Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy												Date: May 2021
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0604536N *I Advanced Undersea Prototyping*							
COST ($ in Millions)	**Prior Years**	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**Cost To Complete**	**Total Cost**
Total Program Element	204.250	180.106	89.296	58.473	-	58.473	-	-	-	-	-	-
3394: *Adv Undersea Prototyping-Vehicles, Propulsion & Navigation*	180.131	165.635	89.296	58.473	-	58.473	-	-	-	-	-	-
9999: *Congressional Adds*	24.119	14.471	0.000	0.000	-	0.000	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

The Orca Extra Large Unmanned Undersea Vehicle (XLUUV) is the Navy's Extra Large UUV effort as part of the Family of UUVs. The Orca XLUUV effort is established to address a Joint Emergent Operational Need (JEON). Orca XLUUV is a multi-phased accelerated acquisition effort to rapidly deliver capability to the Fleet. Phase 1 was a competitively sourced design effort. Phase 2 down selected to one of the Phase 1 vendors in FY 2019 for fabrication and testing of the vehicle and support elements. Testing and delivery of the vehicles and support elements has been delayed to FY22 due to contractor challenges and supplier issues. The Navy is working with Boeing to mitigate schedule delays and execute risk reduction testing under prototyping effort. The Navy is updating facilities at the Naval Base Ventura County site for testing, training, and work-ups, in coordination with large unmanned surface vessel testing for cost efficiencies. Fabrication awards of additional Orca XLUUV systems are planned for FY24 and out, gradually ramping up quantities in future fiscal years, depending on the progress from the first five systems. XLUUV will have a modular payload bay, with defined interfaces that current and future payloads must adhere to for employment from the vehicle. The Orca XLUUV effort will integrate the currently required payload, and potential future payloads will be developed, evaluated, and preliminarily integrated leveraging the Core Technologies Program Element 0604029N. Additional XLUUV technologies/capabilities risk reduction will occur in parallel, leveraging the competitive Industrial base.

B. Program Change Summary ($ in Millions)	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**
Previous President's Budget	187.187	115.858	42.995	-	42.995
Current President's Budget	180.106	89.296	58.473	-	58.473
Total Adjustments	-7.081	-26.562	15.478	-	15.478
• Congressional General Reductions	-	-0.516			
• Congressional Directed Reductions	-	-26.046			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-7.081	0.000			
• Program Adjustments	0.000	0.000	16.098	-	16.098
• Rate/Misc Adjustments	0.000	0.000	-0.620	-	-0.620

Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy	Date: May 2021
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0604536N *I Advanced Undersea Prototyping*

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2020	FY 2021
Project: 9999: *Congressional Adds*		
Congressional Add: *XLUUV competitive risk reduction*	14.471	0.000
Congressional Add Subtotals for Project: 9999	14.471	0.000
Congressional Add Totals for all Projects	14.471	0.000

Change Summary Explanation

Program Changes:
FY20: -$7,081K Small Business Innovation Research (SBIR); -$1K miscellaneous reduction
FY21: -$26,046K Test and Evaluation Delays Congressional Reduction; -$516K miscellaneous Congressional reduction
FY22: +$8,908K ORCA Payload Capacity Increase ; +$7,190K Development and Testing of the Universal Payload Module for ORCA; -$620K Miscellaneous Adjustments
Technical: Not applicable.
Schedule: Not applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604536N / *Advanced Undersea Prototyping*	Project (Number/Name) 3394 / *Adv Undersea Prototyping-Vehicles, Propulsion & Navigation*	

