



Olmsted Waste-to-Energy Facility (OWEF)

Automated Scales

OWEF OVERVIEW



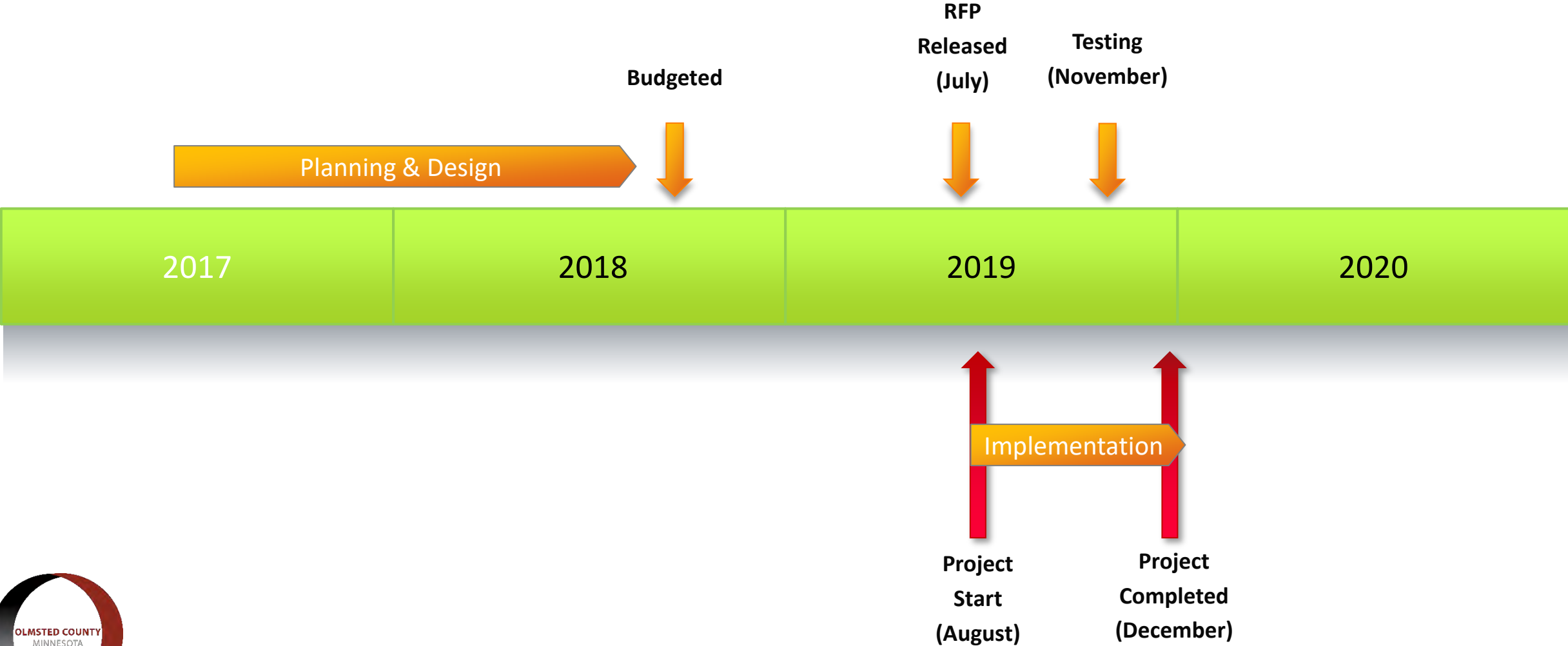
- Began operations in 1987
- Operates as a power plant
24 hours/day, 7 days/week, 52 weeks/year
- 90% available
- Employs 43 people full time
- Serves 26 buildings with steam, chilled water and electric power
- Excess electricity sold to SMMPA
- Capacity of 400 tons per day Municipal Solid Waste (MSW)
- Average of 83 trucks a day enter the facility
- Kalmar Landfill used as backup to OWEF when pit is full

