



**City of South St. Paul**  
**AIRPORT ADVISORY COMMISSION**  
**FLEMING FIELD AIRPORT MEETING ROOM**  
TUESDAY, JULY 11, 2017  
6:00 PM



**1. CALL TO ORDER:**

**2. ROLL CALL:**

**3. CITIZEN'S COMMENTS & PRESENTATIONS:**

**4. APPROVAL OF AGENDA:**

**5. CONSENT AGENDA:**

*All items listed on the Consent Agenda are considered to be routine and will be approved by one motion. There will be no separate discussion of these items unless a Commissioner or citizen so requests, in which event the item will be removed from the consent agenda.*

- A. Meeting Minutes of May 9, 2017
- B. YTD Fuel Report
- C. 2017 Projects
- D. RWY 34 GPS Approach – LPV Minimums
- E. Hangar Inspections
- F. Airport Website Update

**6. ITEMS REMOVED FROM CONSENT AGENDA:**

**7. OLD BUSINESS:**

- A. YTD Budget Report
- B. Court Update
- C. NFL Super Bowl 2018

**8. NEW BUSINESS:**

- A. Airport Wheel Loader and Attachments

**9. COMMISSIONER AND STAFF COMMENTS:**

**10. ADJOURNMENT:**



# City of South St. Paul

## AIRPORT ADVISORY COMMISSION



### FLEMING FIELD AIRPORT

---

#### MEETING MINUTES TUESDAY, MAY 9, 2017, 6:00 PM

##### 1. CALL TO ORDER:

Chair Ludwigson called the Airport Advisory Commission Meeting to order at 6:00 PM on Tuesday, May 9, 2017.

##### 2. ROLL CALL:

Present Ludwigson, Schoen, Sheridan, Gesch, Hilger, Francis, and Reckinger.

Absent Adams, Gardner

Also Present Philip Tiedeman, Airport Manager  
Joseph Carney, Airport Operations Specialist

##### 3. CITIZEN'S COMMENTS & PRESENTATIONS

None

##### 4. APPROVAL OF AGENDA:

Motion by Schoen, seconded by Hilger to approve May 9, 2017, agenda as submitted.

Motion carried 7 ayes/0 nays

##### 5. CONSENT AGENDA:

Motion by Hilger, seconded by Reckinger to approve the amended Consent Agenda.

Motion carried 7 ayes/0 nays

##### 6. ITEMS REMOVED FROM CONSENT AGENDA:

Item 5B, Fuel Report.

Gesch had questions about the downward trend of Jet A & 91UL sales. The Commission directed Airport Staff to reach out to FAA and other airports to see if the trend was Region/Nation-wide or not.

##### 7. OLD BUSINESS:

###### A. NFL Super Bowl

No new developments from FAA/MnDOT in regards to Super Bowl planning. Airport Staff will going to EAA AirVenture to work the MnDOT booth. Plans are



# Memo

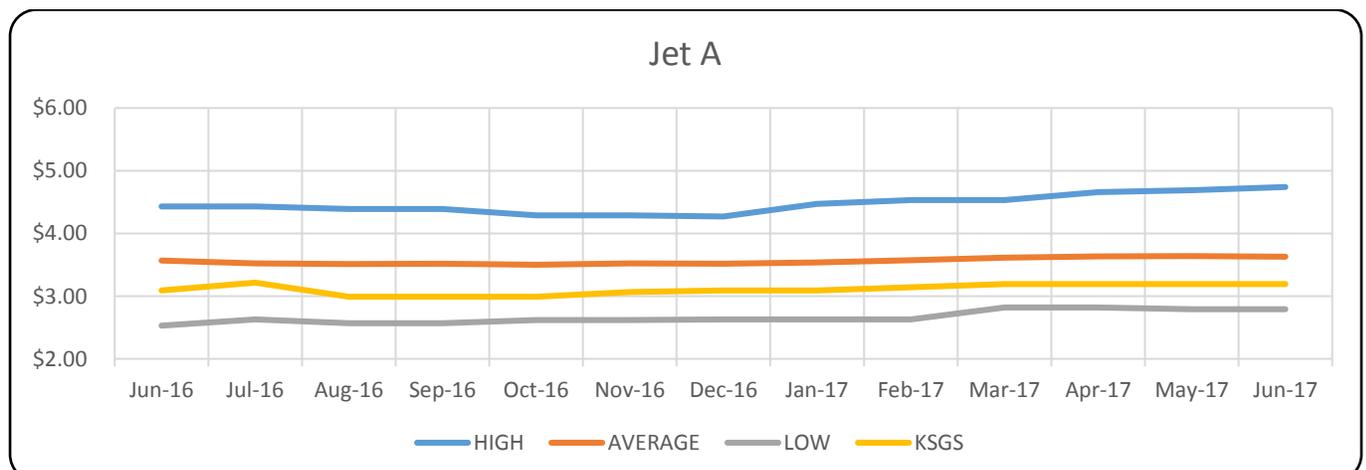
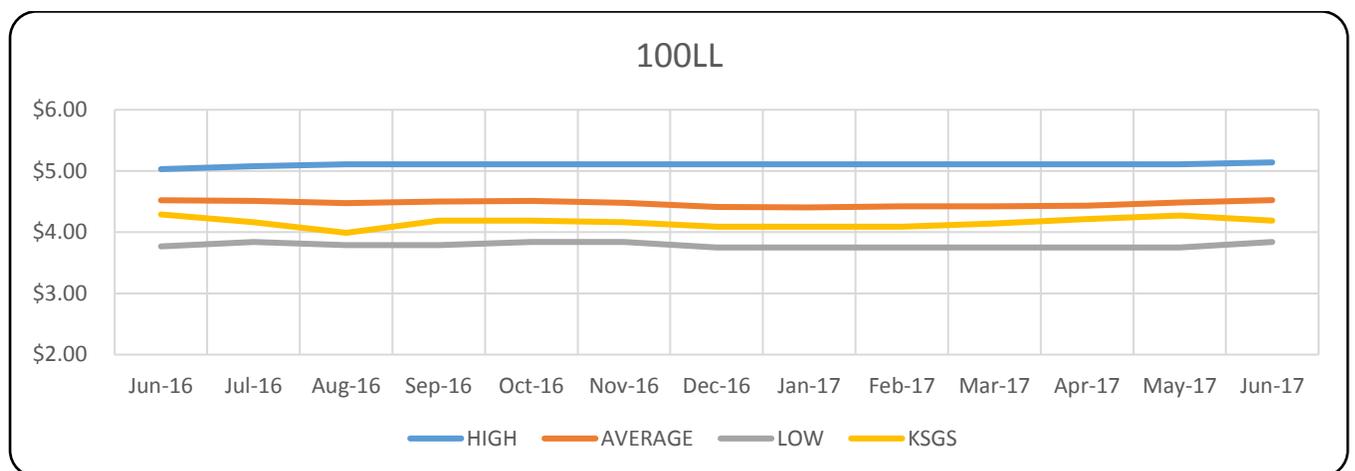


Date: July 11, 2017  
To: Airport Advisory Commission  
From: Philip Tiedeman, Airport Manager  
RE: YTD Fuel Report – June 2017

The 2017 total fuel sales by gallon through June are behind 2016 by 5.16% and down 16.25% compared to the 5-YR Average, an improvement from April 2017.

- For June: 100LL was up 17.54%, 91UL was up 22.50%, and Jet A was down 20.13%.
- For the year: 100LL was up 10.64%, 91UL was down 5.51%, and Jet A was down 32.87%.

The charts below are not all-inclusive but provide a brief snapshot of Fleming Field and the relation to other regional airports' pricing. All prices collected are displayed in the chart, excluding consistently high prices that skewed the data. Differences in Full Service, Self Service, or Assisted Service were not separated out as it is reasonable to compare the different price points within the region. Additional details are shown on the spreadsheet included with this memo.



As a follow up to a question asked during the May 2017 Airport Advisory Commission Meeting, the Airport is still trying to formulate an exact reason as to why Jet A has been consistently lower this year.

