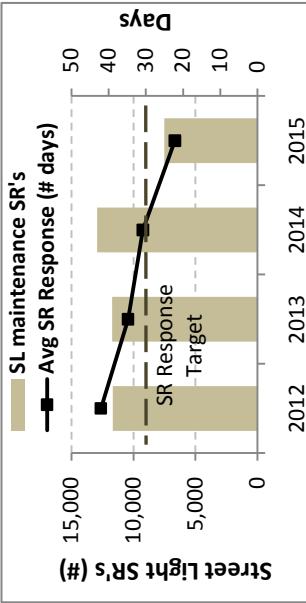
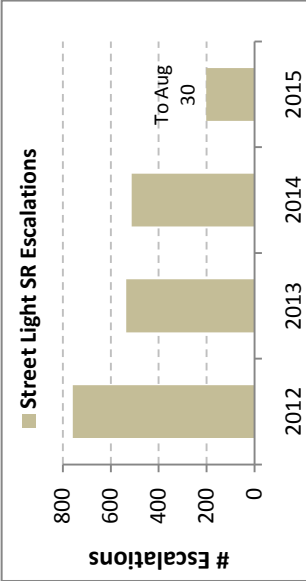
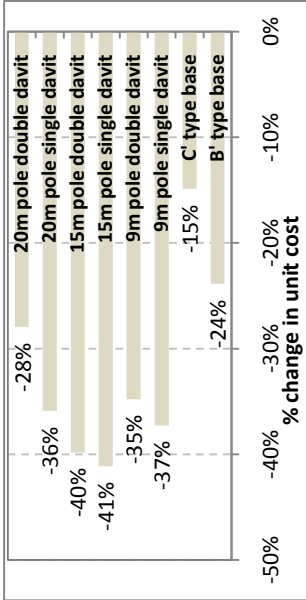


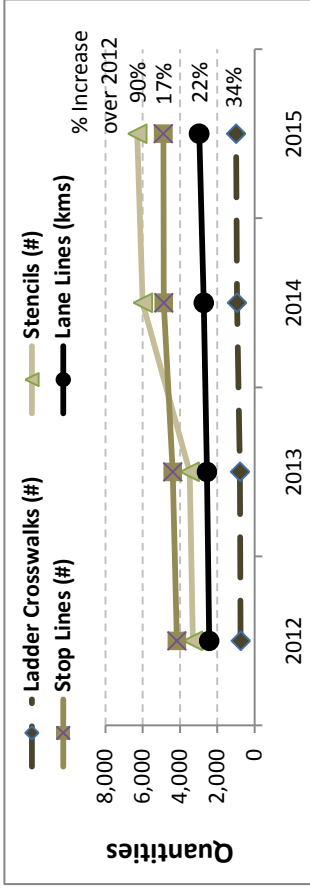
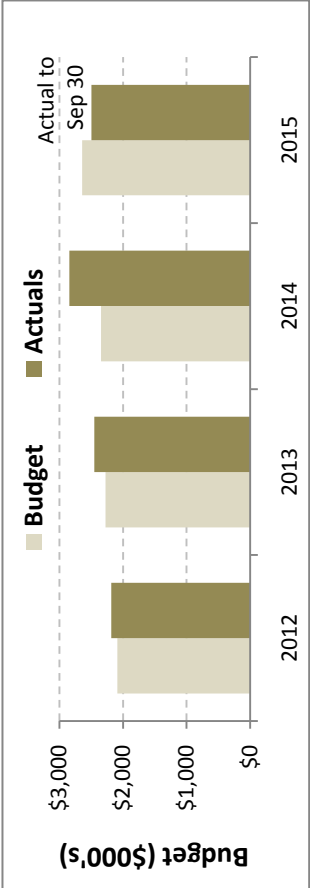


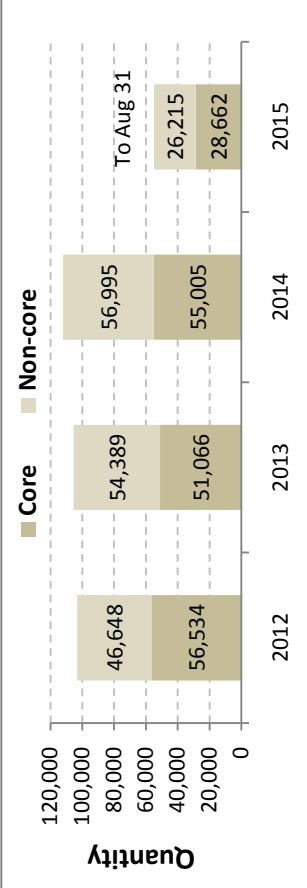
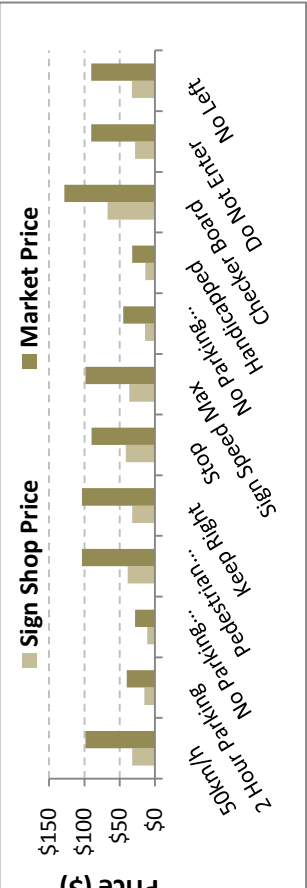
# **The City of Calgary Zero Based Review (ZBR)**

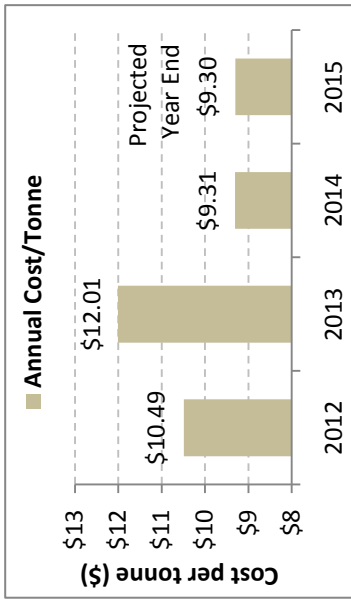
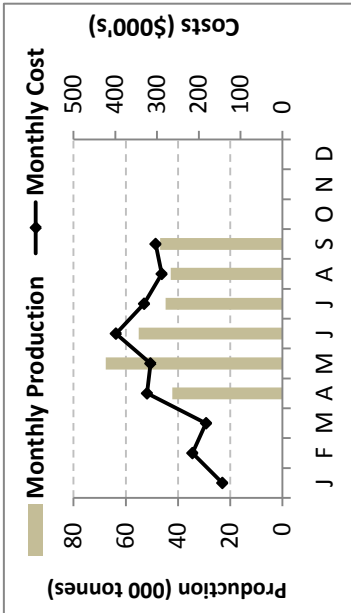
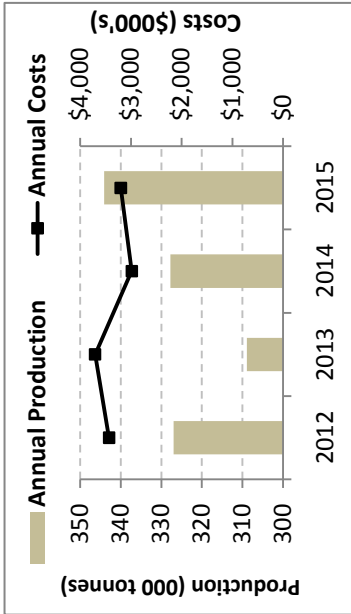
## **Roads Business Unit 2015 Report Cards**

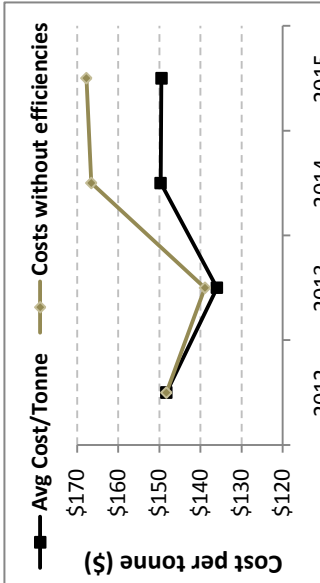
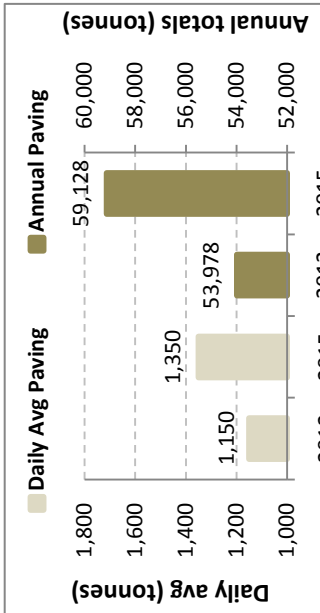
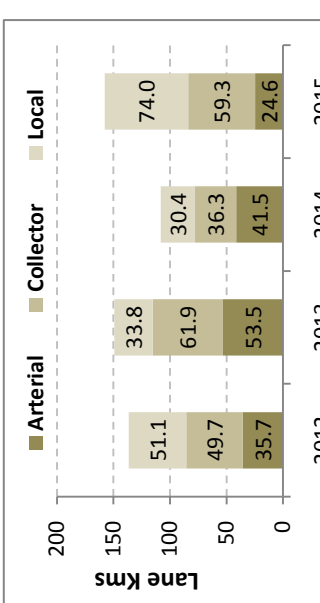


| Roads Service: Street Light Maintenance                                                                                                                                                                                                                                                                                                                                                                                                                              | ZBR Report Card                                                                                                                                                                                                                                                                                                                                                                                      | Results Based Approach (RBA)                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ZBR Recommendations:</b><br>1. Outsource street light maintenance to multiple service providers in different quadrants of the City with clearly defined maintenance performance measures.<br>2. Analyze inventory costs related to the on-site storage of light equipment and supplies.<br>3. Introduce more automation into the process of dispatch and work completion.                                                                                         | <b>Achievements:</b><br>Outsourcing strategy changed to engage multiple vendors who focus on specialized service delivery for street light maintenance.<br><br><b>Service Description:</b><br>The Street Light Maintenance group is responsible for lifecycle and emergency response repairs of over 92,000 street lights in the City right-of-way.                                                  | <b>Customer Satisfaction:</b><br>The 2015 Roads Annual Survey showed that customer satisfaction (very satisfied or satisfied) with street lighting remains high: <ul style="list-style-type: none"> <li>• Lighting on main roads: 92% (88% in 2012).</li> <li>• Lighting on neighbourhood roads: 90% (86% in 2014).</li> <li>• Pace of street light repair: 90% (85% in 2012).</li> </ul>                                                                     |
| <b>How well did we do it?</b><br>                                                                                                                                                                                                                                                                                                                                                 | <b>How well did we do it?</b><br>                                                                                                                                                                                                                                                                                  | <b>How well did we do it?</b><br>                                                                                                                                                                                                                                                                                                                                            |
| <b>Story Behind the Baseline</b><br><ul style="list-style-type: none"> <li>• Street light maintenance service request (SR) response times reduced from 42 days in 2012 to 22 days in 2015:               <ul style="list-style-type: none"> <li>• Service level agreement (SLA) target is 30 days.</li> <li>• Service provider now focused on responding to lights out SR's.</li> <li>• Specialty maintenance activities tendered separately.</li> </ul> </li> </ul> | <b>Story Behind the Baseline</b><br><ul style="list-style-type: none"> <li>• Street light SR escalations reduced by 32% from 2012 to 2014 despite a 10% increase in the number of SR's.</li> <li>• Wire damages due to sidewalk replacement no longer repaired by SR response service provider, resulting in increased efficiency of capital works with little impact on capital budgets.</li> </ul> | <b>Story Behind the Baseline</b><br><ul style="list-style-type: none"> <li>• 2014 tender for concrete bases resulted in an average 19% reduction in costs.</li> <li>• Street light poles combined with signal poles in a single 2015 tender resulted in average 37% reduction in costs.</li> <li>• Trial found City Stores managed material delivery and storage at less cost and with better quality control than direct shipping to contractors.</li> </ul> |
| <b>Next Steps (actions to improve)</b><br><ul style="list-style-type: none"> <li>• Continue to procure specialized street light maintenance through separate tenders.</li> <li>• Renegotiate street light SLA directly.</li> </ul>                                                                                                                                                                                                                                   | <b>Next Steps (actions to improve)</b><br><ul style="list-style-type: none"> <li>• Require the use of an automated system in the next street light maintenance SLA.</li> <li>• Integrate with 311 maps for contractor.</li> </ul>                                                                                                                                                                    | <ul style="list-style-type: none"> <li>• Continue with current tendering strategy for street lighting materials.</li> <li>• Continue to use City stores to receive, store, and distribute street light inventory.</li> </ul>                                                                                                                                                                                                                                  |
| <b>Strategic Alignments:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Transportation W.PM1:</b> Transportation's 311 service requests on-time completion rate.                                                                                                                                                                                                                                                                                                          | <b>Roads Action W2.4:</b> Optimize equipment and materials usage by reviewing service agreements and long-term costs.                                                                                                                                                                                                                                                                                                                                         |

