

**AMENDING AGREEMENT TO DEVELOPMENT AGREEMENT**

**(Admiral's Cove Subdivision)**

**THIS AMENDING AGREEMENT** made as of the \_\_\_ day of February, 2023,

**BETWEEN:**

**MUNICIPALITY OF LAKESHORE**  
(“Lakeshore”)

- and -

**507822 ONTARIO INC. and 1403543 ONTARIO INC.**  
(the “Owner”)

**WHEREAS:**

- A. On May 26, 2020, the Corporation of the Town of Lakeshore changed its name to Municipality of Lakeshore by By-law 43-2020;
- B. Plan 1624 was registered pursuant to a judge's order on April 18, 1963 (the “**Plan**”);
- C. Commencing in or about 2014, the Owner undertook the development of Lots 258 to 300, both inclusive, within the Plan (the “**First Phase**”);
- D. Lots within the Plan, including within the First Phase, were subject to a holding provision incorporated within Lakeshore's zoning by-law. As a condition of removing the holding provision from the First Phase, the Owner was required to enter into a Development Agreement with Lakeshore, dated as of the 9th day of December, 2014, which was registered on title to the First Phase lands as Instrument No. CE646685 on the 6th day of February, 2015 (the “**Development Agreement**”);
- E. The Development Agreement required the Owner to, *inter alia*, engage a consulting Engineer to prepare detailed designs and specifications for certain Works to be constructed in connection with the development of the First Phase;
- F. As a result of flooding events commencing in or about 2019, it has been determined that the design and construction of the roadway included within the First Phase (municipally known as Haven Avenue) requires modification to raise the overall elevation of the roadway as further specified in this Amending Agreement (the “**Roadway Modifications**”);
- G. The Owner also wishes to proceed with a further phase of development to be comprised of Lots 253 to 257, both inclusive, and Lot 301 within the Plan to create four (4) residential parcels (the “**Proposed Phase 1B**”);
- H. Development of Proposed Phase 1B may not proceed until satisfactory arrangements for effecting the Roadway Modifications have been agreed upon and secured through this Amending Agreement to the Development Agreement;

- I. Proposed Phase 1B, if concurrently or subsequently approved by Lakeshore pursuant to a rezoning application seeking to lift the Holding provision, will require the entering into of a further Supplemental Agreement to the Development Agreement to address the incorporation of the additional four (4) residential parcels into the development;
- J. Lakeshore has further advised the Owner that it will not accept or assume Haven Avenue until such time as the Roadway Modifications have been completed by the Owner to the satisfaction of Lakeshore; and
- K. The Owner and Lakeshore have agreed to amend the Development Agreement as set forth in this Amending Agreement to confirm the required Roadway Modifications and to enable the submission of planning applications by the Owner in connection with the Proposed Phase 1B.

**NOW THEREFORE** the parties agree to amend the Development Agreement as follows:

- 1. The recitals above are true and form part of this Amending Agreement as though repeated herein.
- 2. The Development Agreement is hereby amended as follows:
  - (a) The second recital paragraph in the Development Agreement is replaced with:

*And Whereas the Owner owns Lots 253 to 301, both inclusive, on Registered Plan 1624, more particularly described in Schedule "A", attached hereto (the "Subject Lands").*
  - (b) Schedule "A" of the Development Agreement is supplemented with Schedule "A-2" as attached to this Amending Agreement as Appendix "A".
  - (c) Schedule "C" of the Development Agreement is amended by adding the following section:

***Roadway Modifications***

*"C.13 The Owner acknowledges and agrees that Haven Avenue throughout Phase 1 of the Plan and Phase 1B shall be modified in accordance with the design and specifications set out in Schedule "K" attached hereto and Lakeshore's Development Manual (the "**Roadway Modifications**"). The parties agree that the design and specifications for the Roadway Modifications supersede and prevail to the extent of any conflict or inconsistency with any design and/or specifications for Haven Avenue approved by Lakeshore at any time prior to the execution of this Amending Agreement to the Development Agreement. Prior to commencing construction of the Roadway Modifications, the Owner shall provide Lakeshore with an up-to-date Certificate of Insurance for the project in accordance with the requirements of paragraph 8.2. The Owner agrees that construction of the Roadway Modifications shall be commenced by the Owner by no later than June 1, 2023 and shall be fully complete (base asphalt only) by no later than November 30, 2023. Final asphalt shall be applied within one further year (i.e., on or before*

November 30, 2024). The Owner shall ensure that pedestrian and motor vehicle access as well as access to all services (including mail service and garbage / recycling) from all residences situated along Haven Avenue are maintained at all times throughout construction.

Notwithstanding the foregoing, the Owner may, on at least 24 hours prior written notice to affected landowners, temporarily obstruct driveways within the Plan between the hours of 8 a.m. and 6 p.m. during working days (i.e., days other than Saturday, Sunday, or statutory holidays in the Province of Ontario), provided such driveways remain passable at all other times or at such other times as may otherwise be agreed to by any directly affected landowner. The Owner shall make provision for any required temporary access and/or temporary services to residences at its sole cost. Temporary garbage/recycling may be provided by the Owner collecting all garbage/recycling from all affected landowners and delivering same to a designated garbage/recycling area (approved by Lakeshore) for municipal collection. Upon completion of the Roadway Modifications, the Owner shall provide Lakeshore with its Engineer's Certification, pursuant to paragraph 2.3, confirming that the Roadway Modifications have been completed in full conformity with Schedule "K", inspection records and results (pursuant to paragraph 5.3), and statutory declaration (pursuant to paragraph 5.2), whereupon Lakeshore shall consider whether to accept the Roadway Modifications in accordance with Article 5. The maintenance period and the provisions in regard to assumption of the Works shall apply to the Roadway Modifications and to any Works altered, modified, and/or replaced in connection with the construction of the Roadway Modifications. In the event that the Owner fails to commence and/or complete the Roadway Modifications to Lakeshore's satisfaction as required herein, then Lakeshore may draw upon the security held by Lakeshore in order to fulfil any obligations in respect of which the Owner is in default in accordance with Article 10.

- (d) Schedule "F" of the Development Agreement is replaced with Appendix "B" attached to this Amending Agreement.
- (e) Schedule "G" of the Development Agreement is replaced with Appendix "C" attached to this Amending Agreement.
- (f) Appendix "D" attached to this Amending Agreement is added to the Development Agreement as a new Schedule "K".
- (g) Schedule "E" to the Development Agreement has the following additional conveyance requirements:

*Fee simple ownership of Part of Lots 251, 252, 302, and 303 sufficient to accommodate the turning circle location adjacent to these Lots.*

- (h) New section 8.4 is added to the Development Agreement as follows:

*The Owner specifically agrees to indemnify and save Lakeshore harmless from and against all loss or damage, expense, claims, suits and liability on account of any and all damage to, or loss or destruction of, any*

*property or injury to, or death of, any person arising directly or indirectly out of, or in connection with, the negligent performance or unlawful or non-performance of any obligation of the Owner in any way relating to design and/or construction of the Road Modifications, including without limitation any and all damage, disturbance, or other impacts caused to private lands, lot drainage, private sanitary services, and/or other improvements, including any claims by impacted landowners for trespass, injurious affection and/or nuisance in connection with the Roadway Modifications.*

*Prior to commencing any work in relation to the Road Modifications, the Contractor shall engage a qualified engineering firm to carry out a pre-construction survey on the existing structures, which may be affected by construction of the Road Modifications (the “**Preconstruction Survey**”). As a minimum, all existing yards, structures, and other improvements along Haven Avenue shall be inspected and documented through photographs and video recording. The survey must be completed prior to mobilization. Existing conditions of yards, structures, and other improvements shall be surveyed and examined. The Owner shall follow any recommendations from the Preconstruction Survey to protect the existing structures from damage by construction. The Preconstruction Survey, including copies of all photographs and video recording, shall be provided to Lakeshore prior to mobilization.*

3. The Owner acknowledges and agrees that, in the event that the Owner submits planning applications seeking approval of the Proposed Phase 1B, Lakeshore may, as a condition of such approval, require the Owner to enter into a Supplemental Development Agreement, which Supplemental Development Agreement may impose requirements specific to the Proposed Phase 1B, including but not limited to:
  - (a) Additional tree planting charges pursuant to section 3.14 and Schedule “D”;
  - (b) Additional cash-in-lieu of parkland dedication requirements pursuant to Schedules “C” and “D”; and
  - (c) Additional required conveyances pursuant to Schedule “E”.
4. The Development Agreement, this Amending Agreement, and any schedules attached thereto shall be registered on title to those lands set out in Schedule “A” and Schedule “A-2” hereto, where such lands remain registered to the Owner (or either or both of them). Construction of the Roadway Modifications shall not commence until such registration has been completed. The Owner further agrees to pay, upon demand, all costs associated with the preparation and registration of this Amending Agreement.
5. This Amending Agreement may be executed in counterparts, each of which shall be deemed to be an original and all of which taken together shall be deemed to constitute one and the same instrument. Counterparts may be executed either in original or facsimile form and the parties to this Agreement shall adopt any signatures received by facsimile as original signatures of the parties.

6. This Agreement shall extend to, be binding upon and enure to the benefit of the parties hereto and their respective successors and assigns and shall be governed by and construed in accordance with the laws of the Province of Ontario.

***[Remainder of page intentionally left blank]***

**IN WITNESS WHEREOF** the parties have executed this assignment as the date first written above.

**MUNICIPALITY OF LAKESHORE**

Per: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

Per: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

I/We have authority to bind the Corporation.

**507822 ONTARIO INC.**

Per: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

Per: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

I/We have authority to bind the Corporation.

**1403543 ONTARIO INC.**

Per: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

Per: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

I/We have authority to bind the Corporation.

**Appendix "A"**

**Schedule "A-2"**

**Subject Lands**

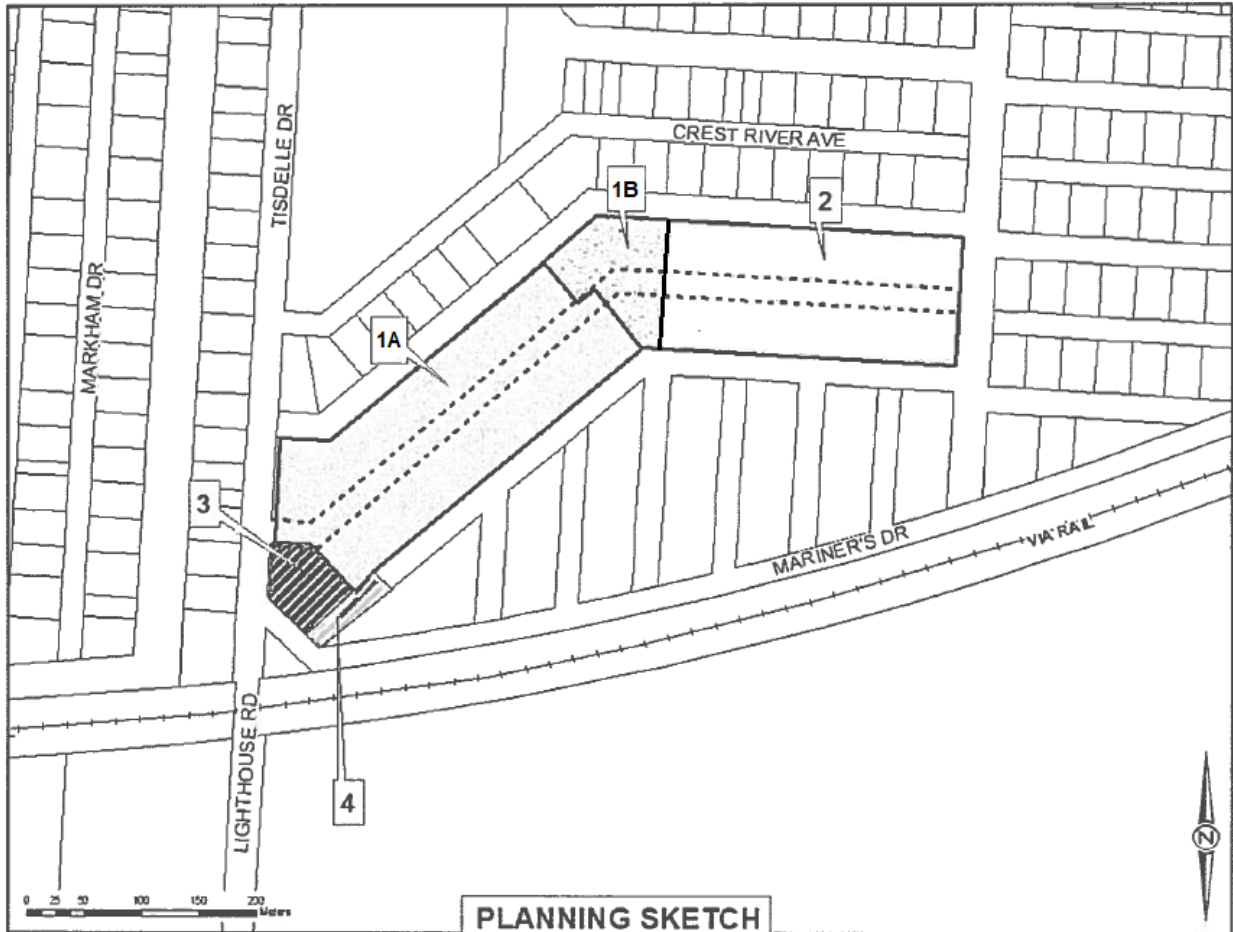
**Proposed Phase 1B**

Lots 253 to 257 and Lot 301, Plan 1624 Tilbury North; Lakeshore.

**Appendix "B"**

**Schedule "F"**

**Planning Sketch**

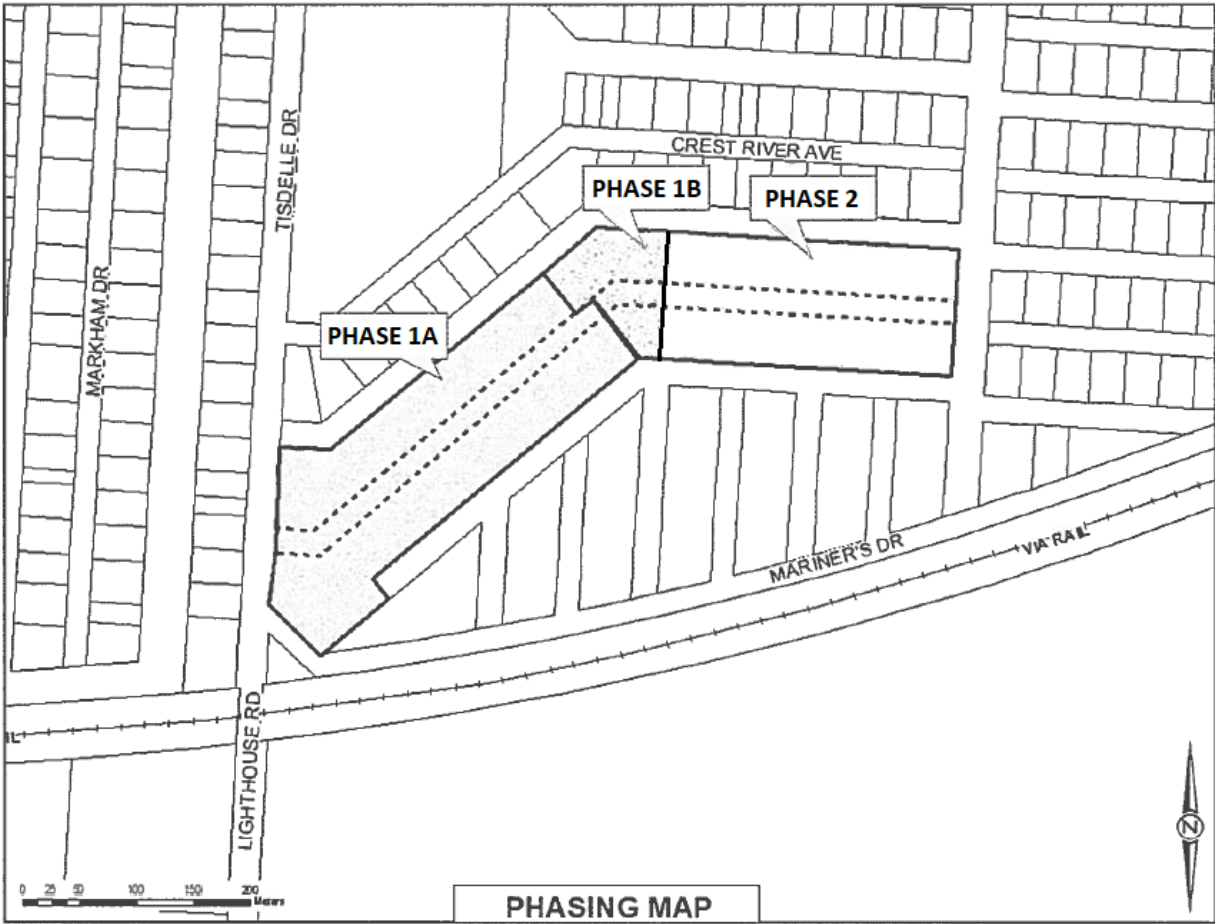




**Appendix "C"**

**Schedule "G"**

**Phasing Map**



## Appendix “D”

### Schedule “K”

#### Specifications for the Roadway Modifications

Sheets 1 through 10, inclusive, Admiral’s Cove Subdivision, prepared by RC Spencer Associates Inc., Consulting Engineers, Project No. 18-734, revision 6, issued for construction, dated September 1, 2022; and

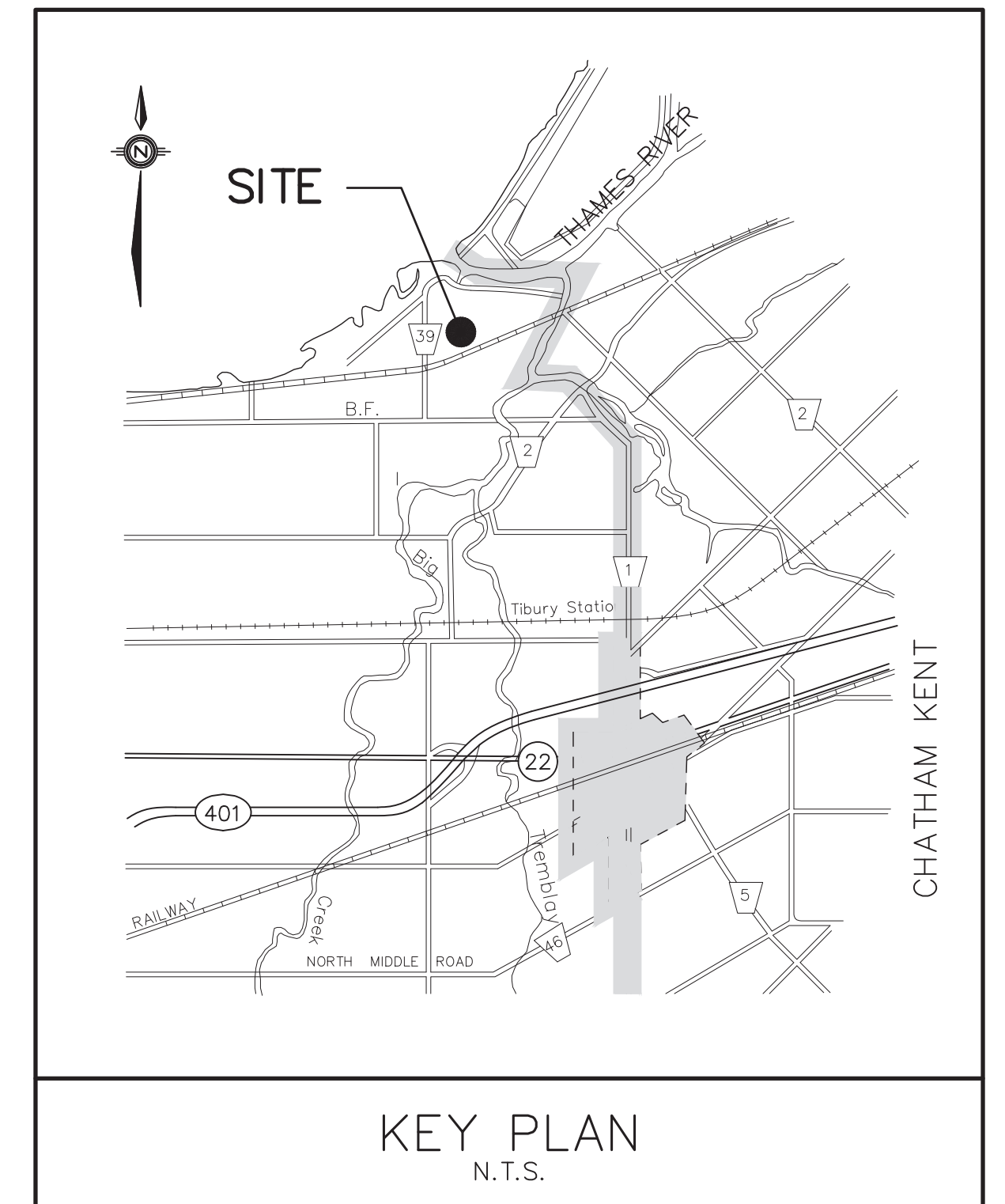
Admiral’s Cove Subdivision Stormwater Management Report Addendum, prepared by RC Spencer Associates Inc., dated and sealed January 11, 2023.

#### Additional Requirements:

1. Full compliance with Lakeshore Development Manual (the “**Development Manual**”), save and except as to the following matters:
  - a. Front yard slope may be provided at a minimum of 2%; and
  - b. Driveway slope may be provided at a minimum of 2%.
2. After pulverization of the existing asphalt is completed, the project's original geotechnical engineer (CT Soil & Materials Engineering Inc.) to be retained to assess the existing granular base to determine if removal is required based on level of saturation and quality. Owner to adhere to recommendations by CT Soil & Materials Engineering Inc.
3. Adjust all above grade infrastructure as required (including driveways, transformers, streetlights, and catch basins).
4. Any fill placed on existing septic beds to remain in conformance with Part 8 of the Ontario Building Code and manufacturer’s recommendations and specifications.
5. Repair storm outfall with bentonite or grout plug around the pipe to ensure inflow issue is resolved. Upon completion of the repair and the Roadway Modifications, the Owner shall complete a camera inspection of the storm sewer network to be provided to Lakeshore for review prior to any determination by Lakeshore regarding acceptance or assumption of any infrastructure.
6. Dismantle current pump system and remove sheet piling as required following Lakeshore’s acceptance of all other Works.
7. Complete all new construction works related to the extension of the roadway and the associated services to accommodate the Proposed Phase 1B, including cul-de-sac.
8. The Owner is responsible for communications with impacted residents to ensure that:
  - a. Residents are invited to attend a pre-construction public information session to be chaired by the Owner’s Engineer and attended by the Owner’s contractor;
  - b. Residents are fully informed as to the proposed construction schedule and potential construction impacts on access and services;

- c. Residents are provided with contact information for the Owner's Engineer in the event of questions, complaints, or other issues.
- 9. The Owner is solely responsible for securing permission to enter onto any private lands required to be accessed to complete the Roadway Modifications and for restoring any and all damage or disturbance (or the payment of any compensation) caused to private lands as a result of the Roadway Modifications, including any disturbance or impacts to lot drainage, private sanitary services, and/or other improvements. The Owner shall indemnify and save Lakeshore harmless in accordance with sections 8.1 and 8.4 of the Development Agreement for all such damage or disturbance.

# ADMIRAL'S COVE SUBDIVISION



INDEX	
No.	DESCRIPTION
1.	INDEX, LEGEND, KEY PLAN & BENCHMARK
2.	REMOVALS PLAN
3.	PAVING & GRADING PLAN
3A.	PAVING & GRADING PLAN – SECTION B-B
4.	PAVING & GRADING DETAILS
5.	OVERALL SITE SERVICING PLAN
6.	PLAN & PROFILE – HAVEN AVENUE
7.	PLAN & PROFILE – HAVEN AVENUE (EXTENSION)
8.	MISCELLANEOUS DETAILS 1
9.	MISCELLANEOUS DETAILS 2
10.	STANDARD DETAILS

LEGEND		
DESCRIPTION	EXISTING	NEW
STORM SEWER	EX 375mm ST	375mm
SANITARY SEWER	EX 250mm SAN	250mm
WATER MAIN	EX 200mm W	200mm
GAS MAIN	G	
GAS MARKER	G <sub>M</sub>	
BELL, HYDRO, & CABLE TV	B H TV	
BELL, & CABLE TV PED.	B.P.C.P.	
WATER VALVE	W.V.	W.V.
FIRE HYDRANT & WATER VALVE	F.H.	F.H. & W.V.
CATCH BASIN	C.B.	CB
MANHOLE	M.H.	M.H. 1
LOT ELEVATION		183.70
LOT GRADES		183.70
ROAD ELEVATION	183.81	183.35
TRANSFORMER	H.TRANS.	
TRAFFIC SIGN	T.S.	

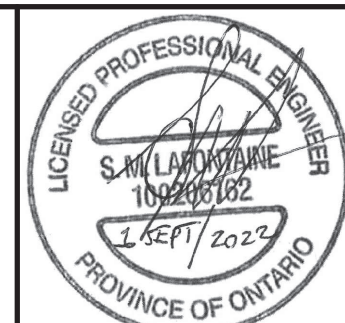
**BENCHMARK:**

ELEVATIONS ARE REFERENCED TO THE TOP OF THE FIRE HYDRANT AT MUN. #855 TISELLE.

ELEVATION = 176.754m

18-734

ADMIRAL'S COVE SUBDIVISION



					5.	REVISED FOR LAKESHORE APPROVAL	11 AUG 2022	S.M.L.	R.C.S.	DESIGN	R.C.S.
					4.	SUBMIT FOR LAKESHORE APPROVAL	08 JUL 2022	S.M.L.	R.C.S.	CHECKED	B.R.
					3.	ISSUED FOR FINAL APPROVAL	27 MAY 2022	S.M.L.	R.C.S.	DRAWN	S.M.L.
					2.	REVISED PER TOWN COMMENTS	24 FEB 2022	S.M.L.	R.C.S.	CHECKED	R.C.S.
					1.	ISSUED FOR TOWN APPROVAL	26 APR 2021	S.M.L.	R.C.S.		
6.	ISSUED FOR CONSTRUCTION	01 SEP 2022	S.M.L.	R.C.S.	1.	ISSUED FOR TOWN APPROVAL	26 APR 2021	S.M.L.	R.C.S.		
NO.	REVISION	DATE	BY	APP.	NO.	REVISION	DATE	BY	APP.	SCALE	N.T.S.

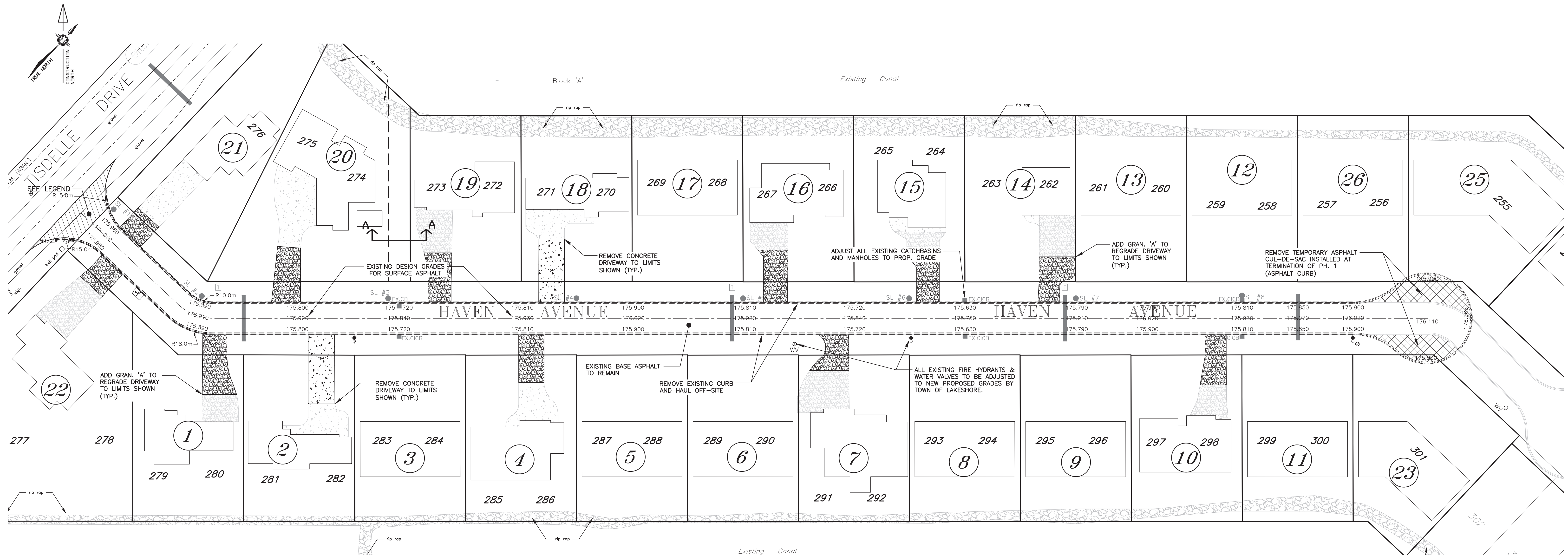
ADMIRAL'S COVE SUBDIVISION

INDEX, LEGEND, KEY PLAN & BENCHMARK

PROJECT NO.  
18-734

SHEET NO.  
1

OF  
10



**REMOVALS GENERAL NOTES:**

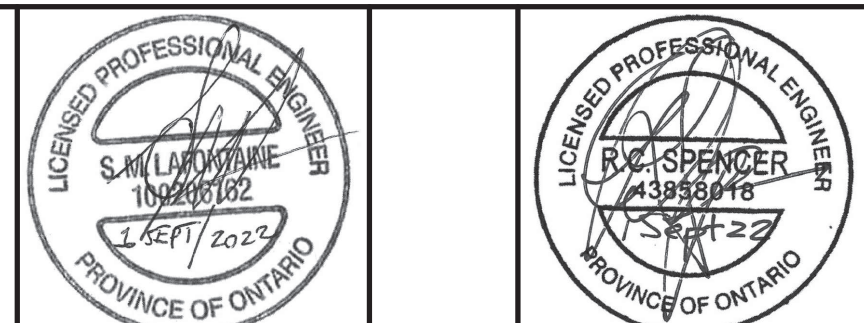
1. ALL CONCRETE REMOVALS (CURB/DRIVEWAY) SHALL BE DISPOSED OFF-SITE BY THE CONTRACTOR.
2. ALL EXCAVATED CLAY OR GRANULAR MATERIAL TO BE RE-USED ON-SITE IN BOULEVARD FILL AREAS TO BUILD UP TO PROPOSED ELEVATION, AS DIRECTED BY THE ENGINEER.
3. ALL EXISTING CATCHBASINS AND MANHOLES TO BE ADJUSTED TO NEW PROPOSED GRADES SHOWN ON SHEET 3.
4. ALL EXISTING STREETLIGHTS AND HYDRO TO BE ADJUSTED BY OTHERS.
5. ALL EXISTING FIRE HYDRANTS, WATER VALVES AND CURB BOXES TO BE ADJUSTED TO NEW PROPOSED GRADES BY TOWN OF LAKESHORE.

**ADJUSTMENT SUMMARY:**

	DESCRIPTION	QTY.	ADJUSTMENT HEIGHT
1.	MAINLINE WATER VALVES	3	0.15m - 0.40m
2.	FIRE HYDRANT & W.V.	3	0.25m - 0.40m
3.	WATER SERVICE CURB BOX	22	0.15m - 0.25m
4.	HYDRO TRANSFORMERS	3	0.30m - 0.35m
5.	STREETLIGHT POLES	8	NOT REQUIRED
6.	STORM MANHOLES	5	0.30m - 0.40m
7.	CATCH BASINS	6	0.25m - 0.40m

**LEGEND**

	ASPHALT REMOVAL		EXISTING CONCRETE DRIVEWAY TO REMAIN
	CURB REMOVAL		EXISTING GRAVEL DRIVEWAY TO REMAIN
	ROAD PAVEMENT WITHIN COUNTY OF ESSEX R.O.W. LIMIT SHALL CONSIST OF 50mm HL3 ON 50mm HL4 ON EXISTING 450mm GRAN. 'A' COMPACTED TO 100% S.P.D.		REMOVE AND REPLACE CONCRETE DRIVEWAY PER LAKESHORE DEVELOPMENT MANUAL STANDARDS
			ADD GRANULAR 'A' AS REQUIRED TO REGRADE GRAVEL DRIVEWAY TO PROPOSED ELEVATIONS



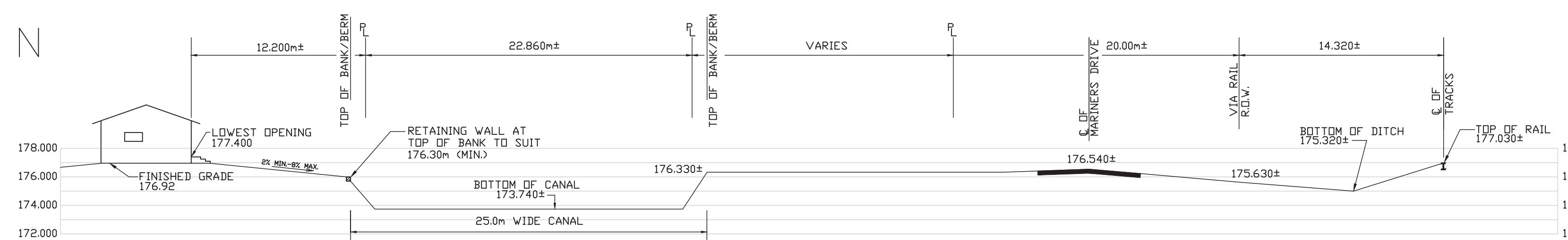
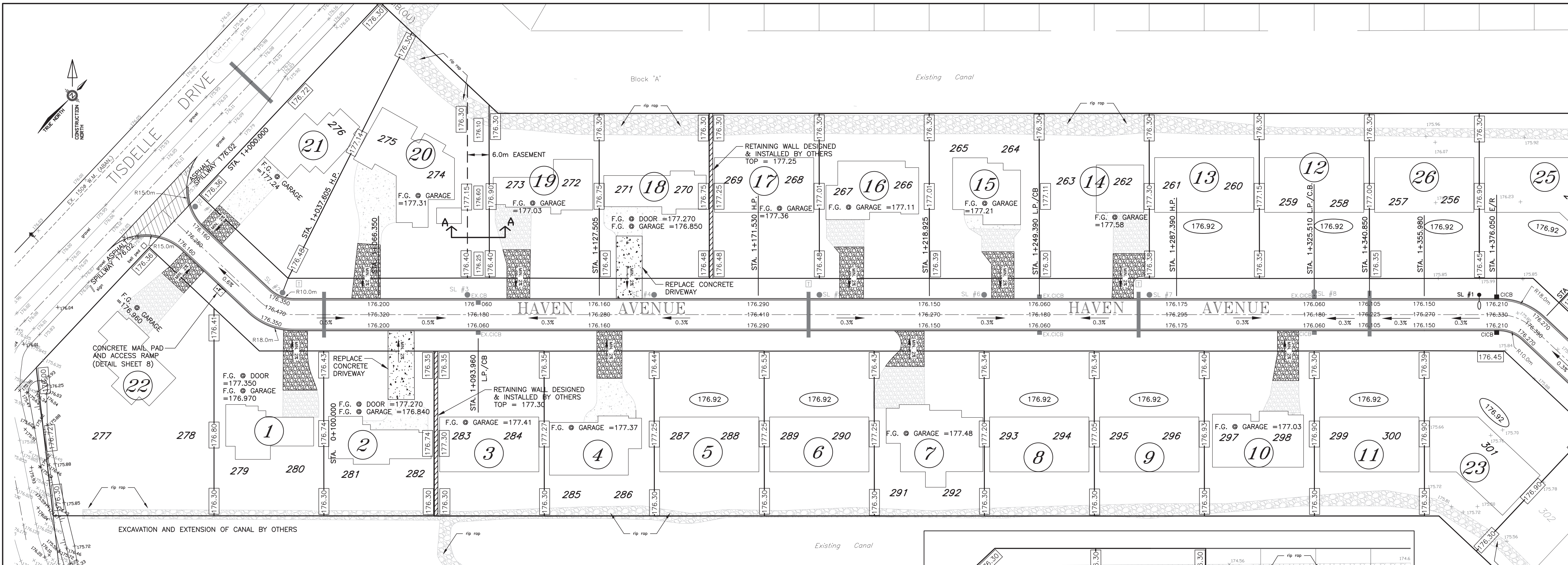
NO.	REVISION	DATE	BY	APP.	NO.	REVISION	DATE	BY	APP.	SCALE
5.	REVISED FOR LAKESHORE APPROVAL	11 AUG 2022	S.M.L.	R.C.S.	DESIGN	R.C.S.				
4.	SUBMIT FOR LAKESHORE APPROVAL	08 JUL 2022	S.M.L.	R.C.S.	CHECKED	B.R.				
3.	ISSUED FOR FINAL APPROVAL	27 MAY 2022	S.M.L.	R.C.S.	DRAWN	S.M.L.				
2.	REVISED PER TOWN COMMENTS	24 FEB 2022	S.M.L.	R.C.S.	CHECKED	R.C.S.				
1.	ISSUED FOR TOWN APPROVAL	26 APR 2021	S.M.L.	R.C.S.						
6.	ISSUED FOR CONSTRUCTION	01 SEP 2022	S.M.L.	R.C.S.						

PROJECT NO. 18-734  
 SHEET NO. 2  
 OF 10

ADMIRAL'S COVE SUBDIVISION

**REMOVALS PLAN**

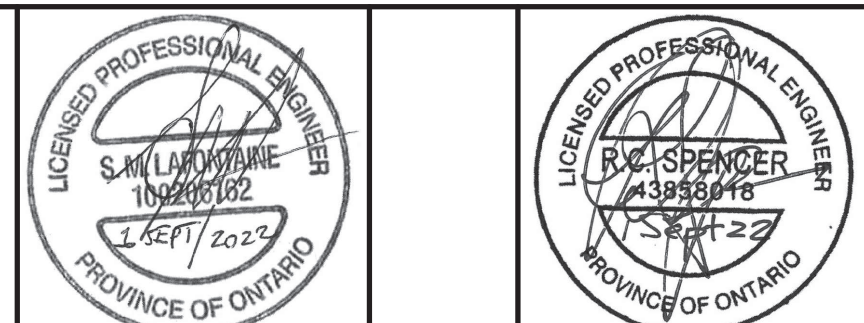
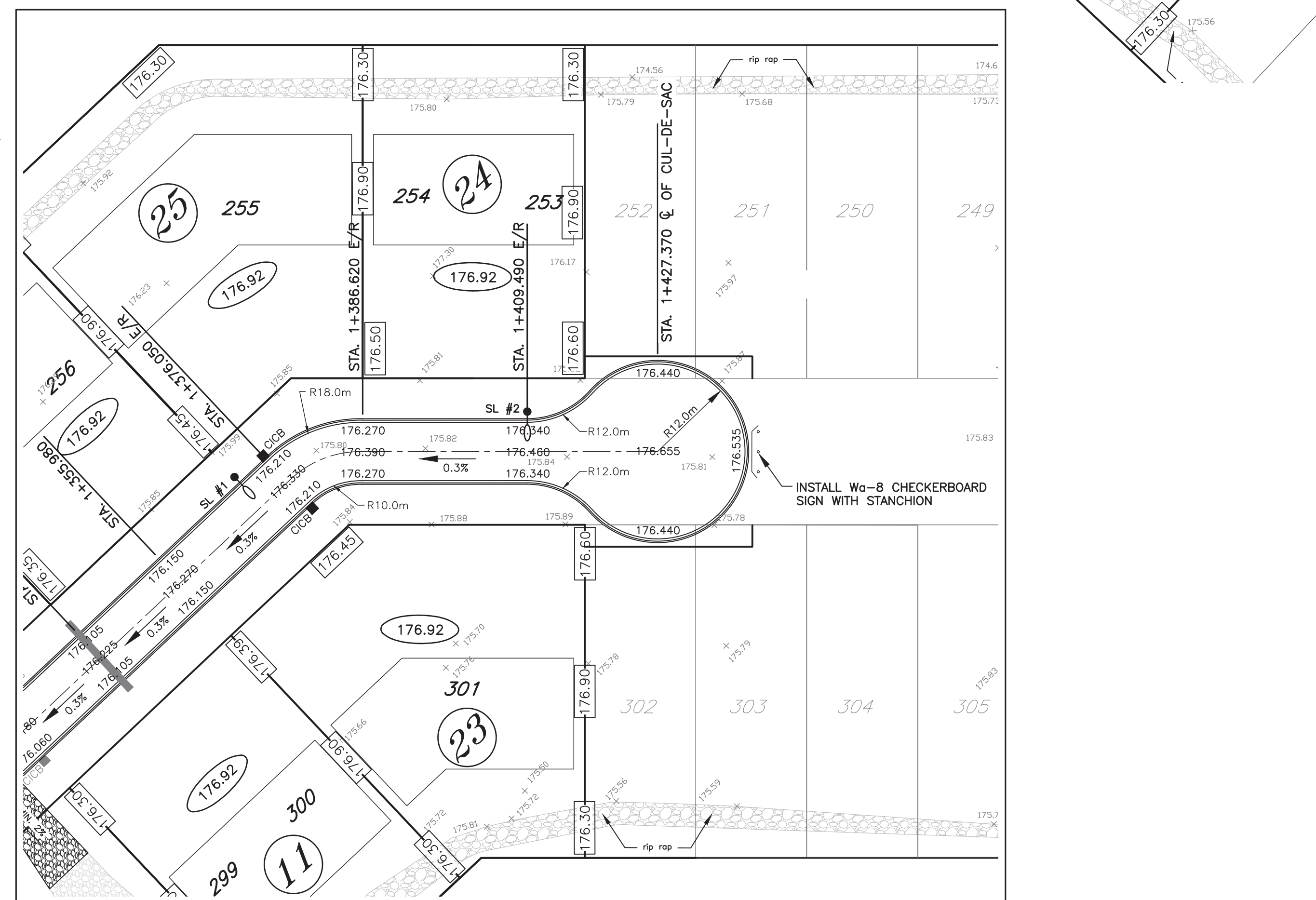
SCALE 1:500



PROPOSED CANAL/REAR LOT CROSS-SECTION  
(APPLIES TO SHEETS 2 & 3)  
1:250

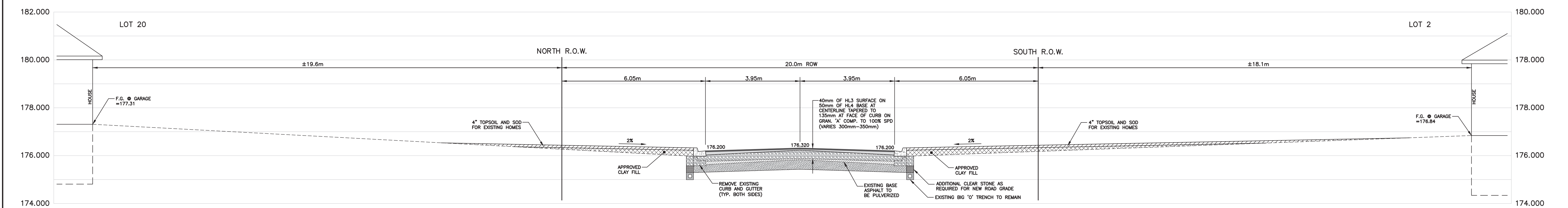
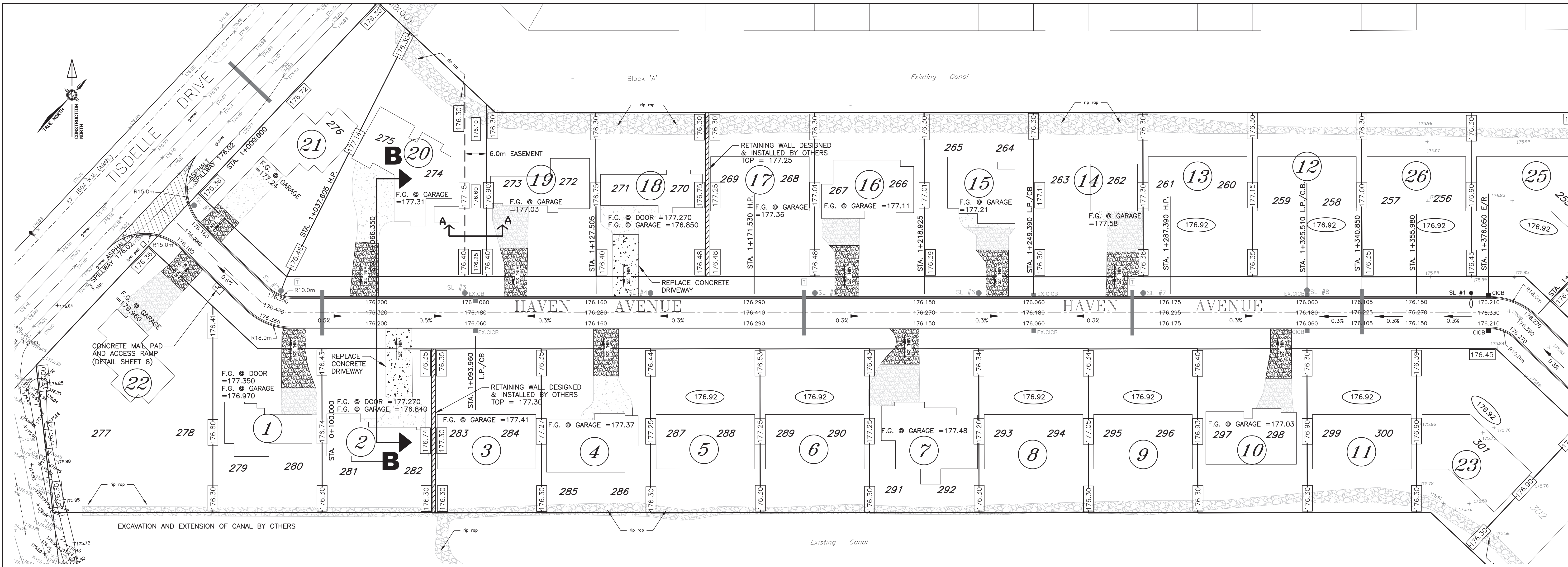
PAVING AND GRADING GENERAL NOTES:

- PERFORM ALL WORK TO TOWN OF LAKESHORE AND ONTARIO PROVINCIAL STANDARDS.
- FOR PAVEMENT STRUCTURE, SEE MISCELLANEOUS DETAILS SHEET.
- ALL EXCESS EXCAVATED MATERIAL TO BE RE-USED ON-SITE IN BOULEVARD FILL AREAS TO BUILD UP TO PROPOSED ELEVATION, AS DIRECTED BY THE ENGINEER.
- ALL RADII AND DIMENSIONS REFER TO EDGE OF PAVEMENT. (UNLESS OTHERWISE NOTED)
- PAVEMENT GRADES SHOWN ARE AT EDGE OF PAVEMENT AND  $\text{\textcircled{C}}$  ROAD.
- CHAINAGES SHOWN REFER TO ROAD  $\text{\textcircled{C}}$ .
- RESTORE ALL DISTURBED AREAS WITHIN EXISTING R.O.W. TO TOWN OF LAKESHORE STANDARDS
- FINISHED GRADES AT HOUSE SHOWN THUS  $\text{\textcircled{176.920}}$
- FINISHED GRADES AT REAR YARD SWALE SHOWN THUS  $\text{\textcircled{177.900}}$
- $\bullet$  - DENOTES SUMP PIT CATCH BASINS
- ALL RADII REFERS TO EDGE OF PAVEMENT.
- CONTRACTOR TO PLACE FILTER CLOTH IN ALL CATCHBASINS
- CONTRACTOR TO GRADE BOULEVARDS AS PER DETAIL SHEET NO. 8.



NO.	REVISION	DATE	BY	APP.	NO.	REVISION	DATE	BY	APP.	SCALE
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PROJECT NO. 18-734  
SHEET NO. 3 OF 10  
ADMIRAL'S COVE SUBDIVISION  
PAVING & GRADING PLAN



SECTION B-B  
SCALE 1 : 75

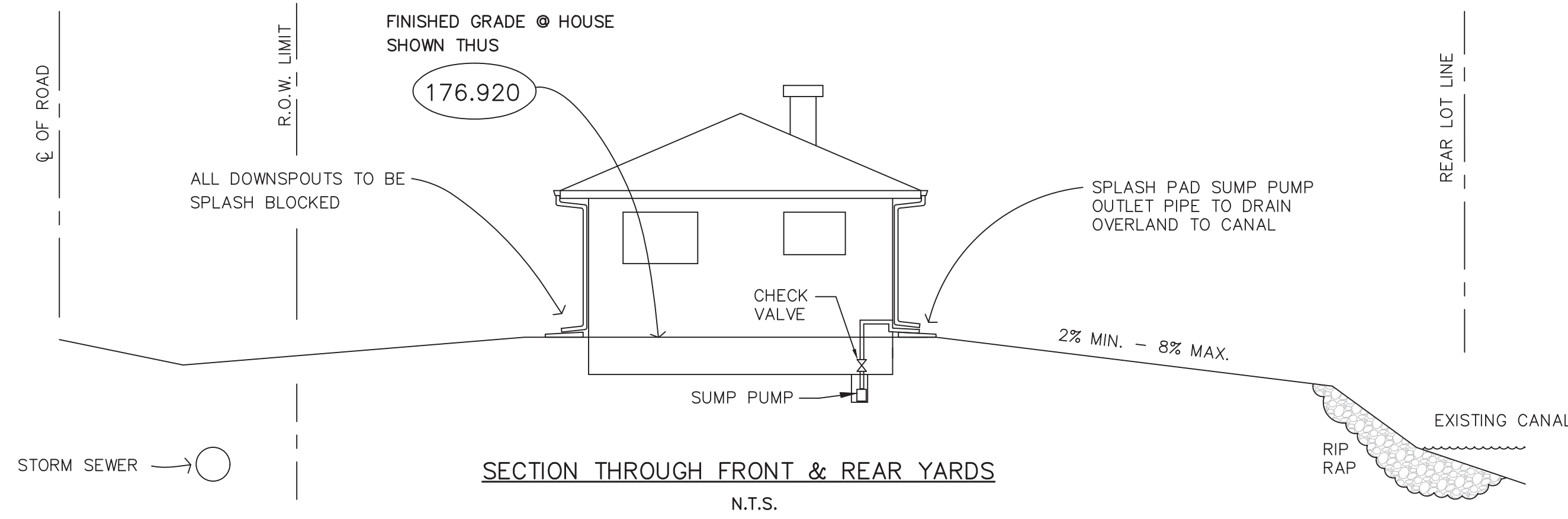
							5. REVISED FOR LAKESHORE APPROVAL	11 AUG 2022	S.M.L.	R.C.S.	DESIGN	R.C.S.	ADMIRAL'S COVE SUBDIVISION <b>PAVING &amp; GRADING PLAN</b> SECTION B-B	PROJECT NO. 18-734	
							4. SUBMIT FOR LAKESHORE APPROVAL	08 JUL 2022	S.M.L.	R.C.S.	CHECKED	B.R.			SHEET NO. 3A
								3. ISSUED FOR FINAL APPROVAL	27 MAY 2022	S.M.L.	R.C.S.	DRAWN	S.M.L.	OF 10	
								2. REVISED PER TOWN COMMENTS	24 FEB 2022	S.M.L.	R.C.S.	CHECKED	R.C.S.		
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								SCALE 1:500							
								NO. REVISION DATE BY APP. NO. REVISION DATE BY APP.							

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- FINISHED GRADES AT REAR YARD SWALE SHOWN THUS (177.900)

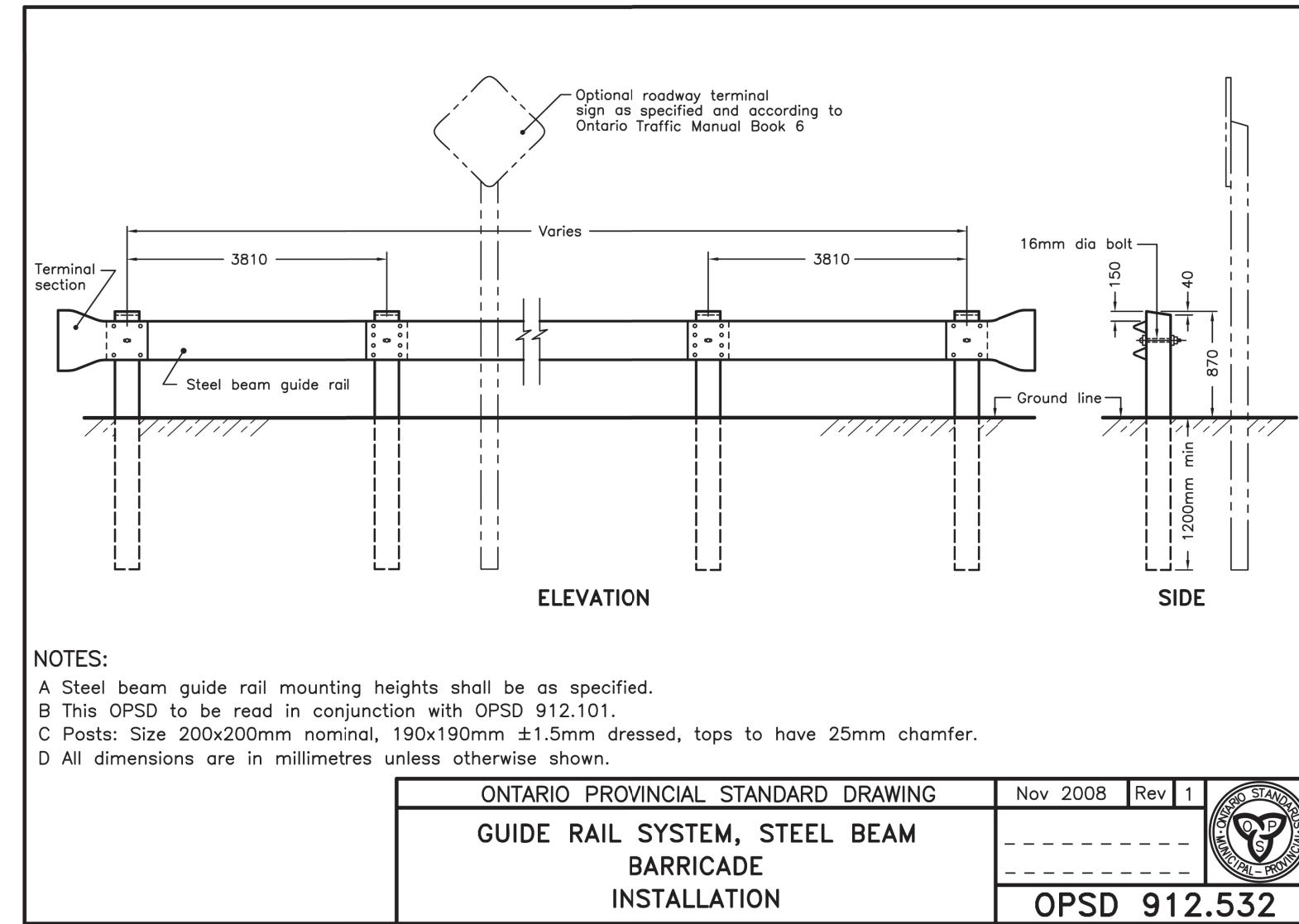
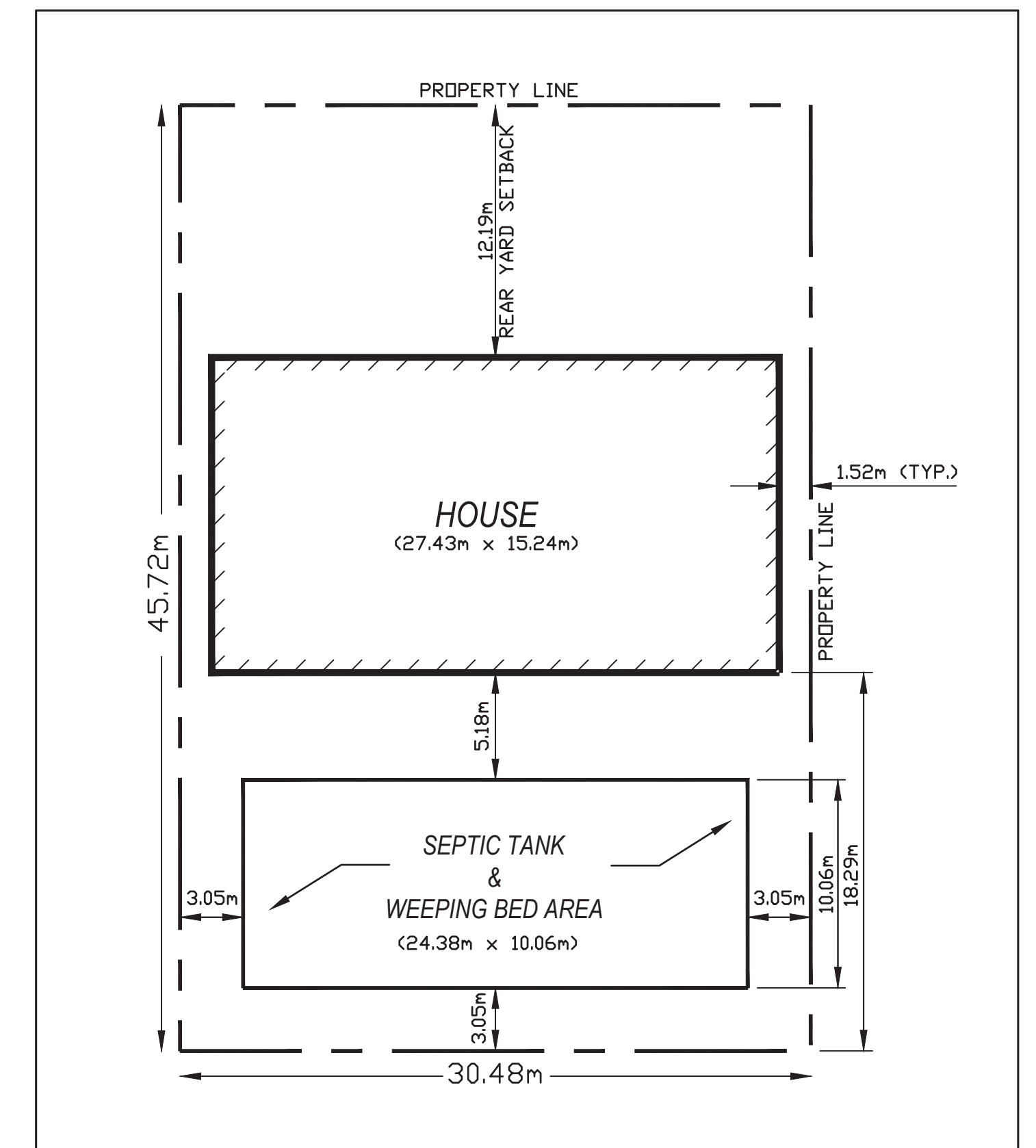
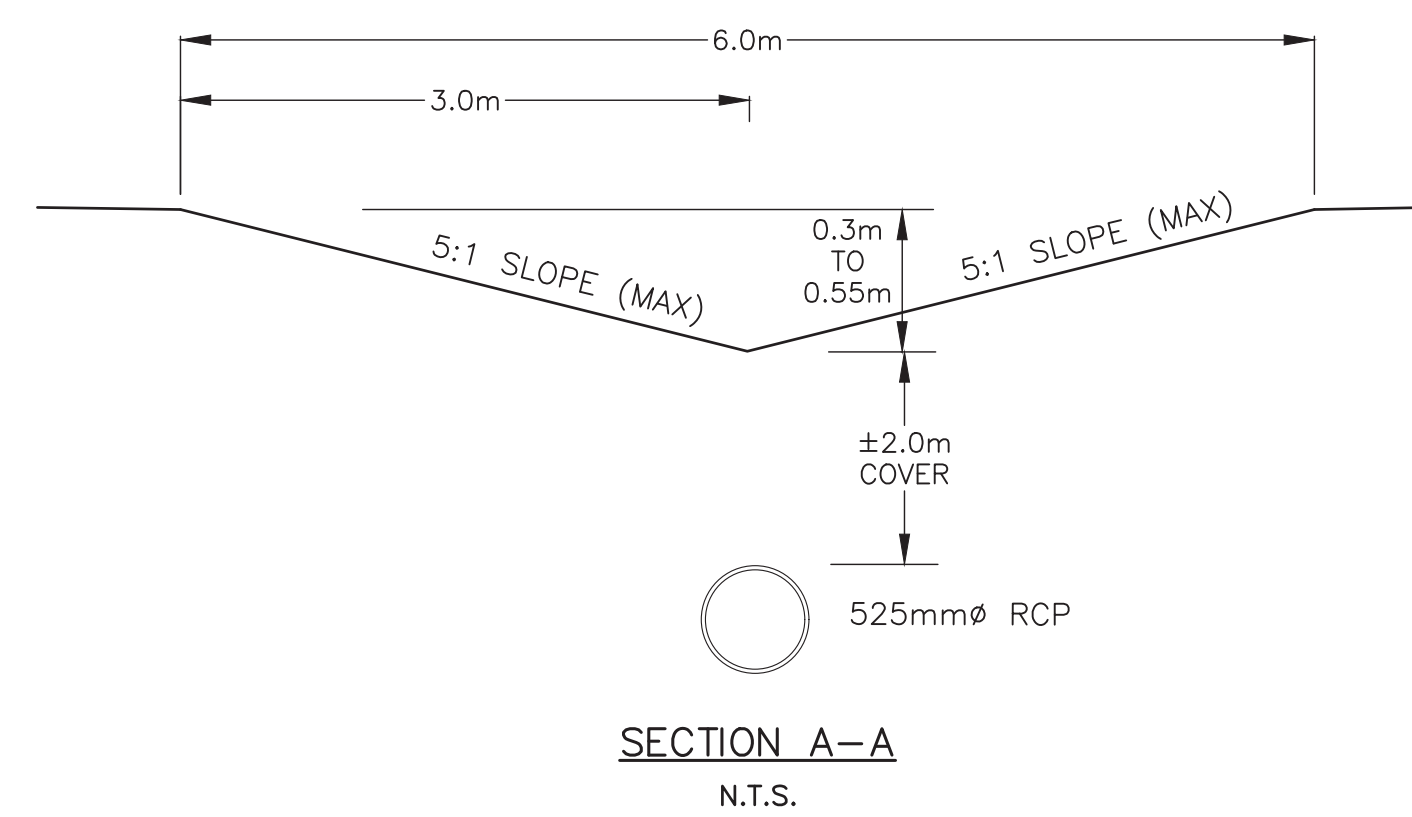
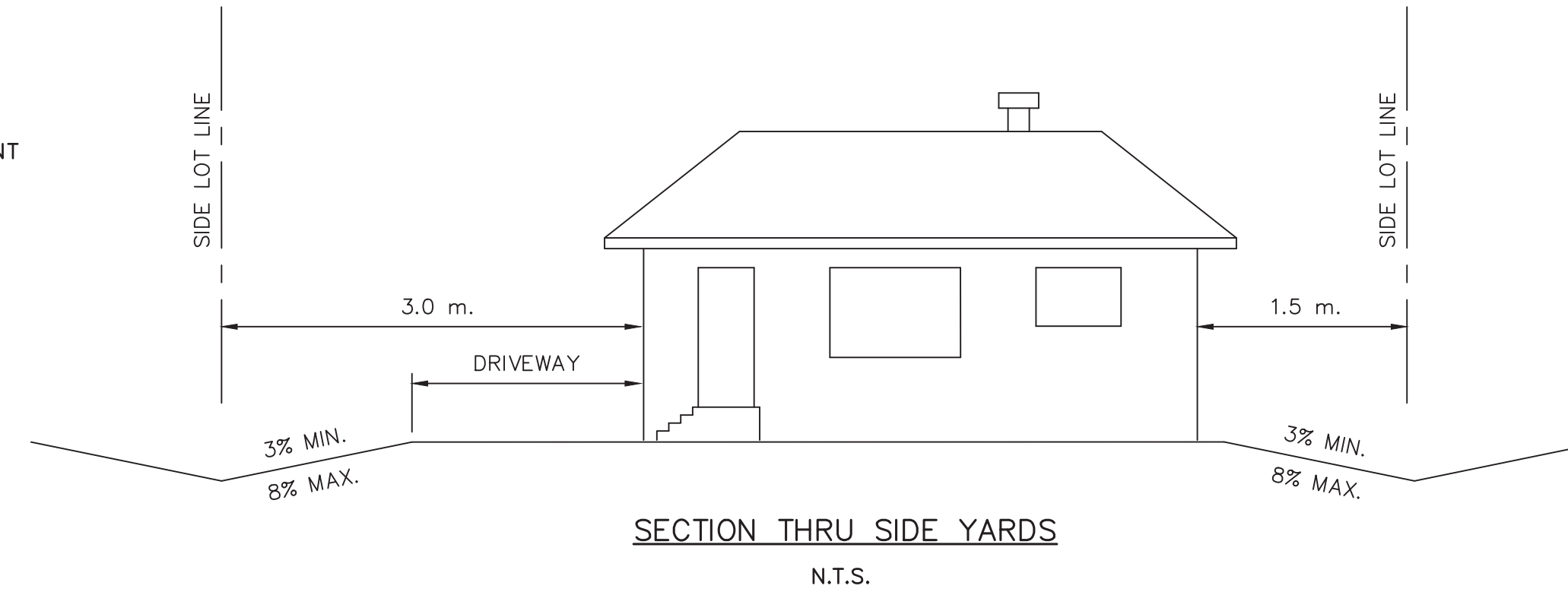
- N.I.C. 10. ● - DENOTES SUMP PIT CATCH BASINS
- ALL RADII REFERS TO EDGE OF PAVEMENT.
  - CONTRACTOR TO PLACE FILTER CLOTH IN ALL CATCHBASINS
  - CONTRACTOR TO GRADE BOULEVARDS AS PER DETAIL SHEET NO. 8.

➔ DENOTES OVERLAND FLOW ROUTE

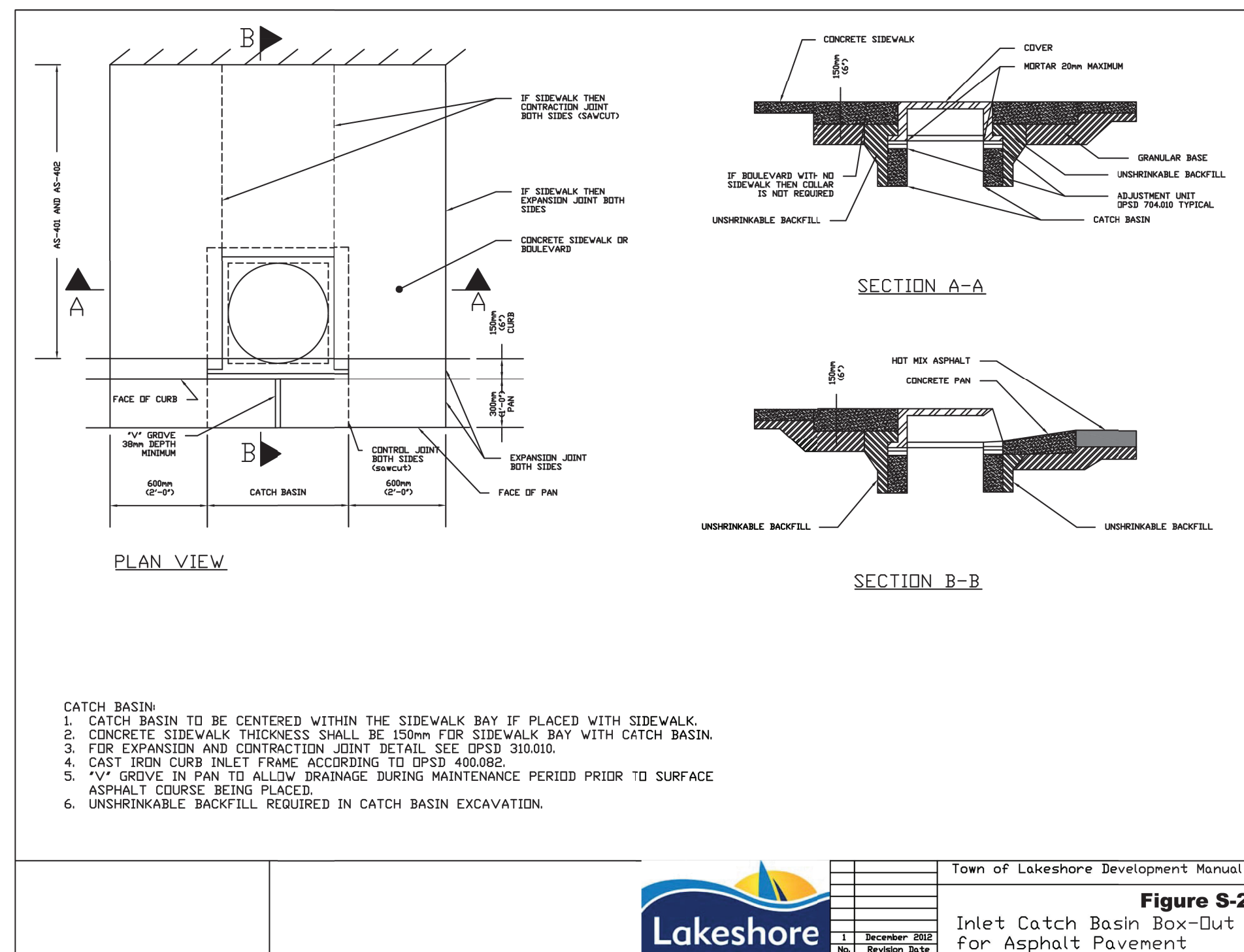


**ABBREVIATIONS**

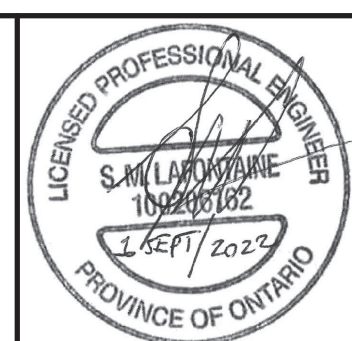
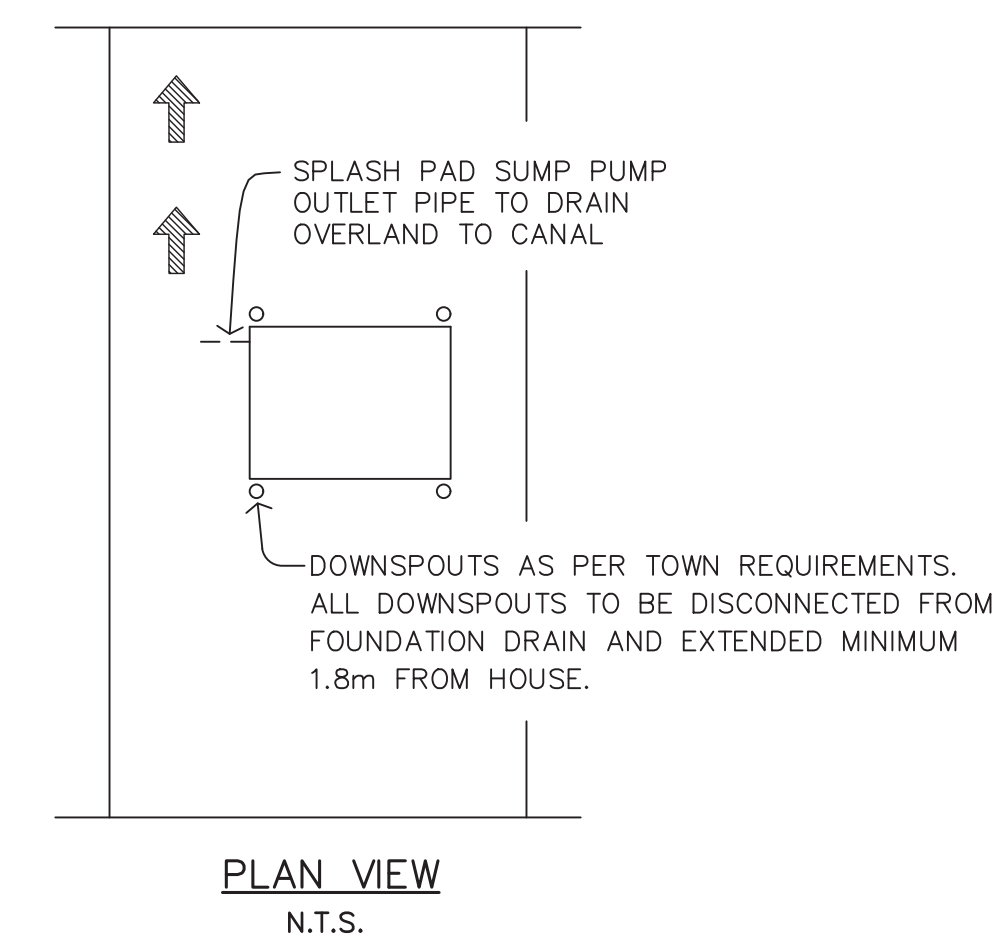
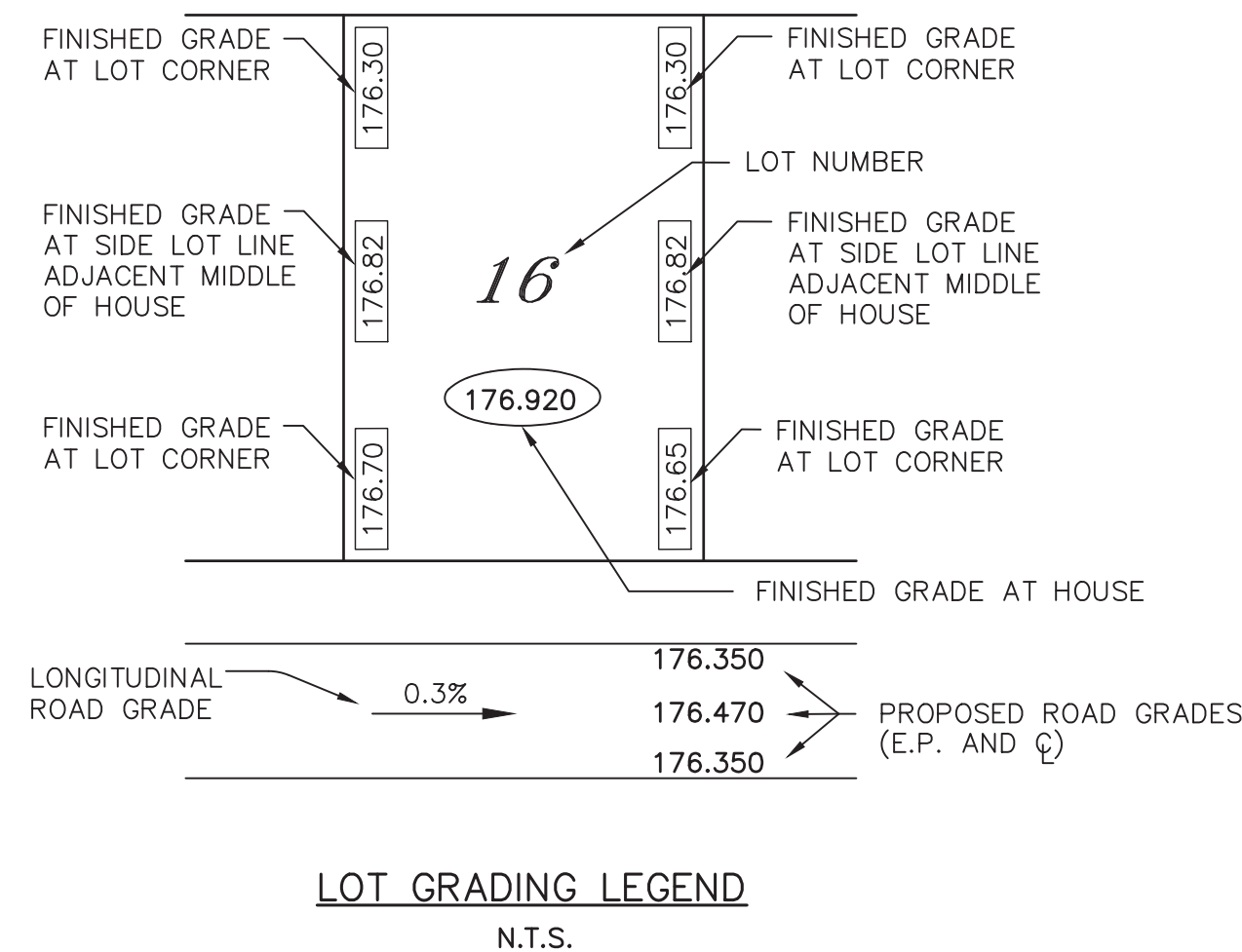
- H.P. DENOTES HIGH GRADING POINT
- L.P. DENOTES LOW GRADING POINT
- I.P. DENOTES INTERMEDIATE GRADING POINT
- E.R. DENOTES END OF CURB RADIUS
- E.P. DENOTES END OF PAVEMENT
- INT. DENOTES ROAD INTERSECTION
- CB DENOTES CATCHBASIN
- MH DENOTES MAINTENANCE HOLE



DEAD END BARRICADE AND SIGN DETAIL  
N.T.S.



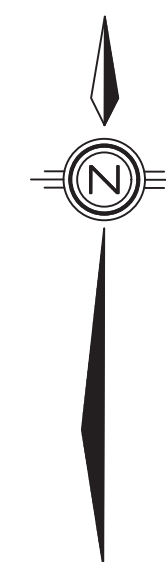
TOWN OF LAKESHORE CURB INLET CATCHBASIN DETAIL  
N.T.S.



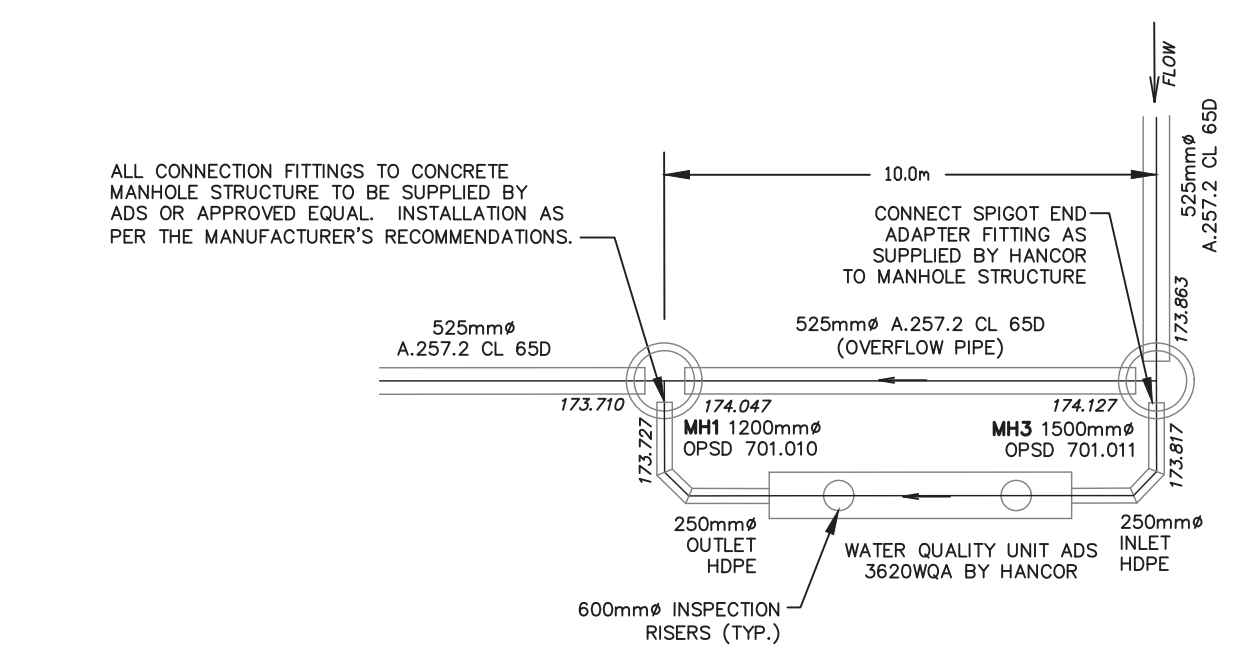
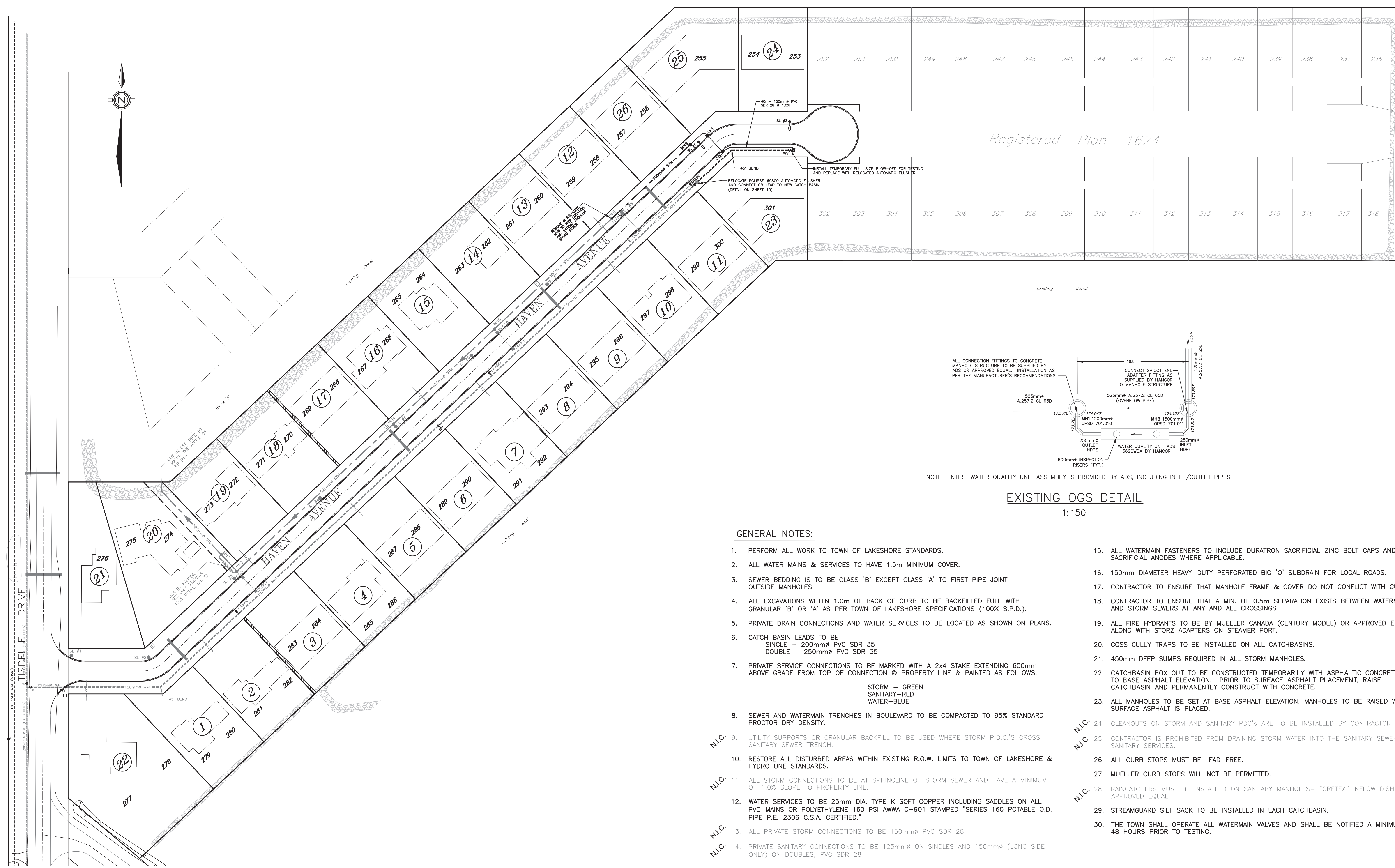
NO.	REVISION	DATE	BY	APP.	NO.	REVISION	DATE	BY	APP.	SCALE
5.	REVISED FOR LAKESHORE APPROVAL	11 AUG 2022	S.M.L.	R.C.S.	DESIGN	R.C.S.				
4.	SUBMIT FOR LAKESHORE APPROVAL	08 JUL 2022	S.M.L.	R.C.S.	CHECKED	B.R.				
3.	ISSUED FOR FINAL APPROVAL	27 MAY 2022	S.M.L.	R.C.S.	DRAWN	S.M.L.				
2.	REVISED PER TOWN COMMENTS	24 FEB 2022	S.M.L.	R.C.S.	CHECKED	R.C.S.				
1.	ISSUED FOR TOWN APPROVAL	26 APR 2021	S.M.L.	R.C.S.						
6.	ISSUED FOR CONSTRUCTION	01 SEP 2022	S.M.L.	R.C.S.						

ADMIRAL'S COVE SUBDIVISION		PROJECT NO.	18-734
PAVING & GRADING DETAILS		SHEET NO.	4
		OF	10





Registered Plan 1624



NOTE: ENTIRE WATER QUALITY UNIT ASSEMBLY IS PROVIDED BY ADS, INCLUDING INLET/OUTLET PIPES

EXISTING OGS DETAIL

1:150

GENERAL NOTES:

- PERFORM ALL WORK TO TOWN OF LAKESHORE STANDARDS.
- ALL WATER MAINS & SERVICES TO HAVE 1.5m MINIMUM COVER.
- SEWER BEDDING IS TO BE CLASS 'B' EXCEPT CLASS 'A' TO FIRST PIPE JOINT OUTSIDE MANHOLES.
- ALL EXCAVATIONS WITHIN 1.0m OF BACK OF CURB TO BE BACKFILLED FULL WITH GRANULAR 'B' OR 'A' AS PER TOWN OF LAKESHORE SPECIFICATIONS (100% S.P.D.).
- PRIVATE DRAIN CONNECTIONS AND WATER SERVICES TO BE LOCATED AS SHOWN ON PLANS.
- CATCH BASIN LEADS TO BE  
SINGLE - 200mm PVC SDR 35  
DOUBLE - 250mm PVC SDR 35
- PRIVATE SERVICE CONNECTIONS TO BE MARKED WITH A 2x4 STAKE EXTENDING 600mm ABOVE GRADE FROM TOP OF CONNECTION @ PROPERTY LINE & PAINTED AS FOLLOWS:  
STORM - GREEN  
SANITARY-RED  
WATER-BLUE
- SEWER AND WATERMAIN TRENCHES IN BOULEVARD TO BE COMPACTED TO 95% STANDARD PROCTOR DRY DENSITY.
- UTILITY SUPPORTS OR GRANULAR BACKFILL TO BE USED WHERE STORM P.D.C.'S CROSS SANITARY SEWER TRENCH.
- RESTORE ALL DISTURBED AREAS WITHIN EXISTING R.O.W. LIMITS TO TOWN OF LAKESHORE & HYDRO ONE STANDARDS.
- ALL STORM CONNECTIONS TO BE AT SPRINGLINE OF STORM SEWER AND HAVE A MINIMUM OF 1.0% SLOPE TO PROPERTY LINE.
- WATER SERVICES TO BE 25mm DIA. TYPE K SOFT COPPER INCLUDING SADDLES ON ALL PVC MAINS OR POLYETHYLENE 160 PSI AWWA C-901 STAMPED "SERIES 160 POTABLE O.D. PIPE P.E. 2306 C.S.A. CERTIFIED."
- ALL PRIVATE STORM CONNECTIONS TO BE 150mm PVC SDR 28.
- PRIVATE SANITARY CONNECTIONS TO BE 125mm ON SINGLES AND 150mm (LONG SIDE ONLY) ON DOUBLES, PVC SDR 28.
- ALL WATERMAIN FASTENERS TO INCLUDE DURATRON SACRIFICIAL ZINC BOLT CAPS AND ZINC SACRIFICIAL ANODES WHERE APPLICABLE.
- 150mm DIAMETER HEAVY-DUTY PERFORATED BIG 'O' SUBDRAIN FOR LOCAL ROADS.
- CONTRACTOR TO ENSURE THAT MANHOLE FRAME & COVER DO NOT CONFLICT WITH CURBS.
- CONTRACTOR TO ENSURE THAT A MIN. OF 0.5m SEPARATION EXISTS BETWEEN WATERMANS AND STORM SEWERS AT ANY AND ALL CROSSINGS
- ALL FIRE HYDRANTS TO BE BY MUELLER CANADA (CENTURY MODEL) OR APPROVED EQUAL ALONG WITH STORZ ADAPTERS ON STEAMER PORT.
- GOSS GULLY TRAPS TO BE INSTALLED ON ALL CATCHBASINS.
- 450mm DEEP SUMPS REQUIRED IN ALL STORM MANHOLES.
- CATCHBASIN BOX OUT TO BE CONSTRUCTED TEMPORARILY WITH ASPHALTIC CONCRETE SET TO BASE ASPHALT ELEVATION. PRIOR TO SURFACE ASPHALT PLACEMENT, RAISE CATCHBASIN AND PERMANENTLY CONSTRUCT WITH CONCRETE.
- ALL MANHOLES TO BE SET AT BASE ASPHALT ELEVATION. MANHOLES TO BE RAISED WHEN SURFACE ASPHALT IS PLACED.
- CLEANOUTS ON STORM AND SANITARY PDC'S ARE TO BE INSTALLED BY CONTRACTOR
- CONTRACTOR IS PROHIBITED FROM DRAINING STORM WATER INTO THE SANITARY SEWERS/ SANITARY SERVICES.
- ALL CURB STOPS MUST BE LEAD-FREE.
- MUELLER CURB STOPS WILL NOT BE PERMITTED.
- RAINCATCHERS MUST BE INSTALLED ON SANITARY MANHOLES- "CRETEX" INFLOW DISH OR APPROVED EQUAL.
- STREAMGUARD SILT SACK TO BE INSTALLED IN EACH CATCHBASIN.
- THE TOWN SHALL OPERATE ALL WATERMAIN VALVES AND SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO TESTING.



**RC SPENCER ASSOCIATES INC.**  
Consulting Engineers

Windsor: 800 University Ave. W., Windsor, ON N9A 5S9  
Leamington: 16 Talbot St. W., Leamington, ON N8H 1M4  
Chatham-Kent: 49 Raleigh St., Chatham, ON N7M 2M8

Professional Engineers  
Ontario

NO.	REVISION	DATE	BY	APP.	NO.	REVISION	DATE	BY	APP.	SCALE
5.	REVISED FOR LAKESHORE APPROVAL	11 AUG 2022	S.M.L.	R.C.S.	DESIGN	R.C.S.				
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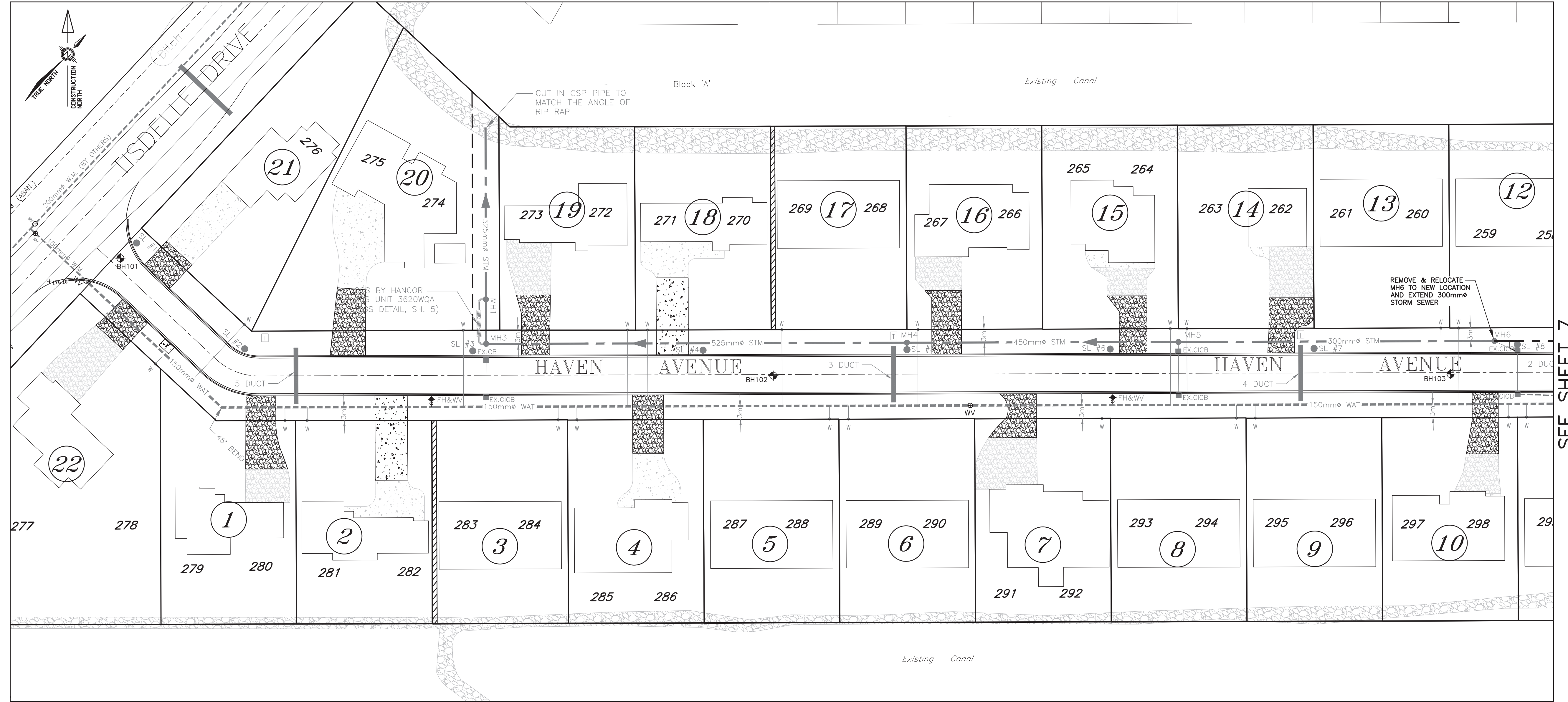
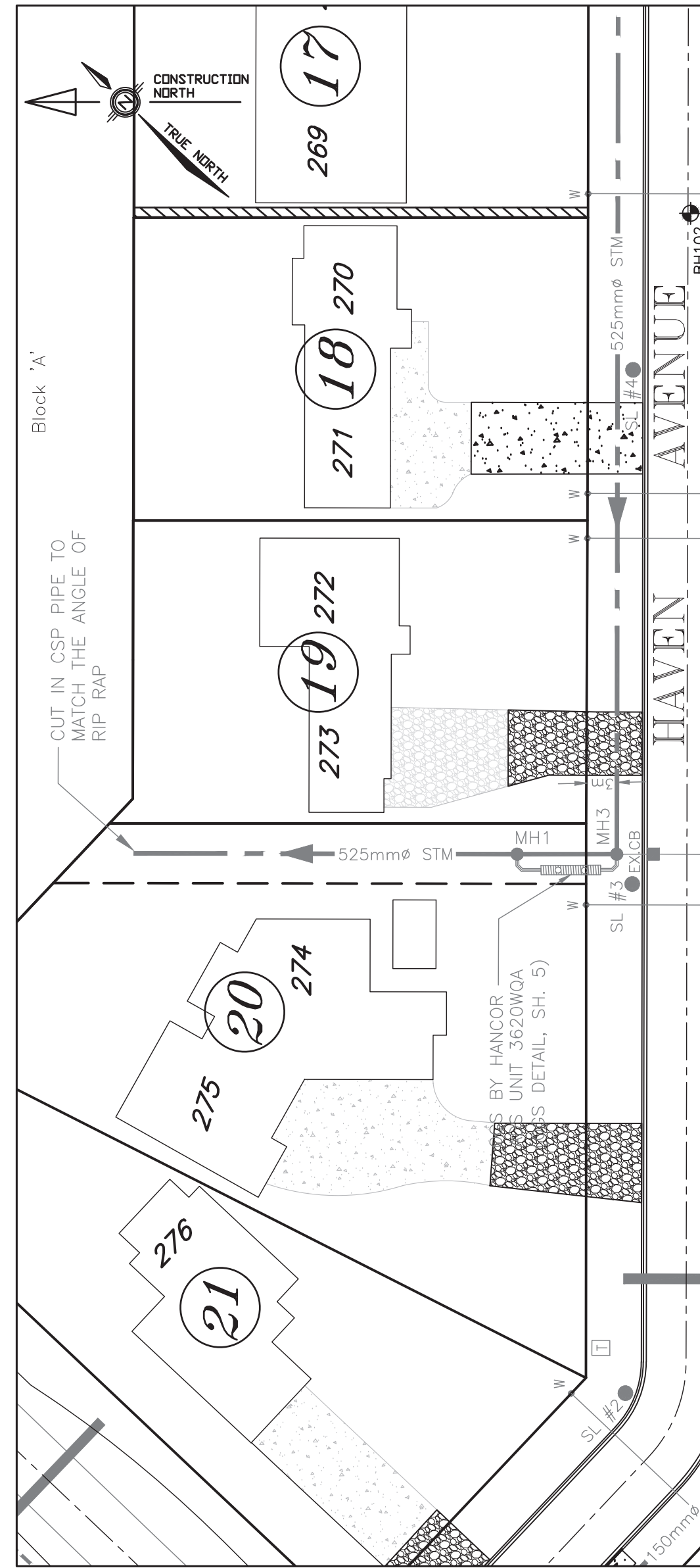
ADMIRAL'S COVE SUBDIVISION

PROJECT NO. 18-734

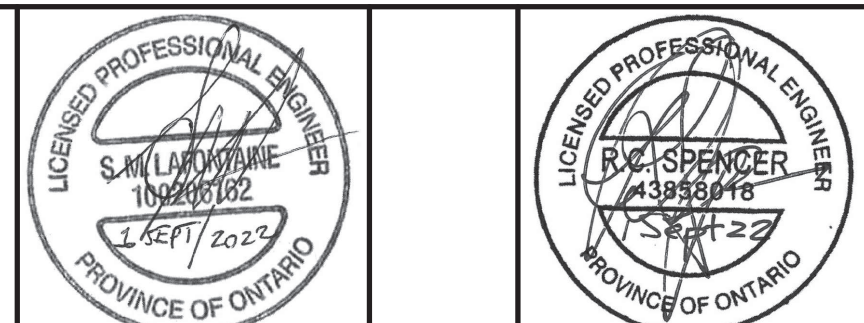
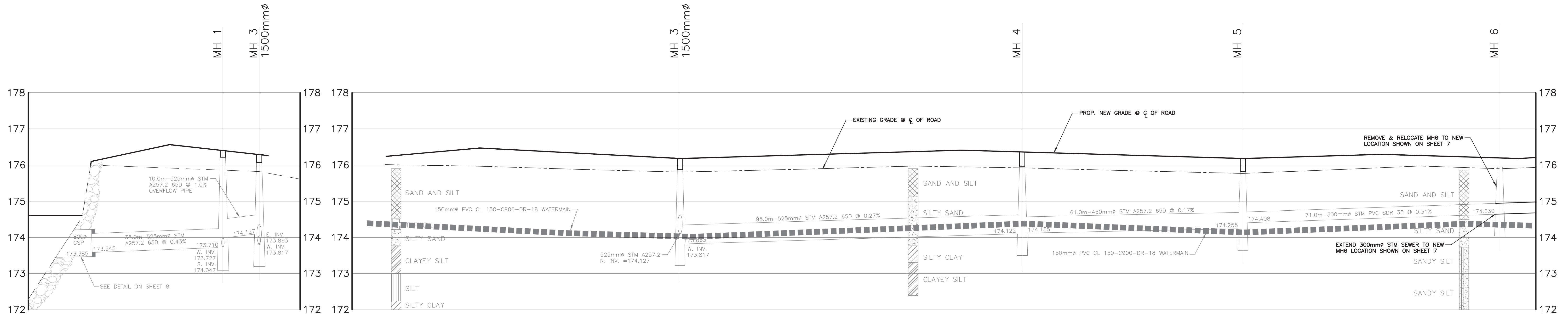
OVERALL SITE SERVICING PLAN

SHEET NO. 5 OF 10

SEE THIS SHEET

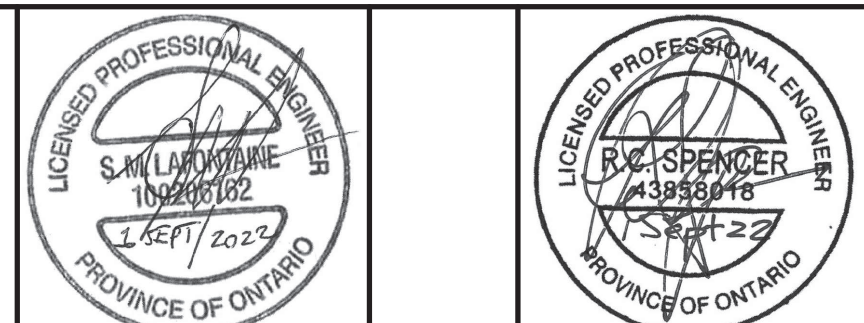
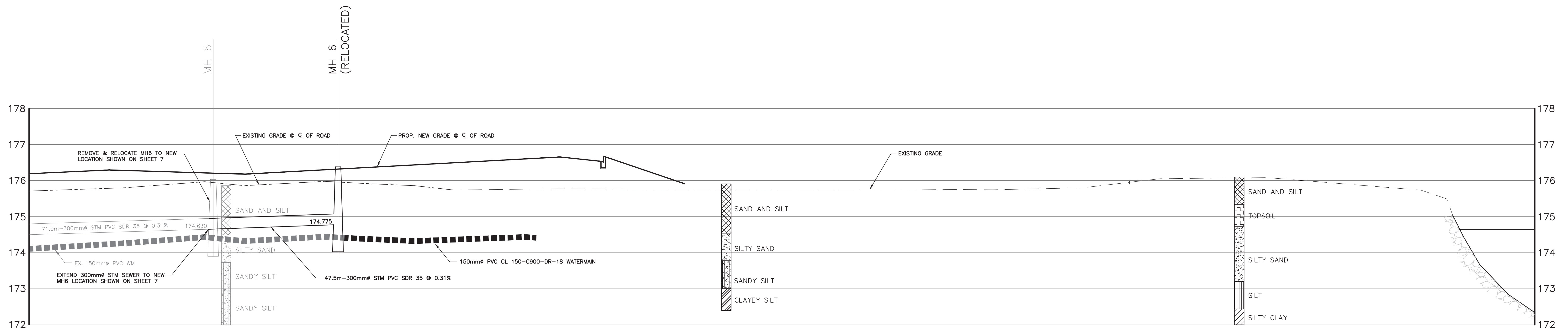
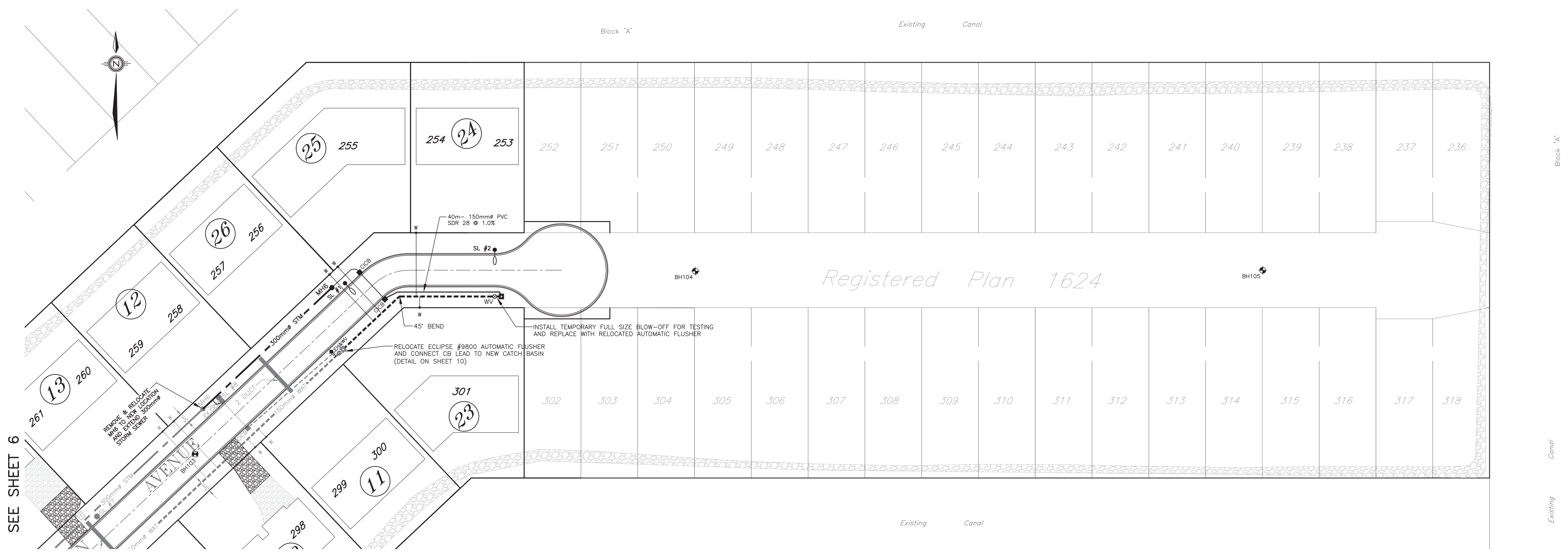


SEE SHEET 7



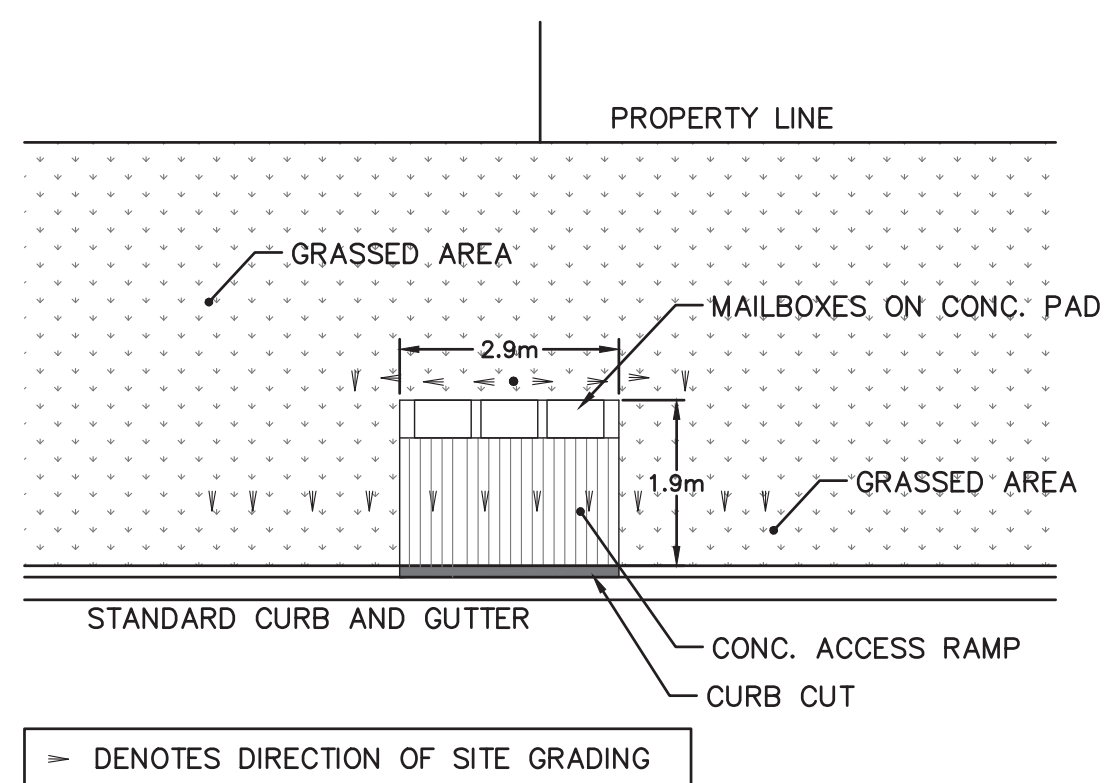
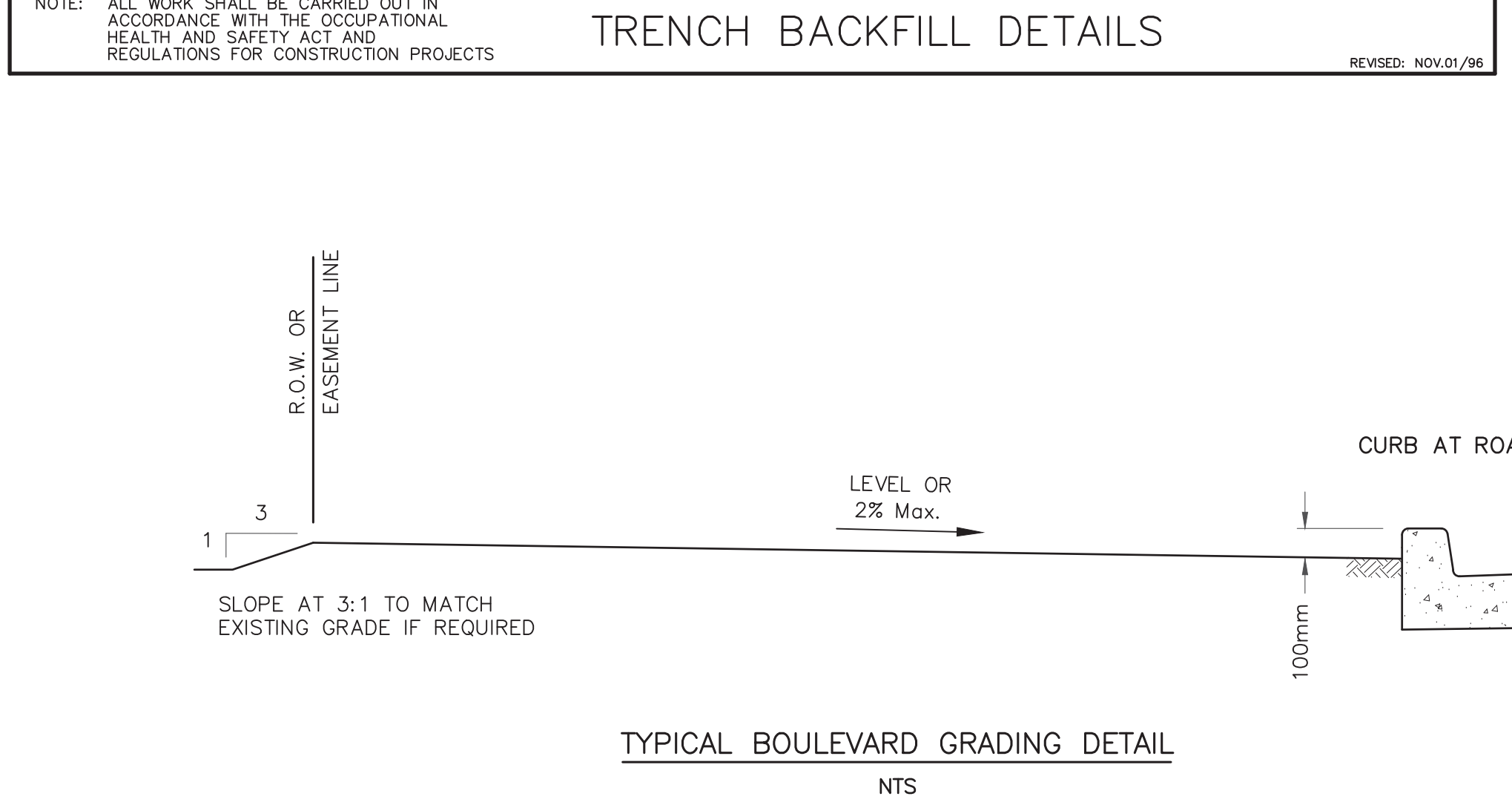
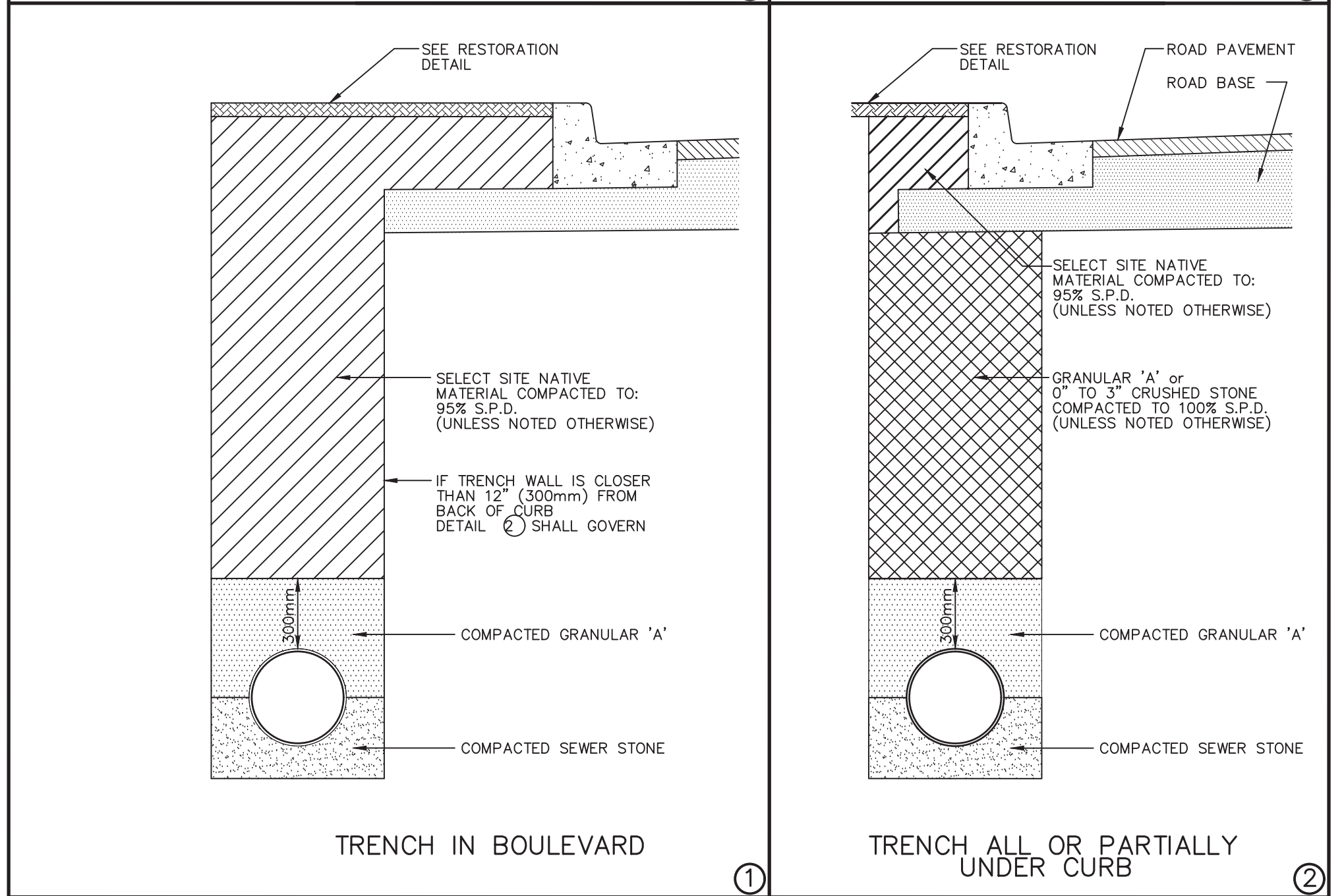
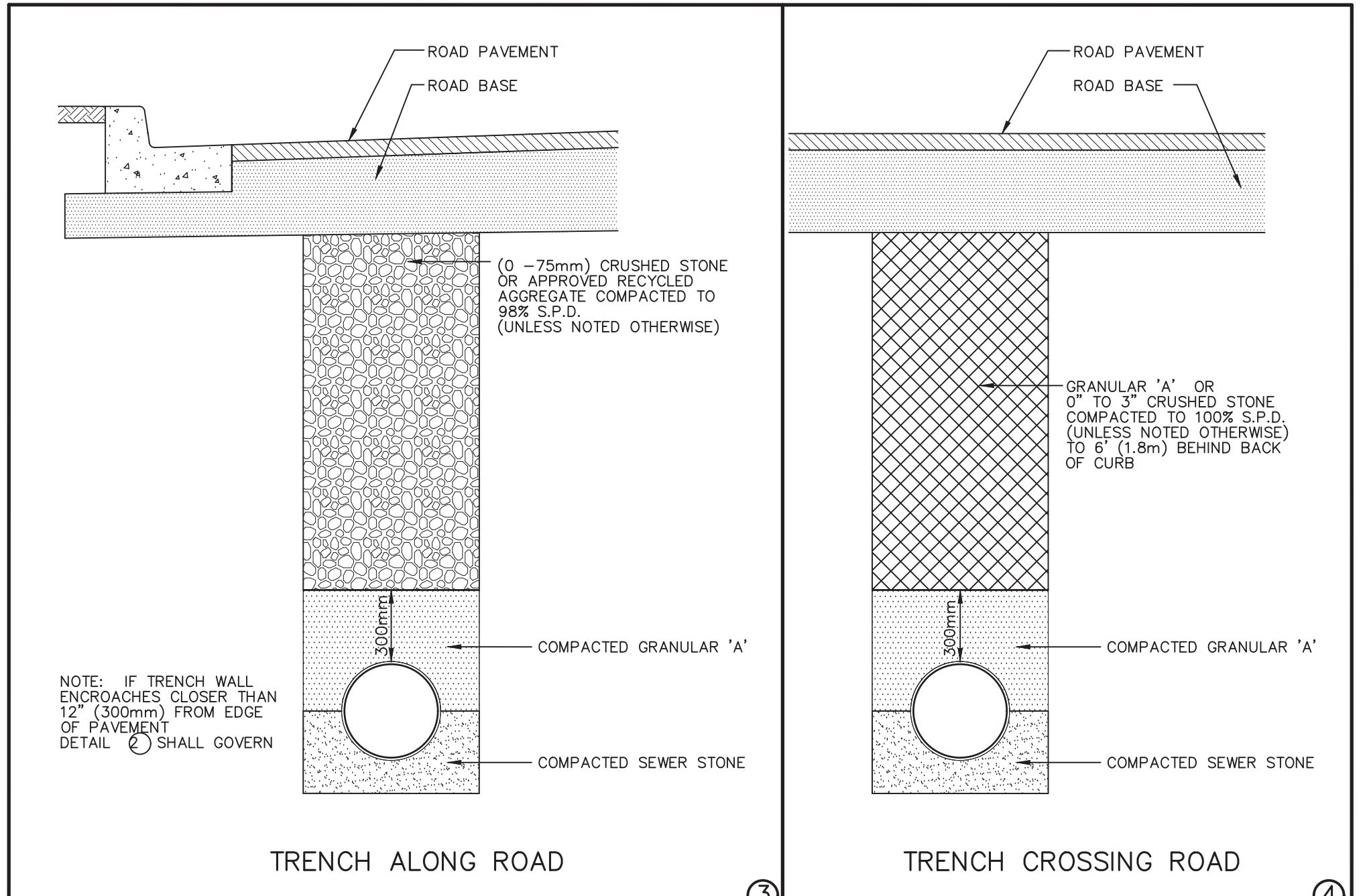
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5.	REVISED FOR LAKESHORE APPROVAL	11 AUG 2022	S.M.L.	R.C.S.	2.	REVISED PER TOWN COMMENTS	24 FEB 2022	S.M.L.	R.C.S.	
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3.	ISSUED FOR FINAL APPROVAL	27 MAY 2022	S.M.L.	R.C.S.	4.	SUBMIT FOR LAKESHORE APPROVAL	08 JUL 2022	S.M.L.	R.C.S.	
2.	REVISED PER TOWN COMMENTS	24 FEB 2022	S.M.L.	R.C.S.	5.	REVISED FOR LAKESHORE APPROVAL	11 AUG 2022	S.M.L.	R.C.S.	
1.	ISSUED FOR TOWN APPROVAL	26 APR 2021	S.M.L.	R.C.S.						

ADMIRAL'S COVE SUBDIVISION  
 PLAN AND PROFILE  
 HAVEN AVENUE  
 PROJECT NO. 18-734  
 SHEET NO. 6  
 OF 10

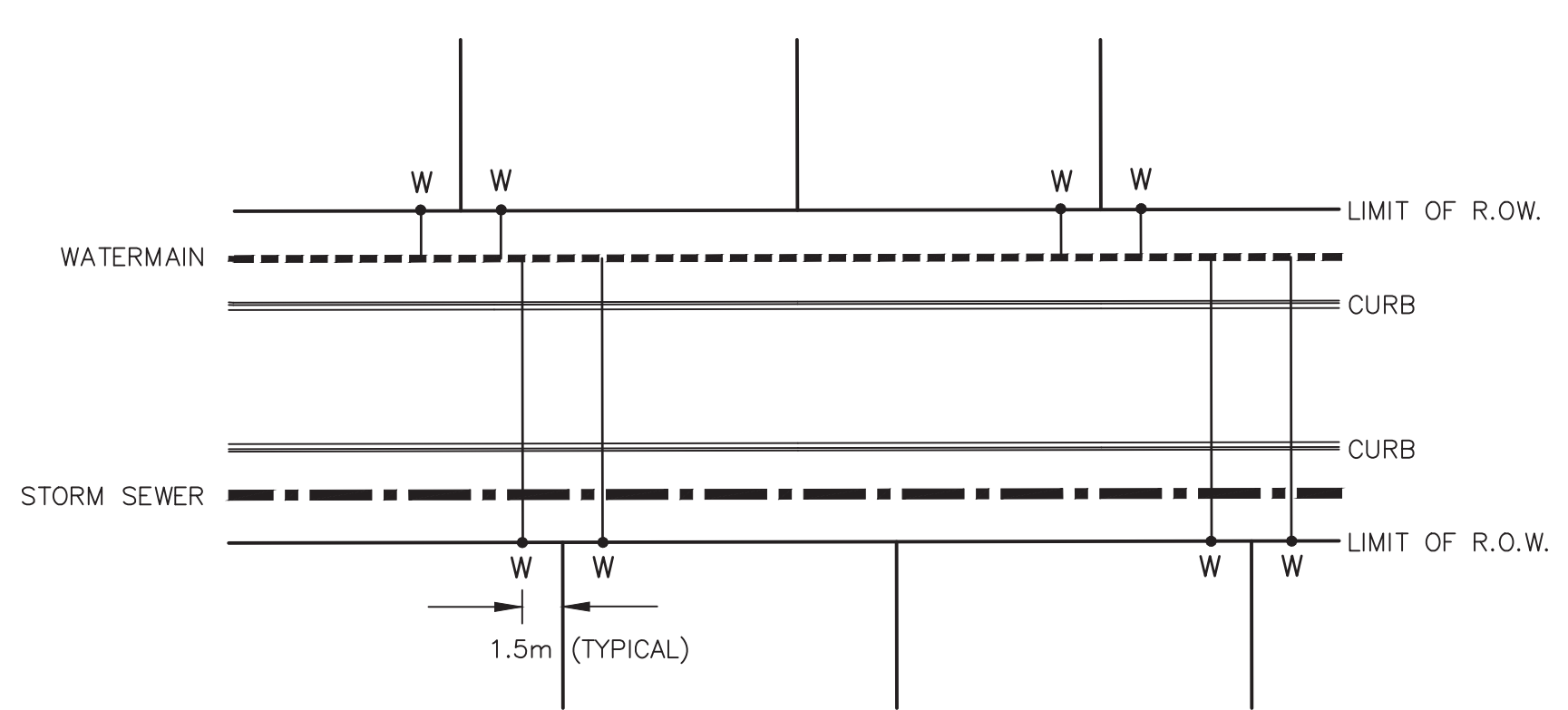


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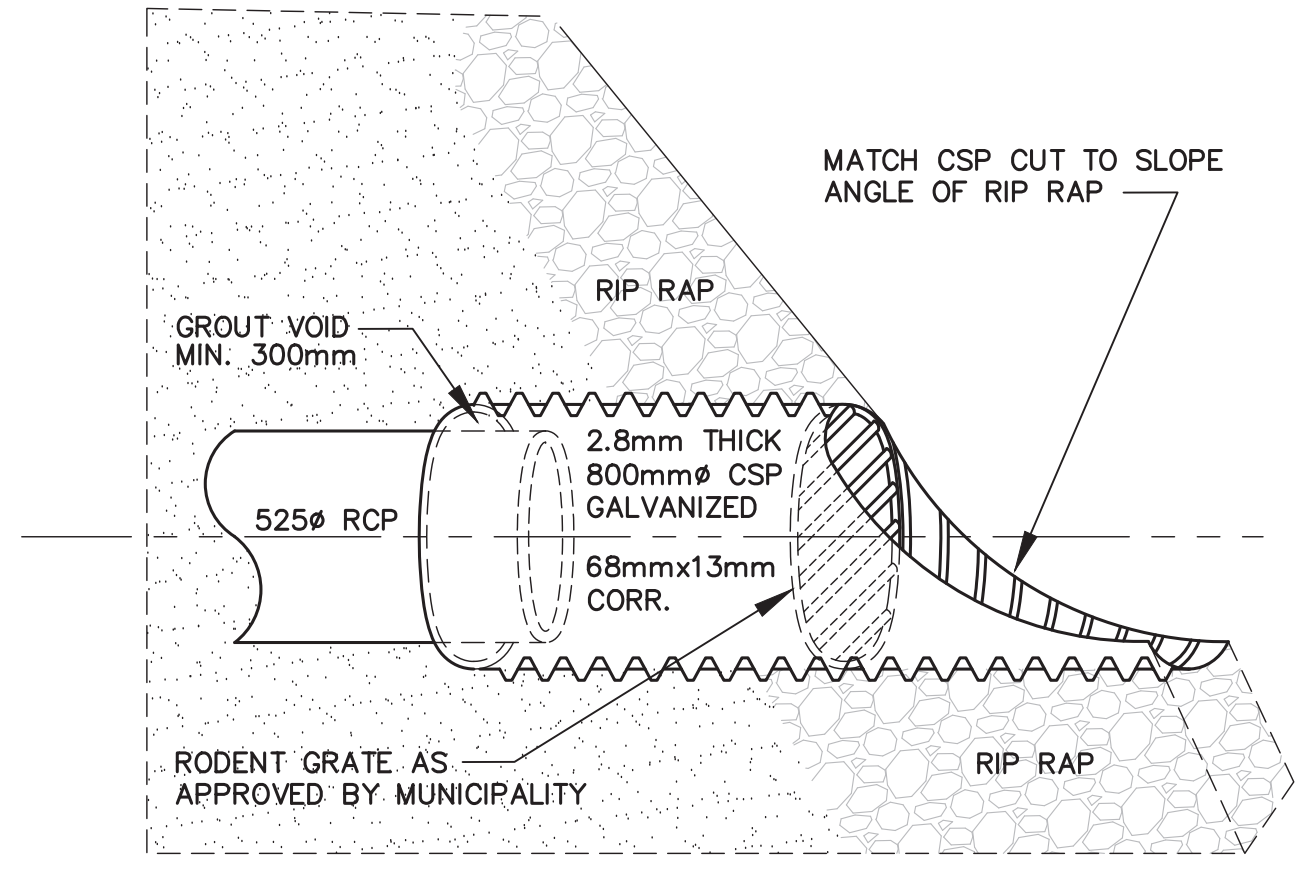
PROJECT NO. 18-734  
 SHEET NO. 7 OF 10  
 ADMIRAL'S COVE SUBDIVISION  
 HAVEN AVENUE (EXTENSION)  
 SCALE 1:500H  
 1:50V



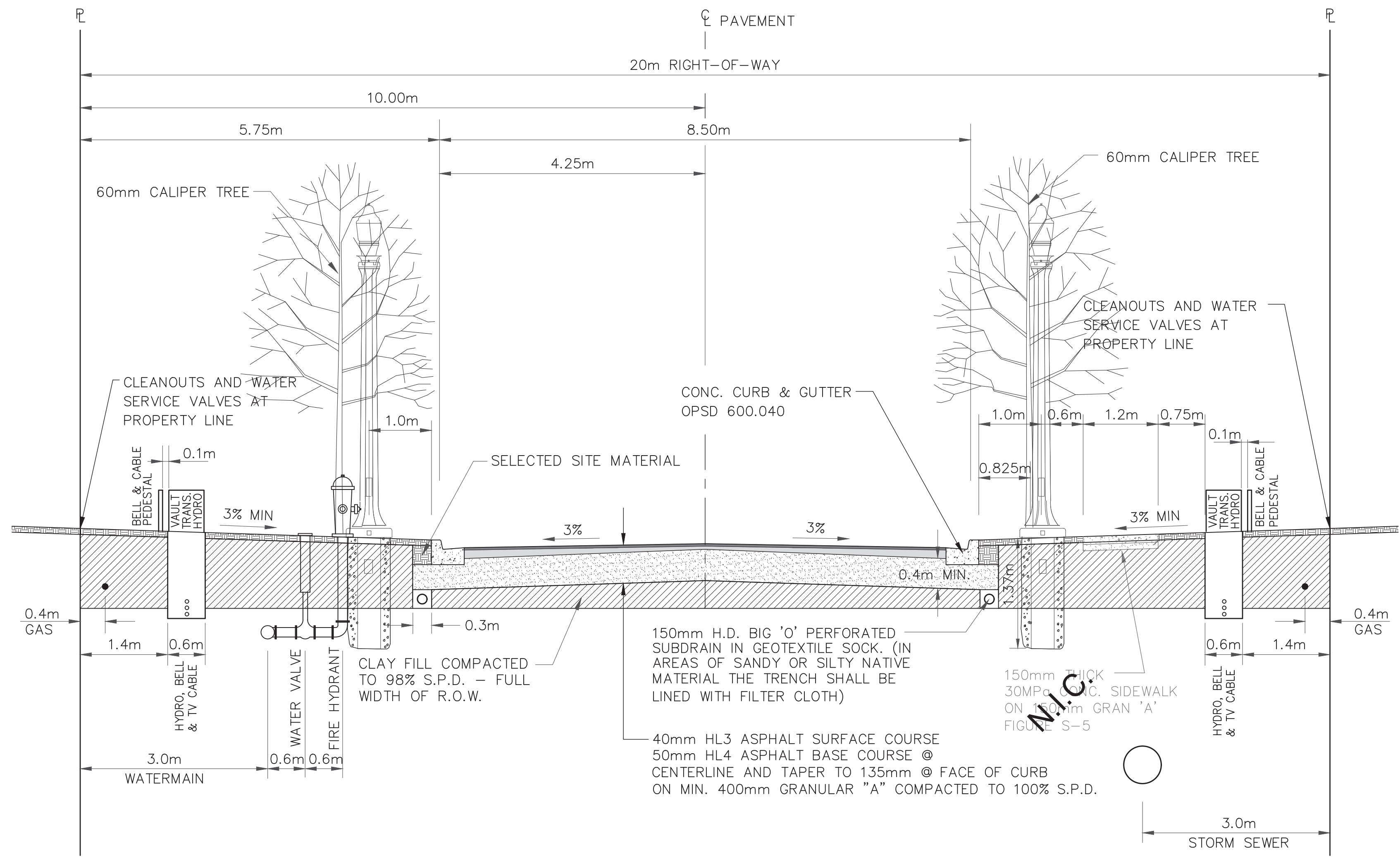
TYPICAL COMMUNITY MAILBOX/SIDEWALK LAYOUT  
NTS



NOTE: MINIMUM WATER SERVICE SIZE IS 25mmø  
TYPICAL SERVICE LAYOUT  
NTS



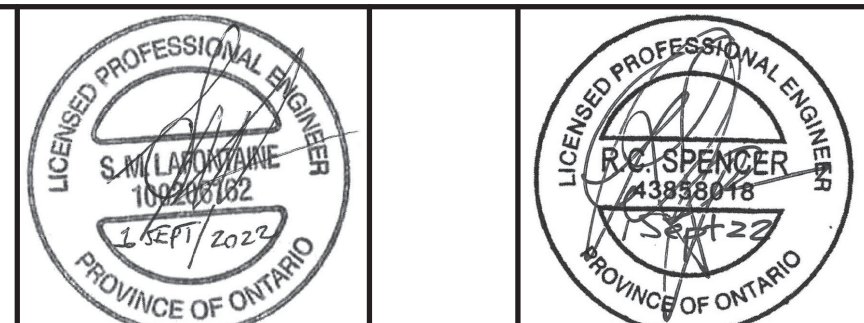
CSP OUTLET DETAIL  
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TOWN OF LAKESHORE  
TYPICAL CROSS-SECTION FOR 20m R.O.W.  
1:50

FOR NEW ROAD EXTENSION ONLY

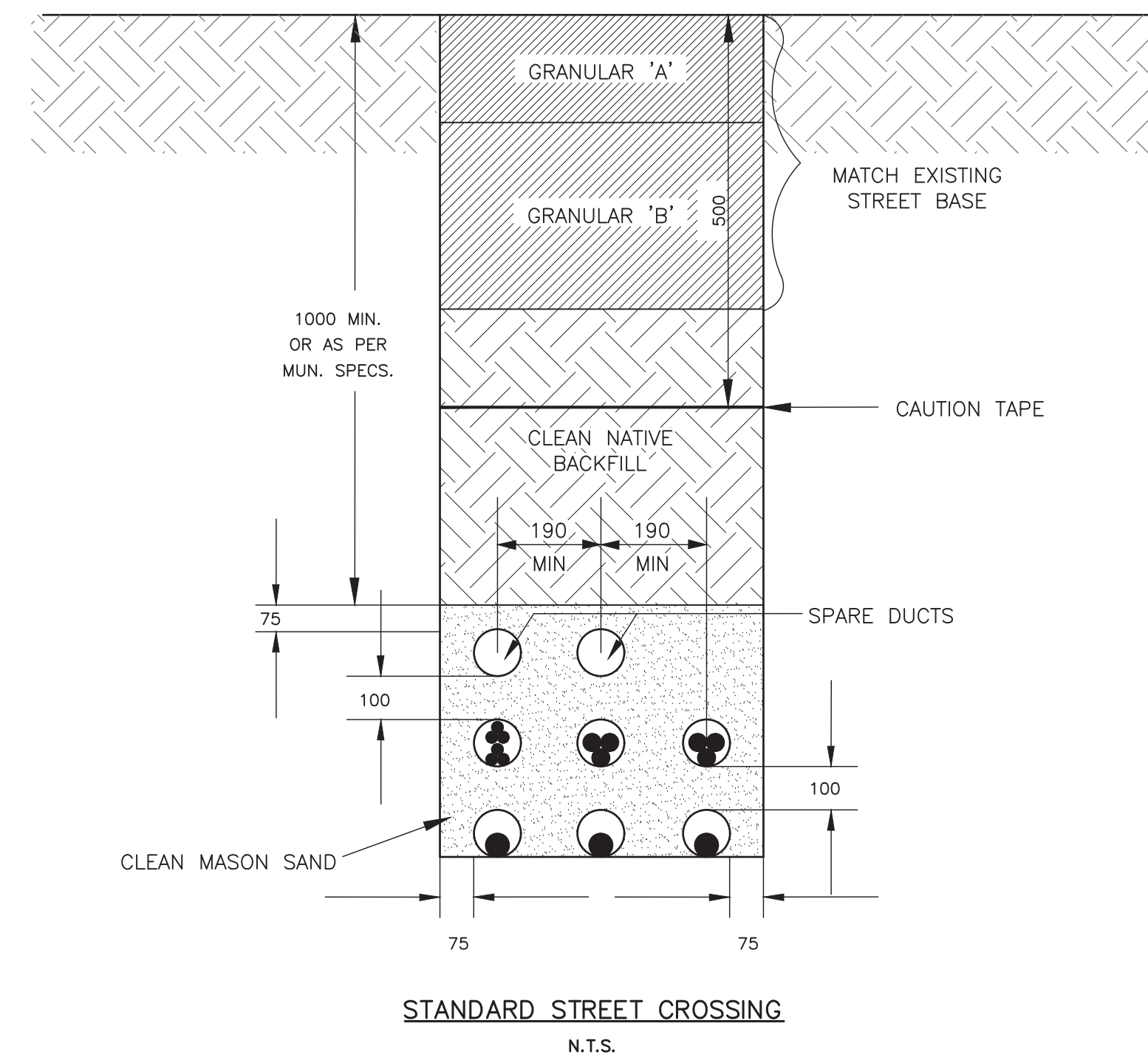
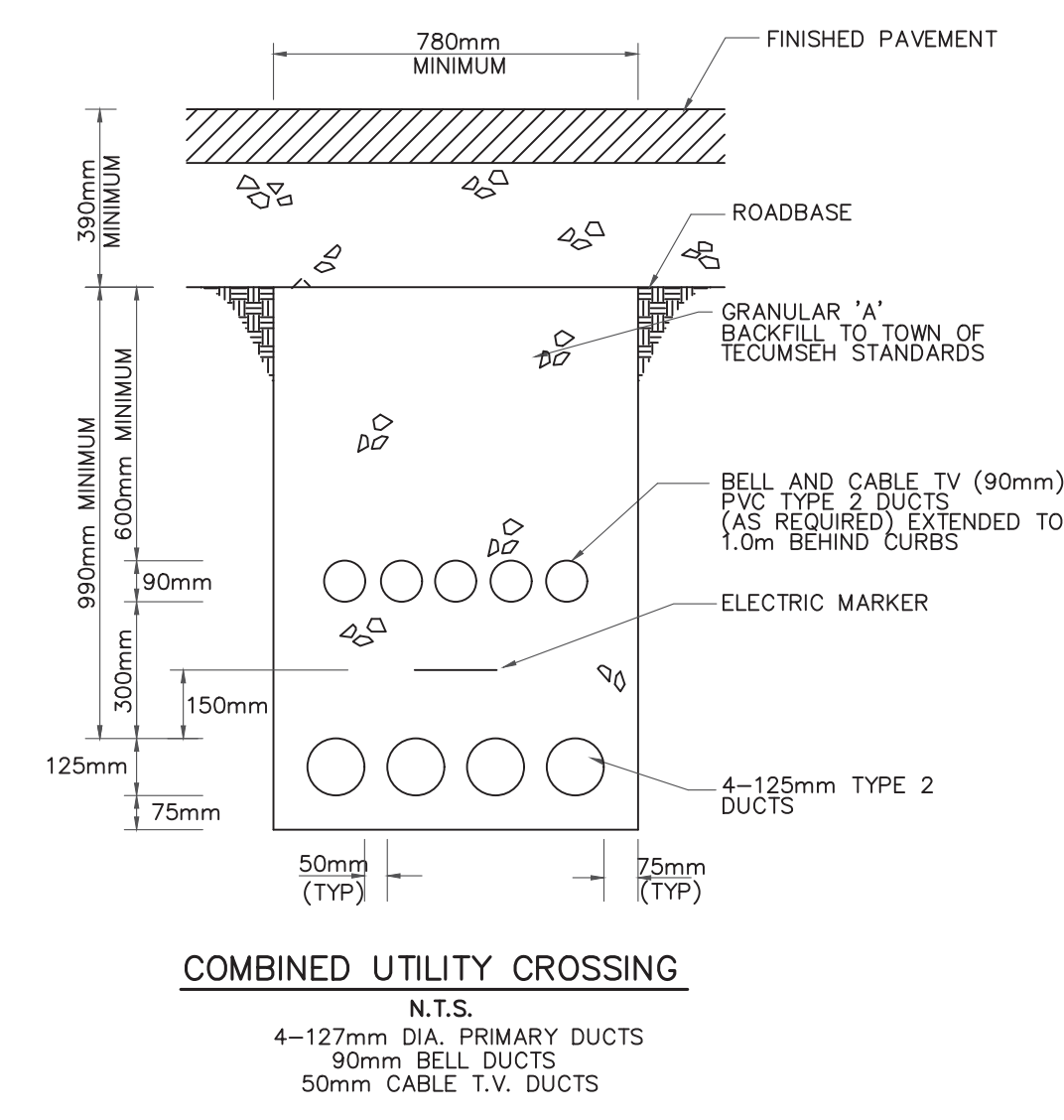
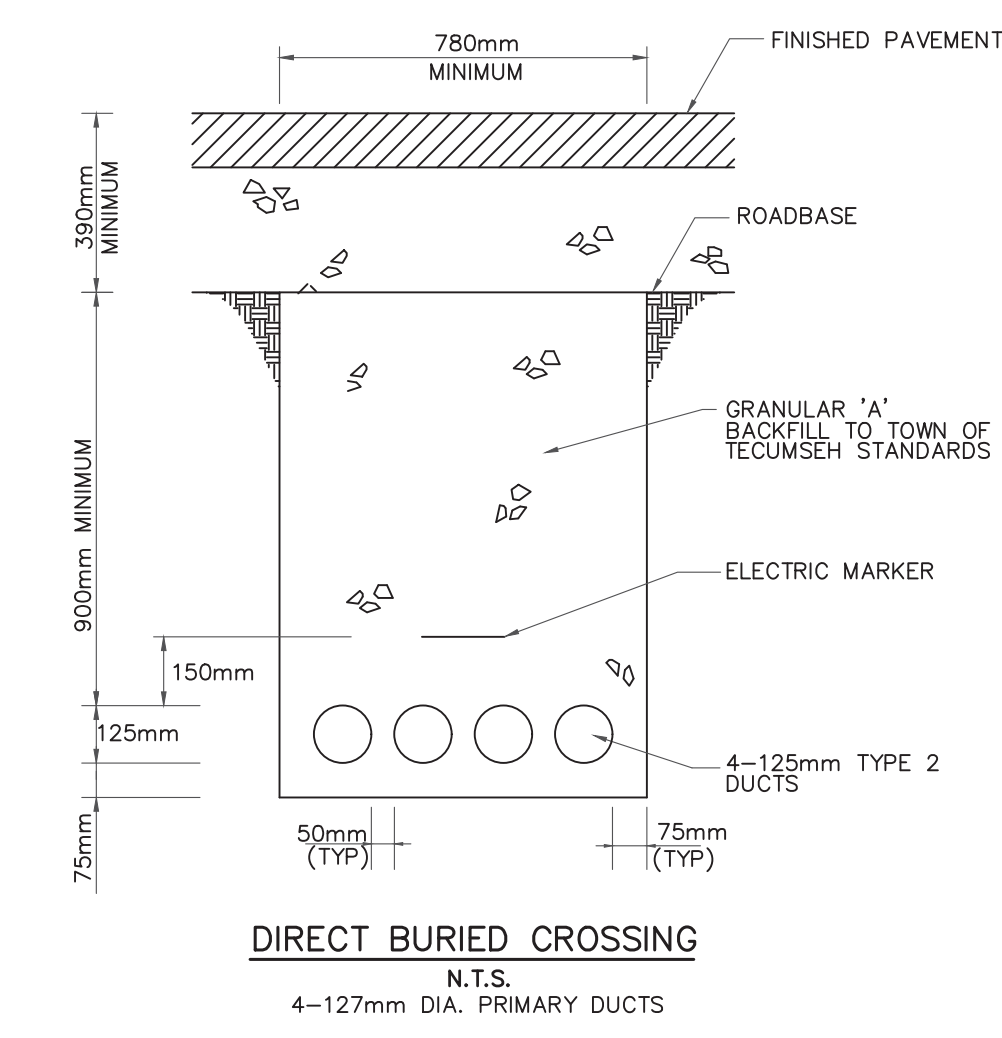
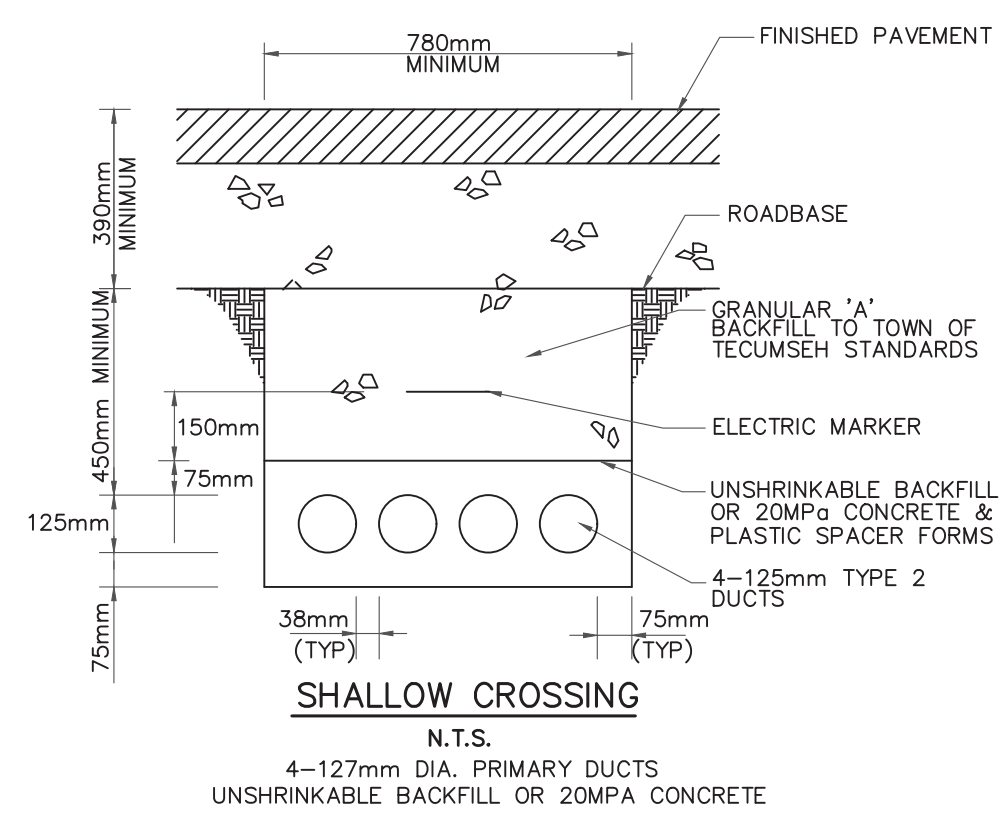
NOTE:  
APPROVED CLAY FILL TO BE USED WHERE REQUIRED. FILL TO BE PLACED FROM R.O.W. LIMIT TO R.O.W. LIMIT ON ALL CROSS SECTIONS. MINIMUM CLAY FILL THICKNESS 250mm FILL TO BE APPROVED BY A GEOTECHNICAL ENGINEER AND COMPACTED TO 98% S.P.D.



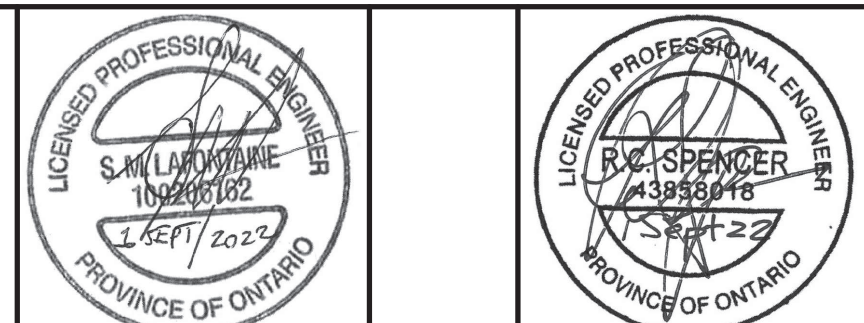
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PROJECT NO.	18-734
SHEET NO.	8
OF	10

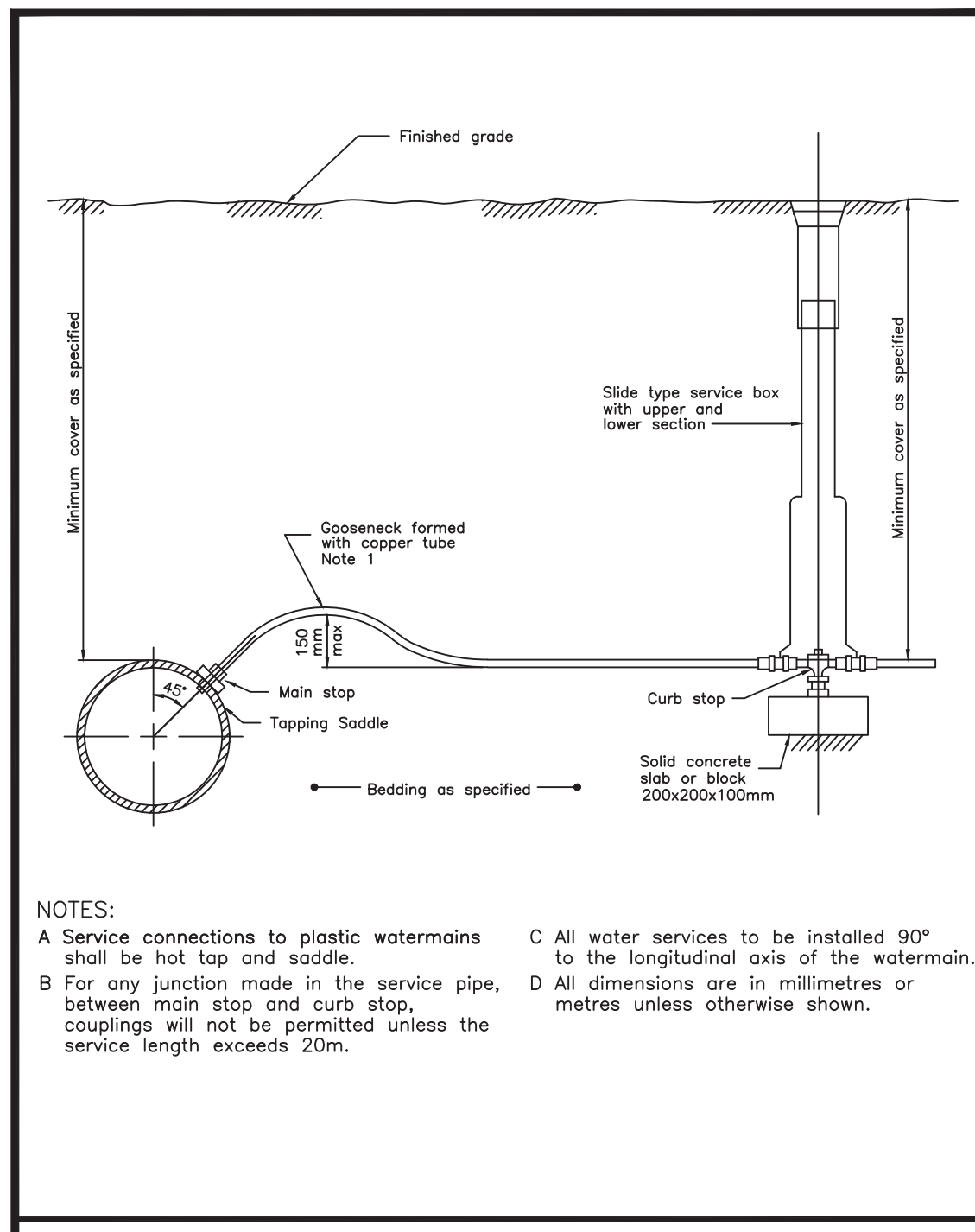
ADMIRAL'S COVE SUBDIVISION  
MISCELLANEOUS DETAILS 1



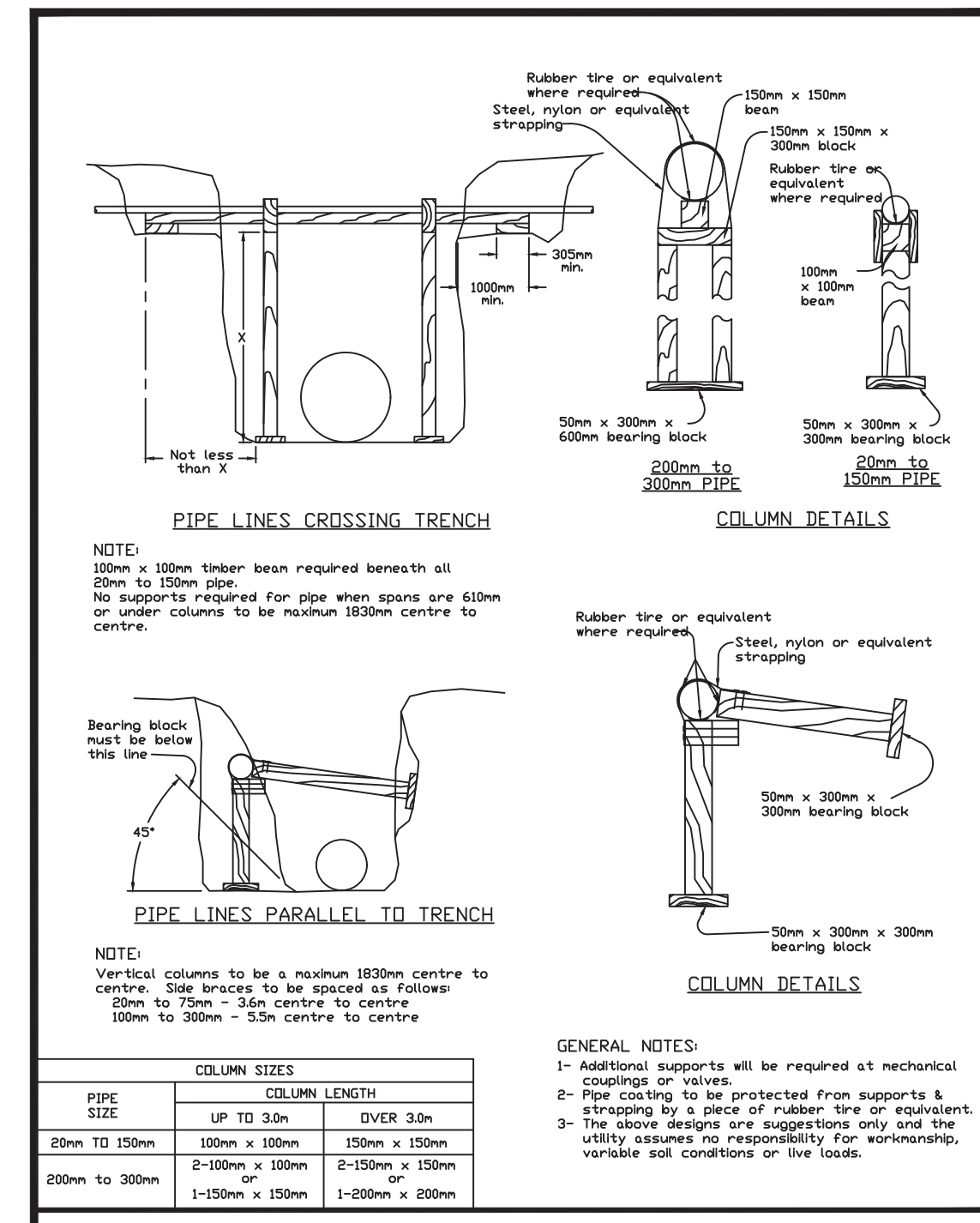
- STANDARD STREET CROSSING NOTES:**
1. ALL CONDUCTORS AT ROAD CROSSINGS TO BE INSTALLED IN DUCTS.
  2. ALL CROSSINGS TO OFFSET 3m FROM TRANSFORMERS IF POSSIBLE AND EXTEND 1.8m BEYOND THE CURB/TRAVELLED PORTION ON BOTH SIDES OF THE ROADWAY.
  3. ROAD CROSSING DUCTS TO BE INSTALLED AS PER MUNICIPAL SPECIFICATION TO A 1000mm MINIMUM DEPTH FROM FINAL GRADE.
  4. PRIMARY CABLES SHALL BE IN THE LOWER DUCTS AND SECONDARY CABLES IN THE UPPER DUCTS.
  5. BACKFILLING & COMPACTION SHALL BE AS PER MUNICIPAL SPECIFICATIONS, COMPACTION SHALL BE A MINIMUM OF 95% STANDARD PROCTOR DENSITY.
  6. HYDRO DUCTS TO BE 100mm TYPE II PVC UNLESS OTHERWISE NOTED.
  7. BELL ENDS TO BE PLACED ON ALL OPEN DUCT ENDS.
  8. UNUSED DUCTS TO BE CAPPED, COMPLETE WITH PULL ROPE.
  9. PRIMARY CONDUCTORS TO BE INDIVIDUALLY DUCTED.
  10. SECONDARY CONDUCTORS TO BE INSTALLED MAXIMUM 2 PER DUCT.
  11. DUCT QUANTITIES SHOWN ARE HYDRO REQUIREMENTS ONLY.



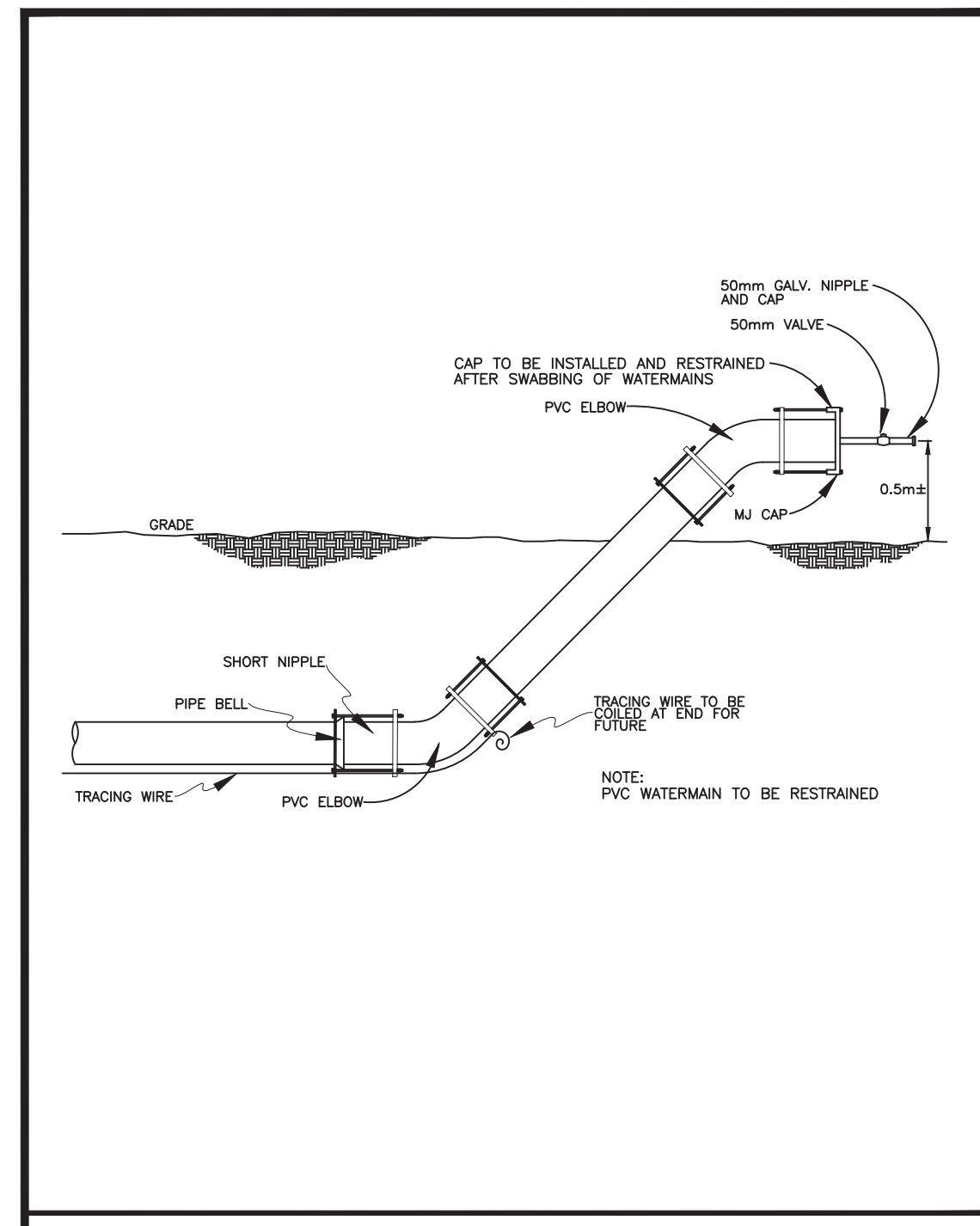
NO.	REVISION	DATE	BY	APP.	NO.	REVISION	DATE	BY	APP.	SCALE
					5.	REVISED FOR LAKESHORE APPROVAL	11 AUG 2022	S.M.L.	R.C.S.	DESIGN R.C.S.
					4.	SUBMIT FOR LAKESHORE APPROVAL	08 JUL 2022	S.M.L.	R.C.S.	CHECKED B.R.
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					2.	REVISED PER TOWN COMMENTS	24 FEB 2022	S.M.L.	R.C.S.	CHECKED R.C.S.
					1.	ISSUED FOR TOWN APPROVAL	26 APR 2021	S.M.L.	R.C.S.	
					6.	ISSUED FOR CONSTRUCTION	01 SEP 2022	S.M.L.	R.C.S.	
										SCALE AS SHOWN



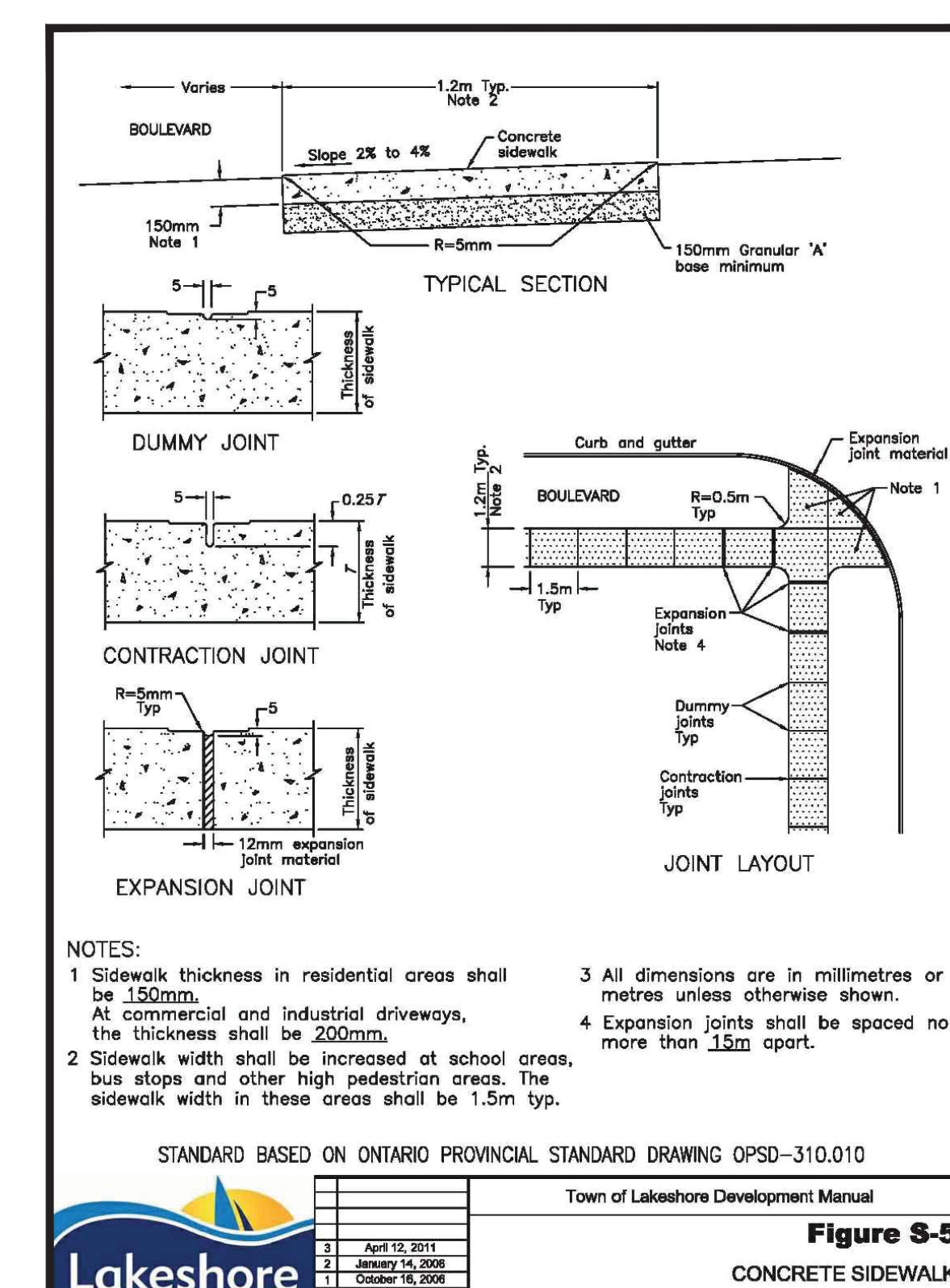
**TYPICAL WATER SERVICE INSTALLATION**



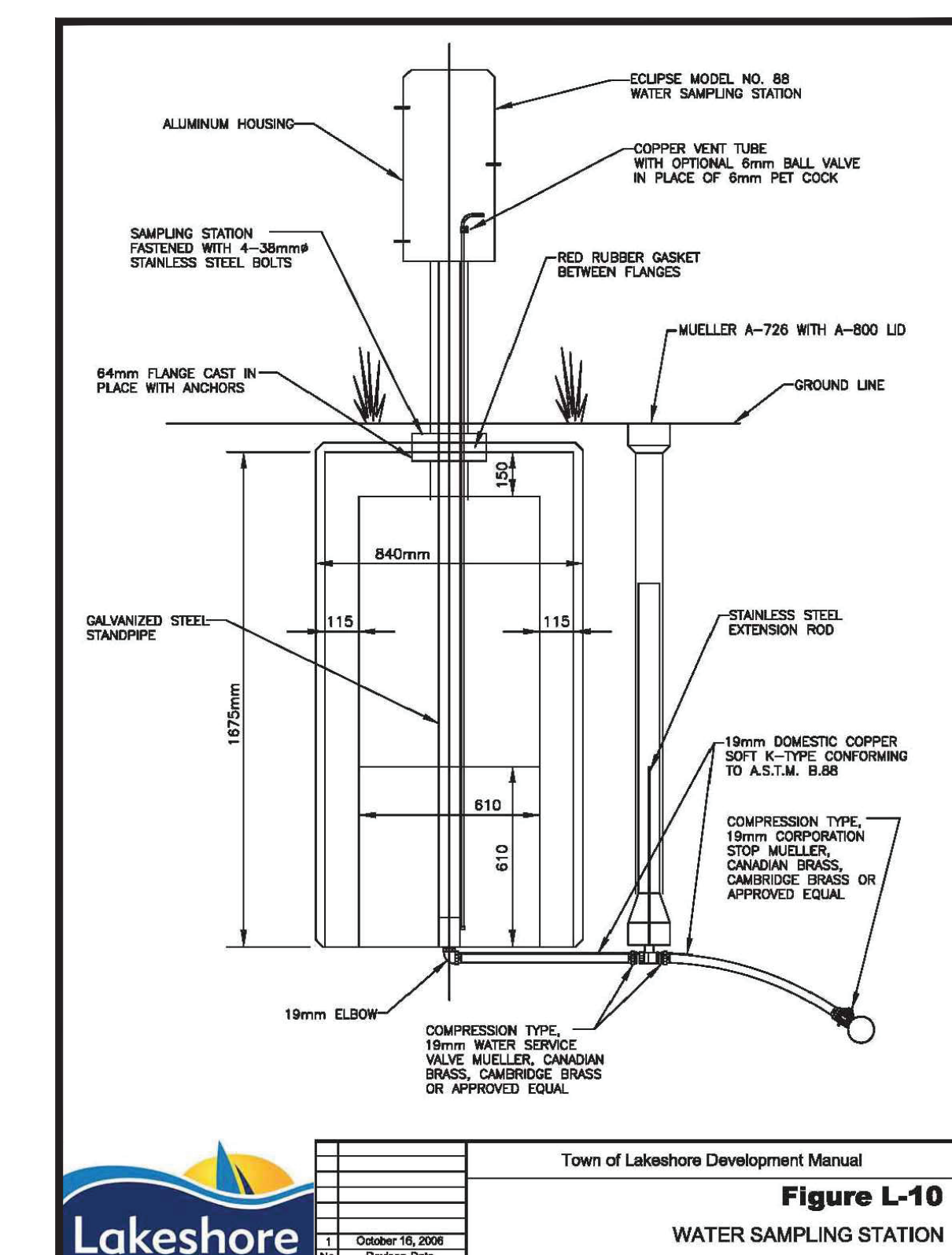
**SUPPORT OF UTILITIES OVER EXCAVATIONS**



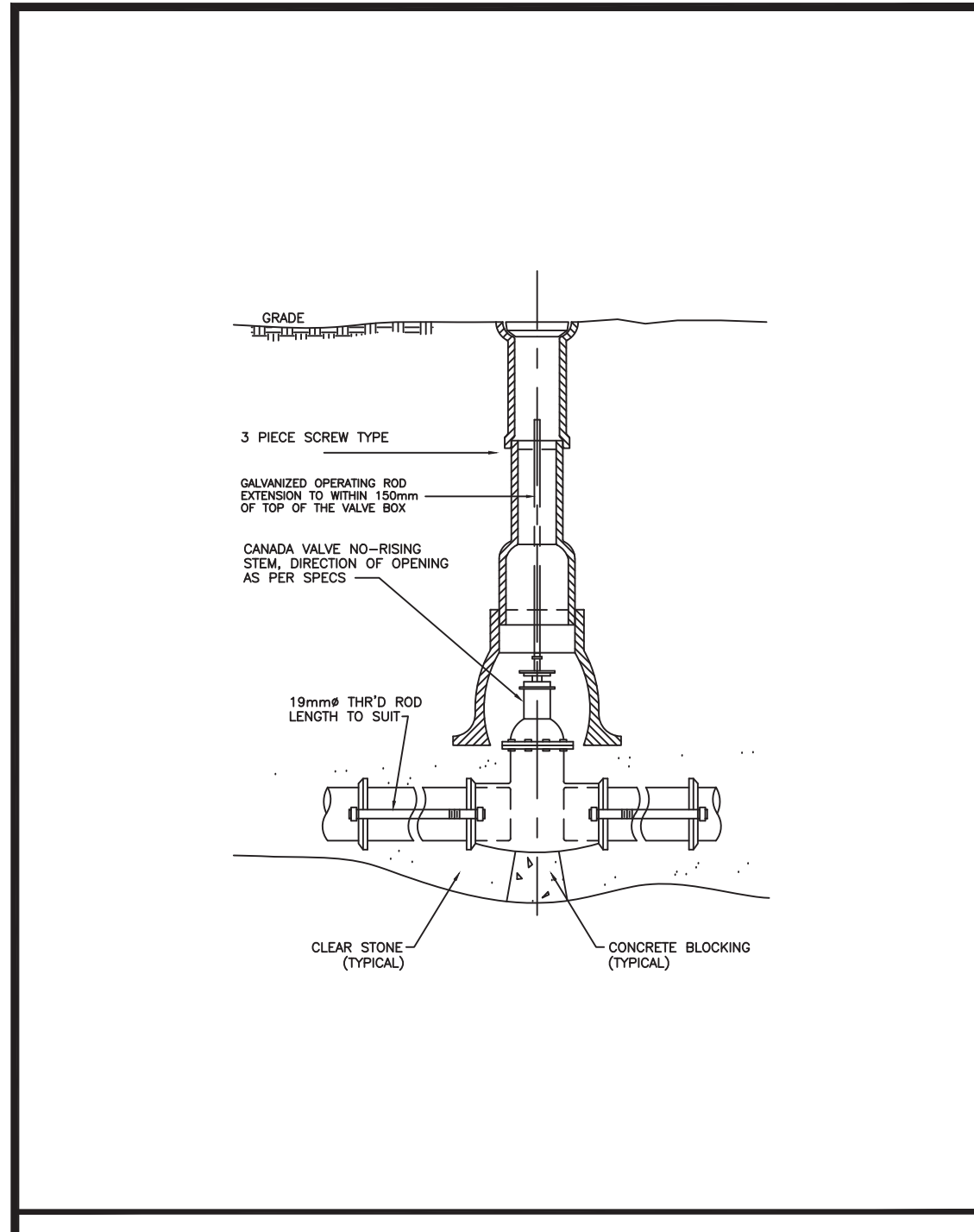
**TYPICAL TEMPORARY BLOW-OFF**



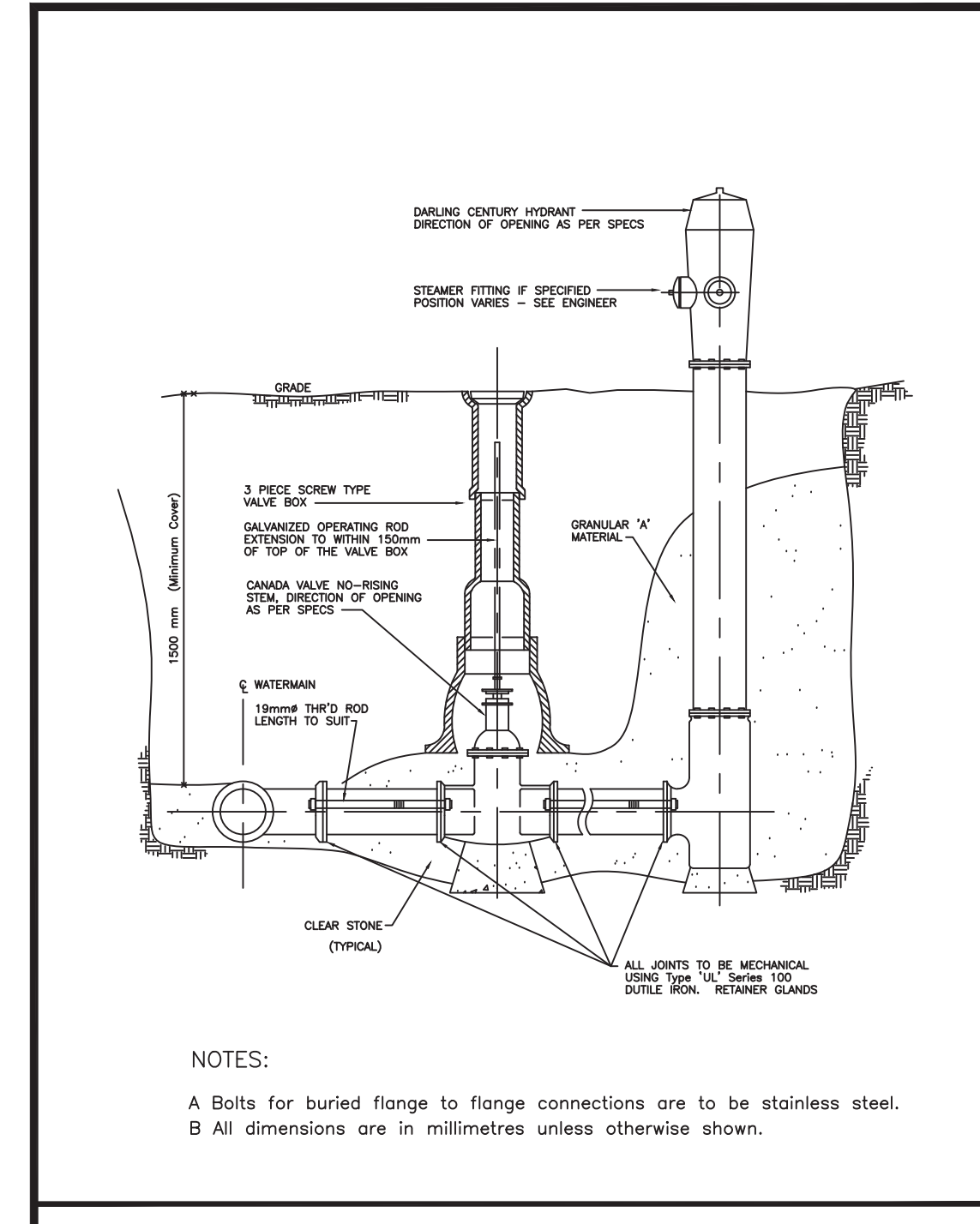
**Figure S-5 CONCRETE SIDEWALK**



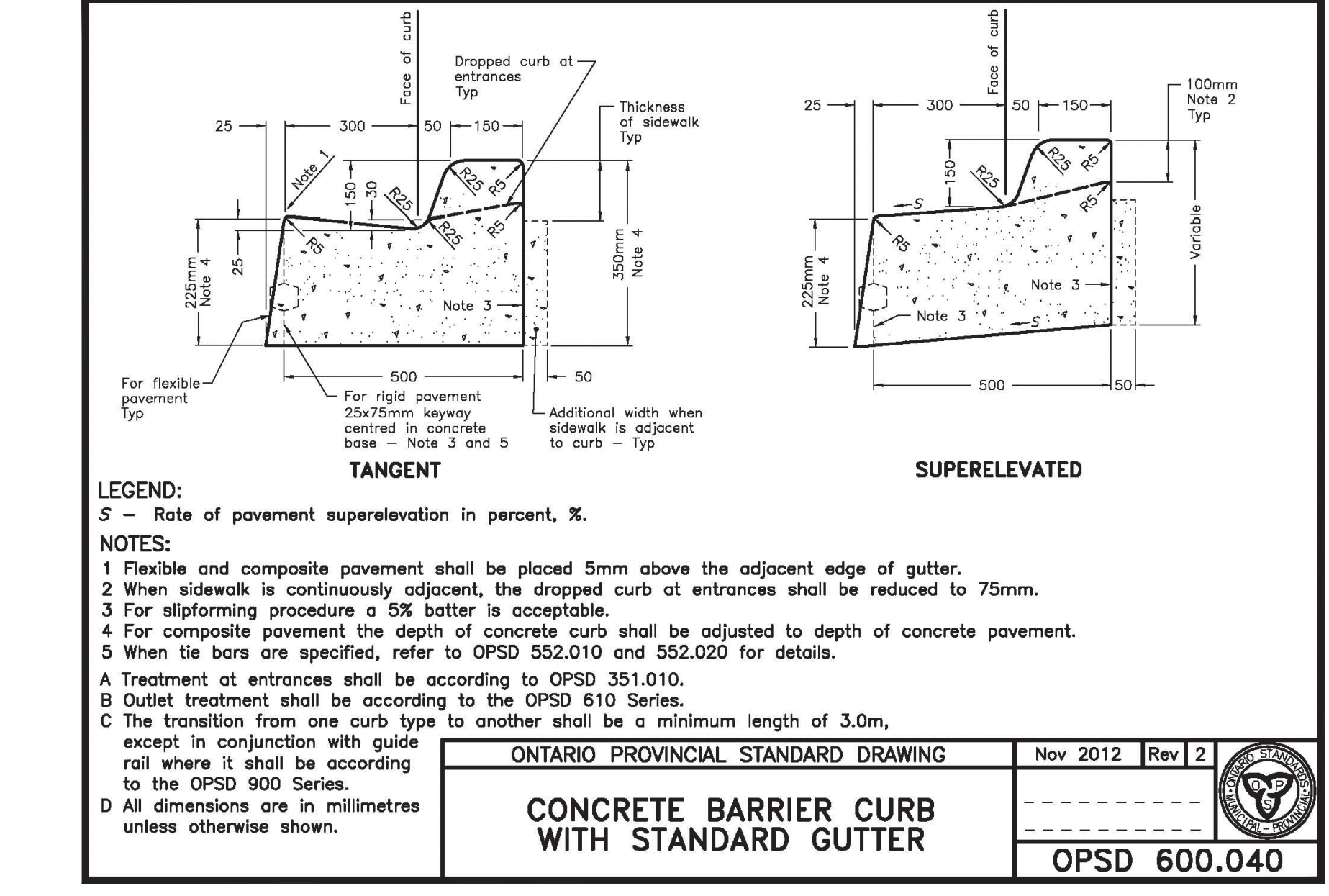
**Figure L-10 WATER SAMPLING STATION**



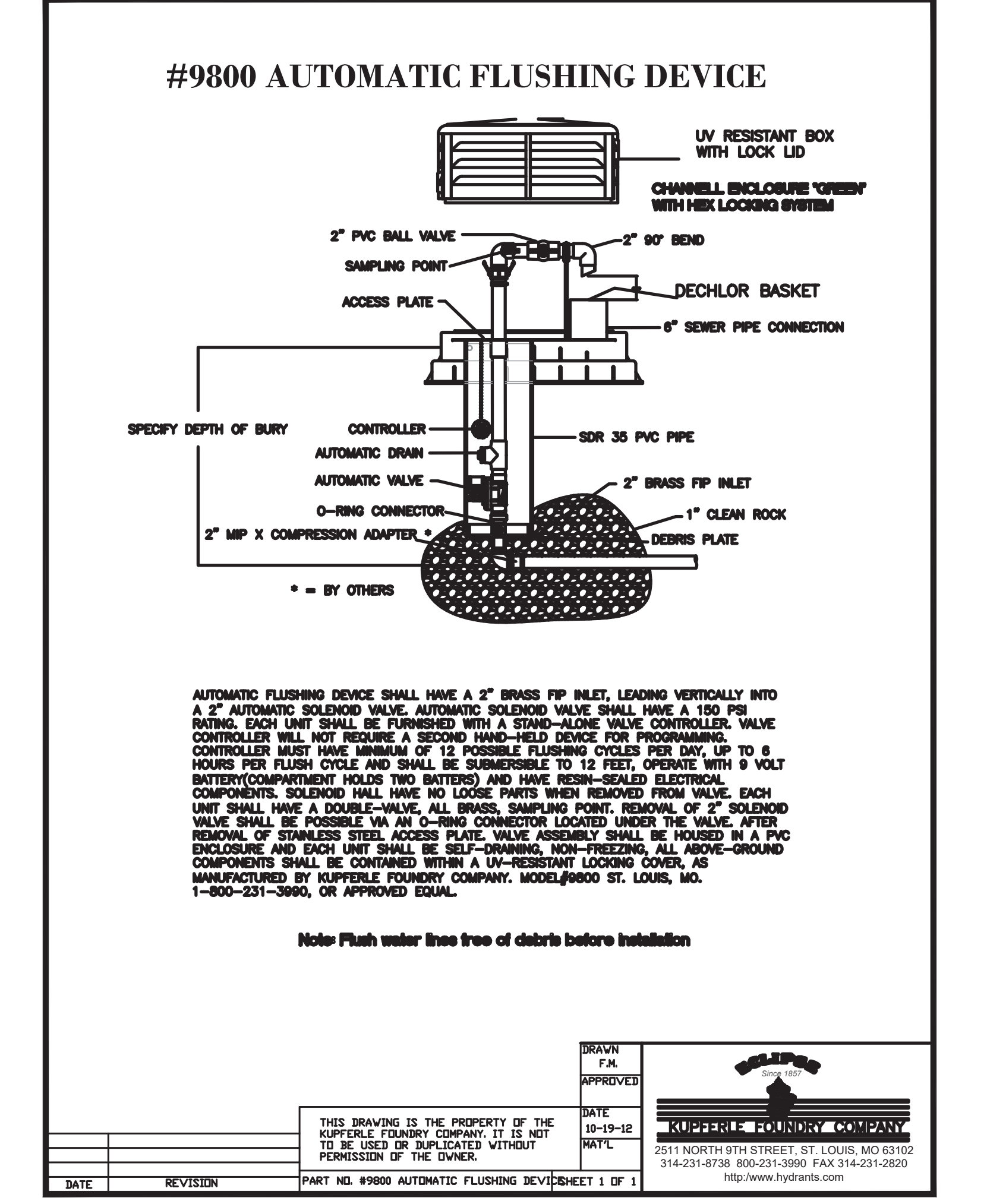
**TYPICAL VALVE SETTING**



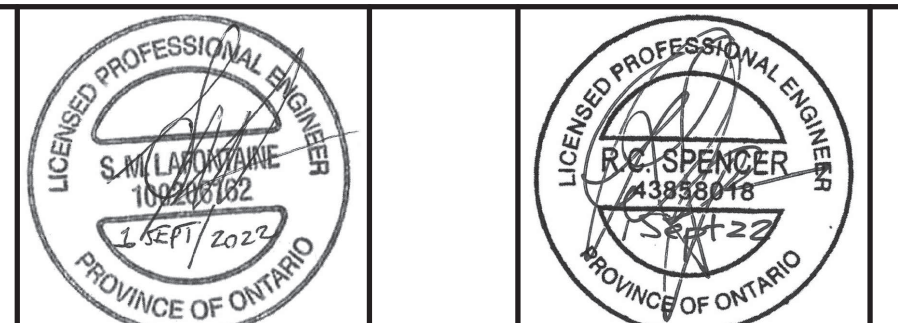
**HYDRANT INSTALLATION**



**CONCRETE BARRIER CURB WITH STANDARD GUTTER**



**#9800 AUTOMATIC FLUSHING DEVICE**



NO.	REVISION	DATE	BY	APP.	NO.	REVISION	DATE	BY	APP.	SCALE	N.T.S.
1.	ISSUED FOR TOWN APPROVAL	26 APR 2021	S.M.L.	R.C.S.	1.	ISSUED FOR TOWN APPROVAL	26 APR 2021	S.M.L.	R.C.S.		
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3.	ISSUED FOR FINAL APPROVAL	27 MAY 2022	S.M.L.	R.C.S.	3.	ISSUED FOR FINAL APPROVAL	27 MAY 2022	S.M.L.	R.C.S.		
4.	SUBMIT FOR LAKESHORE APPROVAL	08 JUL 2022	S.M.L.	R.C.S.	4.	SUBMIT FOR LAKESHORE APPROVAL	08 JUL 2022	S.M.L.	R.C.S.		
5.	REVISED FOR LAKESHORE APPROVAL	11 AUG 2022	S.M.L.	R.C.S.	5.	REVISED FOR LAKESHORE APPROVAL	11 AUG 2022	S.M.L.	R.C.S.		
6.	ISSUED FOR CONSTRUCTION	01 SEP 2022	S.M.L.	R.C.S.	6.	ISSUED FOR CONSTRUCTION	01 SEP 2022	S.M.L.	R.C.S.		

ADMIRAL'S COVE SUBDIVISION  
18-734

STANDARD DETAILS  
10

OF 10

**ADMIRAL'S COVE SUBDIVISION  
TOWN OF LAKESHORE**

**STORM WATER MANAGEMENT REPORT  
ADDENDUM**



**RC SPENCER ASSOCIATES INC.**  
Consulting Engineers

## EXECUTIVE SUMMARY

This report summarizes the storm water management plan for the proposed development, Admiral's Cove Subdivision, located on the east side of Tisdelle Drive just north of Mariners Drive in the Lighthouse Cove Area of the Town of Lakeshore.

The proposed subdivision plan includes the construction of roads and services on Haven Avenue from Tisdelle Drive easterly to a dead-end cul-de-sac. Phase 1 consists of 26 single family residences, with 16 lots remaining for future Phase 2.

The newly developed site will be serviced by connecting to the existing water main on Tisdelle Drive, with the storm water discharging into the Thames River canal system at two (2) locations.

The recommended storm water management (SWM) plan was selected to minimize the environmental impacts of the proposed site development on the existing canal system and to protect the quality of the receiving waters in the most effective way. Because the development is located at the mouth of the Thames River to Lake St. Clair, hydrologic (quantity) impacts are negligible; therefore, no flow restrictions are warranted.

Qualitative protection measures will include:

- On-site source controls
- End-of-pipe controls (ADS Hancor oil-grit separator or approved equal)
- Construction period best management practices

The storm sewers within the Admiral's Cove development are designed to convey the minor storm event from the development area for a 1:5 year event.

## DESIGN STORM

The design storm used in this analysis is the 1:5 year rainfall event (Atmospheric Environment Service) as per the request of the Town of Lakeshore. The 1:5 year rainfall event was used for the sizing of the storm sewers. The equation for the storm curves are as follows:

$$\text{Minor storm (5 Year):} \quad I \text{ (cm/hr)} \quad = \quad 3.10 \times (T/60)^{-0.709}$$

where

I is the rainfall intensity and

T is the time in minutes (measured relative to the start of the storm event)

The storm sewer design chart is included herein. The overland flow route is provided on the paving and grading plan included herein (Sheet 3).



## **POST DEVELOPMENT STORM WATER CONDITIONS**

A new storm drainage system servicing the development is designed to directly deliver storm water flow to the canal system of the Thames River. The storm sewer system for this development is designed to accommodate the drainage areas as shown in the storm sewer design chart.

The storm water quality is achieved by overland flow of all roof drainage via splash pads to grassed swales that will naturally treat transported pollutants washed from the impervious surface areas. Additionally, untreated transported pollutants washed from driveways and roadways that directly enter the storm system via catchbasins or manholes will be treated by an oil-grit separator located at the downstream end of the storm sewer system.

For Phase 1 of the development, the 3.23Ha drainage area will be treated using OGS unit ADS 3620WQA (or approved equal) with a net total suspended solids (TSS) removal efficiency of 88.41%.

**STORM WATER MANAGEMENT - METRIC UNITS**

PROJECT NAME: ADMIRAL'S COVE SUBDIVISION  
 PROJECT NO. 18-734  
 DATE: 11 JANUARY 2023

DESIGN CRITERIA

STORM CURVE: 5 YEAR                      C FACTORS: LAWNS - 0.20  
 ENTRY TIME: 20 MINUTES                      PAVED - 0.90  
 MIN. VELOCITY: 0.75 m/s                      ROOF - 0.95  
 MAX. VELOCITY: 3.0 m/s                      n FACTOR: 0.013

LOCATION			AREA		A X C				RAINFALL INTENSITY			Q	SEWER DESIGN									
STREET	FROM	TO	AREA ha	TOTAL AREA ha	RUNOFF COEFF. "C"	INCR. AXC	TOTAL LAT. AXC	TOTAL SEWER AXC	FLOW SECT.	TIME ACCUM.	INTEN- SITY cm/HR	REQ'D cms	PIPE DIA.	SLOPE %	CAP. cms	VEL. m/s	LENGTH m	FLOW TIME MINS.	STOR- -AGE CM	INV. U.S.	INV. D.S.	FALL IN SEWER
HAVEN AVE	MH 6	MH 5	0.78	0.78	0.40	0.312		0.312	2.58	20.00	6.76	0.059	0.300	0.31	0.054	0.76	118.0	2.58	8	174.775	174.410	0.365
HAVEN AVE	MH 5	MH 4	0.88	1.66	0.40	0.352	0.312	0.664	1.36	22.58	6.20	0.114	0.450	0.17	0.119	0.75	61.0	1.36	10	174.260	174.155	0.105
HAVEN AVE	MH 4	MH 3	1.57	3.23	0.40	0.628	0.664	1.292	1.53	23.94	5.95	0.213	0.525	0.27	0.225	1.04	95.0	1.53	21	174.120	173.860	0.260
HAVEN AVE	MH 3	MH 1	0.00	3.23	0.40	0.000	1.292	1.292	0.09	25.46	5.69	0.204	0.525	0.80	0.385	1.78	10.0	0.09	2	174.125	174.045	0.080
HAVEN AVE	MH 1	Outlet	0.00	3.23	0.40	0.000	1.292	1.292	0.49	25.56	5.68	0.204	0.525	0.43	0.282	1.30	38.0	0.49	8	173.710	173.545	0.165

\* Note: Sewer run from MH6 to MH5 requires H.G.L. slope of 0.37% for required capacity (i.e. H.G.L. jump equal to 70mm)

## ADVANCED DRAINAGE SYSTEMS NET ANNUAL TSS REMOVAL EFFICIENCY



<b>Units:</b>	<b>Metric</b>
<b>Project Location:</b>	<b>Windsor</b>
<b>Mean Annual Rainfall:</b>	<b>805.20</b> mm
<b>Site Drainage Area:</b>	<b>3.23</b> ha
<b>Runoff Coefficient, C:</b>	<b>0.4</b>
<b>Length, L:</b>	<b>0.32</b> km
<b>Slope, S:</b>	<b>0.1</b> %
<b>Assumed Sediment:</b>	<b>F-95</b>
<b>Proposed Unit:</b>	<b>3620WQA</b>
<b>Number of Units:</b>	<b>1</b>
<b>Time of Concentration:</b>	<b>0.43</b> hrs
<b>Intensity Scaling Factor:</b>	<b>17.01</b>

**Restricted Flow per Unit:** **N/A** m<sup>3</sup>/s

Rainfall Intensities for Standard Return Periods (mm/hr)						
Duration (h)	2 year	5 year	10 year	25 year	50 year	100 year
0.083	138.2	178.6	206.3	240.4	266.4	291.7
0.167	84.6	109.5	126.5	147.5	163.4	179.0
0.25	63.5	82.2	95.0	110.8	122.8	134.5
0.50	38.9	50.4	58.2	68.0	75.3	82.5
1	23.8	30.9	35.7	41.7	46.2	50.6
2	14.6	18.9	21.9	25.6	28.3	31.0
6	6.7	8.7	10.1	11.8	13.1	14.3
12	4.1	5.3	6.2	7.2	8.0	8.8
24	2.5	3.3	3.8	4.4	4.9	5.4

Runoff (Rational Method) for Standard Return Periods (m <sup>3</sup> /s)						
Duration (h)	2 year	5 year	10 year	25 year	50 year	100 year
0.083	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
0.167	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
0.25	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
0.5	0.140	0.181	0.209	0.244	0.270	0.296
1	0.085	0.111	0.128	0.150	0.166	0.182
2	0.052	0.068	0.079	0.092	0.102	0.111
6	0.024	0.031	0.036	0.042	0.047	0.051
12	0.015	0.019	0.022	0.026	0.029	0.031
24	0.009	0.012	0.014	0.016	0.018	0.019

**Removal Efficiency-Treated Flow:** **92.12%**

**Net Removal Efficiency:** **88.41%**

**Portion of Total Runoff Treated:** **94.74%**

**(Restricted) Removal Efficiency-Treated Flow:** **#VALUE!**

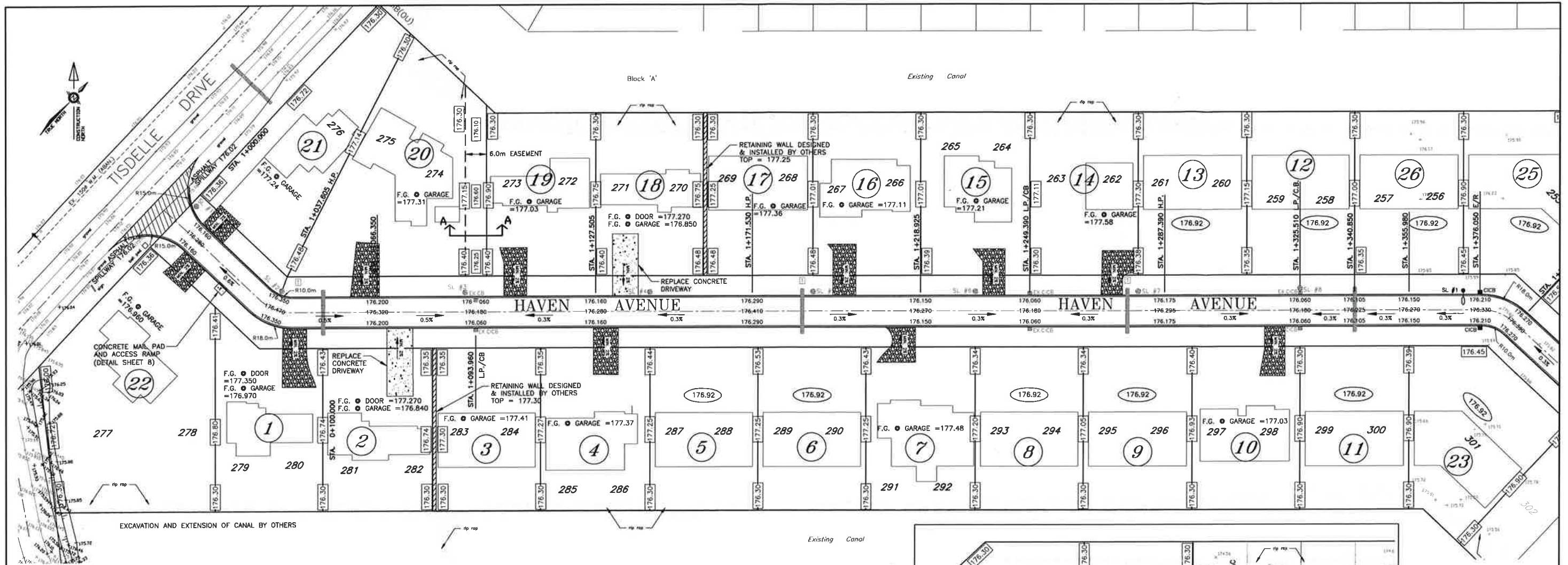
**(Restricted) Net Removal Efficiency:** **#VALUE!**

**(Restricted) Portion of Total Runoff Treated:** **#VALUE!**

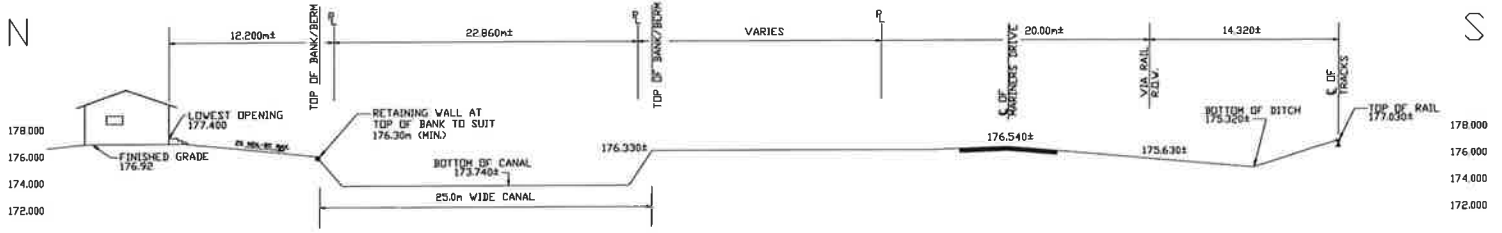
For more information about this Efficiency Calculation Spreadsheet please contact:

**Alex Navarro - Advanced Drainage Systems Inc.**  
alex.navarro@ads-pipe.com  
905.826.1835

**Hans Arisz - R.V. Anderson Associates Limited**  
harisz@rvanderson.com  
506.455.2888



EXCAVATION AND EXTENSION OF CANAL BY OTHERS

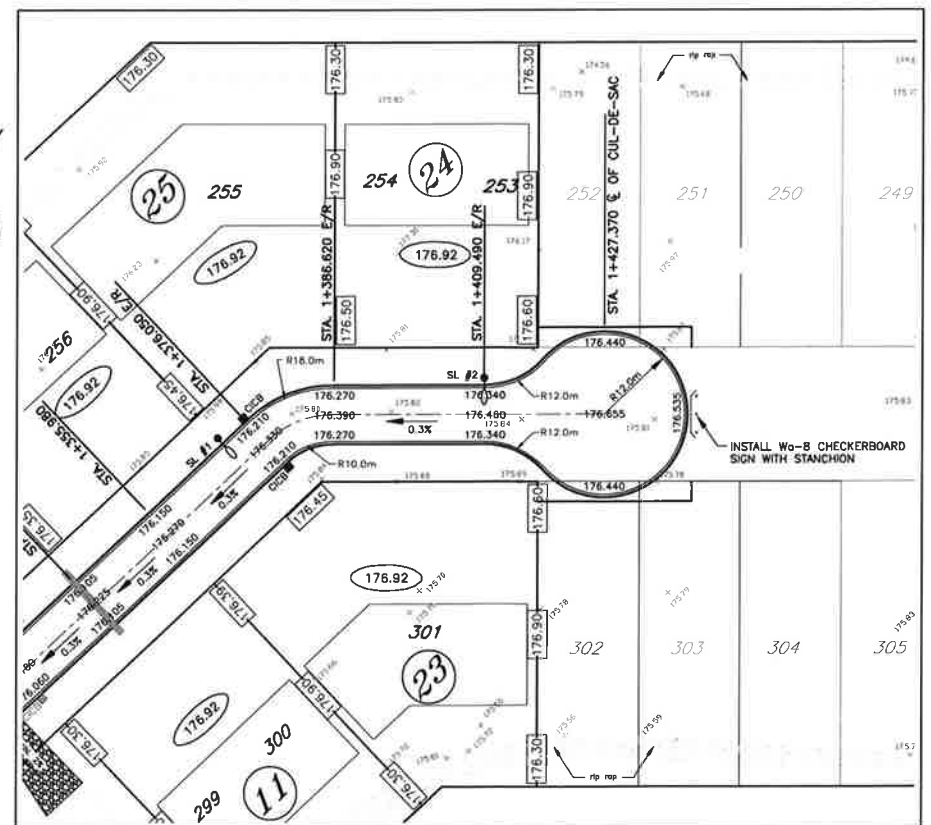


**PROPOSED CANAL/REAR LOT CROSS-SECTION**  
(APPLIES TO SHEETS 2 & 3)  
1:250

**PAVING AND GRADING GENERAL NOTES:**

1. PERFORM ALL WORK TO TOWN OF LAKESHORE AND ONTARIO PROVINCIAL STANDARDS.
2. FOR PAVEMENT STRUCTURE, SEE MISCELLANEOUS DETAILS SHEET.
3. ALL EXCESS EXCAVATED MATERIAL TO BE RE-USED ON-SITE IN BOULEVARD FILL AREAS TO BUILD UP TO PROPOSED ELEVATION, AS DIRECTED BY THE ENGINEER.
4. ALL RADII AND DIMENSIONS REFER TO EDGE OF PAVEMENT. (UNLESS OTHERWISE NOTED)
5. PAVEMENT GRADES SHOWN ARE AT EDGE OF PAVEMENT AND C/Road.
6. CHAINAGES SHOWN REFER TO ROAD C.
7. RESTORE ALL DISTURBED AREAS WITHIN EXISTING R.O.W. TO TOWN OF LAKESHORE STANDARDS
8. FINISHED GRADES AT HOUSE SHOWN THUS (176.920)
9. FINISHED GRADES AT REAR YARD SWALE SHOWN THUS (177.900)

10. - DENOTES SUMP PIT CATCH BASINS
11. ALL RADII REFERS TO EDGE OF PAVEMENT.
12. CONTRACTOR TO PLACE FILTER CLOTH IN ALL CATCHBASINS
13. CONTRACTOR TO GRADE BOULEVARDS AS PER DETAIL SHEET NO. 8.

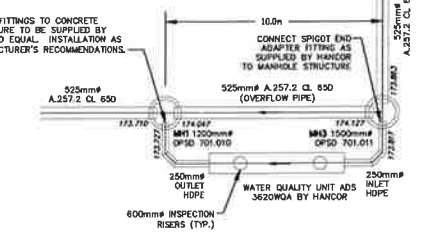
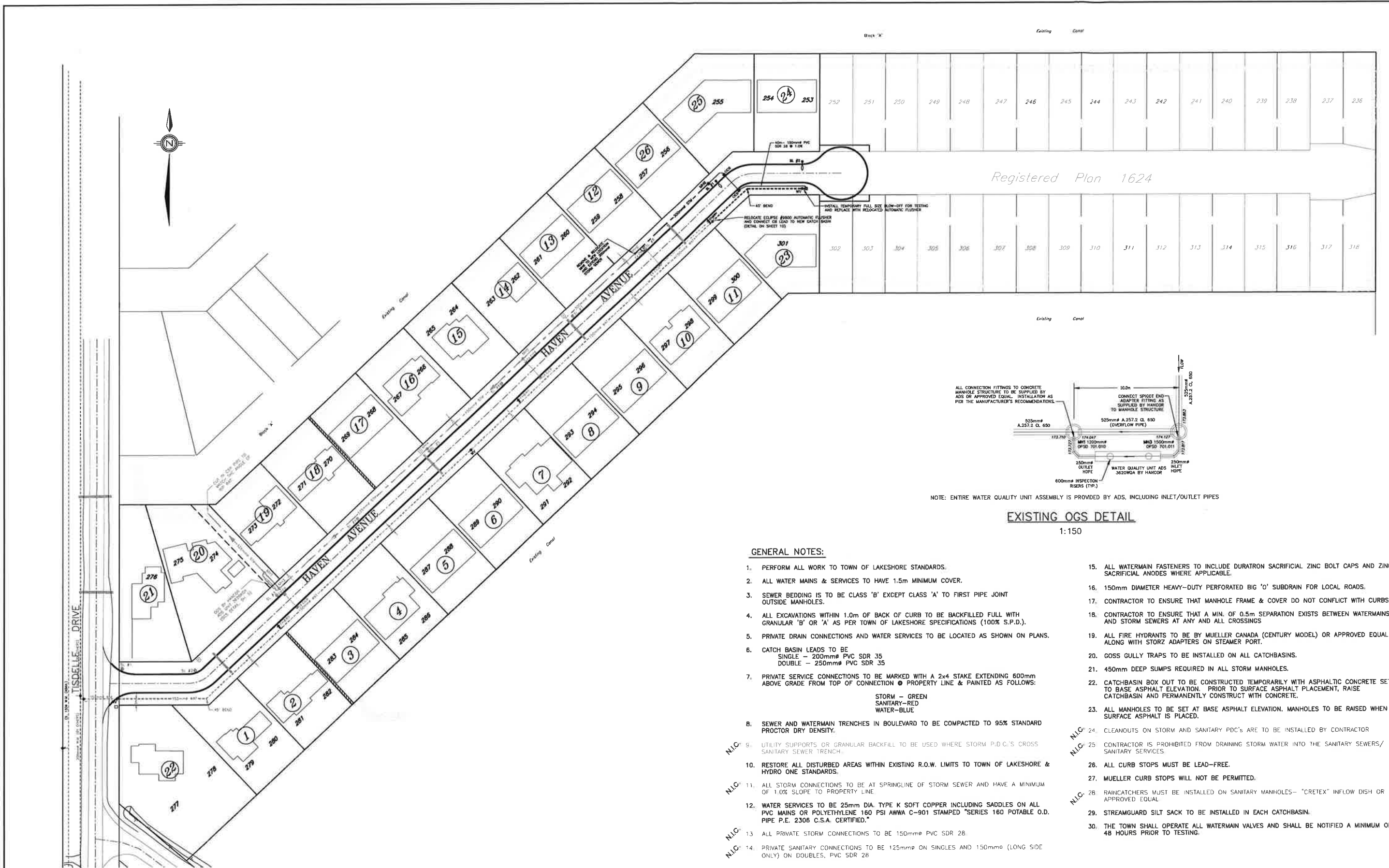


NO.	REVISION	DATE	BY	APP.	NO.	REVISION	DATE	BY	APP.	SCALE
5	REVISED FOR LAKESHORE APPROVAL	11 AUG 2022	S.M.L.	R.C.S.	DESIGN	R.C.S.				1:500
4	SUBMIT FOR LAKESHORE APPROVAL	08 JUL 2022	S.M.L.	R.C.S.	CHECKED	B.R.				
3	ISSUED FOR FINAL APPROVAL	27 MAY 2022	S.M.L.	R.C.S.	DRAWN	S.M.L.				
2	REVISED PER TOWN COMMENTS	24 FEB 2022	S.M.L.	R.C.S.	CHECKED	R.C.S.				
1	ISSUED FOR TOWN APPROVAL	26 APR 2021	S.M.L.	R.C.S.	SCALE					
6	ISSUED FOR CONSTRUCTION	01 SEP 2022	S.M.L.	R.C.S.						

ADMIRAL'S COVE SUBDIVISION

**PAVING & GRADING PLAN**

PROJECT NO. 18-734  
SHEET NO. 3  
OF 10



NOTE: ENTIRE WATER QUALITY UNIT ASSEMBLY IS PROVIDED BY ADS, INCLUDING INLET/OUTLET PIPES

**EXISTING OGS DETAIL**  
1:150

**GENERAL NOTES:**

1. PERFORM ALL WORK TO TOWN OF LAKESHORE STANDARDS.
2. ALL WATER MAINS & SERVICES TO HAVE 1.5m MINIMUM COVER.
3. SEWER BEDDING IS TO BE CLASS 'B' EXCEPT CLASS 'A' TO FIRST PIPE JOINT OUTSIDE MANHOLES.
4. ALL EXCAVATIONS WITHIN 1.0m OF CURB TO BE BACKFILLED FULL WITH GRANULAR 'B' OR 'A' AS PER TOWN OF LAKESHORE SPECIFICATIONS (100% S.P.D.).
5. PRIVATE DRAIN CONNECTIONS AND WATER SERVICES TO BE LOCATED AS SHOWN ON PLANS.
6. CATCH BASIN LEADS TO BE  
SINGLE - 200mm# PVC SDR 35  
DOUBLE - 250mm# PVC SDR 35
7. PRIVATE SERVICE CONNECTIONS TO BE MARKED WITH A 2x4 STAKE EXTENDING 600mm ABOVE GRADE FROM TOP OF CONNECTION @ PROPERTY LINE & PAINTED AS FOLLOWS:  
STORM - GREEN  
SANITARY-RED  
WATER-BLUE
8. SEWER AND WATERMAIN TRENCHES IN BOULEVARD TO BE COMPACTED TO 95% STANDARD PROCTOR DRY DENSITY.
9. UTILITY SUPPORTS OR GRANULAR BACKFILL TO BE USED WHERE STORM P.D.C.'S CROSS SANITARY SEWER TRENCH.
10. RESTORE ALL DISTURBED AREAS WITHIN EXISTING R.O.W. LIMITS TO TOWN OF LAKESHORE & HYDRO ONE STANDARDS.
11. ALL STORM CONNECTIONS TO BE AT SPRINGLINE OF STORM SEWER AND HAVE A MINIMUM OF 1.0% SLOPE TO PROPERTY LINE.
12. WATER SERVICES TO BE 25mm DIA. TYPE K SOFT COPPER INCLUDING SADDLES ON ALL PVC MAINS OR POLYETHYLENE 160 PSI AWWA C-901 STAMPED "SERIES 160 POTABLE O.D. PIPE P.E. 2306 C.S.A. CERTIFIED."
13. ALL PRIVATE STORM CONNECTIONS TO BE 150mm# PVC SDR 28.
14. PRIVATE SANITARY CONNECTIONS TO BE 125mm# ON SINGLES AND 150mm# (LONG SIDE ONLY) ON DOUBLES, PVC SDR 28.
15. ALL WATERMAIN FASTENERS TO INCLUDE DURATRON SACRIFICIAL ZINC BOLT CAPS AND ZINC SACRIFICIAL ANODES WHERE APPLICABLE.
16. 150mm DIAMETER HEAVY-DUTY PERFORATED BIG 'O' SUBDRAIN FOR LOCAL ROADS.
17. CONTRACTOR TO ENSURE THAT MANHOLE FRAME & COVER DO NOT CONFLICT WITH CURBS.
18. CONTRACTOR TO ENSURE THAT A MIN. OF 0.5m SEPARATION EXISTS BETWEEN WATERMANS AND STORM SEWERS AT ANY AND ALL CROSSINGS.
19. ALL FIRE HYDRANTS TO BE BY MUELLER CANADA (CENTURY MODEL) OR APPROVED EQUAL ALONG WITH STORZ ADAPTERS ON STEAMER PORT.
20. GOSS GULLY TRAPS TO BE INSTALLED ON ALL CATCHBASINS.
21. 450mm DEEP SUMPS REQUIRED IN ALL STORM MANHOLES.
22. CATCHBASIN BOX OUT TO BE CONSTRUCTED TEMPORARILY WITH ASPHALTIC CONCRETE SET TO BASE ASPHALT ELEVATION. PRIOR TO SURFACE ASPHALT PLACEMENT, RAISE CATCHBASIN AND PERMANENTLY CONSTRUCT WITH CONCRETE.
23. ALL MANHOLES TO BE SET AT BASE ASPHALT ELEVATION. MANHOLES TO BE RAISED WHEN SURFACE ASPHALT IS PLACED.
24. CLEANOUTS ON STORM AND SANITARY P.D.C.'S ARE TO BE INSTALLED BY CONTRACTOR
25. CONTRACTOR IS PROHIBITED FROM DRAINING STORM WATER INTO THE SANITARY SEWERS/ SANITARY SERVICES
26. ALL CURB STOPS MUST BE LEAD-FREE.
27. MUELLER CURB STOPS WILL NOT BE PERMITTED.
28. RAINCATCHERS MUST BE INSTALLED ON SANITARY MANHOLES- "CRETEX" INFLOW DISH OR APPROVED EQUAL
29. STREAMGUARD SILT SACK TO BE INSTALLED IN EACH CATCHBASIN.
30. THE TOWN SHALL OPERATE ALL WATERMAIN VALVES AND SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO TESTING.



NO.	REVISION	DATE	BY	APP.	NO.	REVISION	DATE	BY	APP.	SCALE
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6	ISSUED FOR CONSTRUCTION	01 SEP 2022	S.M.L.	R.C.S.						

**ADMIRAL'S COVE SUBDIVISION**

**OVERALL SITE SERVICING PLAN**

PROJECT NO. 18-734  
SHEET NO. 5  
OF 10