

Department of Transportation
 Division of Secretariat
 Office of Air, Rail & Transit
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TO: South Dakota Aeronautics Commission
 FROM: Jack Dokken, Office of Aeronautics
 DATE: May 17, 2019
 SUBJECT: Financial Assistance Agreements

The Office of Aeronautics is requesting funding from the State Aeronautics Fund for the AIP projects below.

Canton 3-46-0007-008-2019

Design hangar taxilane reconstruction.

Federal Share	\$	70,200.00
State Share	\$	3,900.00
Local Share	\$	3,900.00
Total	\$	78,000.00

The Department recommends approval of state assistance in the amount of **\$3,900.00**

Faulkton 3-46-0016-011-2019

Reconstruction of south GA apron.

Federal Share	\$	657,000.00
State Share	\$	36,500.00
Local Share	\$	36,500.00
Total	\$	730,000.00

The Department recommends approval of state assistance in the amount of **\$36,500.00**

Miller 3-46-0035-010-2019

ALP update, archeological survey and wetland delineation; land appraisal and land acquisition assistance reimbursement.

Federal Share	\$	202,500.00
State Share	\$	11,250.00
Local Share	\$	11,250.00
Total	\$	225,000.00

The Department recommends approval of state assistance in the amount of **\$11,250.00**

Redfield 3-46-0049-012-2019

Design of wildlife fence.

Federal Share	\$	31,500.00
State Share	\$	1,750.00
Local Share	\$	1,750.00
Total	\$	35,000.00

The Department recommends approval of state assistance in the amount of **\$1,750.00**

Vermillion 3-46-0056-013-2019

Design hangar taxilane reconstruction

Federal Share	\$	49,500.00
State Share	\$	2,750.00
Local Share	\$	2,750.00
Total	\$	55,000.00

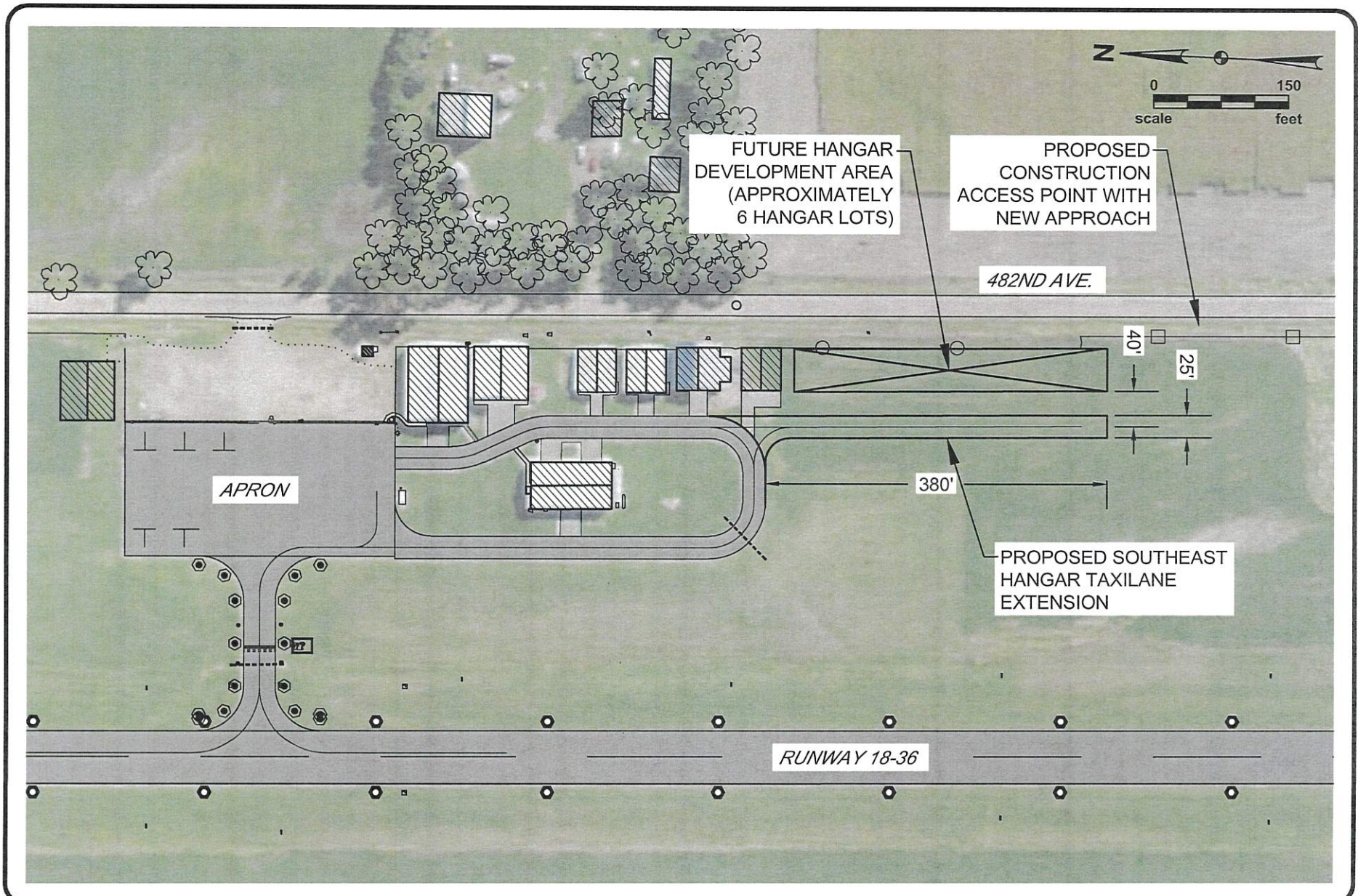
The Department recommends approval of state assistance in the amount of **\$2,750.00**

Winner 3-46-0061-016-2019

Design lower apron expansion – phase 2.

