

## DEVELOPMENT CHARGES ADVISORY COMMITTEE

MEETING NO. 03-21

NAME OF MEETING: DEVELOPMENT CHARGES ADVISORY COMMITTEE

DATE OF MEETING: Thursday, October 21, 2021  
9:30 a.m.

PLACE OF MEETING: Zoom Video Conference

MEMBERS PRESENT: Councillor Paul Sharman (Chair)  
Mayor Rob Burton, Councillor Mike Cluett, Councillor Clark Somerville, Lisa Brown, Ray Chesher, Shane Cooney, Leisl Dukhedin-Lalla, Steven Frankovich, Gary Gregoris, Carmen Gucciardi, Herb Lewington, Ric Robertshaw, Jason Sheldon

GUESTS: Daryl Abbs, Gary Scandlan  
(Watson & Associates)  
Alvaro Almuina (EISo Consulting)  
Sandy Naime, Mark Zamojc (GMBLuePlan)

REGRETS: Gary Carr, Regional Chair

STAFF PRESENT: Matthew Buist, Lee Anne Jones, Paula Kobli, Katherine Fleet, Melissa Green-Battiston, Ann Larkin, Dan Banks, Kate Connell, Graham Milne

The Development Charges Advisory Committee met on the above-noted date via electronic means and advised the following:

### **DISCLOSURES OF PECUNIARY INTEREST**

There being no disclosures of pecuniary interest, the Committee proceeded with the regular order of business.

### **REGULAR AGENDA**

#### **1. Confirmation of Minutes of Development Charges Advisory Committee Meeting No. 02-21 held Friday, October 8, 2021**

The minutes were confirmed without objection.

*Minutes of Development Charges Advisory Committee Meeting No. 03-21, Thursday, October 21, 2021*

## **2. Water/Wastewater & Roads Capital Costs and Calculations**

Lee Anne Jones, Director, Infrastructure Planning and Policy, gave a presentation on the Water/Wastewater and Transportation Review, 2023 to 2031, and an overview of the gross cost to DC recoverable costs for both. Highlights included the revision of the Georgetown Wastewater Servicing Strategy with the decommissioning of the Georgetown Wastewater Treatment Plant. Matthew Buist, Director, Capital Development Financing, provided an overview of the DC calculations. A copy of this presentation was distributed to members prior to the meeting and is appended to the minutes.

## **3. Discussion**

Chair Sharman requested that the outcomes of any further research arising from questions raised by the Committee be brought back to the next meeting. The Committee indicated interest in continuing to provide feedback but suggested it might not meet the timeline of the DCAC meeting schedule. Matthew Buist indicated that further questions could be submitted to the DC advisory committee email, and provided an outline of further opportunity for feedback throughout the DC process, including past the mandate of the Committee which is scheduled to conclude with the release of the DC Background Study.

## **OTHER BUSINESS**

There was no other business.

## **ADJOURNMENT**

Adjournment: 10:39 a.m.

# 2022 Development Charges Update

Development Charges Advisory  
Committee

October 21, 2021

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# Agenda

1. Water/Wastewater and Transportation Review (2023 to 2031)
2. Gross Cost to DC Recoverable Costs
  - Water/Wastewater
  - Transportation
3. DC Calculation

# 1. Water/Wastewater and Transportation Review (2023 to 2031)



# Overview

- DC Technical Reports: Objective and Basis of Analysis and Technical Review
- Water/Wastewater Technical Review
- Transportation Technical Review

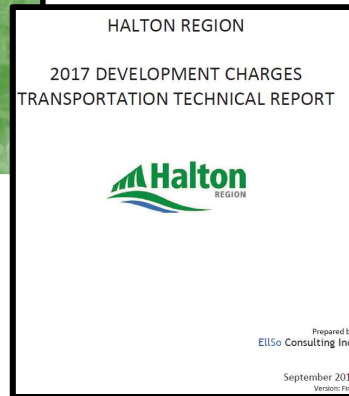
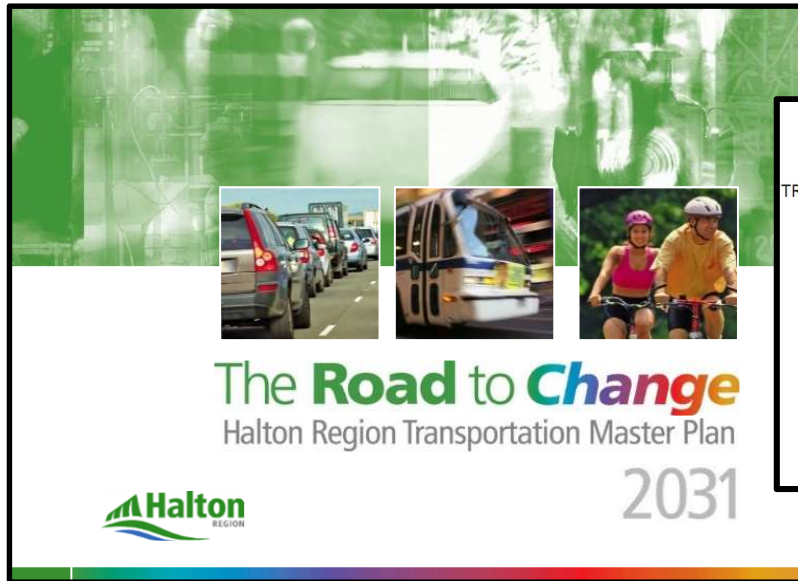
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# Objective

## Update to the 2017 DC, as per FN02-21/PW04-21:

- Development Charges Technical Reports that provide the basis for developing costs and capital implementation plans for transportation and water/wastewater projects to service population and employment growth across Halton Region (2023 – 2031)
- Halton Region Best Planning Estimates (BPE) to 2031 were used as the basis for growth projections, as approved in 2011 as per Staff Report LPS54-11
- BPEs to 2051 are being developed for the IGMS/Regional Official Plan Amendment and will be assessed through upcoming Integrated Master Plans and subsequent DC Update

# Basis of Analysis





# Basis of Technical Review

- Transportation and Water/Wastewater capital programs generally align with the 2017 DC Bylaw Update
- Methodology aligns with 2017 DC Bylaw Update, including design criteria, factors such as project contingencies, and project splits
- Primarily focused on updating project costs (2022\$) to reflect current unit rates and recent construction tenders
- Base year for program is 2023

