



Subdivision Assumption Guidance Manual

City of Guelph Engineering and Capital Infrastructure
Services

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Alternate formats are available as per the Accessibility for Ontarians with Disabilities Act by contacting Connie Constantino at 519-822-1260 extension 2384.

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- City of Hamilton
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- City of Ottawa
- City of Vaughan

1.0 Introduction and Applicability

Effective January 1, 2018 subdivisions in the City of Guelph (“the City”) can be designed and constructed using an assumption-based approach. The assumption-based approach is consistent with development industry practices in other municipalities and ultimately replaces the City’s model where the design and construction of subdivisions is tendered and managed by the City.

The purpose of this document is to provide City staff and the development community clarity regarding the assumption process, and to set forth the City’s expectations for the assumption of municipal assets.

1.1 Transition to Assumption

Subdivisions currently working under the City’s existing model may be eligible to transition to the assumption model depending on what stage the development is in.

Eligibility to Transition

Draft Plan Approval after January 1, 2018

Plans of Subdivision that are Draft Plan Approved by Council after January 1, 2018 will be constructed using an assumption-based approach.

Draft Plan Approval before January 1, 2018

Plans of Subdivision that received Draft Plan Approval prior to January 1, 2018 may be eligible to transition to the assumption model, at the request of the developer, depending on the stage of development. Transition for the Draft Plan Approved subdivisions is not mandatory and will be considered on a case-by-case basis. Subdivisions will not be eligible to transition if final approval for Plan registration has been received or if municipal services and road works have already been

tendered by the City. If a developer wishes to transition to assumption, they should contact the Supervisor of Development Engineering to begin the process.

1.2 Roles and Responsibilities

Following is an overview of the roles and responsibilities for the primary parties in the assumption model build out of a subdivision.

Developer – Owns the land; enters Subdivision agreement with the City; provides financial securities to City. Until assumption is complete, the developer must indemnify and save harmless the City from all actions, cause of actions, suits, claims and demands which may arise directly or indirectly by reason of any work undertaken by the developer. Prior to commencement of any construction, the developer shall file a certificate of commercial general liability insurance in the amount of \$10,000,000 showing the City as an additional insured. This insurance policy shall be kept in force by the developer until assumption. Any garbage collection, snow plowing, salting, sanding, turf mowing, planting maintenance, or any maintenance operations performed by the City will not constitute assumption and the developer absolves and indemnified the City from any and all loss or liability arising out of negligence of the City. The developer shall indemnify and save harmless the City against all claims as a result of negligence by the developer.

Engineering Consultant – Retained and compensated by developer responsible for design, construction contract administration, inspection on a full time basis (100% of the works), and certification of subdivision infrastructure. The subdivision engineering consultant must be a Professional Engineer that is licensed by Professional Engineering Ontario. The engineering consultant must carry at no expense to the City, professional liability insurance, general commercial liability insurance, and automobile insurance satisfactory to the City and naming the City as an additional insured; and provide evidence of such coverages to the City upon request. If applicable, the engineering consultant shall submit a valid Workplace Safety and Insurance Board clearance certificate of Workplace Safety Insurance Act coverage to the City upon request.

Contractor/Constructor – Retained and compensated by developer responsible for construction of subdivision infrastructure per City of Guelph Standard Specifications. Contractors must carry, at no expense to the City, appropriate insurance coverage, satisfactory to the City. All required insurance policies shall name the City as an additional insured, and the Contractor/Consultant shall provide evidence of such coverage to the City upon request.

City – Ensures design and construction meets City requirements, including, but not limited to: roads, sidewalks, street trees, storm sewers, sanitary sewers, watermains, Stormwater management (SWM) infrastructure, sewage pumping stations, parks, trails, and lot grading.

2.0 Assumption Process Overview

An overview of the City's assumption process is provided in the attached Process Map. The assumption process consists of the following stages:

Following is a list of the high-level steps in the process (after Draft Plan Approval):

- Developer works to Satisfy Draft Plan Conditions
 - a) Optional Site Alteration Process for Pre-Grading and Optional Pre-Servicing (pre-servicing agreement required)
- Subdivision Agreement Executed and Registered
 - a) Leads to Registration of the Plan of Subdivision and Conveyances
 - b) Leads to Start of Construction (unless pre-servicing followed)
- Construct subdivision Works
 - a) Construct Stage 1A, 1B and Stage 2 Services (see definitions in Section 6.0)
- Preliminary Acceptance Certificates and Maintenance Periods
 - a) Includes inspection process and rectifying deficiencies
- Final Acceptance Certificate and Assumption
 - a) Assuming municipal infrastructure
 - b) Final accounting

The steps in the process are described in further detail in the following Sections.

3.0 Detailed Engineering Design Review

One of the typical engineering draft plan conditions requires the developer to prepare and submit detailed plans, reports, and designs. The required engineering design documents (reports, drawings, etc.) may include, but are not limited to:

- SWM Report/SWM & Servicing Report
- Hydrogeology Report
- Geotechnical Investigation Report
- Traffic Impact Study (TIS)
- Detailed Noise Study
- Environmental Site Assessment(s)
- Existing Condition and Removal Plan
- General Servicing Plan
- Storm Drainage Area Plan
- Sanitary Drainage Area Plan
- Plan and Profile of all Streets
- Lot Grading and Drainage Plans
- Storm and Sanitary Sewer Design Sheets
- SWM Pond Grading and Details Plan
- Geometric Road Design
- Erosion and Sediment Control Plans

- On Street Parking Plan
- Composite Utilities Plan
- Street Tree Planting Plan
- Utility Plan

Depending on the nature of the proposed development, additional studies and plans may be required by Engineering beyond those listed above. All plans, drawings, and reports prepared for the detailed design need to conform to the City's design standards.

Other City Departments also require plans and reports that have municipal works to be constructed, including, but not limited to, an Environmental Implementation Report and Landscape Plans.

3.1 Satisfying other Draft Plan Conditions

There are other notable Draft Plan Conditions that the developer will need to satisfy, including, but no limited to:

- The developer is required to enter into a Subdivision agreement with the City (see Section 4.0).
- There may be other agency conditions (e.g., GRCA, MNRF, MECP, etc.)

