

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

FROM: Jack Dokken, Program Manager
 Office of Air, Rail, and Transit

DATE: August 14, 2017

SUBJECT: Financial Assistance Agreements

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

Aberdeen 3-46-0001-037-2017

Snow removal equipment acquisition, wildlife hazard assessment, and wildlife hazard management plan.

Federal Share	\$ 1,215,000.00
State Share	\$ 67,500.00
Local Share	\$ 67,500.00
Total	\$ 1,350,000.00

The Department recommends approval of state assistance in the amount of \$67,500.00.

Britton 3-46-0004-012-2017

Design, construction and testing for hangar taxiway expansion.

Federal Share	\$ 463,500.00
State Share	\$ 25,750.00
Local Share	\$ 25,750.00
Total	\$ 515,000.00

The Department recommends approval of state assistance in the amount of \$25,750.00.

Canton 3-46-0007-007-2017

Construct wildlife fence and mitigate wetlands.

Federal Share	\$ 402,901.00
State Share	\$ 22,383.00
Local Share	\$ 22,385.00
Total	\$ 447,669.00

The Department recommends approval of state assistance in the amount of \$22,383.00.

Chamberlain 3-46-0071-009-2017

Produce a master plan and airport layout plan, including aviation forecast and exhibit A property map.

Federal Share	\$ 220,590.00
State Share	\$ 12,255.00
Local Share	\$ 12,255.00
Total	\$ 245,100.00

The Department recommends approval of state assistance in the amount of \$12,255.00.

Clark County 3-46-0009-011-2017

Acquire snow removal equipment and attachments.

Federal Share	\$ 157,500.00
State Share	\$ 8,750.00
Local Share	\$ 8,750.00
Total	\$ 175,000.00

The Department recommends approval of state assistance in the amount of \$8,750.00.

Custer County 3-46-0011-013-2017

Reconstruct GA apron including, engineering, administration and testing.

Federal Share	\$ 575,000.00
State Share	\$ 31,944.44
Local Share	\$ 31,944.45
Total	\$ 638,888.89

The Department recommends approval of state assistance in the amount of \$31,944.44.

Eagle Butte 3-46-0068-009-2017

Design, bidding, CATEX, class III cultural survey for reconstruction and expansion of GA apron.

Federal Share	\$ 72,000.00
State Share	\$ 4,000.00
Local Share	\$ 4,000.00
Total	\$ 80,000.00

The Department recommends approval of state assistance in the amount of \$4,000.00.

Faulkton 3-46-0016-010-2017

Environmental assessment to include wetland delineation, wildlife hazard site visit and cultural survey.

Federal Share	\$ 112,500.00
State Share	\$ 6,250.00
Local Share	\$ 6,250.00
Total	\$ 125,000.00

The Department recommends approval of state assistance in the amount of \$6,250.00.

Madison 3-46-0029-014-2017

Wetland mitigation (approximately 29.44 credits wetland banking)

Federal Share	\$ 299,700.00
State Share	\$ 16,650.00
Local Share	\$ 16,650.00
 Total	 \$ 333,000.00

The Department recommends approval of state assistance in the amount of \$16,650.00.

Martin 3-46-0030-012-2017

Construction, engineering and administration for wildlife fence.

Federal Share	\$ 165,000.00
State Share	\$ 9,166.66
Local Share	\$ 9,166.67
 Total	 \$ 183,333.33

The Department recommends approval of state assistance in the amount of \$9,166.66.

Mitchell 3-46-0037-027-2017

Purchase snow removal equipment.

Federal Share	\$ 119,700.00
State Share	\$ 6,650.00
Local Share	\$ 6,650.00
 Total	 \$ 133,000.00

The Department recommends approval of state assistance in the amount of \$6,650.00.

Mobridge 3-46-0038-011-2017

Design for reconstruction of runway 12/30 and connector taxiway, turnaround expansion, replacement of MIRL and PAPIs. New taxiway MITL and partial RSA grading, land acquisition, exhibit A update. Reimbursement for 12' SRE blade and pusher box attachments.

Federal Share	\$ 337,509.00
State Share	\$ 18,751.00
Local Share	\$ 18,751.00
Total	\$ 375,011.00

The Department recommends approval of state assistance in the amount of \$18,751.00.

Rapid City 3-46-0048-049-2017

Reconstruction of GA apron phase 2, SRE sander, design for de-icing apron and containment system.

Federal Share	\$ 1,615,000.00
State Share	\$ 89,722.22
Local Share	\$ 89,722.22
Total	\$ 1,794,444.44

The Department recommends approval of state assistance in the amount of \$89,722.22.

Sioux Falls 3-46-0050-051-2017

Partial reconstruction of runway 3/21, including in-pavement centerline lights; runway 3/21 partial rehab; runway 3/21 partial RSA grading; taxiway B1 & B3 reconstruction within 3/21 OFA including edge lights..

Federal Share	\$ 8,227,472.00
State Share	\$ 457,081.00
Local Share	\$ 457,081.00
Total	\$ 9,141,637.00

The Department recommends approval of state assistance in the amount of \$457,081.00.

Spearfish 3-46-0065-023-2017

Focused Planning Study – proposed crosswind runway, including historic and Cultural class III pedestrian inventory with tribal review; tribal consultation meeting; wetland delineation; biological resources survey; RPZ analysis for proposed runway 5 and coordination of FAA flight procedure feasibility analysis.

Federal Share	\$ 125,000.00
State Share	\$ 6,944.44
Local Share	\$ 6,944.45
Total	\$ 138,888.89

The Department recommends approval of state assistance in the amount of \$6,944.44.

State Pavement Maintenance 3-46-4600-023-2017

GA airport pavement maintenance, including fog seal, slurry seal, crack leveling, route and seal cracks, crack sealing, joint seal replacement, and pavement markings.

Federal Share	\$ 820,800.00
State Share	\$ 45,600.00
Local Share	\$ 45,600.00
Total	\$ 912,000.00

The Department recommends approval of state assistance in the amount of \$45,600.00.

Project Narrative (Justification)

Snow Removal Equipment

The Aberdeen Regional Airport currently has 1 snow blower, 3 plows, 2 sweepers, 2 hopper spreaders, and 1 front end loader.

According to the Snow Removal Equipment Calculations spreadsheet, the maximum number of eligible items for ABR is as follows:

- 2 – Snow Blowers
- 4 – Plows
- 3 – Sweepers
- 3 – Hopper Spreaders
- 1 – Front End Loader

After the acquisition and replacement of the Snow Removal Equipment, ABR will have:

- 1 – Snow Blower
- 4 – Plows
- 3 – Sweepers
- 2 – Hopper Spreaders
- 1 – Front End Loader

ABR has adequate storage to store the currently owned and proposed snow removal equipment indoors.

WHA/WHMP

The WHA and WHMP are from 2001 and 2002. Both reports need to be updated to reflect the current conditions of the airfield as the airport has done extensive improvements to remove/improve wildlife attractants at the airport in the last several years.



CIVIL ENGINEERS & LAND SURVEYORS

221 Brown County Hwy 19
P.O. Box 111
Aberdeen, SD 57402

Phone: (605) 225-1212 Fax: (605) 225-3189
Email: operations@helmsengineering.com

**Snow Removal Equipment Acquisition
Aberdeen Regional Airport
Aberdeen, South Dakota
AIP #3-46-0001-037-2017
Revised Engineer's Estimate
June, 2017**

Base Bid

Item #	Item Description	Quantity	Unit	Unit Price	Total Price
1	Heavy Duty Multi-Tasking Snow Removal Vehicle, Forward Mounted Cab, 24-Foot Flared Plow with Hands Free Hitch, and 22-Foot High Performance Runway Broom	2	Each	\$ 633,999.00	\$ 1,267,998.00
Base Bid Total					\$ 1,267,998.00

Estimated WHA and WHMP	\$ 75,000.00
Estimated Administration Costs	\$ 7,002.00
Estimated Project Total	\$ 1,350,000.00

SNOW REMOVAL EQUIPMENT ACQUISITION
ABERDEEN REGIONAL AIRPORT
ABERDEEN, SOUTH DAKOTA
AIP #3-46-0001-037-2017
BID TABULATION
6/23/2017

Base Bid				M-B Companies, Inc. New Holstein, WI	
Item #	Item Description	Quantity	Unit	Unit Price	Total Price
1	Heavy Duty Multi-Tasking Snow Removal Vehicle, Forward Mounted Cab, 24-Foot Flared Plow with Hands Free Hitch, and 22-Foot High Performance Runway Broom	2	Each	\$633,999.00	\$1,267,998.00
Total Bid Schedule A				\$1,267,998.00	\$1,267,998.00

I HEREBY CERTIFY THAT THE FOREGOING IS AN ACCURATE REPRESENTATION AND TABULATION OF ALL BIDS RECEIVED AND THAT THE MATHEMATICS HAVE BEEN CHECKED AND IS TO THE BEST OF MY KNOWLEDGE CORRECT:

PROJECT ENGINEER: *Bruce Edger* DATE: 6-23-2017

Project Narrative (Justification)

Hangar Taxilane Expansion (±710' x 35')

There is currently no location for new (large) hangar construction a Farrar Field. The current hangar taxilane has a drainage ditch running behind the hangars and will only allow for hangars 40'-50' deep. A new hangar taxilane will allow for new larger hangar construction. The new location shown on the current approved ALP, will require approximately 350' of taxilane before a hangar area can begin. There will then be another additional 360' of taxilane constructed. The hangar area will contain the relocated hangar (60' wide). Another user has expressed interest in constructing a 120' wide hangar and 50' wide containment pad for their spray operation. An additional 100' will also be constructed for future hangars. In the future, the City plans to construct a Revenue Producing Hangar in that location unless another user wishes to build there first.

Britton Grant Support

Helms & ASSOCIATES

CIVIL ENGINEERS & LAND SURVEYORS

 221 Brown County Hwy 19
 P.O. Box 111
 Aberdeen, SD 57402

 Phone: (605) 225-1212 Fax: (605) 225-3189
 Email: operations@helmsengineering.com

Hangar Taxilane Expansion
Farrar Field
Britton, South Dakota
AIP #3-46-0004-012-2017
Helms # A-6586
Revised Engineer's Estimate
7/10/2017