Federal Share	\$	45,000.00
State Share	\$	2,500.00
Local Share	\$	2,500.00
Total	\$	50,000.00

The Department recommends approval of state assistance in the amount of **\$2,500.00**



DRAFTED BY: JJB
REVIEWED BY: JJB
PROJECT NO: 14517116
REVISED DATE: 12/17/2018

CANTON MUNICIPAL AIRPORT
SCOPE OF WORK EXHIBIT
SOUTHEAST HANGAR TAXILANE EXTENSION



Project Narrative (Justification)
2019 FAA Grant Application
Canton Municipal Airport

Project Item

Design Hangar Taxilane

What is the Project?

The project is for environmental, design, bidding and FAA closeout report services for a hangar taxilane at Canton Municipal Airport.

Why is the Project Needed Now?

The project is needed now due to demand for hangar development at the airport. In recent years, three private hangars have been constructed in the only remaining locations where existing taxilanes are located. The new taxilane will provide access to new hangar development areas. The airport is maintaining a list of requests for hangar development space. The taxilane would also provide access for one side of a future T-hangar that is included in the Capital Improvement Plan (CIP). If the taxilane project is delayed, there will be no available hangar development area remaining and thus will lead to lost revenue and airport growth. In addition, it is expected that the longer hangar development area is not available, more pilots will begin finding space at other airports in the region, hence reducing potential airport users in the future.

The project will ensure long-term economic sustainability of the airport by increasing revenues and based aircraft. With no available hangar development space, pilots are more often choosing another airport; this in turn will lead to a decreased outlook on fuel sales and land lease revenue. A new taxilane will increase based aircraft while also potentially attracting additional itinerant aircraft in the future when the T-Hangar is built.

The proposed project will require a Terminal Area Plan sheet "pen and ink" update to address the proposed southeast taxilane extending beyond what is shown in the current approved ALP. The taxilane project will also address a goal identified in the South Dakota State Aviation System Plan (SDSASP). Canton is identified as a Small General Aviation Airport in the SDSASP. One goal for Small General Aviation Airports is to have hangar space available for 100% of based aircraft. The new taxilane would allow for new hangar development spaces so that the airport can continue to provide hangar space for all based aircraft as user demand continues to increase at the airfield. This project helps to maintain and implement improvements to this goal.

Is the Project Phased?

Yes. This first phase of the project will complete the environmental, design and bidding of the project. The second phase is to construct the project and is currently scheduled for 2020.

Total AIP Funds Expended?

2019: \$70,200

Additional AIP Funds Needed to Complete Project?

2020: \$300,000

Project Narrative (Justification)

Reconstruction of South General Aviation Apron

Reconstruct GA Apron

The pavements have exceeded the end of their useful lives and are in need of reconstruction. The latest results from the Pavement Condition Index (PCI) surveys indicated a 14 for the apron. The table below shows the degradation of the apron since 2012.

FAULKTON (3FU)								
Branch ID	Pavement		2012		2015		2018	
	Age	Material	PCI	Condition	PCI	Condition	PCI	Condition
Apron	2005	Asphalt	78	Satisfactory	34	Very Poor	14	Serious

The apron was constructed as part of a larger project as part of a 2005 grant. The engineered section was designed to match the other existing pavement sections that had been performing well at the time on the airfield. It consists of 2.5" of asphalt and 10" of base.

The distresses from the most recent PCI evaluation include longitudinal and transverse cracking and alligator cracking. Each of the sample sections included low, medium and high severity areas of each of those distresses. Currently, the severe winter and subsequent thawing has caused even more havoc on the pavement. Nearly all of the longitudinal and transverse cracks either have secondary cracking or have differential movement. The areas of alligator cracks have gotten worse. Each of the concrete tie-downs is protruding 2+ inches. The transitions between the apron and taxilanes/taxiways have depressions that are dangerously close to creating damage to props that traverse the area. One of the aircraft located in a hangar on the south taxilane must navigate two transitions and an area of the apron, this is one of those previously mentioned props close to being damaged.

It is proposed that the apron will be reconstructed to the FAA standards for limited subgrade frost protection (up to 65% of frost depth) and include underdrain along both edges of the pavement to reduce the susceptibility to frost heaves and extend the life of the pavement. The transitions to each of the taxilanes/taxiways will be included in the project.

Pictures on the following page show some of the distresses previously discussed.