A complete list of conditions will be developed through the Draft Plan Approval process.

3.2 Pre-Grading and Pre-servicing

While an applicant is working to satisfy Draft Plan Conditions, it may be appropriate for the development to proceed with preliminary grading (pre-grading) work and, in some cases, preliminary servicing (pre-servicing).

3.2.1 Pre-Grading

Pre-grading is defined as commencement of any grading works for a subdivision prior to developer execution of a subdivision agreement.

The developer may make a request to grade the subdivision lands before the registration of the plan of subdivision has occurred. If the developer wishes to conduct pre-grading, they are required to follow the City's Site Alteration By-Law, the Tree By-Law, as well as fulfill any draft plan conditions that are required prior to grading work occurring. The Site Alteration by-law is administered by the City's development engineering team. The developer will be required to obtain a Site Alteration Permit and tree permit from the City prior to commencing any grading activities. These permits will inform the work, including environmental monitoring requirements or other requirements.

3.2.2 Pre-Servicing

Pre-servicing is defined as commencing construction of the subdivision works (Stage 1A, 1B, and 2) before the subdivision agreement is executed.

Guelph's assumption model is set up to allow for servicing to commence once the Subdivision agreement is executed and associated financial securities are paid.

However, there may be circumstances where execution of the agreement and payment of securities is being delayed by items that don't impact servicing, and in those cases, the City may consider allowing pre-servicing. If a developer wants to commence pre-servicing, the following minimum requirements must be met:

- Detailed Design is nearly complete and the remaining incomplete items are not relevant to servicing. This may include final version of the street tree plan, utility plan, final trail design items or other open space design items (such as wording for signage, locations of signs, rest stop locations), and the EIR is at the staff level to approve.
- The MECP Environmental Compliance Approvals (ECAs) for municipal infrastructure have been issued by the MECP.
- Insurance coverage satisfactory to the City as per 1.2 above, naming the City as an additional insured.
- Permit or approvals from external agencies such as GRCA.
- Site Alteration Permit
- Tree Permit

If a developer applies to the City for pre-servicing, the City will require that a pre-servicing agreement be entered into and that financial securities are provided. The pre-servicing agreement will detail the works to be constructed under the agreement, including any external works, as well as other conditions that may be applicable such as monitoring requirements to protect or restore the natural environment. The pre-servicing agreement will also be referenced the subdivision agreement, as appropriate. The financial securities required for pre-servicing will be less than the full securities required when the subdivision agreement is executed. The pre-servicing financial securities will include:

- A percentage of the estimated cost of the internal pre-servicing works to the satisfaction of the City Engineer (minimum 25%)
- 100% of the estimated cost of any off-site works and works on existing right of way
- 15% contingency
- 6% of the full estimated cost of pre-servicing works, including HST, as part of the City's Engineering Fee (with the remaining fee due at the time of subdivision agreement execution)
- 13% Harmonized Sales Tax (HST)

At the time the subdivision agreement is entered into (see Section 4.0), the City will require:

- 100% of the estimated cost of all works not yet constructed to the satisfaction of the City Engineer
- 15% contingency
- 13% HST

- The remaining 6% Engineering Fee for the remaining works.

Details regarding release of securities are provided in Section 8.2.

Note: Pre-servicing is at the developer's risk and is subject to requests for changes based on the City's review of incomplete items. All requested changes are at the developer's expense.

Pre-servicing approvals will expire after five (5) years of the issuance date for the works that have not been completed under the approval. The engineering consultant will be required to ensure any ECAs issued by the MECP are up to date.

4.0 Subdivision Agreement

Typically, one of the engineering conditions of Draft Plan Approval is that the developer to enter into a Subdivision agreement with the City. The Subdivision agreement contains such information as the developer's financial responsibilities, detail about easements and land conveyances to the City, requirements for building permits and covenants to be registered on title. When the detailed design is acceptable to City staff, the Subdivision agreement is prepared by engineering. A draft of the Subdivision agreement is circulated to other City Departments and then the draft is sent to the developer for review. When the Subdivision agreement is executed by the developer and mortgagee and the developer has provided the required financial security (see Section 4.1) as outlined in the Subdivision agreement, the Mayor and Clerk will execute the Subdivision agreement by way of Authorization By-law. The Subdivision agreement is then registered on title of the subdivision lands.

4.1 Financial Security and other Payments

The following is a list of typical Subdivision agreement financial securities and other payments that are to be provided to the City before the Subdivision agreement is executed:

- 100% of the estimated cost of the roads and servicing works internal to the subdivision boundary (for items not included under a pre-servicing agreement)
- 100% of the estimated cost of all works that are external to the plan of subdivision that are deemed to be the developer's responsibility (for items not included under a pre-servicing agreement)
- Parkland dedication and/or payment-in-lieu of parkland
- Street tree planting security
- EIR related securities
- Planning processing fee
- Environmental handbook fee
- Hard Services portion of the Development Charges for wastewater services, roads, storm drainage and waterworks
- 6% of the estimated cost of works as the City's Engineering Fee

Note: financial securities may vary if pre-servicing work has commenced.

5.0 Registration

Once the developer fulfills all of the conditions of Draft Plan approval, including having the Subdivision agreement is registered, an application can be made to the Planning Department for registration of the Plan of Subdivision. After registration, the lots, blocks and roadways are legally created, and any parcels to be dedicated to the City (e.g. parks, 0.3 metre reserves, open spaces) are transferred, and easements in favour of the City are conveyed. Registration of the plan of subdivision is required prior to application for a Building Permit (see Section 8.1).

6.0 Construction

To proceed with construction of subdivision works, the developer must apply to the City for approval to start work. As part of the application to proceed with construction, the City will require:

- All outstanding financial securities posted
- All engineering drawings and reports approved by the City
- Any agreements executed (pre-servicing or subdivision)
- Engineering Fees are paid
- Copies of any required permits
- Any letters of access permission from external landowners, where required
- MECP Environmental Compliance Approvals and Form 1 for Drinking Water Works Permit (DWWP)
- Any required insurance certificates
- Any other document the City may require

Once the City is satisfied with the application, it will issue a letter enabling the developer to proceed with some or all of Stage 1 (A and B) and Stage 2 servicing (depending on what has been applied for). At the start-up of construction, the developer will be required to post signage, including signs indicating "Road Not Assumed by the City – Use at Own Risk".

