



# SPACE LAUNCH DELTA 45



## SPACEPORTS OF THE FUTURE INFRASTRUCTURE

*Lynn Zuch, KZF Design*

*Project Manager for Spaceport of the Future Plan and  
Infrastructure Roadmap and Planner on SPotFi PIO*

*On behalf of Andy Duce, SLD 45  
Program Manager  
Spaceport Development*

**SET THE PACE FOR SPACE**



# SPACE LAUNCH DELTA 45



# Program Scope & Deliverables

- The U.S. Space Force's Range of the Future 2028 Strategic Intent identified the requirement to increase launch posture over the next 10 years. Infrastructure must be improved to meet this new requirement.
- **Primary Goals:**
  - Range must be able to support launching **EVERY** day.
  - Range must be able to support multiple launches per day.
  - Range must eliminate all critical day restrictions.
  - Establish infrastructure redundancy and resiliency.
  - Reduce personnel impacts associated with launch and landing activities.
  - Quick execution projects by completing environmental planning upfront.
- **Previous Completed for SSpotFi Execution:**
  - District Plans: Cape Canaveral Space Force Station & Patrick Space Force Base
  - Infrastructure Roadmap (IR)
  - Environmental Assessments (EA): Cape Canaveral Space Force Station & Patrick Space Force Base