BENEFITS OF AUTOMATED SCALES

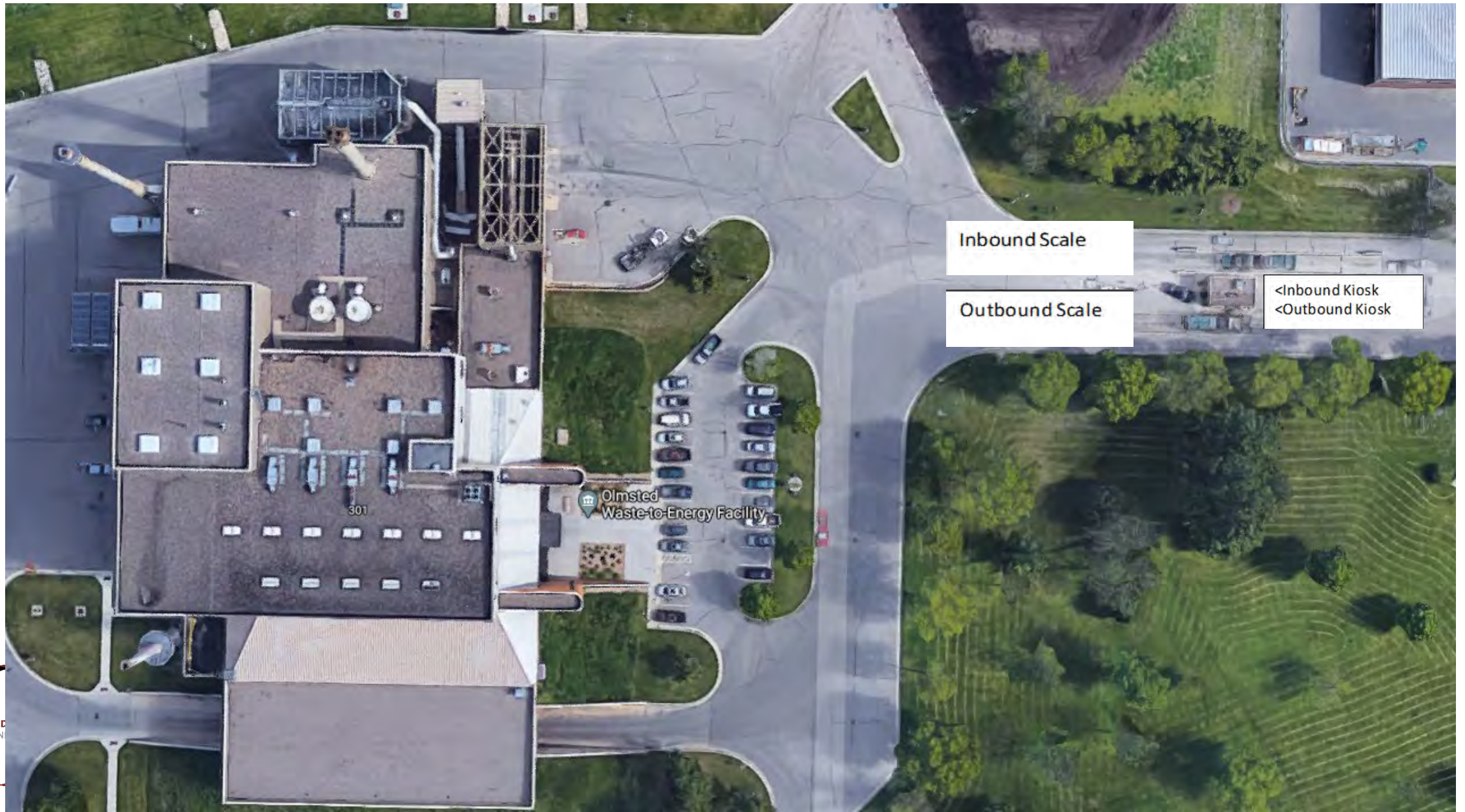
- **Expand Business Hours**
- **Provide Greater Flexibility & Convenience**
- **Faster Transaction Times**
- **Lower Demand for Manual Activities**
- **Improve Workforce Efficiency**
- **Eliminate Human Interaction**



