



Building Markham's Future Together
Journey to Excellence



WINTER MAINTENANCE WORKSHOP
September 28, 2015
Presented By: Morgan Jones

A wide-angle photograph of the Markham City Administration Centre, a modern multi-story building with a glass facade and a curved roofline, set against a clear blue sky.

Agenda

Roles & Responsibilities
Current Service Levels
Windrow Removal Program
Contact Centre Statistics on Calls
Concerns from Council
Implications of Service Level Changes
New Online Tool for Checking status of City Roads
Historical Budget
Continuous Improvements
Conclusions

Operations Role in Winter Maintenance

Roads Operations salts and plows the following:

- Arterial Roads
- Primary Roads
- Secondary Roads
- Local Road
- Cul-De-Sacs
- Sidewalks
- On-street parking

Operations Role in Winter Maintenance

Parks Operations maintains the following:

- Rear Lanes (apply salt)
- Back Lanes (smaller local streets – plow & apply salt)
- Community & Libraries Centres
- Fire Stations
- Green “P” Parking
- City owned facilities

Non City Responsibility

Community Mailboxes

- Maintained by Canada Post (1-866-607-6301)

Regional Roads

- Maintained by the Region (ie. McCowan or Hwy#7)

Provincial Roads

- Maintained by Ministry of Transportation (ie. Hwy #48 south of Princess Street)

Bus Stops

- York Region/VIVA/GO



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ARTERIAL ROAD

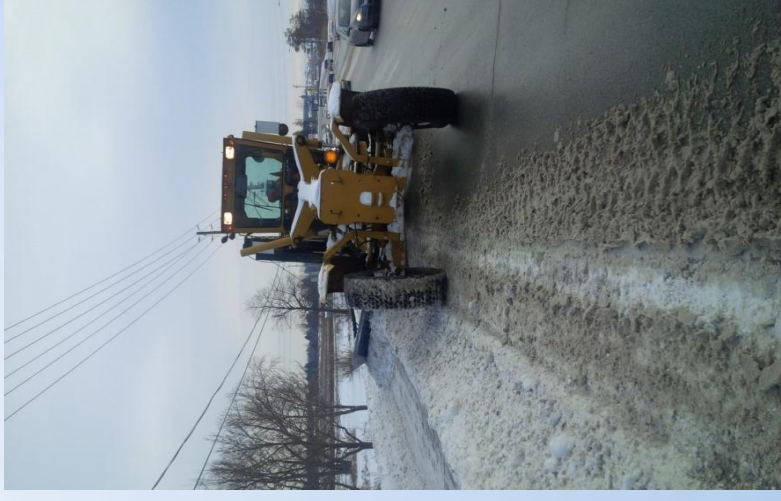


High volume road salted and/or plowed to achieve a bare surface condition 24/7.



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Primary Road (Rural/Urban)





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Challenges: New Built Form





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Challenges: On Street Parking





