NGSC information for any purpose other than the purposes of this consulting agreement. Upon the expiration of this Agreement, Consultant shall return all NGSC information or, at the direction of NGSC, shall destroy such information and certify, in writing, as to its destruction. The terms of this section shall remain in full force and effect after the expiration or termination of this Agreement.

B. **Developments** Consultants shall not make any Developments as defined below without the express written approval of Northrop Grumman. In the case that Consultant does make any Developments, the following applies.

"Developments" are inventions, whether or not patentable, new technology, Confidential Information, computer programs, copyrightable works, mask works, trademarks or other intellectual property. "Made" refers to made, created, conceived, authored, developed, or reduced to practice.

All Developments made by Consultant alone or jointly with others, whether or not during normal business hours or on Northrop Grumman premises, that are within the scope of Northrop Grumman's business, which result from or are suggested by any work Consultant or others may do on behalf of Northrop Grumman, shall be and are the property of Northrop Grumman. Consultant agrees to assign and hereby assigns to Northrop Grumman all of Consultant's rights to such Developments in all countries. Consultant agrees to promptly disclose to Northrop Grumman all Developments covered by this Agreement and will, at the request of Northrop Grumman at any time, including after my termination of this Agreement, cooperate in all lawful acts which may be necessary or desirable in the judgment of Northrop Grumman to protect for the benefit of Northrop Grumman all such Developments, including executing any patent application, or any application for registration or assignment relating to any such Development, without charge to Northrop Grumman.

During the term of this Agreement, Consultant will not, without the advance written approval of Northrop Grumman, engage in any activity that may constitute a conflict with Northrop Grumman's interests regarding Northrop Grumman Confidential Information or Developments. Any question whether a particular activity may constitute a conflict of interest shall be resolved by obtaining Northrop Grumman's written approval before engaging in that activity.

Pursuant to the Defend Trade Secrets Act of 2016, Consultant shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of a trade secret that (A) is made (i) in confidence to a Federal, State, or local government official, either directly or indirectly, or to an attorney and (ii) solely for the purpose of reporting or investigating a suspected violation of law; or

(B) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. An individual who files a lawsuit for retaliation by Northrop Grumman for reporting a suspected violation of law may disclose the trade secret to the attorney the individual and may use the trade secret information in the court proceeding, if the individual (A) files any document containing the trade secret under seal and (B) does not disclose the trade secret, except pursuant to court order.

C. Notes, Memoranda, Reports, and Data. Consultant agrees that the original and all copies of notes, memoranda, reports, findings or other data prepared by Consultant in connection with the services performed hereunder shall become the sole and exclusive property of Northrop Grumman, and shall be delivered to Northrop Grumman upon termination of this Agreement or at any other time upon request.

D. Privacy and Confidentiality.

i. "Confidential Information" includes, but is not limited to, information related to trade secrets, programs, business plans, inventions (whether patentable, patented or not), processes, formulas, existing or contemplated products, technical data, services, technology, concepts, computer programs, plans, studies, techniques, designs, specifications, patterns, contracts, presentations, and business information, and including information related to any research, development, manufacture, purchasing, engineering, know-how, sales or marketing methods, competitive analyses, methods of doing business, customer lists, or customer usages or requirements.

ii. Consultant agrees that to hold all Confidential Information provided by Northrop Grumman to Consultant in strict confidence and only use such Confidential Information for purposes of representing Northrop Grumman. Consultant shall not use Northrop Grumman Confidential Information for Consultant's own purposes, nor divulge, disclose, sell or communicate any information concerning any matters affecting or relating to the business of Northrop Grumman to others (including any third party) without the express prior written consent of Northrop Grumman. Consultant shall take all reasonable precautions to prevent the disclosure of information to third parties, including any foreign national, firm, or country, and foreign nationals employed or associated with Consultant's company except as specifically authorized by Northrop Grumman. Consultant will not disclose to or cause Northrop Grumman to use Confidential Information of others, unless authorized by the owner .

iii. In the event that Consultant becomes legally compelled (by deposition, interrogatory , request for documents, subpoena, civil investigative demand or similar process) or is compelled by stock exchange rules to disclose any such information provided by Northrop Grumman, Consultant will promptly notify Northrop Grumman so that Northrop Grumman may seek, at Northrop Grumman's expense (with Consultant's cooperation, if so requested by Northrop Grumman), a protective order or other appropriate remedy and/or waive compliance with this provision. In the event that such protective order or other remedy is not obtained, or that Northrop Grumman does not waive compliance with this provision, Consultant will furnish only that portion of the information which it is advised by opinion of its legal counsel is legally required. Such information shall, at all times, remain the property of Northrop Grumman and when requested by Northrop Grumman, Consultant shall return all information received from Northrop Grumman and any copies thereof to Northrop Grumman.

