

**Appendix A**  
**Program and Services Listing**

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**A. Economic Development Program**

*Property Development Subprogram*

1. Development Approval.....  
*A public service that provides professional research, guidance, advice and permissions for the development of privately held property.*
2. Building Approval.....  
*A public service that provides building approvals in accordance with the Ontario Building Code.*
3. Property Development Incentive.....  
*A public service that provides property owners and/or tenants with financial assistance for the improvement of property in accordance with applicable legislation.*

*Business Development Subprogram*

4. New Business Attraction.....  
*A public service that provides a Windsor -Essex promotional campaign directed at business decision makers with the aim of attracting investment to Windsor -Essex.*
5. Business Retention & Expansion.....  
*A public service that provides decision makers of existing businesses in Windsor - Essex with the necessary information and assistance to remain and/or expand in Windsor-Essex.*

*Tourism Development Subprogram*

6. Tourism Promotion.....  
*A public service to promote the image of Windsor -Essex as a destination with the cooperation of a united tourism and hospitality industry.*
7. Visitor Information.....  
*A public service that provides information and promotional materials concerning attractions, activities and events in Windsor -Essex through direct responses to inquiries made in person, by phone, email, fax, mail or website interaction.*

**B. Social Development Program**

8. Social Support.....  
*A public service that provides financial and employment assistance for individuals who are in temporary financial need.*

9. Social Housing.....  
*A public service that provides administration, funding and the development of subsidized housing units in the City of Windsor, which meet the needs of residents who require accommodation and support.*
10. Child Development.....  
*A public service that delivers child-care spaces, under the management of qualified, licensed child-care providers.*
11. Social Planning.....  
*A public service that facilitates strategic planning, coordination and cooperation between the City and the various community agencies that provide social support, housing and/or child-care services.*

**C. Environmental Protection Program**

*Garbage & Recycling Subprogram*

12. Garbage & Recycling Collection.....  
*A public service provided to ensure all residential and municipal waste and recyclables are collected in a manner consistent with current health standards and environmental requirements.*
13. Garbage & Recycling Diversion.....  
*A public service dedicated to the identification and diversion of certain household, commercial, industrial and institutional waste from the ESWWA landfill.*
14. Garbage Disposal.....  
*A public service to ensure that all garbage that cannot be diverted is disposed of in the regional landfill in a manner consistent with environmental regulations.*

*Public Parks & Natural Areas Subprogram*

15. Parks & Natural Areas.....  
*A public service to protect, preserve and promote active and passive parks and natural areas, maintain and enhance the urban forest and beautify the City of Windsor.*

*Water & Sewage Subprogram*

16. Fresh Water Supply.....  
*A public service to provide reliable potable water that meets all health, taste and odour standards.*

17. Wastewater Removal.....  
*A public service that removes wastewater from all homes, business and other buildings for appropriate treatment in accordance with provincial regulations.*

18. Storm Water Removal.....  
*A public service that removes storm water from city streets for appropriate treatment and release in accordance with provincial regulations.*

*Energy Subprogram*

19. Electricity Distribution.....  
*A public service that acquires and distributes electricity to all account holders in the City of Windsor.*

20. Downtown Energy Integration.....  
*A public service to produce and distribute energy for the central heating and cooling of commercial and institutional buildings in the downtown district.*

21. Energy Efficiency Promotion.....  
*A public service that offers advice, education and assistance to electricity users concerning methods to reduce electricity usage and increase electricity efficiency.*

**D. Transportation Program**

22. Roads.....  
*A public service that provides residents, businesses and visitors with an accessible transportation network for motor vehicles and bicycles to facilitate the safe and efficient transport of people and goods within the City of Windsor.*

23. Sidewalks & Trails.....  
*A public service that provides safe and accessible sidewalks and trails to residents and visitors.*

24. Transit.....  
*A public service that provides residents of and visitors to the City of Windsor with affordable public transportation throughout the City.*

25. Detroit-Windsor Tunnel.....  
*A public service that provides a convenient and effectively managed tunnel connection between downtown Windsor and downtown Detroit.*

26. Airport Operations.....  
*A public service that provides residents of and visitors to the City of Windsor with access to appropriately maintained air travel facilities.*

**E. Health, Recreation and Cultural Development Program**

*Recreation Subprogram*

- 27. Recreation Programming.....  
*A public service provided to residents of the City of Windsor offering participation in structured, accessible and affordable recreation and sports programming.*
  
- 28. Recreation Facility Access.....  
*A public service providing members of the general public and community groups the opportunity to make use of recreational and sports facilities for independent use.*

*Health Subprogram*

- 29. Public Health Monitoring and Promotion.....  
*A public service that provides the latest information on the state of public health in Windsor and Essex County and best practices for good health and illness and disease prevention.*
  
- 30. Public Health Protection.....  
*A public service that provides a professional response to infectious disease outbreaks and enforces violations of public health regulations.*
  
- 31. Long Term Care Facility.....  
*A public service to provide 24 hour nursing and personal care for eligible residents.*

*Arts and Culture Development Service*

- 32. Arts & Culture Development.....  
*A public service providing professional advice and information on cultural matters to culture-based community groups.*
  
- 33. Public Library & Community Archives.....  
*A public service offered to all residents of and visitors to the City of Windsor that provides access to information resources, reference materials, the preservation of local history and programming to enrich lives through learning and recreation.*
  
- 34. Community Museum.....  
*A public service offering attractions of art, culture and historical interest (both local and general).*

**F. Public Safety Program**

*Investigation & Intervention Subprogram*

- 35. Police Investigation.....  
*A public service to gather evidence to be used by courts of law to determine the guilt or innocence of persons accused of offences against the Crown using established police procedures and rules of evidence.*
- 36. Police Patrol & Intervention.....  
*A public service that places police units throughout the City to respond to incidents and offences in progress.*
- 37. Fire & Rescue.....  
*A public service provided to victims and/or potential victims of emergency situations (i.e. fires and vehicular or other accidents) offering relief and assistance.*
- 38. Animal Control.....  
*A public service that provides a response to reports of unregistered pit bulls, dogs at large, dog attacks and wild animals at large, which may include bringing such animals under control.*
- 39. Paramedics.....  
*A public service that provides a response to medical emergencies of varying severity that may occur throughout the City of Windsor and provide transportation to a medical facility, if necessary.*
- 40. Provincial Offences.....  
*A public service to determine the innocence or guilt of persons charged with a provincial offence using rules of evidence and procedure.*

*Inspection & Prevention Subprogram*

- 41. Inspections.....  
*A public service that provides inspections to ensure adherence to various bylaws concerning property standards and the Province of Ontario's building, fire and health codes.*
- 42. Fire & Crime Prevention Education.....  
*A public service to provide education to the general public concerning fire and crime prevention.*

## Inventory of Programs and Services V1.3

43. Licensing Service.....  
*A public service that establishes appropriate criteria for business, gaming or dog licenses and ensures that applicants meet these requirements before licenses are issued.*
44. Street Lighting.....  
*A public service that provides reliable illumination at night along City streets and sidewalks.*
45. Crossing Guards.....  
*A public service provided to ensure that selected intersections throughout the City are staffed by qualified crossing guards so that school children walking to and from school may cross streets safely.*
46. Parking Enforcement.....  
*A public service to enforce the parking bylaw passed by City Council to ensure an adequate supply of lawful parking throughout the City and to facilitate the safe and efficient movement of people throughout the City.*

### *Emergency Management Subprogram*

47. Emergency Management Implementation.....  
*A public service that puts the City of Windsor's emergency response plan into operation in the event of a declared state of emergency.*

