

# MOJAVE AIR AND SPACE PORT AT RUTAN FIELD

## NOTICE OF A REGULAR MEETING OF THE BOARD OF DIRECTORS

**Date: March 7, 2023**

**Location: Board Room**

**1434 Flightline, Mojave, California**

**Time: 2:00 p.m.**

**Zoom Video Conference**

<https://us02web.zoom.us/j/88979840593?pwd=UWxUcHRVkm1aDdnUHA1cWR0VFFMUT09>

Phone: 669 900 9128

Meeting ID: 889 7984 0593

Passcode: 277366

## AGENDA

### 1. Call to Order

- A. Pledge of Allegiance
- B. Roll Call
- C. Approval of Agenda

### 2. Community Announcements and Public Comments on Items not on the Agenda

### 3. Consent Agenda (*Staff recommends approval of consent items by one motion.*)

- A. Minutes of the Regular Board Meeting of February 21, 2023.
- B. Check Registers dated March 1, 2023; \$269,835.78.

### 4. Action Items

- A. Astrobotic Technology Test Site 5 Land Lease (CEO)
- B. Voyager Aircraft, LLC Ground Lease 969 Assignment of Lease (Counsel)

### 5. Reports

- A. Director of Administration
- B. Chief Executive Officer
- C. Runway 12/30 Update (CEO)
- D. Inland Port Update (CEO)
- E. Director of Operations Hiring Update (CEO)
- F. Water System Update (CEO)
- G. Hangar Development Update (CEO)
- H. Hypersonic Corridor Update (CEO)
- I. Board Committees

### 6. Director Comments on Items Not on the Agenda

## **7. Closed Session**

- A. Existing Litigation (Govt Code 54956.9): Masten Space Systems Bankruptcy
- B. Existing Litigation (Govt Code 54956.9): Welton v. MASP

## **8. Closed Session Report**

### **Adjournment**

This Agenda was posted on, March 3, 2023, by Jason Buck.

This meeting will be conducted in person and via zoom video conference. If you participate via zoom, please:

- **KEEP YOUR MIC MUTED** at all times that you are not making a comment in order to minimize noise during the meeting. Unmute only to make a comment on an agenda item.
- The general rules regarding public comment apply to those using zoom.
- Comments may also be made in the zoom chat function or via email to the Board Clerk at [Lynn@mojaveairport.com](mailto:Lynn@mojaveairport.com) prior to the start of the meeting.

ADA Notice: Persons desiring disability-related accommodations should contact the District no later than forty-eight hours prior to the meeting. Persons needing an alternative format of the agenda because of a disability should notify the District no later than seventy-two hours prior to the meeting. All inquiries/requests can be made by phone at (661) 824-2433, in person at 1434 Flightline, Mojave, CA, or via email to [Lynn@mojaveairport.com](mailto:Lynn@mojaveairport.com)

Copy of Records: Copies of public records related to open session items are available at the administrative office of the District at 1434 Flightline, Mojave, CA.

Public Comments: Members of the public may comment on items on the agenda before the Board takes action on that item, or for closed session items, before the Board goes into closed session. Comments on items not on the agenda, and over which the Board has jurisdiction, may be made under “Public Comments on Items not on the Agenda,” but the Board may not take action on any issues raised during this time. All comments by members of the public are limited to three minutes.

### **MISSION STATEMENT**

**FOSTER AND MAINTAIN OUR RECOGNIZED AEROSPACE PRESENCE WITH A PRINCIPLE FOCUS AS THE WORLD’S PREMIER CIVILIAN AEROSPACE TEST CENTER WHILE SEEKING COMPATIBLY DIVERSE BUSINESS AND INDUSTRY**

## **BOARD OF DIRECTORS**

### **MINUTES OF THE REGULAR MEETING ON FEBRUARY 21, 2023.**

#### **1. CALL TO ORDER**

The meeting was called to order on Tuesday February 21, 2023, at 2:03 p.m. by Director Barney.

**A. Pledge of Allegiance:** DOF VanWey led those assembled in the Pledge of Allegiance.

**B. Roll Call:**

**Directors present:** Allred, Balentine, Barney, Coleman

**Directors absent:** Morgan

**Staff:** DOA Rawlings, DO Fuels Smith, DOT Buck, Contracts Manager Johansen, DOF VanWey.

**Others present via Zoom:** Counsel Navé, CEO Reid, Nicole Altman, Bre Hansford, DPSS Spandorf, Kevin Miller, Patti Orr, A. Gatlin, Joyce Media, and one other unidentified participant.

**C. Approval of Agenda:** Upon motion by Director Balentine, seconded by Director Allred, the Board unanimously approved the agenda.

#### **2. Community Announcements/ Public Comments not on the Agenda**

- A. Contracts Manager Johansen and DOA Rawlings commented on the Career Expo and informed the board that its open to Middle and High School Students.
- B. Director Barney commented on Plane Crazy and commended staff on their efforts for a smooth event.
- C. Patti Orr with the Mojave Desert News commented on Plane Crazy and stated that she had a great time and gave complements to Cathy Hansen, Co-Founder of the Mojave Transportation Museum, Staff and Board of Directors.

#### **3. Consent Agenda**

Upon Motion by Director Balentine, seconded by Director Allred, the Board unanimously approved the Consent Agenda.

- A. Minutes of the Regular Board Meeting of January 17, 2023
- B. Check Register Dated February 15, 2023; \$14,162.99.

#### **4. Action Items**

- A. Stinemetze- Hangar 968 Sublet Agreement  
Counsel informed the Board on the sublet agreement for Stinemetze- Hangar 968 to Mr. Henny. Upon Motion by Director Balentine, seconded by Director Coleman the Board unanimously approved the sublet agreement.
- B. Impulse Space, Inc. Land Lease for Test Site 1  
CEO Reid informed the Board of Impulse Space, Inc. current test area and their need for expansion. After some discussion upon motion by Director Balentine, seconded by Director Coleman the Board unanimously approved the Land Lease for Test Site 1.
- C. Edison Easement for Test Sites

DOF VanWey informed the Board of the existing easement and the extension of the easement for approval. Upon motion by Director Balentine, seconded by Director Coleman the Board unanimously approved the CEO to finalize the easement with Southern California Edison.

- D. Resolution Approving an Amended Budget for the Fiscal Year Commencing July 1, 2022  
DOA Rawlings informed the Board of changes to the budget. Upon Motion by Director Balentine, seconded by Director Allred the board unanimously approved the Resolution to approve the Amended Budget for the Fiscal Year Commencing July 1, 2022. RES # 23-02-850.
- E. Taxiway A Lighting Rehabilitation Project  
CEO Reid informed the board of the Taxiway A Lighting Rehab Project and asked the Board for approval to Award the design engineering contract to Mead & Hunt. Upon motion by Director Balentine, seconded by Director Allred the Board unanimously approved to Award the engineering contract to Mead & Hunt.

## **5. Reports**

- A. Director of Administration  
DOA Rawlings presented her report to the Board.
- B. Director of Facilities  
DOF VanWey presented his report to the Board.
- C. Chief Executive Officer  
CEO Reid presented his report to the Board of Directors.
- D. Runway 12/30 Update (CEO)  
CEO Reid updated the Board on the 12/30 Rehabilitation.
- E. Inland Port Update (CEO)  
CEO Reid updated the Board on the Inland Port
- F. Director of Operations Hiring Update (CEO)  
CEO Reid updated the Board on the hiring of a Director of Operations.
- G. Water System Update (CEO)  
CEO Reid updated the board on the Water System project.
- H. Hangar Development Update (CEO)  
CEO Reid updated the board on the Hangar Development.
- I. Hypersonic Corridor Update (CEO)  
CEO Reid updated and provided information the Board on Hypersonic Corridor.
- J. Board Committees  
No Board Committees

## **6. Director Comments on Items not on the Agenda**

Director Coleman commented on the Airport Rent Study and the cost versus the necessity for the Airport. Discussions ensued; CEO Reid stated he would pass on Director Colemans concerns to the rent study team.

**7. Closed Session**

- A. Existing Litigation (Govt Code 54956.9): Masten Space Systems Bankruptcy
- B. Existing Litigation (Govt Code 54956.9): Welton vs. MASP

**8. Closed Session Report**

In closed session, Counsel and the Board discussed the existing litigation with the Masten Bankruptcy, and Welton vs. MASP. No action was taken, and no other items were discussed.

**ADJOURNMENT**

There being no further business to come before the Board, the chair adjourned the meeting at 3:19 p.m.

\_\_\_\_\_  
Diane Barney, President

ATTEST

\_\_\_\_\_  
Jimmy R. Balentine, Secretary

Date: Wednesday, March 1, 2023  
 Time: 02:29PM  
 User: CPANKO

**Mojave Air & Space Port**  
**Check Register - Standard**  
 Period: 09-23 As of: 3/1/2023

Page: 1 of 1  
 Report: 03630.rpt  
 Company: MASP

Check Nbr	Check Type	Check Date	Vendor ID Vendor Name	Period To Post Closed	Ref Nbr	Doc Type	Invoice Number	Invoice Date	Discount Taken	Amount Paid
<b>Company: MASP</b>										
Acct / Sub:	101000		1200							
063341	CK	3/7/2023	1031 Jake's Roofing and Coatings	09-23	052941	VO	1516	2/20/2023	0.00	15,750.00
063342	CK	3/7/2023	1031 Jake's Roofing and Coatings	09-23	052942	VO	1517	2/20/2023	0.00	14,250.00
063343	CK	3/7/2023	1031 Jake's Roofing and Coatings	09-23	052943	VO	1518	2/20/2023	0.00	14,250.00
063344	CK	3/7/2023	1031 Jake's Roofing and Coatings	09-23	052944	VO	1515	2/20/2023	0.00	15,750.00
063345	CK	3/7/2023	1314 Mead & Hunt	09-23	052904	VO	344625/ENG	2/20/2023	0.00	10,563.25
063346	CK	3/7/2023	1314 Mead & Hunt	09-23	052905	VO	344553	2/20/2023	0.00	2,743.64
063347	CK	3/7/2023	1314 Mead & Hunt	09-23	052906	VO	344550	2/20/2023	0.00	4,402.84
063348	CK	3/7/2023	1868 Royal Electric Company	09-23	053003	VO	A1349/0223	2/28/2023	0.00	129,826.05

Check Count: 8

**Acct Sub Total: 207,535.78**

Check Type	Count	Amount Paid
Regular	8	207,535.78
Hand	0	0.00
Electronic Payment	0	0.00
Void	0	0.00
Stub	0	0.00
Zero	0	0.00
Mask	0	0.00
<b>Total:</b>	<b>8</b>	<b>207,535.78</b>

Company Disc Total 0.00      Company Total 207,535.78

Date: Wednesday, March 1, 2023  
 Time: 02:29PM  
 User: CPANKO

**Mojave Air & Space Port**  
**Check Register - Standard**  
 Period: 09-23 As of: 3/1/2023

Page: 1 of 1  
 Report: 03630.rpt  
 Company: MASP

Check Nbr	Check Type	Check Date	Vendor ID Vendor Name	Period To Post Closed	Ref Nbr	Doc Type	Invoice Number	Invoice Date	Discount Taken	Amount Paid
<b>Company: MASP</b>										
Acct / Sub:	101000		1200							
063304	CK	3/1/2023	0724 Flir Radars, Inc.	09-23	052973	VO	9001628573	3/01/2023	0.00	62,300.00
			1031							

1

**Acct Sub Total: 62,300.00**

Check Type	Count	Amount Paid
Regular	1	62,300.00
Hand	0	0.00
Electronic Payment	0	0.00
Void	0	0.00
Stub	0	0.00
Zero	0	0.00
Mask	0	0.00
<b>Total:</b>	<b>1</b>	<b>62,300.00</b>

<b>Company Disc Total</b>	<b>0.00</b>	<b>Company Total</b>	<b>62,300.00</b>
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## STAFF MEMORANDUM

**TO:** Board of Directors

**FROM:** Tim Reid, CEO

**SUBJECT:** Astrobotic Technology, Inc. – Test Site 5, approximately 6 Acres

**MEETING DATE:** March 7, 2023

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### **Background:**

Astrobotic is the company that bought the Masten lease hold for Test Site 5 during Masten's bankruptcy process in December 2022. Masten executed a month-to-month lease on March 1, 2012, for Test Site 5, approximately 2.35 Acres. Masten did execute a Master Lease on February 17, 2022. Astrobotic is requesting a One (1) year lease with a One (1) year option and increase the Land lease from 2.35 Acres to approximately 6 Acres. A portion of the increased acreage will be used to build the NASA Lunar area.

### **Impacts:**

Fiscal: \$78,408, increase of approximately \$36,662.04 annually  
Environmental: None  
Legal: None

### **Recommended Action:**

Staff recommends approval of the lease and Authorization for CEO to finalize and execute the lease with counsel approval.



## **BASIC LEASE FOR TEST SITE 5**

Mojave Air and Space Port, a California Airport District (“Landlord”), and Astrobotic Technology, a Delaware Corporation (“Tenant”) enter into this Lease Agreement as of March 7, 2023 pursuant to the terms and conditions herein and in the Master Lease Agreement dated, February 17, 2022, and incorporated herein by reference.

**1.1 Premises:** Test Site 5, comprised of approximately 6 Acres (261,360 square feet of Land), as more specifically described on Exhibit A, Site Plan, attached hereto. Tenant acknowledges that, prior to execution of this Basic Lease, Tenant has had the opportunity to inspect the Premises and, by its execution of this Lease, Tenant hereby accepts the Premises in an 'as-is' condition.

**1.2 Rental Commencement Date:** March 7, 2023

**1.3 Lease term:**

**1.3.1 Initial Term:** One (1) year, computed from the Rental Commencement Date.

**1.3.2 [IF APPLICABLE: Renewal Term(s):** Tenant is hereby granted the option to extend the term of this Basic Lease for the [1] Renewal Terms of One (1) year. Such option shall be exercised by giving notice of intent to renew ("Option Notice") to Landlord at least 60 days, but not more than 180 days, before the expiration of the Initial Term, or the then current Renewal Term, as the case may be; provided, however, that if Tenant is in default on the date of giving any such Option Notice or if Tenant has assigned or sublet the Premises, the Option Notice shall be void and totally ineffective; and provided further, that if Tenant is in default on any payments due under the Basic Lease on the day that the Renewal Term would otherwise commence, such Renewal Term, at the election of Landlord, shall not commence and this Lease shall expire at the end of the Initial Term, or at the end of the then current Renewal Term, as the case may be. Tenant shall have no other right to extend the term beyond the specific number of Renewal Terms described in this Section 1.3.2. During the Renewal Term(s), all of the terms and provisions contained herein shall apply.]

