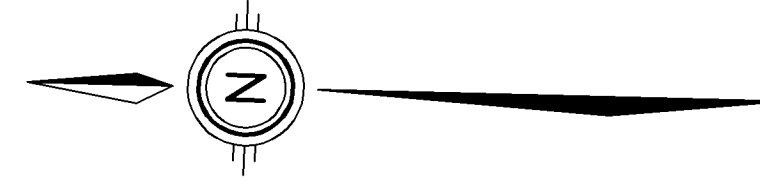
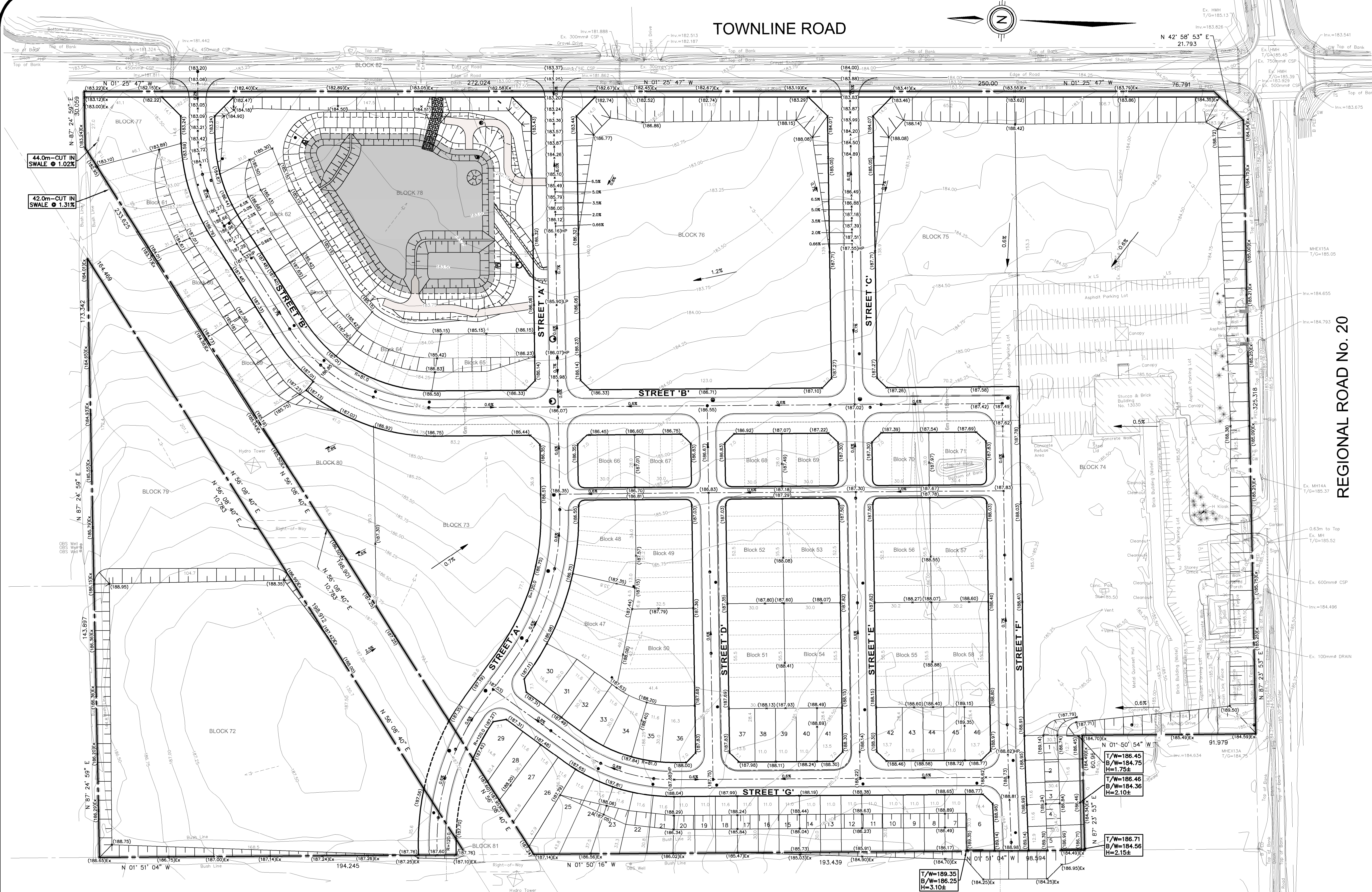


# TOWNLINER ROAD



N 42° 58' 53" E  
21.793

REGIONAL ROAD No. 20

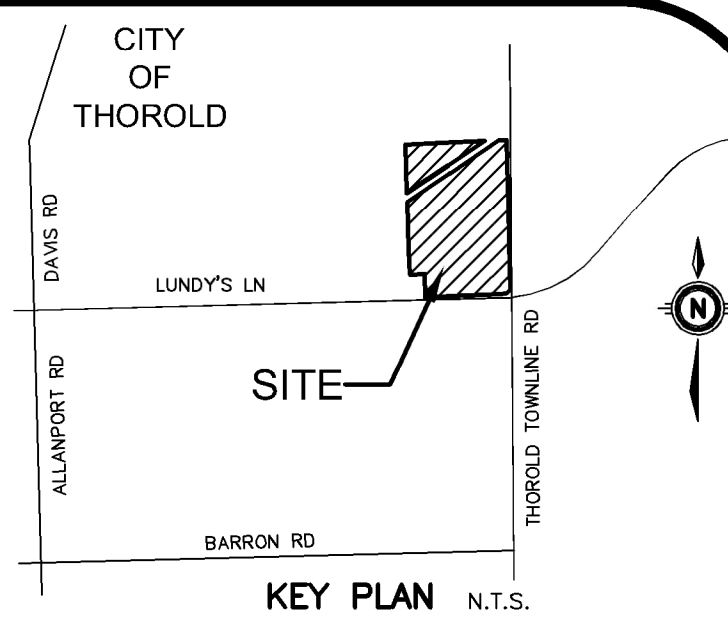


### LEGEND OF EXISTING FEATURES

- SITE BOUNDARY
- EASEMENT
- EXISTING CONTOURS
- EXISTING DIRECTION OF DRAINAGE
- EXISTING CURB
- EXISTING BUILDING
- EXISTING BRICK WALL

### LEGEND OF PROPOSED FEATURES

- PROPOSED SPOT ELEVATIONS  
EX = MAINTAIN EXISTING  
DIRECTION OF DRAINAGE/SWALE
- EMBANKMENT  
(SLOPE AS NOTED)
- OVERLAND FLOW ROUTE  
(MAJOR STORM)



GEODETIC BM ELEV. = NAm

SITE BENCHMARK ELEV. = NAm

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1.	ISSUED FOR DRAFT PLAN APPROVAL RSM 2023-11-24
No.	REVISION BY YYYY-MM-DD



905-639-2552



NOT FOR CONSTRUCTION

CIENT  
**RUDANCO HOSPITALITY CORPORATION**  
4728 DORCHESTER RD. NIAGARA FALLS, ON  
PROJECT  
**PROPOSED PLAN OF SUBDIVISION**  
13030 LUNDY'S LANE  
HIGHWAY 20 & THOROLD TOWNLINER ROAD THOROLD, ON  
DRAWING

## PRELIMINARY GRADING PLAN

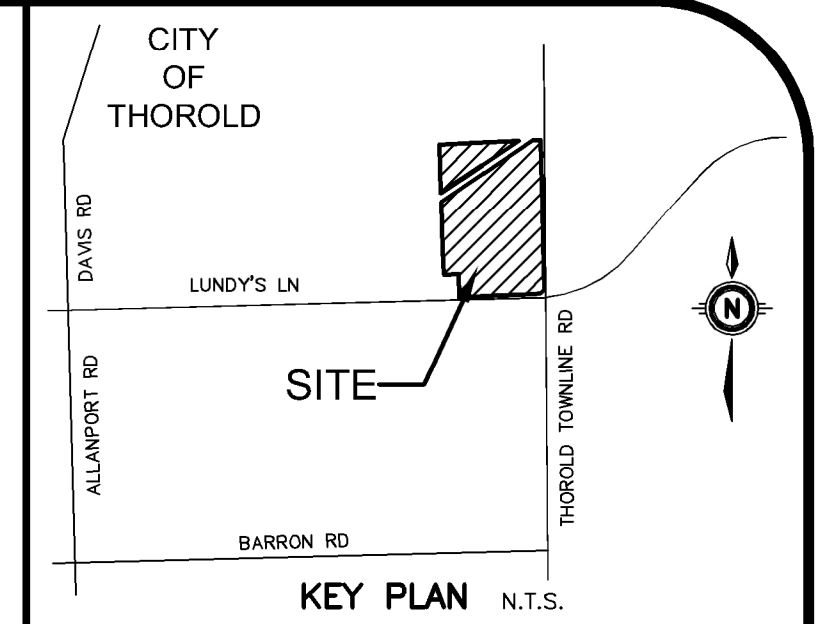
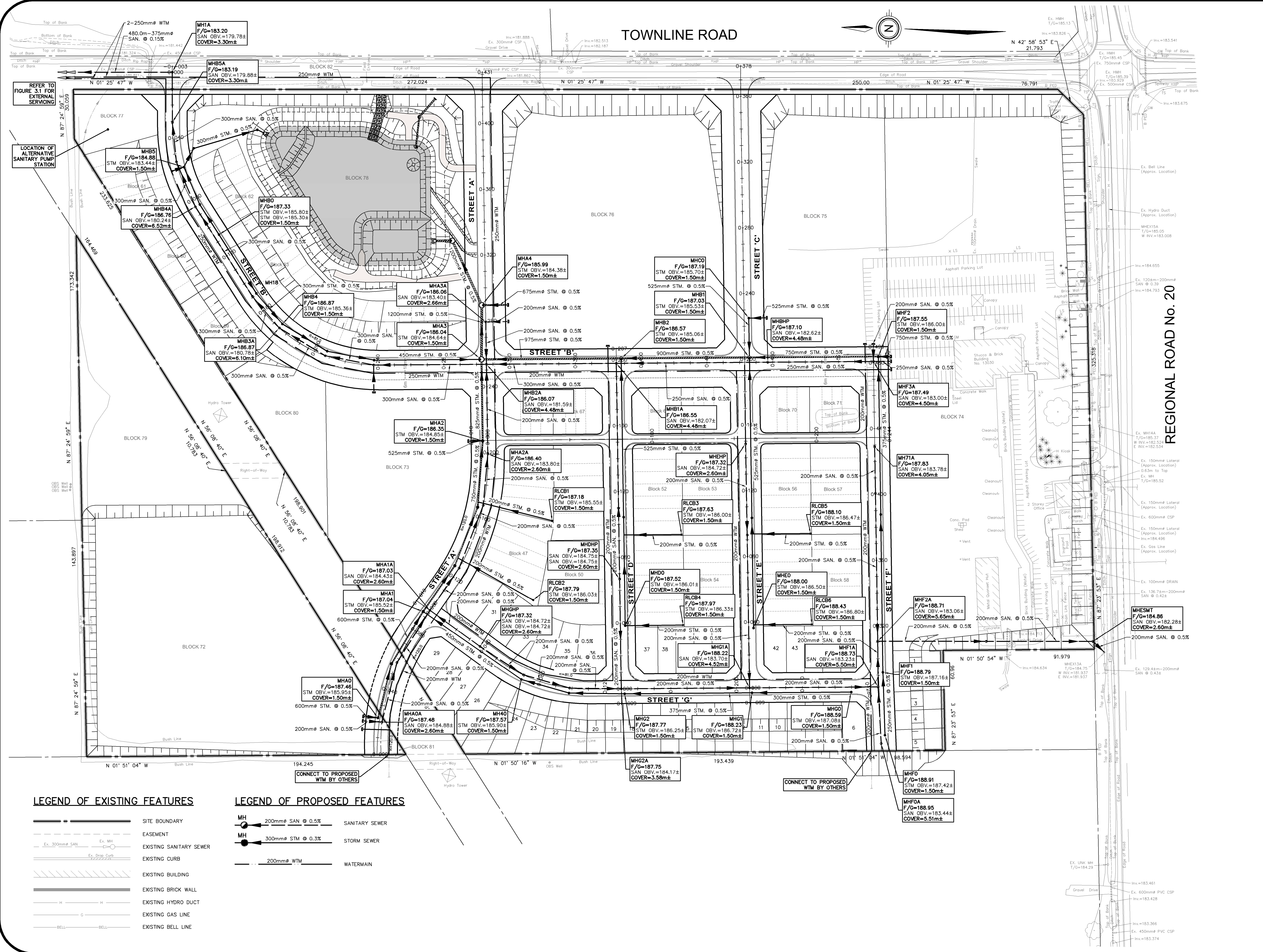
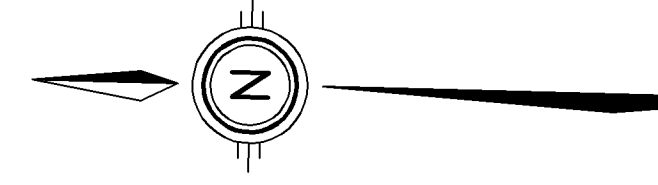
Project Manager	M. GOJSIC	Project No.	49428-100
Design By	CNF	Checked By	RSM
Drawn By	LXQ	Checked By	CNF
Surveyed By	OTHERS	Drawn No.	
Date	Apr. 26/23	<b>P-AG1.1</b>	
Scale	1:1000	Sheet	of

December 13, 2023 - 1:35:14 PM - Plotted By: Reta Jifjes

MTE FILE PATH:

P:\N\49428\100\_49428-100-GP1

# TOWNLINE ROAD



GEODETIC BM ELEV. = Nam

SITE BENCHMARK ELEV. = Nam

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1.	ISSUED FOR DRAFT PLAN APPROVAL	RSM 2023-12-13
No.	REVISION	BY YYYY-MM-DD

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1.	ISSUED FOR DRAFT PLAN APPROVAL	RSM 2023-12-13
No.	REVISION	BY YYYY-MM-DD

**MTE**  
Engineers, Scientists, Surveyors  
905-639-2552

**PROVINCE OF ONTARIO**  
LICENSED PROFESSIONAL ENGINEER  
R. MELICK  
2023-12-14  
40428-100  
NOT FOR CONSTRUCTION

CLIENT  
**RUDANCO HOSPITALITY CORPORATION**  
4728 DORCHESTER RD. NIAGARA FALLS, ON  
PROJECT  
**PROPOSED PLAN OF SUBDIVISION 13030 LUNDY'S LANE**  
HIGHWAY 20 & THOROLD TOWNLINE RD. THOROLD, ON

**PRELIMINARY GENERAL PLAN OF SERVICING**

Project Manager	M.GOUSIC	Project No.	49428-100
Design By	CNF	Checked By	RSM
Drawn By	LXQ	Checked By	CNF
Surveyed By	OTHERS	Drawing No.	
Date	Apr. 18/23	<b>P-GP1.1</b>	
Scale	1:1000	Sheet	of

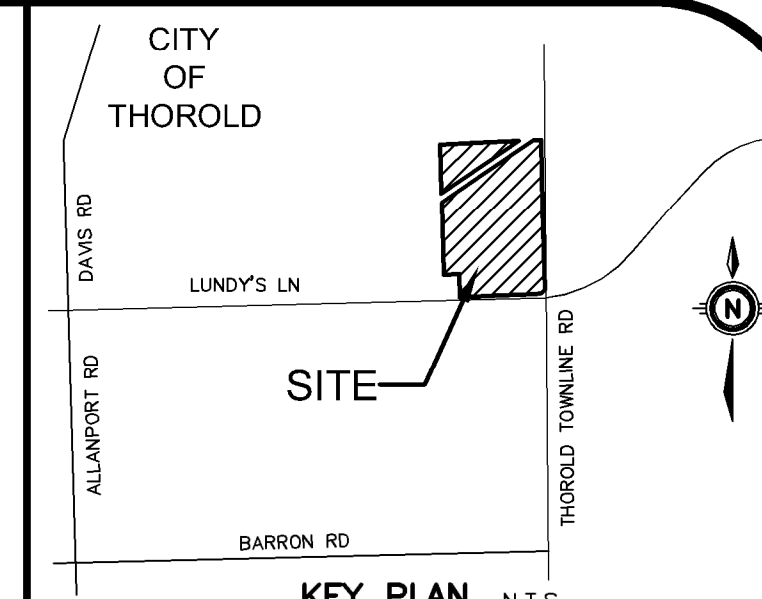
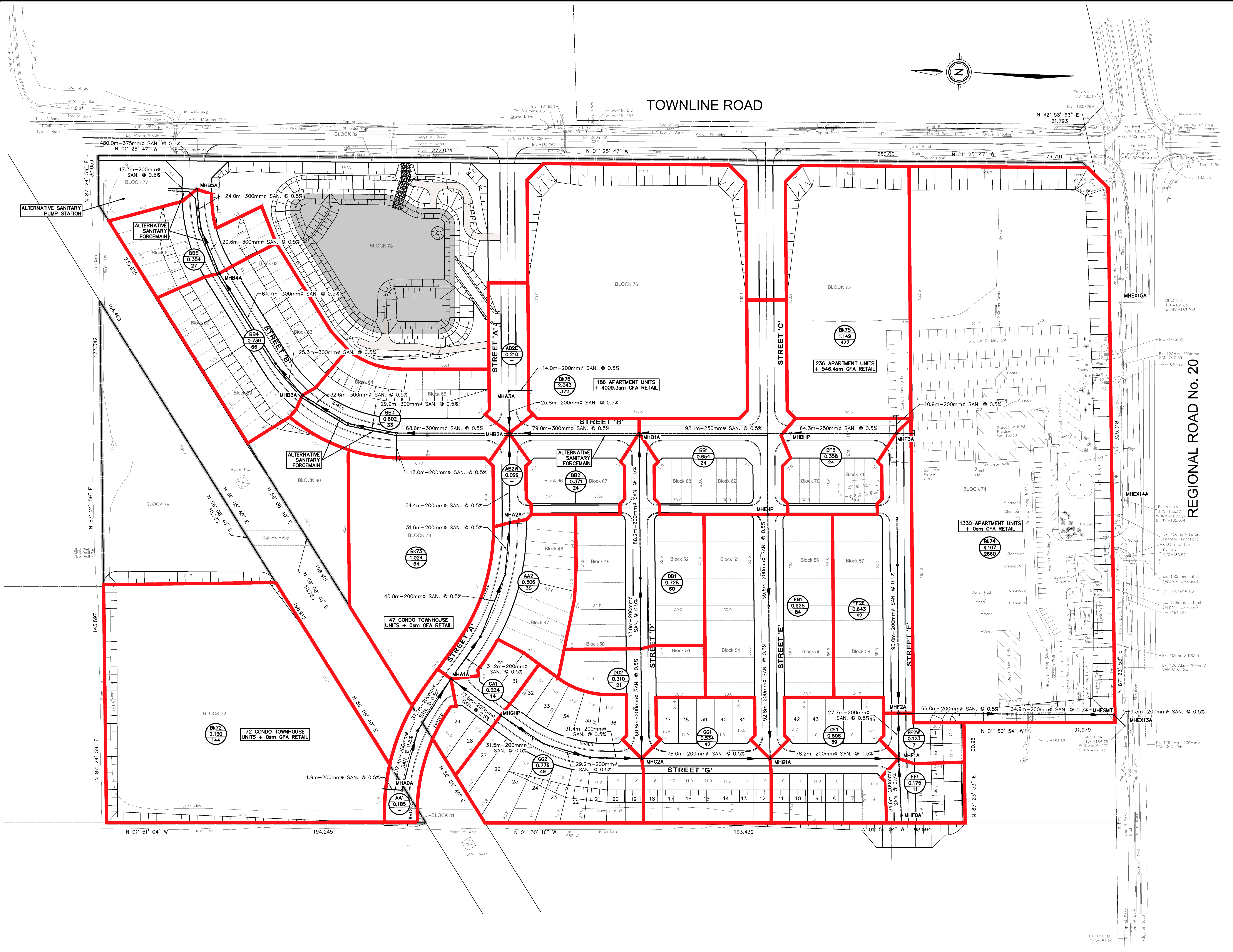
### LEGEND OF EXISTING FEATURES

