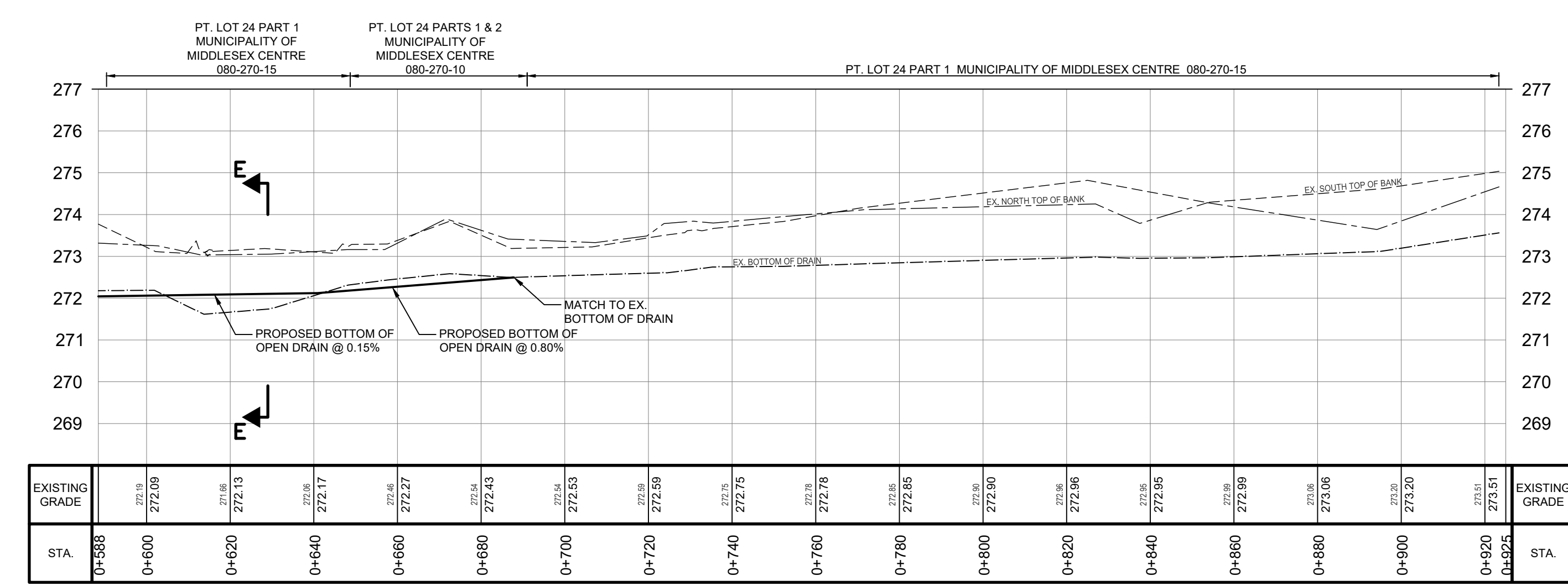


**PROFILE - ILBERTON DRAIN NO. 2**  
SCALE - 1:1000 H  
1:100 V



**PROFILE - ILBERTON DRAIN NO. 2**  
SCALE - 1:1000 H  
1:100 V

STRUCTURE DETAIL SCHEDULE - ILBERTON DRAIN NO. 2			
ITEM NO.	STA.	STRUCTURE DESCRIPTION	LENGTH
1	STA. 0+000 TO STA. 0+150	TWIN 750mm HDPE PIPE @ 0.14% c/w RODENT GRATE AND RIP RAP ON GEOTEXTILE	150m
2	STA. 0+150 TO STA. 0+293	TWIN 750mm CONC. FIELD TILE @ 0.20%	143m
3	STA. 0+293	DICB 1 - 3000mm x 1200mm DICB c/w BIRDCAGE GRATE, BERM, RIP RAP ON GEOTEXTILE AND 3:1 SLOPED TOP	
4	STA. 0+293	450mm HDPE PIPE @ 8.0% c/w GRANULAR 'B' BEDDING AND BACKFILL	2m
5	STA. 0+293	DICB 2 - 1200mm x 900mm DICB c/w BIRDCAGE GRATE, BERM, RIP RAP ON GEOTEXTILE AND 3:1 SLOPED TOP	
6	STA. 0+293 TO STA. 0+689	CLEAR, GRUB AND SEED BUFFER STRIPS - 15m WIDTH ON BOTH SIDES OF OPEN DRAIN	396m
7	STA. 0+293 TO STA. 0+641	OPEN DRAIN RECONSTRUCTION @ 0.15%	348m
8	STA. 0+641 TO STA. 0+689	OPEN DRAIN RECONSTRUCTION @ 0.80%	48m

STRUCTURE INFORMATION - ILBERTON DRAIN NO. 2	
STRUCTURE	DATA
DICB.1	STA. 0+293 3000mm x 1200mm DICB c/w BIRDCAGE GRATE, BERM, RIP RAP ON GEOTEXTILE AND 3:1 SLOPED TOP T/CONC = 271.70m S INV. = 270.81m E INV. = 270.87m
DICB.2	STA. 0+293 1200mm x 900mm DICB c/w BIRDCAGE GRATE, BERM, RIP RAP ON GEOTEXTILE AND 3:1 SLOPED TOP T/CONC = 272.20m W INV. = 271.03m

- NOTES:
- CONTRACTOR IS TO OBTAIN UTILITY LOCATES PRIOR TO CONSTRUCTION.
  - CONTRACTOR IS TO CONNECT EXISTING TILES DURING CONSTRUCTION.

NOMENCLATURE:

APPROX. c/w CONC.	APPROXIMATE COMPLETE WITH CONCRETE
Ø	CATCHBASIN CENTER LINE
Ø	CORRUGATED STEEL PIPE DIAMETER
DICB ELEV.	DITCH INLET CATCHBASIN ELEVATION
EX. INV.	EXISTING INVERT
MIN. PL. STA. TYP.	MINIMUM PROPERTY LINE RADIUS STATION TYPICAL

LEGEND:

---	EX. GROUND / EX. BOTTOM OF DRAIN
---	EX. SOUTH TOP OF BANK
---	EX. NORTH TOP OF BANK
---	BOTTOM OF OPEN DRAIN
---	EXISTING GRADE
---	CONCRETE PIPE
---	HDPE PIPE
---	CATCHBASIN

- BENCH MARKS:
- BM 517029-1 - ELEV. = 275.87  
CC IN BASE OF MIDDLE STREET LIGHT IN PARKING LOT ALONG THE SOUTH PROPERTY LINE OF ROLL NO. 080-270-15.
  - BM 517029-2 - ELEV. = 275.66  
SIB LOCATED ON SOUTHWEST CORNER OF ROLL NO. 080-270-10, 228m EAST OF CALVERT LINE AT ENTRANCE GATE OF MIDDLESEX CENTRE WASTEWATER TREATMENT FACILITY.
  - BM 517029-3 - ELEV. = 273.64  
CC ON SOUTHEAST CORNER OF EX. DICB LOCATED AT DOWNSTREAM END OF THE OPEN DRAIN PORTION OF ILBERTON DRAIN NO. 2

THE POSITION OF POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED.

BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR ANY DAMAGE TO THEM.



NO.	DATE	REVISION DESCRIPTION	CHKD
4.	02/07/2025	ENGINEER'S REPORT	B.S.
3.	06/28/2024	DESIGN REVIEW MEETING	B.S.
2.	02/08/2024	DRAFT DESIGN	B.S.
1.	03/22/2023	DESIGN BRIEF	B.B.

