

Department of Transportation
 Division of Secretariat
 Office of Air, Rail & Transit
 700 East Broadway Avenue
 Pierre, South Dakota 57501-2586
 OFFICE: 605/773-3574
 FAX: 605/773-2804

TO: South Dakota Aeronautics Commission
 FROM: Jack Dokken, Office of Aeronautics
 DATE: July 16, 2018
 SUBJECT: Financial Assistance Agreements

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

Brookings 3-46-0005-030-2018

Design of the GA Apron and Hangar Taxilane Reconstruction.

Federal Share	\$	90,000.00
State Share	\$	5,000.00
Local Share	\$	5,000.00
Total	\$	100,000.00

The Department recommends approval of state assistance in the amount of **\$5,000.00**

Clark County 3-46-0009-012-2018

Design of the Runway 13/31 Rehabilitation/Reconstruction Project.

Federal Share	\$	99,000.00
State Share	\$	5,500.00
Local Share	\$	5,500.00
Total	\$	110,000.00

The Department recommends approval of state assistance in the amount of **\$5,500.00**

DeSmet 3-46-0063-012-2018

Design/Construct Concrete Hardstand and Hangar Taxilane Expansion.

Federal Share	\$	607,500.00
State Share	\$	33,750.00
Local Share	\$	33,750.00
Total	\$	675,000.00

The Department recommends approval of state assistance in the amount of **\$33,750.00**

Gettysburg 3-46-0017-010-2018

Design/Construct Self-Serve Fuel System.

Federal Share	\$	440,309.00
State Share	\$	24,462.00
Local Share	\$	24,461.00
Total	\$	489,232.00

The Department recommends approval of state assistance in the amount of **\$24,462.00**

Gregory 3-46-0018-015-2018

Design/Construct Hangar Taxilane Expansion

Federal Share	\$	335,700.00
State Share	\$	18,650.00
Local Share	\$	18,650.00
Total	\$	373,000.00

The Department recommends approval of state assistance in the amount of **\$18,650.00**

Harding County 3-46-0006-007-2018

Acquisition of new Snow Removal Equipment

Federal Share	\$	221,731.00
State Share	\$	12,319.00
Local Share	\$	12,318.00
Total	\$	246,368.00

The Department recommends approval of state assistance in the amount of **\$12,319.00**

Hoven 3-46-0021-010-2018

Design/Construct Apron Reconstruction

Federal Share	\$	526,500.00
State Share	\$	29,250.00
Local Share	\$	29,250.00
Total	\$	585,000.00

The Department recommends approval of state assistance in the amount of **\$29,250.00**

Mobridge 3-46-0038-012-2018

Reconstruct Runway 12/30, Connecting Taxiway and Expand Runway Turnarounds

Federal Share	\$	4,038,156.00
State Share	\$	224,343.00
Local Share	\$	224,343.00
Total	\$	4,486,842.00

The Department recommends approval of state assistance in the amount of **\$224,343.00**

Philip 3-46-0043-011-2018

Design Revenue Producing Hangar and GA Apron Reconstruction.

Federal Share	\$	117,000.00
State Share	\$	6,500.00
Local Share	\$	6,500.00
Total	\$	130,000.00

The Department recommends approval of state assistance in the amount of **\$6,500.00**

Rapid City 3-46-0048-050-2018

Design/Construct Replacement Baggage Claim Device (East Unit), Terminal Building Escalators, Elevator and Stairs.

Federal Share	\$	620,000.00
State Share	\$	34,445.00
Local Share	\$	34,444.00
Total	\$	688,889.00

The Department recommends approval of state assistance in the amount of **\$34,445.00**

Rapid City 3-46-0048-051-2018

Environmental Assessment of Alternatives for Addressing the Sanitary Sewer Service for the Airport.

Federal Share	\$	185,000.00
State Share	\$	10,278.00
Local Share	\$	10,278.00
Total	\$	205,556.00

The Department recommends approval of state assistance in the amount of **\$10,278.00**

Sisseton 3-46-0051-014-2018

Airport Layout Plan Update

Federal Share	\$	171,000.00
State Share	\$	9,500.00
Local Share	\$	9,500.00
Total	\$	190,000.00

The Department recommends approval of state assistance in the amount of **\$9,500.00**

Springfield 3-46-0052-007-2018

Replace Airport Electrical Systems

Federal Share	\$	219,992.00
State Share	\$	12,222.00
Local Share	\$	12,222.00
Total	\$	244,436.00

The Department recommends approval of state assistance in the amount of **\$12,222.00**

Wagner 3-46-0057-013-2018

Design Revenue Producing T-Hangars

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**

Watertown 3-46-0058-033-2018

Design Terminal Apron Reconstruction (Phase 1)

Federal Share	\$	99,000.00
State Share	\$	5,500.00
Local Share	\$	5,500.00
Total	\$	110,000.00

The Department recommends approval of state assistance in the amount of **\$5,500.00**

Wessington Springs 3-46-0080-010-2018

Design of Runway 12/30 Reconstruction (including Connector Taxiway)

Federal Share	\$	103,500.00
State Share	\$	5,750.00
Local Share	\$	5,750.00
Total	\$	115,000.00

The Department recommends approval of state assistance in the amount of **\$5,750.00**

South Dakota DOT 3-46-4600-024-2018

Pavement maintenance at multiple airports.

Federal Share	\$	315,000.00
State Share	\$	17,500.00
Local Share	\$	17,500.00
Total	\$	350,000.00

The Department recommends approval of state assistance in the amount of **\$17,500.00**

South Dakota DOT 3-46-4600-008-2018

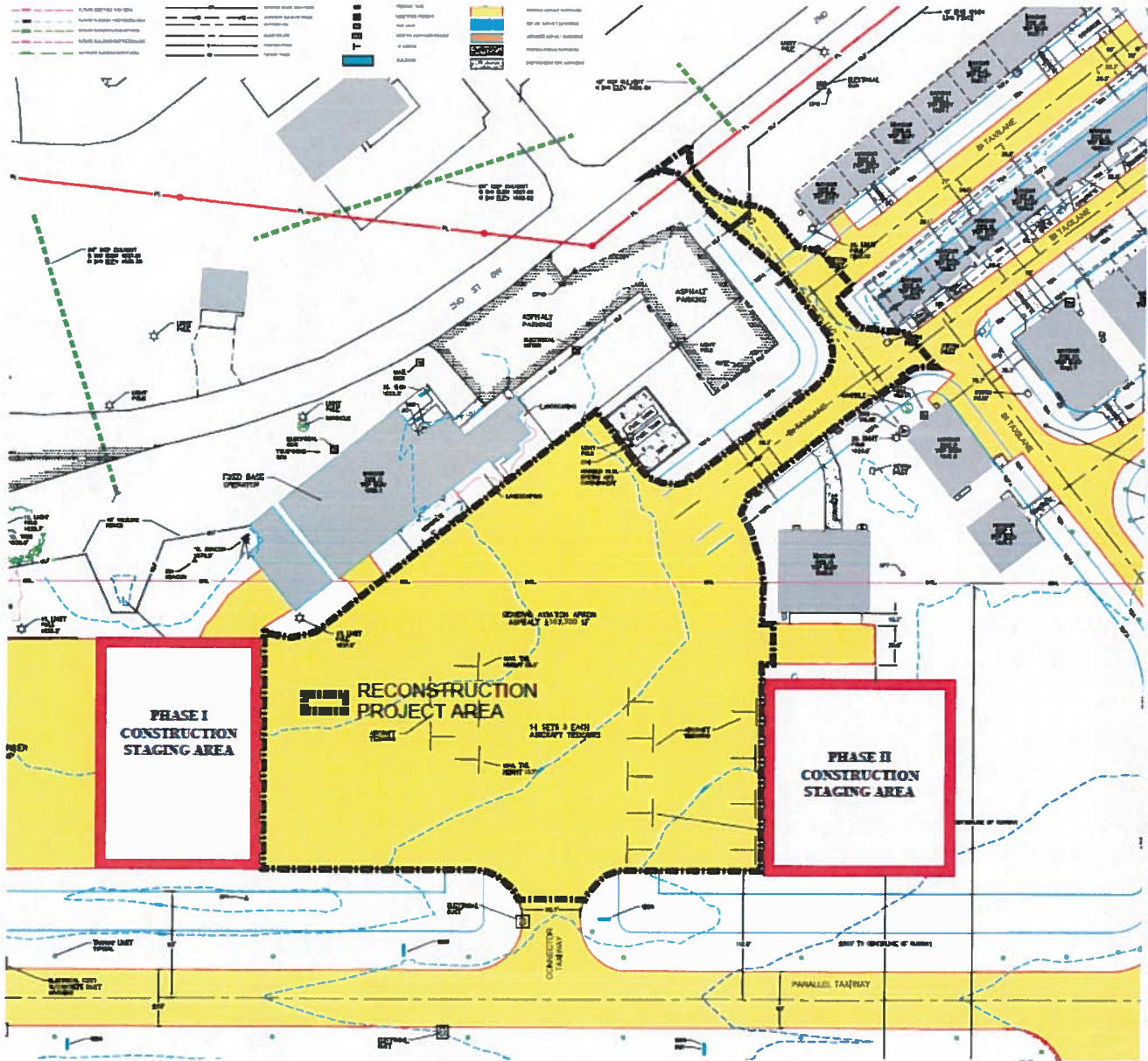
Pavement condition index survey at South Dakota airports including inspection, update feature maps and individual airport PCI maps.

Federal Share	\$	157,500.00
State Share	\$	17,500.00
Local Share	\$	n/a
Total	\$	175,000.00

The Department recommends approval of state assistance in the amount of **\$17,500.00**

Project Sketch/Description

Brookings Regional Airport Brookings, South Dakota



Project Description:

Design of General Aviation Apron (±15,100 Square Yards) and Hangar Taxilane (±400' x 35') Reconstruction

Project Narrative (Justification)