iv. Confidential Information furnished to Consultant shall remain Northrop Grumman's proprietary property, shall be duplicated only as authorized in writing by Northrop Grumman, and shall be returned to Northrop Grumman or destroyed upon request or when no longer required for the performance of this Agreement. Consultant further agrees not to use any Northrop Grumman Information to develop any product, service or system, or to support any third party in the development of any product, service or system.

v. Neither the existence of this Agreement nor the disclosure of Northrop Grumman Confidential Information or any other information hereunder shall be construed as granting expressly by implication, by estoppel or otherwise, a license under any invention or patent now or hereafter owned or controlled by the Northrop Grumman or Northrop Grumman's customer, except as specifically set forth herein.

vi. Consultant's obligations with respect to Northrop Grumman Confidential Information disclosed hereunder prior to the performance in full, termination or cancellation of this Agreement shall not, except as expressly set forth herein, be affected by such performance in full, termination, or cancellation.

vii. Consultant shall respond promptly and appropriately to any inquiries from Northrop Grumman related to compliance with this clause to include documentation and/or independent evidence of the effectiveness of implemented controls.

E. **Disclosure of Confidential or Proprietary Information of Third Parties Prohibited.** Consultant shall not disclose to NGSC or induce NGSC to use any secret process, trade secret, or other confidential or proprietary knowledge or information belonging to others, including but not limited to the United States. Such information includes but is not limited to information relating to bids, offers, technical proposals, responses to requests for procurement, rankings of competitors and other similar procurement sensitive information.

F. **Non-Public Information.** Consultant's duties under this Agreement may involve access to material information that is not publicly available about Northrop Grumman Corporation. Consultant acknowledges that the securities laws of the United States impose certain restrictions upon the use of material non-public information and he agrees to abide by such laws and regulations with respect to his and his family's transactions in Northrop Grumman stock and also with respect to his communication of such material, non-public information to others.

VI. PRESERVATION OF TRADE NAMES, TRADEMARKS AND PATENT RIGHTS

All trade names, trademarks and patent rights of NGSC pertaining to the products of NGSC and/or its affiliates, including the names "Northrop", "Grumman", "Northrop Grumman Corporation" and "Northrop Grumman Systems Corporation" shall remain the sole property of NGSC and Consultant shall do all things necessary to protect and preserve such trade names, trademarks and patent rights from claims by other persons or entities.

VII. COOPERATION WITH NGSC

During and after the expiration of this Agreement, Consultant shall fully cooperate with NGSC in regard to any matter, dispute or controversy in which NGSC or an affiliate is involved or may become involved and of which Consultant may have knowledge. To the extent such cooperation requires significant time and expenses, cooperation shall be subject to further agreement providing for reasonable.

VIII. INDEMNIFICATION

Consultant shall indemnify, defend and hold NGSC harmless from any and all claims of third parties for loss or damage to property or injury or death to persons arising out of or relating to Consultant's activities or operations or omissions, including those of the Consultant's employees, pursuant to this Agreement. Such indemnification shall survive the expiration or termination of this Agreement.

IX. INDEPENDENT CONTRACTOR

Consultant shall render all services hereunder as an independent contractor and shall not hold out himself or herself as an agent of NGSC. Nothing herein shall be construed to create or confer upon Consultant the right to make contracts or commitments for or on behalf of NGSC. Consultant shall not utilize NGSC resources in the performance of consultant activities including use of NGSC stationary, secretarial assistance, or assigned office space.

X. TAXES

Consultant shall pay all taxes due with respect to the compensation paid hereunder (including, without limitation, all taxes that may be due if the classification contemplated by the preceding paragraph is erroneous or if the Company is required to revise such classification).

In accordance with California law, NGSC is required to withhold income tax at the rate of 7% from payments to non-resident independent contractors for services performed in California. All tax withheld will be paid to the California franchise tax board by NGSC on Consultant's behalf and Form 592-b will be mailed to Consultant in January of the following year summarizing total California earnings and withheld tax. Consultant must indicate on each invoice the amount of billing that is attributable to services performed in California or tax at 7% will be withheld on the entire payment. If Consultant believes it is exempt from this withholding requirement, please complete California Form 588 or 590, which can be found online at http://www.ftb.ca.gov, and follow the instructions accompanying those forms.