**GEI Consultants**  
235 NORTH CENTRE ROAD, SUITE 103  
LONDON, ONTARIO N5X 4E7  
519.672.9403

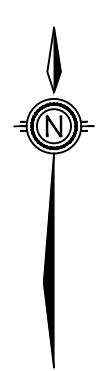
**ILBERTON DRAIN NO.2**

**MUNICIPALITY OF MIDDLESEX CENTRE**

**PROFILE**

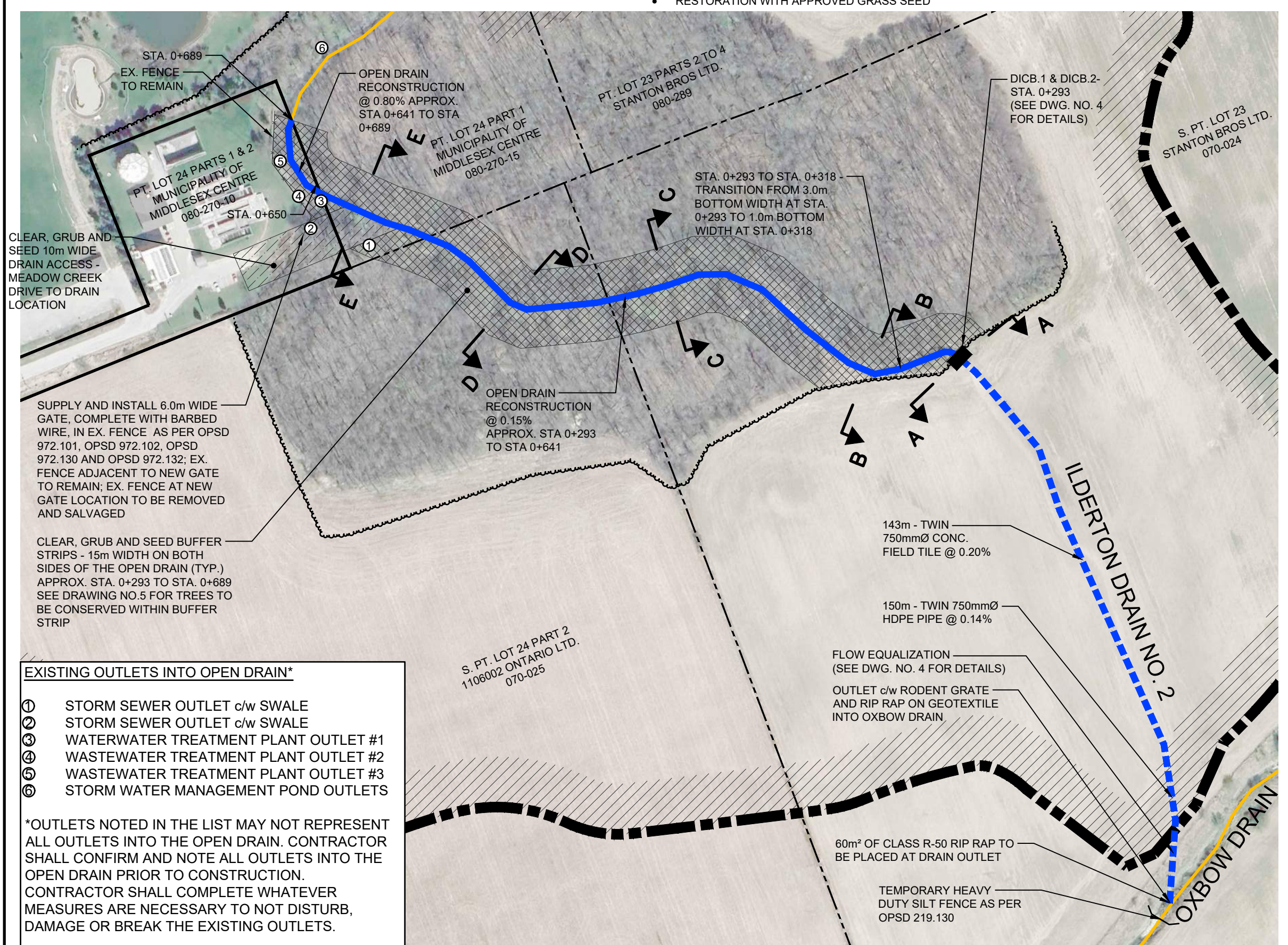
DRAWN BY:	APPROVED BY:	PROJECT NO.:	DRAWING NO.:
B.N./C.M.	B.S.	517029	2
DESIGNED BY:	DATE:	SCALE:	
C.C.	MARCH 2023	AS NOTED	

ALL UTILITIES AND STRUCTURES SHOWN ON THIS DRAWING ARE BASED ON THE INFORMATION PROVIDED BY THE CLIENT. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND UTILITIES AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND STRUCTURES FROM DAMAGE DURING CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN A RECORD OF ALL UTILITIES AND STRUCTURES ENCOUNTERED DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ALL ADJACENT PROPERTIES AND UTILITIES TO ORIGINAL OR BETTER CONDITION AFTER CONSTRUCTION IS COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND UTILITIES AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND STRUCTURES FROM DAMAGE DURING CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN A RECORD OF ALL UTILITIES AND STRUCTURES ENCOUNTERED DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ALL ADJACENT PROPERTIES AND UTILITIES TO ORIGINAL OR BETTER CONDITION AFTER CONSTRUCTION IS COMPLETE.



**15m BUFFER STRIP NOTES:**

- BUFFER STRIPS TO BE 15m WIDE ON BOTH SIDES OF THE OPEN DRAIN, MEASURED FROM THE TOP OF BANK, EXCEPT WHERE THE BUFFER STRIP WOULD EXTEND BEYOND EX. TREELINE LIMITS
- CLEAR GRUB AND REMOVE OVERGROWTH AS PER SPECIFICATIONS
- SEE DRAWING NO. 5 FOR TREES TO BE CONSERVED WITHIN BUFFER STRIP
- TOP SOIL TO BE STRIPPED FOR FULL 15m WIDTH AND TEMPORARILY STOCKPILED AS DIRECTED BY THE ENGINEER
- OPEN DRAIN EXCAVATED MATERIAL TO BE SPREAD ON ONE OR BOTH SIDES OF THE OPEN DRAIN AS DIRECTED BY THE ENGINEER - MAXIMUM SPOIL DEPTH = 200mm
- STOCKPILED TOP SOIL TO BE PLACED OVER BUFFER STRIP AREA TO A MINIMUM 150mm DEPTH
- RESTORATION WITH APPROVED GRASS SEED

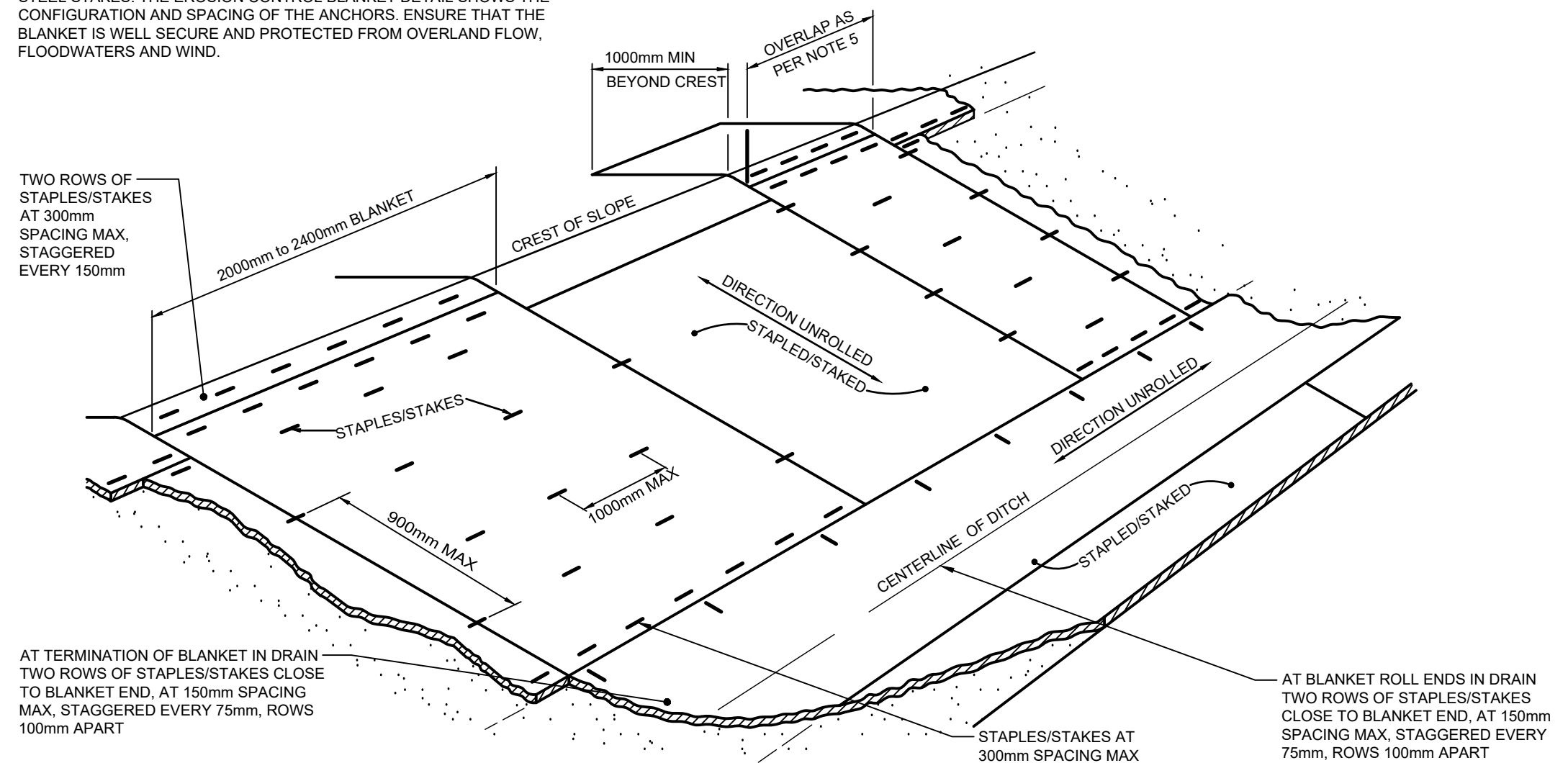


- EXISTING OUTLETS INTO OPEN DRAIN\***
- 1 STORM SEWER OUTLET c/w SWALE
  - 2 STORM SEWER OUTLET c/w SWALE
  - 3 WASTEWATER TREATMENT PLANT OUTLET #1
  - 4 WASTEWATER TREATMENT PLANT OUTLET #2
  - 5 WASTEWATER TREATMENT PLANT OUTLET #3
  - 6 STORM WATER MANAGEMENT POND OUTLETS
- \*OUTLETS NOTED IN THE LIST MAY NOT REPRESENT ALL OUTLETS INTO THE OPEN DRAIN. CONTRACTOR SHALL CONFIRM AND NOTE ALL OUTLETS INTO THE OPEN DRAIN PRIOR TO CONSTRUCTION. CONTRACTOR SHALL COMPLETE WHATEVER MEASURES ARE NECESSARY TO NOT DISTURB, DAMAGE OR BREAK THE EXISTING OUTLETS.