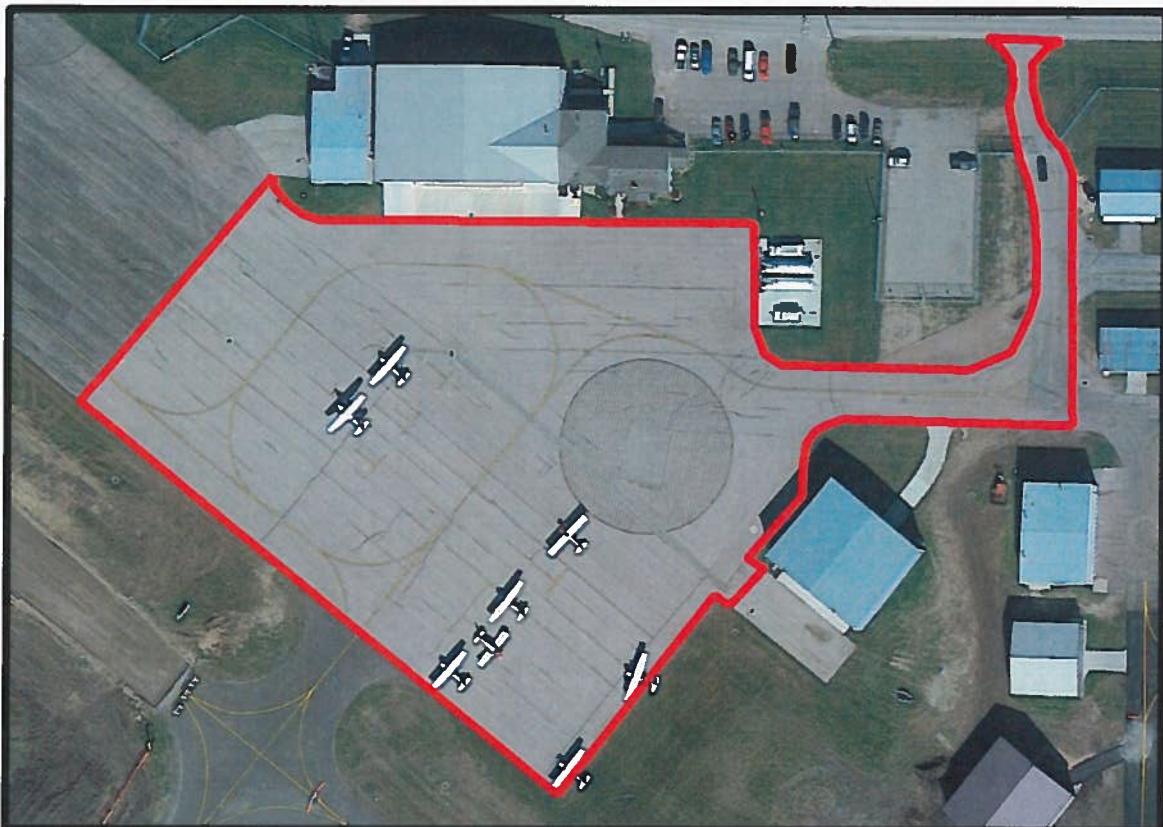
Design of General Aviation Apron (±15,100 Square Yards) and Hangar Taxilane (±400' x 35') Reconstruction and Geotechnical Exploration

The General Aviation Apron is approximately 15,100 square yards and was constructed in 2002. The pavement section consists of 18" of P-208 base course, 6" of P-209 crushed aggregate base course, and 4" of P-401 HMA pavement. The hangar taxilane was originally constructed in 1982 and consists of 8" P-154 subbase course, 4" of bituminous base, and 2" bituminous pavement. A 2" overlay was completed in 1988 and another surface treatment was completed in 2002. The City of Brookings has maintained the pavement with crack sealing throughout the years, however the pavement is deteriorating quickly.

The last Pavement Condition Index (PCI) was conducted in 2015 and both the apron and taxilane had a PCI of 17. A variety of distresses are present and range from low severity bleeding, swells, slippage cracking, and patching. Depressions, longitudinal and transverse cracks range from low severity to high severity. Frost susceptible soils are present in and around the airport, the existing storm water inlets heaved within a few years of construction and storm water in the area has not been able to get to where it was designed to go for years. This has resulted in a faster than normal deterioration of the pavement.

The following image is from Google Earth taking on 10/9/2014. Several longitudinal and transverse cracks are present and highly visible.

Design is anticipated as a project in 2018, with the construction anticipated in 2019.



Project Sketch/Description

Clark County Airport Clark County, South Dakota



Project Description:

Design of the Runway 13/31 (±3700' x 60') Rehabilitation/Reconstruction Project – to include reconstruction/rehabilitation of connector taxiways (2 @ ±125' x 35')

Project Narrative (Justification)

Design of the Runway 13/31 ($\pm 3700'$ x $60'$) Rehabilitation/Reconstruction Project – to include reconstruction/rehabilitation of connector taxiways (2 @ $\pm 125'$ x $35'$)

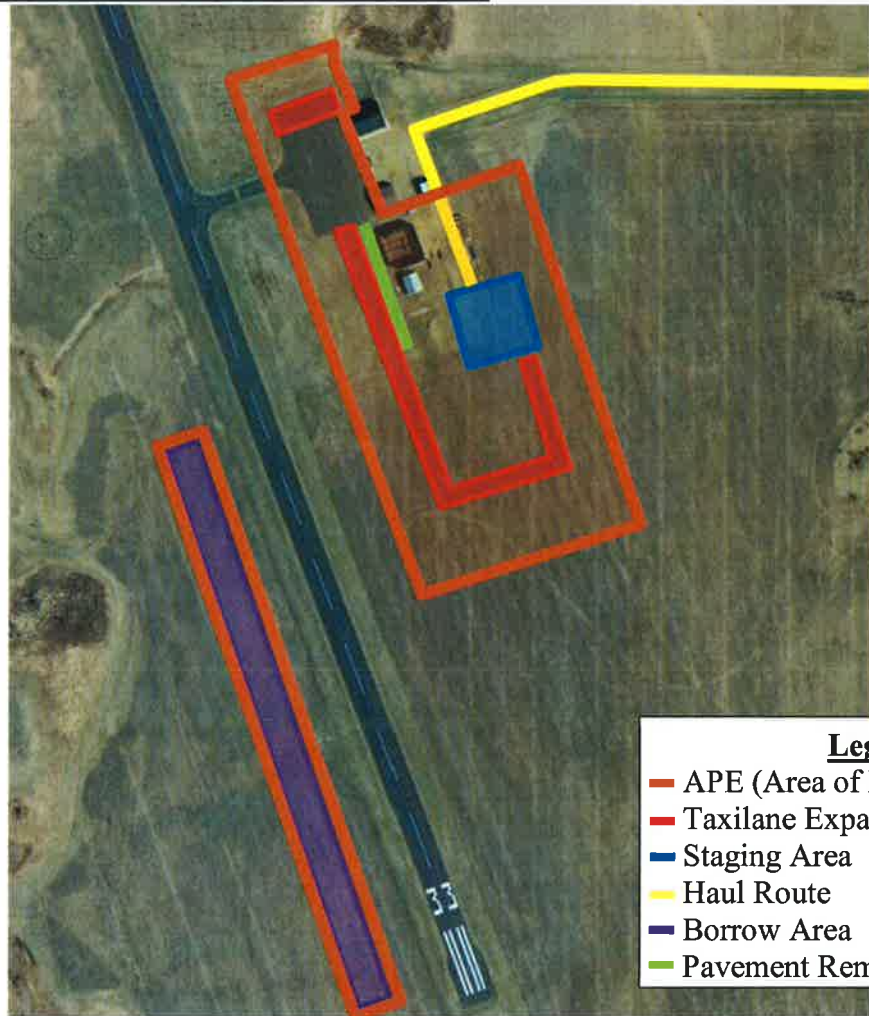
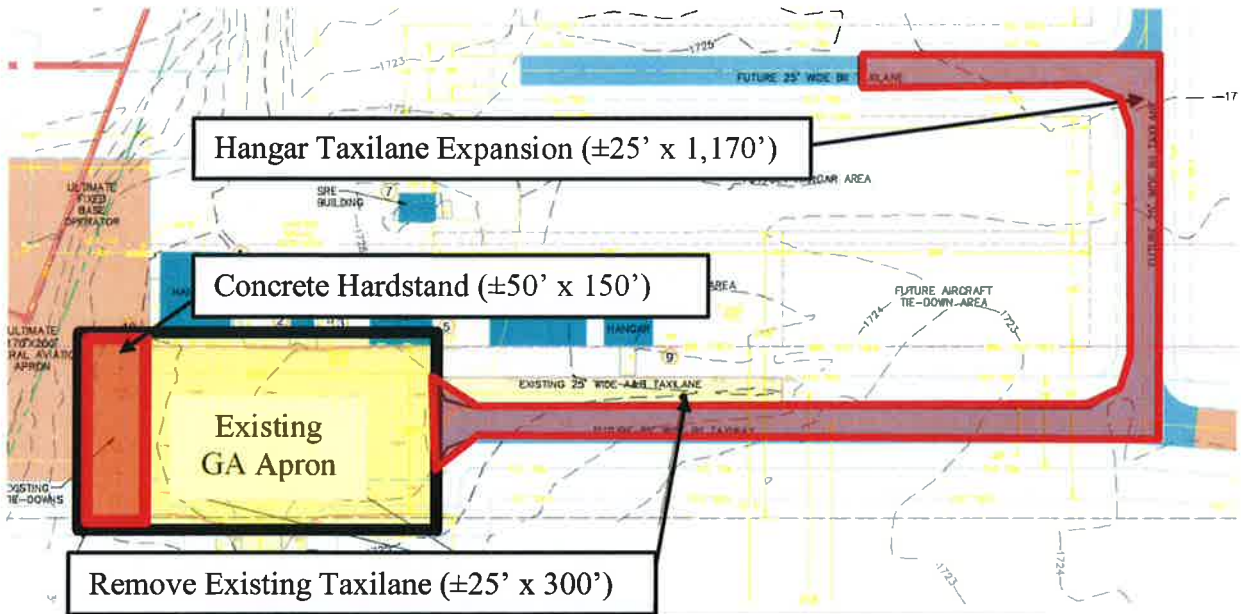
The southern 2,300' of the runway was reconstructed in 2005. It consists of 2" of Millings, 21" of P-154 Subbase, 10" of P-208 Base Course, and 3" of P-401 Asphalt Pavement with underdrain on both sides. The current PCI of that section of pavement was 75 in 2015.

The northern 1400' of the runway was originally constructed in 1993 and was milled and overlaid in 2005. It currently consists of an unknown depth of granular subbase material and millings, 2" of asphalt, and the 2" overlay of P-401 Asphalt Pavement. The current PCI of that section of pavement was 52 in 2015.

The existing conditions of the pavement will be evaluated during the preliminary stages of design and during the geotechnical exploration, however it is proposed that the southern 2,000' be milled, overlaid. The remaining runway will be a full reconstruction as the underlying layers are from 1993.

Project Sketch/Description

Wilder Field De Smet, SD



Legend

- APE (Area of Potential Effect)
- Taxilane Expansion/Hard Stand
- Staging Area
- Haul Route
- Borrow Area
- Pavement Removal

Project Narrative (Justification)

Design, Geotechnical Exploration, Bidding & Negotiations, Construction Administration, Construction Engineering, Administration Costs, and Construction of a Concrete Hardstand and Hangar Taxilane Expansion

Currently, the entire airport consists of asphalt surfacing. Therefore, the City of De Smet proposed to construct a Concrete Hardstand with tie-downs to accommodate transient aircraft and more specifically, the medical helicopters that frequently use the airport to transport patients to and from the local medical facility to larger neighboring medical facilities (Sioux Falls). The concrete hardstand is proposed to be constructed on the existing apron and is to replace the existing tie downs.

