ANTI-ICING ON A FROZEN BUDGET
2015 PURDUE ROAD SCHOOL
March 11, 2015
NEED MORE SALT!
1st BEET JUICE TANK
OLD DAIRY MILK TANK 2000 GALS. – FREE!

1978 ELEVATING PLATFORM TRUCK
1966 KAISER Demolition/Hauling Truck
BRAND NEW
1966/2005 FREIGHTLINER
DUMP TRUCKS
COME ON SPRING !

1991 TRAILER
WINTER PROJECT
1995 RECYCLING TRAILER
“BRAND NEW”
1996 RAVEN DUMP TRAILER
OUR BRINE MAKER!
ANTI-ICING ON A FROZEN BUDGET
ACTUALLY OUR FIRST HOMEMADE BRINE MAKER
FIRST COMPLETE BRINE MAKING/SPRAYING OPERATION
APPROXIMATE COST
$1000 - $1200
PLUS MATERIAL COSTS AND LABOR

$50.00 MILITARY SURPLUS TANK

HOMEMADE SPRAY BAR
$1000.00 PUMP, FITTINGS, ETC.
OUR FIRST BRINE SPRAYING TRUCK
1990 FORD F350  COST: $500.00
$500 FOR USED BED PLUS FABRICATION

TANK, PUMP, HOSE REEL, SPRAY BAR, & PLUMBING COST APPROX. $3500.00
2006 INTERNATIONAL CAB OVER – HEAVY SUSPENSION/LOW FRAME HEIGHT
BUILT FOR OUR NEEDS
CUSTOM BED
TIME TO UPGRADE
OUR DESIGN SENT TO LOCAL METAL SHOP FOR STAINLESS STEEL FABRICATION
START OF NEW BRINE MAKING/EQUIPMENT STORAGE BUILDING
1st TRUSS AT THE CRACK OF DAWN!
BRINE/BEET JUICE CONTAINMENT PIT
BUILDING 62’ x 72’ x 16’ “KIT” COST APPROXIMATELY $55,797.00
# BRINING VERSUS SALTING

<table>
<thead>
<tr>
<th></th>
<th>Hours</th>
<th>Cost</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Brining</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Drivers (labor)</td>
<td>12</td>
<td>$30.00</td>
<td>$720.00</td>
</tr>
<tr>
<td>1 Brine maker/ Loader (labor)</td>
<td>12</td>
<td>$30.00</td>
<td>$360.00</td>
</tr>
<tr>
<td>2 Spray Trucks (equipment)</td>
<td>12</td>
<td>$31.00 *</td>
<td>$744.00</td>
</tr>
<tr>
<td>1 Loader (equipment)</td>
<td>6</td>
<td>$28.75 *</td>
<td>$172.50</td>
</tr>
<tr>
<td>12 Tons of salt to make 12,000 gals.</td>
<td></td>
<td>$73.00</td>
<td>$876.00</td>
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<tr>
<td>(makes 12,000 gallons/230 lane miles = 50 gals/lane mile)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>$2,872.50</td>
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<th></th>
<th>Hours</th>
<th>Cost</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td><strong>Salting</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 Drivers &amp; Loader (labor)</td>
<td>4</td>
<td>$30.00</td>
<td>$1,560.00</td>
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<tr>
<td>12 Plow Trucks w/Spreader (equipment)</td>
<td>4</td>
<td>$45.00 *</td>
<td>$2,160.00</td>
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<tr>
<td>1 Loader (equipment)</td>
<td>4</td>
<td>$28.75 *</td>
<td>$115.00</td>
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<tr>
<td>28.75 Tons of salt</td>
<td></td>
<td>$73.00</td>
<td>$2,098.75</td>
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<tr>
<td>(250 lbs./lane mile x 230 miles = 28.75 tons)</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>$5,933.75</td>
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**Summary:**
- 52% Total cost savings
- 31% Labor cost savings
- 58% Salt cost savings
- 42% Less wear on equipment

**Additional benefits of brining:**
- Aids in preventing ice/snow from bonding to pavement if plowing is needed.

* FEMA rates used for equipment costing