- SITE BOUNDARY
- EASEMENT
- EXISTING SANITARY SEWER
- EXISTING CURB
- EXISTING BUILDING
- EXISTING BRICK WALL
- EXISTING HYDRO DUCT
- EXISTING GAS LINE
- EXISTING BELL LINE

### LEGEND OF PROPOSED FEATURES

- MH 200mm SAN @ 0.5% SANITARY SEWER
- MH 300mm STM @ 0.3% STORM SEWER
- 200mm WTM WATERMAIN





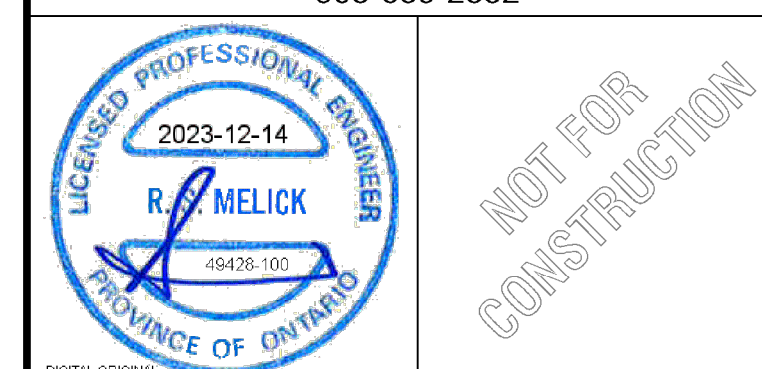
GEODETIC BM	ELEV. =	NA m
SITE BENCHMARK	ELEV. =	NA m

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**LEGEND**

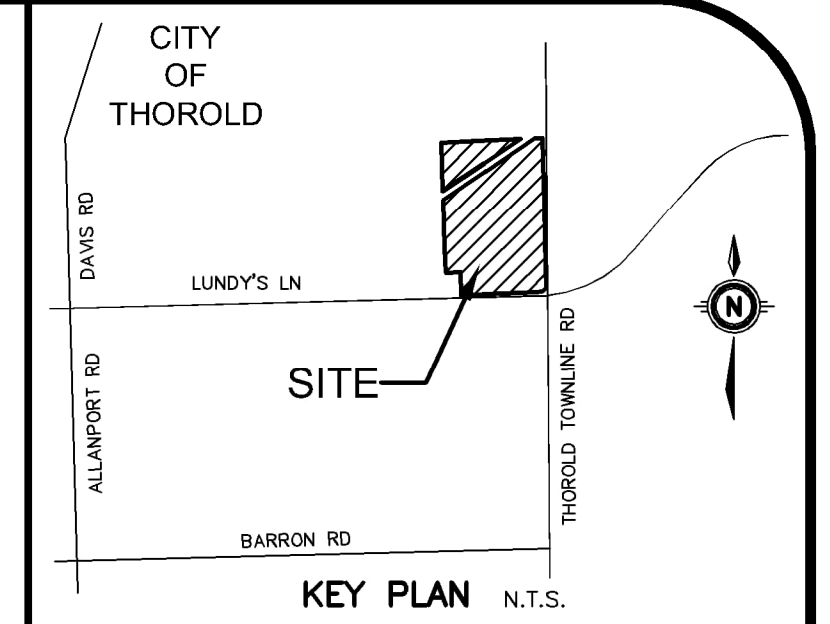
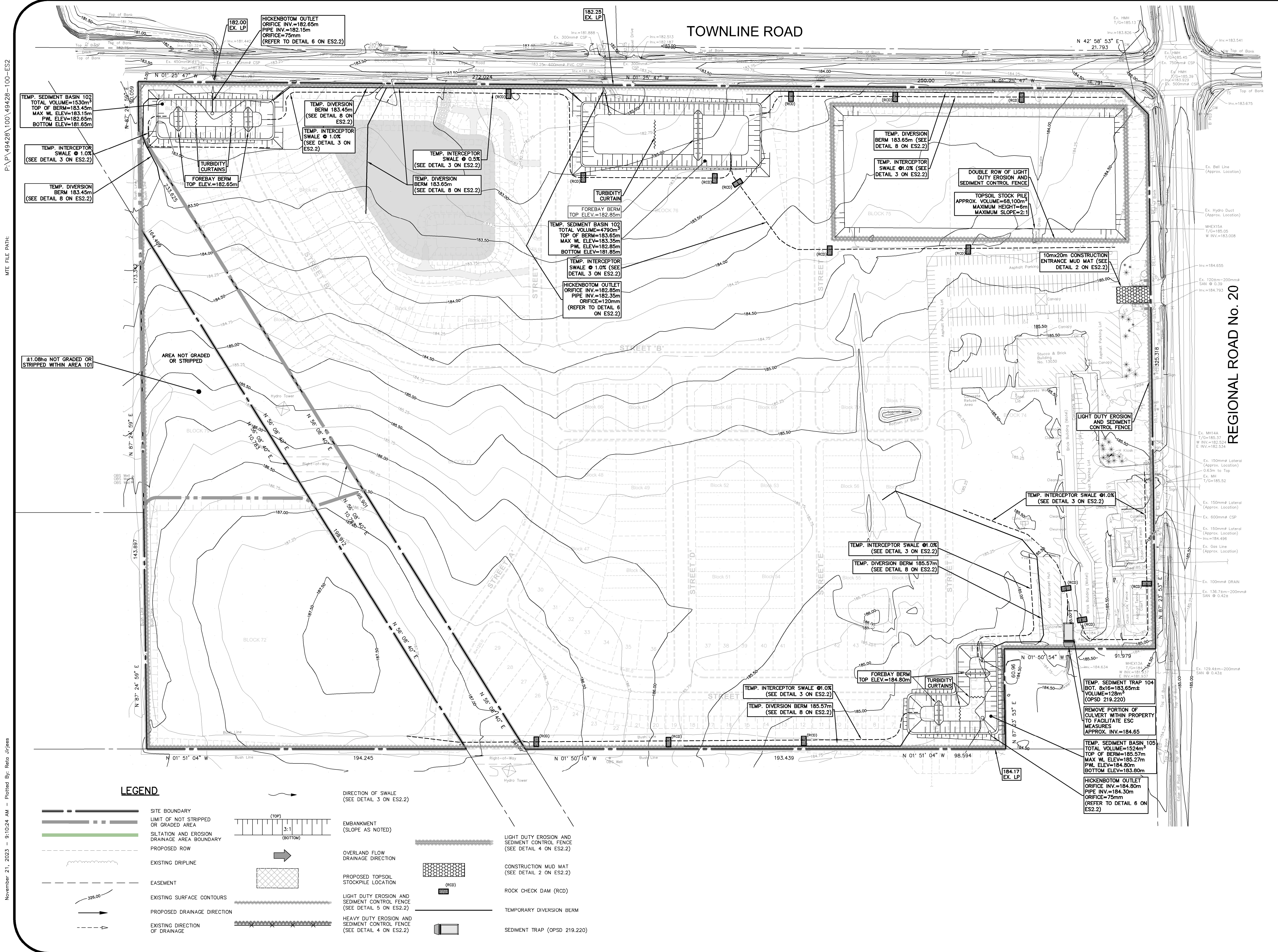
	SITE BOUNDARY
	EXISTING SANITARY SEWER
	PROPOSED SANITARY SEWER
	DRAINAGE AREA
	ID No. AREA (Ha) POPULATION
	UNIT COUNTS PER MASTER SITE PLAN 2023/10/30

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1.	ISSUED FOR DRAFT PLAN APPROVAL	RSM 2023-12-13
No.	REVISION	BY YYYY-MM-DD



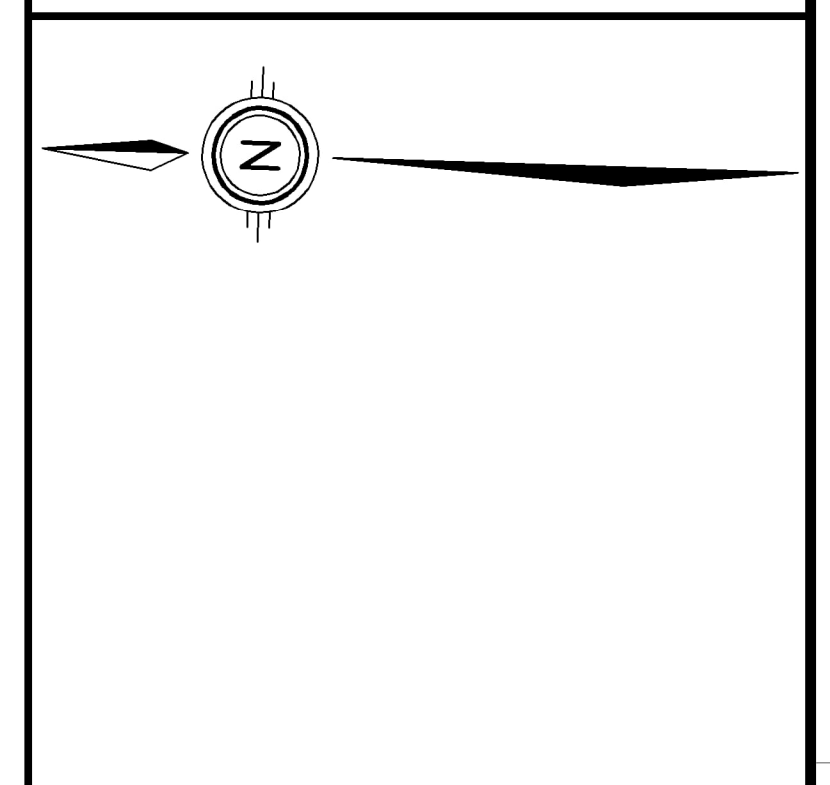
CLIENT  
**RUDANCO HOSPITALITY CORPORATION**  
 4728 DORCHESTER RD. NAGARA FALLS, ON  
 PROJECT  
**PROPOSED PLAN OF SUBDIVISION 13030 LUNDY'S LANE**  
 HIGHWAY 20 & THOROLD TOWNLINE RD. THOROLD, ON  
 DRAWING  
**SANITARY ALTERNATIVE-PUMP STATION & FORCEMAIN**

Project Manager	M.GOUSIC	Project No.	49428-100
Design By	SXA	Checked By	RSM
Drawn By	RXJ	Checked By	CNF
Surveyed By	OTHERS	Drawing No.	
Date	Apr.27/23		<b>P-SA1.2</b>
Scale	1:1000	Sheet	1 of 1



GEODETIC BM ELEV. = NAm  
 SITE BENCHMARK ELEV. = NAm

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1.	FIRST SUBMISSION FOR DRAFT PLAN APPROVAL	RSM 2023-11-23
No. REVISION		BY YYYY-MM-DD

**MTE**  
 Engineers, Scientists, Surveyors  
 905-639-2552

2023-11-24  
**R. MELICK**  
 LICENSED PROFESSIONAL ENGINEER  
 PROVINCE OF ONTARIO  
 NOT FOR CONSTRUCTION

CLIENT  
**RUDANCO HOSPITALITY CORPORATION**  
 4728 DORCHESTER RD NIAGARA FALLS, ON  
 PROJECT  
**PROPOSED PLAN OF SUBDIVISION 13030 LUNDY'S LANE**  
 HIGHWAY 20 & THOROLD TOWNLINE RD THOROLD, ON

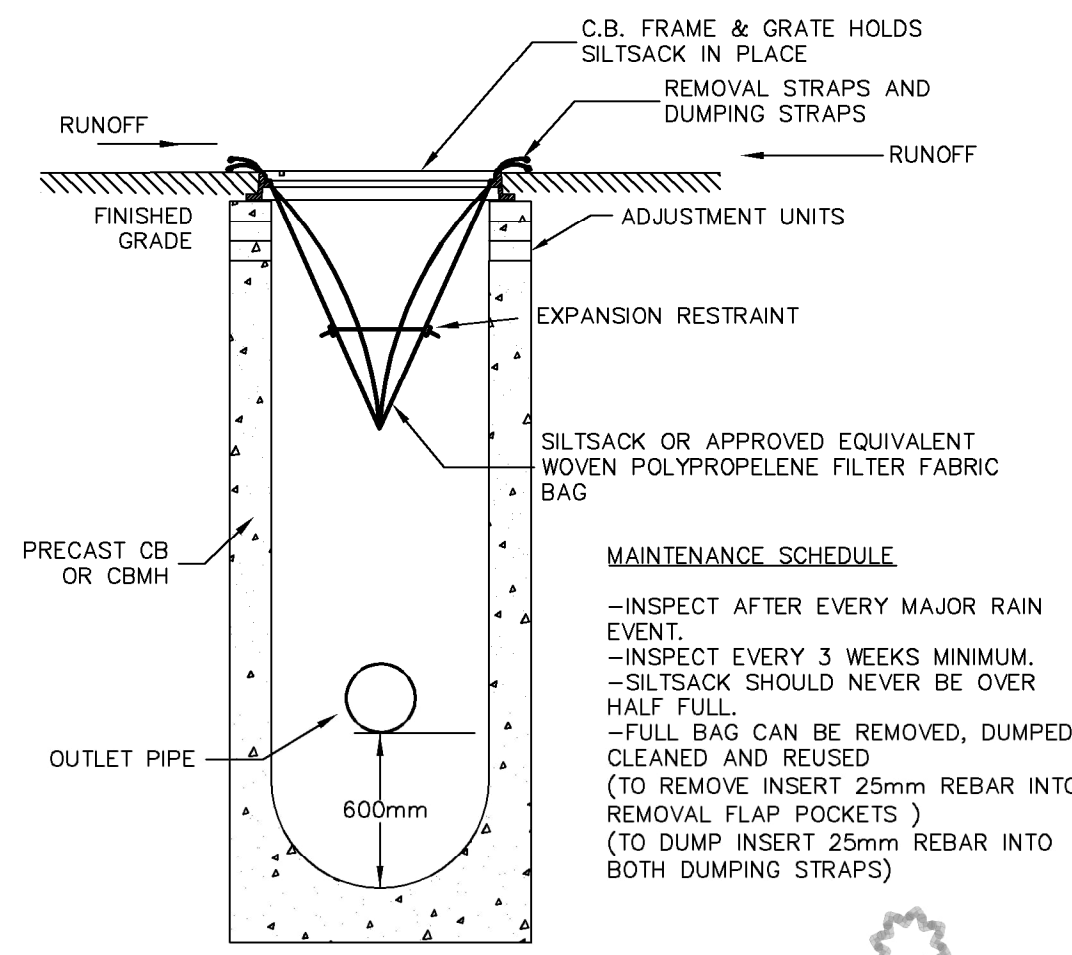
DRAWING  
**EROSION AND SEDIMENT CONTROL PLAN PRE-GRADING**

Project Manager	M.GOJSIC	Project No.	49428-100
Design By	CNF	Checked By	MJG
Drawn By	RXJ	Checked By	CNF
Surveyed By	OTHERS	Drawing No.	
Date	Nov.03/23	<b>P-ES2.1</b>	
Scale	1:1000	Sheet 1 of 2	

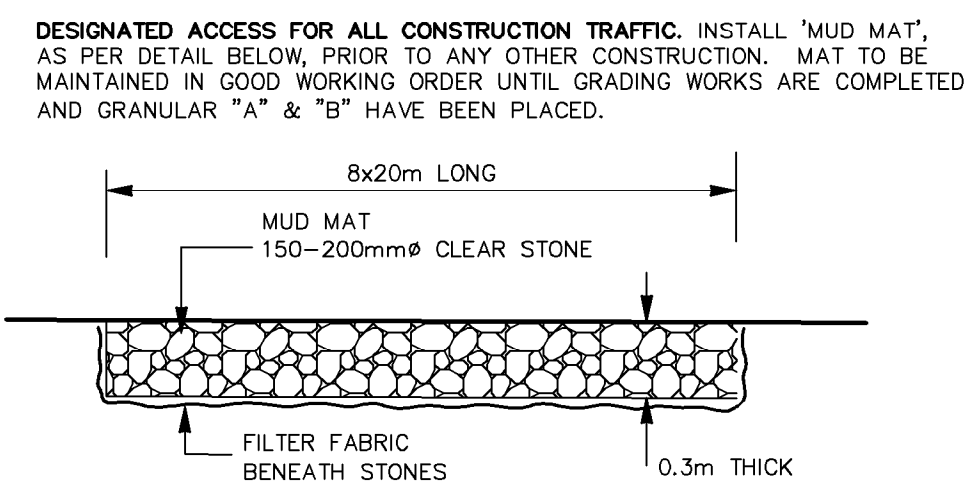
November 21, 2023 - 9:10:24 AM - Plotted By: Reta Jirfens