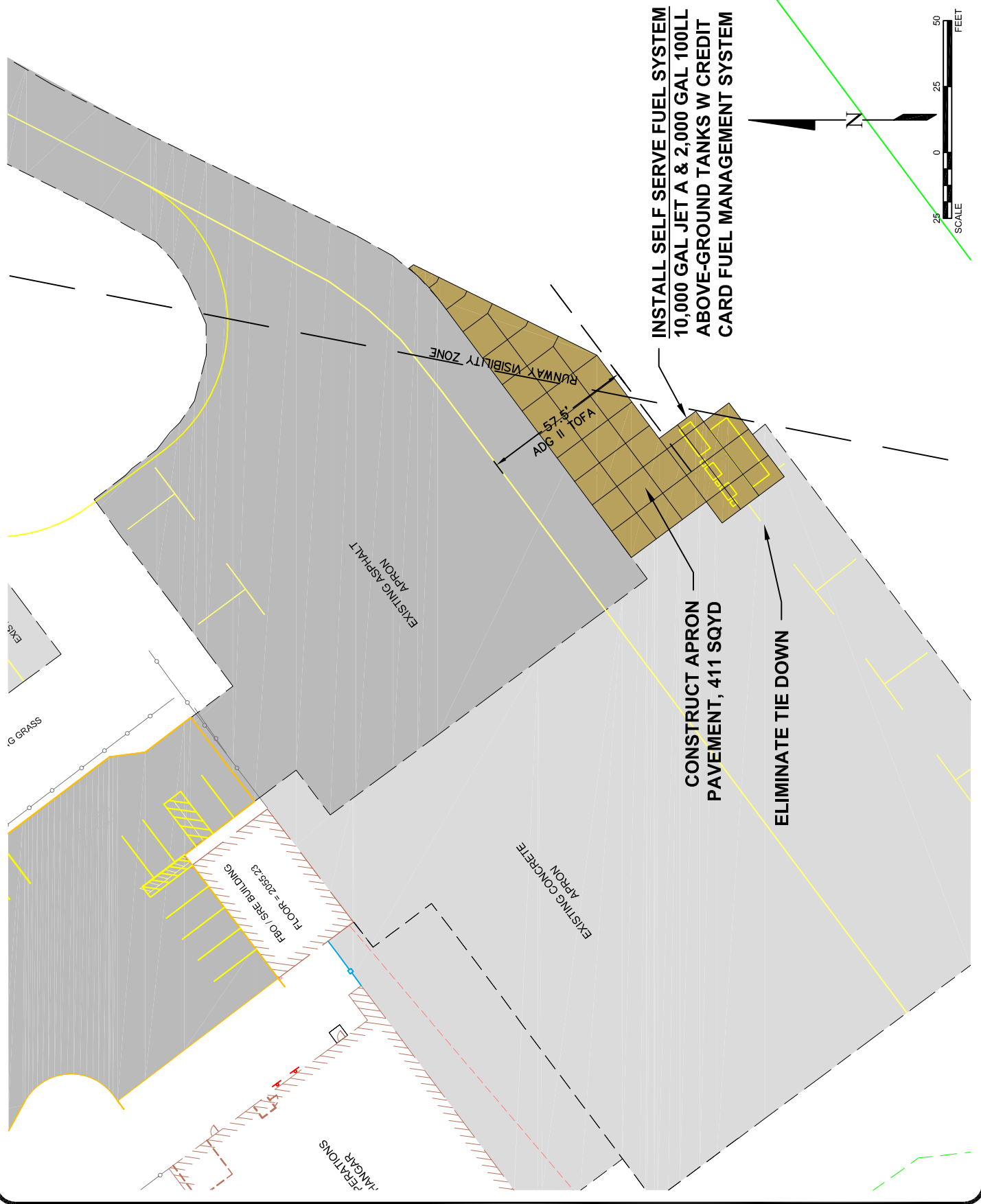
The City of De Smet has recently requested that approaches be developed at their airport, therefore in the near future, the primary surface will extend 250' from the Runway centerline. With a 7:1 transitional surface starting at that point, only hangars 20' or less can be constructed on the current taxilane without being an obstruction. Therefore, there is currently no location for a new hangar (larger than 20' tall) to be constructed on the airfield. A user is making plans to construct a hangar as large as 100' wide in the summer of 2018. Therefore, the City of De Smet is proposing to remove the existing taxilane and replace it with a 25' taxilane with BII wingtip clearance requirements for the proposed new hangar and additional 100' for prospective new users according to the ALP.



DRAFTED	BAS
REVIEWED	MDW
PROJECT NUMBER	10517133
ISSUE DATE	06/27/18

FUEL SYSTEM
 GETTYSBURG MUNICIPAL AIRPORT
 GETTYSBURG, SOUTH DAKOTA
 GRANT APPLICATION SKETCH

© KLJ 2017

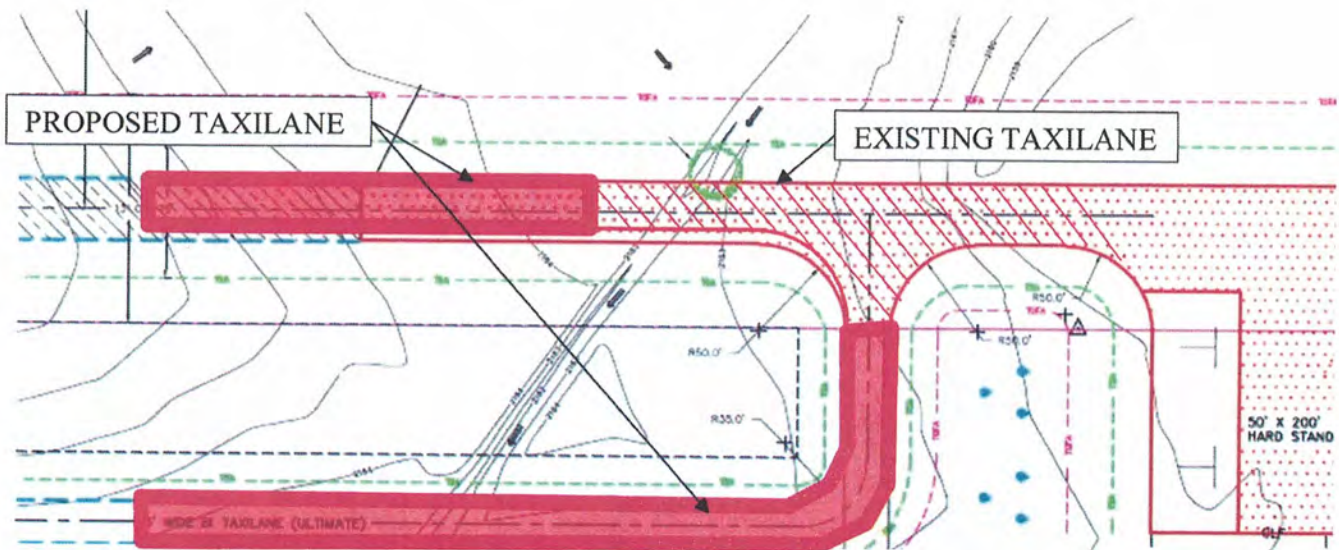


Jun 30, 2018 - 10:51 am - P:\Airport\SD\Gettysburg\Projects\10517133-Fuel System\CADD\C3D\Gettysburg Grant Application 2018.dwg (2018 Grant App)

PART IV – PROGRAM NARRATIVE
(Suggested Format)

PROJECT:
AIRPORT:
1. Objective:
2. Benefits Anticipated:
3. Approach: (See approved Scope of Work in Final Application)
4. Geographic Location:
5. If Applicable, Provide Additional Information:
6. Sponsor's Representative: (include address & telephone number)

**Gregory Municipal Airport
Gregory, SD**



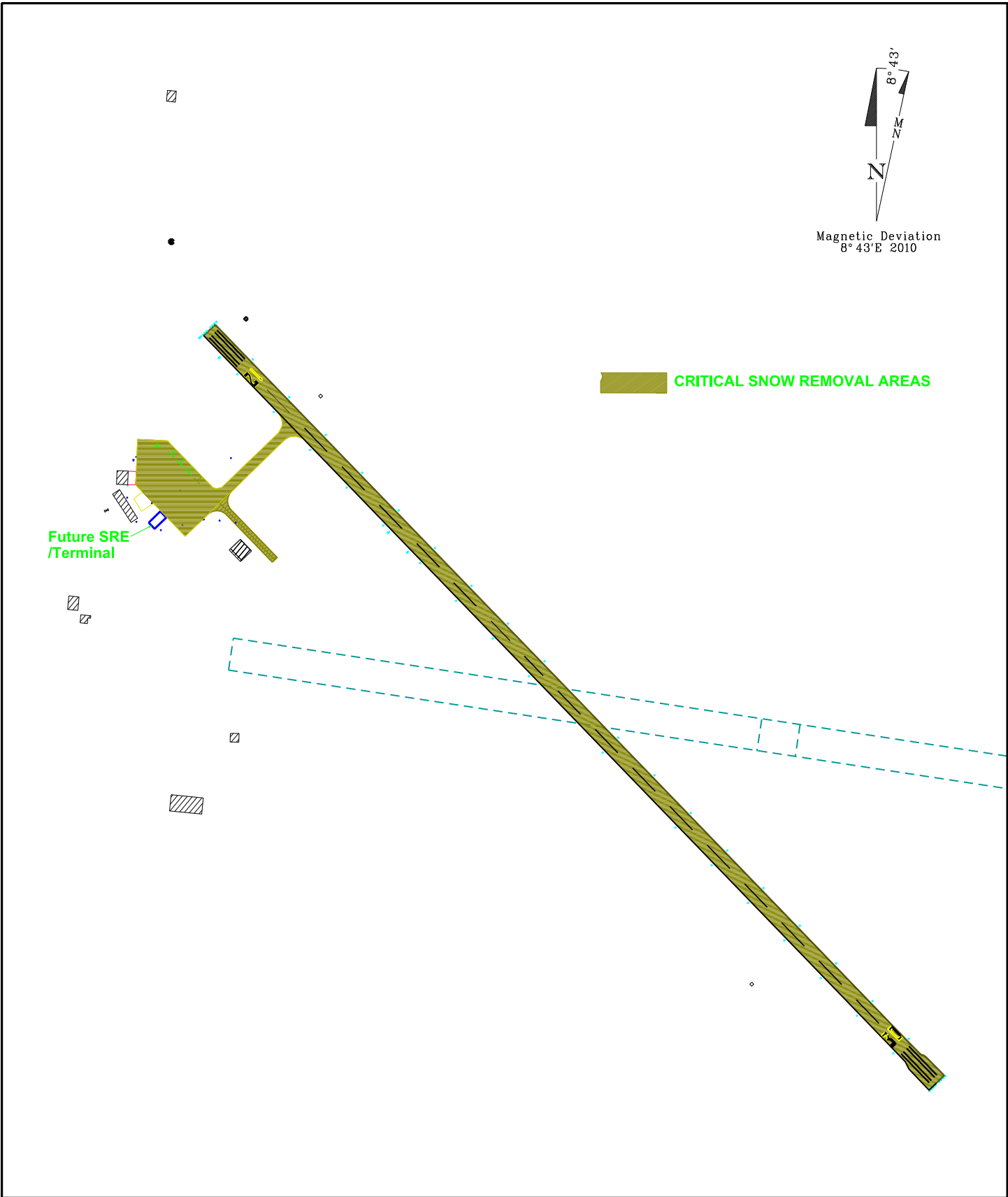
Project Description:

Design and Construction of the Hangar Taxilane Expansion - (±610' x 25')

Project Narrative (Justification)

DESIGN OF HANGAR TAXILANE EXPANSION - (±610' X 25')

Currently, there is no hangar taxilane for prospective users to construct private hangars. 'The City of Gregory also plans to construct T-Hangars in the near future. Additional taxilane is necessary for future hangar construction.



3561 Whitewood Rd, Box 636
Sturgis, SD 57785
PH: 605.347.2722

Brosz
ENGINEERING, INC.
ARCHITECTURE ENGINEERING SURVEYING

SHEET DESCRIPTION: Attachment 2

PROJECT NAME: Harding County Airport SRE Acquisition

Project Justification/Narrative

Harding County Airport

Buffalo, South Dakota

Grant Number AIP-3-46-0006-007-2018

Harding County is requesting consideration for the acquisition of Airport Snow Removal Equipment with this grant. The airport currently does not have any Snow Removal Equipment. Snow removal is done with Harding County equipment and thus the airport does not have first priority on snow removal, sometimes leaving the airport unusable until County forces can get the priority roads opened first. By having SRE at the airport, the airport manager would be able to get to the airport and remove the snow immediately instead of waiting for County forces.

