

Miles City Airport Commission Minutes – March 11, 2013

Members present: Brand Hirsch, airport manager; Lee Richardson, chairman; Keith Brownfield; Linda Corbett; Butch Grenz; Vicki Hamilton and Dorothy Meidinger, secretary. Also in attendance were Paul Grutkowski, Bruce Larson, and from KLJ Craig Canfield, Mason Short from Rapid City SD and Tom Schauer from Bismarck, ND.

Chairman Lee Richardson called the meeting to order. The budget paragraph of the February 11, 2013 meeting needs to be corrected to read, the airport get 3 mils yearly, 1.5 mils from the City and 1.5 mils from the County. Vicki made a motion, seconded by Linda to approve the minutes as corrected. Motion carried.

Craig Canfield handed out a status report. SK Geotechnical did the drilling on RW 4-22 and has completed their report. Development options have been established for the rehab of 4-22, Craig with review these with the commission today; KLJ has prepared a scope of work and the fee proposal for the aeronautical survey to upgrade the approaches to RW-12-30. Tom Schauer and Mason Short are KLJ's senior planners. The plan is to update our Master Plan; it was last updated in 2006. Some of the improvements have been accomplished. The rehab options for the runway were presented. SKG did the drilling program on the runway, they did 18 borings. The problem with the frost heaving on the runway is related to the section that is in there now. When the runway was reconstructed in 1998, the old pavement was ground and blended with new gravel, there is approximately 8 inches of the recycled gravel and 2 ½ inches of asphalt. The soils beneath the gravel are fairly susceptible to frost, where there are cracks in the runway the moisture has entered through the cracks and saturated the soils beneath. Since there is not a lot of depth to the pavement, when it freezes it creates a problem at every crack. KLJ has developed alternatives to address the issue.

Copies of the alternatives proposal and plat of runway design were handed out. Alternative II would be a mill and overlay of RW 4-22; one inch would be milled off and overlay the runway, we would improve the pavement strength. KLJ designed for a fleet mix, through fuel records and flight aware we determined the aircraft that weigh more than 12,500 pounds, and these are summarized in the proposal. Our pavement design was based on the fleet mix, it is not based on the aircraft but the number of operations. The weight bearing will be 70,000 pounds. The critical aircraft are the heavier aircraft; the two heaviest are Gulfstream and Boeing. If you get 500 operations by a Gulfstream III that would affect the pavement design, the pavement strength would need to be increased when those 500 operations occur. Currently airport directories list weight bearing capacities, in the next few years the directories will publish ACN and PCN not weight bearing. Wheel configuration is equally as important as the actual weight of the aircraft. Keith mentioned that this airport depends on fuel sales and when the larger planes come in "light" and leave "light" because of runway strength etc, they spend very little on fuel. Tom and Mason reviewed our runway length of 5600 feet and 75% of the fleet mix at 60% load can land: destination determines fuel sales.

KLJ feels we have two problems on RW 4-22, there is a very thin pavement section with frost susceptible soils underneath, and water seeps in and freezes and causes the rough runway in the winter. A mill and overlay would correct the problem for a while; the runway was constructed in 1998 so we got 15 years of service. It started getting rough about 4 years ago. The estimated cost of the mill and overlay is \$3,000,000 our cost would be \$300,000.

Alternative III would be a reconstruction of RW 4-22, the specs and procedure are included in the hand out that was given to all in attendance. A copy will accompany the City minutes. The estimated cost is \$5,800,000; our cost would be \$580,000. This project is scheduled for FY 2015-FY2016. KLJ recommends this alternative.