| Roads: Pavement Marking                                                                                                                                                                                                                                                                                                                                 | ZBR Report Card                                                                                                                                                                                                                                                                                                                                                                         | Results Based Approach (RBA)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>ZBR Recommendations:</b></p> <p>Maintain the present state relative to pavement marking service using Roads Business Unit staff and equipment.</p> <p>Roads ZBR consultants also encouraged the division to look for ways to further enhance service delivery, including the use of automated or semi-automated tools to monitor performance.</p> | <p><b>Achievements:</b></p> <p>Accommodated significant growth in pavement marking inventories, in particular for specialized markings, while maintaining service delivery.</p> <p><b>Service Description:</b></p> <p>The Pavement Marking group is responsible for the application and maintenance of all lane-line, centerline, stencils and crosswalk markings on city roadways.</p> | <p><b>Customer Satisfaction:</b></p> <p>Improving customer satisfaction with pavement markings remains a challenge. The 2015 Roads Annual Survey showed the following results (% very satisfied or satisfied) :</p> <ul style="list-style-type: none"> <li>On main roads: 51% (52% in 2012).</li> <li>On neighbourhood roads: 67% (63% in 2014).</li> <li>Pedestrian crosswalk markings: 64% (59% in 2014).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                         | <p><b>How much did we do?</b></p>  <p><b>Story Behind the Baseline</b></p> <ul style="list-style-type: none"> <li>Steady increase in total inventory from 2012 to 2015:</li> <li>90% increase in stencil demand driven by new traffic control measures and new bicycle lanes.</li> <li>34% increase in ladder style crosswalks, which have significantly higher installation time and material usage than regular crosswalks.</li> <li>22% increase in lane lines, to 2,976 km.</li> <li>Difficulties expected in completing road marking for Surface Overlay Program and other late-season construction projects due to weather.</li> </ul>                                                               |
|                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                         | <p><b>How well did we do it?</b></p>  <p><b>Story Behind the Baseline</b></p> <ul style="list-style-type: none"> <li>Pavement marking budget has not kept pace with inventory growth and has consequently been over budget the past three years.</li> <li>Little change in staff and equipment since 2012. Efficiencies have allowed resources to be reallocated within the program to address growth areas.</li> <li>Expanded staff training to support requests for specialized markings and materials applications in order to respond to specialized demands.</li> <li>Glass bead consumption reduced by 25% while maintaining appropriate lane line visibility, annual savings of \$45,000.</li> </ul> |
|                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                         | <p><b>Next Steps (actions to improve)</b></p> <ul style="list-style-type: none"> <li>Implementing GIS mapping to replace the manual, paper-based performance monitoring of the pavement marking program.</li> </ul> <p><b>Roads Action P3.2:</b> Provide enhanced Roads services to prioritized business revitalization zones via various operations and lifecycle maintenance agreements.</p> <p><b>Roads Action W6.1:</b> Operate, maintain and repair road infrastructure to align infrastructure and associated funding needs to service level expectations.</p>                                                                                                                                                                                                                          |

| Roads: Sign Manufacturing Shop | ZBR Report Card                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Results Based Approach (RBA)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                | <p><b>ZBR Recommendations:</b></p> <ol style="list-style-type: none"> <li>1. Focus on the production of core signs and graphics related to traffic and roadway signs.</li> <li>2. Develop a full cost recovery model for the production of all sign shop work and apply this for external customers.</li> <li>3. Explore the feasibility of expanding services to external organizations including other municipalities.</li> <li>4. Review equipment utilization.</li> <li>5. Establish a new work order type to track production of all core and non-core work.</li> </ol> | <p><b>Achievements:</b></p> <p>Independent study identified potential for expansion, and gaps in cost management/financial tracking that must be addressed first. New equipment has reduced production time on core products and increased capacity.</p> <p><b>Service Description:</b></p> <p>The Sign Shop's core work is to design and manufacture informational, regulatory, detour and street name signs for installation on the public right-of-way. Non-core work includes custom products such as vinyl wraps, lettering for buildings, and vehicle graphics.</p> <p><b>How much did we do?</b></p>  <p><b>Story Behind the Baseline</b></p> <ul style="list-style-type: none"> <li>• New equipment expected to increase printing speeds up to 30% and reduce production time on core diamond grade products by 50%.</li> <li>• Clerk position added as point of customer contact, and to complete clerical duties previously assigned to sign production staff.</li> <li>• 2015 staff training from 3M in the application of vinyl wrap.</li> <li>• Established more efficient option for temporary signage, allowing for quick and inexpensive production.</li> </ul> <p><b>What did we do?</b></p>  <p><b>Story Behind the Baseline</b></p> <ul style="list-style-type: none"> <li>• Comparison to market on twelve core products showed an estimated customer savings of \$482K. The main customer for these is Roads Traffic.</li> <li>• Sign Shop price includes only labour and materials.</li> <li>• Review found that systems and processes for recording and recovering costs were used inconsistently through 2013-2014: <ul style="list-style-type: none"> <li>• An estimated \$100,000 in costs were unrecovered each year, would have resulted in a favourable budget balance for the Sign Shop in both years.</li> </ul> </li> </ul> <p><b>Next Steps (actions to improve)</b></p> <ul style="list-style-type: none"> <li>• Complete full cost recovery assessment and in-depth pricing review.</li> <li>• Develop implementation plan for improving sales processes, tracking work orders (core vs non-core), and invoicing.</li> </ul> <p><b>Strategic Alignments:</b></p> <p><b>Roads Action P3.2:</b> Provide enhanced Roads services to prioritized business revitalization zones via various operations and lifecycle maintenance agreements.</p> <p><b>Roads Action W6.1:</b> Operate, maintain and repair road infrastructure to align infrastructure and associated funding needs to service level expectations.</p> |