## 2017 AVIATION FUEL SALES BY GALLON

July 7, 2017

	100LL				91UL				JET A				TOTAL FOR ALL FUEL				
	2017	2016	% Δ	5-YR AVG*	2017	2016	% Δ	5-YR AVG*	2017	2016	% Δ	5-YR AVG*	2017	2016	5-YR AVG*	%Δ 2017/2016	%Δ 2017/5-YR AVG
JAN	2,964.90	2,646.30	12.04%	3,436.10	172.40	273.50	-36.97%	378.40	2,329.90	1,085.90	114.56%	2,368.48	5,467.20	4,005.70	6,182.98	36.49%	-11.58%
FEB	5,768.50	3,450.90	67.16%	3,440.18	214.60	136.20	57.56%	362.60	1,366.80	4,173.00	-67.25%	3,679.66	7,349.90	7,760.10	7,482.44	-5.29%	-1.77%
MAR	6,072.90	5,662.20	7.25%	5,741.60	151.20	351.80	-57.02%	722.48	1,606.80	3,291.90	-51.19%	4,313.48	7,830.90	9,305.90	10,777.56	-15.85%	-27.34%
<b>Q1</b>	<b>14,806.30</b>	<b>11,759.40</b>	<b>25.91%</b>	<b>12,617.88</b>	<b>538.20</b>	<b>761.50</b>	<b>-29.32%</b>	<b>1,463.48</b>	<b>5,303.50</b>	<b>8,550.80</b>	<b>-37.98%</b>	<b>10,361.62</b>	<b>20,648.00</b>	<b>21,071.70</b>	<b>24,442.98</b>	<b>-2.01%</b>	<b>-15.53%</b>
APR	7,122.80	6,795.70	4.81%	9,694.60	467.00	321.50	45.26%	738.40	2,074.20	4,618.30	-55.09%	4,033.88	9,664.00	11,735.50	14,466.88	-17.65%	-33.20%
MAY	9,987.60	10,890.90	-8.29%	9,861.58	334.30	481.80	-30.61%	826.78	2,982.40	3,347.60	-10.91%	5,365.36	13,304.30	14,720.30	16,053.72	-9.62%	-17.13%
JUN	11,273.40	9,590.80	17.54%	10,549.50	608.10	496.40	22.50%	885.14	4,567.90	5,719.50	-20.13%	5,325.74	16,449.40	15,806.70	16,760.38	4.07%	-1.86%
<b>Q2</b>	<b>28,383.80</b>	<b>27,277.40</b>	<b>4.06%</b>	<b>30,105.68</b>	<b>1,409.40</b>	<b>1,299.70</b>	<b>8.44%</b>	<b>2,450.32</b>	<b>9,624.50</b>	<b>13,685.40</b>	<b>-29.67%</b>	<b>14,724.98</b>	<b>39,417.70</b>	<b>42,262.50</b>	<b>47,280.98</b>	<b>-6.73%</b>	<b>-16.63%</b>
JUL	-	9,591.80	-100.00%	10,549.50	-	738.50	-100.00%	990.52	-	5,010.90	-100.00%	4,263.04	-	15,341.20	15,803.06	-100.00%	-100.00%
AUG	-	10,501.90	-100.00%	10,759.22	-	812.60	-100.00%	960.58	-	7,328.60	-100.00%	5,429.04	-	18,643.10	17,148.84	-100.00%	-100.00%
SEP	-	8,780.90	-100.00%	10,137.04	-	604.90	-100.00%	939.26	-	4,035.70	-100.00%	4,247.20	-	13,421.50	15,323.50	-100.00%	-100.00%
<b>Q3</b>	<b>-</b>	<b>28,874.60</b>	<b>-100.00%</b>	<b>31,445.76</b>	<b>-</b>	<b>2,156.00</b>	<b>-100.00%</b>	<b>2,890.36</b>	<b>-</b>	<b>16,375.20</b>	<b>-100.00%</b>	<b>13,939.28</b>	<b>-</b>	<b>47,405.80</b>	<b>48,275.40</b>	<b>-100.00%</b>	<b>-100.00%</b>
OCT	-	10,279.30	-100.00%	7,789.82	-	350.60	-100.00%	532.58	-	2,382.10	-100.00%	4,192.52	-	13,012.00	12,514.92	-100.00%	-100.00%
NOV	-	8,450.00	-100.00%	6,287.92	-	242.60	-100.00%	532.14	-	3,439.80	-100.00%	3,891.36	-	12,132.40	10,711.42	-100.00%	-100.00%
DEC	-	3,587.80	-100.00%	3,169.58	-	172.60	-100.00%	816.30	-	2,429.20	-100.00%	2,130.62	-	6,189.60	6,116.50	-100.00%	-100.00%
<b>Q4</b>	<b>-</b>	<b>22,317.10</b>	<b>-100.00%</b>	<b>17,247.32</b>	<b>-</b>	<b>765.80</b>	<b>-100.00%</b>	<b>1,881.02</b>	<b>-</b>	<b>8,251.10</b>	<b>-100.00%</b>	<b>10,214.50</b>	<b>-</b>	<b>31,334.00</b>	<b>29,342.84</b>	<b>-100.00%</b>	<b>-100.00%</b>
<b>TOTAL</b>	<b>43,190.10</b>	<b>90,228.50</b>	<b>-52.13%</b>	<b>91,416.64</b>	<b>1,947.60</b>	<b>4,983.00</b>	<b>-60.92%</b>	<b>8,685.18</b>	<b>14,928.00</b>	<b>46,862.50</b>	<b>-68.15%</b>	<b>49,240.38</b>	<b>60,065.70</b>	<b>142,074.00</b>	<b>149,342.20</b>	<b>-57.72%</b>	<b>-59.78%</b>

\* 5-YR AVG 2016-2012

# Memo



Date: July 11, 2017

To: Airport Advisory Commission

From: Philip Tiedeman, Airport Manager

RE: 2017 Projects

---

## Overview

Enclosed there is a list of project to be complete in 2017 along with a brief update on where each is at. There is also a list of items accomplished in 2017. This can be any number of items including but not limited to equipment acquisitions, tests or studies, awards, projects, programs, events, and many others. A calendar of upcoming events has also been included for reference as well.



# 2017 Projects

- Loader and Attachment Replacement
  - Source of Funds: FAA Entitlement Funds
  - Developed specifications from MnDOT State Contract List.
  - Must meet Buy American Requirement
  - The National Joint Powers Alliance (NJPS) does not satisfy Federal Procurement Policies.
  - November 22, 2016: Submitted FAA Grant Pre-application
  - March 10, 2017: Submitted FAA SRE Inventory, Justification, and Equipment Calculation
  - July 6, 2017: Submitted State and FAA Grant Application
  - Grant could come as early as two weeks.
  - Pending Action:
    - Notice of Award
    - Airport Advisory Commission Approval
    - City Council Approval
    - Submit Notice of Award



# 2017 Projects (Continued)

- Terminal Lighting
  - Source of Funds: Airport Capital Budget
  - Premier Lighting conducted an audit in October 2016 and June 2017
    - Premier and CEE identified additional lighting that would qualify.
  - Center For Energy and Environment One-Stop Efficiency Shop and Premier Lighting working on qualifying equipment
  - Airport Staff is putting together a scope of work to begin the bid process
- Other Buildings & Improvements
  - Replace Sliding Doors on Hangar #5 (Anticipated funding in State FY 2018)
  - Roof Replacement on two Bowstring Hangars (Anticipated funding in State FY 2018)
- North Gate Road Sign Relocation
  - Should be completed as current work load permits



# 2017 Accomplishments

- January 10 – Super Bowl Working Group Created
- February 17 – Finalized Digitizing Airport Documents Via LaserFische
- March 2 – New HVAC Controls Installed
- March 6 – Airport Rules & Regulations Approved
- March 8 – Tested General Audio Recording Device (GARD) System for MnDOT
- March 20 – John Deere Z930M Ztrak Zero-turn Mower
- March 21 – BRS Rocket and Parachute Test
- March 24 – Final Tree Removals to reinitiate LPV Approach Minimums
- April 26 – Terminal Carpeting Installed
- April 30 – William Steier: Minnesota Pilot Who Flew the Most Young Eagles in 2016
- May 2 – Fleming Field Hall of Fame: Jim Hancock
- May 5 – Terminal Furniture Delivered
- May 10 – Geographical Information System (GIS)
- June 23 – Kaposia Days
- July 7 – MnDOT Tour
- July 7 – Wipaire Photo Shoot



# 2017 Upcoming Events

- July 13-16: X Games
- July 25-26: Airport Staff at EAA AirVenture in Oshkosh, WI
- August 5: Relay For Life
- September 9: CAF Hangar Dance
- September 10: Bob Brown III Car Show
- September 17: EAA Pancake Breakfast



# CAP Hangar Construction

- The CAP received a \$3,500,000 bonding grant to renovate a portion of and construct an addition to the training and maintenance facility located at the South St. Paul Airport, and to furnish and equip the facility, including communications equipment and a mobile command post vehicle, subject to Minnesota Statutes, section 16A.642.
- Held an preliminary meeting on June 22, 2017 to introduce all the various entities, provide a general overview of the project, and outline the State and FAA requirements.
- Next meeting is scheduled for mid-July.

# Memo



Date: July 11, 2017  
To: Airport Advisory Commission  
From: Philip Tiedeman, Airport Manager  
RE: RWY 34 GPS Approach – LPV Minimums

---

As of early May 2017 the probable chart date for the revised approach was 9/13/2018.

The Airport has been pushing the FAA to consider an earlier charting date. The FAA stated they would try to push the date up if something delays an approach already in the process. Airport staff found through the Instrument Flight Procedure (IFP) portal that the scheduled publication date has been moved up to 2/1/2018. While this is good news that there is movement with our approach, there is still no guarantee the approach will actually be published on this date.

Below is a screenshot from the FAA Instrument Flight Procedure (IFP) portal.