Faulkton Municipal Airport 2019 Project Drawing

Attachment #8



Potential
Transitional
Taxiway Areas
Impacted

GA Apron to be
Reconstructed

Legend



Project Impact Area



Contractor Staging Area

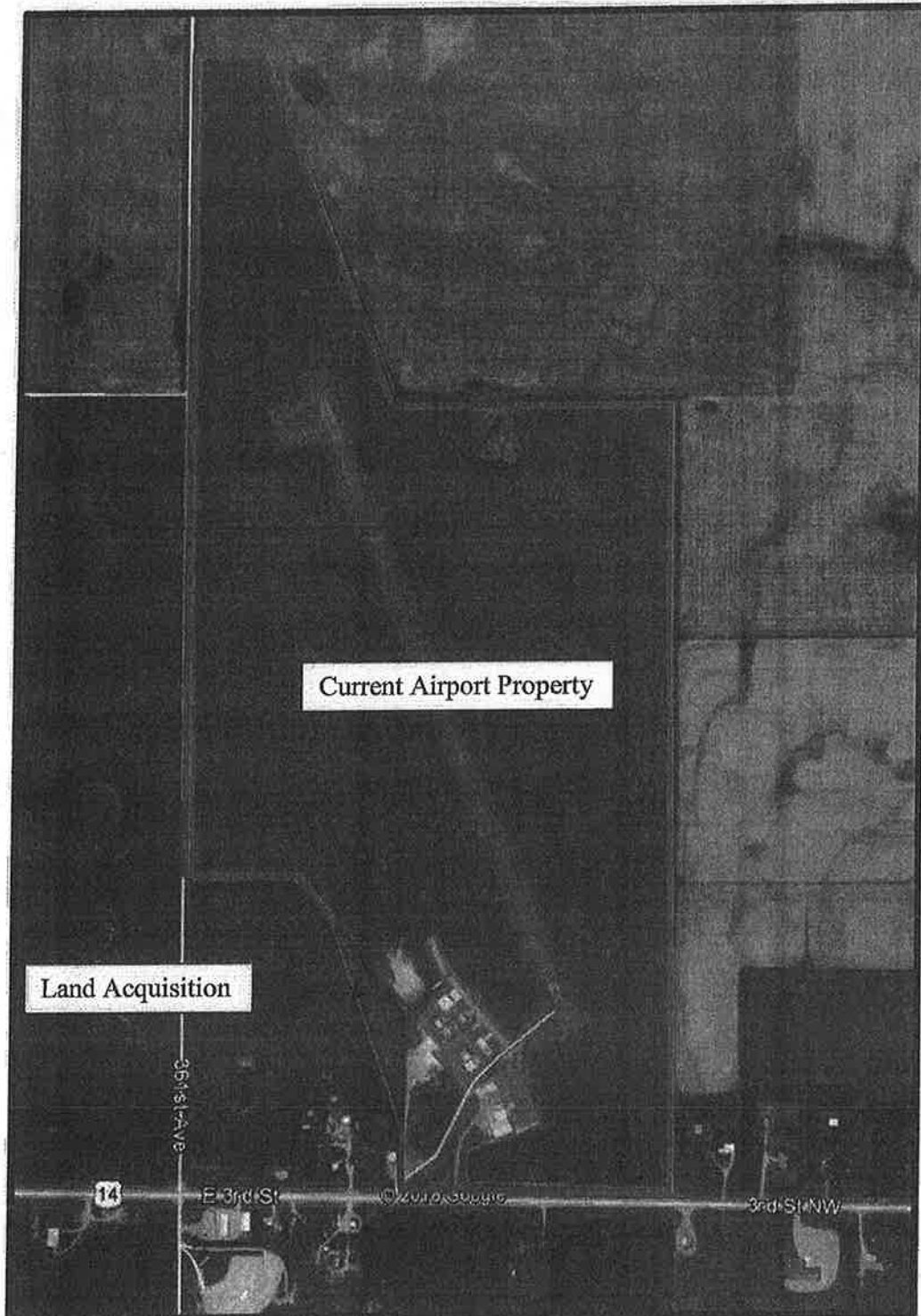


Haul Route

Project Sketch/Description

Miller Municipal Airport
Miller, SD

ALP Update, Archaeological Survey, Wetland Delineation
Land Appraisal & Land Acquisition Assistance Reimbursement



Project Narrative (Justification)

Update ALP

The current Airport Layout Plan (ALP) was completed as part of a grant in 1999. The ALP needs to be updated to correctly show the existing conditions. As part of the ALP Update, the airport will be flown and uploaded to the AGIS system, and the Exhibit A will be updated.

Archaeological Survey and Wetland Delineation

An archaeological survey and wetland delineation at the Miller Municipal Airport is desired to be incorporated into the ALP and will be used in environmental clearance for future expansion at the airport.