Stage 1A Services

- Area grading (if not pre-grading)
- Sanitary sewer complete with all appurtenances including connections to building lots
- Watermain complete with all appurtenances including hydrants and service connections to building lots
- Storm drains complete with all appurtenances including sewers, outlet sewers, weeping tile collector, infiltration galleries, open ditches, catchbasins, sediment basins, recharge and detention ponds
- Builder's road (built to Granular B and minimum 50 millimetres of Granular A)

- Temporary turning circles (if required)
- External road works such as turning lanes on existing City streets
- Street name signs and traffic control signs
- Erosion and sediment controls
- Record drawings prepared, sealed and signed by a Professional Engineer

Stage 1B Services

- Base asphalt
- Line painting
- Curb and Gutter
- Canada Post mailbox pads
- Open space property demarcation fencing and markers

Stage 2 Services

- Surface asphalt
- Line painting
- Traffic calming
- Driveway ramps paved
- Boulevards including topsoil and sod
- Sidewalks
- Bus stop pads
- Walkway blocks
- Basic Park development
- Open Space Restoration
- Trails
- Landscaping Works
- Street Trees
- Lot grading certification for all lots and blocks (certified by a Professional Engineer or Licensed Ontario Land Surveyor)
- SWM facilities surveyed to confirm no sediment accumulation or facilities cleaned out
- Engineering Record drawings updated (if needed)
- Landscape record drawings prepared, sealed and signed by a Landscape Architect

7.0 Construction Review

Once the construction process begins, the review and inspection process is triggered.

7.1 Construction and Review, Inspection Roles and Responsibilities

City of Guelph Review:

The City may attend to the site during construction and may liaise with contractors, engineering consultants, developers, general public and utility companies. The City may also check for compliance with City of Guelph standard specifications, Occupational Health and Safety Act, OTM Book 7, Traffic Control Plans, Regional, Federal and Conservation Authority Requirements, adherence to design, and for compliance with any other applicable municipal requirements.

Developers Responsibilities for Construction and Inspection:

The developer has the following responsibilities:

- Retain the services of the engineering consultant and any other consultants required to construct the subdivision
- prepare contract documents for tendering purposes for the construction of the subdivision
- Retain a contractor to construct the subdivision
- Provision of line and grade for the Contractor
- Complete any necessary surveys, including topographic surveys and any special investigative surveys and/or exploration

More specifically, the developer is responsible to have an engineering consultant perform the following tasks:

- provide the design and preparation of detailed drawings for the subdivision in accordance with the current standards and specifications of the City
- prepare cost estimates based upon the final design
- prepare applications to the public authorities for approval of construction
- administer the contract for the construction of the subdivision
- provide profiles and cross-sections required for design purposes and for tender quantities
- prepare reinforcing bar schedules, where required
- prepare "As Built" or "As Constructed" drawings
- administer the contract for the construction of the subdivision
- co-ordinate and oversee utility construction
- Inspect on a full time basis (100% of the works), the accuracy and quality of the work being completed, including full time inspection of each and every area, job or location of the work that is under construction at any given time. This also includes any inspection requirements listed in the EIR, if applicable.

Daily inspection and monitoring reports from the engineering consultant shall be submitted to the City. The reports must at a minimum contain the following information:

- Weather Conditions
- General Progress of Work; where the Contractor is working and what tasks are being completed
- Equipment being moved or arriving on the job and its purpose
- Visits to the site by the City Officials and any specific instruction they may have given
- All discussions or dealings with developer
- Instructions given to the Contractor
- Contractor's claims or complaints
- Geotechnical reports and compaction efforts for such items as trench backfill, granular road bedding and asphalt
- Trench conditions
- Work performed on the site involving the installation of public utilities
- Stoppage of work by the Contractor with full description of why the work stopped;
- Extra works and miscellaneous happenings
- Complete descriptions of how excavations were executed, type of equipment used and difficulties due to either improper equipment or nature of material
- Indicate where all fill materials came from, such as the lot or station of the cut or name of the borrow site
- Number of loads of material where possible without consulting with the Weighman on the Contractors records
- All equipment that is on site must be recorded
- The actual hours worked
- The actual hours not worked
- The actual area of work
- Particular attention must be taken with watering equipment and the number of loads of water applied per day must be recorded as well as the number of hours the equipment worked
- The time of arrival and departure of the engineering consultant's inspector
- All pertinent information relating to Quality Assurance of the works

The Inspection Checklists shall include:

- Daily Report for full time inspection
- Bi-weekly Report (packaged reports with a summary statement of work complete); bi-weekly reports due by the Friday of the following week
- Erosion and Sediment Control Inspection Report

- Water System Commissioning Report (consistent City specifications)

7.2 Preliminary and Final Acceptance Inspection Details

Once the engineering consultant is satisfied that the constructed works meet City standards/requirements (i.e., all deficiencies identified and rectified), then the engineering consultant will request a preliminary or final acceptance inspection meeting with the City (depending on the stage of the development). The engineering consultant and City staff (comprising of Technical Services Staff and other as required departments) shall meet onsite at the determined time and location and will conduct a walk through inspection of the project to ensure that it has been constructed to the City of Guelph standards and specifications and as per the approved drawings. While the engineering consultant has worked to ensure the City's expectations will be met, there may still be deficiencies identified during the acceptance inspection. Deficiencies will be marked in orange paint by City staff.

All structural and safety deficiencies will be noted by the engineering consultant and City staff and will need to be rectified prior to City approving works be put onto maintenance. A deficiency list shall be prepared and circulated by the engineering consultant to the Technical Services Staff, within five (5) business days, which will be reviewed and agreed to by Technical Services Staff. Note: all catchbasins, manholes, valve boxes, etc. shall be flush to the base asphalt grade and will be raised once surface asphalt is placed.