| Roads Service: Spyhill Gravel Crusher                                                                                                                                                                                                                                                                                                                                                                                                   |                         | ZBR Report Card                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                     | Results Based Approach (RBA)                                                                                                                                                                                                                                        |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
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| <b>ZBR Recommendations:</b><br><br>Reduce costs of the mining, crushing and stockpiling of gravel at Spyhill by implementing industry standard cost control measures.<br><br>TARGET: An efficiency or savings of \$600,000 to \$900,000 per annum via cost control by 2017.                                                                                                                                                             |                         | <b>Achievements:</b><br><br>Roads has achieved an 11% reduction in the overall cost per tonne compared to 2012. This equates to an efficiency gain of approximately \$400,000 based on 2015 production targets.                                                                                                                                                                                                                                                                          |                     | <b>Service Description:</b><br><br>The mining and production of aggregates at Spy Hill combines with the Manchester Asphalt Plant to support roadway paving. Mining also supports the expansion of the Spy Hill landfill site for Waste & Recycling Services (WRS). |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| <b>How well did we do it?</b><br><br> <table><caption>Annual Cost/Tonne</caption><tr><th>Year</th><th>Cost per tonne (\$)</th></tr><tr><td>2012</td><td>\$10.49</td></tr><tr><td>2013</td><td>\$12.01</td></tr><tr><td>2014</td><td>\$9.31</td></tr><tr><td>2015</td><td>\$9.30</td></tr><tr><td>Projected Year End</td><td>\$9.31</td></tr></table> |                         | Year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Cost per tonne (\$) | 2012                                                                                                                                                                                                                                                                | \$10.49 | 2013 | \$12.01 | 2014 | \$9.31 | 2015 | \$9.30 | Projected Year End | \$9.31 | <b>How well did we do it?</b><br><br> <table><caption>Monthly Production and Cost</caption><tr><th>Month</th><th>Production (000 tonnes)</th><th>Monthly Cost (\$000's)</th></tr><tr><td>J</td><td>60</td><td>350</td></tr><tr><td>F</td><td>65</td><td>300</td></tr><tr><td>M</td><td>70</td><td>250</td></tr><tr><td>A</td><td>75</td><td>200</td></tr><tr><td>M</td><td>70</td><td>150</td></tr><tr><td>J</td><td>65</td><td>100</td></tr><tr><td>J</td><td>60</td><td>100</td></tr><tr><td>A</td><td>55</td><td>150</td></tr><tr><td>S</td><td>50</td><td>200</td></tr><tr><td>O</td><td>45</td><td>250</td></tr><tr><td>N</td><td>40</td><td>300</td></tr><tr><td>D</td><td>35</td><td>350</td></tr></table> |  | Month | Production (000 tonnes) | Monthly Cost (\$000's) | J | 60 | 350 | F | 65 | 300 | M | 70 | 250 | A | 75 | 200 | M | 70 | 150 | J | 65 | 100 | J | 60 | 100 | A | 55 | 150 | S | 50 | 200 | O | 45 | 250 | N | 40 | 300 | D | 35 | 350 | <b>How much did we do?</b><br><br> <table><caption>Annual Production and Costs</caption><tr><th>Year</th><th>Production (000 tonnes)</th><th>Annual Costs (\$000's)</th></tr><tr><td>2012</td><td>340</td><td>3,500</td></tr><tr><td>2013</td><td>345</td><td>3,000</td></tr><tr><td>2014</td><td>348</td><td>2,800</td></tr><tr><td>2015</td><td>350</td><td>2,500</td></tr></table> |  | Year | Production (000 tonnes) | Annual Costs (\$000's) | 2012 | 340 | 3,500 | 2013 | 345 | 3,000 | 2014 | 348 | 2,800 | 2015 | 350 | 2,500 |
| Year                                                                                                                                                                                                                                                                                                                                                                                                                                    | Cost per tonne (\$)     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| 2012                                                                                                                                                                                                                                                                                                                                                                                                                                    | \$10.49                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| 2013                                                                                                                                                                                                                                                                                                                                                                                                                                    | \$12.01                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| 2014                                                                                                                                                                                                                                                                                                                                                                                                                                    | \$9.31                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| 2015                                                                                                                                                                                                                                                                                                                                                                                                                                    | \$9.30                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| Projected Year