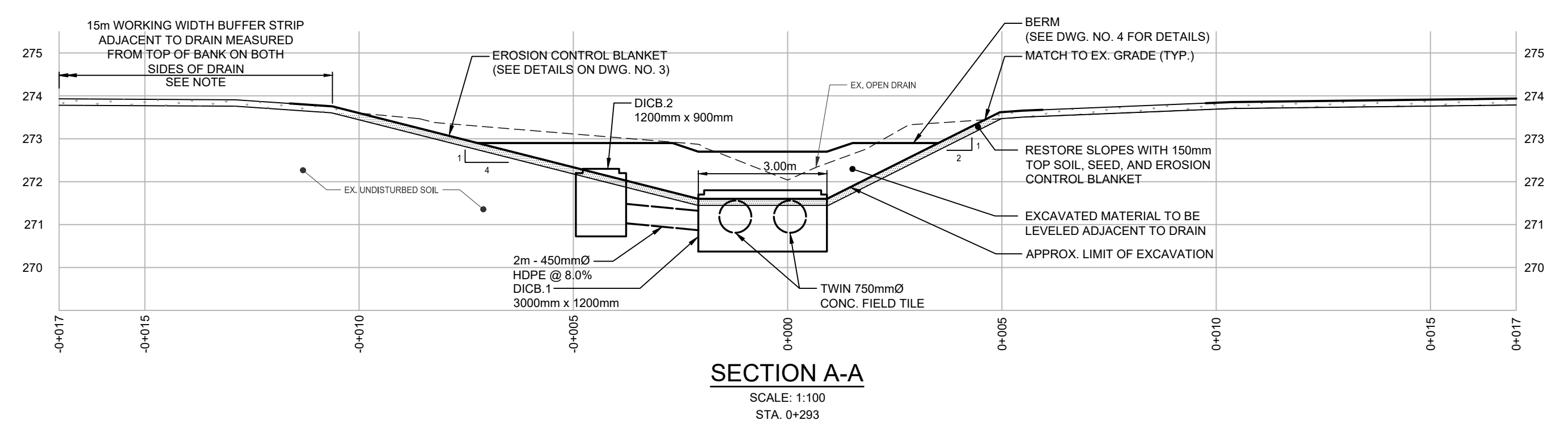
**PLAN**  
SCALE 1:2000

**EROSION CONTROL BLANKET INSTALLATION GUIDELINES:**

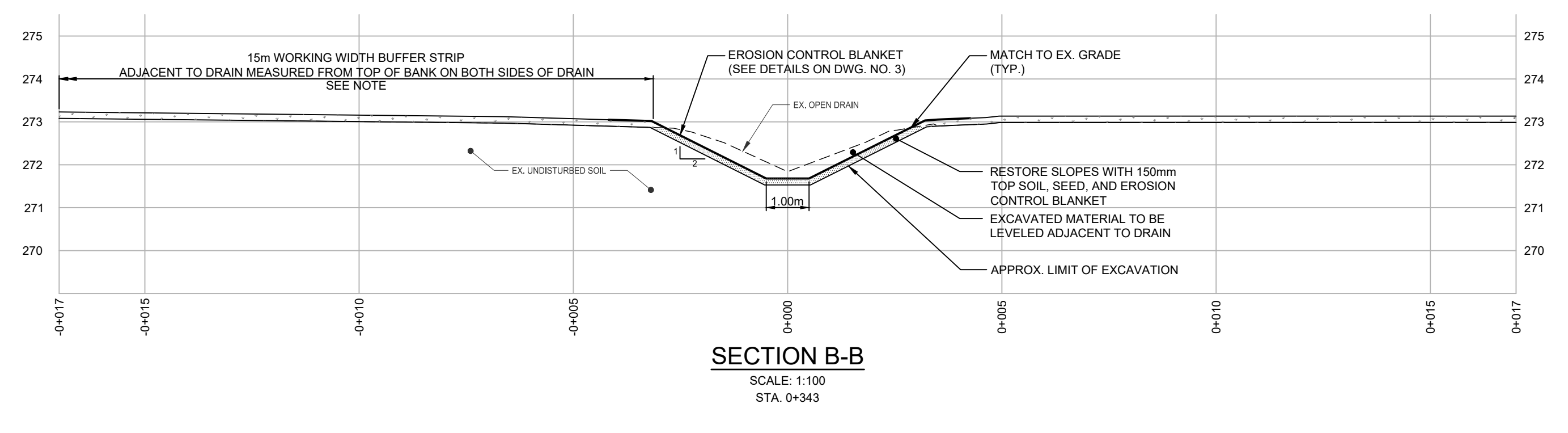
- 1) REGRADE THE SITE AS PER THE DESIGN.
- 2) PREPARE THE SITE BY REMOVING LARGE ROCKS, OBSTRUCTIONS OR MATERIALS THAT MAY PREVENT THE EROSION CONTROL BLANKET FROM MAKING DIRECT FIRM CONTACT WITH THE SOIL.
- 3) APPLY THE SEED AND LIGHTLY RAKE IN.
- 4) ANCHOR THE BLANKET AT THE TOP OF THE SLOPE IN A 150mm DEEP TRENCH (SEE ANCHOR DETAIL).
- 5) OVERLAP PARALLEL ROLLS 100mm AND END 300mm MINIMUM.
- 6) ANCHOR BIOMAC C OR APPROVED EQUIVALENT WITH WOODEN OR STEEL STAKES. THE EROSION CONTROL BLANKET DETAIL SHOWS THE CONFIGURATION AND SPACING OF THE ANCHORS. ENSURE THAT THE BLANKET IS WELL SECURE AND PROTECTED FROM OVERLAND FLOW, FLOODWATERS AND WIND.
- 7) DO NOT STRETCH THE BLANKETS.
- 8) PLANT AS PER THE DRAWING WITH ROOTED PLANTS OR LIVE STAKES.
- 9) INSERT STAKE/STAPLES SO THAT THE HEADS ARE PARALLEL TO THE FLOW OF WATER.
- 10) ADD ADDITIONAL STAKES/STAPLES SO THAT STAKES/STAPLES ARE PLACED IN CRITICAL CHANNEL POINTS (INTERFACE BETWEEN SIDE SLOPE AND DRAIN BOTTOM, CORNERS OF BLANKET, EDGES AND OVERLAP OF BLANKETS, ETC.)
- 11) BLANKETS ARE TO BE INSTALLED TO HAVE AN OVERLAP "SHINGLE" EFFECT IN THE DIRECTION OF FLOW



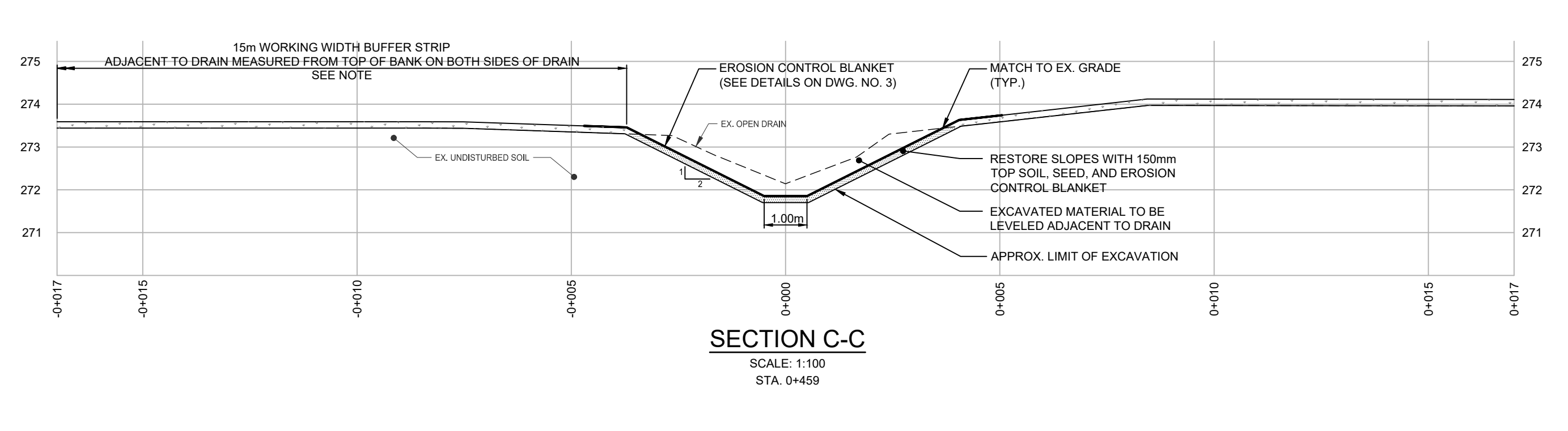
**SUGGESTED MANUFACTURER INSTALLATION SPECIFICATIONS: EROSION CONTROL BLANKET \*\***  
NOT TO SCALE  
\*\* CONTRACTOR TO CONFIRM WITH EROSION CONTROL BLANKET MANUFACTURER