The engineering consultant shall endeavor to coordinate the repairs and deficiencies by a contractor within two (2) months of the deficiencies being noted, unless otherwise agreed to by the City. Once deficiencies have been repaired, City staff will be invited onsite again to inspect the repairs. If the time taken to repair the deficiencies is greater than two (2) months, then the re-inspection of the infrastructure item that was repaired is at the discretion of the Technical Services Staff. This process will continue until the City Staff is satisfied that all structural and safety deficiencies have been rectified.

Note: Surface asphalt cannot be placed until the base asphalt and curb and gutter have been given final acceptance inspection clearance from Technical Services, and 95% house build out is complete for the street(s) being inspected. Prior to placement of surface asphalt, damaged curbs will be marked in orange paint by City staff. Then, all base asphalt and curb and gutter repairs are to be complete and subsequently inspected by Technical Services. All manholes, catchbasins, valve boxes, etc. have to be raised to surface asphalt grade. During the initial acceptance inspection of the surface asphalt, all structures within the roadway will be checked for proper adjustment including gas valves. Water service curb stops for the empty lots noted during the final acceptance of the underground works will be inspected as part of the surface asphalt initial acceptance, and any related deficiencies will need to be rectified prior to surface asphalt initial acceptance.

8.0 Construction Preliminary Acceptance

After each stage of subdivision construction (1A, 1B and 2) is complete, the developer can apply for a Preliminary Acceptance Certificate (PAC) from the City to begin the two-year maintenance period for that stage of works. The developer requires a PAC for the Stage 1A works as a condition of building permit application.

Once all three stages of subdivision construction have completed their two-year maintenance period, and all deficiencies have been rectified, the developer can apply for a Final Acceptance Certificate (FAC) from the City. The developer requires a FAC as a condition of subdivision assumption.

8.1 Building Permits (for residential dwellings and/or commercial developments)

Once the City grants preliminary acceptance of Stage 1A services, the developer may be in a position to apply for building permits. The Subdivision agreement outlines the requirements that are to be met before engineering staff can support the release of building permits. Typically, the requirements include such items as:

- Plan of Subdivision is registered
- All easements and conveyances registered and are in favor of the City
- Stage 1A services are constructed and have received preliminary acceptance
- Hydro servicing is complete (per the City's Zoning By-Law)
- Erosion and sediment control measures are in place

8.2 Security Reduction

The developer can request a reduction in securities (maximum 90% of the cost of the work) after each of the three PAC's are issued. Each application for security reduction must include a cost-to-complete estimate certified by a Professional Engineer. The City will always hold a minimum 10% of completed work to date until assumption. Prior to the reduction of security held by the City, the Owner must submit with the following documentation:

- Statutory declaration of works completed
- Worker's compensation clearance; and
- Proof of expiration of construction lien period (45 days), if applicable

9.0 Maintenance Period

After preliminary acceptance is complete, the maintenance period begins. The maintenance period is a minimum of 2 years. At the end of the maintenance period, the developer can submit a maintenance package and request the City to conduct a maintenance inspection.

Maintenance Package submission by Engineering Consultant

The engineering consultant shall submit a Maintenance Package to Technical Services Staff with a covering letter that certifies that all the works within the particular stage have been completed to City of Guelph standards, and lists all the items included. It should be noted that test results shall be submitted via PDF to Technical Services Staff as soon as it is available during construction, however, a hardcopy of these results shall be included as part of the Maintenance Package.

If a test result is marginally "out of spec", Technical Services Staff may request the engineering consultant to provide a written explanation from the party responsible for the material testing, indicating what the potential problems could be over the

long term and suggest ways to mitigate (plan of action). Technical Services Staff will review the explanation to determine whether to accept the works or not. Any future problems would be referred back to the engineering consultant for resolution.

Maintenance Package requirements should be discussed with Technical Services. Testing of materials shall follow OPSS requirements. Water sampling and testing will be performed by the City (48-hour notice required prior to sampling). Watermain commissioning plans are to be submitted to the City for review and approval. A typical maintenance package includes, but is not limited to, the following:

- Pre-construction test results – Granular sites, mix designs, etc.
- Sieve analysis and compaction testing of sewer and water main bedding material
- Sieve analysis and compaction testing of road subgrade and granular base courses
- Asphalt tests of the base asphalt courses, AC content, compaction, etc.
- Concrete tests for curb and gutter - air, slump, twenty-eight (28) day strength, etc.
- Watermain test results including, bacteriological analysis, residual chlorine, leakage/pressure testing, etc.
- Exfiltration / infiltrations testing of sanitary and storm sewers
- Video inspection is to be provided with the Maintenance Package/ Assumption Package
- Any outstanding construction inspection reports
- Any outstanding Erosion & Sedimentation Control Monitoring reports
- Topsoil tests and confirmation from the engineering consultant that topsoil depths are as per city standards for parks and open spaces.
- A letter certifying that all of the requirements of the subdivision have been met and that the works have been constructed in accordance to City standards
- USB with:
 - a) As-Recorded drawings in .PDF format
 - b) As Recorded drawings in AutoCAD
 - c) Constructed Asset Data drawing in AutoCAD SDF format
- Record Drawing requirements include:
 - a) Ensure that CAD drawings are in NAD 83 UTM ZONE 17
 - b) Delete references to "PROPOSED" on all plans and profiles
 - c) Do not show removed structures and delete references to "REMOVED" on plans and profiles

- d) Add label EXIST. (or EX.) to all existing pipes on all profile descriptions and label all existing pipe work (Watermain, Sanitary, Storm) with corresponding material and class (Reinforced Concrete Class 100-D, or PVC Ultra Ribbed, PVC SDR 35, PVC SDR 18, etc.)
 - e) Label diameter, material and class for individual lot service connections (Watermain, Sanitary, Storm) both on new and existing. If this is consistent for all lateral connections, a note on the side of the drawing or in a legend will suffice
 - f) Label diameter, material and class for all catch basin laterals. If this is consistent for all single or double catch basins, a note on the side of the drawing or in a legend will suffice. Indicate slope on Plans
 - g) When plotting the drawings, as-built features should be grey colour code 8 to differentiate what was existing (colour code 9) prior to this. All of the City's drawings are Black and White or Grey scale
- Two sealed hard copy sets of final record drawings
 - Representative digital photographs of the water connections, including services to document that wrapping as per Corrosion Protection in the DGSSMS has been completed, upon request by City staff
 - CCTV Inspection Report – per City specifications

If the Maintenance Package is sent more than 3 months after the inspection, it is at the City's discretion whether a re-inspection of all the works will be conducted. Acceptance dates for packages received after 3 months of the inspection will be the date the package is received by Technical Services.