# Project Costing Approach

**Project capital costs were adjusted for the 2022 DC Program using the following approach:**

- Where projects have advanced, cost estimates from Municipal Class Environmental Assessment (MCEA) Studies, Peel-led studies, scoping studies or preliminary/detailed design were applied throughout the 2023 to 2031 capital forecast
- The majority of the projects in the 2023-2031 program were costed using the same methodology as was used in the 2017 DC Technical Study
- Unit Costs for Master Plan costed projects only (formerly referred to as Benchmarked projects) were based on recent regional data and construction tenders, and tenders from neighbouring municipalities

# WATER/ WASTEWATER TECHNICAL REVIEW



# Water/Wastewater Technical Review Results

**Results of the Technical Review were incorporated into the 2022 DC Technical Report. The main outcomes were:**

- Water and wastewater per capita design criteria updated in 2017 DC Technical Report used for 2022 DC Update
- Calibrated hydraulic models used to confirm and validate capital implementation plans
- Potential to revise wastewater flow diversion strategy for Georgetown.
  - Identified through a separate study.
  - 2022 DC Technical Study outlines the financial/infrastructure requirements of the closure strategy.
  - Overall strategy to be re-confirmed through the next Master Plan.

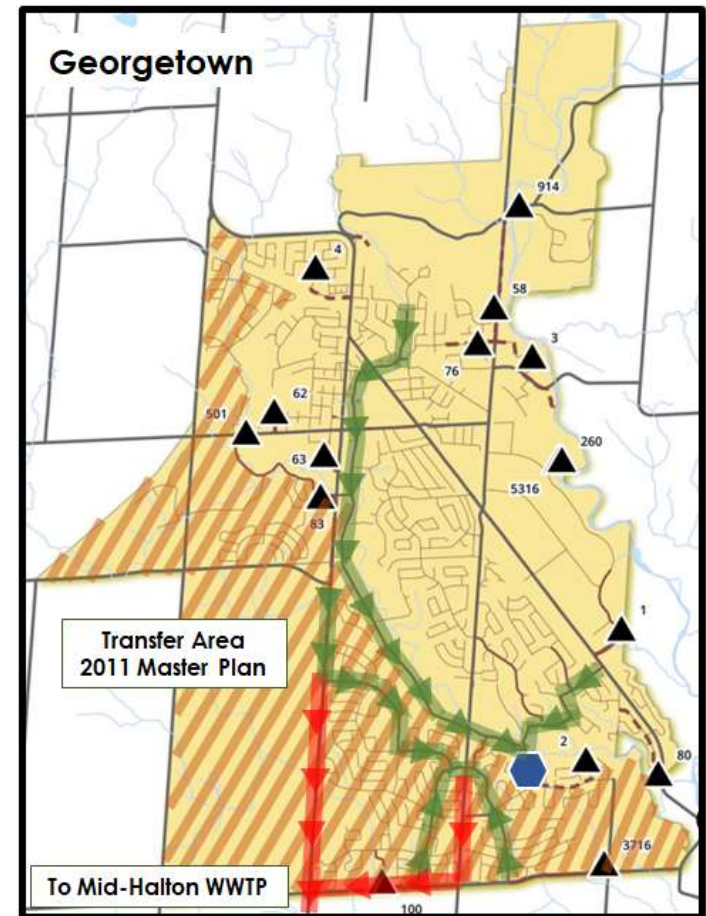
# Revised Georgetown Wastewater Servicing Strategy - Decommission Georgetown WWTP

## 2011 Master Plan Transfer Strategy:

- Partial flow diversion from Georgetown WWTP to Mid-Halton WWTP (Oakville).
- Remaining customers (generally north of Silver Creek) remain serviced by Georgetown WWTP.

## Servicing Strategy Revised:

- Divert all Georgetown WWTP flow to Mid-Halton in the 2025 timeframe (concurrent with lake-based transfer of service) to minimize impacts on operation post-transfer:
  - Odour generation at low flows.
  - Loss of redundancy to accommodate storm events.



# Revised Georgetown Wastewater Servicing Strategy - Decommission Georgetown WWTP

- Project scope impacted by the decommissioning of the Georgetown WWTP in the 2023-2031 capital program:

| Region IPFS ID | Project Description  | Scope Change  |
|----------------|--|---|
| 6581           | 1500 mm WWM on 5th Line from Britannia Rd to Lower Base Line (MIL) | Size changed from 1350mm to 1500mm                  |
| 6582           | 1500 mm WWM on Lower Base Line from 5th Line to 4th Line (MIL)     | Size changed from 1350mm to 1500mm                  |
| 7528           | North WWPS expansion of 2,000 L/s at Mid-Halton WWTP (OAK)         | Capacity expansion changed from 1200L/s to 2000 L/s |
| 8034           | 2350 L/s WWPS at Lower Base Line and 4th Line (MIL)                | Capacity changed from 1805L/s to 2350 L/s           |

- Benefit to Existing (BTE) calculations for impacted infrastructure updated to reflect the revised servicing strategy:
  - Projects listed above.
  - Mid-Halton WWTP expansion (ID8159).
  - Forcemains from the Lower Base Line Pump Station (ID8035).



