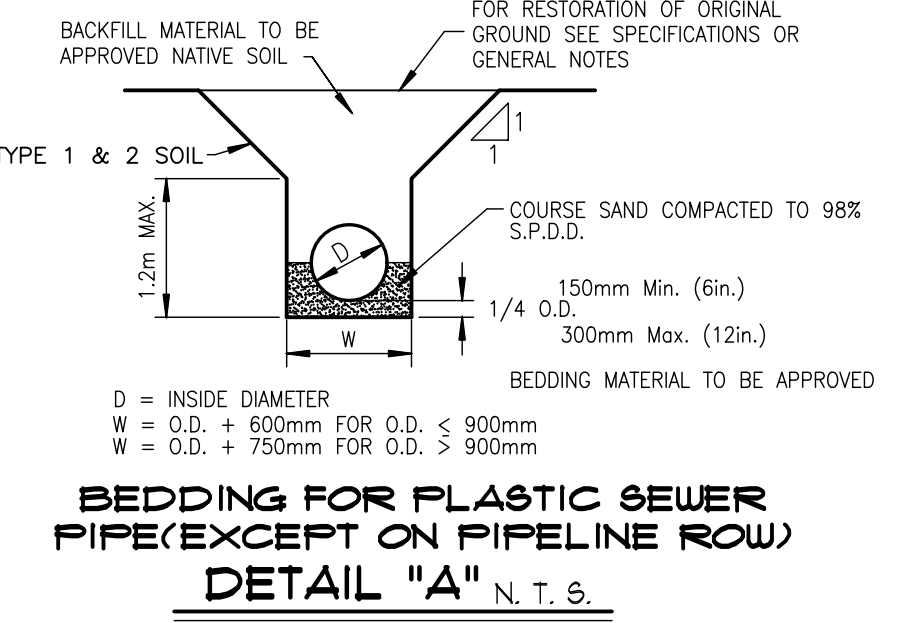


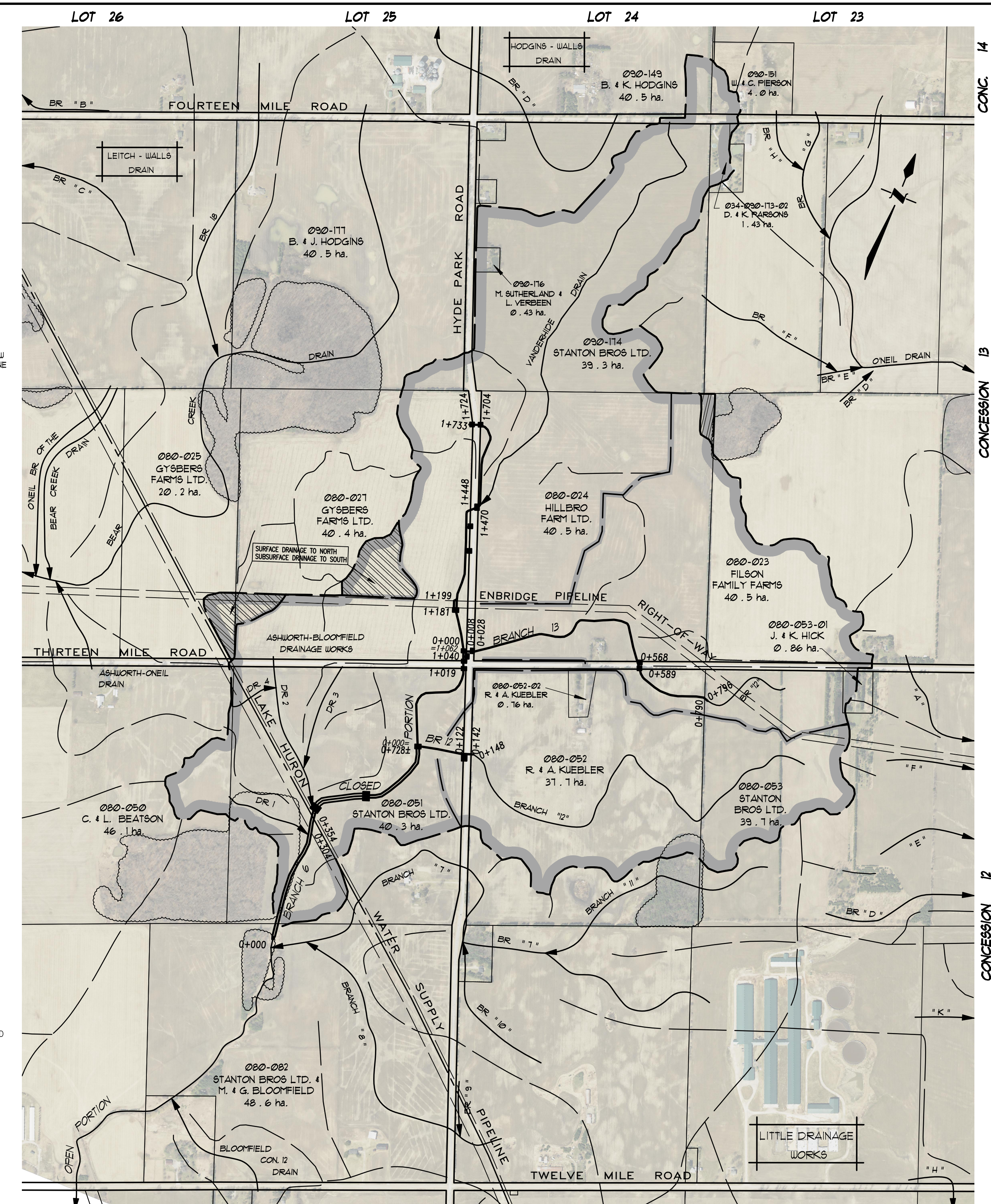
**BRANCH 6 PROFILE**  
SCALE: HOR 1:5,000  
VERT. 1:50