### **G. Public Engagement Program**

48. Provincial Registration.....  
*A public service to administer the registration of deaths and marriages as required by the Province of Ontario and to perform marriage ceremonies if requested.*
49. Access to Information & Records.....  
*A public service to respond to requests from members of the general public for access to municipal records and to ensure all privacy regulations are observed when such requests are processed.*
50. Municipal Election Management.....  
*A public service that provides for the management of fair and equitable elections to fill elected municipal positions as well as trustees and other elected positions for the various area school boards.*
51. Community Development & Urban Design.....  
*A public service that solicits input and advice from the community to create the various plans that govern the development and design of the City of Windsor.*

- 52. Council Support.....  
*A public service that facilitates interaction between the community and City Council through Council meetings, Committees of Council, informal meetings, public events and correspondence.*
- 53. Customer Service.....  
*A public service that provides timely and accurate information on and access to government and community services.*

**H. Internal Services Program**

*Corporate Management Subprogram*

- 54. Corporate Leadership.....  
*An internal service that implements, monitors and reports on the strategic and operational direction for the Corporation, as approved by City Council.*
- 55. Corporate Communication.....  
*An internal service that prepares and releases information to a defined audience (internal or external) at the request of a service department in the Corporation.*

*Human Resources Management Subprogram*

- 56. Staffing Support.....  
*An internal service that provides for the recruitment, placement, development, allocation and support of all staff of the Corporation.*
- 57. Compensation & Benefits Management.....  
*An internal service that prepares and maintains a complete set of policies and procedures to ensure that staff receives correct compensation and benefits.*
- 58. Labour Relations.....  
*An internal service that supports the development of and adherence to collective agreements with CUPE Locals 543 and 82, ONA, WPFPA, and CANUE/PETU.*
- 59. Workplace Health & Safety.....  
*An internal service that develops and implements policies and procedures that ensure that the Corporation is compliant with Health and Safety and WSIB regulations.*
- 60. Employee Performance Management.....  
*An internal service that promotes, monitors and reports on the employee performance program.*

*Financial Management Subprogram*

- 61. Financial Planning and Monitoring.....  
*An internal service that directs the planning, documentation and implementation of the budget process, from development to review and results reporting.*
- 62. Investment and Debt Management.....  
*An internal service that maximizes return on investments and minimizes interest on debt.*
- 63. Financial Accounting & Reporting.....  
*An internal service that ensures proper financial accounting, completion of consolidated financial statements and necessary legislated filings.*
- 64. Billing & Collection.....  
*An internal service that provides accurate billing and collection of municipal taxes and other accounts receivable.*

*Information Technology Management Subprogram*

- 65. Information Technology Design & Planning.....  
*An internal service that plans and designs Information Technology solutions that contribute to the achievement of corporate strategic objectives.*
- 66. Business Solutions Development & Support.....  
*An internal service that designs, develops, implements and maintains electronic business solutions to meet the needs of public and internal service providers across the Corporation.*
- 67. Information Technology Infrastructure Operations.....  
*An internal service that selects, acquires, and maintains all technology as sets as well as controls access to the Corporation's network.*

*Corporate Asset Management Subprogram*

- 68. Corporate Facilities Management.....  
*An internal service that acquires, maintains and disposes of all facilities owned by the Corporation.*
- 69. Corporate Fleet Management.....  
*An internal service that provides for the maintenance, operation, repair and disposal of the Corporation's fleet of vehicles.*

Inventory of Programs and Services V1.3

70. Corporate Real Estate Management.....  
*An internal service that manages the Corporation's real estate assets through acquisitions, sales and leasing.*

*Professional Services Subprogram*

71. Legal.....  
*An internal service that provides legal advice and expertise to City Council and senior administration on matters relating to the Corporation's business activities.*
72. Audit.....  
*An internal service that reviews and analyzes the Corporation's business practices to ensure operational excellence at reasonable cost as well as adherence to generally accepted accounting principles.*
73. Purchasing.....  
*An internal service that provides professional advice and administrative support to ensure the purchasing bylaw, approved by City Council, is observed.*
74. Project Management.....  
*An internal service that provides an effective, trained project manager.*



**Appendix B**  
**Windsor Essex Community Housing**  
**Corporation Letter**

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WINDSOR ESSEX



COMMUNITY HOUSING CORPORATION

October 29, 2013

Melissa Osborne, Senior Manager Asset Planning  
The Corporation of the City of Windsor  
400 City Hall Square East  
Suite 402  
Windsor, Ontario  
N9A 7K6

Dear Ms. Osborne:

**Re: Overview Of The State of Asset Management At Windsor Essex Community Housing**

Windsor Essex Community Housing (CHC) owns and manages 732 buildings in the region of Windsor-Essex consisting of single family homes, townhomes, low-rise, mid- rise and high-rise apartment buildings. The average age of the housing stock is approximately 40 years old and has a 2013 replacement value of \$650M CDN.

Within the past 12 months CHC has transitioned from an Excel based asset management tool to Asset Planner™\*, a web-based asset management software specialized for housing applications. Asset Planner™, is used by 25 Service Managers, LHC's and other housing providers to manage over 113,000 units in Ontario. Asset Planner™ utilizes leading construction estimating software and empirical data to determine the cost of capital repairs and asset replacement value.

The general state of CHC's assets can be referred to as "tired and aging" however, in recent years a higher number of structural issues have surfaced which is indicative of the asset age and are costly to repair. Significant capital funding will be required in the next 30 years in order to reverse the deteriorating trend in our assets. Based on the current funding level of \$3.6M/year, the average FCI for all of CHC's assets will have declined from Good to Fair rating by 2016. Then, with the same annual investment of \$3.6M/year, in 2020 the average FCI for all of CHC's assets will have further declined from Fair to Poor rating. CHC is closely monitoring this issue and working on solutions to mitigate the risk and rate of asset decline.

CHC's capital needs over the next 30 years averages \$11.5M per year yet the average annual capital funding is \$3.6M per year. Through cost reduction and optimization of the asset management process, CHC believes this need can be reduced to \$6M - \$8M per year to stabilize and perhaps even reverse the trend in physical asset deterioration.

Initiatives CHC is or will be undertaking to reduce costs are as follows:

1. Continue to conduct strategic Building Condition Assessments (BCA's) to augment building data in Asset Planner™.
2. Monitor pitched roofs on a bi-annual basis and flat roofs on an annual basis to ensure maximum life is obtained before repair or replacement.

*\*Asset Planner™ is an Ameresco product*

3. Continue to combine like capital work corporate wide in order to maximize purchasing value through increased size of project.
4. Develop partnerships with leading architectural and building science schools to strengthen asset management and asset restoration knowledge base.
5. Seize opportunities to lower asset operating cost when implementing a capital restoration project. An example of such an initiative is adding insulation to the exterior of a building when replacing the exterior skin.

CHC clearly recognizes the challenges obtaining funding to finance the capital requirements that currently exist and will exist for the foreseeable future. While CHC sees a number of challenges to self-fund 100% of the capital requirements, CHC has started a number of initiatives to minimize the needs for external funding. Capital funding opportunities in addition to the City of Windsor that CHC is currently exploring or plans to explore are as follows:

1. Establish a reserve fund for Public Housing Stock using energy retrofit grants received in 2010/2011. Public Housing stock represents approximately 75% of CHC's total stock.
2. Increase asset revenue by implementing mixed use models when completing regeneration projects
3. Leverage equity in current assets
4. Utilize Infrastructure Ontario funding

CHC believes that creative solutions can be found through collaborative relationships, working together to address the challenges upon us now and in the coming years. CHC is working with the City of Windsor Asset Planning Department to identify synergies and standardize reporting methodologies to streamline the asset planning process and standardize the reporting information. Similar activities are currently underway with other housing providers within the province which provide opportunities to develop best practices and benchmark buildings all leading to enhanced performance.