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
3394: *Adv Undersea Prototyping-Vehicles, Propulsion & Navigation*	180.131	165.635	89.296	58.473	-	58.473	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Orca Extra Large Unmanned Undersea Vehicle (XLUUV) is the Navy's Extra Large UUV effort as part of the UUV Family of Systems (FoS). The Orca XLUUV effort has been established to address a Joint Emergent Operational Need (JEON). Orca XLUUV will have a modular payload bay, with defined interfaces that current and future payloads must adhere to for employment from the vehicle. The Orca XLUUV effort will integrate the currently required payload, and additional potential future payloads will be developed, evaluated, and preliminarily integrated under the Core Technologies Program Element 0604029N. Additional XLUUV technologies/ capabilities risk reduction will occur in parallel, leveraging the competitive Industrial base.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: XLUUV Product Development	153.543	70.796	17.641	0.000	17.641
Articles:	-	-	-	-	-
Description: Orca XLUUV Phase 1 design was completed via a full and open competition with two industry teams. Phase 2 fabrication was down selected to one vendor for the fabrication and delivery of 5 Orca vehicles.					
FY 2021 Plans: Continue Phase 2 fabrication of initial vehicles and commence contractor testing at subsystem level, in preparation for system level testing. Develop training, sustainment, and sparing products. Execute contract modification to improve payload capability per Fleet needs and optimize Navy's sustainment posture.					
FY 2022 Base Plans: Continue Phase 2 fabrication of initial vehicles. First vehicle to begin contractor in-water testing by Q2FY22. Accept delivery of vehicle 1. Vehicle integration of subsystems includes propulsion, sensors, payload, communications, and control systems. Conduct contractor testing to validate and verify system requirements and prepare system for Government testing. Begin development of a universal payload module to be used for future payload integration, test, and demonstration.					
FY 2022 OCO Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604536N / *Advanced Undersea Prototyping*	**Project (Number/Name)** 3394 / *Adv Undersea Prototyping-Vehicles, Propulsion & Navigation*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Decrease of $53.155M due to planned ramp down of funding on prime contract.					
Title: XLUUV Support	7.982	11.664	6.860	0.000	6.860
Articles:	-	-	-	-	-
FY 2021 Plans: Support engineering and technical oversight of fabrication efforts and engineering services including engineering change proposals. Review and approve CDRLs, design products, and manufacturing processes. Provide expert oversight and support of subsystem and system testing. Engage UUVRON to develop and document tactics, techniques, and procedures (TTPs) to create and validate Integrated Logistics Support products. Initiate preparation of payload integration efforts. ***FY 2022 Base Plans:*** Support engineering and technical oversight of fabrication efforts and engineering services including engineering change proposals. Review and approve CDRLs, final design products, and manufacturing processes. Provide expert oversight and support of subsystem and system testing, including performing final system inspection and acceptance. Engage UUVRON to develop and document tactics, techniques, and procedures (TTPs) to create and validate Integrated Logistics Support products. Continue payload integration efforts. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Decrease of $4.804M due to reduced engineering support for fabrication efforts due to delivery of vehicles.					
Title: XLUUV Test and Evaluation	0.000	2.790	31.267	0.000	31.267
Articles:	-	-	-	-	-
FY 2021 Plans: Commence XLUUV contractor testing of first and second Orca XLUUV vehicles at subsystem level, in preparation for system level testing. Government test support to include planning for and participating at multiple test events, including various Navy test range locations. Plan for XLUUV system level and upcoming Navy testing. Initiate subsystem test planning for payload integration. Continue planning efforts and infrastructure					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604536N / *Advanced Undersea Prototyping*	**Project (Number/Name)** 3394 / *Adv Undersea Prototyping-Vehicles, Propulsion & Navigation*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
development initiated in FY20 to support XLUUV basing, testing, training, fleet integration and CONOPs. Plans for testing adjusted due to contractor delays and updates to fabrication and test schedule. ***FY 2022 Base Plans:*** Complete XLUUV contractor testing of first and second Orca vehicles. Begin contractor testing for vehicles 3 and 4. Fabrication contractor to provide support for test events including technical representatives and hardware to conduct events. Commence and execute initial Navy testing and related Fleet training. Begin subsystem testing for payload integration Continue efforts and infrastructure development to support XLUUV basing, testing, training, fleet integration and CONOPs. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Increase of $28.477M due to additional test and evaluation efforts including oversight of contractor testing prior to delivery as well as initiation of Government testing and Fleet training on delivered vehicles.					
Title: XLUUV Management Services	4.110	4.046	2.705	0.000	2.705
Articles:	-	-	-	-	-
FY 2021 Plans: Provide technical guidance, project planning, program management and travel for Orca fabrication. Provide financial and contracting support, and coordinate work with the Fleet, test support, engineering support, and contractors. ***FY 2022 Base Plans:*** Provide technical guidance, project planning, program management and travel for Orca fabrication. Provide financial and contracting support, and coordinate work with the Fleet, test support, engineering support, and contractors. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Decrease of $1.341M due to reduced management efforts with the completion of first and second Orca vehicle fabrication.					
Accomplishments/Planned Programs Subtotals	165.635	89.296	58.473	0.000	58.473

