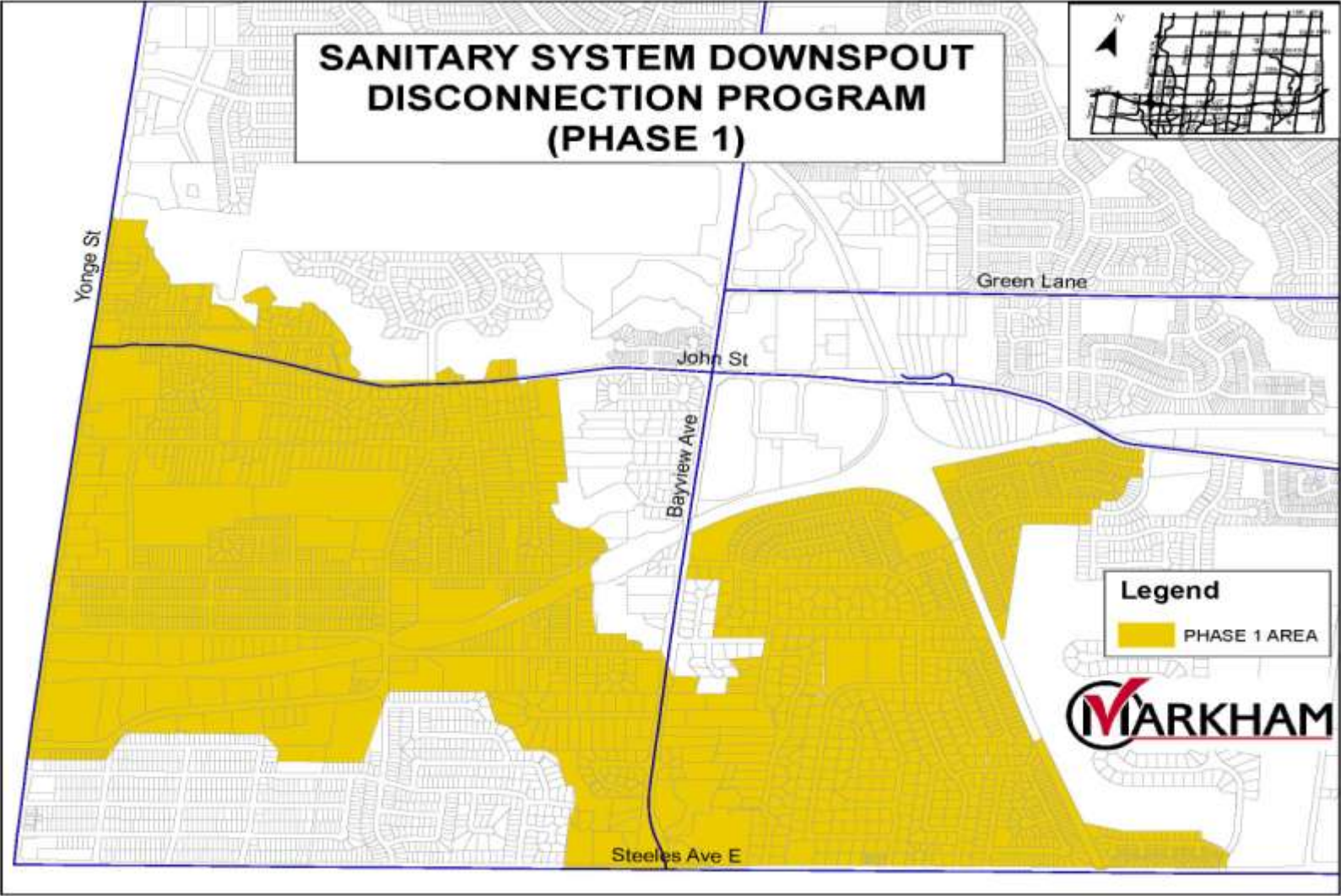