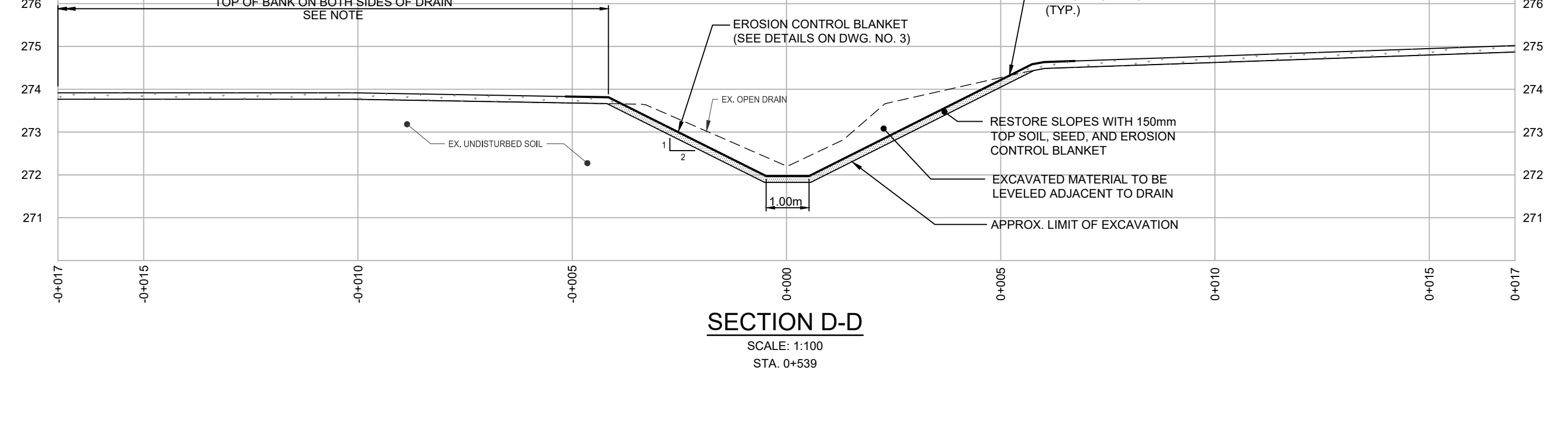
**SECTION A-A**  
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STA. 0+293



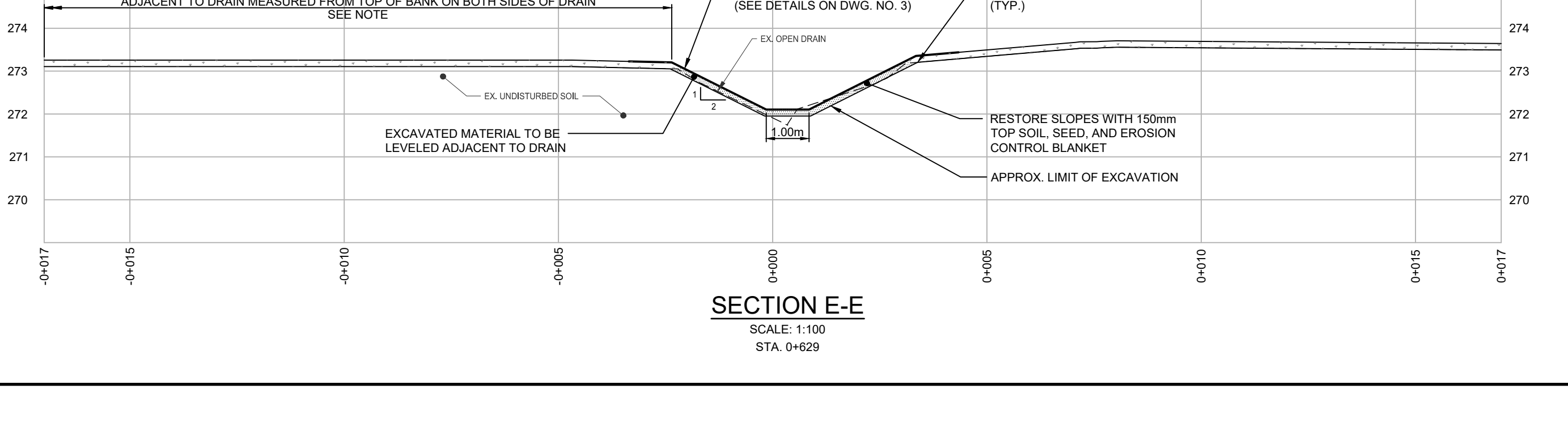
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SCALE: 1:100  
STA. 0+343



**SECTION C-C**  
SCALE: 1:100  
STA. 0+459



**SECTION D-D**  
SCALE: 1:100  
STA. 0+539



**SECTION E-E**  
SCALE: 1:100  
STA. 0+629

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2. CONTRACTOR IS TO CONNECT EXISTING TILES DURING CONSTRUCTION.

**NOMENCLATURE:**

APPROX. c/w CONC. C/S	APPROXIMATE COMPLETE WITH CATCHBASIN
Ø	CONCRETE CENTER LINE
Ø	CORRUGATED STEEL PIPE DIAMETER
Ø	DITCH INLET CATCHBASIN ELEVATION
EX. ELEV.	EXISTING ELEVATION
INV. MIN.	INVERT MINIMUM
PL. STA. TYP.	PROPERTY LINE RADIUS STATION TYPICAL

**LEGEND:**

	WATERSHED BOUNDARY
	INTERMEDIATE WATERSHED BOUNDARY
	R.O.W. LIMITS
	PROPERTY LINE
	EX. OPEN DRAIN
	PROPOSED CLOSED DRAIN
	PROPOSED OPEN DRAIN
	APPROX. EX. DRIPLINE
	DIRECTION OF FLOW
	EX. CATCHBASIN
	PROPOSED CATCHBASIN
	BENCHMARK LOCATION
	EXCAVATED MATERIAL SPREAD AND RESTORATION ON BUFFER STRIP
	RESTORATION ON OPEN DRAIN
	10m DRAIN ACCESS
	15m BUFFER STRIP

**BENCH MARKS:**

BM 517029-1 - ELEV. = 278.87	CC IN BASE OF MIDDLE STREET LIGHT IN PARKING LOT ALONG THE SOUTH PROPERTY LINE OF ROLL NO. 080-270-15.
BM 517029-2 - ELEV. = 275.66	SIB LOCATED ON SOUTHWEST CORNER OF EX. DICB LOCATED AT DOWNSTREAM END OF THE OPEN DRAIN PORTION OF MIDDLESEX CENTRE WASTEWATER TREATMENT FACILITY.
BM 517029-3 - ELEV. = 273.64	CC ON SOUTHEAST CORNER OF EX. DICB LOCATED AT DOWNSTREAM END OF THE OPEN DRAIN PORTION OF ILBERTON DRAIN NO. 2