The following are the justifications of the variables used in completing the “Snow Removal Equipment Calculations” spreadsheet.

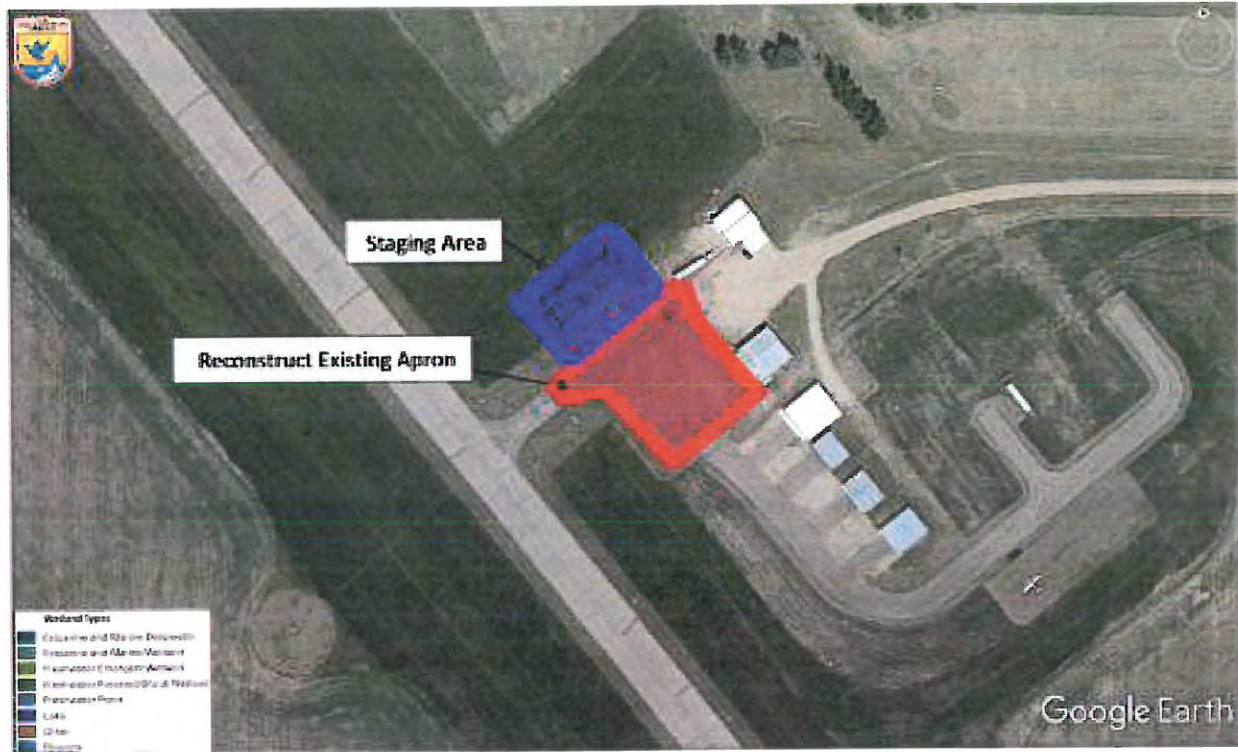
- The Harding County Airport is a General Aviation facility
- The Average Annual Snowfall was determined to be 51 inches from the historical average yearly data from 1955 to 2016 from the High Plains Regional Climate Center
- The number of operations was obtained from the most recent Airport Master Record. The total operations for 12 months ending 12/22/2015 was 1,020
- The size of Runways, Taxiways and Apron are: Runway is 3,900 ft x 60ft, the connector taxiway is 367ft x 35 ft, the hangar taxiway is 336 ft x 25 ft and the apron is 200 ft x 300 ft. Attachment 2 shows the critical snow removal areas of the airport.

Attachment 1 is a completed “Snow Removal Equipment Calculations” spreadsheet for the Harding County Airport.

Projected Harding County Federal Entitlements will be in the amount of \$ 600,000.00 in FY2018 and are considered adequate for this project. (See Engineers Estimate Attached)

Project Sketch/Description

Hoven Municipal Airport Hoven, South Dakota



Project Description:

Apron Reconstruction Project (Design, Bidding & Negotiations, Construction, Construction Administration, Construction Engineering, Geotechnical Investigation, and Asphalt Testing)

Project Narrative (Justification)

Apron Reconstruction Project (Design, Bidding & Negotiations, Construction, Construction Administration, Construction Engineering, Geotechnical Investigation, and Asphalt Testing)

The General Aviation Apron was constructed in 2000 and consists of 5.5" of P-154 Subbase, 3" of P-208 Base Course, 7" of P-401 Surfacing. As can be seen in the aerial image on the previous page, the apron is in serious disrepair. The distresses on the apron consist of longitudinal and transverse cracks, alligator cracking, weathering, and raveling. The majority of the distresses are categorized as low severity, however a large number of the distresses are medium and high severity.

Included in the reconstruction will be addressing moisture drainage away from the pavement section to ensure the lifespan of the pavement is maximized.



MOBRIDGE MUNICIPAL AIRPORT
 CITY OF MOBRIDGE
 MOBRIDGE, SOUTH DAKOTA

PROJECT WORK DESCRIPTION &
 BASIS OF ESTIMATE

DRAFTED
JAB
REVIEWED
MDW
PROJECT NUMBER
10517119
LAST REVISED DATE
06/15/2018

PROJECT WORK DESCRIPTION

BASE BID

- 1 RECONSTRUCT RUNWAY 12-30 (APPROX. 4,410'x75')
- 2 RECONSTRUCT CONNECTING TAXIWAY (APPROX. 200'x35')
- 3 GRADE RUNWAY SAFETY AREA 12 END (APPROX. 100'x150')
- 4 GRADE RUNWAY SAFETY AREA 30 END (APPROX. 300'x150')
- 5 GRADE CROSSWIND RUNWAY 17-35 AT INTERSECTION (APPROX. 520'x250')
- 6 REPLACE RUNWAY CULVERTS
- 7 REPLACE RUNWAY AND TAXIWAY EDGE LIGHTING SYSTEM

ALTERNATE 1

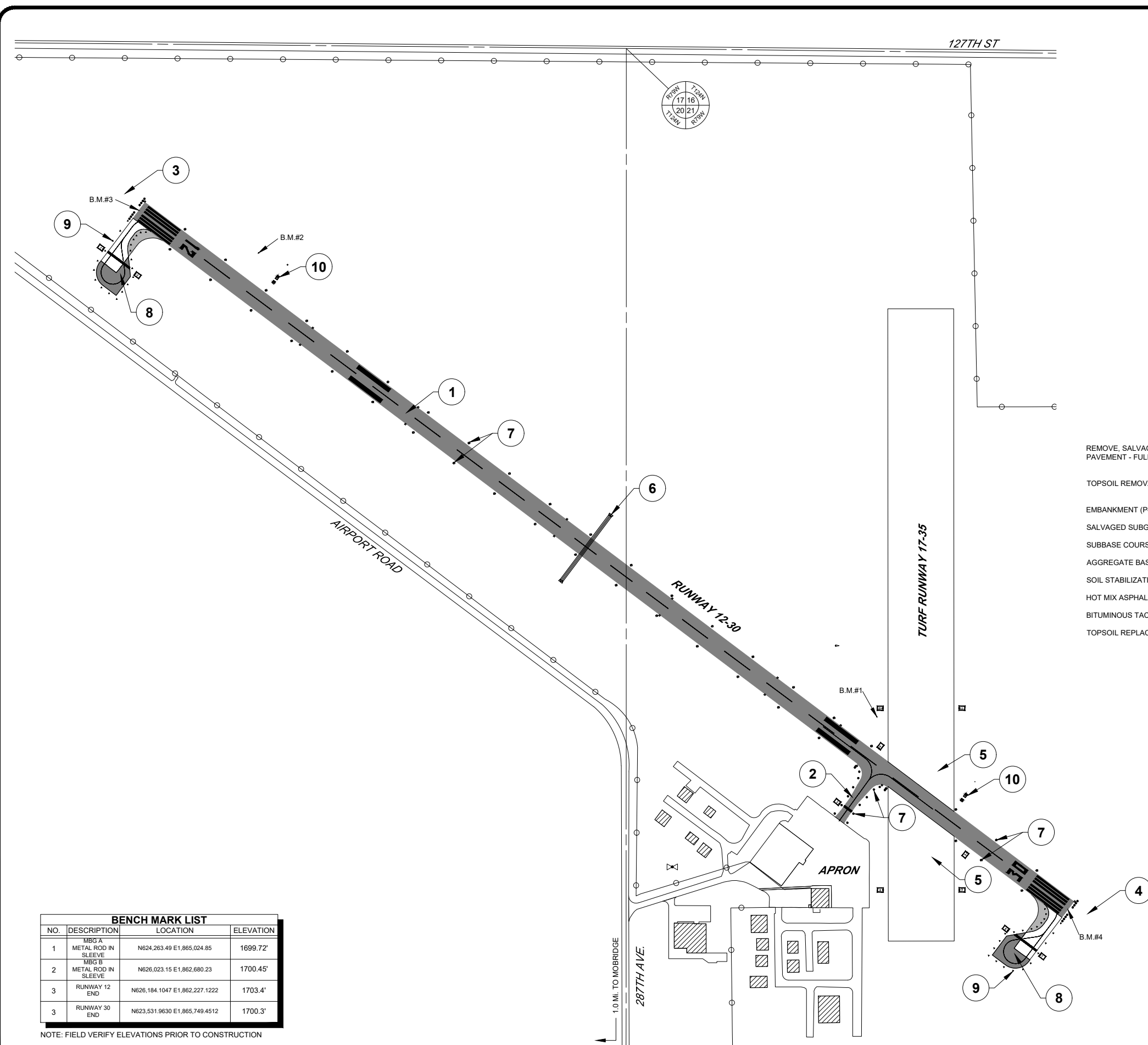
- 8 EXPAND RUNWAY TURNAROUNDS (APPROX. 3,252 S.Y.)
- 9 INSTALL TURNAROUND RETROREFLECTIVE MARKERS

ALTERNATE 2

- 10 REPLACE RUNWAY 12-30 PRECISION APPROACH PATH INDICATORS (PAPIS)

BASIS OF ESTIMATE

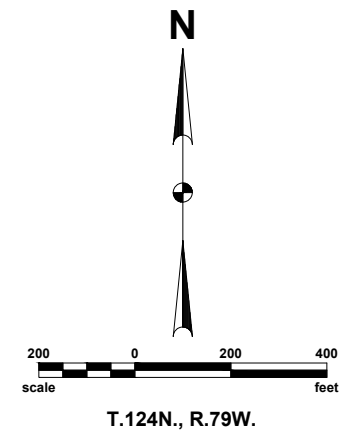
REMOVE, SALVAGE & PROCESS BITUMINOUS PAVEMENT - FULL DEPTH (P-101) -	AVERAGE DEPTH BITUMINOUS PAVEMENT: - 3"-5" RUNWAY 12-30 - ±3" TAXIWAY
TOPSOIL REMOVAL (P-152) -	STRIP 6" OVER ALL EXCAVATION OR EMBANKMENT AREAS. (INCLUDED IN UNCLASSIFIED EXCAVATION QUANTITY FOR PAYMENT)
EMBANKMENT (P-152) -	40% ADDITIONAL VOLUME HAS BEEN ADDED FOR SHRINKAGE
SALVAGED SUBGRADE COURSE (PLAN NOTES)-	COMPACTED VOLUME IN PLACE
SUBBASE COURSE (P-154) -	COMPACTED VOLUME IN PLACE
AGGREGATE BASE COURSE (P-208)-	COMPACTED VOLUME IN PLACE
SOIL STABILIZATION FABRIC (PLAN NOTES) -	ACTUAL S.Y., NO OVERLAP INCLUDED
HOT MIX ASPHALT (HMA) PAVEMENT (P-401) -	150 LBS/C.F.
BITUMINOUS TACK COAT (P-603) -	0.10 GAL/S.Y.
TOPSOIL REPLACEMENT (T-905) -	MEASURED IN STOCKPILES BY AVERAGE END AREAS OR PRISMOIDAL METHOD (PAID FOR AS TOPSOILING)



