

# GENERAL NOTES

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FHWA REGION	STATE	PROJECT
5	OHIO	

10  
38

LAKE COUNTY  
LAK-44-4.14

## 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 THE EXISTING SEWERS WITHIN THE WORK LIMITS 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 INSPECTIONS 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 UNIT PRICES BID FOR THE PERTINENT 603 CONDUIT ITEMS OF THE CONTRACT.

### UNDERDRAIN OUTLETS IN EARTHWORK AREAS

EXISTING UNDERDRAIN OUTLETS WHICH ARE ENCOUNTERED IN THE EARTHWORK OR CULVERT EXTENSION AREAS SHALL BE EXTENDED AS DIRECTED BY THE ENGINEER USING 6 INCH CONDUIT, TYPE F. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS OUTLINED ABOVE:

ITEM 603 - 6" CONDUIT, TYPE F

550 L.F.

### ITEM 605 - AGGREGATE DRAIN

THE FOLLOWING ESTIMATED QUANTITY IS INCLUDED IN THE GENERAL SUMMARY TO BE USED WHERE AND AS DIRECTED BY THE ENGINEER TO DRAIN SUBBASE MATERIAL WHICH HAS BECOME SATURATED:

ITEM 605 - AGGREGATE DRAIN

50 L.F.

### LOCATION AND FLOW LINE ELEVATIONS OF EXISTING SEWERS AND EXISTING UNDERDRAINS

FLOW LINE ELEVATIONS AND LOCATIONS OF EXISTING SEWERS AND EXISTING UNDERDRAINS HAVE BEEN OBTAINED FROM THE EXISTING DESIGN PLANS.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE THE EXISTING UNDERDRAINS BOTH AS TO LINE AND GRADE.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT 605 ITEM

### FLUSHING AND REPAIR OF UNDERDRAINS:

ALL EXISTING UNDERDRAINS SHALL BE FLUSHED WITH WATER TO DETERMINE IF THEY ARE FUNCTIONING PROPERLY AND IF NOT THE OBSTRUCTIONS ARE TO BE LOCATED AND REPAIRED. THE FOLLOWING PROCEDURES AND METHODS OF PAYMENT ARE PROVIDED FOR THIS PURPOSE. A COPY OF THE ORIGINAL CONSTRUCTION PLANS SHOWING THE LOCATION OF THE UNDERDRAINS AND OUTLETS WILL BE ON FILE IN THE PROJECT OFFICE.

1. ITEM SPECIAL - UNDERDRAIN OPENING - (EACH). THIS ITEM SHALL CONSIST OF EXPOSING THE FIRST TILE AT THE UPPER END OF AN UNDERDRAIN LINE OR A SUBSEQUENT INTERMEDIATE UNDERDRAIN OPENING AS PROVIDED HEREIN. EACH OPENING SHALL INCLUDE THE TRENCH EXCAVATION LENGTHWISE OVER THE EXISTING TILE, REPLACING THE 6" TILE BROKEN IN MAKING THE OPENING AND THE FULL DEPTH BACKFILL WITH NO. 8 AGGREGATE, ALL IN ACCORDANCE WITH SPECIFICATION SECTION 605. PAYMENT FOR THE OPERATIONS DESCRIBED ABOVE SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS INCIDENTAL TO COMPLETING THE ITEM INCLUDING A MAXIMUM OF 6 LIN. FT. OF 6" TILE AND SHALL BE MADE FOR "EACH" -- ITEM SPECIAL -- UNDER DRAIN OPENING.

2. ITEM SPECIAL-WATER-(M. GALS.). AFTER THE UNDERDRAIN OPENING HAS BEEN MADE AND THE EXPOSED TILE REMOVED, THE LINE SHALL BE FLUSHED WITH WATER USING A MINIMUM SIZE HOSE OF 2" AND A MAXIMUM VOLUME OF WATER CALCULATED AT 1-1/2 GALLONS PER LIN. FT. OF UNDERDRAIN LINE. THE FLUSHING OPERATION MAY BE STOPPED AT ANY TIME BY THE ENGINEER IF FIELD OBSERVATIONS SHOW THE LINE TO BE EITHER PLUGGED OR OPERATING EFFICIENTLY.

IN THE EVENT THE LINE IS FOUND TO BE PLUGGED OR FLOW RESTRICTED, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE RESTRICTION BY RODDING OR OTHER SIMILAR METHOD APPROVED BY THE ENGINEER. AN INTERMEDIATE UNDERDRAIN OPENING WILL BE PERMITTED AND PAID FOR PROVIDING IT IS NO CLOSER THAN 500 FT. TO THE INITIAL OPENING OR AT THE MID POINT OF THE LINE. THE COST OF RODDING THE LINE IS TO BE INCLUDED IN THE UNIT BID PRICE FOR WATER.

THE METHOD OF MEASUREMENT FOR THE ITEM SPECIAL -- WATER WILL BE IN ACCORDANCE WITH SPECIFICATION SECTION 616.03 AND PAYMENT WILL BE PER THOUSAND GALLONS (M. GAL.) USED.

3. WHERE A SECTION OF TILE IS FOUND TO BE PLUGGED OR BROKEN, IT IS TO BE ISOLATED AS NOTED ABOVE BY RODDING. THIS SECTION SHALL THEN BE REPLACED AT APPROXIMATELY THE SAME LINE AND GRADE USING 6" TILE IN ACCORDANCE WITH SPECIFICATION SECTION 605.03. THE COST OF REMOVAL OF THE EXISTING TILE IS CONSIDERED TO BE INCIDENTAL TO THIS WORK AND EXTREME CARE IS TO BE EXERCISED IN NOT DAMAGING OR REMOVING ANY MORE TILE THAN IS NECESSARY. MEASUREMENT AND PAYMENT FOR THIS WORK WILL BE AS PER SECTION 605.06 RESPECTIVELY.

4. AFTER ALL REPAIRS HAVE BEEN MADE TO A LINE A FINAL FLUSHING WILL BE PERFORMED TO ASCERTAIN THE LINE IS FUNCTIONING PROPERLY AFTER WHICH THE CLOSING OF THE INITIAL OPENING WILL BE PERMITTED.

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED IN THE SUMMARY FOR THIS WORK ON THE PARTS OF THIS PROJECT:

ITEM SPECIAL - UNDERDRAIN OPENING	55 EACH
ITEM SPECIAL - WATER	59 M. GAL.
ITEM 603 - 6" CONDUIT TYPE F	55 L.F.
ITEM 605 - 6" UNCLASSIFIED PIPE UNDERDRAINS	550 L.F.