PROJECT TIMELINE



OWEF SCALE HOUSE

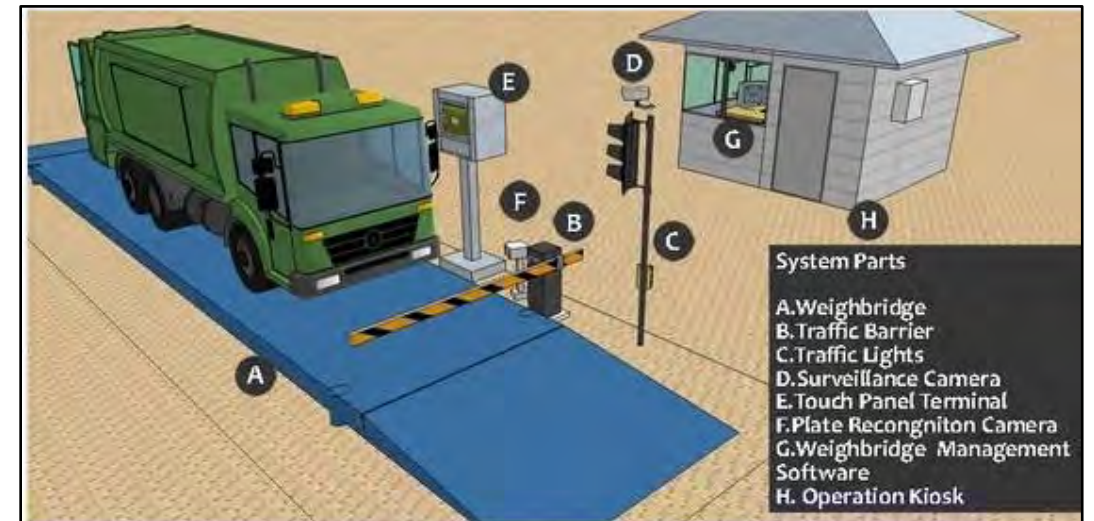


REQUEST FOR PROPOSALS

- Kiosk Hauler Interface Terminal
 - Inbound and Outbound Scale Transactions
 - Radio Frequency Identification (RFID) Card Reader
 - Numeric Keypad and Programmable Buttons
 - Printer
- Scale Cameras
- Traffic Barrier Gates
- Photo Eyes
- Software Compatible with County Database



Source: AliExpress



Source: Leon Engineering



ADVANCED WEIGHING SYSTEM (AWS)



Advanced Weighing Systems Inc. (AWS)
Chippewa Falls, WI

www.awsys.com



ADVANCED WEIGHING SYSTEM (ADS)

- K-2 Kiosk
 - Weather resistant
 - RFID reader
 - Numeric Keypad with drop down lists
 - DataSync Module
- Interact LE Software
 - Compatible with Microsoft Windows 10
 - Database to kiosk interface
 - Compatible with Olmsted County Finance database
 - Capable of emailing transaction tickets



Weight: 11:29 PM - Monday, November 30, 2009 - Applicable Max Gross Weight None

Category	Field	Value
Hauler	Hauler	SHER175 HERMAN EXCAVATING
Truck	Truck	Sx 27200 Dumpers
Customer	Bill to Acct	SHER175 HERMAN EXCAVATING
	Job	800 Interstate 90 Paving
	PO	05740
Product	Material	031 1/4 - 3/4 Washed Rock
	Zone	7 Alton

Charge	Amount
Charge	\$37.95
Freight	\$0.00
Add	\$0.00
Flight Tar	\$0.00
Other Tar	\$0.00
Total	\$37.95

Weight In: 27200 lb
Gross Weight: 63000 lb
Net Weight: 35800 lb

Conversion: 17.90 Tons

Number of loads: 1
Truck Qty: 14.99
Job Loads: 3
Job Qty: 30.69

Categories: [Icons] [Print] [Close]

sample job | 11/30/09 | (1) Items: \$37.95

Weight Form



COSTS



Capital Costs

- Software and related install cost about \$73K
- Misc costs (electrical, concrete work, attached overhang) \$50K

