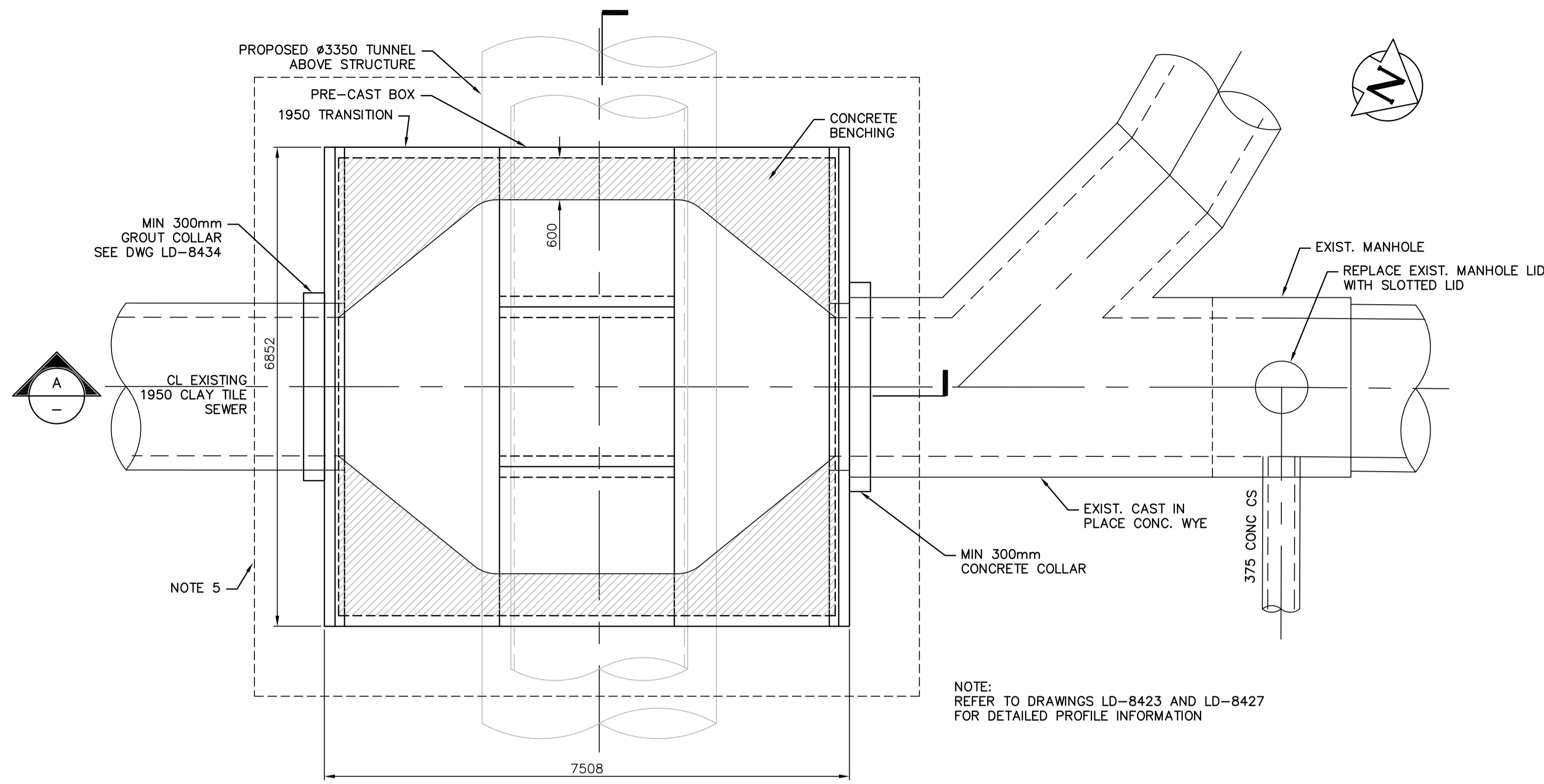