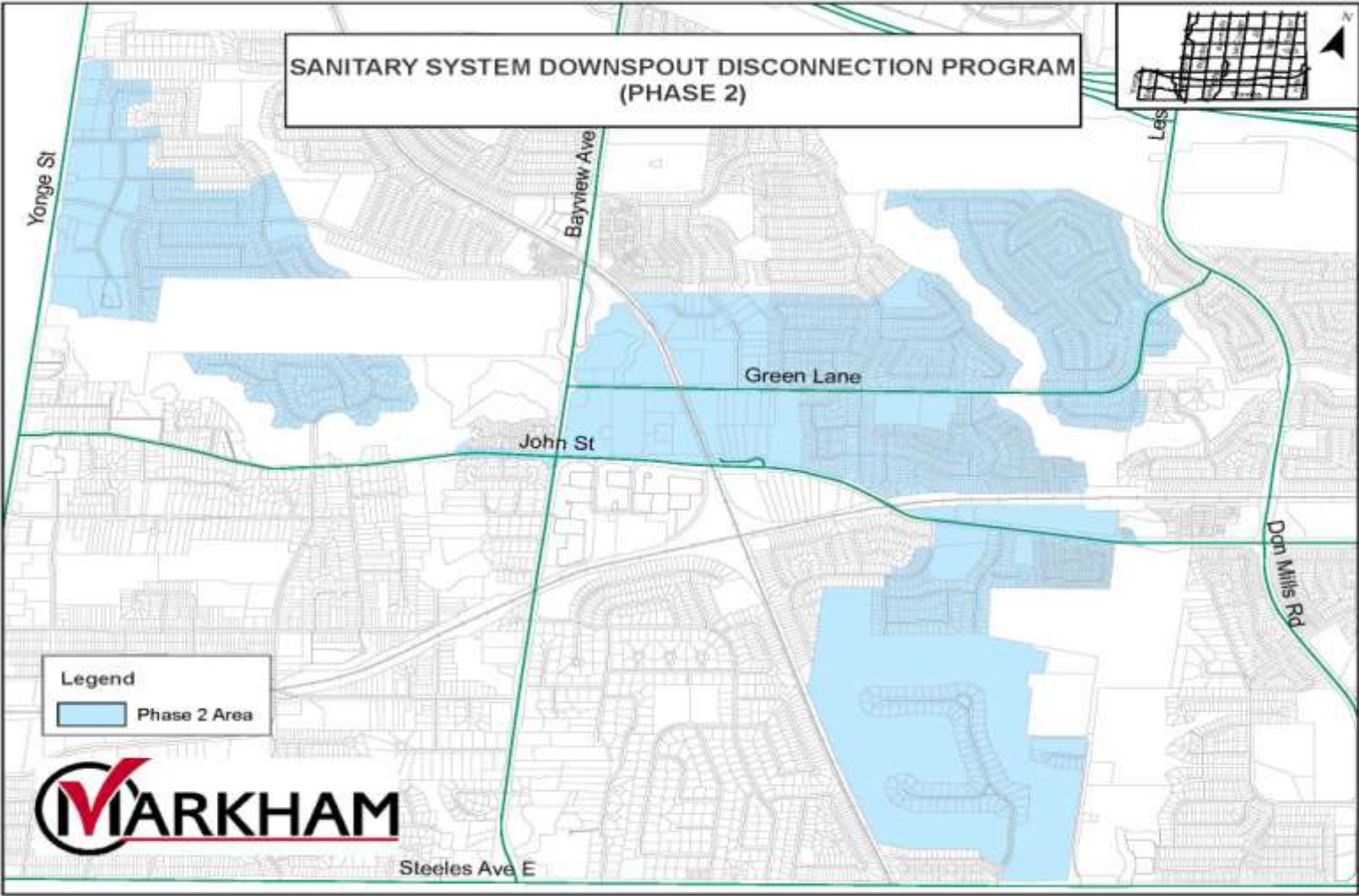


