

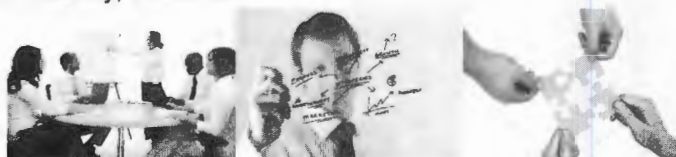
CITY OF CALGARY
RECEIVED
 IN ENGINEERING TRADITIONS ROOM
 OCT 14 2014
 ITEM: PFC 2014-0802
Distribution
 CITY CLERK'S OFFICE

City of Calgary Zero Based Review Roads Business Unit

Business Case Recommendations

October 14, 2014

Gordon Harris, Cal McClary, Franc Cioffi



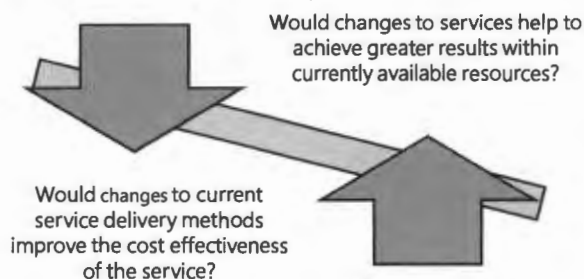
Western Management Consultants

Delivering Results Since 1975

Vancouver Calgary Edmonton Toronto

Project Overview

Western Management Consultants supported by ISL were contracted to undertake a Zero-Based Review (ZBR) to address two key questions relative to Roads business unit services



Under Phase 2B of the ZBR process, seven sub-services were initially identified for an in-depth review and analysis

Western Management Consultants

2

Project Overview

Recommendations were subsequently made to develop business cases for the following five Roads sub-services

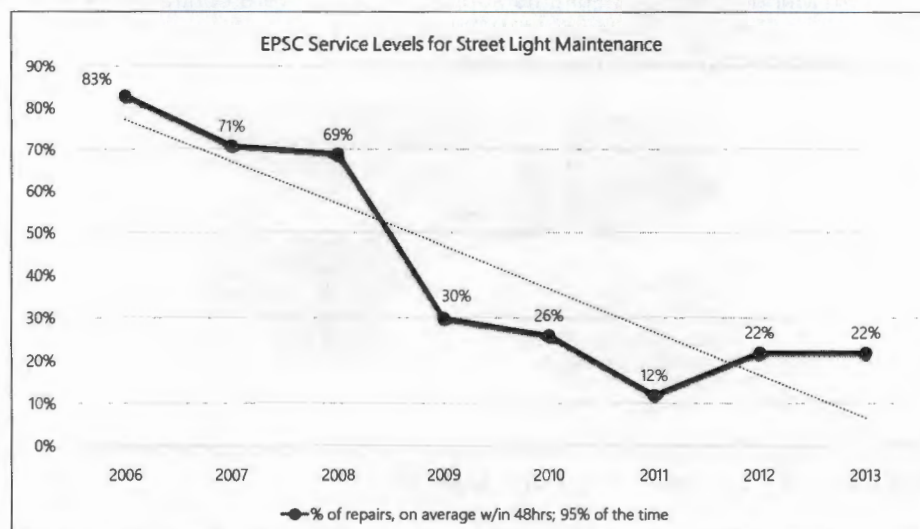
Street Light Maintenance	Pavement Marking	Sign Manufacturing	Gravel Crushing	Pavement Rehabilitation
<ul style="list-style-type: none"> To explore alternative approaches to improve service efficiency and effectiveness of street light maintenance. 	<ul style="list-style-type: none"> To investigate the feasibility and benefits of contracting out pavement marking to the private sector. 	<ul style="list-style-type: none"> To examine the commercial viability of expanding Sign Shop services to other customers and clients or concentrating on core sign manufacturing processes. 	<ul style="list-style-type: none"> To investigate the feasibility and benefits of contracting gravel mining and crushing operation to a private sector operator. 	<ul style="list-style-type: none"> To compare the merits of self-performing versus contracting out pavement rehabilitation services.

