



Drive-thru Recycling Center

Help us build and maintain a clean, safe community...

Reduce



Reuse



Recycle



Rethink

Design Principles

Task: Develop a convenient, sustainable recycling solution for City of Salina Water Customer Account holders following the closure of Images Recycling in December, 2017:

- Develop an economically feasible, operationally lean, and convenient system of recycling for the residents and small businesses within Salina
- Solution contingent upon successful completion of phase I/phase II environmental site assessments
- Use feasibility study/business plan figures when appropriate
- Provide comparative analysis, if possible
- Plan conservatively when developing estimates
- Use existing resources, if able/appropriate
- Determine necessary start-up costs to meet DRT/code requirements
- Leverage opportunities with local private haulers
- Develop a temporary solution (2-3 years) that could be sustained indefinitely, if necessary
- Understand there are lead times for trucks, carts, ordinances, and other requirements

Proposed Recycling Center Building

125 W North Street – 5,950 Sq. Ft. - \$5.50- \$5.75/Sq. Ft./Year



New construction warehouse with two 14' overhead doors, drive through capability, fully insulated, high bay fluorescent lighting, off street parking southwest corner of Santa Fe Ave. and North Street just north of downtown Salina. North Street offers easy access to Ohio Street, west to I-135, and north to I-70.

Real Estate Options

Recommended Building

- 125 W North Street (-) Needs water/sewer/bathroom
- 5,950 Sq. Ft. - \$5.75/Sq. Ft./Yr. (+) Ideal central location
- \$34,212.50/Yr. or \$2,851.04/Mo. (+) Optimal configuration



Comparable Buildings

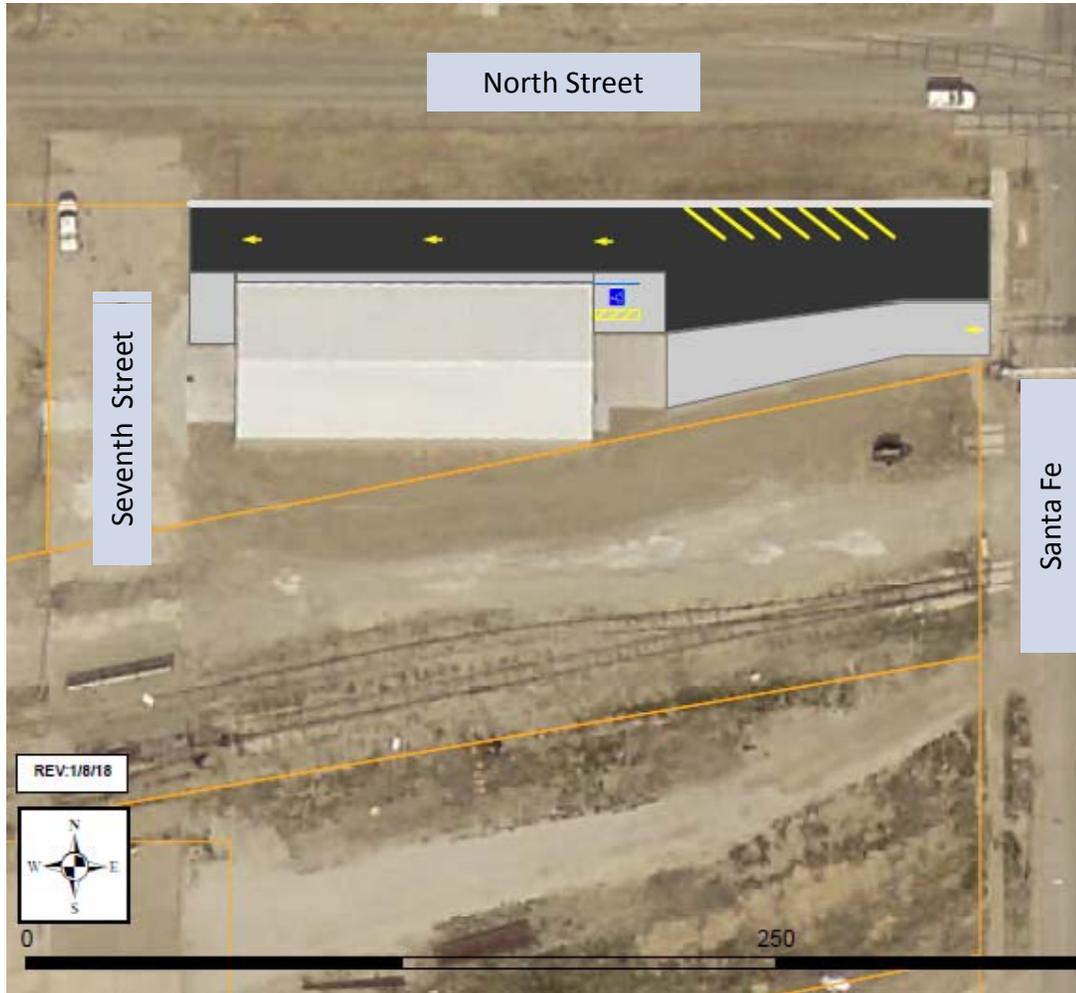
- 2013 Kneubuhl Ct. (Hangar) (-) Less than ideal location/runway
- 5,617 Sq. Ft. - \$3.10/Sq. Ft./Yr. (-) Wasted Space/bad configuration
- \$17,412/Yr. or \$1,451/Mo. (+) Cheaper than recommendation