Annual Maintenance/Support Cost

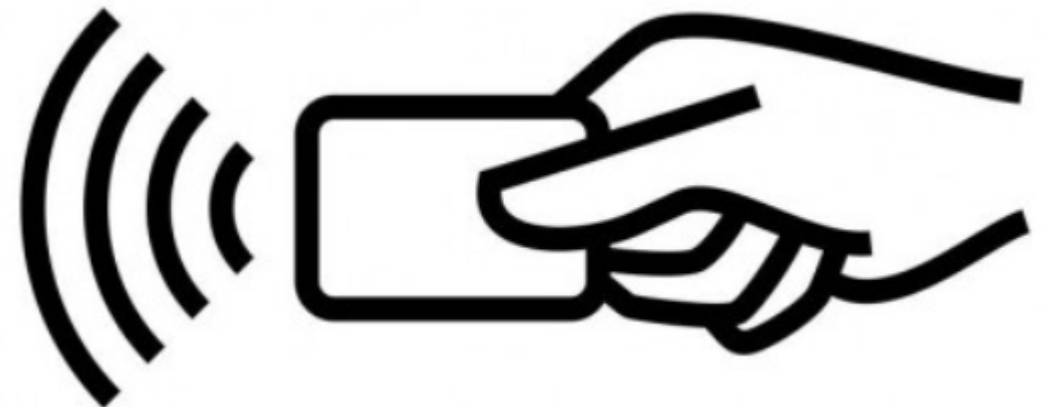
- \$3,300

Staffing Savings:

Due to retirements, reduced scale house FTE's from 2.50 to 1.88 between OWEF and Kalmar Landfill

RADIO-FREQUENCY IDENTIFICATION (RFID) CARD

- Each truck is assigned a RFID card
- This card identifies the truck and cannot be switched with other trucks
- When a card is captured, the system will start the ticket and capture gross weight
 - Clip the card to the visor or other area within the truck so it doesn't get lost
 - The driver must take this card to the kiosk and use it, but then return it back to the truck
 - If the card is lost:
 - Contact the scale operator about getting a replacement RFID card.
 - Your employer might be charged to replace the RFID card.
 - Until you receive a replacement card, a staff Scale Operator will have to complete the ticket. So, you will only be able to access the scale during staffed operating hours.



Drivers must have an RFID card to use OWEF during unstaffed hours.

SCALE HOUSE HOURS - WITH AND WITHOUT RFID CARDS

- **Without the RFID Card (Scale house staffed)**
 - 8:00 AM to 4:30 PM Monday – Friday (Except Holidays)
- **With the RFID Card**
 - 24-hour access 7 days a week.
 - Exception: Loads that would require scale operator's assistance or temporary hour changes to facilitate maintenance

**No 24-Hour Access at Kalmar Landfill.
No RFID cards are used at Kalmar Landfill.**



WASTE HAULER PROCESS

- Use Kiosk when:

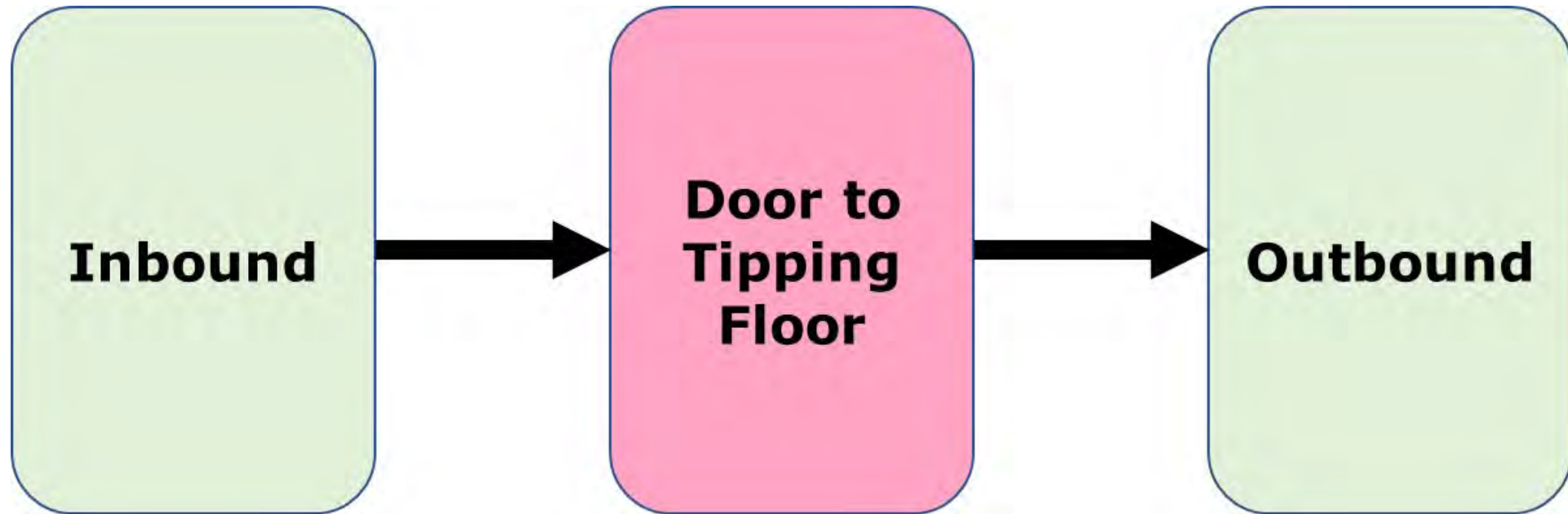
- **You have the truck's RFID Card**
- **MSW loads with only one (1) county of origin**
- **Truck Weighments**

- Use Scale Operator Staff when
(Only available during staffed hours)

- Truck does not have an RFID card (not all trucks will get them)
- Truck does not have an Olmsted ID sticker
- Container does not have an Olmsted County ID Sticker
- Industrial Solid Waste loads
- Loads that also require a special handling fee
- Kiosks down for maintenance (A notice will be posted on the window of the scale house and/or a notice will be sent to your employer.)



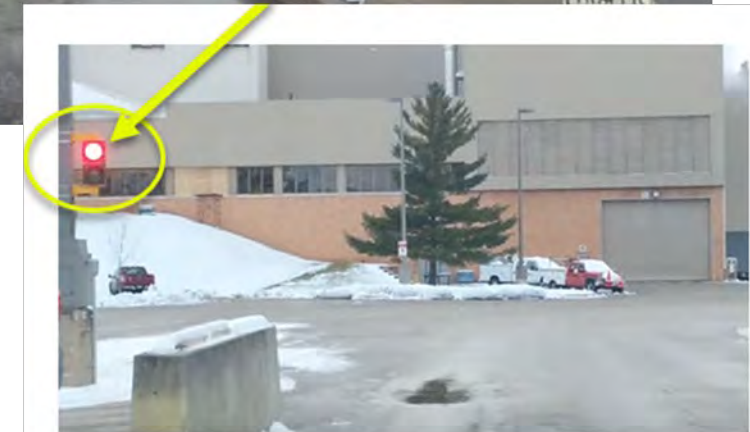
SEQUENCE OF OPERATION



INBOUND SCALE

1. The Inbound scale is zero (0).
2. The Inbound gate is closed.
3. Drive up to the gate.
4. The Gate opens.
5. Slowly drive onto the scale. Drive forward until the traffic light changes to **red**.

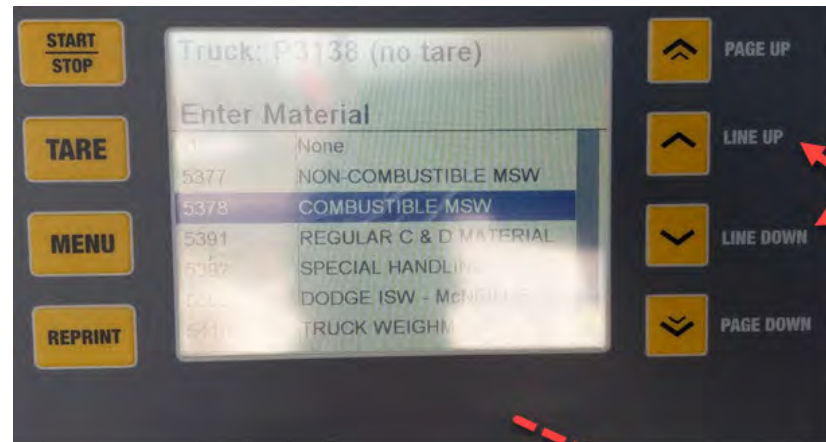
- **Do not proceed until the scale reads zero!**



The truck must be fully on the scale.