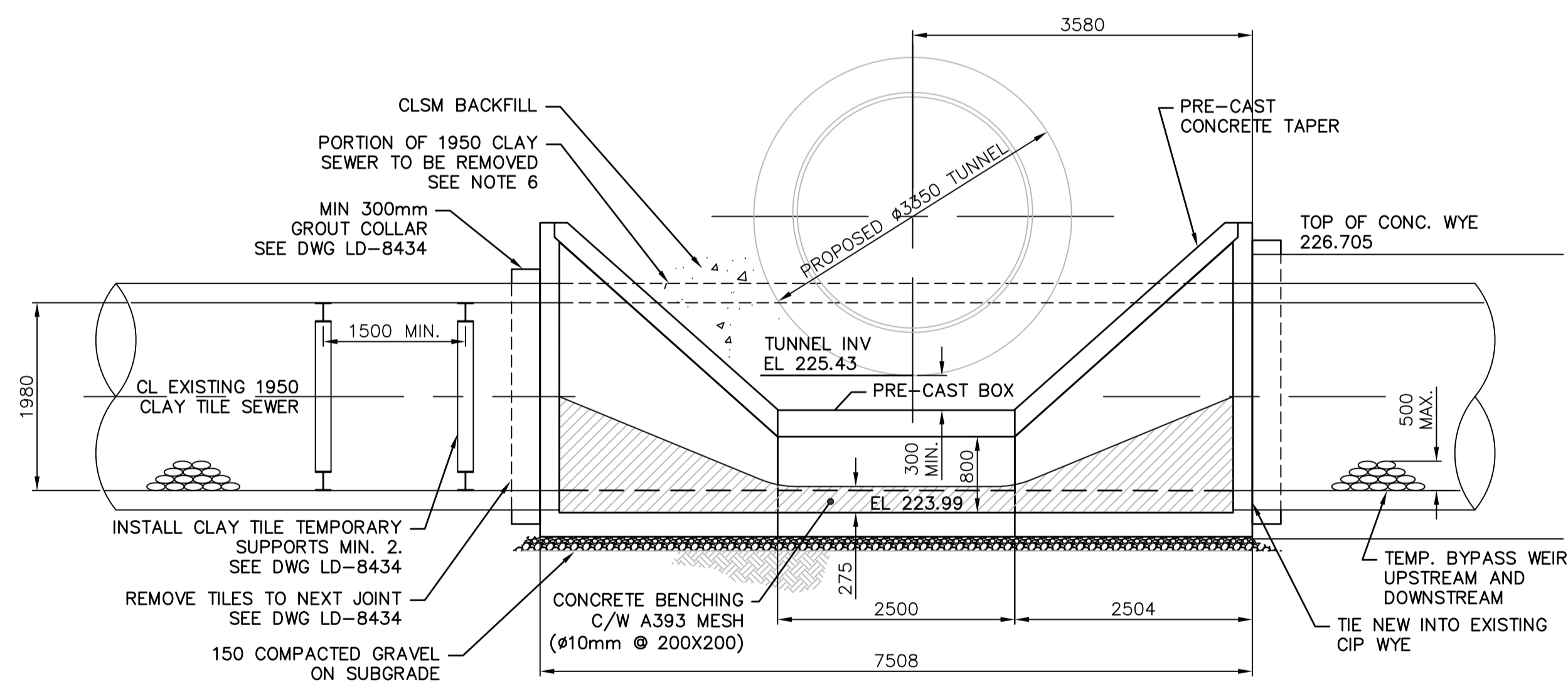


