

Friedman Memorial Airport Authority

Regular Board Meeting

December 4, 2018





Approve Agenda



Public Comment (10 Minutes)



Approval of Meeting Minutes

October 2, 2018 Regular Meeting October 24, 2018 Special Meeting November 6, 2018 Regular Meeting



Reports

Reports

- Chairman Report
- Blaine County Report
- City of Hailey Report
- Fly Sun Valley Alliance Report
- Airport Manager's Report









Fly Sun Valley Alliance Air Service/Industry Update

Friedman **Memorial** Airport (SUN)

December 2018

- Airline Industry Trends
- Resort Area Air Service Trends
- SUN Air Service Market History and Trends

Airline Industry Trends



Economy Drives Airline Financial Performance



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And Financial Performance Drives Capacity

- Airlines consistently profitable since 2010.
- U.S. recessions over last 30 years drove losses and capacity pullback.
- 2008-2009 Great Recession took 10 years to recover pre-recession capacity levels.
- 1H2018 profitability down and some airlines already slowing growth.



- Prices dropped by 43% on average in 2015 driving record profitability.
- Airlines are replacing older/smaller planes with more fuel efficient aircraft.
- Fuel went from 32% of airline expenses in 2013 to 19% in 2016 but increased in 2017/18
- 1 cent/gallon equates to ~\$200M in U.S. airline industry fuel expense.

Airport Trends – Domestic <u>Flights/Seats</u> by Airport Size



■ Non-hub ■ Small hub ■ Medium hub ■ Large hub ■ Total

- Airlines have reduced flights at non-hub airports.
- SUN #244 of 386 ranked commercial service airports.
- SUN seats have increased 62% with 15% fewer flights.

Seat Change (CY 2018 vs. CY 2013)



| 2017 FAA Commercial Service Airport Ranking | | | | | | |
|---|------------|--------------|----------|--|--|--|
| Hub size | # Airports | Enplanements | Example | | | |
| Large | 30 | 9.4M-50M | PDX #30 | | | |
| Medium | 31 | 2.2M-7.6M | SNA #42 | | | |
| Small | 70 | 440k-2.1M | BOI #69 | | | |
| Non-hub | 255 | 10k-423k | SUN #244 | | | |

Resort Area Air Service Trends

Resort Changes Over 5-Year Period

| 12 Months | ASE | EGE | GUC | HDN | JAC | ММН | MTJ | SUN | | |
|-------------------------------|---------|--------------|------------------------------|------------------------|-------------------|--------------------|--------------------------|--------------|-----------|--|
| ending August 2018 vs 2013 | (Aspen) | (Vail/Eagle) | (Gunnison- Crested Butte) | (Steamboat Springs) | (Jackson Hole) | (Mammoth Lakes) | (Montrose- Telluride) | (Sun Valley) | Total | |
| Flights | 6,160 | 2,326 | 796 | 1,903 | 4,136 | 593 | 2,611 | 1,690 | 20,212 | |
| Change vs 2013 | 1,718 | 365 | 206 | 409 | 866 | (136) | 894 | (230) | 4,092 | |
| % change | 39% | 19% | 35% | 27% | 26% | (19%) | 52% | (12%) | 25% | |
| Seats | 430,487 | 282,572 | 55,655 | 153,411 | 478,958 | 42,055 | 183,495 | 124,608 | 1,751,141 | |
| Change vs 2013 | 137,984 | 24,887 | 8,539 | 12,659 | 118,786 | (9,964) | 68,434 | 50,486 | 411,810 | |
| % change | 47% | 10% | 18% | 9% | 33% | (19%) | 59% | 68% | 31% | |
| Passengers | 268,300 | 170,949 | 36,472 | 101,064 | 362,344 | 25,179 | 129,872 | 91,147 | 1,185,275 | |
| Change vs 2013 | 65,422 | 4,614 | 6,036 | 8,478 | 72,529 | (4,931) | 47,213 | 42,161 | 241,529 | |
| % change | 32% | 3% | 20% | 9% | 25% | (16%) | 57% | 86% | 26% | |
| Seat Load Factor | 62% | 60% | 66% | 66% | 76% | 60% | 71% | 73% | 68% | |
| Change vs 2013 | (7%) | (4%) | 1% | 0 | (5%) | 2% | (1%) | 7% | (3%) | |

• Upgrading props to jets and adding new destinations/competition has resulted in significant growth at SUN.