In closing, with respect to the state of CHC's assets, the single biggest issue facing CHC is the projected state of decline based on current funding levels. Opportunities have been identified for cost reduction and acquisition of funding. These both need to be further developed in the coming months and years to ensure the sustainability of our housing assets in Windsor-Essex for many years to come.

Sincerely,

Hans Kogel, P. Eng, Director, Asset Engineering

/mz

**Appendix C**  
**Windsor Utilities Commission Letter**

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October 24, 2012

Ms. Melissa Osborne  
Senior Manager Asset Planning  
City of Windsor  
400 City Hall Square Suite 402  
Windsor, ON N9A 7K6

Dear Ms. Osborne:

**Re: Asset Management Program- Windsor Utilities Commission**

*Introduction*

The Windsor Utilities Commission adopted an asset management plan from recommendations made from a study conducted by Earth Tech/ Watson and Associates in 2007. This plan was developed to satisfy the intent of the Suitable Water and Sewage System Act (SWSSA) and Section 30 of the Safe Water Drinking Act. As part of the report a Lifecycle Replacement Plan was adopted to ensure the following objectives:

- Meeting ratepayer demands with focus on water system sustainability
- Establishing water rates based upon sound operational and financial planning
- Budgeting focused on activities critical to sustained performance
- Meeting service level expectations and regulatory requirements
- Maintaining the security and safety of all water distribution infrastructure

As part of the WUC asset management process an asset inventory, condition assessment and rating system were developed which is reviewed each year to assess the remaining life of assets which govern the capital budget forecasts and future replacement programs.

### *Watermain Program*

Watermain projects are prioritized based upon a scoring algorithm where a point system is applied to the below criteria as follows:

<b>Criteria</b>	<b>Reason</b>	<b>Regulatory Requirement</b>
Low Chlorine Residual	- indicator of corrosion of water piping resulting in disturbed water	- mandated by MOE to achieve and maintain free chlorine residual of 0.2mg/L
Lead Service	- WUC is mandated to have a Lead Community Testing Program performed twice a year	- Maximum Acceptable Concentration (MAC) is 10ug/L as prescribed by O.Reg 169/03, schedule 2
High Break Frequency	- corrosion results in potential contamination and public health risk	- MOE Regulations
Fire Protection	- internal corrosion reduces the internal diameter of piping resulting in reduced flow capacity	- Ontario Fire Code
Life Cycle Replacement	- based upon useful life of assets cast iron piping and other water infrastructure in need of replacement	

In addition to the above, the Water System engineering staff of Enwin Utilities Ltd. work in conjunction with the Public Works Department to coordinate watermain replacement works with road and sewer projects ensures optimal resources utilization.

If additional information is required, please advise the undersigned. Thank you.

Yours very truly,



Victoria Zuber  
Vice President and Chief Financial Officer

cc: M. Friel, Controller

**Appendix D**  
**Condition Rating Approach**

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Asset Management Plan Development  
**State of the Infrastructure Report**

**Mapping of Current Condition Ratings to new Corporate Condition Rating Categories**

**Road Pavement**

Asset: **Road Pavement**

Current Condition Rating Categories			Mapping of CURRENT to NEW SOI CORPORATE		NEW State of the Infrastructure Corporate Asset Condition Categories		
Category	Definition	Numeric Rating		Proposed Mapping of Numeric Rating		Category	Definition (Canadian Infrastructure Report Card)
		From	To	From	To		
<b>Adequate Roads:</b> Greater than 10 Years	Roads which will need repair in a greater than 10 year timeframe. Roads that are in adequate pavement condition.	1	4	1	2	<b>Very Good:</b> Fit for the future	The infrastructure in the system or network is generally in very good condition, typically new or recently rehabilitated. A few elements show general signs of deterioration that require attention.
<b>6-10 Year Deficient</b>	Roads that will need repair in 6 to 10 years. Generally, selective crack sealing should be done if funding is made available. Isolated base repairs and mill & pave may also be performed.	5	9	3	4	<b>Good:</b> Adequate for now	The infrastructure in the system or network is in good condition; some elements show general signs of deterioration that require attention. A few elements
<b>1-5 Year Deficient</b>	Roads that will need repair within 1 to 5 years. Typically a mill and pave should be completed.	10	19	5	19	<b>Fair:</b> Requires attention	The infrastructure in the system or network is in fair condition; it shows general signs of deterioration and requires attention. Some elements exhibit significant deficiencies.
<b>NOW Deficient Roads</b>	Roads that are in the worst pavement condition and need immediate repair. Typically roads in the "Now Deficient" category are not good candidates for mill and pave rehabilitation and therefore require full reconstruction.	20	100	20	30	<b>Poor:</b> At risk	The infrastructure in the system or network is in poor condition and mostly below standard, with many elements approaching the end of their service life. A large portion of the system exhibits significant deterioration.
				31	100	<b>Very poor:</b> Unfit for sustained service	The infrastructure in the system or network is in unacceptable condition with widespread signs of advanced deterioration. Many components in the system exhibit signs of imminent failure, which is affecting service.

NOTE: For MPMP, OMBI, and corp KPI annual reporting purposes, Road Adequacy (ie. roads in good to very good condition) has been historically reported using the Adequate Roads (ie. Greater than 10 Year) Category. For Budget purposes, the NOW Deficient road category is used. Gravel roads included & assumed to be NOW Deficient.

Asset Management Plan Development  
**State of the Infrastructure Report**

**Mapping of Current Condition Ratings to new Corporate Condition Rating Categories**

Asset: **Alley Pavement**

**Alley Pavement**

Current Condition Rating Categories			
Category	Definition	Numeric Rating	
		From	To
<b>Adequate:</b> Greater than 10 Years	Alleys which will need repair in a greater than 10 year timeframe. Alleys that are in adequate pavement condition.	1	4
<b>6-10 Year Deficient</b>	Alleys that will need repair in 6 to 10 years. Generally, selective crack sealing should be done if funding is made available. Isolated base repairs and mill & pave may also be performed.	5	9
<b>1-5 Year Deficient</b>	Alleys that will need repair within 1 to 5 years. Typically a mill and pave should be completed.	10	19
<b>NOW Deficient</b>	Alleys that are in the worst pavement condition and need immediate repair. Typically alleys in the "Now Deficient" category are not good candidates for mill and pave rehabilitation and therefore require full reconstruction.	20	100

Mapping of CURRENT to NEW SOI CORPORATE	
Proposed Mapping of Numeric Rating	
From	To
1	2
3	4
5	19
20	30
31	100

NEW State of the Infrastructure Corporate Asset Condition Categories	
Category	Definition (Canadian Infrastructure Report Card)
<b>Very Good:</b> Fit for the future	The infrastructure in the system or network is generally in very good condition, typically new or recently rehabilitated. A few elements show general signs of deterioration that require attention.
<b>Good:</b> Adequate for now	The infrastructure in the system or network is in good condition; some elements show general signs of deterioration that require attention. A few elements exhibit significant
<b>Fair:</b> Requires attention	The infrastructure in the system or network is in fair condition; it shows general signs of deterioration and requires attention. Some elements exhibit significant deficiencies.
<b>Poor:</b> At risk	The infrastructure in the system or network is in poor condition and mostly below standard, with many elements approaching the end of their service life. A large portion of the system exhibits significant deterioration.
<b>Very poor:</b> Unfit for sustained service	The infrastructure in the system or network is in unacceptable condition with widespread signs of advanced deterioration. Many components in the system exhibit signs of imminent failure, which is affecting service.