XI. OBSERVANCE OF APPLICABLE LAWS AND REGULATIONS

A. United States Laws. Consultant shall comply with and do all things necessary for NGSC to comply with United States laws and regulations and express policies of the United States Government, including but not limited to the requirements of the Foreign Corrupt Practices Act, 15 U.S.C. Section 78 dd-1 et seq., the Federal Acquisition Regulations, 48 CFR section 1.101 et seq.,("FAR"), the International Traffic In Arms Regulations, 22 CFR Parts 120 through 130 and applicable regulations; the Byrd Amendment (31 U.S.C. Section 1352) and applicable regulations; the Office of Federal Procurement Policy Act (41 U.S.C. Section 423) and applicable regulations; and DoD Directive 5500.7 and applicable regulations. No part of any compensation or fee paid by NGSC will be used directly or indirectly to make any kickbacks to any person or entity, or to make payments, gratuities, emoluments or to confer any other benefit to an official of any government or any political party. Consultant shall not seek, nor relay to NGSC, any classified, proprietary or source selection information not generally available to the public. Consultant shall also comply with and do all things necessary for NGSC to comply with provisions of contracts between agencies of the United States Government or their contractors and NGSC which relate either to patent rights or the safeguarding of information pertaining to the security of the United States. This entire Agreement and/or the contents thereof may be disclosed to the United States Government.

B. No Selling Agency Employed. Consultant further represents and warrants that no person or selling agency has been or will be employed or retained to solicit or secure any contract, including but not limited to a United States Government contract, upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Consultant for the purpose of receiving business. In the event of a breach or violation of this warranty, NGSC shall have the right to annul this Agreement without liability or in its discretion to deduct from the fee or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage or contingent fee.

C. State and Local Laws And Regulations. Consultant shall comply with and do all things necessary for Consultant and NGSC and its affiliates each to comply with all laws and regulations of the Commonwealth of Virginia and any other state or locality, in which services hereunder are or may be rendered.

D. **Maintenance Of Time And Expense Records.** Consultant shall maintain appropriate time and expense records pertaining to the services performed under this Agreement. Said records shall be subject to examination and audit by NGSC and the United States Government until notified by NGSC in writing, that the records no longer need to be maintained.

E. **Certification.** This Agreement is made in material reliance upon the representations and warranties made by Consultant. The effectiveness of this Agreement is contingent upon and will not commence until receipt by NGSC of the certifications set forth in **Attachments A, C and D** hereto. In the event that NGSC has reason to believe that these certifications are incorrect, NGSC may treat this Agreement as being null and void or may terminate this Agreement pursuant to Section XVI.

F. **Standards of Business Conduct.** Consultant hereby acknowledges that he has received a copy of the Standards of Business Conduct (or amendment thereof) and agrees to conduct his activities for or on behalf of NGSC in accordance with such principles as a condition of this Agreement.

XII. ASSIGNMENT OF RIGHTS

This Agreement and the rights, benefits, duties and obligations contained herein may not be assigned or otherwise transferred in any manner to third parties without the express written approval of NGSC. Any such assignment or transfer without prior approval of NGSC will be null, void and without effect.

XIII. MODIFICATION

No waiver or modification of this Agreement or of any covenant, condition, or limitation herein shall be valid and enforceable unless such waiver or modification is in writing and agreed by both parties.

XIV. USE OR EMPLOYMENT OF THIRD PARTIES

Consultant shall not utilize or employ any third party, individual or entity, in connection with Consultant's performance of services under this Agreement without the express written approval of NGSC.

XV. CONFLICTS OF INTEREST

No business or legal conflicts of interest shall exist between services performed or to be performed by Consultant on behalf of NGSC and by Consultant on behalf of any other client. The identity of Consultant's directorships, other employment and clients shall be fully disclosed in the Certification, **Attachment D.** Consultant will avoid entering into any business arrangement that presents an appearance of or a potential for any such conflict of interest. In the event there is a change to Consultant's directorships, other employment and/or clients, Consultant is required to provide NGSC an updated copy of **Attachment D** within five (5) days of such change.