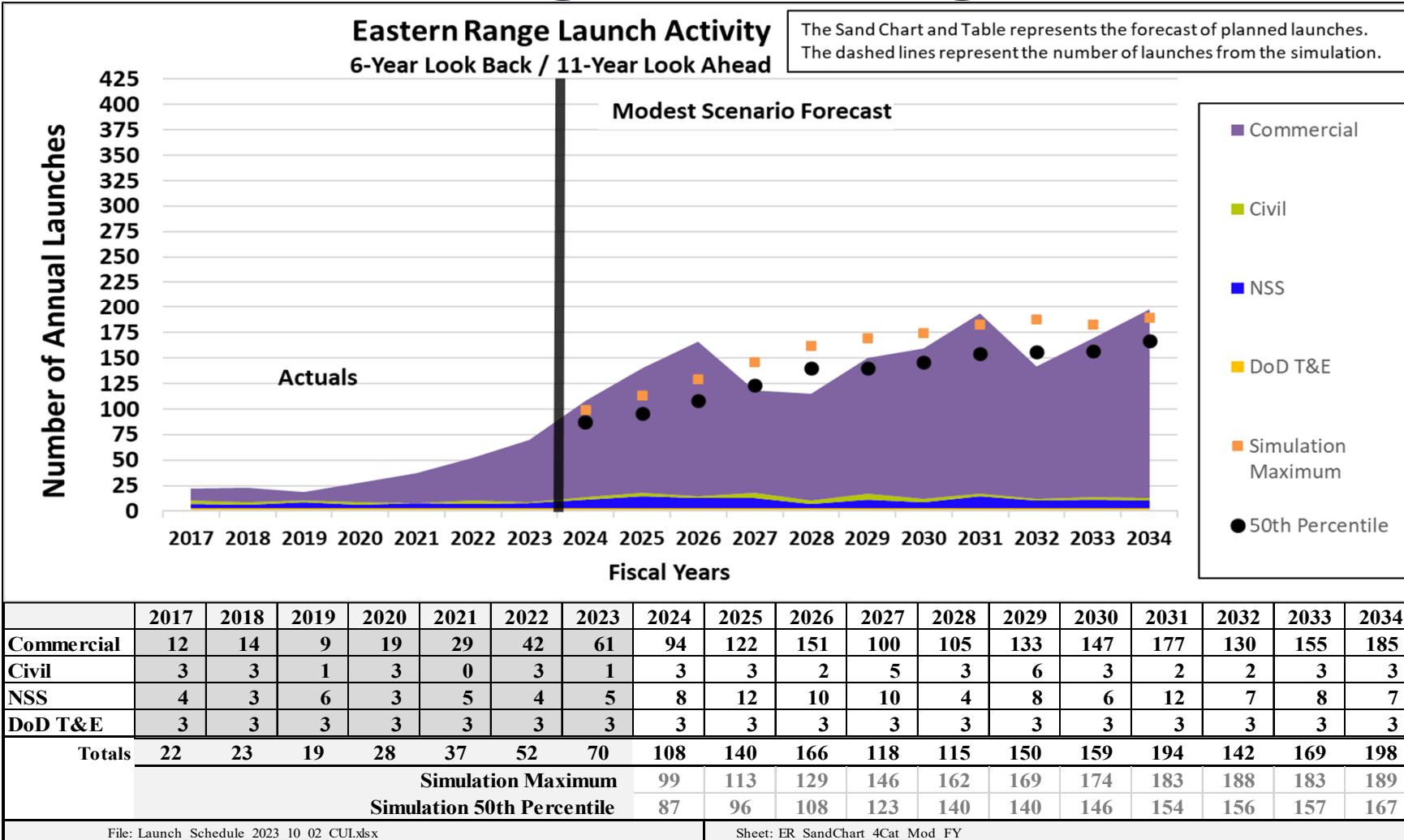
SET THE PACE FOR SPACE



SPACE  
LAUNCH  
DELTA 45



# What's Driving this Program Need



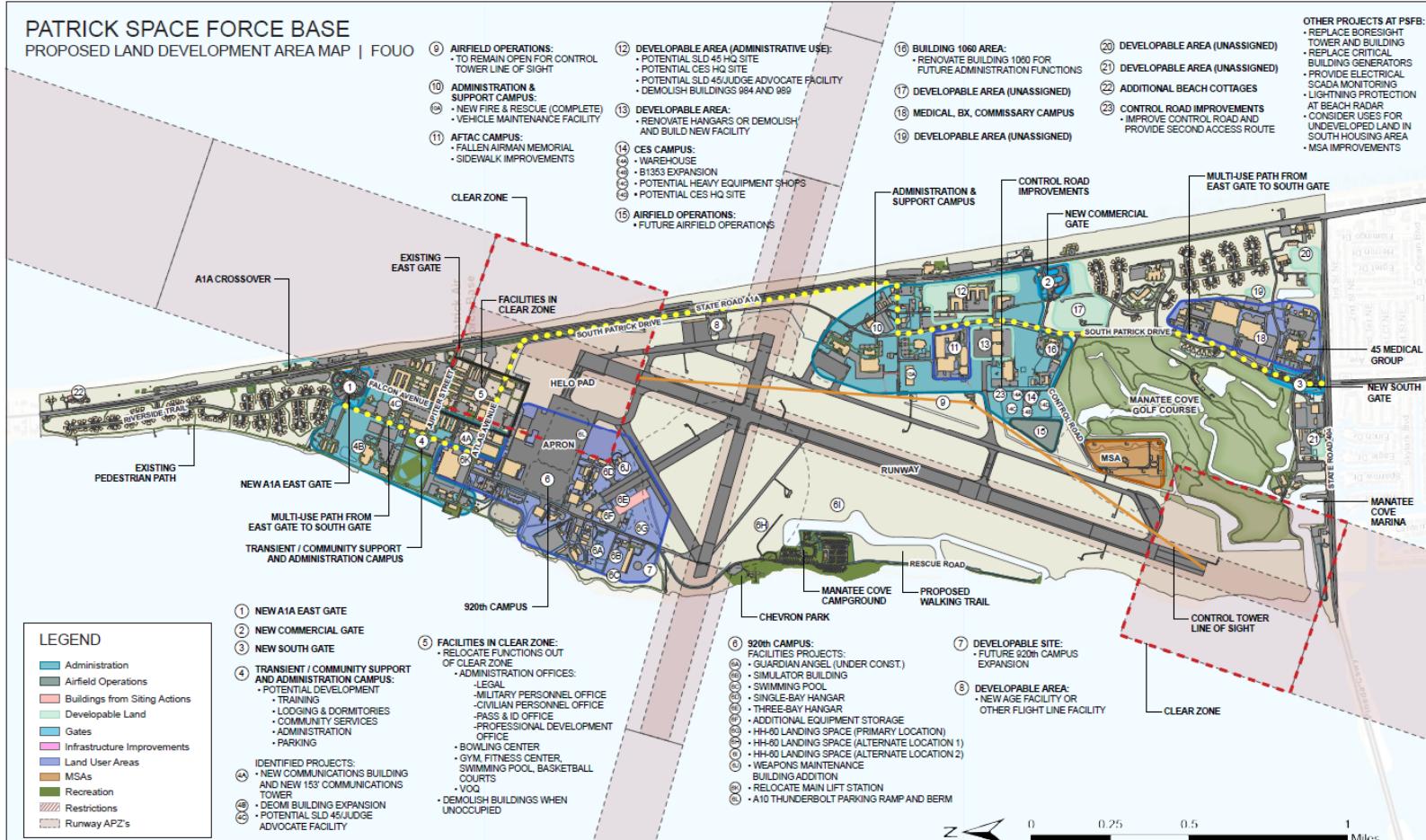
SET THE PACE FOR SPACE



SPACE  
LAUNCH  
DELTA 45



# PSFB District Plan

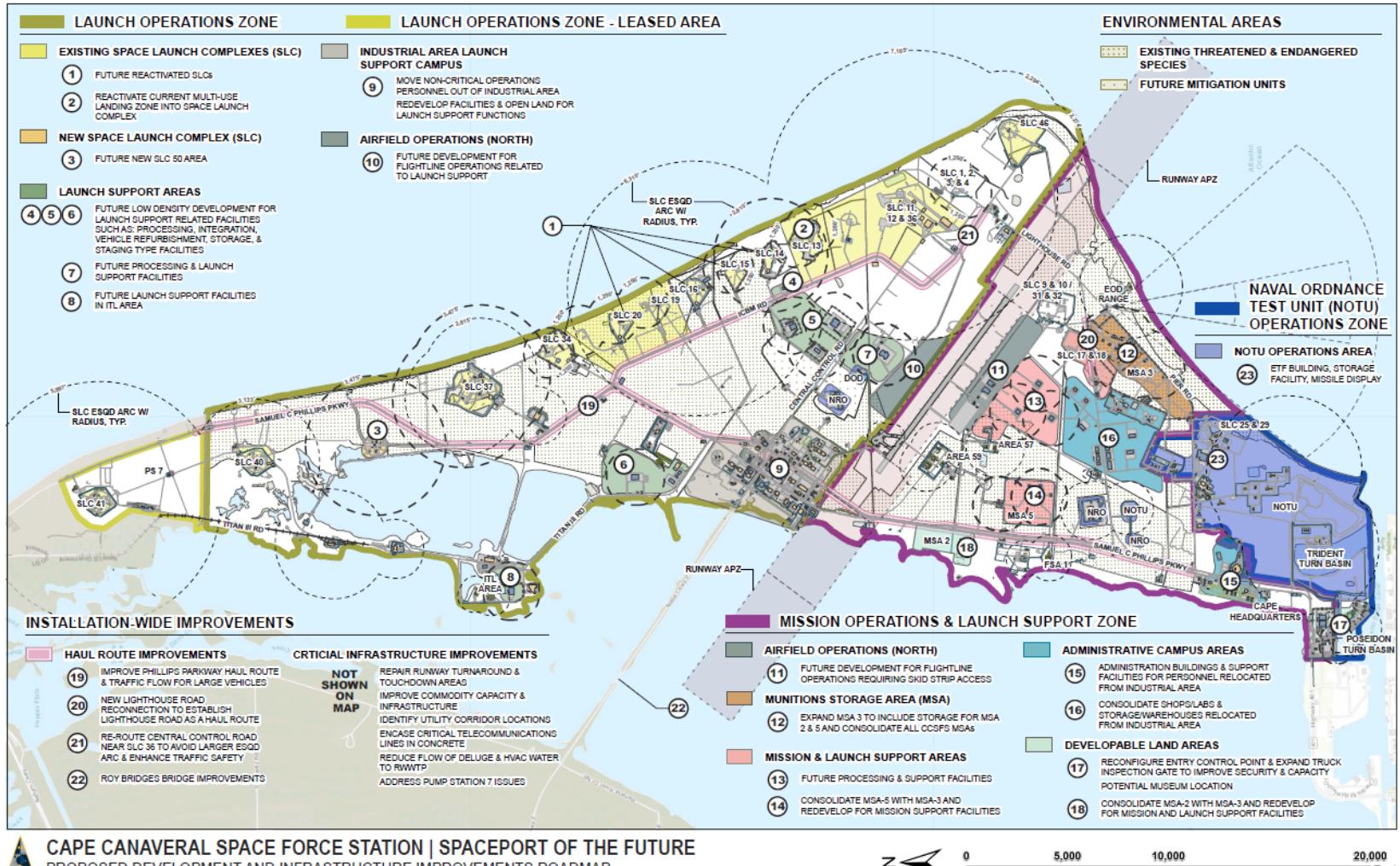




# SPACE LAUNCH DELTA 45



# CCSFS District Plan



SET THE PACE FOR SPACE



SPACE  
LAUNCH  
DELTA 45



# New Biological Restrictions

## Tricolored Bat:

- Avoid tree trimming/clearing 1 May – 15 July to minimize impact during bat maternity season
- Avoid tree trimming/clearing when ambient day time temperatures are 45 degrees Fahrenheit or below

