Park Street Municipal Drain Improvement

Information Meeting No. 3

July 15, 2020

Purpose of this Meeting

- An information exchange with stakeholders in the contributing watershed.

- *The design is NOT written in stone and we're looking for feedback to proceed.*

Overview

1. Project Background and Watershed History
2. Design Criteria and Investigation Results
3. Proposed Design
4. Construction Process
5. Cost Estimates
6. Preliminary Assessments
7. Next Steps

What is a Municipal Drain?

- **Drainage Act, R.S.O. 1990**
  - Provincial legislation which provides a **system/framework/process** for landowners to gain a **legal or sufficient outlet** for surface and subsurface water from their property through private lands.
  - Process is administered through the Municipality and the Engineer, with Agency review.

What is a Municipal Drain?

- **Community Project**
  - Contributing properties have input towards the scale, design, and other aspects of the drainage system.
- **User Pay System**
  - Each member of the contributing watershed is responsible for a portion of the cost of the drain.
- **Legal Existence**
  - Provides a Legal Outlet for a property.
  - Legal Standing under associated Municipal By-Law.
- **Municipal Infrastructure**
  - Maintained by the Municipality on behalf of the affected landowners.

Watershed Boundary

What is a Watershed Boundary?

- **A watershed boundary is a divide that defines an area draining to a particular watercourse.**
- Rain falling on our side of a watershed boundary will flow to our drain and on the other side will flow to another watercourse.
- This line should represent the high ground on your property.

#	ROLL	LANDOWNER
1	(11-124-02)	R. Mackay
2	(11-001-00)	B. Meyer & L. Meyer
3	(11-002-02)	S. Martyn & S. Martyn
4	(11-002-01)	J. Nixon
5	(11-002-03)	J. Stanley & L. Stanley
6	(11-003-04)	D. Stanley & J. Stanley
7	(11-003-03)	D. Stanley & J. Stanley
8	(11-003-02)	S. Reeves
9	(11-003-00)	M. McLean & J. Steffler
10	(11-003-01)	P. McDonald & R. Liddle
11	(11-003-05)	R. Lotton & G. Lotton
12	(11-004-00)	1519201 Ontario Inc
13	(11-005-00)	K. Harrison
14	(11-006-00)	G. Ackert & K. Ackert
15	(11-007-00)	J. Chilton & J. Jones
16	(11-009-00)	W. McLelland
17	(11-010-00)	T. Gamble & A. Gamble
18	(11-011-00)	D. Farrell & C. Farrell
19	(11-012-00)	K. Piel
20	(11-102-00)	K. Eakett
21	(11-103-00)	C. Liddle
22	(11-102-01)	D. Carruthers & P. Carruthers
23	(11-103-01)	B. Pollock & W. Pollock
24	(11-103-02)	G. Szarer & D. Szarer
25	(11-104-00)	C. Bruce
26	(11-013-00)	M. Bolton
27	(11-014-00)	D. Elliott
28	(11-015-00)	J. Clark & I. Clark
29	(11-016-00)	R. Freer & M. Freer
30	(11-017-00)	D. McKay & L. McKay
31	(11-018-00)	C. Anger
32	(11-019-00)	R. Nicholson & C. Nicholson
33	(11-020-00)	B. Pollock & L. Kerry
34	(11-021-00)	1985370 Ontario Inc
35	(11-022-00)	M. McKeachnie & B. McKeachnie

#	ROLL	LANDOWNER
36	(11-023-00)	C. Fludder
37	(11-024-00)	Township of Huron-Kinloss
38	(11-025-00)	Township of Huron-Kinloss
39	(11-088-00)	E. Paton
40	(11-089-00)	L. McCulloch & MacDonald
41	(11-090-00)	C. Maguire-Greenwood
42	(11-091-00)	M. Quinn
43	(11-092-00)	T. Church & J. Church
44	(11-093-00)	K. Eskrick & L. Eskrick
45	(11-094-00)	M. Iharosy
46	(11-095-00)	2217608 Ontario Limited
47	(11-096-00)	B. Colling & G. Colling
48	(11-097-00)	M. Farrell
49	(11-098-00)	M. Hawley & D. Hawley
50	(11-099-00)	D. Neyvatte
51	(11-100-00)	A. Smith
52	(11-101-00)	R. Johnston
53	(11-101-01)	K. Taylor
54	(11-106-00)	M. Slack & B. Slack
55	(11-107-00)	T. Lubberts & J. Lubberts
56	(11-108-00)	Earl Lippert Trucking
57	(11-109-01)	Brian Colling Trucking Inc
58	(11-109-00)	G. Colling
59	(11-110-00)	C. Hutchinson
60	(11-111-00)	A. Lawson
61	(11-112-00)	K. Houston
62	(11-113-00)	T. Azar
63	(11-107-04)	K. France & T. France
64	(11-107-05)	G. Wilhelm & J. Wilhelm
65	(11-107-15)	P. Vanhardeveld & K. Vanhardeveld
66	(11-107-10)	D. Martyn & K. Martyn
67	(11-105-05)	R. Pope & N. Pope
68	(11-115-05)	P. MacDonald & C. MacDonald
69	(11-114-00)	G. Fortin
70	(11-026-00)	S. Brown

#	ROLL	LANDOWNER
71	(11-027-00)	Meat Consultants
72	(11-028-00)	2068140 Ontario Ltd
73	(11-030-00)	Meat Consultants
74	(11-082-00)	Meat Consultants
75	(11-083-00)	Meat Consultants
76	(11-083-10)	2068140 Ontario Ltd
77	(11-086-01)	Canada Post Corporation
78	(11-086-00)	Township of Huron-Kinloss
79	(11-126-00)	K. Galloway
80	(11-127-00)	K. Galloway
81	(11-125-00)	G. Farrell
82	(02-066-00)	D. Geddes & D. Geddes
83	(10-146-00)	H. Dundas
84	(10-146-04)	M. Scott & B. Scott
85	(10-146-02)	B. Scott & J. Scott
86	(10-145-01)	B. Cliffe & S. Cliffe
87	(10-145-00)	S. Cliffe
88	(10-144-00)	K. Kortegaard & K. Kortegaard
89	(10-143-00)	J. Savage
90	(10-142-00)	J. Funk
91	(10-141-00)	S. Farrell & S. Vidic
92	(10-140-01)	J. MacDonald & C. MacDonald
93	(10-140-00)	W. Armstrong
94	(10-139-00)	Earl Lippert Trucking & P. MacDonald
95	(10-138-00)	J. York
96	(10-137-00)	R. Hill & S. Conley
97	(10-136-00)	M. Cook
98	(10-135-00)	A. Newman & K. Mcguire
99	(10-134-00)	W. Rhody & J. Rhody
100	(10-133-00)	S. Culleton
101	(10-132-00)	R. Grubb
102	(10-132-01)	R. Grubb & R. Grubb
103	(10-130-00)	Thomson Humble Holdings Inc
104	(10-130-50)	P. Humble
105	(10-129-00)	C. MacLennan

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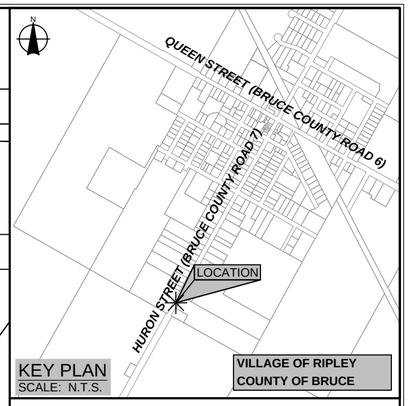

KEY PLAN
SCALE: N.T.S.

VILLAGE OF RIPLEY
COUNTY OF BRUCE

LEGEND

Notes

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4. All property lines are approximate and for information purposes only.

NOT FOR CONSTRUCTION

No.	Issue / Revision	Date	Auth.
1	ON SITE MEETING	2018/11/14	EMD
2	INFORMATION MEETING 1	2019/10/31	EMD
3	INFORMATION MEETING 2	2020/03/07	EMD
4	INFORMATION MEETING 3	2020/07/15	EMD

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Client
TOWNSHIP OF HURON-KINLOSS
21 QUEEN STREET
RIPLEY, ONTARIO
N0G 2R0

Drawing Title
PARK STREET
MUNICIPAL DRAIN
PROJECT WATERSHED

Huron - Kinloss

Designed	Checked	Drawn	Checked	Drawing No.
----	----	GAG	EMD	6OF7
Date		Project No.		
2018/11/14		300043723		

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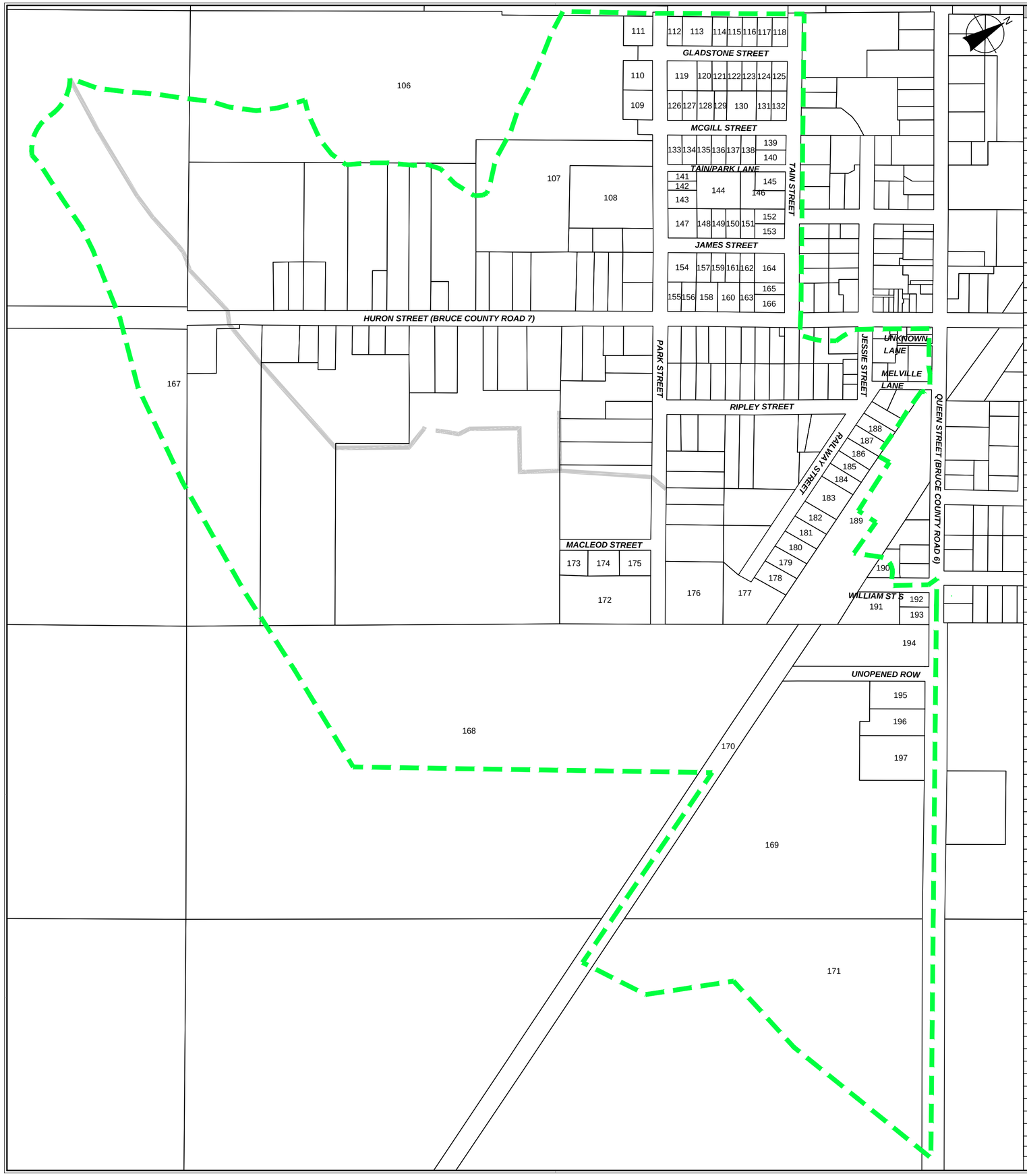

