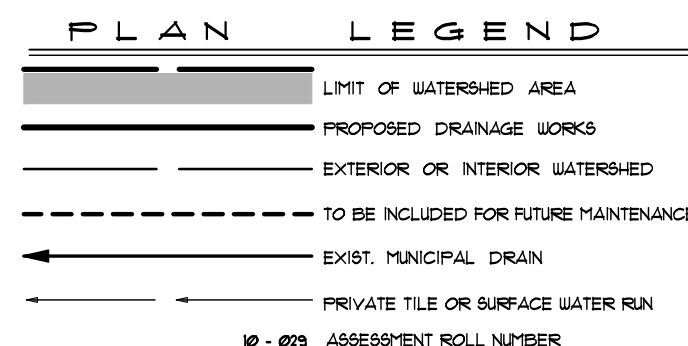


LOT 30
LOT 31
LOT 32
LOT 33
CONCESSION S. B.
MICHHELL LINE



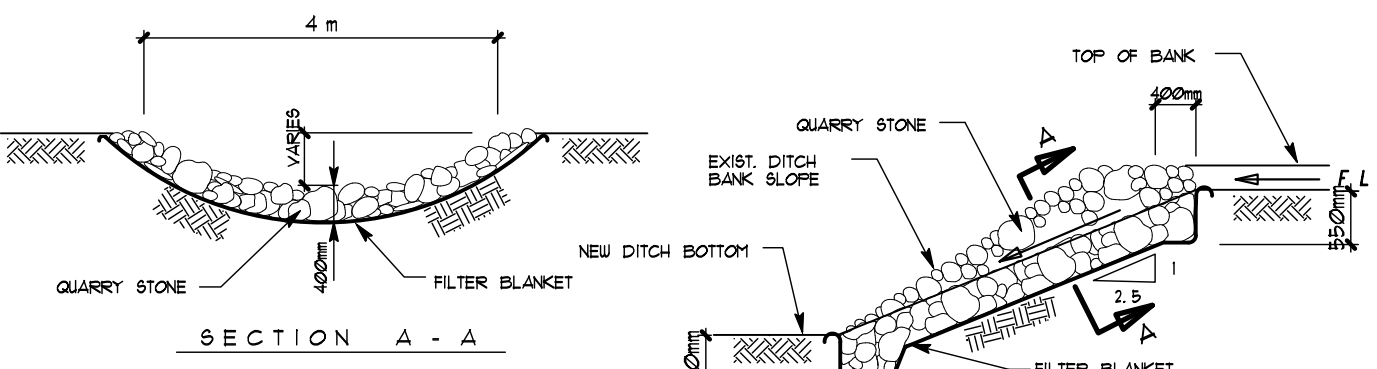
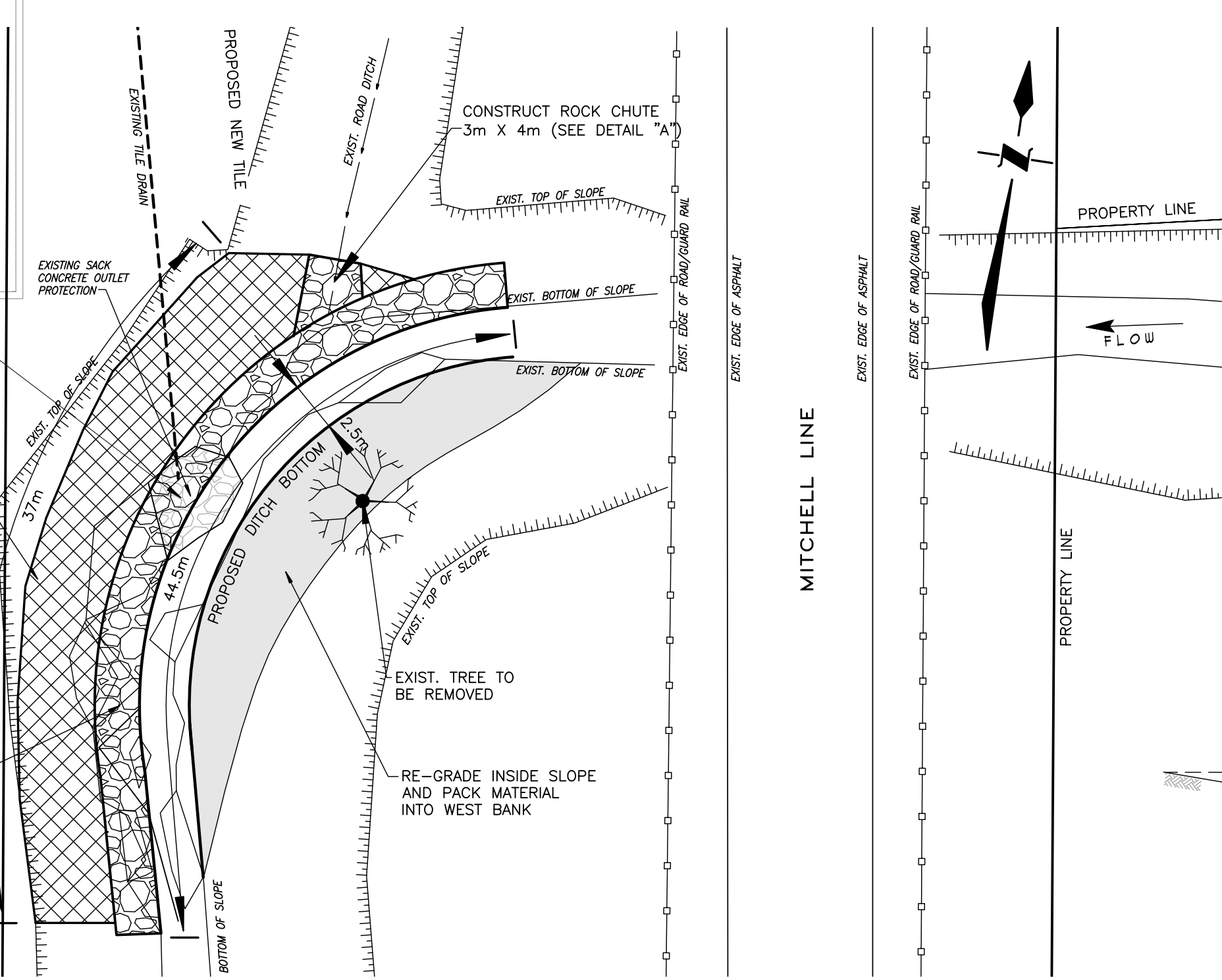
GENERAL NOTES

- 1/ OUR SPECIFICATIONS DATED JANUARY 2020 APPLY TO THIS PROJECT.
- 2/ THE WORKING WIDTH AVAILABLE TO THE CONTRACTOR TO CONSTRUCT THE NEW DRAINS SHALL CONSIST OF THOSE LANDS IMMEDIATELY ADJACENT TO THE DRAIN AND CONNECTIONS AND SHALL NOT EXCEED THE FOLLOWING AVERAGE WIDTHS:
 - OPEN PORTIONS - 18 meters (INCLUDING 3m BUFFER)
 - OPEN PORTIONS-BUSH AREAS - 15 meters TOTAL (REMOVE ONLY TREES ALONG BANK AND THOSE ABSOLUTELY NECESSARY TO COMPLETE CONSTRUCTION)
 - CLOSED PORTIONS (THROUGH BUSH) - 20 meters
 - THE WORKING WIDTH FOR PURPOSES OF FUTURE MAINTENANCE SHALL BE THE SAME AS ABOVE EXCEPT FOR CLOSED PORTIONS (NOT THROUGH BUSH) SHALL BE 10m.
- 3/ ALL OWNERS ALONG THE COURSE OF THE DRAIN SHALL MAKE AN ACCESS ROUTE FROM THE NEAREST ROAD TO THE DRAIN LOCATION AVAILABLE TO THE CONTRACTOR THE AVERAGE WIDTH OF THIS ROUTE SHALL NOT EXCEED 9 METERS, THE ACCESS ROUTE SHALL ALSO APPLY FOR FUTURE MAINTENANCE PURPOSES.
- 4/ a) ALL UTILITIES TO BE LOCATED AND EXPOSED PRIOR TO CONSTRUCTION SO THAT THE NEW TILE GRADES CAN BE CONFIRMED. IF THERE IS A CONFLICT IN ELEVATION BETWEEN THE PROPOSED DRAIN AND THE UTILITY, THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY.
 - b) CONTRACTOR TO NOTIFY ALL UTILITIES 72 HOURS PRIOR TO HIS SCHEDULED TIME FOR STARTING THE ABOVE WORK.
 - c) THE COST FOR THIS WORK SHALL BE INCLUDED IN THE ITEM ON THE EXTENT OF WORK AND NO EXTRA PAYMENT SHALL BE MADE TO THE CONTRACTOR, EXCEPT IF ROAD RESTORATION IS REQUIRED.
- 5/ ALL TREES, SCRUB, BRUSH, ETC. TO BE CLEARED AND GRUBBED IN ACCORDANCE WITH "SECTION B. 3 AND C. 4" SPECIFICATIONS.
- 6/ RIP-RAP TO BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH "SECTION A. 12" IN THE SPECIFICATIONS.
- 7/ TURF REINFORCEMENT MAT SHALL BE "NORTH AMERICAN GREEN C 350" OR APPROVED EQUAL MAT SHALL BE INSTALLED ON SEEDD BANK IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS WITH THE FOLLOWING EXCEPTIONS:
 - a) STAPLES TO BE 200mm LONG AND SHALL BE INSTALLED TO MANUFACTURER'S "D" PATTERN
 - b) MAT TO BE KEPT 300mm BELOW DITCH BOTTOM, 200mm INTO BANK SLOPE AT UPSTREAM LIMIT AND SHALL BE STAPLED 200mm BELOW TOE OF BANK.
- 8/ CONTRACTOR TO ARRANGE A PRE-CONSTRUCTION MEETING WITH THE ENGINEER, DRAINAGE SUPERINTENDENT, AND THE AFFECTED OWNERS. ALL PARTIES SHALL RECEIVE 48 HOURS NOTICE TO THE MEETING.
- 9/ ALL CONCRETE AND PLASTIC TILE AND PIPE TO CONFORM TO "SECTION C. 1" IN THE SPECIFICATIONS.
 - a) SEWER PIPE TO BE CONCRETE, H. D. P. E. PLASTIC 320 MPA (BELL 4 SPIGOT WITH RUBBER GASKETS, CONFORMING TO C.S.A. 1026-08), PVC ULTRA RIB OR PVC SDR 35
 - b) CONCRETE TILE SHALL BE HEAVY DUTY, UNLESS SPECIFIED AS 2000 D OR 2400 D ON PROFILE.
 - c) PLASTIC TILE SHALL BE PERFORATED AGRICULTURAL TUBING WITH FILTER SOCK CONFORMING TO TERRAFIX 700R, TEXEL F-100 ID OR APPROVED EQUAL.
- 10/ ALL CATCHBASINS SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH "SECTION C. 16" IN THE SPECIFICATIONS, EXCEPT AS FOLLOWS:
 - a) ALL OFF-SET CATCH-BASIN LEADS TO BE CONNECTED TO NEW TILE DRAIN WITH PRE-FABRICATED "WYES" OR "TEES"
 - b) EXISTING TILE DRAINS TO BE EXPOSED IN AS MANY LOCATIONS AS ARE NECESSARY TO CONFIRM THEIR EXACT LOCATION AND ELEVATION PRIOR TO CONSTRUCTION WITH SUFFICIENT TIME TO CONFIRM STRUCTURE (JUNCTION BOXES, CATCHBASINS ETC.) LOCATION & ELEVATIONS. EXACT LOCATION OF NEW TILE DRAINS AND STRUCTURES TO BE CONFIRMED BY ENGINEER.
- 11/ NEW TILE DRAINS TO BE LOCATED ADJACENT TO THE EXISTING MUNICIPAL DRAINS WHERE APPLICABLE AS SHOWN ON THE ADJACENT PLAN. EXACT LOCATION OF ALL DRAINS TO BE CONFIRMED AT TIME OF CONSTRUCTION BY ENGINEER.
- 12/ EXISTING 200mm TILE ALONG EAST SIDE OF ROAD FROM THE ROMAN LINE DRAIN TO BRANCH D (INCLUDING CATCHBASIN AND APPURTENANCES) SHALL BE INCORPORATED AS BRANCH H OF THE BLAKE DRAIN 2021 FOR FUTURE MAINTENANCE PURPOSES.
- 13/ a) INSTALLATION OF TILE AND TRENCH WIDTHS SHALL BE IN ACCORDANCE WITH "SECTION C - TILE DRAIN" IN THE SPECIFICATIONS.
 - b) SEWER PIPE UNDER TRAVEL PORTION OF ROADS TO BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILED DRAWING No. 022 IN THE SPECIFICATIONS.
 - c) ALL OTHER SEWER PIPE TO BE INSTALLED IN ACCORDANCE WITH DETAIL "B"
 - d) ALL CONCRETE TILE AND TILE-PIPE JOINTS TO BE WRAPPED WITH GEOTEXTILE IN ACCORDANCE WITH "SECTION C. 8" IN THE SPECIFICATIONS.
 - e) NO CONSTRUCTION EQUIPMENT OR FARM MACHINERY SHALL CROSS OVER THE MOUNDED BACKFILLED TILE TRENCHES UNTIL SUFFICIENT SETTLEMENT HAS OCCURRED.
 - f) STRIP AND STOCKPILE TOPSOIL FROM CONSTRUCTION AREA (4 metre width) EXCEPT LANEWAYS & ROADS. EXCESS SPOIL TO BE LEVELLED AND TOPSOIL RELEVELLED OVER SPOIL, MOUNDED TRENCH AND REMAINING CONSTRUCTION AREA.
 - g) PERFORATED PLASTIC FILTERED TILE TO BE INSTALLED WITH APPROVED DRAINAGE FLOUGH. IF SOLID PLASTIC TILE IS INSTALLED WITH TRENCHER OR BACKHOE, THE IT SHALL BE BEDDED IN ACCORDANCE WITH DETAIL "B" AND SPECIFICATIONS.
 - h) WHERE THE TILE SIZE IS LARGER THAN 615mm, THE EXCESS TRENCH MATERIAL (APPROXIMATELY EQUAL TO THE VOLUME OF THE TILE BEING INSTALLED) SHALL BE HAULED AWAY AND DISPOSED OF BY THE CONTRACTOR. ENOUGH MATERIAL SHALL BE RETAINED TO PROVIDE SUFFICIENT MOUNDING OVER TILE TO ALLOW FOR SETTLEMENT.
- 14/ a) IT SHALL BE NOTED THAT AREAS OF POOR SOIL CONDITION MAY BE ENCOUNTERED ALONG THE COURSE OF THE DRAIN. IF SUCH CONDITIONS ARE ENCOUNTERED AND IF THE TRENCH WALLS AND/OR TRENCH BOTTOM AND/OR TRENCH BOTTOM BECOME UNSTABLE, THEN THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE DRAINAGE SUPERINTENDENT OR ENGINEER.
 - b) IF SO ORDERED BY THE DRAINAGE SUPERINTENDENT OR ENGINEER THE CONTRACTOR SHALL INSTALL THE TILE OR PIPE ON A BEDDING OF 19mm (3/4") CRUSHED STONE THROUGH THE AREA OF UNSTABLE TRENCH. THE CRUSHED STONE SHALL BE COMPLETELY WRAPPED IN GEOTEXTILE SUCH AS "TERRAFIX 360 R" OR APPROVED EQUAL. (SEE DETAIL "D") THE LIMITS OF THIS WORK SHALL BE DETERMINED BY THE DRAINAGE SUPERINTENDENT OR ENGINEER.
 - c) PAYMENT FOR THIS WORK SHALL BE IN ACCORDANCE WITH THE CONTINGENCY AMOUNTS SHOWN IN THE "FORM OF TENDER".
 - d) THE CONTRACTOR SHALL ENSURE THAT ALL TRIBUTARY DRAINS ARE CONNECTED DURING TIME OF CONSTRUCTION. ANY MISSED TILE CONNECTIONS THAT ARE FOUND DURING THE WARRANTY PERIOD OF THE CONTRACT SHALL BE COMPLETED BY THE CONTRACTOR AND SHALL BE PAID THE AMOUNT SET OUT ON PAGE 2 OF THE "FORM OF TENDER". NO ADDITIONAL PAYMENT FOR MOBILIZATION WILL BE ALLOWED. THE CONTRACTOR IS NOT RESPONSIBLE FOR COMPLETING MISSED TILE CONNECTIONS THAT ARE FOUND AFTER THE WARRANTY PERIOD FOR THE CONTRACT HAS EXPIRED.
 - e) ALL TILE CONNECTIONS TO BE MADE WITH CORING MACHINE AND PLASTIC ADAPTOR OR PREFABRICATED FITTINGS.
 - f) THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH A LIST SHOWING STATIONS OF ALL TILE CONNECTIONS UPON COMPLETION OF CONSTRUCTION.
- 15/ a) SILT FENCE TO BE PLACED ACROSS DITCH BOTTOM AT STA. 0 + 000 DURING CONSTRUCTION TO PREVENT SILT FROM FLUSHING DOWNSTREAM, AND ARE TO BE MAINTAINED AS NECESSARY DURING CONSTRUCTION. SILT FENCE AND SILT TO BE REMOVED AND DISPOSED OF AFTER CONSTRUCTION.