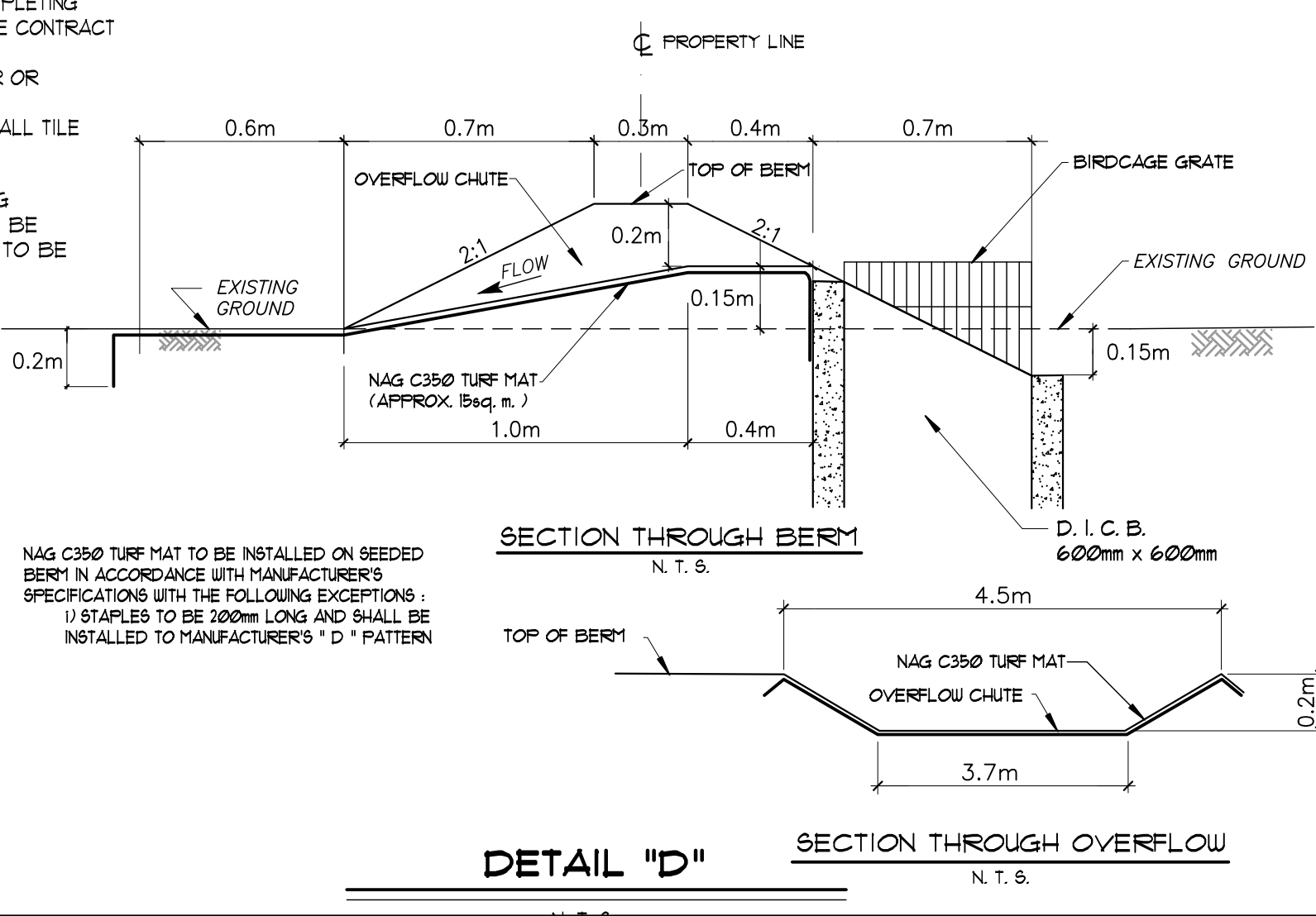
**BEDDING FOR PLASTIC SEWER PIPE (EXCEPT ON PIPELINE ROW) DETAIL "A" N.T.S.**

**GENERAL NOTES**

- OUR SPECIFICATIONS DATED JANUARY 2010 APPLY TO THIS PROJECT.
- 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:  
CLOSED PORTIONS (TRIPLE/TIPLE TILES) - 25 meters  
CLOSED PORTIONS (SINGLE TILE) - 20 meters  
THE WORKING WIDTH FOR PURPOSES OF FUTURE MAINTENANCE SHALL BE THE SAME AS ABOVE, EXCEPT FOR CLOSED PORTIONS (SINGLE TILE) SHALL BE 10m.
- 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 6 METERS. THE ACCESS ROUTE SHALL ALSO APPLY FOR FUTURE MAINTENANCE PURPOSES.
- 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.
  - CONTRACTOR TO NOTIFY ALL UTILITIES 24 HOURS PRIOR TO HIS SCHEDULED TIME FOR STARTING THE ABOVE WORK.
  - 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.
- RIP-RAP TO BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH SECTION A.12 IN THE SPECIFICATIONS.
- 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.
- ALL CONCRETE AND PLASTIC TILE AND PIPE TO CONFORM TO SECTION C.11 IN THE SPECIFICATIONS.
  - SEWER PIPE TO BE CONCRETE H.D.P.E. PLASTIC 300 MPA (CELL 4) SPIGOT WITH RUBBER GASKETS, CONFORMING TO C.S.A. 1026-08). PVC ULTRA RIB OR PVC SDR 35.
  - CONCRETE TILE SHALL BE HEAVY DUTY, UNLESS SPECIFIED AS 2000 D OR 2400 D ON PROFILE.
  - PLASTIC TILE SHALL BE PERFORATED AGRICULTURAL TUBING WITH FILTER SOCK CONFORMING TO TERRAFIX 200R, TEXEL F-100 ID OR APPROVED EQUAL.
- ALL CATCHBASINS SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH SECTION C.16 IN THE SPECIFICATIONS, EXCEPT AS FOLLOWS:  
a) ALL CATCHBASIN LEADS TO BE CONNECTED TO NEW TILE DRAIN WITH PRE-FABRICATED "WYE"
- NEW TILE DRAINS TO BE LOCATED AS FOLLOWS:  
MAIN DRAIN  
a) STA 0+000 TO STA 0+115 & STA 1+021 TO 1+724 - NEW TILE DRAINS TO BE PLACED IN SAME LOCATION AS EXISTING TILE DRAIN WHERE POSSIBLE. EXIST. TILE TO BE DESTROYED AND EXPOSED TILE SHALL BE DISPOSED OF OFF-SITE.  