City Staff will review the Maintenance Package for:

- Completeness (note: all incomplete packages will be returned to the engineering consultant)
- Test results meeting City standards

Once the maintenance package is submitted, the engineering consultant and City will complete an inspection. If deficiencies are identified, the City will require they be corrected. After a deficiency is corrected, an additional maintenance period may be required (the need for and length of additional maintenance is to be determined at the discretion of Technical Services staff). Once all deficiencies are addressed and the City is satisfied (all departments have signed off), the City will issue a FAC to the developer.

Once the FAC is issued, the developer can apply for City assumption of the infrastructure. During the period between start of construction and assumption, the developer maintains full responsibility for the constructed works.

9.1 Maintenance of Stormwater Management Facilities

Where a new subdivision will outlet to an existing or proposed SWM facility that it beyond the subdivision phase limits, a cleanout maintenance security will be required, and will form part of the developer's securities. The amount required for

the cleanout maintenance security will be the Engineer's estimated cost to clean out the pond 2 times.

Additionally, subdivisions outletting to an existing SWM facility will be required to add the estimated cost to flush the existing storm sewers up to the SWM pond 2 times. The estimated cost will be based on the City's current sewer flushing rate per meter of pipe.

Prior to final acceptance the following conditions must be met in order:

- a) Clean out of the existing SWM facility at 95% of building construction
- b) 2 years of performance monitoring (per the SWM report, EIR, and ECA) after 95% buildout has been reached and clean out completed
- c) Satisfactory inspections from Parks, Operations (SWM), and Engineering

At 95% build out of the facility catchment area, the pond must be surveyed and cleaned out (if required). After the facility has been cleaned out, the minimum 2-year performance monitoring of the SWM pond can commence.

All items in the SWM facility (underground and surface works) are to be inspected as a whole, for final acceptance. SWM facility undergrounds will require an updated CCTV inspection, and as-recorded survey submission at final acceptance. Please refer to SWM Facility Final Acceptance Checklist (Appendix B) for more details.

Where SWM facilities require seasonal valve operation, the developer is responsible to operate the valves during the maintenance period, not the City.

9.2 Obligations during Maintenance Period

Developers Obligations during Maintenance Periods

The developer shall make good in a permanent manner satisfactory to the Technical Services Staff, any and all damage to the work during the maintenance period. Any deficiencies or defects noted during the maintenance period are the responsibility of the developer and all complaints and concerns will be deferred to the engineering consultant for resolution. This shall be on an ongoing basis. This obligation ends once assumption is complete. The developer, on receiving either written or oral notification from the City that works are required, shall immediately undertake such necessary work. If the developer fails to comply, the City may arrange for such work to be undertaken at the expense of the developer. The monies for this work may be drawn from the securities.

It is important to note that the standard maintenance period for each stage of work is 2 years, however this term maybe extended if and where significant deficiencies have existed and been left unattended.

The developer's obligations until assumption include the following:

- Shall maintain or cause to be maintained all underground and surface works and every part thereof in working order and in good repair the developer shall be responsible for sewer flushing maintenance until initial acceptance of the surface asphalt.

- Developer will ensure that storm sewer system, which includes catchbasins, manholes, infiltration trenches, soakaway pits and other quality control features, and appurtenances in a satisfactory working condition and free from debris, silt etc. Should the efficiency of the storm sewer become reduced due to building activity the developer shall be responsible for any cleaning, flushing etc. necessary to restore the storm sewer to full capacity for the duration of building activity. If the City determines a developer is not ensuring that the storm sewer is kept free of debris, silt, due to builder activity, a work order will be emailed to the developer. If the storm sewer is not cleaned within five (5) business days, the City will arrange to have the storm sewer cleaned, and the work will be invoiced to the developer.
- The developer shall maintain all road allowances, lots and blocks within the vicinity of the works within the subdivision free of mud, dust, litter, construction debris, construction materials and obstruction that may occur directly or indirectly on account of construction or illegal dumping by others within the subdivision. All subdivision streets will be swept once a week or more frequently as conditions warrant during construction and house building. If on-site building activity warrants, the streets may need to be scraped before they can be swept, and cleaning may be required on a daily basis. The developer will also ensure that abutting streets affected by the subdivision activity are also cleaned when they have been impacted. City staff will review the road condition on a periodic basis and/or on a complaint basis. If it is determined by the City that the developer is not adhering to the street sweeping requirements he will be required by the City to clean the streets. The developer will have 48 hours to comply with the work order. Should the City deem it necessary to respond to a cleanup of the subdivision streets and / or abutting streets after having notified the developer, the City will complete the work at the expense of the developer.
- The developer is responsible for the cost of the pavement marking for the initial painting after the placement of base asphalt and again when surface asphalt is placed.
- The developer shall maintain or cause to be maintained, all surface and landscaping works and every part thereof in acceptable order and in good repair for a period of not less than 2 years.
- All storm water management facilities must be inspected within 24 hours after each significant rainfall event (>25 mm) and an inspection report shall be sent to Technical Services Staff for review.
- The developer shall meet all tree planting requirements identified.
- Public complaints regarding the development (not specific to contraventions of a City By-Law).
- Prior to issuance of the PAC for Stage 1B works, the developer is responsible for all winter road maintenance on the builder's road. Snow removal and ice management is the responsibility of the developer until the Stage IB PAC has been issued by the City. If the City happens to conduct some winter

maintenance on the builder road, it shall not be construed as an acceptance of assumption of the works.

Prior to assumption the City will:

- Respond and carry out emergency repairs on an as needed basis at the developer's expense
- Respond and oversee developer's contractor repair of watermain breaks (note: if developer's contractor does not repair a watermain break immediately, the City will do the repairs and charge the developer accordingly)
- Operate water valves including water service curb stops
- Once streets and sidewalks, have been put on maintenance after PAC, the City will carry out winter control (where applicable); however, the developer is still responsible for boulevard maintenance
- Provide Solid Waste Management Services
- Provide utility locate services for City infrastructure only
- By-Law compliance (e.g., parking infractions, property standards, noise, construction traffic, etc.)