Western Management Consultants

3

Street Light Maintenance

Issue Identification: Decline in contractor performance over time



Western Management Consultants

4

Street Light Maintenance

Options Analysis and Recommendations:

Option	Description	Efficiency	Effectiveness	Recommendation
Continue contract relationship with EPSC	Maintain contract relationship with EPSC but with changes to the identification, performance tracking and management of outcome measures against which service delivery can be monitored, penalized and or incentivized.	↔	↓	Not recommended due to past performance of EPSC as a single source maintenance service contractor
Managed competition	Under a managed competition environment the Roads Business Unit would be permitted to compete with the private sector for the provision of street light maintenance functions.	↑	↑	Not recommended due to lack of readiness of Roads Business Unit for this type of service delivery model
Outsource to Multiple Service Providers	Out-source street light maintenance to multiple maintenance service providers in different quadrants of the City with clearly identified maintenance performance measures.	↔	↑	Recommended to achieve short and long term service improvements that can be tracked over time

Western Management Consultants

5

Pavement Marking

Issue Identification:

- Calgary's pavement marking services have not been reviewed in the past five years
- Many other large urban municipalities contract out the majority of their pavement marking services
- Alternative service delivery providers exist in the Calgary market

Western Management Consultants

6

Pavement Marking

Options Analysis:

- The internal cost per meter of pavement marked is 67 cents. This is approximately equal to the weighted average for a third party provider
- Difference for internally provided services, including labour and maintenance is \$174,273

Roads Pavement Marking Internal Cost Categories	Reported Costs
Vehicles & Equipment	\$255,693
Materials & Supplies	\$720,986
Salary, Wages, & Benefits	\$1,802,974
TOTAL	\$2,779,652

Pavement Markings	Quantity	Estimated Costs	Estimated Cost Per Unit
Solid Line	522,308 m	\$344,723	\$0.66
Double Solid Line	783,461 m	\$658,108	\$0.84
Skip Line	1,305,769 m	\$365,615	\$0.28
Crosswalks	451,357 m	\$297,896	\$0.66
HOV Stencils	750	\$56,250	\$75.00
Turn Signal Stencils	3,500	\$945,000	\$270.00
Cycling Stencils	750	\$105,000	\$140.00
TOTAL		\$2,772,592	

Western Management Consultants

7

Pavement Marking

Options Analysis and Recommendations:

Option	Description	Efficiency	Effectiveness	Recommendation
Present State	Maintain the present state by continuing to provide pavement marking services within Roads business unit staff and equipment.	↔	↔	Recommended
Contract Services	Contract pavement marking services to an external third party provider through a competitive bidding process.	↔	↓	Not Recommended

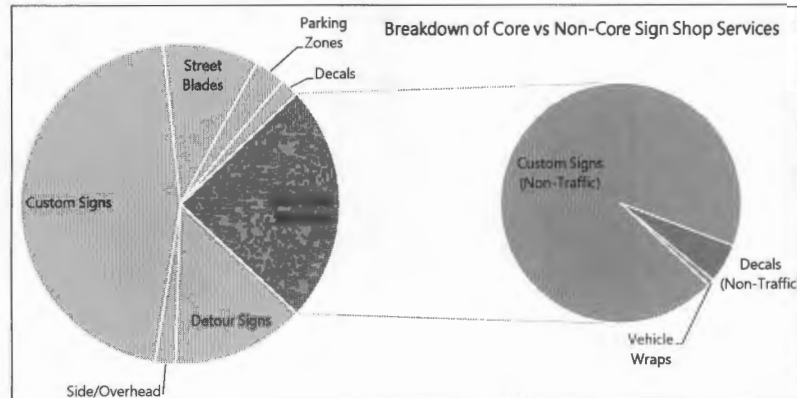
Western Management Consultants

8

Sign Manufacturing

Issue Identification:

- Services have grown from the initial objective of traffic sign production to include what can be considered "non-core" products and services
- Non-core products have the highest cost per unit at \$448 (vs. \$59 for manufacturing traffic signs)