Procedure	Airport Name	Airport ID	City/State	Scheduled Pub Date	Status	Actual Pub Date	
RNAV (GPS) RWY 34, AMDT 2	SOUTH ST PAUL MUNI-RICHARD E FLEMING FLD	SGS (KSGS)	SOUTH ST PAUL, MN	2/1/2018	Pending		<a href="#">Email FAA</a>
LOC RWY 34, AMDT 1C	SOUTH ST PAUL MUNI-RICHARD E FLEMING FLD	SGS (KSGS)	SOUTH ST PAUL, MN	6/21/2018	Pending		<a href="#">Email FAA</a>
NDB B, AMDT 4B	SOUTH ST PAUL MUNI-RICHARD E FLEMING FLD	SGS (KSGS)	SOUTH ST PAUL, MN	6/21/2018	Pending		<a href="#">Email FAA</a>

Showing results 1 - 3 of 3

# Memo



Date: July 11, 2017  
To: Airport Advisory Commission  
From: Philip Tiedeman, Airport Manager  
RE: Hangar Inspections

---

## **Overview**

The 2017 Hangar inspections officially began April 1, 2017.

The Fire Department and Airport Staff are inspecting all commercial hangars and those hangars on the south side. Hangars on the west and north sides of the airport will be inspected by Airport Staff. There were several inquiries to have inspections conducted by the Fire Department on Saturdays. However, the Fire Department elected to continue to inspect hangars during their normal business hours. Notices will be sent out and/or tenants will be contacted monthly, to ensure tenants have been advised and the inspections are completed in a timely manner.

As of July 11, 151 hangars (86.3%) have been inspected with 24 hangars (13.7%) remaining.

## **Incentive – Discount**

To help expedite the process we are offering a \$0.15/gallon fuel discount during the first two months. While this may not entice all hangar owners to help move the process along, it may help those who already have their inspection completed on time and may benefit a few others as well.

Overall, six tenants utilized the fuel discount.

## **Fire Extinguishers**

Several tenants have inquired as to why the fire extinguishers need to be inspected each year. The National Fire Protection Association (NFPA), recognized by the State of Minnesota as setting national standards, identifies that fire extinguishers must be inspected annually and pressure tested every six years (NFPA 10, Chapter 7). St. Croix Fire & Safety Inc is able to conduct these inspections at the airport. Moreover, each tenant is able to coordinate with any other company to have their fire extinguishers inspected if they so choose.

# Memo



Date: July 11, 2017  
To: Airport Advisory Commission  
From: Philip Tiedeman, Airport Manager  
RE: Airport Website Update

---

Airport staff will be updating the Fleming Field website (<http://www.flemingfield.com/>) in hopes to make items more accessible, improve navigation, and provide better information to the public. The City is also revisiting their website and reviewing potential upgrades as well. This would be a prime opportunity to collaborate with web design specialists and to add/change/remove features. Airport Staff may be contacting airfield businesses and other organizations to request used of their logos and contact details for the website.

In a recent development, discovered on July 3<sup>rd</sup>, the airport website was down due to a database issue. Airport Staff has been working with our web host to reestablish the site. The problem was identified as a plugin error. However, the Web Host initially deleted the admin login access and database and is now attempting to recover the data so the plugin can be corrected.

# Memo



Date: July 11, 2017  
To: Airport Advisory Commission  
From: Philip Tiedeman, Airport Manager  
RE: YTD Budget Report – June 2017

---

## **Airport Operating Fund**

The 2017 Airport Operating Revenues for June YTD are \$541,851.30; the Airport Operating Expenditures for June YTD are \$421,033.02. The June YTD net change is a surplus of \$120,818.28.

- Airport Fuel Receipts (4583) are currently at \$176,585.46 (28.25%). This line item is expected to catch up throughout the summer months.
- Land Lease (4585) is at \$145,022.40 (87.76%). Most land leases are due in March of each year with a few occurring throughout the remainder of the year.
- Other Revenue items are in line with expectations.
- Expense items are in line with expectations.

## **Capital Improvement Fund**

The 2017 Airport Capital Revenues for June YTD are \$3,217.63; the Airport Operating Expenses for June YTD are \$8,971.88. The June YTD net change is a deficit of \$5,754.25.

- The new loader is still on track to be acquired this year and should near the budgeted amount.
- Items that remain uncertain are Bowstring Hangar Roof repairs and Hangar #5 door repair. Due to recent storms, Insurance may also be covering a portion of the repairs costs as well.

## **5-Year History**

City Finance Director, Michelle Pietrick will provide an overview of the 5-year debt history of the airport.

**MONTHLY FINANCIAL REPORT**  
**Year-to-Date June 2017**

Description	2017 Actual Budget	June YTD Actual 2017	Budget Balance 2017	Percent Used 2017	2016 Actual Budget	June YTD Actual 2016	Percent Used 2016
<b>20245 - AIRPORT</b>							
<b>REVENUES AND EXPENDITURES</b>							
<b>REVENUES</b>							
<b>INTERGOVERNMENTAL</b>							
4321 - AIRPORT OPERATIONS & MAINT	(34,320.00)	(34,320.00)	0.00	100.00%	(32,000.00)	(34,320.00)	107.25%
4325 - STATE GRANTS AND AIDS	(35,000.00)	0.00	(35,000.00)	0.00%	(40,000.00)	0.00	0.00%
<b>INTERGOVERNMENTAL</b>	<b>(69,320.00)</b>	<b>(34,320.00)</b>	<b>(35,000.00)</b>	<b>49.51%</b>	<b>(72,000.00)</b>	<b>(34,320.00)</b>	<b>47.67%</b>
<b>CHARGE FOR SERVICE</b>							
4411 - PILOT	(48,460.00)	(24,563.52)	(23,896.48)	50.69%	(43,435.00)	(22,361.21)	51.48%
4402 - RENT	(16,000.00)	(9,980.39)	(6,019.61)	62.38%	(8,652.00)	(6,328.49)	73.14%
4581 - RENT OF HANGARS	(197,050.00)	(91,316.11)	(105,733.89)	46.34%	(200,687.00)	(96,422.44)	48.05%
4583 - AIRPORT FUEL RECEIPTS	(625,000.00)	(176,585.46)	(448,414.54)	28.25%	(638,252.00)	(200,692.38)	31.44%
4585 - LAND LEASE	(165,250.00)	(145,022.40)	(20,227.60)	87.76%	(162,238.00)	(130,964.78)	80.72%
4586 - TEE HANGAR RENTAL	(105,000.00)	(53,735.15)	(51,264.85)	51.18%	(112,265.00)	(52,290.74)	46.58%
4587 - AIRCRAFT PARKING FEES	(5,500.00)	(3,210.00)	(2,290.00)	58.36%	(3,000.00)	(2,915.00)	97.17%
4588 - AIRPORT RAMP FEES	(1,500.00)	0.00	(1,500.00)	0.00%	(7,500.00)	(70.00)	0.93%
<b>CHARGES FOR SERVICES</b>	<b>(1,163,760.00)</b>	<b>(504,413.03)</b>	<b>(659,346.97)</b>	<b>43.34%</b>	<b>(1,176,029.00)</b>	<b>(512,045.04)</b>	<b>43.54%</b>
<b>MISCELLANEOUS</b>							
4510 - CONCESSION SALES	(50.00)	(89.51)	39.51	179.02%	0.00	(90.00)	
4590 - AIRPORT GATE CARD	(500.00)	(942.38)	442.38	188.48%	(800.00)	(1,680.95)	210.12%
4591 - AIRPORT VENDING SALES	(800.00)	(374.42)	(425.58)	46.80%	(750.00)	(356.04)	47.47%
4592 - OTHER TRANSPORTATION		(1,000.00)	1,000.00				
4413 - XEROX COPIES	(10.00)	0.00	(10.00)	0.00%	(10.00)	0.00	0.00%
4672 - OTHER	(500.00)	(684.89)	184.89	136.98%	0.00	(1,568.16)	
4673 - CASH OVER/SHORT		0.34	(0.34)			0.07	
4675 - INSURANCE DIVIDEND	(7,000.00)	0.00	(7,000.00)	0.00%	(7,000.00)	0.00	0.00%
4677 - MISC REVENUE		(27.41)	27.41			0.00	
4681 - UNREALIZED GAIN/LOSS ON INV		0.00	0.00			0.00	
<b>MISCELLANEOUS</b>	<b>(8,860.00)</b>	<b>(3,118.27)</b>	<b>(5,741.73)</b>	<b>35.19%</b>	<b>(8,560.00)</b>	<b>(3,695.08)</b>	<b>43.17%</b>
<b>OTHER FINANCING SOURCES</b>							
<b>REVENUES</b>	<b>(1,241,940.00)</b>	<b>(541,851.30)</b>	<b>(700,088.70)</b>	<b>43.63%</b>	<b>(1,256,589.00)</b>	<b>(550,060.12)</b>	<b>43.77%</b>
<b>EXPENDITURES</b>							
<b>PERSONNEL SERVICES</b>							
6101 - FULL-TIME EMPLOYEES-REG	155,366.00	70,197.05	85,168.95	45.18%	145,691.00	66,222.05	45.45%
6102 - FULL-TIME EMPLOYEES-OVERTIME	2,000.00	140.61	1,859.39	7.03%	1,000.00	479.56	47.96%
6104 - TEMPORARY EMPLOYEES-REG	15,500.00	5,284.94	10,215.06	34.10%	14,658.00	2,176.92	14.85%
6108 - ACCUMULATED VACATION/COMP LEAV	1,600.00	0.00	1,600.00	0.00%	0.00	0.00	
6120 - EMPLOYER CONTR FOR RETIREMENT	24,832.00	10,879.23	13,952.77	43.81%	23,067.00	9,983.78	43.28%
6130 - EMPLOYER PAID INSURANCE	15,046.00	7,422.72	7,623.28	49.33%	14,182.00	6,916.71	48.77%