- SUN share of total seats increased from 5.5% to 7.1% and **passengers increased from 5.2% to 7.7%.**
- SUN seat load factor at 73% was 5 points higher than the resort average.

Monthly Seats by Market

- Flight seasonality based on peak/low demand is a factor for all resort airports.
- Competition for winter seat capacity is very strong – all resorts except MMH and GUC have more winter seats and nonstop destinations than SUN.
- Summer/fall capacity is focused in fewer resorts but growing – only JAC and ASE have more summer capacity and destinations than SUN.
- Most resorts have very limited seat capacity in non-peak spring and fall.



Winter 2018/2019 Seats by Origin Market



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10

SUN Air Service Market

SUN Growth Since 2014 (Average Passengers/Day)

12

Increased service driving strong growth in all 4Q.

| Period | Seats | Рах |
|--------|-------|-----|
| 1Q | 37% | 49% |
| 2Q | 44% | 69% |
| 3Q | 18% | 20% |
| 4Q | 51% | 44% |

- Winter (1Q) now approaching summer passenger level.
 - 1Q = January March 2Q = April – June 3Q = July – September 4Q = October - December



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SUN Average Seats and Passengers/Day Year ending August



- SUN seats/day increased significantly from 2012 to 2018.
- Current SUN passengers 25% higher than 2004-2008 period.
- 70%+ of SUN seats being filled compared to 50-54% pre-2009.
- U.S. average load factor = 85% compared to average resort load factors at 68%.
- SUN has record enplanements in August 2018!

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SUN Schedule Evolved Over Time

- Schedule reductions were implemented as a result of the 2008 recession.
- SkyWest further reduced SLC capacity due to limited demand and higher costs 2011-2013.
- UA service to SFO, DEN and ORD and additional DL SLC service led to significant growth.

| Travel Year | SLC | SEA | LAX | SFO | DEN | PDX | ORD | ΟΑΚ | SEA one- stop | Total |
|-------------|--------|--------|--------|--------|--------|-------|-----|-------|------------------|---------|
| 2004 | 98,100 | 25,760 | 12,740 | | | | | 7,280 | | 143,880 |
| 2005 | 99,030 | 24,382 | 13,650 | | | | | 7,700 | 910 | 145,672 |
| 2006 | 99,600 | 24,790 | 13,986 | | | | | 8,066 | 5,846 | 152,288 |
| 2007 | 99,840 | 23,804 | 14,258 | | | | | 8,436 | | 146,338 |
| 2008 | 93,030 | 22,570 | 12,876 | | | | | 7,104 | 10.286 | 145,866 |
| 2009 | 74,430 | 6,586 | 7,574 | | | | | | 13,904 | 102,494 |
| 2010 | 68,850 | 7,980 | 12,692 | | | | | | 18,392 | 107,914 |
| 2011 | 61,740 | 15,048 | 15,048 | | | | | | | 91,836 |
| 2012 | 48,900 | 15,884 | 14,440 | | | | | | | 79,224 |
| 2013 | 51,420 | 15,884 | 15,352 | 1,320 | | | | | | 83,976 |
| 2014 | 53,225 | 17,784 | 16,264 | 12,336 | 6,230 | | | | | 105,839 |
| 2015 | 47,840 | 16,720 | 14,668 | 11,900 | 8,050 | | | | | 99,178 |
| 2016 | 57,845 | 19,487 | 18,559 | 12,810 | 10,290 | 380 | | | | 119,371 |
| 2017 | 59,629 | 24,449 | 20,324 | 14,446 | 12,626 | 4,484 | 152 | | | 136,110 |
| 2018 | 65,794 | 21,508 | 17,466 | 13,148 | 13,148 | 4,028 | 760 | | | 135,852 |
| 2019 | 70,661 | 19,380 | 14,288 | 14,592 | 12,388 | | 760 | | | 132,069 |

On the Horizon

On the Horizon

- More competition for SUN -- early schedules show resorts increasing capacity 9% for summer 2019.
- FMAA continues working to accommodate current and potential future growth at SUN.
- Indications that fuel price uncertainty and recession concerns will temper airline growth.
 - "We are continuing to look for opportunities to reduce marginal flying in a higher fuel environment."
 - Ed Bastian, CEO Delta 2Q18 Earnings Call



- Southwest plans to trim planned capacity growth in the second half of 2018 "in light of current revenue trends and higher oil prices." – Gary Kelly, Chairman and CEO
- JetBlue expects capacity to increase between 6.5% and 7.5%, including a 2 point reduction to capacity in the fourth quarter of 2018. – JetBlue 3Q18 press release
- Competition for new air service will tighten in this environment.