**1.4 Rent:**

**1.4.1 Initial Term:** Tenant shall pay to Landlord rent in the amount of Six Thousand Five Hundred Thirty-Four Dollars and 00/100 (\$6,534.00) on or before the first day of each month without notice or demand. Tenant shall pay a charge for security patrol and monitoring in the amount of 5% of the monthly rental payment.

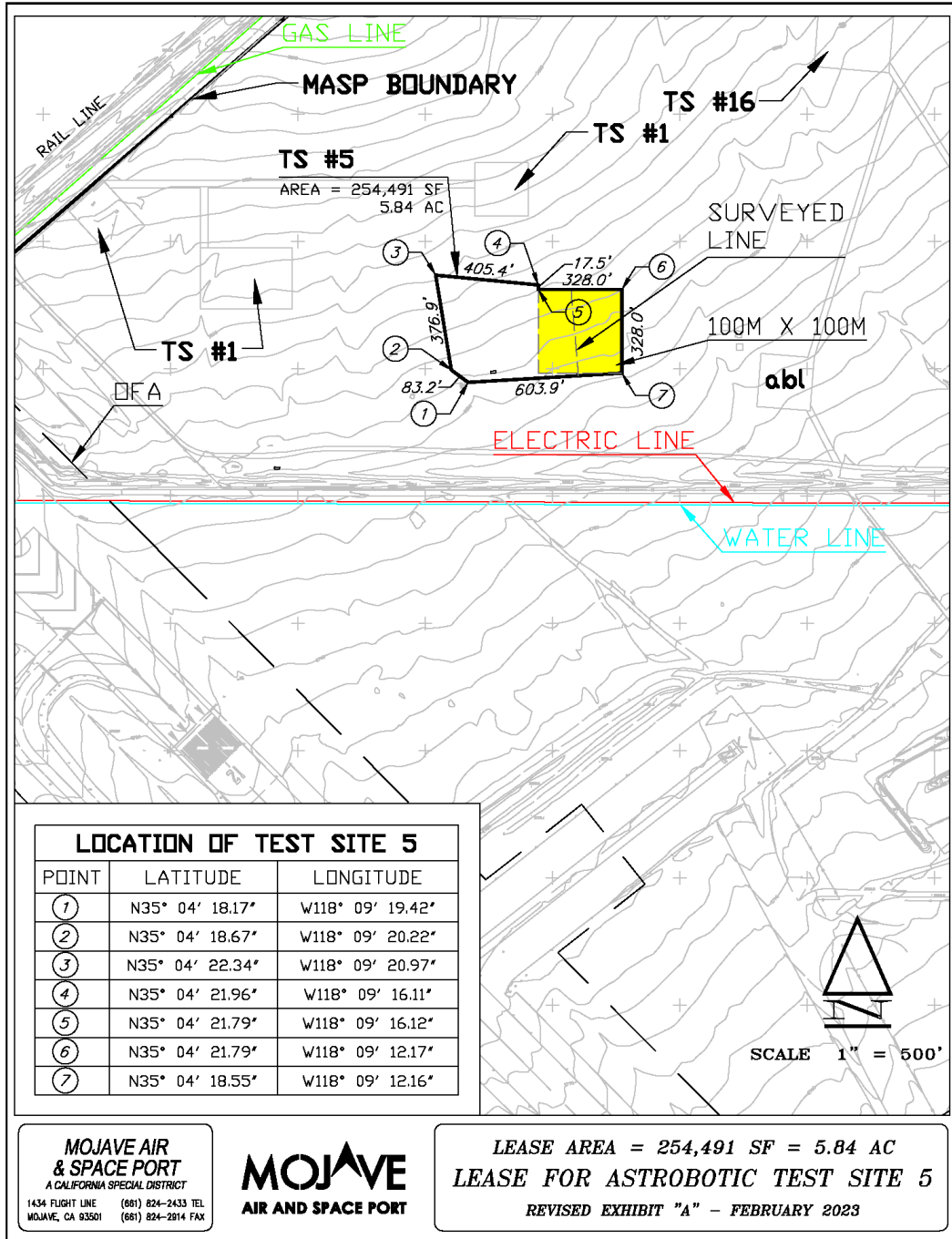
**1.4.2. Rent Adjustment.** During the Initial Term and Renewal Term, if any, Rent shall be adjusted annually in accordance with Section 3.2 of the Master Lease.

**1.5 Use of Premises:** The Premises shall be occupied and used by Tenant for the sole purpose of rocket engine testing, and for no other use or purpose.

**1.6 Tenant’s Work:** Submit Test Site 5 Precise Development Plan (PD Plan) for airport approval prior to any round movement

EXHIBIT A

Site Plan



# MOJAVE

AIR & SPACE PORT  
AT RUTAN FIELD

## STAFF MEMORANDUM

**TO:** Board of Directors

**FROM:** Scott Navé, Counsel

**SUBJECT:** Voyager Aircraft, LLC, Ground Lease 969 Assignment of Lease

**MEETING DATE:** March 7, 2023

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### **Background:**

Voyager Aircraft, LLC, has a thirty (30) year ground lease for Hangar 969 that will expire on January 31, 2045. Voyager is selling Hangar 969 to Charles Coleman, who is an existing tenant in good standing at MASP, and is the current authorized Sub Tenant in Hangar 969. The lease requires that the Board approve an assignment of the lease.

Previously, Director Coleman sought an opinion from the FPPC regarding the legality of subleasing hangar 969 from Voyager since the sublease required Board approval. The FPPC issued an opinion on September 26, 2022, concluding the Board could approve the sublease under Government Code section 1091.5(a)(3) and the rule of necessity exception. We believe the FPPC's analysis and conclusions regarding the sublease equally apply to the lease assignment.

### **Impacts:**

Fiscal: None  
Environmental: None  
Legal: None

### **Recommended Action:**

Counsel recommends approval of the Assignment and Authorization for CEO to execute the agreement with counsel approval.

## Lease Agreement

THIS LEASE ("Lease") is entered into as of February 1, 2015 ("Effective Date") by Mojave Air & Space Port, a California Airport District ("Landlord") and Richard Rutan ("Tenant").

### ARTICLE 1. BASIC LEASE PROVISIONS

**1.1 Landlord:** Mojave Air & Space Port

**1.2 Tenant:** Richard Rutan

**1.3 Rental Commencement Date:** February 1, 2015

**1.4 Premises:** Ground Lease, T-Hangar 969, as more specifically described on Exhibit A attached hereto.

**1.5 Rentable area:** Approximately 2,376 sq. ft. of Acreage.

**1.6 Lease term:**

Basic Term: Fifteen (15) years, computed from the first day of the first calendar month on or after the Rental Commencement Date.

Renewal Term: Three (3) Five (5) year options, exercisable pursuant to Section 22.17.

**1.7 Annual Rental:**

<u>Year(s)</u>	<u>Monthly Rental</u>	<u>Annual Rental</u>
2015	\$118.80	\$1,425.60

On February 1, 2016, and each year thereafter, including during the Renewal Term, if any, Annual Rental shall be adjusted in accordance with Section 4.2.

**1.8 Use of Premises:** The Premises shall be occupied and used Tenant for the sole purpose of aircraft storage and other airport approved activities, and for no other use or purpose.

**1.9 Security Fee:** Tenant shall pay a charge for security patrol and monitoring in the amount of 5% of the amount of such monthly rent payment.

**1.10 Late charge:** If Rent is not paid by the first day of the month, Landlord shall also be paid by Tenant interest at the rate of 1.5% per month on the unpaid balance of such Rent until paid in full.

**1.11 Addresses for notices and rent payment:**

Landlord:  
Mojave Air & Space Port  
Attn: Director of Business Development  
1434 Flightline Mojave, CA 93501  
661.824.2433

Tenant:  
Richard Rutan  
2833 Delmar Avenue  
Mojave, CA 93501  
661-828-7547  
824-4608

## ASSIGNMENT OF LEASE

THIS ASSIGNMENT OF LEASE ("Assignment") is made as of September 1, 2015 between Richard Rutan ("Assignor"), Voyager Aircraft, LLC ("Assignee"), and Mojave Air and Space Port ("Landlord").

### Recitals

A. Mojave Air and Space Port, as landlord, and Assignor, as Tenant, executed a lease dated as February 1, 2015 ("Lease"), a copy of which is attached and incorporated by reference as Exhibit A, pursuant to which Landlord leased to Tenant, and Tenant leased from Landlord, that certain property described in the Lease (the "Premises" Ground Lease, T-Hangar 969).

B. Assignor desires to assign the Lease to Assignee, and Assignee desires to accept the assignment of the Lease from the Assignor, and assume the obligations under the Lease.

NOW THEREFORE, for good and valuable consideration, the receipt and adequacy of which are acknowledged, Assignor and Assignee agree as follows:

### Terms

#### Section 1. Assignment

Assignor assigns and transfers to Assignee all right, title, and interest in the Lease, and Premises, and Assignee accepts from Assignor all right, title, and interest, subject to the terms and conditions set forth in this Assignment.

#### Section 2. Assumption of Lease Obligations

Assignee represents and warrants that:

- (a) It is a duly organized corporation in good standing in the State of its incorporation, is registered with the California Secretary of State, and is authorized do business in the County of Kern and State of California.
- (b) All necessary corporate approvals for the assumption of this Lease have been obtained by Assignee.
- (c) Assignee agrees to perform and fulfill all the terms, covenants, conditions, and obligations required to be performed by Assignor under the Lease, including the making of all payments due or payable to Landlord under the Lease as they become due and payable.

#### Section 3. Assignor's Covenants

(a) Assignor covenants that the copy of the Lease attached as Exhibit A is a true and accurate copy of the Lease as currently in effect, and that there exists no other agreement affecting Assignor's tenancy under the Lease.

(b) Assignor covenants that the Lease is in full effect and no default exists under the Lease, nor any acts or events which, with the passage of time or the giving of notice or both, could become defaults.

**Mojave Air & Space Port  
Treasurer's Report  
For the month ended January 31, 2023**

	<u>General</u>	<u>County Treasury</u>	<u>LAIF</u>	<u>Total</u>
<b>Beginning Balance</b>	<b><u>\$ 3,050,998.58</u></b>	<b><u>\$ 2,252,812.29</u></b>	<b><u>\$ 4,210,358.59</u></b>	<b><u>\$ 9,514,169.46</u></b>
Receipts:				
Operating Revenues	1,167,213.34	-	-	1,167,213.34
Interest Income	132.78	-	21,994.77	22,127.55
Tax Proceeds	-	46,091.12	-	46,091.12
<b>Total Receipts</b>	<b><u>1,167,346.12</u></b>	<b><u>46,091.12</u></b>	<b><u>21,994.77</u></b>	<b><u>1,235,432.01</u></b>
Expenditures:				
Operating Expenses	(930,555.37)	-	-	(930,555.37)
Project Expenses	-	-	-	-
<b>Total Expenditures</b>	<b><u>(930,555.37)</u></b>	<b><u>-</u></b>	<b><u>-</u></b>	<b><u>(930,555.37)</u></b>
Transfers:				
Between General and County Treasury	-	-	-	-
Between General and LAIF	-	-	-	-
<b>Total Transfers</b>	<b><u>-</u></b>	<b><u>-</u></b>	<b><u>-</u></b>	<b><u>-</u></b>
<b>Ending Balance</b>	<b><u>\$ 3,287,789.33</u></b>	<b><u>\$ 2,298,903.41</u></b>	<b><u>\$ 4,232,353.36</u></b>	<b><u>\$ 9,819,046.10</u></b>

The Mojave Air & Space Port unencumbered cash is on deposit bearing interest at various rates, in accordance with the District's Investment Policy.

**MOJAVE AIR & SPACE PORT**  
**Revenue and Expense by Function**  
**For the Seven Months Ending Tuesday, January 31, 2023**

Description	Rents & Leases Aviation	Rents & Leases Non-aviation	Flight Related Activities	Non-flight Related Activities	Total
<b>Operating Revenue</b>					
Fuel Sales & Services	1,579	-	2,413,056	-	2,414,635
Cost of Fuel & Lubricants Sold	-	-	1,874,102	-	1,874,102
<b>Gross Profit on Fuel Sales &amp; Services</b>	<b>1,579</b>	<b>-</b>	<b>538,954</b>	<b>-</b>	<b>540,533</b>
Rents & Leases	3,367,442	1,212,359	6,143	28,293	4,614,238
Other Revenue	-	-	47,917	177,885	225,802
<b>Total Operating Revenue</b>	<b>3,369,021</b>	<b>1,212,359</b>	<b>593,015</b>	<b>206,179</b>	<b>5,380,574</b>
<b>Operating Expense</b>					
Salaries & Benefits	655,672	432,645	592,368	233,746	1,914,431
Noncapitalized Equipment	25,909	7,879	4,481	19,682	57,951
Supplies	34,733	17,328	51,225	10,959	114,245
Licensing & Software	15,875	12,720	6,918	11,785	47,298
Communications	15,332	6,560	7,647	7,877	37,416
Training & Travel	712	442	262	37,439	38,855
Permits & Fees	2,520	193	3,382	-	6,095
Repairs & Maintenance	238,850	152,054	113,691	6,759	511,353
Engineering Services	58,871	35,216	23,093	71,173	188,354
Legal & Accounting Services	66,420	-	-	76,066	142,486
Operating Services	115,017	39,149	213,470	11,334	378,970
Bad Debts	-	-	-	-	-
Dues & Subscriptions	13,595	8,336	10,803	30,400	63,134
Insurance	103,852	65,998	103,852	66,038	339,739
Marketing	5,868	5,276	5,765	57,828	74,737
Rent Expense	7,690	3,868	50,762	2,615	64,935
Utilities	76,992	129,783	32,773	30,574	270,122
Tenant Retention	7,569	7,569	-	-	15,137
Miscellaneous	1,147	943	19,898	21,567	43,556
Depreciation	511,420	3,634	920,758	15,636	1,451,448
Expense Reimbursements	5,705	-	(16,021)	(41,105)	(51,422)
<b>Total Operating Expense</b>	<b>1,963,747</b>	<b>929,594</b>	<b>2,145,126</b>	<b>670,373</b>	<b>5,708,840</b>
<b>Excess (Deficit) of Operating Revenue over Operating Expense</b>					
	<b>1,405,274</b>	<b>282,766</b>	<b>(1,552,112)</b>	<b>(464,195)</b>	<b>(328,267)</b>
<b>Nonoperating Revenue</b>					
Property Taxes	362,806	120,935	-	-	483,742
Interest Income	-	-	-	46,349	46,349
Other Nonoperating Revenue	-	-	-	227,721	227,721
<b>Total Nonoperating Revenue</b>	<b>362,806</b>	<b>120,935</b>	<b>-</b>	<b>274,069</b>	<b>757,811</b>
<b>Excess (Deficit) of Revenue over Expense</b>					
	<b>1,768,080</b>	<b>403,701</b>	<b>(1,552,112)</b>	<b>(190,125)</b>	<b>201,824</b>
<b>FAA Projects</b>					
Grants In Aid-Federal/State	-	-	129,816	-	129,816
FAA Projects Expense	-	-	-	453,581	453,581
<b>Excess (Deficit) of FAA Projects Revenue over FAA Projects Expense</b>	<b>-</b>	<b>-</b>	<b>129,816</b>	<b>(453,581)</b>	<b>323,765</b>
<b>Reserve Designations</b>					
Infrastructure Projects	-	-	-	143,206	143,206
Property Investments	-	-	-	70,000	70,000
Building Improvements	-	-	-	372,179	372,179
Equipment	-	-	-	374,005	374,005
Noncapital Equipment	-	-	-	-	-
Employee Benefits	-	-	-	250,000	250,000
<b>Total Reserve Designations</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,209,390</b>	<b>1,209,390</b>