**MONTHLY FINANCIAL REPORT**  
**Year-to-Date June 2017**

Description	2017 Actual Budget	June YTD Actual 2017	Budget Balance 2017	Percent Used 2017	2016 Actual Budget	June YTD Actual 2016	Percent Used 2016
6140 - UNEMPLOYMENT COMP INS.		789.99	(789.99)			0.00	
6150 - WORKERS COMPENSATION	8,422.00	5,039.25	3,382.75	59.83%	8,422.00	5,551.50	65.92%
6170 - EMPLOYER CONTR TO HCSP	2,786.00	300.00	2,486.00	10.77%	2,163.00	277.75	12.84%
<b>PERSONNEL SERVICES</b>	<b>225,552.00</b>	<b>100,053.79</b>	<b>125,498.21</b>	<b>44.36%</b>	<b>209,183.00</b>	<b>91,608.27</b>	<b>43.79%</b>
<b>MATERIALS &amp; SUPPLIES</b>							
6201 - OFFICE SUPPLIES	1,500.00	465.49	1,034.51	31.03%	1,500.00	180.06	12.00%
6220 - REPAIR & MAINTENANCE SUPPLIES	40,000.00	16,085.32	23,914.68	40.21%	40,000.00	7,822.95	19.56%
6240 - MINOR EQUIPMENT AND FURNITURE	58,000.00	28,698.92	29,301.08	49.48%	2,100.00	649.99	30.95%
6250 - MERCHANDISE FOR RESALE	450,000.00	176,347.28	273,652.72	39.19%	516,633.00	123,110.23	23.83%
<b>MATERIALS &amp; SUPPLIES</b>	<b>549,500.00</b>	<b>221,597.01</b>	<b>327,902.99</b>	<b>40.33%</b>	<b>560,233.00</b>	<b>131,763.23</b>	<b>23.52%</b>
<b>SERVICES AND OTHER CHARGES</b>							
6302 - PROFESSIONAL SERVICES	15,000.00	12,864.53	2,135.47	85.76%	14,200.00	4,854.69	34.19%
6331 - CONFERENCES, TRAINING, TRAVEL	5,000.00	813.65	4,186.35	16.27%	3,800.00	651.46	17.14%
6341 - ADVERTISING	7,000.00	2,019.00	4,981.00	28.84%	6,325.00	2,350.00	37.15%
6361 - INSURANCE	50,786.00	22,252.36	28,533.64	43.82%	50,786.00	41,114.87	80.96%
6371 - REPAIRS & MAINT CONTRACTUAL	129,000.00	5,278.62	123,721.38	4.09%	76,000.00	4,125.68	5.43%
6374 - ADMINISTRATION SUPPORT FEE	71,686.00	29,945.00	41,741.00	41.77%	62,709.00	31,356.00	50.00%
6378 - COPIER MAINTENANCE AGREEMENT	450.00	105.02	344.98	23.34%	450.00	124.64	27.70%
6379 - CONT SERV/REFUSE & SANITATION	750.00	290.00	460.00	38.67%	600.00	290.00	48.33%
6380 - CENTRAL GARAGE MAINT. CHARGE	15,959.00	6,650.00	9,309.00	41.67%	13,877.00	6,942.00	50.03%
6385 - UTILITY SERVICE	20,500.00	7,628.61	12,871.39	37.21%	19,775.00	7,503.80	37.95%
6388 - TECHNOLOGY EQUIP CHARGE	632.00	265.00	367.00	41.93%	40.00	22.00	55.00%
6390 - POSTAGE AND TELEPHONE	5,750.00	1,811.81	3,938.19	31.51%	5,000.00	2,081.28	41.63%
<b>SERVICES AND OTHER CHARGES</b>	<b>322,513.00</b>	<b>89,923.60</b>	<b>232,589.40</b>	<b>27.88%</b>	<b>253,562.00</b>	<b>101,416.42</b>	<b>40.00%</b>
<b>CAPITAL OUTLAY</b>							
6560 - BUILDING FIXTURES AND IMPRS	0.00	0.00	0.00		0.00	0.00	
6572 - COMPUTER SOFTWARE	2,500.00	1,268.85	1,231.15	50.75%	7,500.00	0.00	0.00%
<b>CAPITAL OUTLAY</b>	<b>2,500.00</b>	<b>1,268.85</b>	<b>1,231.15</b>	<b>50.75%</b>	<b>7,500.00</b>	<b>0.00</b>	<b>0.00%</b>
<b>MISCELLANEOUS</b>							
6412 - CREDIT CARD/ACH/BANK FEE		142.55	(142.55)			58.85	
6453 - REMITTANCE OF REV/OTHER	800.00	425.00	375.00	53.13%	650.00	455.00	70.00%
6471 - DUES & SUBSCRIPTIONS	1,250.00	1,364.00	(114.00)	109.12%	470.00	1,335.25	284.10%
<b>MISCELLANEOUS</b>	<b>2,050.00</b>	<b>1,931.55</b>	<b>118.45</b>	<b>94.22%</b>	<b>1,120.00</b>	<b>1,849.10</b>	<b>165.10%</b>
<b>DEBT SERVICE</b>							
6602 - OTHER LONG TERM DEBT-PRINCIPAL	3,130.00	6,258.22	(3,128.22)	199.94%	38,656.00	18,774.48	48.57%
6612 - INTEREST EXPENSE	15,000.00	0.00	15,000.00	0.00%	15,000.00	5,661.23	37.74%
<b>DEBT SERVICE</b>	<b>18,130.00</b>	<b>6,258.22</b>	<b>11,871.78</b>	<b>34.52%</b>	<b>53,656.00</b>	<b>24,435.71</b>	<b>45.54%</b>
<b>TRANSFERS</b>							
6719 - TRANSFER TO CAPITAL PROJECT FU	103,750.00	0.00	103,750.00	0.00%	46,500.00	0.00	0.00%

**MONTHLY FINANCIAL REPORT**  
**Year-to-Date June 2017**

Description	2017 Actual Budget	June YTD Actual 2017	Budget Balance 2017	Percent Used 2017	2016 Actual Budget	June YTD Actual 2016	Percent Used 2016
TRANSFERS	103,750.00	0.00	103,750.00	0.00%	46,500.00	0.00	0.00%
EXPENDITURES	1,223,995.00	421,033.02	802,961.98	34.40%	1,131,754.00	351,072.73	31.02%
REVENUES AND EXPENDITURES	(17,945.00)	(120,818.28)	102,873.28	673.27%	(124,835.00)	(198,987.39)	159.40%