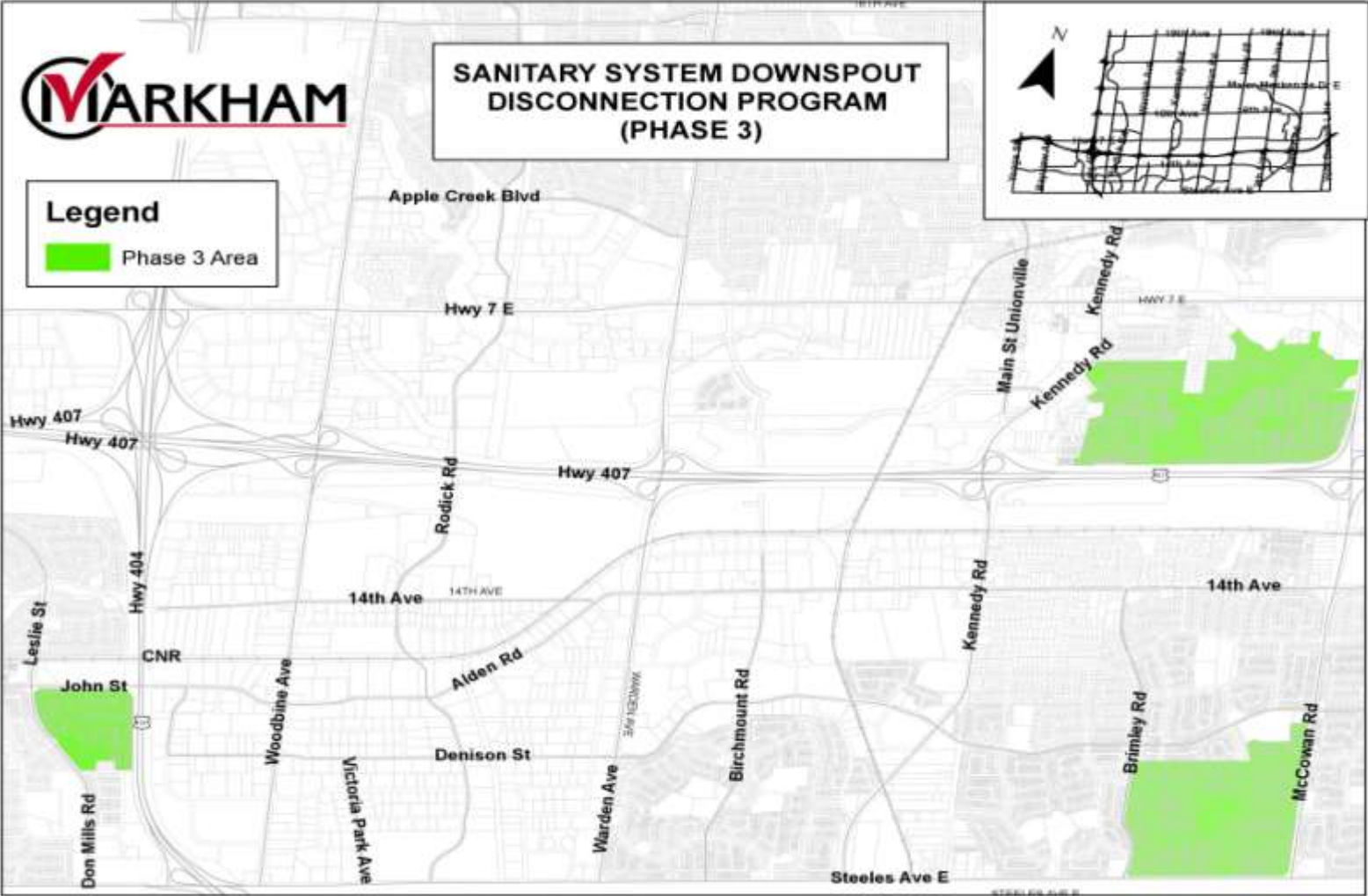
ATTACHMENT A



ATTACHMENT B

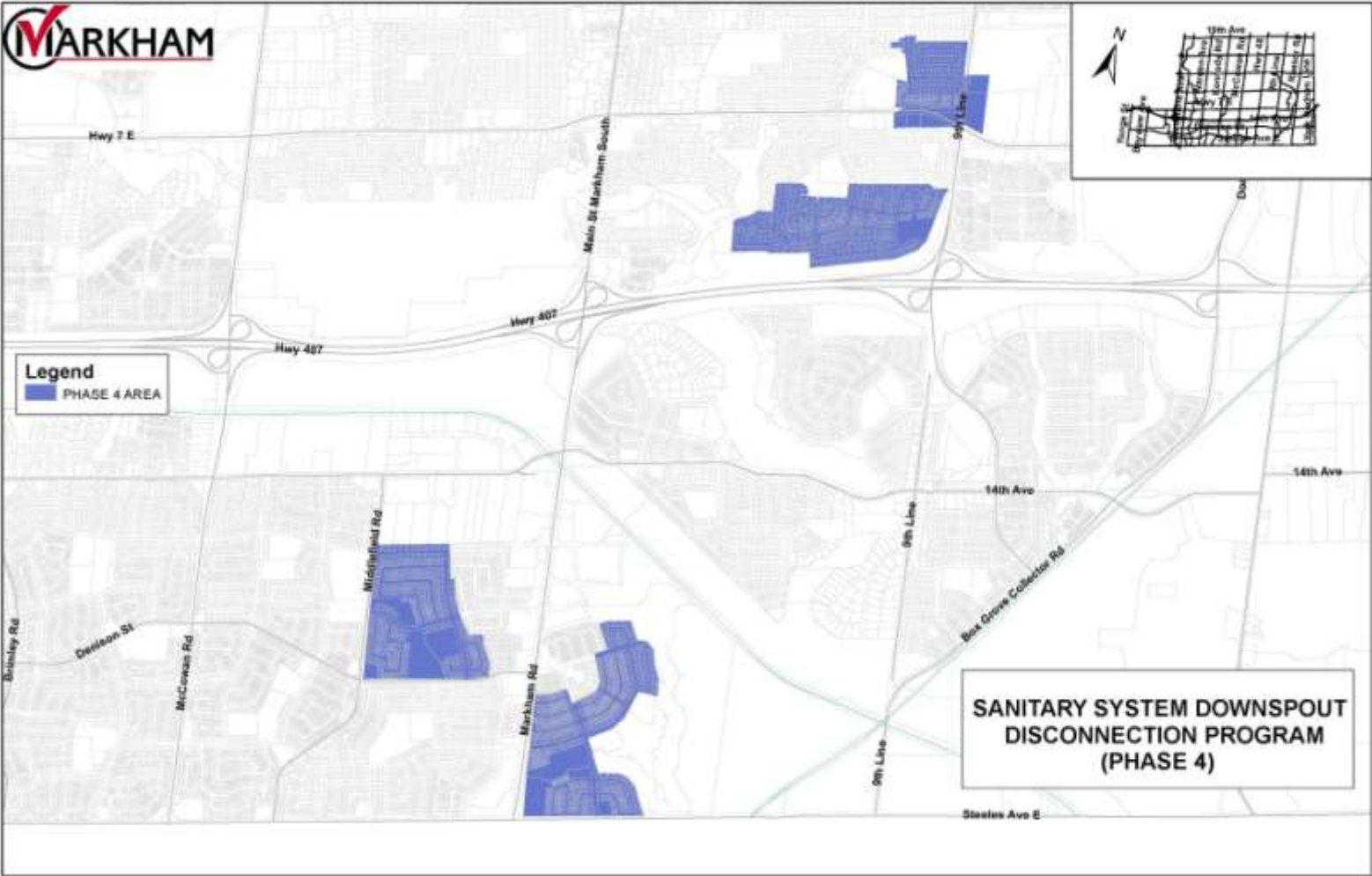


ATTACHMENT C

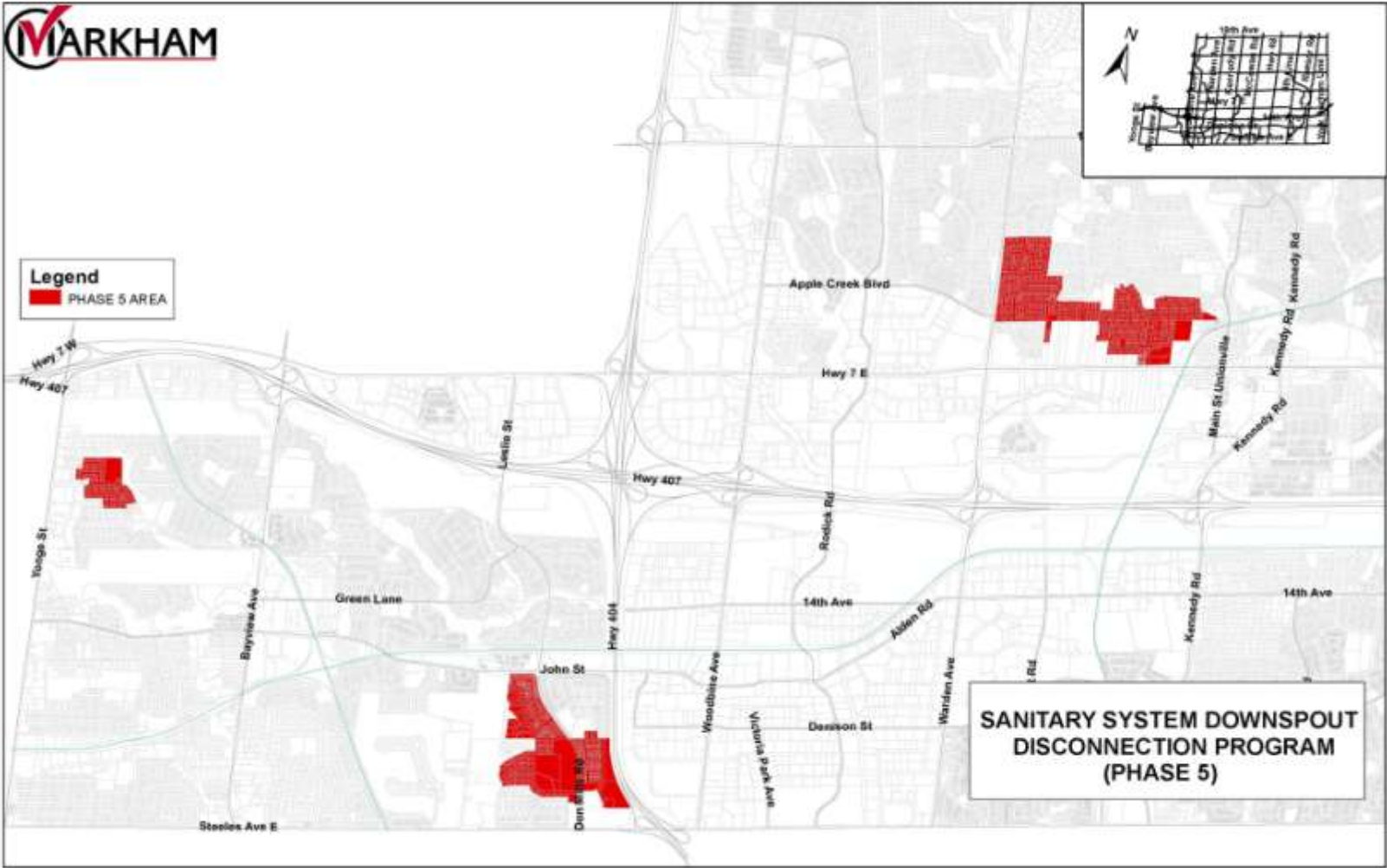




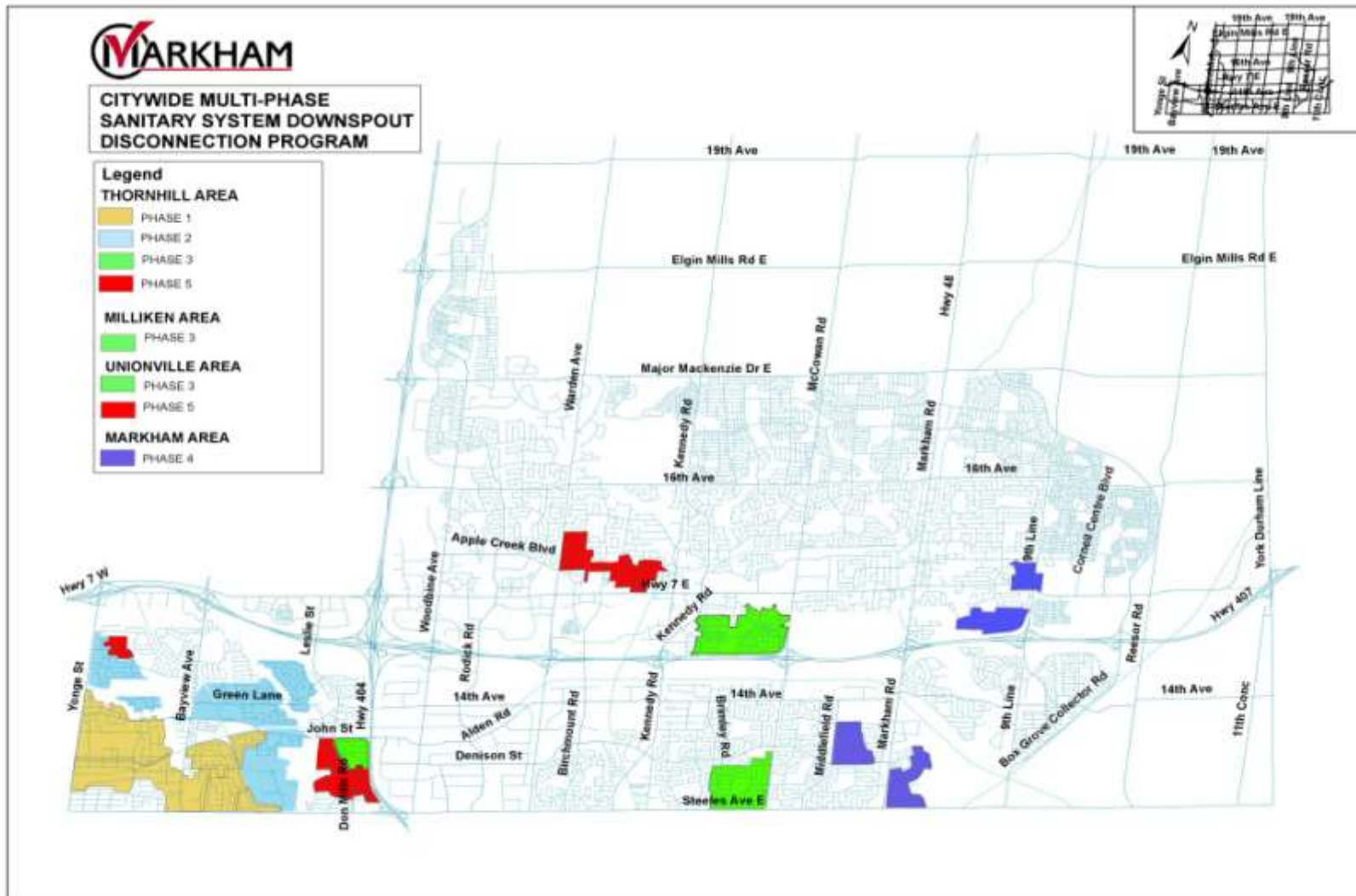
ATTACHMENT D



ATTACHMENT E



## ATTACHMENT F



## ATTACHMENT G

### **DOWNSPOUT DISCONNECTION PROGRAM – PHASE 5 COMMUNICATIONS STRATEGY:**

The Communications Strategy will make available a number of resources for the public to assist in addressing questions they may have regarding the City's Multi-phase Downspout Disconnection Program, the potential impact to homeowners and details of the financial assistance program, particularly in the Phase 5 areas.