## Mojave Air & Space Port Fuel Inventory Report

JANUARY 2023

JET A		
Beginning Inventory	69,494	
Gallons Delivered		
Gallons Purchased	79,931	
Defuels	-	
Total Gallons Delivered	79,931	
Gallons Pumped		
Gallons Sold	85,205	
Refuels	-	
Tank farm/Line truck sumps	50	
Delivery Samples	10	
Total Gallons Pumped	85,265	
Ending Inventory	64,160	
Physical Check	64,406	
Inventory Value at	3.88	<b>\$249,895.28</b>

AVGAS		
Beginning Inventory		14,172
Gallons Delivered		
Gallons Purchased		-
Gallons Pumped		
Gallons Sold		2,969
Tank farm/Line truck sumps		5
Delivery Samples		-
Total Gallons Pumped		2,974
Ending Inventory		11,198
Physical Check		10,930
Inventory Value at	6.16	<b>\$67,328.80</b>

LUBRICANTS		
Beginning Inventory	203	
Quarts Purchased	0	
Quarts Sold	6	
Ending Inventory	197	
Physical Check	203	
Aeroshell 110; 100W; 15/50 Multi 108@ \$8.35; 33@ \$8.35; 62@ \$11.29		<b>\$1,877.33</b>

PRIST		
Beginning Inventory		117
Cans Purchased		0
Cans Sold		0
Ending Inventory		117
Physical Check - Cans		117
Physical Check - Bulk		11.2
117 CANS @ \$7.40; 11.2 (2.3) Gallons @ 60.90		<b>\$1,119.66</b>

UNLEADED FUEL		
Beginning Inventory	852.8	
Gallons Purchased	521.0	
Gallons Used	596.3	
Ending Inventory	777.5	
Physical Check	759.2	
Inventory Value at	\$4.04	<b>\$3,066.41</b>

DIESEL FUEL		
Beginning Inventory		873.6
Gallons Purchased		114.0
Gallons Used		219.0
Ending Inventory		768.6
Physical Check		769.6
Inventory Value at	\$4.75	<b>\$3,654.83</b>

**JANUARY 2023 Fuel Inventory      \$326,942.31**

**JANUARY Gallons Sold      88,174**  
**Year to Date      JET A      462,864**



**Mojave Air & Space Port**  
**Customers Over 90 Days Past Due**

	<b>1-30 Days</b>	<b>31-60 Days</b>	<b>61-90 Days</b>	<b>90+ Days</b>	<b>TOTAL</b>	<b>Comments</b>
American Verde Technologies	619.5	619.5	619.5	2478	4336.5	Belief of Abandonment Issued - Working with Legal - Ends 3/13 Bankruptcy
Masten	0.00	0.00	0.00	37,802.31	37,802.31	
Spacelink	578.91	578.91	0.00	1,605.90	2,763.72	Working with legal
Dean Soest	465.00	465.00	465.00	3,611.50	5,006.50	
<b>Aged AR as of 2/28/2023</b>	<b>210,455.11</b>	<b>8,430.88</b>	<b>509.18</b>	<b>45,497.71</b>	<b>264,892.88</b>	

**2023**

	January	February	March	April	May	June	July	August	September	October	November	December
Total Income	19714.28	0	0	0	0	0	0	0	0	0	0	0
Total Expenses	17208.62	0	0	0	0	0	0	0	0	0	0	0
=====												
Net Income	2505.66	0	0	0	0	0	0	0	0	0	0	0
MEMBERSHIPS	577	0	0	0	0	0	0	0	0	0	0	0
New Members	48	0	0	0	0	0	0	0	0	0	0	0
Cancelled Members	-26	0	0	0	0	0	0	0	0	0	0	0
Net Change	22	0	0	0	0	0	0	0	0	0	0	0

Notes for January Of the 26 cancels, 5 are leaving the location 9 left for other reasons and the other 11 were either were cancelled because of missed payments or unknown reasons.



AIR & SPACE PORT  
AT RUTAN FIELD

**CEO REPORT**

**TO:** MASP Board of Directors  
**FROM:** Tim Reid, General Manager/CEO  
**MEETING DATE:** March 7, 2023

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**Updates**

- Runway 12/30 Rehabilitation – IFE completed and submitted to FAA for approval. Work is scheduled to begin the week of May 29<sup>th</sup>.
- Inland Port Update – No updates.
- Water System Hydraulic Modeling Update – Currently gathering, compiling, and reviewing data.
- Water Main Improvements – Topo survey completed, working on preliminary set of plans and specs. Meeting scheduled with Staff March 2.
- Hangar Development Update – Will be showing the property to a developer tomorrow.
- Hypersonic Corridor Update – Draft technical report provided with recommendations. No other action is required at this time.
- Taxiway A Lighting Circuit Project – Plans in development, bid docs and reports in progress.
- Sen. Feinstein’s office reached out for a conference call RE: FAA Reauthorization, and intend to visit the Airport soon.
- Conferences– I have been out attending space conferences during the month of February, and a few important take homes:
  - Big push for the FAA Reauthorization
  - Spaceports collectively need funding to make infrastructure improvements to meet the demand for space travel.
  - Estimated in the next 10 years space travel will be around a \$4BN dollar industry
  - Working to lessen the government’s involvement and shift to more of an advisory purpose
  - Approximately 12 spaceport applications in the que – Some concerns about spaceports in name only (certificate but not performing space operations). This could have far-reaching consequences like Mojave having to compete for infrastructure improvements against pie-in-the-sky spaceports.



**AIR & SPACE PORT  
AT RUTAN FIELD**

**CEO REPORT**

- Discussions with other spaceports about working with the Global Spaceport Alliance to work out a system plan for spaceports.
- Mojave is falling behind our competitors when it comes to marketing efforts – we lean heavily on our street cred. We need to focus on a marketing program for the spaceport.
- Spaceports are working hard collectively trying to find ways to connect talent with their space operators – Mojave has a head start on these efforts since we are already working with local resources including colleges/universities. ASU and Purdue are heavily perusing opportunities in this realm – ASU has reached out to Mojave and continues to show interest at our airport. Spaceports are looking to be the hub for learning, both technical trades and college students.
- Spaceports collectively are working on efforts to connect with their communities while inspiring future generations by providing programs like STEM and internships. This is an area of opportunity for Mojave to grow.
- Spaceports all have different facilities they offer for current and prospective operators, which makes the industry unique when compared to airports. Mojave has the most unique mission and opportunity to promote and attract a very specific type of operations – testing. I feel this is in heavy demand and in line with what Mojave specializes in: We are a civilian test flight facility. All these concepts will need to be tested at some point, and Mojave is well versed in testing operations.
- Hypersonic testing is quickly becoming a focus point. There's discussion about developing a nationwide network of high-speed routes connecting spaceport to spaceport, in preparation for future high speed travel (leaning towards cargo ops right now). Mojave's efforts to explore accessing a high speed corridor will be essential to test these concepts in the near future (next 3-4 years).
- FAA funding – CSF has prepared recommendations for the FAA Reauthorization Bill, and for the most part I am satisfied with the recommendations. However, keeping a close eye on how the funds for infrastructure improvements will be distributed as this will have a direct impact on Mojave.
  - A lot of discussion about funding for infrastructure improvements including how do we make the funding reliable and sustainable. Space operators are not favorable at this point to contributing for these improvements, which makes sense given how much investment they are making to design and build spacecraft. The goal is to work towards a sustainable model (like the AIP program with the FAA). This is where I believe development of a spaceport network will be essential.
- There's some ideas on the table to move the Space office with the FAA under the umbrella of the Department of Transportation to help streamline reporting but most importantly because space operations currently report to an organization focused on aviation and aviation safety.
- Most important take away: Nobody wants to see space become highly regulated, mostly because it stifles innovation.



**AIR & SPACE PORT  
AT RUTAN FIELD**

**CEO REPORT**

- ➔ Contracts/Agreements/SVC/ Public Works/Consulting
  - o MJ Mechanical Heating & Air Conditioning- Board Room, New Air Conditioner

**Authorized Payments**

BOARD MEETING: 3/7/2023	DATE	AMOUNT	EFT'S	TOTAL
CEO CHECK REGISTER	3/1/2023	135,868.01		135,868.01
				-
				-
EFT'S	2/27/2023	-	620,122.12	620,122.12
		135,868.01	620,122.12	755,990.13
BOD CHECK	3/1/23	207,535.78		
	3/1/23	62,300.00		
		269,835.78		269,835.78
VOID CHECK	63265			
TOTAL ALL CHECKS & EFT'S				1,025,825.91



## TECHNICAL MEMORANDUM

To: Tim Reid  
General Manager / CEO  
Mojave Air and Space Port

From: Jonathan Craig and Andrew Scanlon  
Kimley-Horn

Date: January 22, 2023

Subject: Highspeed Test Corridor Planning Analysis

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### EXECUTIVE SUMMARY

Current regulations prohibit civilian flight operations traveling at supersonic speeds over the continental United States (U.S.) without prior approval from the FAA. However, there is a growing need from the highspeed flight industry to conduct civilian supersonic and hypersonic flight testing over land to reduce the risk of total vehicle loss in the case of mission failure. The analysis documented in this technical memorandum investigated the process for operating civilian supersonic and hypersonic flight testing within established restricted airspace (R-2508 Complex). The analysis included 1) a review of current and proposed regulations related to supersonic flight, 2) research into existing corridors that are used for highspeed testing, 3) a review of the current process for the scheduling of tests within the R-2508 Complex, and 4) input from stakeholders associated with the R-2508 Complex and Mojave Air and Space Port (MASP).

The result of the investigation indicated that highspeed testing capabilities are an interest to both civilian and military sectors within the area. Throughout the investigatory phase of this project, it was determined that Edwards Air Force Base and China Lake officials are open to allowing civilian testing within the R-2508 Complex. However, DoD operations may take precedence over civilian operations and effect scheduling. Additionally, it was determined that the best near-term option would be use of the High-Altitude Supersonic Corridor, newly renamed the "Bell X-1 Supersonic Corridor" in October of 2022, beginning at the Colorado River and terminating prior to the coast of California and Point Mugu. Use of this corridor would allow test operators a longer range for testing or transitioning airspace. The corridor outside of the R-2508 Complex is controlled by Los Angeles Air Route Traffic Control Center (ZLA ARTCC). The ZLA ARTCC is currently performing updates to the airspace for the High-Altitude Supersonic Corridor (Bell X-1 Supersonic Corridor), these updates have not yet been published for review. The current Letter of Agreement with ZLA ARTCC and the R-2508 Complex Control Board is provided in Attachment A.

## Recommended Next Steps

1. MASP should contact Joshua Center and Edwards AFB to initiate the process of developing a Letter of Agreement enabling customers originating from MASP to utilize the restricted airspace at the R-2508 Complex for highspeed testing.
2. MASP should coordinate with the appropriate personnel at ZLA ARTCC, and the FAA western service center to establish a course of action for implementing operations within the Bell X-1 Supersonic Corridor.
3. As part of the discussions regarding the Bell X-1 Supersonic Corridor, MASP should consider establishing communication with Point Mugu personnel to identify the feasibility of using restricted airspace over the Pacific Ocean for testing operations as an alternative or in addition to overland testing operations.
4. MASP should perform a SWOT analysis to determine benefits and marketability for highspeed operations.
5. It is recommended that MASP focus on outreach to potential highspeed users to determine interest in the project and collect data for use case analysis.
6. Determine environmental analysis required to perform operations in proposed airspace corridors. It is assumed that cost of further environmental analysis would be the responsibility of the vehicle operator.
7. Perform analysis of spaceport operational capacity and determine infrastructure development needs to support highspeed operations. This will be dependent upon the specifications of the vehicle and vehicle operator.

## **REGULATORY CONSIDERATIONS**

In 1973, supersonic flights over land in the U.S. were banned because of concerns from the Federal Aviation Administration (FAA) and civil activists regarding the potential damage supersonic flights could have on the environment and/or civil infrastructure due to the impulsive overpressure of the sonic booms. Furthermore, there were concerns with noise and air pollution during the approach and arrival phase of flight at airports generated from the engine technology used in supersonic aircraft in the early 1970s.

In 1989, the FAA amended the original 1973 ban on supersonic flights over land to provide a means for authorizing supersonic flights in designated areas. The rules have largely remained unchanged since then, and currently maintain a prohibition on civil aircraft operating at speeds greater than Mach 1 without special authorization within a designated test area. While there have been recent rulemaking efforts to address subsonic noise limits for supersonic aircraft, these efforts would not rescind the prohibition of flights in excess of Mach 1 over land (ref [6]).

## **RECENT CHANGES IN RULES**

The FAA issued a final rule to streamline the application procedure for civil aircraft that wish to operate in the United States at speeds exceeding Mach 1 on January 6, 2021. The final rule includes clarification of the information that needs to be submitted, specifying the contact office within the FAA, and removing the application criteria and procedure from an appendix and placing it within the regulatory text.