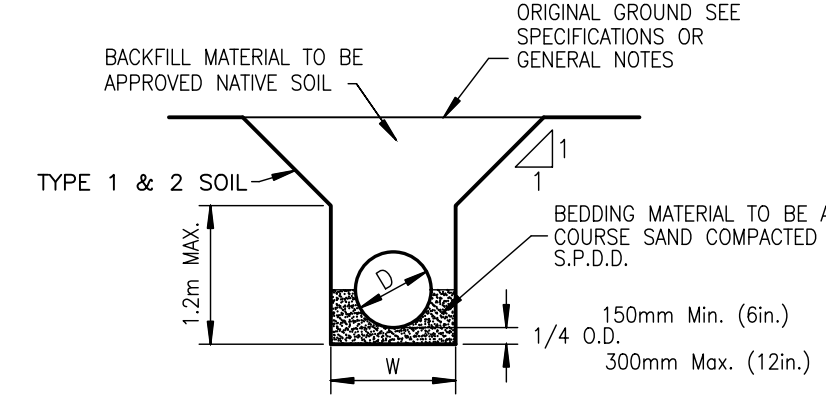
LOT LEGEND

ROLL NO.	OWNERSHIP	HECTARES OWNED
1)	010-126-01 VANDERMOLEN HOMES INC.	0.14
2)	010-127 D. VANDERMOLEN	0.14
3)	010-128 T. DAVIDSON & J. SHAW	0.40
4)	010-129 G. ANDERSON	0.40
5)	010-174 W. TIMMERMANS	0.14
6)	010-175-02 W. TIMMERMANS	0.14
7)	010-175-01 R. BANNISTER	0.12
8)	010-177-10 D. & T. VANHOODONK	0.55
9)	010-177 M. & N. FRANCIS	0.42
10)	010-173 K. ELLIOTT & C. FINLAYSON	0.18
11)	010-172 C. LUYTEN	0.10

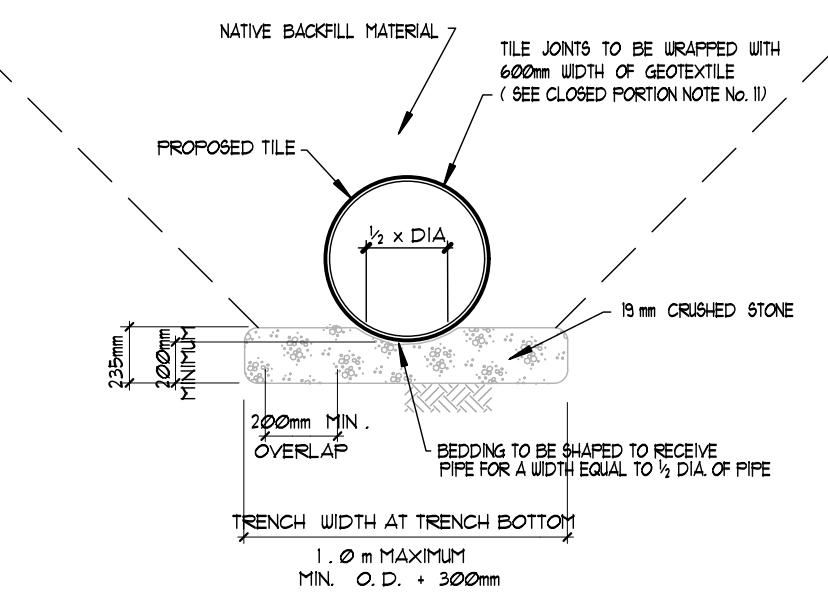
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DETAIL "A"
N. T. S.

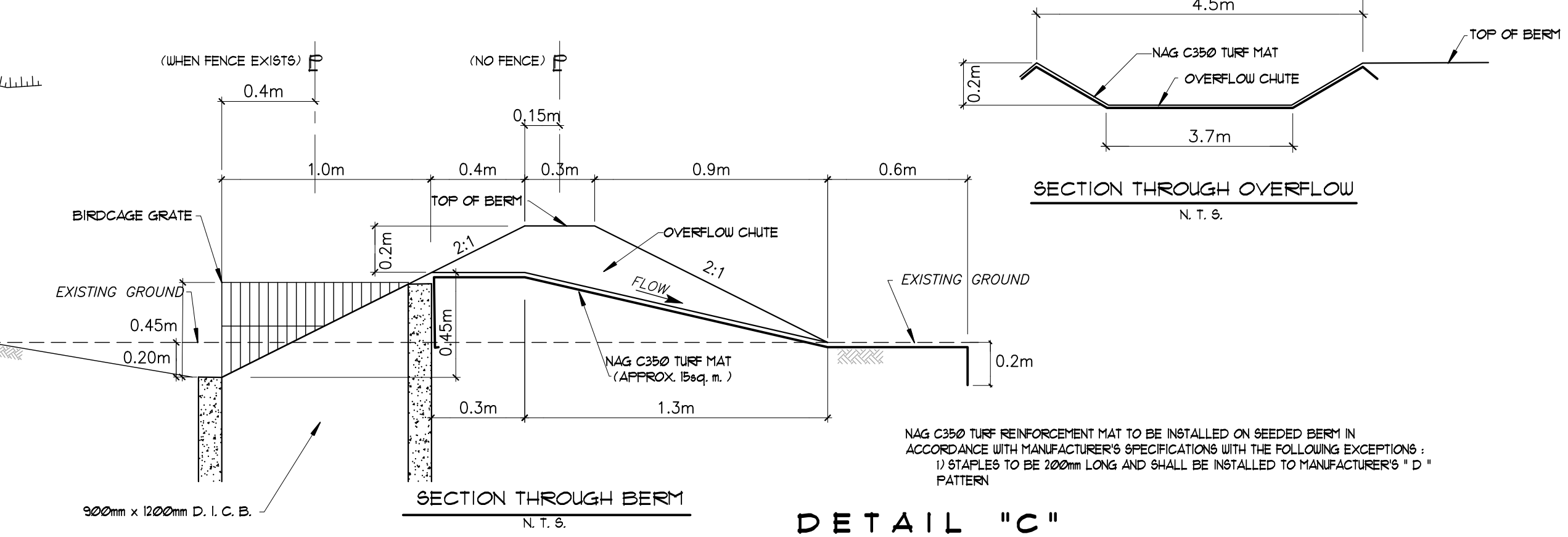


DETAIL "B"
N. T. S.



CRUSHED STONE BEDDING DETAIL CONCRETE FIELD TILE

DETAIL "D"
N. T. S.



DETAIL "C"
N. T. S.