The Communications Strategy will, among other things, provide the Mayor, Council and Markham Residents with regular updates program progress and promote increased awareness of what all residents living in areas of Markham identified for participation in this program;

- **Provide residents with resources that explain:**
  - What the Multi-phase Downspout Disconnection Program is all about
    - What is going to happen, why and when
    - Financial assistance to homeowners
  - Who may be impacted
  - Area designated for Phase 5
  - Importance of protecting the City's sanitary sewer system
  - Benefits of disconnecting or redirecting downspouts to
    - Lawn
    - Garden
    - Rain barrel
  - How-to information to assist residents in the downspout disconnection process
- **Advise residents of what Markham is currently doing**
  - Pilot project undertaken and related results
  - Investigation/testing steps taken by the City
    - Lot survey
    - Smoke test
  - Program progress
- **Targeted contact with impacted homeowners** – letters/newsletters/ brochures for distribution to homeowners with downspouts connected to the City sanitary sewer system – what, how, why, when
- **Leverage portal to allow residents to:**
  - Obtain information/updates on the Program phases, current status, planned next steps and results.
  - Find resources to assist with downspout disconnection and rain barrel acquisition.
  - Apply for Downspout Disconnection Program Financial Assistance.
  - Get answers to frequently asked questions
- **Social media** – Twitter, Facebook, YouTube to share information updates and drive residents to markham.ca for details - *ongoing*
- **Article(s) in Markham Life magazine that provide information and updates** – *ongoing*
- **Advertising on Markham city pages / other print media outlets** – inform & drive residents to markham.ca and social media sites for more information
- **EIBs**
- **Councillor newsletter articles(s)** – as required