Note: Mapping and rating cut offs are consistent with mapping used for Road Pavements  
 Excludes gravel alleys (not rated).

Asset Management Plan Development  
**State of the Infrastructure Report**

**Mapping of Current Condition Ratings to new Corporate Condition Rating Categories**

**Bridges**  
(includes culverts with a greater than 3m span)

Asset: **Bridges**  
(includes culverts with a greater than 3m span)

Current Condition Rating Categories			Mapping of CURRENT to NEW SOI CORPORATE		NEW State of the Infrastructure Corporate Asset Condition Categories		
Category	Definition	Numeric Rating		Proposed Mapping of Numeric Rating		Category	Definition (Canadian Infrastructure Report Card)
		From	To	From	To		
<b>Excellent</b>	Primary and secondary components are showing no signs of distress. Very minor maintenance needs only.  <b>Reported as our Bridge Adequacy for MPMP &amp; OMBI. See definition in NOTES.</b>	90	100	90	100	<b>Very Good:</b> Fit for the future	The infrastructure in the system or network is generally in very good condition, typically new or recently rehabilitated. A few elements show general signs of deterioration that require attention.
<b>Good</b>	Primary and/or secondary components are showing minimal signs of distress. Minor maintenance needs and possibly rehabilitation of some primary and/or secondary elements may be suggested.	80	89.9	80	89.9	<b>Good:</b> Adequate for now	The infrastructure in the system or network is in good condition; some elements show general signs of deterioration that require attention. A few elements exhibit significant deficiencies.
<b>Fair</b>	Primary and/or secondary components are showing minimal to severe distresses which could include the need for condition surveys and major rehabilitation on some scale.	70	79.9	70	79.9	<b>Fair:</b> Requires attention	The infrastructure in the system or network is in fair condition; it shows general signs of deterioration and requires attention. Some elements exhibit significant deficiencies.
<b>Poor</b>	Primary and/or secondary components are showing severe to critical distresses which could include the need for condition surveys, major rehabilitation on some scale, or removal and replacement of structure.	1	69.9	60	69.9	<b>Poor:</b> At risk	The infrastructure in the system or network is in poor condition and mostly below standard, with many elements approaching the end of their service life. A large portion of the system exhibits significant deterioration.
	1			59.9			
	Primary and/or secondary components are showing critical distresses which could include the need for condition surveys, major rehabilitation on some scale, removal and replacement of structure, or closure. Structure is in a state which may pose hazards to traffic or pedestrian traffic.					<b>Very poor:</b> Unfit for sustained service	The infrastructure in the system or network is in unacceptable condition with widespread signs of advanced deterioration. Many components in the system exhibit signs of imminent failure, which is affecting service.

NOTES: **For MPMP & OMBI, the percent of bridges & culverts in good to very good condition is generally reported each year as the current system Excellent category.**  
**MPMP definition for Bridge Adequacy is defined as "A bridge or culvert is rated as good to very good if distress to primary components is minimal, requiring only maintenance."**  
Overall Condition ratings are based on an internally developed calculation in the Hansen database. They are not based on OGRA's MDW software  
The overall rating is a numeric calculated rating from 1-100. (The higher the value the better the overall rating.) The numeric value is then categorized by ranges into the overall categories above (ie. Exc, Good, Fair, Poor).  
OSIM only rates elements into 4 categories (Excellent, Good, Fair, Poor).  
Issues with the various uses of the same terminology for various rating systems, definitions, and reporting purposes.

Asset Management Plan Development  
**State of the Infrastructure Report**

**Mapping of Current Condition Ratings to new Corporate Condition Rating Categories**

**Sidewalks (right-of-way only)**

Asset: **Sidewalks (right-of-way only)**

ie. Does not include sidewalks located at city facilities and in recreational areas

Current Condition Rating Categories		Mapping of CURRENT to NEW SOI CORPORATE	NEW State of the Infrastructure Corporate Asset Condition Categories	
Category	Definition Definition/Guideline	Proposed Mapping of Subjective Rating Definition/Guideline	Category	Definition (Canadian Infrastructure Report Card)
<b>Excellent</b>	10% or less of the sidewalk length is affected by deficiencies  < = 10% deficient	< = 10% deficient	<b>Very Good:</b> Fit for the future	The infrastructure in the system or network is generally in very good condition, typically new or recently rehabilitated. A few elements show general signs of deterioration that require attention.
<b>Good</b>	11% to 25% of the sidewalk length is affected by deficiencies  11% to 25% Deficient	11% to 25% Deficient	<b>Good:</b> Adequate for now	The infrastructure in the system or network is in good condition; some elements show general signs of deterioration that require attention. A few elements exhibit significant deficiencies.
<b>Fair</b>	26% to 45% of the sidewalk length is affected by deficiencies  26% to 45% Deficient	26% to 45% Deficient	<b>Fair:</b> Requires attention	The infrastructure in the system or network is in fair condition; it shows general signs of deterioration and requires attention. Some elements exhibit significant deficiencies.
<b>Poor</b>	46% or more of the sidewalk length is affected by deficiencies  46% to 100% Deficient	46% to 100% Deficient <b>AND</b> <b>Pedestrian Traffic = Low</b>	<b>Poor:</b> At risk	The infrastructure in the system or network is in poor condition and mostly below standard, with many elements approaching the end of their service life. A large portion of the system exhibits significant deterioration.
		46% to 100% Deficient <b>AND</b> <b>Pedestrian Traffic = Medium &amp; High</b>	<b>Very poor:</b> Unfit for sustained service	The infrastructure in the system or network is in unacceptable condition with widespread signs of advanced deterioration. Many components in the system exhibit signs of imminent failure, which is affecting service.

NOTES: A formula generated numeric rating scale is not used. The ratings are subjective following the guidelines provided.

A Very Poor category is not used in inspections. The use of Pedestrian Traffic levels is suggested for the further breakdown for Corp SOI purposes and is a measure of Risk.

**Mapping of Current Condition Ratings to new Corporate Condition Rating Categories**

**Storm and Sanitary Sewers**

Asset: **Storm and Sanitary Sewers**

\* Subjective ratings were applied to all sewers for which there was no CCTV rating. How subjective ratings were applied is noted below

NEW State of the Infrastructure Corporate Asset Condition Categories		Subjective Ratings
Category	Definition (Canadian Infrastructure Report Card)	
<b>Very Good:</b> Fit for the future	The infrastructure in the system or network is generally in very good condition, typically new or recently rehabilitated. A few elements show general signs of deterioration that require attention.	High Density Polyethylene - any year
<b>Good:</b> Adequate for now	The infrastructure in the system or network is in good condition; some elements show general signs of deterioration that require attention. A few elements exhibit significant deficiencies.	PVC, Asbestos Cement, Polyethylen, UR, Concrete - all those post 1970
<b>Fair:</b> Requires attention	The infrastructure in the system or network is in fair condition; it shows general signs of deterioration and requires attention. Some elements exhibit significant deficiencies.	Brick, Concrete - all those pre 1970
<b>Poor:</b> At risk	The infrastructure in the system or network is in poor condition and mostly below standard, with many elements approaching the end of their service life. A large portion of the system exhibits significant deterioration.	Iron, Clay, Big O - any year
<b>Very poor:</b> Unfit for sustained service	The infrastructure in the system or network is in unacceptable condition with widespread signs of advanced deterioration. Many components in the system exhibit signs of imminent failure, which is affecting service.	CSP - any year

**Objective CCTV Rating Mapping**

Service Rating	1	2	3	4	5
Structural Rating					
1	Very	Good	Fair	Poor	Very
2	Good	Good	Fair	Poor	Very Poor
3	Fair	Fair	Fair	Poor	Very Poor
4	Poor	Poor	Poor	Poor	Very Poor
5	Very Poor				