End                                                                                                                                                                                                                                                                                                                                                                                                                      | \$9.31                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| Month                                                                                                                                                                                                                                                                                                                                                                                                                                   | Production (000 tonnes) | Monthly Cost (\$000's)                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| J                                                                                                                                                                                                                                                                                                                                                                                                                                       | 60                      | 350                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| F                                                                                                                                                                                                                                                                                                                                                                                                                                       | 65                      | 300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| M                                                                                                                                                                                                                                                                                                                                                                                                                                       | 70                      | 250                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                       | 75                      | 200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| M                                                                                                                                                                                                                                                                                                                                                                                                                                       | 70                      | 150                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| J                                                                                                                                                                                                                                                                                                                                                                                                                                       | 65                      | 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| J                                                                                                                                                                                                                                                                                                                                                                                                                                       | 60                      | 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                       | 55                      | 150                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
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| N                                                                                                                                                                                                                                                                                                                                                                                                                                       | 40                      | 300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
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| Year                                                                                                                                                                                                                                                                                                                                                                                                                                    | Production (000 tonnes) | Annual Costs (\$000's)                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| 2012                                                                                                                                                                                                                                                                                                                                                                                                                                    | 340                     | 3,500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| 2013                                                                                                                                                                                                                                                                                                                                                                                                                                    | 345                     | 3,000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| 2014                                                                                                                                                                                                                                                                                                                                                                                                                                    | 348                     | 2,800                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| 2015                                                                                                                                                                                                                                                                                                                                                                                                                                    | 350                     | 2,500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| <b>Story Behind the Baseline</b> <ul style="list-style-type: none"><li>• Efficiencies resulted in an 11% reduction in overall cost per tonne since 2012. Equates to 2015 savings of approximately \$400K.