**MONTHLY FINANCIAL REPORT**  
**Year-to-Date June 2017**

Description	2017 Actual Budget	June YTD Actual 2017	Budget Balance 2017	Percent Used 2017	2016 Actual Budget	June YTD Actual 2016	Percent Used 2016
<b>40404 - AIRPORT CAPITAL FUND</b>							
<b>REVENUES AND EXPENDITURES</b>							
<b>REVENUES</b>							
<b>INTERGOVERNMENTAL</b>							
4302 - FEDERAL GRANTS - OTHER	(202,500.00)	0.00	(202,500.00)	0.00%	(135,000.00)	313,928.00	-232.54%
4325 - STATE GRANTS AND AIDS	(193,250.00)	0.00	(193,250.00)	0.00%	(163,500.00)	16,077.44	-9.83%
<b>INTERGOVERNMENTAL</b>	<b>(395,750.00)</b>	<b>0.00</b>	<b>(395,750.00)</b>	<b>0.00%</b>	<b>(298,500.00)</b>	<b>330,005.44</b>	<b>-110.55%</b>
<b>CHARGE FOR SERVICE</b>							
4572 - USER IMPROVEMENT FEES	0.00	0.00	0.00		0.00	(15,843.75)	
<b>CHARGES FOR SERVICES</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>0.00</b>	<b>(15,843.75)</b>	
<b>SPECIAL ASSESSMENTS</b>							
4657 - OTHER ASSESSMENTS		(3,217.63)	3,217.63			(3,217.63)	
<b>SPECIAL ASSESSMENTS</b>		<b>(3,217.63)</b>	<b>3,217.63</b>			<b>(3,217.63)</b>	
<b>MISCELLANEOUS</b>							
4681 - UNREALIZED GAIN/LOSS ON INV		0.00	0.00			0.00	
<b>MISCELLANEOUS</b>		<b>0.00</b>	<b>0.00</b>			<b>0.00</b>	
<b>OTHER FINANCING SOURCES</b>							
4920 - INTERFUND OPERATING TRANSFER	(103,750.00)	0.00	(103,750.00)	0.00%	(46,500.00)	0.00	0.00%
<b>OTHER FINANCING SOURCES</b>	<b>(103,750.00)</b>	<b>0.00</b>	<b>(103,750.00)</b>	<b>0.00%</b>	<b>(46,500.00)</b>	<b>0.00</b>	<b>0.00%</b>
<b>REVENUES</b>	<b>(499,500.00)</b>	<b>(3,217.63)</b>	<b>(496,282.37)</b>	<b>0.64%</b>	<b>(345,000.00)</b>	<b>310,944.06</b>	<b>-90.13%</b>
<b>EXPENDITURES</b>							
<b>SERVICES AND OTHER CHARGES</b>							
6302 - PROFESSIONAL SERVICES	0.00	0.00	0.00		0.00	589.14	
6371 - REPAIRS & MAINT CONTRACTUAL	0.00	0.00	0.00		0.00	1,143.11	
<b>SERVICES AND OTHER CHARGES</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>0.00</b>	<b>1,732.25</b>	
<b>CAPITAL OUTLAY</b>							
6530 - IMPR OTHER THAN BUILDING	225,000.00	0.00	225,000.00	0.00%	165,000.00	13,751.40	8.33%
6560 - BUILDING FIXTURES AND IMPRS	260,000.00		260,000.00		180,000.00		
6580 - OTHER EQUIPMENT	14,500.00	8,971.88	5,528.12	61.88%	0.00	0.00	
<b>CAPITAL OUTLAY</b>	<b>499,500.00</b>	<b>8,971.88</b>	<b>490,528.12</b>	<b>1.80%</b>	<b>345,000.00</b>	<b>13,751.40</b>	<b>3.99%</b>
<b>MISCELLANEOUS</b>							
<b>DEBT SERVICE</b>							
6612 - INTEREST EXPENSE	15,000.00	0.00	15,000.00	0.00%	15,000.00	10,456.69	69.71%
<b>DEBT SERVICE</b>	<b>15,000.00</b>	<b>0.00</b>	<b>15,000.00</b>	<b>0.00%</b>	<b>15,000.00</b>	<b>10,456.69</b>	<b>69.71%</b>
<b>EXPENDITURES</b>	<b>514,500.00</b>	<b>8,971.88</b>	<b>505,528.12</b>	<b>1.74%</b>	<b>360,000.00</b>	<b>25,940.34</b>	<b>7.21%</b>
<b>REVENUES AND EXPENDITURES</b>	<b>15,000.00</b>	<b>5,754.25</b>	<b>9,245.75</b>	<b>38.36%</b>	<b>15,000.00</b>	<b>336,884.40</b>	<b>2,245.90%</b>

# Memo



Date: July 11, 2017  
To: Airport Advisory Commission  
From: Philip Tiedeman, Airport Manager  
RE: Court Update

---

City Finance Director, Michelle Pietrick will provide an update on recent court developments regarding the former Airport Manager.

# Memo



Date: July 11, 2017  
To: Airport Advisory Commission  
From: Philip Tiedeman, Airport Manager  
RE: NFL Super Bowl 2018

---

Airport staff and the Super Bowl Planning Committee will provide updates regarding planning for Super Bowl LII.

# Memo



Date: July 11, 2017  
To: Airport Advisory Commission  
From: Philip Tiedeman, Airport Manager  
RE: Airport Wheel Loader and Attachments Replacement

---

## **Overview:**

Airport Staff researched the type of loader required to meet the demands of the airport. Staff held several discussions with Case, John Deere, and Caterpillar as all three companies were presumed to be able to meet the Buy American Requirement for an FAA Grant.

After reviewing the available companies and equipment options on the State Contact System and the National Joint Powers Alliance (NJPA), it was determined that the NJPA system did not qualify for this type of federal funding. Airport Staff met with other City Staff to determine repair and maintenance costs and functionality prior to developing a spec sheet for the loader and attachments.

The Airport received quotes based on the spec sheet from John Deere (\$283,623.89, trade-in \$29,000) and Caterpillar (\$241,630.00, trade-in TBD) for a new wheel loader and attachments. Airport Administration is roughly \$2,000.00. However, the trade-in value of the current loader and attachments has not yet been finalized for Caterpillar. Overall, both quotes are federally eligible with available entitlement funds, but both are over the budgeted amount of \$225,000.00. However, with the trade-in value relatively close to the John Deere value, the price would drop near the budgeted value.

The Ziegler-Cat proposal is included in the packet as well as product brochures and information.

## **Staff Recommendation:**

The staff recommendation is to approve the acquisition of a new Caterpillar 938M with attachments, to rehook the current snow blower coupler from Zeigler-Caterpillar in the amount of \$243,630.00, and to trade-in the Case 821B and associated attachments.

## **Source of Funding:**

Airport Capital Budget



901 WEST 94TH STREET  
MINNEAPOLIS, MN 55420-4299  
952/888-4121  
800/352-2812  
www.zieglerinc.com

July 6, 2017

Fleming Field  
Attn: Philip Tiedeman  
1725 Henry Avenue  
South St. Paul, MN 55075

Philip,

Ziegler Inc. proposes the following equipment for your consideration per MN/DOT state bid contract # 115219:

1.0	2017 Caterpillar 938M	\$160,980.00
2.1	Standard cab (includes automatic temperature control, seat mounted implement controls, two heated external mirrors, two internal mirrors, tilt and telescoping steering wheel, and primary instrument display)	Included
2.2	Deluxe cab (includes all features included in 2.1 plus automatic blower control, electrically adjusted external mirrors, secondary display which allows real time adjustments to rimpull, creeper speed, 3rd function flow, throttle lock, and doubles as rear camera display (camera not included), enhanced in cab LED lighting, and front and rear sun visor)	\$1,330.00
2.5	Deluxe AM/FM radio (includes Bluetooth interface, microphone, and aux inputs for MP3 players, etc)	\$450.00
2.7	Ride control	\$2,440.00
2.10	Premium seat (heated and ventilated high back air suspension seat)	\$1,460.00
2.13	Rear view camera (requires 2.2 deluxe cab)	\$650.00
2.15	Washer & Wiper, front and rear	Included
3.1	Front differential lock	Included

901 WEST 94TH STREET  
 MINNEAPOLIS, MN 55420-4299  
 952/888-4121  
 800/352-2812  
 www.zieglerinc.com

3.2	Limited slip rear differential	\$1,850.00
3.5	Ether starting aid	Included
3.6	Engine coolant heater	Included
4.1	Warning beacon, LED strobe, amber lens	Included
4.2	Whelen L22 strobe with blue or amber lens	\$710.00
4.3	Halogen front and rear roading and work lights	Included
4.6	Lights Two additional forward facing and two additional rear facing LED work lights - plus three additional LED engine enclosure lights	\$600.00
4.8	Product Link PL641 - cellular (requires service subscription)	Included
4.10	Two Additional Batteries for Cold Start	Included
5.6	20.5-R25 Michelin XSNO+, L2 Snow	\$1,570.00
6.1	Hydraulic oil cooler, heavy duty	Included
6.3	Hydraulics, 3 valve Coupler Ready	\$1,620.00
7.1	Caterpillar Fusion quick coupler	\$2,530.00
7.7	General purpose bucket, 3.8 cyd. with bolt-on edge (pin-on or Fusion coupler)	\$6,830.00
7.30	Transportation to Little Falls for install	\$900.00
7.31	Joystick, diverter valves, and hydraulic modifications to run snow wing	\$15,700.00
7.34	LDL-10-10' snow wing	\$14,570.00
7.38	PR1243 power reversible trip blade plow (12') with female adapter installed	\$9,910.00
0.00	Re-hook current snow blower	\$4,000.00
0.00	Raveling 16' Snow Pusher w/ rubber edge	\$8,500.00
0.00	ICOM A120 Aviation Radio	\$2,000.00
8.1	Counterweight Heavy - Required for High Lift	\$1,660.00
8.13	Standard fenders (provides black non-metallic front fenders and partial coverage rear fenders)	Included





# Cat<sup>®</sup> 938M

## WHEEL LOADER

### M SERIES – MAKING YOUR CHOICE EASY:

■ **Enjoy All Day Comfort** – Have a seat in the new M Series Small Wheel Loader and enjoy automatic temperature control, class leading sound levels, excellent all around visibility and low-effort joystick controls that move with you on a fully adjustable seat suspension. A large spacious operator environment combined with Caterpillar’s exclusive hydraulic cylinder damping and smooth predictable controls make this the most comfortable seat on your job site.

■ **Work Made Easy** – Move more with Caterpillar’s patented quick loading Performance Series buckets and optimized Z-bar linkage that combines the digging efficiency of a traditional Z-bar with tool carrier capabilities. The parallel lift and high tilt forces throughout the working range allow you to safely and confidently handle loads with precise control.

Multi-function work has never been easier with dedicated pumps for each system and a flow sharing implement valve governed by an intelligent power management system. Simultaneously lift, steer and drive without compromise. The M Series Small Wheel Loader simply does what you ask it to do.

■ **Efficiently Powerful** – Experience hybrid like fuel efficiency with an intelligent hydrostatic power train and industry leading fuel savings through a lower maximum engine speed of just 1,600 rpm in Standard Mode. Power when you need it with Caterpillar’s exclusive Power-by-Range technology that increases power in Range 4 for improved speed on grade. For your toughest and most demanding applications a new Performance Mode will allow you to boost the power and hydraulic speed in all Ranges to get the job done even quicker. Meets U.S. EPA Tier 4 Final/EU Stage IV emission standards with a Cat<sup>®</sup> C7.1 ACERT™ engine that is designed to manage itself so you can concentrate on your work.