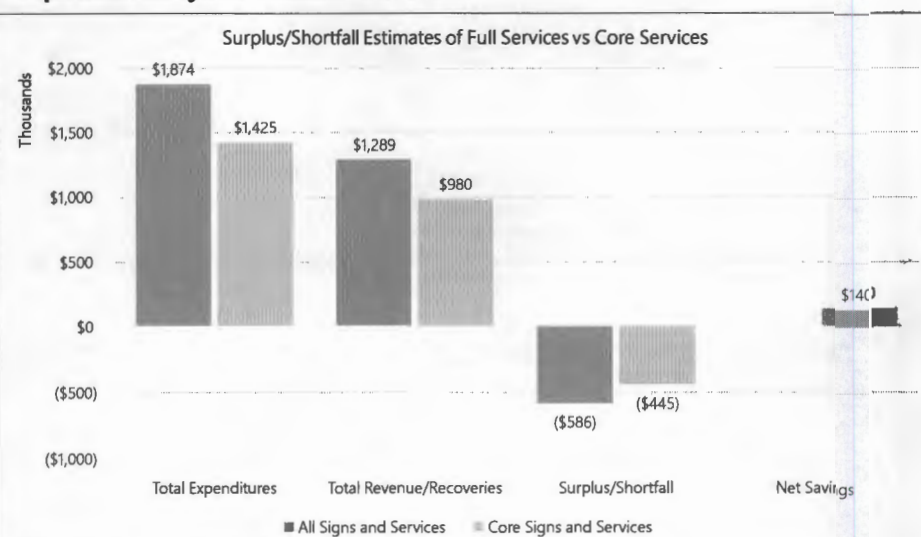


Western Management Consultants

9

Sign Manufacturing

Options Analysis: Present State

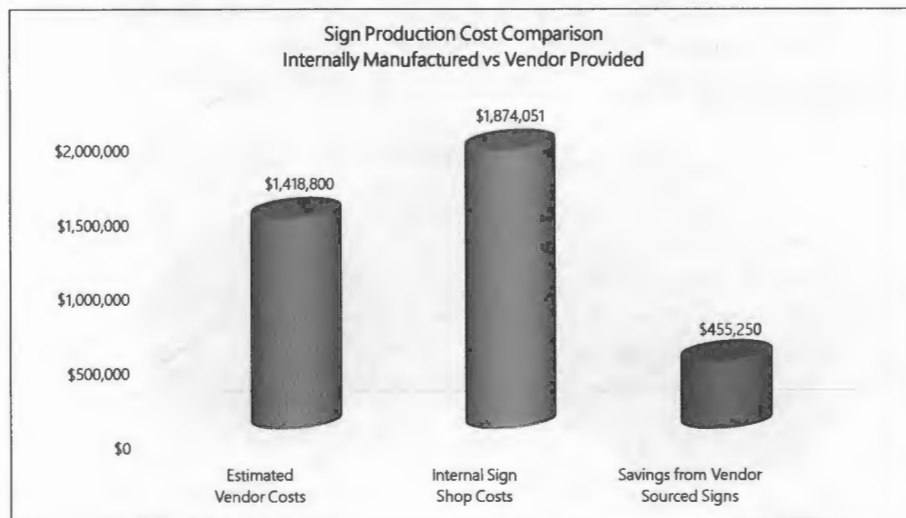


Western Management Consultants

10

Sign Manufacturing

Options Analysis: Vendor Supplied Signs and Services



Western Management Consultants

11

Sign Manufacturing

Options Analysis and Recommendations:

Option	Description	Efficiency	Effectiveness	Result
Present State	Maintain the present state where the sign shop would continue to manufacture the same products and services as it presently does.	↓	↔	Not Recommended
Focus on Core Products	Focus production on core products and services. The sign shop would continue to operate using its existing processes and practices, but would focus on the manufacture of traffic and roadway signs (regulatory signs, informational signs, detour signs, street name blades, and side/overhead signs).	↔	↑	Recommended
Commercial Expansion	Expand the Sign Shop's commercial offerings to provide the Sign Shop's products and services to additional private and / or municipal customers beyond the City of Calgary.	↓	↔	Not Recommended
Vendor Supplied	Transition to vendor supplied traffic and roadway signs, procured from private vendors and no longer produced internally by the Sign Shop.	↑	↔	Recommended if Option 2 is not successful

Western Management Consultants

12

Gravel Crushing

Issue Identification:

- Industry comparable costs for similar services were estimated from available data and found to be \$6 to \$8 per tonne versus \$10 per tonne at Spyhill. This represents a 20% to 30% premium, due to:
 - Annual re-training of work force
 - Manufacture of small quantities of specialty products for other City Business Units
 - Services provided to other City Business Units without cost recovery