There was discussion concerning soils, gravel etc. Keith asked for a cost estimate to widen the runway to 100 feet. Tom explained as you lengthen a runway for bigger aircraft, the safety area increases in size and the ditches get pushed out, your width may go from 75 to 100 ft and your cost can increase radically as everything is changing and moving. It is very important to plan for the future. On our airport plan we are a B2 runway, everything is designed for that. If we go to a small business jet or medium sized business jet you jump to a C2 runway group which would push

your safety areas to 250 per side; everything changes accordingly. Before you reconstruct runway be sure you know what your future plans are. Planning studies should show what kind of fleet mix are you capable of handling today; what kind of fleet mix is it reasonable to expect in the future. There may be things in the area coming our way, oil, coal or business development; if we build is there a way to design so there is flexibility to add on in the future width or length without causing additional undue costs. When you lay out your plans take all this into consideration. The hardest part is the next challenge is to go from A and B 1 and 2 aircraft to C category aircraft. At the present time the FAA would not fund for the 1,000 ft extension because we cannot justify need. It will be included in future planning. Tom previously worked for FAA and stated you need a compelling argument to qualify for federal money as you are competing against other airports. After the runway extension plan is formulated you need to go through the environmental process which takes anywhere from 1 ½ to 3 years; if you want an instrument approach you need your GIS data submittal which takes about a year to process; approach development takes 2 years so you are looking at an estimated total of 4 years. Laws on Federal funding to airports, under 10,000 passengers a year get \$150,000 year primary entitlements that can accrue for 4 years, other funds are called discretionary funds, these cannot be used to fund construction. For a Letter of Intent to be done the planning and environmental assessment has to be done and the Letter of Intent approved prior to the start of the project. The FAA will determine reimbursement based on availability of funding; this information can be used to borrow money needed. The time line for this is 3 years. Tom expressed the importance of the planning to obtain funds. Is our airport big enough to handle what is coming our way, are we able to handle what is here now, do we have justification to move forward with something bigger, and if we do not what do we anticipate. These are things included in the planning document. Past successes at other airports were industry driven.

Craig needs to submit report to FAA, KLJ recommends Alternative III to reconstruct Runway 4-22. Motion was made by Vicki, seconded by Butch to submit to the FAA the reconstruction plan versus mill and overlay plan. Motion carried.

KLJ has prepared a scope and fee proposal for the aeronautical survey to upgrade the approaches to RW-12-30. Currently there are no instrument approaches on RW 12-30, this would be an aeronautical survey to provide vertical guidance, it would include GPS and LPV approaches. There are LPV approaches on RW 4-22. LPV approaches are non-precision instrument approaches. We plan to start the survey in June or July and have the survey done and the information to the FAA and National Geodetic Service by this fall. Once they have this information it goes to flight procedures and they start developing the approach; this could take approximately 18 months. There are 8 or 9 steps to go through in this survey. The fee for this survey is \$166,000; we cannot use any of the information from the RW 4-22 survey so we have to start anew. They are expensive because of the process required. Because the fee is greater than \$100,000 the FAA will require an independent fee estimate be prepared; basically you will get another firm to do the fee estimate.

At one time RW 4-22 was 100 feet wide but was reduced to 75 feet by the FAA in 1998 because of funds. KLJ will help update the Master Plan but they need to know what our expectations are and what we want in the plan. Lee commented that if we do the actual rebuild of RW 4-22; we need \$580,000 by 2015, we need to find a way to fund this even for the plan we have without doing the wish list. The legislature is trying to remove the 18 month moratorium on the new oil development and put in a fund for infrastructure.

The Airport Association of North Dakota just this year hired a lobbyist for the first time ever. They put together a one page briefing paper that worked with the North Dakota Aeronautics to identify and consolidate the CIP's of airports across the state so they can help Senators and Congressmen understand the impacts to the airport infrastructure. Keith commented we need to start identifying sources of available funds. Tom recommended start a planning process that because of the timing of 4-22 needs and the availability of funds that Craig take a look at how difficult it will be to widen 4-22 if and when that becomes the case, if there is a way for minimal cost to create flexibility to widen, the planning process will look at how to maximize your airfield and look at 4-22 long term for the next 20 years which will include an upgrade from a B2 to a C2 airfield. We will look at and identify different options available to

capture some of the fleet mix and try to find ways to see when that will come and forecast a level of when you would need to go to the C2 level. If we find it is arriving faster and the timing will collide with the development of 4-22, we will call you and Craig and notify him of the data we have collected.

KLJ will do small purchase procurement for the Wildlife Hazard Assessment as the cost will be less than \$100,000.

Leases – Janette has sent a letter terminating the farm lease. A new lease needs to be drawn up and put out for bid. There are parties that have shown interest in the lease. The ground will need to be planted to a grass that does not attract geese.