**LEGEND**

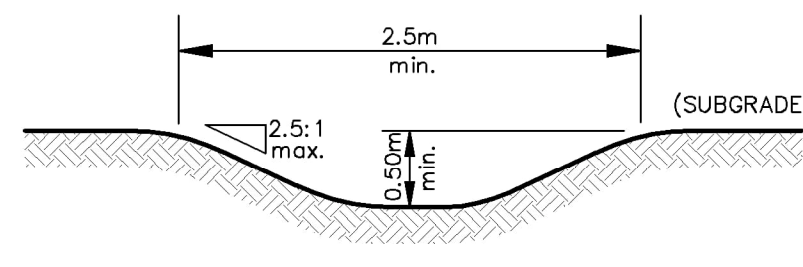
- SITE BOUNDARY
- LIMIT OF NOT STRIPPED OR GRADED AREA
- SILTATION AND EROSION DRAINAGE AREA BOUNDARY
- PROPOSED ROW
- EXISTING DRILINE
- EASEMENT
- EXISTING SURFACE CONTOURS
- PROPOSED DRAINAGE DIRECTION
- EXISTING DIRECTION OF DRAINAGE
- EMBANKMENT (SLOPE AS NOTED)
- OVERLAND FLOW DRAINAGE DIRECTION
- PROPOSED TOPSOIL STOCKPILE LOCATION
- LIGHT DUTY EROSION AND SEDIMENT CONTROL FENCE (SEE DETAIL 4 ON ES2.2)
- HEAVY DUTY EROSION AND SEDIMENT CONTROL FENCE (SEE DETAIL 4 ON ES2.2)
- CONSTRUCTION MUD MAT (SEE DETAIL 2 ON ES2.2)
- ROCK CHECK DAM (RCD)
- TEMPORARY DIVERSION BERM
- SEDIMENT TRAP (OPSD 219.220)



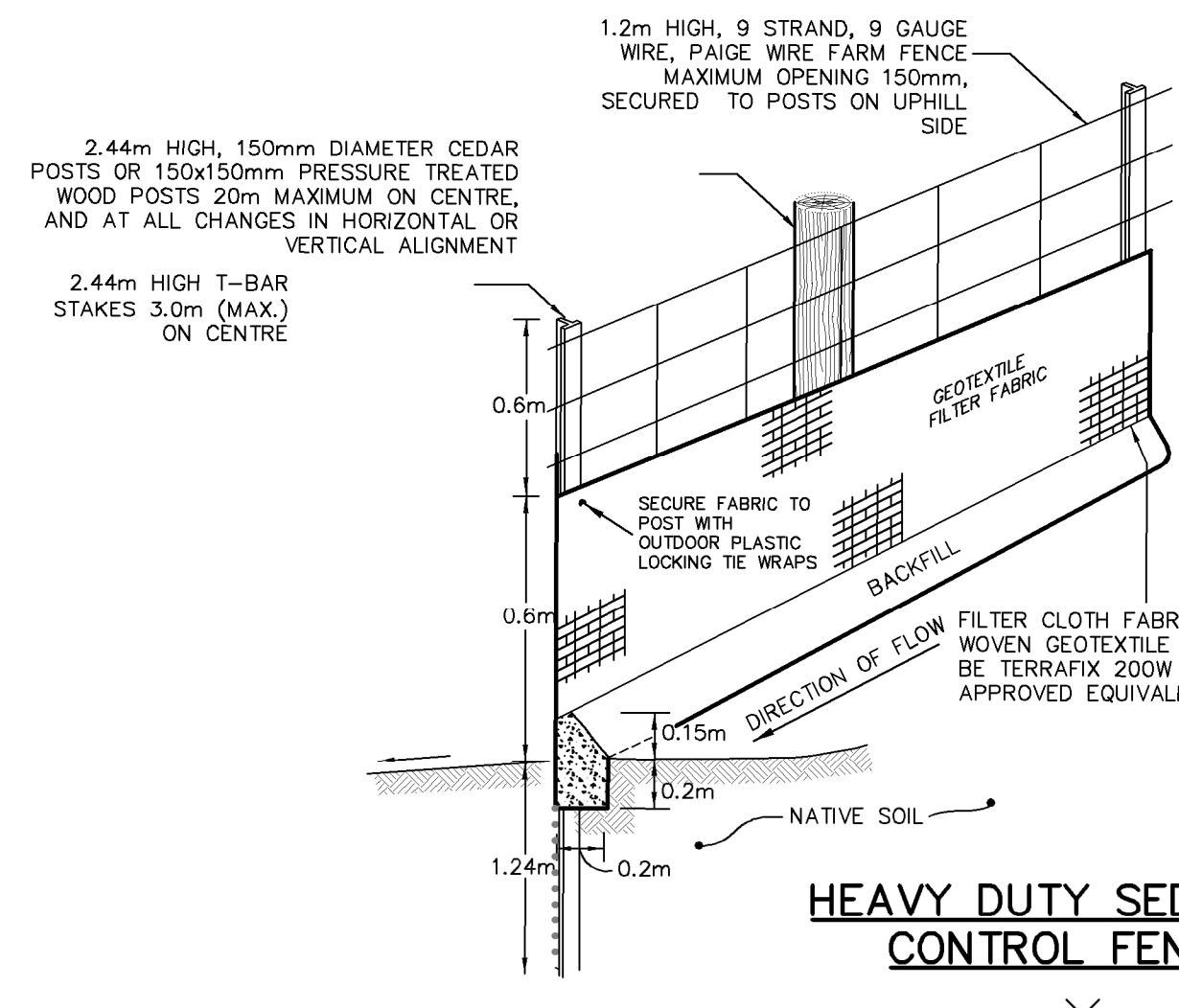
**TEMPORARY SILTSACK SILTATION CONTROL IN CB**  
N.T.S.  
**DETAIL 1**



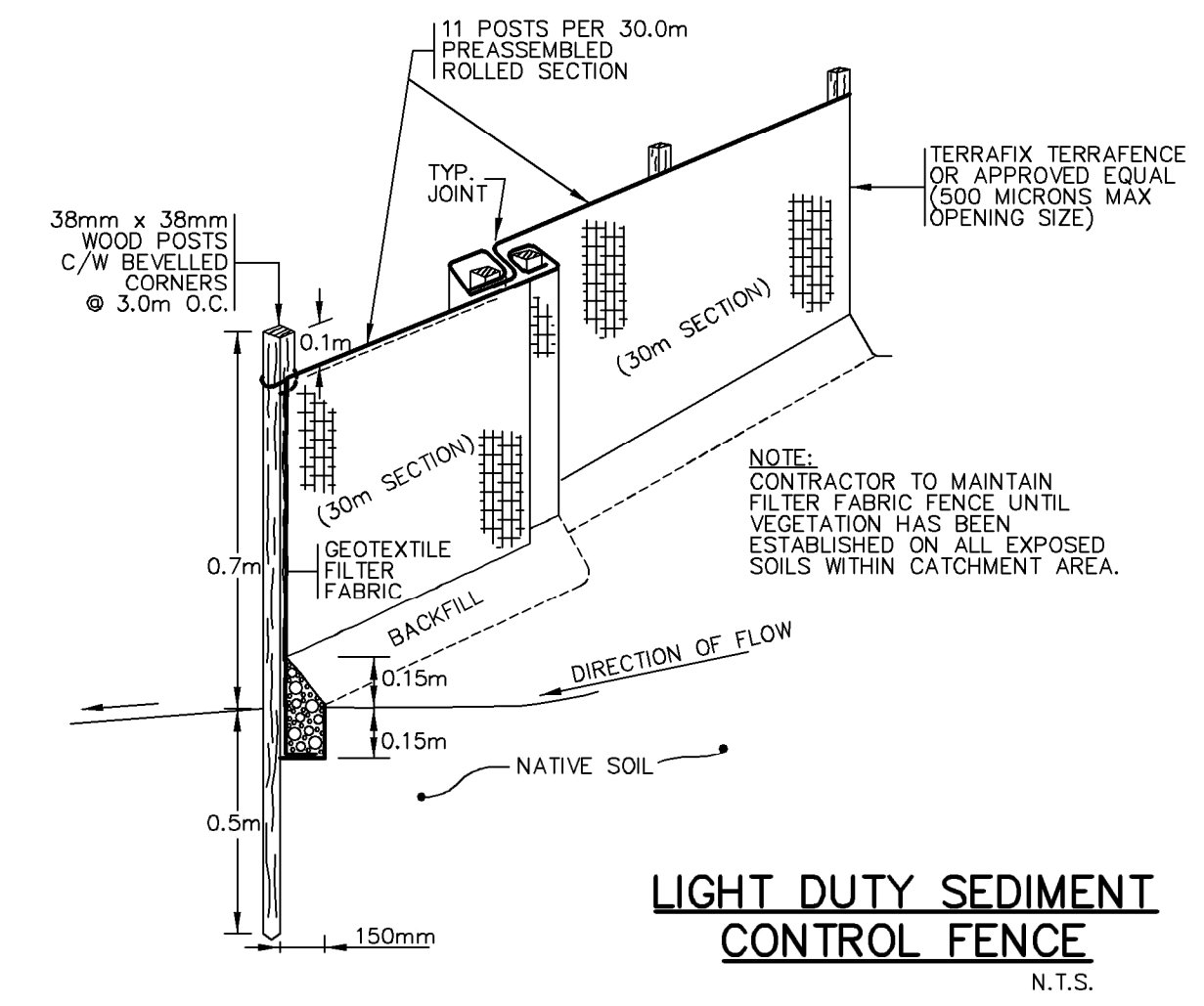
**MUD MAT ENTRANCE DETAIL**  
N.T.S.  
**DETAIL 2**



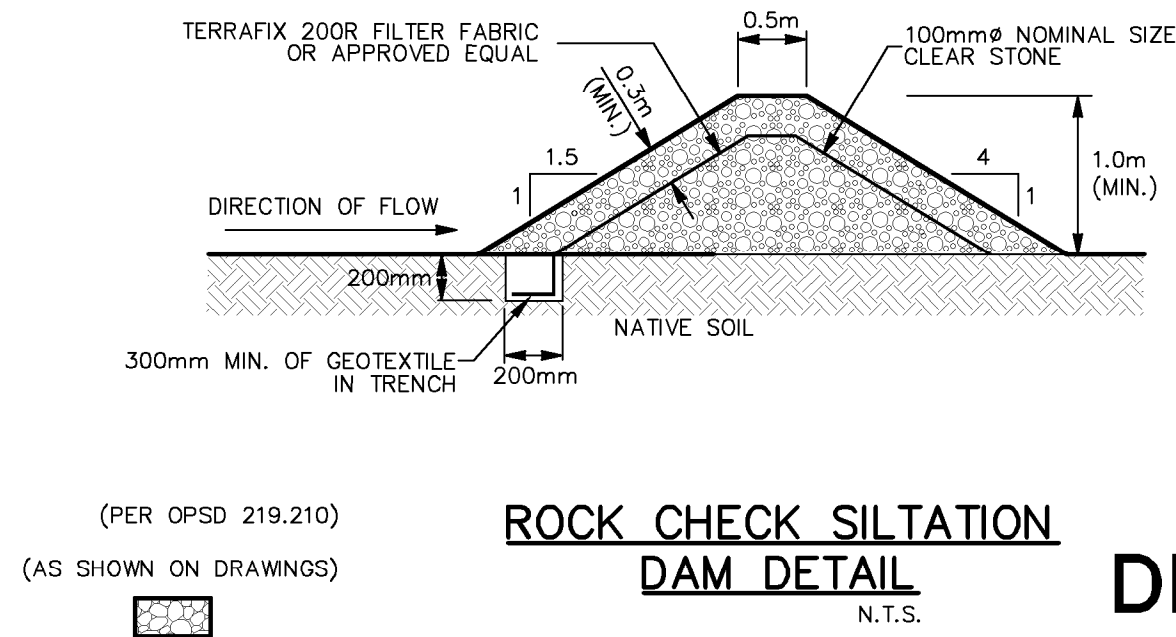
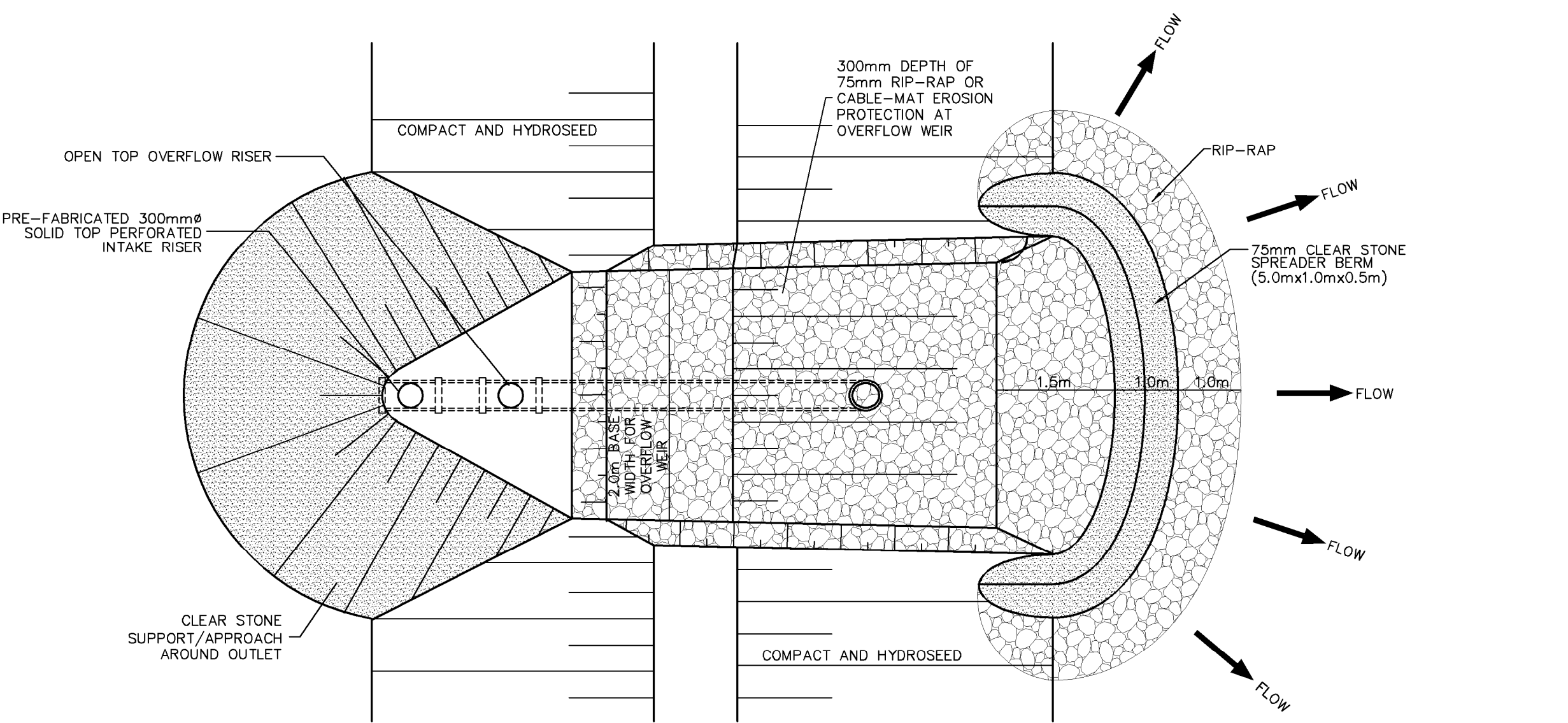
**TEMPORARY INTERCEPTOR SWALE**  
N.T.S.  
**DETAIL 3**



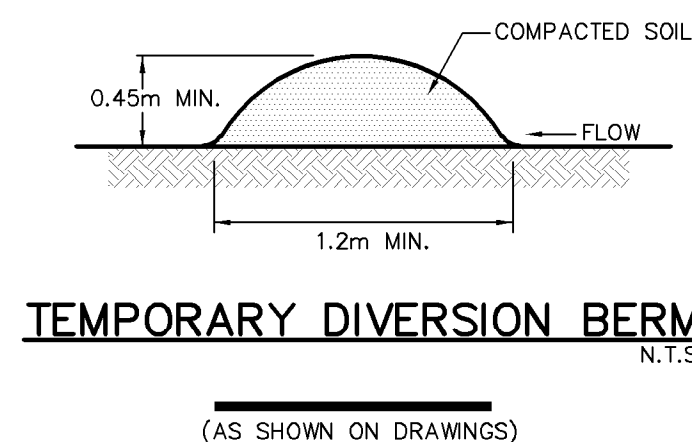
**HEAVY DUTY SEDIMENT CONTROL FENCE**  
N.T.S.  
**DETAIL 4**