# 2023 – 2031 PROGRAM COSTS WATER/WASTEWATER



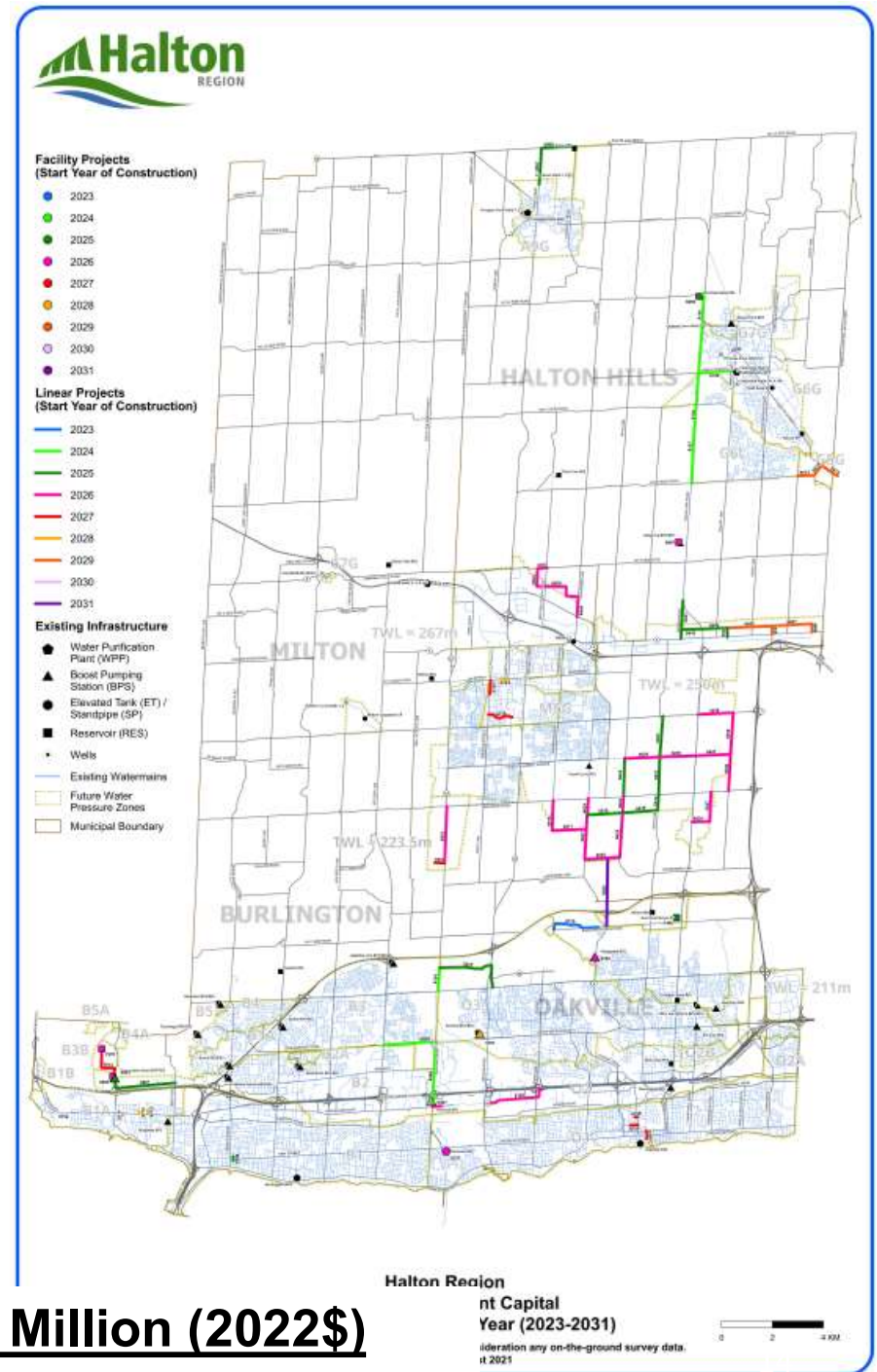
# Water Capital Program (2023 to 2031)

## Water Capital Program

- There are a total of **80** projects:
  - 6 Capacity projects
  - 61 Greenfield projects
  - 13 Built Boundary projects

## Significant Water Projects:

- Construction of Burloak WPP Phase 2 Expansion from 55 to 165 ML/d
- Expansion of Kitchen Zone O3 Pumping Station
- Burloak Pumping Station Phase 1 and watermains to Upper Middle
- Zone 6 Lake base Storage at 22 Sideroad and watermain
- Expansion of Ashgrove Reservoir
- Wyecroft Connection Completed



**Overall Water Capital Program ~\$562 Million (2022\$)**



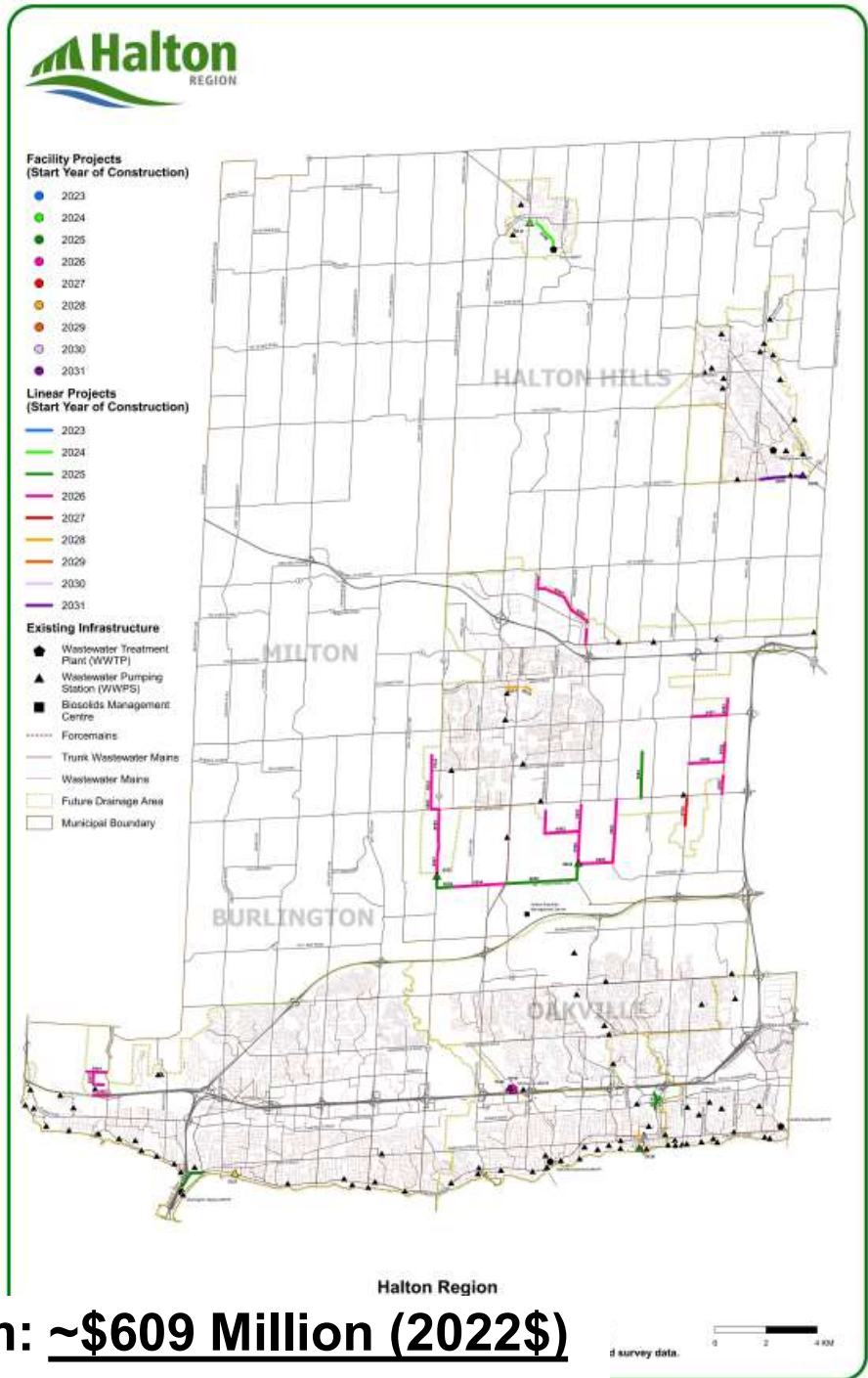
# Wastewater Capital Program (2023 to 2031)