■ **Customize Your Experience** – Meet your application requirements and individual preferences with Caterpillar’s industry first Hystat™ Operator Modes featuring four unique power train settings. Select classic Torque Converter for smooth rollout, conventional Hystat for aggressive engine braking, an Ice Mode that maximizes your control on slippery underfoot, or default mode which blends the best of Hystat and Torque Converter characteristics. Fine tune machine performance with adjustments at your fingertips through the soft touch buttons and optional secondary display. Quickly set hydraulic response along with linkage kick-out positions, maximum wheel torque, and peak ground speed to efficiently perform a multitude of tasks.

## Specifications

### Engine

Engine Model	Cat C7.1 ACERT			
Power Mode	Standard Mode		Performance Mode	
Speed Range	Range 1-3*		Range 1-4	
Maximum Gross Power				
Maximum Engine Speed	1,600 rpm		1,800 rpm	
ISO 14396	129 kW	173 hp	140 kW	188 hp
ISO 14396 (DIN)	129 kW	175 hp	140 kW	190 hp
Rated Net Power	1,600 rpm		1,800 rpm	
SAE J1349	125 kW	168 hp	136 kW	182 hp
SAE J1349 at				
Maximum Fan Speed	114 kW	153 hp	125 kW	168 hp
ISO 9249 (DIN)	126 kW	171 hp	137 kW	186 hp

### Engine (continued)

	Standard Mode		Performance Mode	
Maximum Gross Torque				
ISO 14396	879 N-m	648 lbf-ft	879 N-m	648 lbf-ft
Maximum Net Torque				
SAE J1349	843 N-m	621 lbf-ft	843 N-m	621 lbf-ft
ISO 9249 (1977)/EEC 80/1269	852 N-m	628 lbf-ft	852 N-m	628 lbf-ft
Displacement	7.01 L	427 in <sup>3</sup>	7.01 L	427 in <sup>3</sup>

- Engine meets Tier 4 Final/Stage IV emission standards.
- Net power shown is the power available at the flywheel when the engine is equipped with alternator, air cleaner and diesel exhaust filter.

\*Range 4 power is boosted to be the same as Performance Mode.



# 938M Wheel Loader

## Buckets

Bucket Capacities – General Purpose	2.5-3.2 m <sup>3</sup>	3.2-4.2 yd <sup>3</sup>
Bucket Capacities – Light Material	3.1-5.0 m <sup>3</sup>	4.0-6.5 yd <sup>3</sup>

## Steering

Steering Articulation Angle (each direction)	40°	
Maximum Flow – Steering Pump	130 L/min	34 gal/min
Maximum Working Pressure – Steering Pump	24 130 kPa	3,500 psi
Maximum Steering Torque:		
0 degrees (straight machine)	57 630 N·m	42,506 lbf·ft
40 degrees (full turn)	42 570 N·m	31,398 lbf·ft
Steering Cycle Times (full left to full right):		
At 1,800 rpm: 90 rpm steering wheel speed	2.3 seconds	
Number of Steering Wheel Turns – full left to full right or full right to full left	3.3 turns	

## Loader Hydraulic System

Maximum Flow – Implement Pump	190 L/min	50 gal/min
3rd Function Maximum Flow*	190 L/min	50 gal/min
4th Function Maximum Flow*	160 L/min	42 gal/min
Maximum Working Pressure – Implement Pump	28 000 kPa	4,061 psi
Relief Pressure – Tilt Cylinder	30 000 kPa	4,351 psi
3rd Function Maximum Working Pressure	28 000 kPa	4,061 psi
4th Function Maximum Working Pressure	28 000 kPa	4,061 psi
Hydraulic Cycle Times:	Standard Mode	Performance Mode
	At 1,600 rpm	At 1,800 rpm
Raise (ground level to maximum lift)	6.2 seconds	5.5 seconds
Dump (at maximum lift height)	1.7 seconds	1.5 seconds
Float Down (maximum lift to ground level)	2.7 seconds	2.7 seconds
Total Cycle Time	10.6 seconds	9.7 seconds

\*Adjustable from 20% to 100% of maximum flow through the secondary display, when equipped.

## Service Refill Capacities

Fuel Tank	195 L	51.5 gal
Cooling System	32 L	7.9 gal
Engine Crankcase	20 L	5.3 gal
Transmission (gearbox)	11 L	2.9 gal
Axles:		
Front	35 L	9.2 gal
Rear	35 L	9.2 gal
Hydraulic System (including tank)	170 L	44.9 gal
Hydraulic Tank	90 L	23.8 gal
Diesel Exhaust Fluid (DEF) Tank	19 L	5 gal

- DEF used in Cat SCR systems must meet the requirements outlined in the International Organization for Standardization (ISO) standard 22241-1.

## Transmission

Forward and Reverse:		
Range 1*	1-13 km/h	0.6-8 mph
Range 2	13 km/h	8 mph
Range 3	27 km/h	17 mph
Range 4	40 km/h	25 mph

\*Creeper control allows maximum speed range adjustability from 1 km/h (0.6 mph) to 13 km/h (8 mph) in Range 1 through the secondary display, when equipped. Factory default is 7 km/h (4.4 mph).

## Tires

Standard Size	20.5 R25, radial (L-3)	
Other Choices Include:	20.5 R25, radial (L-2)	23.5 R25, radial (L-3)
	20.5 R25, radial (L-5)	650/65 R25 radial (L-3)
	20.5-25 12PR (L-2)	Skidder/Agriculture
	20.5-25 12PR (L-3)	Flexports Gen II
	20.5-25 16PR (L-5)	

- Other tire choices are available. Contact your Cat dealer for details.
- In certain applications, the loader's productive capabilities may exceed the tire's tonnes-km/h (ton-mph) capabilities.
- Caterpillar recommends that you consult a tire supplier to evaluate all conditions before selecting a tire model.

## Cab

ROPS	SAE J1040 MAY94, ISO 3471-1994
FOPS	SAE J/ISO 3449 APR98, Level II, ISO 3449 1992 Level II

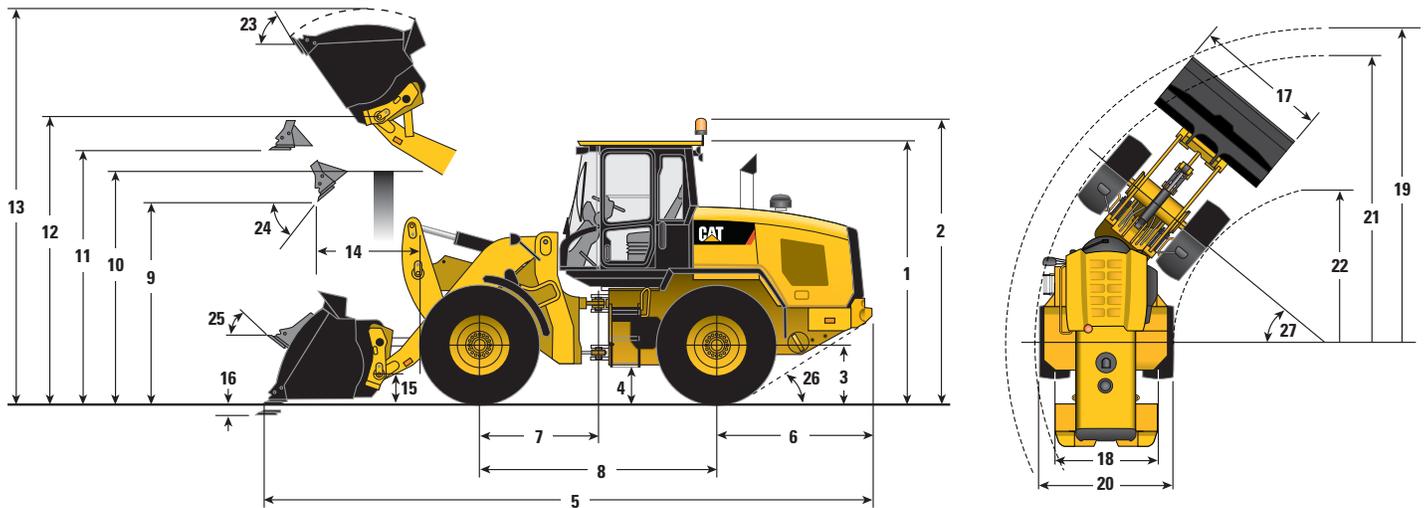
- Cab and Rollover Protective Structures (ROPS) are standard in North America and Europe.
- The declared dynamic operator sound pressure levels per ISO 6396:2008\*, when properly installed and maintained, are:
  - Standard cab: 68 ±3 dB(A)
  - Deluxe cab: 66 ±2 dB(A)

\*The measurements were conducted with the cab doors and windows closed and at 70% of the maximum engine cooling fan speed. The sound level may vary at different engine cooling fan speeds.