BLAKE DRAIN 2021 SOUTH PORTION

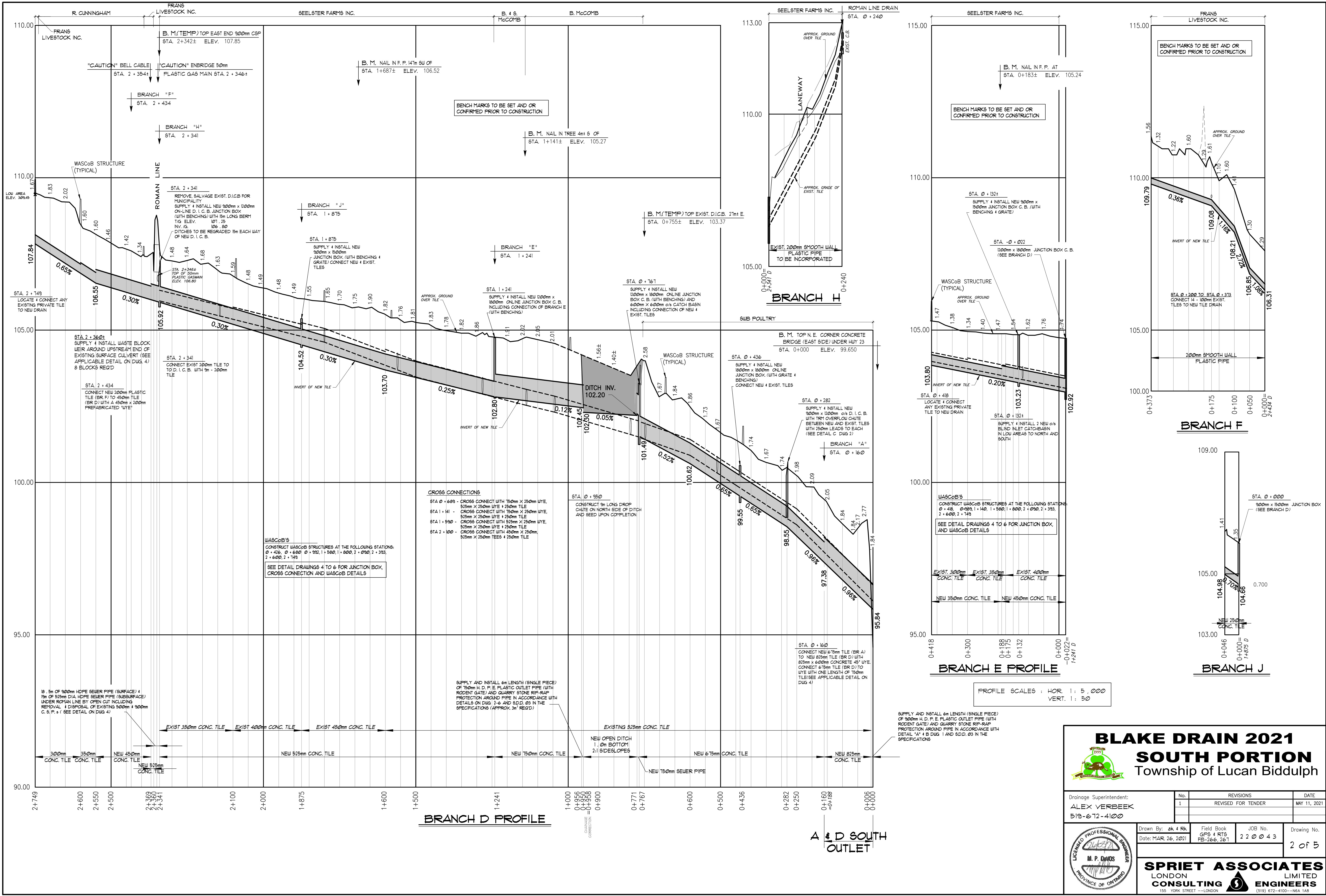
Township of Lucan Biddulph

Drainage Superintendent: ALEX VERBEEK 519-672-4100	No. 1	REVISIONS REVISED FOR TENDER	DATE MAY 11, 2021
Drawn By: ak 4 RL Date: MAR 26, 2021	Field Book GPS & RTS FB-266, 267	JOB No. 220043	Drawing No. 1 of 5

PLAN, DETAIL PLAN AND NOTES

SPRIET ASSOCIATES
LONDON LIMITED
CONSULTING ENGINEERS

155 YORK STREET - LONDON (519) 672-4100 - NEA 1A8



BRANCH D PROFILE

BRANCH E PROFILE

BRANCH F

BRANCH H

BRANCH J

PROFILE SCALES : HOR. 1 : 5,000
VERT. 1 : 50

A & D SOUTH OUTLET

BLAKE DRAIN 2021

SOUTH PORTION

Township of Lucan Biddulph

Drainage Superintendent: ALEX VERBEEK 519-672-4100	No.	REVISIONS	DATE
	1	REVISED FOR TENDER	MAY 11, 2021