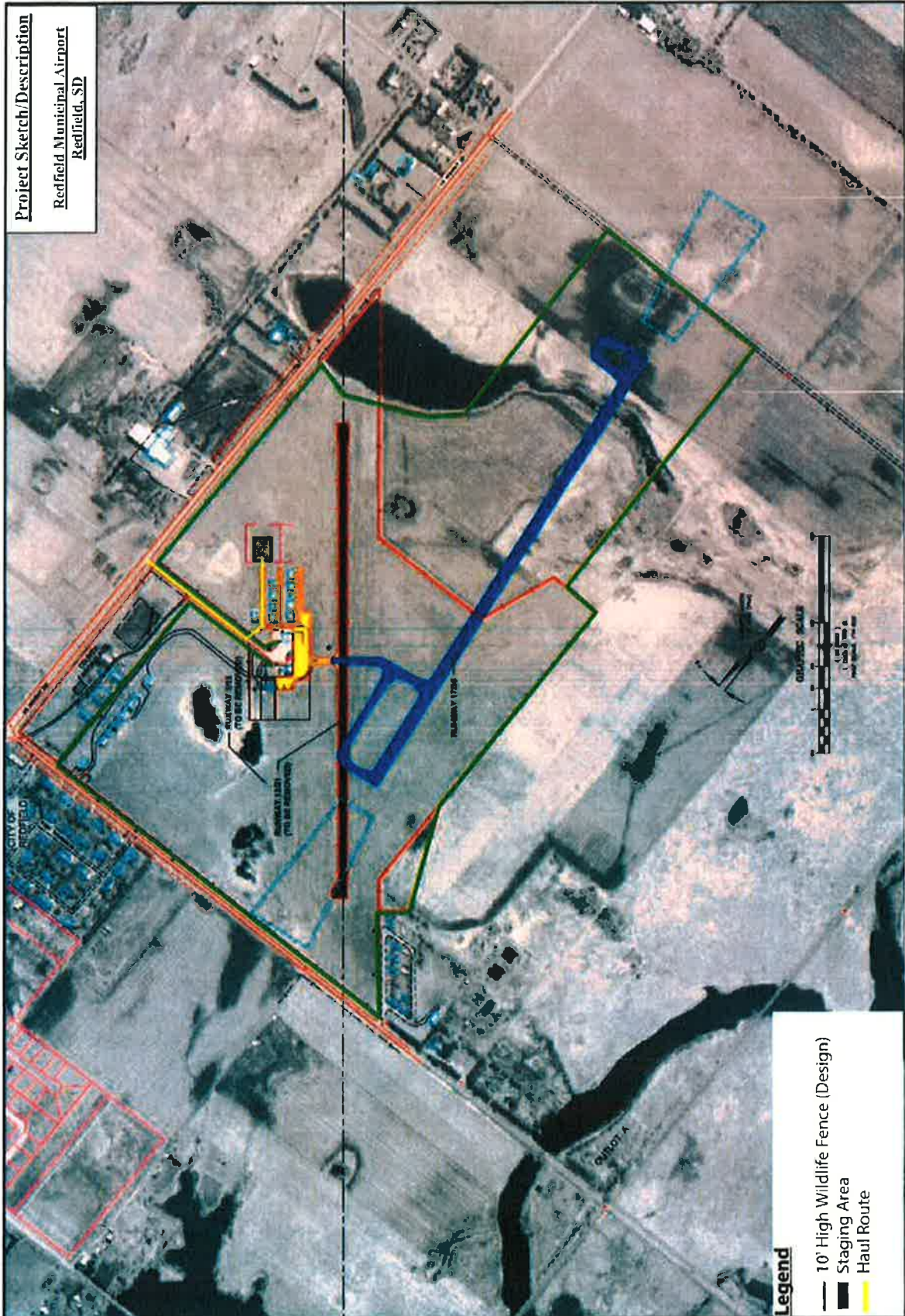
Land Appraisal and Land Acquisition Assistance Reimbursement

The City purchased land as part of a previous grant in order to expand the hangar area. All associated appraisals, SDDOT review, locating the lot, title and written agreement amounted to the reimbursement cost.

Project Narrative (Justification)

Design Wildlife Fence

With the new Runway 17/35 construction, the existing barb wire fence does not encompass the existing airport property. The airport is less than 1 mile from Turtle Creek and has a large wetland on the southeast side of the airport. Both are large wildlife attractants of not only waterfowl but large and small mammals as well. By constructing a 10' high wildlife fence, access by large mammals will be reduced and security at the airport enhanced.



Project Narrative (Justification)