b) STA 0+115 TO STA 1+021 - NEW TILE TO BE PLACED IN SAME LOCATION AS ONE OF THE EXISTING TILES WHERE POSSIBLE AND THE OTHER TILE TO BE MAINTAINED AS PRIVATE HEADER.  
EXISTING TILE DRAINS TO BE EXPOSED IN AS MANY LOCATIONS AS ARE NECESSARY TO CONFIRM THEIR EXACT LOCATION AND ELEVATION PRIOR TO CONSTRUCTION. EXACT LOCATION OF NEW TILE DRAINS THEN TO BE CONFIRMED BY DRAINAGE SUPERINTENDENT OR ENGINEER.
  - INSTALLATION OF TILE AND TRENCH WIDTHS SHALL BE IN ACCORDANCE WITH SECTION C.15 - TILE DRAINS IN THE SPECIFICATIONS.  
c) ALL OTHER SEWER PIPE TO BE INSTALLED IN ACCORDANCE WITH DETAIL "C".  
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 MOUND BACKFILLED TILE TRENCHES UNTIL SUFFICIENT SETTLEMENT HAS OCCURRED.  
f) STRIP AND STOCKPILE TOPSOIL FROM CONSTRUCTION AREA (4 metres width OVER EACH TILE) EXCEPT LANEWAYS & ROADS. EXCESS SOIL TO BE LEVELLED AND TOPSOIL RELIEVELLED OVER SPOIL, MOUND TRENCH AND REMAINING CONSTRUCTION AREA.  
g) 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.
  - IF IT BECOMES IMPRACTICAL TO INSTALL THE NEW TILE IN THE EXISTING TILE LOCATION DUE TO EXISTING TILE ALIGNMENT AND/OR TOO MUCH WATER FLOWING THROUGH THE TILE, THEN THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND/OR THE DRAINAGE SUPERINTENDENT.
    - IF SO ORDERED BY THE ENGINEER AND/OR DRAINAGE SUPERINTENDENT THEN THE CONTRACTOR SHALL DESTROY ALL THE NEW TILE IMMEDIATELY ADJACENT TO THE EXISTING TILE. AFTER CONSTRUCTION IS COMPLETED THE EXISTING TILE SHALL BE DESTROYED WITH A RUBBER TIRE BACKHOE. TILE CONNECTIONS INTO THE EXISTING TILE SHALL BE CONNECTED TO THE NEW TILE.
- 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 3 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.
  - ALL TILE CONNECTIONS TO BE MADE WITH CORING MACHINE AND PLASTIC ADAPTOR OR PREFABRICATED FITTINGS.
  - THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH A LIST SHOWING STATIONS OF ALL TILE CONNECTIONS UPON COMPLETION OF CONSTRUCTION.
- 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.



