

DRAINAGE (CONT.)

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

603	150mm CONDUIT, TYPE B, AS PER PLAN, 707.45 PS 46 MIN., 707.41, NON-PERFORATED OR 706.08	100 METERS
603	150mm CONDUIT, TYPE C, AS PER PLAN, 707.45 PS 46 MIN., 707.41, NON PERFORATED OR 706.08	100 METERS
603	200mm CONDUIT, TYPE B, AS PER PLAN, 707.45 PS 46 MIN., 707.41, NON PERFORATED OR 706.08	100 METERS
603	200mm CONDUIT, TYPE C, AS PER PLAN, 707.45 PS 46 MIN., 707.41, NON PERFORATED OR 706.08	100 METERS
603	250mm CONDUIT, TYPE B, AS PER PLAN, 707.45 PS 46 MIN., 707.41, NON PERFORATED OR 706.08	100 METERS
603	250mm CONDUIT, TYPE C, AS PER PLAN, 707.45 PS 46 MIN., 707.41, NON PERFORATED OR 706.08	100 METERS

UNDERDRAIN INSTALLATION

WHERE PROPOSED UNDERDRAIN TRENCH CLEARS EXISTING UNDERDRAIN TRENCHES BY 0.3 METERS OR MORE, THE EXISTING UNDERDRAINS SHALL REMAIN AND BE OUTLETTED TO THE NEAREST CATCH BASIN OR CONNECTED TO THE PROPOSED UNDERDRAIN.

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

603	100mm CONDUIT, TYPE F, AS PER PLAN, 707.41, NON-PERFORATED, ASTM D 3034 SDR 35, 707.42 OR 707.33	100 METERS
603	150mm CONDUIT, TYPE F, AS PER PLAN, 707.41, NON-PERFORATED, ASTM D 3034 SDR 35, 707.42 OR 707.33	100 METERS

WHERE PROPOSED UNDERDRAIN TRENCH WILL DISTURB THE EXISTING UNDERDRAIN TRENCH, REMOVE THE EXISTING UNDERDRAIN, BACKFILL AND THEN EXCAVATE FOR AND INSTALL PROPOSED UNDERDRAIN.

ITEM SPECIAL - MISCELLANEOUS METAL

EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE, AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. ALL MATERIALS SHALL MEET ITEM 604 OF THE SPECIFICATIONS AND SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED FORWARD TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM SPECIAL - MISCELLANEOUS METAL 2500 KILOGRAMS

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE AND REPLACEMENT OF ALL EXISTING CASTINGS. CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE EXPENSE OF THE CONTRACTOR.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS.

ITEM 613 - LOW STRENGTH MORTAR BACKFILL, (TYPE 3)

THE FOLLOWING ITEM SHALL BE USED TO BACKFILL THE FOLLOWING STORM SEWER CONDUIT/MANHOLE INSTALLATIONS IN LIEU OF THE NORMAL BACKFILL REQUIREMENTS OF 603 AND 604.

- REF D-2, SHEET 97 OF 214
- REF D-3, SHEET 97 OF 214
- REF D-1, SHEET 98 OF 214

THIS MATERIAL SHALL BE USED FOR ALL OF THE BACKFILL UP TO TWO (2) FEET BELOW FINAL GRADE. THE REMAINING FILL SHALL BE LOOSE, FRIABLE, LOAMY SOIL CAPABLE OF SUPPORTING VEGETATION. THE UNIT PRICE BID FOR ITEM 613-LOW STRENGTH MORTAR BACKFILL, (TYPE 3), SHALL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO MEET THE ABOVE REQUIREMENTS.

ITEM 613 - LOW STRENGTH MORTAR BACKFILL, (TYPE 3) - 534 CUBIC METER

DRAINAGE WORK ADJACENT TO AN EXISTING LANDFILL

THE CONTRACTOR IS NOTIFIED THAT THE FOLLOWING DRAINAGE ITEMS WILL BE INSTALLED ADJACENT TO AN OLD LANDFILL. IN ADDITION TO THE NORMAL 603 AND 604 REQUIREMENTS, THESE CONDUIT RUNS SHALL BE INSTALLED IN TRENCHES WITH NEAR VERTICAL WALLS, WITH THE APPROPRIATE SHEETING AND OR SHORING PER OSHA REQUIREMENTS. ALL COSTS ASSOCIATED WITH THESE REQUIREMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE BID ITEMS.