10.0 Assumption

Once the developer has received a FAC, the developer can apply for the City to assume the municipal works/infrastructure. The City will consider assumption on phase-by-phase basis only. To apply for assumption, the developer must demonstrate that they have:

- complied with all terms and conditions of the Subdivision agreement
- received final acceptance of maintenance items and corrected all deficiencies in the works throughout the maintenance periods to the satisfaction of the City
- paid all accounts in connection with the supply, installation and maintenance of the works and that there are no outstanding debts, claims or liens in respect to the works
- provided a copy of the City a Certificate of Substantial Completion per the Construction Lien Act, signed by the engineering consultant
- provided a Certificate by an Ontario Land Surveyor stating that all standard iron bars are visible on corners and at all points where there occurs a horizontal change of direction in every street, easement and/or other lands dedicated to the City and along the outside perimeter of the land
- provided grading certificate for each lot on the street(s) to be assumed
- provided any other additional assurances that the City may require
- statutory declaration to confirm all payments have been made

The City will review the developer's request for assumption and schedule a final walkthrough. If the City is not satisfied, the developer will be required to make the necessary corrections and re-apply. If the City is satisfied, the following will occur:

- City staff prepares a request for Council to assume the roads and works
- Council passes a By-Law assuming the works
- City will lift any applicable 0.3 metre reserves (at developers cost)
- The City and developer work to complete final accounting and final LC release for the work being assumed

10.1 Works Not Assumed

The following works are not assumed by the City:

- entry features
- fences or noise attenuation features located on private lands
- Utilities
- Grading, topsoil and seed or sod on the privately-owned lots and blocks
- Driveways
- Rear yard catchbasins and leads
- Retaining walls located on private property
- Trees and other landscaping on the privately-owned lots and blocks
- Temporary turning circles
- Temporary emergency access roads

Appendix A - Typical Deficiencies List (to be addressed prior to assumption)

Items	Deficiencies
Sidewalks	cracks, heaving, marks in the surface of the concrete e.g. names, footprints, scratches etc. and settlements
Boulevards	dead grass, stones and rocks in the boulevards, settlements, topsoil thickness and quality
Curb and gutter	Cracks, heaving, settlements, gouges deeper than 1 inch in the face of the curb
Base asphalt and surface asphalt	cracks in the asphalt such as progressive edge cracking, alligator and bleeding, segregation, dips in the asphalt, rutting, corrugations and shoving, pot holes, ravelling and polished aggregates
Sanitary pipes and storm pipes (Including laterals)	Cracks, fractures, hole, lining failure, sags, broken pipes, deformed pipes, joint offsets or separation, debris, blockages, Intruding and defective connections, Infiltration, cleanout caps at grade, all CBs to be cleaned and filter cloth removed
Sanitary & Storm Structures	Infiltration, proper parging and benching, adjustment units, frame and casting (cracked, broken and wrong description), CB lids open, ladder rungs Installed, safety landings down, missing and buried frame and grate, debris and blockages, drop structure
Hedgerows, woodlots and wooded features	No certificate received from consulting Landscape Architect (once at planting and once at two-year warranty); poor tree health due to soil quality (insufficient nutrients as per specifications); poor installation (trees planted too deep or high, etc.); poor tree vigor due to inadequate watering; mulching deficiencies (i.e. insufficient depth, etc.) and wounds
Miscellaneous	lot grading, SWM Facilities (see Appendix B), landscaping, parks and open space
Watermains and appurtenances	leaks, broken or buried valve boxes, wrong number of turns on valve boxes, hydrants etc., tracer wire continuity, hydrant numbering, bent or broken or buried curb stops

Appendix B – Stormwater Management Assumption Checklist

Subdivision Name: _____ Date: _____
 _____ Stage: _____
 Phase: _____ Developer: _____
 30T Number: _____ Consultant: _____
 Pond ID: _____

Confirm items in this table are included by checking under columns Yes, No or n/a (not applicable)

Item	Description	Yes	No	n/a	Comments
1	As-Recorded topographic survey (with excel spreadsheet calculations).				
1.1	Permanent pool volume versus proposed				
1.2	Active storage volume versus Proposed				
1.3	Berm elevations versus Proposed				
1.4	Weir elevations versus Proposed				
1.5	Bottom of pond elevations versus Proposed				
1.6	Orifice plate inverts versus Proposed				
1.7	Culvert inverts versus Proposed				
2	Proof that 95% of the subdivision's drainage area discharging into the SWM pond has been built out.				
3	Attach written clearance (correspondence) from construction inspector and operations (drainage) that all the infrastructure items within the SWM pond block (existing manholes, CSP manholes, outlets, inlets, weirs, rip-rap, access roads, ditch inlets, headwalls, orifice plates and other infrastructure, etc.) have been inspected satisfactorily.				

Item	Description	Yes	No	n/a	Comments
4	Attach written confirmation from engineering Department that the as-built drawings of the pond are submitted and correct.				
5	Attach written clearance (correspondence) from Development Engineering for satisfactory inspection.				
6	Confirmation that the two-year maintenance period for the landscaping items as well as the underground and above ground items are complete.				
7	Provide geotechnical letters of certification (ex. Liner certification, compaction test results, soil properties, etc.)				
8	Provide monitoring test reports.				
9	Attach written clearance (correspondence) from Asset Management confirming that the CCTV report is satisfactory.				
10	Attach written clearance (correspondence) from Development Engineering for satisfactory inspection.				
11	Utilities clearance (if available)				
12	Attach written clearance (correspondence) from Storm Utility for satisfaction inspection.				
13	A letter of certification from the consultant (with Engineer seal) certifying that the facility has been constructed and is operating in general conformance with the consultant's plans and design report and that all orifice plates are installed as specified.				

Notes: Should the City or the consultant determine that the facility is not performing to the Engineer's design, the consultant shall provide recommendations for the constructed facility to be retrofitted by the developer.