- 2359 Hein Avenue (-) Less than ideal location
- 12,352 Sq. Ft. - \$2.95/Sq. Ft./Yr. (-) Wasted Space/bad configuration
- \$36,438/Yr. or \$3,037/Mo. (-) Higher than recommendation

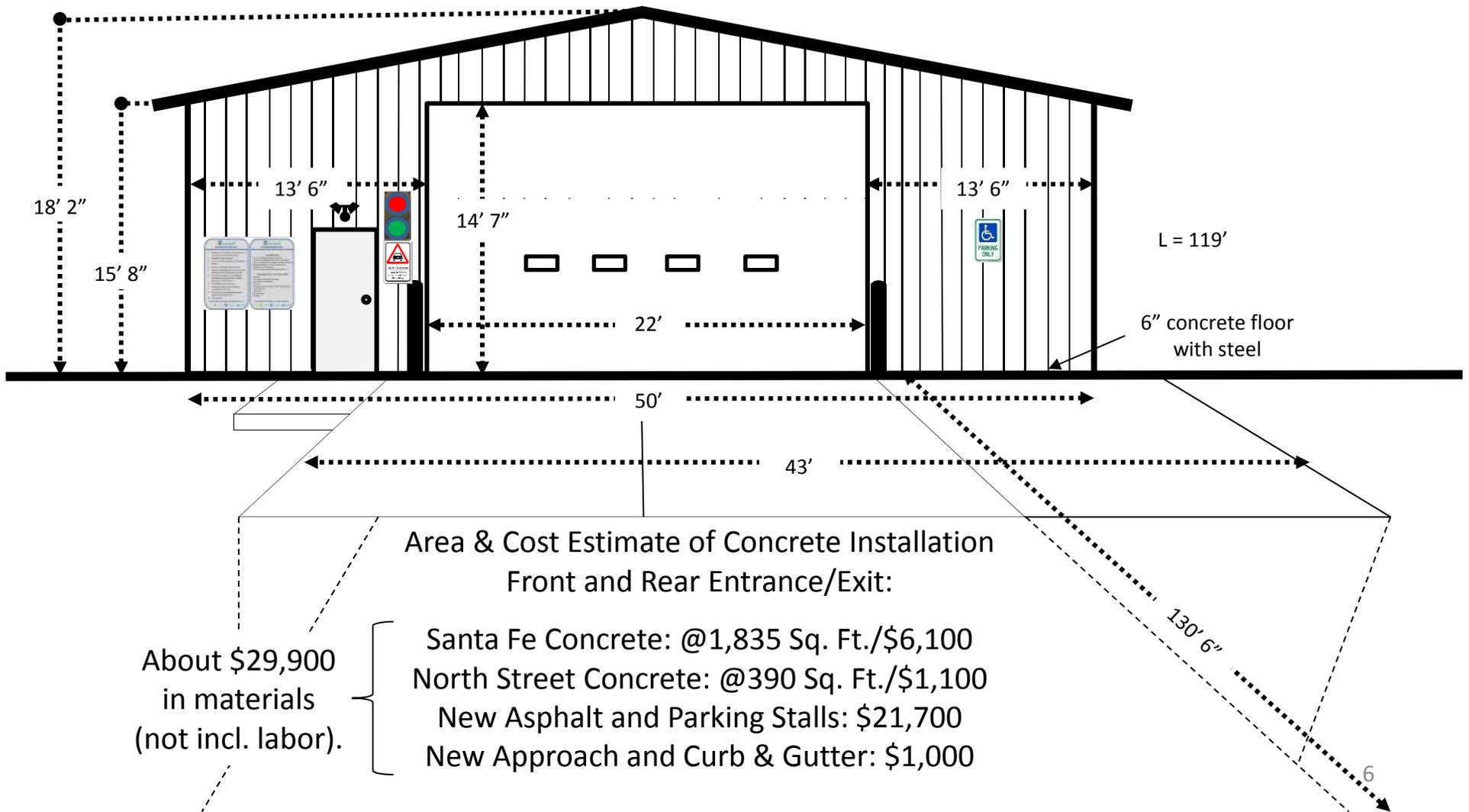
- 3025 Centennial Road (-) Less than ideal location
- 14,104 Sq. Ft. - \$5.75/Sq. Ft./Yr. (-) Wasted Space/bad configuration
- \$81,098/Yr. or \$6,758/Mo. (-) Higher than recommendation