**PLAN SCALE 1:1,500**

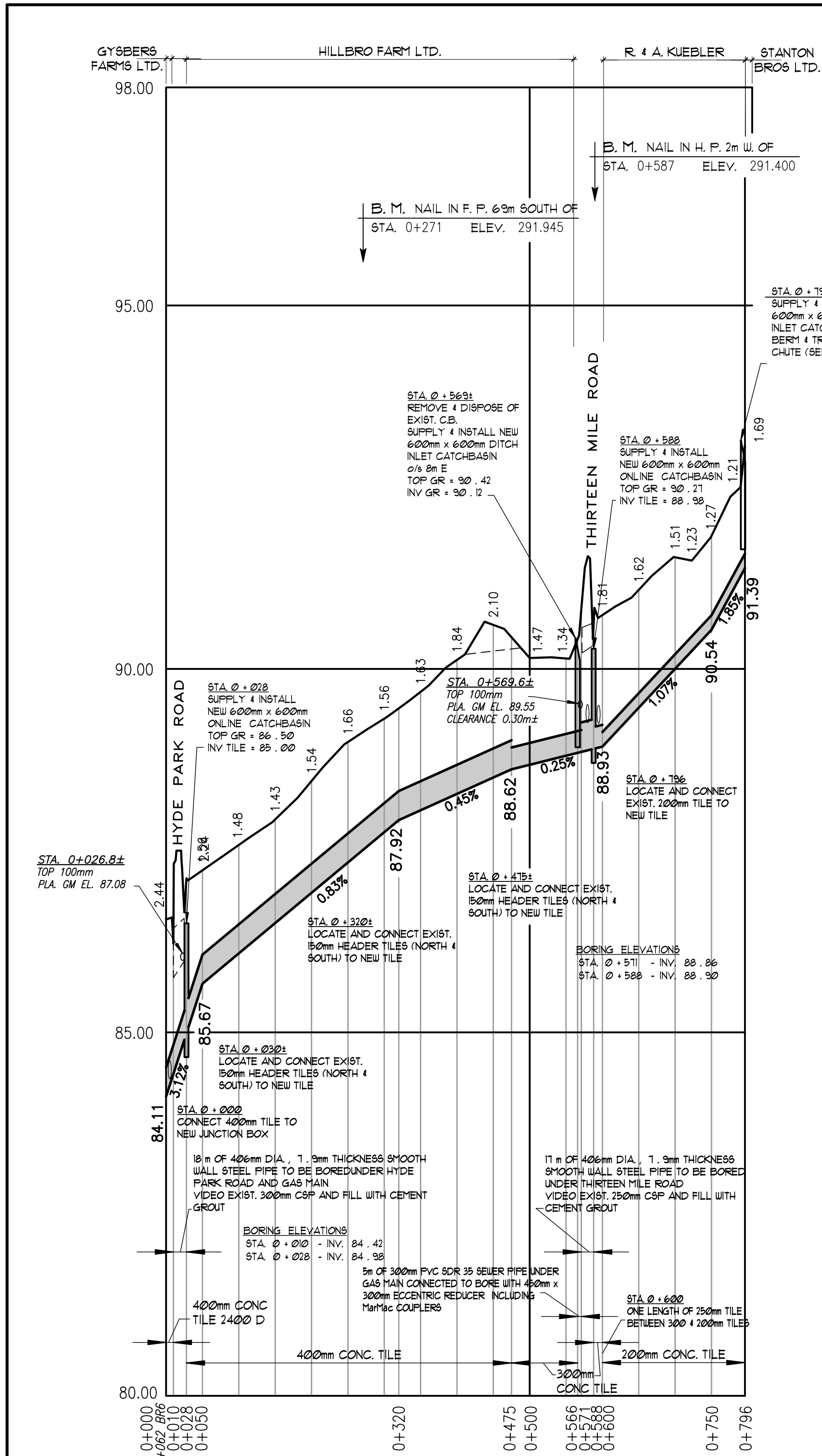


**SECTION THROUGH BERM N.T.S.**  
**SECTION THROUGH OVERFLOW N.T.S.**

**BEAR CREEK DRAIN BRANCHES 6, 12 & 13 2021**  
Municipality of **middlesex centre**  
*in the centre of it all*

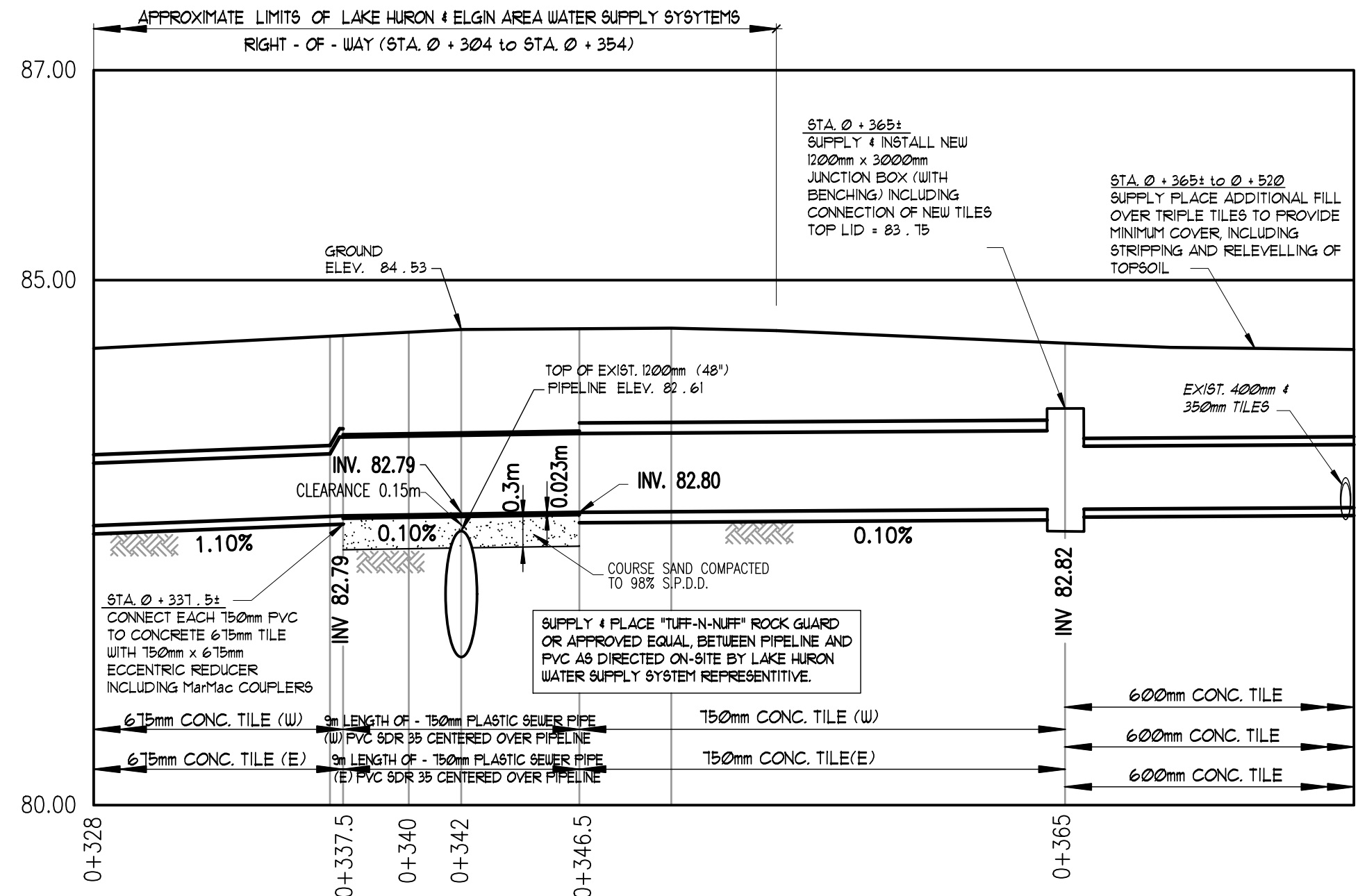
Drainage Superintendent: <b>DAN ANDERSON</b> 519-666-0190 EXT. 229	No. _____	REVISIONS _____	DATE _____
Drawn By: <b>AK</b>	Field Book: <b>D-268 &amp; GFS</b>	JOB No.: <b>219213</b>	Drawing No.: <b>1 of 2</b>
<b>PLAN, PROFILES, &amp; DETAIL</b>			
<b>SPRIET ASSOCIATES LIMITED CONSULTING ENGINEERS</b> 155 YORK STREET - LONDON (519) 672-4100 - NEA 1A8			