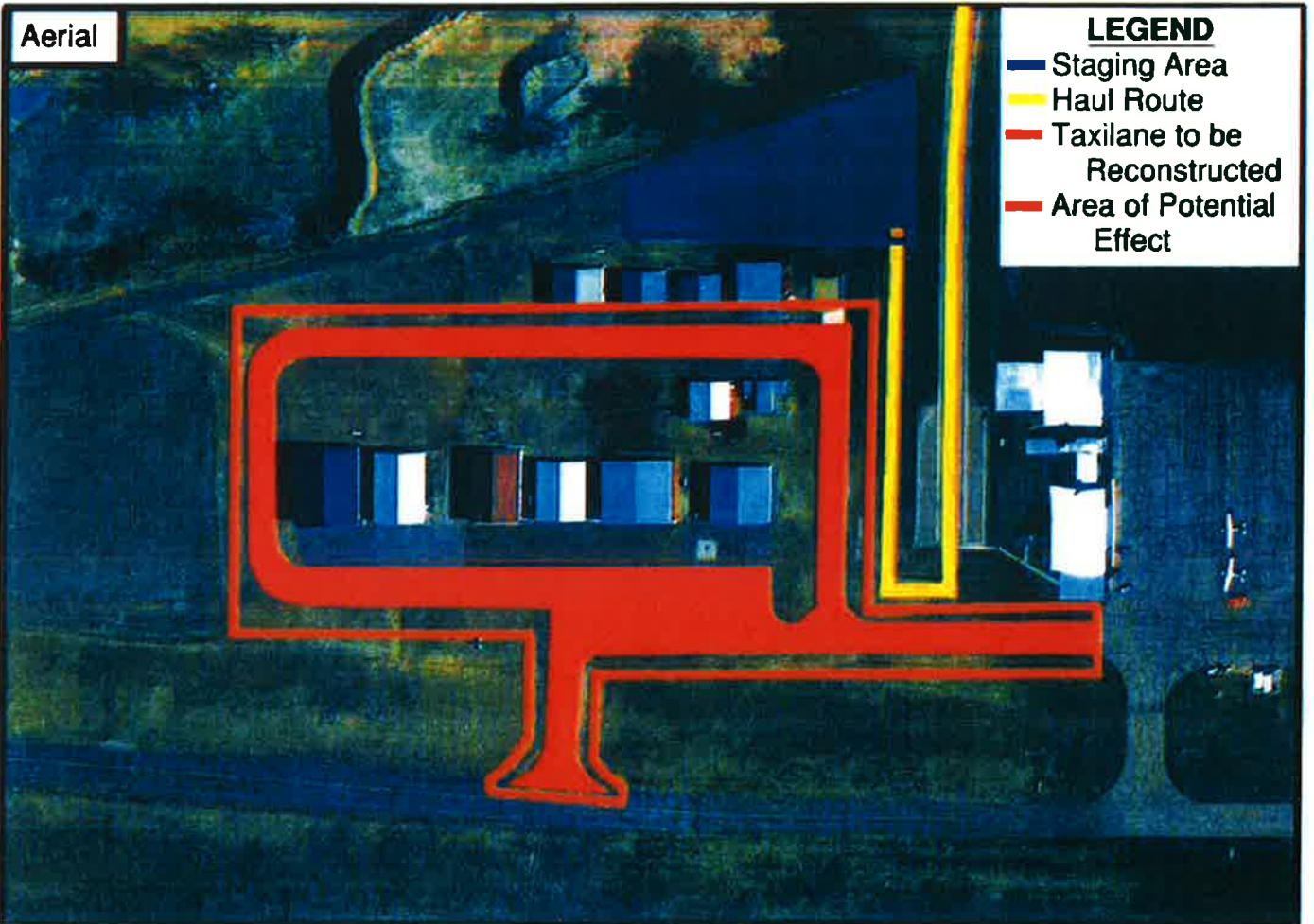
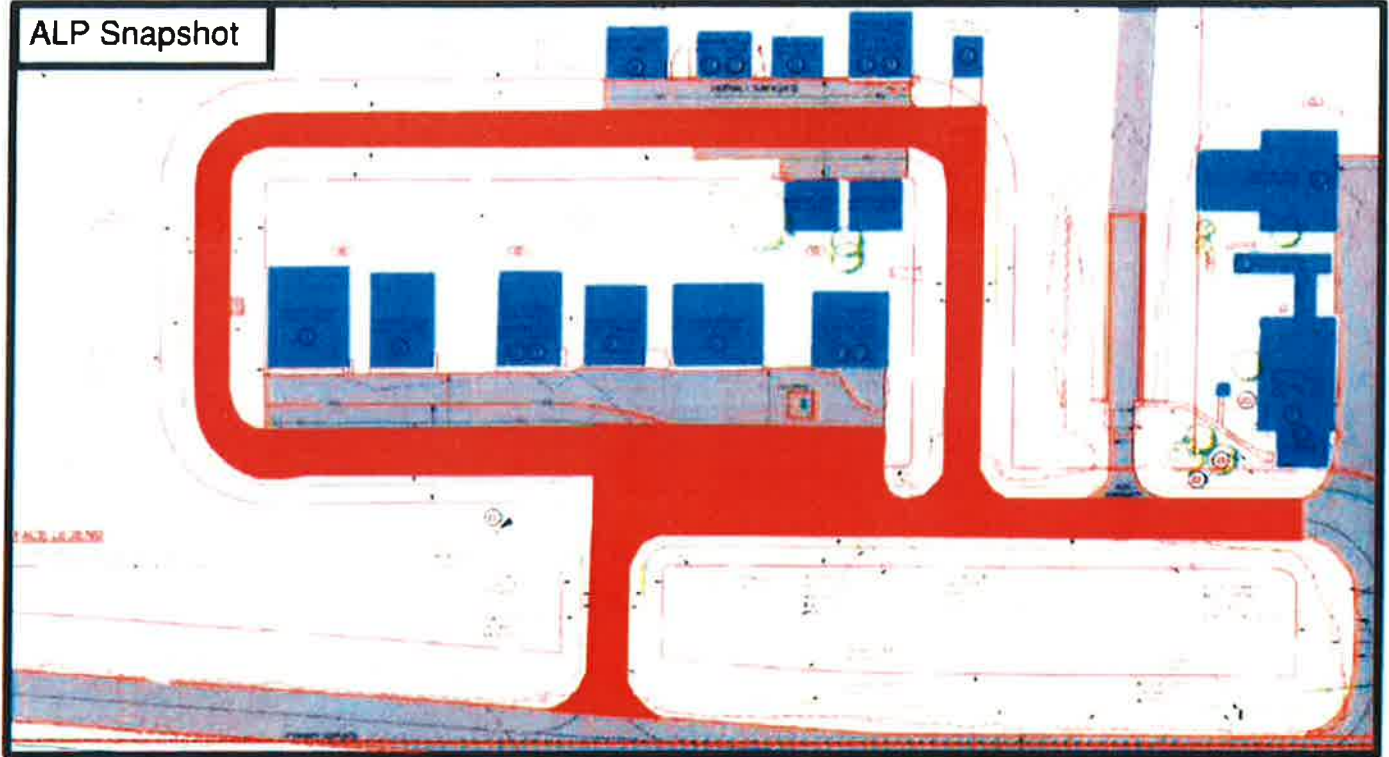
Design of Hangar Taxilane Reconstruction

Design of Hangar Taxilane Rehabilitation

The hangar taxilane pavement has exceeded the end of its useful life and is in need of reconstruction. The most recent Pavement Condition Index (PCI) survey indicated a 56 and 17 for the hangar taxilane, immediate maintenance or rehabilitation. The table below shows the gradual degradation of the hangar taxilanes since 2012.