Base Bid

Item #	Spec #	Item Description	Quantity	Unit	Unit Price	Total Cost
1	GP-105	Mobilization	1	L.S.	\$39,000.00	\$39,000.00
2	GP-50	Construction Staking	1	L.S.	\$7,500.00	\$7,500.00
3	S-100	Construction Safety Phasing Plan	1	L.S.	\$9,500.00	\$9,500.00
4	P-101	Asphalt Pavement Removal	152	SqYd	\$5.00	\$760.00
5	P-101	Concrete Pavement Removal	31	SqYd	\$12.00	\$372.00
6	P-152 (MOD)	Unclassified Excavation	3,173	CuYd	\$4.00	\$12,692.00
7	P-152 (MOD)	Off-Site Borrow Material	3,140	CuYd	\$14.00	\$43,960.00
8	P-154	Subbase Course	2,015	CuYd	\$23.00	\$46,345.00
9	P-208 (MOD)	Aggregate Base Course	1,658	CuYd	\$25.00	\$41,450.00
10	P-403	Bituminous Base/Surface Course	550.0	Ton	\$135.00	\$74,250.00
11	P-602	Bituminous Prime Coat	5.0	Ton	\$1,100.00	\$5,500.00
12	P-603	Bituminous Tack Coat	2.0	Ton	\$1,000.00	\$2,000.00
13	P-620	Pavement Marking	1	L.S.	\$3,600.00	\$3,600.00
14	F-160	Barbed Wire Fence	425	Ft	\$8.00	\$3,400.00
15	F-160	Corner Panel	1	Each	\$350.00	\$350.00
16	F-160	Brace/Gate Panel	3	Each	\$350.00	\$1,050.00
17	D-701	15" RCP	662	Ft	\$40.00	\$26,480.00
18	D-701	15" RCP TEE	1	Each	\$750.00	\$750.00
19	D-705 (MOD)	4" Perforated Underdrain Piping	894	Ft	\$11.00	\$9,834.00
20	D-705 (MOD)	Connect to RCP	3	Each	\$250.00	\$750.00
21	D-705 (MOD)	Underdrain Cleanout	3	Each	\$200.00	\$600.00
22	D-751	2' x 3' Storm Sewer Inlet w/Type E Frame and Grate and 10' x 10' Concrete Apron	5	Each	\$2,250.00	\$11,250.00
23	T-901	Seeding and Fertilizing	2.0	Acre	\$2,400.00	\$4,800.00
24	T-905	Topsoiling	1,573	CuYd	\$4.00	\$6,292.00
25	TL-100	Field Laboratory, Type I	1	Each	\$4,500.00	\$4,500.00
26	SP-2	Geogrid	3,315	SqYd	\$2.00	\$6,630.00
27	SP-3	Geotextile Separator Fabric	3,712	SqYd	\$2.00	\$7,424.00
28	Plans	Remove, Salvage, and Reset Chain Link Cantilever Gate	1	Each	\$300.00	\$300.00
29	Plans	Remove and Dispose of Barbed Wire Fence	485	Ft	\$1.00	\$485.00
30	Plans	Remove and Dispose of 12" CMP Culvert	60	Ft	\$15.00	\$900.00
31	Plans	Gravel Surfacing	200.0	Ton	\$25.00	\$5,000.00
32	Plans	Type II Erosion Control Blanket	1,855	SqYd	\$3.00	\$5,565.00
33	Plans	Sediment Control at Inlet	5	Each	\$250.00	\$1,250.00
Estimated Construction Total						\$384,539.00
Design Engineering						\$34,871.93
Geotechnical Exploration						\$3,984.00
Bidding & Negotiations						\$5,750.34
Construction Administration						\$21,486.19
Construction Engineering						\$37,734.39
Estimated Asphalt Testing						\$7,500.00
Estimated Administration						\$19,134.15
Total Estimated Project Cost						\$515,000.00

Britton Grant Support

HANGAR TAXILANE EXPANSION
 FARRAR FIELD
 BRITTON, SOUTH DAKOTA
 AIP #3-46-0004-012-2017
 HELMS # A-6586
 BID TABULATION
 7/10/2017

Bid Tabulation

Item #	Spec #	Item Description	Quantity	Unit	Webster Scale, Inc. Webster, SD		J & J Earth Works, Inc. Millbank, SD		Lien Transportation Aberdeen, SD	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
1	GP-105	Mobilization	1	L.S.	\$39,000.00	\$39,000.00	\$42,000.00	\$42,000.00	\$65,000.00	\$65,000.00
2	GP-50	Construction Staking	1	L.S.	\$7,500.00	\$7,500.00	\$12,000.00	\$12,000.00	\$13,000.00	\$13,000.00
3	S-100	Construction Safety Phasing Plan	1	L.S.	\$9,500.00	\$9,500.00	\$7,200.00	\$7,200.00	\$12,500.00	\$12,500.00
4	P-101	Asphalt Pavement Removal	152	SqYd	\$5.00	\$760.00	\$6.00	\$912.00	\$9.00	\$1,368.00
5	P-101	Concrete Pavement Removal	31	SqYd	\$12.00	\$372.00	\$10.00	\$310.00	\$8.50	\$263.50
6	P-152 (MOD)	Unclassified Excavation	3,173	CuYd	\$4.00	\$12,692.00	\$6.75	\$21,417.75	\$10.00	\$31,730.00
7	P-152 (MOD)	Off-Site Borrow Material	3,140	CuYd	\$14.00	\$43,960.00	\$10.50	\$32,970.00	\$15.00	\$47,100.00
8	P-154	Subbase Course	2,015	CuYd	\$23.00	\$46,345.00	\$24.50	\$49,367.50	\$45.00	\$90,675.00
9	P-208 (MOD)	Aggregate Base Course	1,658	CuYd	\$25.00	\$41,450.00	\$26.25	\$43,522.50	\$130.00	\$215,540.00
10	P-403	Bituminous Base/Surface Course	550.0	Ton	\$135.00	\$74,250.00	\$135.00	\$74,250.00	\$120.00	\$66,000.00
11	P-602	Bituminous Prime Coat	5.0	Ton	\$1,100.00	\$5,500.00	\$1,200.00	\$6,000.00	\$1,000.00	\$5,000.00
12	P-603	Bituminous Tack Coat	2.0	Ton	\$1,000.00	\$2,000.00	\$1,000.00	\$2,000.00	\$850.00	\$1,700.00
13	P-620	Pavement Marking	1	L.S.	\$3,600.00	\$3,600.00	\$3,500.00	\$3,500.00	\$3,495.00	\$3,495.00
14	F-160	Barbed Wire Fence	425	Ft	\$8.00	\$3,400.00	\$3.25	\$1,381.25	\$3.40	\$1,445.00
15	F-160	Corner Panel	1	Each	\$350.00	\$350.00	\$400.00	\$400.00	\$350.00	\$350.00
16	F-160	Brace/Gate Panel	3	Each	\$350.00	\$1,050.00	\$250.00	\$750.00	\$175.00	\$525.00
17	D-701	15" RCP	662	Ft	\$40.00	\$26,480.00	\$36.00	\$23,832.00	\$30.00	\$19,860.00
18	D-701	15" RCP TEE	1	Each	\$750.00	\$750.00	\$675.00	\$675.00	\$880.00	\$880.00
19	D-705 (MOD)	4" Perforated Underdrain Piping	894	Ft	\$11.00	\$9,834.00	\$9.50	\$8,493.00	\$10.00	\$8,940.00
20	D-705 (MOD)	Connect to RCP	3	Each	\$250.00	\$750.00	\$350.00	\$1,050.00	\$985.00	\$2,955.00
21	D-705 (MOD)	Underdrain Cleanout	3	Each	\$200.00	\$600.00	\$275.00	\$825.00	\$440.00	\$1,320.00
22	D-751	2' x 3' Storm Sewer Inlet w/Type E Frame and Grate and 10' x 10' Concrete Apron	5	Each	\$2,250.00	\$11,250.00	\$4,300.00	\$21,500.00	\$5,000.00	\$25,000.00
23	T-901	Seeding and Fertilizing	2.0	Acre	\$2,400.00	\$4,800.00	\$800.00	\$1,600.00	\$700.00	\$1,400.00
24	T-905	Topsolling	1,573	CuYd	\$4.00	\$6,292.00	\$2.50	\$3,932.50	\$7.65	\$12,033.45
25	TL-100	Field Laboratory, Type I	1	Each	\$4,500.00	\$4,500.00	\$500.00	\$500.00	\$2,745.00	\$2,745.00
26	SP-2	Geogrid	3,315	SqYd	\$2.00	\$6,630.00	\$2.50	\$8,287.50	\$2.95	\$9,779.25
27	SP-3	Geotextile Separator Fabric	3,712	SqYd	\$2.00	\$7,424.00	\$1.60	\$5,939.20	\$1.20	\$4,454.40
28	Plans	Remove, Salvage, and Reset Chain Link Cantilever Gate	1	Each	\$300.00	\$300.00	\$350.00	\$350.00	\$340.00	\$340.00
29	Plans	Remove and Dispose of Barbed Wire Fence	485	Ft	\$1.00	\$485.00	\$2.00	\$970.00	\$1.35	\$654.75
30	Plans	Remove and Dispose of 12" CMP Culvert	60	Ft	\$15.00	\$900.00	\$5.00	\$300.00	\$23.00	\$1,380.00
31	Plans	Gravel Surfacing	200.0	Ton	\$25.00	\$5,000.00	\$16.00	\$3,200.00	\$25.00	\$5,000.00
32	Plans	Type II Erosion Control Blanket	1,855	SqYd	\$3.00	\$5,565.00	\$2.50	\$4,637.50	\$2.15	\$3,988.25
33	Plans	Sediment Control at Inlet	5	Each	\$250.00	\$1,250.00	\$150.00	\$750.00	\$115.00	\$575.00
Total Base Bid						\$384,539.00		\$384,822.70		\$656,996.60

I HEREBY CERTIFY THAT THE FOREGOING IS AN ACCURATE REPRESENTATION AND TABULATION OF ALL BIDS RECEIVED AND THAT THE MATHEMATICS HAVE BEEN CHECKED AND IS TO THE BEST OF MY KNOWLEDGE CORRECT:

PROJECT ENGINEER: Michael A. Schmidt DATE: 7-10-2017

Canton Municipal Airport – Canton, SD

Construct Wildlife Fence, Mitigate Wetlands:

The proposed project is to construct a new wildlife fence around the perimeter of the airport entirely on airport property. The new fence will keep deer and other animals off of airport property. The sponsor has recently conducted a wildlife site visit and is preparing a wildlife hazard management plan to further justify the project. The fence alignment will be designed to provide minimal impacts to wetlands and minimal changes to existing ground features. The fence will be located so that all heavily treed areas will be located outside of the fence. A number of gates will be installed in the fence to provide access to maintenance equipment and also to provide an escape route for any large animals that could get trapped inside the fence. The fence elevations will be determined during the design process and will be verified to clear all associated airfield surfaces. As part of the project a small amount of wetlands will be mitigated through a wetland bank. This project shall be a single phase with an estimated cost of \$450,000. This is not an LOI project.

Canton Municipal Airport
 Canton, South Dakota
 FAA AIP 3-46-0007-007-2017
 Canton Municipal Airport
 Summary of Project Costs

Description	Project Costs
Administration	\$ 1,000.00
Wetland Mitigation	\$ 3,000.00
Construct Wildlife Fence	\$ 387,026.20
Construction Engineering Services	\$ 56,642.64
Total Estimated Project Costs	\$ 447,668.84
Federal Funding =	\$ 402,901.00
State Share =	\$ 22,383.00
Sponsor Share =	\$ 22,384.84