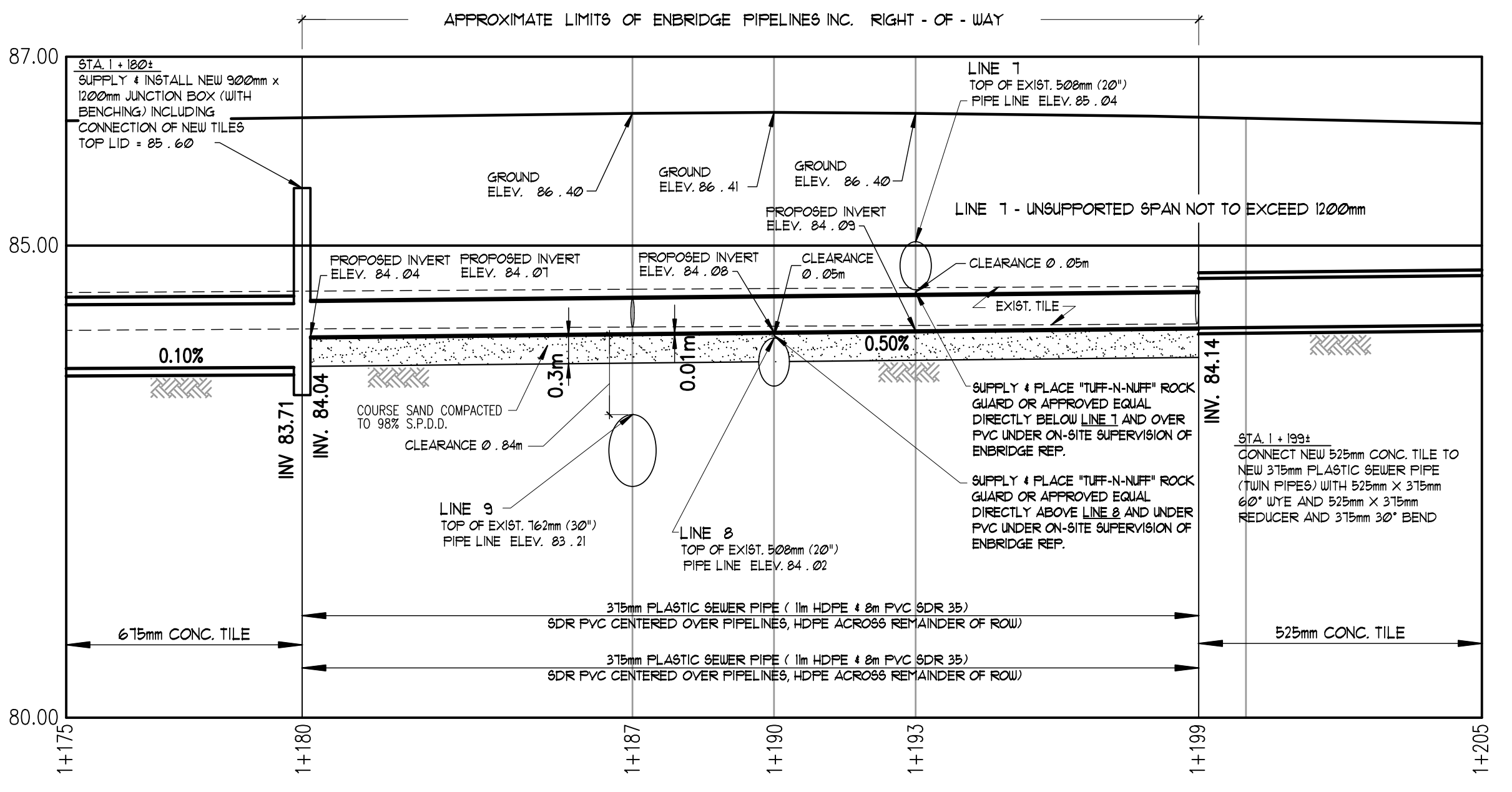
**BRANCH 13 PROFILE**

SCALE: HOR 1:5,000 VERT. 1:50



**BRANCH 6 PROFILE ACROSS LAKE HURON & ELGIN AREA WATER SUPPLY PIPELINE**

SCALE: HOR 1:100 VERT. 1:50



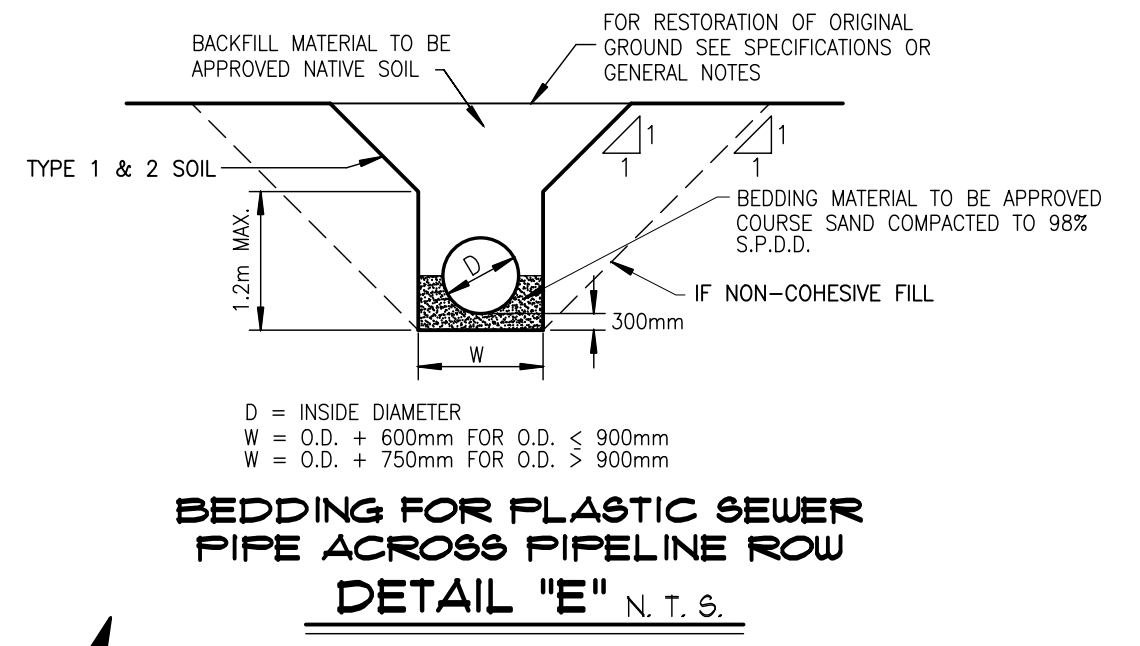
**BRANCH 6 PROFILE ACROSS ENBRIDGE PIPELINES**

SCALE: HOR 1:100 VERT. 1:50