BLM lease – We asked for a 30% increase, they counter offered 20%; 20% is \$38,000; 30% is \$42,000. Brand did research in North Dakota, Wyoming and Montana. Our prices were fair; in fact we were on the low end. During fire season they use over 80% of our field and it impacts our general aviation.

Keith feels it is good for BLM but they do not maintain the airport. We maintain so they can operate. They have a hangar that could be used for FBO purposes, the hangar could also be used for overnight parking of jets. Brand checked back and at one time BLM was going to build a building at the airport. Butch suggested a counter offer of 25% this year and a 3% increase per year for the next 10 years. We need a plan to put money aside for wear and tear and upkeep on the airport.

Airport Attorney – No report.

Equipment usage – Brand has been on the Glasgow website concerning surplus equipment. We are looking for a fuel truck, broom for sweeping runways, mowers and any equipment we can utilize. There is no cost except for the moving, the County would haul it for us. The County and Rural Fire Department have gotten equipment from Glasgow.

The non directional beacon tower is on airport property but is no longer used. The Miles City Radio Club is possibly interested in using the tower for emergency broadcasts during a disaster or power failure. If it is left in place the previous users will take out asbestos and replace the tile. We prefer it be left in place for a service to the community.

Budget – no report.

Personnel – we have 3 applicants for the full time position. Brand will set up interviews. Mark Anderson the most recent applicant.

FBO – receiving calls showing interest.

The security gate needs repair; it could pose a safety problem with deer on the runway. Keith suggested getting someone up to fix it. Flight service calibrated the path approach lights, we had one circuit go out, the first crew made an adjustment, new crew came in and did fly-overs and adjustments they could not figure out the numbers. We have to get them back as next year they will start charging for adjustments.

Essential Air – Vicki received e-mails from Baucus and Tester; the sequester is impacting the funding. Vicki has not received any information concerning the meeting.

Vicki said she felt a committee should be set up to review and update the handbook and by-laws. The committee will be Linda, Lee and Vicki. Vicki feels the handbook should contain minutes for the previous year.

The City and County passed a Resolution to increase the airport commission to 7 members. The updated handbook and by-laws will reflect the 7 member board. The County advertises airport commission vacancies; applicants are reviewed and forwarded to the City for approval. There are currently 3 applicants and Lee felt that possibly by the April meeting we would have a 7 member board in place. Butch stated that he does not know who the applicants are and they may or not be accepted. He stated he does not get to vote on the decision. Keith stated that if the applicants were unacceptable we cannot continue to be out of compliance with elections.

There was discussion concerning the fact there had not been a yearly election of Board members as stated in the by-laws. Previous minutes reflect that elections were postponed waiting new board members as well as the decision to become an Airport Authority. Butch stated since the board has not been increased to 7, we are still operating under 5 people until we get 2 more members. Vicki stated that is very important that we understand that we are all on this board and we are equal, if the something needs to be added to the agenda, call Lee by the Wednesday before the scheduled meeting so it can be added.

Manager's report – Brand would like to sell the street sweeper and replace it with a broom. He wants some idea on the price to ask. The surplus equipment in Glasgow has a fuel truck and he is waiting for a picture. They may have a broom; the website is difficult to access.

Our next meeting will be April 8, 2013.

Respectfully submitted:



Dorothy L. Meidinger
Secretary

**Frank Wiley Field
Runway 4-22 Rehabilitation Alternatives
Draft (February 7, 2013)
AIP 3-30-0055-013-2011
Miles City, Montana**

The purpose of this study is to develop rehabilitation alternatives for Runway 4-22 at Frank Wiley Field located in Miles City, Montana. The current condition of Runway 4-22 is deteriorating with many cracks and frost heaves developing in the existing pavement section. Poor drainage is also a concern near the runway. Construction is currently planned for the summer of 2015 to address these issues.