## Axles

Front	Fixed
	Locking differential (standard)
Rear	Oscillating ±11 degrees
	Open differential (standard)
	Limited slip differential (optional)

## Dimensions and Operating Specifications (All dimensions are approximate. Dimensions vary with bucket and tire choice.)



	Standard Lift		High Lift	
** 1 Height: Ground to Cab	3340 mm	(10'11")	3340 mm	(10'11")
** 2 Height: Ground to Beacon	3669 mm	(12'0")	3669 mm	(12'0")
** 3 Height: Ground Axle Center	685 mm	(2'2")	685 mm	(2'2")
** 4 Height: Ground Clearance	386 mm	(1'3")	386 mm	(1'3")
* 5 Length: Overall	7656 mm	(25'1")	8397 mm	(27'6")
6 Length: Rear Axle to Bumper	1963 mm	(6'5")	1968 mm	(6'5")
7 Length: Hitch to Front Axle	1525 mm	(5'0")	1525 mm	(5'0")
8 Length: Wheel Base	3050 mm	(10'0")	3050 mm	(10'0")
* 9 Clearance: Bucket at 45 degrees	2834 mm	(9'3")	3415 mm	(11'2")
** 10 Clearance: Loadover Height	3354 mm	(11'0")	3561 mm	(11'8")
** 11 Clearance: Level Bucket	3641 mm	(11'11")	4222 mm	(13'10")
** 12 Height: Bucket Pin	3969 mm	(13'0")	4550 mm	(14'11")
** 13 Height: Overall	5273 mm	(17'3")	5853 mm	(19'2")
* 14 Reach: Bucket at 45 degrees	1146 mm	(3'9")	1413 mm	(4'7")
15 Carry Height: Bucket Pin	467 mm	(1'6")	686 mm	(2'2")
** 16 Dig Depth	101 mm	(3.9")	135 mm	(5.3")
17 Width: Bucket	2750 mm	(9'0")	2750 mm	(9'0")
18 Width: Tread Center	2065 mm	(6'9")	2065 mm	(6'9")
19 Turning Radius: Over Bucket	6133 mm	(20'1")	6490 mm	(21'3")
20 Width: Over Tires	2675 mm	(8'9")	2675 mm	(8'9")
21 Turning Radius: Outside of Tires	5537 mm	(18'1")	5537 mm	(18'1")
22 Turning Radius: Inside of Tires	2852 mm	(9'4")	2852 mm	(9'4")
23 Rack Angle at Full Lift	54 degrees		53 degrees	
24 Dump Angle at Full Lift	49 degrees		47 degrees	
25 Rack Angle at Carry	45 degrees		50 degrees	
26 Departure Angle	33 degrees		33 degrees	
27 Articulation Angle	40 degrees		40 degrees	
* Tipping Load – Straight (ISO 14397-1)	11 837 kg	26,097 lb	8362 kg	18,435 lb
* Tipping Load – Full Turn (ISO 14397-1)	10 045 kg	22,146 lb	7021 kg	15,480 lb
* Breakout	13 170 kg	29,035 lb	12 663 kg	27,917 lb
* Operating Weight	16 400 kg	36,156 lb	16 326 kg	35,993 lb

\*Vary with bucket.

\*\*Vary with tire.

Dimensions listed are for a machine configured with 2.5 m<sup>3</sup> (3.2 yd<sup>3</sup>) general purpose Fusion™ bucket, bolt-on cutting edge, heavy counterweights, additional guarding, 80 kg (176 lb) operator and Michelin 20.5 R25 (L-3) XHA2 tires.

# 938M Wheel Loader

## STANDARD EQUIPMENT

### POWER TRAIN

- Auto idle shut down feature
- Cat C7.1 ACERT engine
  - Power modes (Standard and Performance)
  - Power by range (High Power in Range 4)
  - Turbocharged and aftercooled
  - Filtered crankcase breather
  - Diesel particulate filter
  - Selective Catalyst Reduction
- Coded start (requires secondary display)
- Coolant protection to  $-34^{\circ}\text{C}$  ( $-29^{\circ}\text{F}$ )
- Enclosed wet disc full hydraulic brakes
- Fuel priming pump, automatic
- Hydraulically driven demand cooling fan
- Hydrostatic transmission with electronic control
  - Operator modes (Default, TC, Hystat, and Ice)
  - Directional Shift Aggressiveness (fast, medium, slow)
  - Rimpull control, adjust wheel torque
  - Creeper control, adjust ground speed
- Parking brake, electric
- Single plane cooling package wide six fins per inch density
- Throttle lock and max speed limiter

### HYDRAULICS

- Automatic lift and bucket kickouts, adjustable in-cab
- Bucket and fork modes, adjustable in-cab
- Cylinder damping at kickout and mechanical end stops
- Fine mode control (fast, medium, slow) in fork mode
- Hydraulic response setting (fast, medium, slow)
- Hydraulic diagnostic connectors and S-O-S<sup>SM</sup> ports
- Load sensing hydraulics and steering

### ELECTRICAL

- Alternator, 115 amp, heavy duty
- 12V power supply in cab (2)
- Batteries, 1,000 CCA (2) 24V system, disconnect switch
- Back-up alarm
- Emergency shutdown switch
- Halogen work and roading lights, LED rear tail lights
- Product Link™ PRO with three year subscription
- Remote jump start post
- Resettable main and critical function breakers

### OPERATOR ENVIRONMENT

- 75 mm (3 in) retractable seat belt, with audible alarm and indicator
- Automatic temperature control
- External heated mirrors with lower parabolic
- Hydraulic control lockout
- Interior cab lighting, door and dome
- Interior rearview mirrors (2)
- Lunch box storage
- Radio ready speakers
- Rear window defrost, electric
- Seat-mounted electronic implement controls, adjustable
- Column mounted multi function control – lights, wipers, turn signal
- Tilt and telescopic steering wheel
- Tinted front glass
- Wet arm wiper/washer, 2-speed and intermittent, front

### OTHER STANDARD EQUIPMENT

- Large-access enclosure doors with adjustable close/open force
- Parallel lift loader linkage

### EU STANDARD EQUIPMENT

- Deluxe cab
- Secondary display
- Rearview camera

## OPTIONAL EQUIPMENT

- Auto lube, integrated in secondary display
- Auxiliary flow, third and fourth function, adjustable through secondary display
- Beacon light, strobe
- Cab, deluxe (standard in Europe, optional in North America)
  - Electrically adjustable external heated mirrors (2)
  - Secondary display to enable features and adjust parameters
  - Sunscreen, front and rear
- Camera, rearview (standard in Europe)
- Cold start package
- Counterweight, (heavy and logger)
- Coupler, (Fusion and ISO 23727)
- Debris packages (low, medium, high)
- Fenders (extended cover and full coverage)
- Guarding (machine and operator)
- Linkage, high lift
- Lights, auxiliary, halogen or LED with engine compartment lights
- Object Detection
- Product Link ELITE with capabilities for software push, data logging, histogram and trend mapping
- Radio packages
- Ride Control System, adjustable through secondary display
- Seats
  - Deluxe seat – fully adjustable fabric air suspension seat with mid backrest and mechanical lumbar support
  - Premium seat – fully adjustable leather and fabric air suspension with high backrest and air lumbar support. Seat is heated and ventilated on bottom cushion and backrest.
- Steering
  - Dual mode and secondary
- NOTE: Not all features are available in all regions.

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at [www.cat.com](http://www.cat.com)

AEHQ7363 (11-14)

© 2014 Caterpillar  
All Rights Reserved  
Printed in U.S.A.

Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

CAT, CATERPILLAR, SAFETY.CAT.COM, their respective logos, "Caterpillar Yellow" and the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.



# Falls®

## PR Series

Power Reversible E-1

Power Reversible E-1 w/Slotted Trip

Power Reversible E-1 w/Trip Edge

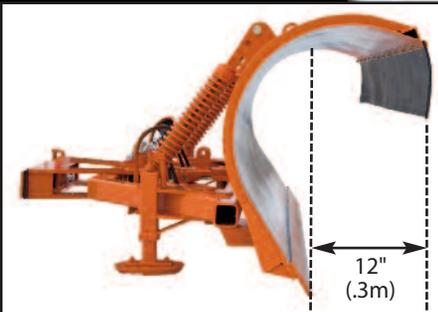
Power Reversible E-1 w/Reduced Curl

Power Reversible E-1 One Way

# POWER REVERSIBLE FLOW

For Trucks, Motor Graders and Wheel Loaders

**E-1**  
SERIES



Deep roll casts snow perfectly and reduces snow cloud.

***Rigid and trip blade units for use at all operating speeds. Recommended for airports, highways, city streets and rural roads.***

- Heavy-duty double A-frame.
- Quick coupler plow units attach to push plate with 2" diameter pivot bolt allowing desired snow plow oscillation for cleaner plowing.
- Five rolled, heavy channel iron ribs provide maximum rollboard rigidity. Horizontal channel braces reinforce transverse stability.
- Moldboard may be tilted forward or back depending on snow and road conditions.
- Nitrided cylinders for increased corrosion resistance
- Bottom support structure is constructed of 4" x 4" x 3/4" A-36MOD angle iron reinforced between bolt holes.
- Heavy-duty tubular push frame distributes plowing stresses across full length of moldboard.
- Two heavy-duty single-acting reversing cylinders for quick control with hydraulic cushion valve for circuit protection.
- Standard screw-adjustable mushroom shoes.