Airport Manager's Report



Tower Planning Update



Tower Planning





Other Happenings

- Active shooter/active attack training – tomorrow
 Over 70 people
 - Thanks HPD and BCSO LE
 - St. Luke's
 - Steve G.

SRE challenges



"On the Horizon"

- Auditor Report
- First review of new employee handbook



Airport Holiday Party!



- December 7
- 6:30 pm
- Airport Terminal
- Hope to see you there!



Farewell...

Thank you...

Godspeed...

Retirement Party

- December 27
- 5:30-7:30 pm
- The Mint





Airport Staff Brief Questions



Action New Business

Change of Date January 2019 Meeting

- Regularly scheduled date Tuesday, January 1, 2019
- Proposing, Tuesday, January 8, 2019
- Motion:
 - Motion to approve FMAA January 2019 meeting date to...?





Action Continuing Business

Snow Removal Equipment Bids

- Bids for Snow Removal Equipment were opened on August 30
- Five bids were received

| Bidder | Bid | | | |
|-------------------------------|----------------------|--|--|--|
| J.A. Larue, Inc. | \$528,448 | | | |
| Kodiak America LLC | \$530,000/\$535,000* | | | |
| Oshkosh Airport Products, LLC | \$545,213 | | | |
| M-B Companies, Inc. | \$567,382 | | | |
| Wasua Equipment Company, Inc. | \$601,798 | | | |

*Bid from Kodiak included two separate bid submittals, with different prices on each submittal.

Snow Removal Equipment Bids

- LaRue submitted "Type III Waiver" documentation for Buy American requirements
 - FAA disapproved request, therefore LaRue's bid is nonresponsive
- Kodiak bid was disqualified
 - $\,\circ\,$ Two bids and prices submitted
- Oshkosk submitted "Type III Waiver" documentation
 FAA approved this request
Snow Removal Equipment Bids

• Motion:

Recommend award to Oshkosh Airport Projects, LLC in the amount of \$545,213, subject to FAA concurrence.

Time is of the essence... Nearly 365 day delivery schedule...



Discussion and Updates New Business

Instrument Approach Presentation

Alec Seybold

Flight Tech Engineering





Instrument Flight Procedure Capabilities



December 2018

Specializing in navigation solutions for mountainous airports



Flight Procedure Capabilities

- Approach & Departure: Flight Tech can evaluate, build, and design a full range of conventional (ground based) and RNAV flight procedures.
- Implementation: If evaluations lead to a viable procedure, Flight Tech can present the analysis to the FAA and allow for fast track development of new public procedures. Flight Tech also can work with air carriers to implement the procedures privately on an expedited timeline.
- **Obstacle Impact Assessments:** Full flight procedure impact for Construction Proposals, OE/AAA & NOTAM Assessments. Flight Tech also has FAA approval to perform ground obstacle inspections for flight procedures.
- Airspace Integration: New flight procedures are coordinated with existing airports and ATC services.



Operator Coordination

Differences exist between the navigational capabilities and aircraft equipage of different aircraft operators. Flight Tech maintains active relationships within the business aviation and airline industry and coordinates with theses stakeholders when assessing new procedure concepts. If required, simulator validation of new concepts is performed to ensure the flyability of procedures in real world conditions.



Image Examples: Testing of new flight procedures in coordination with air carriers at Flight Safety International.

Project Portfolio & Examples

 While we assist airports and aircraft operators across the entire country, Flight Tech specializes in challenging mountainous locations and airport construction procedures. The following slides contain examples an artifacts from a few of these projects.

• The advanced procedure design software we employ allows us to model legacy conventional procedures as well the latest PBN design concepts.