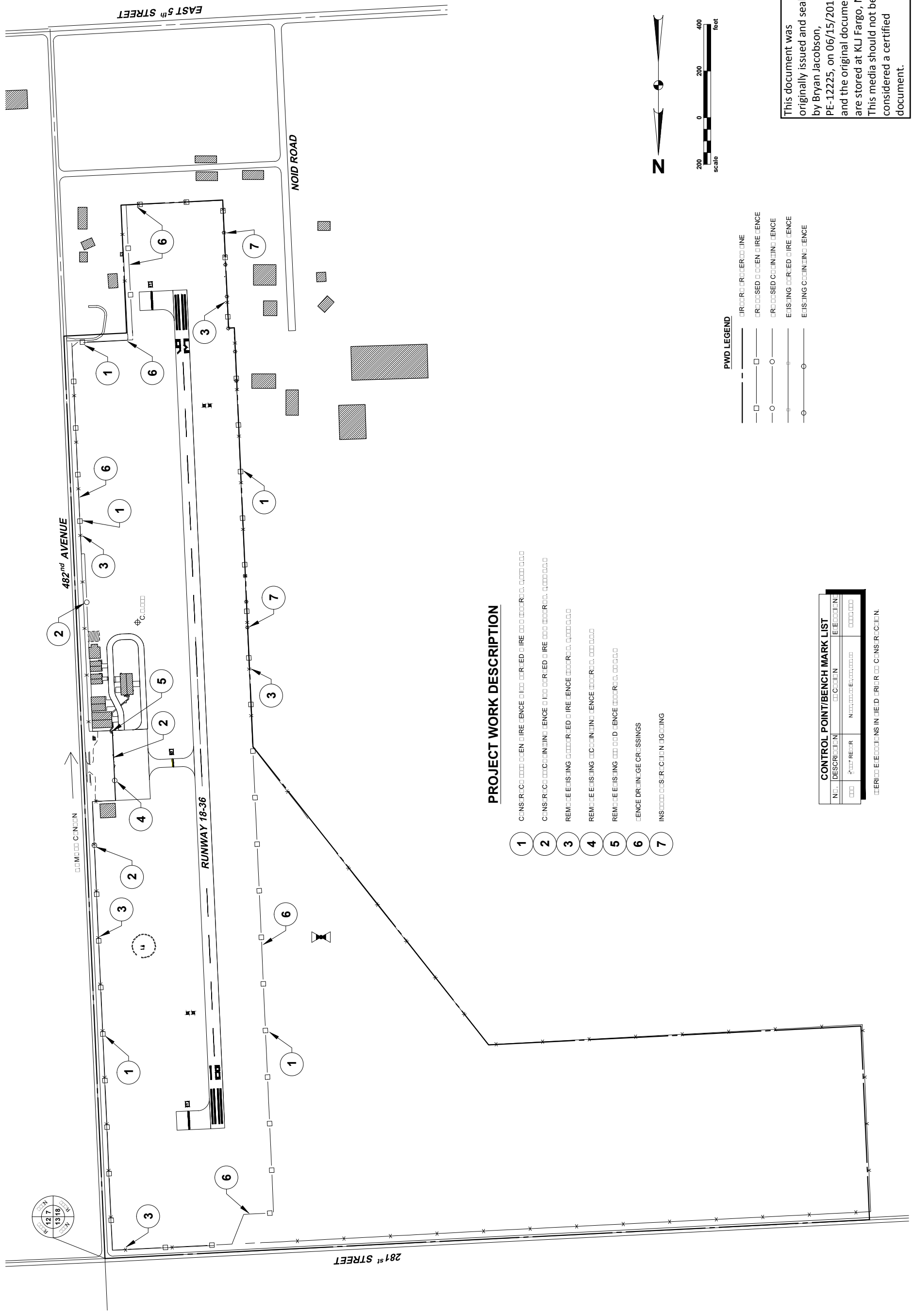
CANTON MUNICIPAL AIRPORT
 CITY OF CANTON (OWNER)
 CANTON, SOUTH DAKOTA

PROJECT WORK DESCRIPTION

DATE	06/07/2017
PROJECT NUMBER	14516112
REVISION	BJJ
DATE	06/07/2017
SCALE	1

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This document was originally issued and sealed by Bryan Jacobson, PE-12225, on 06/15/2017 and the original documents are stored at KLJ Fargo, ND. This media should not be considered a certified document.



PROJECT WORK DESCRIPTION

- 1 CONSTRUCTION OF FENCE
- 2 CONSTRUCTION OF FENCE
- 3 REMOVAL OF EXISTING FENCE
- 4 REMOVAL OF EXISTING FENCE
- 5 REMOVAL OF EXISTING FENCE
- 6 FENCE DRAINAGE CRASSINGS
- 7 INSULATION SURROUNDING

PWD LEGEND

- EXISTING CENTERLINE
- PROPOSED CENTERLINE
- EXISTING CORNER
- PROPOSED CORNER
- EXISTING FENCE
- PROPOSED FENCE

CONTROL POINT/BENCH MARK LIST

N.O.	DESCRIPTION	COORDINATES	ELEVATION
1	REAR	N 127.000 E 1318.000	127.000

COORDINATES IN FEET OR IN CONVERSION

Part IV - Program Narrative

(Suggested Format)

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

Project Narrative (Justification)

SRE TRACTOR WITH ATTACHMENTS

The airport currently does not have any Snow removal equipment. Snow removal is done with Clark County SRE; therefore the runway does not have first priority on snow removal sometimes leaving the airport unusable until the County crews can get county roads opened. By having SRE at the airport the airport manager or other personnel can go to the airport and start removing snow immediately instead of waiting for County snow plows to come out. In addition, by getting a broom and blower attachment along with the bucket and the plow, the tractor will clean the runway better since it can blow the plow furrow away. If there is a small amount of snow, the broom can still be used to clean the pavement keeping the markings visible.

The following are the justifications of the variables used in completing the "Snow Removal Equipment Calculations" spreadsheet. Figure 1 shows the spreadsheet that was prepared with the following variables:

- The Clark County Airport is a General Aviation facility.
- The Average Annual Snowfall was determined to be 32.0 inches from the historical average monthly data from 1893 to 2012 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 9/24/2013 was 3,104.
- The size of Runways, Taxiways, and Apron are: the current 13/31 Runway is 3,700 ft x 60 ft, the connector taxiway is 175 ft x 35 ft, and the existing apron is 200 ft x 150 ft. For simplicity reasons, half of the apron is considered critical to aircraft operations. Figure 2 shows the critical snow removal areas of airport.

Attachment 1 is a completed "Airport Snow Removal Equipment" for the Clark County Airport. The Airport does not own snow removal equipment and is requesting a Tractor with Attachments for the removal of snow at the airport. This will reduce delays in snow removal dramatically.



CIVIL ENGINEERS & LAND SURVEYORS

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 Aberdeen, SD 57402

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 Email: operations@helmsengineering.com

Snow Removal Equipment Acquisition
Clark County Airport
Clark, South Dakota
AIP #3-46-0009-010-2017
A-6685
Revised Engineer's Estimate
June, 2017

Base Bid

Item #	Item Description	Quantity	Unit	Unit Price	Total Price
1	Articulated, 4-Wheel Drive Loader	1	L.S.	\$ 130,986.00	\$ 130,986.00
Bid Schedule A Total					\$ 130,986.00

Alternate Bid # 1

Item #	Item Description	Quantity	Unit	Unit Price	Total Price
1	10' Power Angle Broom	1	L.S.	\$ 16,025.00	\$ 16,025.00
Alternate Bid #1 Total					\$ 16,025.00

Alternate Bid # 2

Item #	Item Description	Quantity	Unit	Unit Price	Total Price
1	14' Snow Pusher	1	L.S.	\$ 9,000.00	\$ 9,000.00
Alternate Bid #2 Total					\$ 9,000.00

Alternate Bid # 3

Item #	Item Description	Quantity	Unit	Unit Price	Total Price
1	One Way Snow Plow	1	L.S.	\$ 11,100.00	\$ 11,100.00
Alternate Bid #3 Total					\$ 11,100.00

Base Bid, Alternate Bid 1, 2, and 3 Total	\$ 167,111.00
Engineering	\$ 5,000.00
Adminstration	\$ 2,889.00
Estimated Project Total	\$ 175,000.00


SNOW REMOVAL EQUIPMENT ACQUISITION
 CLARK COUNTY AIRPORT
 CLARK, SOUTH DAKOTA
 AIP #3-46-0009-010-2017

A-6685

BID TABULATION
 6/19/2017

Base Bid			Sheehan Mack Sales & Equipment Aberdeen, SD		RDO Equipment Co. Aberdeen, SD		Titan Machinery, Inc. Sioux Falls, SD		Butler Machinery Aberdeen, SD		
Item #	Item Description	Quantity	Unit	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
1	Articulated, 4-Wheel Drive Loader	1	L.S.	\$130,986.00	\$130,986.00	\$142,300.00	\$142,300.00	\$149,545.00	\$149,545.00	\$155,255.00	\$155,255.00
Total Base Bid					\$130,986.00	\$142,300.00	\$149,545.00	\$155,255.00	\$155,255.00	\$155,255.00	\$155,255.00
Alternate Bid #1											
1	10' Power Angle Broom	1	L.S.	\$16,025.00	\$16,025.00	\$12,500.00	\$12,500.00	\$15,735.00	\$15,735.00	\$17,225.00	\$17,225.00
Total Alternate Bid #1					\$16,025.00	\$12,500.00	\$15,735.00	\$17,225.00	\$17,225.00	\$17,225.00	\$17,225.00
Alternate Bid #2											
1	14' Snow Pusher	1	L.S.	\$9,000.00	\$9,000.00	\$5,800.00	\$5,800.00	\$5,978.00	\$5,978.00	\$7,025.00	\$7,025.00
Total Alternate Bid #2					\$9,000.00	\$5,800.00	\$5,978.00	\$7,025.00	\$7,025.00	\$7,025.00	\$7,025.00
Alternate Bid #3											
1	One Way Snow Plow	1	L.S.	\$11,100.00	\$11,100.00	\$8,800.00	\$8,800.00	\$9,674.00	\$9,674.00	\$10,960.00	\$10,960.00
Total Alternate Bid #3					\$11,100.00	\$8,800.00	\$9,674.00	\$10,960.00	\$10,960.00	\$10,960.00	\$10,960.00
Total Base Bid, Alternate Bid 1, 2, 3					\$167,111.00	\$169,400.00	\$180,932.00	\$190,465.00	\$190,465.00	\$190,465.00	\$190,465.00

I HEREBY CERTIFY THAT THE FOREGOING IS AN ACCURATE REPRESENTATION AND TABULATION OF ALL BIDS RECEIVED AND THAT THE MATHEMATICS HAVE BEEN CHECKED AND IS TO THE BEST OF MY KNOWLEDGE CORRECT:

PROJECT ENGINEER:  DATE: 6-19-2017

**CUSTER COUNTY AIRPORT 013-2017 GRANT
COST SUMMARY**

**Construction - General Aviation Apron Reconstruction and
Taxiway Rehabilitation**

Hills Materials Company..... \$ 524,500.00

**Consulting Services - General Aviation Apron Reconstruction
and Taxiway Rehabilitation**

Construction Administration and Observation
Services..... \$ 98,440.80

Material Testing Services

Preliminary Investigations\$ 3,720.00
Construction Testing Services..... \$ 7,652.50