- REF D-2, SHEET 97 OF 214
- REF D-3, SHEET 97 OF 214
- REF D-1, SHEET 98 OF 214

ITEM 604 - MANHOLE NO. 3, AS PER PLAN, TYPE B

THIS ITEM SHALL CONFORM TO ITEM 604, EXCEPT SLAG SHALL NOT BE USED AS BEDDING OR BACKFILL MATERIAL.

ALL JOINTS SHALL BE PER 706.11, INCLUDING CONNECTION BETWEEN MANHOLE AND SEWER PIPE.

SANITARY

SANITARY WORK

THE FOLLOWING CONDUIT TYPES MAY BE USED:

ALL TYPE B AND TYPE C CONDUITS FOR STORM AND/OR SANITARY SEWERS SHALL CONFORM TO THE FOLLOWING CITY OF WILLOUGHBY REQUIREMENTS:

CONDUITS WITH DIAMETERS OR RISE LESS THAN 300 mm SHALL BE LIMITED TO 706.08 E.S. WITH 706.12 JOINTS OR 707.45 PS 115 WITH JOINTS CONFORMING TO ASTM D 3212.

CONDUITS WITH DIAMETERS OR RISE EQUAL TO OR GREATER THAN 300 mm SHALL BE LIMITED TO 706.02 WITH 706.11 JOINTS.

UNRECORDED SANITARY CONNECTIONS

ANY UNRECORDED ACTIVE CONNECTION TO A SANITARY SEWER ENCOUNTERED DURING CONSTRUCTION SHALL BE RECONNECTED TO THE EXISTING SANITARY SEWER TO THE SATISFACTION OF THE ENGINEER.

THE FOLLOWING CONDUIT TYPES MAY BE USED: 706.08 E.S. WITH 706.12 JOINTS OR 707.45 P.S. 115 WITH JOINTS CONFORMING TO ASTM D 3212.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

603, 150 mm CONDUIT, TYPE B, FOR SANITARY	50 METERS
603, 150 mm CONDUIT, TYPE C, FOR SANITARY	50 METERS

SANITARY SEWER CONNECTIONS, STA. 4+814 TO STA. 5+381

THE EXISTING SANITARY SEWER CONNECTIONS ALONG SR-640 (VINE STREET) STATION 4+814 TO STATION 5+381 SHALL BE REMOVED AND REPLACED. THE LIMIT OF THIS CONNECTION REPLACEMENT SHALL BE FROM THE EXISTING SANITARY SEWER TO THE RIGHT-OF-WAY. ALL CONNECTIONS APPEARING ON THESE PLANS ARE TAKEN FROM RECORD. THE ACTIVE SANITARY CONNECTIONS SHALL BE IDENTIFIED PRIOR TO REPLACEMENT. NON-ACTIVE CONNECTIONS SHALL BE ABANDON IN PLACE. THE CITY OF WILLOUGHBY SHALL BE RESPONSIBLE FOR 100% OF THE COST OF THE PROJECT COST TO PERFORM THIS WORK. THE CONNECTION SCHEDULE FOR THIS WORK IS LISTED ON SHEET NO. 60.

REPLACEMENT OF SANITARY SEWER STA. 4+445 TO STA. 4+670

THE PROPOSED SANITARY SEWER FROM STATION 4+445 TO STATION 4+670 SHALL BE INSTALLED PRIOR TO THE REMOVAL OF THE EXISTING SANITARY AND EXISTING STORM SEWER. THE PROPOSED STORM SEWER MAY THEN BE INSTALLED ONCE THE PROPOSED SANITARY SEWER IS OPERATIONAL.