The rule has not changed the requirement for civil aircraft to obtain permission prior to operating at speeds of Mach 1 and above. Additionally, the applicants are still required to provide environmental documentation that is compliant with NEPA requirements. It is anticipated that the required level of documentation that will be required for approval will be an Environmental Assessment. The FAA estimates that with the new rule, there will be one request submitted per year and that the application should take approximately 40 hours for the applicant to complete, assuming that the environmental documentation was already complete. The FAA also assumes that the applicants will utilize airspace where supersonic flights already occur and a NEPA document already exists. If an applicant is to propose a new airspace corridor, it is likely that the time and cost to the applicant would significantly increase.

## UPDATED REGULATIONS, JANUARY 15, 2021

Code of Federal Regulation (CFR) Title 14 Part 91.817 defines the regulations of “Civil Aircraft Sonic Boom” and states:

**§ 91.817** Civil aircraft sonic boom.

**(a)** No person may operate a civil aircraft in the United States at a true flight Mach number greater than 1 except in compliance with conditions and limitations in an authorization to exceed Mach 1 issued to the operator in accordance with **§ 91.818**.

**(b)** In addition, no person may operate a civil aircraft for which the maximum operating limit speed M<sub>MO</sub> exceeds a Mach number of 1, to or from an airport in the United States, unless -

**(1)** Information available to the flight crew includes flight limitations that ensure that flights entering or leaving the United States will not cause a sonic boom to reach the surface within the United States; and

**(2)** The operator complies with the flight limitations prescribed in **paragraph (b)(1)** of this section or complies with conditions and limitations in an authorization to exceed Mach 1 issued in accordance with **§ 91.818**.

As previously mentioned, Appendix B to Part 91 – Authorization to Exceed Mach 1, was implemented into the regulatory text with the final rule in January 2021, and is now incorporated as Part 91.818 and states:

**§ 91.818** Special flight authorization to exceed Mach 1.

For all civil aircraft, any operation that exceeds Mach 1 may be conducted only in accordance with a special flight authorization issued to an operator in accordance with the requirements of this section.

**(a)** Application. Application for a special flight authorization to exceed Mach 1 must be made to the FAA Office of Environment and Energy for consideration by the Administrator. Each application must include:

**(1)** The name of the operator;

**(2)** The number and model(s) of the aircraft to be operated;

**(3)** The number of proposed flights;

**(4)** The date range during which the flight(s) would be conducted;

**(5)** The time of day the flight(s) would be conducted. Proposed night operations may require further justification for their necessity;



- (6)** A description of the flight area requested by the applicant, including any environmental information required to be submitted pursuant to **paragraph (c)** of this section;
- (7)** All conditions and limitations on the flight(s) that will ensure that no measurable sonic boom overpressure will reach the surface outside of the proposed flight area; and
- (8)** The reason(s) that operation at a speed greater than Mach 1 is necessary. A special flight authorization to exceed Mach 1 may be granted only for operations that are intended to:
  - (i)** Show compliance with airworthiness requirements;
  - (ii)** Determine the sonic boom characteristics of an aircraft;
  - (iii)** Establish a means of reducing or eliminating the effects of sonic boom, including flight profiles and special features of an aircraft;
  - (iv)** Demonstrate the conditions and limitations under which speeds in excess of Mach 1 will not cause a measurable sonic boom overpressure to reach the surface; or
  - (v)** Measure the noise characteristics of an aircraft to demonstrate compliance with noise requirements imposed under this chapter, or to determine the limits for operation in accordance with **§ 91.817(b)**.
- (9)** For any purpose listed in **paragraph (a)(8)** of this section, each applicant must indicate why its intended operation cannot be safely or properly accomplished over the ocean at a distance ensuring that no sonic boom overpressure reaches any land surface in the United States.
- (b)** Operation outside a test area. An applicant may apply for an authorization to conduct flights outside a test area under certain conditions and limitations upon a conservative showing that:
  - (1)** Flight(s) within a test area have been conducted in accordance with an authorization issued for the purpose specified in **paragraph (a)(8)(iv)** of this section;
  - (2)** The results of the flight test(s) required by **paragraph (b)(1)** of this section demonstrate that a speed in excess of Mach 1 does not cause a measurable sonic boom overpressure to reach the surface; and
  - (3)** The conditions and limitations determined by the test(s) represent all foreseeable operating conditions and are effective on all flights conducted under an authorization.
- (c)** Environmental findings.
  - (1)** No special flight authorization will be granted if the Administrator finds that such action is necessary to protect or enhance the environment.
  - (2)** The Administrator is required to consider the potential environmental impacts resulting from the issuance of an authorization for a particular flight area pursuant to the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C 4321 et seq.), all applicable regulations implementing NEPA, and related Executive orders and guidance. Accordingly, each applicant must provide information that sufficiently describes the potential environmental impact of any flight in excess of Mach 1, including the effect of a sonic boom reaching the surface in the proposed flight area, to enable the FAA to determine whether such impacts are significant within the meaning of NEPA.
- (d)** Issuance. An authorization to operate a civil aircraft in excess of Mach 1 may be issued only after an applicant has submitted the information described in this section and the

Administrator has taken the required action regarding the environmental findings described in **paragraph (c)** of this section.

**(e)** Duration.

**(1)** An authorization to exceed Mach 1 will be granted for the time the Administrator determines necessary to conduct the flights for the described purposes.

**(2)** An authorization to exceed Mach 1 is effective until it expires or is surrendered.

**(3)** An authorization to exceed Mach 1 may be terminated, suspended, or amended by the Administrator at any time the Administrator finds that such action is necessary to protect the environment.

**(4)** The holder of an authorization to exceed Mach 1 may request reconsideration of a termination, amendment, or suspension issued under **paragraph (e)(3)** of this section within 30 days of notice of the action. Failure to request reconsideration and provide information why the Administrator's action is not appropriate will result in permanent termination of the authorization.

**(5)** Findings made by and actions taken by the Administrator under this section do not affect any certificate issued under **Chapter 447 of Title 49** of the United States Code.

## AIRSPACE CONSIDERATIONS

In the U.S., the FAA owns the national airspace, which is categorized as Controlled, Uncontrolled, Special Use Airspace (SUA), and other. Controlled airspace includes Classes A, B, C, D and E, in which Air Traffic Control (ATC) services are provided (see Figure 1). Uncontrolled airspace, i.e., Class G, is airspace in which ATC does not have authority or responsibility. Special Use Airspace (SUA), which is a designation for airspace in which certain activities must be limited due to, as the name implies, the specialized use of that airspace or area of operations, consists of Air Traffic Control Assigned Airspace (ATCA), Alert Areas, Air Defense Identification Zone (ADIZ), Military Operations Areas (MOA), National Security Areas, Prohibited Areas, Restricted Areas, Warning Areas and Other. Finally, other airspace types include Military Training Routes (MTRs), Aerial Refueling Routes, and Temporary Flight Restrictions (TFRs).



Figure 1. FAA Airspace Classification (Source: faasafety.gov)

FAA Order JO 7400.10D provides a listing of all regularly and non-regularity SUA requirements and usage rules. Additionally, the FAA provides an online graphical tool regarding current SUA definitions and usage located at <https://sua.faa.gov/sua/siteFrame.app>. To create a new or existing SUA for a supersonic flight corridor, there must be agreements in place between the FAA and the Department of Defense (DoD) to establish the intended use of the airspace that is then subject to rulemaking, comment period, and final approval through the FAA Airspace Office (AJV-11).

For a FAA licensed commercial spaceport, TFRs are used to support space launch and landing activities. However, in the case of supersonic testing TFRs would not be applicable since the activity falls outside the approved list of conditions under which the FAA may establish a TFR area. The approved TFR conditions include:

- Disaster/Hazard Areas
- Disaster Areas in Hawaii
- Emergency Air Traffic Rules
- President and Other Parties
- Space Flight Operations
- High Barometric Pressure Conditions
- Aerial and Major Sporting Events
- Special Security Instructions

It is possible that if a supersonic aircraft also contained a rocket motor, then the aircraft could be regulated under rules governing commercial launch vehicles and therefore fall within the condition of space flight operations.

The FAA currently utilizes supersonic airspace corridors through DoD Major Range and Test Facility Base (MRTFBs) at several sites including Edwards (California), Cape Canaveral (Florida), White Sands (New Mexico), Vandenberg (California) and Dugway Proving Ground (Utah). Table 1 provides

dimensions of the existing supersonic test corridors that are part of the Armstrong Flight Research Center located inside Edwards Air Force Base in California.

**Table 1. Existing Test Corridors at Edwards Air Force Base**

Existing Test Corridors	Length x Width	Altitude	Airspace
High Altitude Supersonic Corridor (Bell X-1 Corridor)	224 NM x 15 NM	FL300 – Unlimited	R-2515, California
Black Mountain Supersonic Corridor	55 NM x 8 NM	500’ AGL – Unlimited	R-2515, California
PIRA Supersonic Corridor	26 NM x 4 NM	500’ AGL - Unlimited	R-2515, California

The development of a supersonic corridor for testing would require coordination at the earliest stages of the project and include military and civil aviation organizations such as the Department of Defense (Pentagon), FAA En Route Air Traffic Facilities and FAA Headquarters rulemaking and legal organizations, along with local and regional community outreach. Additionally, the FAA must grant a waiver from (CFR) Title 14 Part 91.817(a) to fly supersonic over the continental U.S. There are efforts underway to explore airspace integration through NASA Ames Industry Partnership Group discussing strategic deconfliction (FL550-FL600), testing procedures and developing the CONOPs (Concept of Operations) that would accommodate commercial supersonic flight.

In the June 28, 2019, Notice of Proposed Rulemaking (NPRM), the FAA assumed that future applications for authorization to exceed Mach 1 “*would qualify to use airspace in the United States in a location where supersonic flights already occur and a NEPA document already exists.*” The NPRM goes on to further state that “*the three applicants for supersonic flight test that received authorization under the current appendix each used military test ranges with previously approved Environmental Impact Statements that had been updated as necessary. Use of available military sites is more efficient and less costly than establishing a new test range and complying with the initial environmental requirements for one.*” As previously mentioned, this NPRM was issued as a final rule in January 2021, and is now incorporated as Part 91.818.

**R-2508 AIRSPACE COMPLEX (CALIFORNIA)**

The R-2508 Complex (see Figure 2) includes all the airspace used by the Naval Air Weapons Station China Lake, National Training Center at Fort Irwin, and Edwards Air Force Base. The complex is composed of restricted airspace, MOAs, ACTAs, and other SUA. The R-2508 Complex is the proposed test range for civilian highspeed vehicle testing originating from MASP. The proximity of restricted airspace to MASP makes the R-2508 Complex the best options for supersonic and hypersonic test vehicle customers at MASP.



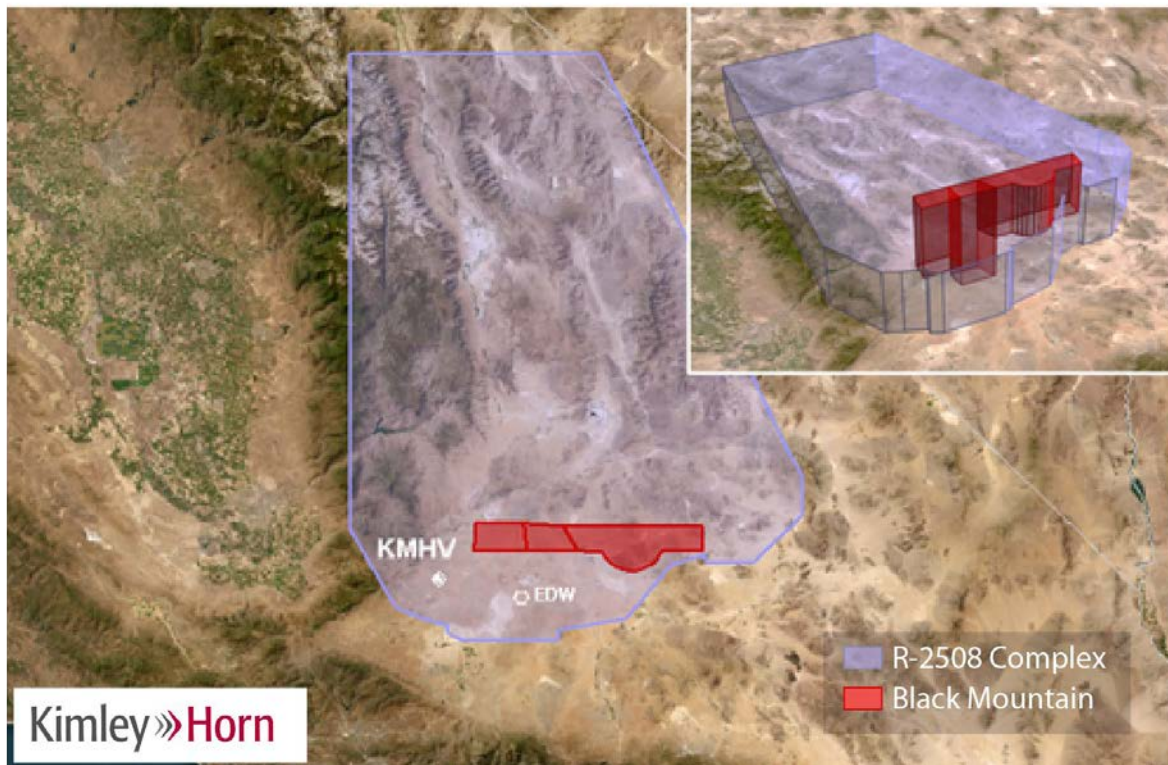
Figure 2. R-2508 Complex - Edwards Air Force Base (Source: [5])

Supersonic operations are allowed only in authorized supersonic areas, such as the “High Altitude Supersonic Corridor” and the “Black Mountain Supersonic Corridor” (see Figure 3).



## Black Mountain Supersonic Corridor

The Black Mountain Supersonic Corridor is about 55 NM long by 8 NM wide and resides completely within the R2508 complex. The Black Mountain Supersonic Corridor extends vertically in three steps as low as 500' AGL, 10,000' MSL, and FL300 with a ceiling of unlimited. The Black Mountain Supersonic Corridor is primarily contained within the R-2515 restricted airspace within the R-2508 complex just north of the High-Altitude Supersonic Corridor. Figure 3 shows the location of the Black Mountain Supersonic Corridor relative to the R-2508 complex boundary and MASP (KMHV).