## Wastewater Capital Program

- There are a total of **44** projects:
  - 8 Capacity projects
  - 27 Greenfield projects
  - 9 Built Boundary projects

## Significant Wastewater Projects:

- Mid-Halton WWTP Expansion from 125 ML/d to 175 ML/d. Design and Construction
- New inlet to Skyway WWTP
- Expansion of North WWPS
- New WWPS and forcemain at Lower Base Line and 4<sup>th</sup> Line
- New trunk sewers from Britannia to Lower Base Line



**Overall Wastewater Capital Program: ~\$609 Million (2022\$)**

# 2023-2031 Cost Comparison

| Water/Wastewater Costs<br>2023 to 2031                | Per 2022<br>Technical<br>Report | Per 2017<br>Development<br>Charges<br>Background<br>Study  | Change |
|---|---------------------------------|--|--------|
| Total Program Cost (\$millions)                       | \$1,171                         | \$620  | \$551  |
| <b>Drivers for Increase:</b>                          |                                 |  |        |
| Revised Cost Estimate                                 | \$148                           | To reflect current unit rates (including land acquisition).  |        |
| Municipal Class Environmental Assessment Study/Design | \$52                            | To reflect the results of Municipal Class Environmental Assessments Studies and Detailed Design.   |        |
| Scope Changes   | \$128                           | To reflect current unit rates and upsizing to accommodate the decommissioning of the Georgetown Wastewater Treatment Plant.<br>This category also includes the scope change associated with the Burnhamthorpe Water Tower (water program). |        |
| Reprogramming   | \$223                           | To reflect updated costs for projects previously identified for 2017 to 2022, which have been moved to this program.   |        |
| <b>TOTAL Change</b>                                   | <b>\$551</b>                    |  |        |

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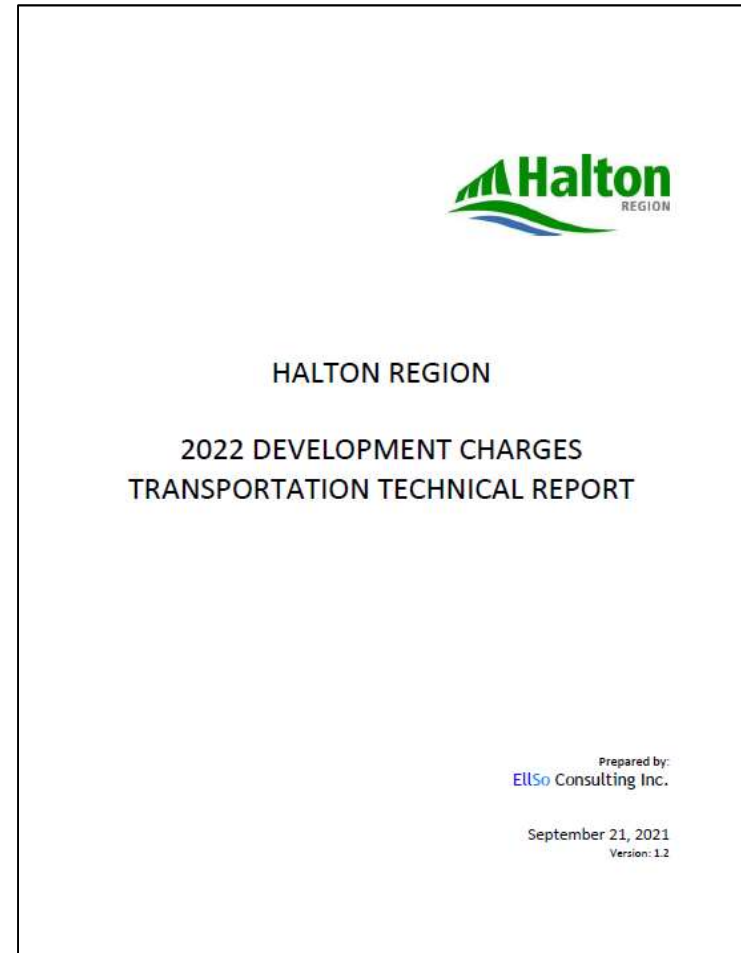
# TRANSPORTATION TECHNICAL REVIEW



# Transportation Technical Review

**Technical Review of the transportation network and projects per the 2011 TMP was completed by:**

- Updating the transportation demand forecasting model with current travel pattern characteristics (2016 TTS & 2016 Census).
- Validating the long-range Transportation Capital Implementation Plan to 2031.
- Updating project costing, including:
  - land unit rates using market-based information which were applied to the historical land use categories set out in the 2012 Development Charge Technical Study;
  - apportioning of the capital costs by Growth/Non-Growth and Residential/Non-Residential shares.



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# Review Results

**The results of the Technical Review were incorporated into the 2022 Development Charges Transportation Technical Report. The main outcomes were:**

- Updated travel forecasting outputs resulted in no change in capital project needs.
- Minor Reprogramming of Transportation Capital Projects.
- Updated Capital Project Costs, including apportioning of the capital costs by Growth/Non-Growth and Residential/Non-Residential shares.
- No increase in Level of Service, Quantity and Quality by 2031.