Administration

Administration, Legal, Advertising, etc. \$ 4,575.59

TOTAL **\$638,888.89**

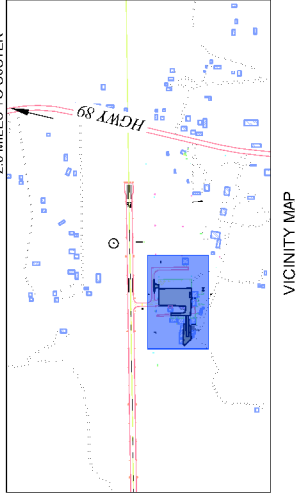


GA APRON AND TAXILANE RECONSTRUCTION
 CUSTER COUNTY AIRPORT - CUSTER COUNTY
 CUSTER, SOUTH DAKOTA

PROJECT WORK DESCRIPTION

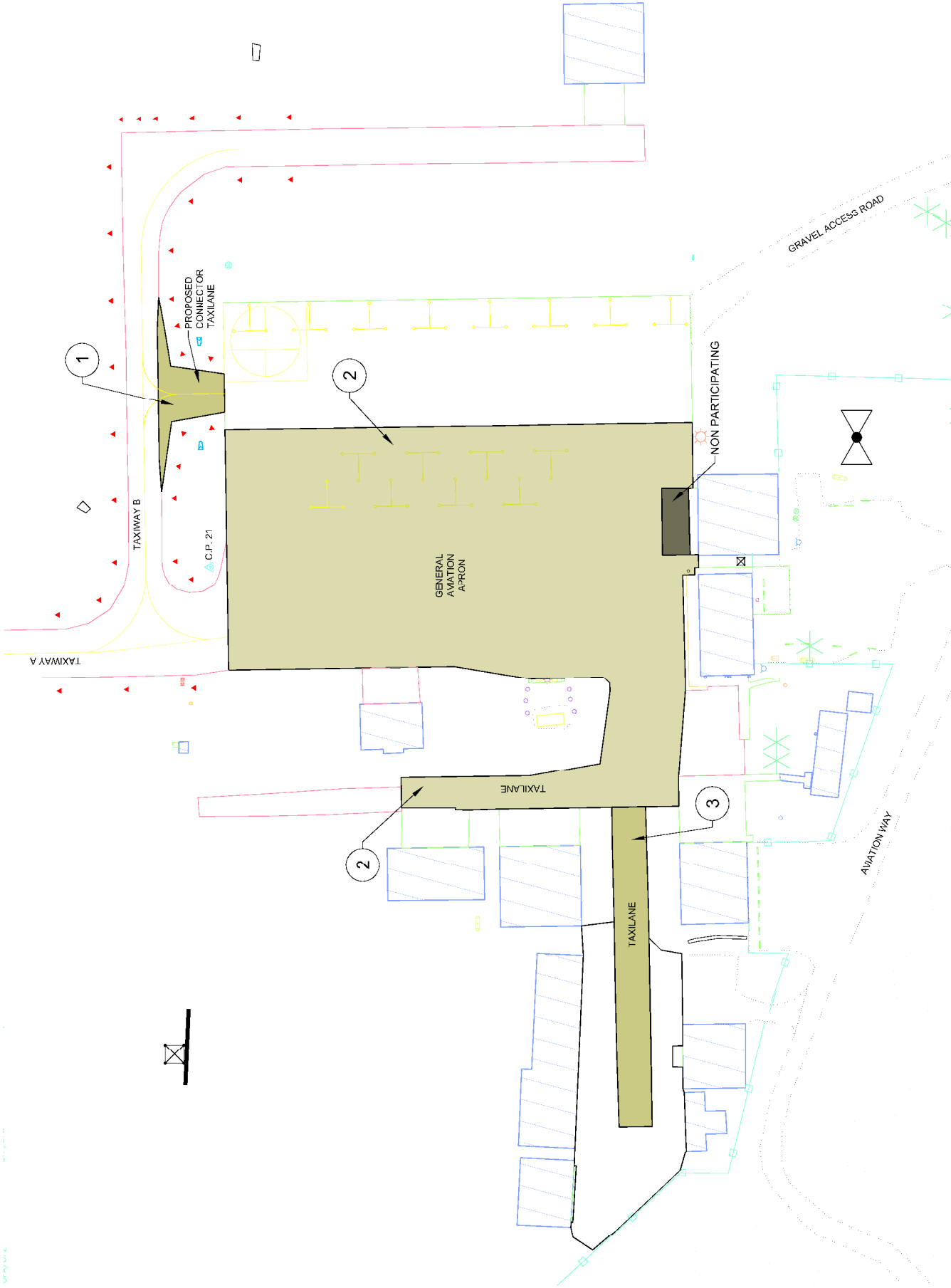
DRAFTED	GCH
REVIEWED	
PROJECT NUMBER	10516110
LAST REVISED DATE	6/06/2017
SHEET	2

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PROJECT WORK DESCRIPTION

- ① CONSTRUCT GA APRON TAXILANE CONNECTOR (APPROX. 266 S.Y.)
 -REMOVE EXISTING PAVEMENT
 -PERFORM EXCAVATION
 -CONSTRUCT EMBANKMENT
 -INSTALL STORM CULVERT
 -INSTALL GEOTEXTILE FABRIC
 -PLACE BASE COURSE
 -PLACE HOT MIX ASPHALT PAVEMENT
 -PLACE PAVEMENT MARKINGS
 -GRADE & TOP-SOIL ALONG PAVEMENT EDGES
 -RETROREFLECTIVE MARKERS
 -SEED & MULCH DISTURBED AREA
- ② RECONSTRUCT GA APRON AND TAXILANE (APPROX. 8,106 S.Y.)
 -REMOVE EXISTING PAVEMENT
 -REMOVE EXISTING TIEDOWNS
 -PERFORM EXCAVATION
 -INSTALL UNDERDRAIN SYSTEM
 -INSTALL GEOTEXTILE FABRIC
 -PLACE BASE COURSE
 -PLACE HOT MIX ASPHALT PAVEMENT
 -INSTALL NEW TIEDOWNS
 -PLACE PAVEMENT MARKINGS
 -GRADE & TOP-SOIL ALONG PAVEMENT EDGES
 -SEED & MULCH DISTURBED AREA
- ③ REHABILITATE EXISTING TAXILANE (APPROX. 1,044 S.Y.)
 -PREP EXISTING PAVEMENT
 -PLACE HOT MIX ASPHALT PAVEMENT OVERLAY



BASIS OF ESTIMATE

PAVEMENT REMOVAL FULL DEPTH (P-101) -	S.Y. (AVG. DEPTH EXISTING APRON: ±5')
TOPSOIL REMOVAL (P-152) -	STRIP 4" OVER ALL EXCAVATION OR EMBANKMENT AREAS. (INCLUDED IN UNCLASSIFIED EXCAVATION QUANTITY FOR PAYMENT)
WATER (P-152) -	10 GAL.C.Y. EXCAVATION/EMBANKMENT 20 GAL.C.Y. AGGREGATE BASE
EMBANKMENT (P-152) -	30% ADDITIONAL VOLUME HAS BEEN ADDED FOR SHRINKAGE
AGGREGATE BASE COURSE (SDDOT 882) (P-208) -	COMPACTED VOLUME IN PLACE
HOT MIX ASPHALT (SDDOT 320) (P-403) -	2 TONS/C.Y.
BITUMINOUS TACK COAT (P-603) -	0.08 GAL./S.Y.
4" PERFORATED P/C UNDERDRAIN PIPE WITH FILTER SOCK AND POROUS MATERIAL(D-705) -	L.F. (INCLUDES FITTINGS AND CONNECTIONS)
TOPSOIL REPLACEMENT (T-905) -	MEASURED IN STOCKPIES BY AVERAGE END AREAS OR PRISMOIDAL METHOD

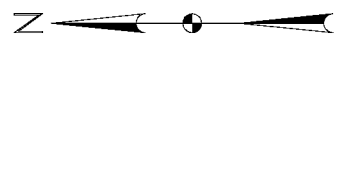
BENCH MARK LIST

NO.	DESCRIPTION	LOCATION	ELEVATION
CP 21	REBAR W/ GUARD HUBS	N = 527,296.13 E = 1,101,730.02	5961.71'

FIELD VERIFY CONTROL POINT AT THE START OF THE PROJECT

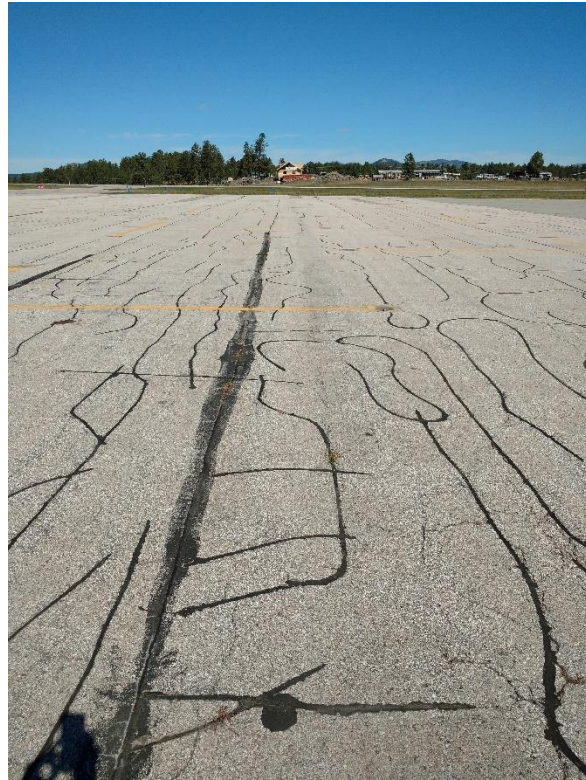
BASIS OF SURVEY

ALL COURSES, ELEVATIONS AND COORDINATES FOR THIS PROJECT ARE BASED ON SD STATE PLANE COORDINATES, SOUTH DAKOTA SOUTH ZONE, NAD 83/2011 U.S. SURVEY FEET. THE VERTICAL DATUM FOR THIS PROJECT IS NAVD 1988. GEOID 2012A. THE PROJECT CONTROL POINTS AND BENCHMARKS ARE SHOWN HEREIN. THE COMBINED SCALE FACTOR IS 0.99964565



T.4S., R.4E.

PRECONSTRUCTION PHOTOS



General Aviation Apron - easterly half. Typical conditions and crack sealing.



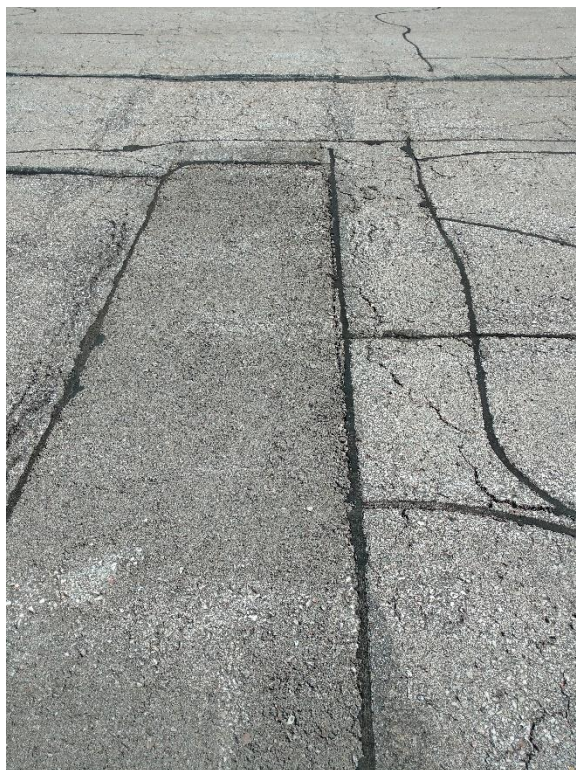
General Aviation Apron. Taken at General Aviation Terminal facing north looking at the Runway 8-26 connecting taxiway.

Custer Co. Grant Support

PRECONSTRUCTION PHOTOS



General Aviation Apron – Area of random cracking



General Aviation Apron – Area of cracking, oxidation and alligator cracking

PRECONSTRUCTION PHOTOS



General Aviation Apron. Typical conditions – alligator cracking



East / West Taxilane – Typical conditions with some ponding water.

**CHEYENNE - EAGLE BUTTE AIRPORT 008-2017 GRANT
COST SUMMARY**

Consulting Services - General Aviation Apron Reconstruction and Expansion

Environmental Documentation..... \$ 9,000.00
Design Engineering and Bidding Services..... \$61,669.76

Material Testing Services

Preliminary Investigations\$ 6,000.00

Administration

Administration, Legal, Advertising, etc.\$ 3,330.24

TOTAL **\$80,000.00**



CHEYENNE EAGLE BUTTE AIRPORT
CITY OF EAGLE BUTTE & CHEYENNE RIVER SIOUX TRIBE
EAGLE BUTTE, SOUTH DAKOTA

PROJECT WORK DESCRIPTION

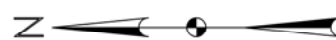
DRAWN	GCH
REVIEWED	RAS
PROJECT NUMBER	
LAST REVISED DATE	11/09/2016
SHEET	1

© KLJ 2016

PROJECT WORK DESCRIPTION

- ① RECONSTRUCT GENERAL AVIATION APRON (APPROXIMATELY 214' x 210', 5,000 S.Y.)
- ② FUTURE GENERAL AVIATION APRON EXPANSION (APPROXIMATELY 150' x 150', 2,500 S.Y.)

PRELIMINARY
NOT FOR
CONSTRUCTION



Eagle Butte Grant Support

PRECONSTRUCTION PHOTOS



Existing General Aviation Apron Typical Conditions



Existing General Aviation Apron Typical Conditions

Project Narrative (Justification)

Environmental Assessment

The purpose of the proposed federal action analyzed in the EA is that the Faulkton Municipal Airport currently does not meet FAA recommendations and standards for runway length.

The need is to enhance airport safety by taking actions that will:

- Meet FAA Standards and protect the people and property on the ground.
- Eliminate the possibility of future incompatible land uses in the RPZs and Departure Surfaces to the end of the RPZ limits.