Three alternatives have been developed to address these issues and are as follows:

Alternative I – No Build

This is the base course of action and would leave Runway 4-22 in its current condition without addressing any issues. The current runway was constructed in 1998 and consists of 2.5" of bituminous pavement over 8" of base course blended with asphalt millings. Over the years, a significant number of cracks and frost heaves have developed in the pavement section. No edge drain system currently exists underneath Runway 4-22, thus allowing a significant amount of moisture to accumulate in the pavement section and become susceptible to frost during winter months. Poor drainage has also been associated with Runway 4-22 due to the lack of spacing between ditches and pavement sections. This further contributes to moisture accumulating in pavement sections due to the inability of the water drained to distance itself from the pavement section.

Alternative II – Mill & Overlay Runway 4-22 and Re-Grade Runway Primary Surface

Alternative II would construct a mill and overlay of Runway 4-22 and re-grade the entire runway's safety area (RSA) to improve drainage conditions. The current runway ditches are located 75 feet from the runway centerline (edge of RSA) and are standard "V" shaped ditches. Under this alternative, the ditches would be re-

located 25' further from the runway centerline and install an edgedrain system. The edge drain would be installed under the runway edges to collect and drain moisture from the pavement section. The edge drain system would utilize the existing storm drain paralleling Runway 4-22. Outlets from the edge drain would be core drilled into the storm drain manholes, thus allowing moisture collected in the edge drains to be discharged into the storm drain. Since the storm drain is currently located in the existing runway ditch, this alternative would require manhole adjustments to match the newly graded runway shoulders. Under this alternative, the existing paved runway shoulders would be kept and would receive a mill and overlay. There is also a Part 77 earth obstruction located near the Runway 4 turnaround and would be removed as part of this alternative. The estimated excavation required for this alternative is 16,000 cubic yards and would result in excess material. There is a future extension for Runway 4 planned and the excess excavation from this alternative could be placed under future sections of the runway extension. Existing runway lights and guidance signs would also require adjustment under this alternative. The estimated cost of this alternative is \$3,000,000.

300,000 on cost

Alternative III – Reconstruct Runway 4-22

*49
205+
2016-*

*32 years out.
Complete Reconstruct Runway 4-22*

Alternative III involves a complete reconstruction of Runway 4-22. In this case, the existing pavement would be removed and replaced with a new pavement section. The new pavement section would be constructed to accommodate a Gulfstream III jet weighing 70,000 lbs. The new pavement section to be constructed would consist of 4" of P-401 asphalt pavement and 6" of P-209 crushed aggregate base course. Frost heaving has been an issue for the current runway due to the highly susceptible soils located underneath. Complete frost protection would require a 65" pavement section with 55" of rapid draining material. Due to funding limitations, complete frost protection is not feasible under a runway reconstruction. Limited frost protection has been used successfully on many airports in eastern Montana and is recommended for Miles City. This reconstruction alternative will provide 65% of complete frost protection. A 32" layer of porous material and geotextile separation fabric will be placed underneath the crushed aggregate base course to minimize frost heave. While limited frost protection does not prevent frost heaving, it does contain it to tolerable amounts. In addition to the new pavement section, the finished grade

Pavement

of the entire runway would be increased approximately one foot over the existing runway in order to improve runway drainage and includes the installation of an edge drain system as in Alternative II. This alternative would also grade the runway safety area (RSA) in the same manner as in Alternative II and would require adjustment of existing storm drain manholes to match new grades. Alternative III would require significantly more excavation than Alternative II due to the extra earth required to be removed for the frost protection. The estimated amount of excavation would exceed the amount to be re-used as fill material and therefore would be placed under the future extension of Runway 4. The estimated cost for Alternative III is \$5,800,000 and includes reconstruction of the paved shoulders.

5,800,000 per cost

Conclusion

It is the KLJ's opinion that Alternative III (Reconstruction) should be implemented. This alternative will allow the frost susceptible subgrade soils to be removed and replaced with a granular subbase material which will minimize future frost heave concerns. KLJ's highly recommends the installation of edge drains to aid in removing water from the subgrade and re-grading of the runway safety area to improve drainage surface water away from the runway.

If Alternative II (Mill and Overlay) is implemented it will not adequately address the frost susceptible nature of the existing subgrade soils. While a mill and overlay would provide an immediate improvement to the rough pavement surface, within 2-5 years the frost heave conditions will begin to develop and it is anticipated that within 10-15 years the runway surface would be in a condition similar to what it is today.

