

DRAINAGE

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.

CROSSING EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

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

ITEM 604 - PRECAST REINFORCED CONCRETE OUTLET

A PRECAST REINFORCED CONCRETE OUTLET SHALL BE NECESSARY AT ALL UNDERDRAIN OUTLET LOCATIONS NOT FLOWING INTO AN APPURTENANCE. THIS INSTALLATION SHALL BE PER STANDARD DRAWING DM-1.1M. ALL DIMENSIONS IN STANDARD DRAWING DM-1.1M SHOWN IN METRIC UNITS SHALL BE CONVERTED TO ENGLISH UNITS.

CASTINGS ADJUSTED TO GRADE, AS PER PLAN

ALL CASTINGS, EXCEPT THOSE OWNED BY PRIVATE COMPANIES SHALL BE ADJUSTED BY THE CONTRACTOR. THE TIME BETWEEN ADJUSTING THE CASTINGS AND RESURFACING SHALL BE AN ABSOLUTE MINIMUM. ADJUSTING RINGS SHALL NOT BE USED.

THE ESTIMATED QUANTITIES FOR THE ABOVE MENTIONED WORK ARE AS FOLLOWS:

ITEM	DESCRIPTION	QUANTITY	UNIT
604	MONUMENT BOX, ADJUSTED TO GRADE, AS PER PLAN	5	EACH

UNDERDRAIN SUPPLEMENT

THE EXISTING UNDERDRAIN SYSTEM IS TO BE SUPPLEMENTED THROUGHOUT THIS PROJECT WITH ITEM 605 - 6" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, AS PER PLAN. THE NEW UNDERDRAINS SHALL BE INSTALLED AT THE SAME LOCATIONS AS EXISTING, EXCEPT THAT THEY SHALL BE LOCATED AT THE EDGE OF THE CONCRETE PAVEMENT AS SHOWN ON THE TYPICALS.

THE FLOWLINE ELEVATIONS SHOWN IN THE PLANS ARE APPROXIMATE. THE PROPOSED UNDERDRAINS SHALL BE PLACED AT A DEPTH AS DETAILED ON SHEET 8.

NEW UNDERDRAIN AT THE EDGE OF CONCRETE PAVEMENT SHALL BE OUTLETTED IN THE SAME LOCATIONS AS THE EXISTING. THE OUTLETS SHALL BE CONSTRUCTED AT THE SAME LINE AND GRADE AS THE EXISTING OUTLET CONDUITS AND SHALL CONNECT BOTH THE OLD AND NEW UNDERDRAIN SYSTEMS INTO THE OUTLET. THE COST FOR ALL PIPE BENDS AND BRANCHES TO CONNECT THE EXISTING AND PROPOSED UNDERDRAIN SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 605 - 6" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, AS PER PLAN. THE OUTLET CONDUIT SHALL BE ITEM 603 - 6" CONDUIT, TYPE F, 707.41 NON-PERFORATED ASTM D3034, SDR35, 707.42 OR 707.33. FOR ADDITIONAL DETAILS SEE SHEET NO. 134A.

THE FOLLOWING ESTIMATED QUANTITIES SHALL BE USED TO REPLACE THE ASPHALT REMOVED TO CONSTRUCT THE PROPOSED UNDERDRAINS WITH ITEM 301 - BITUMINOUS AGGREGATE BASE, PG64-22, AS DETAILED ON THE TYPICAL SECTIONS:

ITEM	DESCRIPTION	QUANTITY	UNIT
301	BITUMINOUS AGGREGATE BASE, PG64-22	900	CU YD

CONTINGENCY QUANTITIES

AT LOCATIONS SHOWN IN THE PLANS, THE PROPOSED UNDERDRAIN IS CONNECTED TO AN EXISTING 6" CONDUIT RUNNING UNDER THE ROADWAY. IF THE EXISTING 6" CONDUIT IS NON-FUNCTIONAL. THE FOLLOWING ESTIMATED QUANTITIES SHALL BE USED AS DIRECTED BY THE ENGINEER TO ESTABLISH FLOW EITHER BY BORING OR JACKING A PIPE UNDER THE EXISTING PAVEMENT OR BY OUTLETTING THE UNDERDRAIN AT A LOCATION OUTSIDE THE PAVEMENT:

ITEM	DESCRIPTION	QUANTITY	UNIT
603	6" CONDUIT, TYPE B	150	LIN FT
603	CONDUIT BORED OR JACKED: 6" TYPE B	150	LIN FT
604	PRECAST REINFORCED CONCRETE OUTLET	5	EACH
605	6" CONDUIT, TYPE F, 707.14 NON-PERFORATED ASTM D3034, SDR35, 707.42 OR 707.33	200	LIN FT

ITEM 659 - SEEDING AND MULCHING

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. THE CONTRACTOR SHALL ESTABLISH A GOOD STRAND OF GRASS OF UNIFORM COLOR AND DENSITY, TO THE SATISFACTION OF THE ENGINEER. QUANTITY CALCULATIONS FOR ITEM 659, SEEDING AND MULCHING, ARE BASED ON THESE LIMITS.

WATERING PERMANENT SEEDED AREAS

THE FOLLOWING ESTIMATED QUANTITY ARE TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH AND TO CARE FOR PERMANENT SEEDED AREAS PER 659.09:

ITEM	DESCRIPTION	QUANTITY	UNIT
659	WATER	50	M GAL

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

ITEM	DESCRIPTION	QUANTITY	UNIT
207	STRAW OR HAY BALES	100	EACH
207	FILTER FABRIC FENCE	2500	LIN FT
207	TEMPORARY SEEDING AND MULCHING	4200	SQ YD
659	COMMERCIAL FERTILIZER	0.25	TON
659	REPAIR SEEDING AND MULCHING	1100	SQ YD
659	WATER	10	M GAL

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 SUPPLEMENTAL SPECIFICATION 932 AND SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

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

ITEM	DESCRIPTION	QUANTITY	UNIT
	SPECIAL MISCELLANEOUS METAL	1,000	POUND

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.

PLOT SUBMITTED: 10-FEB-1999 11:08

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GENERAL NOTES

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