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604536N / *Advanced Undersea Prototyping*	**Project (Number/Name)** 3394 / *Adv Undersea Prototyping-Vehicles, Propulsion & Navigation*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• OPN/1613: *Extra Large UUV*	0.000	0.000	0.000	-	0.000	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

Orca XLUUV is a multi-phased accelerated acquisition effort using USC Sec. 2358 authorities to rapidly deliver capability to the Fleet. Phase 1 was a competitively sourced design effort. Two design contracts were awarded to Industry in FY 2017. Phase 2 commenced with a down select in FY 2019 to one of the Phase 1 vendors for fabrication and testing of the vehicle and support elements. Five (5) Orca XLUUV operationally relevant prototype systems (vehicles, mobile C2 equipment, and support equipment) are being fabricated for demonstration and use by the Fleet. Additional XLUUV technologies/capabilities risk reduction will occur in parallel, leveraging the competitive Industrial base. Phase 3 provides the option to fabricate up to four (4) additional systems from the vendor who fabricated vehicles in Phase 2. Fabrication award of these additional Orca XLUUV systems is planned to be no earlier than FY24. Transition to an Acquisition Category (ACAT) Program and production may occur as early as FY24, pending successful completion of Government testing. XLUUV will have a modular payload bay, including a universal payload module, with defined interfaces that current and future payloads must adhere to for employment from the vehicle. The Hammerhead payload is the next payload for integration with Orca XLUUV. Other potential future payloads, advanced energy solutions, and enhanced autonomy and command and control will be developed and evaluated under the Core Technologies PE 0604029N, and/or by other Science and technology organizations, and integrated into Orca XLUUV when ready. The Navy is concurrently updating facilities at the Naval Base Ventura County site for XLUUV testing, training, and work-ups, in coordination with large unmanned surface vessel testing for cost efficiencies. In parallel, the Navy is evaluating options for future far-forward basing locations.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604536N / *Advanced Undersea Prototyping*	**Project (Number/Name)** 3394 / *Adv Undersea Prototyping-Vehicles, Propulsion & Navigation*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Payload Design documentation	C/CPIF	Various : Various	3.735	0.000		0.000		0.000		-		0.000	-	-	-
Design & Long Lead Material, including sub-systems	C/CPIF	Boeing : Huntington Beach, CA	49.558	0.000		0.000		0.000		-		0.000	-	-	-
Design & Long Lead Material, including sub-systems	C/CPIF	Lockheed Martin : Riviera Baech, FL	43.349	0.000		0.000		0.000		-		0.000	-	-	-
Fabrication of 5 XLUUVs, including sub-systems	C/FPIF	Boeing : Huntington Beach, CA	60.672	153.543	Dec 2019	70.796	Dec 2020	16.022	Dec 2021	-		16.022	-	-	-