#	ROLL	LANDOWNER
106	(10-140-20)	F. Thorburn & C. Thorburn
107	(10-128-00)	2217608 Ontario Limited
108	(10-127-00)	RVilla Retirement Living Inc
109	(10-125-00)	J. Johnson & D. Johnson
110	(10-124-00)	M. McKenzie & S. McKenzie
111	(10-123-00)	M. Harper & S. Harper
112	(10-122-00)	C. Gomes
113	(10-121-00)	E. Finlayson & G. Finlayson
114	(10-120-00)	M. Elliott
115	(10-120-01)	E. Vanhardeveld & A. Vanhardeveld
116	(10-120-02)	K. Hackett & S. Hackett
117	(10-120-03)	J. Vandenhogen & P. Vandenhogan
118	(10-120-04)	R. Coulson & M. Spampinato
119	(10-115-00)	T. Gamble & A. Gamble
120	(10-115-50)	H. Sczyrba
121	(10-116-00)	P. Wehrmann & B. McCorkle
122	(10-117-00)	E. MacDonald
123	(10-118-00)	E. MacDonald
124	(10-119-01)	M. Walden
125	(10-119-00)	D. Haldenby & J. Haldenby
126	(10-114-00)	A. Drumond
127	(10-113-10)	B. Dewar & S. Dewar
128	(10-113-00)	P. Kerins & C. Kerins
129	(10-112-00)	B. McCormick & T. Fleet
130	(10-111-00)	A. Rawlings & A. Rawlings
131	(10-110-00)	J. Murray
132	(10-110-01)	N. Gibbons & R. Page
133	(10-104-00)	J. Hodgins & N. Joseph
134	(10-104-50)	M. Hodgins
135	(10-105-00)	J. Blackwell & J. Caesar
136	(10-106-00)	S. Nicholson & S. Nicholson
137	(10-107-00)	C. Walden
138	(10-107-01)	G. Meurs
139	(10-108-00)	A. Taylor
140	(10-109-00)	K. Taylor
141	(10-102-98)	1893015 Ontario Inc
142	(10-103-01)	A. Norman & P. Norman
143	(10-103-02)	M. Mann & W. Ward
144	(10-103-00)	S. Nicholson & S. Nicholson
145	(10-082-00)	Township of Huron-Kinloss
146	(10-083-00)	C. Wheeler
147	(10-102-00)	United Church Canada
148	(10-101-00)	D. Quinn
149	(10-101-01)	R. Elphick & A. Elphick
150	(10-087-00)	L. Guse & K. Guse
151	(10-086-00)	D. Bolton & D. Bolton
152	(10-084-00)	J. Gibson & M. Cocharn
153	(10-085-00)	K. Holland
154	(10-098-00)	C. Taylor & J. McKnight-Taylor
155	(10-097-00)	J. Burgess
156	(10-096-00)	W. Murray & J. Murray
157	(10-099-00)	D. Schell & D. Schell
158	(10-095-00)	E. McGillivray & S. McGillivray
159	(10-100-00)	J. Platten & D. Platten
160	(10-094-00)	K. Clarke & A. Clarke
161	(10-088-00)	S. O'Connor & I. Dougall
162	(10-089-00)	D. Cameron
163	(10-093-00)	Huron Telecommunications
164	(10-090-00)	A. Chevalier
165	(10-091-00)	G. Roulston
166	(10-092-00)	W. Wagner & R. Meyer
167	(02-065-00)	K. MacLeod & D. MacLeod
168	(02-111-00)	Township of Huron-Kinloss
169	(02-111-00)	Township of Huron-Kinloss
170	(02-107-50)	Township of Huron-Kinloss
171	(02-108-00)	L. Beishuizen & B. Beishuizen
172	(11-104-01)	J. McIntosh & D. McIntosh
173	(11-126-04)	2467882 Ontario Inc
174	(11-126-03)	2467882 Ontario Inc
175	(11-126-02)	2467882 Ontario Inc
176	(11-105-00)	Township of Huron-Kinloss
177	(11-115-00)	J. Richardson
178	(11-115-01)	R. Mitchell
179	(11-116-00)	J. Stanley & C. Graham
180	(11-116-05)	D. Martyn & L. Martyn
181	(11-116-10)	G. Near & H. Martyn
182	(11-116-15)	J. Lang
183	(11-117-00)	D. Watson & S. Watson
184	(11-120-00)	D. Cook & V. Cook
185	(11-121-00)	W. Watson & M. Watson
186	(11-122-00)	B. MacDonald & M. MacDonald
187	(11-123-00)	C. Stanley
188	(11-124-00)	A. Robinson
189	(11-150-00)	Huron Telecommunications
190	(11-068-00)	D. Large & E. Large
191	(11-067-00)	B. MacDonald & M. MacDonald
192	(11-066-00)	L. Cormier & C. Brewer
193	(11-065-00)	L. Cormier & C. Brewer
194	(02-112-00)	B. MacDonald & B. MacDonald
195	(02-110-02)	R. MacInnes & K. MacInnes
196	(02-110-03)	M. Rock & R. Rock
197	(02-110-00)	J. Van Den Hogen

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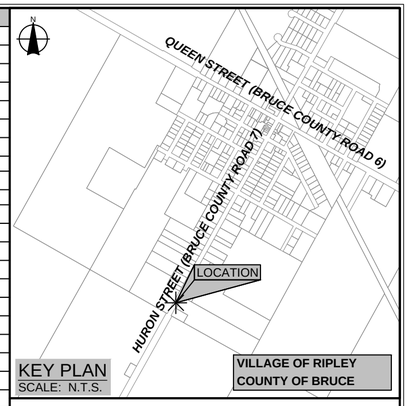

KEY PLAN
SCALE: N.T.S.

VILLAGE OF RIPLEY
COUNTY OF BRUCE

LEGEND

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TOWNSHIP OF HURON-KINLOSS

21 QUEEN STREET
RIPLEY, ONTARIO
N0G 2R0

Drawing Title

PARK STREET
MUNICIPAL DRAIN
ROLL WATERSHED

Huron - Kinloss

Designed	Checked	Drawn	Checked	Drawing No.
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Date: 2018/11/14
Project No.: 300043723
Scale: 1:4,000 (0 40 80 160 240m)

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Project Background

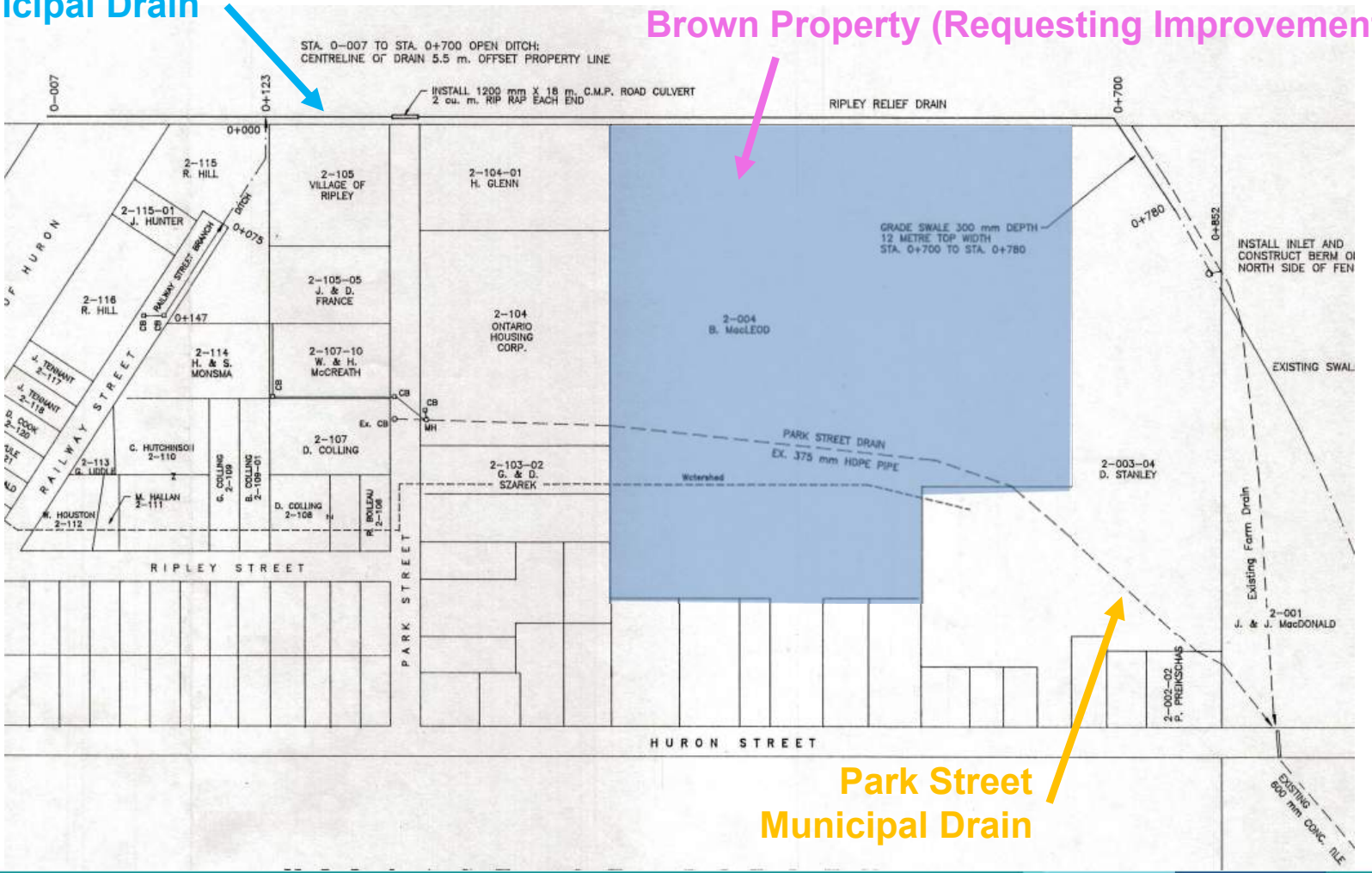
Project Background

What started this project?

- Request for Improvements to the Park Street Municipal Drain to improve the outlet of the Brown property for development in 2018.
- On-Site Meeting – November 2018
- Information Meeting No. 1 – October 2019
- Information Meeting No. 2 – March 2020