**RECOMMENDED CONSTRUCTION SEQUENCE**

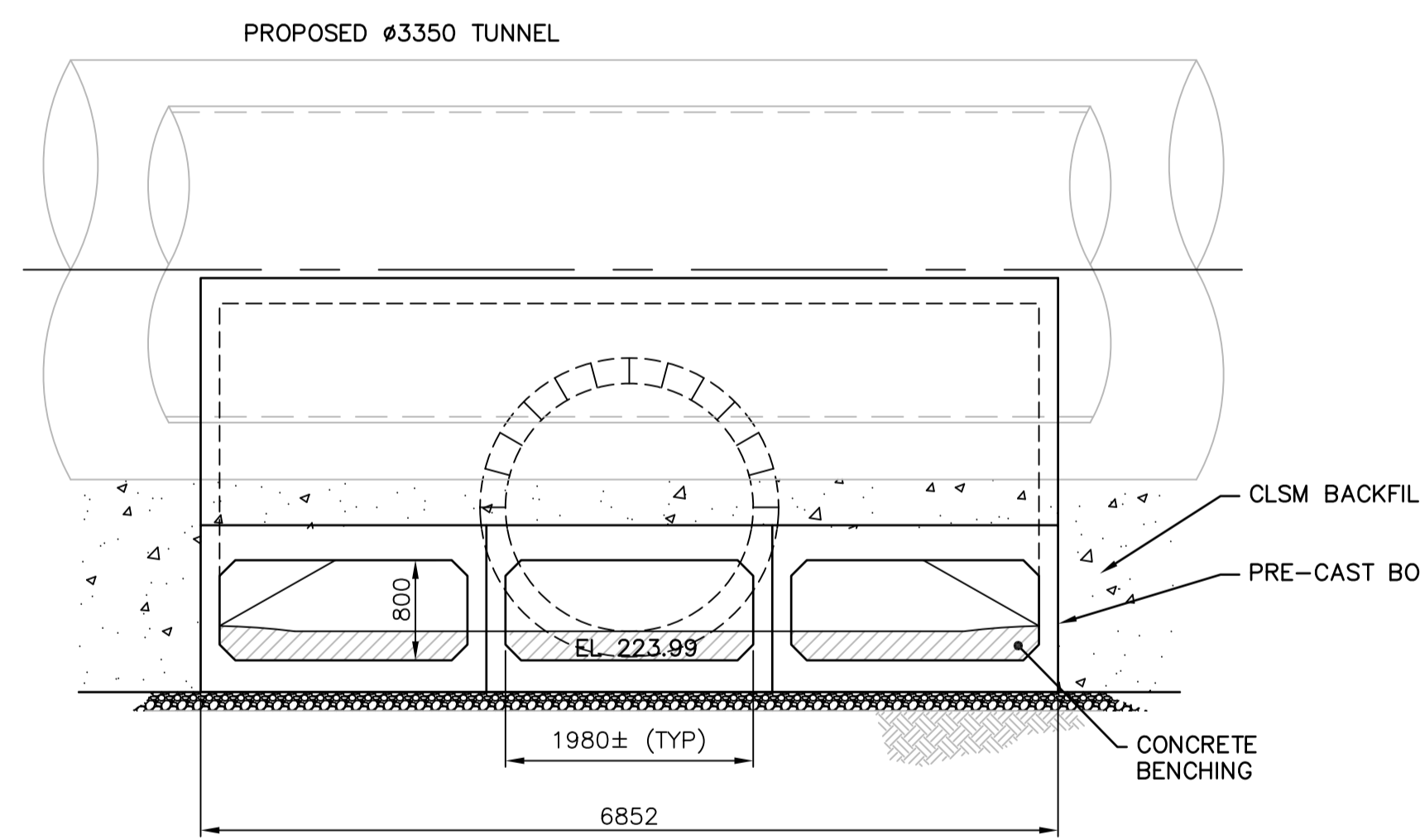
1. INSTALL TEMPORARY BYPASS PUMPING FOR SANITARY FLOWS.
2. SUPPORT EXISTING TILE SEWER AT EXTENT OF EXCAVATION.
3. EXPOSE EXISTING CLAY TILE SEWER AND CONFIRM LOCATION AND DIMENSIONS.
4. DEWATER EXCAVATION TO A MIN. 300mm BELOW SUBGRADE.
5. EXCAVATE AND REMOVE EXISTING TILE SEWER WITHIN WORKING LIMITS.
6. PREPARE SUBGRADE.
7. INSTALL CIP UNITS AND CAST COLLAR.
8. INSTALL BENCHING AND GROUT GAPS WITHIN THE TILES AT THE UP AND DOWNSTREAM LOCATIONS.
9. BACKFILL WITH CLSM TO UNDERSIDE OF ROAD SUBGRADE.
10. REINSTATE TAYLOR AVENUE.
11. TUNNEL 3350 THROUGH CLSM AND MONITOR FOR SETTLEMENT/ MOVEMENT.