Universal Payload Module	C/CPIF	Various : Various	0.000	0.000		0.000		0.682	Dec 2021	-		0.682	-	-	-
XLUUV Spares/ Maintenance	C/CPIF	Boeing : Huntington Beach, CA	0.000	0.000		0.000		0.937	Dec 2021	-		0.937	-	-	-
		Subtotal	157.314	153.543		70.796		17.641		-		17.641	-	-	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
RFP/PSPED Dev	SS/CPFF	APL/JHU : Laurel, MD	0.300	0.000		0.000		0.000		-		0.000	-	-	-
Source Selection	WR	NSWC CD : West Bethesda, MD	1.518	0.000		0.000		0.000		-		0.000	-	-	-
Source Selection	WR	SSC PAC : San Diego, CA	0.517	0.000		0.000		0.000		-		0.000	-	-	-
Engineering Support	WR	NSWC CD : West Bethesda, MD	1.200	1.620	Nov 2019	2.606	Nov 2020	1.432	Nov 2021	-		1.432	-	-	-
Engineering Support	WR	NSWC IH : Indian Head, MD	0.900	1.050	Nov 2019	2.613	Nov 2020	1.100	Nov 2021	-		1.100	-	-	-
Engineering and Logistic Support	WR	NUWC KPT : Keyport, WA	1.500	2.560	Nov 2019	2.541	Nov 2020	2.068	Nov 2021	-		2.068	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604536N / *Advanced Undersea Prototyping*	Project (Number/Name) 3394 / *Adv Undersea Prototyping-Vehicles, Propulsion & Navigation*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical Warrant Holder Support	Various	NAVSEA Activities : Washington, DC	0.500	0.420	Nov 2019	0.782	Nov 2020	0.280	Nov 2021	-		0.280	-	-	-
Program Support	Various	Various : Various	7.642	2.332	Nov 2019	3.122	Nov 2020	1.980	Nov 2021	-		1.980	-	-	-
		Subtotal	14.077	7.982		11.664		6.860		-		6.860	-	-	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test support	WR	Naval Base Ventura County : Port Hueneme, CA	0.000	0.000		0.000		7.933	Dec 2021	-		7.933	-	-	-
Test support	WR	NSWC, CD : West Bethesda, MD	0.000	0.000		1.100	Dec 2020	7.216	Dec 2021	-		7.216	-	-	-
Test safety support	WR	NSWC, IH : Indian Head, MD	0.000	0.000		0.000		0.600	Dec 2021	-		0.600	-	-	-
Test Ranges and support equipment	WR	Various : Various	0.000	0.000		0.000		1.400	Dec 2021	-		1.400	-	-	-
Test hardware and support equipment	C/CPFF	Boeing : Hunting Beach, CA	0.000	0.000		1.690	Dec 2020	4.718	Dec 2021	-		4.718	-	-	-
XLUUV Test Site	WR	Naval Base Ventura County : Point Mugu, CA	0.000	0.000		0.000		9.400	Dec 2021	-		9.400	-	-	-
		Subtotal	0.000	0.000		2.790		31.267		-		31.267	-	-	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Mgmt & Techncal Efforts	WR	NAVSEA Activities : WASHINGTON, D.C.	8.740	4.110	Nov 2019	4.046	Nov 2020	2.705	Nov 2021	-		2.705	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604536N / *Advanced Undersea Prototyping*	**Project (Number/Name)** 3394 / *Adv Undersea Prototyping-Vehicles, Propulsion & Navigation*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	8.740	4.110		4.046		2.705		-		2.705	-	-	N/A

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	180.131	165.635		89.296		58.473		-		58.473	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604536N / *Advanced Undersea Prototyping*	**Project (Number/Name)** 3394 / *Adv Undersea Prototyping-Vehicles, Propulsion & Navigation*