INBOUND KIOSK

1. Scan the RFID card at the inbound kiosk.
2. Make sure the truck ID on the screen matches the truck ID on the scale.
3. If applicable, using the keypad, enter the Container # (found on the Olmsted sticker on the container) and press enter.
4. Select type of waste material & on the keypad press Enter.
 - Example: 5378 Combustible MSW for burnable MSW
5. Next, select the origin of where the waste was generated and on the keypad press Enter.
6. When you see **Open Ticket, Drive Ahead on the display AND the signal light turns green**, proceed to the Tipping Floor door.



To move up and down the list.



AUTOMATED OWEF SCALES DOOR TO TIP FLOOR

- Before entering the Tipping Floor:

- If the light is **red**, wait for it to turn **green**.
- When the light **turns green slowly** proceed into the Tipping Floor.
- Follow the normal Tipping Floor procedures.

- If the light is red longer than five (5) minutes:

- Contact the control room (507-328-7039)

Door to
Tipping
Floor



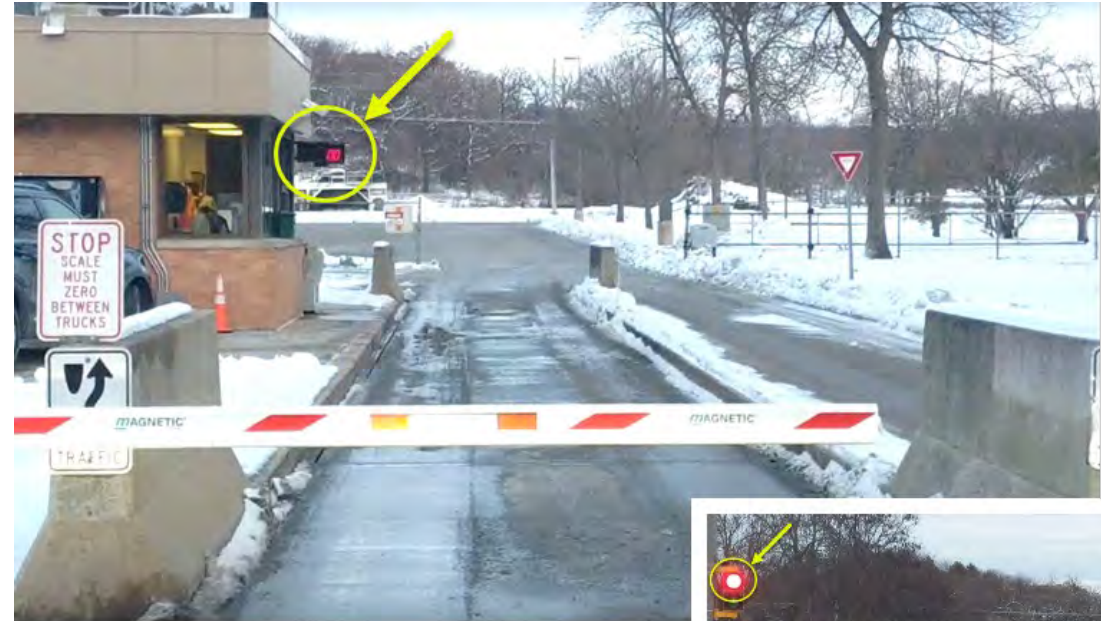
Wait for
Green Light

Red Light?
Stop **BEHIND** the underground
loop so that the door will not open.