The Faulkton Municipal Airport proposes to purchase approximately 70 acres of land for the construction of a runway shift and reconstruction of the current Runway 13/31. The current runway is 60' wide and 2,994' long. The northern RPZ crosses US Highway 212 and contains homes and storage buildings. The proposed alternative will consist of shifting Runway 13/31 to the southeast, allowing the Faulkton Municipal Airport to meet FAA recommendations and standards for runway length at 60' wide and 3,600' long. The project will consist of the removal of the salvage and removal of the existing runway, construction of a new 13/31 shifted to the southeast approximately 915' to contain the RPZ on Airport Property. It will also consist of a new connector taxiway with a turnaround on the 31 end. A new electrical control system with MIRLs and PAPIs will be installed.

Currently the Runway PCI is 70 and will be in need of rehabilitation or reconstruction in the near future, therefore the City of Faulkton plans to have the runway reconstruction incorporated into this project.

Project Cost Breakdown

Faulkton Municipal Airport
Faulkton, SD

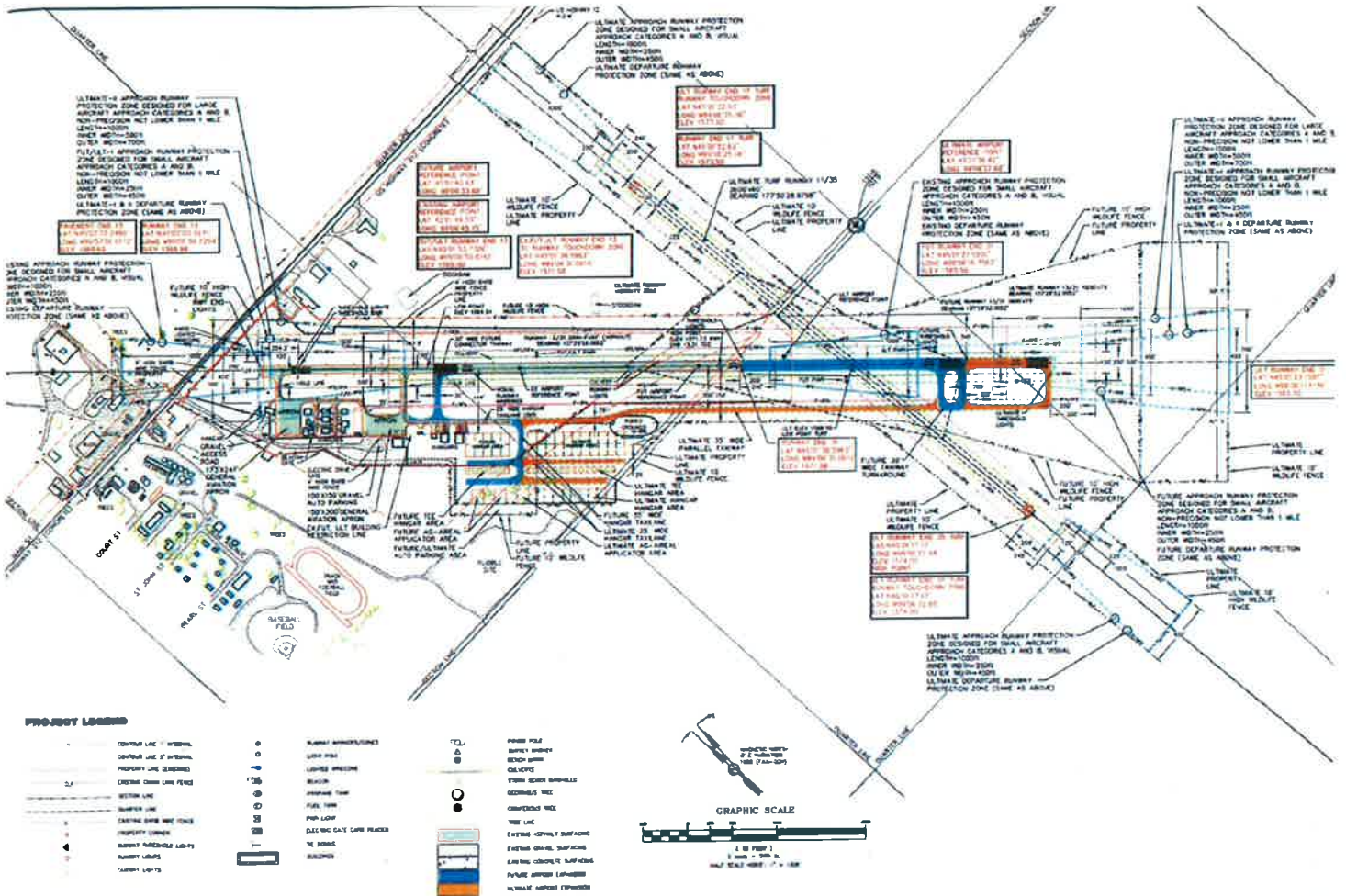
Environmental Assessment

Brief Item Description	Engr./Land Incidental	Total Cost	Federal Share	Non-Federal
			90%	10%
Environmental Assessment	\$86,643.97	\$86,643.97	\$77,979.57	\$8,664.40
Cultural Review WHSV & WHMP	\$30,000	\$30,000	\$27,000	\$3,000
Administration	\$8,356.03	\$8,356.03	\$7,520.43	\$835.6
Totals	\$125,000	\$125,000	\$112,500	\$12,500

Faulkton Grant Support

Project Sketch/Description

Faulkton Municipal Airport
Faulkton, SD



Project Description:

Environmental Assessment for runway shift and extension

Madison Municipal Airport - Madison, SD

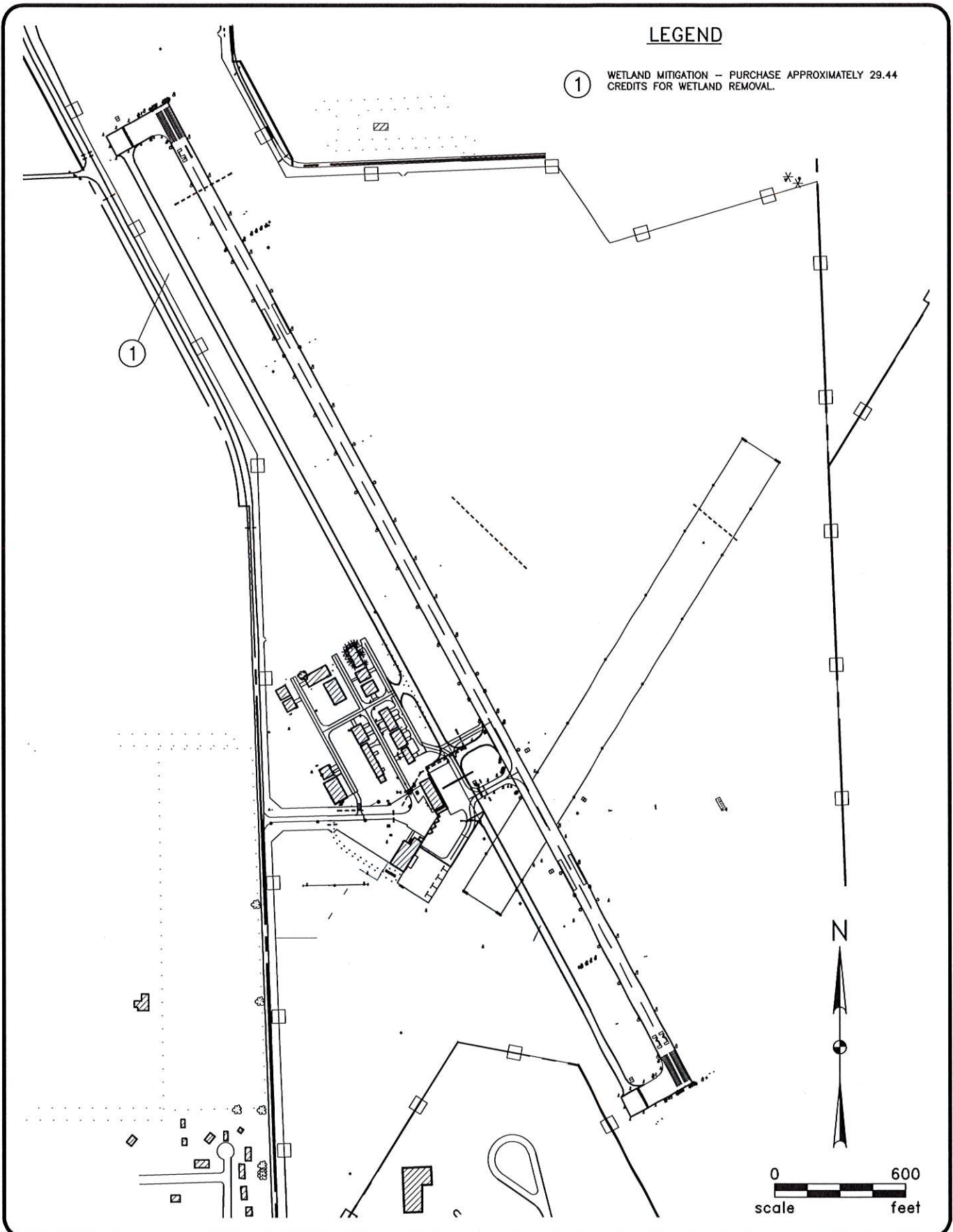
AIP 3-46-0029-014-2017

Wetland Mitigation:

The City of Madison is requesting financial assistance for wetland mitigation. The wetland mitigation is a continuation of the work for the parallel taxiway project. This project includes purchasing approximately 29.44 credits for the removal of wetlands on the airport determined from the environmental assessment. This project shall be a single phase with an estimated cost of \$333,000. This is not an LOI project.

Madison Municipal Airport
 Madison, South Dakota
 FAA AIP 3-46-0029-014-2017
 Madison Municipal Airport
 Summary of Project Costs

Description	Project Costs
Administration	\$ 328.00
Purchase Wetland Credits-Phase 2 (Approximately 29.44 Credits)	\$ 332,672.00
Total Estimated Project Costs	\$ 333,000.00
Federal Funding =	\$ 299,700.00
State Share =	\$ 16,650.00
Sponsor Share =	\$ 16,650.00



DRAFTED BY: BJJ
 REVIEWED BY:
 PROJECT NO:
 REVISED DATE: 11/19/2016

MADISON MUNICIPAL AIRPORT
 2017 APPLICATION SKETCH



**MARTIN MUNICIPAL AIRPORT 012-2017 GRANT
COST SUMMARY**

Construction - Construct Wildlife Fence and Gates - Phase 1

Doug O'Bryan Contracting, Inc \$129,686.60

Consulting Services - Construct Wildlife Fence and Gates - Phase 1

Construction Administration and Observation
Services..... \$ 44,758.90

Material Testing Services

Construction Testing Services..... \$ 5,000.00

Administration

Administration, Legal, Advertising, etc.\$ 3,887.83

TOTAL **\$183,333.33**



BID TABULATION
Martin Municipal Airport
Wildlife Exclusion Fence - Phase 1
AIP #3-38-0046-012-2017 KLJ #1516111

Engineer's Opinion of Construction Cost	Ace In The Hole Construction	Doug O'Bryan Contracting, Inc
---	------------------------------	-------------------------------