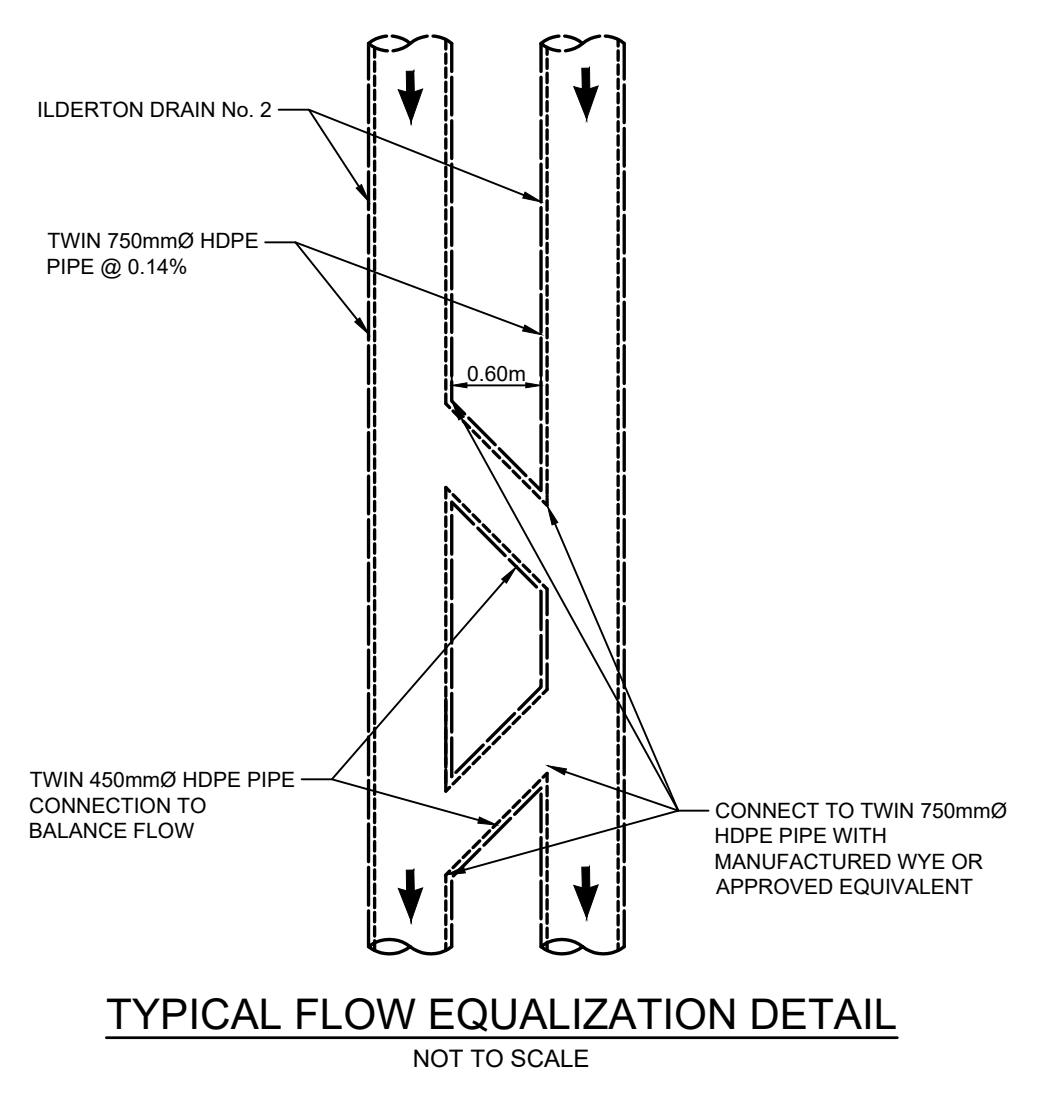
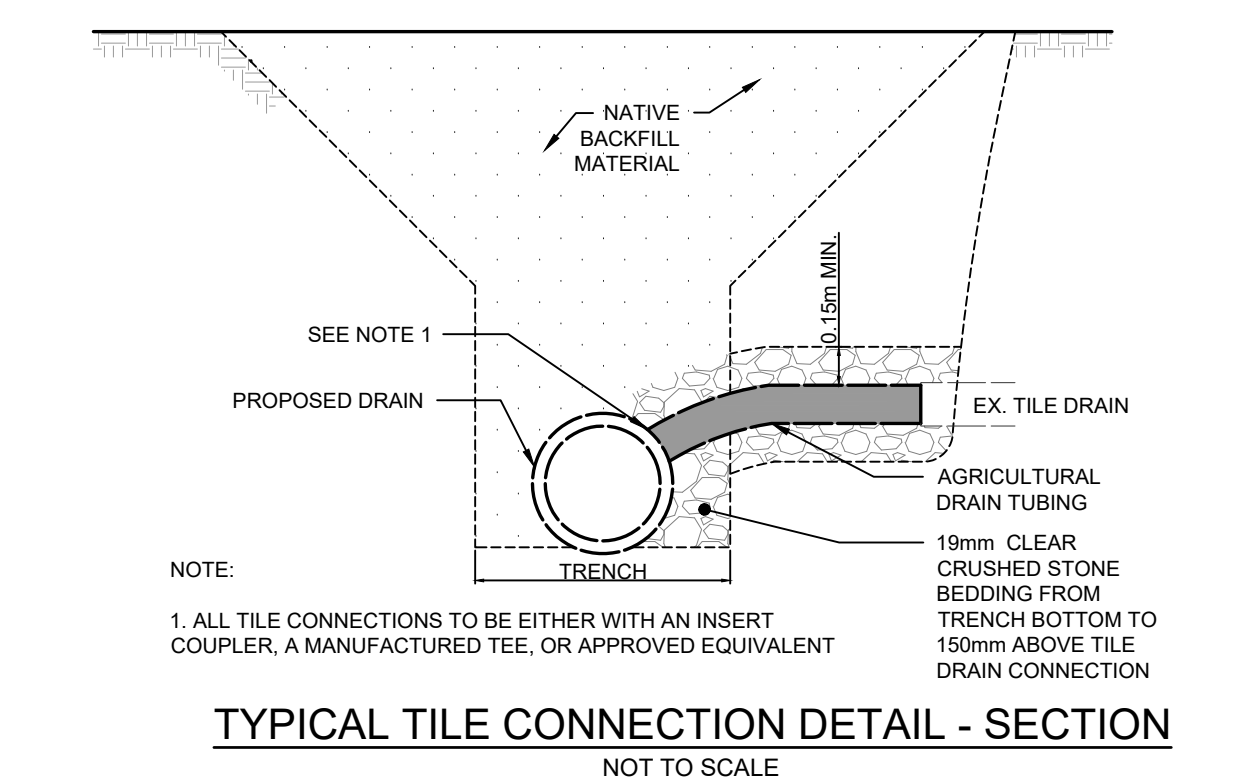
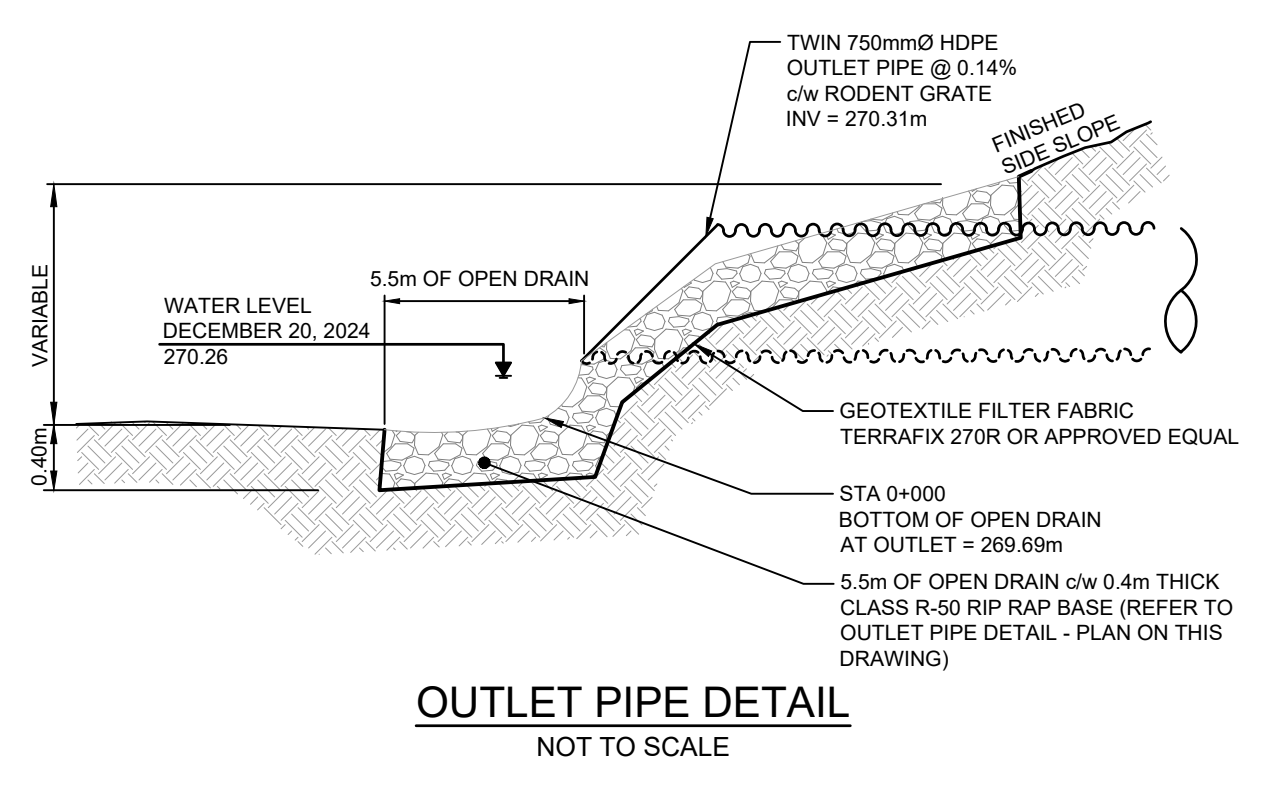
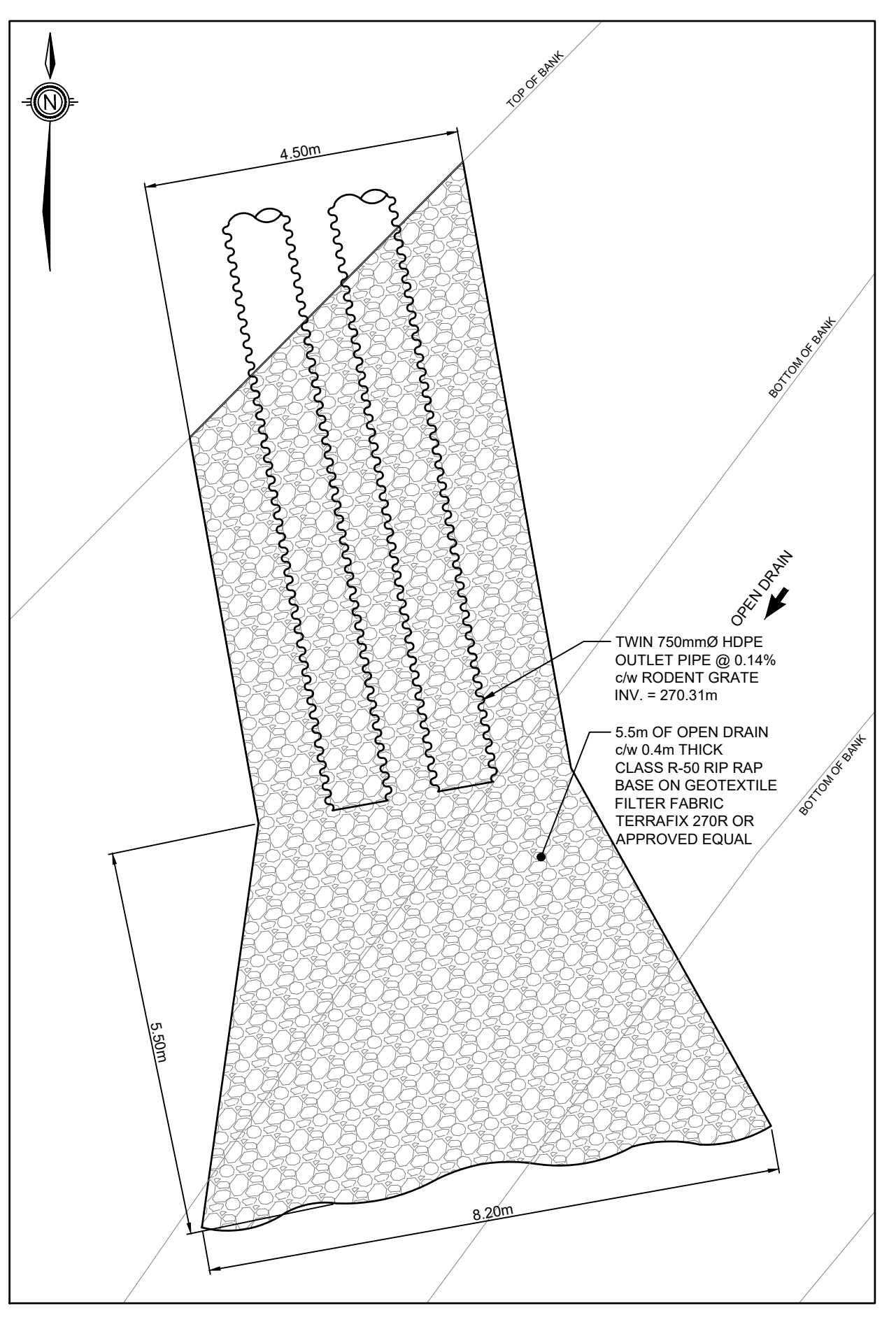
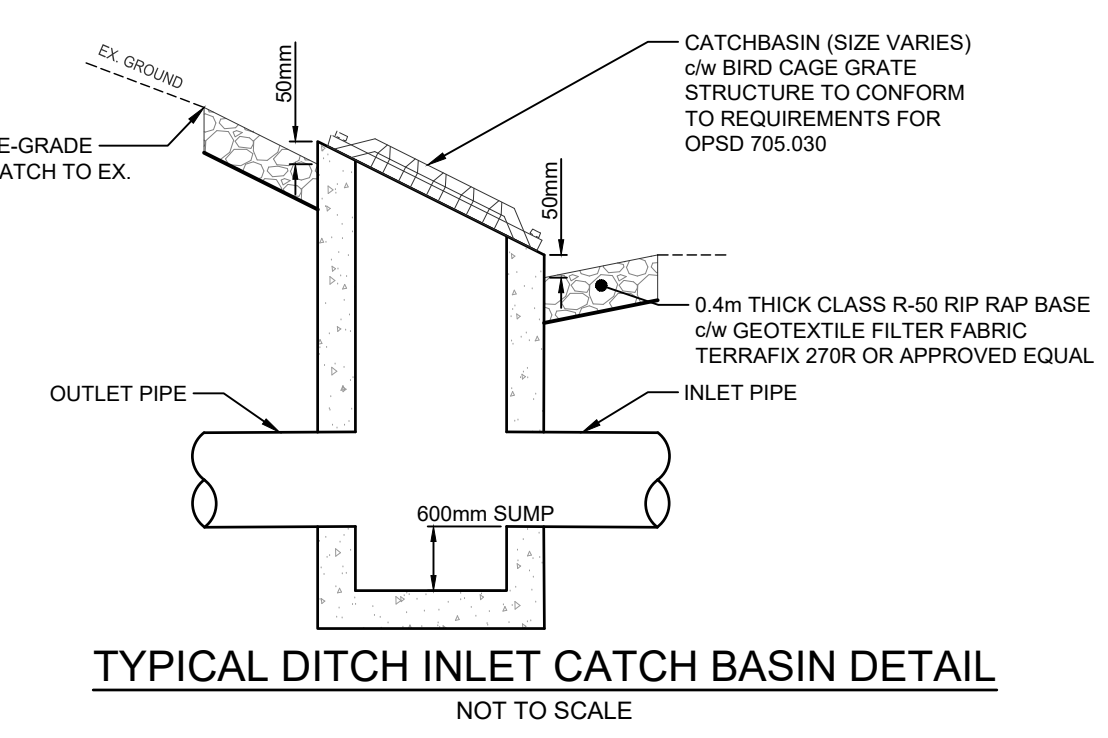