M. P. DAVIS
PROVINCE OF ONTARIO

Drawn By: ak & Rk
Date: MAR 26, 2021

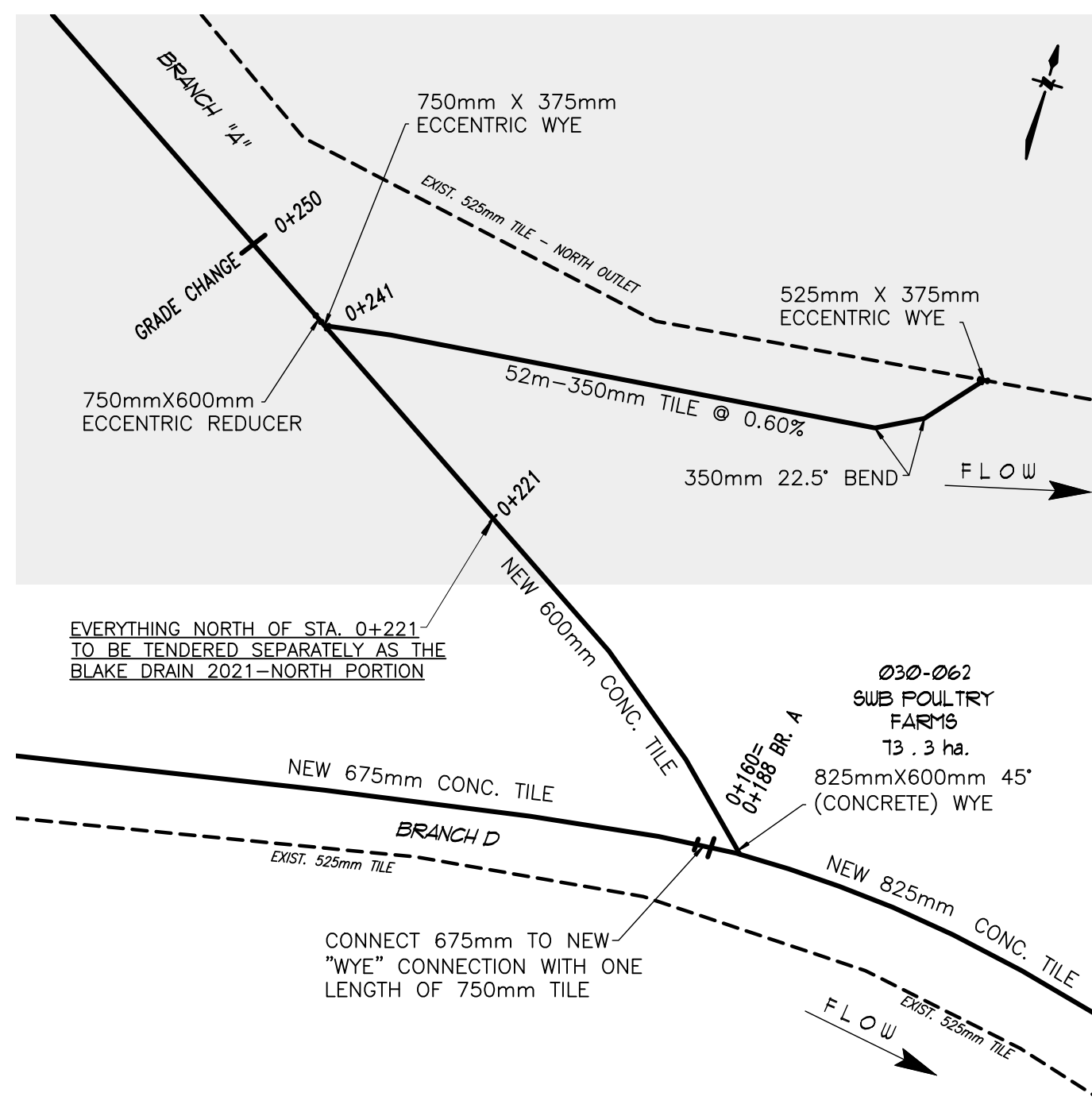
Field Book
GPS & RT5
FB-266, 267

JOB No.
2 2 0 0 4 3

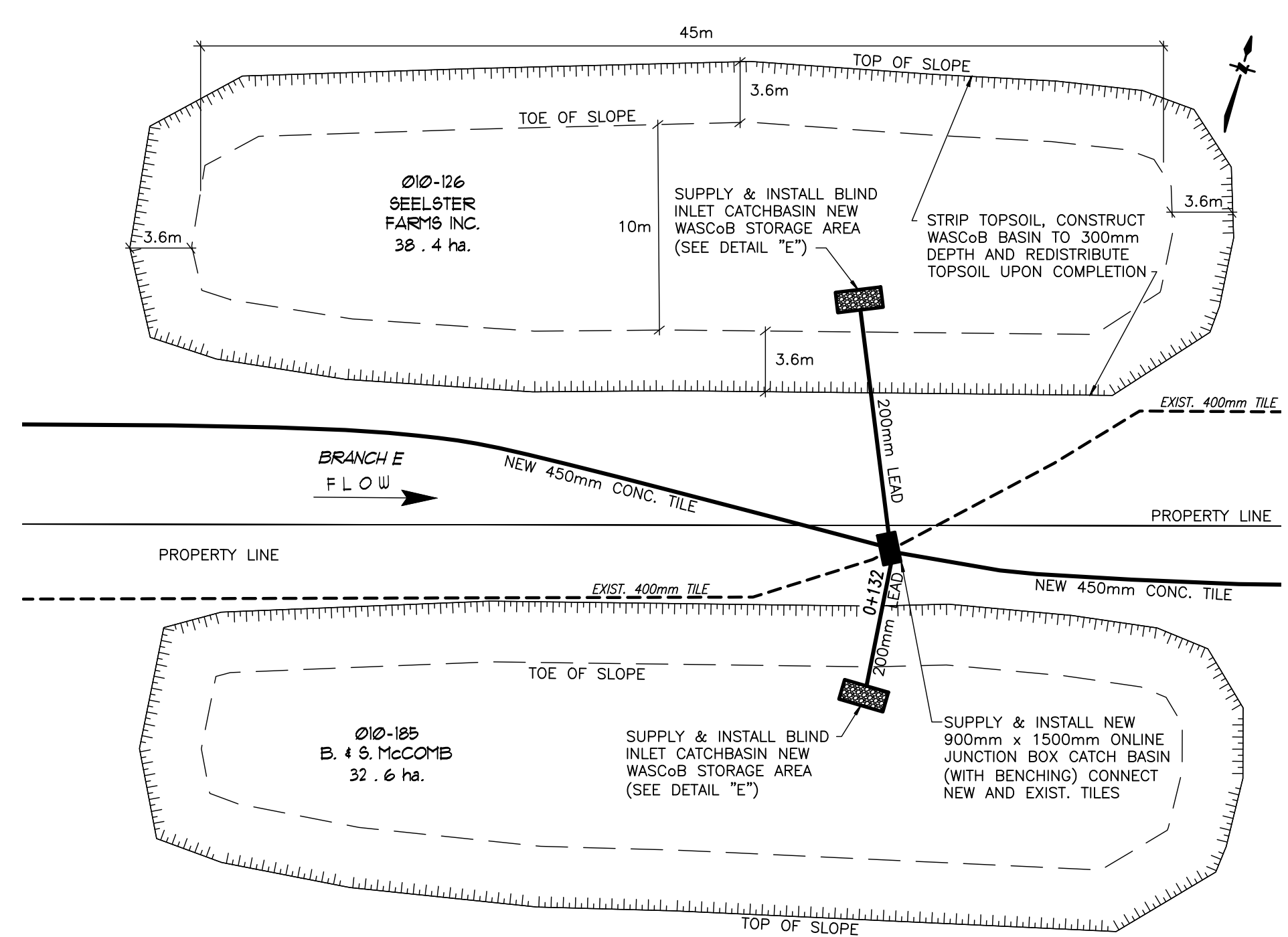
Drawing No.
2 of 5

SPRIET ASSOCIATES
LONDON CONSULTING ENGINEERS LIMITED

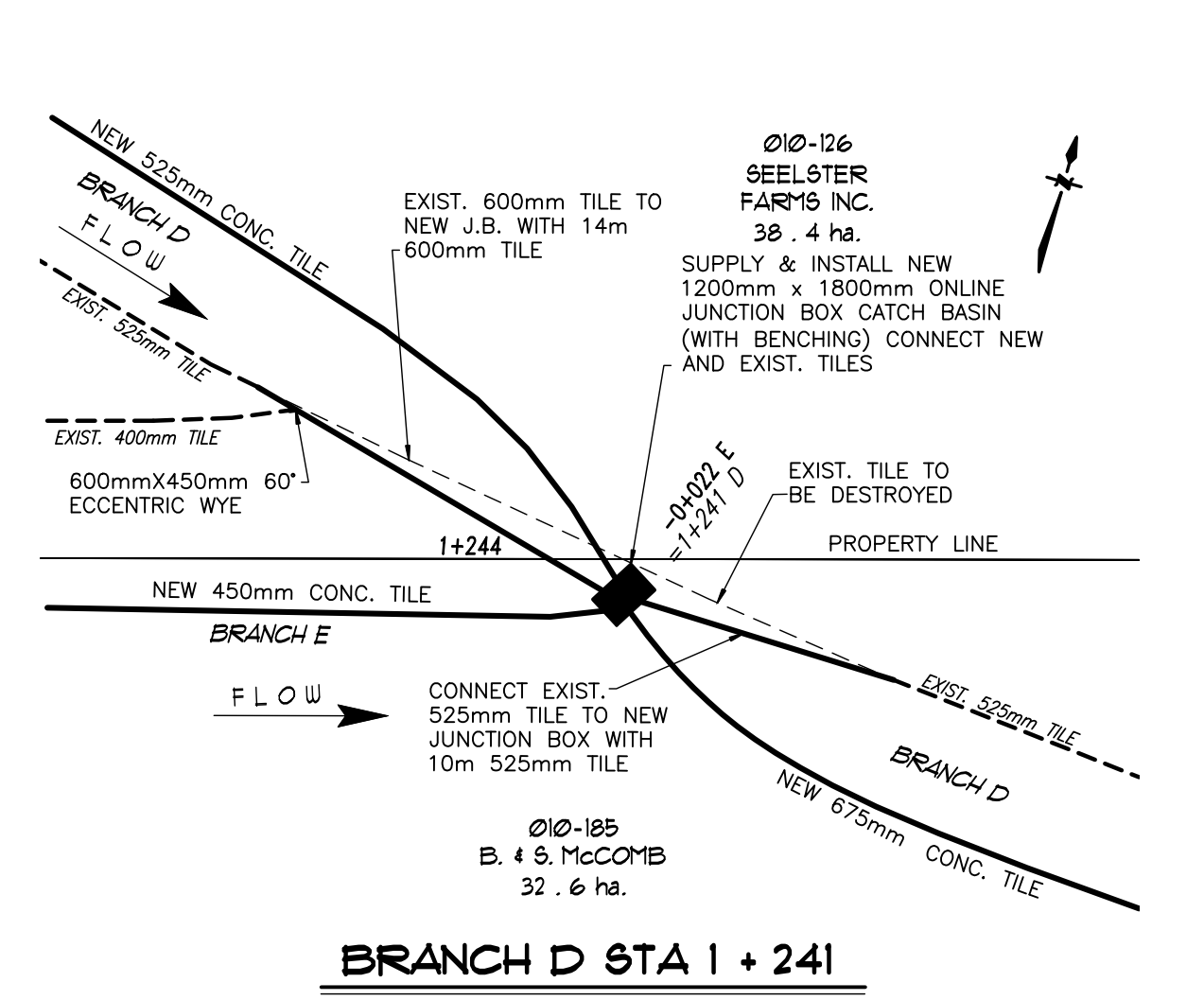
155 YORK STREET - LONDON (519) 672-4100 - NEA 1A8



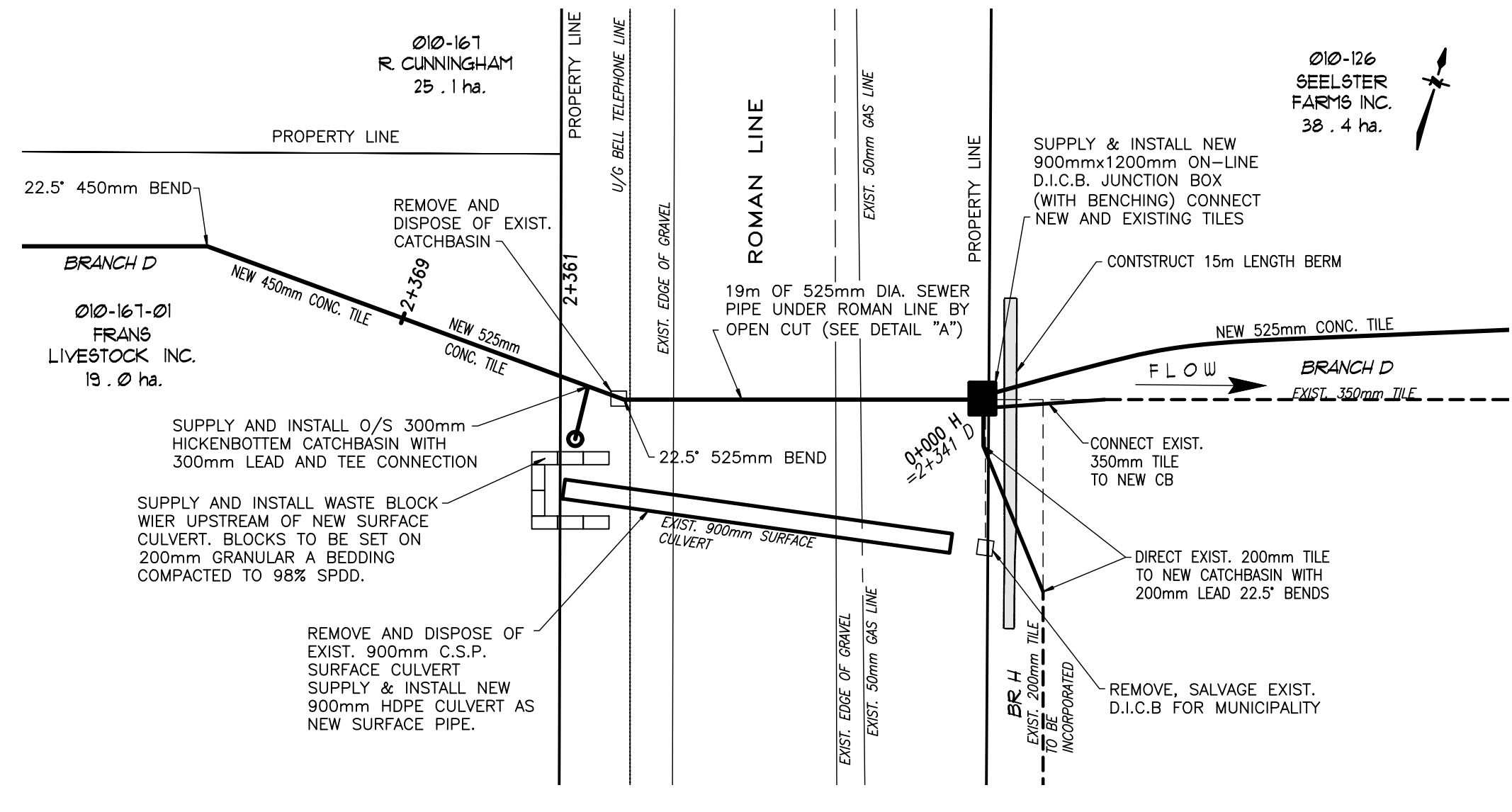
BRANCH D STA. 0 + 160
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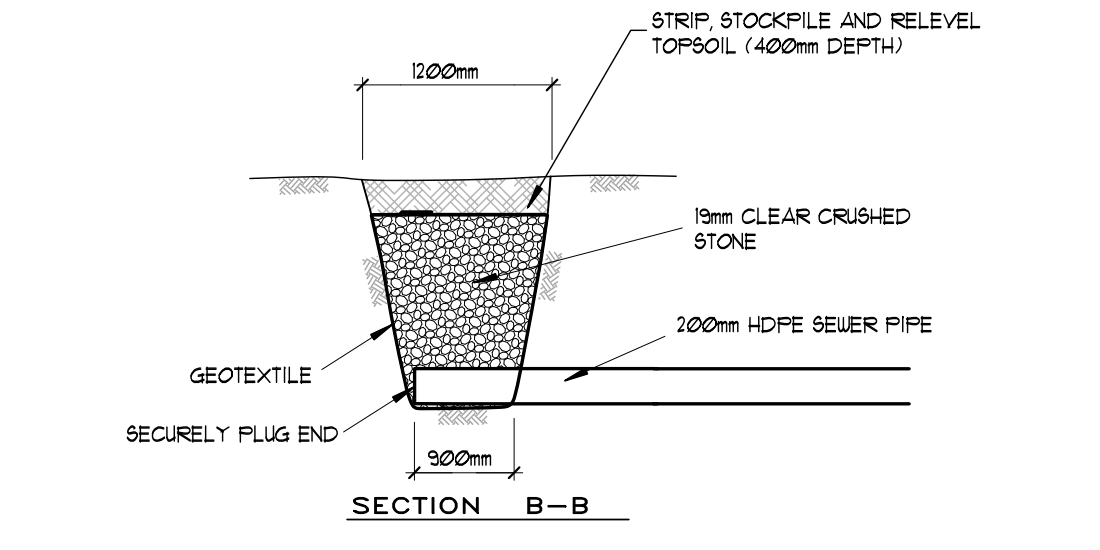
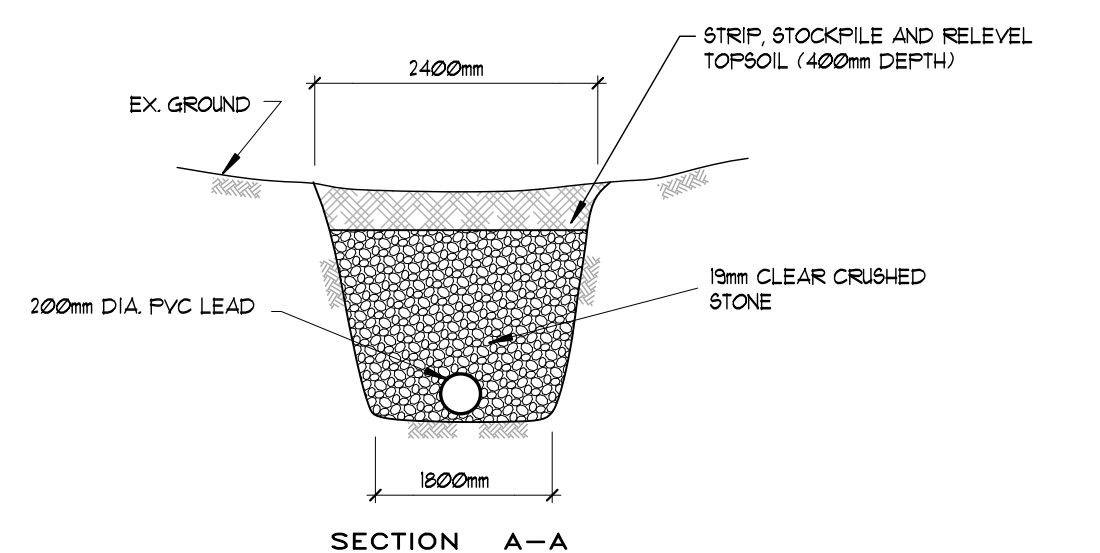
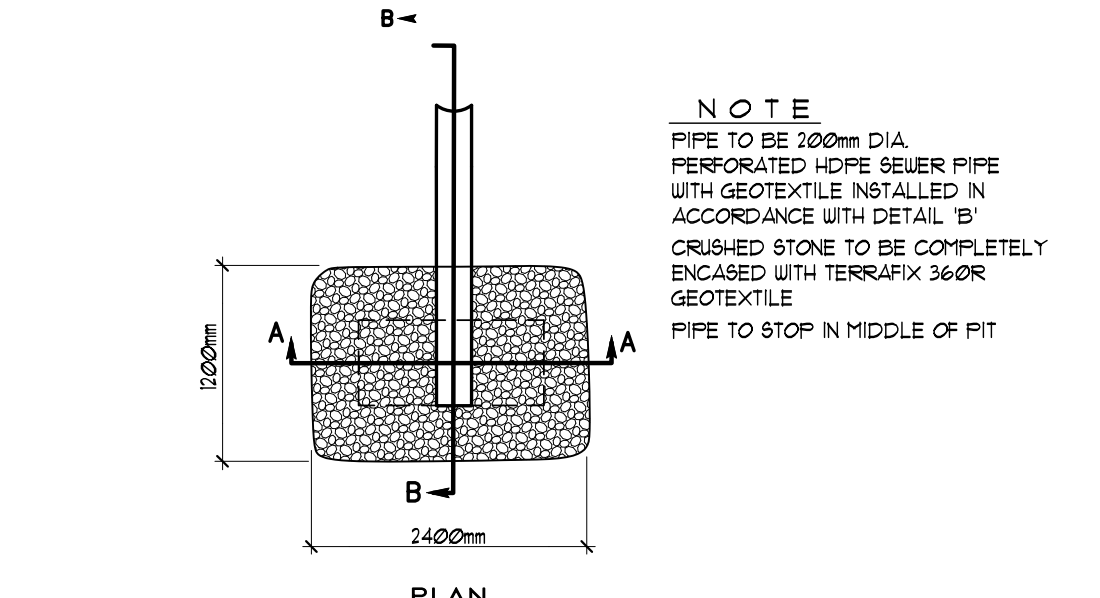
BRANCH E STA. 0 + 132
 SCALE 1 : 250