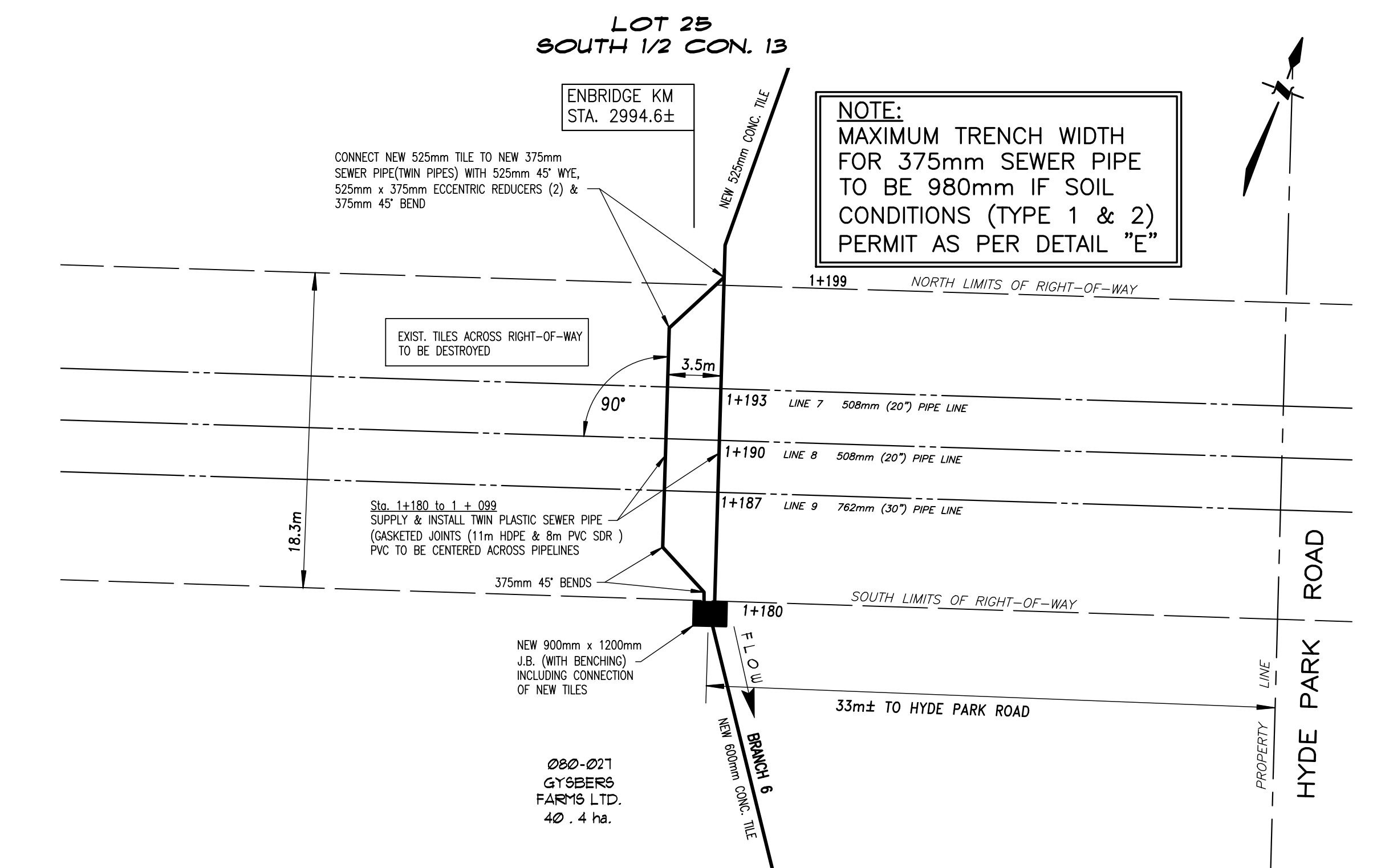
**LHEAUS6 PIPELINE CROSSING NOTES**

- CONTRACTOR TO NOTIFY "LAKE HURON & ELGIN AREA WATER SUPPLY SYSTEMS" 1 DAY PRIOR TO HIS SCHEDULED TIME FOR STARTING WORK ACROSS OR NEAR THEIR PIPELINES.
- A REPRESENTATIVE FROM LHEAUS6 IS TO BE ON-SITE AT ALL TIMES FOR THE DURATION OF THE PIPELINE CROSSINGS.