OUTBOUND

1. Leave the Tipping Floor and go to the outbound scale.
2. The outbound scale is zero (0).
3. The Outbound gate is closed.
4. Drive up to the gate.
5. The Gate opens.
6. Slowly drive onto the scale. Drive forward until the traffic light changes to **red**.

- **Do not proceed until the scale reads zero!**



The truck must be fully on the scale!



OUTBOUND: RECORD WEIGHT

1. Get out of the truck.
2. Scan the RFID card at the outbound kiosk.
3. Select any requested information.
4. The kiosk prints out a ticket. Take the ticket with you for your records.
5. The traffic signal turns **green**.
6. Drive forward and exit the scale.

• **No RFID Card?**
See the Scale Operator



SAMPLE EMAILED TICKET



OLMSTED WASTE-TO-ENERGY

2122 Campus Dr. SE, STE 200
Rochester, MN 55904
(507) 328-7070

Customer: 627
Kalmar Landfill
7401 19th St. NW
Rochester, MN 55901

Ticket # : 30018742
Date : 1/7/2021
Time In : 09:36 AM
Time Out : 09:43 AM

Truck : R4043
Container : B6203
PO No. :
No. of Axles : 5

Material Type	Origin	%	Quantity	Rate	Line Total
4378 - REPURPOSED MSW SUPPLEMENTAL	OLMSTED	100	14.56 tn	\$0.00	\$0.00
Gross: 65680	Tare: 36560	Net: 29120	Adjusted Net: 29120		
Base Tip fee or Service Charge					\$0.00
Olmsted County Environmental Service Charge					\$0.00
MN Solid Waste Mgmt Tax 17%					\$0.00
TOTAL DUE					\$0.00

Comments:

Please pay from statement mailed on the 5th of each month.

Weighmaster: Unattended Op

Reprinted Ticket



OTHER IMPORTANT INFORMATION

- **If one scale is out of operation due to maintenance:**

- The gate arms for the operating scale is always open.
- Trucks must take turns.
- Wait until the truck in front of you is off the scale and the scale reads zero (0) before moving on to the scale.
- Use only the kiosk linked to the operating scale.


- **Ticket Errors:**

- If you make an error, **before you leave the facility**, contact the Scale Operator or the Control Room (507-328-7039).
- The Scale Operator will help you get a new ticket, or email one to your employer.



TRUCK/CUSTOMER TRACKING

- County Provided ID stickers attached to trucks/containers
- ID # is also put on RFID cards – linked to customer account in scale software
- ID # is stored in scale software/database
 - Linked to Customer account
 - Contains Truck identification
 - Info for compliance with MN Statute 169.872

 P3360

Truck/Container	Lead Letter	Number Series
Roll-off Truck	R	4000's
Roll-off Box	B	6000-7999 (initial) Expanded in 2020 to include 5000's
Stationary Compactor	C	8000's
Packer Truck	P	3000's
Tip Floor Access	X	4000's
Transfer Station	T	9000's

OVERWEIGHT ?

PLEASE READ....

"STATE LAW REQUIRES DISCLOSURE OF ALL WEIGHT TICKETS"

M.S. 169.872 requires us to record complete and accurate information regarding vehicles weighed at this facility. Required information includes vehicle identification (license plate), shipper/carrier name and number of axles on the vehicle.



BENEFITS OF THE SYSTEM

- **Expand Hours for Garbage Haulers**
- **Provide Greater Flexibility & Convenience**
- **Faster Transaction Times – not waiting for scale operator for assistance**
- **Lower Demand for Manual Activities**
- **Improve Workforce Efficiency**
- **Eliminate Human Interaction – (COVID-19)**
- **Cost savings – Less staffing hours**
- **Less chance of error by scale operator**
- **Less time reprinting and emailing lost tickets to customers**



ISSUES WITH THE SYSTEM

- **If system goes down, more delays. Scale operator needed**
- **Potential for cheating - Video is being recorded to mitigate this**
- **Training drivers on using the system**
- **Drivers can put in wrong codes – System allows limits on what codes a customer can use**
- **Increased set up time for new hauler/truck**
- **Damaged arm gates**



Questions?