BRANCH D STA. 1 + 241
 SCALE 1 : 250



BRANCH D ROAD CROSSING
 SCALE 1 : 250



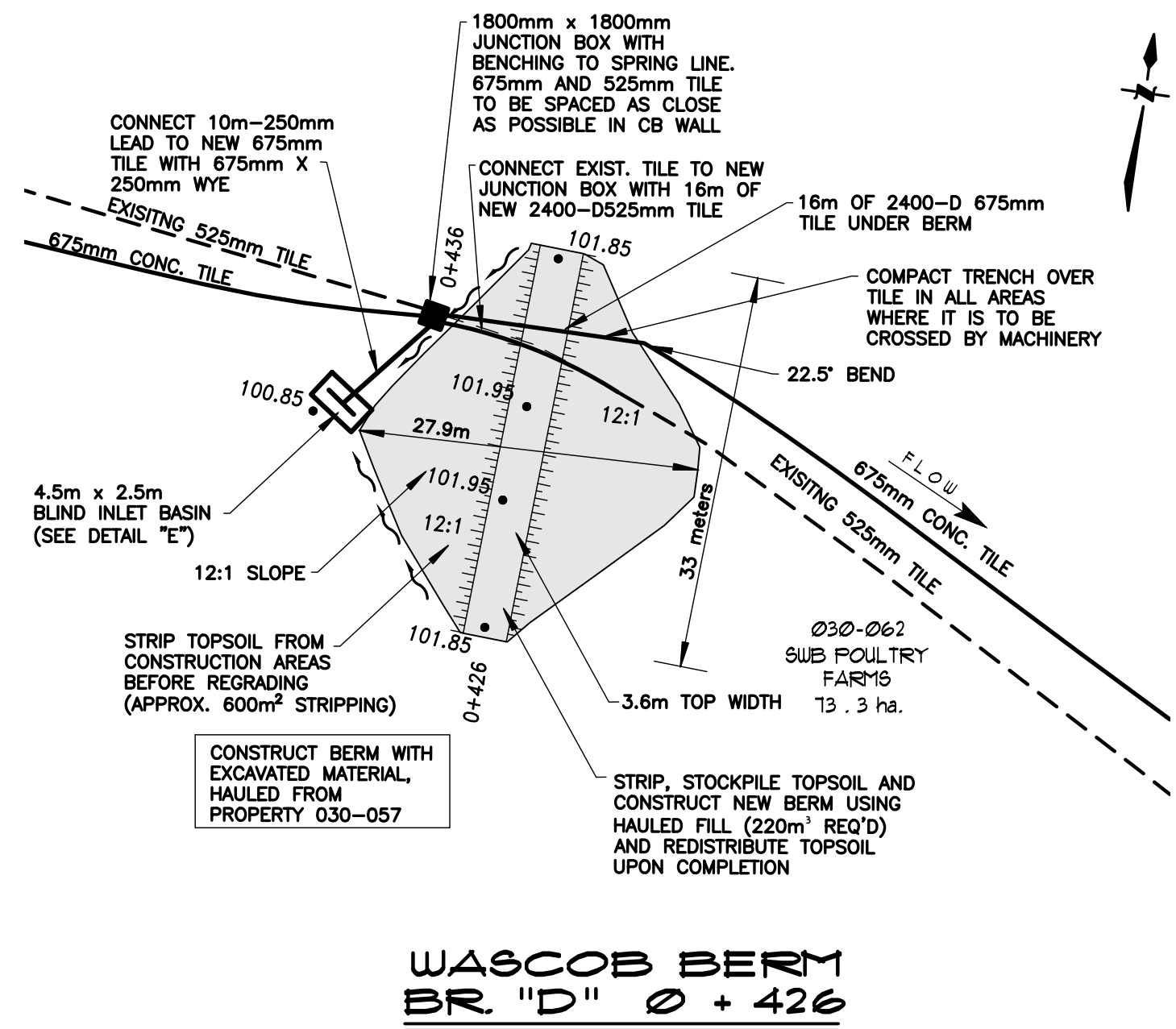
TYPICAL BLIND INLET BASIN DETAIL "E"
 N.T.S.

BLAKE DRAIN 2021 SOUTH PORTION
 Township of Lucan Biddulph

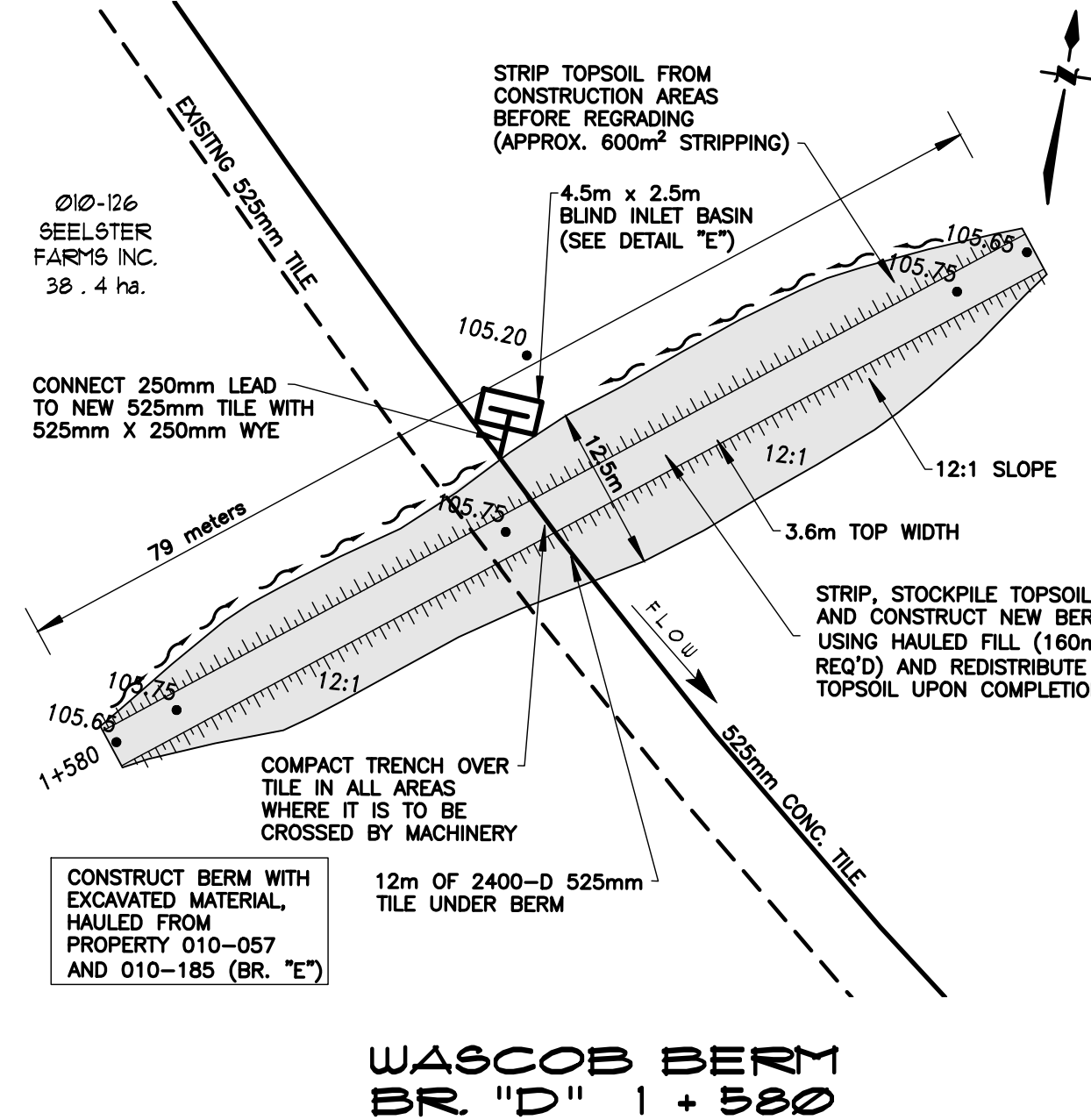
Drainage Superintendent: ALEX VERBEEK 519 - 672 - 4100	No. 1	REVISIONS REVISED FOR TENDER	DATE MAY 11, 2021
Drawn By: ak 4 Rk Date: MARCH 26, 2021	Field Book GPS D-266, D-267	JOB No. 220043	Drawing No. 3 of 5

JUNCTION BOX DETAILS

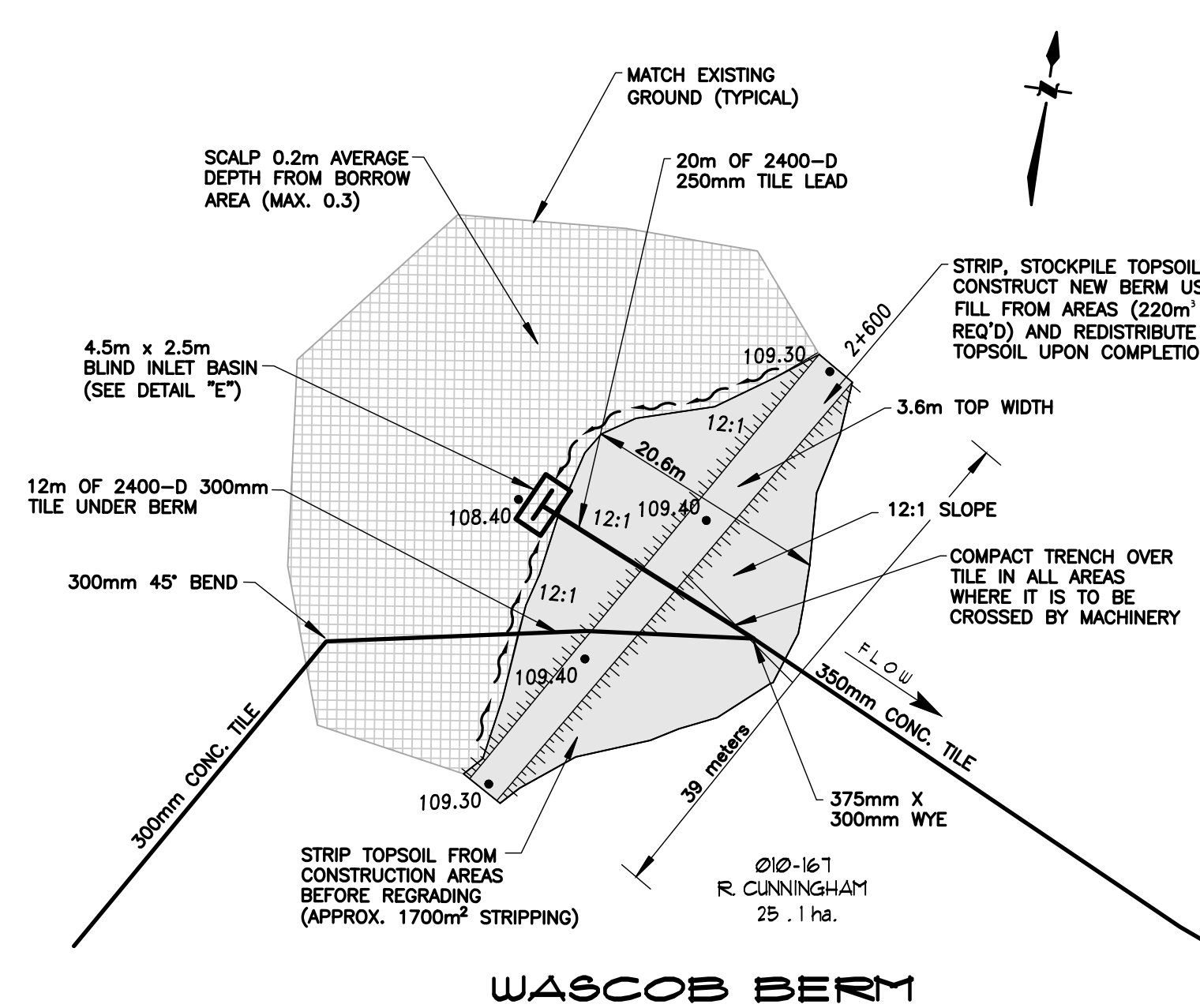
SPRIET ASSOCIATES
 LONDON CONSULTING ENGINEERS LIMITED
 155 YORK STREET - LONDON (519) 672-4100 - NEA 1A8