BENCH MARK LIST			
NO.	DESCRIPTION	LOCATION	ELEVATION
1	MBC A METAL ROD IN SLEEVE	N624,263.49 E1,865,024.85	1699.72'
2	MBC B METAL ROD IN SLEEVE	N626,023.15 E1,862,680.23	1700.45'
3	RUNWAY 12 END	N626,184.1047 E1,862,227.1222	1703.4'
3	RUNWAY 30 END	N623,531.9630 E1,865,749.4512	1700.3'

NOTE: FIELD VERIFY ELEVATIONS PRIOR TO CONSTRUCTION

PRELIMINARY
 NOT FOR
 CONSTRUCTION



PART IV – PROGRAM NARRATIVE
(Suggested Format)

PROJECT: AIP No. 3-46-0038-012-2018
AIRPORT: Mobridge Municipal Airport
<p>1. Objective:</p> <p>Design and Construction of the Reconstruction of Runway 12/30 (4,410'+/- x 75'); Expansion of Runway 12/30 Turnarounds, Reconstruction of the Connector Taxiway (approx 200'+/- x 35') to the OFA line; Partial Rwy 12-30 RSA Grading; and Replacement of Runway 12/30 Edge Light System. The runway and connector taxiway pavements are deteriorating at a rapid rate due to age, increased traffic and size of aircraft. The last runway surfacing improvement was done in 1999. The existing LIRL were installed in 1991 and are unreliable and need routine repairs.</p>
<p>2. Benefits Anticipated:</p> <p>The design and reconstruction of the runway and connector taxiway including lighting will allow for the airport to continue to operate safely and efficiently. The expansion of the turnarounds will improve safety and efficiency by allowing aircraft to turn around beyond the runway safety area line.</p>
<p>3. Approach: (See approved Scope of Work in Final Application)</p> <p>KLJ will completed field survey and environmental clearance including a Class III cultural resources survey and wetland delineation in 2017 grant. KLJ will complete final design of a full depth runway reconstruction with underdrains, new lighting and PAPI's and connector taxiway. KLJ will design an expansion of the Runway 12/30 end turnarounds. KLJ will prepare construction plans, specifications and bid documents. Project will be advertised and bid in July 2018 for construction during the summer of 2019.</p>
<p>4. Geographic Location:</p> <p>Mobridge Municipal Airport, Mobridge, South Dakota</p>
<p>5. If Applicable, Provide Additional Information:</p>
<p>6. Sponsor's Representative: (include address & telephone number)</p> <p>Christine Goldsmith 114 1st Avenue E Mobridge, SD 57601 (tele: 605-845-3555)</p>



PHILLIP MUNICIPAL AIRPORT
CITY OF PHILLIP
PHILLIP, SOUTH DAKOTA

PROJECT WORK
DESCRIPTION

DRAFTED

GCH

REVIEWED

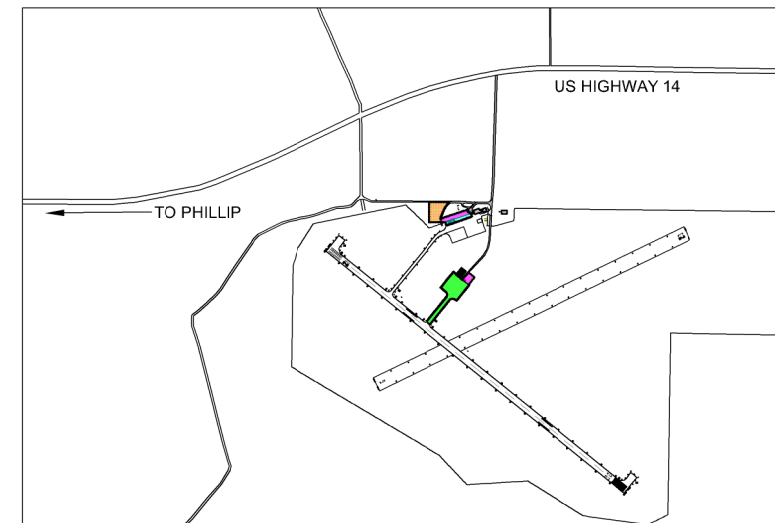
PROJECT NUMBER

LAST REVISED DATE

6/11/2018

SHEET

1



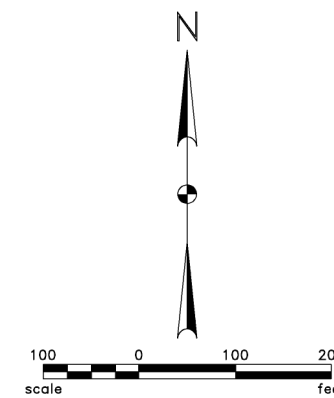
VICINITY MAP

PROJECT WORK DESCRIPTION

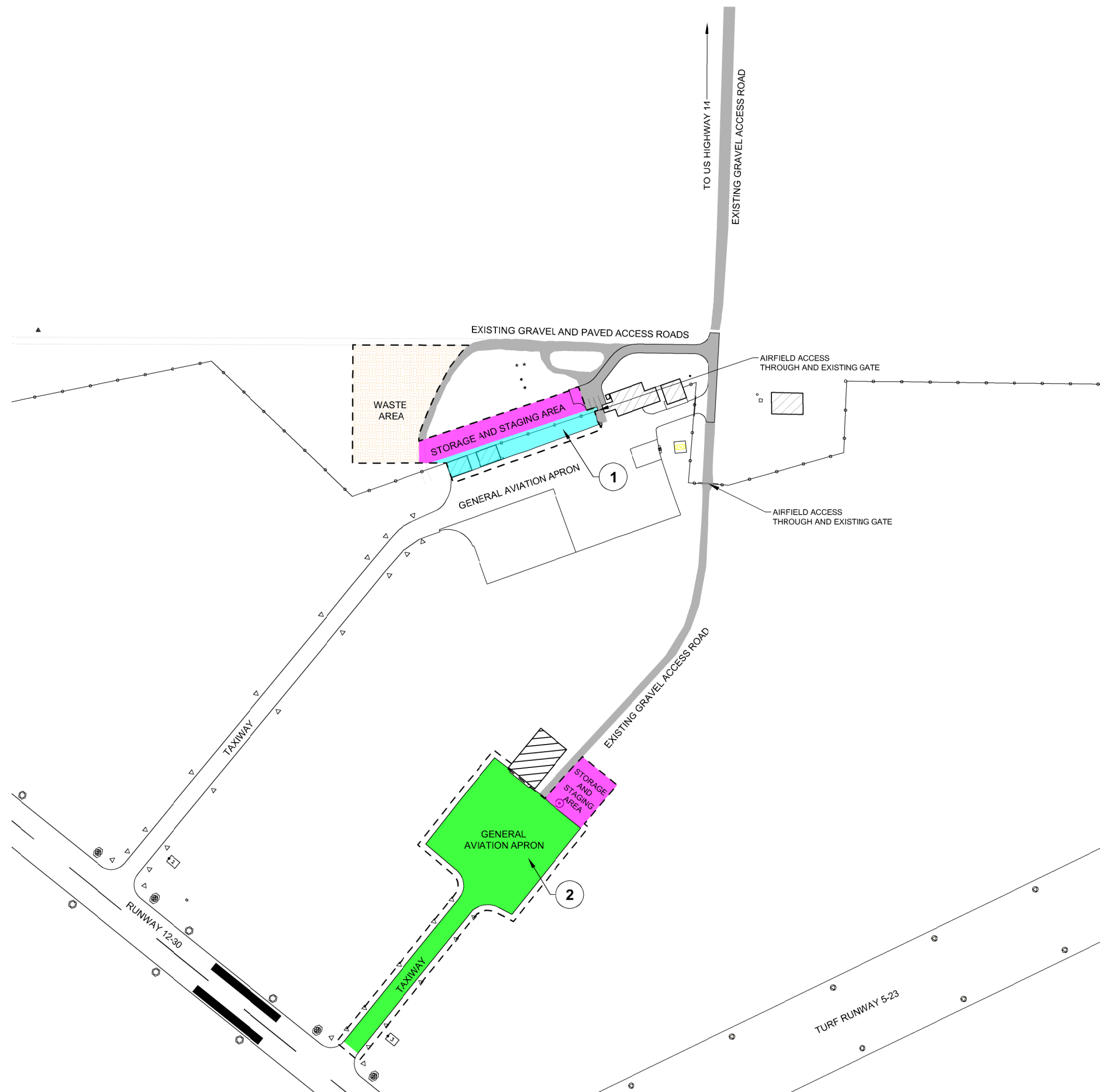
- 1 MULTIPLE AIRCRAFT HANGAR CONSTRUCTION
- 2 GENERAL AVIATION APRON AND TAXIWAY RECONSTRUCTION

LEGEND

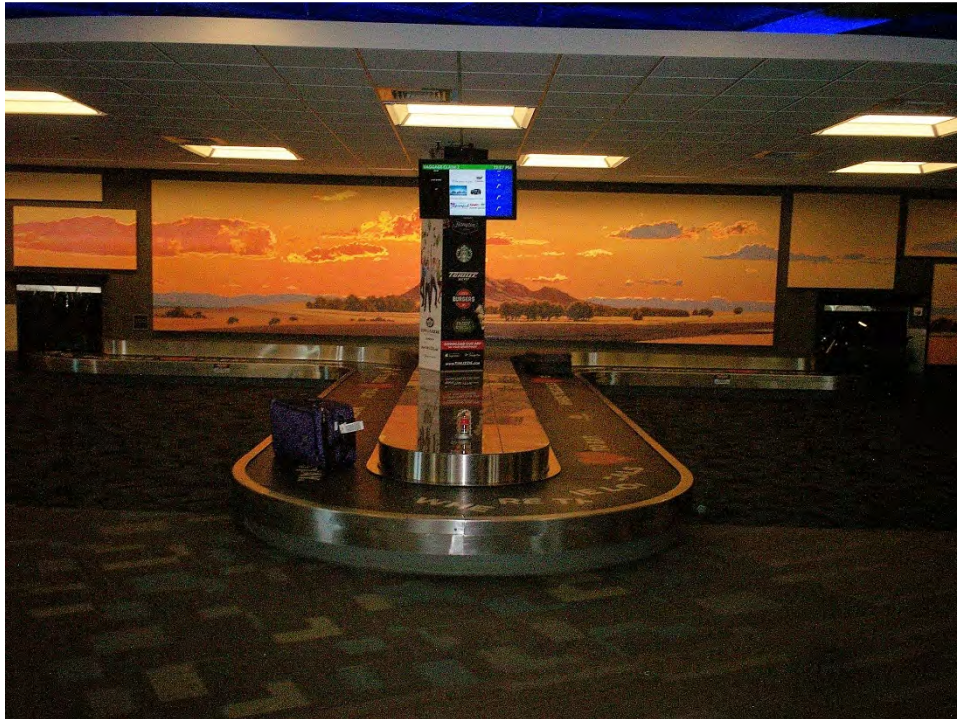
- PHASE 1 CONSTRUCTION
- PHASE 2 CONSTRUCTION
- STORAGE AND STAGING AREAS
- WASTE AREA
- CONSTRUCTION LIMITS
- ACCESS ROADS