With regular pavement maintenance (crack sealing and fog sealing), it is anticipated the Alternative III (Reconstruction) would provide a pavement surface with an excellent ride quality surface for the first five years following the reconstruction of the runway. At the end of year 15 we anticipate the pavement surface having a satisfactory ride quality and in year 20 the pavement condition would be such that a mill and overlay would be considered a reasonable and recommended rehabilitation effort.

Preliminary Project Cost Estimate
Runway 4-22 Rehabilitation
Frank Wiley Field
AIP 3-30-0055-013-2011
Miles City, Montana
1/28/2013

Alternative II - Reconstruct Runway 4-22 (Limited Frost Protection)

Item	Estimated Qty.	Unit	Unit Price	Total Price
Unclassified Excavation	55,000	CY	\$ 10.00	\$ 550,000.00
Remove Existing Runway Pavement	58,900	SY	\$ 4.00	\$ 235,600.00
Geotextile Separation Fabric	61,200	SY	\$ 3.00	\$ 183,600.00
Subbase Course (32")	54,900	CY	\$ 30.00	\$ 1,647,000.00
Aggregate Base Course (6")	10,300	CY	\$ 100.00	\$ 1,030,000.00
Bituminous Surface Course (4")	13,900	TON	\$ 75.00	\$ 1,042,500.00
Asphalt Cement	900	TON	\$ 750.00	\$ 675,000.00
Tack Coat	3,100	GAL	\$ 3.50	\$ 10,850.00
Edge Drain	11,360	LF	\$ 15.00	\$ 170,400.00
Edge Drain Outlet	600	LF	\$ 15.00	\$ 9,000.00
Edge Drain Cleanout	22	EA	\$ 400.00	\$ 8,800.00
Core Drilling for Edgedrain Cleanouts	22	EA	\$ 400.00	\$ 8,800.00
Runway Grooving	47,300	SY	\$ 2.50	\$ 118,250.00
Runway Painting	42,860	SF	\$ 1.00	\$ 42,860.00
Taxiway Painting	560	SF	\$ 1.00	\$ 560.00
Adjust Runway Sign	5	EA	\$ 1,500.00	\$ 7,500.00
Adjust Existing Manhole	32	EA	\$ 800.00	\$ 25,600.00

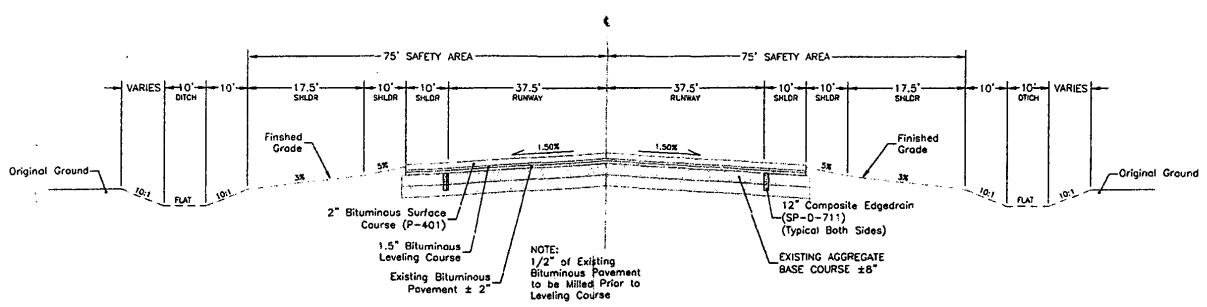
Total - Alternative II	\$ 5,766,320.00
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Preliminary Project Cost Estimate
Runway 4-22 Rehabilitation
Frank Wiley Field
AIP 3-30-0055-013-2011
Miles City, Montana
1/28/2013

Alternative I - Mill & Overlay Runway 4-22, Install Edgedrain System, and Re-Grade Primary Surface