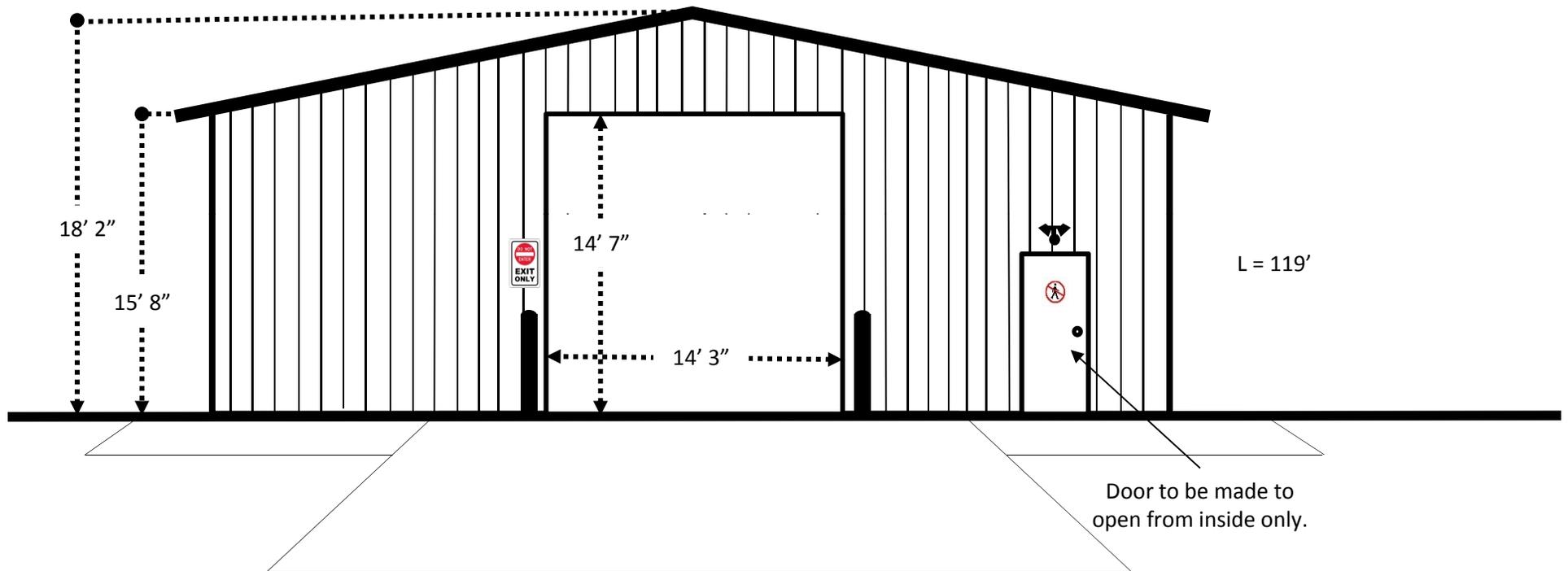
Proposed Site Layout/Parking



Proposed Recycling Center Building



Rear (West Side) View



Employee Schedule/Tasks

Work Schedule - Employee Hours		
Hours	Wednesday - Saturday	
1	8:00 AM	9:00 AM
2	9:00 AM	10:00 AM
3	10:00 AM	11:00 AM
4	11:00 AM	12:00 Noon
5	12:00 Noon	1:00 PM
*Lunch	1:00 PM	1:30 PM
6	1:30 PM	2:30 PM
7	2:30 PM	3:30 PM
8	3:30 PM	4:30 PM
9	4:30 PM	5:30 PM
10	5:30 PM	6:30 PM

Opening Procedure (8:00-8:30 AM)