Asset Management Plan Development  
**State of the Infrastructure Report**

**Mapping of Current Condition Ratings to new Corporate Condition Rating Categories**

Asset: **All Other Assets**

\* Subjective ratings were applied to all sewers for which there was no CCTV rating. How subjective ratings were applied is noted below

NEW State of the Infrastructure Corporate Asset Condition Categories		Subjective Ratings
Category	Definition (Canadian Infrastructure Report Card)	
<b>Very Good:</b> Fit for the future	The infrastructure in the system or network is generally in very good condition, typically new or recently rehabilitated. A few elements show general signs of deterioration that require attention.	Greater than 80% remaining useful life - then reviewed by asset experts for validation and or correction based on actual asset performance, inspections where appropriate, reactive maintenance and other available information
<b>Good:</b> Adequate for now	The infrastructure in the system or network is in good condition; some elements show general signs of deterioration that require attention. A few elements exhibit significant deficiencies.	60 - 79.9% remaining useful life - then reviewed by asset experts for validation and or correction based on actual asset performance, inspections where appropriate, reactive maintenance and other available information
<b>Fair:</b> Requires attention	The infrastructure in the system or network is in fair condition; it shows general signs of deterioration and requires attention. Some elements exhibit significant deficiencies.	40 - 59.9% remaining useful life - then reviewed by asset experts for validation and or correction based on actual asset performance, inspections where appropriate, reactive maintenance and other available information
<b>Poor:</b> At risk	The infrastructure in the system or network is in poor condition and mostly below standard, with many elements approaching the end of their service life. A large portion of the system exhibits significant deterioration.	20 - 39.9% remaining useful life - then reviewed by asset experts for validation and or correction based on actual asset performance, inspections where appropriate, reactive maintenance and other available information
<b>Very poor:</b> Unfit for sustained service	The infrastructure in the system or network is in unacceptable condition with widespread signs of advanced deterioration. Many components in the system exhibit signs of imminent failure, which is affecting service.	Less than 20% remaining useful life - then reviewed by asset experts for validation and or correction based on actual asset performance, inspections where appropriate, reactive maintenance and other available information

Confirmed by: **Mark Winteron - PW Operations**

## Appendix E

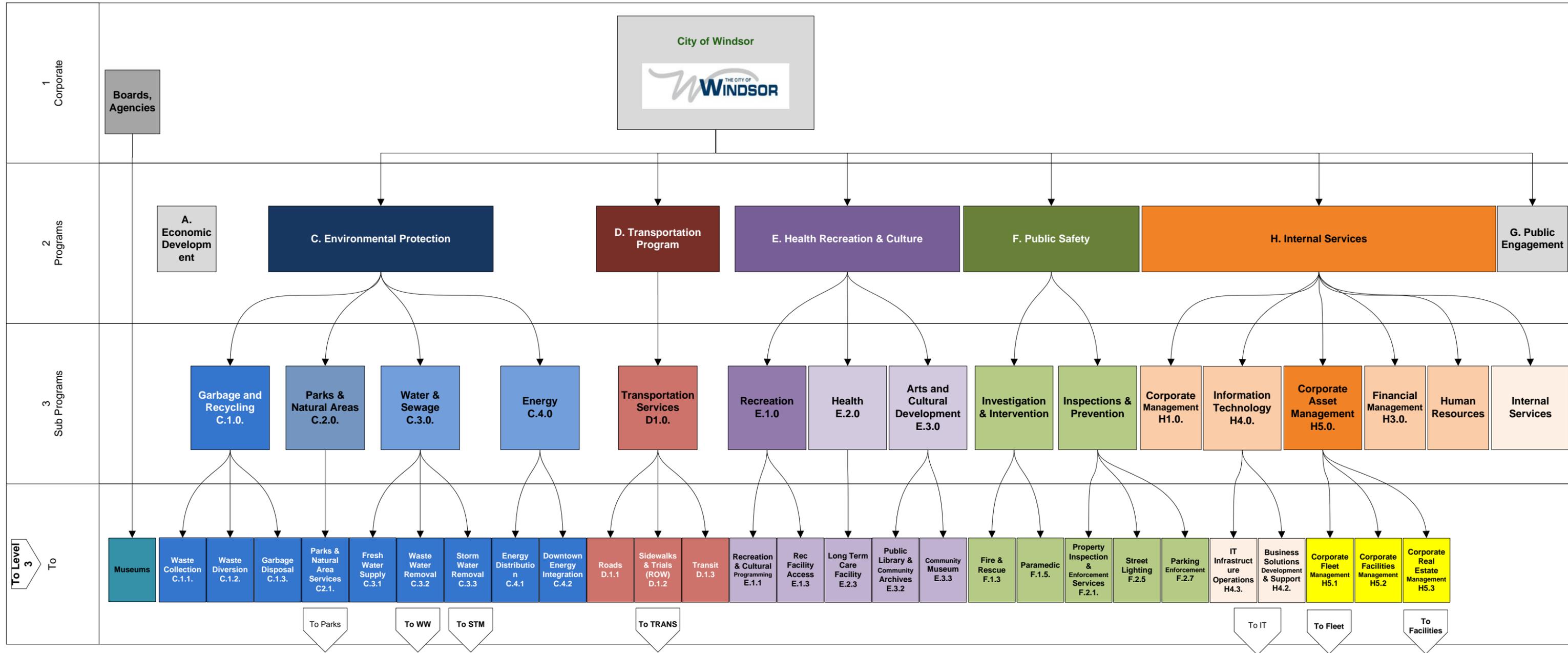
### Asset Hierarchy

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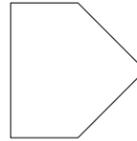