## ATTACHMENT H

### Financial Breakdown for Identified Program Areas

Activities	Phase 1 (#11382)	Phase 2 (#14313)	Phase 3 (#15294)	Phase 4 (#16238)	Phase 5
	Thornhill	Thornhill	Thornhill, Unionville & Milliken	Markham	Thornhill & Unionville
	Actual Expenditure (Account closed in 2015)	Actual Expenditure (as per end of 2016 – Account to be close in 2017))	Actual Expenditure (as per end of 2016)	Actual Expenditure (as per end of 2016)	2017 Approved Budget
Public Communication and Education	\$824	\$2,387	\$845	\$839	\$18,724
Site investigation	\$130,101	\$118,612	\$75,825	\$70,631	\$98,198
Financial Assistant Plan: Downspout Disconnection & Rain Barrel	\$0 (Covered under Phase 2 Project Account #14313)	\$6,418 (Phase 1 Assistant - \$2,509; Phase 2 Assistant - \$3,909)	\$0 (Commenced in 2016)	\$0 (Commence in 2017)	\$47,624
Flow Monitoring Program	\$0 (Perform under Sanitary Flow Monitoring Project #14300)	\$5,767	\$0 (Perform under Flow Monitoring Program)	\$0 (Perform under Flow Monitoring Program)	\$0 (Perform under Flow Monitoring Program)
Total Project Spend (Incl. HST)	\$130,925	\$133,184	\$76,670	\$71,470	\$164,546
Contingency (10%)					\$16,454
<b>Total Budget (incl. HST)</b>	<b>\$130,925</b>	<b>\$266,844</b>	<b>\$163,922</b>	<b>\$300,000</b>	<b>\$181,000</b>
<b>Total expenditure to date</b>	<b>\$130,925</b>	<b>\$133,184</b>	<b>\$76,670</b>	<b>\$71,470</b>	
<b>Remaining Budget Required</b>	<b>#11382 Account closed</b>	<b>Account to be closed in 2017</b>	<b>\$2,800</b>	<b>\$4,200</b>	
<b>Amount return to source</b>		<b>\$133,660</b>	<b>\$84,452</b>	<b>\$224,330</b>	

Note: The remaining budgets under Phase 3 & 4 are for the Financial Assistant Plan. The Phase 5 forecast is determined based on industrial standards and estimated percentages of properties that will require disconnection. The amount returning to source is a result elimination of water testing in the testing approach starting in Phase 2, the actual number of properties required downspout disconnection base on the test result is less than the original estimates and the flow monitoring program funded under a separate annual project.



## ATTACHMENT I

### Phase 1 to 4 Comparative Findings Summary

Description	Phase 1		Phase 2		Phase 3		Phase 4	
	No. of Locations	% of Properties	No. of Locations	% of Properties	No. of Locations	% of Properties	No. of Locations	% of Properties
<b>Total Properties Tested</b>	2,256	100%	2,827	100%	3,690	100%	2,305	100%
<b>Properties Passing I-I Test</b>	2,131	94%	2,544	90%	3,668	99.4%	2,186	94.8%
<b>Identified Problems (Private-side)</b>								
i. Downspouts direct connection to sanitary system	21	1%	70	3%	4	0.11%	6	0.3%
ii. Other I-I sources ( <i>driveway drains, stairwell drains, weeping tiles, sump pump, and etc connected to the sanitary system.</i> )	39	2%	7 * <sup>1</sup>	0.3% * <sup>4</sup>	12	0.3%	13	0.6% * <sup>4</sup>
iii. Lateral interactions between storm and sanitary systems	65	3%	215 * <sup>2</sup>	8% * <sup>4</sup>	6	0.16%	103 * <sup>3</sup>	4.5% * <sup>4</sup>
<b>Identified Problems (Public-side)</b>								
i. Other I-I sources ( <i>uncapped lateral cleanouts, damaged sanitary manholes, street catch basins, potential cross-connection, etc.</i> )	9	-	30	-	10	-	31	-

\*Note:

1. Within the 7 properties with “Other I-I sources”, 2 properties also have downspouts connected to the sanitary system.
2. Within the 215 properties with “Lateral interactions”, 7 properties also have downspouts connected to the sanitary system.
3. Within the 103 properties with “Lateral interactions”, 2 properties also has downspouts connected to the sanitary system and 1 property also has weeping tile indirectly connected to sanitary system.
4. The “% of Properties” under “Properties Passing I-I Test” and “Identified Problems (Private-side)” add up more than 100% is because some properties have has more than one problem as indicated in Note 1 - 4.