HAROLD DAVIDSON FIELD (VMR)									
Branch ID	Section ID	Pavement		2012		2015		2018	
		Age	Material	PCI	Condition	PCI	Condition	PCI	Condition
Hangar Taxilane	HTW -610	1993	Asphalt	58	Fair	62	Fair	56	Fair
Hangar Taxilane	HTW - 700	unk	Asphalt	67	Fair	65	Fair	17	Serious

Harold Davidson Field, Vermillion, SD
Design of Hangar Taxilane Reconstruction

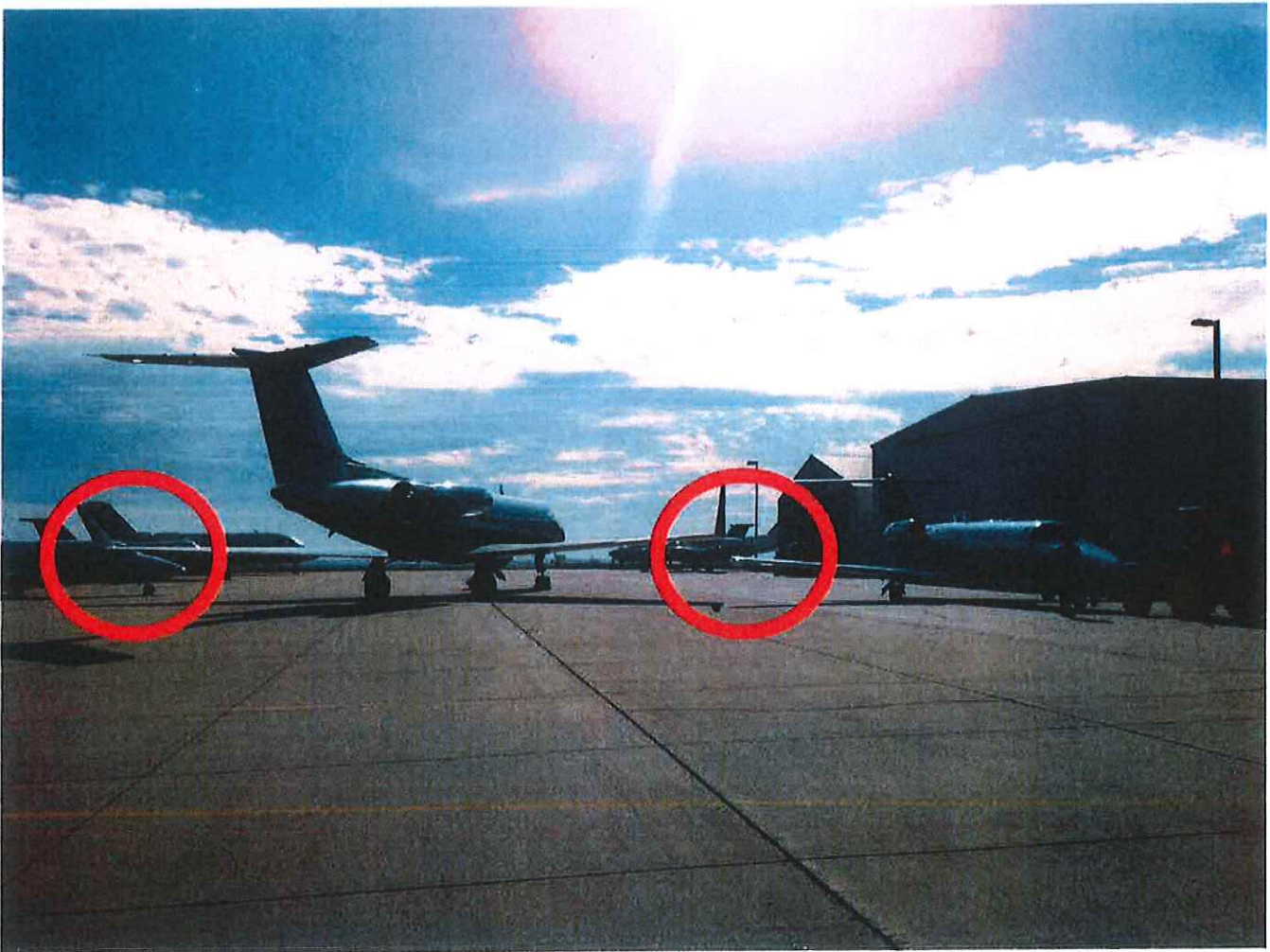


Project Narrative (Justification)