XVI. TERMINATION

Subject to any applicable ethical or legal constraint, either party may terminate this Agreement upon thirty days written notice to the other.

In the event of a violation by Consultant of any term or condition, express or implied, of this Agreement or of any federal, state or local law or regulation pertaining to or arising from Consultant's performance of services under this Agreement, NGSC may, in its discretion, terminate this Agreement immediately, without prior notice, and in such event Consultant shall be entitled to compensation only up to the time of such violation.

Notwithstanding the foregoing, in the event that Consultant is: (1) adjudicated a bankrupt or petitions for relief under bankruptcy, reorganization, receivership, liquidation, compromise or other arrangement or attempts to make an assignment for the benefit of creditors, this Agreement shall be deemed terminated automatically, without requirement of notice, without further liability or obligation to NGSC; or (2) nominated to a politically appointed position, this Agreement shall be deemed terminated effective as of the day before any affirmative Senate Committee confirmation vote.

XVII. SEVERABILITY OF PROVISIONS

All provisions contained herein are severable and in the event any of them are held to be invalid by any competent court, this Agreement shall be interpreted as if such invalid provision was not contained herein.

XVIII. AVAILABILITY OF EQUITABLE REMEDIES

Consultant understands and agrees that any breach or evasion of any of the terms of this Agreement will result in immediate and irreparable injury to NGSC and will entitle NGSC to all legal and equitable remedies including, without limitation, injunction or specific performance.

XIX. GOVERNING LAW

This Agreement and the performance hereunder shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia (excluding any conflicts of laws provisions), which shall be the exclusive applicable law. Consultant shall submit to the jurisdiction of the courts within the Commonwealth of Virginia for any claim, demand or suit that may arise in connection with this Agreement and Consultant specifically waives any objection or defense to venue and jurisdiction.

XX. SETTLEMENT OF DISPUTES

NGSC and Consultant hereby consent to the resolution by arbitration of all disputes, issues, claims or controversies arising out of or in connection with this Agreement, that NGSC may have against Consultant, or that Consultant may have against NGSC, or against its officers, directors, employees or agents acting in their capacity as such; provided however, that in order to comply with the requirements of section 8116 of P.L.111-118 (the "Franken Amendment") and its implementing regulations, Consultant is not required to arbitrate any claim under Title VII of the Civil Rights Act of 1964 or any tort related to or arising out of sexual assault or harassment, including assault and battery, intentional infliction of emotional distress, false imprisonment, or negligent hiring, supervision, or retention, regardless of when that claim arises or has arisen. Consultant may, but is not required to, request arbitration of such claims. Each party's promise to resolve all such claims, issues, or disputes by arbitration, except as noted above, in accordance with this Agreement rather than through the courts, is consideration for the other party's like promise. It is further agreed that the decision of an arbitrator on any issue, dispute, claim or controversy submitted for arbitration, shall be final and binding upon the NGSC and Consultant and that judgment may be entered on the award of the arbitrator in any court having proper jurisdiction.

Except as otherwise provided herein or by mutual agreement of the parties, any arbitration shall be administered in accordance with the then-current Model Arbitration Procedures of the American Arbitration Association (AAA) before an arbitrator who is licensed to practice law in the state in which the arbitration is convened. The arbitration shall be held in Fairfax County, VA or at any other location mutually agreed upon by the parties.

The parties shall act reasonably and in good faith to agree upon the arbitrator .

In reaching his or her decision, the arbitrator shall have no authority to change or modify any lawful NGSC or affiliate policy, rule or regulation or this Agreement.

XXI. NOTICE

Any notice to be given hereunder shall be in writing, mailed by certified or registered mail with return receipt requested addressed to NGSC:

Northrop Grumman Systems Corporation
45101 Warp Drive, Building 1
Dulles, VA 20166-6874
Attn.: General Counsel

or to Consultant at their residential or business address, or to such other address as may have been furnished at the date of mailing either by NGSC or Consultant in writing.

XXII. SECURITY REQUIREMENTS

Consultant shall comply with all security requirements of the United States Government affecting NGSC and shall not engage in any services for which Consultant does not have a proper security clearance. Further, Consultant shall comply with all United States Government and NGSC requirements applicable to Special Access Required ("SAR") Programs in which NGSC is involved.

Consultant shall not possess classified material except at NGSC's cleared facility or the U.S. Government's cleared facility. If Consultant performs services under this Agreement in connection with any program in SAR status, prior to any foreign travel Consultant shall obtain the approval of NGSC's Division Security.