US Mountain OPS & Approach Overview

| Airport Name | Asnen-Pitkin County | Telluride Regional | Hailey/ Friedman | luneau Intl. AK | Cody/Vellowstone | Mammoth Vosemite | Butto MT | Gunnison / CB | Vamna Valley | Eagle County |
|-------------------------|-------------------------|--------------------|-----------------------------|------------------|--------------------|-------------------|---------------|-------------------|-----------------|-----------------|
| | κΔSF | KTFX | KSLIN | ΡΔ ΙΝΙ | KCOD | кммн | KBTM | KGUC | | KEGE |
| Location | Aspen Colorado | Telluride Colorado | Hailey Idaho | | Cody Wyoming | Mammoth Lakes CA | Butte Montana | Gunnison Colorado | Havden Colorado | Eagle Colorado |
| | 8006' x 100' | 7111' x 100' | 7550' x 100' | 8857' x 150' | 8268' x 100' | 7000' x 100' | 9000' x 150' | 9400' x 150' | 10 000 x 150' | 9000' x 150' |
| Field Flov | 7838' | 9070 | 5319 | 25' | 5102' | 7135' | 5550 | 7680' | 6603' | 6547' |
| One Way Arnt? | Vos. Ski Posort Hill | Vos/No. Mountains | Voc – Vollov/Mtro | No | | No | No | No | No | No |
| Drimory Don Buny | 22 | 27 | 12 | NO | NO (AFFCH Kest) | NO | NO | NO | | NO |
| Primary LNDG Puty | 15 | 0 | 21 | | 22 | 27 | 15 | | | |
| | No | Yos CAT D Circlo | Voc | No | ZZ Voc | No | Yor | Voc | Voc | Voc |
| Advanced PND Avail2 | No | No. | 165 | NO | 165 | No | | Voc. BND | Voc. BND | No |
| CONV/ New Cet C mine | 2400.2 | | 2800 F | 2200.4 | 700.2 | | 200 1/2 | 1000.2 | 200.2/4 | 1900.2 |
| | 2400-3 | | 2800-5 | 3200-4 | 700-2 | N/A | 300-1/2 | 2 20% | 200-3/4 | 1800-3 |
| | 0.59 | 3.02 | 000.0.5 | 1000.0 | 100 1 1 / 1 | N/A | 3.50 | 5.20 | 3.00 | 3.80 |
| RNAV Cat C Mins | 2400 [°] - 3nm | 1600-3 | 900-2.5 | 1900-2 | 400-1 1/4 | 1300-3 | 300-1/2 | 500-1 1/4 | 500 - 1 1/2 | 2400-3 |
| RNAV Descent Angle | 6.49° | 3.59° | 3.50° | | 3.00° | 3.00° | 3.50° | 3.20° | 3.00° | |
| Private CONV CAT C Mins | Yes - LOC: 1000-3 | Yes - LOC: 1300-3 | RNP (.1) 31 | AS/DL RNP | N/A | RNP 09/27 | N/A | ILS/FMS 06 | RNP 28 | RNP/ILS/FMS |
| Private APPCH Owner | FAA / NetJets | TRAA/DFA | Alaska / Horizon | Alaska/Delta/FAA | - | Alaska/Horizon | | FAA | Delta | FAA / Delta |
| Private APPCH Descent | 4.55° | 3.60° | | , , | | | | | | , |
| Hours Avail | 07:00-23:00 | 06:00-2100 | 07:00-2300 | 24Hr | | 08:00-16:30 | Dawn-Dusk | 0600-2230 | 0600-2000 | |
| ILS Equip Avail | YES (2)- I-ASE/I-PKN | YES (1) I-TEX | No | Yes (1) I-JDL | No | No | Yes (1) I-BEY | Yes (1) I-GUC | Yes (1) I-HDN | Yes (1) I-ESJ |
| EMAS | No | Yes (09/27) | No | No | No | No | No | No | No | No |
| ATCT | Yes | No | Yes | Yes | No | No | No | No | No | Yes |
| Approach Lights | Yes- MALSF | No | No | Yes- MALSF | No | No | Yes - MALSR | Yes -MALSF | Yes - MALSF | Yes - MALSR |
| | | | | | | | | | | American/United |
| Air Carriers | SkyWest | Boutique | SkyWest / Horizon | Mainline/Reg | SkyWest/GoJet/Mesa | SkyWest/Horizon | SkyWest | American/United | Delta / United | |
| Airline Aircraft | CRJ-700 | PC-12 | EMB 175 / Q400 | 737/A320 | ERJ-175 / CRJ-700 | CRJ-700 / Q400 | CRJ 200 | A319/ERJ | 737/A320 | RJ/A319/757 |
| Challenges | Winds LNDG RWY 33 | Winds LNDG RWY 27 | LDA 6,631', M.A. Terrain | | Winds LNDG RWY 04 | Winds LNDG RWY 09 | Obstacles | Terrain | Terrain | Terrain |