PRELIMINARY
NOT FOR
CONSTRUCTION



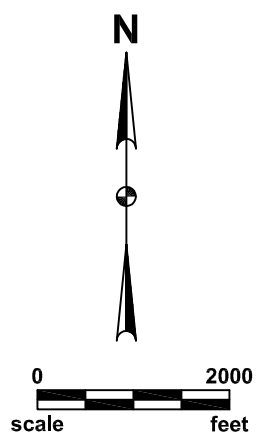
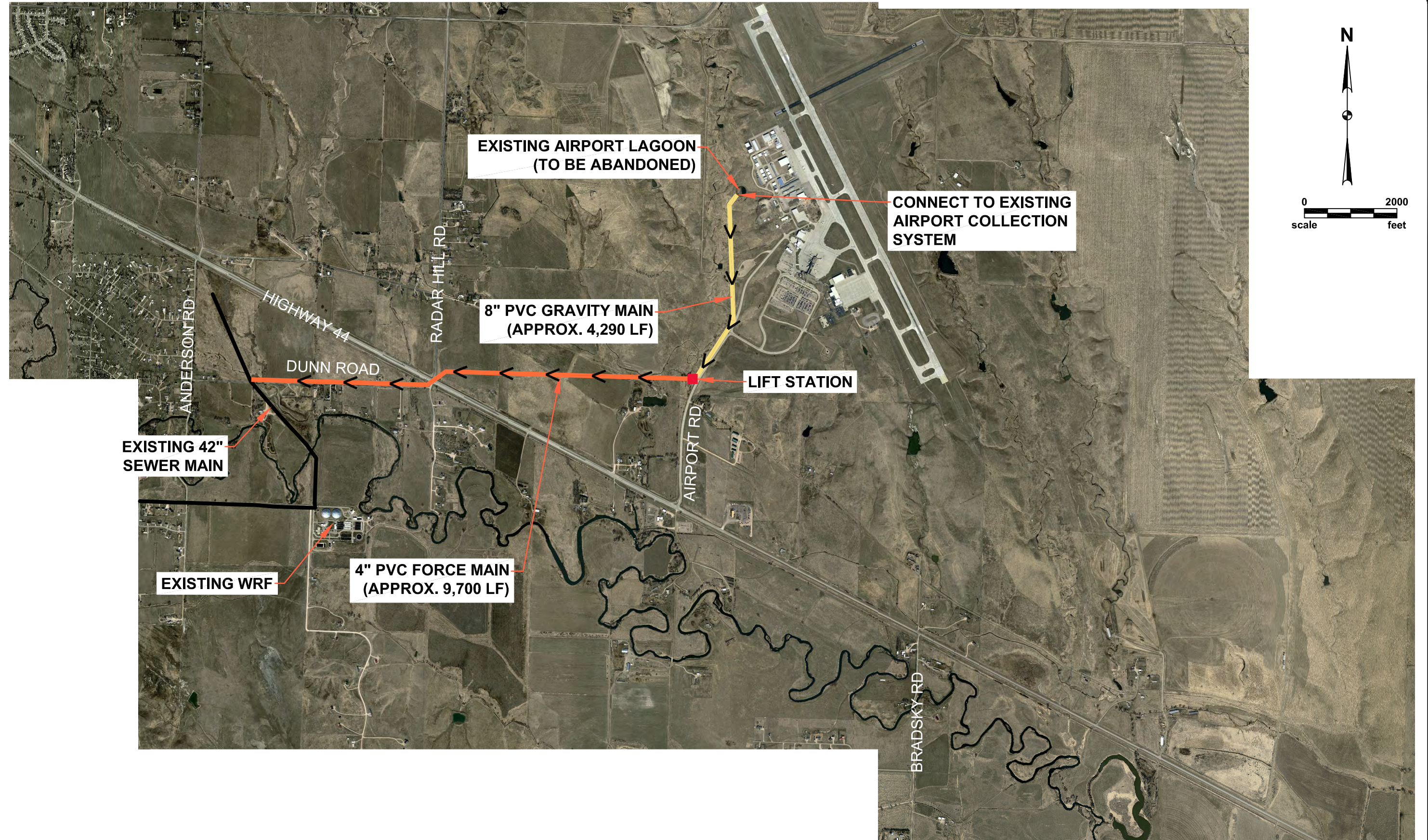
PRECONSTRUCTION PHOTOS



Existing baggage claim device - public / landside



Existing baggage claim device - airside



ALTERNATIVE NO. 4 - AIRPORT COLLECTION SYSTEM W/ CONNECTION TO RAPID CITY SYSTEM
 FIGURE 4



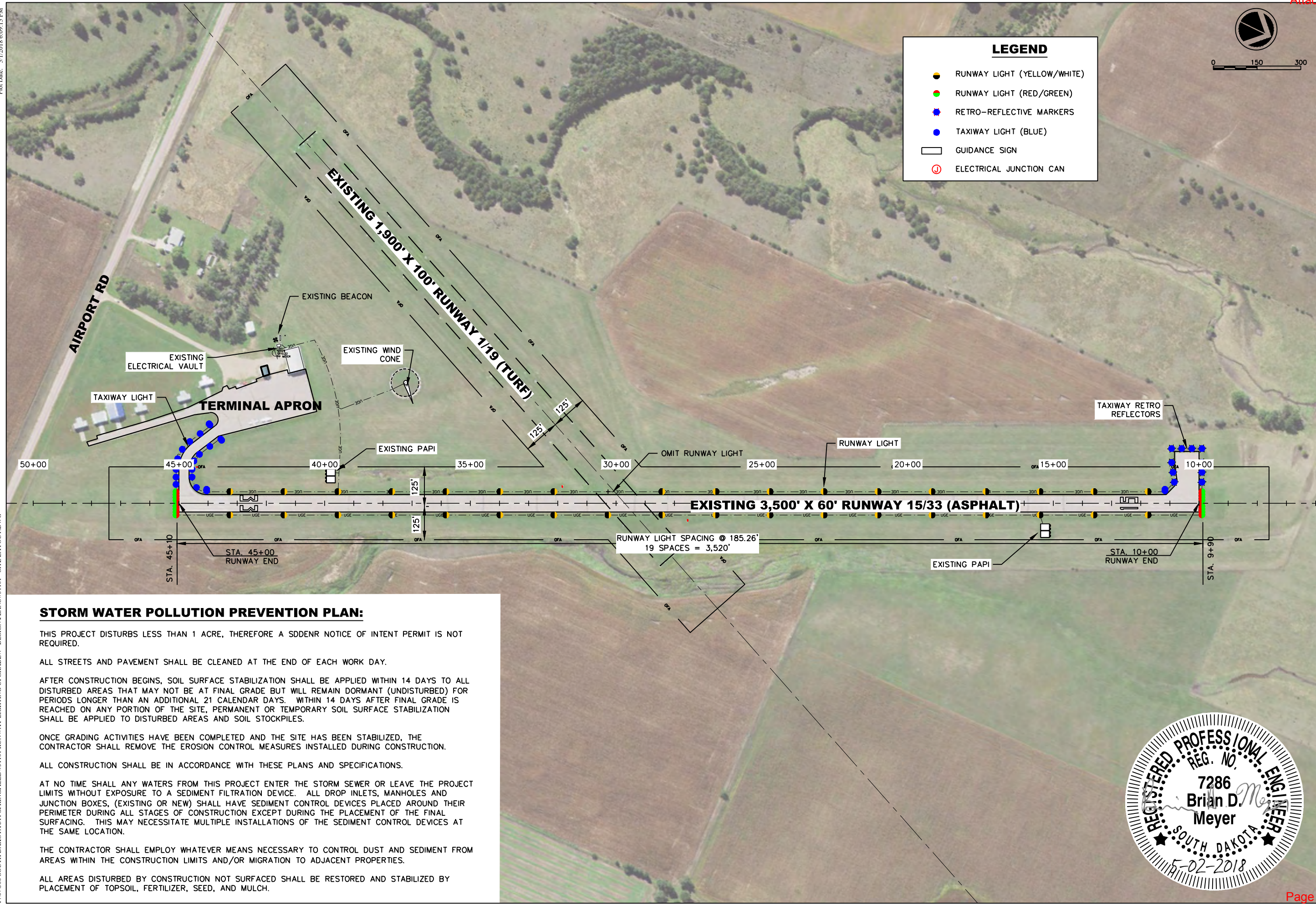
Project Narrative (Justification)

PROJECT DESCRIPTION

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.

Plot Date: 5/1/2018 6:09:15 PM

P:\07-300 SOUTH DAKOTA\311 SPRINGFIELD\731101 RUNWAY LIGHTING UPGRADE\4 - DESIGN\PLANS\731101 - SITE LAYOUT.DWG



LEGEND

- RUNWAY LIGHT (YELLOW/WHITE)
- RUNWAY LIGHT (RED/GREEN)
- ★ RETRO-REFLECTIVE MARKERS
- TAXIWAY LIGHT (BLUE)
- GUIDANCE SIGN
- Ⓜ ELECTRICAL JUNCTION CAN

STORM WATER POLLUTION PREVENTION PLAN:

THIS PROJECT DISTURBS LESS THAN 1 ACRE, THEREFORE A SDDENR NOTICE OF INTENT PERMIT IS NOT REQUIRED.

ALL STREETS AND PAVEMENT SHALL BE CLEANED AT THE END OF EACH WORK DAY.

AFTER CONSTRUCTION BEGINS, SOIL SURFACE STABILIZATION SHALL BE APPLIED WITHIN 14 DAYS TO ALL DISTURBED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR PERIODS LONGER THAN AN ADDITIONAL 21 CALENDAR DAYS. WITHIN 14 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE, PERMANENT OR TEMPORARY SOIL SURFACE STABILIZATION SHALL BE APPLIED TO DISTURBED AREAS AND SOIL STOCKPILES.

ONCE GRADING ACTIVITIES HAVE BEEN COMPLETED AND THE SITE HAS BEEN STABILIZED, THE CONTRACTOR SHALL REMOVE THE EROSION CONTROL MEASURES INSTALLED DURING CONSTRUCTION.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS.

AT NO TIME SHALL ANY WATERS FROM THIS PROJECT ENTER THE STORM SEWER OR LEAVE THE PROJECT LIMITS WITHOUT EXPOSURE TO A SEDIMENT FILTRATION DEVICE. ALL DROP INLETS, MANHOLES AND JUNCTION BOXES, (EXISTING OR NEW) SHALL HAVE SEDIMENT CONTROL DEVICES PLACED AROUND THEIR PERIMETER DURING ALL STAGES OF CONSTRUCTION EXCEPT DURING THE PLACEMENT OF THE FINAL SURFACING. THIS MAY NECESSITATE MULTIPLE INSTALLATIONS OF THE SEDIMENT CONTROL DEVICES AT THE SAME LOCATION.