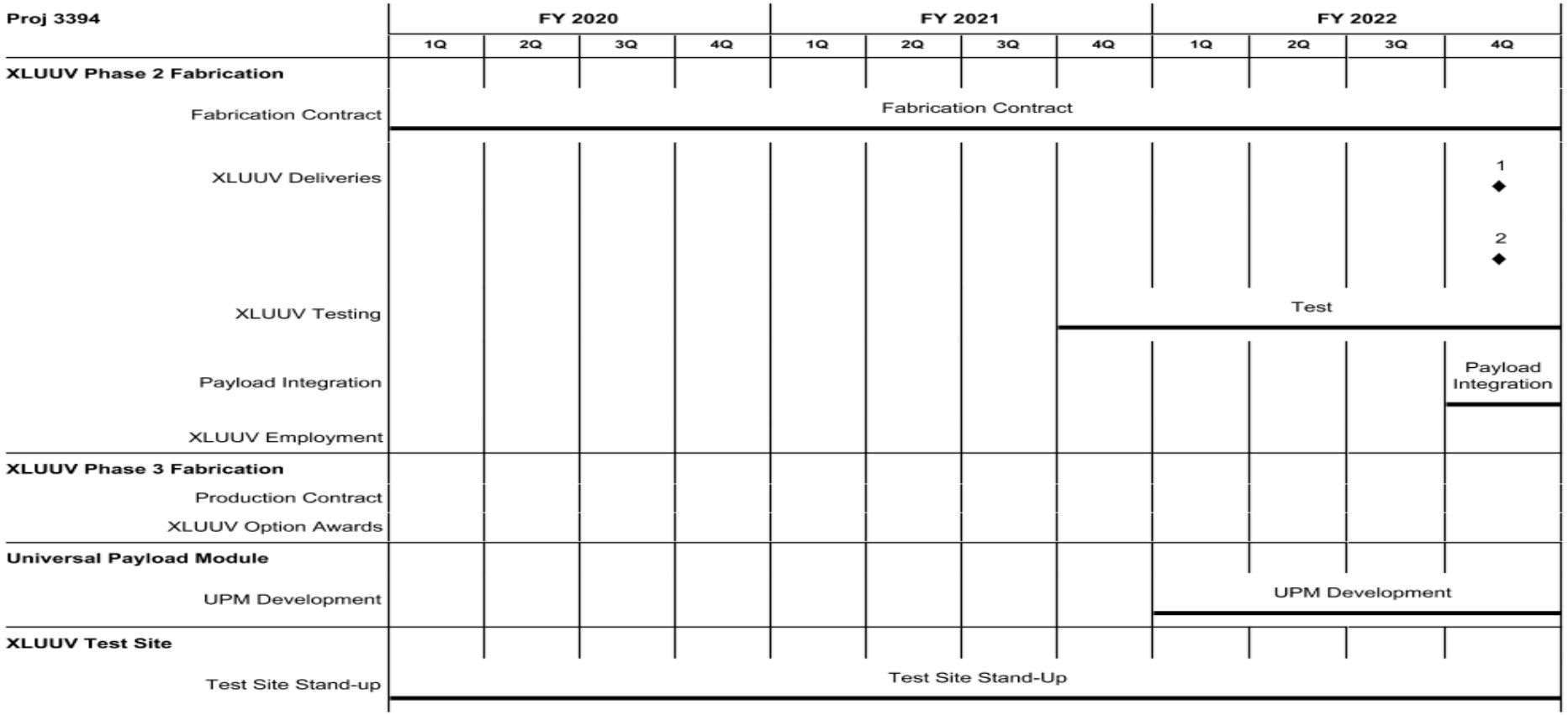

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604536N / *Advanced Undersea Prototyping*	**Project (Number/Name)** 3394 / *Adv Undersea Prototyping-Vehicles, Propulsion & Navigation*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3394				
XLUUV Phase 2 Fabrication: Fabrication Contract: Fabrication Contract	1	2020	4	2022
XLUUV Phase 2 Fabrication: XLUUV Deliveries: Delivery System 1	4	2022	4	2022
XLUUV Phase 2 Fabrication: XLUUV Deliveries: Delivery System 2	4	2022	4	2022
XLUUV Phase 2 Fabrication: XLUUV Testing: Test	4	2021	4	2022
XLUUV Phase 2 Fabrication: Payload Integration: Integration	4	2022	4	2022
Universal Payload Module: UPM Development: UPM Development	1	2022	4	2022
XLUUV Test Site: Test Site Stand-up: XLUUV Test Site:	1	2020	4	2022