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# Transportation Project Reprogramming

2022 Development Charges Transportation Technical Study:

- includes projects from the 2020 Allocation Program that were reprogrammed to post-2022
- reviewed the program and phasing of projects from 2023 to 2031 holistically with a focus on timing and sequential delivery of projects across each corridor

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# 2023 – 2031 PROGRAM COSTS TRANSPORTATION

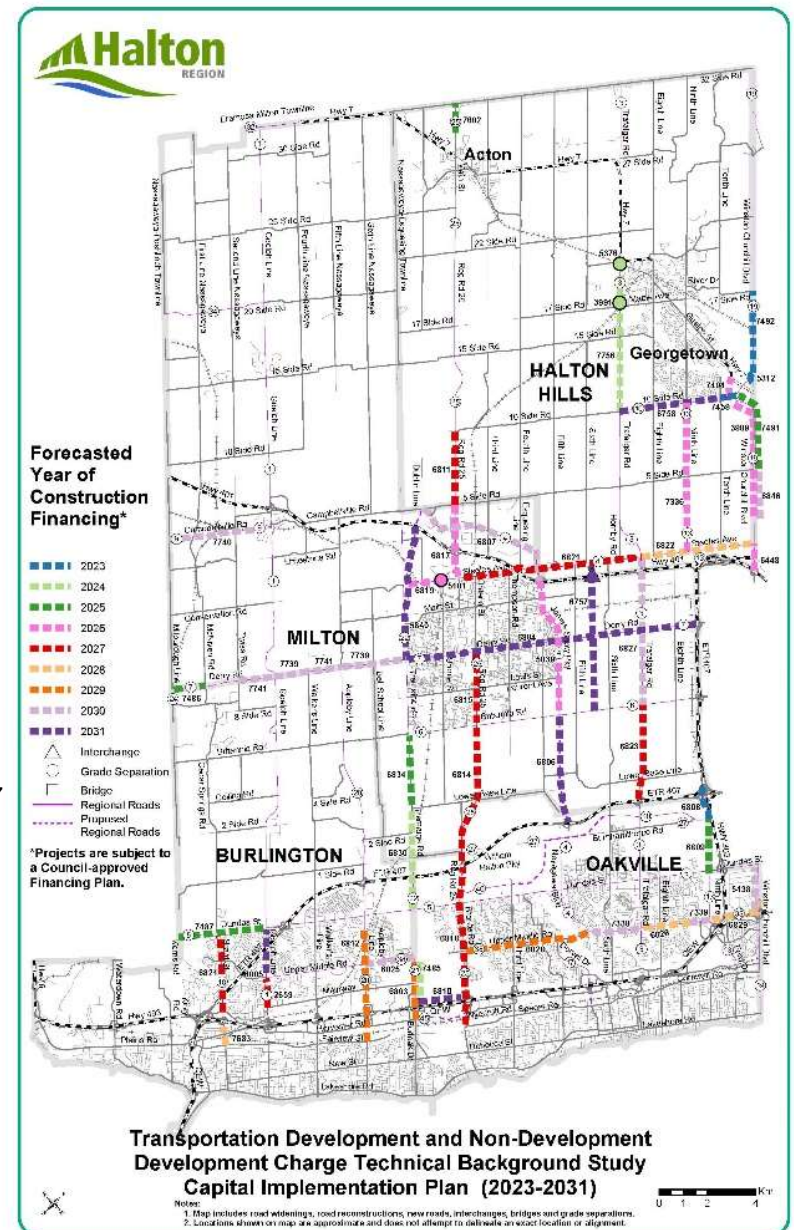


# Transportation Capital Program (2023 to 2031)

## Significant Transportation Projects (2023-2031) include:

- **"5 1/2 Line"** - New six lane road from Britannia Road to Steeles Avenue and Interchange at Highway 401
- **Derry Road** - Widening from four to six lanes from Tremaine Road to Highway 407
- **North Service Road** - New four lanes from Burloak Drive to Bronte Road
- **James Snow Parkway** - Widening from four to six lanes from Highway 401 to Tremaine Road
- **Tremaine Road** - Widening from four to six lanes from Highway 401 to Derry Road
- **James Snow Parkway** - New six lane road from Highway 407 to Britannia Road
- **Bronte Road** - Widening from four to six lanes from Speers Road to Highway 407
- **Steeles Avenue** - Widening from four to six lanes from Regional Road 25 to Trafalgar Road
- **Trafalgar Road** - Widening from four to six lanes from Britannia Road to Steeles Avenue
- **Appleby Line** - Widening from four to six lanes from Fairview Street to Taywood Drive
- **The Transportation Development and Non-Development Capital Program ~ \$2.44B (2022\$)**

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# 2023-2031 Cost Comparison

| Transportation Costs<br>2023 to 2031                  | Per 2022<br>Technical<br>Report | Per 2017<br>Development<br>Charges<br>Background<br>Study  | Change  |
|---|---------------------------------|--|---------|
| Total Program Cost (\$millions)                       | \$2,441                         | \$1,267  | \$1,174 |
| <b>Drivers for Increase:</b>                          |                                 |  |         |
| Revised Cost Estimate                                 | \$508                           | To reflect current unit rates (including land acquisition).  |         |
| Municipal Class Environmental Assessment Study/Design | \$7                             | To reflect the results of Municipal Class Environmental Assessments Studies and Detailed Design.                     |         |
| Peel Region Projects (Winston Churchill Boulevard)    | \$16                            | Updated project costs for Halton's Share of road improvements.   |         |
| Reprogramming   | \$509                           | To reflect updated costs for projects previously identified for 2017 to 2022, which have been moved to this program. |         |
| Non-Growth  | \$134                           |  |         |
| <b>TOTAL Change</b>                                   | <b>\$1,174</b>                  |  |         |



# 3. Gross Cost to DC Recoverable Costs



# Gross Cost to DC Recoverable Cost Water and Wastewater (\$000's)

| Category                                 | Gross Cost<br>2023-2031 | Less                |                           | Net Growth        | Residential       | Non<br>Residential |
|--|-------------------------|---------------------|---------------------------|-------------------|-------------------|--------------------|
|  |                         | Non-Growth<br>(BTE) | Post<br>Period<br>Benefit |                   |                   |                    |
| <b>Capacity</b>                          |                         |                     |                           |                   |                   |                    |
| Treatment/Plants                         | \$ 322,715              | \$ 65,054           | \$ 24,549                 | \$ 233,112        | \$ 177,166        | \$ 55,946          |
| Pumping Stations/Reservoir               | 75,507                  | 47,425              | -                         | 28,082            | 21,342            | 6,740              |
| Major Trunk                              | 32,137                  | 29,887              | -                         | 2,250             | 1,710             | 540                |
| Studies                                  | 6,280                   | -                   | -                         | 6,280             | 4,780             | 1,500              |
| Sub-total                                | \$ 436,639              | \$ 142,366          | \$ 24,549                 | \$ 269,724        | \$ 204,998        | \$ 64,726          |
| <b>Other Distribut'n &amp; Collect'n</b> | 734,180                 | 44,742              | 46,888                    | 642,550           | 469,640           | 172,910            |
| <b>Total</b>                             | <b>\$ 1,170,819</b>     | <b>\$ 187,108</b>   | <b>\$ 71,437</b>          | <b>\$ 912,274</b> | <b>\$ 674,638</b> | <b>\$ 237,636</b>  |