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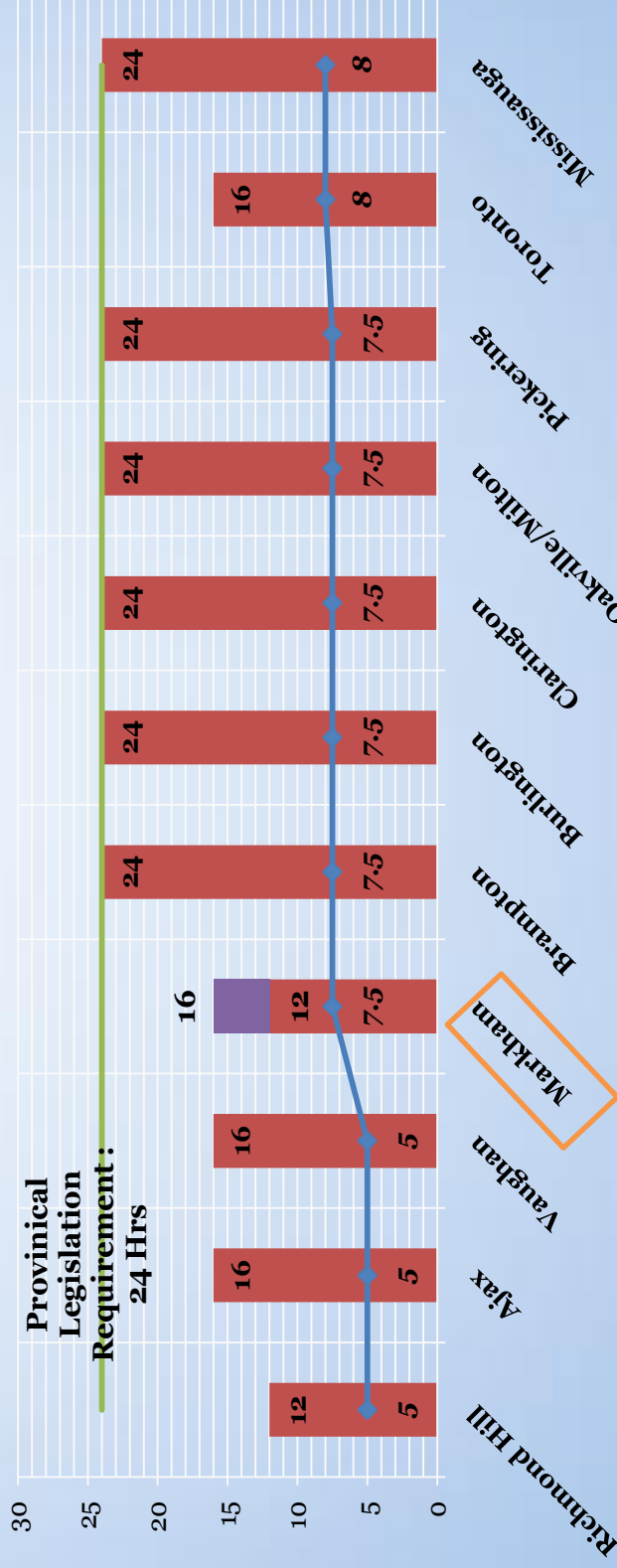
LOCAL PLOW



Local Road Plow

- Generally carry low volumes of traffic.
- Plowing will be carried generally when snow accumulations reach or exceed 7.5 cm.
- If snowfall is continuing, plowing will commence once snowfall ceases or accumulations exceed 12 cm.
- Normal plowing operation will take approximately 16 hours to complete City wide.
- Plowing is ongoing until completed.
- 16 hour plow exceeds minimum maintenance standards (Provincial Legislation).

Local Road Service Level



- Service Level (Hrs)
- Markham: 12-16hrs
- Provincial Legislation Requirement (Hrs)
- Snow Falls (cm)



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Local Road

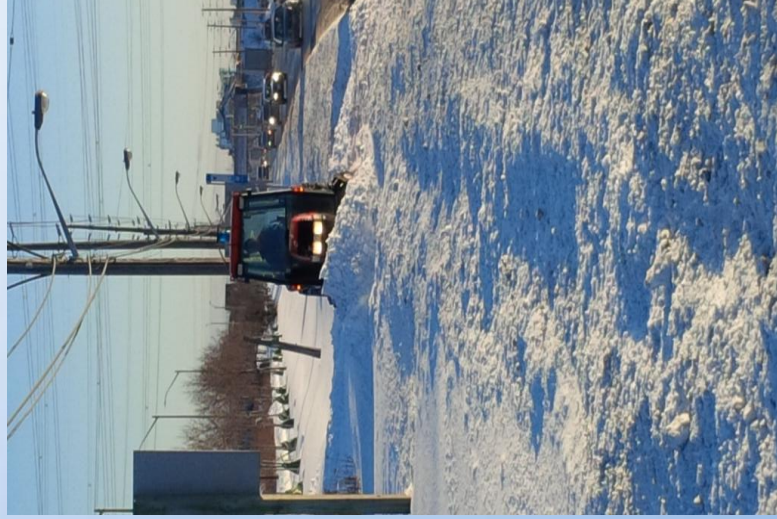


Council approved local road service
level - acceptable in a snow packed
condition