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604536N / *Advanced Undersea Prototyping*	Project (Number/Name) 9999 / *Congressional Adds*	

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
9999: *Congressional Adds*	24.119	14.471	0.000	0.000	-	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Orca Extra Large Unmanned Undersea Vehicle (XLUUV) is the Navy's Extra Large UUV effort as part of the Family of UUVs. The Orca XLUUV effort has been established to address a Joint Emergent Operational Need (JEON). Orca XLUUV will have a modular payload bay, with defined interfaces that current and future payloads must adhere to for employment from the vehicle. The Orca XLUUV effort will integrate the currently required payload, and additional potential future payloads will be developed, evaluated, and preliminarily integrated under the Core Technologies Program Element 0604029N.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021
Congressional Add: XLUUV competitive risk reduction	14.471	0.000
FY 2020 Accomplishments: N/A		
FY 2021 Plans: N/A		
Congressional Adds Subtotals	14.471	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Orca XLUUV is a multi-phased accelerated acquisition effort to rapidly deliver capability to the Fleet. Phase 1 was a competitively sourced design effort. Two design contracts were awarded to Industry in FY 2017. Phase 2 commenced with a down select in FY 2019 to one of the Phase 1 vendors for fabrication and testing of the vehicle and support elements. Up to five (5) Orca XLUUV systems (vehicles, mobile C2 equipment, and support equipment) are to be fabricated for demonstration and use by the Fleet.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604536N / *Advanced Undersea Prototyping*	**Project (Number/Name)** 9999 / *Congressional Adds*