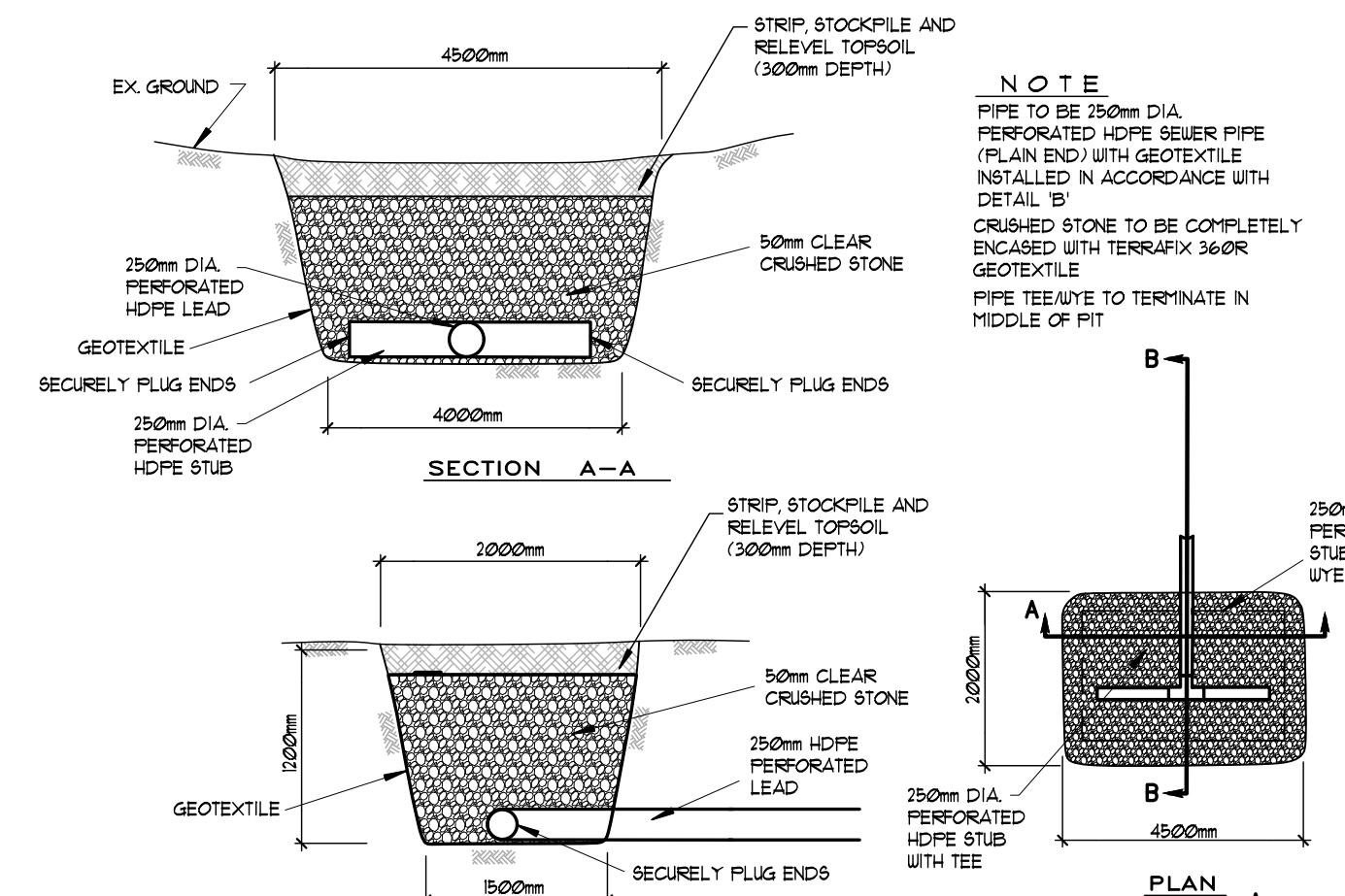
**WASCOB BERM
BR "D" 0 + 426**
SCALE 1 : 500



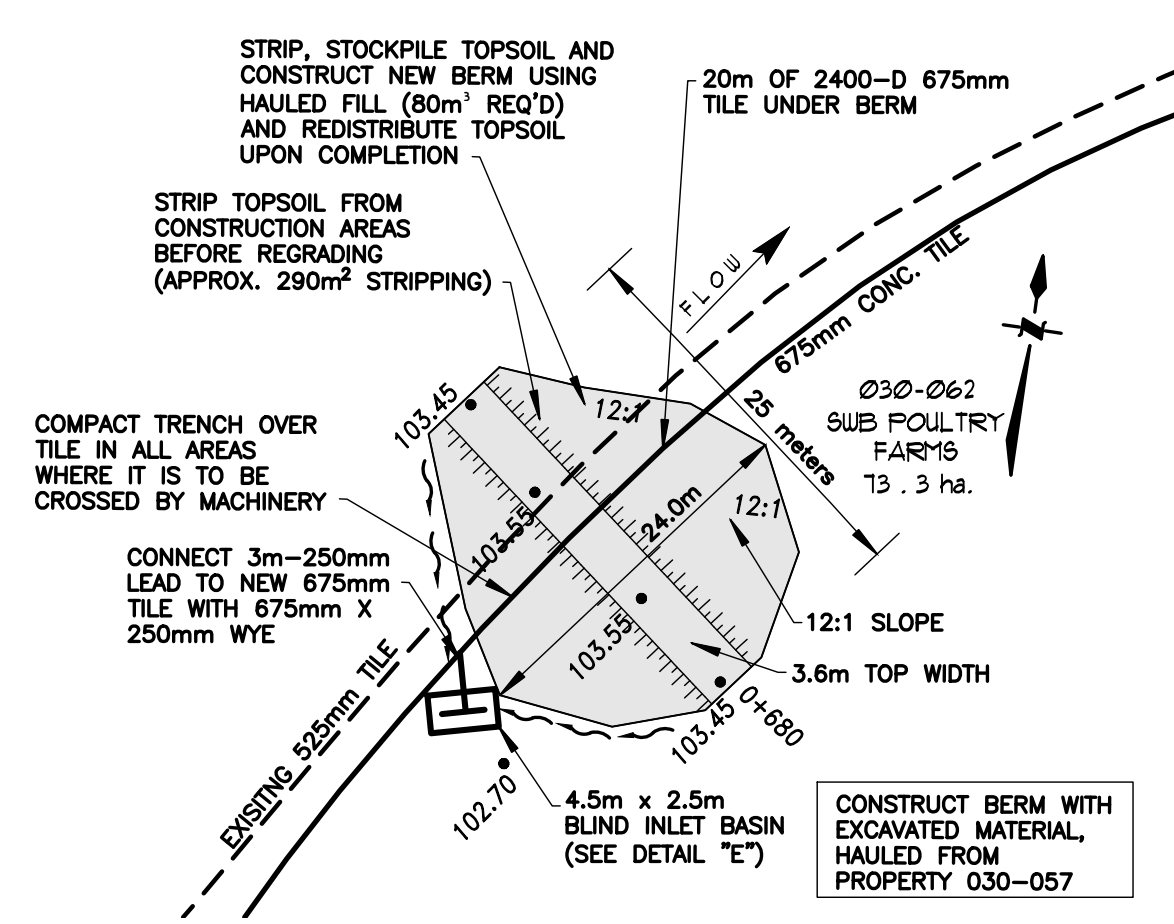
**WASCOB BERM
BR "D" 1 + 580**
SCALE 1 : 500



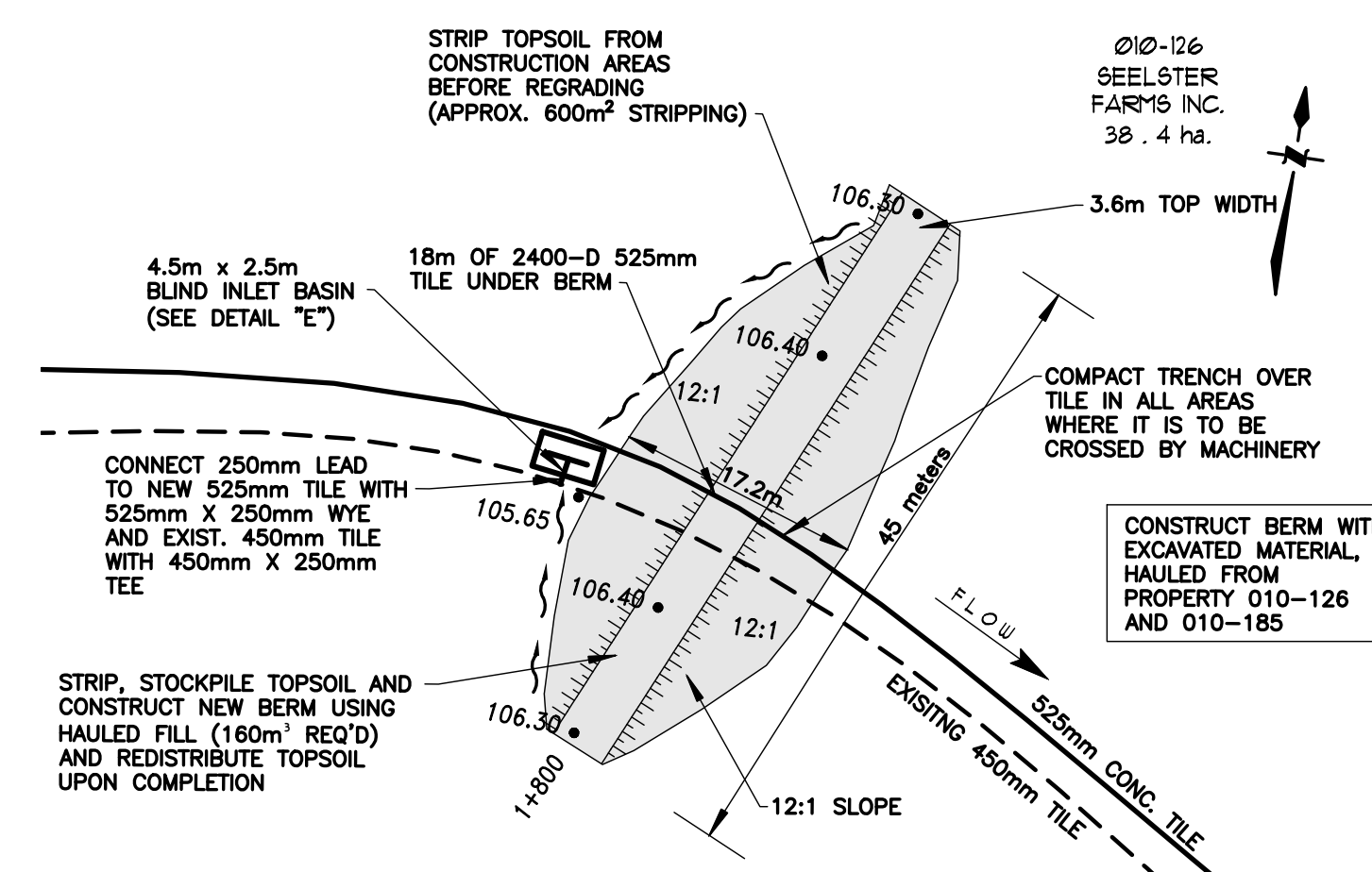
**WASCOB BERM
BR "D" 2 + 600**
SCALE 1 : 500