**Figure 3. R-2508 Black Mountain Supersonic Corridor**

## High-Altitude Supersonic Corridor (Bell X-1 Supersonic Corridor)

The High-Altitude Supersonic Corridor, newly renamed the Bell X-1 Supersonic Corridor in October of 2022, is 224 NM long by 15 NM wide and extends vertically from FL300 to unlimited (see Figure 4). This corridor runs west from the Colorado River and terminates prior to reaching the California Coast near Point Mugu. The corridor outside of the R-2508 complex is controlled by the ZLA ARTCC. The ZLA ARTCC is currently performing updates to the airspace for the High-Altitude Supersonic Corridor (Bell X-1 Supersonic Corridor), and these updates have not yet been published for review. The current Letter of Agreement with ZLA ARTCC and the R-2508 Complex Control Board is provided in Attachment B (ref [2]).

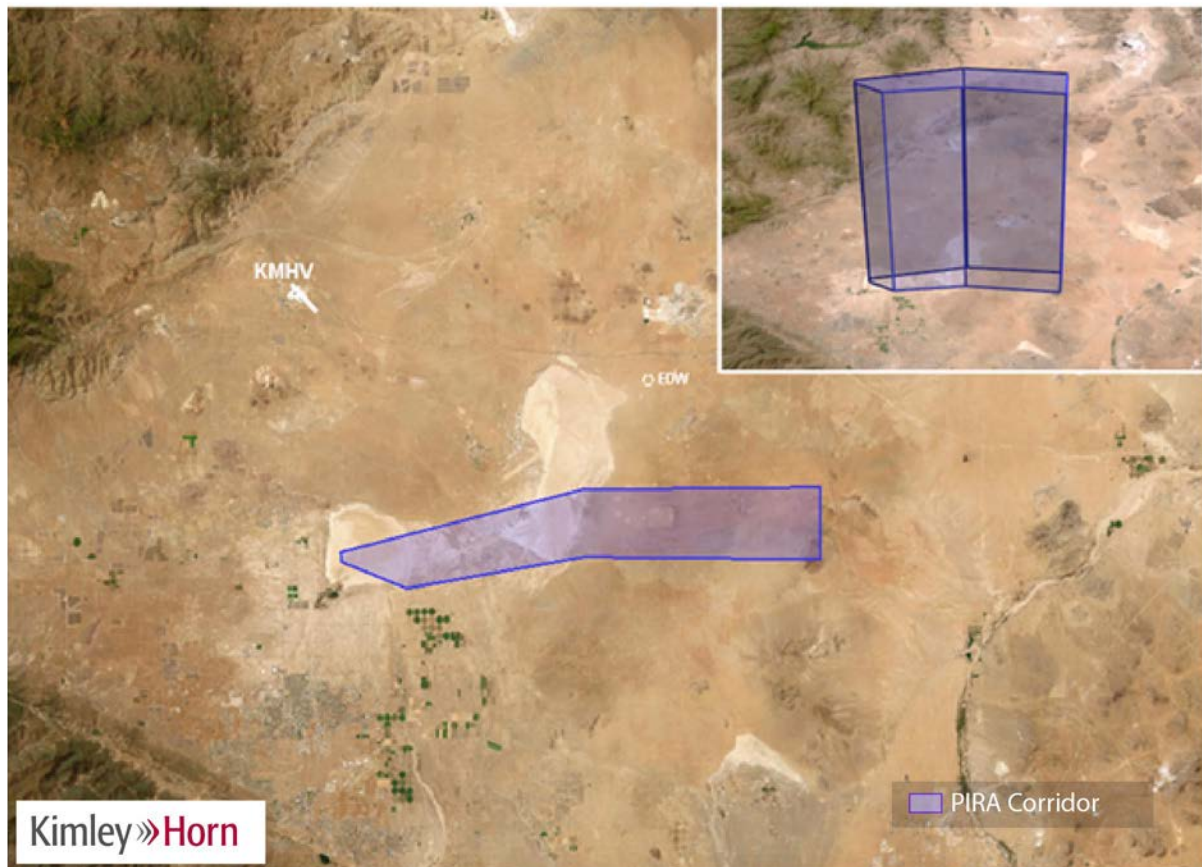


Figure 4. Bell X-1 Supersonic Corridor (Former High Altitude Supersonic Corridor)



## Precision Impact Range (PIRA) Supersonic Corridor

The PIRA Supersonic Corridor is about 26 NM in length by 4 NM in width and extends vertically from 500' AGL to unlimited (see Figure 5). While the width is undefined, the centerline is located between 34°48.9' N / 118°03.5' W to 34°51.4' N / 117°31.5' W. Supersonic flight below 15,000' MSL is restricted west to east only (ref [5]).



**Figure 5. PIRA Supersonic Corridor**

## **OTHER SUPERSONIC TEST AREAS**

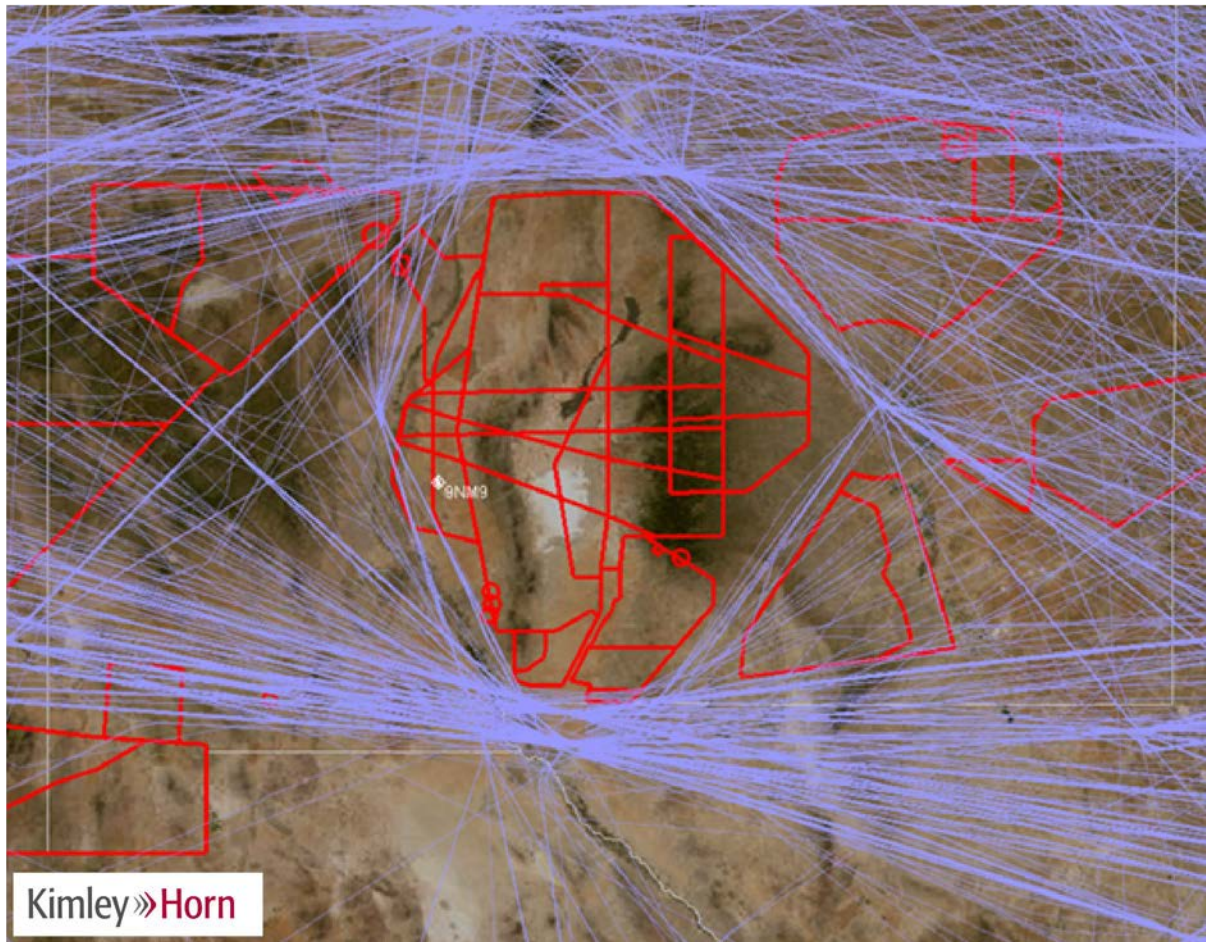
### White Sands Missile Range (New Mexico)

White Sands Missile Range (WSMR), located in the southeast corner of New Mexico, contains special use airspace that is fully controlled and managed by WSMR. The DoD Restricted Airspace at WSMR has full command and control authority of the FAA from ground to space all year around. During testing operations commercial air traffic is routed around WSMR as shown in Figure 6. WSMR is the largest



overland testing facility in the DoD, accounting for over 2.2 million acres. The WSMR Operating Area is approximately 131 NM by 90 NM at the widest point (ref [12]).

WSMR is approximately 620 NM southeast of MASP. Currently no highspeed corridor exist between the two areas. However, the development of highspeed point-to-point operations is becoming a popular discussion within the industry. Midland International Air and Space Port and Spaceport America are currently working on initiatives to develop a highspeed corridor that connects to Spaceport America near WSMR airspace. MASP may be provided an opportunity to further expand said corridor to connect MASP and Spaceport America if a business case were found (ref [11]).



**Figure 6. FAA “WSMR SHADOW” - Commercial Air Traffic Routes Around WSMR**

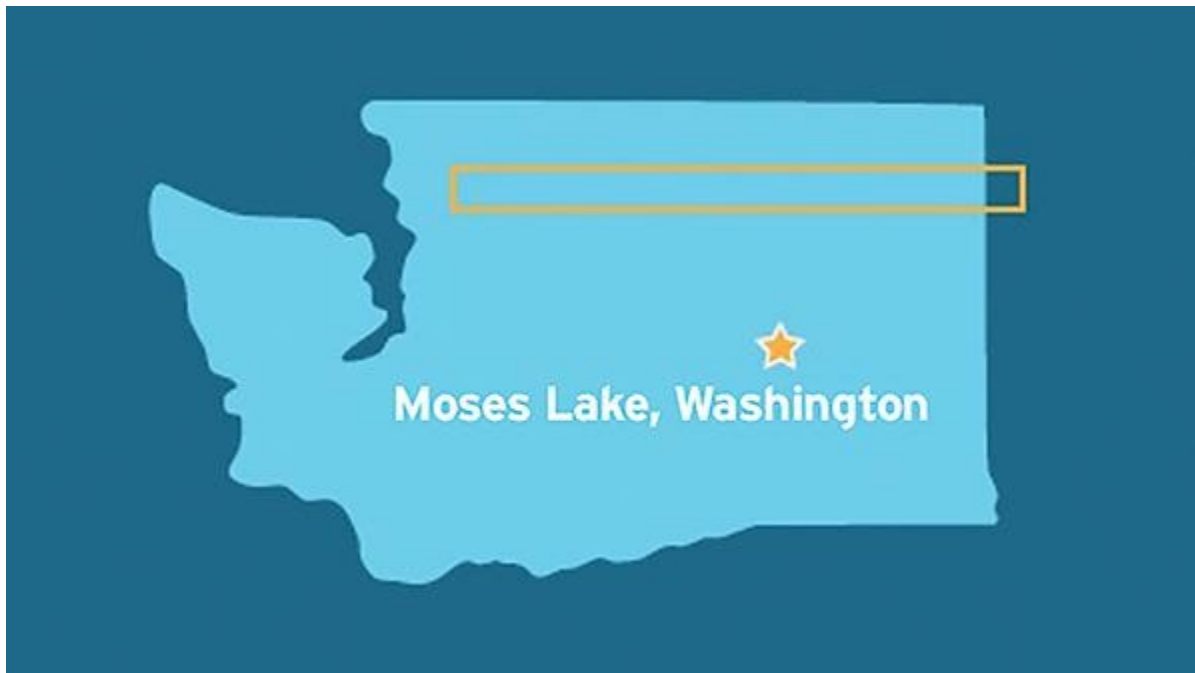
## Holloman High Speed Test Track

The Holloman High Speed Test Track (HHSTT) is a 50,788-foot track used to simulate selected trajectories of aircraft and missiles and is located within WSMR. The sled on the track has reached speeds of 8,900 feet per second for sled weights ranging from 100 to 30,000 pounds. HHSTT is the

most precisely aligned and instrumented facility of its kind. Currently, HHSTT is primarily operated for the needs of the Air Force Materiel Command, but its testing capabilities are also available for other government agencies and government contractors (ref [13]).

## Proposed High-Altitude Flight Test Corridor - Washington

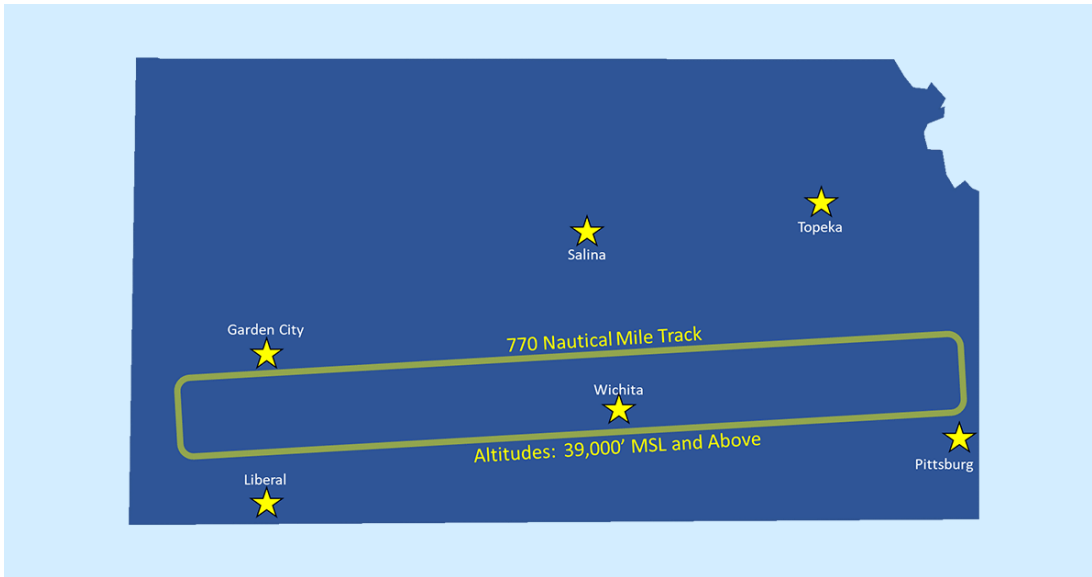
In November 2019, Grant County International Airport in Moses Lake, Washington expressed interest in developing a high-altitude flight test corridor for civilian supersonic jets testing. Engineering and flight-testing contractor AeroTEC leads a new “Supersonic Flight Alliance” and has partnered with Port of Moses Lake to sketch out a 300-mile-long corridor from the east slopes of the Cascades to western Montana, south of, and parallel to, the Canadian border (ref [9]).



