FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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LAKE COUNTY
LAK-2-14.22

GENERAL NOTES

ITEM I-9 STONE UNDERDRAINS, NO. 2

WHEN CALLED FOR ON THE TYPICAL SECTION AND PLAN, STONE UNDERDRAINS SHALL BE PLACED AT FIFTY (50) FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS AND AT TWENTY - FIVE (25) FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS. EXCEPT WHERE I-4 UNDERDRAINS HAVE BEEN PROVIDED.

CONNECTIONS TO EXISTING PIPE

AT PLACES WHERE THE PLANS PROVIDE FOR PROPOSED DRAINAGE PIPE TO BE CONNECTED TO EXISTING PIPES, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING PIPE BOTH AS TO LINE AND GRADE BEFORE HE STARTS TO LAY THE PROPOSED PIPE. THE COST OF THIS OPERATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT PIPE ITEM.

ITEM I-8 MANHOLE RECONSTRUCTED TO GRADE

THIS ITEM SHALL CONSIST OF THE CAREFUL REMOVAL OF THE EXISTING MANHOLE DOWN TO THE SPRINGLINE. IF THE OVERALL DEPTH OF THE MANHOLE, AFTER RECONSTRUCTION, WILL NOT EXCEED TWELVE FEET (12') FROM FLOW LINE TO COVER, RECONSTRUCT THE MANHOLE TO THE NEW GRADE, CONFORMING AS NEARLY AS PRACTICABLE TO THE EXISTING DIMENSIONS AND TYPE OF CONSTRUCTION AND USING THE SALVAGED MANHOLE FRAME AND COVER.

IF THE FINISHED OVERALL HEIGHT EXCEEDS TWELVE FEET (12'), THE ENGINEER SHALL ASCERTAIN WHETHER THE EXISTING MANHOLE CONSTRUCTION WILL MEET THE REQUIREMENTS OF STANDARD DRAWING NO. I-8 M. H. #2 FOR WALL THICKNESSES. IF THESE REQUIREMENTS ARE MET RECONSTRUCT THE MANHOLE TO THE NEW GRADE IN CONFORMANCE WITH STANDARD DRAWING NO. I-8 M. H. NO. 2. IN THE EVENT THAT THE EXISTING CONSTRUCTION DOES NOT MEET THESE REQUIREMENTS, THE ITEM SHALL BE NON-PERFORMED AND A NEW MANHOLE SHALL BE CONSTRUCTED PER STANDARD DRAWING NO. I-8 M. H. NO. 2. PAYMENT TO BE AS PER UNIT PRICE BID FOR ONE (1) EACH STANDARD NO. 2 MANHOLE.

PRIVATE SEWER TAPS

THIS PLAN MAKES NO PROVISION FOR CONNECTING, NOR SHALL THE ENGINEER OR CONTRACTOR CONNECT, ANY EXISTING OR NEW PRIVATE DRAINAGE TO THE NEW HIGHWAY DRAINAGE SYSTEM WHEN SUCH PRIVATE DRAINS CARRY EFFLUENT OR DRAINAGE FROM LEACHING BED OUTLETS, CELLAR DRAINS, OR SINK DRAINS, OR POLLUTED WATER OF ANY KIND. CONNECTIONS MAY BE MADE TO THE EXISTING OR NEW HIGHWAY DRAINAGE SYSTEM WHEN THE WATER CARRIED TO THE PROJECT DRAINAGE SYSTEM DOES NOT COME WITHIN THE CATEGORY OUTLINED ABOVE. ACCEPTABLE WATER INCLUDES FLOW FROM ROOF DRAINS, FIELD DRAINS, AND ENCLOSED NATURAL DRAINAGE SOURCES WHICH WOULD REACH THE ROAD THROUGH NATURAL CHANNELS IF SUCH WATER WAS NOT CONDUCTED ARTIFICALLY. EXISTING LEGAL SEWER TAPS WHICH DO NOT CARRY ACCEPTABLE WATER AS DEFINED ABOVE AND WHICH MAY BE DISTURBED BECAUSE OF THIS HIGHWAY IMPROVEMENT SHALL BE RECONNECTED TO EITHER AN EXISTING OR RELOCATED SANITARY SEWER. IF AN ILLEGAL CONNECTION IS DISTURBED, IT SHALL BE PLUGGED AT THE RIGHT OF WAY LINE. PLUGGING I SPECIFIED SHALL BE BY MEANS OF CLASS "E" CONCRETE AND PAYMENT THEREFOR SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM E-1, ROADWAY EXCAVATION.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY, FOR USE AS DIRECTED BY THE ENGINEER, IN MAKING THE ABOVE DESCRIBED CONNECTIONS:

ITEM I-1	8" CLASS E-1 PIPE	100 LIN. FT.
ITEM I-1	10" CLASS E-1 PIPE	100 LIN. FT.
ITEM I-1	12" CLASS E-1 PIPE	100 LIN. FT.
ITEM I-1	15" CLASS E-1 PIPE	50 LIN. FT.
ITEM I-5	8" PIPE SPECIALS FOR CLASS E-1 PIPE	10 EACH
ITEM I-5	10" PIPE SPECIALS FOR CLASS E-1 PIPE	5 EACH
ITEM I-5	12" PIPE SPECIALS FOR CLASS E-1 PIPE	5 EACH
ITEM I-5	15" PIPE SPECIALS FOR CLASS E-1 PIPE	5 EACH

GRATE ELEVATIONS

THE FLOW LINE OF GRATE ELEVATIONS SHOWN FOR I-8 #4 CATCH BASIN AND I-8 #5 CATCH BASIN IS THE LOWEST POINT ON THE GRATE.

FIELD DRAINS

ALL FARM TILES WHICH ARE ENCOUNTERED DURING CONSTRUCTION SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS UNDER THE DIRECTION OF THE ENGINEER. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS AND WHICH CROSS THE ROADWAY SHALL BE REPLACED WITHIN THE RIGHT-OF-WAY LIMITS BY ITEM I-1 CLASS A-1 PIPE.

EXISTING COLLECTORS AND ISOLATED FARM TILES WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF THE ROADWAY DITCHES SHALL BE OUTLETTED INTO THE ROADWAY DITCH. THE OPTIMUM OUTLET ELEVATION SHALL BE, IF POSSIBLE, ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL TILE FIELDS WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY ITEM I-1 CLASS H-2 PIPE AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE, AND GRADE OF REQUIRED REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

I-1	8" CLASS A-1 SEC. M-6.6 (b) OR SEC. M-6.8 (b) PIPE	500 LIN. FT.
I-1	8" CLASS H-2 PIPE.	1000 LIN. FT.
I-1	10" CLASS F-1 PIPE	100 LIN. FT.
I-5	8" PIPE SPECIALS FOR CLASS H-2 PIPE	25 EACH
I-10	DUMPED ROCK CHANNEL PROTECTION	50 CU. YD.

ITEM SPECIAL - FILL AND PLUG EXISTING STORM SEWER

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN THE EXISTING MANHOLES AND FILLING THE AREA THUS SEALED OFF WITH SAND OR OTHER GRANULAR MATERIAL APPROVED BY THE ENGINEER.

BULKHEADS SHALL BE LOCATED AT THE LIMITS OF THE AREA TO BE FILLED AS INDICATED ON THE PLANS. THE BULKHEADS SHALL CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

THE FILL MATERIAL SHALL BE PUMPED INTO PLACE OR PLACED BY SOME OTHER MEANS APPROVED BY THE ENGINEER, SO THAT, AFTER SETTLEMENT, AT LEAST 90 PER CENT OF THE CROSS-SECTIONAL AREA OF THE STORM SEWER FOR ITS ENTIRE LENGTH SHALL BE FILLED. THE FOOTAGE OF FILLED AND PLUGGED PIPE TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF LINEAR FEET (MEASURED ALONG THE CENTER LINE OF THE PIPE FROM OUTER FACE TO OUTER FACE OF BULKHEADS) FILLED AND PLUGGED AS DESCRIBED ABOVE, BEFORE PLACING THE EMBANKMENT. THE FOOTAGE, MEASURED AS PROVIDED ABOVE, SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER LINEAR FOOT FOR "ITEM SPECIAL, FILL AND PLUG EXISTING STORM SEWER", WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING, HAULING, AND PLACING ALL THE NECESSARY MATERIALS, AND FOR ALL LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

INTERCHANGE GRADING

IT IS ANTICIPATED THAT THE MOISTURE CONTENT OF THE SOIL IN THE CUT BETWEEN STATION 731+ AND STATION 769+ WILL BE GREATER THAN OPTIMUM PLUS 8%. AN ESTIMATED 371,845 CUBIC YARDS WILL BE UNSUITABLE FOR EMBANKMENT UNDER SECTION E-1.06(a). IT IS INTENDED THAT THE GRADING IN THE INTERCHANGE AREA, AS SHOWN ON THE CROSS SECTIONS ABOVE THE NORMAL SIDE SLOPE LIMITS, BE ACCOMPLISHED BY USE OF THIS UNSUITABLE MATERIAL. THE ESTIMATED QUANTITY REQUIRED FOR INTERCHANGE GRADING IS 168,567 CUBIC YARDS OF EMBANKMENT. THE CONTRACTOR MAY ELECT TO WASTE THE MATERIAL FROM THE CUT AREA, AND USE SOME OTHER SUITABLE MATERIAL FOR THE INTERCHANGE GRADING ABOVE THE NORMAL SLOPE LINES. NO ADDITIONAL PAYMENT WILL BE ALLOWED FOR SUCH ALTERNATE METHOD, IF ELECTED.