</li><li>• Eliminated sanding chips in 2013, recommending standard products when specialty items requested.</li><li>• Additional 2014-15 costs to physically move the crusher plant ahead of WRS landfill expansion.</li></ul> |                         | <b>Story Behind the Baseline</b> <ul style="list-style-type: none"><li>• 2015 production targets increased to rebuild winter stockpiles after higher-than-expected sales in 2014.</li><li>• New WRS Cell Development requires movement of some stockpiles, adding cost and production downtime to 2015.</li><li>• Supervisor salary now included in the crusher plant budget as of 2015, resulting in higher base costs.</li><li>• Equipment upgrades reduced system downtime.</li></ul> |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| <b>Next Steps (actions to improve)</b> <ul style="list-style-type: none"><li>• Continue to monitor monthly costs and make corrective actions as required.</li></ul>                                                                                                                                                                                                                                                                     |                         | <b>Next Steps (actions to improve)</b> <ul style="list-style-type: none"><li>• Continue to align maintenance with production change-overs to reduce shut down frequency.</li></ul>                                                                                                                                                                                                                                                                                                       |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |
| <b>Strategic Alignments:</b><br><b>Roads Action H2.1:</b> Complete upgrades at Asphalt and Crusher plants to meet environmental standards and realize cost savings.                                                                                                                                                                                                                                                                     |                         | <b>Roads Action W4.2:</b> Produce materials (gravel and asphalt) as required for City construction and maintenance activities to support self-funded operations and facilitate year-round quality road repairs.                                                                                                                                                                                                                                                                          |                     |                                                                                                                                                                                                                                                                     |         |      |         |      |        |      |        |                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |       |                         |                        |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |   |    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |      |                         |                        |      |     |       |      |     |       |      |     |       |      |     |       |

| Roads Service: Pavement Rehabilitation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    | ZBR Report Card                                                                                                                                                                                                                                                         |                | Results Based Approach (RBA)                                                                                                                                                                                                                                                                                                                                                      |      |       |       |      |       |       |      |       |       |      |       |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |      |                    |               |      |       |        |      |       |        |      |       |        |      |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |      |          |           |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
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| <b>ZBR Recommendations:</b><br>Endeavor to improve efficiency, i.e. reduce unit costs, by implementing Industry Standards measures for cost control.<br><br>TARGET: Realize savings on the City conducted pavement rehab projects, with a potential cost savings of \$800,000 to \$1.0 million annually.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    | <b>Achievements:</b><br>Improved efficiencies have offset cost increases, equating to savings of approximately \$1.5 million in 2015.<br><br><b>Service Description:</b><br>City Forces crews resurface roadways in support of safe and comfortable driving conditions. |                | <b>Satisfaction with pavement condition:</b><br>The 2015 Roads Annual Survey showed that customer satisfaction (very satisfied or satisfied) has increased: <ul style="list-style-type: none"><li>On main roads: 76% (66% in 2014).</li><li>On neighbourhood roads: 83% (78% in 2014).</li></ul> Road network: 81% in good or very good condition as of 2014. Target 84% in 2015. |      |       |       |      |       |       |      |       |       |      |       |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |      |                    |               |      |       |        |      |       |        |      |       |        |      |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |      |          |           |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| <b>How well did we do it?</b><br> <table><caption>Cost per tonne (\$)</caption><thead><tr><th>Year</th><th>Avg Cost/Tonne</th><th>Costs without efficiencies</th></tr></thead><tbody><tr><td>2012</td><td>\$150</td><td>\$150</td></tr><tr><td>2013</td><td>\$145</td><td>\$145</td></tr><tr><td>2014</td><td>\$140</td><td>\$140</td></tr><tr><td>2015</td><td>\$140</td><td>\$140</td></tr></tbody></table> <b>Story Behind the Baseline</b> <ul style="list-style-type: none"><li>Paving cost per tonne remained flat from 2012-15 despite increases to costs of labour (8.5%) and asphalt (19%).</li><li>Efficiencies offset rising input costs, equates to a 2015 savings of approximately \$1.5 million.</li><li>Asphalt production shifts realigned to reduce production gaps and paving downtime.