PAVEMENT

ITEM 304. AGGREGATE BASE, AS PER PLAN

THE ONLY SLAG MATERIALS PERMITTED FOR THIS ITEM SHALL BE CRUSHED AIR COOLED BLAST FURNACE SLAG, A MIXTURE OF CRUSHED AND GRANULATED SLAG, OR OPEN HEARTH SLAG FROM APPROVED SOURCES ON FILE AT THE LABORATORY.

ALL MATERIALS OR BLENDED MATERIALS SHALL MEET THE GRADATION REQUIREMENTS OF 304.02.

ANY GRANULATED SLAG MATERIAL USED SHALL MEET THESE GRADATION REQUIREMENTS IN LIEU OF 703.08.

CONTRACTION AND/OR EXPANSION JOINTS

THE PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2M AND THE SPECIFICATIONS AS FOLLOWS:

- * THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS SHALL NOT EXCEED 6.5 m.
- * CONTRACTION JOINTS SHALL BE SAWED ALONG THE CENTERLINE OF THE DOWEL BASKET TO A DEPTH OF ONE-FOURTH OF THE SPECIFIED PAVEMENT THICKNESS AS PER STANDARD DETAIL B.P.2.2m
- * ITEM 705.04 HOT APPLIED CRACK AND JOINT SEALER SHALL BE USED TO FILL THE JOINT IN LEU OF ITEM 705.11 PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL FOR CONCRETE.

ITEM 623 - CONSTRUCTION LAYOUT STAKES, AS PER PLAN

ALL EXISTING ROADWAY MONUMENTS WITHIN THE CONSTRUCTION LIMITS ARE TO BE REFERENCED TO POINTS AND/OR PERMANENT STRUCTURES OUTSIDE THE CONSTRUCTION LIMITS, SO AS TO REESTABLISH THEIR POSITION AND REPLACE THE POINT, AS NECESSARY. NO LESS THAN THREE (3) SUCH REFERENCES PER MONUMENT ARE TO BE FURNISHED.

THE REFERENCES WILL BE DOCUMENTED IN A FIELD BOOK PROVIDED BY THE LAKE COUNTY SURVEY DEPARTMENT. THE DOCUMENTATION, REFERENCING, AND REPLACEMENT SHALL BE MADE UNDER THE SUPERVISION OF A LICENSED SURVEYOR. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE ABOVE DOCUMENTATION AND FIELD BOOK. THE FIELD BOOK SHALL BE GIVEN TO THE PROJECT ENGINEER UPON COMPLETION OF THE WORK AND SUBSEQUENTLY RETURNED TO THE LAKE COUNTY ENGINEER SURVEY DEPARTMENT.

PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE CONTRACT UNIT FOR ITEM 623 - CONSTRUCTION LAYOUT STAKES, AS PER PLAN.

ADDITIONAL SOIL INFORMATION

THE SOIL PROFILE AND/OR STRUCTURE FOUNDATION INVESTIGATION SHEETS CONTAIN ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN. ADDITIONAL SUBSURFACE INVESTIGATIONS MAY HAVE BEEN MADE TO STUDY SOME ASPECT OF THE PROJECT. MORE INFORMATION, IF ANY, MAY BE OBTAINED IN DISTRICT 12, THE OFFICE OF MATERIALS MANAGEMENT AT 1600 WEST BROAD STREET OR THE OFFICE OF STRUCTURAL ENGINEERING AT 1980 WEST BROAD STREET IN COLUMBUS, OHIO, 43223.

ADDITIONAL SOIL INFORMATION FROM FEDERAL PROJECT NO. U-UG-1090(1), 1957 (LAK-640-2.56) IS AVAILABLE AT DISTRICT 12 (SUBDIRECTORY 000163).

ITEM 202. FENCE REMOVED, FOR STORAGE

WHERE DESIGNATED, FENCE SHALL BE CAREFULLY DISMANTLED AND STORED FOR SALVAGE BY THE PROPERTY OWNER. QUANTITIES FOR THIS ITEM HAVE BEEN TABULATED IN THE CALCULATIONS ON SHEET NO. 56.

CALC. BY: CHECKED BY: GENERAL NOTES LAK-640-3.444 24 214