EXISTING BUILDINGS

ALL EXISTING BUILDINGS WITHIN LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER ITEM E-10 WHERE BUILDINGS ARE REMOVED, OR HAVE PREVIOUSLY BEEN REMOVED, THE CONTRACTOR SHALL BREAK UP BASEMENT FLOORS AND REMOVE UPPER PORTIONS OF WALLS IN ACCORDANCE WITH SECTION E-1.03(c). IN EMBANKMENT AREAS SUCH BASEMENTS WITHIN NORMAL SLOPE LIMITS SHOULD BE FILLED WITH GRANULAR MATERIAL MEETING THE REQUIREMENTS OF SECTION E-1.02 AND COMPACTED WITH WATER AS PROVIDED IN SECTION E-2.08, METHOD (b). THE CONTRACTOR SHALL, FURTHER, SECURELY PLUG ALL SANITARY SEWER OUTLETS AT BASEMENT WALLS, AND SHUT OFF WATER SERVICE LINES IN CURB BOXES AND WATER METER BOXES. SUCH BOXES, METERS AND VALVES REMAIN THE PROPERTY OF THE OWNER AS INDICATED ELSEWHERE IN THESE NOTES.

ALL BASEMENTS OR PORTIONS THEREOF WITHIN THE RIGHT-OF-WAY ON THIS PROJECT BUT BEYOND THE NORMAL SLOPE LINES SHALL BE FILLED TO SURROUNDING GROUND ELEVATION AS DIRECTED BY THE ENGINEER. PRIOR TO FILLING WITHIN THIS AREA, ALL DEBRIS SHALL BE REMOVED AND THE BASEMENT FLOORS AND WALLS SHALL BE BROKEN UP OR REMOVED.

WHERE BASEMENTS EXTEND BEYOND THE RIGHT-OF-WAY LINE, BUT ARE WITHIN SLOPE EASEMENT OR WORK AGREEMENT LINES, THEY SHALL BE FILLED TO THE ELEVATION OF THE SURROUNDING GROUND AS DIRECTED BY THE ENGINEER BUT THE REQUIREMENTS OF SECTION E-1.03(c) FOR REMOVALS BELOW THE PROPOSED FINISHED SURFACE SHALL BE WAIVED FOR THE PORTIONS EXTENDING BEYOND THE RIGHT-OF-WAY LINE.

AT THOSE LOCATIONS WHERE A BUILDING IS REMOVED AND TREATED AS ABOVE, THE REMAINING AREA OF THE PROPERTY SHALL BE RESTORED TO A NATURAL CONDITION BY REMOVING SIDEWALKS, WALLS, DRIVEWAYS, TRASH PITS OR ANY OTHER UNNATURAL CONDITION WHICH MAY EXIST. THE AREA SHALL GENERALLY BE MADE TO FIT THE SURROUNDING TOPOGRAPHY.

PAYMENT FOR ALL OF THE ABOVE, EXCEPT FOR GRANULAR MATERIAL, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ROADWAY EXCAVATION, ITEM E-1.

PIPE CONNECTIONS TO CORRUGATED METAL STRUCTURES

CONNECTIONS OF PROPOSED LONGITUDINAL DRAINAGE TO THE PROPOSED CORRUGATED METAL STRUCTURE SHALL BE BY MEANS OF A SHOP FABRICATED (OR FIELD WELDED) STUB ON THE STRUCTURE. THE STUB SHALL MEET THE REQUIREMENTS OF SECTION M-6.4 AND HAVE A MINIMUM LENGTH OF TWO FEET AND A MINIMUM GAGE OF 14.

LOCATION AND ELEVATION OF THE STUB ARE TO BE CONSIDERED APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER TO AVOID CUTTING THROUGH JOINTS IN THE STRUCTURE.

THE FIELD WELDED JOINT, IF USED, SHALL BE PAINTED ON THE INSIDE AND OUTSIDE WITH TWO COATS OF RED LEAD, SECTION M-9.9, AND TWO COATS OF GRAPHITE PAINT, SECTION M-9.11. WELDING SHALL BE CLASS "B".

PAYMENT FOR CUTTING INTO THE STRUCTURE AND PROVIDING THE CONNECTION DESCRIBED SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM I-1 CLASS A-1 PIPE.

REMOVALS

WHERE PIPE IS MARKED FOR REMOVAL WITH HEADWALLS AND/OR CATCH BASINS INVOLVED, THE COST OF SUCH REMOVAL SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT FOR ITEM E-12 PIPE REMOVAL. CASTINGS, GRATES, WATER METERS, WATER VALVES, FIRE HYDRANTS, OR SIMILAR APPURTENANCES OR FITTINGS REMOVED UNDER ITEMS I-16 OR I-124 SHALL REMAIN THE PROPERTY OF THE OWNER AND ARE TO BE STORED ON THE RIGHT OF WAY FOR DISPOSAL BY THE OWNER.