Item	Description	Qty.	Unit	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost
Schedule 1 - Wildlife Exclusion Fence - Phase 1									
1	Remove 4' Barb Wire Fence	4,288	LF	\$ 2.00	\$ 8,576.00			\$ 0.70	\$ 3,001.60
2	10' Wildlife Exclusion Fence w/ 3-Strand Barbed Wire Top	6,150	LF	\$ 30.00	\$ 184,500.00			\$ 18.50	\$ 113,775.00
3	24' Wide Double Swing Vehicle Access Gate	2	EA	\$ 5,000.00	\$ 10,000.00			\$ 1,400.00	\$ 2,800.00
4	4' Pedestrian Access Gate	2	EA	\$ 1,500.00	\$ 3,000.00			\$ 800.00	\$ 1,600.00
5	Concrete Gate Pad	2	Ea	\$ 2,500.00	\$ 5,000.00			\$ 1,300.00	\$ 2,600.00
6	Seeding	1.5	ACRE	\$ 2,500.00	\$ 3,750.00			\$ 500.00	\$ 750.00
7	Topsoiling (On-Site)	20	CY	\$ 20.00	\$ 400.00			\$ 8.00	\$ 160.00
8	Mobilization	1	LS	\$ 21,774.00	\$ 21,774.00			\$ 5,000.00	\$ 5,000.00
TOTAL BID - SCHUDULE 1				\$	237,000.00	\$	-	\$	129,686.60



 Project Engineer's Signature

7/10/17

 Date

True tabulations of bids received on: June 29, 2017
 Number of bids received: 2
 Bids rejected: 1

Bid rejected due to non responsive DBE documentation



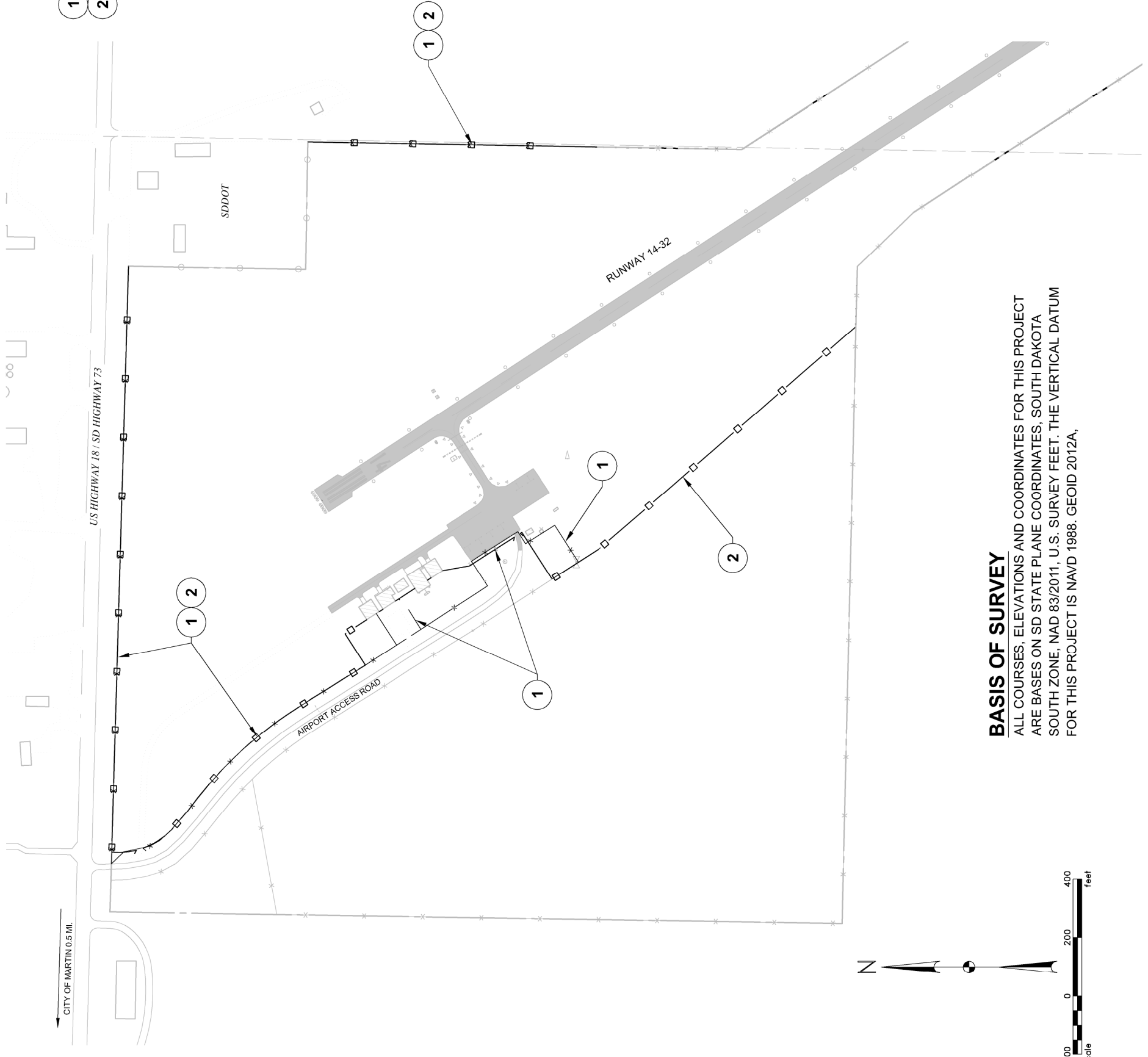
WILDLIFE EXCLUSION FENCE - PHASE 1
CITY OF MARTIN
MARTIN, SOUTH DAKOTA

PROJECT WORK DESCRIPTION

DRAFTED	GCH
REVIEWED	
PROJECT NUMBER	10516111
LAST REVISED DATE	6/3/2017
SHEET	2

PROJECT WORK DESCRIPTION

- 1 REMOVE AND DISPOSE OF EXISTING BARBED WIRE FENCING. (APPROXIMATELY 4,288 L.F.)
- 2 INSTALL NEW WILDLIFE EXCLUSION FENCING. (6,150 L.F.)



BASIS OF SURVEY
ALL COURSES, ELEVATIONS AND COORDINATES FOR THIS PROJECT ARE BASES ON SD STATE PLANE COORDINATES, SOUTH DAKOTA SOUTH ZONE, NAD 83/2011, U.S. SURVEY FEET. THE VERTICAL DATUM FOR THIS PROJECT IS NAVD 1988. GEOID 2012A.

AIRPORT TOPOG LEGEND	
EXISTING (E)	PROPOSED (P)
SECTION LINE WITH RIGHT-OF-WAY	SECTION LINE WITH RIGHT-OF-WAY
AIRPORT PROPERTY LINE	AIRPORT PROPERTY LINE
AIRPORT EASEMENT	AIRPORT EASEMENT
R.P.Z. EASEMENT	R.P.Z. EASEMENT
RUNWAY PROTECTION ZONE (RPZ)	RUNWAY PROTECTION ZONE (RPZ)
BUILDING RESTRICTION LINE (BRL)	BUILDING RESTRICTION LINE (BRL)
OPA	OPA
RSA	RSA
TQFA	TQFA
GLZ	GLZ
CLEAR ZONE	CLEAR ZONE
BUILDING	BUILDING
BITUMINOUS/CONCRETE SURFACE	BITUMINOUS/CONCRETE SURFACE
UNPAVED SURFACE (GRAVEL)	UNPAVED SURFACE (GRAVEL)
AIRPORT REFERENCE POINT (ARP)	AIRPORT REFERENCE POINT (ARP)
AIRPORT BEACON	AIRPORT BEACON
WIND CONE & SEGMENTED CIRCLE	WIND CONE & SEGMENTED CIRCLE
INTERMEDIATE/INDEX CONTOUR LINE	INTERMEDIATE/INDEX CONTOUR LINE
DECIDUOUS/EVERGREEN TREE	DECIDUOUS/EVERGREEN TREE
TREE ROWS, BUSHES	TREE ROWS, BUSHES
BARBED WIRE FENCE	BARBED WIRE FENCE
CHAINLINK FENCE	CHAINLINK FENCE
WILDLIFE FENCE	WILDLIFE FENCE
PRIVATE/HIGHWAY SIGN	PRIVATE/HIGHWAY SIGN
PRIVATE/FEDERAL MAILBOX	PRIVATE/FEDERAL MAILBOX
POWER POLE/STREET LIGHT	POWER POLE/STREET LIGHT
AIRPLANE TIEDOWN	AIRPLANE TIEDOWN
RUNWAY THRESHOLD LIGHT	RUNWAY THRESHOLD LIGHT
TAXIWAY LIGHT/TAXIWAY REFLECTOR	TAXIWAY LIGHT/TAXIWAY REFLECTOR
PAPIVASI	PAPIVASI
REL/MALS	REL/MALS
TURF RUNWAY MARKER (CONE/PRISM)	TURF RUNWAY MARKER (CONE/PRISM)
AIRPORT DISTANCE TO GO SIGN	AIRPORT DISTANCE TO GO SIGN
CULVERT WITH END SECTION	CULVERT WITH END SECTION

APT. UTILITY LEGEND	
EXISTING (E)	ITEM
⊗	AIRPORT BEACON
○	WIND CONE & SEGMENTED CIRCLE
⬅	AIRPORT DISTANCE TO GO SIGN
⊠	PAPIVASI
○	REL/MALS
⊞	TURF RUNWAY MARKER (CONE/PRISM)
○	RUNWAY LIGHT (STAKEBASE MOUNTED)
○	THRESHOLD LIGHT (STAKEBASE MOUNTED)
⊙	TAXIWAY LIGHT (STAKEBASE MOUNTED)
△	TAXIWAY REFLECTOR
⊕	BASE CAN WITH SOLID COVER
⊞	ELECTRICAL MARKER (CABLE/SPLICED/JCT)
⊞	ELECTRICAL DUCT
⊞	ELECTRICAL MANHOLE
⊞	ELECTRICAL JUNCTION BOX/PEDISTAL
⊞	POWER POLE/STREET LIGHT
⊞	TELEPHONE MANHOLE
⊞	TELEPHONE PEDestal
⊞	TELEPHONE POLE
⊞	SANITARY MANHOLE
⊞	SANITARY MANHOLE (FORCE MAIN/CLEANOUT)
⊞	STORM/STORM INLET MANHOLE
⊞	STORM CATCH BASIN (ROUND)
⊞	STORM INLET (TYPE 1/TYP 2)
⊞	CURB INLET (TYPE 2/DOUBLE)
⊞	CULVERT WITH END SECTION
⊞	WATER MANHOLE
⊞	WATER CURB STOP
⊞	WATER FIRE HYDRANT
⊞	IRRIGATION SPRINKLER HEAD
⊞	VALVE (WATER, NATURAL GAS)
⊞	NATURAL GAS MANHOLE
⊞	LIQUID PROPANE STORAGE TANK
⊞	FUEL PUMP
⊞	ELECTRICAL CABLE
⊞	OVERHEAD ELECTRICAL CABLE
⊞	TELEPHONE CABLE
⊞	OVERHEAD TELEPHONE LINE
⊞	TELEVISION CABLE
⊞	FIBER OPTIC CABLE
⊞	FAA CABLE
⊞	SIG
⊞	COMMUNICATION SIGNAL CABLE
⊞	CONTROL CABLE
⊞	SANITARY SEWER LINE
⊞	STORM SEWER LINE
⊞	WATER OR STEAM LINE
⊞	NATURAL GAS LINE
⊞	NATURAL GAS PIPELINE
⊞	L.P.
⊞	FUEL LINE
⊞	CRUDE PETROLEUM PIPELINE

Martin Grant Support

PRECONSTRUCTION PHOTOS



Existing fencing along airport entrance road



Typical existing fence

Martin Grant Support

PRECONSTRUCTION PHOTOS



Existing apron access gate



Typical existing fence

Mitchell Grant Support

Project Narrative (Justification)**Snow Removal Equipment to Replace 1989 OshKosh Plow**

The Mitchell Municipal Airport currently has an Oshkosh snow blower/broom truck, a frontend loader, three snow plow trucks with blades, and a tractor with attachments. A new SRE Building was constructed in 2012 allowing for storage of SRE on airport property. The acquisition of an additional truck to replace the 1989 OshKosh will decrease the time it takes to get the runways clear and ready for safe operations. The OshKosh has reached the end of its useful life and is broken down on a constant basis.