**Figure 7. Proposed High-Altitude Flight Test Corridor in Washington (Ref [9])**

## Proposed Supersonic Transportation Corridor (SSTC) – Kansas

In December of 2020, Governor Laura Kelly and the Kansas Department of Transportation announced the development of a high-altitude flight corridor with a total test range of 770 nautical miles in a “racetrack-shaped” configuration. Kansas representatives expressed interest in capturing the supersonic aircraft market and encourage economic development amidst the recovery of the COVID-19 pandemic. The corridor runs the length of the state, just north of the Kansas-Oklahoma border and will support sustained flight up to Mach 3 (ref [8]).



**Figure 8. Supersonic Transportation Corridor in Kansas (Ref [8])**

## ENVIRONMENTAL CONSIDERATIONS

According to the 14 CFR Part 91 NRPM from June 2018, “*Although there is limited history in the approval of these authorizations, the presumption has been that an applicant would submit an Environmental Assessment (EA), or other documentation that provides sufficient information for the Administrator to make a NEPA determination.*”

The current regulations for obtaining authorization to exceed Mach 1 (14 CFR Part 91.818 (c)(2)), require the Administrator to consider “*potential environmental impacts resulting from the issuance of an authorization for a particular flight area pursuant to the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C 4321 et seq.), all applicable regulations implementing NEPA, and related Executive orders and guidance. Accordingly, each applicant must provide information that sufficiently describes the potential environmental impact of any flight in excess of Mach 1, including the effect of a sonic boom reaching the surface in the proposed flight area, to enable the FAA to determine whether such impacts are significant within the meaning of NEPA.*” If the issuance of authorization for exceeding Mach 1 is determined to be a major Federal Action, then an Environmental Assessment (EA) or Environmental Impact Statement (EIS) would need to be completed.

## NATIONAL ENVIRONMENTAL POLICY ACT

Signed into law in 1969, NEPA is often described as an “umbrella” law because it establishes a process through which federal agencies can comply with other laws and planning requirements. NEPA emphasizes the federal government’s leadership role in ensuring that environmental impacts are factored into the federal decision-making process. Under NEPA, federal agencies must use a systematic, interdisciplinary approach to project planning to ensure that environmental resources are given appropriate weight in the decision-making process. The NEPA process ensures that decision-



makers understand the potential environmental impacts of proposed licensing and permitting activities, and that the potential impacts to the human and natural environment are fully disclosed.

NEPA also established The Council on Environmental Quality (CEQ) within the Executive Office of the President. CEQ's primary responsibility is to oversee the implementation of NEPA and ensure that federal agencies meet their NEPA obligations. In 1978, CEQ issued regulations at 40 CFR parts 1500–1508 implementing the statutory provisions of NEPA and providing direction to federal agencies regarding the requirements necessary to fulfill their NEPA obligations. The CEQ Regulations set the standard for NEPA compliance. FAA Order 1050.1F, Environmental Impacts: Policies and Procedures, provides the FAA's agency-wide policies and procedures to ensure agency compliance with the requirements set forth in the CEQ Regulations for implementing NEPA. In addition to FAA Order 1050.1F, there are other NEPA-implementing policies and procedures that may be applicable to proposed projects, including FAA Order 5050.4B, NEPA Implementing Instructions for Airport Actions. NEPA compliance occurs through one of three levels of environmental review: a Categorical Exclusion (CATEX), an EA, or an EIS. The level of environmental review is based on the potential significance of a project's environmental effects and/or extraordinary circumstances.

Environmental impact categories that may be applicable to FAA actions, and therefore analyzed during the FAA's environmental review, are identified in FAA Order 1050.1F, Paragraph 4-1 and include:

- Air quality
- Biological resources (including fish, wildlife, and plants)
- Climate
- Coastal resources
- Department of Transportation Act, Section 4(f)
- Farmlands
- Hazardous materials, solid waste, and pollution prevention
- Historic, architectural, archaeological, and cultural resources
- Land use
- Natural resources and energy supply
- Noise and noise-compatible land use
- Socioeconomics, environmental justice, and children's environmental health and safety risks
- Visual effects (including light emissions)
- Water resources (including wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers)

For all environmental impact categories, both direct and indirect impacts must be considered. Direct impacts are those which are caused by the action and occur at the same time and place (see 40 CFR § 1508.8(a)). Indirect impacts are those impacts which are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable (see 40 CFR § 1508.8(b)). Indirect impacts may include growth-inducing impacts and other effects related to induced changes in the pattern of land use, population density or growth rate, and related impacts on air and water and other natural systems, including ecosystems (see 40 CFR § 1508.8(b)).

Since MASP is in California, there may be additional environmental regulations to consider under the California Environmental Quality Act (CEQA). Additionally, it is assumed that existing highspeed corridors have already completed a level of environmental review consistent with current operations. Existing environmental review should be leveraged by MASP and potential vehicle operators. If the proposed operations are outside the parameters of the environmental review in place for the existing corridor, additional analysis by the vehicle operator may be necessary. Further analysis beyond the scope of this technical memo will need to be performed to determine the appropriate level of environmental analysis.

## **SONIC BOOMS**

Vehicles moving within the atmosphere displace air as they project forward. When vehicles are traveling at supersonic speeds, the displaced air forms a coherent pressure wave, or a sonic boom. A sonic boom consists of two shock waves that are separated by approximately 100 to 200 milliseconds. When plotted over time, the two pressure waves form an "N" shape, leading to the sonic boom pressure wave often being referred to as an "N-wave." The pressure magnitude and duration of sonic booms is dependent on multiple factors, including vehicle size, weight, shape, speed, and trajectory. Sonic boom energy can also be focused in highly localized areas on the ground during vehicle maneuvering at supersonic speeds (ref [7]).



The sonic boom from an aircraft also contributes to the overall noise levels produced by the aircraft, which are analyzed as part of the NEPA documentation. Specifically, sonic boom impacts are evaluated in relation to hearing conservation and structural damage criteria. Hearing conservation criteria are in place to protect one's hearing from exposure to high and impulsive noise levels. Multiple federal government agencies have provided guidelines on allowable noise exposure limits for impulsive noise such as a sonic boom. The overpressure from a sonic boom has also been known to cause structural damage, particularly to brittle or structures with preexisting damage. The probability of structural damage varies based on the magnitude of the sonic boom overpressure (ref [7]).

## Potential Supersonic and Hypersonic Testing Customers

### *Potential Highspeed Corridor Customers*

A list of highspeed test operators is as follows:

- Boom Supersonic
- StratoLaunch
- Hermeus
- Virgin Galactic
- Virgin Orbit
- Eon Aerospace
- Exosonic
- Spike Aerospace

While large strides have been made in the supersonic market with the development of “quiet boom” technology, many supersonic operators are still in the development stage for commercial use vehicles. Civilian hypersonic technology has many challenges to overcome as well. The supersonics market would be a more readily available market to capture with the growing interest in supersonic passenger traffic. With MASP's primary aerospace focus on testing facilities, now would be an opportune time to consider integrating supersonic testing with much of the market still in research and development.

## KEY FINDINGS AND RECOMMENDATIONS

Highspeed testing originating from MASP is possible and several airspace options were identified.

**Near-Term Recommendation:** Edwards Air Force Base and Los Angeles Center offers many benefits that can be utilized by customers at Mojave Air and Space Port without costly analysis that would be required if developing a new highspeed test corridor. Using the existing high altitude supersonic corridor would allow for a more streamlined path to civilian testing near MASP. In the near-term it is recommended that agreements be developed for supersonic testing capabilities while the hypersonic market matures.

**Long-Term Recommendation:** MASP should explore the possibility of developing procedures for hypersonic integration into existing highspeed corridors. Additionally, there is an option for MASP to

explore point-to-point highspeed corridors between other spaceports / facilities that support supersonic and hypersonic development.

The pros and cons of near-term approach and long-term approach are presented in Tables 3 and 4:

**Table 2. Near Term – R-2508 High Altitude Supersonic Corridor Procedure Development**

Pros	Cons
<ul style="list-style-type: none"> <li>• Potentially the more readily available option</li> <li>• Existing ground support equipment and telemetry services available</li> <li>• Existing procedures for managing airspace</li> <li>• Contingency landing site at Edwards AFB</li> <li>• Located within 175 NM of MASP</li> <li>• Airspace is protected</li> <li>• Corridor extends close to Point Mugu with access to additional special use airspace over the Pacific Ocean</li> <li>• Existing environmental analysis has been completed for existing corridors</li> </ul>	<ul style="list-style-type: none"> <li>• Corridor length is limited to 224 NM</li> <li>• Operations would need to be scheduled around existing operations within the protected airspace</li> <li>• Limited to supersonic testing</li> <li>• High traffic volume on coast of California</li> <li>• Further environmental review may be needed for civilian testing within existing corridors</li> <li>• Each Operator must gain FAA approval for overland supersonic flight and may be denied.</li> </ul>

**Table 3. Long Term – Develop New Procedures for Hypersonic Testing Integration**

Pros	Cons
<ul style="list-style-type: none"> <li>• Allows hypersonic market to mature</li> <li>• Allows for integration into existing corridors</li> <li>• Possibility for longer corridors in the future as market matures and testing increases</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental impacts of hypersonic vehicles are unknown</li> <li>• Impacts to existing air traffic is unknown</li> <li>• Further analysis on range requirements for hypersonic testing is needed</li> <li>• The effects of sonic booms along the corridor are unknown</li> </ul>

## RECOMMENDED NEXT STEPS

Below are recommended next steps that should be taken by MASP. A preliminary schedule is included in Attachment B.

1. MASP should contact Joshua Center and Edwards AFB to initiate the process of developing a Letter of Agreement enabling customers originating from MASP to utilize the restricted airspace at the R-2508 Complex for highspeed testing.
2. MASP should continue coordinate with the appropriate personnel at ZLA ARTCC, and the FAA western service center to establish a course of action for implementing operations within the high-altitude supersonic corridor.
3. As part of the discussions regarding the Bell X-1 supersonic corridor, MASP should consider establishing communication with Point Mugu personnel to identify the feasibility of using restricted airspace over the Pacific Ocean for testing operations as an alternative or addition to overland testing operations.
4. MASP should perform a SWOT analysis to determine benefits and marketability for highspeed operations.
5. It is recommended that MASP focus on outreach to potential highspeed users to determine interest in the project and collect data for use case analysis.
6. Determine environmental analysis required to perform operations in proposed airspace corridors. It is assumed that cost of further environmental analysis would be the responsibility of the vehicle operator.
7. Perform analysis of spaceport operational capacity and determine infrastructure development needs to support highspeed operations.



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**ATTACHMENT A – HIGH ALTITUDE SUPERSONIC CORRIDOR LETTER OF  
AGREEMENT**

Los Angeles Air Route Traffic Control Center, High Desert Terminal Radar Approach Control, the 412<sup>th</sup> Test Wing and the R-2508 Complex Control Board

## LETTER OF AGREEMENT

EFFECTIVE: August 1, 2007

### SUBJECT: HIGH ALTITUDE SUPERSONIC CORRIDOR

1. **PURPOSE.** This Letter of Agreement (LOA) establishes procedures to be utilized in the conduct of supersonic flight within the High Altitude Supersonic Corridor (HASC), including entry and exit procedures.

2. **CANCELLATION.** The Los Angeles ARTC Center, High Desert TRACON, the R-2508 Complex Control Board and the 412 Operations Support Squadron LOA; Subject: High Altitude Supersonic Corridor; dated October 31, 1995.

3. **SCOPE.** These procedures pertain to supersonic flight conducted within the area described as: "an elongated area 15NM wide, defined by a centerline utilizing the 244 and 064 degree radials of Edwards VORTAC, at and above FL300."

Eastern Terminus: Colorado River/Lake Mojave - EDW064154  
(35°25' N / 114°40' W)

Western Terminus: Mt. Pinos - EDW244070  
(34°49' N / 119°00' W)

### 4. RESPONSIBILITIES.

a. The R-2508 Complex Control Board (CCB) shall ensure that all users of the HASC, regardless of command, are knowledgeable of and comply with the procedures contained in this LOA.

b. Los Angeles Air Route Traffic Control Center (CENTER) shall ensure that all required personnel are knowledgeable of and comply with the procedures contained in this LOA.

c. Sport Military Radar Unit (SPORT) shall ensure that all required personnel are knowledgeable of and comply with the procedures contained in this LOA.

d. High Desert Terminal Radar Approach Control (TRACON) shall ensure that all required personnel are knowledgeable of and comply with the procedures contained in this LOA.

Los Angeles Air Route Traffic Control Center, High  
Desert Terminal Radar Approach Control, the 412<sup>th</sup>  
Test Wing and the R-2508 Complex Control Board

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## 5. PROCEDURES.

a. For supersonic missions that are contained totally within the R-2508 Complex, pilots shall:

(1) Contact the radar facility monitoring the flight (SPORT or TRACON). Flights proposing supersonic runs contained within the R-2508 Complex require no other advance notification.

(2) When requesting the HASC, specify entry #1/exit #1, number of runs, direction of flight, and altitudes requested.

(3) Obtain over-flight clearance of R-2502 from TRACON/SPORT, if required.

(4) Advise TRACON/SPORT when HASC mission is completed.

b. Proposed supersonic flight outside R-2508 Complex airspace shall be coordinated with the Los Angeles Center Military Operations Specialist at least one hour in advance via commercial phone number (661) 265-8287. This coordination shall include the following information:

(1) Aircraft Identification.

(2) Type Aircraft.

(3) Proposed time of crossing the R-2508 Boundary enroute to the entry point.

(4) Corridor entry and exit route (See attachment 1).

(5) Altitude restrictions on entry or exit route (If critical for the specific mission).

(6) Flight levels requested in HASC. (Describe flight profile).

(7) Special requirements (additional runs, pacer/chase aircraft, equipment limitations, etc.).

(8) Air/ground frequency to be used, if a discrete flight test frequency is requested.