## Prescribed Burning:

- Implement a minimum of 450-acre average (up from 300) of prescribed fire within occupiable Florida scrub-jay habitat over a six-year rolling period (down from 10-year) to maintain current habitat conditions.

## Southeastern Beach Mouse:

- Implement 135.9 acres of beach mouse habitat mitigation at a 1:1 ratio
- If existing mitigation areas are impacted, the ratio will double to 2:1. If these areas are impacted in the future, the mitigation ratio will double again.

## Florida Scrub-Jay:

- Avoid construction during Florida scrub-jay nesting season from 1 March – 30 June to the maximum extent practicable in areas known to be occupied by scrub-jays.
- The total acreage of restoration shall be a minimum of 118 acres and should be within a contiguous area to the greatest extent practicable. This is based on a 2:1 ratio. If existing mitigation areas are impacted the ratio will double to 4:1 and if these areas are impacted it will keep doubling if impacted again.



# SPACE LAUNCH DELTA 45



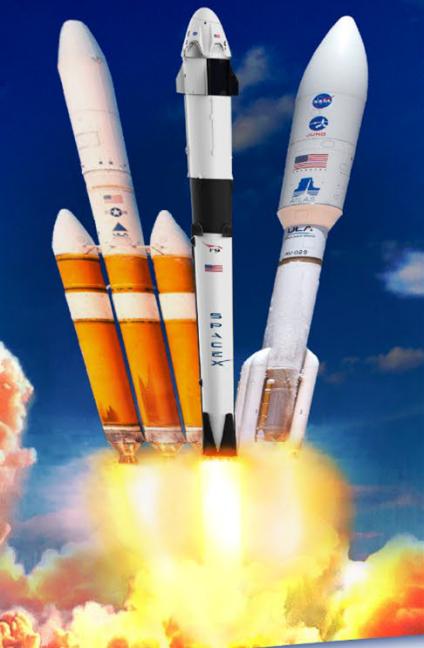
## *Execution of SLD 45 SPotFi*

- OMB identified funding for program during FY24-28 Presidential Budget.
- ~\$1.3B for ER and WR infrastructure roadmaps.
- Program Codified under NDAA signed in Dec 2023 and funding began spring of 2024.
- To execute the SLD 45 portion of the program, execution will be broken down by:
  - Program Oversight – PMO under AFIMSC/Det 1
  - Design and Execution of MILCON (Year 2+) – AFCEC, AFIMSC Det-1 via USACE
  - Design and Execution of FSRM
    - Project specific method of execution determined FY-1
      - 45 CONS, with 45 CES as PM
      - PIO contracted services, who will also provide PM responsibility
    - General Base Support (Base Operations, Cnst Insp, A-E Services) – 45 CES supported by PIO
- PIO Contracted Services awarded 29 September 2023 (THANOS)
  - 16 personnel on site and remote providing various types of program support.
    - Project Programming, Planning, Real Property
    - Financial Oversight
    - Environmental Support
    - Project Management
    - Contracting Support

SET THE PACE FOR SPACE



SPACE  
LAUNCH  
DELTA 45



# IR - Completed Projects

Project #	% Complete	Project Name	Amount
DBEH 12-1765	100%	Upgrade SCADA Controls at RWWTP	\$450,000
DBEH 20-1563	100%	Repair Lift Stations, Various	\$1,297,387
KSCC 18-1543	100%	Repair Weather Towers, Multi	\$474,515