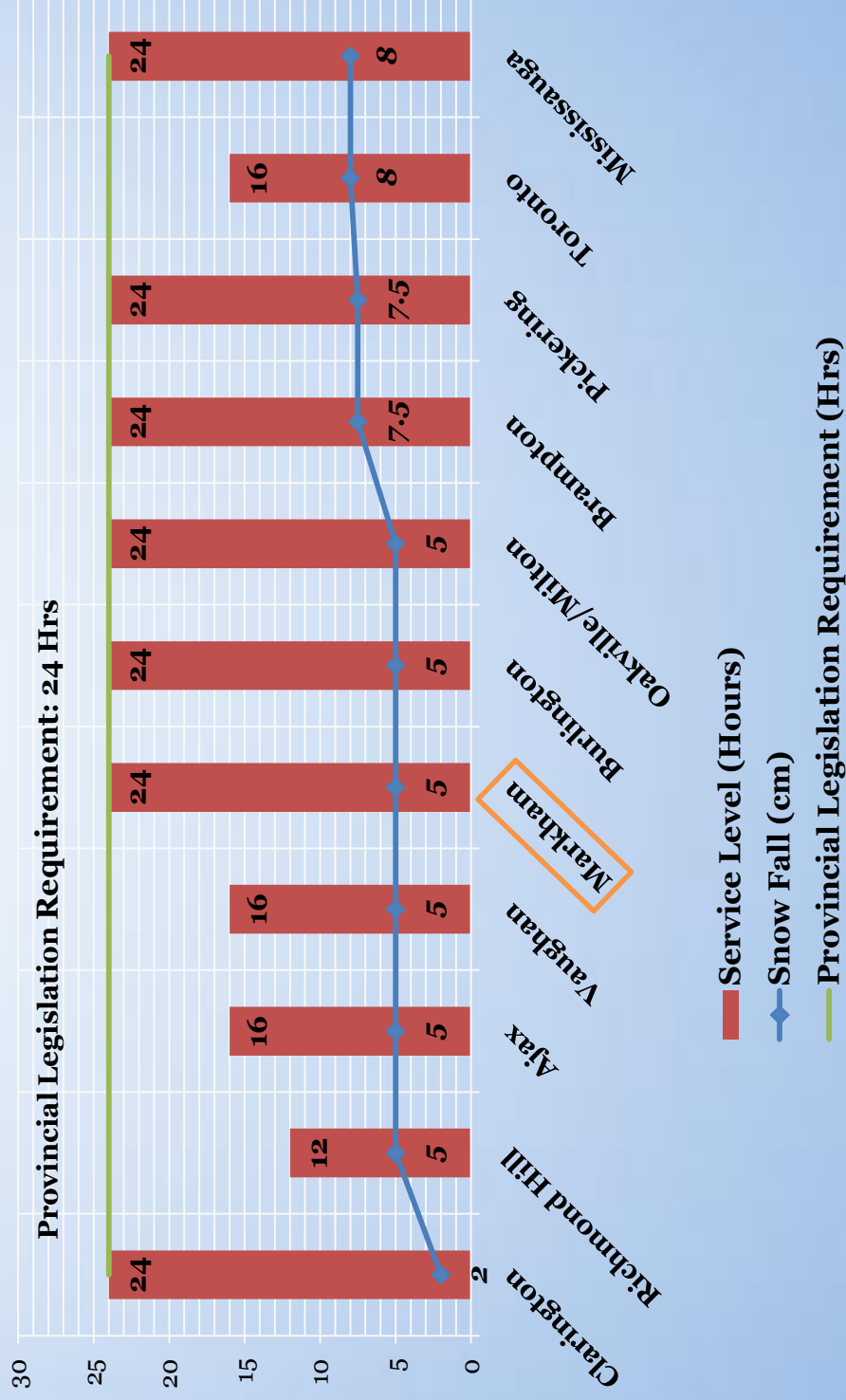


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SIDEWALKS



Sidewalk Service Level



Current Windrow Removal Program

Who is eligible? All residents of Markham who require assistance in removing their windrows and meet the requirements.