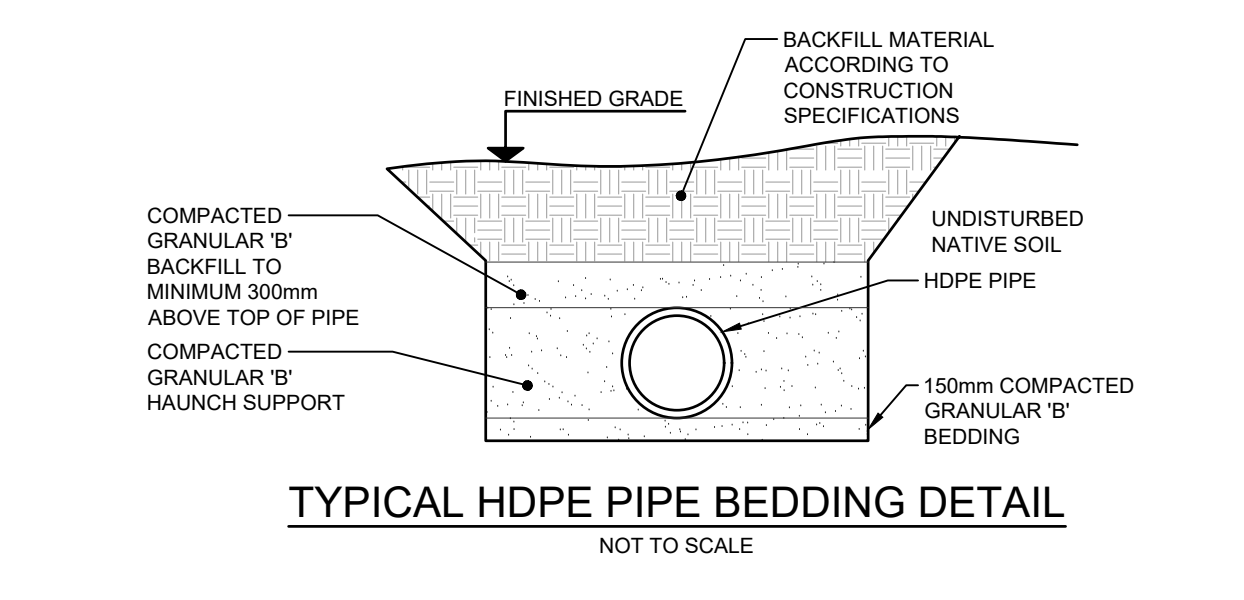
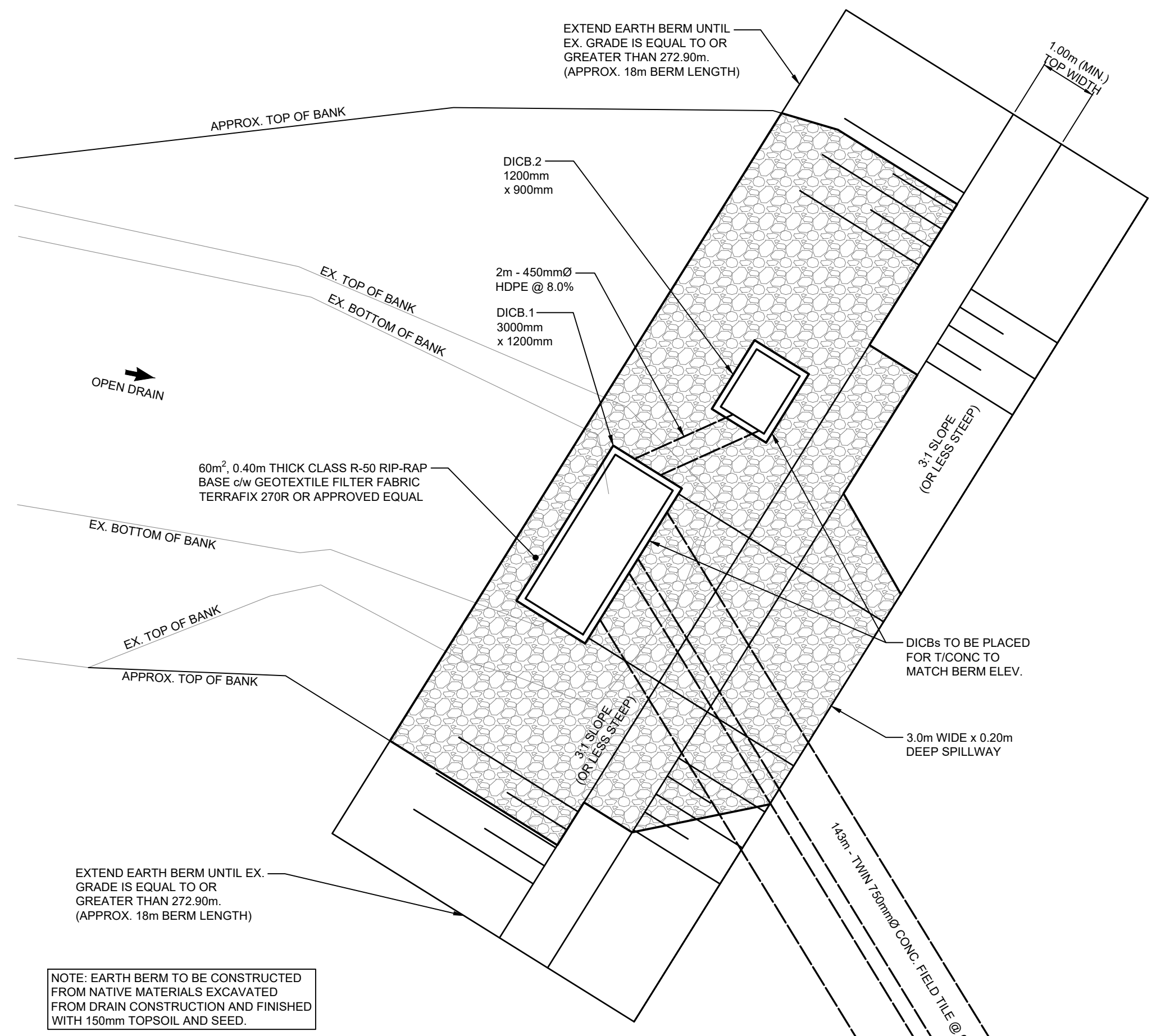
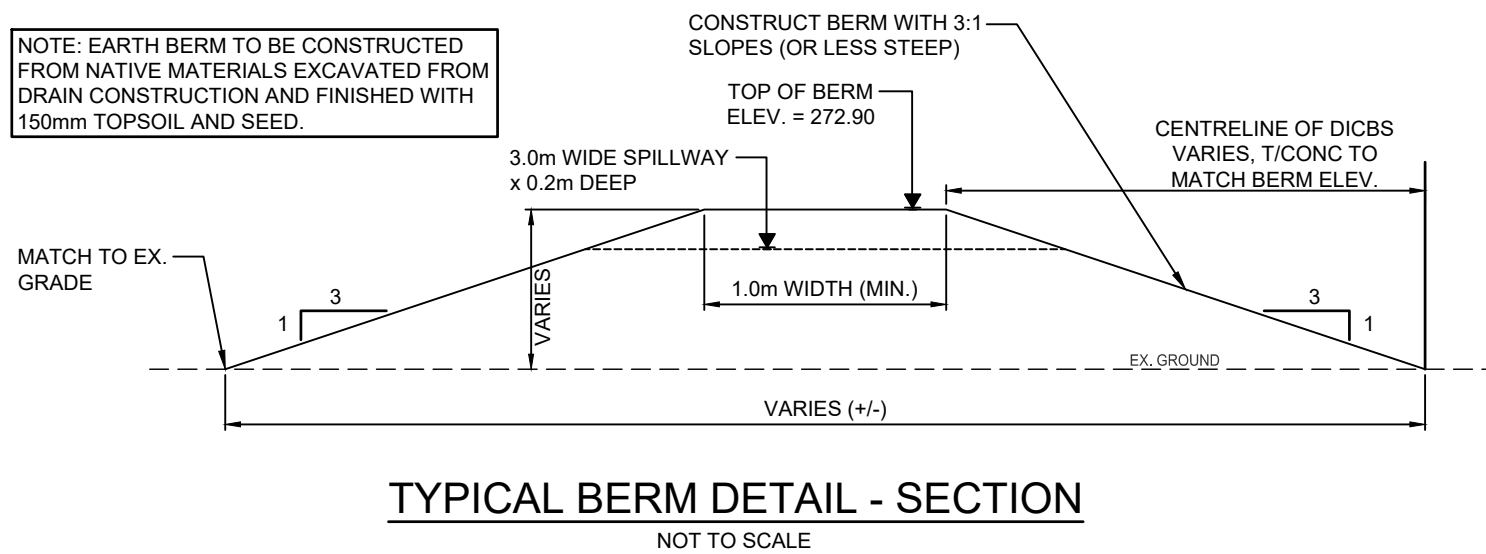
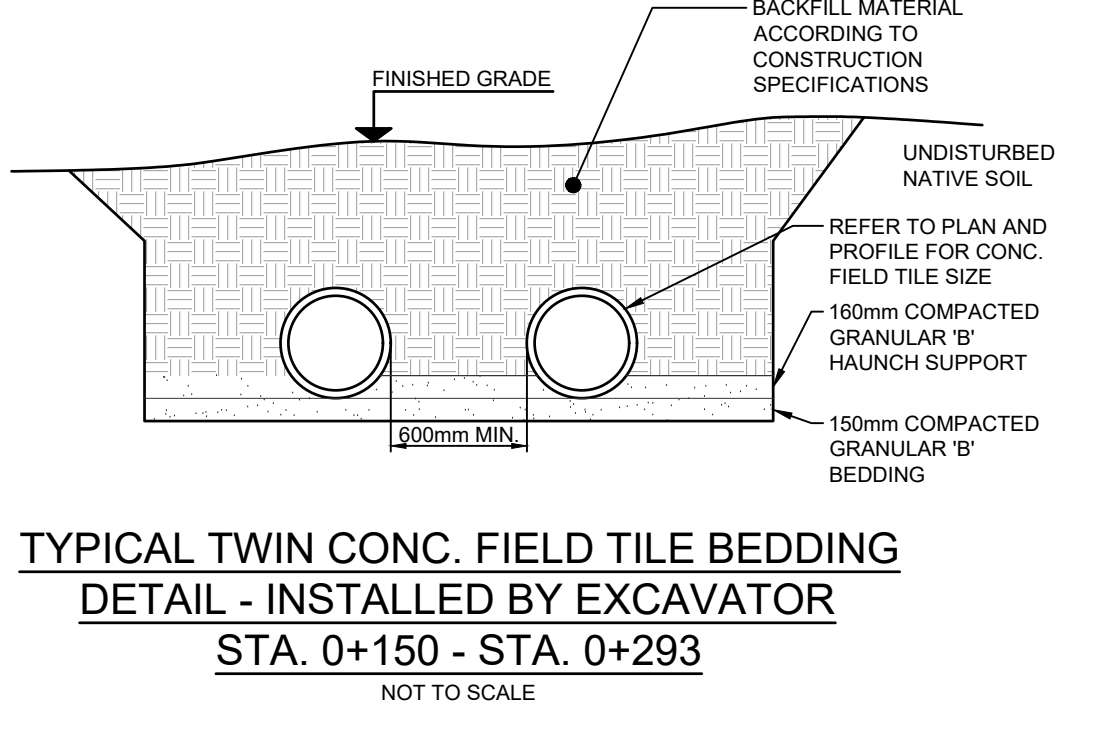
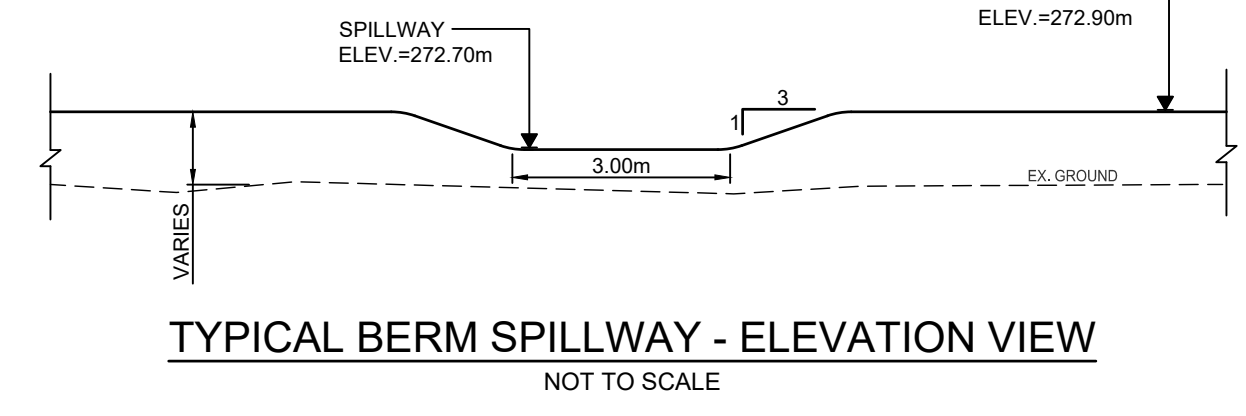
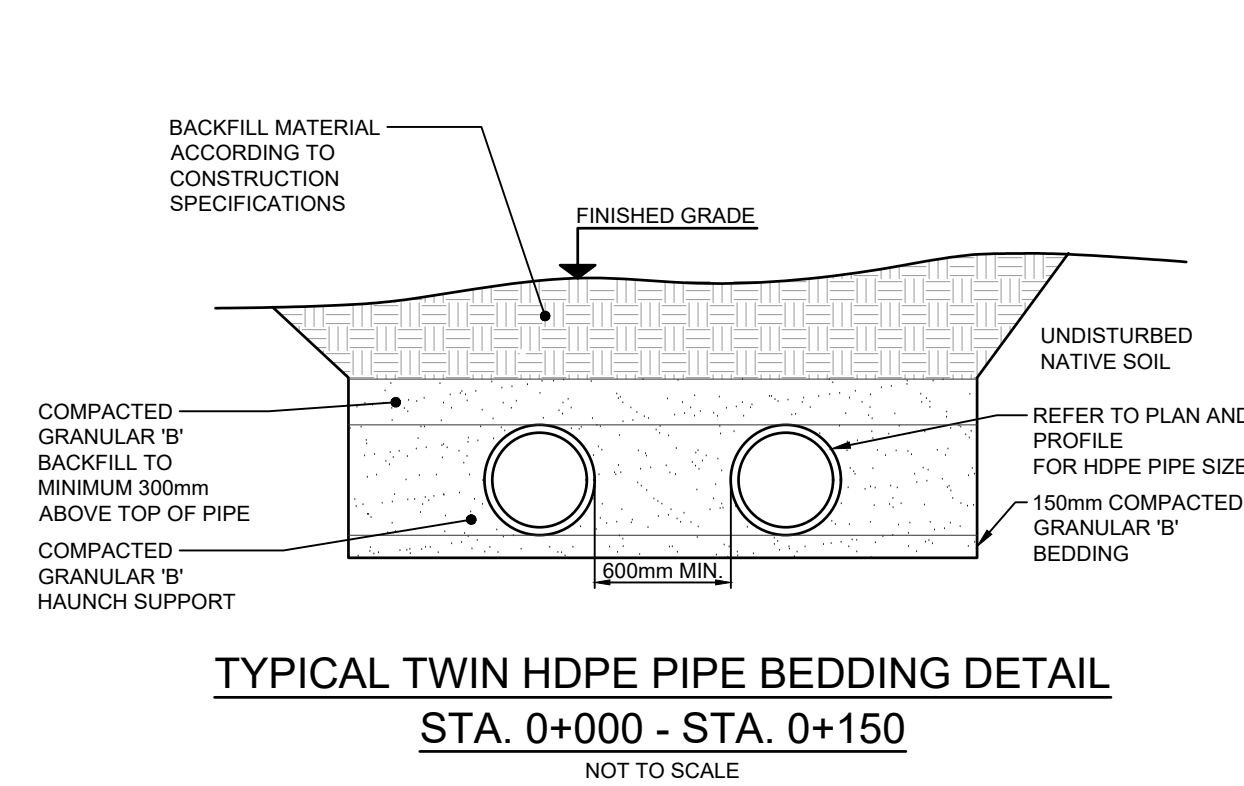
NO.	DATE	REVISION DESCRIPTION	CHKD
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2.	02/08/2024	DRAFT DESIGN	B.S.
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LONDON, ONTARIO N5X 4E7  
519.672.9403