Project Background

Ripley Relief Municipal Drain

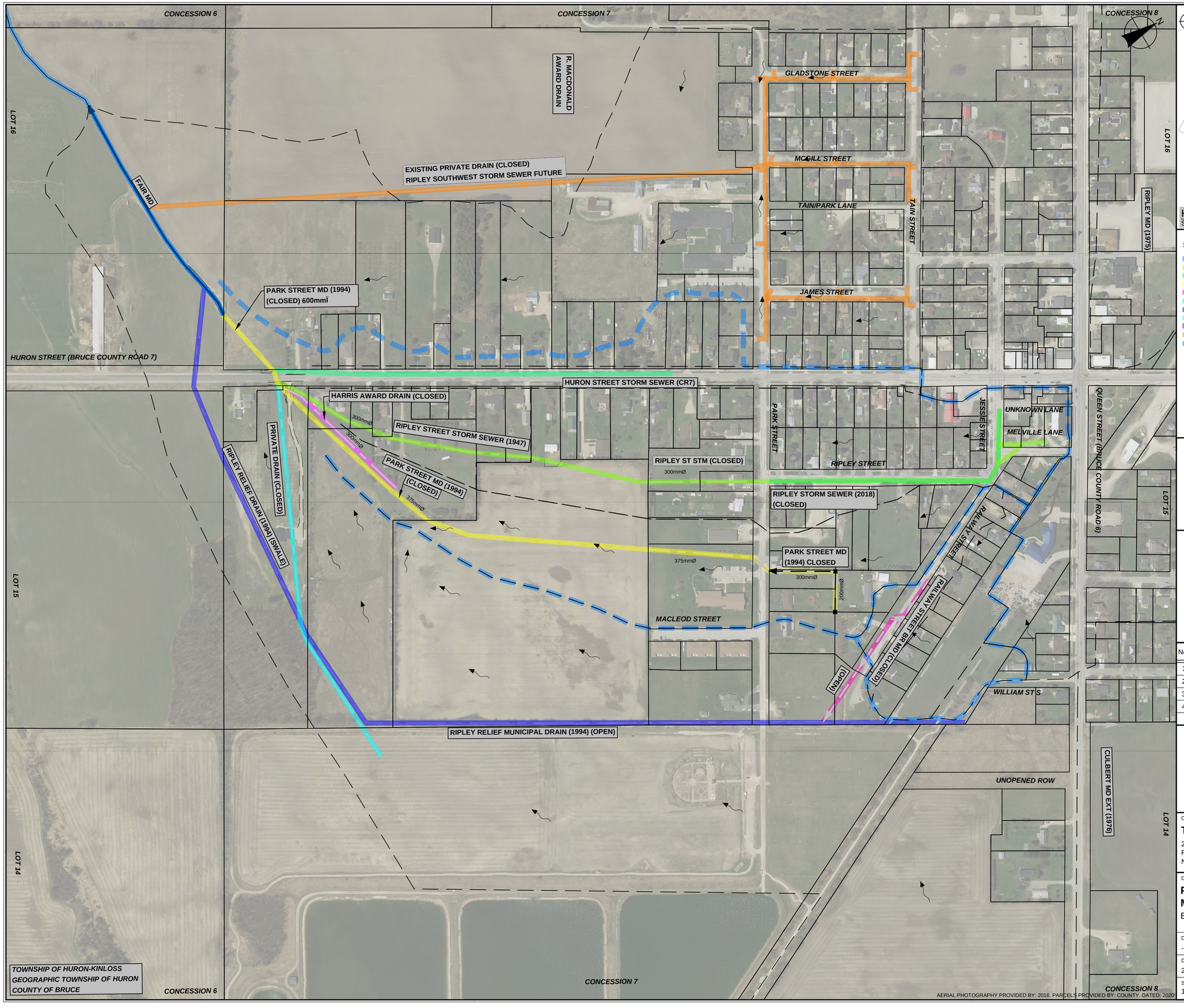


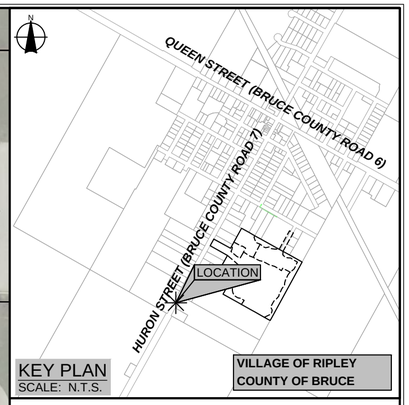
Watershed History

- 1906
  - Harris Award Drain constructed, servicing the Ripley Street and Park Street watersheds.
- 1947
  - Ripley storm sewer constructed parallel to Park Street MD.
- 1957
  - Fair MD construction west of Huron Street, the outlet for the Park Street MD and Ripley Street sewer systems.
- 1994
  - Park Street MD constructed under a report by W.J. Bartlett, existing drainage systems incorporated.
  - Construction of Ripley relief MD and Railway Street drain.

Watershed History

- 1996
  - Storm drainage report for the Village of Ripley completed by B.M. Ross and Associates.
- 2018
  - Ripley storm sewer reconstruction (obstructed outlet).
  - Park Street MD improvement project initiated.





LEGEND

- FAIR MD (1957)
- RIPLEY STREET STORM SEWER (1947)
- RIPLEY STREET STORM (2018)
- PARK STREET MD (1994)
- RAILWAY STREET BRANCH MD (1994)
- COUNTY ROAD 7 STORM SEWER (2008)
- RIPLEY RELIEF MD (1994)
- EXISTING PRIVATE DRAIN
- HARRIS AWARD DRAIN
- RIPLEY SOUTHWEST STORM SEWER
- WATERSHED BOUNDARY

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Client

TOWNSHIP OF HURON-KINLOSS
21 QUEEN STREET
RIPLEY, ONTARIO
N0G 2R0

Drawing Title

PARK STREET MUNICIPAL DRAIN

EXISTING WATERSHED AREA

Designed	Checked	Drawn	Checked	Drawing No.
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Date		Project No.		
2018/11/14		300043723		
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Existing Drainage Systems

- Park Street MD (1994)
  - Mainly 375 mm dia. (15 inch) single-wall HDPE tubing south of Park Street
  - 400 mm CSP crossing under Park Street.
  - 200 – 300 mm dia. Dual-wall HDPE upstream of Park Street.
- Ripley Street Storm Sewer (1947 and 2018)
  - Mainly 300 mm dia. (12 inch) concrete pipe
  - Upper section (u/s of Park Street) re-constructed in 2018 with dual-wall HDPE (320 kPa) pipe up to 600 mm dia. (24 inch).
  - Currently outlets to the existing sewer at the south intersection of Ripley and Park Streets.
- Harris Award Drain (1906)
  - Concrete/clay system in the general location of the Ripley and Park drainage systems west of Queen Street (~200 mm dia.)

Existing Drainage Systems

- Fair Municipal Drain (1957)
  - Channel Municipal Drain and the outlet for the existing Park Street Municipal Drain.
- Ripley Relief Drain(1994)
  - Mainly channel municipal drain that outlets to the Fair Municipal Drain downstream of the existing Park Street MD outlet.
- Huron Street (County Road 7) Storm Sewer
  - Currently outlets to the existing Park Street Municipal Drain in the WROW of Huron Street.

Existing Conditions

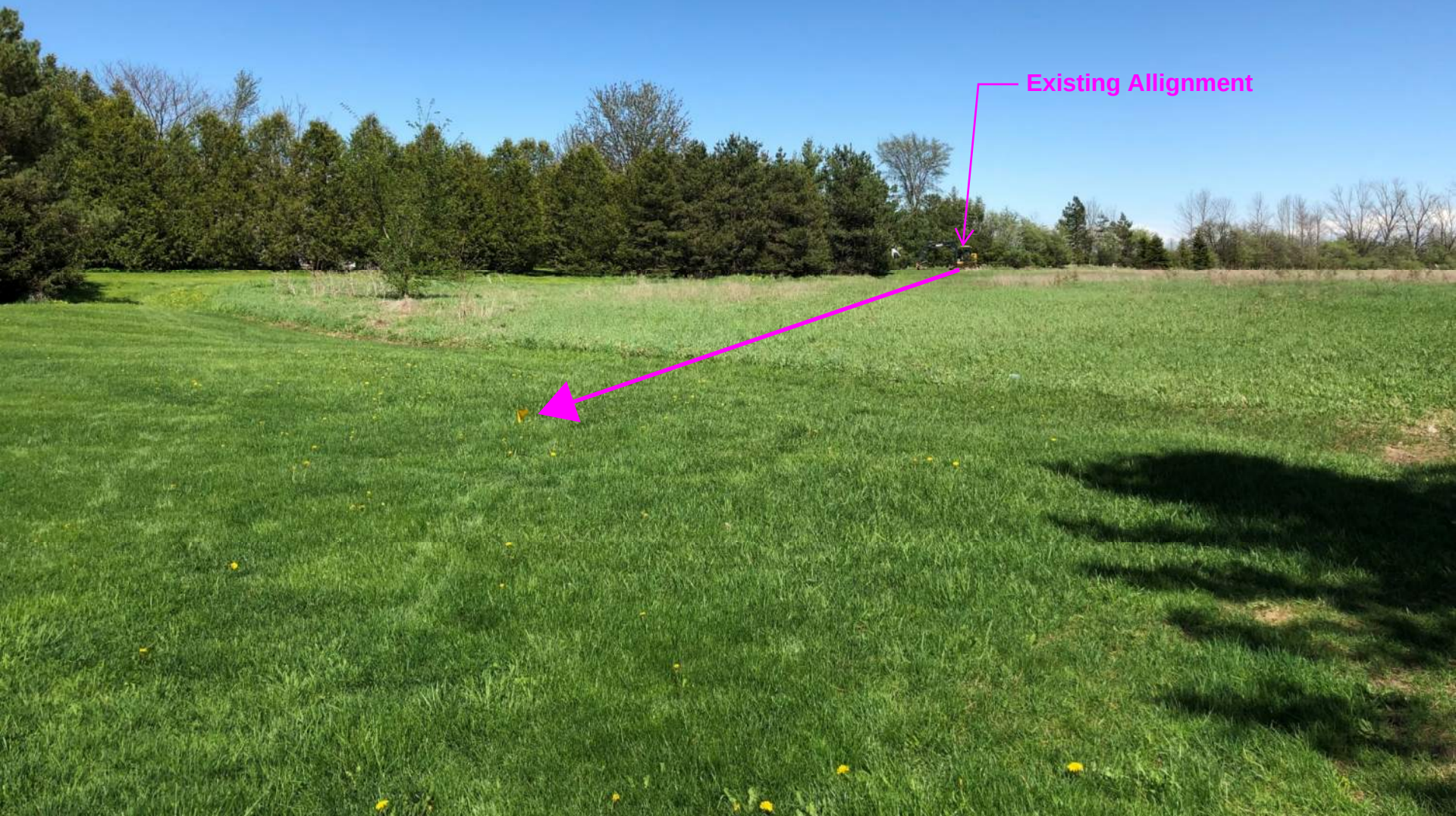
Looking u/s along Ex. Park Street
MD alignment (Park Street)

Looking d/s along Ex. Park Street
MD alignment (Park Street)


Looking u/s along Ex. Park Street
MD alignment (Stanley Property)


Looking d/s along Ex. Park Street
MD alignment (Stanley Property)

Looking u/s along Ex. Park Street MD alignment (Stanley Property)



Looking u/s along Ex. Park Street MD alignment (Meyer Property)

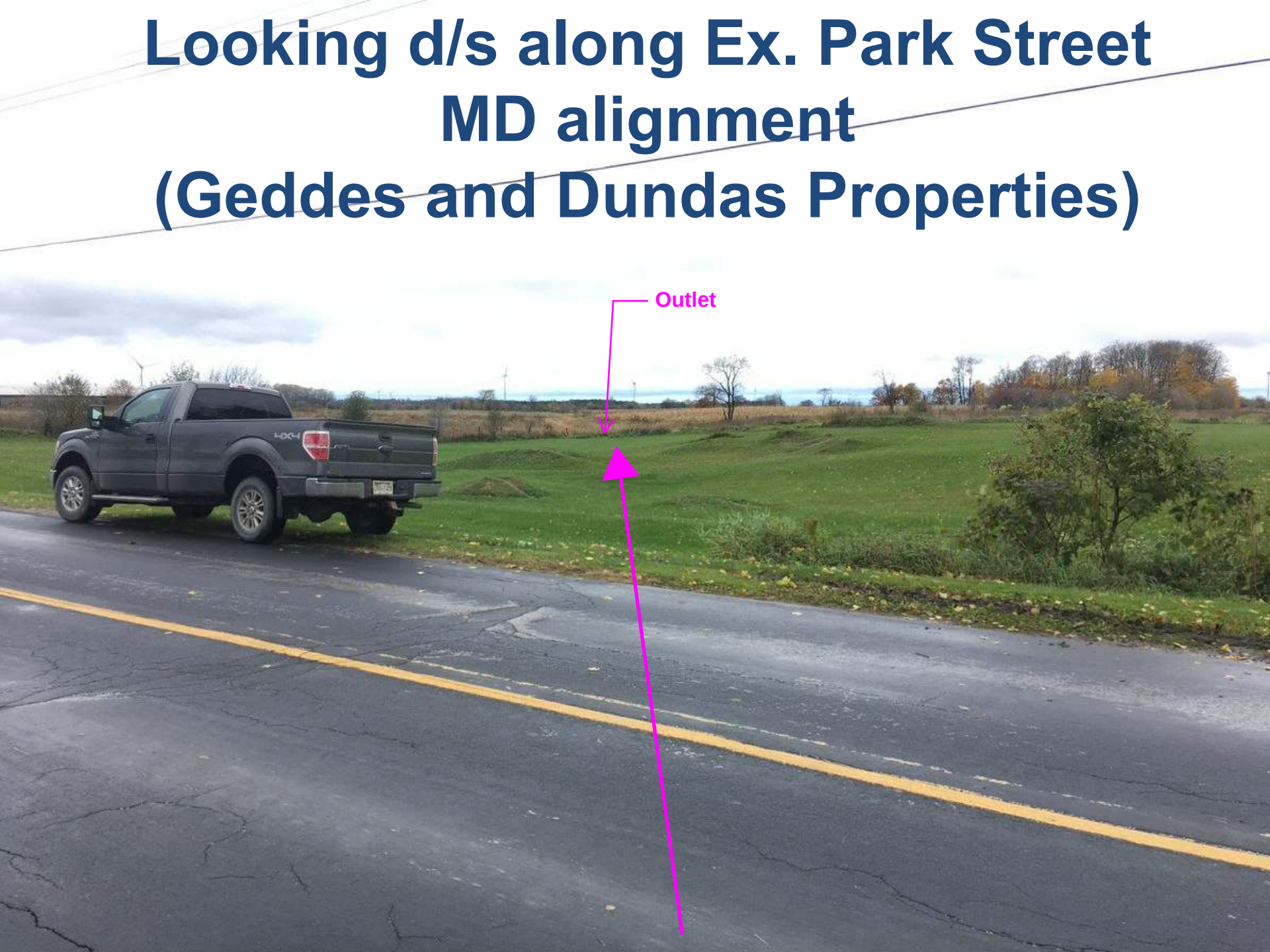
Looking d/s towards Harris Street (Martyn Property)

Presumed Harris Award Drain (1906)

Existing Tile Outlets at Huron Street

Looking u/s along Ex. Park Street MD alignment (Meyer Property)

Looking d/s along Ex. Park Street MD alignment (Geddes and Dundas Properties)



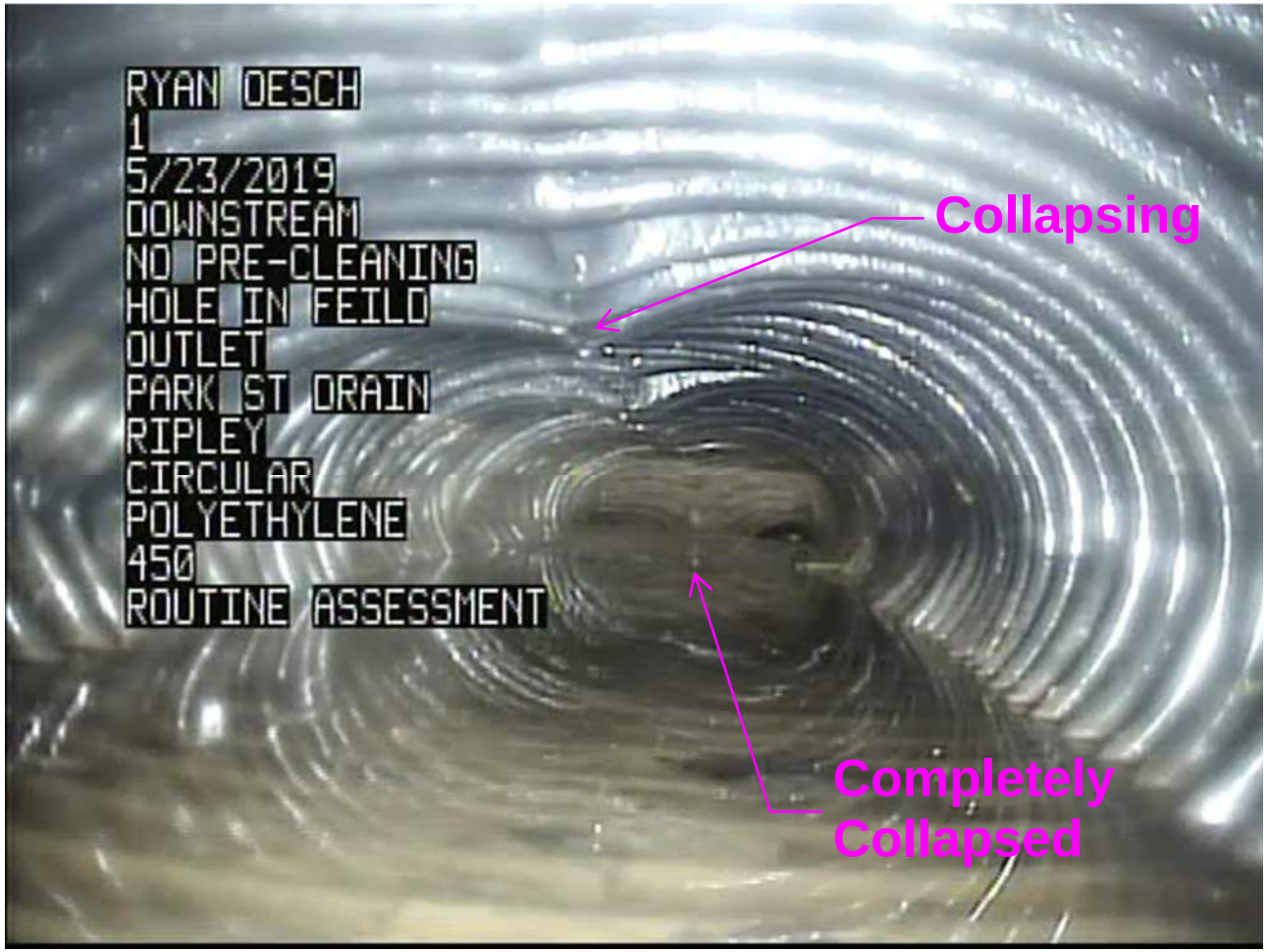
Looking u/s along Ex. Park Street MD alignment (Geddes and Dundas Properties)

Video of Existing Conditions

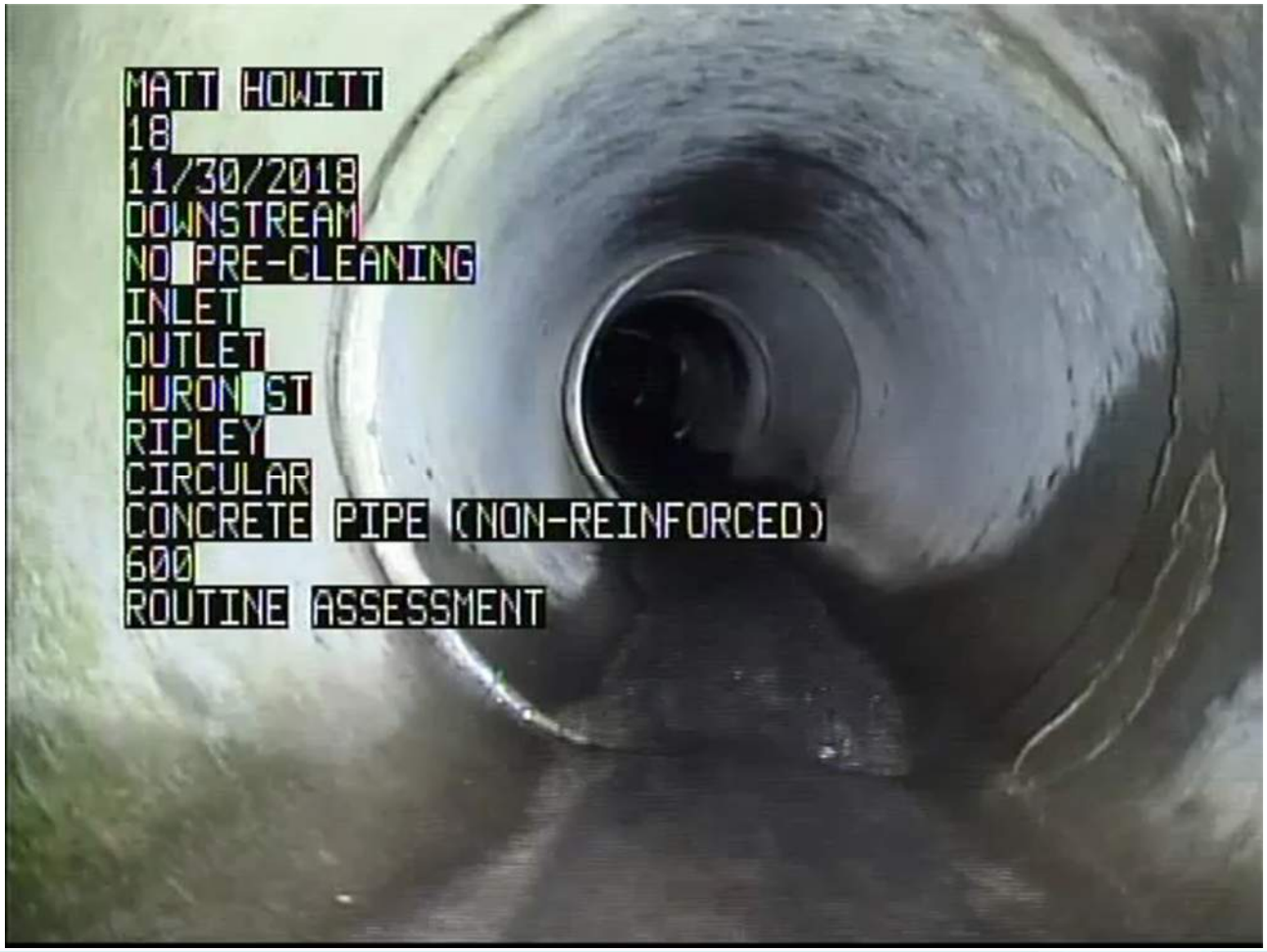
- Camera investigation of existing drainage systems (November 2018, May 2019, May 2020):
  - Park Street and Railway Street Municipal Drains (1994)
  - Harris Award Drain (1906)
  - Ripley Street Storm Sewer (1947)

Video of Ex. Park Street MD – U/S of Park Street to Bruce Housing

Video of Ex. Park Street MD – Brown Property



Video of Ex. Park Street MD - Dundas Property



Design Considerations

Design Criteria

- The sub-surface drainage system design sizing is based on a 5-year return period rainfall event (1 in 5-year flood).
- The design will accommodate floods up to the simulated 100-yr event using overland flow paths.
- For larger rainfall events, a SWM pond is typically required to attenuate peak flows to pre-development rates.

Design Criteria

- The Stormwater management report prepared by Cobide Engineering was reviewed and integrated as part of this design.
- The previously developed portion of the Village within the watershed is not currently controlled and would be as part of this project in conjunction with the proposed development.
- Volume control of development runoff (Low Impact Development) was not identified as feasible in the Cobide SWM Report.

So, What's a Stormwater Management (SWM) Pond?

- ***A SWM pond is an engineered structure constructed to gather rainfall and surface water runoff.***

- *The pond temporarily stores water and then releases it at a controlled rate.*

- *A single pond can provide erosion and flooding control while enhancing water quality.*

So, What's a Stormwater Management (SWM) Pond?

So, What's a Stormwater Management (SWM) Pond?

SWM Pond Benefits:

- Allow **sediment and contaminants to settle out** of runoff before it is released into a natural watercourse.
- Hold back water in order to release it at a **controlled rate** during large storms.
- Controlling the flow of stormwater protects downstream lands from **erosion and flooding**.
- Constructed to be an attractive feature with an **environmental benefit**.
- Designed to be surrounded by natural vegetation and to provide **habitat** for birds and animals.

Reviewing Agencies

A) Saugeen Valley Conservation Authority (SVCA)

- Potential erosion and flooding risks associated with the project.
- Work in ‘regulated areas’

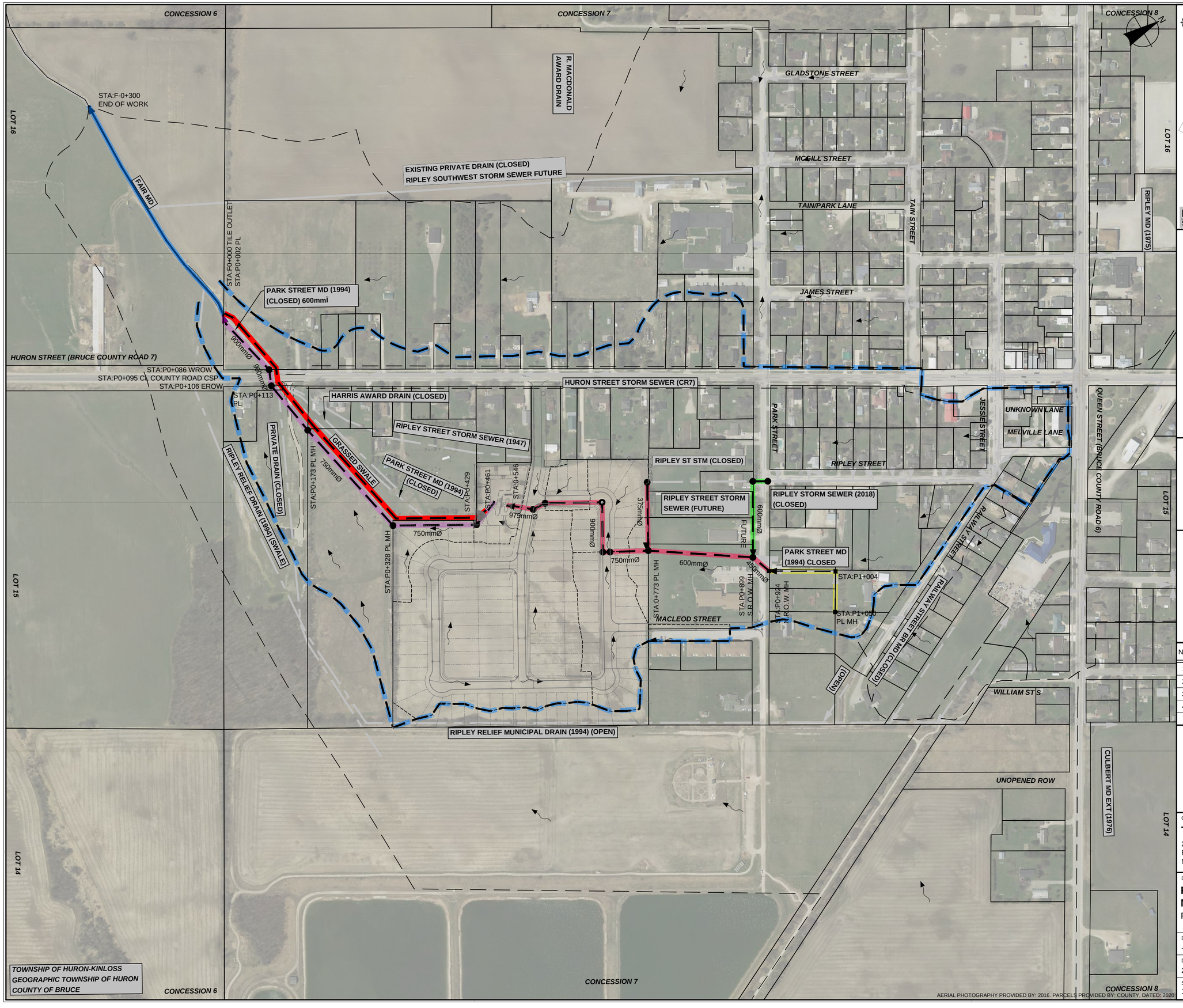
B) Fisheries & Oceans Canada (DFO)

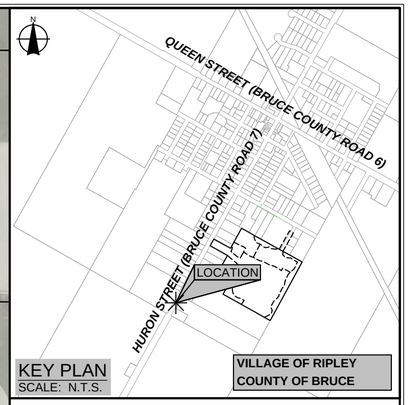
- Work in an Open Drain and potential fish habitat requires approval.
- Federal Species at Risk (SAR).

C) Ministry of Environment, Conservation, and Parks (MECP)

- Environmental Compliance Approval (ECA) application for the entire project.
- Provincial Endangered Species (Formerly through MNRF).

Proposed Design





KEY PLAN
SCALE: N.T.S.

VILLAGE OF RIPLEY
COUNTY OF BRUCE

LEGEND

- FAIR MD (1957)
- PARK STREET MD
  - DOWNSTREAM OF POND
  - UPSTREAM OF POND
  - SWALE
  - EXISTING
- RIPLEY STREET STORM (FUTURE)
- WATERSHED BOUNDARY

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1	ON SITE MEETING	2018/11/14	EMD
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Client

TOWNSHIP OF HURON-KINLOSS
21 QUEEN STREET
RIPLEY, ONTARIO
N0G 2R0

Drawing Title

PARK STREET MUNICIPAL DRAIN
PROPOSED WATERSHED AREA

Huron - Kinloss

Designed	Checked	Drawn	Checked	Drawing No.
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Date		Project No.		
2018/11/14		300043723		

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Proposed Design

Huron Street and Downstream

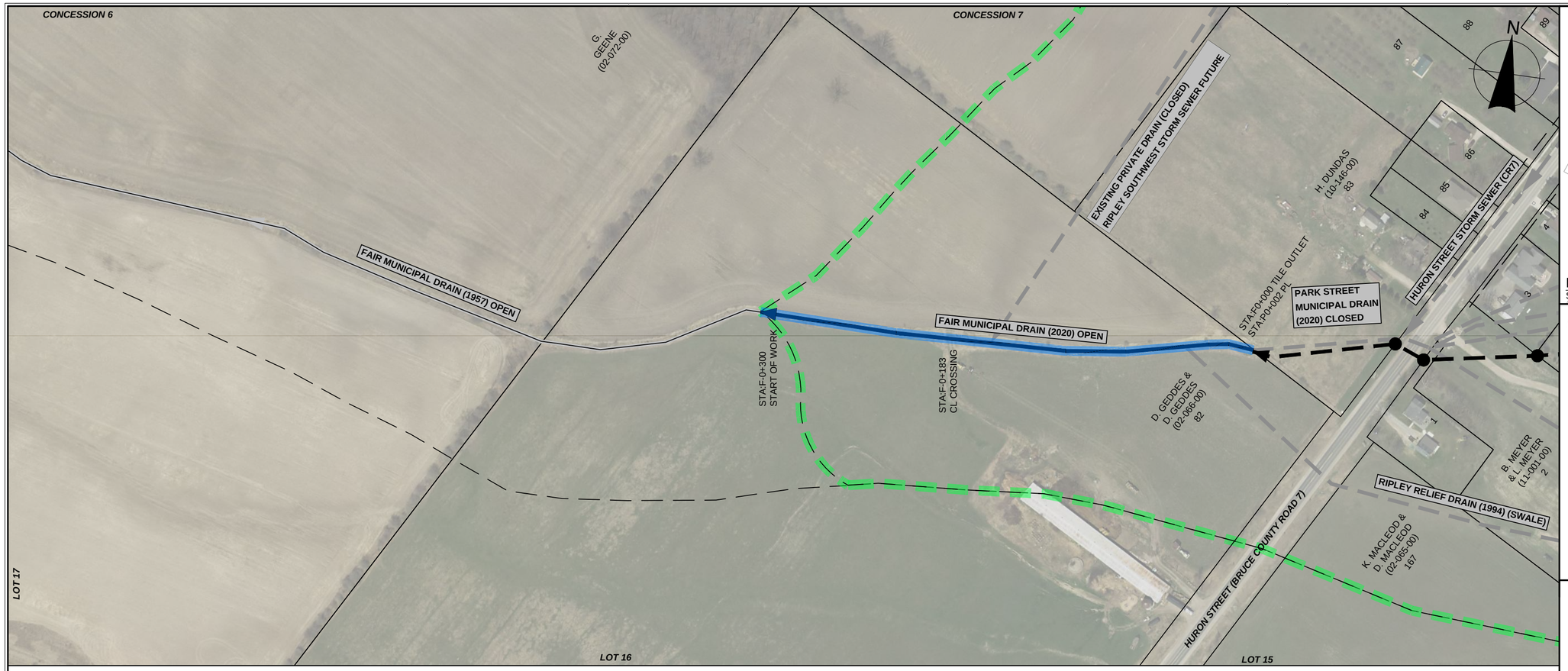
Fair Municipal Drain

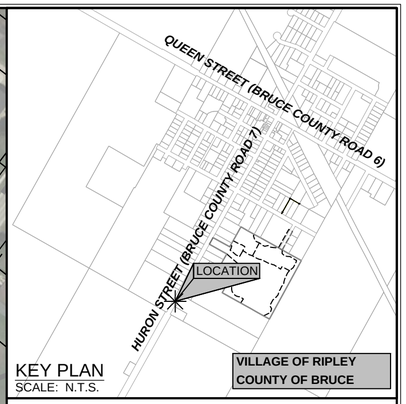
Geddes Property:
- Approx. 300 m of channel deepening and widening.
- Approx. 300 m of riparian buffer.

Park Street Municipal Drain

Dundas Property:
- Approx. 86 m of 900 mm dia. Pipe and surface grassed swale.

County Road 7 ROW:
- Approx. 20 m of 900 mm dia. Bored crossing.





LEGEND

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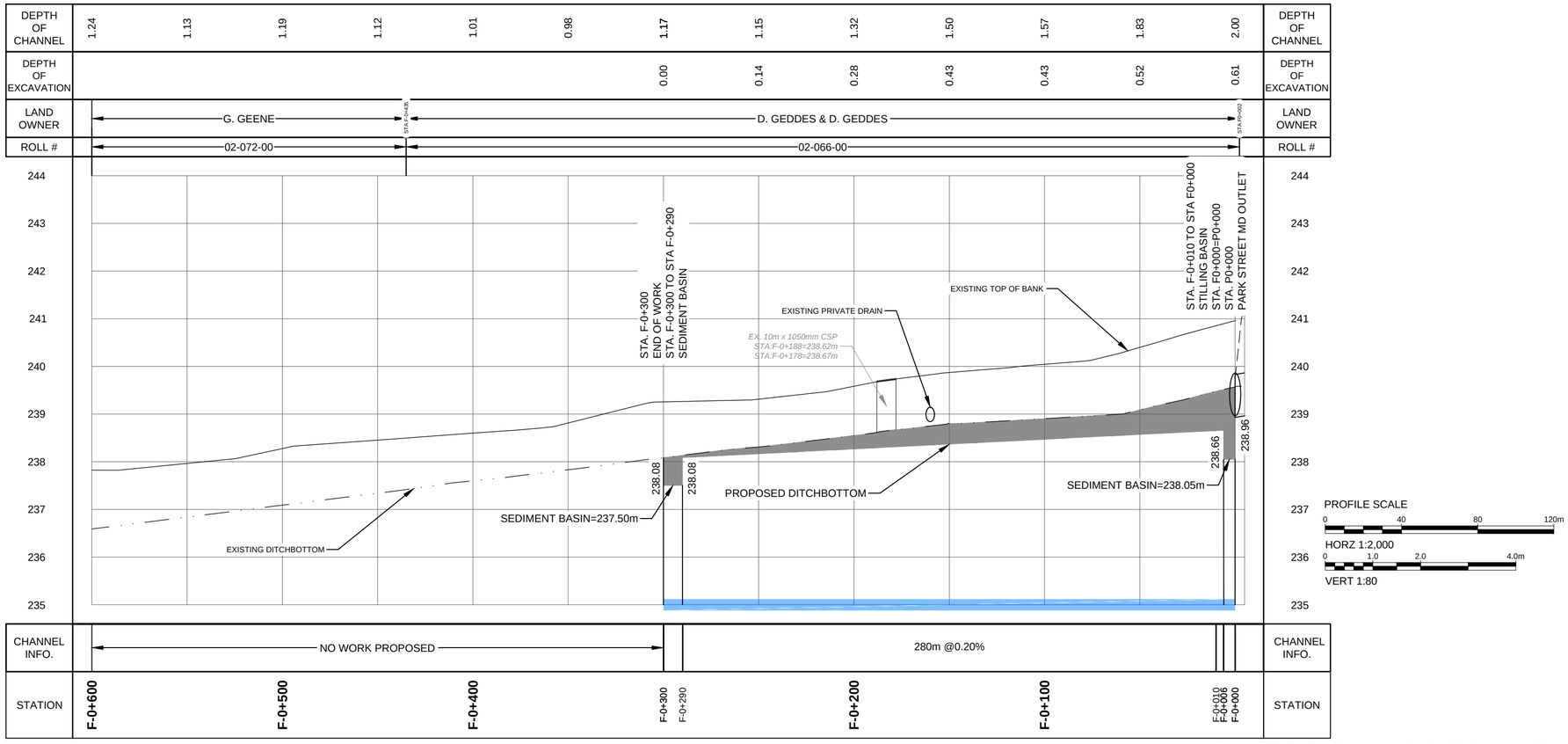

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HORZ 1:2,000
0 1.0 2.0 4.0m
VERT 1:80

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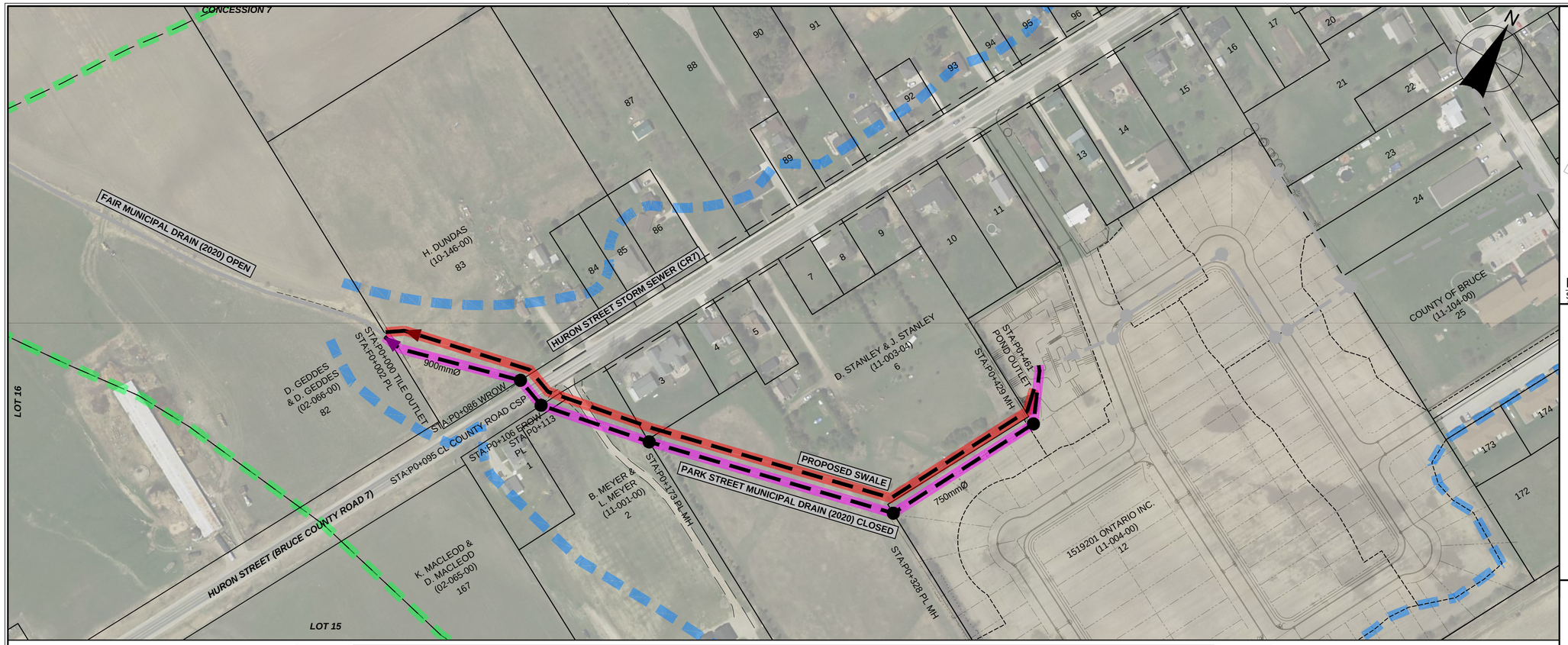
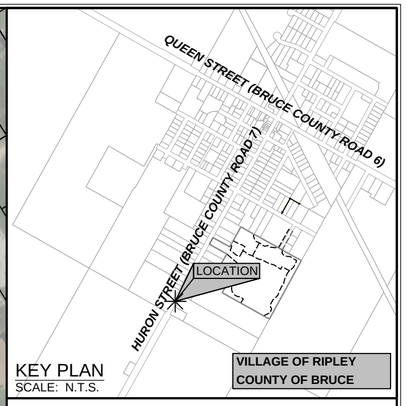
Client
TOWNSHIP OF HURON-KINLOSS
21 QUEEN STREET
RIPLEY, ONTARIO
N0G 2R0

Drawing Title
PARK STREET MUNICIPAL DRAIN
PLAN & PROFILE
STA F-0+300 TO F0+000

Designed	Checked	Drawn	Checked	Drawing No.
EMD	----	GAG	EMD	3OF7
Date		Project No.		
2018/11/14		300043723		

Scale
PLAN SCALE 1:2000

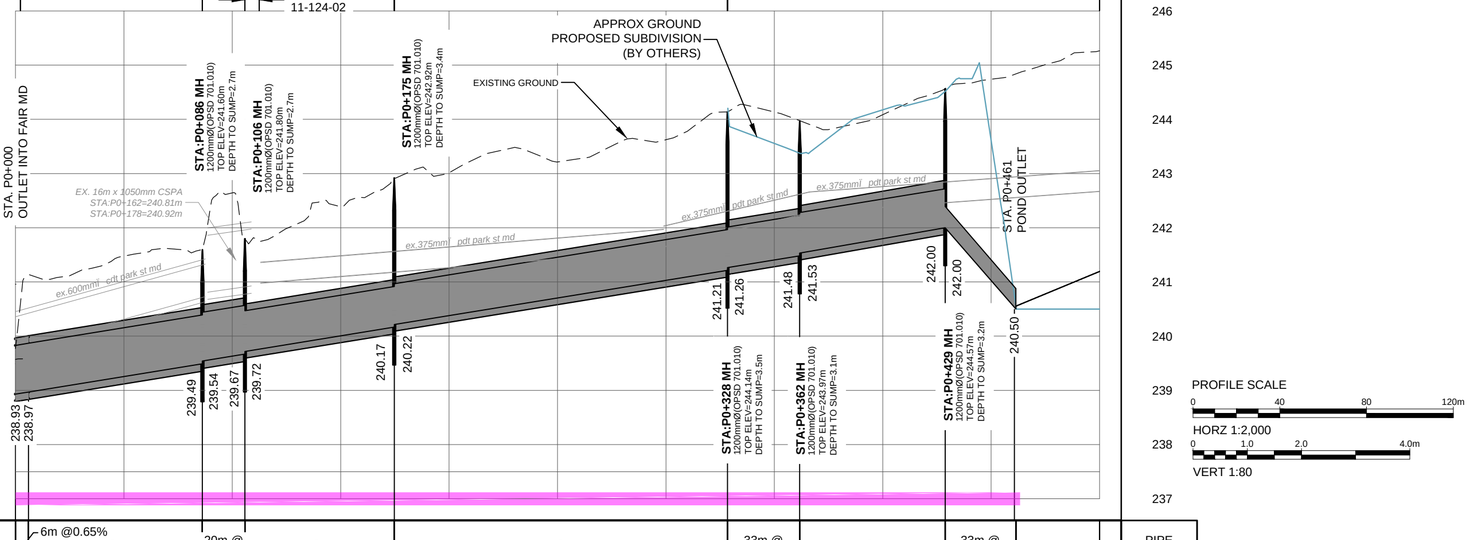




KEY PLAN
SCALE: N.T.S.

VILLAGE OF RIPLEY
COUNTY OF BRUCE

DEPTH TO TOP	-0.06	1.32	2.11	1.63	1.88	1.76	1.84	1.98	1.55	3.33	4.07
DEPTH TO INVERT	0.84	2.22	3.01	2.38	2.63	2.51	2.59	2.73	2.29	3.71	4.07
LAND OWNER	STA:P0+002	H. DUNDAS	STA:P0+086	HURON ST (CTY RD 7)	STA:P0+106	STA:P0+112	B. MEYER & L. MEYER	STA:P0+175	D. STANLEY & J. STANLEY	STA:P0+328	1519201 ONTARIO INC	STA:P0+500
ROLL #		10-146-00		R. MACKAY 11-124-02		11-001-00		11-003-04		11-004-00		



PROFILE SCALE
0 40 80 120m
HORZ 1:2,000
0 1.0 2.0 4.0m
VERT 1:80

PIPE INFO.	6m @0.65%	80m @0.65%	20m @ 0.65%	69m @0.65%	154m @0.65%		33m @ 0.65%	67m @0.70%	33m @ -4.60%		
DESC OF WORK	900mmØ			750mmØ					375mmØ		
STATION	P0+000	P0+006	P0+086	P0+100	P0+106	P0+175	P0+200	P0+300	P0+328	P0+362	P0+400	P0+429	P0+461	P0+500

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LEGEND

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Client

TOWNSHIP OF HURON-KINLOSS

21 QUEEN STREET
RIPLEY, ONTARIO
N0G 2R0

Drawing Title

PARK STREET MUNICIPAL DRAIN

PLAN & PROFILE
STA P0+000 TO P0+500

Designed	Checked	Drawn	Checked	Drawing No.
EMD	----	GAG	EMD	4OF7
Date		Project No.		
2018/11/14		300043723		

Scale
PLAN SCALE 1:2000

Proposed Design (cont.)

Upstream of Huron Street to the SWM Pond

Park Street Municipal Drain

MacKay Property:
- Approx. 7 m of 750 mm dia. Pipe and surface grassed swale.

Meyer and Martyn Properties:
- Approx. 60 m of 750 mm dia. Pipe and surface grassed swale.

Stanley Property:
- Approx. 155 m of 750 mm dia. Pipe.
- Approx. 261 m of surface grassed swale.

Brown Property:
- Approx. 106 m of 750 mm dia. Pipe.

Proposed Design (cont.)