Expectation of Clearing: A single loading driveway or 50% for a double loading driveway will be removed.

- City Windrow program began in 2003
- Reduced Eligibility from 65 to 60 in 2008
- Currently 3200 applicants for 2014-2015 season

Current Windrows Program Requirements

- Must be 60 years of age or older and no one living in the home between the ages of 12-59
- If under 60 and no one living in the home between the ages of 12-59, must have a doctor's note identifying that they are not able to shovel snow for health reasons.
- Proof of age
- Proof of residency

Benchmarking Municipal Winter Windrow Maintenance

- 10 Municipalities were surveyed and only 2 provide Windrow clearing for all residents. Vaughan provides this service to all and Toronto only in eligible areas (ie. mainly North York, Scarborough and Etobicoke).
- Based on 2011 census just under 40% of the City of Toronto's entire population do not receive a windrow removal program.
- Markham does not have the yard capacity to store all hired equipment required to provide this service.
- Existing contracts expire 2017/18

Customer Service – Contact Centre Data

- Overall impact on the Contact Centre on winter maintenance represents between 5-10% of daily calls 6 days post storm.
- Winter Maintenance calls on average over the last 3 years are declining despite growth and severity of winter.

Concerns from Council about Winter Maintenance

- Windrow Clearing for all homes using same standards
- Local Roads:
 - Changing service level on local roads from snow packed to bare similar to arterial roads
 - Changing the service level on all local roads from 7.5 to 5 cm for plowing
 - Only change local roads without sidewalks from 7.5 to 5 cm for plowing
- Improved Communications and Education to residents on service levels and status of operations

Considerations : Cost to implement City-Wide Windrow Clearing

- Preliminary estimate based on City of Vaughan model of windrow removal. Approx. 80,000 driveways City-wide for Markham.
- Annual costs to the City is \$4M or 3.7% tax rate increase.
- **Not included: land acquisition, infrastructure (salt domes), contractor capital costs**

Customer Expectations and Operational Impacts	Implications
Fast/speed	Equipment moves much slower
Full driveway width	N/A
Private Property (borders)	Often damaged
Built form impact	Condos and rear lanes don't receive this service
Works Yard capacity	Existing yard too small to meet service adjustment
Customer Complaints /Contact Centre	Increase in complaints – everyone wants the service immediately

Considerations: Service level 7.5 cm to 5cm local road plow

- Preliminary estimate to reduce the local road plow from 7.5 cm or 3 inches to 5 cm or 2 inches. Based on averages for the past 3 winter seasons.
- The annual costs would be approximately \$1.8M or 1.35% tax rate increase not including increased windrow costs.

Challenges

- Existing salt storage doesn't provide inventory capacity necessary to achieve this service level enhancement.
- Increase windrow removal costs as more frequent plows
- **Not included: land acquisition, infrastructure (salt domes), contractor capital costs**

Considerations: Changing Service level from Snow Packed to Bare Local Roads

- Municipal survey indicates no other municipality provides this service model
 - Not achievable
- Preliminary estimate to provide this \$6M or 4.5% tax rate increase.
- **Not included, land acquisition, infrastructure (salt domes), contractor capital costs**

Customer Expectations and Operational Impacts	Implications
Works yard capacity	Existing yard too small inventory
Service level increase may not be attainable as locals have lower volumes of traffic, reducing brine burn of salt	Not achievable
On Street Parking	Would have to be eliminated to facilitate during winter precipitation events. Significant impact on By-laws
Environment Canada practice for salt use	Extreme environmental impact
Employment standards act	Maximum hour of equipment operators implicated