XXIII. INFORMATION SECURITY

Consultant will comply with all applicable laws, statutes and regulations in the handling, transmitting and safeguarding of information provided by Northrop Grumman including, but not limited to, data protection, privacy, data transfer, and export laws. Information provided by Northrop Grumman in connection with this matter shall not be stored or transmitted outside of the U.S. without Northrop Grumman's express permission.

Consultant further agrees that it will take reasonable measures to safeguard and protect all information provided by Northrop Grumman, including all company sensitive, third party and personally identifiable information, from inadvertent disclosure, unauthorized disclosure, or unauthorized access, regardless of whether such information is in paper, electronic or other form. Consultant represents that it has a comprehensive information security program that is comparable to, meets, or exceeds the requirements in **Appendix A.**

Consultant agrees that it will flow down the data security and compliance requirements in **Appendix A** in any agreement with a third-party supplier, retained in connection with this matter that will receive Sensitive Information.

The terms of this section shall remain in full force and effect after the termination or expiration of this Agreement. Sensitive information exchanged pursuant to this Agreement should be returned to Northrop Grumman within 30 days of termination, unless otherwise agreed to by the parties.

XXIV. COMPLETE AGREEMENT

This Agreement constitutes the entire agreement of the parties with respect to the engagement of Consultant by NGSC. The parties stipulate and agree that neither of them has made any representation with respect to this Agreement except that such representations are specifically set forth herein. The parties acknowledge that any other payments or representations that may have been made are of no effect and that neither party has relied on such payments or representations in connection with this Agreement or the performance of services contemplated herein.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be entered into and executed as set forth below.

NORTHROP GRUMMAN SYSTEMS CORPORATION

/s/ Bobby Lentz April 8, 2022

______________________________ ______________________________

Date

CONSULTANT ACCEPTANCE:

/s/ Blake Larson April 11, 2022

______________________________ ______________________________

Date

NORTHROP GRUMMAN CORPORATION

EXHIBIT 15

LETTER FROM INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

July 27, 2022

The Board of Directors and Stockholders of Northrop Grumman Corporation

Northrop Grumman Corporation
2980 Fairview Park Drive
Falls Church, Virginia 22042

We are aware that our report dated July 27, 2022, on our review of the interim financial information of Northrop Grumman Corporation and subsidiaries appearing in this Quarterly Report on Form 10-Q for the quarter ended June 30, 2022, is incorporated by reference in Registration Statement Nos. 033-59815, 033-59853, 333-67266, 333-100179, 333-107734, 333-121104, 333-125120, 333-127317, 333-175798 on Form S-8, 333-237504 on Form S-3, and 333-264549 on Form S-4.

/s/ Deloitte & Touche LLP
McLean, Virginia

NORTHROP GRUMMAN CORPORATION

EXHIBIT 31.1

CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Kathy J. Warden, certify that:

1. I have reviewed this report on Form 10-Q of Northrop Grumman Corporation ("company");
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
    c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the company's most recent fiscal quarter (the company's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):
    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: July 27, 2022

/s/ Kathy J. Warden

Kathy J. Warden
Chair, Chief Executive Officer and President

NORTHROP GRUMMAN CORPORATION

EXHIBIT 31.2

CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, David F. Keffer, certify that:

1. I have reviewed this report on Form 10-Q of Northrop Grumman Corporation ("company");
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the company's most recent fiscal quarter (the company's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):
   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: July 27, 2022

/s/ David F. Keffer

David F. Keffer
Corporate Vice President and Chief Financial Officer

NORTHROP GRUMMAN CORPORATION

EXHIBIT 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Northrop Grumman Corporation (the “company”) on Form 10-Q for the period ended June 30, 2022, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Kathy J. Warden, Chair, Chief Executive Officer and President of the company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the company.

Date: July 27, 2022

/s/ Kathy J. Warden

Kathy J. Warden
Chair, Chief Executive Officer and President

NORTHROP GRUMMAN CORPORATION

EXHIBIT 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Northrop Grumman Corporation (the “company”) on Form 10-Q for the period ended June 30, 2022, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, David F. Keffer, Corporate Vice President and Chief Financial Officer of the company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the company.

Date: July 27, 2022

/s/ David F. Keffer
David F. Keffer
Corporate Vice President and Chief Financial Officer