Gravel Crushing

Options Analysis:

Option 1: Introduce Industry Standard Cost Control

Option 2: Contract Out Gravel Crushing

- Often, where multiple specialty service providers are available for contracting, those vendors become increasingly efficient within their market
- The adjusted cost of mining, crushing and stockpiling to suit the Roads requirements at Spyhill is 20% to 30% higher than similar services procured through Tendering in the current market
- Should the Roads chose to contract out for the mining, crushing and stockpiling of gravel it would by definition enjoy and live with the lowest market based price for this service

Gravel Crushing

Options Analysis and Recommendations:

Option	Description	Efficiency	Effectiveness	Result
Introduce Industry Standard Cost Control	Improve efficiency via application of industry standard approaches for cost control.	↑	↔	Recommended
Contract Services	Improve efficiency by contracting the mining, crushing and stockpiling to industry via soliciting tenders or competitive proposals.	↑	↔	Not Recommended in the short-term

Western Management Consultants

15

Pavement Rehabilitation

Issue Identification:

- Many large urban municipalities contract successfully contract out the majority of their pavement rehabilitation
- Consideration of utilization of the Roads labour pool
- Comparable costs for similar services contracted by the City were available for the year 2012 and found to be \$16 per tonne (10%) lower than the City's after adjusting for Detours and Project Management, due to:
 - Annual re-training of workers
 - Weekend work
 - Artificially higher cost of hot mixed asphalt from the City's plant in Manchester

Western Management Consultants

16

Pavement Rehabilitation

Options Analysis:

- Option 1:
 - Efficiency may be significantly improved by implementing industry standard measures for cost control, similar to Gravel Crushing
 - Cost control requires that a responsible supervisor be empowered on a rational basis to accept or reject charges from others that are coded to the operation within the accounting system
- Option 2:
 - As with Gravel Crushing, the nature of tenders is that scope must be reasonably fixed, i.e. within plus or minus of 15% of the quantity for each item, and there is little or no flexibility after the contract is let
 - Same benefits of low market price, increased efficiency and no capital investment
 - The adjusted cost of self-performing Pavement Rehabilitation is about 10% higher than other similar work contracted by the City
- Either option 1 or 2 will lead to improved unit cost performance.

Western Management Consultants

17

Pavement Rehabilitation

Options Analysis and Recommendations:

Option	Description	Efficiency	Effectiveness	Result
Industry Standard Cost Control	Improve efficiency via application of industry standard approaches for cost control.	↑	↔	Recommended
Outsource All Pavement Rehabilitation Services	Improve efficiency by contracting out to industry via soliciting tenders or competitive proposals.	↑	↓	Not Recommended at the present time

Western Management Consultants

18

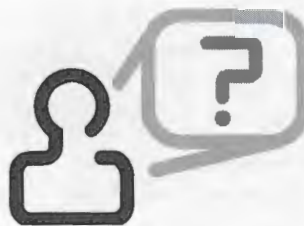
Implementation Considerations

Service	Other Considerations
Street Light Maintenance	<ul style="list-style-type: none"> Examine 30 day service level agreement tool and data. Analyze inventory costs. Automate dispatch and completion tasks.
Pavement Marking	<ul style="list-style-type: none"> Automate performance monitoring of maintenance marking. Lengthen pavement marking notice times. Review and revise resource allocations based on new marking request trends.
Sign Manufacturing	<ul style="list-style-type: none"> Review potential vendors for specialty signs. Review equipment utilization and phase out equipment for non-core signs. Identify/confirm staff and resource impacts to discontinue non-core services. Establish a new work order type to track production of Parks signs.
Gravel Crushing	Roads should engage a consultant familiar with industry standards for cost control and seek assistance in developing and implementing the system. The system will report the results of improving efficiency and should the result not be satisfactory, Roads could then implement outsourcing of the service.
Pavement Rehabilitation	Roads should engage a consultant familiar with industry standards for cost control and seek assistance in developing and implementing the system. The system will report the results of improving efficiency and should the result not be satisfactory, Roads could then implement additional outsourcing of the service.

Western Management Consultants

19

Questions



Western Management Consultants

20