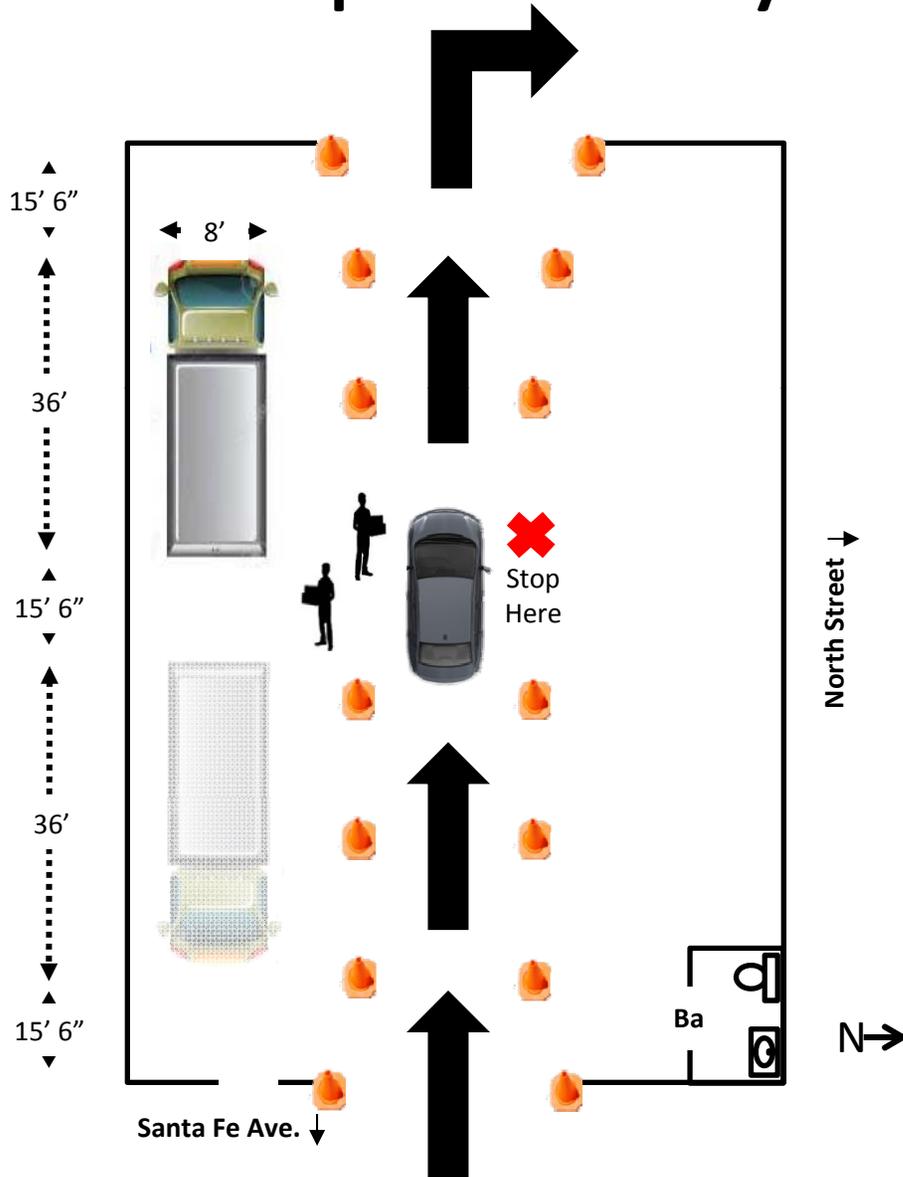
Task	Minutes
Morning Briefing	5
Pre-Op. Checks	10
Drive to Facility	5
Park/Set-up	10
Total	30

Closing Procedure (6:00-6:30 PM)

Task	Minutes
Sweep Facility	15
Close/Lock Facility	5
Drive to L. Shed	5
Park/Depart	5
Total	30

Note: To allow staff 30-minutes for opening and closing procedures, business hours will be 8:30 AM to 6:00 PM daily, Wednesday through Saturday. *Lunch (30 minutes) will be provided to each employee during regular business.

Proposed Layout/Operations



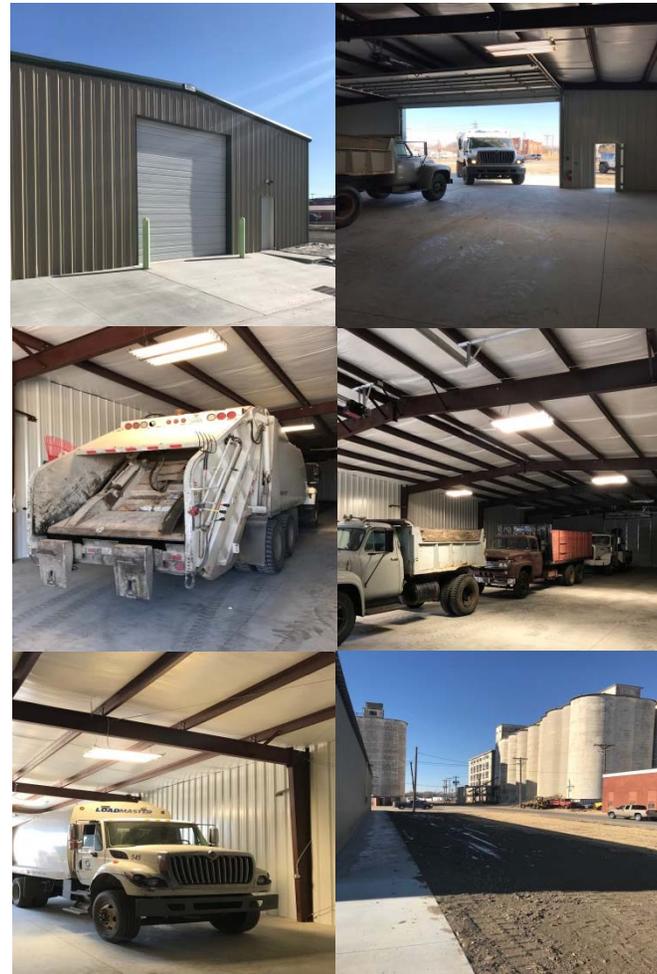
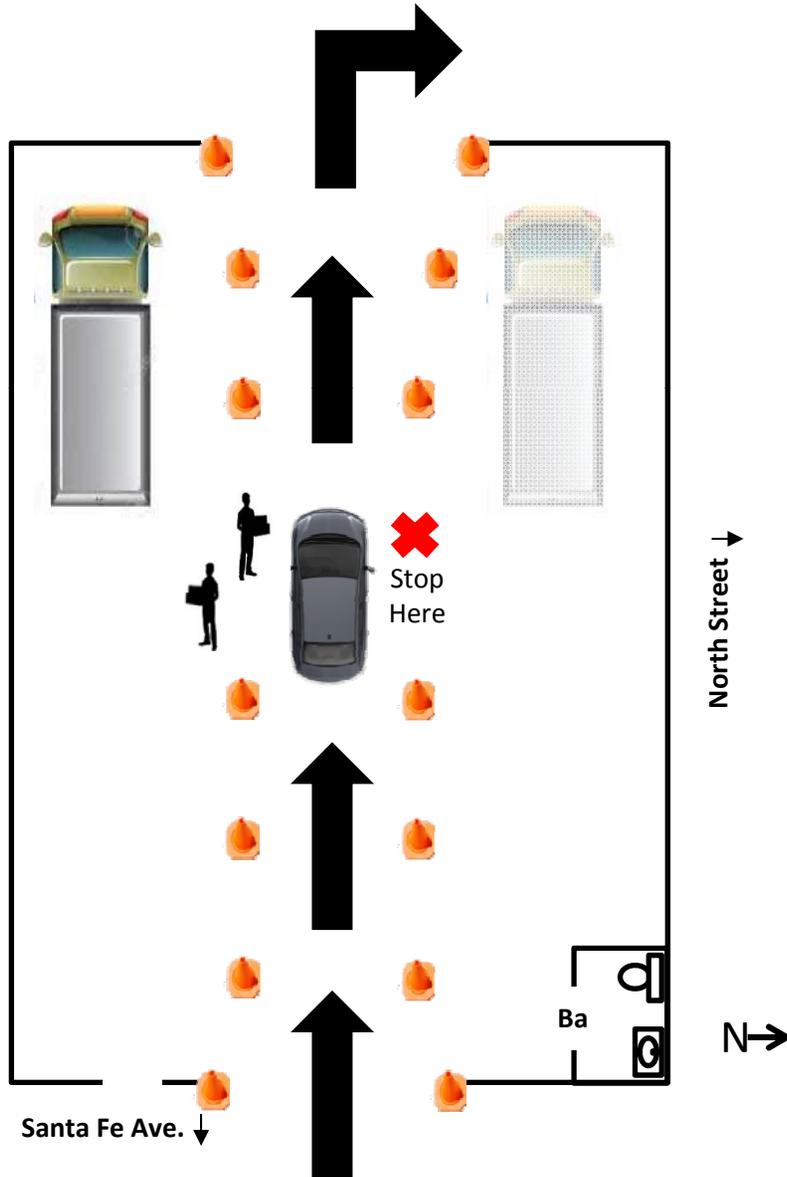
- 2 Trks (1 more if no RC)
- 2 FTE (Drivers/CS Reps)

Hours of Operation

Wednesday	8:30 AM	6:00 PM
Thursday	8:30 AM	6:00 PM
Friday	8:30 AM	6:00 PM
Saturday	8:30 AM	6:00 PM

1. Customer enters building, stops alongside the farthest forward packer truck.
2. Customer opens trunk (stays inside vehicle).
3. Staff unloads, dumps, and returns bin(s) to vehicle.
4. Customer departs.

Alternative Parking/Pics



Trip Duration

To Stutzman's Hutchinson (Minutes)	
Drive	80
Unload	20
Return	80
Total	180
Total (Hours)	3



To Salina Waste Systems/Landfill (Minutes)	
Drive	27
Unload	20
Drive	27
Total	74
Total (Hours)	1.23



Trips and Cost

(To Stutzman's – Hutchinson, KS)

#Trips/Week	
1,960,000	Images (Pounds)
2,000	Ton
980	Total (Tons)
5.91	Packer Truck
166	# Loads
12	Months
13.82	Trips/Month
3.19	Trips/Week
4 (2x per Truck)	Rounded Up

Drive Data and Fuel Costs		
Miles round trip		142
MPG		2.4
Gallons per trip		59.2
Cost per gallon	\$	2.40
Cost per trip	\$	142
Trips per year		166
*Total Fuel Expense	\$	23,550.80

*Adding in the 150 tons from the current subscription recycling service would require about 191 trips annually or 3.67/week at a cost of @ **\$27,122.**

Trips and Cost

(To Salina Waste Systems/Landfill)

#Trips/Week	
1,960,000	Images (Pounds)
2,000	Ton
980	Total (Tons)
5.91	Packer Truck
166	# Loads
12	Months
13.82	Trips/Month
3.19	Trips/Week
4 (2x per Truck)	Rounded Up

Drive Data and Fuel Costs		
Miles round trip		31
MPG		2.4
Gallons per trip		13
Cost per gallon	\$	2.40
Cost per trip	\$	31.20
Trips per year		166
*Total Fuel Expense	\$	5,179.20

*Adding in the 150 tons from the current subscription recycling service would require about 191 trips annually or 3.67/week at a cost of @ **\$5,959**.

Estimated Annual Costs

(To Stutzman's – Hutchinson, KS)

Recycling Center	
Building	\$ 34,212.50
Personnel	\$ 83,400.00
Fuel	\$ 23,550.80
Maintenance	\$ 27,866.80
Lifecycle	\$ 33,000.00
Utilities	\$ 12,000.00
Miscellaneous	\$ 12,000.00
*Estimate	\$ 226,030.10

Current *subscription recycling* costs about \$212,000 annually for 900 households or \$19.63/month.

Estimated cost of *universal community-wide recycling* is \$728,223 for 15,330 households or \$3.96/month.

\$226,100/20,200 water customers about \$0.94/month.

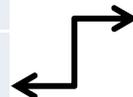
Current Service =
\$10.50 SU
\$5.50/Mo.

@ 150 tons =
\$1,413/ton

@ 3,066 tons =
\$237.52/ton

Based on 400 pounds per household annually.

@ 980 tons =
\$230.71/ton



*Total cost affected by decision to keep or remove/process cardboard separately

Additional Potential Savings

CPI Projects

1. **Consider eliminating current subscription recycling collection program:** Estimated cost could drop to about \$200/ton with the +/- 150 tons being added to SDRC tonnage by eliminating separate subscription recycling collection (current program).
2. **Increase the number of customers through public education and outreach by promoting drive-thru convenience:** Additional cost per ton improvements may result if popularity of drive-through option enables increase in tonnage from the previous recycling center.
3. **Increase the amount of material each customer brings by promoting accepted items in brochures and water bill inserts and on the City website and social media platforms, Access TV, radio advertisements, etc.** Estimated cost could drop further if annual customer recycling tonnage reaches estimated 500 tons per household (IAW Business Plan after three years through education and compliance).
4. **Analyze potential partnership with local haulers:** Potential savings by eliminating haul costs for cardboard through partnership with a local waste hauler here in Salina (savings depends on value of cardboard, if any, from MRF vs. local rebate).

Fencing



Recommend 6' black chainlink perimeter fence to help prevent illegal dumping; enable onsite parking of vehicles, and provide general security of the facility.



ity of Salina

Drive-thru Recycling Center



Open Wednesday thru Saturday
8:30 A.M. to 6:00 P.M.

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Drive-thru Recycling Center

1. Passenger cars, SUVs, light trucks, trailers, and vans only. Material must be bagged, boxed or bundled.
2. Drive-thru only. Walk-in service not available.
3. Please stop/wait on red and only enter the recycling center when a green light is present.
4. Remain in your vehicle throughout your visit.
5. Approach the designated drop-off point slowly, place vehicle in park, shut off engine, open your trunk.
6. No Styrofoam, packaging “peanuts”, cigarettes, flammable materials, hazardous or toxic wastes, plastic bags or liquids of any kind.
7. All recyclables must be clean and dry.
8. All bags and containers will be checked and unacceptable items returned.
9. Once your box, bin, and unaccepted materials have been returned, please exit the building carefully.
10. Have a nice day!

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Drive-thru Recycling Center

Acceptable Items:

- Aluminum & steel (tin) beverage & food cans
- Cardboard & pasteboard (flatten for better use of space)
- Glass containers (all colors of food & beverage jars & bottles)
- Magazines/catalogs, junk mail, office paper, books
- Newspapers (including inserts)
- Plastic beverage, food, & soap containers (plastics 1-7)

Unacceptable Items Not Permitted:

- Batteries
- Cigarettes
- Fluids or aerosols of any kind
- Hazardous chemical containers (motor oil, pesticides, etc.)
- Other glass (windshields or glass panes)
- Other plastics not listed above
- Paint cans
- Plastic bags
- Shredded paper
- Styrofoam and packaging “peanuts”

For assistance, please call 309-5750 or visit www.salina-ks.gov

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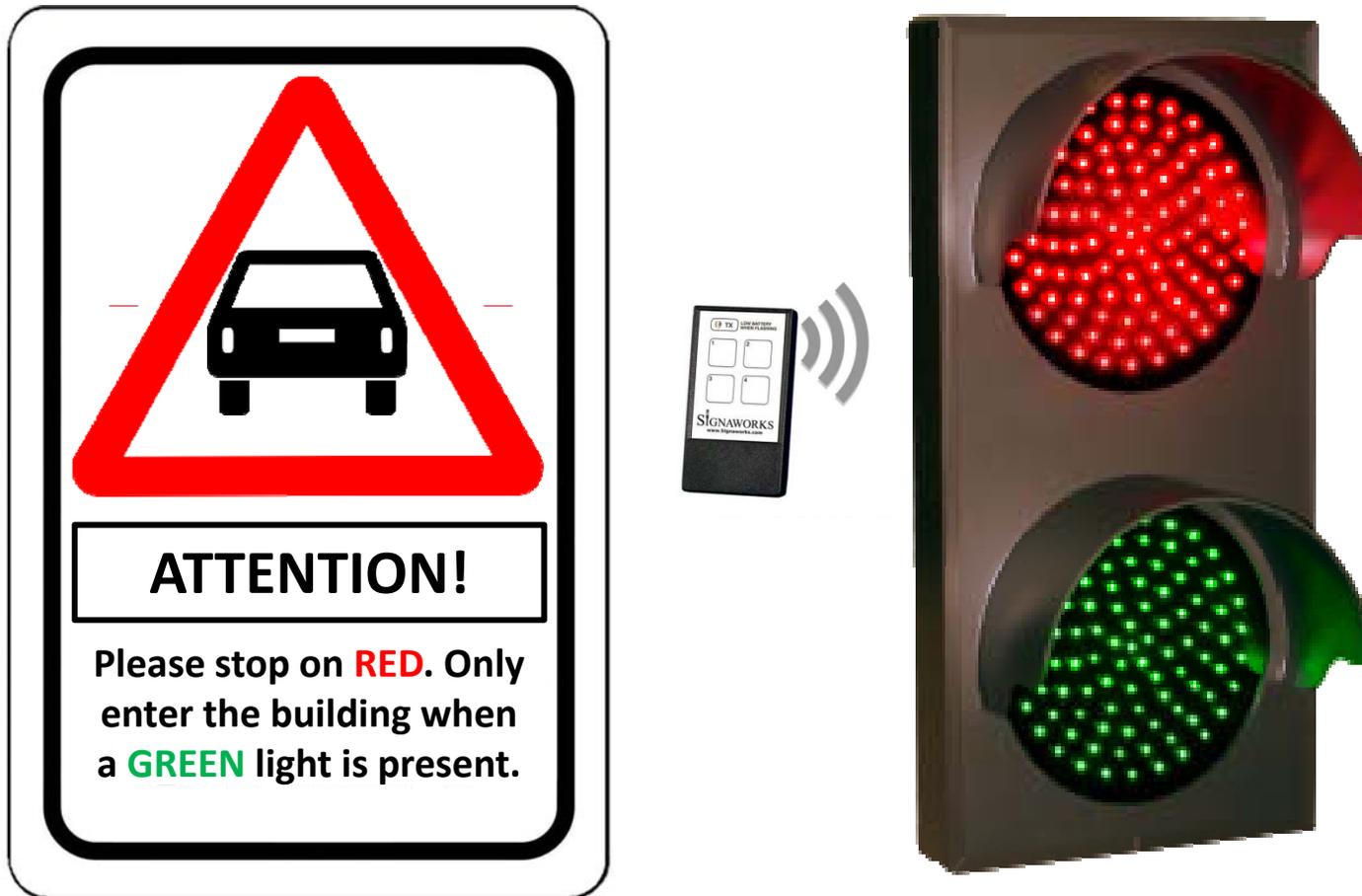


ADA Accessible Parking Space



Placed right of front bay door; staff will also paint pavement marking delineating space.

Traffic Control Sign/Lights



A wireless traffic control device would allow minimal staff to control traffic flow in the facility. Placed on/near the entrance bay door (Santa Fe).

Cones/Caution Sign/Floor Tape

YELLOW	Aisleways & Traffic Lanes; 'Paths of Egress'; Work Cells
WHITE	Production -OR- Racks, Machines, Carts, Benches, and other equipment that does not fall under any other color guidelines
RED	Defect/Scrap Area; Red Tag Area
ORANGE	Material or Product Inspection -OR- Energized Equipment
GREEN	Materials & Manufacturing: Finished Goods
BLUE	Materials & Manufacturing: Raw Materials
BLACK	Materials & Manufacturing: Works In Progress
BLACK/YELLOW	Areas which present physical or health risks to employees. Indicates that extra caution is to be exercised.
RED/WHITE	Areas to be kept clear for safety reasons (around emergency access points, electrical panels, firefighting equipment, etc.)
BLACK/WHITE	Areas to be kept clear for operational purposes (non-safety related)



Placed inside the building near the front walk-in door and on the floor across the bay opening to promote efficiency and help ensure public safety.