**Total: \$2,221,902**

SET THE PACE FOR SPACE



SPACE  
LAUNCH  
DELTA 45



# IR - FSRM Design & Construction

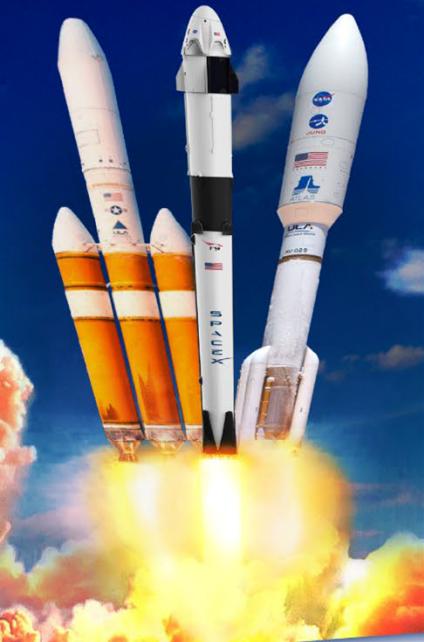
Project #	% Complete	Project Name	Amount
DBEH 22-7768	10%	Charrette - Construct Philips Parkway Haul Route	\$16,564,000
DBEH 19-1508	75%	Design – Relocate Weather Station to SLC - 17	\$350,000
DBEH 22-7740	45%	Design - Install Water Main, ICBM Rd	\$10,219,000
DBEH 22-7743	45%	Design - Install Wastewater Main, ICBM Rd	\$10,099,000
DBEH 22-7760	50%	Design - Install Redundant Power Distro, CCSFS (USACE)	\$4,778,000
DBEH 22-7763	50%	Design - Install Emergency Generator at MOC (USACE)	\$4,778,000
SXHT 21-1011	1%	Repair Lightning Protection, B969	\$332,323
DBEH 17-1568	2%	Rpr CCSFS Runway, B50305	\$49,571,480
KSCC 19-1511	6%	Modify Deluge Pump Suction and Discharge, Pump Station 7	\$509,100
SXHT 22-1015	10%	Repair Generator, B962	\$367,620
JJAE 18-1504	5%	Repair Missile Guidance Station, B28001	\$4,116,295
KSCC 19-1534	70%	Construct Final Denial Barrier, North Gate	\$612,680
SXHT 14-1045	1%	Repair Generator, B1497	\$358,000
SXHT 16-1104	1%	Repair Generator, B423	\$285,000
SXHT 16-1115	95%	Construct Boresight Tower & Equipment Building, B1653	\$1,182,665
DBEH 02-1675	15%	Repair 'B-Line' Supporting Launch Complexes	\$4,232,456
DBEH 19-1517	85%	Repair Cable & Splices in Feeder from North Substation	\$1,456,414

Total: \$109,812,033

SET THE PACE FOR SPACE



SPACE  
LAUNCH  
DELTA 45



# IR - FSRM In Solicitation

Project #	Est. Award Date	Project Name	Program Estimate
DBEH 22-7759	1 July 2024	CTO - (Design) CCSFS Comm Duct Bank Survey and Design	
DBEH 22-7767	1 July 2024	CTO - (Charrette) Repair Phillips Pkwy, B20201	
KSCC 15-1587	12 July 2024	Repair & Certify Weather Tower Fall Protection	
SXHT 08-1127	12 July 2024	Repair Lift Station 650 Holding Tank	
SXHT 14-1044	12 July 2024	(Design/Build) Repair Generator, B650	
DBEH 12-1690	12 July 2024	Replace Lift Stations, Multiple Across CCSFS	
SXHT 18-1000	2 Aug 2024	(Design) Repair Water Distribution System	
SXHT 00-1028	2 Aug 2024	(Design) Convert Space for Airfield Lighting Vault, B802	
DBEH 10-1565	2 Aug 2024	(Design) Repair Optics Maintenance / Storage, B01606 (Hangar G)	
DBEH 15-1539	16 Aug 2024	CTO - Repair Water Lines, MACA Area	
SXHT 14-1029	30 Aug 2024	(Design/Build) Install Wastewater SCADA, Multiple Facilities	
DBEH 17-1710	30 Aug 2024	(Design/Build) Repair Roads and Parking	
DBEH 15-1579	30 Aug 2024	CTO - (Design) Repair Fire Detection System, B54800	
DBEH 19-1508	30 Aug 2024	CTO - (Design/Build) Relocate Weather Operations, B36001 & B36009	