**LIGHT DUTY SEDIMENT CONTROL FENCE**  
N.T.S.  
**DETAIL 5**



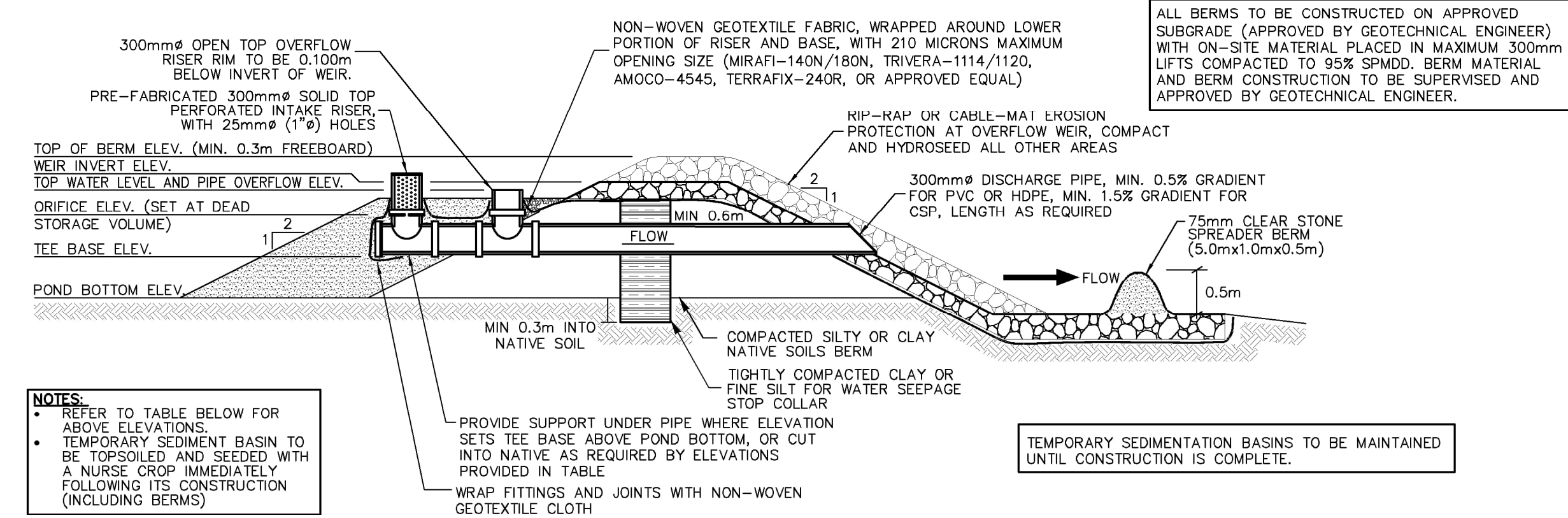
**ROCK CHECK SILTATION DAM DETAIL**  
N.T.S.  
**DETAIL 7**



**TEMPORARY DIVERSION BERM**  
N.T.S.  
**DETAIL 8**

**RIP-RAP SPECIFICATIONS**

CLASS 1  
NOMINAL 300mm Ø OR 36kg WEIGHT GRADING SPECIFICATIONS:  
100% SMALLER THAN 450mm OR 136kg  
AT LEAST 20% LARGER THAN 350mm OR 68kg  
AT LEAST 50% LARGER THAN 300mm OR 36kg  
AT LEAST 80% LARGER THAN 200mm OR 11kg



**TEMPORARY SEDIMENT BASIN AND BERM OUTLET DETAIL**  
N.T.S.  
**DETAIL 6**

**GENERAL NOTES :**

- EROSION AND SEDIMENTATION FACILITIES TO BE INSTALLED PRIOR TO ANY AREA GRADING OPERATIONS.
- SITE INSPECTIONS OF THE EROSION CONTROL MEASURES BY THE DEVELOPER'S CONSULTANT ARE TO BE CONDUCTED WEEKLY OR AFTER ANY STORM EVENT GREATER THAN 15mm. INSPECTIONS MUST INCLUDE AN ASSESSMENT OF THE PROPOSED FACILITIES/CONTROLS AND RECOMMENDED CORRECTIVE MEASURES (IF REQUIRED). REPORTS ARE TO BE SUBMITTED MONTHLY TO THE NIAGARA PENINSULA CONSERVATION AUTHORITY AND CITY OF THOROLD.
- ALL EROSION CONTROL MEASURES (INCLUDING SILT FENCE, TEMPORARY SEDIMENT BASINS, INTERCEPTOR SWALES AND STORM STRUCTURE CONTROL MEASURES) ARE TO BE MONITORED BY THE DEVELOPER'S CONSULTANT AND REPAIRS COMMISSIONED AS REQUIRED.
- THE MEASURES AS PROPOSED MAY BE MODIFIED AT THE DISCRETION OF THE ENGINEER TO SUIT THE PROPOSED CONSTRUCTION PROGRAMS. THE GENERAL INTENT OF THE PROPOSED EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES.
- UPON COMPLETION OF THE GRADING OPERATION ALL DISTURBED AREAS SHALL BE RESTORED WITH MULCH AND TREFOIL MIX SEED PER OPS-804 UNLESS FINAL CONSTRUCTION IS SCHEDULED TO COMMENCE WITHIN 1 MONTH OF THE GRADING OPERATION.
- CONTRACTOR AND DEVELOPER'S CONSULTANT TO REVIEW SITE PRIOR TO CONSTRUCTION TO DETERMINE THE NEED FOR MODIFICATIONS TO THIS SCHEDULE. CONTRACTOR IS NOT TO REMOVE ANY EROSION OR SEDIMENT CONTROL FACILITIES UNTIL DIRECTED TO DO SO BY THE ENGINEER.

**SCHEDULE FOR CONSTRUCTION OF EROSION CONTROL MEASURES :**

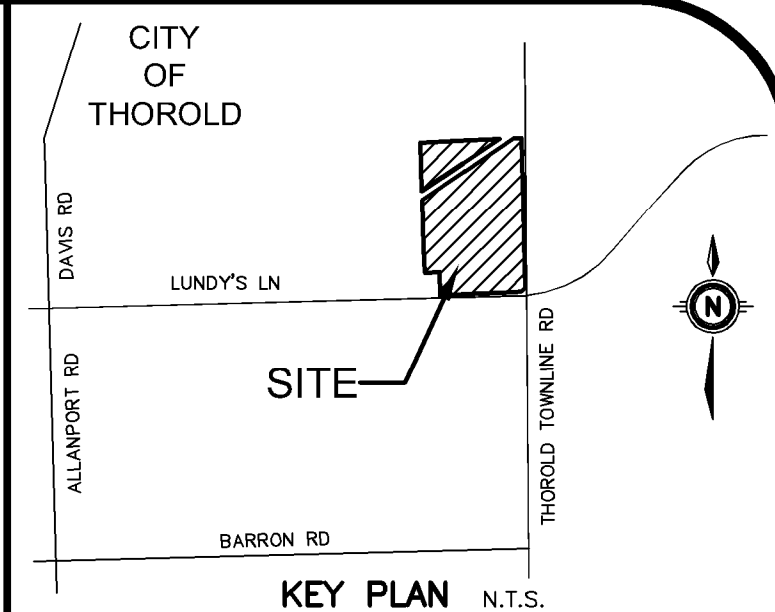
- INSTALL SEDIMENT FENCE AS ILLUSTRATED. CONSTRUCT SEDIMENT BASINS c/w OUTLET STRUCTURES. INSTALL CONSTRUCTION ACCESS.
- INSTALL "NO DUMPING OR REMOVAL OF TREES" SIGNS.
- CONSTRUCT TEMPORARY INTERCEPTOR SWALES c/w ROCK CHECK DAMS WHERE GRADES PERMIT.
- ROUGH GRADE SUBDIVISION AS FOLLOWS:  
- GRADE AREAS DIRECTING DRAINAGE TO TEMPORARY SEDIMENT BASIN 101, 102, AND 105, AND TO SEDIMENT TRAP 104.  
- SEDIMENT BASINS TO REMAIN IN PLACE UNTIL VEGETATIVE COVER IS ESTABLISHED.
- ESTABLISH VEGETATIVE COVER TO ALL GRADED AREAS.
- REMOVE/DECOMMISSION ALL EROSION CONTROL MEASURES ONCE VEGETATIVE COVERS IS ESTABLISHED. FINE GRADE AND ESTABLISH VEGETATIVE COVER ON REMAINING AFFECTED LOTS WHERE DISTURBED BY REMOVAL/DECOMMISSIONING OF SAID MEASURES.
- AS SERVICING OF EACH PHASE IS COMPLETED, CATCHBASINS OR OTHER POTENTIAL INLET TO THE STORM SEWER SYSTEM SHALL BE PROTECTED WITH SILTSACKS, SILT FENCE, OR STRAW BALE FILTERS (OR COMBINATION THERE OF) AS DIRECTED BY THE ENGINEER TO PREVENT ENTRY OF SEDIMENT TO THE STORM SEWER SYSTEM.

**MAINTENANCE RECOMMENDATIONS :**

- EROSION CONTROL STRUCTURES TO BE MONITORED REGULARLY AND ANY DAMAGE REPAIRED IMMEDIATELY.
- SEDIMENTS TO BE REMOVED WHEN ACCUMULATIONS REACH A MAXIMUM OF 1/3 THE HEIGHT OF THE FABRIC ON THE LIGHT DUTY TYPE FENCE AND 2/3 THE HEIGHT OF THE FABRIC ON THE HEAVY DUTY FENCE TYPE.
- OWNER'S REPRESENTATIVE TO MONITOR EROSION CONTROL STRUCTURES TO ENSURE FENCING IS INSTALLED AND MAINTENANCE IS PERFORMED TO CITY OF THOROLD REQUIREMENTS.

**EROSION AND SEDIMENT CONTROL STRATEGY :**

- ALL MATERIALS AND EQUIPMENT USED FOR THE PURPOSE OF SITE PREPARATION AND PROJECT COMPLETION SHOULD BE OPERATED AND STORED IN A MANNER THAT PREVENTS ANY DELETERIOUS SUBSTANCE (E.G. PETROLEUM PRODUCTS, SILT, DEBRIS, ETC) FROM REACHING GROUND SURFACE OR ENTERING GROUNDWATER.
- ANY STOCKPILED MATERIALS SHOULD BE STORED AND STABILIZED AWAY FROM THE SEDIMENT BASINS.
- VEHICLE AND EQUIPMENT REFUELLING AND MAINTENANCE SHOULD BE CONDUCTED AWAY FROM THE SEDIMENT BASINS.
- ANY PART OF EQUIPMENT ENTERING OPEN WATER OR GROUNDWATER SHOULD BE FREE OF FLUID LEAKS AND EXTERNALLY CLEANED/DEGREASED TO PREVENT ANY DELETERIOUS SUBSTANCES FROM ENTERING THE WATER OR GROUNDWATER.



**GEODETIC BM** ELEV. = **NA**m

**SITE BENCHMARK** ELEV. = **NA**m

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1.	FIRST SUBMISSION FOR DRAFT PLAN APPROVAL	RSM	2023-11-23
No.	REVISION	BY	YYYY-MM-DD



905-639-2552



NOT FOR CONSTRUCTION

**RUDANCO HOSPITALITY CORPORATION**  
4728 DORCHESTER RD. NIAGARA FALLS, ON

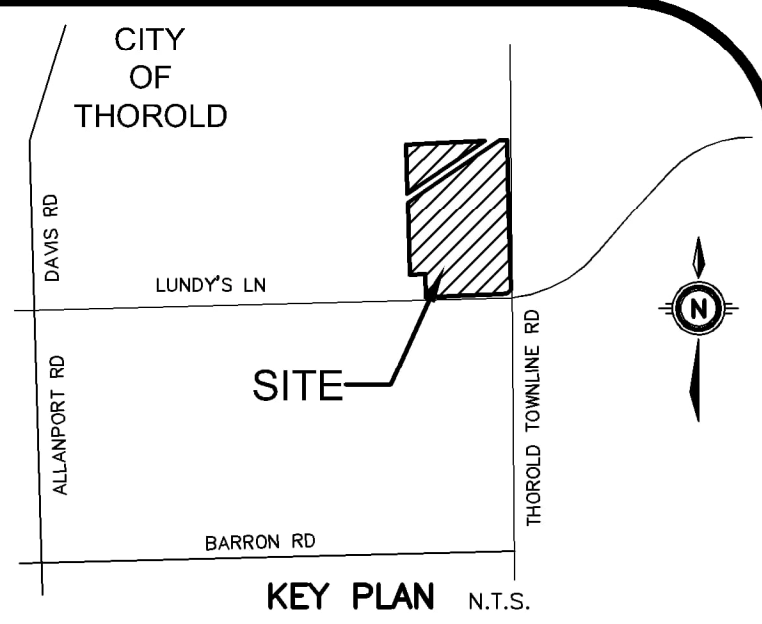
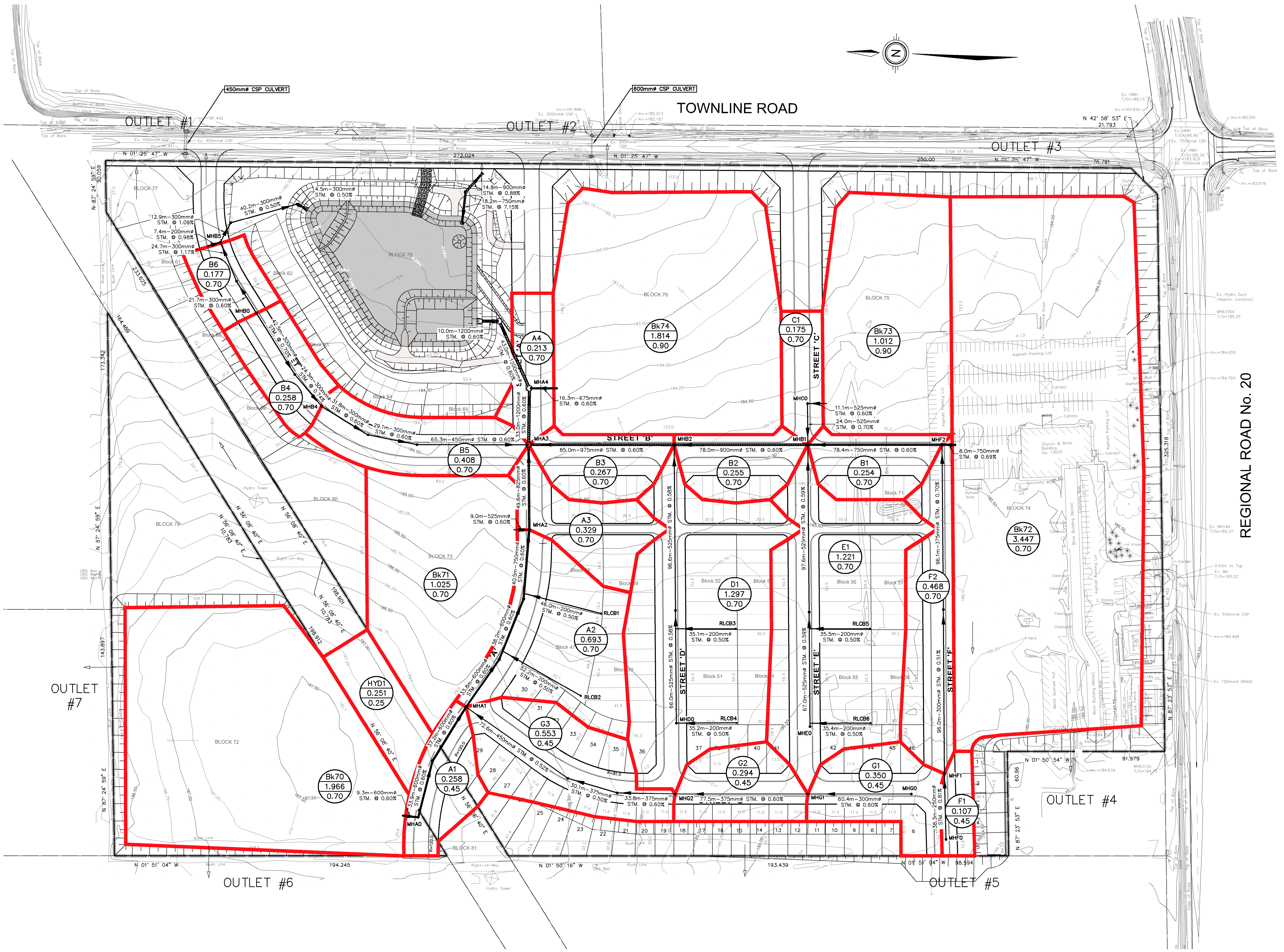
**PROPOSED PLAN OF SUBDIVISION 13030 LUNDY'S LANE**  
HIGHWAY 20 & THOROLD TOWNLINE RD. THOROLD, ON

**EROSION AND SEDIMENT CONTROL PLAN NOTES AND DETAILS**

Project Manager	M.GOJSIC	Project No.	49428-100
Design By	CNF	Checked By	MJG
Drawn By	RXJ	Checked By	CNF
Surveyed By	OTHERS	Drawing No.	
Date	Nov.03/23		<b>P-ES2.2</b>
Scale	N.T.S.		Sheet 2 of 2

EROSION & SEDIMENT CONTROL SEDIMENT BASIN SIZING & CONSTRUCTION INFORMATION												13030 Lundy's Lane		Date: November 01, 2023					
												City of Thorold, Ontario		Project Number: 49428-100					
												Design By: cnf, rsm							
ID Tag	Basin Area	Sediment Basin Design Volume			Bottom Area	Bottom of Basin	Bottom Elevation	Tee Base Elevation	Orifice Plate		Top Water Level & Overflow Pipe		Weir Invert	Top Berm Elevation	Orifice Diameter	Maximum Orifice Flow	Live Storage Drawdown Time	Error Report	
		Dead	Live	Total					Elevation	Dead Volume	Elevation	Total Volume						Dead Volume	Total Volume
	ha	m <sup>3</sup>	m <sup>3</sup>	m <sup>3</sup>	m <sup>2</sup>	flat/sloped	m	m	m	m	m	m <sup>3</sup>	m	m	m <sup>3</sup> /s	hrs			
101	2.07	383 (2)	259	642	570	flat	181.65	182.15	182.65	670	183.15	1,530	183.25	183.45	75	0.0087	48.4	OK	OK
102	14.73	2725 (2)	1,841	4,566	2423	flat	181.85	182.35	2926	4,790	183.35	4,790	183.45	183.65	120	0.0223	50.0	OK	OK
105	3.55	444 (1)	444	888	644	flat	183.80	184.30	184.80	869	185.27	1,524	185.37	185.57	76	0.0086	48.7	OK	OK

(1) Dead Storage is based upon minimum 125m<sup>3</sup> volume per ha drainage area; Live Storage is based upon minimum 125m<sup>3</sup> volume per ha drainage area.  
(2) Dead Storage is based upon minimum 185m<sup>3</sup> volume per ha drainage area; Live Storage is based upon minimum 125m<sup>3</sup> volume per ha drainage area.