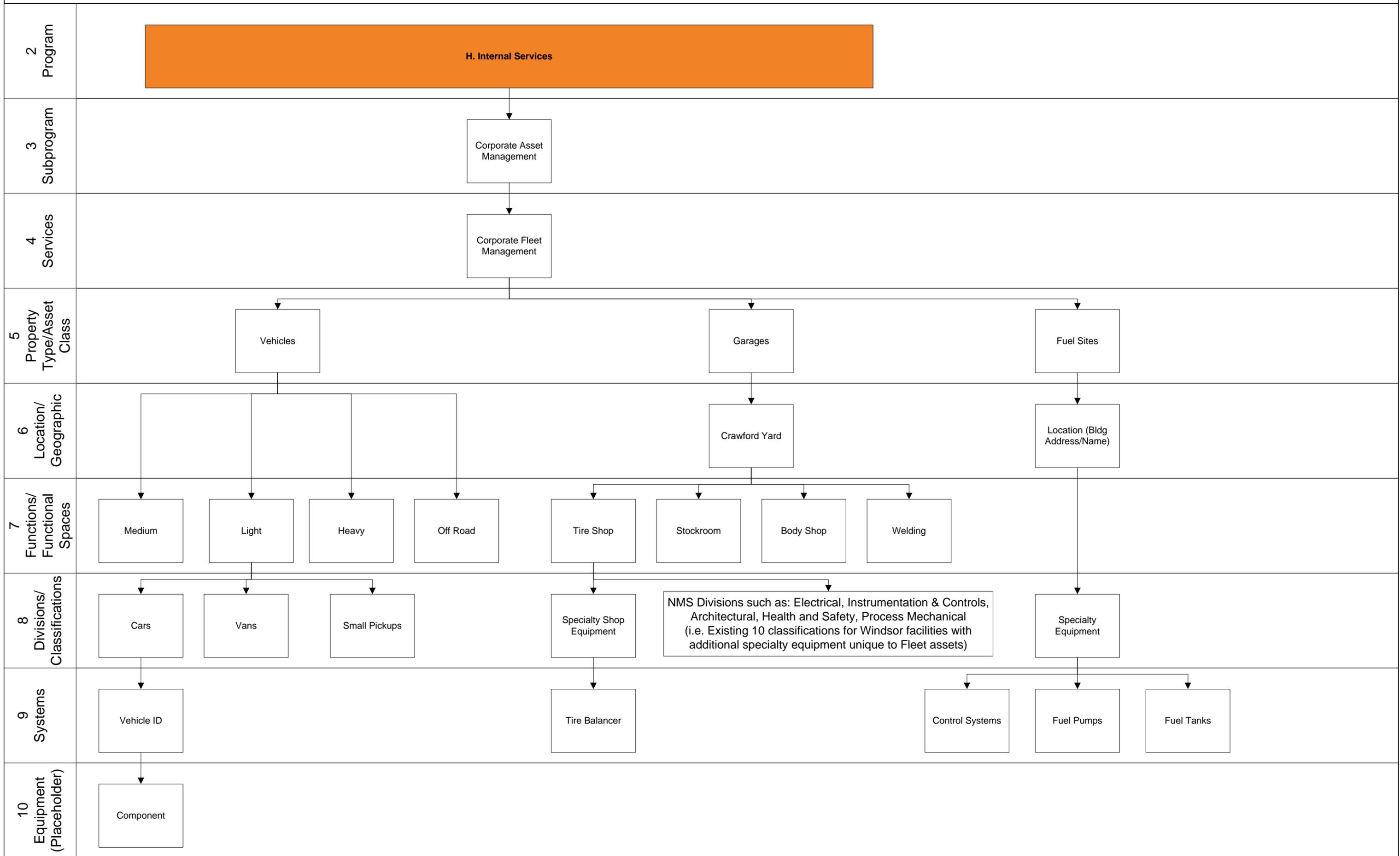
# ASSET HIERARCHY NO. A-1: CITY OF WINDSOR CORPORATE ASSET HIERARCHY FRAMEWORK (LEVELS NO. 1-4)