Item	Estimated Qty	Unit	Unit Price	Total Price
Asphalt Milling	58,900	SY	\$ 4.00	\$ 235,600.00
Tack Coat	9,000	GAL	\$ 4.50	\$ 40,500.00
Bituminous Leveling Course (1.5")	5,200	TON	\$ 75.00	\$ 390,000.00
Bituminous Surface Course (4")	13,900	TON	\$ 75.00	\$ 1,042,500.00
Asphalt Cement	900	TON	\$ 750.00	\$ 675,000.00
Edge Drain	11,360	LF	\$ 15.00	\$ 170,400.00
Edge Drain Outlet	600	LF	\$ 15.00	\$ 9,000.00
Edgdrain Cleanout	22	EA	\$ 400.00	\$ 8,800.00
Core Drilling for Edgedrain Outlets	22	EA	\$ 400.00	\$ 8,800.00
Unclassified Excavation	16,000	CY	\$ 10.00	\$ 160,000.00
Runway Grooving	47,300	SY	\$ 2.50	\$ 118,250.00
Runway Painting	42,860	SF	\$ 1.00	\$ 42,860.00
Taxiway Painting	560	SF	\$ 1.00	\$ 560.00
Adjust Existing Manhole	32	EA	\$ 800.00	\$ 25,600.00
Adjust Existing Runway Light Base	73	EA	\$ 500.00	\$ 36,500.00
Adjust Existing Runway Sign Base	5	EA	\$ 1,000.00	\$ 5,000.00

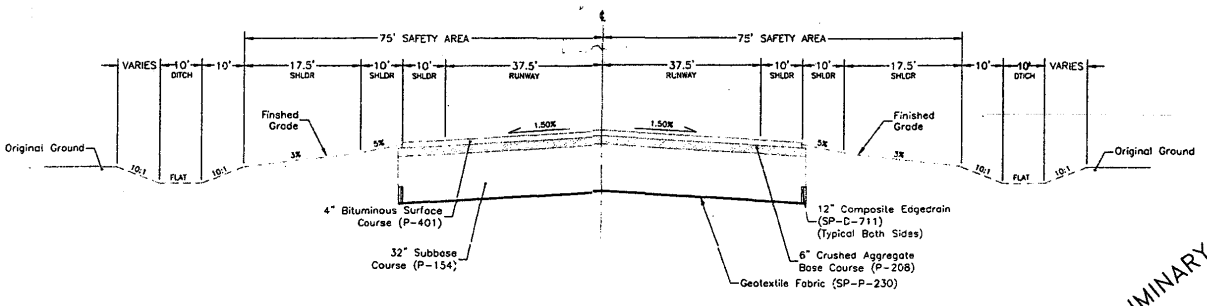
Total - Alternative I	\$ 2,969,370.00
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PROPOSED TYPICAL RUNWAY OVERLAY SECTION

 REHABILITATION OPTION I

 NO SCALE



PROPOSED TYPICAL RUNWAY SECTION

 REHABILITATION OPTION II

 NO SCALE

PRELIMINARY

2011 Flight Aware Data Fleet Mix

Manufacturer	Aircraft/Model	MFR/Model Code	# of Times Arrived	Max Takeoff (lbs)	Final Adjust for taxi
Boeing	737-700	B737	2	154500	
Gulfstream	GLF-III	GLF3	4	69700	
Canadair	CL600/601/604 Challenger	CL60	4	41250	
Embraer	EMB - 120	E120	1	26433	
Hawker	HS-125-700	H25B	4	24200	
IAI	Astra 1125	ASTR	4	23500	
Short	330	SH33	1	22899	
Beech	1900	B190	1759	17120	2513
Lear	31	LJ31	2	17000	
Cessna	Citation Excel	C56X	4	16630	
Beech	Beechjet 400	BE40	5	15780	
Cessna	Citation 5/ Ultra	C560	6	15100	
Beech	Super King Air 350	B350	3	15000	
Beech	Starship 2000	STAR	2	14900	
Beech	Super King Air 300	BE30	2	14,000	
Cessna	CitationJet C525 CJ1	C525	2	13870	
Beech	Super King Air 200/1300	BE20	122	12500	

Total estimated > 12.5K # operations = 6654

Total Operations from 2016 Forecast of 2006 Master Plan Update = 12,800

- 12.5K # & > = 1927.0

Total Utility (<12.5K#) Ops = 10,873

Total estimated < 12.5K# operations adjusted for taxi = 21746