Total: \$30,000,000

AFCEC CTO: \$13,000,000  
dFSRM: \$17,000,000

SET THE PACE FOR SPACE



SPACE  
LAUNCH  
DELTA 45



# IR - ERCIP, MILCON & UMMC (FY23-27)



Project #	Construction FY	Project Name	CWE	Status
SXHT 02-3004	2023	Consolidated Communication Center, Patrick SFB	\$ 98.0M	Construction Award – 15 Sep 24 (est)
DBEH 07-1588	2023	Repair Electrical Z Line, OH to UG	\$ 8.7M	Construction Advertise – 8 Apr 24
DBEH 16-1571	2023	Construct Water Main to ITL Area	\$ 8.2M	Construction Award – 15 July 24 (est)
DBEH 22-7740	2025	(Design) Install Water Main, ICBM Rd	\$ 10.1M	65% Design Submittal – 10 Jul 24
DBEH 22-7743	2025	(Design) Install Wastewater Force Main, ICBM Rd	\$ 10.0M	65% Design Submittal – 10 Jul 24
DBEH 22-7760	2025	(Design) Install Redundant Power Distro at CCSFS	\$ 7.5M	65% Design Submittal – 10 Jun 24
DBEH 22-7763	2025	(Design) Install Emergency Generator at MOC	\$ 4.5M	65% Design Submittal – 8 Jun 24
DBEH 22-7768	2026	(Charrette) Construct Phillips Prkwy (South) Haul Route	\$ 17.1M	35% Design Submittal - Sept 24
DBEH 03-3000	2027	Construct Consolidated Launch Support Facility, Phase I	\$ 31.7M	Charrette – 4-6 June 24
DBEH 03-3001	2027	Construct Consolidated Launch Support Facility, Phase II	\$ 31.7M	Charrette – 4-6 June 24
DBEH 22-7755	2027	Construct Consolidated Shop/Laboratory, PH1	\$ 10.3M	Charrette – 14-16 June 24
DBEH 22-7784	2027	Construct Consolidated Shop/Laboratory, PH2	\$ 19.6M	Charrette – 14-16 June 24
DBEH 22-7756	2027	Construct Consolidated Storage/Warehouse Facility, PH1	\$ 40.4M	Charrette – 28-30 June 24
DBEH 22-7786	2027	Construct Consolidated Storage/Warehouse Facility, PH2	\$ 30.7M	Charrette – 28-30 June 24

Total: \$328,500,000

SET THE PACE FOR SPACE



SPACE  
LAUNCH  
DELTA 45



# ERCIP, MILCON and UMMC (FY26+)

Project #	Construction FY	Project Name	CWE
DBEH 22-7769	2026	Expand Truck Inspection Area (UMMC)	\$4.8M
DBEH 22-7787	2027	Construct Consolidated Storage/Warehouse Facility, PH3	\$25.8M
DBEH 22-7750	2027	Install Redundant Power Distro, Trident Wharf (ERCIP)	\$0.5M
DBEH 22-7761	2028	Install Redundant Power Distro, ICBM Rd (ERCIP) – <b>Planning Instruction Issued</b>	\$11.4M
DBEH 22-7786	2028	Consolidate Munitions Storage – <b>Planning Instruction Issued</b>	\$126.6M
DBEH 22-7780	2028	Construct Water Storage Tanks	\$7.9M
DBEH 22-7773	2028	Construct Consolidated Base Support Complex	\$26.3M
SXHT 22-1103	2028	Relocate Lift Station, B650	\$6.2M
DBEH 22-7788	2028	Construct Consolidated Storage/Warehouse Facility, PH4	\$18.8M
DBEH 17-1619	2028	Covert Power Distribution Line R-Line, OH to UG (ERCIP)	\$7.3M
DBEH 22-7764	2028	Widen ICBM Rd	\$10.2M
DBEH 22-7785	2029	Construct Consolidated Shop/Laboratory, PH3	\$15.3M
DBEH 03-3002	2029	Construct Consolidated Launch Support Facility, Phase III	\$38.6M
DBEH 03-3003	2029	Construct Consolidated Launch Support Facility, Phase IV	\$55.9M
DBEH 22-7749	2030	Construct Wastewater Treatment Facility	\$10.7M
DBEH 22-7777	2029	Construct Redundant Operations Center	\$207.8M
SXHT 22-1105	2029	Consolidated HQ Facility	\$216.0M

Total: \$626,130,000

SET THE PACE FOR SPACE



# SPACEPORTS OF THE FUTURE INFRASTRUCTURE