GEODETIC BM	ELEV. =	Nam
SITE BENCHMARK	ELEV. =	Nam

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**LEGEND**

	SITE BOUNDARY
	DRAINAGE AREA
	ID No. AREA (Ha)
	RUNOFF COEFFICIENT
	EXISTING DIRECTION OF DRAINAGE
	PROPOSED DIRECTION OF DRAINAGE
	EXISTING OUTLET LOCATION
	STORM SEWER

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1.	ISSUED FOR DRAFT PLAN APPROVAL	RSM 2023-11-24
No.	REVISION	BY YYYY-MM-DD

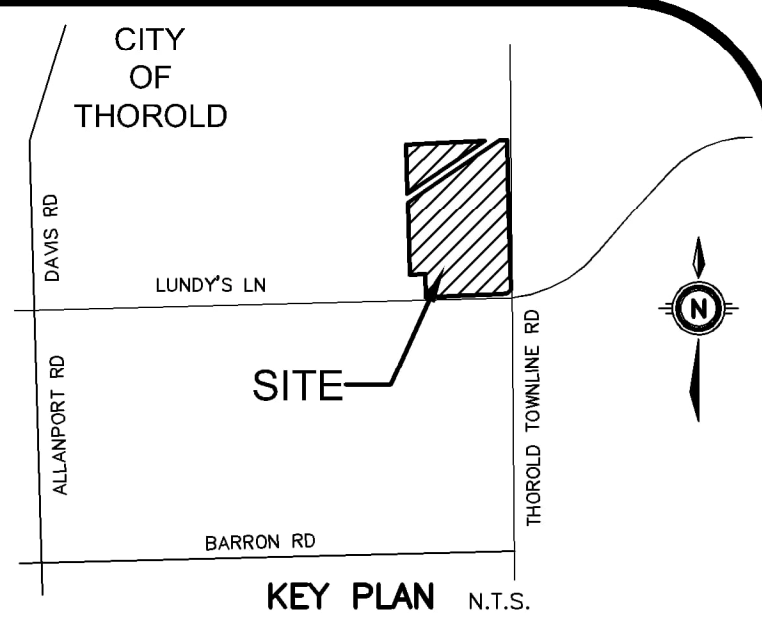
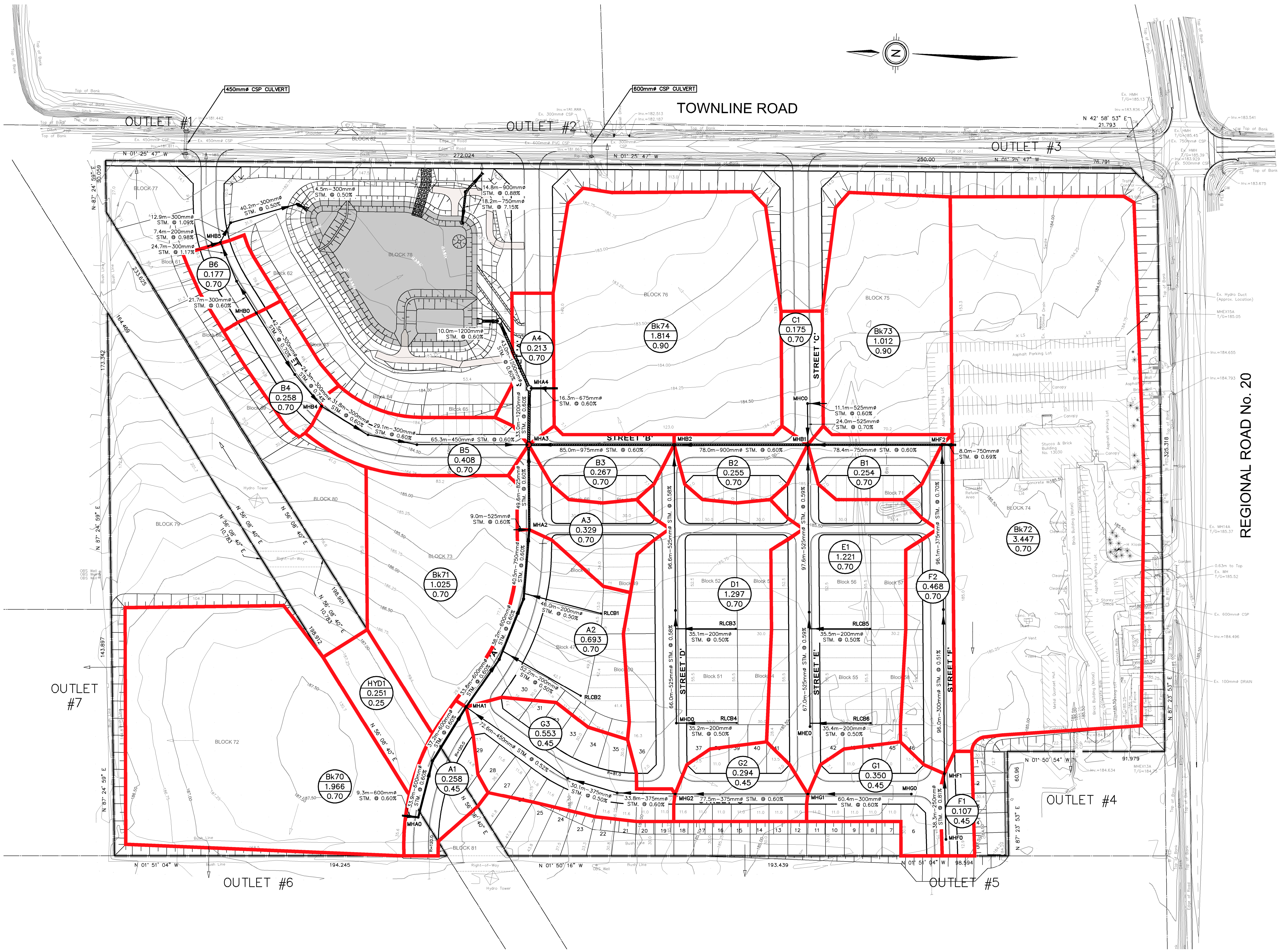
**MTE**  
Engineers, Scientists, Surveyors  
905-639-2552

**LICENSED PROFESSIONAL ENGINEER**  
2023-11-24  
R. MELICK  
49428-100  
PROVINCE OF ONTARIO  
NOT FOR CONSTRUCTION

CLIENT  
**RUDANCO HOSPITALITY CORPORATION**  
4728 DORCHESTER RD. NAGARA FALLS, ON  
PROJECT  
**PROPOSED PLAN OF SUBDIVISION 13030 LUNDY'S LANE**  
HIGHWAY 20 & THOROLD TOWNLINE RD THOROLD, ON

**PRELIMINARY STORM DRAINAGE AREA PLAN**

Project Manager	M.GOUSIC	Project No.	49428-100
Design By	CNF	Checked By	RSM
Drawn By	RXJ	Checked By	CNF
Surveyed By	OTHERS	Drawing No.	
Date	Apr.27/23		<b>P-ST1.1</b>
Scale	1:1000	Sheet 1 of 1	



GEODETIC BM	ELEV. =	Nam
SITE BENCHMARK	ELEV. =	Nam

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**LEGEND**

	SITE BOUNDARY
	DRAINAGE AREA
	ID No. AREA (Ha)
	RUNOFF COEFFICIENT
	EXISTING DIRECTION OF DRAINAGE
	PROPOSED DIRECTION OF DRAINAGE
	EXISTING OUTLET LOCATION
	STORM SEWER

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1.	ISSUED FOR DRAFT PLAN APPROVAL	RSM 2023-11-24
No.	REVISION	BY YYYY-MM-DD

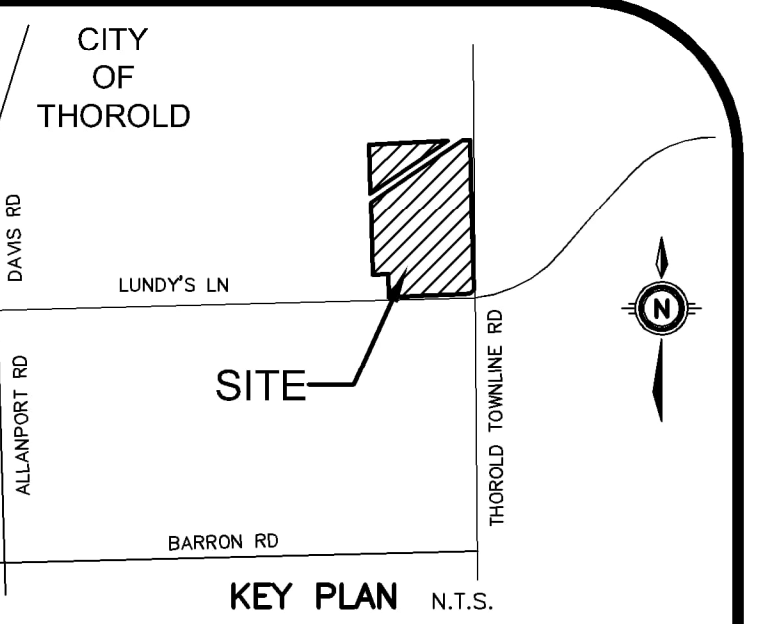
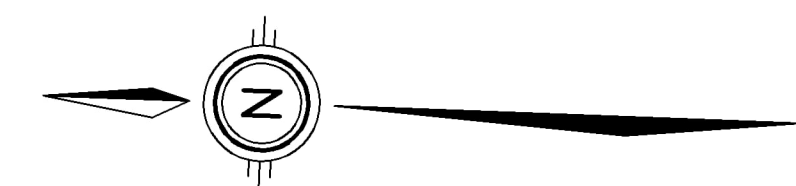
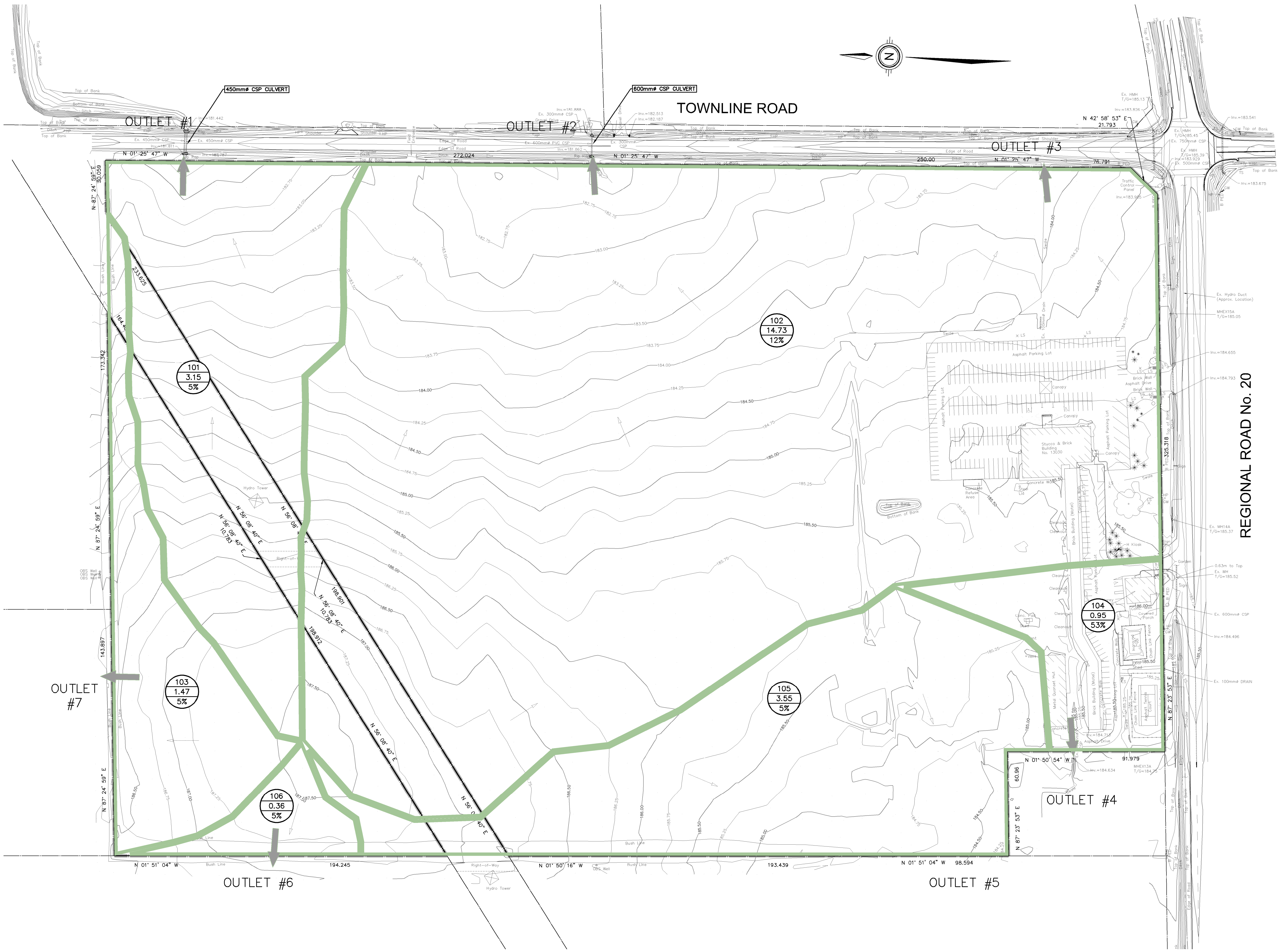
**MTE**  
 Engineers, Scientists, Surveyors  
 905-639-2552

**Licensed Professional Engineer**  
 2023-11-24  
 R. MELICK  
 49428-100  
 PROVINCE OF ONTARIO  
 NOT FOR CONSTRUCTION

CLIENT  
**RUDANCO HOSPITALITY CORPORATION**  
 4728 DORCHESTER RD. NAGARA FALLS, ON  
 PROJECT  
**PROPOSED PLAN OF SUBDIVISION 13030 LUNDY'S LANE**  
 HIGHWAY 20 & THOROLD TOWNLINE RD THOROLD, ON

**PRELIMINARY STORM DRAINAGE AREA PLAN**

Project Manager	M.GOUSIC	Project No.	49428-100
Design By	CNF	Checked By	RSM
Drawn By	RXJ	Checked By	CNF
Surveyed By	OTHERS	Drawing No.	
Date	Apr.27/23		<b>P-ST1.1</b>
Scale	1:1000	Sheet 1 of 1	



GEODETIC BM	ELEV. =	NAm
SITE BENCHMARK	ELEV. =	NAm

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LEGEND	
	SITE BOUNDARY
	DRAINAGE AREA
	ID No. AREA (Ha) % IMPERVIOUS
	EXISTING DIRECTION OF DRAINAGE
	EXISTING OUTLET LOCATION

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1.	ISSUED FOR DRAFT PLAN APPROVAL	RM 2023-11-24
No.	REVISION	BY YYYY-MM-DD