**ILBERTON DRAIN NO.2**  
**MUNICIPALITY OF MIDDLESEX CENTRE**

**PLAN AND CROSS SECTIONS**

DRAWN BY:	APPROVED BY:	PROJECT NO.:	DRAWING NO.:
B.N./C.M.	B.S.	517029	3
DESIGNED BY:	DATE:	SCALE:	
C.C.	MARCH 2023	AS NOTED	



NOTES:

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NOMENCLATURE:

APPROX. c/w CONC.	APPROXIMATE COMPLETE WITH CATCHBASIN
CSP	CONCRETE CENTER LINE
DICB	CORRUGATED STEEL PIPE DIAMETER
ELEV.	DITCH INLET CATCHBASIN ELEVATION
EX.	EXISTING
INV.	MINIMUM PROPERTY LINE
PL	RADIUS
STA.	STATION
TYP.	TYPICAL

BENCH MARKS:

BM 517029-1 - ELEV. = 275.87
CC IN BASE OF MIDDLE STREET LIGHT IN PARKING LOT ALONG THE SOUTH PROPERTY LINE OF ROLL NO. 080-270-15.
BM 517029-2 - ELEV. = 275.66
SIB LOCATED ON SOUTHWEST CORNER OF ROLL NO. 080-270-10. 228m EAST OF CALVERT LINE AT ENTRANCE GATE OF MIDDLESEX CENTRE WASTEWATER TREATMENT FACILITY.
BM 517029-3 - ELEV. = 273.64
CC ON SOUTHEAST CORNER OF EX. DICB LOCATED AT DOWNSTREAM END OF THE OPEN DRAIN PORTION OF ILBERTON DRAIN NO. 2.

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ILBERTON DRAIN NO.2

MUNICIPALITY OF MIDDLESEX CENTRE

DETAILS

DRAWN BY:	APPROVED BY:	PROJECT NO.:	DRAWING NO.:
B.N./C.M.	B.S.	517029	4
DESIGNED BY:	DATE:	SCALE:	
C.C.	MARCH 2023	AS NOTED	

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NOMENCLATURE:

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CL	CENTER LINE
CSP	CORRUGATED STEEL PIPE
Ø	DIAMETER
DICB	DITCH INLET CATCHBASIN
ELEV.	ELEVATION
EX.	EXISTING
INV.	INVERT
MIN.	MINIMUM
PL	PROPERTY LINE
R.	RADIUS
STA.	STATION
TYP.	TYPICAL

LEGEND:

	WATERSHED BOUNDARY
	INTERMEDIATE WATERSHED BOUNDARY
	R.O.W. LIMITS
	PROPERTY LINE
	EX. OPEN DRAIN
	PROPOSED CLOSED DRAIN
	PROPOSED OPEN DRAIN
	APPROX. EX. DRIFLINE
	EX. FENCE
	PROPOSED CATCHBASIN
	EX. TREE TO BE CONSERVED PER UTRCA (TREE SIZES ARE NOT TO SCALE)
	10m DRAIN ACCESS
	15m BUFFER STRIP (MEASURED FROM TOP OF BANK)

BENCH MARKS :

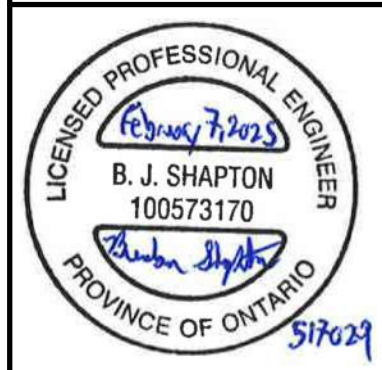
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3.	06/28/2024	DESIGN REVIEW MEETING	B.S.
2.	02/08/2024	DRAFT DESIGN	B.S.
1.	2023/10/31	DRAFT TREE CONSERVATION PLAN	B.B.
NO.	DATE	REVISION DESCRIPTION	CHKD

**GEI** Consultants  
 235 NORTH CENTRE ROAD, SUITE 103  
 LONDON, ONTARIO N5X 4E7  
 519.672.9403

ILBERTON DRAIN NO.2

MUNICIPALITY OF MIDDLESEX CENTRE

TREE CONSERVATION PLAN

DRAWN BY :	APPROVED BY :	PROJECT NO. :	DRAWING NO. :
B.N./C.M.	B.S.	517029	5
DESIGNED BY :	DATE :	SCALE :	
C.C.	MARCH 2023	1:1000	

**B** TREE CONSERVATION PLAN  
 5 NOTE: TREE SIZES ARE NOT TO SCALE

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