CONTACTS: ANDREW J. HENRY 519-930-3505 EXT. 1355  
 aherry@huronelginwater.ca  
 DAVE SCOTT 519-930-3505 EXT. 5099  
 davescott@huronelginwater.ca



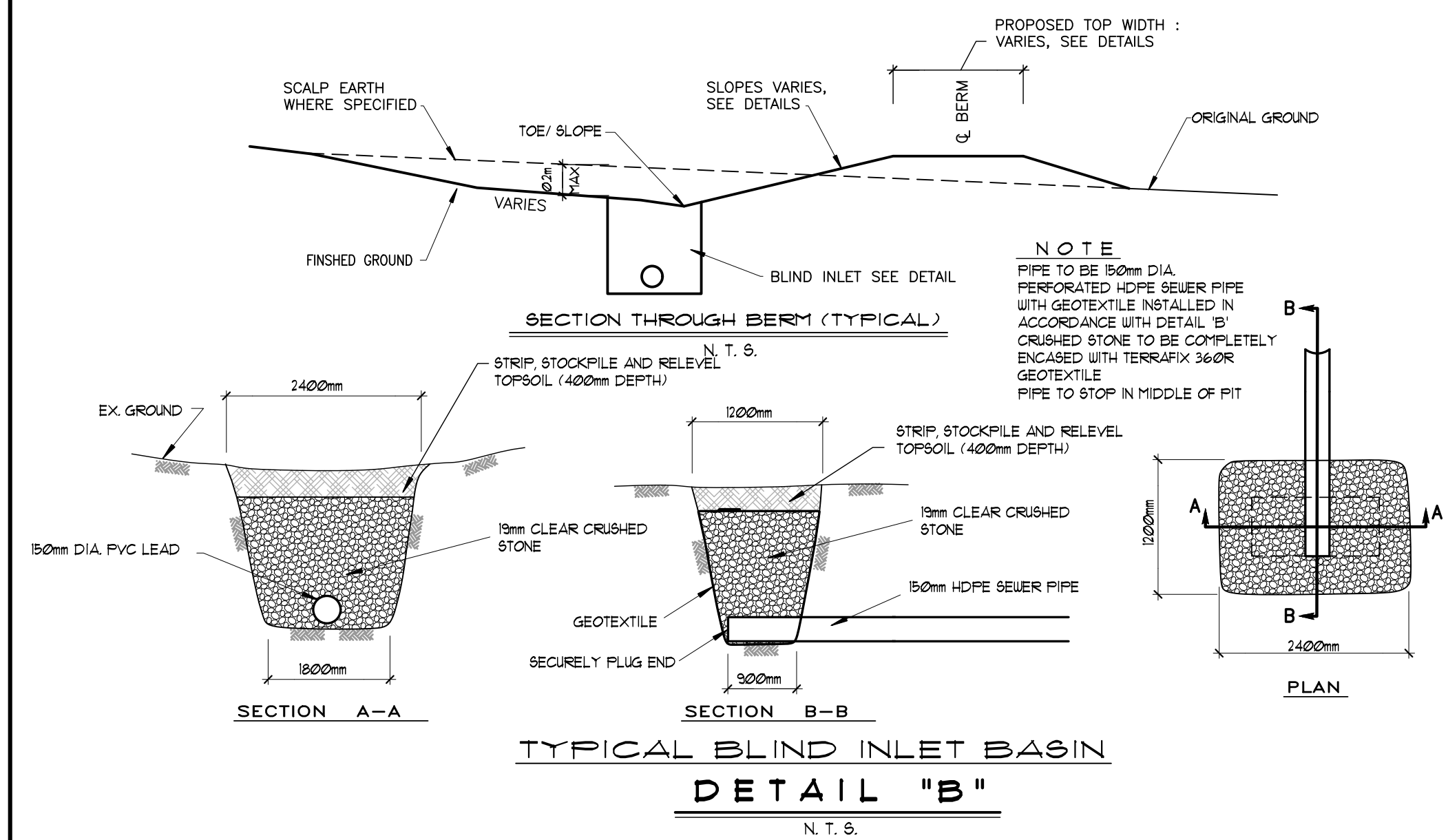
**DETAIL "E" N.T.S.**



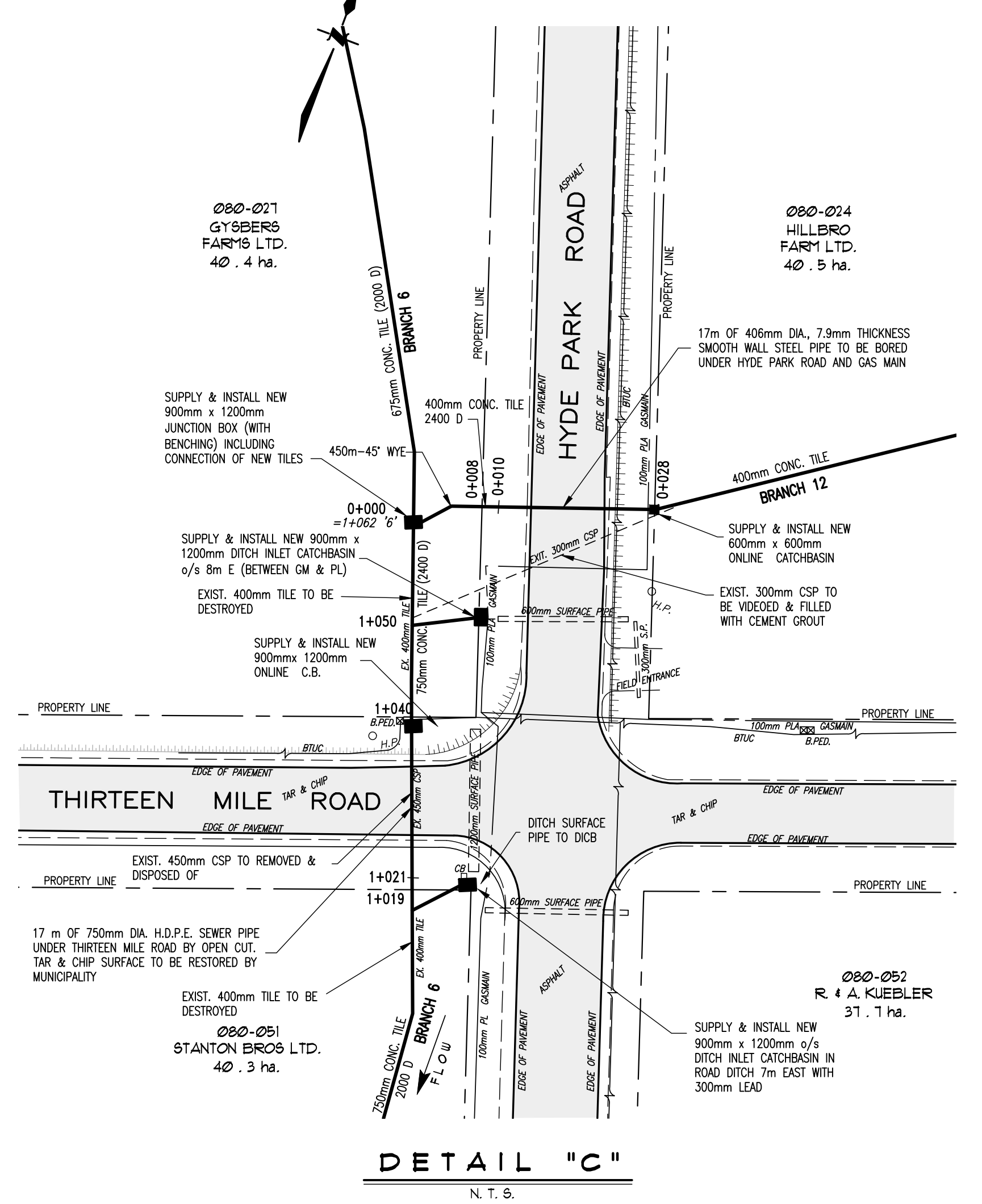
**"CAUTION" HIGH PRESSURE PIPELINES**

**PLAN OF BRANCH 6 PIPELINE CROSSINGS**

SCALE 1:250



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



**DETAIL "C" N.T.S.**

**ENBRIDGE PIPELINE CROSSING NOTES**

- THE CONTRACTOR IS REQUIRED TO REQUEST LOCATES THROUGH ONTARIO ONE CALL PRIOR TO ANY WORK ON THE RIGHT OF WAY. THIS CAN BE DONE BY CALLING 1-800-400-225 OR BY EMAIL TO ONCALL.COM. A MINIMUM 12 HOURS 3 BUSINESS DAYS IS REQUIRED TO SCHEDULE ON-SITE INSPECTION. LONGER NOTICE IS APPRECIATED FOR SCHEDULING CREWS WHENEVER POSSIBLE.
- CONTACT: ANN NEUMAN, SUPERVISOR LANDS & RIGHT OF WAY, EASTERN CANADA 1066 MODELAND RD, BLDG 1050, SARNIA ON N1S 6L2 BUSINESS: (519) 339-0503 E-MAIL: ANN.NEUMAN@ENBRIDGE.COM
- ANY MOBILE EQUIPMENT, OTHER THAN FARMING EQUIPMENT, TRAVELING OVER A TRAVELED ROAD MUST OBTAIN PERMISSION FROM ENBRIDGE PRIOR TO CROSSING THE PIPELINES/RIGHT-OF-WAY.
- DEPENDING ON THE SIZE AND WEIGHT OF THE EQUIPMENT AN ENGINEERING ASSESSMENT MAY BE REQUIRED.