Considerations: Local Roads Without Sidewalks

- The City has approximately 200 km of local road without sidewalks

Challenges

- Municipalities surveyed indicated they do not provide this service for the following reasons:
 - Locations are scattered throughout their respective Town or City, inefficiencies are recognized.
 - Service level increase may not be attainable as locals have lower volumes of traffic, reducing brine burn of salt
 - Environmental impact greatly increased due to increase salt use
 - Lack of understanding of the service level

Resident Service Level Education

Implementation of Enhanced Communications Strategy:

- Winter Road Maintenance Status for all roads – City Portal (NEW)
- Reactivate & enhance Winter Roads Maintenance app button ready in November
- City page ads- Winter Services in Markham-English, Cantonese, Tamil
- Works Yard - Media launch, November 16, 2015 (TBD)
- Outreach to diverse media and radio

Communication Strategy – cont'd

- Mobile signs under consideration
- City social media – twitter, Facebook, YouTube (video)
- Press releases / Op-Ed articles
 - EDUCATE
 - INFORM
 - STATUS
 - ACT



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Winter Maintenance

68 Caboto Trail, Unionville, ON L3R 5G6, Canada

Search Q

Road was last plowed:

Within Last Hour

1 to 4 Hours Ago

4 to 12 Hours Ago

12 to 16 Hours Ago

16 + Hours Ago

(Road Conditions Are Being Monitored)

Not Serviced by City of Markham

Unassumed Road

Primary Roads are Represented by Thicker Overlays

Information

- Acceptable in snow packed conditions
- Plowing commences when snow accumulations reach or exceed 7.5 cm
- If snowfall is continuing, plowing will commence once snowfall ceases or exceeds 12.5 cm
- Plowing operations could take up to 16 hours
- Snow plowing will be continuous until completed

Local Weather

Roads

Sidewalks

Map

Satellite

Notice: Winter Maintenance Underway

Map data ©2015 Google

Terms of Use

Report a map error

System is refreshed every hour. Last refreshed at 08:54 AM

For Winter Maintenance Inquiry, Please Call 905-477-5530 or Email @ customer.service@markham.ca

Council Approved Service Level
Winter Parking Restrictions

Historical Budgets

Year	Actual \$	Budget \$	Variance Fav. / (Unfav.) \$
2012	4.60M	6.23M	1.63M
2013	8.63M	6.55M	(2.08M)
2014	9.31M	6.98M	(2.33M)
YTD July 2015*	6.78M	6.48M	(0.30M)

*2015 Annual budget of 7.98M

Service Improvements Since 2008

- 2008 service levels improvements:
 - Improved sidewalk delivery- right sized equipment and AVL's
 - Improved tandem delivery – age restrictions on equipment and AVL's
- Winter Equipment #'s in 2008 vs 2015 (Growth Related)
 - Tandems – 18/23 (+ 20%)
 - Sidewalk plows - 24/40 (+ 67%)
 - Loaders - 28/36 (+ 29%)
 - Graders/local plows – 38/44 (+ 16%)
 - Windrow trucks – 5/12 (+ 140%)
- 2013 service level improvement for rear lanes, added 7 loaders
- New in 2015/16 - Growth Related
 - 1 Tandem, 1 Grader, 2 Sidewalk, 2 Windrows
- Winter Maintenance Status Report