Private Special

Oakland International (KOAK

- Our procedure designers helped mitigate the impacts to flight operations when the primary air carrier runway (12/30) at Oakland International needed to be closed for pavement resurfacing in the summer of 2017. In support of this effort, we designed, implemented, and maintained temporary RNAV approach procedures to the new runway and performed extensive obstruction clearance analysis related to the procedure design and aircraft performance needs of stakeholders.
- Fifteen domestic and foreign air carriers(including Delta mainline) utilized the temporary RNAV procedures during this time period.





Yellowstone Regional Airport (KCOD)

Due to prevailing winds and smoke from summer fires, aircraft landing in Cody were diverting as a result of no instrument procedures to Runway 04. We performed a feasibility study to demonstrate that a RNAV (GPS) solution to Runway 04 was possible. This feasibility study was provided to the FAA and will be put in the development queue.





Aspen Airspace & Procedure Redesign (KASE)

Aspen Airspace & Procedure Redesign (KASE)

As a direct contractor to the Airport Authority (Pitkin County) and its engineering firms, Flight Tech represented the airports interests and actively participates in the Aspen Airspace & procedure design process ongoing within the FAA.

Due to changes driven by Aspen's unique Opposite Direction Operations (ODO), Flight Tech was contracted to participate in the Full Working Group (FWG) meetings consisting of FAA and air carrier representatives. This included a variety of PBN flight path changes/additions that had potential for community impact. As each new proposal was presented by the group, Flight Tech quickly determined impacts, provided visuals, and briefed the airport authority to ensure they had a clear picture and to ensure any concerns were conveyed.

The feedback provided by Flight Tech was also utilized by the airport and Pitkin County to provide better feedback to its community stakeholders as new PBN flight paths were proposed.







Airspace Planning for ASE Opposite Direction Operations

Aspen, CO Examples:

Developing solutions for integrating legacy convention and PBN procedures in the same Airspace.





ASE ODO Continued

Analysis of approach and departure procedures and consultation with Aspen Tower and DEN ARTCC to determine spacing requirements to allow for improved ODO operations.



Telluride Regional Airport Elevation 9,070 ft.

Flight Tech Developed:

- ✓ RWY 09 Localizer 'CAT C' Procedure
- ✓ RYY 09 Vertically Guided LPV Procedure
- ✓ RWY 27 Visual Procedure

Telluride Regional Airport (KTEX)

Flight Tech was tasked by the Telluride Airport Authority to assess the feasibility of expanding current CAT B Localizer approach for CAT C minimums and to analyze instrument procedure operations to RWY 27.

Upon review of the study, the airport board commissioned FTE to implement a new CAT C – Special Localizer approach opening the airport to a wider range of aircraft and with lower minimums. This new procedure was approved by the FAA and activated for private use in 2017. Building on the success of the new LOC M approach, the airport has expanded the scope of work with FTE to include a new vertically guided RNAV approach with LPV line of minima to RWY 09 expected in Q1 2019.





Friedman Memorial (KSUN)

Building on Past efforts

SUN has performed considerable research in the past to explore and even implement solutions consisting of Microwave, Transponder, and traditional ILS based navigational aids.

With the widespread availability of WAAS enabled satellite technology, the FAA is moving away from funding, installing and supporting traditional ground-based navigation infrastructure.

The airline industry is reaching a point where WAAS and RNP capabilities are becoming more common as older aircraft are upgraded and new aircraft are being delivered with advanced avionics to support this capability from the factory.