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# Gross Cost to DC Recoverable Cost Water and Wastewater (\$millions)

| Service      | Residential Share |                                 |                                  |                 | Non-residential Share |                                 |                                  |                 |
|--------------|-------------------|---------------------------------|----------------------------------|-----------------|-----------------------|---------------------------------|----------------------------------|-----------------|
|              | Capacity          | Distrb'n /Collct'n - Greenfield | Distrb'n /Collct'n - Built bndry | Total           | Capacity              | Distrb'n /Collct'n - Greenfield | Distrb'n /Collct'n - Built bndry | Total           |
| Water        | \$ 139.8          | \$ 226.8                        | \$ 7.3                           | \$ 373.9        | \$ 44.1               | \$ 83.9                         | \$ 1.5                           | \$ 129.5        |
| Wastewater   | 65.2              | 213.5                           | 22.1                             | 300.8           | 20.6                  | 83.0                            | 4.5                              | 108.1           |
| <b>Total</b> | <b>\$ 205.0</b>   | <b>\$ 440.3</b>                 | <b>\$ 29.4</b>                   | <b>\$ 674.6</b> | <b>\$ 64.7</b>        | <b>\$ 166.9</b>                 | <b>\$ 6.0</b>                    | <b>\$ 237.6</b> |

\*may not add due to rounding

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# Water/Wastewater Cost Allocations

## Benefit to Existing

- Principles applied to calculating Benefit to Existing (BTE) are consistent with the 2017 DC.
- BTE considers benefits to existing service areas by growth driven projects. These growth projects may also:
  - Address existing deficiencies in the system;
  - Provide redundancy/security of supply;
  - Provide additional capacity required for existing users;
- **Total BTE equal to ~\$187 M (~16% of total cost)**



# Water/Wastewater Cost Allocations

## Post Period Benefit

- Principles applied to allocating Post Period Benefit (PPB) are consistent with the 2017 Development Charges Background Study.
- PPB considers:
  - Additional cost to install oversized infrastructure (linear, pumping storage, treatment) that will provide capacity for growth beyond 2031.
- **Total PPB equal to ~\$71 M (~6% of total cost)**

# Water Cost Allocation Res vs. Non-Res Share

|                     | Incremental<br>(Pop/Emp) Growth | Projected Increase in Water<br>Demand (2021 to 2031) (ML/D) | 2022 DC Bylaw Update<br>Percentage |
|---------------------|---------------------------------|---|------------------------------------|
| <b>Capacity</b>     |                                 |   |                                    |
| Region-Wide         |                                 |   |                                    |
| Residential         | 129,788                         | 65.3  | 76%                                |
| Non-Residential     | 48,556                          | 20.8  | 24%                                |
| Total               | 178,344                         | 86.1  | 100%                               |
| <b>Distribution</b> |                                 |   |                                    |
| Greenfield          |                                 |   |                                    |
| Residential         | 85,983                          | 43.3  | 73%                                |
| Non-Residential     | 38,248                          | 16.4  | 27%                                |
| Total               | 124,231                         | 59.6  | 100%                               |
| Built Boundary      |                                 |   |                                    |
| Residential         | 43,805                          | 22.1  | 83%                                |
| Non-Residential     | 10,308                          | 4.4   | 17%                                |
| Total               | 54,113                          | 26.5  | 100%                               |

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# Wastewater Cost Allocation

## Res vs. Non-Res Share

|                     | Incremental<br>(Pop/Emp) Growth | Projected Increase in Wastewater<br>Generation (2021 to 2031) (ML/D) | 2022 DC Bylaw Update<br>Percentage |
|---------------------|---------------------------------|--|------------------------------------|
| <b>Capacity</b>     |                                 |  |                                    |
| Region-Wide         |                                 |  |                                    |
| Residential         | 129,788                         | 46.7   | 76%                                |
| Non-Residential     | 48,556                          | 15.1   | 24%                                |
| Total               | 178,344                         | 61.8   | 100%                               |
| <b>Distribution</b> |                                 |  |                                    |
| Greenfield          |                                 |  |                                    |
| Residential         | 85,983                          | 31.0   | 72%                                |
| Non-Residential     | 38,248                          | 11.9   | 28%                                |
| Total               | 124,231                         | 42.8   | 100%                               |
| Built Boundary      |                                 |  |                                    |
| Residential         | 43,805                          | 15.8   | 83%                                |
| Non-Residential     | 10,308                          | 3.2  | 17%                                |
| Total               | 54,113                          | 19.0   | 100%                               |

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# Transportation Capital Cost (\$ 000's)

| Category                     | Gross Cost<br>2023 - 2031 | Less:               |                            | Net Cost            | Res.                | Non Res           |
|------------------------------|---------------------------|---------------------|----------------------------|---------------------|---------------------|-------------------|
|                              |                           | Non-Growth<br>(BTE) | Post<br>Planning<br>Period |                     |                     |                   |
| Road Reconstruction          | \$ 47,140                 | \$ 41,835           | \$ -                       | \$ 5,305            | \$ 3,396            | \$ 1,909          |
| Road Widening                | 1,402,344                 | 162,067             | 143,910                    | 1,096,367           | 701,677             | 394,690           |
| Reconstruction with Widening | 288,312                   | 39,224              | 7,803                      | 241,285             | 154,419             | 86,866            |
| New Alignment                | 448,565                   | 7,339               | 86,293                     | 354,933             | 227,158             | 127,775           |
| Structures/Grade Separation  | 74,369                    | 7,250               | -                          | 67,119              | 42,955              | 24,164            |
| Studies/Other                | 180,349                   | 142,320             | -                          | 38,029              | 24,332              | 13,697            |
| <b>Total</b>                 | <b>\$ 2,441,079</b>       | <b>\$ 400,035</b>   | <b>\$ 238,006</b>          | <b>\$ 1,803,038</b> | <b>\$ 1,153,937</b> | <b>\$ 649,101</b> |