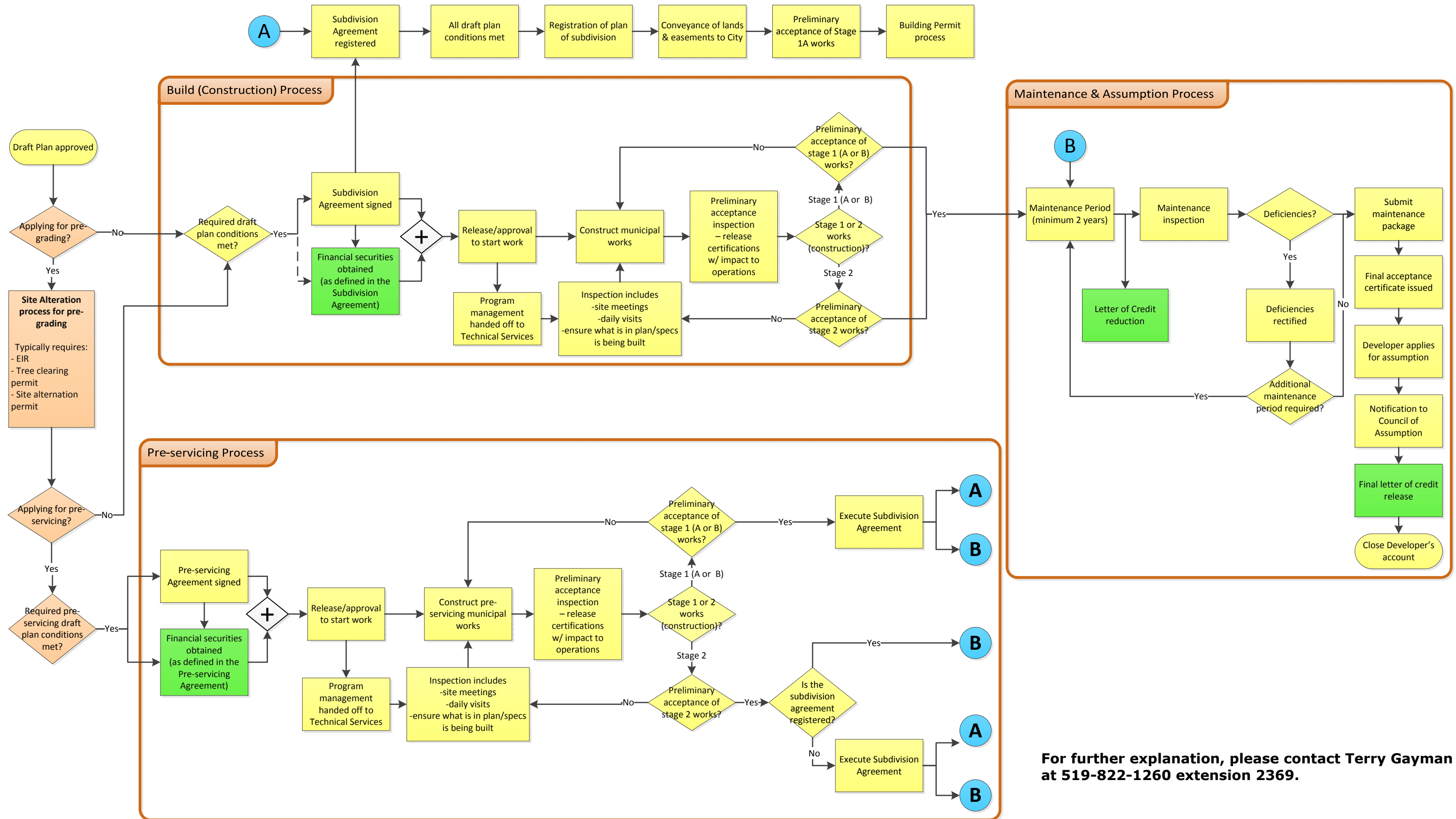
Consultant's Name: _____ Consultant's Signature: _____

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CS Operations clearance	
CS parks clearance	
INS -Engineering CCTV clearance	
INS - Engineering clearance	
Final acceptance date:	
Reviewed By: _____	Signature: _____