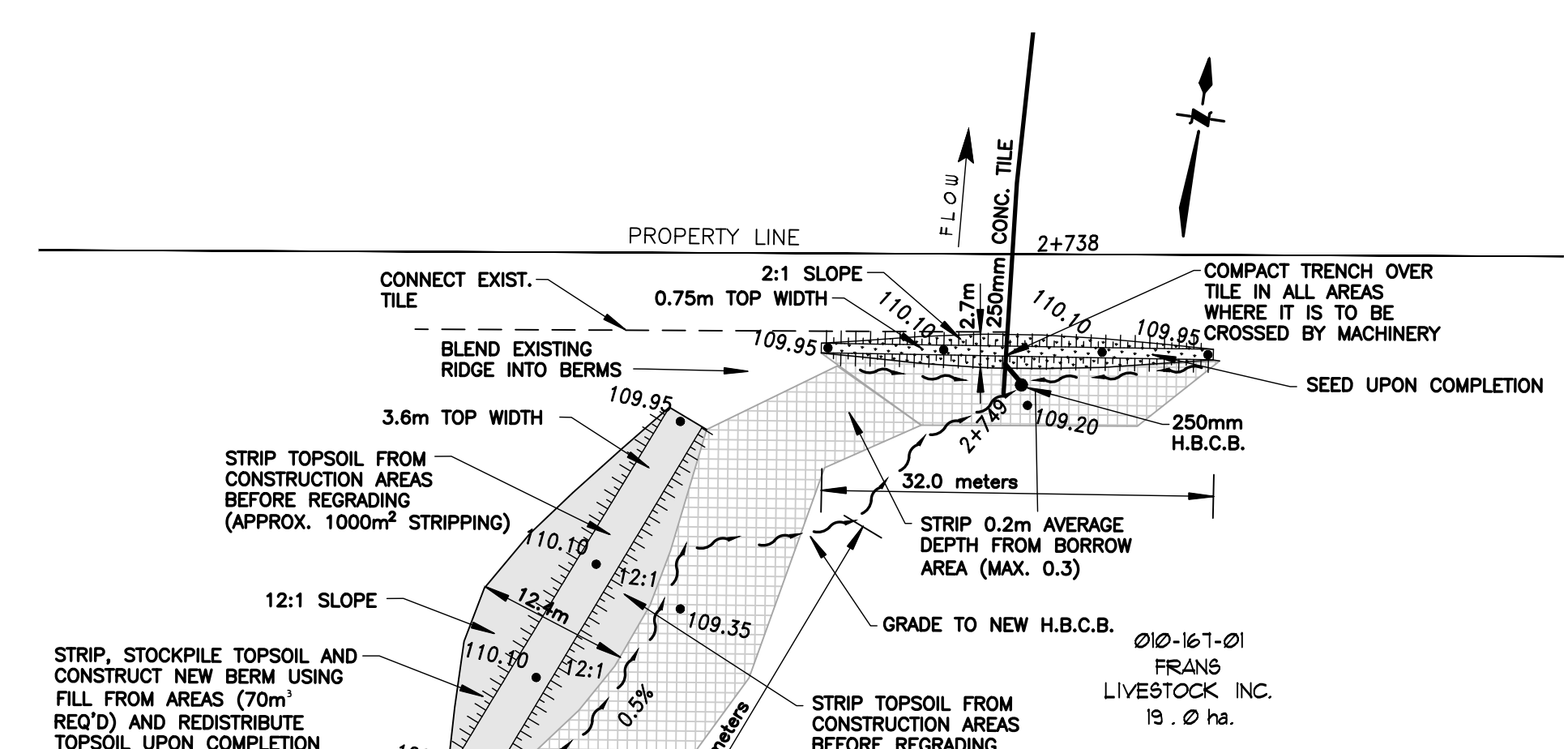
**TYPICAL BLIND INLET BASIN
DETAIL "E"**
N. T. S.



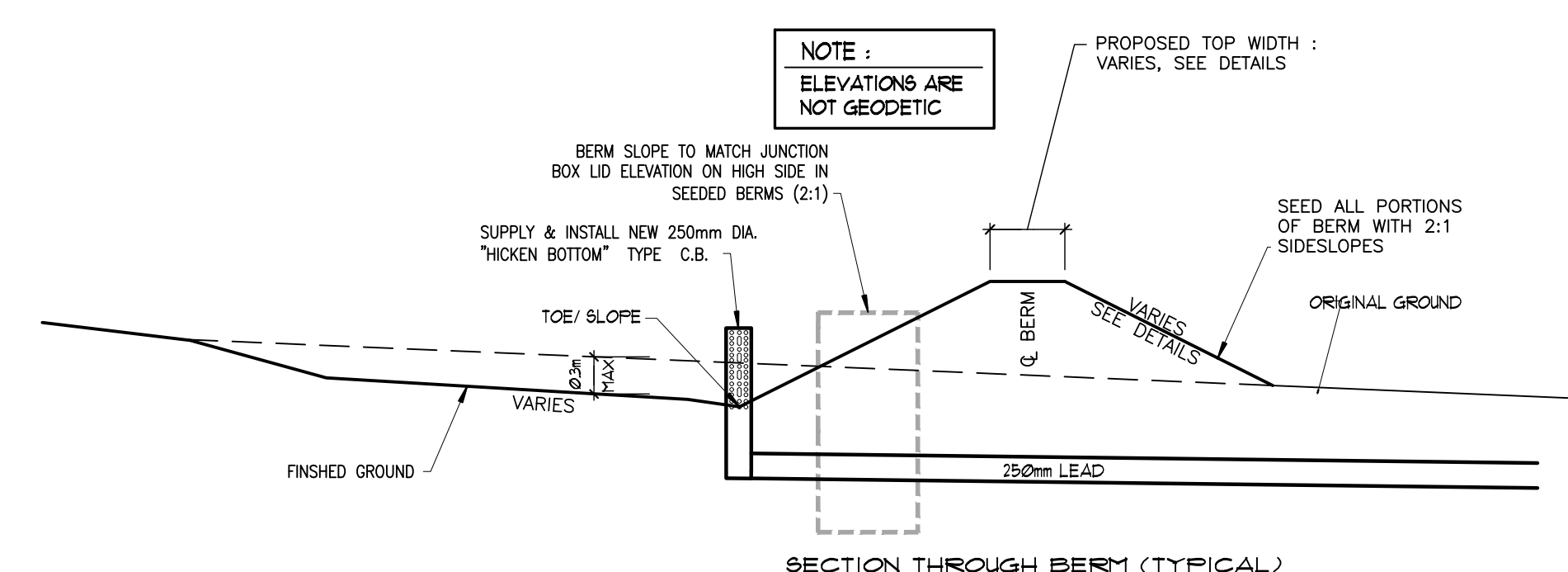
**WASCOB BERM
BR "D" 0 + 680**
SCALE 1 : 500



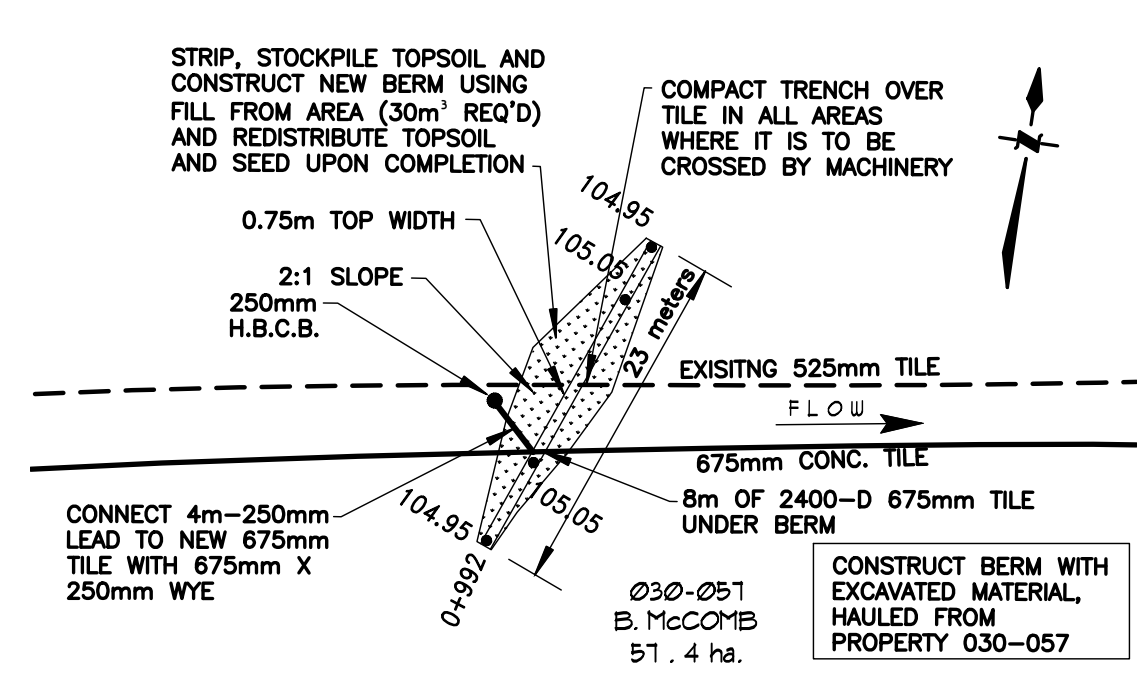
**WASCOB BERM
BR "D" 1 + 800**
SCALE 1 : 500



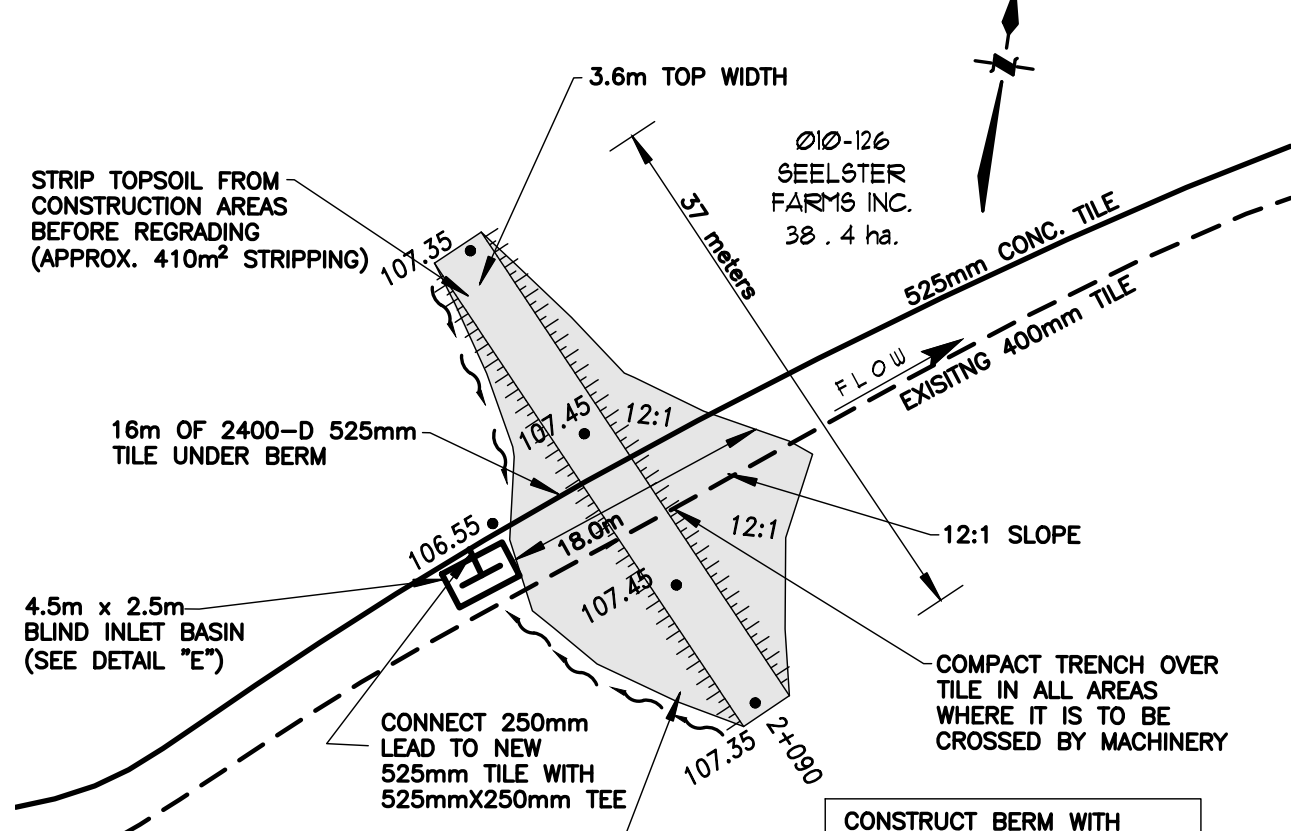
**WASCOB BERM
BR "D" 2 + 748**
SCALE 1 : 500