</li></ul> |                    | Year                                                                                                                                                                                                                                                                    | Avg Cost/Tonne | Costs without efficiencies                                                                                                                                                                                                                                                                                                                                                        | 2012 | \$150 | \$150 | 2013 | \$145 | \$145 | 2014 | \$140 | \$140 | 2015 | \$140 | \$140 | <b>How much did we do?</b><br> <table><caption>Daily avg (tonnes) and Annual Paving</caption><thead><tr><th>Year</th><th>Daily avg (tonnes)</th><th>Annual Paving</th></tr></thead><tbody><tr><td>2012</td><td>1,150</td><td>53,978</td></tr><tr><td>2013</td><td>1,350</td><td>59,128</td></tr><tr><td>2014</td><td>1,150</td><td>56,000</td></tr><tr><td>2015</td><td>1,150</td><td>52,000</td></tr></tbody></table> <b>Story Behind the Baseline</b> <ul style="list-style-type: none"><li>Increased daily paving by 200 tonnes per day.</li><li>More trucks contracted to reduce paver wait time and increase production. Trucking adjusted day-to-day to suit project needs.</li><li>Newer equipment reduced paving downtime and maintenance costs (\$556K less in 2015 than 2012).</li></ul> |  | Year | Daily avg (tonnes) | Annual Paving | 2012 | 1,150 | 53,978 | 2013 | 1,350 | 59,128 | 2014 | 1,150 | 56,000 | 2015 | 1,150 | 52,000 | <b>How much did we do?</b><br> <table><caption>Lane kms</caption><thead><tr><th>Year</th><th>Arterial</th><th>Collector</th><th>Local</th></tr></thead><tbody><tr><td>2012</td><td>51.1</td><td>49.7</td><td>35.7</td></tr><tr><td>2013</td><td>33.8</td><td>61.9</td><td>53.5</td></tr><tr><td>2014</td><td>30.4</td><td>36.3</td><td>41.5</td></tr><tr><td>2015</td><td>74.0</td><td>59.3</td><td>24.6</td></tr></tbody></table> <b>Story Behind the Baseline</b> <ul style="list-style-type: none"><li>Proximity to Manchester asphalt plant used to allocate projects to City Forces to reduce trucking costs.</li><li>Now have sufficient skilled labour to run two crews side by side on arterials and collectors, reducing total time to complete projects.</li></ul> |  | Year | Arterial | Collector | Local | 2012 | 51.1 | 49.7 | 35.7 | 2013 | 33.8 | 61.9 | 53.5 | 2014 | 30.4 | 36.3 | 41.5 | 2015 | 74.0 | 59.3 | 24.6 |
| Year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Avg Cost/Tonne     | Costs without efficiencies                                                                                                                                                                                                                                              |                |                                                                                                                                                                                                                                                                                                                                                                                   |      |       |       |      |       |       |      |       |       |      |       |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |      |                    |               |      |       |        |      |       |        |      |       |        |      |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |      |          |           |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 2012                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | \$150              | \$150                                                                                                                                                                                                                                                                   |                |                                                                                                                                                                                                                                                                                                                                                                                   |      |       |       |      |       |       |      |       |       |      |       |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |      |                    |               |      |       |        |      |       |        |      |       |        |      |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |      |          |           |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 2013                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | \$145              | \$145                                                                                                                                                                                                                                                                   |                |                                                                                                                                                                                                                                                                                                                                                                                   |      |       |       |      |       |       |      |       |       |      |       |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |      |                    |               |      |       |        |      |       |        |      |       |        |      |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |      |          |           |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 2014                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | \$140              | \$140                                                                                                                                                                                                                                                                   |                |                                                                                                                                                                                                                                                                                                                                                                                   |      |       |       |      |       |       |      |       |       |      |       |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |      |                    |               |      |       |        |      |       |        |      |       |        |      |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |      |          |           |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 2015                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | \$140              | \$140                                                                                                                                                                                                                                                                   |                |                                                                                                                                                                                                                                                                                                                                                                                   |      |       |       |      |       |       |      |       |       |      |       |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |      |                    |               |      |       |        |      |       |        |      |       |        |      |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |      |          |           |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Daily avg (tonnes) | Annual Paving                                                                                                                                                                                                                                                           |                |                                                                                                                                                                                                                                                                                                                                                                                   |      |       |       |      |       |       |      |       |       |      |       |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |      |                    |               |      |       |        |      |       |        |      |       |        |      |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |      |          |           |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 2012                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1,150              | 53,978                                                                                                                                                                                                                                                                  |                |                                                                                                                                                                                                                                                                                                                                                                                   |      |       |       |      |       |       |      |       |       |      |       |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |      |                    |               |      |       |        |      |       |        |      |       |        |      |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |      |          |           |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 2013                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1,350              | 59,128                                                                                                                                                                                                                                                                  |                |                                                                                                                                                                                                                                                                                                                                                                                   |      |       |       |      |       |       |      |       |       |      |       |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |      |                    |               |      |       |        |      |       |        |      |       |        |      |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |      |          |           |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 2014                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1,150              | 56,000                                                                                                                                                                                                                                                                  |                |                                                                                                                                                                                                                                                                                                                                                                                   |      |       |       |      |       |       |      |       |       |      |       |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |      |                    |               |      |       |        |      |       |        |      |       |        |      |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |      |          |           |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 2015                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1,150              | 52,000                                                                                                                                                                                                                                                                  |                |                                                                                                                                                                                                                                                                                                                                                                                   |      |       |       |      |       |       |      |       |       |      |       |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |      |                    |               |      |       |        |      |       |        |      |       |        |      |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |      |          |           |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Arterial           | Collector                                                                                                                                                                                                                                                               | Local          |                                                                                                                                                                                                                                                                                                                                                                                   |      |       |       |      |       |       |      |       |       |      |       |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |      |                    |               |      |       |        |      |       |        |      |       |        |      |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |      |          |           |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 2012                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 51.1               | 49.7                                                                                                                                                                                                                                                                    | 35.7           |                                                                                                                                                                                                                                                                                                                                                                                   |      |       |       |      |       |       |      |       |       |      |       |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |      |                    |               |      |       |        |      |       |        |      |       |        |      |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |      |          |           |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 2013                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 33.8               | 61.9                                                                                                                                                                                                                                                                    | 53.5           |                                                                                                                                                                                                                                                                                                                                                                                   |      |       |       |      |       |       |      |       |       |      |       |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |      |                    |               |      |       |        |      |       |        |      |       |        |      |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |      |          |           |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 2014                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 30.4               | 36.3                                                                                                                                                                                                                                                                    | 41.5           |                                                                                                                                                                                                                                                                                                                                                                                   |      |       |       |      |       |       |      |       |       |      |       |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |      |                    |               |      |       |        |      |       |        |      |       |        |      |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |      |          |           |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 2015                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 74.0               | 59.3                                                                                                                                                                                                                                                                    | 24.6           |                                                                                                                                                                                                                                                                                                                                                                                   |      |       |       |      |       |       |      |       |       |      |       |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |      |                    |               |      |       |        |      |       |        |      |       |        |      |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |      |          |           |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| <b>Next Steps (actions to improve)</b> <ul style="list-style-type: none"><li>Continue to streamline trucking of asphalt.</li><li>Goal to average 1,500 tonnes of paving per day.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    | <b>Next Steps (actions to improve)</b> <ul style="list-style-type: none"><li>Continue to optimize work allocations based on location.</li><li>Continue to emphasize staff training and retention.</li></ul>                                                             |                |                                                                                                                                                                                                                                                                                                                                                                                   |      |       |       |      |       |       |      |       |       |      |       |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |      |                    |               |      |       |        |      |       |        |      |       |        |      |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |      |          |           |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| <b>Strategic Alignments:</b><br><b>Roads M.PM6:</b> Percent of overall roadway pavement that is in good or very good condition (2015 target of 84%).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                                                                                                                                                                                                                                                                         |                | <b>Roads Action W6.1:</b> Operate, maintain and repair road infrastructure to align infrastructure and associated funding needs to service level expectations.                                                                                                                                                                                                                    |      |       |       |      |       |       |      |       |       |      |       |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |      |                    |               |      |       |        |      |       |        |      |       |        |      |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |      |          |           |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |