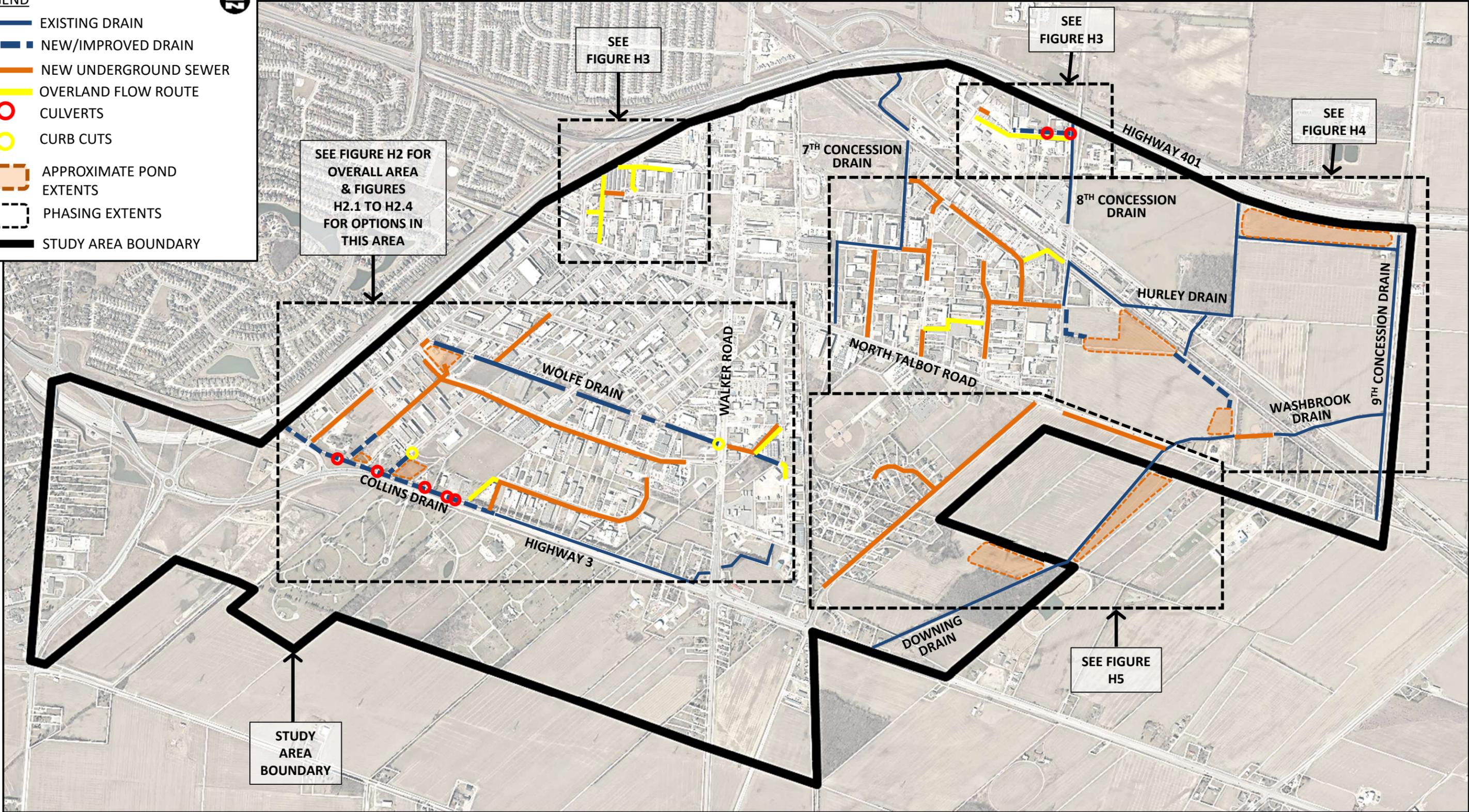
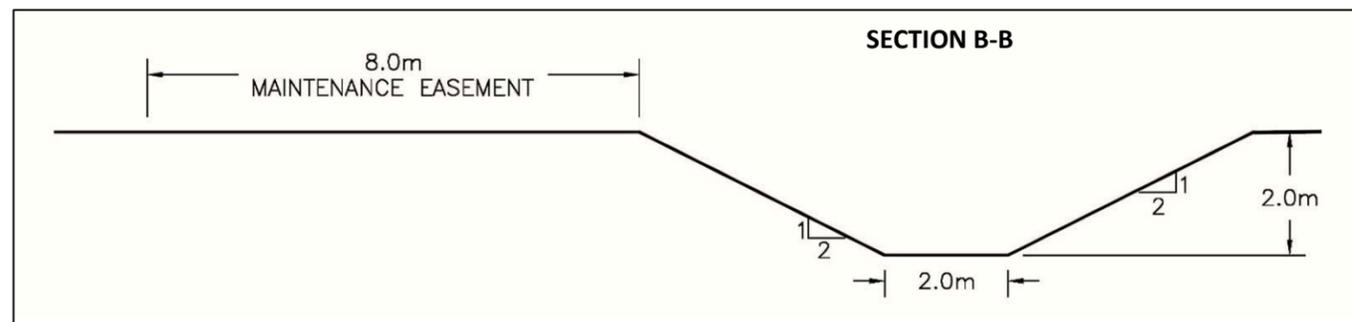
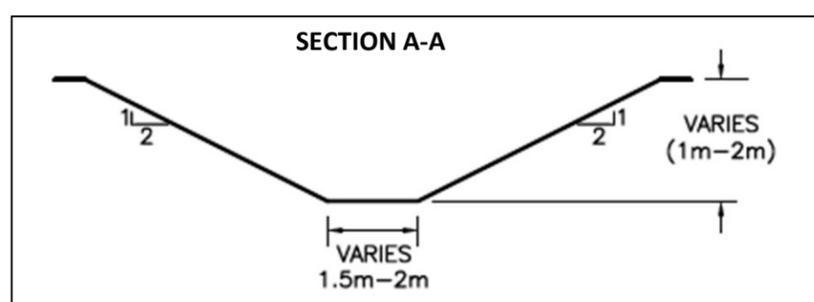
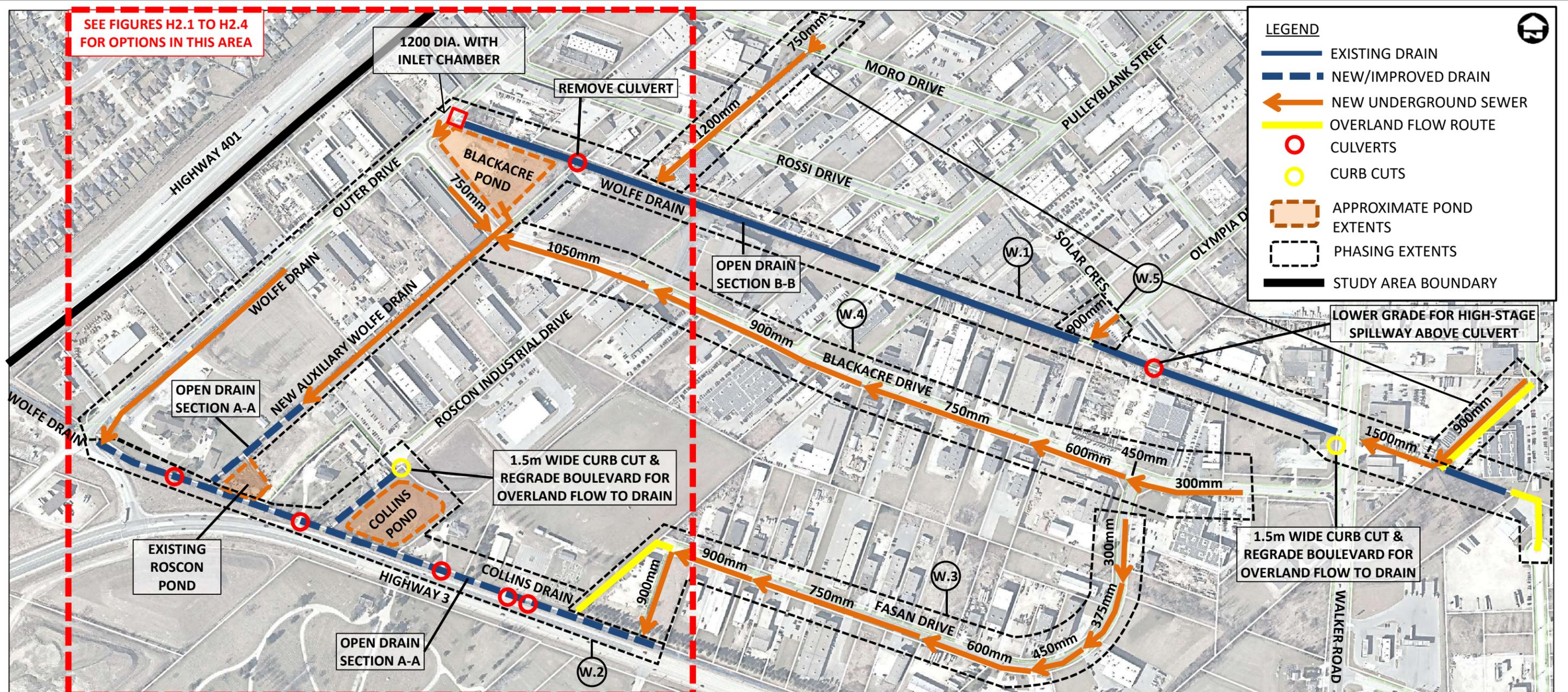


LEGEND

-  EXISTING DRAIN
-  NEW/IMPROVED DRAIN
-  NEW UNDERGROUND SEWER
-  OVERLAND FLOW ROUTE
-  CULVERTS
-  CURB CUTS
-  APPROXIMATE POND EXTENTS
-  PHASING EXTENTS
-  STUDY AREA BOUNDARY



Title	PROPOSED IMPROVEMENTS: OVERALL PLAN		Date	JAN. 2022	FIGURE H1
	Project	OLDCASTLE STORMWATER MASTER PLAN		Scale	
		Project No.	19-010		



Title: PROPOSED IMPROVEMENTS:
WOLFE DRAIN AREA

Project: OLDCASTLE STORMWATER MASTER PLAN

Date: JAN. 2022

Scale: NTS

Project No.: 19-010

FIGURE
H2

WOLFE DRAIN WATERSHED IMPROVEMENT OPTIONS

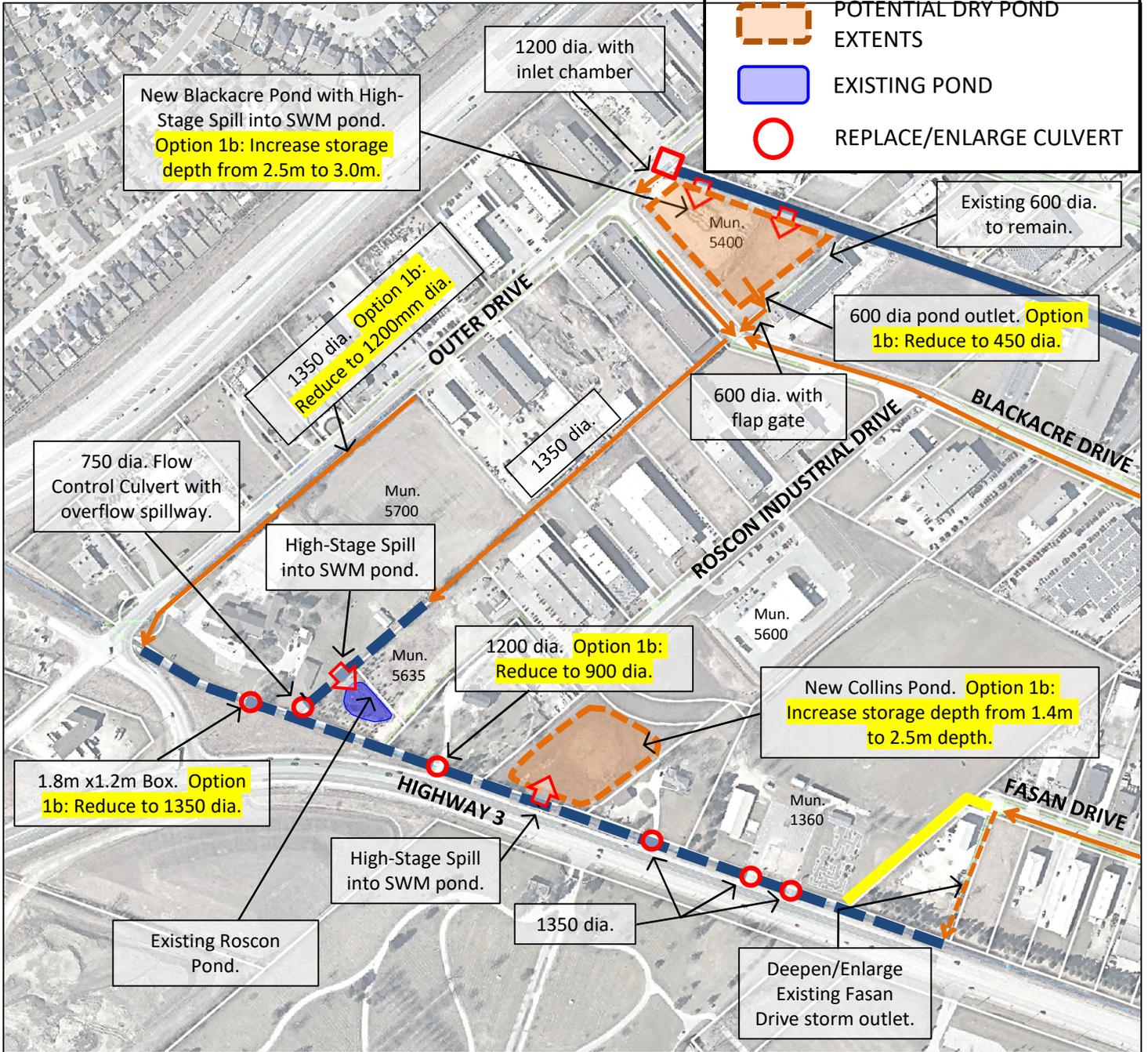
OPTION	Re-route Fasan Drive storm sewer to new Collins Pond	Deepen/Enlarge Collins Drain	New Blackacre Pond (2.5m Deep Storage)	New Blackacre Pond (3.0m Deep Storage)	New Collins Pond (1.5m Deep Storage)	New Collins Pond (2.5m Deep Storage)	Flow Control on proposed new Auxiliary Wolfe Drain	1:100 Year Peak Flow to City (m ³ /s) ¹
1a		x	x		x		x	7.55
1b		x		x		x	x	6.63
2	x		x		x		x	7.59
3*		x	x				x	8.92
4*		x						12.54

Note 1: Existing 1:100 Year Peak Flow to City is 7.7 m³/s. Parkway Design Flow is 6.1 m³/s. See Figure J4 of Appendix J for flow reference location and flow hydrographs.

* Option is only valid if the ongoing Turkey Creek Study findings determine that the downstream receivers can safely convey the peak flow rate.

LEGEND

-  NEW/IMPROVED DRAIN
-  NEW UNDERGROUND SEWER
-  OVERLAND FLOW ROUTE
-  POTENTIAL DRY POND EXTENTS
-  EXISTING POND
-  REPLACE/ENLARGE CULVERT



WOLFE DRAIN 1:100 YEAR PEAK FLOW DOWNSTREAM OF HIGHWAY 401 CROSSING:

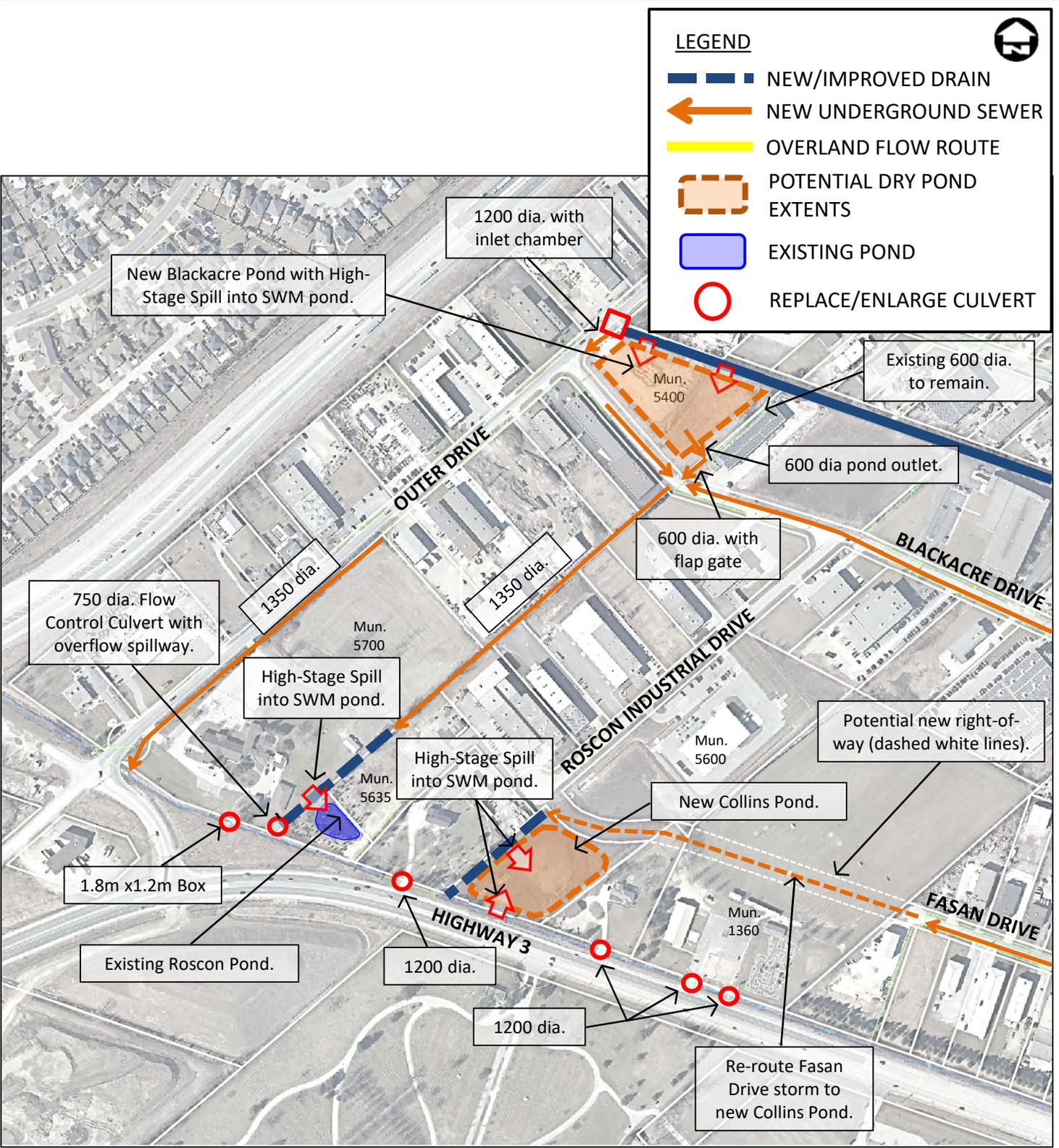
- Option 1a = 7.55 m³/s.
- Option 1b = 6.63 m³/s.



Title	WOLFE DRAIN IMPROVEMENTS – OPTIONS 1A & 1B	
	Project	OLDCASTLE STORMWATER MASTER PLAN

Date	JAN 2022
Scale	NTS
Project No.	19-010

**FIGURE
H2.1**



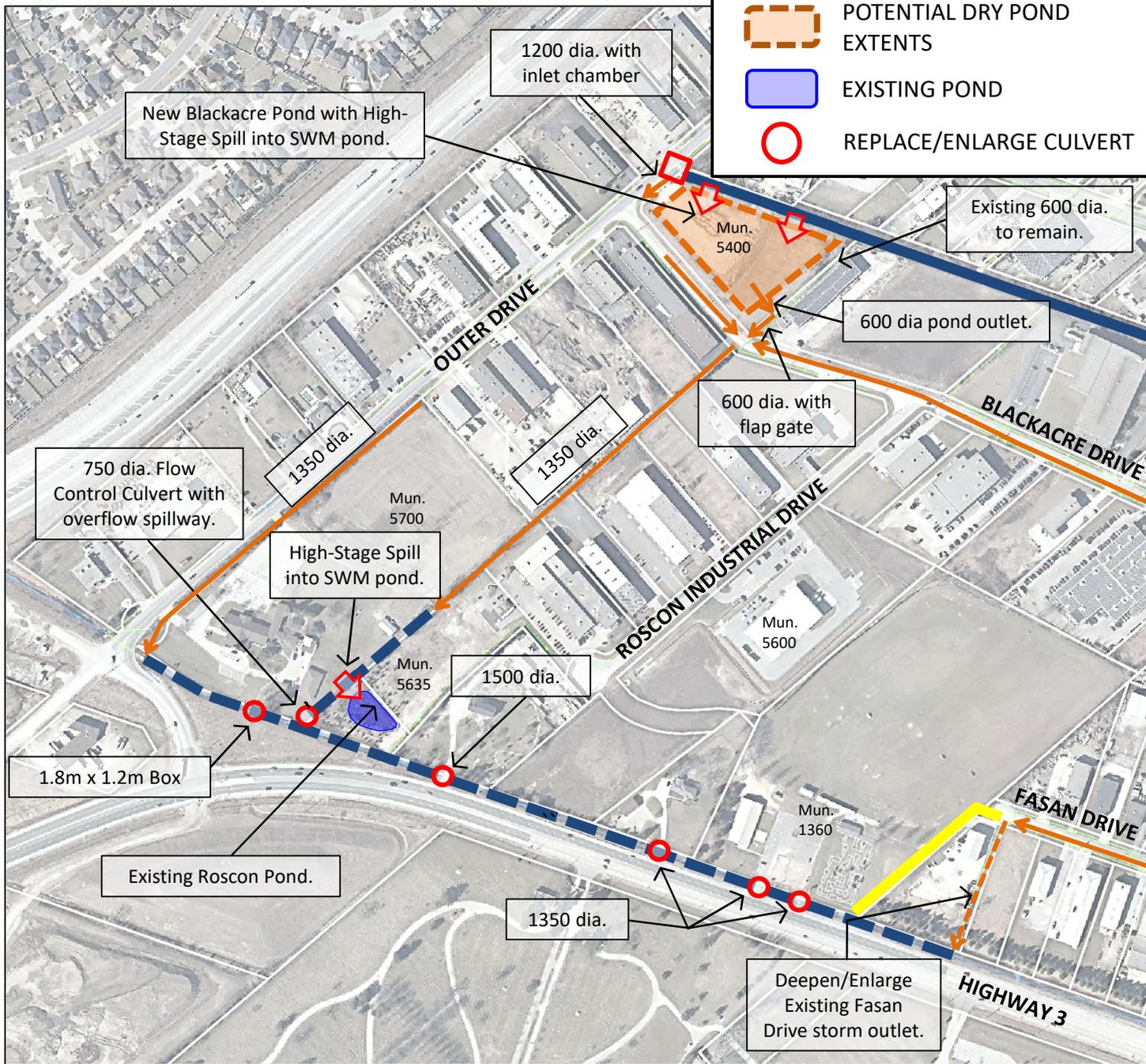
Title	WOLFE DRAIN IMPROVEMENTS – OPTION 2	
	Project	
Project		Project No.
OLDCASTLE STORMWATER MASTER PLAN		19-010

Date	JAN 2022
Scale	NTS
Project No.	19-010

FIGURE
H2.2

LEGEND

-  NEW/IMPROVED DRAIN
-  NEW UNDERGROUND SEWER
-  OVERLAND FLOW ROUTE
-  POTENTIAL DRY POND EXTENTS
-  EXISTING POND
-  REPLACE/ENLARGE CULVERT

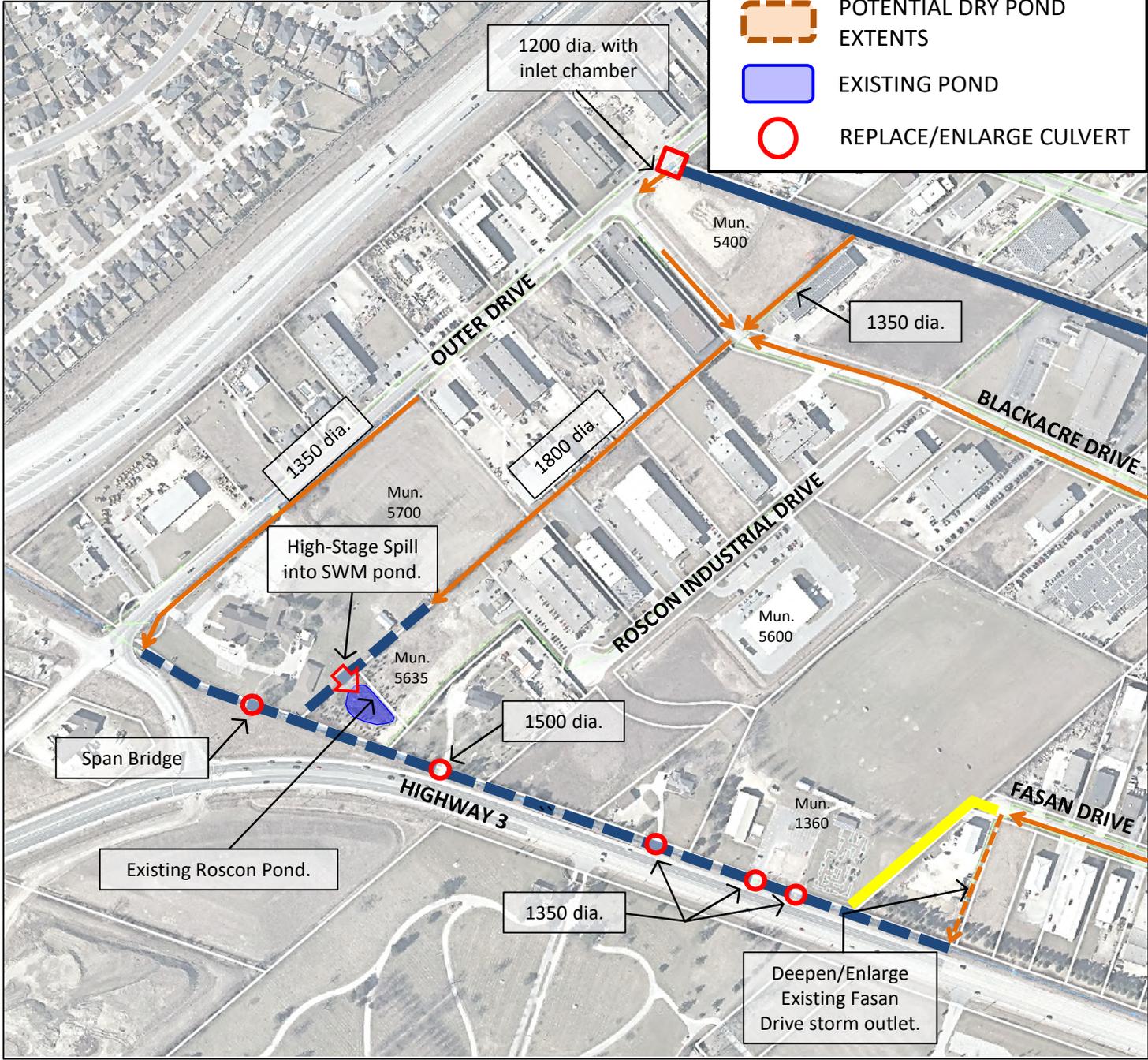


* Option 3 is only valid if the ongoing Turkey Creek Study findings determine that the downstream receivers can safely convey the peak flow rate of 8.92 m³/s.

Title	WOLFE DRAIN IMPROVEMENTS – OPTION 3*		Date	JAN 2022	FIGURE
	Project	OLDCASTLE STORMWATER MASTER PLAN		Scale	
		Project No.	19-010		

LEGEND

-  NEW/IMPROVED DRAIN
-  NEW UNDERGROUND SEWER
-  OVERLAND FLOW ROUTE
-  POTENTIAL DRY POND EXTENTS
-  EXISTING POND
-  REPLACE/ENLARGE CULVERT

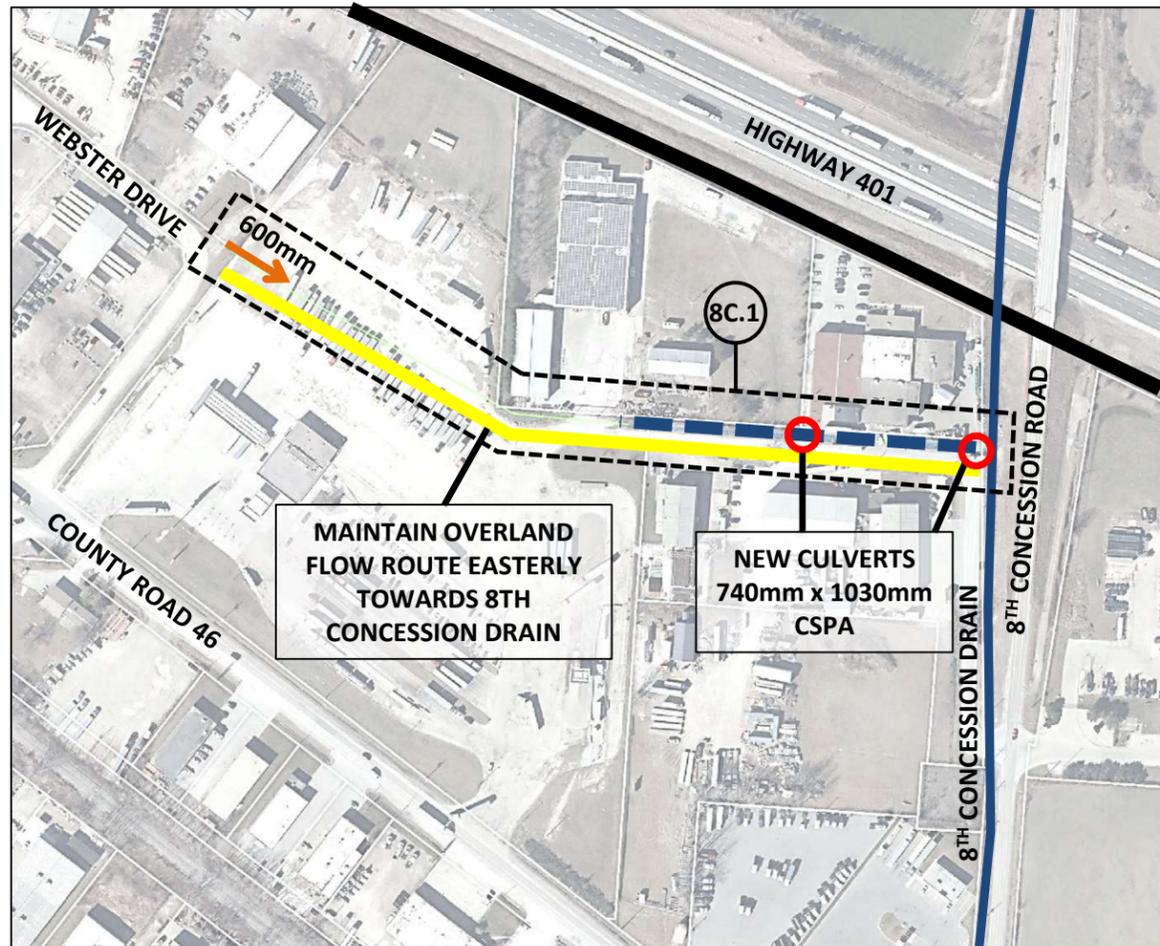


WOLFE DRAIN 1:100 YEAR PEAK FLOW DOWNSTREAM OF HIGHWAY 401 CROSSING = 12.54 m³/s.

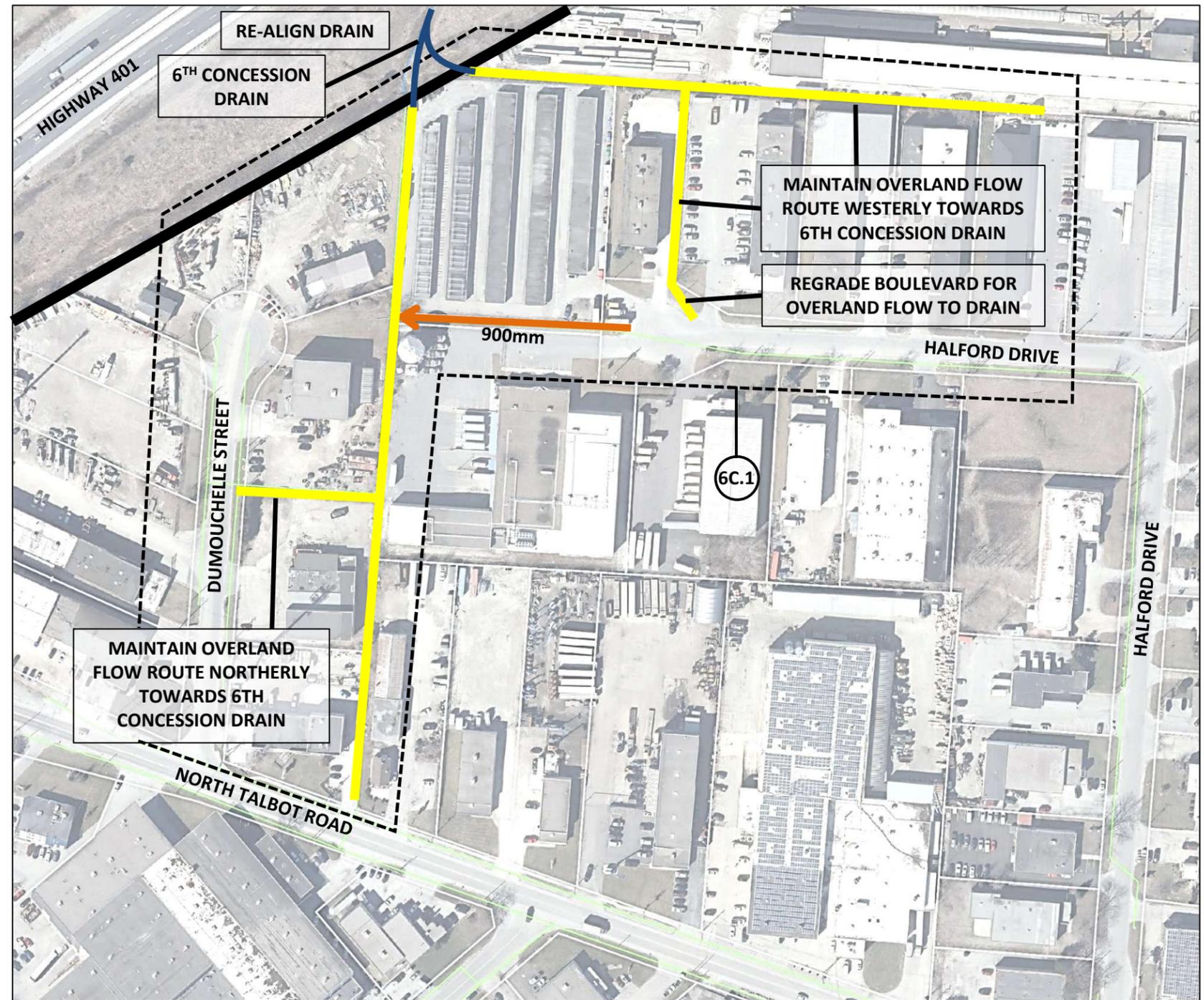


* Option 4 is only valid if the ongoing Turkey Creek Study findings determine that the downstream receivers can safely convey the peak flow rate of 12.54 m³/s.

Title WOLFE DRAIN IMPROVEMENTS – OPTION 4*	Date	JAN 2022	FIGURE H2.4
	Scale	NTS	
	Project No.	19-010	
Project OLDCASTLE STORMWATER MASTER PLAN			



8TH CONCESSION DRAIN AREA



6TH CONCESSION DRAIN AREA

- LEGEND**
- EXISTING DRAIN
 - NEW/IMPROVED DRAIN
 - NEW UNDERGROUND SEWER
 - OVERLAND FLOW ROUTE
 - CULVERTS
 - CURB CUTS
 - FLOW CONTROL STRUCTURE
 - APPROXIMATE POND EXTENTS
 - PHASING EXTENTS
 - STUDY AREA BOUNDARY



Title: PROPOSED IMPROVEMENTS:
6TH & 8TH CONCESSION DRAIN AREAS

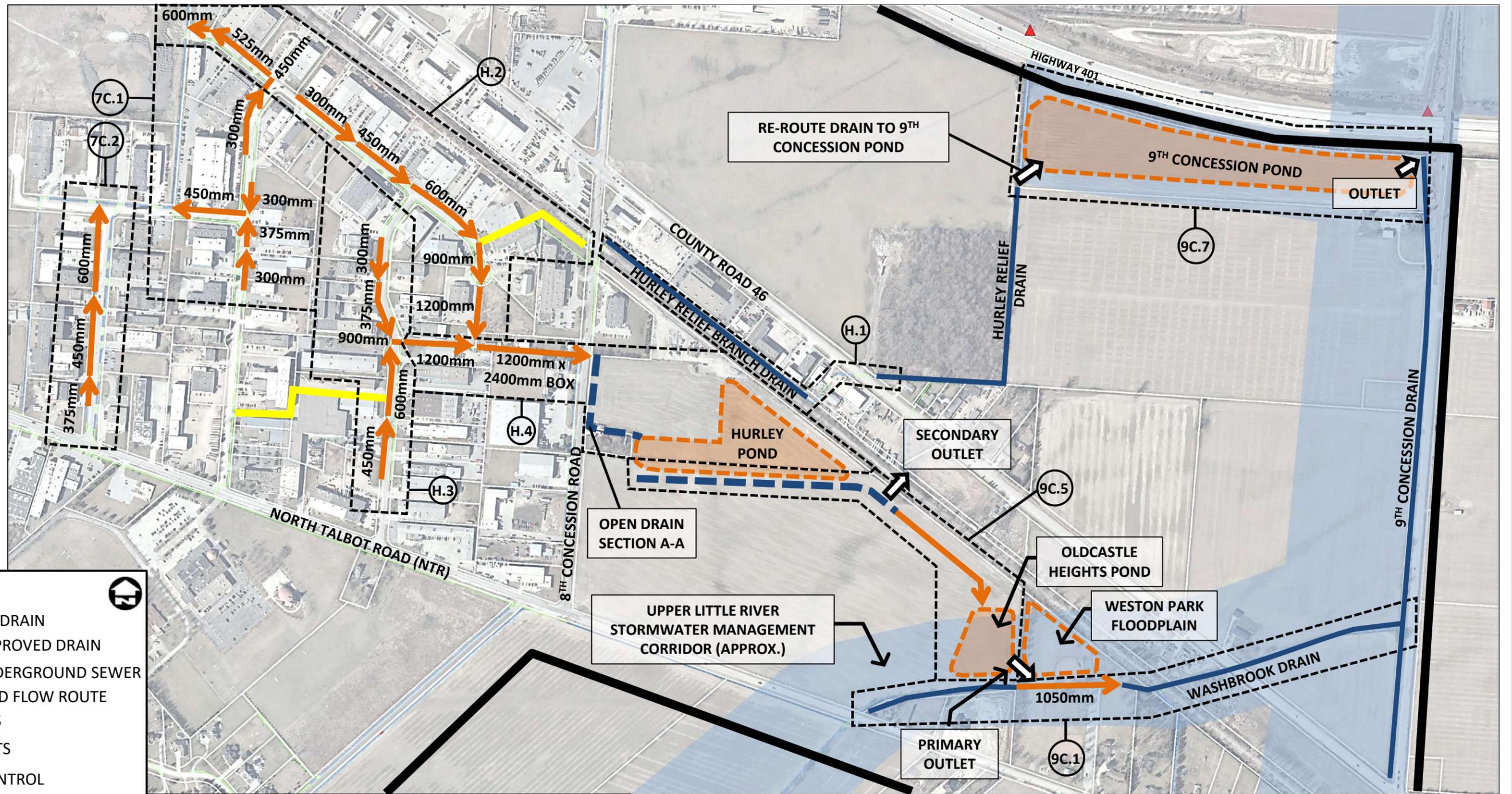
Project: OLDCASTLE STORMWATER MASTER PLAN

Date: JAN. 2022

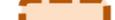
Scale: NTS

Project No.: 19-010

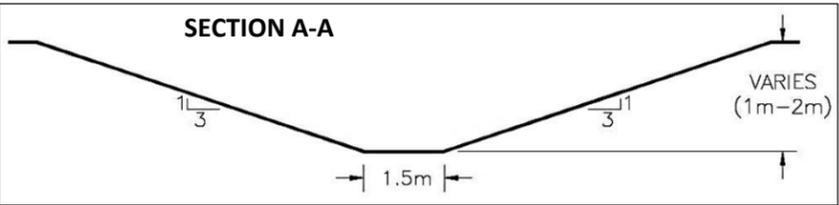
FIGURE
H3



LEGEND

-  EXISTING DRAIN
-  NEW/IMPROVED DRAIN
-  NEW UNDERGROUND SEWER
-  OVERLAND FLOW ROUTE
-  CULVERTS
-  CURB CUTS
-  FLOW CONTROL STRUCTURE
-  APPROXIMATE POND EXTENTS
-  PHASING EXTENTS
-  STUDY AREA BOUNDARY

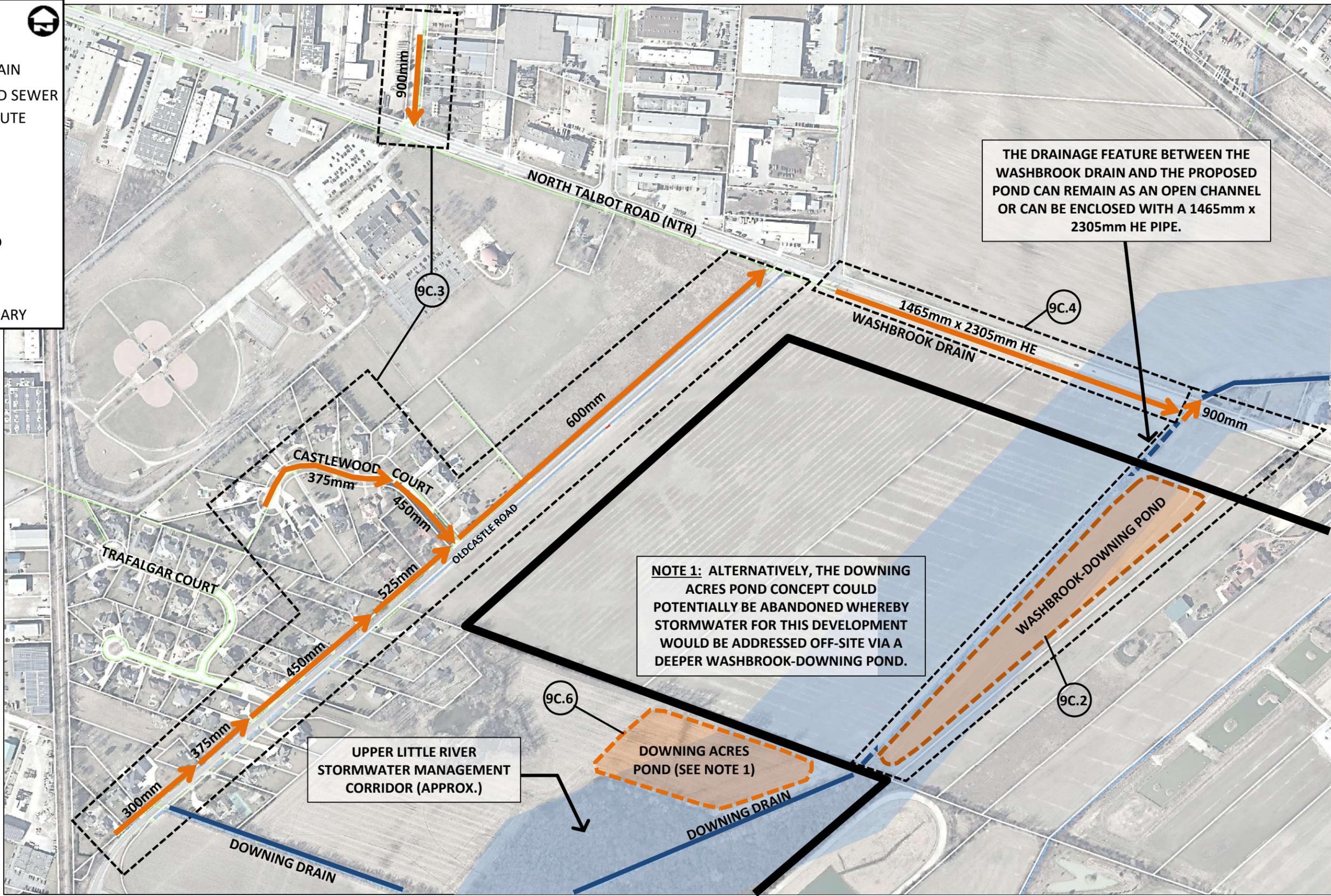
OPEN DRAIN CROSS SECTION:



Title	PROPOSED IMPROVEMENTS: HURLEY & 9 TH CONCESSION DRAIN AREAS – NORTH OF NTR		Date	JAN. 2022	FIGURE H4
	Project	OLDCASTLE STORMWATER MASTER PLAN		Scale	
		Project No.	19-010		

LEGEND

-  EXISTING DRAIN
-  NEW/IMPROVED DRAIN
-  NEW UNDERGROUND SEWER
-  OVERLAND FLOW ROUTE
-  CULVERTS
-  CURB CUTS
-  FLOW CONTROL STRUCTURE
-  APPROXIMATE POND EXTENTS
-  PHASING EXTENTS
-  STUDY AREA BOUNDARY



THE DRAINAGE FEATURE BETWEEN THE WASHBROOK DRAIN AND THE PROPOSED POND CAN REMAIN AS AN OPEN CHANNEL OR CAN BE ENCLOSED WITH A 1465mm x 2305mm HE PIPE.

NOTE 1: ALTERNATIVELY, THE DOWNING ACRES POND CONCEPT COULD POTENTIALLY BE ABANDONED WHEREBY STORMWATER FOR THIS DEVELOPMENT WOULD BE ADDRESSED OFF-SITE VIA A DEEPER WASHBROOK-DOWNING POND.

UPPER LITTLE RIVER STORMWATER MANAGEMENT CORRIDOR (APPROX.)



Title	PROPOSED IMPROVEMENTS: 9 TH CONCESSION DRAIN AREA – SOUTH OF NTR	
	Project OLDCASTLE STORMWATER MASTER PLAN	

Date	JAN. 2022
Scale	NTS
Project No.	19-010

FIGURE H5