THE CONTRACTOR SHALL EMPLOY WHATEVER MEANS NECESSARY TO CONTROL DUST AND SEDIMENT FROM AREAS WITHIN THE CONSTRUCTION LIMITS AND/OR MIGRATION TO ADJACENT PROPERTIES.

ALL AREAS DISTURBED BY CONSTRUCTION NOT SURFACED SHALL BE RESTORED AND STABILIZED BY PLACEMENT OF TOPSOIL, FERTILIZER, SEED, AND MULCH.



AIRFIELD LIGHTING IMPROVEMENTS
 SPRINGFIELD MUNICIPAL AIRPORT
 SPRINGFIELD, SOUTH DAKOTA

SITE LAYOUT

REVISIONS

Project Manager: BDM
 Designer: DAF
 Project Number: 731101
 Phone: (605) 339-4157



Sheet

Project Narrative

Airport Electrical Systems Replacement

Springfield Municipal Airport
Springfield, South Dakota

The condition of the existing airport lighting system is deteriorating, and annual repairs have grown steadily in recent years. Specifically, the underground wiring is direct buried wire and rodents are compromising the existing direct buried runway lighting system.

Annual repairs are becoming significant. Last year the City spent over \$17,500 on localized repairs to the lighting system. Rodents are compromising the existing direct buried conductors. Last year's system repair included 27 spot repairs to patch conductor shorts in the runway lighting circuit. In addition, several of the buried light transformers have required replacement from rodent damage. Additional repairs have been required in the electrical vault vicinity.

The proposed electrical system improvements to the runway lighting system are required to maintain system safety and reliability. The annual repairs required will be minimized or eliminated. Without an upgraded system, annual repairs can be anticipated to grow in coming years.

The proposed project will include an updated airport lighting system and related electrical improvements. All airport runway and taxiway lights systems will be replaced and rewired with the new lights, LED type. All electrical conductors will be placed in duct. The existing vault will be reused. The existing regulator and PAPI units will be evaluated during design for replacement, although replacement is anticipated. Refer to the attached sketch.

Project Sketch/Description

Wagner Municipal Airport
Wagner, SD



Project Description:

Design of Revenue Producing T-Hangars with Geotechnical Exploration

Project Narrative (Justification)

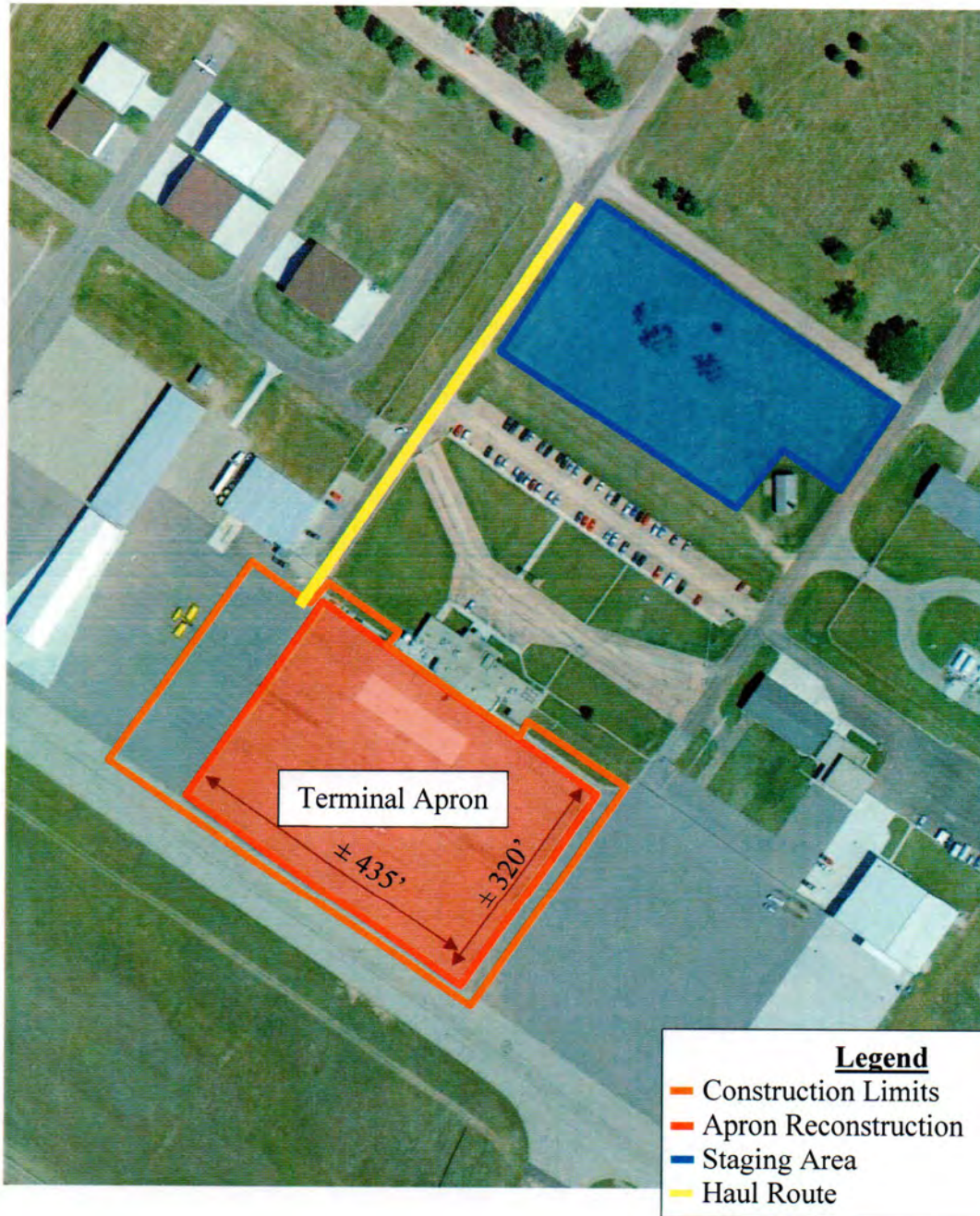
Design of Revenue Producing T-Hangars with Geotechnical Exploration

The most recent Pavement Condition Index (PCI) surveys showed all pavements at 98D were at least satisfactory (75+), requiring no immediate maintenance or rehabilitation. The exception is the hangar taxiway which was a 61, but has since been reconstructed. All other airside needs of the airport have been met including the recent rehabilitation of the grass crosswind runway.

The Wagner Municipal Airport constructed a GA Terminal/Hangar/SRE Storage Building in 2006. It is currently full of aircraft and there is a growing need for additional hangar storage space at the airport. The proposed hangars will allow for existing and transient users to store their aircraft.

Project Sketch/Description

Watertown Regional Airport Watertown, SD



Project Description:

Design Phase I in 2018
Construct Phase I in 2019
Design and Construct Phase II in 2020

Project Narrative (Justification)

Design of Terminal Apron Reconstruction – Phase I and Geotechnical Exploration

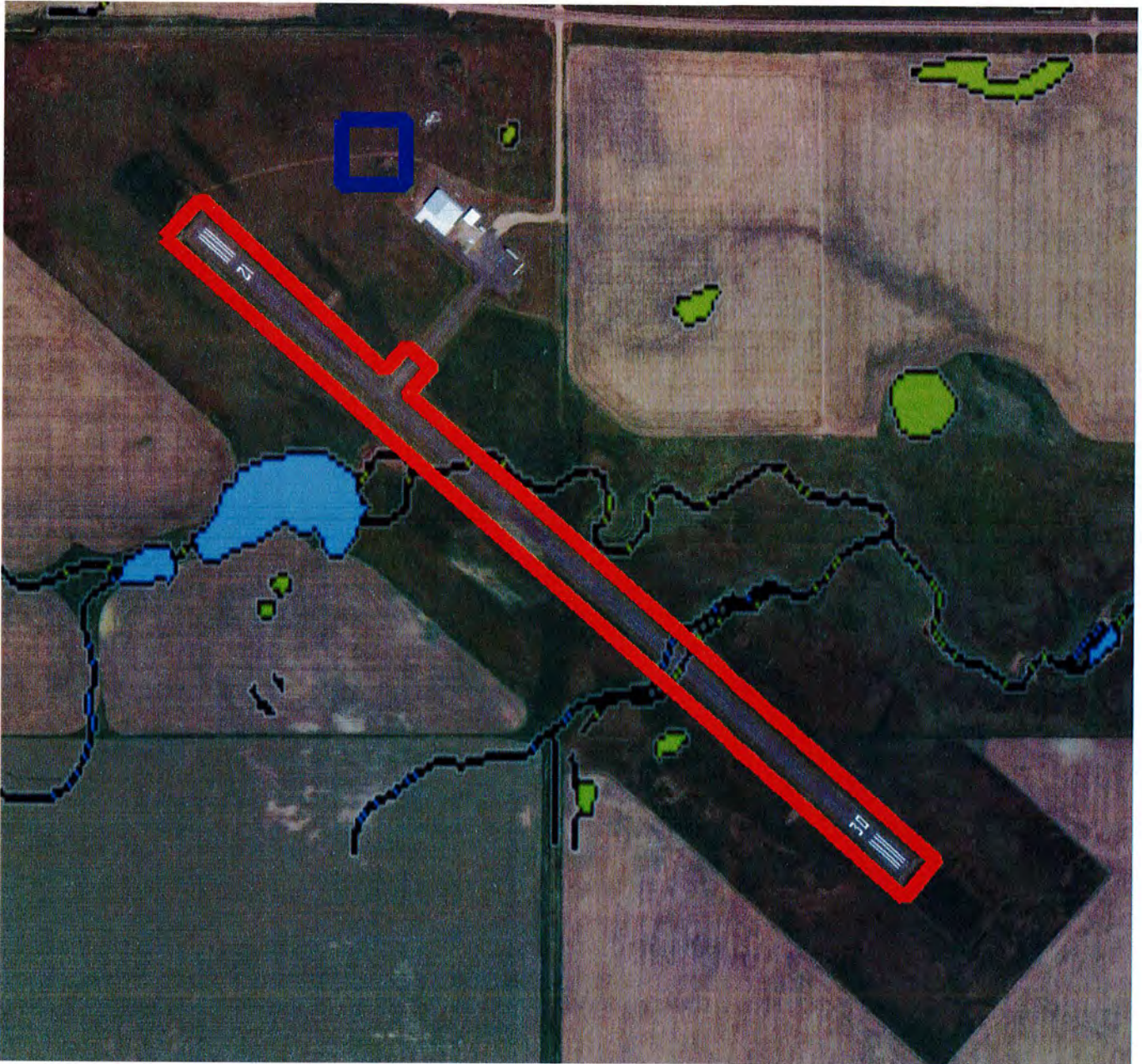
The Terminal Apron PCI in 2015 was 49 and with the concrete hardstand at 51. The 2018 PCI values are 52 and 50 respectively. The original section was constructed in 1944 with a concrete overlay of 9” in 1977 and an additional 4” of asphalt in 1992. Whereas the hard stand had 4.5” of concrete place in 2005. The pavements are in need of repair.

The entire apron will be reconstructed in phases. Design of Phase I will occur in 2018, construction of Phase I will be in 2019, and in 2020 the design and construction of Phase II is planned to occur.

The apron is approximately 435’ x 320’.

Project Sketch/Description

Wessington Springs Airport Wessington Springs, SD



Project Description:

Design, Geotechnical Exploration, and Construction of the Runway 12/30 ($\pm 60' \times 3,600'$) Reconstruction to include the reconstruction of the connector taxiway outside of the OFA ($\pm 35' \times 125'$)

The design and geotechnical exploration are planned to occur as part of a grant in 2018 and the construction is planned for a 2019 grant.