The following are the justifications of the variables used in completing the "Snow Removal Equipment Calculations" spreadsheet. Figure 1 shows the spreadsheet that was prepared with the following variables:

- The Average Annual Snowfall was determined from the historical average monthly data from 1893 to 2003 from the High Plains Regional Climate Center.
- The Mitchell Municipal Airport is a General Aviation facility.
- The Number of Operations was obtained from the most recent Airport Master Record. The total operations for 12 months ending 10/15/2015 was 14,940.
- The size of Runways, Taxiways, and Apron are: 12/30 Runway is 6,700 ft x 100 ft, 17/35 Runway is 5,513 ft x 100 ft, the parallel taxiway is approximately 5,500 ft x 50 ft, the connector taxiways are 600 ft by 50 ft, 450 ft x 65 ft and 500 ft x 65 ft, and the existing apron is 1,200 ft x 300 ft. For simplicity reasons, only half of the apron area is considered critical to aircraft operations. Figure 2 shows the critical snow removal areas of airport.

Attachment 1 is a completed "Airport Snow Removal Equipment" for the Mitchell Municipal Airport. The Airport is requesting Snow Removal Equipment with Plow for the removal of snow at the airport. This will reduce delays in snow removal dramatically.



221 Brown County Hwy 19
P.O. Box 111
Aberdeen, SD 57402

Phone: (605) 225-1212 Fax: (605) 225-3189
Email: operations@helmsengineering.com

**Snow Removal Equipment Acquisition
Mitchell Regional Airport
Mitchell, South Dakota
AIP #3-46-0037-027-2017
Revised Engineer's Estimate
July 12, 2017**

Base Bid

Item #	Item Description	Quantity	Unit	Unit Price	Total Price
1	Tandem Axle Snowplow, Dump Truck Chassis	1	Each	\$ 124,530.00	\$ 124,530.00
Base Bid Total					\$ 124,530.00
Estimated Engineering Costs					\$ 5,000.00
Estimated Administration Costs					\$ 3,470.00
Estimated Project Total					\$ 133,000.00

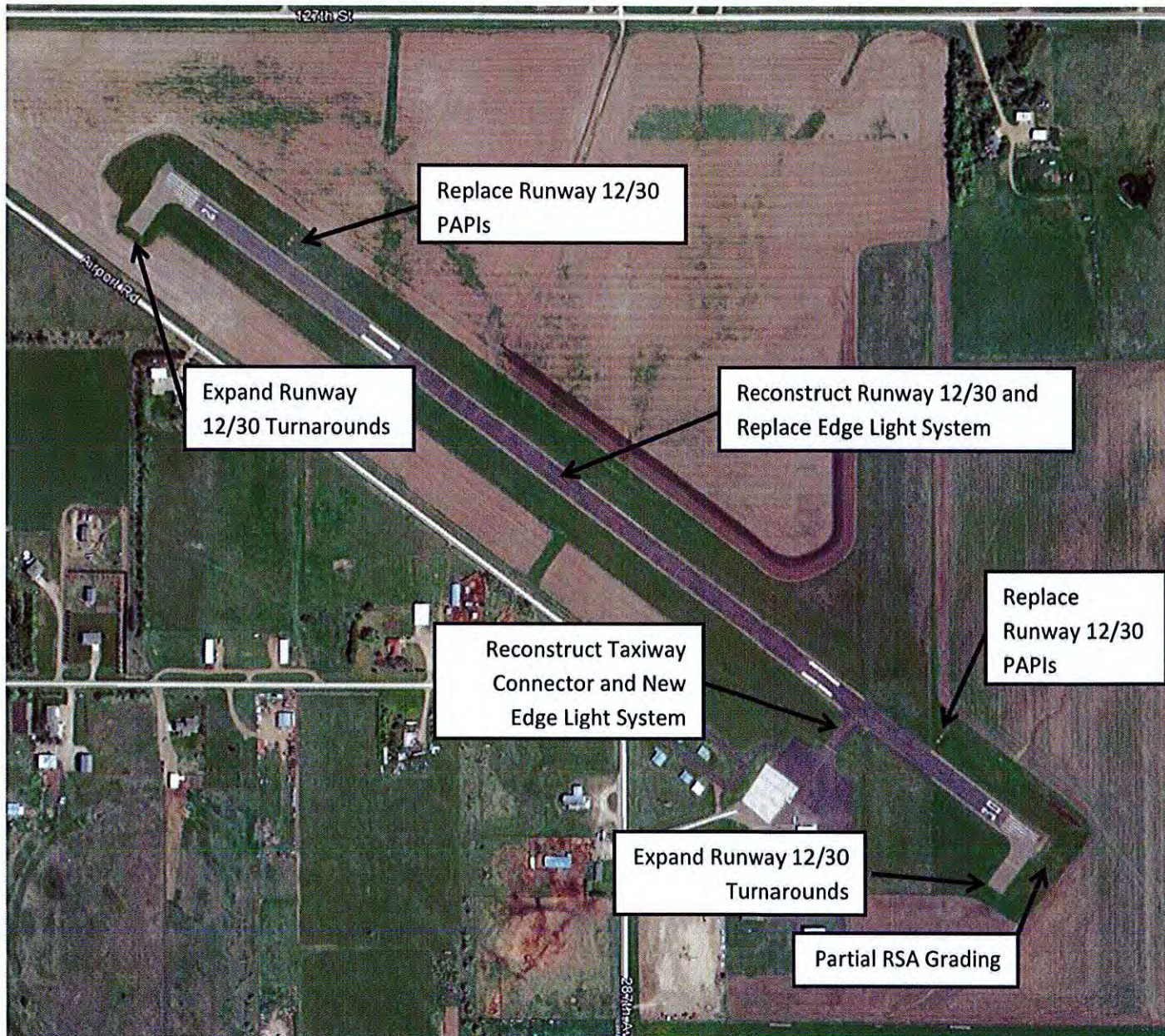
PART IV – PROGRAM NARRATIVE
(Suggested Format)

PROJECT: AIP No. 3-46-0038-011-2017
AIRPORT: Mobridge Municipal Airport
<p>1. Objective:</p> <p>Design 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; Replacement of Runway 12/30 Edge Light System and PAPI's. 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 and PAPIs were installed in 1991 and unreliable and need routine repairs. Purchase Snow Removal Equipment Attachments - 10' Blade and Pusher Box. Acquisition of six parcels of land for RPZ.</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. The purchase of the SRE blade and pusher box will enable efficient snow removal operations on the airfield. The land acquisition will meet FAA requirements and provide a safer airfield.</p>
<p>3. Approach: (See approved Scope of Work in Final Application)</p> <p>Soil Technologies will complete soil borings and soils report. Goldsmith Heck will complete field survey and design of a full depth runway reconstruction with underdrains, new lighting and PAPI's and connector taxiway. Goldsmith Heck will design an expansion of the Runway 12/30 turnarounds. The City of Mobridge will pursue acquisition of six land parcels for RPZ. Goldsmith Heck will complete an Exhibit A Property Map Update after the parcels have been acquired.</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: 605-845-3509)</p>

Mobridge Grant Support

Project Sketch

**Mobridge Municipal Airport
Mobridge, South Dakota**



Project Description

Reconstruct Runway 12/30 (4,410'± X 75'); Reconstruct Taxiway Connector (200'± X 35'); Expand Runway 12/30 Turnarounds; Replace Runway 12/30 MIRL Edge Light System and PAPI's, New Taxiway Connector MITL Edge Light System and Partial RSA Grading

Mobridge Grant Support

H HELMS AND ASSOCIATES
 CIVIL ENGINEERS, ARCHITECTS, AND LAND SURVEYORS
 1001 13th St. SW, Suite 100
 Grand Rapids, MI 49503
 Phone: (616) 233-1100
 Fax: (616) 233-1101
 Email: info@hhelms.com

EXISTING RPZ EASEMENTS
 EXISTING RPZ EASEMENTS
 EXISTING RPZ EASEMENTS
 EXISTING RPZ EASEMENTS
 EXISTING RPZ EASEMENTS



LAND ACQUISITION PARCELS
FOR RUNWAY PROTECTION ZONES (RPZ)

Rapid City Grant Support

**RAPID CITY REGIONAL AIRPORT 049-2017 GRANT
COST SUMMARY**

**Construction - General Aviation Apron Reconstruction
And Commercial Apron Rehabilitation**

Complete Concrete, Inc. \$1,312,109.60

Equipment Procurement - SRE Sander

Eddie's Truck Center.....\$ 165,891.00

**Consulting Services - General Aviation Apron Reconstruction
And Commercial Apron Rehabilitation**

Design and Bidding Services.....\$ 22,627.66

Construction Administration and Observation
Services..... \$ 159,808.11

Consulting Services - Equipment Procurement

Design, Bidding and Procurement Services.....\$ 19,628.70

**Consulting Services - Commercial Apron De-icing Apron
And Containment System**

Design and Bidding Services..... \$ 93,920.74

**Material Testing Services - General Aviation Apron Reconstruction
And Commercial Apron Rehabilitation Construction Testing Services**

Northern Technologies, LLC.\$ 7,370.00

Administration

Administration, Legal, Advertising, etc.\$ 13,088.63

TOTAL **\$1,794,444.44**



TABULATION OF BIDS
RAPID CITY REGIONAL AIRPORT
AIP 3-46-0048-049-2017
SRE PROCUREMENT - GRANULAR SAND SPREADER AND PRE-WET SYSTEM

Bid Letting: July 24, 2017
 Comp. No. 10517111
 Checked by: Rod Senn

ITEM	UNIT DESCRIPTION	QUANTITY	UNIT	Engineer's Estimate		Eddies Truck Center, Inc. Rapid City, SD		TOTAL SUM	UNIT PRICE	TOTAL SUM
				UNIT PRICE	TOTAL SUM	UNIT PRICE	TOTAL SUM			
1	Granlar Sand Spreader abd Pre-Wet System	1	L.S.	\$150,000.00	\$150,000.00	\$165,891.00	\$165,891.00	\$165,891.00		\$0.00
TOTAL BID - BASE BID:					\$150,000.00		\$165,891.00			\$0.00


 Project Manager's Signature

TRUE TABULATION OF BIDS:
 Kadrmas, Lee & Jackson

From: Curt Cady [mailto:Curt.Cady@kljeng.com]
Sent: Monday, April 24, 2017 4:01 PM
To: Lares, Sheri (FAA)
Cc: Mark Wiederrich; dan.letellier sfairport.com
Subject: FSD Additional Request for CATEX

Hello Sheri,

KLJ and Goldsmith Heck Engineers Inc. are currently assisting the Sioux Fall Regional Airport with design and construction of the Runway 3-21 Reconstruction and the West General Aviation Apron Expansion. Attached is a CATEX exhibit for FSD for two additional items that came up during design. The additional work is as follows:

1. Runway Safety Area Grading (approx. 800' x 225') to provide positive drainage from runway out to the RSA line. Work will include grading, installation of approx. 110' of 18" RCP and an inlet, top soiling, seeding and mulching. This project work is in association with the reconstruction of Runway 3-21. **Paragraph 5-6.4 (e.) applies to this project** and no extraordinary circumstances are present.

This document serves to include additional work required based on a better defined project work description from the complete design of the following project.