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# Transportation Cost Allocations

## Benefit to Existing

- Principles applied to calculating Benefit to Existing (BTE) are consistent with the 2012 & 2017 DC Study
- Benefit to Existing in road widening with reconstruction considers:
  - Residual value in existing roads, as determined under PSAB (Road widening/reconstruction)
  - Safety benefit at railway grade separations
  - Enhanced service by new intersection signals and studies
- Total BTE amounts to \$400M (16% of gross cost)

# Transportation Cost Allocations

## Benefit to Existing (\$ Millions) Continued

Road Widening

|                    |   |           |
|--------------------|---|-----------|
| ID                 | 6804  |           |
| Description        | Derry Road - Widening from 4 to 6 lanes from Tremaine Road to Highway 407 |           |
| Construction Year  | 2031  |           |
| Project Cost (\$M) |   | \$ 132.21 |

**BTE Calculation:**

**BTE of Resurfacing on Existing Lanes**

|     |   |          |          |
|-----|---|----------|----------|
| (1) | Project Length (km)                           | 12.2     |          |
| (2) | Mill & Pave Benchmark - \$M/km                | \$ 1.40  |          |
| (3) | Resurfacing Cost (1)x(2)                      |          | \$ 17.08 |
| (4) | Net Book Value of Asset                       | \$ 68.32 |          |
| (5) | Residual Value in Construction Year           | \$ 34.16 |          |
| (6) | BTE % - (1)-(5)/(4)                           |          | 50%      |
| (7) | Existing Pavement Value and Deduction (3)x(6) |          | \$ 8.54  |

**BTE of Other Component**

|      |  |         |         |
|------|--|---------|---------|
| (8)  | Intersection & Existing Signal Modifications         | \$ 8.52 |         |
| (9)  | Intersection & Existing Signal Modifications - BTE % | 50%     |         |
| (10) | BTE (8)x (9)   |         | \$ 4.26 |
| (11) | Off Road Active Transportation                       | \$ 3.39 |         |
| (12) | Active Transportation - BTE%                         | 10%     |         |
| (13) | BTE (11)x(12)  |         | \$ 0.34 |

|                                      |          |
|--------------------------------------|----------|
| <b>Total BTE (7)+(10)+(13)</b>       | \$ 13.14 |
| <b>BTE % Over Total Project Cost</b> | 10%      |

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# Transportation Cost Allocations

## Post Period Benefit

- Allocation method of Post Period remains unchanged from the 2008 / 2012 / 2017 DC Studies
- Post Period Benefit considers:
  - Capacity that will benefit growth beyond 2031
  - Volume over Capacity ratio to determine the excess capacity created by road improvements in the last five years of planning horizon (2026 - 2031)
- Total Post Period Benefit cost amounts to \$238M (10% of gross cost)



# Post-Planning Period Capacity

- Transportation Example Calculation:
  - Project “A”: road widening starting 2029
  - From model runs for 2031:
    - road link v/c = 0.75
    - v/c on the associated screenline = 0.85
  - Road is operating better than Screenline
  - Therefore have excess capacity at road level
  - The deduction applied to Project “A” per Equation 12 in report is 12%:

$$\frac{0.85 - 0.75}{0.85} \times 100 = 12\%$$

# Transportation Cost Allocations Res vs. Non-Res Share

| Category        | BPE                 |                     |                                    | Demand  |     |
|-----------------|---------------------|---------------------|------------------------------------|---------|-----|
|                 | 2021<br>(pop, empl) | 2031<br>(pop, empl) | 2021-2031<br>Growth<br>(pop, empl) | Trips   | %   |
| Residential     | 624,094             | 752,53              | 128,443                            | 74,423  | 64  |
| Non Residential | 327,683             | 390,000             | 49,430                             | 43,229  | 36  |
| Total:          |                     |                     |                                    | 117,652 | 100 |

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# Retail/ Non-Retail Trip Rate

| (1)<br>Category   | (2)<br>Rate <sup>1</sup> | (3)<br>Transit/ Pass-<br>By Trip<br>Reduction | (4)<br>Net Rate<br>(Auto)<br><br>(100%-3) x (2) | (5)<br>Category<br>Weight <sup>2</sup> | (6)<br>Trip Gen. X<br>GFA Weight<br><br>(4x5) |
|---|--------------------------|---|---|--|---|
| <b>Retail</b>   |                          |   |   |  |   |
| Retail Trade (eg. Shopping Centre)  | 4.50                     | 10%   | 4.05  | 48%                                    | 1.93  |
| Finance & Insurance (eg. Bank and Financial Office)                         | 3.48                     | 13%   | 3.03  | 11%                                    | 0.35  |
| Entertainment/Recreation (eg. Cinemas, fitness, recreation)                 | 6.40                     | 0%  | 6.40  | 7%                                     | 0.45  |
| Food Services (eg. Restaurant, fast food)                                   | 19.53                    | 54%   | 8.94  | 22%                                    | 1.99  |
| Other Services (eg. auto care/personal services)                            | 4.06                     | 4%  | 3.88  | 12%                                    | 0.45  |
| <b>Total Retail</b>   |                          |   |   |  | <b>5.17</b>                                   |
| <b>Non-Retail</b>   |                          |   |   |  |   |
| Industrial (eg. Light, Warehouse, Manufacturing)                            | 0.90                     | 0%  | 0.89  | 91%                                    | 0.82  |
| Institutional (eg. Schools, Community centres, hospitals, place of worship) | 3.26                     | 21%   | 2.58  | 1%                                     | 0.03  |
| Office (eg. general office, medical office)                                 | 2.05                     | 16%   | 1.73  | 7%                                     | 0.13  |
| Accommodation (eg. hotel/motel)   | 0.76                     | 0%  | 0.76  | 0%                                     | 0.00  |
| <b>Total Non-Retail</b>   |                          |   |   |  | <b>0.98</b>                                   |

May not add due to rounding

<sup>1</sup> Derived from Institute of Transportation Engineers Trip Generation Manual