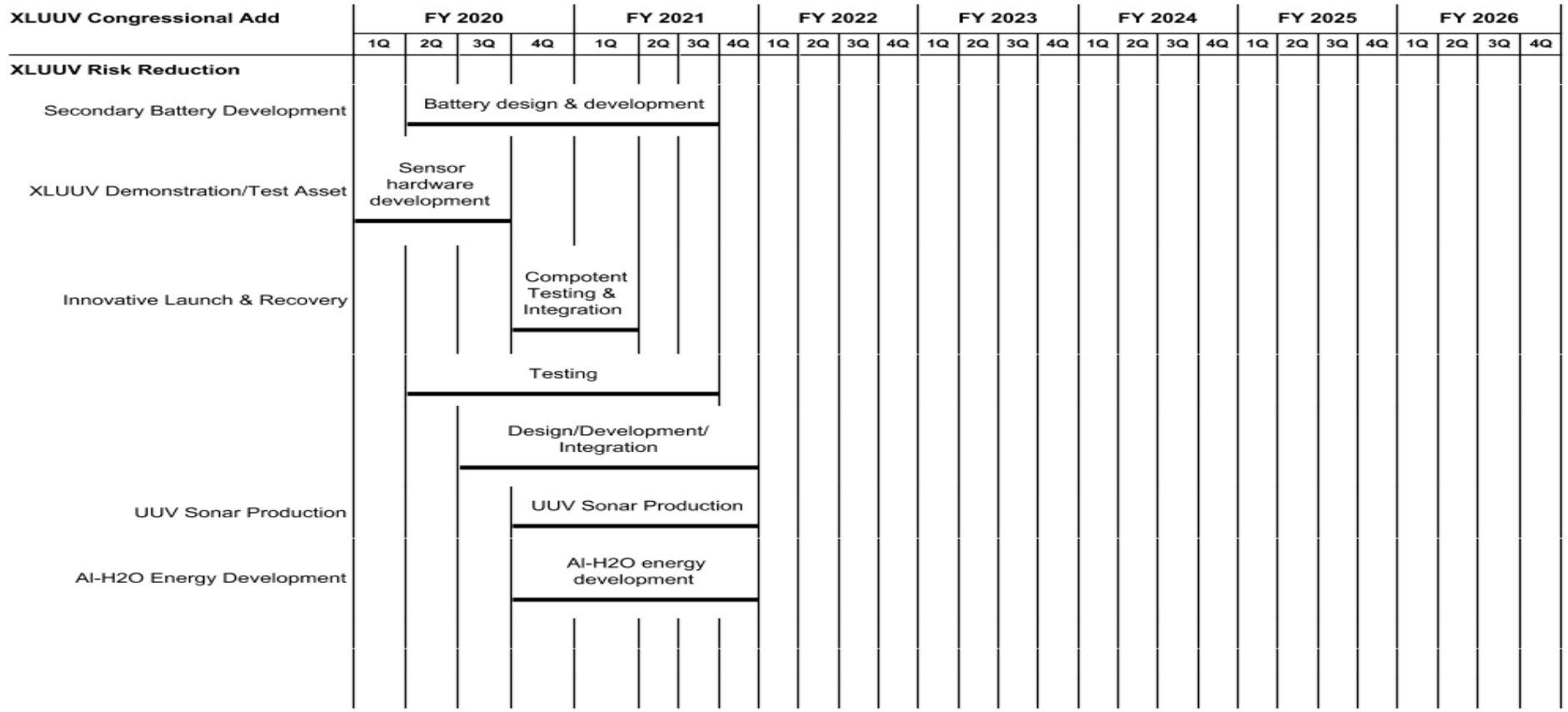
Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Fabrication Contract	C/FPIF	Boeing : Huntington Beach, CA	24.119	0.000		0.000		0.000		-		0.000	-	-	-
Secondary Battery development	Various	Various : Various	0.000	5.891	Jan 2020	0.000		0.000		-		0.000	-	-	-
XLUUV demonstration/test asset	C/CPFF	Lockheed Martin : West Palm Beach, FL	0.000	3.418	Feb 2020	0.000		0.000		-		0.000	-	-	-
Innovative L&R efforts	Various	Various : Various	0.000	2.951	Apr 2020	0.000		0.000		-		0.000	-	-	-
UUV Sonar production	Various	Various : Various	0.000	1.400	Jun 2020	0.000		0.000		-		0.000	-	-	-
Al-H2O power and energy development	C/CPIF	L3 Harris : Summerville, SC	0.000	0.811	Jun 2020	0.000		0.000		-		0.000	-	-	-
		Subtotal	24.119	14.471		0.000		0.000		-		0.000	-	-	N/A

	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	24.119	14.471		0.000		0.000		-		0.000	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604536N / *Advanced Undersea Prototyping*	**Project (Number/Name)** 9999 / *Congressional Adds*



2022PB - 0604536N - 9999

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604536N / *Advanced Undersea Prototyping*	**Project (Number/Name)** 9999 / *Congressional Adds*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
XLUUV Congressional Add				
XLUUV Risk Reduction: Secondary Battery Development:	2	2020	3	2021
XLUUV Risk Reduction: XLUUV Demonstration/Test Asset:	1	2020	3	2020
XLUUV Risk Reduction: Innovative Launch & Recovery: Component Testing	4	2020	1	2021
XLUUV Risk Reduction: Innovative Launch & Recovery: Testing	2	2020	3	2021
XLUUV Risk Reduction: Innovative Launch & Recovery: Integration	3	2020	4	2021
XLUUV Risk Reduction: UUV Sonar Production:	4	2020	4	2021
XLUUV Risk Reduction: Al-H2O Energy Development:	4	2020	4	2021