A previous CATEX for the Reconstruction of Runway 3-21; Reconstruction of Taxiways A, B1, B3, B4, & B5; Rehabilitation of Taxiway K, and Associated Work Items was approved November 12, 2015. **Paragraph(s) 5-6.4 (a.), (e.), and (f.) applied to these projects.**

The previous CATEX incorporated requests for the following actions:

1. Runway 3-21 Partial Reconstruction (approximately 93,000 S.Y concrete reconstruction)
2. Taxiway B1, B3, B4, and B5 Reconstruction (approximately 16,300 S.Y. concrete reconstruction and approximately 9,400 S.Y. asphalt paved shoulder construction)
3. Taxiway A, A2, and K Partial Rehabilitation (Taxiway A – Reconstruct approximately 8,100 S.Y.; Taxiway A2 Concrete rehab approximately 4,100 S.Y.; and Taxiway K – Asphalt mill/overlay approximately 2,100 S.Y.)
4. National; Guard Drive (Reconstruct/Realign approximately 3,500 S.Y. and Asphalt overlay/rehabilitation on approximately 7,000 S.Y.)
5. Security Fence Reconstruction (approximately 13,000 LF)
6. West GA Taxilane Extension (approximately 4,800 S.Y.)
7. Perimeter Road Realignment for fence shift (approximately 2,000 S.Y.)
8. Aviation Avenue Asphalt Mill and overlay (approximately 7,500 S.Y.)
9. Hangar Street Replace C&G, and asphalt mill and overlay (approximately 6,500 S.Y.)

2. Excavate to cap an existing 20" well main at two locations to abandon main that is in conflict with our W GA Apron expansion. Excavation at each location will be about 10' x 10' x 6' deep. **Paragraph 5-6.4 (o.) applies to this project** and no extraordinary circumstances are present.

This document serves to include additional work required based on a better defined project work description from the complete design of the following project.

A previous CATEX for the West GA Apron Expansion, East GA Apron Taxilane Reconstruction, Replace/Modify Airfield Signs, and Detention Pond Expansion was approved January 18, 2017. **Paragraph(s) 5-6.4 (d.), (e.), (f.)and (l.) applied to these projects.**

The previous CATEX incorporated requests for the following actions:

1. West GA Apron Expansion including edge and overhead lighting (approximately 6,000 SY)
2. Reconstruct East GA Taxilane (approximately 875 SY)
3. Modify 8 existing airfield signs
4. Detention Pond Expansion
5. Replace Runway 3-21 distance remaining signs (11 on existing base and 5 on new base)



SCALE: 1"=1000'

0 500 1000 FT

MODIFY 8 EXISTING AIRFIELD SIGNS

W. GA APRON EXPANSION (APPROX 6,000 SY) INCLUDING EDGE & OVERHEAD LIGHTING AND DETENTION/BMP POND EXPANSION

EXISTING BMP/ DETENTION POND

GRADING LIMITS

PROPOSED BMP/ DETENTION POND EXPANSION

RECONSTRUCT 165' OF EAST GA TAXILANE (875 SY)

REPLACE RWY 3-21 DISTANCE REMAINING SIGNS 11 ON EXISTING BASE 5 ON NEW BASE

REPLACE PANELS IN 3 EXISTING AIRFIELD SIGNS

2017 FSD CATEX EXHIBIT

W GA APRON EXPANSION, E GA APRON TAXILANE RECONSTRUCTION, AND REPLACE/MODIFY AIRFIELD SIGNS
SIOUX FALLS, SOUTH DAKOTA

GH GOLDSMITH HECK ENGINEERS, INC.

DATE: 10/17/2016

DRAWING: FSD Pre-Application sketches.dwg

Part IV - Program Narrative

(Suggested Format)

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

**BLACK HILLS AIRPORT / CLYDE ICE FIELD 023-2017 GRANT
COST SUMMARY**

Consulting Services - KLJ

Airport Master Plan/Airport Layout Plan Update
Focused Planning Study - Crosswind Runway... .. \$ 98,270.04

Administration

Tribal Review Expenses..... \$ 34,400.00
Administration, Legal, Advertising, etc. \$ 6,218.85

TOTAL **\$138,888.89**

Cultural Survey Areas

Black Hills Airport - Clyde Ice Field

Existing Airport Property

Future Airport Property

Legend

- Runway 5-23
- Runway OFA

Spearfish Grant Support

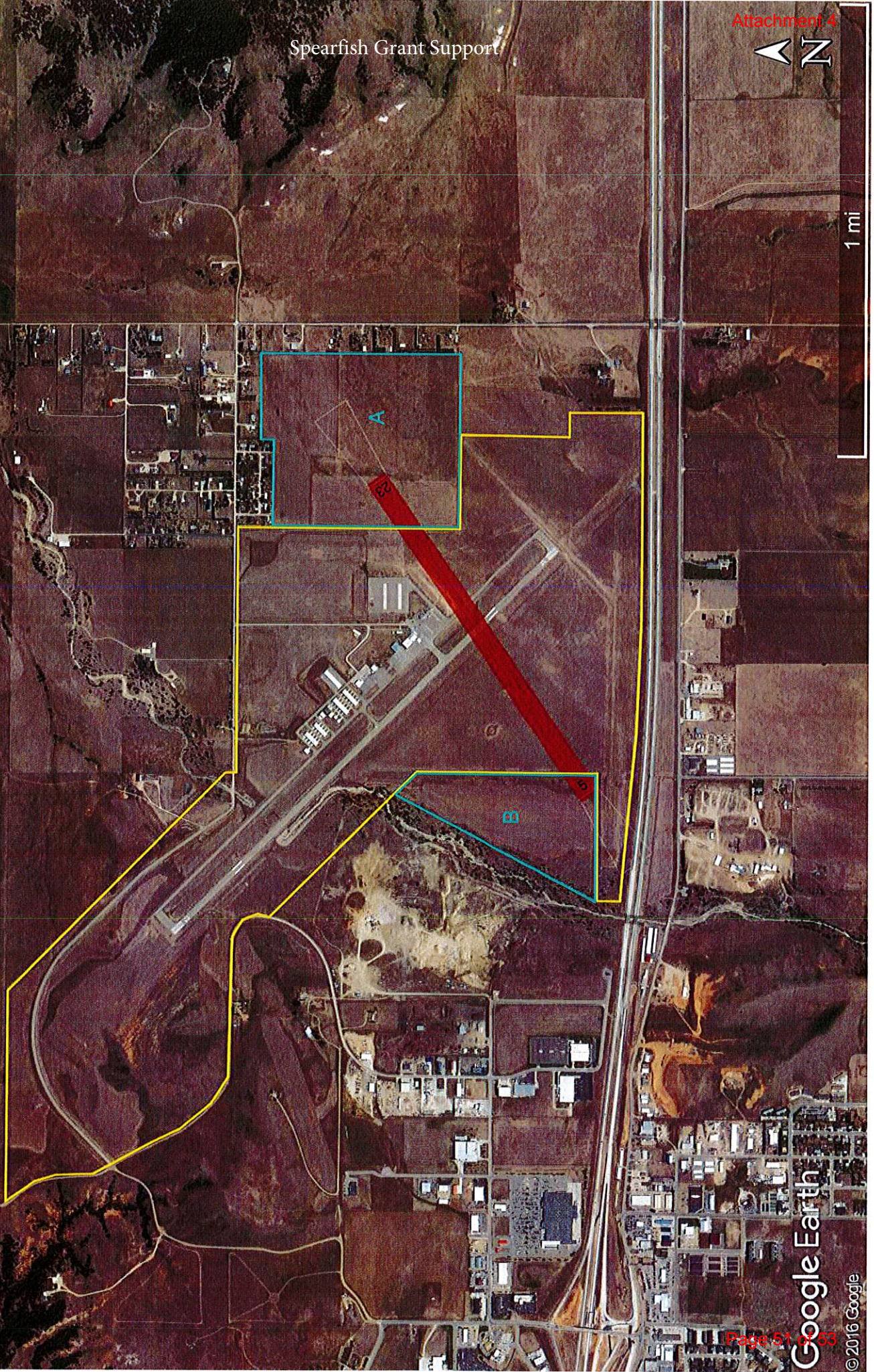
Attachment 4



1 mi

Google Earth

© 2016 Google

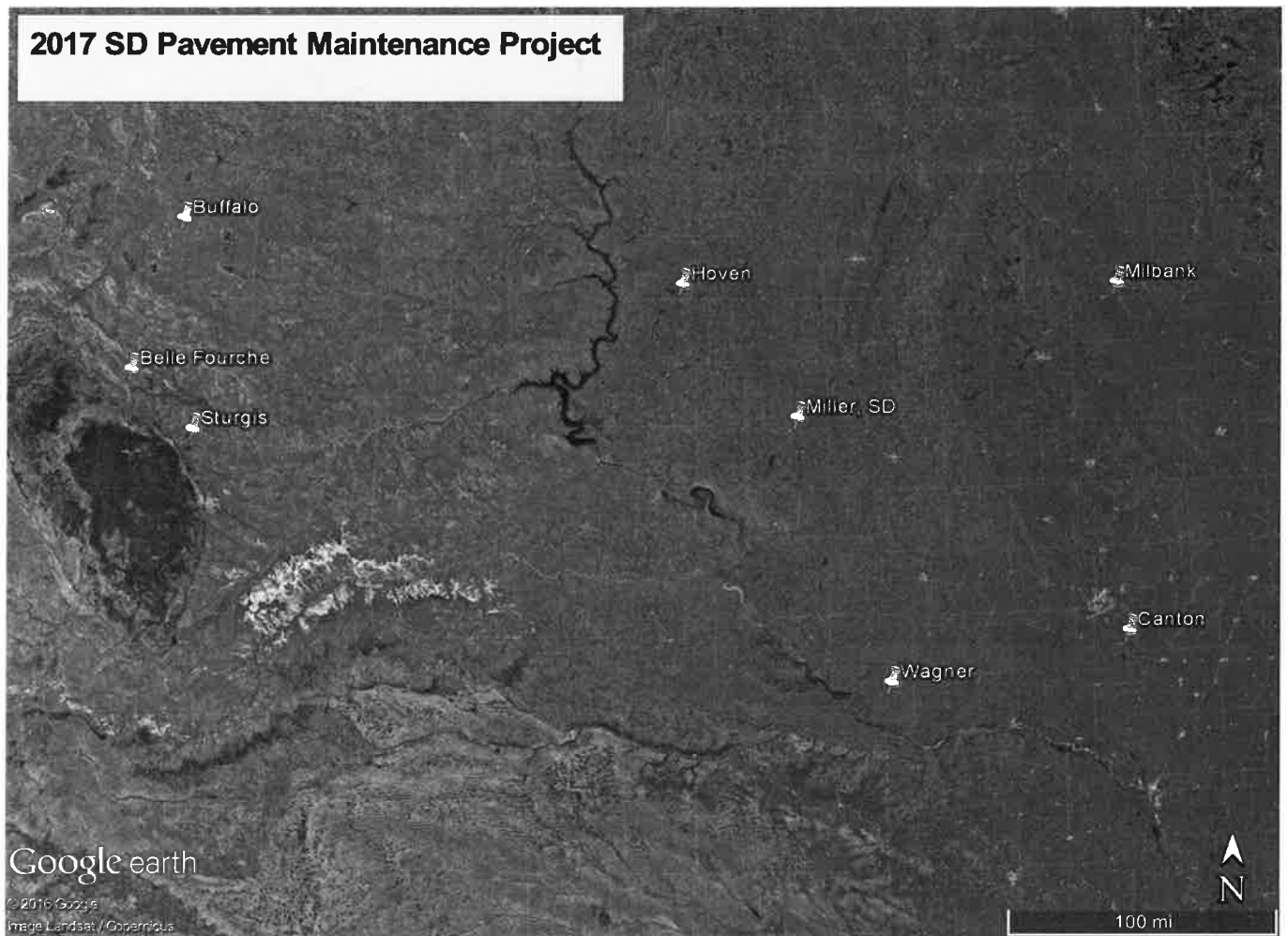


Project Narrative (Justification)

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), Replacing Joint Sealant, and/or Pavement Markings. There will be maintenance completed on all existing surfaces at Belle Fourche, Buffalo, Canton, Hoven, Milbank, Miller, Sturgis and Wagner.

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 to get 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



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), Replacing Joint Sealant, and/or Pavement Markings. There will be maintenance completed on all existing surfaces at Belle Fourche, Buffalo, Canton, Hoven, Milbank, Miller, Sturgis and Wagner.