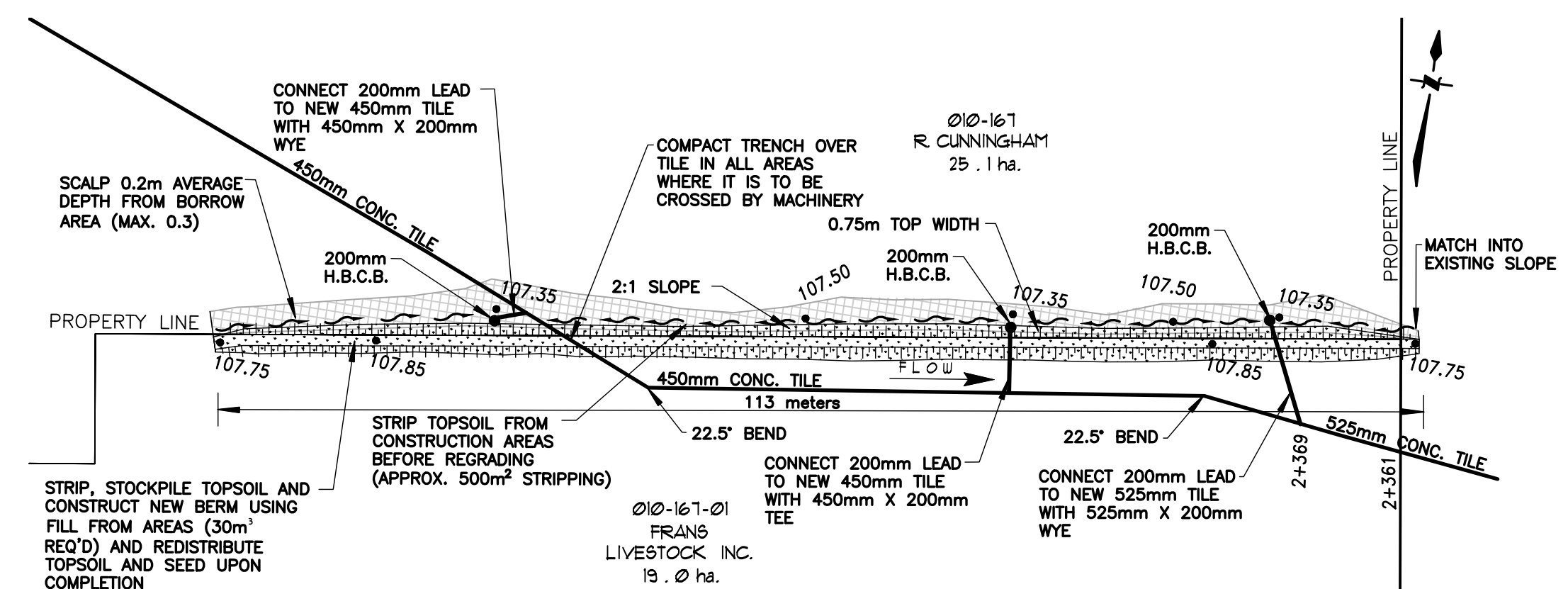
**SECTION THROUGH BERM (TYPICAL)
DETAIL "F"**
N. T. S.



**WASCOB BERM
BR "D" 0 + 992**
SCALE 1 : 500



**WASCOB BERM
BR "D" 2 + 090**
SCALE 1 : 500

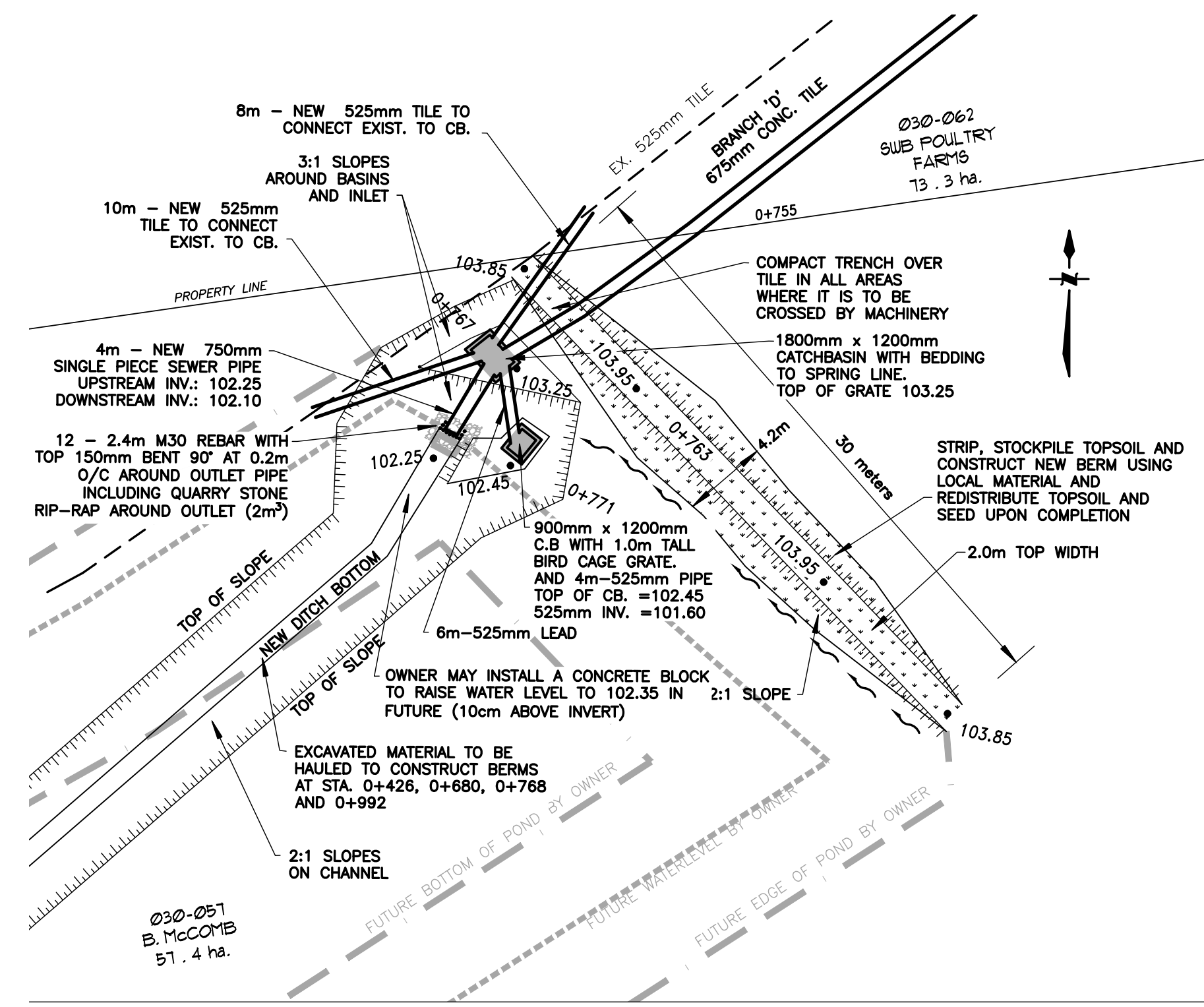


**WASCOB BERM
BR "D" 2 + 393**
SCALE 1 : 500

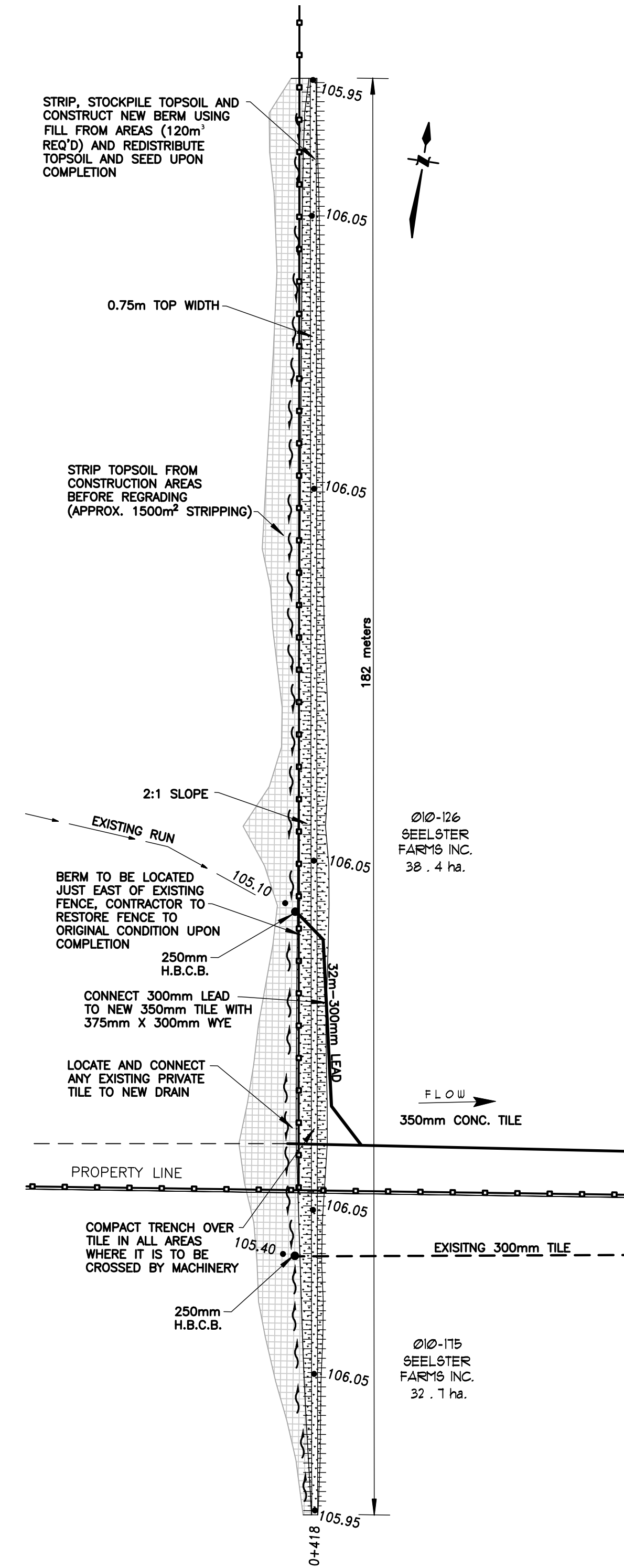
BLAKE DRAIN 2021 SOUTH PORTION

Township of Lucan Biddulph

Drainage Superintendent: ALEX VERBEEK 519 - 672 - 4100	No. 1	REVISIONS REVISED FOR TENDER	DATE MAY 11, 2021
Drawn By: ak & Rk Date: MAR 26, 2021 Field Book: GPS, D-266, D-267 Job No.: 2 2 0 0 4 3 Drawing No.: 4 of 5		SPRIET ASSOCIATES LONDON CONSULTING ENGINEERS <small>155 YORK STREET - LONDON (519) 672-4100 - NEA 1A8</small>	



OUTLET POND BR "D" @ + 767
 SCALE 1 : 250



WASCOB BERM BR "E" @ + 418
 SCALE 1 : 500

BLAKE DRAIN 2021 SOUTH PORTION
 Township of Lucan Biddulph

Drainage Superintendent:	No.	REVISIONS	DATE
ALEX VERBEEK 519 - 672 - 4100	1	REVISED FOR TENDER	MAY 11, 2021

	Drawn By: ak & Rk	Field Book	JOB No.	Drawing No.
	Date: MAR 26, 2021	GPS: D-266, D-267	2 2 0 0 4 3	5 of 5
WASCOB DETAILS				
SPRIET ASSOCIATES LIMITED LONDON CONSULTING ENGINEERS 155 YORK STREET - LONDON (519) 672-4100 - NEA 1A8				