Diesel Emissions Ventilation/Heat



Industrial Drum Fan



Portable Multi-gas Meter



Industrial Heater



Tailpipe Adapter
w/clamp



Crush-proof Hose
Sections w/connectors



Portable 1HP 6" Blower

There are numerous options to help ensure air quality during the operation. Staff recommends purchasing a portable multi-gas air quality meter capable of measuring Carbon Monoxide (CO), Nitrogen Dioxide (NO₂), and Sulfur Dioxide (SO₂). Open bay doors will already provide approximately 529 square feet of wall space open to the outside air. Additionally staff recommends purchasing a vehicle exhaust fan and 6" crush-proof hosing designed to pull diesel exhaust from the building. Finally, staff requests a large (36"-42") industrial drum fan to help remove hot, stale air from the building on low wind days.

Security Camera System



PRE-MADE
BNC CABLES
INCLUDED (x 16)



18 PORT 29AMP
POWER BOX
INCLUDED



FREE SIGN
& STICKERS
INCLUDED



FREE 22" LCD
MONITOR
INCLUDED



Available on the
App Store



Available on
Google play



IP MEGAPIXEL
HD over CAT5e/6



Staff recommends a system that includes: 16-high-definition indoor/outdoor cameras with motion-activated, night-time IR lenses to at least 120 feet with downloadable video footage and app-based remote viewing capabilities.

Unloading Point Sign



Placed on a post with a weighted base inside the building near the rear of the furthest forward packer truck.

Exit Signage



Placed on/near the exit bay door and rear door.

Estimated Start-up Costs

Description	Cost	Description	Cost
2 Packer Trucks	*\$330,000	Fan/Exhaust Hose/Clamps	\$3,200
Vehicle Radios	*\$3,000	36" – 42" Industrial Fan	\$500
Handheld Radio	\$1,000	Industrial Heater	\$500
2 – 4'x6' Facility Sign	\$4,000	Security Camera System	\$5,000
3 – Facility Rules Sign	\$145	Facility Fencing w/2 Gates	\$11,555
3 – Acceptable Items Sign	\$145	Move Westar Pole	\$1,000
1 – ADA Access. Parking Sign	\$20	Floor Tape w/applicator	\$250
1 – Traffic Control Sign	\$20	14 – 28" Traffic Cones	\$325
1 – Caution/Employees Sign	\$20	Employee Uniforms	\$750
1 – Unloading Point Sign	\$20	Radio Advertisements	\$2,500
1 – Do Not Enter Sign	\$20	Newspaper Advertisements	\$1,000
1 – Do Not Enter Sticker	\$5	Other Misc. Advertising	\$1,000
Traffic Light with 2 Remotes	\$1,650	Facebook Advertising	\$250
Multi-gas Air Quality Meter	\$750	Total (not incl. trucks/radios)	\$35,625

*Note: Costs for trucks and radios are dependent upon whether or not current subscription recycling (-1 truck) or separate yard waste collection (-3 trucks) continues.

Summary

- Temporary (3-year lease) - model could be used long term
- Two additional lease periods optional; includes option to purchase
- Lease contingent on successful completion of environmental testing
- Good location - central Salina, near downtown
- Efficient - fast, eliminates waste, saves time
- Cheaper than other recycling alternatives
- Safer for workers and public, trucks off-route
- Less pavement wear/damage to city streets
- Improved service to all citizens (drive-thru)
- Potential for reduced cost per ton using CPI
- Operation expects to require about 1 trip per day (3.19/week)
- Additional time one vehicle out of the facility for washing/fueling
- Current plan does not provide spare truck or staff member
- Facility requires fencing and other site improvements to prevent unwanted drop-offs and develop a workable operational plan
- Program currently limited to City of Salina residents by statute; could be expanded to include Saline County residents with County participation in funding the operation

Recommended Commission Action

- Staff recommends the following actions:
 - **Action 1.** Approve drive-thru recycling operations for the collection of acceptable recyclable materials in the City of Salina and adopt on first reading Ordinance # 18-90919 to levy a fee to all Water Customer Account holders to fund operations of the Salina Drive-thru Recycling Center upon approval of the lease agreement.
 - **Action 2.** Resolution 18-7522 to approve and sign the lease agreement contingent on acceptable phase I and phase II environmental site assessments for the property located at 125 West North Street in order to enable the establishment of the Salina Drive-thru Recycling Center.