1 PLAN AT EL. 227.0m  
1:50



A SECTION (STA 2+339.43)  
1:50



B SECTION  
1:50

**CONSTRUCTION NOTES:**

1. SEWER AND WATER SERVICES SHOWN ON DRAWING ARE APPROXIMATE ONLY.
2. LOCATION OF ALL SEWER AND WATER LINES TO BE CONFIRMED IN FIELD.
3. DRY WEATHER CONSTRUCTION ONLY.
4. TRAFFIC MANAGEMENT PLAN TO BE IMPLEMENTED AS PER SPECIFICATIONS DURING EACH PHASE OF CONTRACT.
5. CONTRACTOR TO DESIGN TEMPORARY SHORING WORKS. SEE TRAFFIC RESTRICTIONS WITHIN THE DETAIL SPECIFICATIONS FOR CONSTRAINTS.
6. CONTRACTOR TO TEMPORARILY SUPPORT CLAY TILES DURING INSTALLATION.
7. CONTRACTOR TO PROVIDE TEMPORARY BYPASS PUMPING.
8. PRECON PRE-CAST CONCRETE STRUCTURES OR APPROVED EQUAL IN ACCORDANCE WITH B7.
9. PRE-CAST UNITS TO BE SEALED WATER TIGHT IN ACCORDANCE WITH PRE-CAST MANUFACTURER'S RECOMMENDATIONS.
10. CONTRACTOR TO ENSURE CAST IN PLACE STRUCTURE HAS BEEN DESIGNED FOR TEMPORARY LOADS FROM TBM AND LONG TERM PERMANENT LOADINGS. CONTRACTOR TO PROVIDE SHOP DRAWINGS SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN MANITOBA.
11. MINIMUM FINAL CROSS SECTION FLOW AREA OF 2.986m<sup>2</sup> WITH FINAL BENCHING IN PLACE.

**LOADING SCENARIOS**

1. DEAD LOADS: CLSM BACKFILL. LIVE LOADS: TRAFFIC.
  2. DEAD LOADS: CLSM BACKFILL. LIVE LOADS: TBM AND TRAFFIC.
  3. DEAD LOADS: CLSM BACKFILL + PIPE WEIGHT - PIPE VOID. LIVE LOADS: TRAFFIC.
  4. DEAD LOADS: CLSM BACKFILL + PIPE WEIGHT + FULL PIPE WATER. LIVE LOADS: TRAFFIC.
- ALL SCENARIOS WOULD BE SUBJECT TO UPLIFT AND SANITARY SEWER FLOWS



B.M. ELEV.					THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT	
DESIGNED BY	MD				CHECKED BY	ES
DRAWN BY	JBC	APPROVED BY	RBO	COCKBURN AND CALROSSIE COMBINED SEWER RELIEF WORKS - CONTRACT 5	22 OF 25	
1	RE ISSUED FOR TENDER	01/2018	JBC	RELEASED FOR CONSTRUCTION: K. ZUREK DATE JAN 19, 2018	COMPUTER FILE NAME	
0	ISSUED FOR TENDER	01/2018	JBC		S-505.dwg	
NO. REVISIONS		DATE	BY	DATE	CITY DRAWING NUMBER	
					LD-8433	
				CONSULTANT DRAWING NO.	STRUCTURAL	
				S-505	MODIFICATION OF EXISTING 1950 SEWER	
					SHEET 1 OF 2	