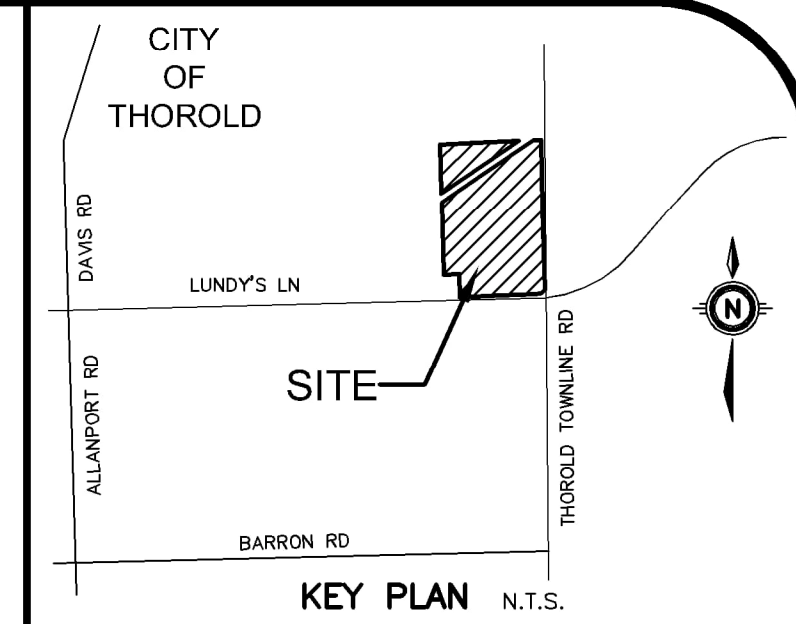
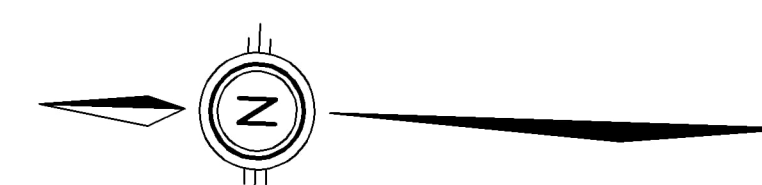
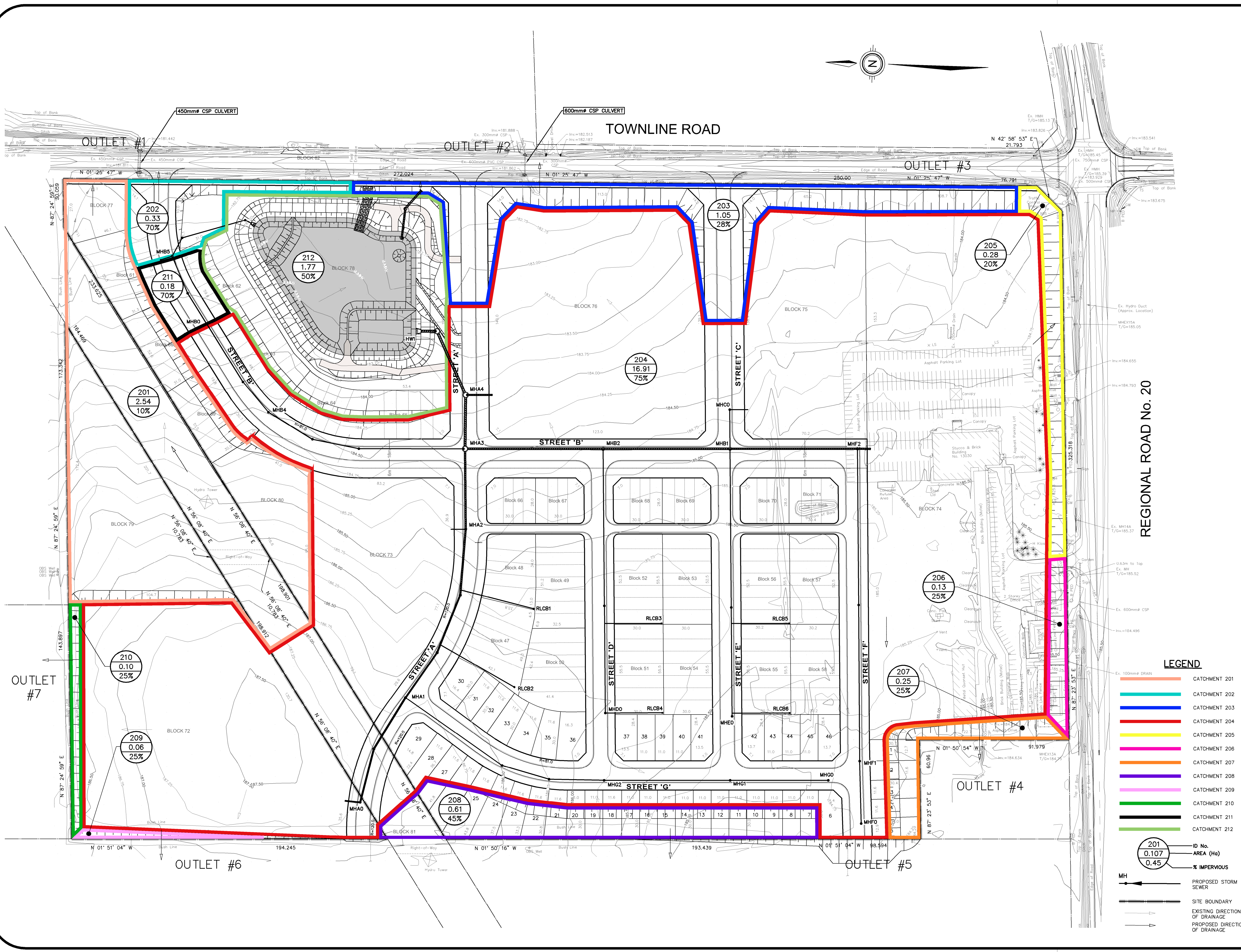
**MTE**  
 Engineers, Scientists, Surveyors  
 905-639-2552

**LICENSED PROFESSIONAL ENGINEER**  
 2023-11-24  
**R. MELICK**  
 49428-100  
 PROVINCE OF ONTARIO  
 NOT FOR CONSTRUCTION

CLIENT  
**RUDANCO HOSPITALITY CORPORATION**  
 4728 DORCHESTER RD NAGARA FALLS, ON  
 PROJECT  
**PROPOSED PLAN OF SUBDIVISION 13030 LUNDY'S LANE**  
 HIGHWAY 20 & THOROLD TOWNLINE RD THOROLD, ON  
 DRAWING

**PRELIMINARY PRE-DEVELOPMENT STORM DRAINAGE AREA PLAN**

Project Manager	M.GOUSIC	Project No.	49428-100
Design By	SXA	Checked By	MJG
Drawn By	RXJ	Checked By	SXA
Surveyed By	OTHERS	Drawing No.	<b>P-ST1</b>
Date	Apr.27/23	Scale	1:1000
Scale	1:1000	Sheet	1 of 1



GEODETIC BM	ELEV. =	NA m
SITE BENCHMARK	ELEV. =	NA m

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1.	ISSUED FOR DRAFT PLAN APPROVAL	RSM 2023-11-24
No.	REVISION	BY YYYY-MM-DD

905-639-2552	

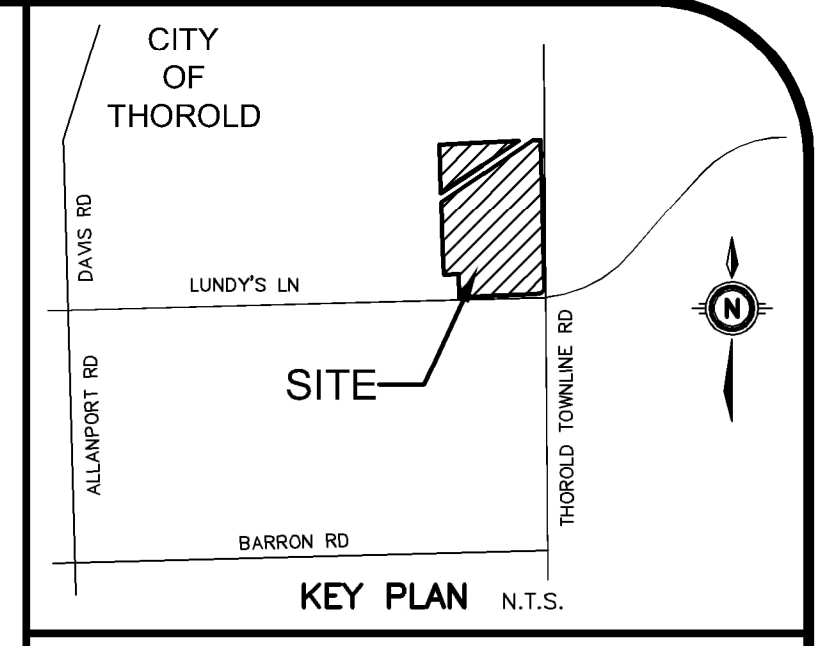
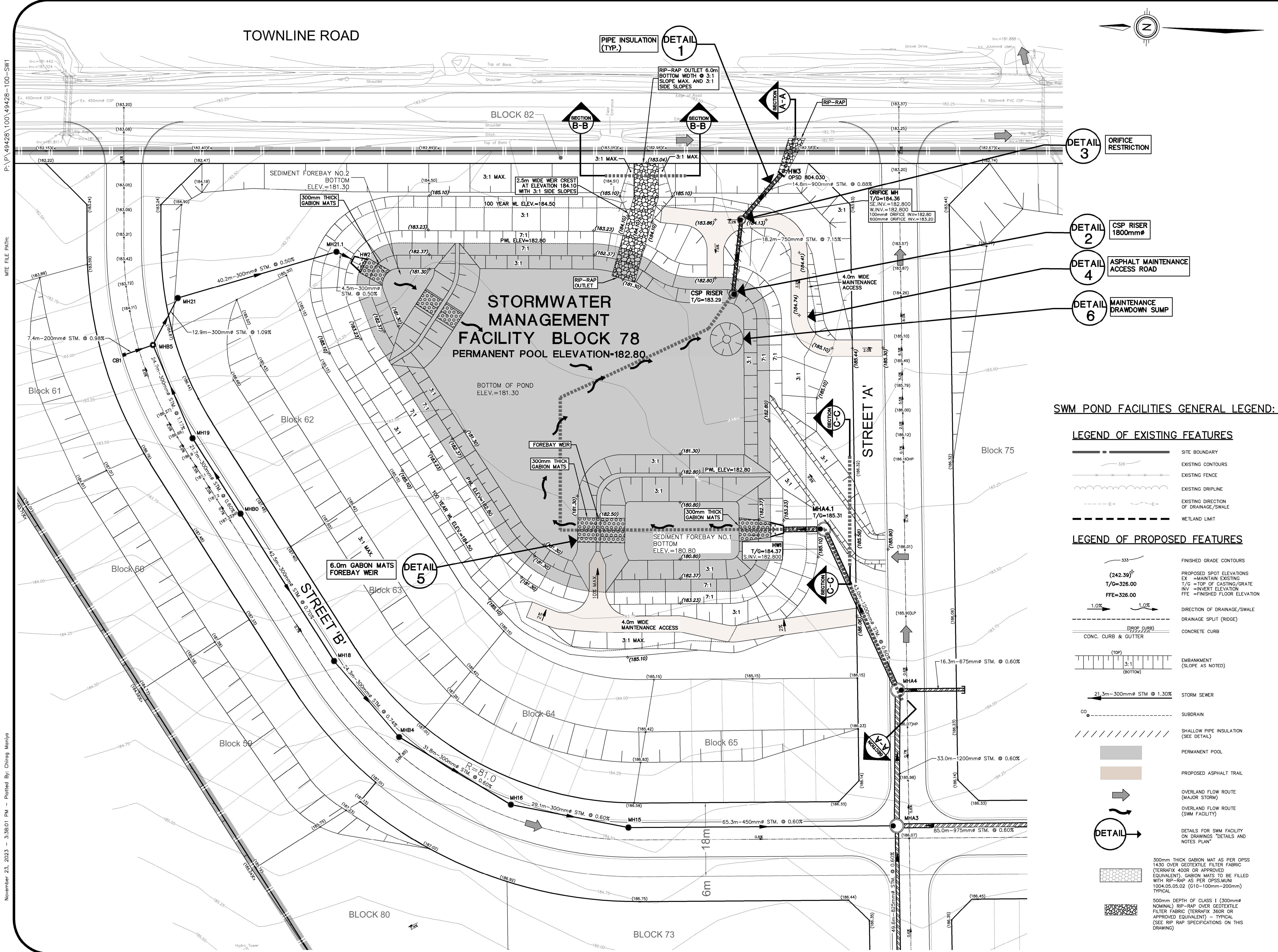
CLIENT  
**RUDANCO HOSPITALITY CORPORATION**  
 4728 DORCHESTER RD. NIAGARA FALLS, ON  
 PROJECT  
**PROPOSED PLAN OF SUBDIVISION 13030 LUNDY'S LANE**  
 HIGHWAY 20 & THOROLD TOWNLINE RD. THOROLD, ON  
 DRAWING

**PRELIMINARY POST-DEVELOPMENT STORM DRAINAGE AREA PLAN**

Project Manager	M.GOJSIC	Project No.	49428-100
Design By	CNF	Checked By	RSM
Drawn By	RXJ	Checked By	CNF
Surveyed By	OTHERS	Drawing No.	<b>P-ST2</b>
Date	Apr.27/23	Scale	1:1000
Scale	1:1000	Sheet	1 of 1

<b>LEGEND</b>	
	CATCHMENT 201
	CATCHMENT 202
	CATCHMENT 203
	CATCHMENT 204
	CATCHMENT 205
	CATCHMENT 206
	CATCHMENT 207
	CATCHMENT 208
	CATCHMENT 209
	CATCHMENT 210
	CATCHMENT 211
	CATCHMENT 212
	ID No. AREA (Ha) % IMPERVIOUS
	PROPOSED STORM SEWER
	SITE BOUNDARY
	EXISTING DIRECTION OF DRAINAGE
	PROPOSED DIRECTION OF DRAINAGE

NOT FOR CONSTRUCTION



GEODETIC BM	ELEV. =	NA m
SITE BENCHMARK	ELEV. =	NA m

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**SWM POND FACILITIES GENERAL LEGEND:**

**LEGEND OF EXISTING FEATURES**

- SITE BOUNDARY
- - - EXISTING CONTOURS
- - - EXISTING FENCE
- - - EXISTING DRIPLINE
- - - EXISTING DIRECTION OF DRAINAGE/SWALE
- - - WETLAND LIMIT

**LEGEND OF PROPOSED FEATURES**

- FINISHED GRADE CONTOURS
- (242.39)<sup>±</sup> PROPOSED SPOT ELEVATIONS
- T/G=326.00 EX = MAINTAIN EXISTING
- INV = INVERT ELEVATION
- FFE=326.00 T/G = TOP OF CASTING/GRATE
- DIRECTION OF DRAINAGE/SWALE
- DRAINAGE SPLIT (RIDGE)
- CONC. CURB & GUTTER
- CONCRETE CURB
- EMBANKMENT (SLOPE AS NOTED)
- STORM SEWER
- SUBDRAIN
- SHALLOW PIPE INSULATION (SEE DETAIL)
- PERMANENT POOL
- PROPOSED ASPHALT TRAIL
- OVERLAND FLOW ROUTE (MAJOR STORM)
- OVERLAND FLOW ROUTE (SWM FACILITY)
- DETAILS FOR SWM FACILITY ON DRAWINGS "DETAILS AND NOTES PLAN"

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No.	REVISION	BY YYYY-MM-DD



905-639-2552

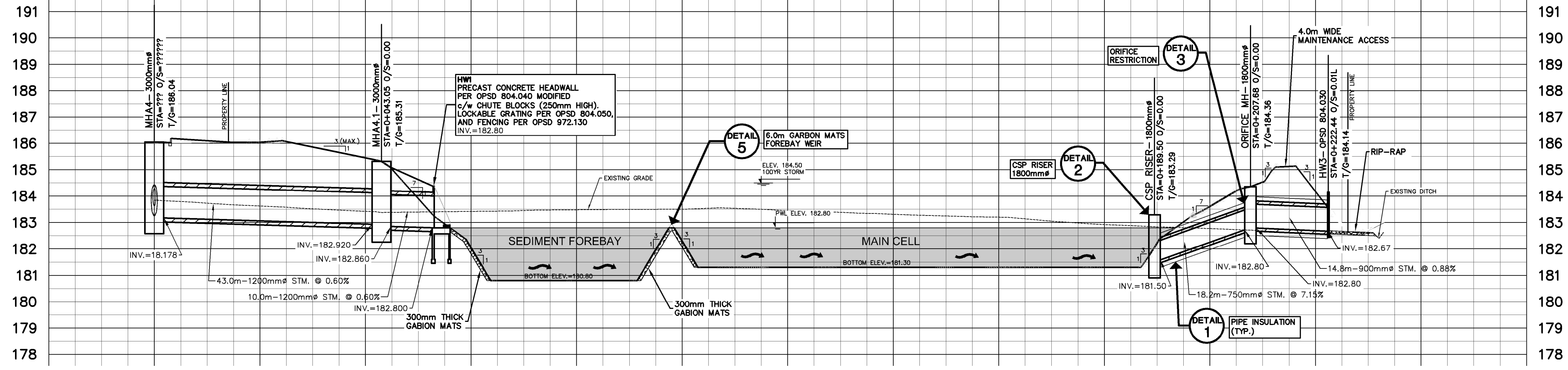


CLIENT  
**RUDANCO HOSPITALITY CORPORATION**  
 4728 DORCHESTER RD. NAGARA FALLS, ON  
 PROJECT  
**PROPOSED PLAN OF SUBDIVISION**  
 13030 LUNDY'S LANE THOROLD, ON  
 HIGHWAY 20 & THOROLD TOWNLINE RD

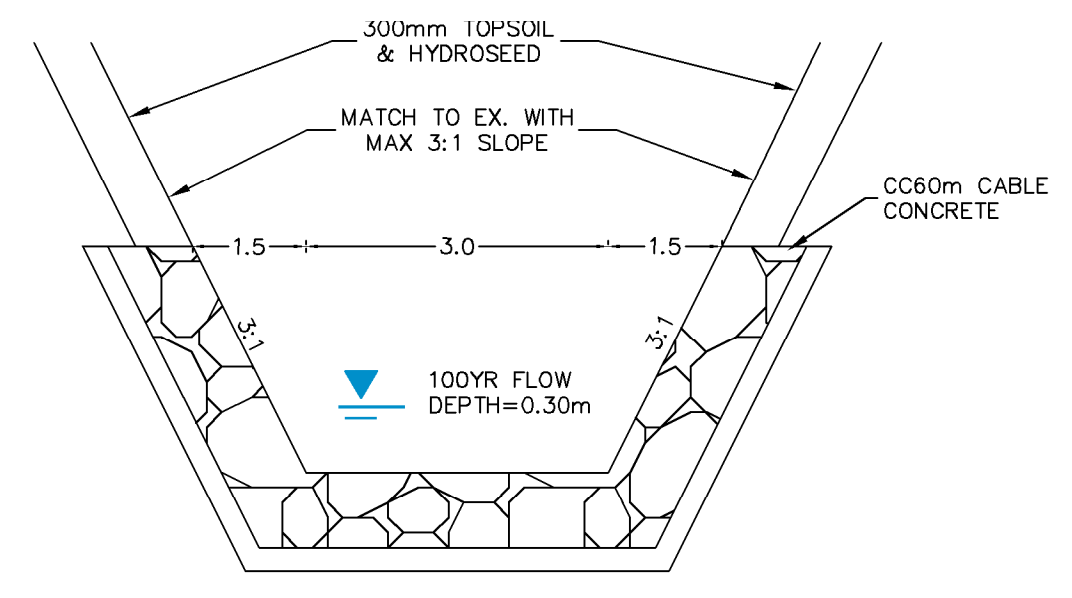
<b>PRELIMINARY SWM FACILITY PLAN</b>	
Project Manager	M.GOJSIC
Design By	CNF
Drawn By	AXG
Surveyed By	OTHERS
Date	Nov.06/23
Scale	1:400
Project No.	49428-100
Checked By	RSM
Checked By	CNF
Drawing No.	<b>P-SW1.1</b>
Sheet	of