Project Narrative (Justification)

Design of the Runway 12/30 Reconstruction (to include connector taxiway reconstruction within the OFA) and Geotechnical Exploration

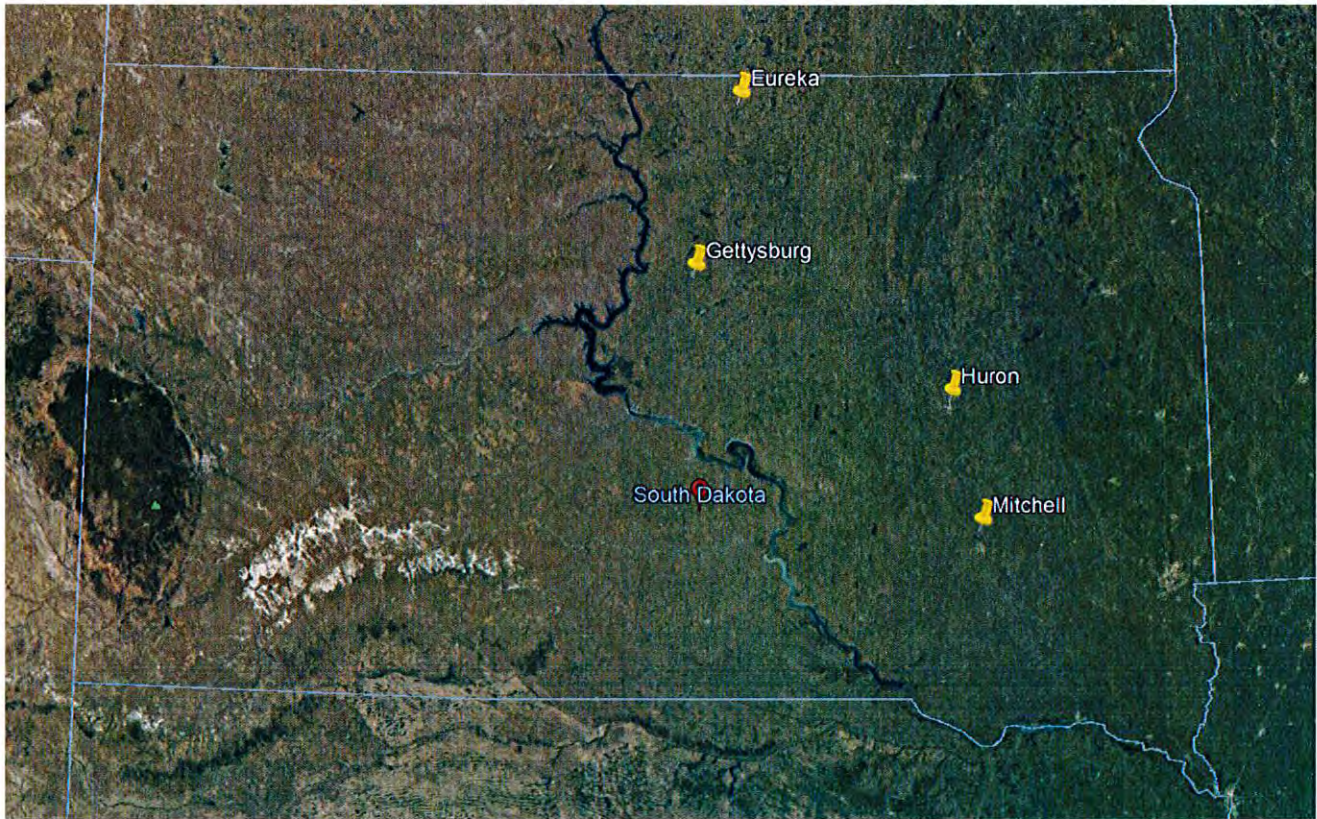
The PCI has fallen to a weighted average of 60 in 2015 and 50 in 2018 on the runway. The pavements have exceeded the end of their useful lives and are in need of reconstruction.

It is proposed that the runway will be reconstructed to an adequate depth (up to 65% of frost depth) and include underdrain along both edges of the pavement to reduce the susceptibility of frost heaves and extend the life of the pavement.

During design, a preliminary life cycle cost analysis will be evaluated to determine the validity of constructing the project in concrete versus asphalt surfacing. The final determination based on the life cycle cost analysis will be evaluated on the actual bid costs and availability of adequate funding.

Project Sketch/Description

2018 SD Pavement Rehabilitation Project **Statewide, South Dakota**



Project Description:

This project will include the pavement rehabilitation on runways, taxiways, taxilanes, and/or aprons which may include any of the following: Emulsified Seal Coats, Fog Seals, Slurry Seals, Crack Leveling, Route and Seal Cracks, Crack Sealing (Overbanding), Saw and Seal Cracks, Spall Repairs, Panel Replacement, Replacing Joint Sealant, and/or Pavement Markings. There will be maintenance completed on existing surfaces at the Eureka, Gettysburg, Huron, and Mitchell Airports in South Dakota in 2018.

Project Narrative (Justification)

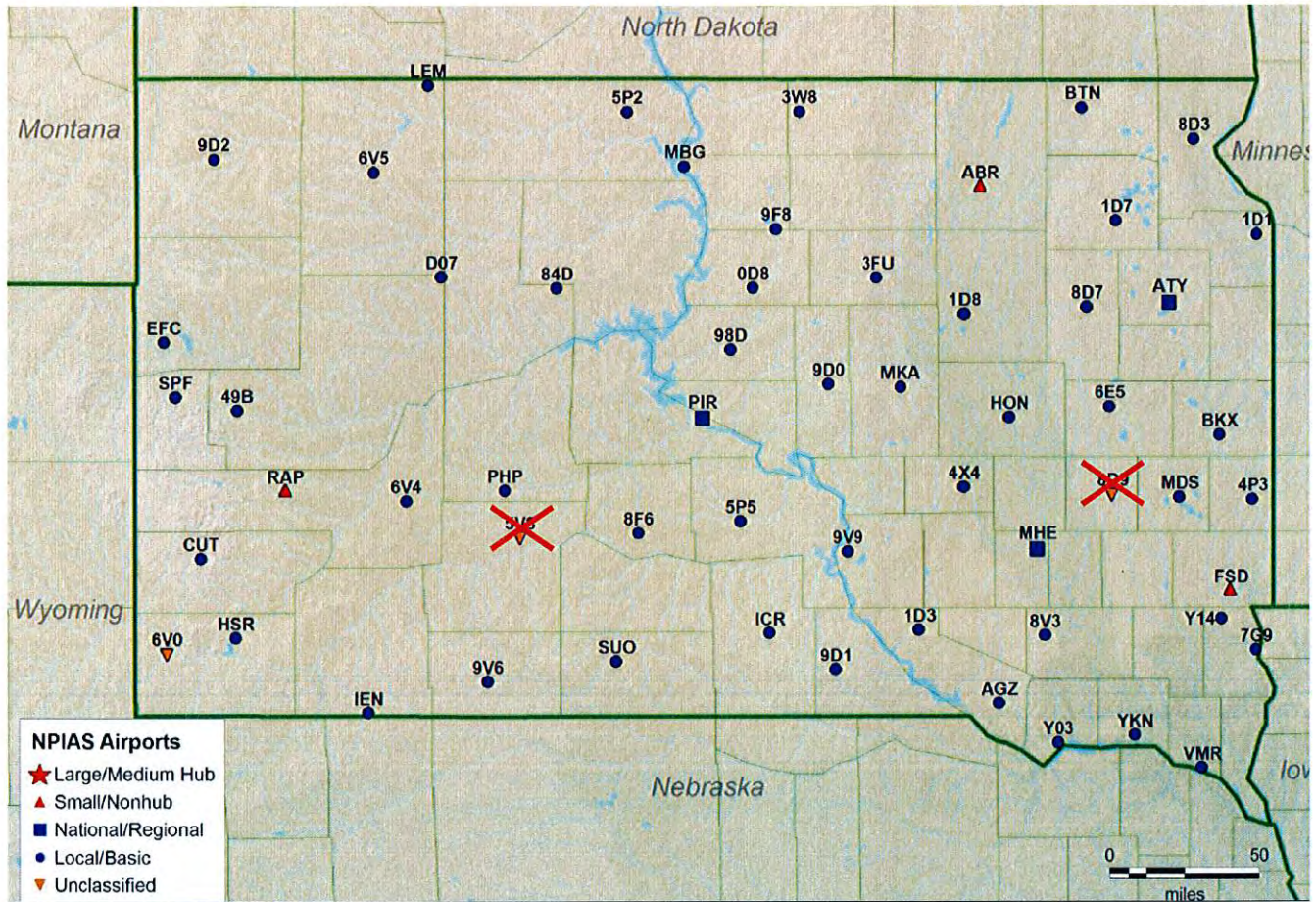
PROJECT DESCRIPTION

The project will include the pavement rehabilitation on runways, taxiways, and/or aprons which may include any of the following: Emulsified Seal Coats, Fog Seals, Slurry Seals, Crack Leveling, Route and Seal Cracks, Crack Sealing (Overbanding), Saw and Seal Cracks, Spall Repairs, Panel Replacement, Replacing Joint Sealant, and/or Pavement Markings. There will be maintenance completed on existing surfaces at the Eureka, Gettysburg, Huron, and Mitchell Airports in South Dakota in 2018.

The Office of Air, Rail and Transit has taken the role of managing the statewide pavement maintenance project. Due to the small quantity of work needed at most airports, the state has found it to be most cost effective to manage one statewide pavement maintenance project in order to obtain a larger quantity of work and thus a better price. The state has found that with only one project to oversee, administrative overhead is also lower.

Project Sketch/Description

All Paved NPIAS Airports in South Dakota



Project Description:

Complete the South Dakota Statewide Airport Pavement Condition Inspections, Update Feature Maps, and Update Individual Airport PCI Maps

Project Narrative (Justification)

Complete the South Dakota Statewide Airport Pavement Condition Inspections, Update Feature Maps, and Update Individual Airport PCI Maps

Airports (55) to be included in the inventory are: Aberdeen, Belle Fourche, Bison, Britton, Brookings, Buffalo, Canton, Chamberlain, Clark County, Custer County, De Smet, Eagle Butte, Edgemont, Eureka, Faith, Faulkton, Flandreau, Gettysburg, Gregory, Highmore, Hot Springs, Hoven, Huron, Lemmon, Madison, Martin, McLaughlin, Milbank, Miller, Mitchell, Mobridge, Murdo, Onida, Parkston, Philip, Pierre, Pine Ridge, Platte, Rapid City, Redfield, Rosebud Sioux Tribal, Sioux Falls, Sisseton, Spearfish, Springfield, Sturgis, Tea Lincoln County, Vermillion, Wagner, Wall, Watertown, Webster, Wessington Springs, Winner, and Yankton.

Newly constructed pavements in 2017 will not be evaluated in the inventory as their PCI is assumed to be 100. Pavements include the Britton hangar taxilane, Brookings southern portion of Runway 17/35, Custer GA apron, Eureka hangar taxilane, Gregory apron expansion, Platte Runway 14/32, Redfield Runway 17/35, Vermillion GA apron, Watertown Runway 12/30, Watertown Hangar Taxilane Expansion, Webster Runway 12/30, Winner lower apron expansion.

The last PCI inspections were completed in 2015 and the SDDOT has established a three year rotation on updating the PCI Maps throughout South Dakota.