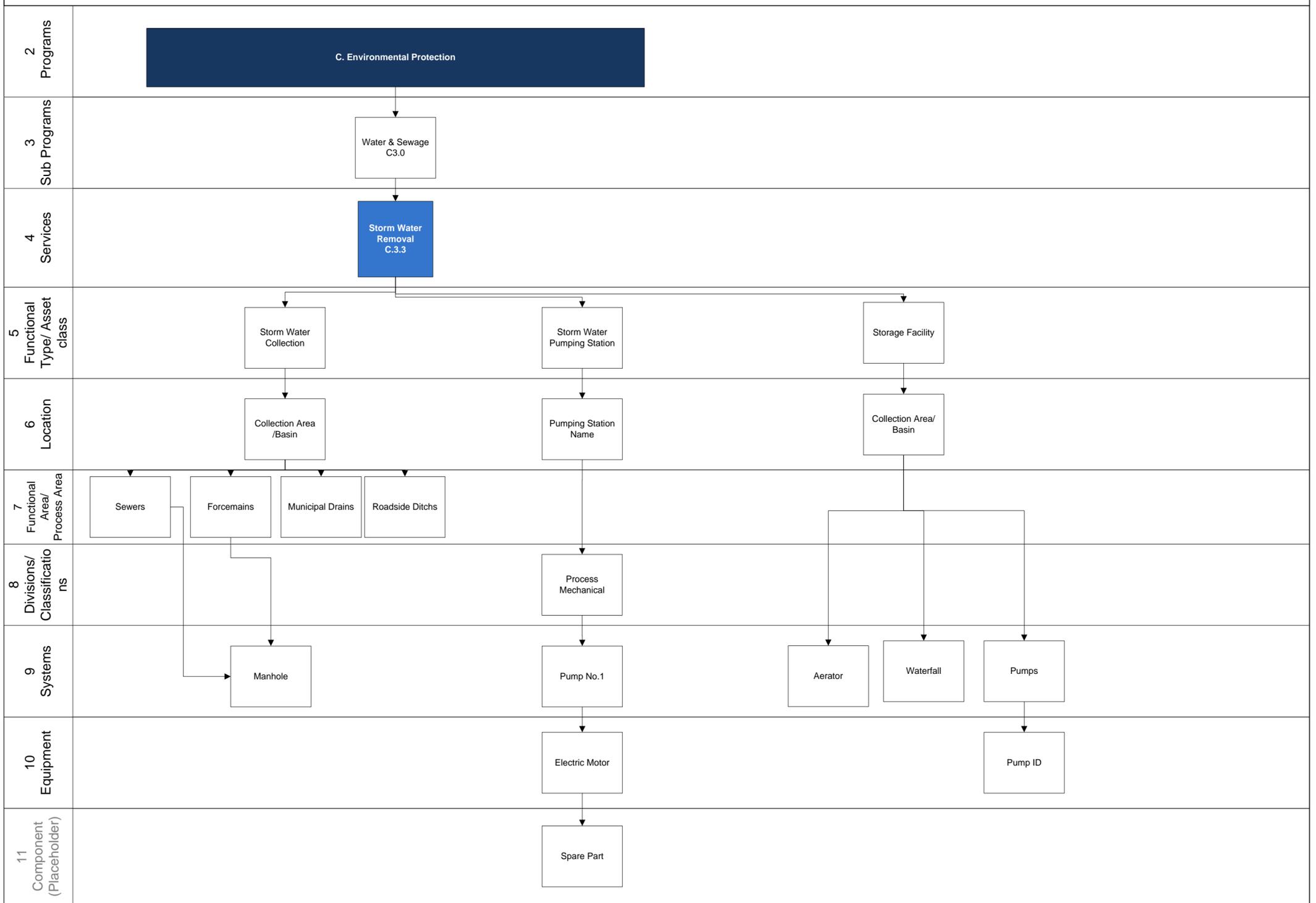


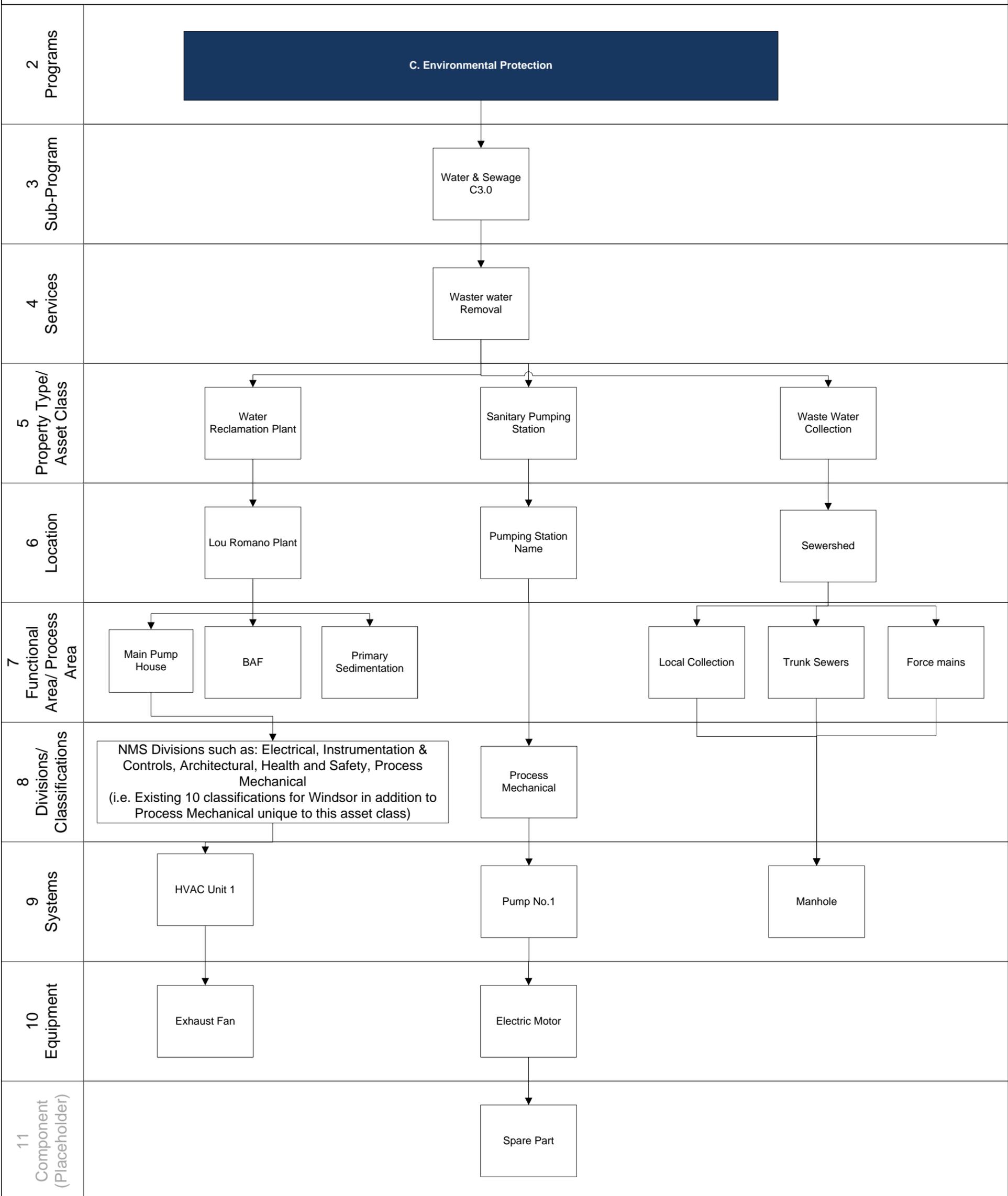
# ASSET HIERARCHY NO. A-1: CITY OF WINDSOR CORPORATE ASSET HIERARCHY FRAMEWORK (LEVELS NO. 5-10)