Council Considerations

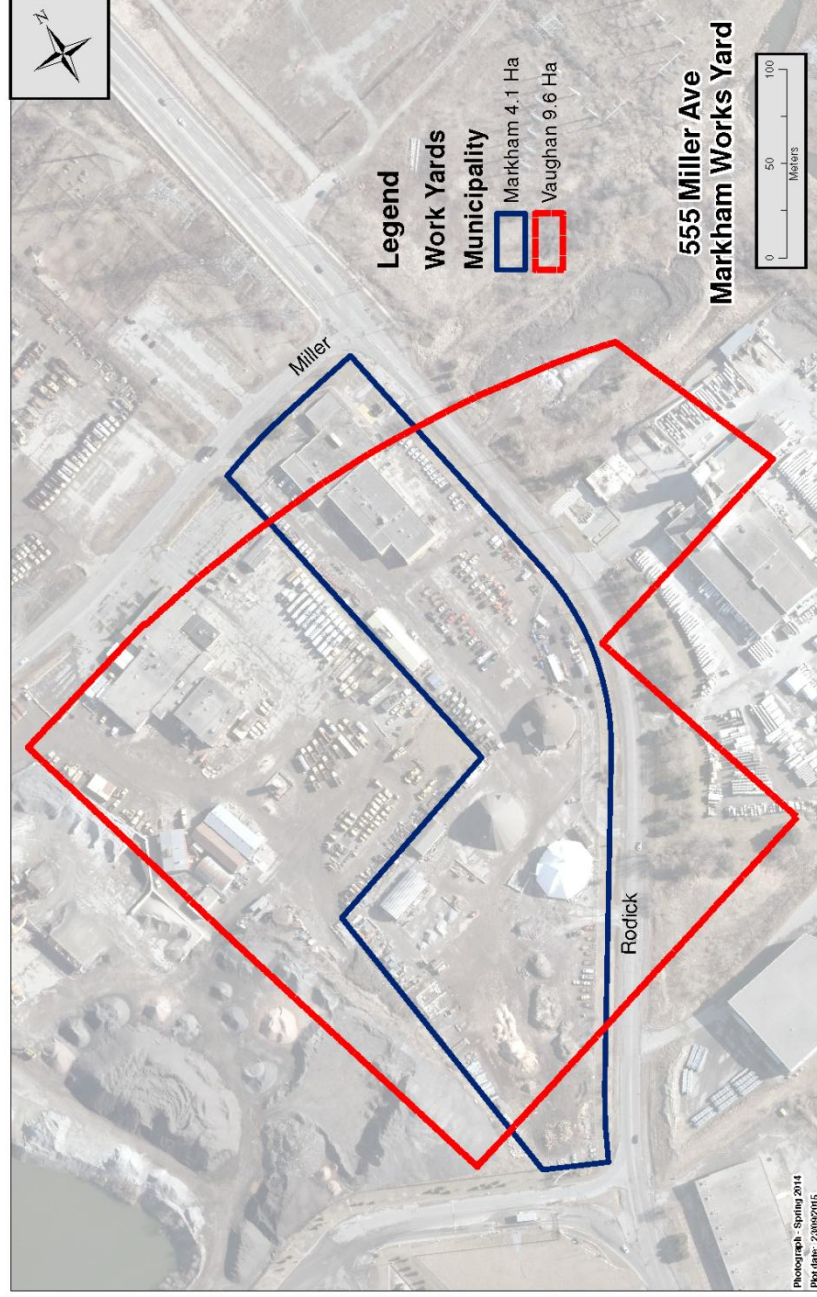
Area of Consideration	Preliminary Costs/Tax Impacts
1. Threshold change from 7.5 - 5cm local road	\$1.8M/1.35%
2. City wide windrow removal	\$4.0M/3.0%
3. Local Roads with no sidewalks only for 5cm	Problematic to undertake costs not determined
4. Local Roads to bare surface instead of 7.5 cm	\$6M/4.5%
5. Resident Service Level Education	Improved communications strategy

Not included, land acquisition, infrastructure (salt domes), contractor capital costs

Conclusions

- Minor complaints per capita indicates good public satisfaction.
- Service level changes have both financial and operational implications requiring significant lead time. (18months depending on the change)
- Existing contracts for local road network expire in 2017/18, improvement couldn't be implemented until such time.
- Increased salt usage for enhanced local road plowing has environmental impacts on the Rouge watershed.
- Current salt storage capacity will not meet service level changes for local roads.
- Current yard unable to manage any changes in service levels without expansion of the operations yard.

City of Vaughan's Depot





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Discussion/Questions?