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(9) Name and phone number for CENTER to contact with coordination reply (Allow approximately 15 minutes for reply).

c. In order to minimize the possibility of excessive restrictions which would adversely impact the mission, supersonic flights should be planned for time periods of 0700 to 0930 and 1230 to 1500 local time.

d. Operations conducted with those portions of flight outside of the R-2508 Complex at FL390 and above can normally expect minimal restrictions.

e. CENTER will accommodate requests to use the HASC outside of the R-2508 boundaries to the maximum extent possible, consistent with other traffic conditions. However, due to complications caused by high density enroute traffic, the utilization of that portion of the HASC which extends beyond the boundary of the R-2508 Complex to the west (entry/exit #3) shall be limited to those missions absolutely required.

f. Unless required by the mission and specifically approved, the entry and/or exit phases of the route which are outside the R-2508 Complex airspace shall be conducted under the control of CENTER at ATC assigned altitudes. Normally, pilots can expect to be released from CENTER frequency at or prior to the entry fix, and will be cleared to re-contact the CENTER prior to the exit fix (except on exit #1).

g. Upon completion of preliminary coordination, CENTER shall enter the flight plan into computer storage.

(1) Receipt of FDIO generated flight progress strip shall constitute CENTER approval of the flight plan.

(2) CENTER shall verbally coordinate any special requirements with TRACON/SPORT.

(3) CENTER will enter the R-2508 Complex exit altitude as the requested altitude of the flight plan. In the remarks section, CENTER will enter the block altitudes requested in the HASC.

h. TRACON/SPORT shall notify CENTER ten minutes before the mission aircraft exits the R-2508 Complex.

i. TRACON/SPORT/CENTER shall be advised whenever a proposed supersonic flight has been canceled or delayed by 30 minutes or more. Delayed flights may require re-coordination.

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j. Whenever an individual aircraft within a formation becomes separated by more than one mile laterally or 100 feet vertically from the formation leader, the pilot shall immediately squawk code 4000 with mode C altitude encoded.

k. In accordance with FAA Order 7110.65, the following procedures shall constitute pre-arranged coordination for aircraft conducting flight within the HASC. This advance coordination allows penetration of the airspace under TRACON, SPORT or CENTER jurisdiction without the completion of a radar hand-off or an automated transfer of information.

(1) When SPORT MRU is open:

(a) SPORT shall transfer flight information on aircraft departing the R-2508 Complex enroute to entry points 2, 3 or 4 to the appropriate TRACON sector. This transfer of flight information shall constitute approval for both the outbound and inbound portions of that flight, allowing the aircraft to re-enter the R-2508 Complex without further coordination with TRACON.

(b) SPORT shall transfer flight information and communications to CENTER Sector 38 for aircraft proceeding to entry points 2 or 4, or to Sector 27 for entry point 3.

(c) On the inbound segment of the supersonic flight, CENTER shall transfer flight information of the aircraft to SPORT. If the supersonic flight will exit the R-2508 Complex, SPORT shall transfer flight information of the aircraft back to CENTER as early as feasible. SPORT shall insure that TRACON has the outbound flight information.

(2) When SPORT MRU is closed, normal ATC procedures shall be in effect between TRACON and CENTER.

(3) In the event of Air Traffic Control computer or radar failure, or if these prearranged coordination procedures are not practicable, aircraft shall not be cleared into the HASC.

**Attachments:**

1. Description of entry and exit routes
2. Map depicting the High Altitude Supersonic Corridor

Los Angeles Air Route Traffic Control Center, High  
Desert Terminal Radar Approach Control, the 412<sup>th</sup>  
Test Wing and the R-2508 Complex Control Board

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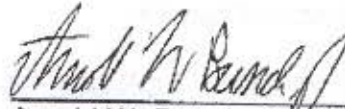
LETTER OF AGREEMENT

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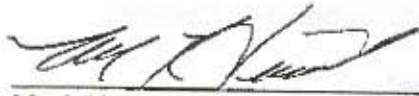
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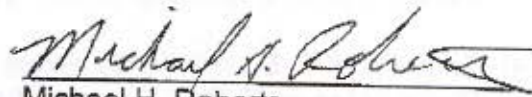
Kevin Stark  
Air Traffic Manager  
Los Angeles ARTC Center  
Federal Aviation Administration



Arnold W. Bunch, Jr., Col., USAF  
Commander, 412th Test Wing  
Edwards AFB, Ca.



Mark Heinrich  
Air Traffic Manager  
High Desert TRACON  
Federal Aviation Administration



Michael H. Roberts  
R-2508 Complex Control Board



Los Angeles Air Route Traffic Control Center, High  
Desert Terminal Radar Approach Control, the 412<sup>th</sup>  
Test Wing and the R-2508 Complex Control Board

Attachment 1

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### HIGH ALTITUDE SUPERSONIC CORRIDOR ENTRIES/EXITS

The following tracks are authorized for aircraft entering and exiting the High Altitude Supersonic Corridor.

- (1) Entry/Exit #1 (EDW VORTAC) "R-2508 Complex"  
When entering or exiting the corridor from within the R-2508 Complex
- (2) Entry/Exit #2 (EDW064154) "Silver Lake-Lake Mojave"  
Route directly between Silver Lake and Lake Mojave to include a turning radius to and from the east end of the Supersonic Corridor
- (3) Entry/Exit #3 (EDW244070) "Mt. Pinos"  
Via EDW VORTAC 260° radial to a point directly north of Mt. Pinos to include a turning radius to or from the west end of the Supersonic Corridor
- (4) Entry/Exit #4 (EDW064087) "Silver Lake-Soda Lake"  
Route between R-2508 Complex directly over Silver Lake to include a turning radius to or from Soda Lake (EDW064087) to join/exit the Supersonic Corridor.

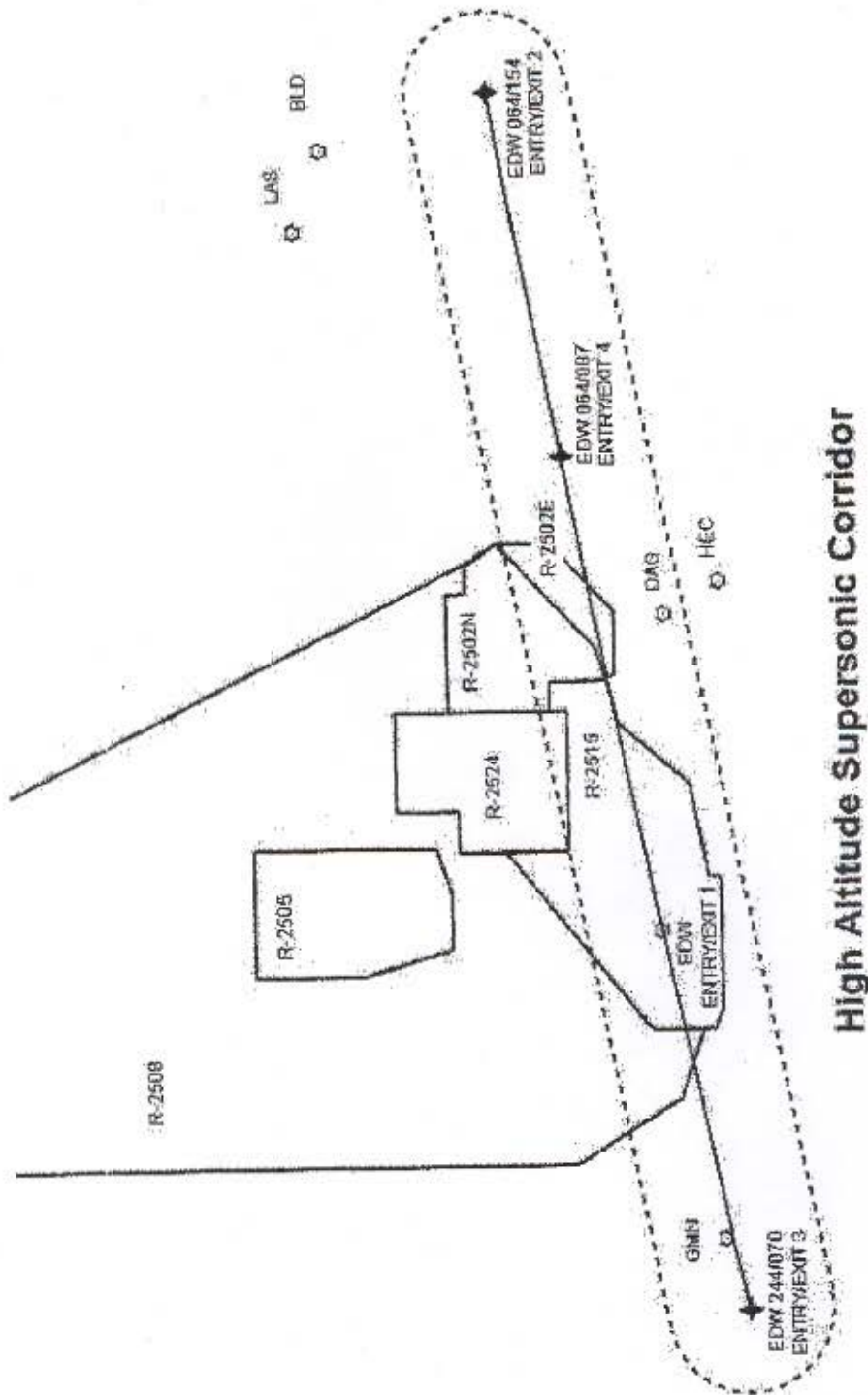


Los Angeles Air Route Traffic Control Center, High Desert Terminal Radar Approach Control, the 412<sup>th</sup> Test Wing and the R-2508 Complex Control Board

Attachment 2

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Effective: 8-1-07





**ATTACHMENT B – MHV PRELIMINARY HIGHSPEED TEST CORRIDOR SCHEDULE**

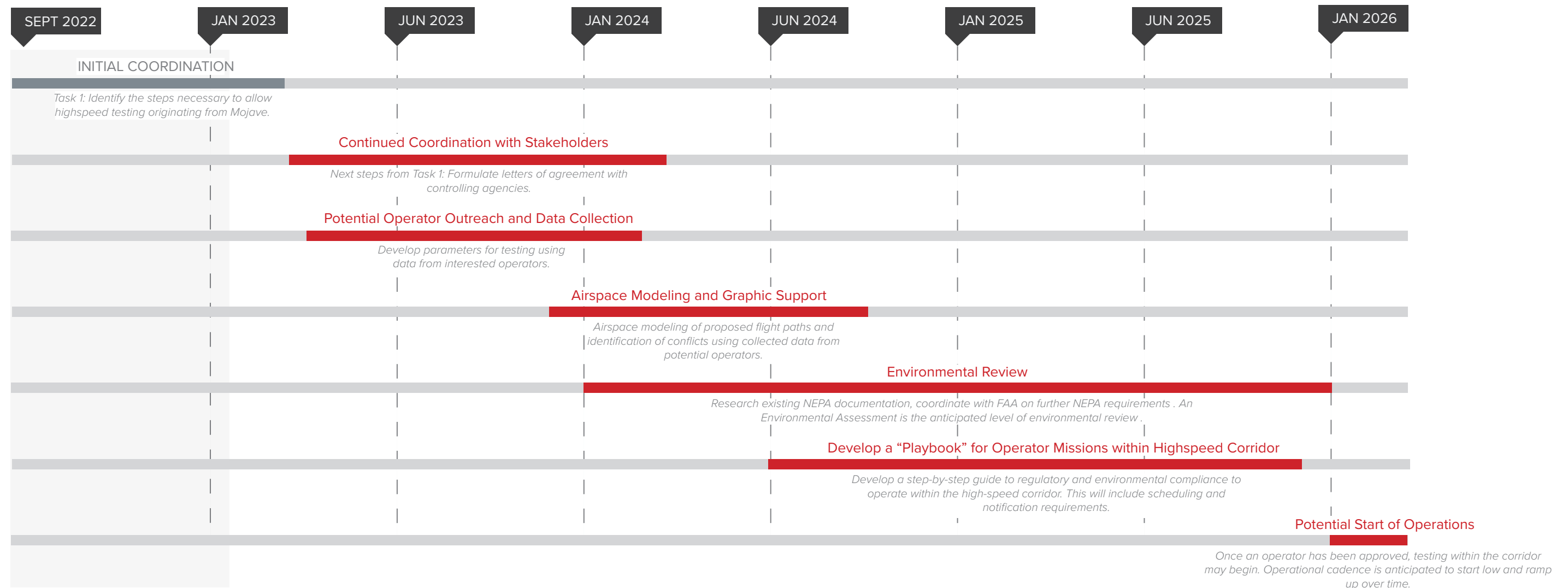
# HIGHSPEED TEST CORRIDOR SCHEDULE

SEPT 2022 - JAN 2026

## Schedule of Concept to Operations of a Highspeed Testing Corridor at Mojave Air and Space Port

Mojave Air and Space Port is interested in access to a highspeed corridor to be used by vehicle test operators that would fuel the development of supersonic and hypersonic technologies. This schedule depicts a trajectory for accomplishing this goal by the end of 2025. The depicted schedule may change as necessary to meet the requirements and undergo the appropriate reviews to implement access to such a corridor.

- Current Kimley-Horn Task - Funded
- Future Task - Not Scoped



**Note:**

The anticipated schedule shown is based on use of existing highspeed corridors and is dependent on variables outside the control of Kimley-Horn. Schedule is subject to changes and is not guaranteed.

Date: Wednesday, March 1, 2023  
 Time: 01:39PM  
 User: CPANKO

**Mojave Air & Space Port**  
**Check Register - Standard**  
 Period: 09-23 As of: 3/1/2023

Page: 1 of 6  
 Report: 03630.rpt  
 Company: MASP

Check Nbr	Check Type	Check Date	Vendor ID Vendor Name	Period To Post Closed	Ref Nbr	Doc Type	Invoice Number	Invoice Date	Discount Taken	Amount Paid
<b>Company: MASP</b>										
Acct / Sub:	101000		1200							
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									<b>Check Total</b>	<b>3,224.79</b>
063295	CK	3/1/2023	0479 Aramark	09-23	052894	VO	2601539195	2/17/2023	0.00	101.19
063295	CK	3/1/2023	0479 Aramark	09-23	052932	VO	2601539218	2/17/2023	0.00	162.62
063295	CK	3/1/2023	0479 Aramark	09-23	052961	VO	2601540362	2/24/2023	0.00	104.94
									<b>Check Total</b>	<b>368.75</b>

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				To Post	Closed						
063296	CK	3/1/2023	0514 E. Michael Louden, P. E.	09-23		052945	VO	2302-05	2/3/2023	0.00	870.00
063297	CK	3/1/2023	0517 De Leon Auto Glass	09-23		052933	VO	W-12414	2/16/2023	0.00	1,360.00
063297	CK	3/1/2023	0517 De Leon Auto Glass	09-23		052934	VO	W-12423	2/20/2023	0.00	690.00
063297	CK	3/1/2023	0517 De Leon Auto Glass	09-23		052935	VO	W-12410	2/15/2023	0.00	240.00
<b>Check Total</b>											<b>2,290.00</b>
063298	CK	3/1/2023	0526 Diamond Ford Accounting	09-23		052936	VO	629587	2/1/2023	0.00	5,873.62
063299	CK	3/1/2023	0610 4 imprint	09-23		052998	VO	24498759	2/17/2023	0.00	2,549.16
063300	CK	3/1/2023	0615 Federal Express	09-23		052900	VO	8-035-63634	2/10/2023	0.00	35.00
063301	CK	3/1/2023	0625 Fire Ace Inc.	09-23		052923	VO	12447033	2/13/2023	0.00	2,906.26
063302	CK	3/1/2023	0712 FRANCOTYP POSTALIA, INC	09-23		052962	VO	RI105651844	1/10/2023	0.00	3.22
063303	CK	3/1/2023	0717 Geographic Data and	09-23		052926	VO	GD109659/1122	1/25/2023	0.00	5,555.00
063303	CK	3/1/2023	0717 Geographic Data and	09-23		052927	VO	GD109660/1222	1/25/2023	0.00	2,365.00
063303	CK	3/1/2023	0717 Geographic Data and	09-23		052928	VO	GD109663/0123	2/14/2023	0.00	3,850.00
<b>Check Total</b>											<b>11,770.00</b>
O											
063305	CK	3/1/2023	51 The Gibbons Family LLC	09-23		052901	VO	INVST PMT/0223	2/1/2023	0.00	6,311.14
063306	CK	3/1/2023	0773 Grainger	09-23		052937	VO	9594961501	2/2/2023	0.00	89.23

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				To Post	Closed						
063306	CK	3/1/2023	0773 Grainger	09-23		052938	VO	9595520256	2/2/2023	0.00	46.22
063306	CK	3/1/2023	0773 Grainger	09-23		052939	VO	9597610170	2/6/2023	0.00	16.56
063306	CK	3/1/2023	0773 Grainger	09-23		052958	VO	9587967143	1/26/2023	0.00	760.88
<b>Check Total</b>											<b>912.89</b>
063307	CK	3/1/2023	0825 Edward Hargroder	09-23		052931	VO	BLDG 1	2/22/2023	0.00	6,475.00
063308	CK	3/1/2023	0842 J. Hitchcock Riverwest	09-23		052903	VO	INVST PMT/0223	2/1/2023	0.00	4,207.43
063309	CK	3/1/2023	1106 Elmer F. Karpe, Inc.	09-23		052902	VO	INVST PMT/0223	2/1/2023	0.00	10,518.56
063310	CK	3/1/2023	1161 Kern Auto Parts Inc	09-23		052963	VO	978539	2/23/2023	0.00	197.71
063310	CK	3/1/2023	1161 Kern Auto Parts Inc	09-23		052964	VO	978511	2/22/2023	0.00	8.56
<b>Check Total</b>											<b>206.27</b>
063311	CK	3/1/2023	1200 L & L Construction	09-23		052946	VO	WE 2.19.23	2/19/2023	0.00	891.00
063312	CK	3/1/2023	1241 Loschnigg Consulting LLC	09-23		052969	VO	WA DC CONF	2/11/2023	0.00	4,083.35
063313	CK	3/1/2023	1254 Lincoln Nat'l Life Ins. Co.	09-23		052924	VO	032023	3/1/2023	0.00	1,062.28
063314	CK	3/1/2023	1315 McMaster-Carr	09-23		052929	VO	91924856	1/30/2023	0.00	2,793.62
063314	CK	3/1/2023	1315 McMaster-Carr	09-23		052947	VO	92538870	2/9/2023	0.00	36.83
063314	CK	3/1/2023	1315 McMaster-Carr	09-23		052949	VO	92538773	2/9/2023	0.00	561.26
<b>Check Total</b>											<b>3,391.71</b>
063315	CK	3/1/2023	1372 Mojave Public Utility District	09-23		052959	VO	01231/0123	2/24/2023	0.00	6,716.15

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				To Post	Closed						
063316	CK	3/1/2023	1373 Mojave Public Utility District	09-23		052960	VO	01232/0123	2/24/2023	0.00	467.00
063317	CK	3/1/2023	1390 Mission Linen Supply	09-23		052948	VO	518763198	2/15/2023	0.00	68.54
063317	CK	3/1/2023	1390 Mission Linen Supply	09-23		052974	VO	518806622	2/23/2023	0.00	68.54
063317	CK	3/1/2023	1390 Mission Linen Supply	09-23		052975	VO	518806626	2/23/2023	0.00	155.67
<b>Check Total</b>											<b>292.75</b>
063318	CK	3/1/2023	1429 Northern Digital, Inc.	09-23		052999	VO	057148	12/31/2023	0.00	13,210.07
063319	CK	3/1/2023	1570 Otis Elevator Company	09-23		052930	VO	100401043743	1/16/2023	0.00	8,476.08
063320	CK	3/1/2023	1571 Ottimo Resources Inc	09-23		052907	VO	4250006025	2/9/2023	0.00	1,216.00
063320	CK	3/1/2023	1571 Ottimo Resources Inc	09-23		052966	VO	4250006067	2/16/2023	0.00	1,152.00
<b>Check Total</b>											<b>2,368.00</b>
063321	CK	3/1/2023	1670 Linde Gas & Equipment Inc.	09-23		052965	VO	34296207	2/22/2023	0.00	67.57
063322	CK	3/1/2023	1800 Ramos Strong Inc	09-23		052908	VO	0383822	2/7/2023	0.00	2,937.12
063322	CK	3/1/2023	1800 Ramos Strong Inc	09-23		053002	VO	0384407	2/22/2023	0.00	2,457.13
<b>Check Total</b>											<b>5,394.25</b>
063323	CK	3/1/2023	1803 Race Telecommunications, Inc.	09-23		053000	VO	RC841649	3/1/2023	0.00	556.92
063323	CK	3/1/2023	1803 Race Telecommunications, Inc.	09-23		053001	VO	RC841343	3/1/2023	0.00	806.36
<b>Check Total</b>											<b>1,363.28</b>
063324	CK	3/1/2023	1865 RLH Fire Protection	09-23		052971	VO	0982722	2/15/2023	0.00	1,214.00
063324	CK	3/1/2023	1865 RLH Fire Protection	09-23		052972	VO	0982821	2/22/2023	0.00	2,169.00
<b>Check Total</b>											<b>3,383.00</b>
063325	CK	3/1/2023	1896 Speedy Car Wash	09-23		052970	VO	5024	2/20/2023	0.00	50.00



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				To Post	Closed						
063326	CK	3/1/2023	1925 Sparkletts	09-23		052918	VO	13703338021623	2/16/2023	0.00	639.71
063327	CK	3/1/2023	1950 Society of Exp. Test Pilots	09-23		052917	VO	2023	2/21/2023	0.00	500.00
063328	CK	3/1/2023	1952 Southern California Edison	09-23		052915	VO	196090594/0223	2/15/2023	0.00	309.94
063328	CK	3/1/2023	1952 Southern California Edison	09-23		052916	VO	616545683/0223	2/15/2023	0.00	1,697.87
<b>Check Total</b>											<b>2,007.81</b>
063329	CK	3/1/2023	1954 Southern California Gas	09-23		052911	VO	61545001/0223	2/14/2023	0.00	2,772.81
063329	CK	3/1/2023	1954 Southern California Gas	09-23		052912	VO	11545997/0223	2/14/2023	0.00	2,613.78
063329	CK	3/1/2023	1954 Southern California Gas	09-23		052913	VO	31545767/0223	2/14/2023	0.00	454.07
063329	CK	3/1/2023	1954 Southern California Gas	09-23		052914	VO	89363938/0223	2/14/2023	0.00	1,451.67
<b>Check Total</b>											<b>7,292.33</b>
063330	CK	3/1/2023	2071 Synchrony Bank	09-23		052910	VO	010623	1/6/2023	0.00	1,216.76
063331	CK	3/1/2023	2136 UNUM Life Ins. Co.	09-23		052925	VO	0323	3/1/2023	0.00	2,938.80
063332	CK	3/1/2023	2230 Verizon Wireless	09-23		052968	VO	9927549715	2/12/2023	0.00	1,717.64
063333	CK	3/1/2023	2450 Xerox Corporation	09-23		052920	VO	018138468	2/1/2023	0.00	119.76
063333	CK	3/1/2023	2450 Xerox Corporation	09-23		052921	VO	018138469	2/1/2023	0.00	75.44
063333	CK	3/1/2023	2450 Xerox Corporation	09-23		052922	VO	504276578	2/3/2023	0.00	279.79
<b>Check Total</b>											<b>474.99</b>
063334	CK	3/1/2023	3027 Nicole Altman	09-23		052994	VO	022723	2/27/2023	0.00	1,088.55

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063335	CK	3/1/2023	3030 Sonia Valenzuela	09-23	052919	VO	012723	2/16/2023	0.00	59.00
063335	CK	3/1/2023	3030 Sonia Valenzuela	09-23	053004	VO	022423	2/27/2023	0.00	131.60
									<b>Check Total</b>	<b>190.60</b>
063336	CK	3/1/2023	3031 Floyd Vanwey	09-23	052996	VO	022723	2/27/2023	0.00	1,546.50
063337	CK	3/1/2023	3043 Ashlee Diaz	09-23	052899	VO	032923/PERDIEM	2/10/2023	0.00	482.00
063338	CK	3/1/2023	3220 Ray Hatfield	09-23	052940	VO	022123	2/23/2023	0.00	102.80
063338	CK	3/1/2023	3220 Ray Hatfield	09-23	052951	VO	121522	2/22/2023	0.00	55.00
									<b>Check Total</b>	<b>157.80</b>
063339	CK	3/1/2023	3864 Carrie Rawlings	09-23	052909	VO	021523	2/15/2023	0.00	55.00
063340	CK	3/1/2023	4014 Jason, Buck	09-23	052895	VO	032923/PERDIEM	2/17/2023	0.00	473.25

Check Count: 53

**Acct Sub Total: 135,868.01**

Check Type	Count	Amount Paid
Regular	52	135,868.01
Hand	0	0.00
Electronic Payment	0	0.00
Void	0	0.00
Stub	0	0.00
Zero	0	0.00
Mask	0	0.00
<b>Total:</b>	<b>52</b>	<b>135,868.01</b>

<b>Company Disc Total</b>	<b>0.00</b>	<b>Company Total</b>	<b>135,868.01</b>
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**AIR & SPACE PORT  
AT RUTAN FIELD**

*Electronic Fund Transfers for February 9 through February 27, 2023*

<b>Date</b>		<b>Debit</b>
2/9/2023	ACH DEBIT INVESTMENT DSTRS	\$250.00
2/9/2023	ACH DEBIT INVESTMENT DSTRS	\$250.00
2/10/2023	ACH DEBIT EFTTRANSFE AVFUEL	\$99,713.77
2/10/2023	ACH DEBIT ACH PMT AMEX EPAYMENT	\$18,947.42
2/10/2023	ACH DEBIT CLOVER APP CLOVER APP MRKT	\$44.95
2/13/2023	ACH DEBIT EFTTRANSFE AVFUEL	\$35,253.91
2/13/2023	ACH DEBIT ACH PMT AMEX EPAYMENT	\$1,404.64
2/15/2023	WIRE TRANSFER FEE	\$15.00
2/15/2023	ACH DEBIT CDTFA EPMT CA DEPT TAX FEE	\$7,963.35
2/16/2023	ACH DEBIT PAYROLL PAYCHEX	\$64,928.00
2/16/2023	ACH DEBIT EFTTRANSFE AVFUEL	\$35,214.17
2/16/2023	ACH DEBIT GARNISH PAYCHEX CGS	\$48.96
2/16/2023	ACH DEBIT PAYROLL PAYCHEX	\$64,928.00
2/16/2023	ACH DEBIT EFTTRANSFE AVFUEL	\$35,214.17
2/16/2023	ACH DEBIT GARNISH PAYCHEX CGS	\$48.96
2/17/2023	ACH DEBIT EFTTRANSFE AVFUEL	\$35,287.52
2/17/2023	ACH DEBIT TAXES PAYCHEX TPS	\$12,826.53
2/17/2023	ACH DEBIT TAX SALE KERN COUNTY	\$5,035.00
2/17/2023	ACH DEBIT INVOICE PAYCHEX EIB	\$267.05
2/17/2023	ACH DEBIT EFTTRANSFE AVFUEL	\$35,287.52
2/17/2023	ACH DEBIT TAXES PAYCHEX TPS	\$12,826.53
2/17/2023	ACH DEBIT TAX SALE KERN COUNTY	\$5,035.00
2/17/2023	ACH DEBIT INVOICE PAYCHEX EIB	\$267.05
2/21/2023	ACH DEBIT INVOICE PAYCHEX-OAB	\$700.35
2/21/2023	ACH DEBIT INVOICE PAYCHEX-OAB	\$700.35
2/22/2023	ACH DEBIT PAYABLES Mojave Air-Space0002	\$55,833.33
2/22/2023	ACH DEBIT PAYABLES Mojave Air-Space	\$210.00
2/22/2023	CHARGES & FEES, ACH PER BATCH FEE X 2 ITEMS	\$10.00
2/22/2023	ACH DEBIT PAYABLES Mojave Air-Space	\$55,833.33
2/22/2023	ACH DEBIT PAYABLES Mojave Air-Space	\$210.00
2/22/2023	CHARGES & FEES, ACH PER BATCH FEE X 2 ITEMS	\$10.00
2/23/2023	MEMO DEBIT : Wire Transfer Fee	\$15.00
2/23/2023	MEMO DEBIT : Wire Transfer Fee	\$15.00
2/24/2023	ACH DEBIT EFTTRANSFE AVFUEL	\$33,980.26
2/24/2023	ACH DEBIT CDTFA EPMT CA DEPT TAX FEE	\$949.00
2/27/2023	ACH DEBIT CDTFA EPMT CA DEPT TAX FEE	\$448.00
2/27/2023	FEE TM-ACH OR MULTIPLE SERVICES	\$75.00
2/27/2023	ACCOUNT SERVICE FEE RDC MONTHLY FEE	\$75.00
	<b>TOTAL</b>	<b>\$620,122.12</b>