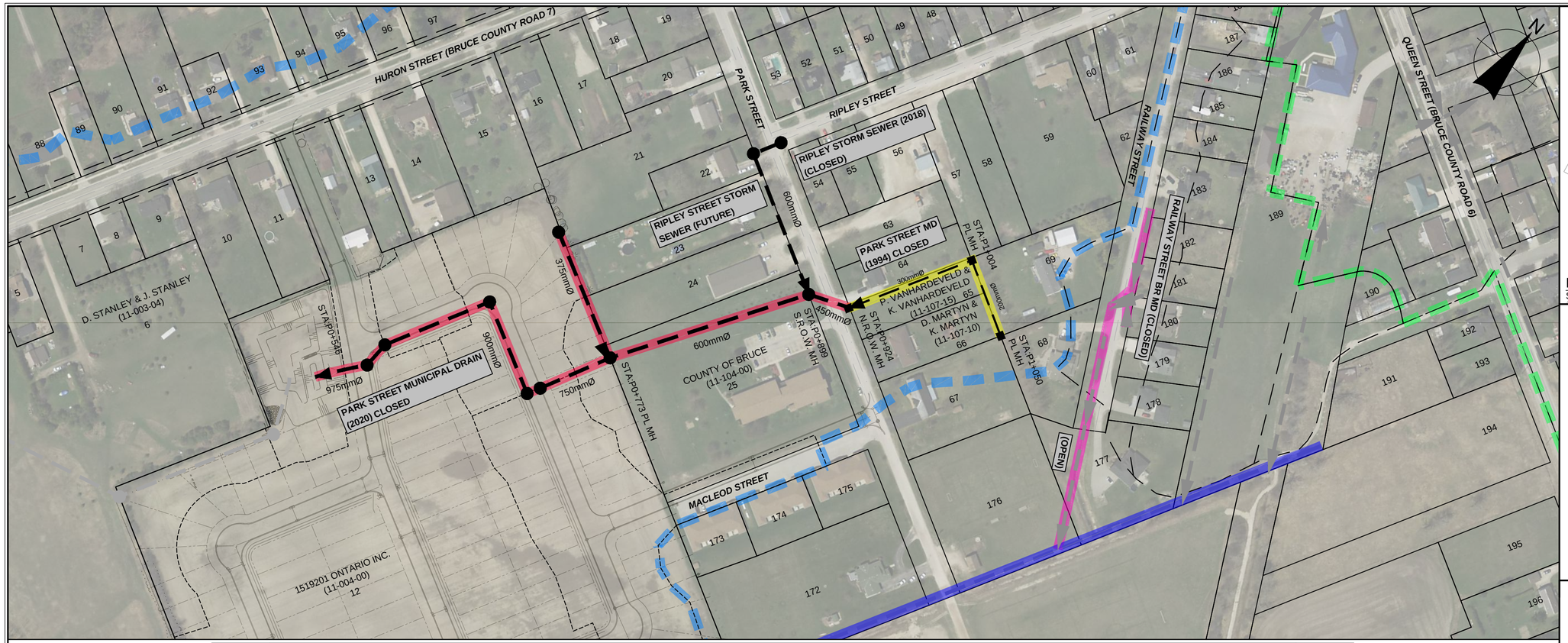
SWM Pond Upstream to Park Street

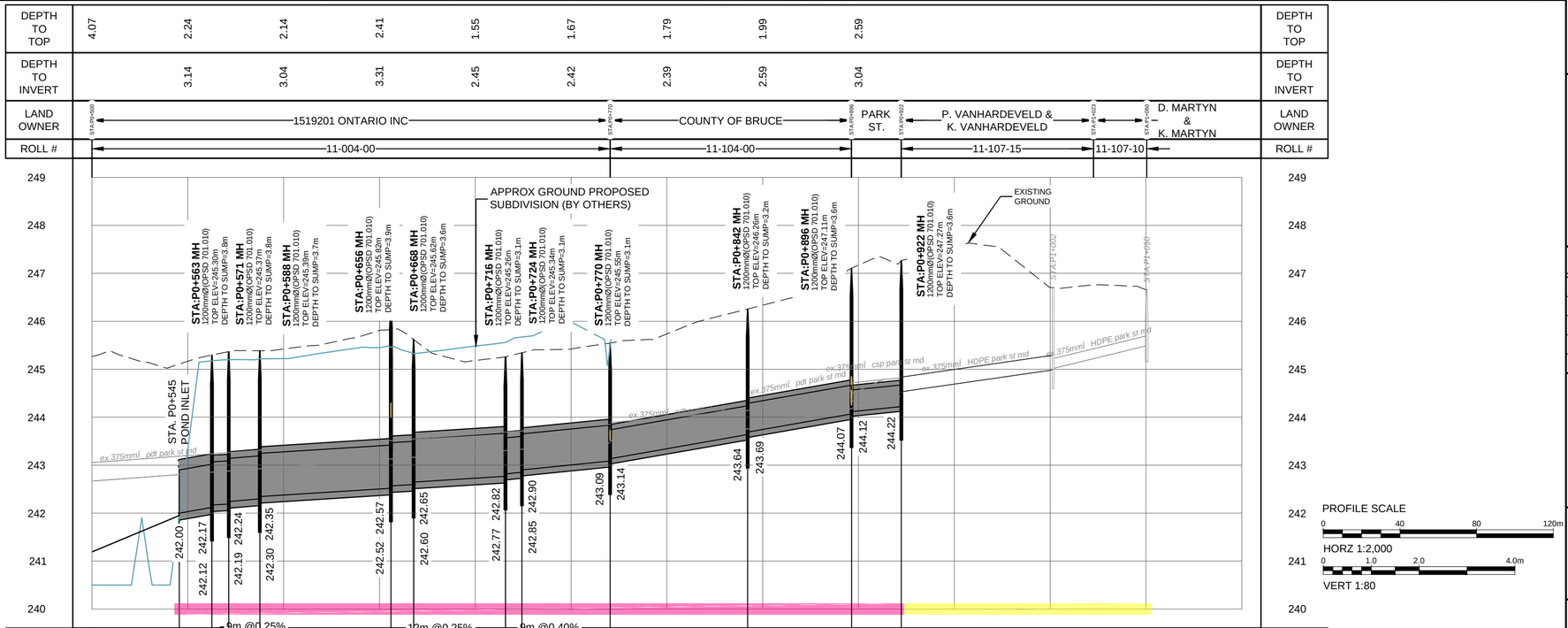
Park Street Municipal Drain

Brown Property:
- Stormwater Management (SWM) Pond.
- Approx. 17 m of 975 mm dia. Pipe.
- Approx. 139 m of 900 mm dia. Pipe.
- Approx. 45 m of 750 mm dia. Pipe.
- Approx. 87 m of 375 mm dia. Pipe.

Bruce County Housing Property:
- Approx. 129 m of 600 mm dia. Pipe.

Park Street ROW:
- Approx. 25 m of 450 mm dia. Pipe.





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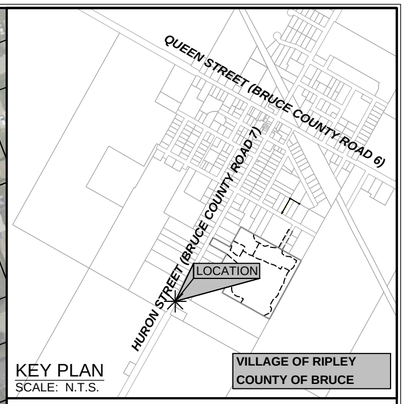

KEY PLAN
SCALE: N.T.S.

VILLAGE OF RIPLEY
COUNTY OF BRUCE

LEGEND

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Drawing Title
PARK STREET MUNICIPAL DRAIN
PLAN & PROFILE
STA P0+500 TO P1+052

Designed	Checked	Drawn	Checked	Drawing No.
EMD	----	GAG	EMD	5OF7
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2018/11/14		300043723		

Scale
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Project Cost Estimate

Project Costs - Construction

Construction Costs:

- Typically represent the greatest costs of the project.
- Some examples include:
  - Pipe installation
  - Outlet stilling basin
  - Catchbasins
  - Road and private crossings
  - Channel excavation
  - Berms/Ponds
  - Clearing/Grubbing/Brushing
  - Etc.

Example of a Municipal Drain Being Installed via Wheel Trencher

Project Costs - Allowances

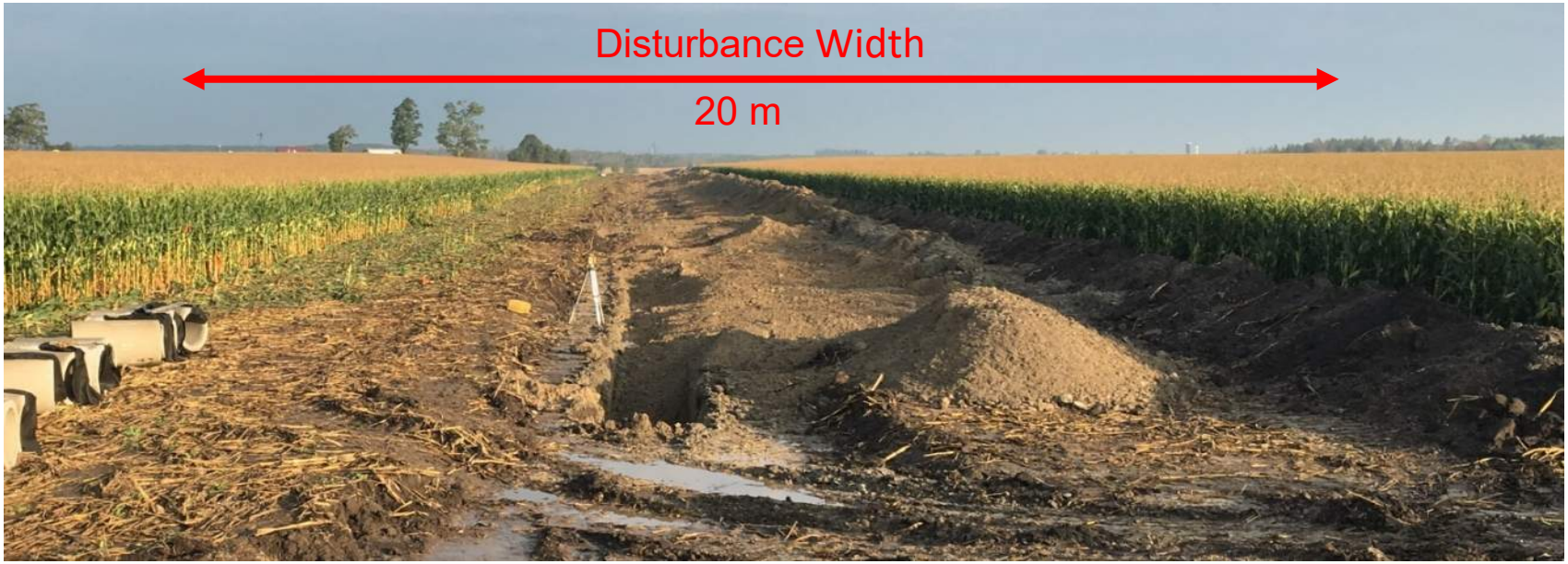
Section 29 – Allowance for Right-of-Way

- **Allowance "buys" access/use of the land for the drain,** and construction and maintenance activities.
- Land periodically used for access to construct the drain and in any future maintenance/repair work.
- Riparian buffers, access routes also included.
- Currently based on **$17,500/acre.**
- **Typically a 10 m width in agricultural areas for pipe or channel access.**

Project Costs - Allowances

Section 30 - Allowance for Damages

- **Damages caused to a property** by the construction of the drain or site access (**typically a 20 m width in agricultural areas**).
- Not given if area is **restored** as part of the drain.
- Examples include damage to:
  - Lands and crops.
  - Trees, lawns, fences, and other features.



Project Costs - Engineering

Engineering

Preparation of Engineer's Report

- Survey and Field Investigation
- Drain Design and Drawings
- Creating Assessment Schedules
- Coordination with project Stakeholders
- **Obtain Agency Approvals**
- Report Preparation and Processing
- Presentations to Stakeholders and Council

Construction Services

- Preparation of Tender and Construction Contract
- Periodic Construction Review
- Contract Administration

Field Survey

Project Costs – Sundry and Other

Other Costs

- Conservation Authority Review Fees
- CCTV Pipe Camera Investigation
- Soils Investigations

Sundry Costs

- Overall Project Contingency
- Net HST
- Interest

Project Cost Summary

Approximate Cost of Proposed Improvements

Construction		$705,000
	Fair MD	$ 35,000
	Park Street D/S	$180,000
	SWM Pond	$275,000
	Park Street U/S	$215,000
Landowner Allowances		$105,000
Engineering		$160,000
Sundry and Other Costs		$90,000
Total Estimated Cost		**$1,060,000**

Preliminary Assessments

Benefit Assessment

Section 22 of the Drainage Act states:

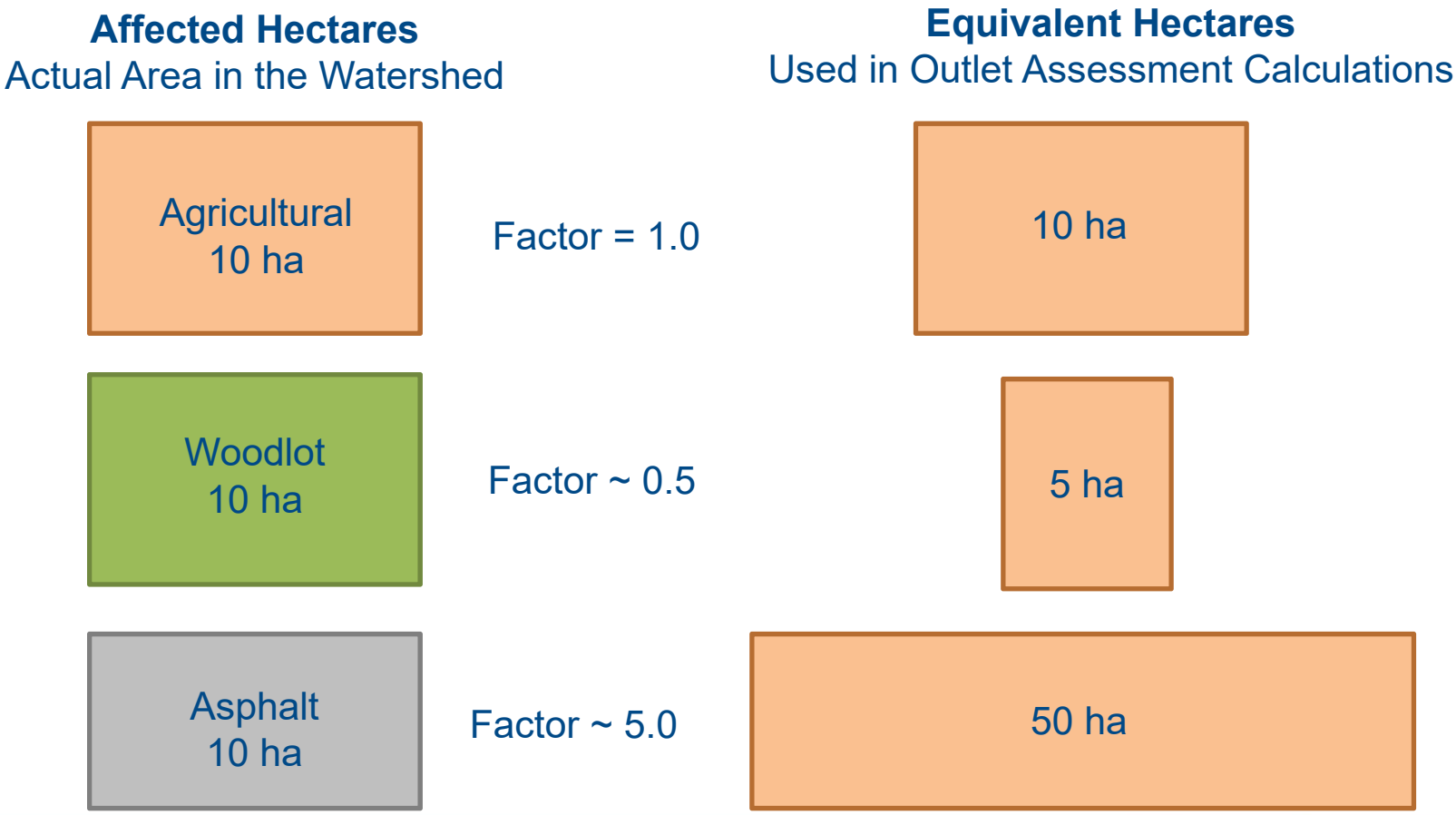
"Lands, roads, buildings, utilities or other structures that are increased in value or are more easily maintained as a result of the construction, improvement, maintenance or repair of a drainage works **may be assessed for benefit**. R.S.O. 1990, c. D.17, s.22"

- Properties are typically assessed for benefit if the drain construction:
  - Provides a direct **Connection** (for tile or surface flows);
  - **Protects** a property from potentially harmful flows;
  - **Increases** property value.

Direct connection of a Private Tile

Outlet Liability Assessment

- **All** properties within a watershed are assessed for outlet liability.
  - Depends on land type and where your property drains to



Special Assessments
Roads and Utilities

Section 26 of the Act states:

*"…a public utility or road authority…**shall pay all the increase of cost** of such drainage works **caused by the existence of the works of the public utility or road authority**."*

Example of a Road Crossing

Road Authority Pays as a Special Assessment:

20 m Road Crossing (Bore Pipe + Catchbasins)	$20,000
LESS 20 m Equivalent Drain through Field (Concrete Tile)	($1,000)
	$19,000

Upstream Landowners Pay: **$1,000**

Provincial Grants

- Assessments on land used for agriculture ***(Farm Tax Class)*** may be eligible for grants through OMAFRA.
- Grant rate in southern Ontario is 1/3 of the assessment on the property for typical Municipal Drainage projects.
- *Drain enclosures and properties with an approved development plan are NOT eligible for ADIP grant.*

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KEY PLAN
SCALE: N.T.S.

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21 QUEEN STREET
RIPLEY, ONTARIO
N0G 2R0

Drawing Title
PARK STREET MUNICIPAL DRAIN

ASSESSMENT PLAN

Designed	Checked	Drawn	Checked	Drawing No.
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Date		Project No.		
2018/11/14		300043723		
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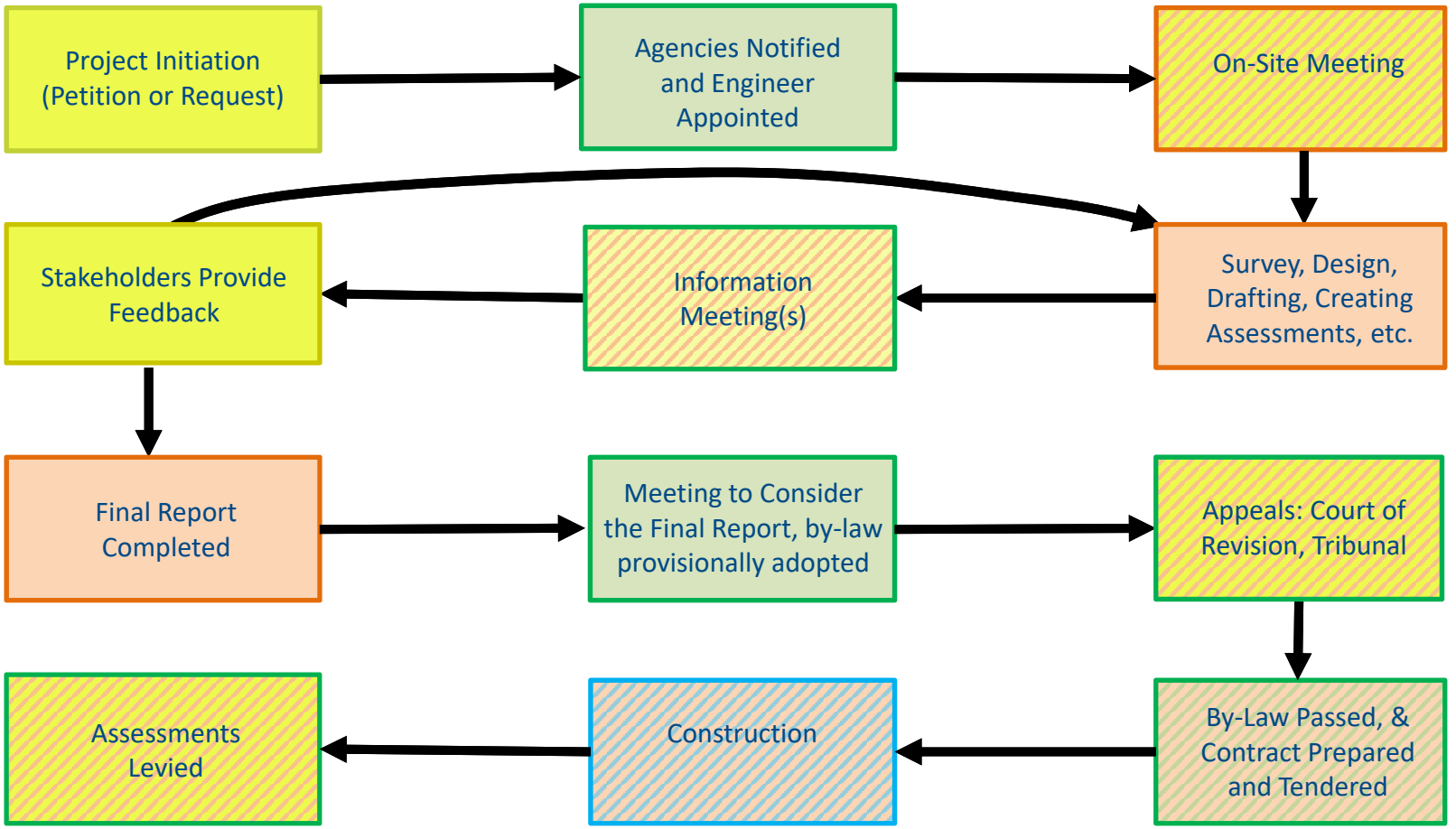
Next Steps

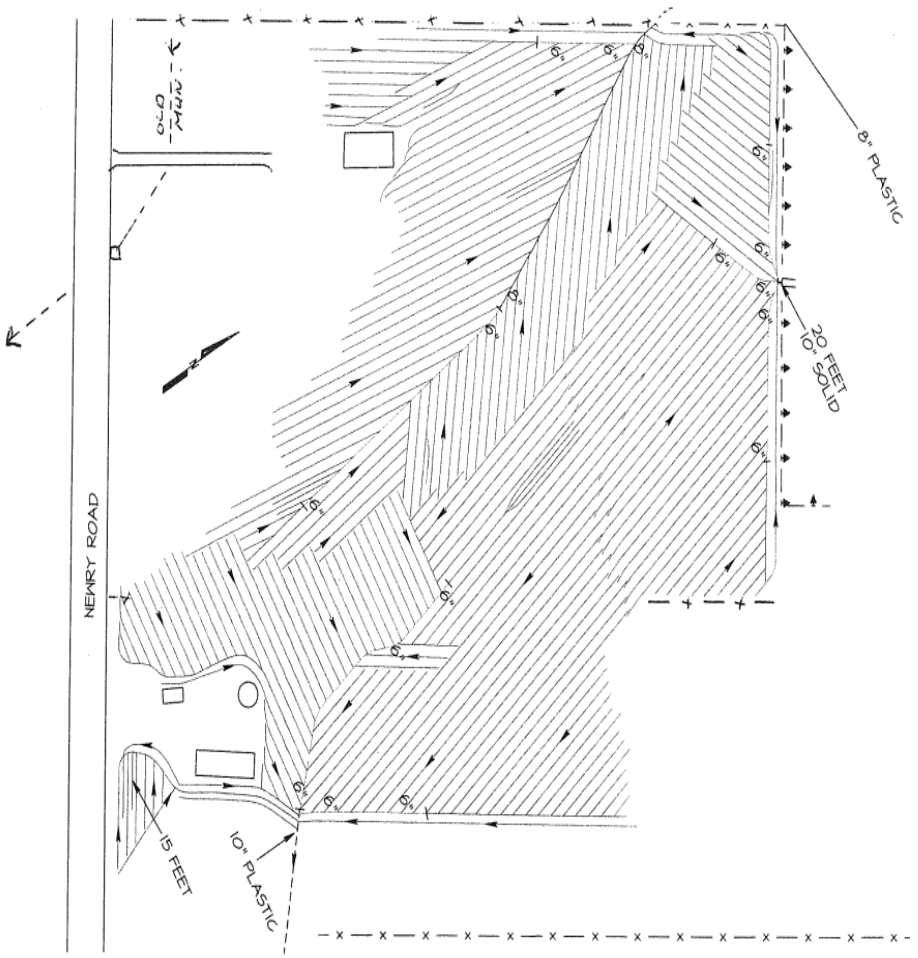
From this point on what are the *"next steps"* in the process under the Act?



How Can You Help?

If available, we ask that property owners provide us with:

- **Farm Tile maps.**
- **Sump pump/ downspout connection locations.**
- **Local Knowledge**
  - Any known Soil Conditions?
  - Poor soil conditions can effect design
  - Locations of septic systems? Where does the Village sanitary sewer end?
  - Other Information?



Sample Tile Plan

Questions?

If you have any questions or concerns you can always email or call us:

Grant Collins, Drainage Superintendent
Township of Huron-Kinloss
gcollins@huronkinloss.com
(519)-395-3735

Ed DeLay, M.Eng., P.Eng.
Appointed Engineer – R.J. Burnside & Associates Limited
edelay@rjburnside.com
(519)-340-2014

Appealing Assessments

Section 11 the Act states:

"The Engineer **shall**, to the best of the Engineer's skill, knowledge, judgement and ability, **honestly and faithfully, and without fear of, favour or prejudice against any person**, perform the duty assigned to the Engineer in connection with any drainage works and make a true report thereon. R.S.O. 1990, c. D.17, s.11."

- It is the Engineer's responsibility to assess project costs in a manner they feel is fair and unbiased, however there are various ways to appeal your assessment for a project.

1. **Court of Revision**
   - When the Engineer's Report is completed any landowner can appeal their assessment to the Court, typically made up of members of local Council.
     - We encourage landowners to do so if they feel that they are being assessed unfairly.
     - We recommend that landowners have a sound argument justifying why their assessment should be changed, and which landowner should pay for the reduction in their assessment.

2. **Agriculture, Food and Rural Affairs Appeal Tribunal**
   - Appeals to the Tribunal essentially goes to court.
   - We like to avoid this type of appeal if at all possible, as legal fees can have a large impact on project costs.