# POWER REVERSIBLE SLOTTED TRIP

*Slotted Trip units for use at all operating speeds. Recommended for airports, highways, city streets and rural roads.*

Same great features as our basic E-1 but with the tough, exclusive Falls Slotted Trip mechanism.



< The Falls Slotted Trip unit is overbuilt to get you through those tough winters.

> Precise moldboard curvature provides proper lift, roll, and throw.



^ Heavy-duty tubular push frame distributes plowing stresses.

# POWER REVERSIBLE TRIP EDGE

*Trip Edge units for use at all operating speeds. Recommended for airports, highways and city streets.*

Same great features as our basic E-1 but with the tough, exclusive Falls Trip Edge mechanism. Available in 1-, 2- or 3-section Trip.



^ Heavy-duty tubular push frame distributes plowing stresses.



< Precise moldboard curvature provides proper lift, roll, and throw (shown in stainless steel).



# POWER REVERSIBLE ONE WAY PLOW



**One Way Power Reversible Plows are for use at all operating speeds. Recommended for airports, highways, city streets and rural roads.**

- Heavy-duty double A-frame.
- Quick coupler plow units attach to push plate with 2" diameter pivot bolt allowing desired snow plow oscillation for cleaner plowing.
- Four rolled, heavy channel iron ribs provide maximum rollboard rigidity. Horizontal channel braces reinforce transverse stability.
- Moldboard may be tilted forward or back depending on snow and road conditions.
- Bottom support structure is constructed of 4" x 4" x 3/4" A-36 MOD angle iron reinforced between bolt holes. Discharge end is reinforced with an additional 1/2" x 7" 1045 steel plate.
- Heavy-duty tubular push frame distributes plowing stresses across entire length of moldboard.
- Two heavy-duty single-acting reversing cylinders for quick control with hydraulic cushion valve for circuit protection.
- Nitrided cylinders for increased corrosion resistance.
- 3/8" landslide plate has renewable nose.
- Standard screw-adjustable mushroom shoes.
- Slotted Trip and Trip Edge available.



▲ Heavy-duty tubular push frame distributes plowing stresses.

▲ Curvature provides proper lift, roll, and throw. Deep roll casts snow perfectly and reduces snow cloud.

# POWER REVERSIBLE REDUCED CURL PLOW



## **Now Available!**

The entire Falls PR Series is available with our optional Reduced Curl moldboard. Perfect for Wheel Loader and Tractor applications.

# Falls SPECIFICATIONS

MODEL	PR1043	PR1143	PR1243	PR1255
Cutting Width @ 0 degrees @ 35 degrees	10' 0" (3.05m) 8' 2" (2.49m)	11' 0" (3.35m) 9' 0" (2.74m)	12' 0" (3.66m) 9' 10" (3m)	12' 0" (3.66m) 9' 10" (3m)
Moldboard Height	43" (1.09m)	43" (1.09m)	43" (1.09m)	55" (1.4m)
Moldboard Ribs	Five (5) Rolled Heavy Channel Iron			
Moldboard Thickness	10 ga.(3mm) A607-50 Steel			7 ga.(5mm) A607-50
Snow Deflectors	Standard — Built-in			
Cutting Edge (AASHO punch)	5/8" x 6" x 10'	5/8" x 6" x 11'	5/8" x 6" x 12'	5/8" x 6" x 12'
Spring Trip Assemblies	2	2	2	Optional
Approx. Weight, plow & hyd-reverse	1800 lbs. (818 kg)	1900 lbs. (863 kg)	2000 lbs. (909 kg)	2200 lbs. (1,000 kg)
Approx. Total Weight w/hitch assembly	2250 lbs. (1,022 kg)	2350 lbs. (1,068 kg)	2450 lbs. (1,114 kg)	2650 lbs. (1,205 kg)

Also available are models PR1443, PR1455, & PR1655. Prices and specifications on request only.

MODEL	311HR	312R
Cutting Width @ 0 degrees @ 35 degrees	11' 0" (3.35m) 9' 0" (2.74m)	12' 0" (3.66m) 9' 10" (3m)
Moldboard Height, nose	30" (.762m)	
Moldboard Height, discharge	58" (1.473m)	60" (1.524m)
Moldboard Ribs	Four (4) Rolled Heavy Channel Iron	
Moldboard Thickness	7 ga.(2.38mm) A607-50 Steel	
Snow Deflectors	Standard — Built-in	
Cutting Edge (AASHO punch)	5/8" x 6" x 11'	5/8" x 6" x 12'
Spring Trip Assemblies	2	
Approx. Weight, plow & hyd-reverse	1900 lbs. (863 kg)	2000 lbs. (909 kg)
Approx. Total Weight w/hitch assembly	2350 lbs. (1,068 kg)	2450 lbs. (1,114 kg)

**POWER REVERSE** – Infinite adjustment from 0 – 35 degrees, left or right. Two heavy-duty, single-acting cylinders provide smooth adjustment with the moldboard raised or lowered or while under full load. The high pressure construction (8,000 psi min. burst) enable the cylinders to withstand normal plowing stresses. A cushion valve (standard equipment) protects the cylinders and the hydraulic circuits from sudden impact or surge.

**TRIP MECHANISM** – Compression spring-loaded tilting bars or slotted trip assemblies allow the plow to "trip" over unavoidable road hazards and return to normal plowing position. Especially recommended in urban applications.

YOUR DEALER IS:

**Specifications are subject to change without notice.**

The policy and promise of Little Falls Machine, Inc. is continuing product improvement. Design change and structural alterations may occur without prior notice. Such changes will not sacrifice quality or product integrity.

*Falls® is a trademark of Little Falls Machine, Inc.  
Little Falls Machine, Inc. is an equal opportunity employer.*

0209-250-RP



**LITTLE FALLS MACHINE, INC.**

300 Lindbergh Drive South

Little Falls, MN 56345

Toll-free 800-772-PLOW

Phone (320) 632-9266 • Fax (320) 632-3484

[www.fallsplows.com](http://www.fallsplows.com)



## LDL Series

Rear Mount with Front Lift

Front Mount with Front Lift

Front Mount with Rear Lift

# DIRECT HYDRAULIC WHEEL LOADERS REAR MOUNT/FRONT LIFT



The snow-proven performance of Falls Snow Equipment is legendary and now the Falls Heavy-Duty LDL SnowWings may be installed on a wide variety of front end wheel loaders. Get the best from your wheel loader while dealing with winter's worst!

REAR MOUNT/FRONT LIFT

- Streamlined, low profile design for maximum visibility
- Trip cutting edge or trip moldboard available
- Hydraulic rear post slide available
- Nitrogen-accumulated hydraulic push arm extension available
- Adaptable to all popular quick couplers

# Falls SPECIFICATIONS

MODEL	LDL-9	LDL-10	LDL-11	LDL-12
Overall Length	9' 6"	10' 6"	11' 6"	12' 6"
Cutting Edge	5/8" x 6" x 9'	1/2" x 6" x 10'	1/2" x 6" x 11'	1/2" x 6" x 12'
Moldboard Height (front & rear)	30"			
Moldboard Thickness	10 gauge A607-50			
Moldboard Radius	16.5"			
Pivot Bolt	1.75"			
Front Mast Assembly	7" T-1® I-beam			
Front Slide Mechanism	Tubular — 18"			
Hydraulic Cylinders	Two (2) 3.5" Diameter double acting			
Push Arms	1			
Plowing Angles	30-50 Degrees			
Total Weight	1950 lbs.	2150 lbs.	2250 lbs.	2350 lbs.

Contact Little Falls Machine Inc. for available Hydraulic Control Packages.

YOUR DEALER IS:



**LITTLE FALLS MACHINE, INC.**

300 Lindbergh Drive South  
 Little Falls, MN 56345  
 Phone 800-772-PLOW  
 (320) 632-9266  
 Fax (320) 632-3484  
[www.fallsplows.com](http://www.fallsplows.com)

*Specifications are subject to change without notice.*

The policy and promise of Little Falls Machine, Inc. is continuing product improvement. Design change and structural alterations may occur without prior notice. Such changes will not sacrifice quality or product integrity.

*Falls® is a registered trademark of Little Falls Machine, Inc.  
 Little Falls Machine, Inc. is an equal opportunity employer.*

# RAVELING COMPANIES, LLC

## Snow Pushers

Clear any space in a hurry with a snow pusher by Raveling Companies. Custom made to fit your needs.



[Buckets](#)

[Couplers](#)

[Rippers](#)

[Bolt On Edges](#)

[Pins](#)

[Stick Extensions](#)

[Custom Forming](#)

[Custom Burning](#)

[Repairs](#)

[Fabrication and Machining](#)

[Trench Shields](#)

[Snow Pushers](#)

[Used Equipment](#)

**RAVELING COMPANIES, LLC**

345 Venture Drive

Amery, WI 54001

Dean@RavelingCompanies.com

Tel: 715-268-9600

Fax: 715-268-9090



RAVELING COMPANIES, LLC

## The Bucket Experts.