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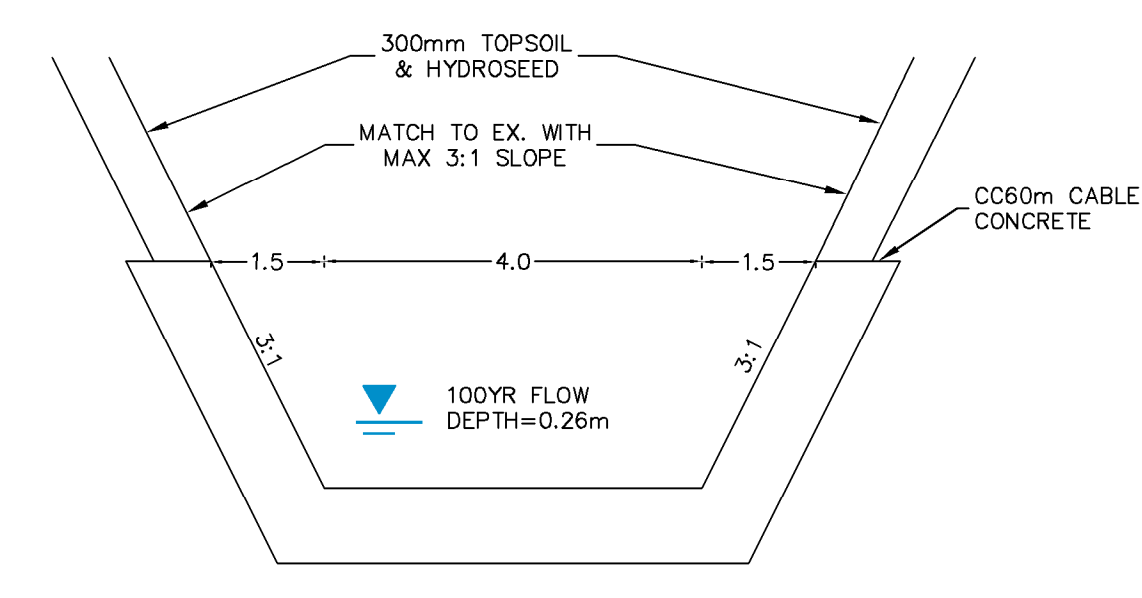
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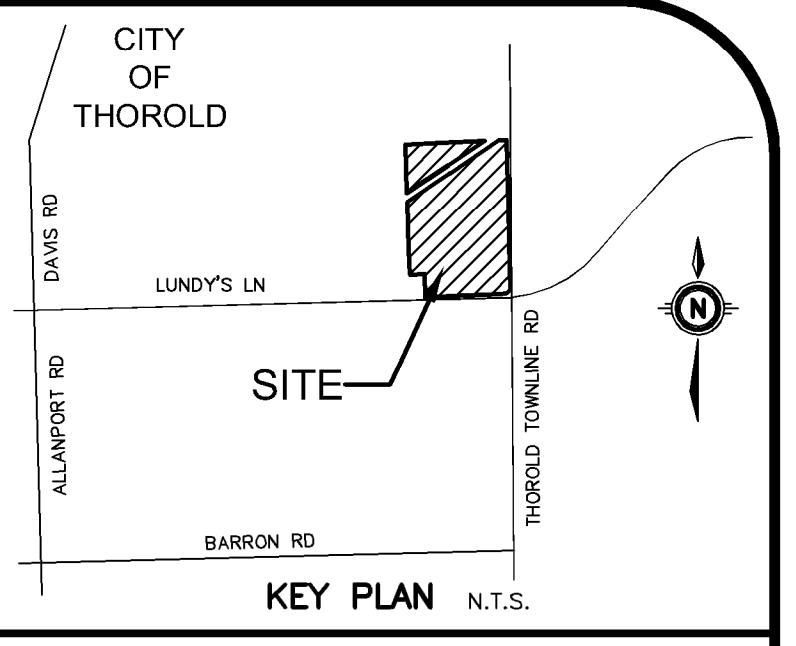
**SWM FACILITY - SECTION A-A**  
SCALE 1:500 HOR, 1:100 VERT



**EMERGENCY SPILLWAY - SECTION B-B**  
N.T.S.



**FOREBAY BYPASS - SECTION C-C**  
N.T.S.



GEODETIC BM	ELEV. =	NA m
SITE BENCHMARK	ELEV. =	NA m

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1.	ISSUED FOR DRAFT PLAN APPROVAL	RSM 2023-11-24
No.	REVISION	BY YYYY-MM-DD

**MTE**  
Engineers, Scientists, Surveyors  
905-639-2552

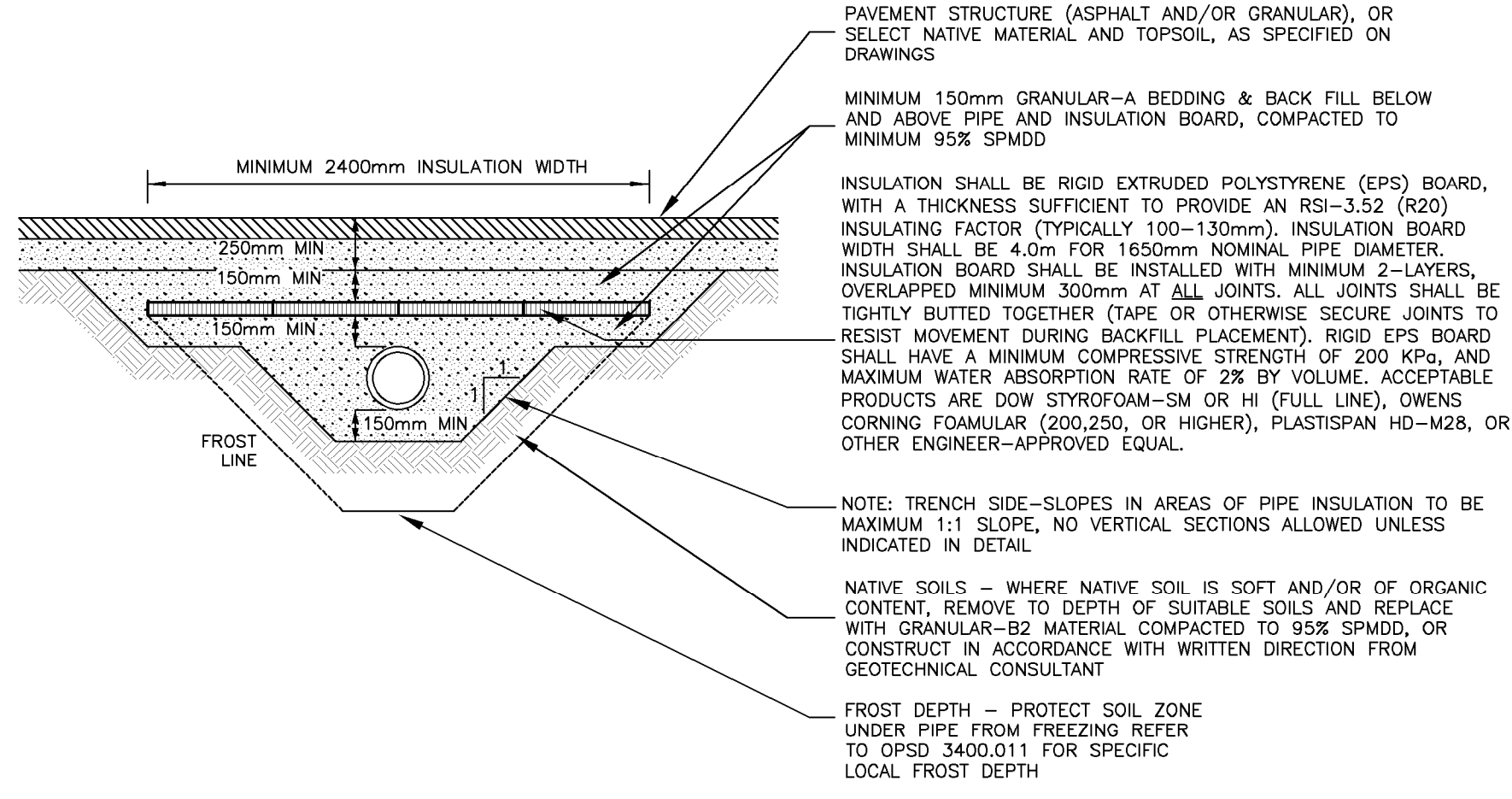
LICENSED PROFESSIONAL ENGINEER  
2023-11-24  
R. MELICK  
49428-100  
PROVINCE OF ONTARIO  
DIGITAL ORIGINAL  
NOT FOR CONSTRUCTION

CLIENT  
**RUDANCO HOSPITALITY CORPORATION**  
4728 DORCHESTER RD. NIAGARA FALLS, ON  
PROJECT  
**PROPOSED PLAN OF SUBDIVISION 13030 LUNDY'S LANE**  
HIGHWAY 20 & THOROLD TOWNLIN RD THOROLD, ON  
DRAWING

<b>PRELIMINARY SWM FACILITY SECTIONS</b>	
Project Manager M.GOUJIC	Project No. <b>49428-100</b>
Design By CNF	Checked By RSM
Drawn By AXG	Checked By CNF
Surveyed By OTHERS	Drawn No.
Date Nov.06/23	<b>P-SW1.2</b>
Scale 1:400	Sheet of

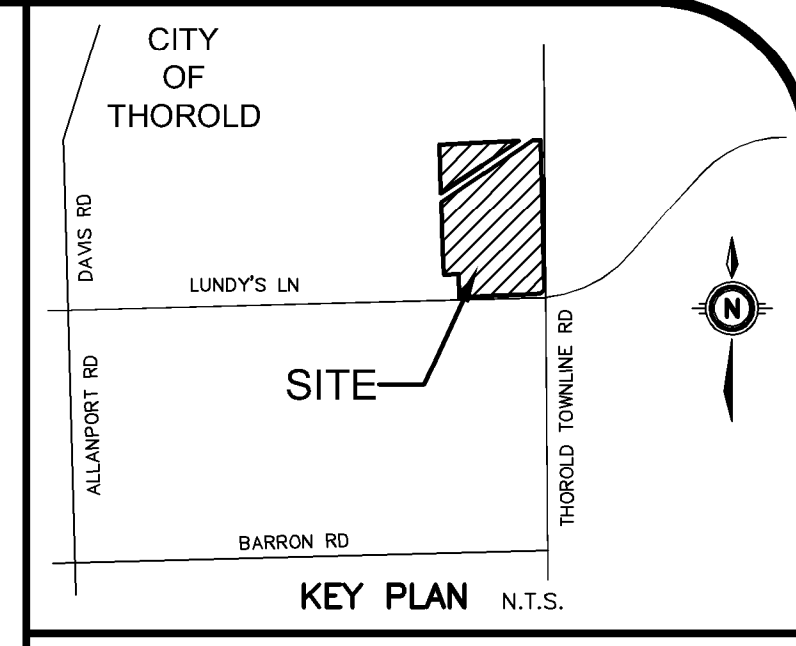
November 23, 2023 - 3:36:30 PM - Plotted By: Chirag Maniya

P:\P\49428\100\49428-100-SW1



**SEWER PIPE INSULATION DETAIL**  
FOR SEWER PIPES HAVING LESS THAN 1.5m COVER N.T.S.

**DETAIL 1**



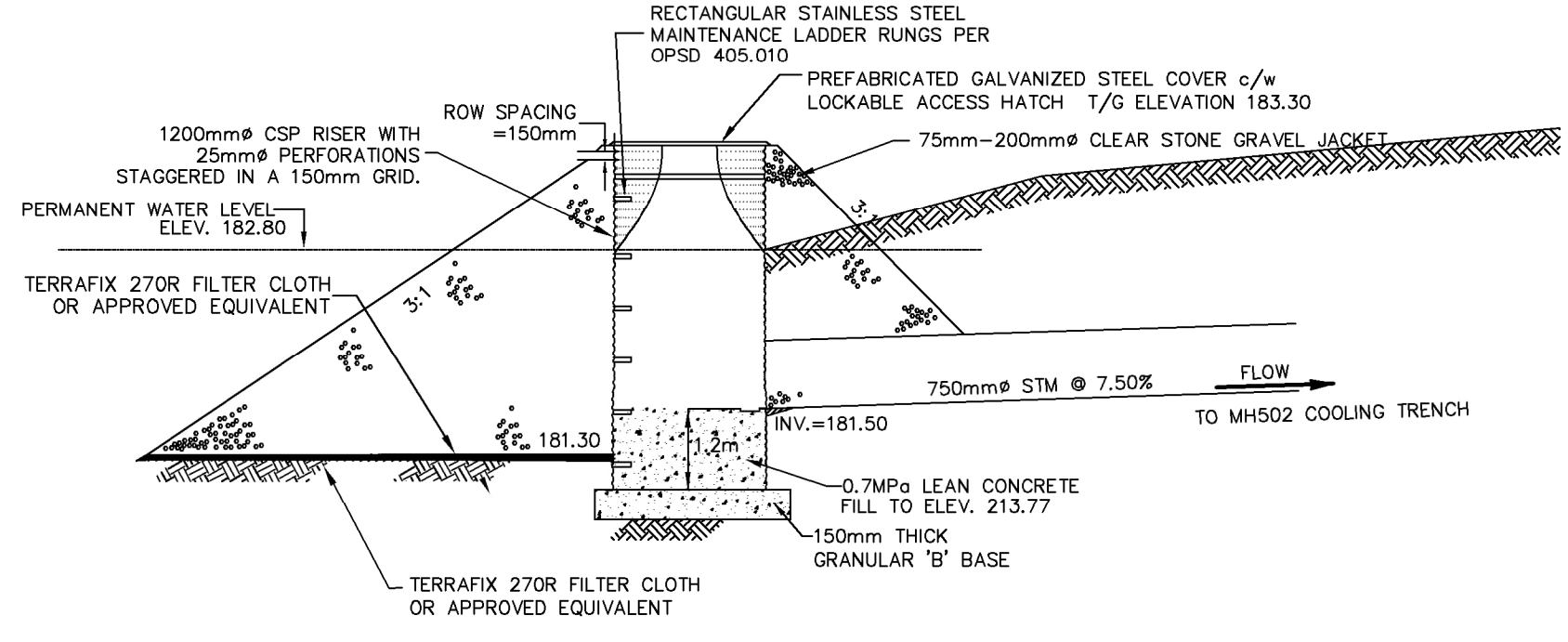
GEODETIC BM ELEV. = NAm

SITE BENCHMARK ELEV. = NAm

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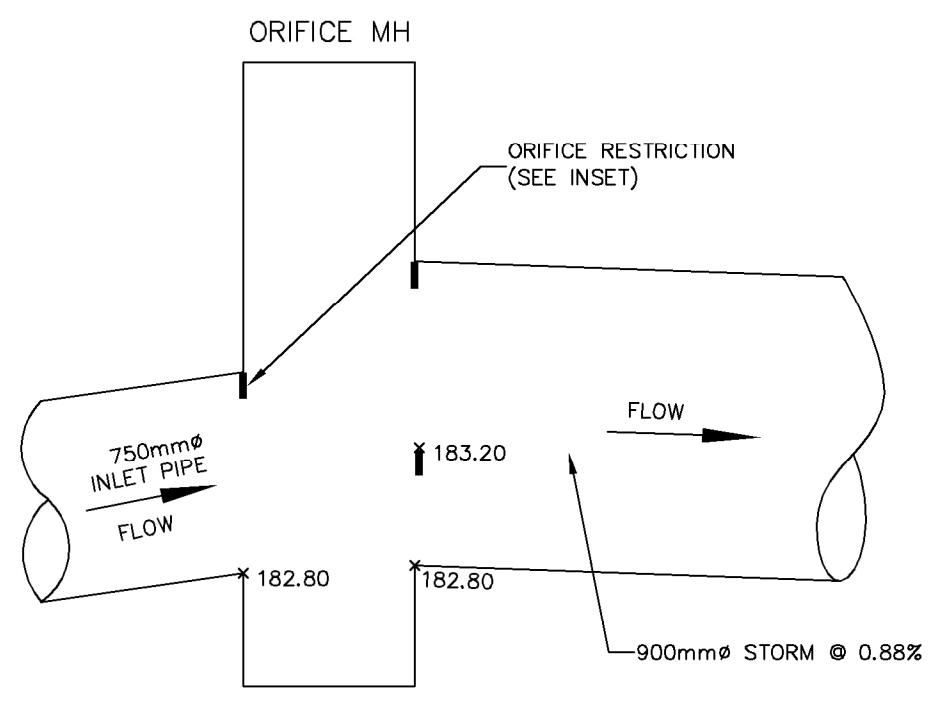
**POND CONSTRUCTION NOTES:**

- ALL STANDARDS ARE AS FOLLOWS, UNLESS INDICATED OTHERWISE ON THE CONTRACT DRAWINGS.
- ALL BERMS (INCLUDING INTERNAL) TO BE CONSTRUCTED ON APPROVED SUBGRADE (APPROVED BY GEOTECHNICAL ENGINEER) WITH ON SITE MATERIAL PLACED IN MAXIMUM 300mm LIFTS COMPACTED TO 95% SPMD. BERM MATERIAL AND BERM CONSTRUCTION TO BE SUPERVISED, APPROVED AND CERTIFIED BY GEOTECHNICAL ENGINEER.
- POND CELLS TO MAINTAIN A MINIMUM TOPSOIL THICKNESS OF 300mm ABOVE THE P.W. UNLESS OTHERWISE NOTED. FINISHED SLOPES AND BASE OF CELLS TO BE TOPSOILED AND VEGETATED AS SOON AS POSSIBLE FOLLOWING CONSTRUCTION. NO TOPSOIL SHALL BE PLACED BELOW THE POOL.
- CONCRETE CUT-OFF COLLAR REQUIRED ON OUTLET PIPE. COLLAR TO BE 1.0m THICK AND TO EXTEND 1.0m BEYOND LIMIT OF CONSTRUCTION TRENCH. CAREFUL HAND COMPACTION OF LOW PERMEABILITY FILL AROUND THE SEEPAGE COLLARS IS REQUIRED TO ENSURE INTIMATE CONTACT BETWEEN SOIL AND PIPE TO BE INSTALLED AS DIRECTED BY GEOTECHNICAL ENGINEER.
- BACKFILL OF PIPE TRENCHES IN THE VICINITY OF THE PROPOSED INLET AND OUTLET STRUCTURES TO CONSIST OF LOW PERMEABILITY CLAY PLACED IN 300mm THICK LIFTS COMPACTED TO 95% SPMD, AS DIRECTED BY GEOTECHNICAL ENGINEER.
- STORM SEWER MATERIALS SHALL BE AS FOLLOWS (UNLESS OTHERWISE INDICATED):  
POLYVINYL CHLORIDE (PVC) CSA-B182.2 DR-35 100mm TO 450mm  
CONCRETE PIPE CSA-A257.2 CLASS 65-D FOR 525mm TO 900mm  
CONCRETE PIPE CSA-A257.2 CLASS 50-D FOR 975mm AND LARGER
- ALL STORM SEWERS SHALL HAVE RUBBER GASKET JOINTS (WHERE APPLICABLE) AND BE INSTALLED IN CLASS 'B' BEDDING.