TRAFFIC CONTROL DEVICES SHALL BE REMOVED BY THE OWNER.

CURB AND SIDEWALK

IN AREAS WHERE SIDEWALK AND/OR CURB IS TO BE RECONSTRUCTED, THE EXISTING CURB AND/OR SIDEWALK IS TO BE REMOVED TO THE NEAREST JOINT. NEW WORK IS TO JOIN EXISTING AS INDICATED ON THE PLANS. THIS WORK SHALL BE DONE AS DIRECTED BY THE ENGINEER. WHERE PAVEMENT IS DAMAGED TO CONSTRUCT THE CURB, A SUITABLE REPLACEMENT PAVEMENT SHALL BE CONSTRUCTED. PAYMENT SHALL BE INCLUDED IN THE PRICE BID FOR CURB ITEM I-12.

CURBS ON APPROACH SLABS

THE HEIGHT AND FACE OF CURBS ON APPROACH SLABS SHALL BE TRANSITIONED FROM THE STANDARD SECTION USED ON THE APPROACH PAVEMENT TO THE SECTION USED ON THE BRIDGE CURBING WITHIN THE LIMITS OF THE APPROACH SLAB.

FLARED APPROACH SLABS

PLACE ADDITIONAL A-BARS IN FLARED AREAS BY MAINTAINING THE STANDARD SPACING ALONG THE WIDE END OF THE SLAB AND FANNING THE BARS IN TOWARD THE BRIDGE AS DIRECTED BY THE ENGINEER.

EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED AND EXPANSION JOINTS SHALL BE PROVIDED AT ALL MAJOR STRUCTURES AS REQUIRED BY STANDARD CONSTRUCTION DRAWING T. J.,

ITEM T-10, AS PER PLAN

THE WEIGHTS TO BE USED IN CALCULATING THE YARDAGE TO BE PAID FOR UNDER THIS ITEM SHALL, IF A STANDARD SIZE COARSE AGGREGATE IS SPECIFIED, BE THE SAME AS THOSE INDICATED IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS FOR CRUSHER RUN OR BANK RUN MATERIALS.

ROAD MIX QUANTITIES

THE QUANTITY OF BITUMINOUS MATERIAL ESTIMATED FOR THE BITUMINOUS ROAD MIX SURFACE COURSE HAS BEEN CALCULATED FOR USE WITH SLAG AGGREGATE. IF THE CONTRACTOR ELECTS TO USE STONE OR GRAVEL AGGREGATE, BITUMINOUS MATERIAL FOR THE ROAD MIX SHALL BE APPLIED AT THE RATE OF 0.9 GALLON PER SQUARE YARD WHICH WILL REQUIRE A TOTAL QUANTITY OF APPROXIMATELY 705 GALLONS. PAYMENT WILL BE MADE ON FINAL MEASUREMENT.

EROSION CONTROL AT HEADWALLS

AN 18" WIDE STRIP OF SOD SHALL BE PLACED ALONG THE BACK AND BOTH ENDS OF EACH STANDARD HEADWALL TO PREVENT EROSION. THE QUANTITY OF SODDING REQUIRED TO PREVENT EROSION AT THE HEADWALLS IS INCLUDED IN EACH OF THE CULVERT ESTIMATED QUANTITIES.

SIGHT DISTANCE

BASIS FOR MEASURING SIGHT DISTANCE SHALL BE 4.0 FEET FOR HEIGHT OF EYE AND ZERO FEET FOR HEIGHT OF OBJECT. THE MINIMUM STOPPING SIGHT DISTANCE ON THIS PROJECT IS 600 FEET.

I-22 SUBBASE GRADING

I-22 SUBBASE GRADING A AND B (AS PER PLAN) MATERIAL FOR THIS ITEM SHALL MEET THE REQUIREMENTS FOR I-22 GRADING A OR B EXCEPT THAT FOR BOTH GRADINGS THE PERCENT PASSING NO. 200 SIEVE SHALL NOT EXCEED TEN.

TEMPORARY DRAINAGE

TEMPORARY DRAINAGE WILL BE REQUIRED FOR THE PIPE UNDERDRAINS AND SUBBASE DURING CONSTRUCTION OF THIS SECTION, PAYMENT FOR WHICH IS INCLUDED IN THE PRICE BID PER LINEAR FOOT FOR THE UNDERDRAIN.

MANHOLE CASTING

MANHOLE CASTINGS LOCATED IN SLOPES SHALL BE SET SO THAT THE COVER WILL CONFORM WITH THE PLANE OF THE SLOPED SURFACE, WHERE THE SLOPE RATE IS 5:1 OR LESS.