- ANY FACILITIES CONSTRUCTED ACROSS A PIPELINE/RIGHT-OF-WAY REQUIRES WRITTEN APPROVAL FROM ENBRIDGE PRIOR TO CONSTRUCTION - THIS APPROVAL IS GRANTED IN THE FORM OF A CROSSING AGREEMENT.
- A REPRESENTATIVE FROM ENBRIDGE IS TO BE ON-SITE AT ALL TIMES FOR THE DURATION OF THE HIGH PRESSURE PIPELINE CROSSINGS. FOR ON-SITE INSPECTION: SUPERVISOR PAUL TOENDERS (519) 332-4700
- NO TEMPORARY CROSSING IS ALLOWED WITHOUT FURTHER ENBRIDGE ENGINEERING INPUT.
- NO ENBRIDGE PIPE IS TO BE EXPOSED FOR A LENGTH GREATER THEN ONE METER.
- APPLICANT TO CONFIRM CROSSING LOCATION PRIOR TO CONSTRUCTION.
- THE APPLICANT/CONTRACTOR MUST STAY MORE THAN 5m AWAY FROM THE PIPELINE AT ALL TIMES EXCEPT WITHIN THE SPECIFIED CROSSING LOCATION.

**BEAR CREEK DRAIN BRANCHES 6, 12 & 13 2021**

Municipality of **middlesex centre**  
*in the centre of it all*

Drainage Superintendent: <b>DAN ANDERSON</b> 519-666-0190 EXT. 229	No. _____	REVISIONS _____	DATE _____
Drawn By: ak & Rk	Field Book	JOB No.	Drawing No.
Date: SEPT. 30, 2021	D - 268 & GPs	219 213	2 of 2

**SPRIET ASSOCIATES LIMITED**  
 LONDON CONSULTING ENGINEERS  
 155 YORK STREET - LONDON (519) 672-4100 - 166A 1A8