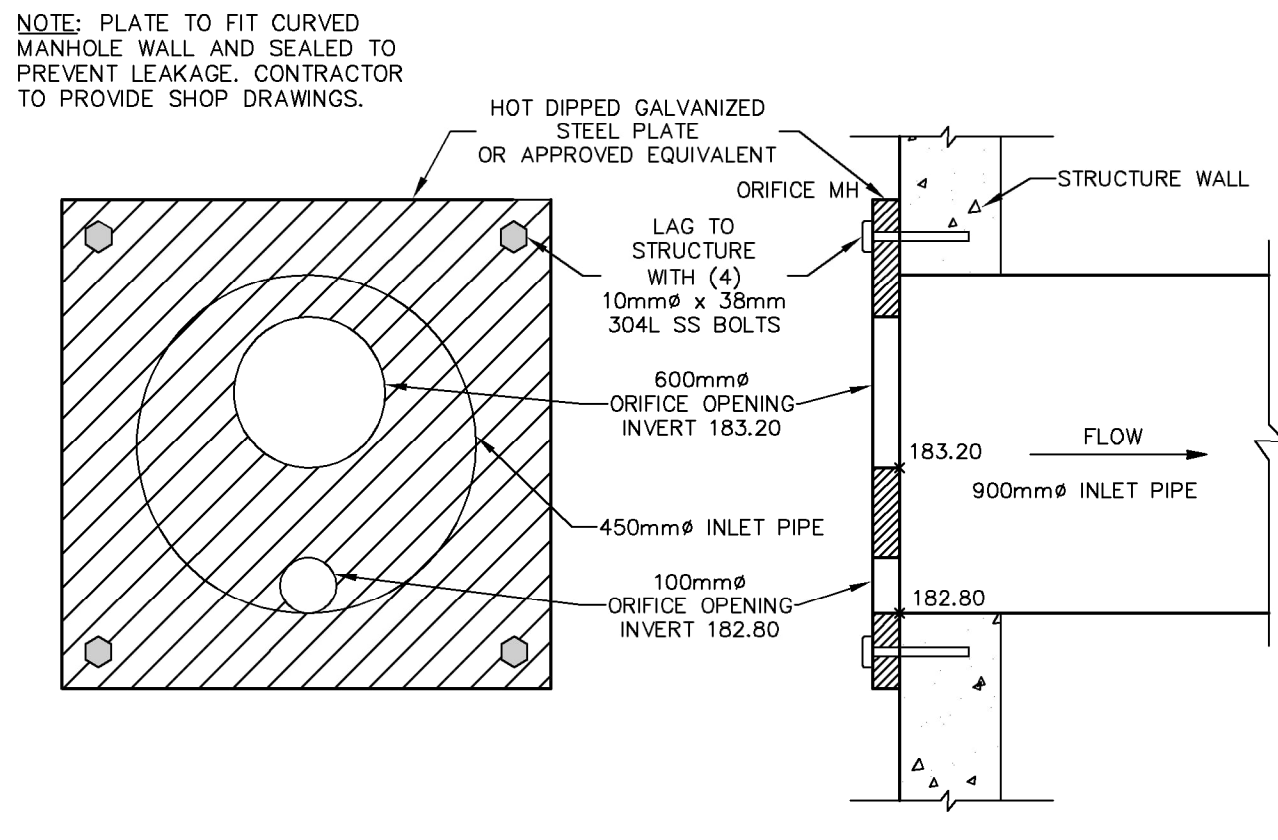


**CSP RISER DETAIL**  
N.T.S.

**DETAIL 2**



**ON-LINE ORIFICE DETAIL**  
N.T.S.



**ON-LINE ORIFICE DETAIL**  
N.T.S.

**DETAIL 3**

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1.	ISSUED FOR DRAFT PLAN APPROVAL	RSM 2023-11-24
NO.	REVISION	BY YYYY-MM-DD



905-639-2552



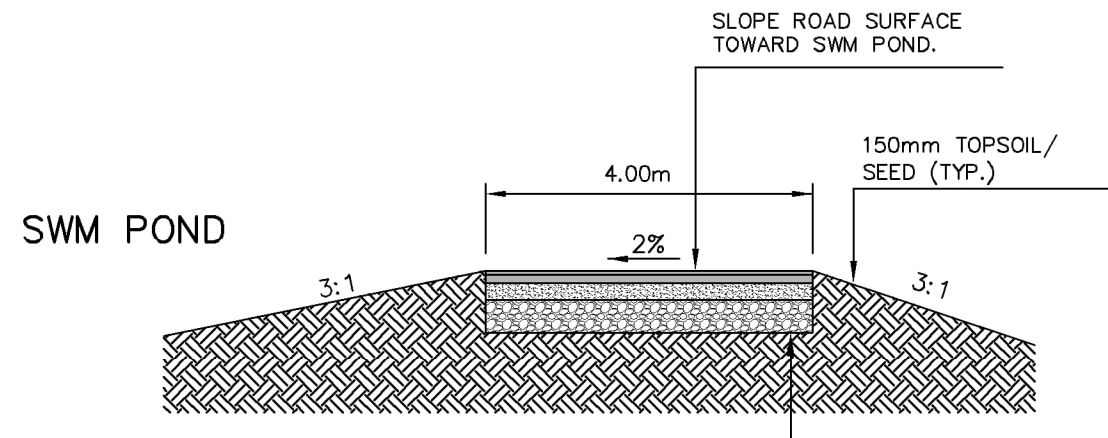
NOT FOR CONSTRUCTION

CLIENT  
**RUDANCO HOSPITALITY CORPORATION**  
4728 DORCHESTER RD. NIAGARA FALLS, ON

PROJECT  
**PROPOSED PLAN OF SUBDIVISION 13030 LUNDY'S LANE**  
HIGHWAY 20 & THOROLD TOWNLINE RD THOROLD, ON

**PRELIMINARY SWM FACILITY DETAILS AND NOTES**

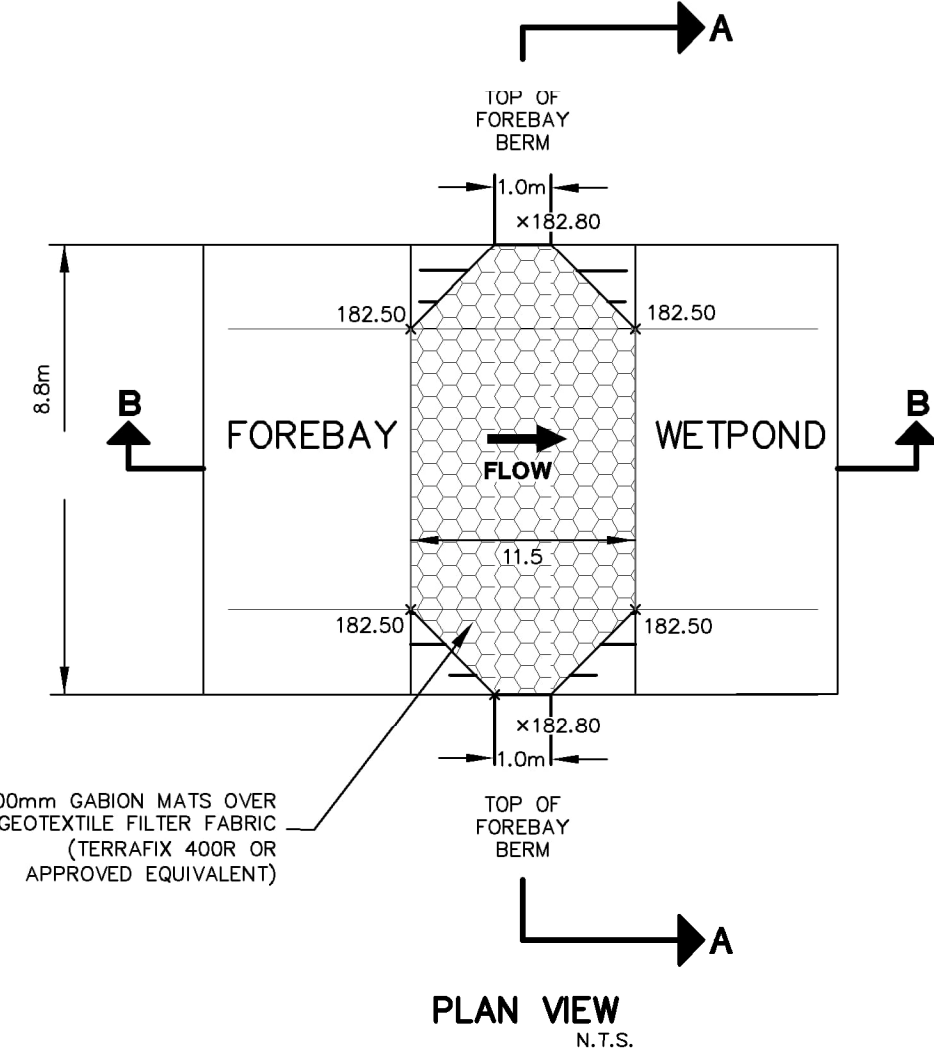
Project Manager	M.GOJSIC	Project No.	49428-100
Design By	CNF	Checked By	RSM
Drawn By	AXG	Checked By	CNF
Surveyed By	OTHERS	Drawing No.	
Date	Nov.06/23		<b>P-SW1.3</b>
Scale	1:400	Sheet	of



**DETAIL B**

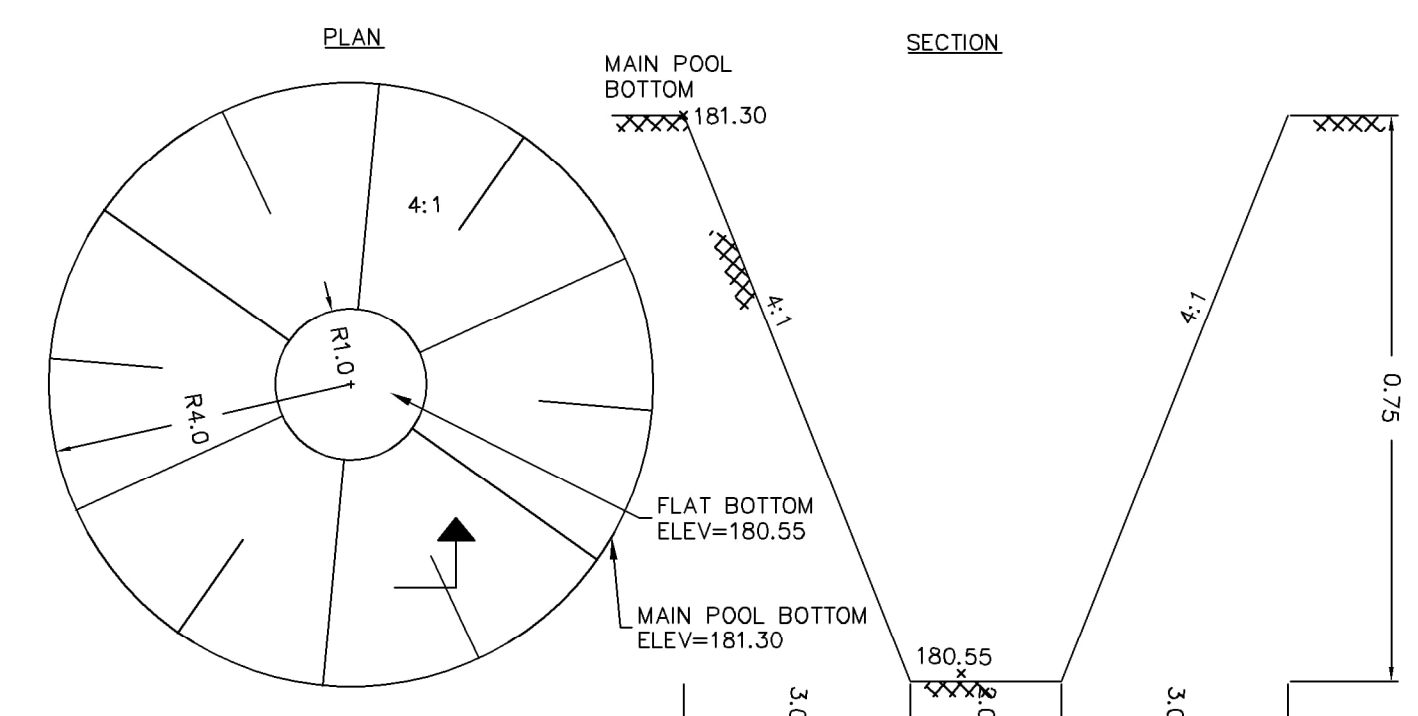
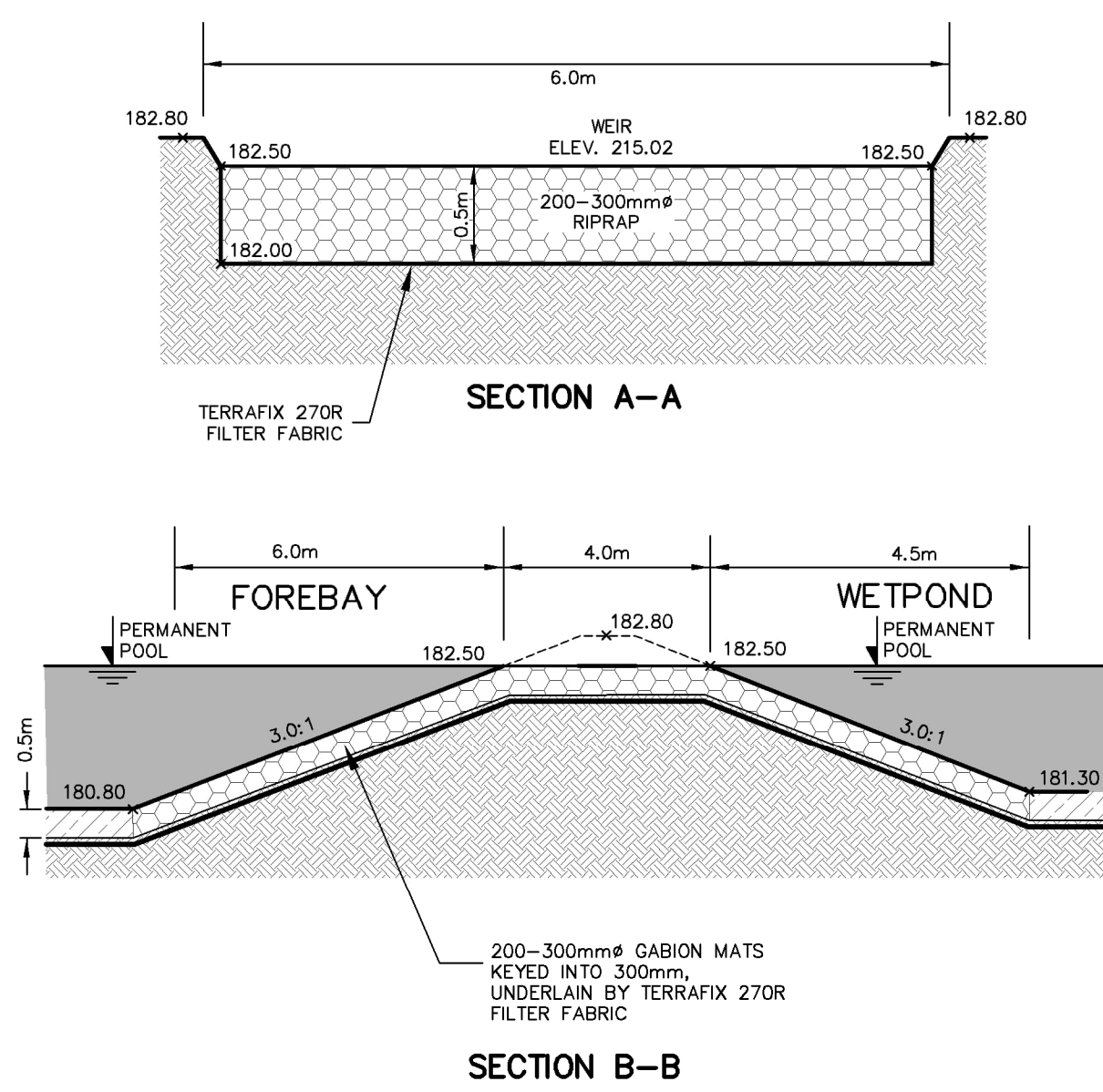
**TYPICAL ASPHALT ACCESS ROAD/TRAIL SECTION**  
N.T.S.

**DETAIL 4**



**FOREBAY WEIR**  
N.T.S.

**DETAIL 5**



**MAINTENANCE DRAWDOWN SUMP**  
SCALE: H 1:100 V 1:10

**DETAIL 6**

- DRAWDOWN OF PERMANENT POOL FOR MAINTENANCE PURPOSES TO BE DONE USING PORTABLE PUMP.
- PERMANENT POOL DRAWDOWN EFFLUENT SHALL BE DISCHARGED TO MH 405 OR DIRECTLY TO OUTLET CHANNEL (DOWNSTREAM OF COOLING TRENCH) TO PREVENT DISCHARGE OF SEDIMENT INTO COOLING TRENCH.
- DRAWDOWN EFFLUENT SHALL BE DISCHARGED THROUGH A FILTER BAG TO PREVENT DISCHARGE OF SEDIMENT INTO RECEIVING WATERCOURSE.

November 23, 2023 - 3:38:46 PM - Plotted By: Ching Maniya