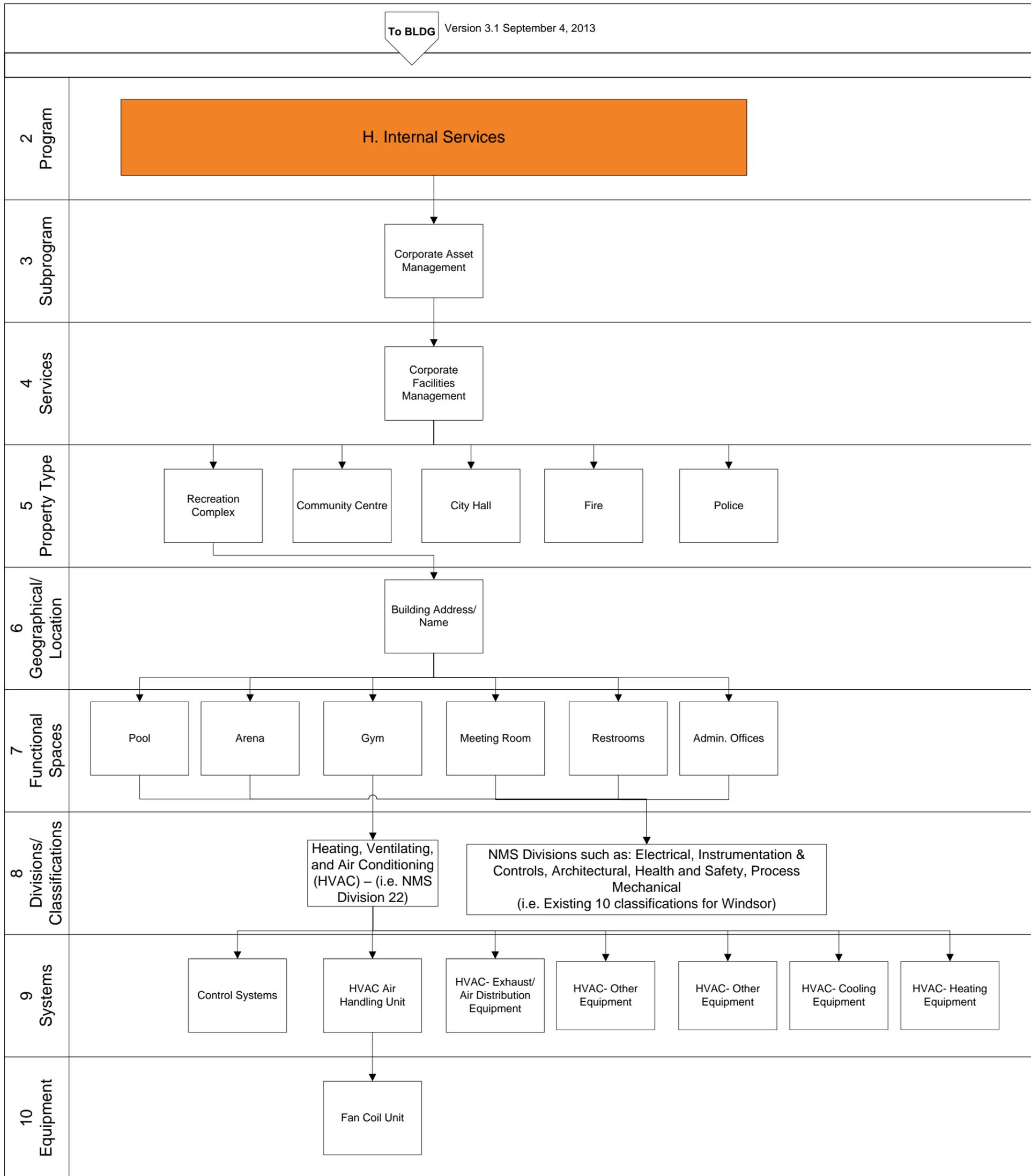


Draft- Windsor CAM Asset Hierarchy Framework cont'd	
5 Property Type/ Asset Class	<div style="display: flex; justify-content: space-between; align-items: center; margin-top: 20px;"> <div style="border: 1px solid black; background-color: yellow; padding: 5px; text-align: center;">Linear</div> <div style="text-align: center; flex-grow: 1;"> <p>Systems (Linear) Assets versus Facilities (Discrete) Type Assets</p> </div> <div style="border: 1px solid black; background-color: magenta; padding: 5px; text-align: center;">Facilities</div> </div>
6 Location/ Areas	<div style="display: flex; justify-content: space-between; align-items: center; margin-top: 20px;"> <div style="border: 1px solid black; background-color: yellow; padding: 5px; text-align: center;">Areas</div> <div style="text-align: center; flex-grow: 1;"> <p>Geographical: (Pressure Districts, Sewersheds, Process Areas, Functional, Areas etc.)            Definition: The service area is expressed as a combination of the operational area and/or the geographical area.            In some instances, This level carries the unique facility name used in communications including correspondence and documentation.</p> </div> <div style="border: 1px solid black; background-color: magenta; padding: 5px; text-align: center;">Facility/Site</div> </div>
7 Functional Spaces/ Types	<div style="display: flex; justify-content: space-between; align-items: center; margin-top: 20px;"> <div style="border: 1px solid black; background-color: yellow; padding: 5px; text-align: center;">Asset Classes</div> <div style="text-align: center; flex-grow: 1;"> <p>Asset Classes (For example. Bridges, Forcemains, Watermains, MERF, Pumping Stations, LTC Facility)            Definition: The asset category is the functional asset type of facility or class and denotes the operational function of the asset feature.</p> </div> <div style="border: 1px solid black; background-color: magenta; padding: 5px; text-align: center;">Sub-Area</div> </div>
8 Divisions/ Classifications	<div style="display: flex; justify-content: space-between; align-items: center; margin-top: 20px;"> <div style="border: 1px solid black; background-color: yellow; padding: 5px; text-align: center;">Divisions/ Classifications</div> <div style="text-align: center; flex-grow: 1;"> <p>Disciplines (For example. I&amp;C, Electrical, HVAC, Process Mechanical, Building Mechanical, Architectural, Health &amp; Safety, Others, )            Sub-Asset Classes-            Definition: This level represents the unit process or sub-process within a type of infrastructure facility- Existing for City of Windsor there are existing 10 categories- alignment with NMS(future) recommended</p> </div> <div style="border: 1px solid black; background-color: magenta; padding: 5px; text-align: center;">Disciplines</div> </div>
9 Systems	<div style="display: flex; justify-content: space-between; align-items: center; margin-top: 20px;"> <div style="border: 1px solid black; background-color: yellow; padding: 5px; text-align: center;">Sub-Asset Classes</div> <div style="text-align: center; flex-grow: 1;"> <p>Equipment (For example. Blower, Fan, Pump, Valve, Door, Roof etc.)            Definition: Process, certain non-process related equipment, and instruments (collectively referenced as Devices) are covered under this level including all equipment that is not part of a process system located in a facility</p> </div> </div>
10 Equipment	<div style="display: flex; justify-content: space-between; align-items: center; margin-top: 20px;"> <div style="border: 1px solid black; background-color: yellow; padding: 5px; text-align: center;">Asset (ID)</div> <div style="text-align: center; flex-grow: 1;"> <p>Equipment (For example. PRV-1, tc.)            Definition: Components or Sub-components of the equipment assembly at this level of the asset hierarchy.</p> </div> </div>
11 Component/ Spare Parts (Placeholder)	<div style="display: flex; justify-content: space-between; align-items: center; margin-top: 20px;"> <div style="border: 1px solid black; background-color: gray; padding: 5px; text-align: center;">Sub-component</div> <div style="text-align: center; flex-grow: 1;"> <p>Future Placeholder- Spare Parts (For Example, bearing, impeller, gaskets, etc.)            Definition: Spare Parts at this level of the asset hierarchy.</p> </div> <div style="border: 1px solid black; background-color: gray; padding: 5px; text-align: center;">Spare Parts</div> </div>



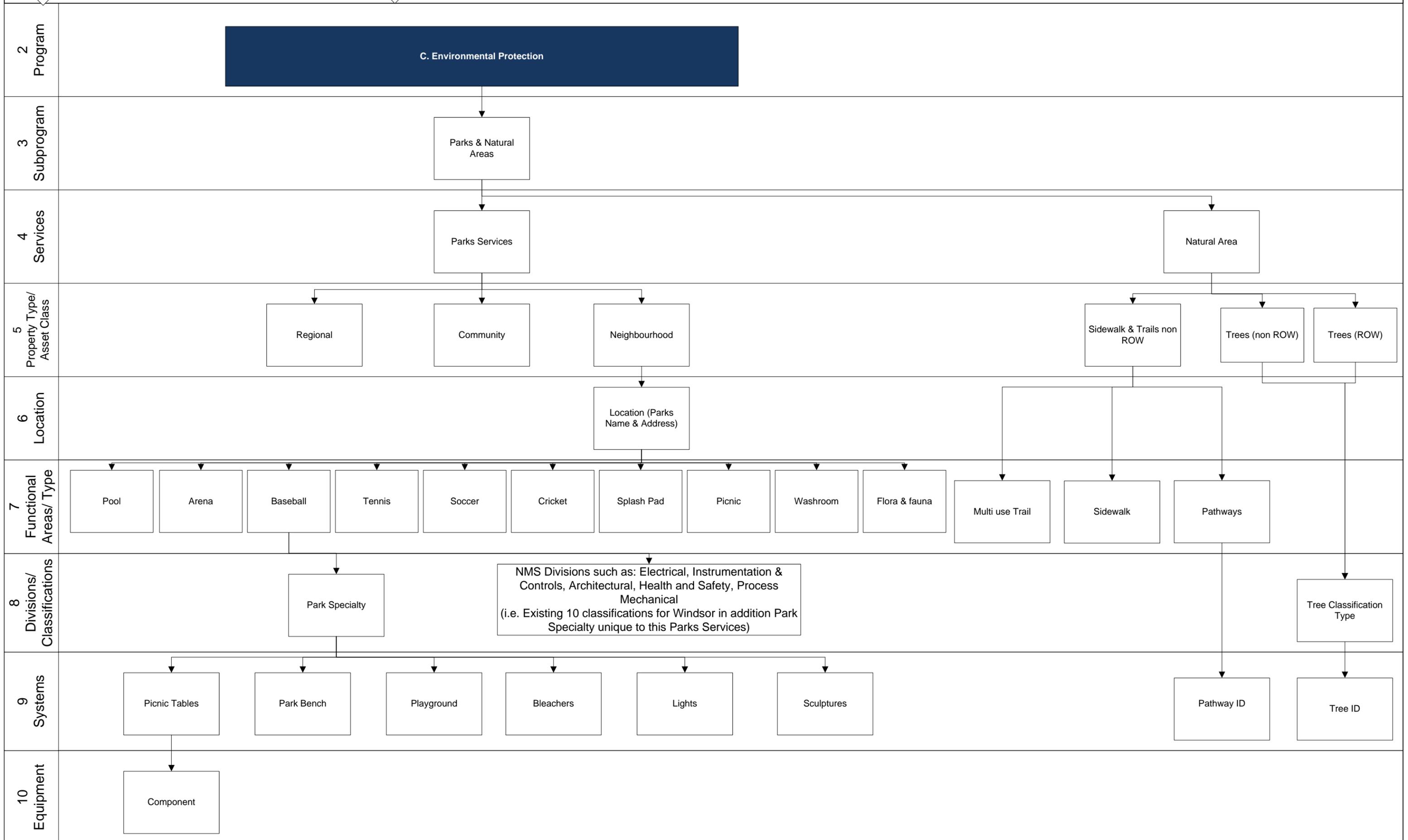








To Parks & Rec



2  
Program

3  
Subprogram

4  
Services

5  
Property Type/  
Asset Class

6  
Location

7  
Functional  
Areas/  
Type

8  
Divisions/  
Classifications

9  
Systems

10  
Equipment

C. Environmental Protection

Parks & Natural Areas

Parks Services

Natural Area

Regional

Community

Neighbourhood

Sidewalk & Trails non ROW

Trees (non ROW)

Trees (ROW)

Location (Parks Name & Address)

Pool

Arena

Baseball

Tennis

Soccer

Cricket

Splash Pad

Picnic

Washroom

Flora & fauna

Multi use Trail

Sidewalk

Pathways

Park Specialty

NMS Divisions such as: Electrical, Instrumentation & Controls, Architectural, Health and Safety, Process Mechanical  
(i.e. Existing 10 classifications for Windsor in addition Park Specialty unique to this Parks Services)

Tree Classification Type

Picnic Tables

Park Bench

Playground

Bleachers

Lights

Sculptures

Pathway ID

Tree ID

Component