Building on recommendations stated in the 2013 report, Flight Tech will model these procedures to ensure the feasibility of each design.

Feasibility Study Overview

Task One: Meetings

- ✓ Airport Authority to discuss facilities, planned obstacle mitigation, noise abatement, and local routing preferences.
- ✓ Sun Valley Tower/ SLC ARTCC: Preferred routings, local procedure considerations, VFR traffic integration, Opposite Direction Operations (ODO) considerations.
- ✓ Air Carrier (i.e. SkyWest): Determine Navigation Capabilities, RNP Levels, Aircraft Performance Capabilities.

Task Two: Obstacle Deconfliction

- ✓ Review the baseline survey data from the 2013 Vertically Guided Approach survey.
- ✓ Based on planned obstacle mitigation work, we'll create a test obstacle database to emulate the new flight procedure benefits that would be achieved.
- ✓ Load new obstacles sets in to the procedure design tools and document results.

Task Three: Flight Procedure Assessment

FTE will explore different RNAV approach design concepts.

- ✓ RNAV (RNP-AR) Approach to RWY 31
- ✓ RNAV (GPS) WAAS LPV Approach to RWY 31
- ✓ A final report will be generated detailing the specifics of each procedure including weather minima, deviations required, and aircraft navigation and performance requirements.

Goals of the Feasibility Study

- Determine a new Performance Based Navigation (PBN) solution that works for today's Jet fleet aircraft operating at Hailey.
- Document the results so they can be used in the next stage of the project which includes final design, FAA Form 8260 generation, FMS encoding, FAA approval and publication for air carrier use.
- Prepare a solution that will prevent unnecessary diversions in inclement weather.
- Improve passenger flying experience when utilizing the Friedman Memorial Airport.

Regional Jet Fleet Limitations

- The current lineage of regional jets such as the CRJ 200/700 and ERJ 135/145 will start to reach their end of life between 2025-2030.
- This transformation is already occurring as air carriers have been steadily ordering new quantities of Embraer 175/195 series aircraft.
- Additional market entrants will be the Airbus A220 (for airports capable of 115' wingspan) and Mitsubishi Regional Jet.
- Each air carrier orders aircraft with different levels of navigation equipage. Just because the aircraft is equipped does not mean the air carrier can utilize the capabilities.
- Furthermore, advanced levels of RNP (below .3 in the final and 1.0 in the missed) usually require additional avionics upgrades.





End of Report





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Discussion and Updates Continuing Business

Construction and Capital Projects



TSA Screening/Terminal Improvements

- > 2nd Security Checkpoint
- Holdroom expansion
- FAA Supplemental Discretionary Request
 \$1.7 million
- Mid-December notification
 - 2100 requests
 - \$10 billion
 - Under \$1 billion available



TSA Screening/Terminal Improvements

- Timing?
 - Goal: next summer late (September)
- Flight Schedule will be critical Summer 2019
 - TSA throughput capacity
 - Fire Code Max Occupancy
- Beyond our Control
 - Passenger arrival times

Continued coordination with FSVA and the airlines







TSA Screening/Terminal Improvements



Airport Planning Projects





Environmental Assessment Land Acquisition and Obstruction Removal

EA Status

- 4(f) memo and Memorandum of Agreement with SHPO are complete
- FAA review of Chapters 1-3 was completed last week
 - Chapter 1 Background and Proposed Action
 - Chapter 2 Purpose and Need
 - Chapter 3 Alternatives
 - Note: Chapters 1-2 had been reviewed several times previously, but were reviewed again, with proposed changes from FAA
- Revised Chapters 1-3 will be submitted by December 7

EA Status

- Upon acceptance of Chapters 1–3, Chapter 4 will be completed
 - Chapter 4 Affected Environment, Environmental Consequences, and Mitigation
- DRAFT EA will be distributed to board as soon as it is complete
- A public meeting will be scheduled and the Draft EA will be published following Board review



Public Comment

Executive Session

I.C §74-206 (c)To acquire an interest in real property which is not owned by a public agency

I.C §74-206 (f) to communicate with legal counsel to discuss legal ramifications for controversy imminently likely to be litigated



Action – Continuing Business

 Proceeding to make earnest money deposit under terms of PSA with Flying Hat Ranch, LLC



Thank You!