<sup>2</sup> Weighting derived from Halton Region Employment Survey

# Retail/ Non-Retail Splits

|            | (1)        | (2)                | (3)                        | (4)     |
|------------|------------|--------------------|----------------------------|---------|
| Category   | Sq. Ft     | PM Peak Trip Rates | PM Peak Trips<br>(1) x (2) | % Trips |
| Retail     | 6,281,583  | 5.17               | 32,461,889                 | 27%     |
| Non-Retail | 88,834,161 | 0.96               | 85,590,726                 | 73%     |
| Total      | 95,115,744 |                    | 118,052,615                | 100%    |

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# 3. DC Calculation



# W/WW Calculation Inputs (\$000's)

| Costs                             | Residential       | Non-Residential   | Comments   |
|-----------------------------------|-------------------|-------------------|--|
| Reserve Fund Balance              | \$ (0)            | \$ -              | Projected 2021 year-end balances   |
| Unfunded Capital Costs            | 75,304            | 93,492            | Remaining expenditures in the 2012 and 2020 Allocation program   |
| 2012 Allocation Front End Payment | (31,685)          |                   | Front end payment for from remaining expenditures in 2012 Allocation program   |
| Internal Debt                     | -                 | 287,469           | Regional Interim Financing to be recovered up to 2021  |
| External Debt Charges             | 83,476            | 38,739            | Outstanding debt charge for projects proceeded or approved up to 2021 (e.g. Sinking fund for employment land servicing, Skyway WWTP) |
| DC Credits                        | -                 | 5,237             | Remaining DC credits relating to S. 14 of the DC Act and developer up-front financing provided under CS-52-03.                       |
| Oversizing - Historic             | 10,736            | 6,001             | Oversizing costs carried from previous DC Studies  |
| Net Growth Cost                   | 674,638           | 237,636           |  |
| Interest/Inflation                | (948)             | 24,127            | Assumed 2.0% inflation, 3.0% interest  |
| <b>Total</b>                      | <b>\$ 811,520</b> | <b>\$ 692,700</b> |  |

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# W/WW DC's

## Summary of Calculation Results - Per SDE

| Service      | As of April 1, 2021 |                 | New Calculated   |                  | Difference       |                 |
|--------------|---------------------|-----------------|------------------|------------------|------------------|-----------------|
|              | Greenfield          | Built Boundary  | Greenfield       | Built Boundary   | Greenfield       | Built Boundary  |
| Water        | \$ 8,689            | \$ 3,144        | \$ 12,276        | \$ 4,503         | \$ 3,587         | \$ 1,360        |
| Wastewater   | 10,276              | 4,535           | 17,261           | 5,718            | 6,985            | 1,182           |
| <b>Total</b> | <b>\$ 18,965</b>    | <b>\$ 7,679</b> | <b>\$ 29,537</b> | <b>\$ 10,221</b> | <b>\$ 10,571</b> | <b>\$ 2,542</b> |

\*may not add due to rounding

## Summary of Calculation Results - Per Sq. Ft

| Service      | As of April 1, 2021 |                 | New Calculated  |                 | Difference      |                 |
|--------------|---------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|              | Greenfield          | Built Boundary  | Greenfield      | Built Boundary  | Greenfield      | Built Boundary  |
| Water        | \$ 3.166            | \$ 1.229        | \$ 3.897        | \$ 1.340        | \$ 0.731        | \$ 0.111        |
| Wastewater   | 4.060               | 2.004           | 5.245           | 2.053           | 1.185           | 0.049           |
| <b>Total</b> | <b>\$ 7.226</b>     | <b>\$ 3.233</b> | <b>\$ 9.142</b> | <b>\$ 3.393</b> | <b>\$ 1.916</b> | <b>\$ 0.160</b> |

\*may not add due to rounding



# Roads Calculation Inputs (\$000's)

| Costs                  | Residential         | Non-Residential     | Comments  |
|------------------------|---------------------|---------------------|---|
| Reserve Fund Balance   | \$ (9)              | \$ 0                | Projected 2021 year-end balances                      |
| Unfunded Capital Costs | 84,647              | 47,436              | Remaining expenditures in the 2020 Allocation program |
| Internal Debt          | -                   | 327,970             | Regional Interim Financing to be recovered up to 2021 |
| DC Credits             | -                   | 145                 | Remaining DC credits relating to S. 14 of the DC Act. |
| Oversizing - Historic  | 2,374               | 1,726               | Oversizing costs carried from previous DC Studies     |
| Net Growth Cost        | 1,153,937           | 649,101             |   |
| Interest/Inflation     | (6,690)             | 25,554              | Assumed 2.0% inflation, 3.0% interest                 |
| <b>Total</b>           | <b>\$ 1,234,260</b> | <b>\$ 1,051,931</b> |   |

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# Roads DC's

## Summary of Calculation Results - Per SDE

| Service | As of April 1, 2021 | New Calculated | Difference |
|---------|---------------------|----------------|------------|
| Roads   | \$ 19,284           | \$ 30,366      | 11,081     |

\*may not add due to rounding

## Summary of Calculation Results - Per Sq. Ft

| Service | As of April 1, 2021 |           | New Calculated |           | Difference |           |
|---------|---------------------|-----------|----------------|-----------|------------|-----------|
|         | Non-Retail          | Retail    | Non-Retail     | Retail    | Non-Retail | Retail    |
| Roads   | \$ 5.978            | \$ 30.279 | \$ 8.585       | \$ 46.049 | \$ 2.607   | \$ 15.770 |

\*may not add due to rounding

# Retail/ Non-Retail Splits

|            | (1)        | (2)                | (3)                        | (4)     | (5)   | (6)                       |
|------------|------------|--------------------|----------------------------|---------|---|---------------------------|
| Category   | Sq. Ft     | PM Peak Trip Rates | PM Peak Trips<br>(1) x (2) | % Trips | Revenue<br>(Uninflated)<br>(Total Revenues x (4)) | <b>\$DC<br/>(5) / (1)</b> |
| Retail     | 6,281,583  | 5.17               | 32,461,889                 | 27%     | \$ 289,258,056                                    | <b>\$ 46.05</b>           |
| Non-Retail | 88,834,161 | 0.96               | 85,590,726                 | 73%     | 762,673,010                                       | <b>\$ 8.59</b>            |
| Total      | 95,115,744 |                    | 118,052,615                | 100%    | \$ 1,051,931,066                                  |                           |

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# Thank you Questions?