SUBDIVISION ASSUMPTION MODEL

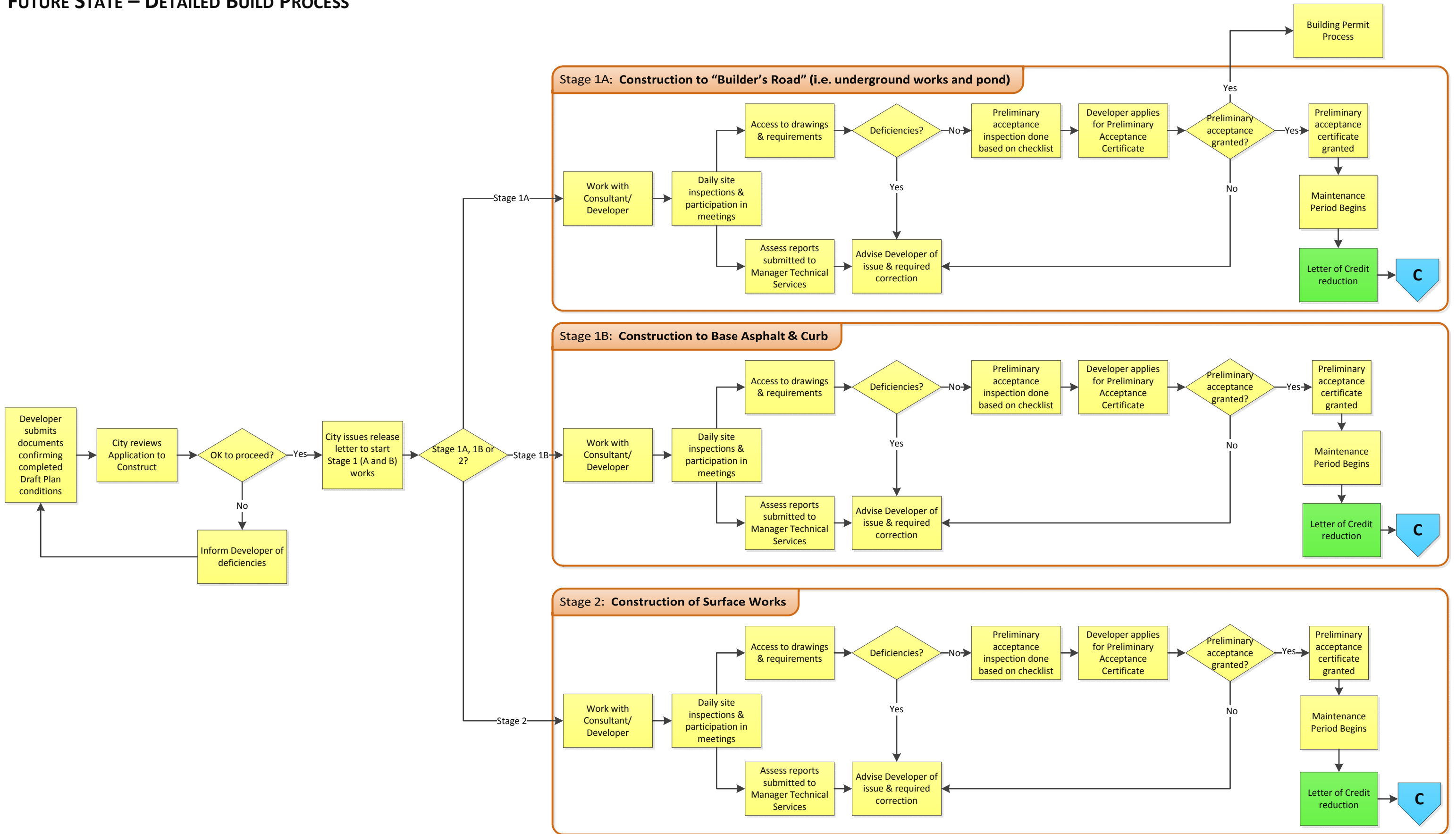
FUTURE STATE – HIGH LEVEL



For further explanation, please contact Terry Gayman at 519-822-1260 extension 2369.

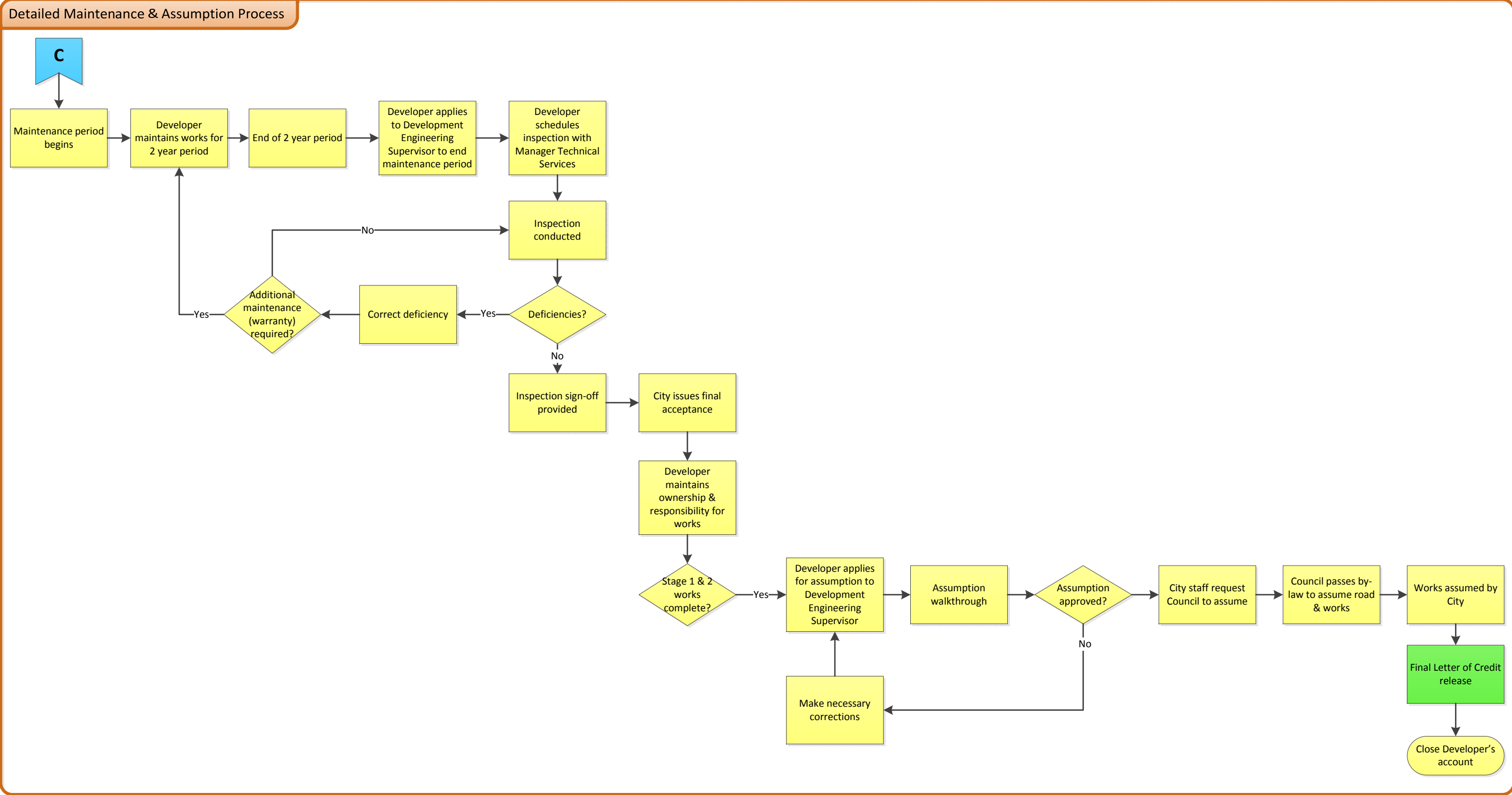
SUBDIVISION ASSUMPTION MODEL

FUTURE STATE – DETAILED BUILD PROCESS



For further explanation, please contact Terry Gayman at 519-822-1260 extension 2369.

FUTURE STATE – DETAILED MAINTENANCE & ASSUMPTION PROCESS



For further explanation, please contact Terry Gayman at 519-822-1260 extension 2369.