Phase II Lower Apron Expansion

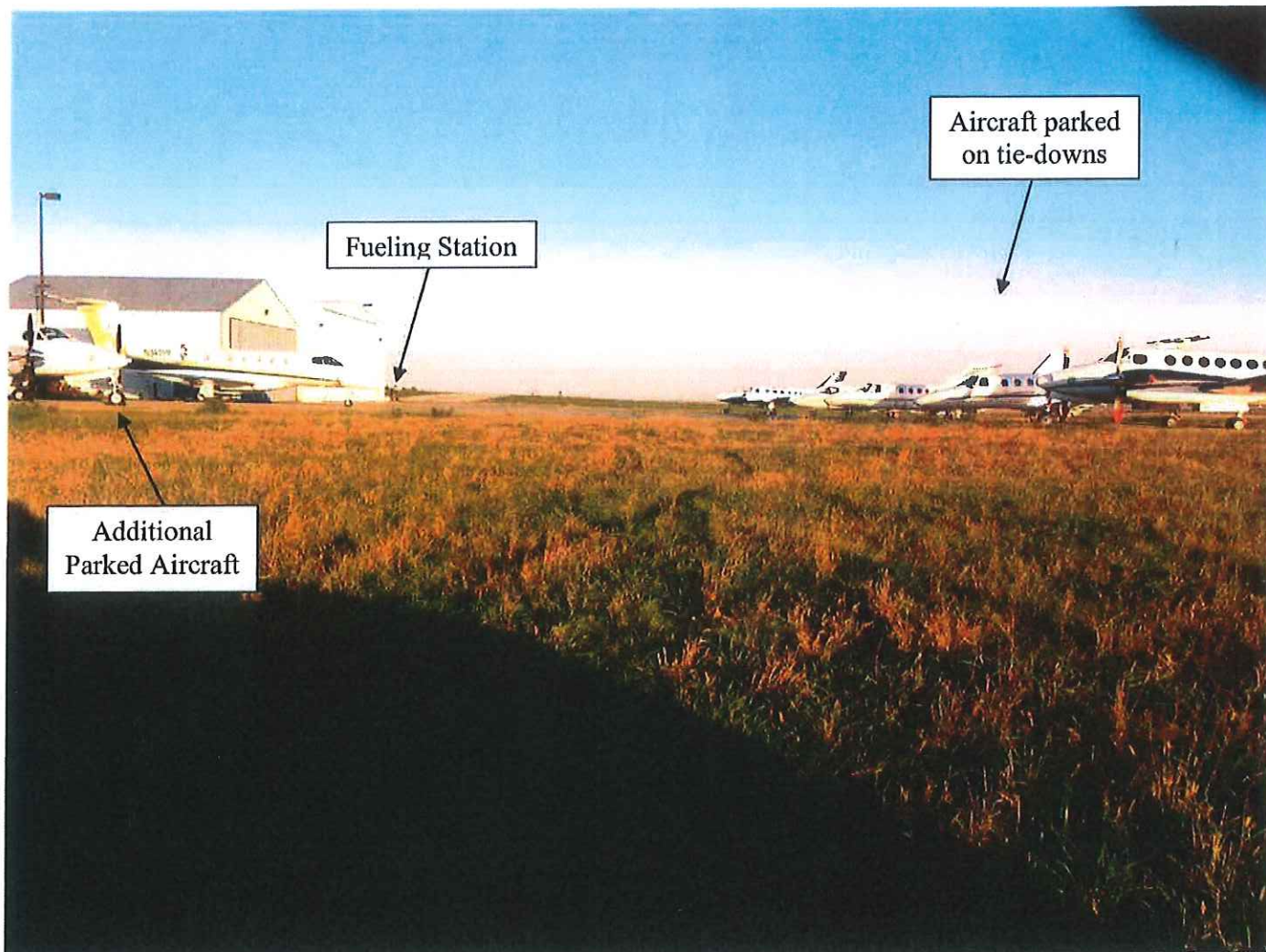
Apron expansion is needed to accommodate aircraft currently utilizing the airport. The existing apron was constructed in 2001 and approximately 60% of the annual operations have been itinerant. A total of 6,100 square yards of additional apron space is planned to be constructed. Phase I consisted of approximately 305' x 50' expansion to the northeast edge of the apron, completed in 2017. Phase II will consist of approximately 100' x 200' expansion to the southeast edge of the apron. Phase III will be another expansion to the southeast edge of the apron approximately 100' x 200'. Associated items, such as markings, lighting, signs and tie-downs will also be constructed in each phase.

Currently, the apron is not adequate for the traffic trying to use it at the Winner Regional Airport. With the extension of the primary runway, the airport has continually received larger aircraft. It can be seen on the photo below (taken recently) that there is not adequate space for aircraft to be parked, aircraft fueling and for aircraft to traverse safely through that location. A 100' by 200' addition on the southeast edge of the lower apron would decongest the area and allow for safer aircraft movement.



The picture below from 2015 shows 5 aircraft parked on the northeast edge of the pavement and an additional 2 aircraft parked on the southwest edge of the pavement. The 5 aircraft are located on the current tie downs, however the 2 aircraft on the southwest are parked in front of the only available location for an FBO. If an FBO were to be constructed, those aircraft would have nowhere to park.

Additionally, if aircraft were parked to get fuel in the west corner of the apron (on the far side of the current hangars), 6 of the 7 aircraft shown would not be able to exit the apron and only small aircraft would be able to enter the apron area.



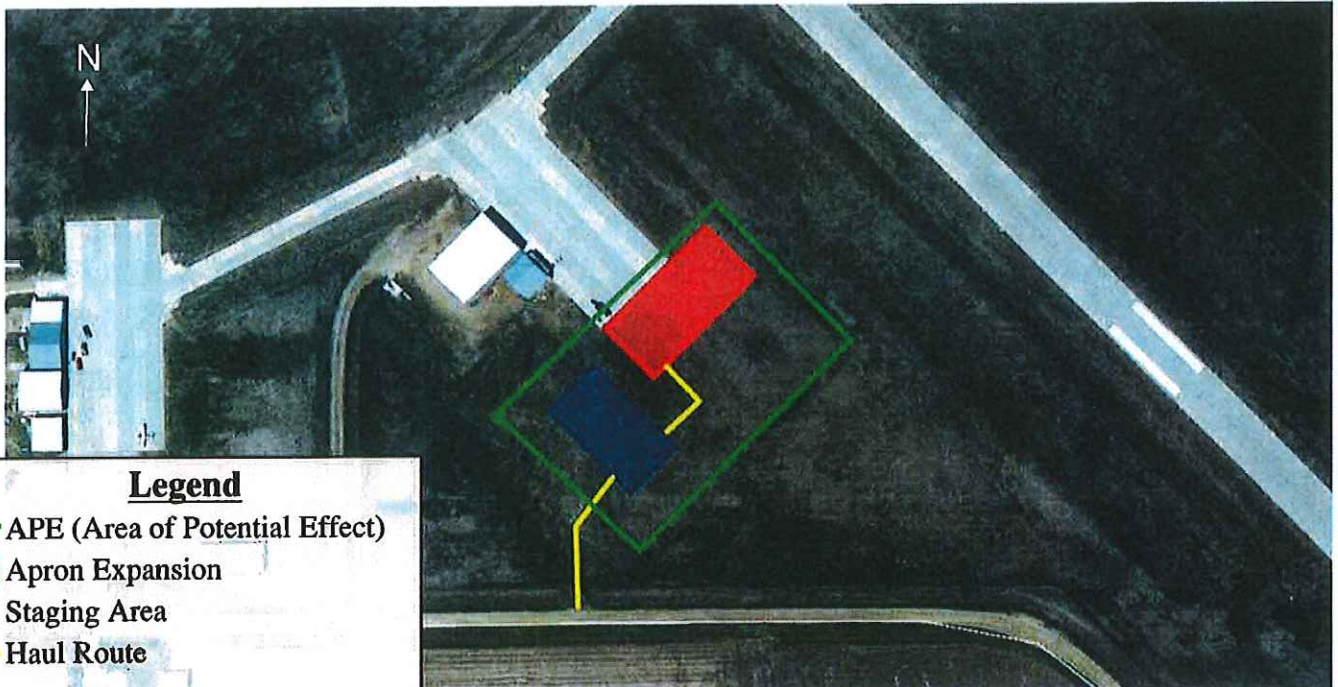
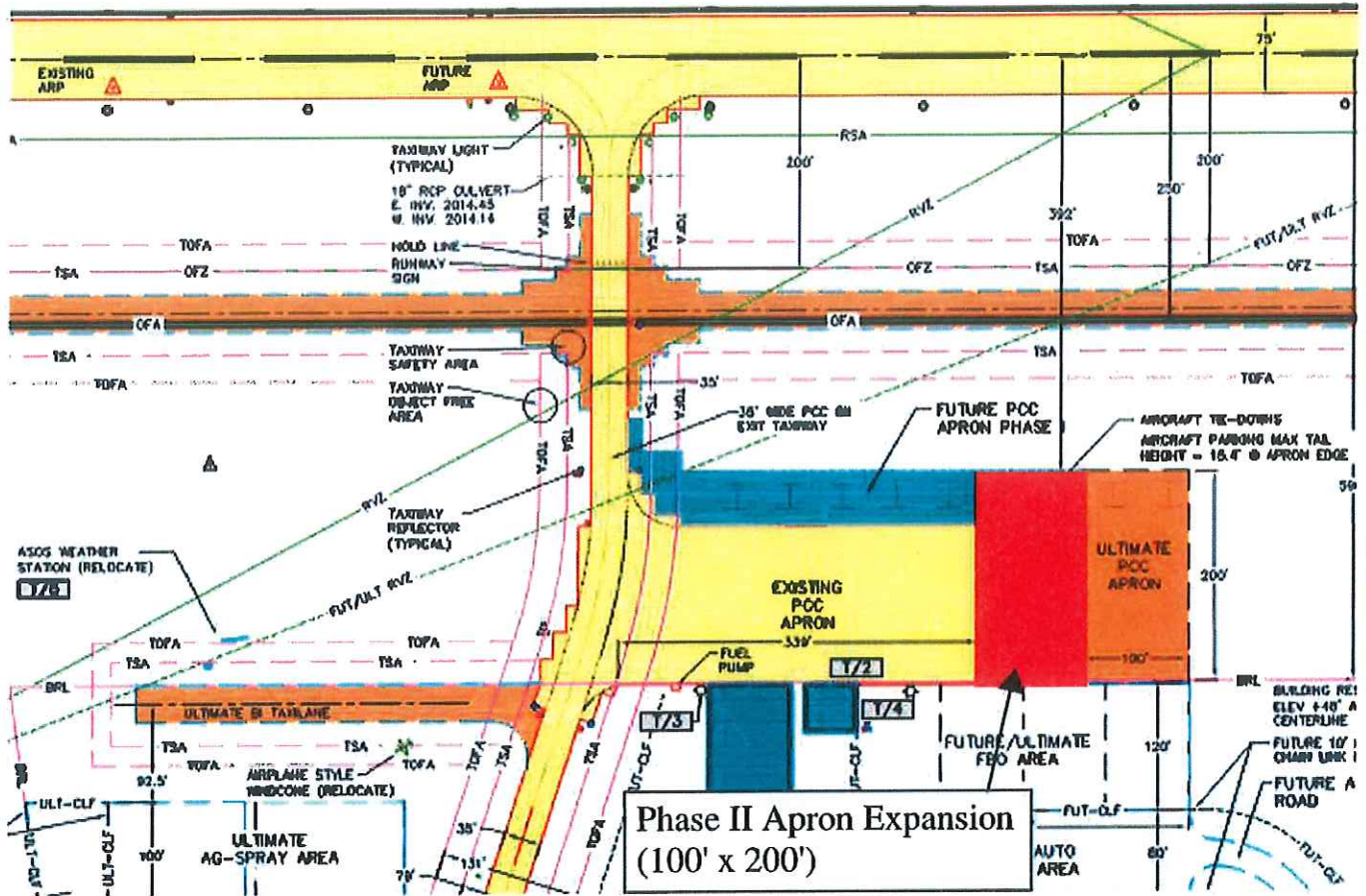
The attached sheets are a record kept by the airport manager from 9/21/2015 to 11/3/2015 depicting most of the operations in that timeframe. Over 1,000 documented operations occurred in those 43 days. This is only a sampling of the operations of the airport, it is not a complete list of all operations in that time period.

The following are photos from 2016.



Project Sketch/Description

Winner Regional Airport
Winner, SD



Legend

- APE (Area of Potential Effect)
- Apron Expansion
- Staging Area
- Haul Route