

GENERAL NOTES

LAKE COUNTY
LAK-90-6.71

OHIO
FHWA
REGION 5

8
182

ROADWAY - CONT'D

ITEM 606 - GUARDRAIL

1) LOCATION OF GUARDRAIL

THE LOCATIONS OF GUARDRAIL RUNS, AS SHOWN IN THESE PLANS, ARE SUBJECT TO ADJUSTMENT PRIOR TO FINAL ACCEPTANCE. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

2) GUARDRAIL REPLACEMENT LIMITS

ALL EXISTING GUARDRAIL IS TO BE REPLACED AS SHOWN ON THE PLANS.

3) FASTENING OF BRIDGE TERMINAL ASSEMBLIES

BRIDGE TERMINAL ASSEMBLIES WHICH ARE TO BE FASTENED TO EXISTING CONCRETE PARAPETS BY STEEL BOX BLOCKOUTS SHALL BE ATTACHED BY MEANS OF THROUGH BOLTS. EXPANSION ANCHOR BOLTS WILL NOT BE PERMITTED.

WHEN MOUNTING IS TO AN EXISTING WALL, THE END TERMINAL SHALL BE ATTACHED USING 1/8 INCH. DIAMETER ADHESIVE ANCHORS.

4) SEQUENCE OF OPERATIONS FOR GUARDRAIL INSTALLATION

1. COMPLETE SHOULDER CONSTRUCTION AND RESURFACING.
2. REMOVE EXISTING GUARDRAIL (INSTALL TEMPORARY CONCRETE BARRIER AT HAZARDS - SEE PUBLIC SAFETY NOTE).
3. CONSTRUCT STRIP OF ITEM 404 - ASPHALT CONCRETE, AC-20
4. INSTALL NEW GUARDRAIL.

5) TYPE 5 GUARDRAIL POST SPACING

WHEN THE OFFSET BETWEEN THE FACE OF THE GUARDRAIL AND BRIDGE PIERS, MAJOR SIGNS, SIGN SUPPORTS, OR OTHER OBSTACLES IS LESS THAN 5 FEET 6 INCHES THE GUARDRAIL SHALL BE STIFFENED BY PROVIDING 3 FT. 1.5 INCH POST SPACING FROM 12.5 FEET IN ADVANCE OF THE OBSTRUCTION TO ITS END, AS PER STD. DRAWING GR-7.1, DESIGN B. COST INCLUDED IN THE ITEM 605 GUARDRAIL, TYPE 5 UNIT PRICE BID.

THREE BEAM GUARDRAIL PROTECTION FOR OVERHEAD SIGN SUPPORTS OR PIERS SHALL BE REQUIRED WHEN FACE OF HAZARD IS BETWEEN 3 FEET 6 INCHES AND 2 FEET 9 INCHES OF NORMAL GUARDRAIL OFFSET. CONCRETE BARRIER IS TYPICALLY PROPOSED WHEN THE GUARDRAIL OFFSET IS LESS THAN 2 FEET 9 INCHES.

6) GUARDRAIL PROTECTION

NO SIGNS SUPPORTS SHALL BE ERECTED BEFORE THE NECESSARY GUARDRAIL PROTECTION IS IN PLACE. SIMILARLY EXISTING GUARDRAIL WHICH PROTECTS AN OBSTRUCTION OR SLOPE WHICH IS TO BE UPGRADED TO ELIMINATE GUARDRAIL, SHALL NOT BE REMOVED UNTIL THAT WORK HAS BEEN COMPLETED. EXISTING GUARDRAIL WHICH IS SCHEDULED TO BE REPLACED WITH TYPE 5 GUARDRAIL, SHALL NOT BE REMOVED UNTIL THE NEW GUARDRAIL IS READY TO BE INSTALLED. UNDER NO CIRCUMSTANCES SHALL ANY HAZARD BE WITHOUT GUARDRAIL PROTECTION FOR MORE THAN 24 HOURS.

7) ITEM 202 - GUARDRAIL REMOVED

THIS ITEM SHALL INCLUDE BOTH STANDARD AND BARRIER TYPE RAILS INCLUDING ANCHOR ASSEMBLIES AND TERMINAL ASSEMBLIES.

EROSION CONTROL

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ITEM 601 AND 660 ARE PROVIDED IN THE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE OF THIS ITEM AND TURF OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE 601 AND 660. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES OF THIS ITEM WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION. IN ADDITION, THIS ITEM SHALL MEET THE REQUIREMENT OF 108.04.

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. QUANTITY CALCULATIONS FOR ITEM 659, SEEDING AND MULCHING, ARE BASED ON THESE LIMITS.

ITEM 653 - TOPSOIL FURNISHED AND PLACED, AS PER PLAN

REPAIR OF ERODED AREAS:

THIS ITEM OF WORK SHALL BE USED AT THE LOCATIONS AS DIRECTED BY THE ENGINEER TO REPAIR AND RESEED ERODED AREAS, DEEP TIRE RUTS AND ANY OTHER AREAS WHICH ARE LACKING HEALTHY VEGETATION. THE ENGINEER WILL ESTABLISH THESE AFFECTED AREAS BEFORE THE START OF CONSTRUCTION OPERATIONS. DAMAGE CAUSED BY CONSTRUCTION OPERATION WILL BE RESTORED TO ORIGINAL CONDITIONS BY THE CONTRACTOR AT NO COST TO THE STATE.

THE SEQUENCE OF WORK SHALL BE AS FOLLOWS:

1. LOOSEN UP THE EXISTING SOIL AND PERFORM MINOR REGRADING WORK AS NECESSARY (INCLUDES EMBANKMENT AND EXCAVATION OPERATIONS).

ITEM 653 - TOPSOIL FURNISHED AND PLACED, AS PER PLAN (CONT'D)

2. PLACE TWO INCHES OF TOPSOIL OVER THE PREPARED AREAS, INCORPORATE LIMING AND FERTILIZER INTO THE TOPSOIL.
3. PLACE SEEDING AND MULCHING ON ALL REPAIR AREAS.

GENERALLY TWO INCHES OF TOPSOIL SHALL BE PLACED OVER ALL REPAIRED AREAS. THE BOUNDARIES OF THE TOPSOIL PLACEMENT SHALL BE FEATHERED BEYOND THE PREPARED AREAS TO ACHIEVE A GRADUAL TRANSITION AND INSURE DRAINAGE FLOW. PAYMENT SHALL BE BASED UPON A WEIGHT CONVERSION OF 2400 LBS. PER CUBIC YARD REGARDLESS OF THE ACTUAL UNIT WEIGHT. THE ORGANIC MATTER REQUIREMENT OF 653.02 IS WAIVED FOR THIS ITEM OF WORK.

PRIOR TO PLACING THE TOPSOIL ALL AREAS SHALL BE LEVELLED OFF WITH THE SURROUNDING SOIL. DURING THIS OPERATION GRADING OPERATIONS SHALL BE PERFORMED AS NECESSARY TO INSURE THE DRAINAGE FLOW TO THE DITCHES AND ALONG THE DITCHES WILL BE MAINTAINED AFTER THE PLACEMENT OF THE TOPSOIL.

AGRICULTURAL LIMING AND FERTILIZER SHALL BE PLACED ON ALL AREAS COVERED WITH TOPSOIL AS PER 659.08.

PAYMENT FOR ALL OF THE ABOVE LABOR AND MATERIALS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 653 - TOPSOIL FURNISHED AND PLACED, AS PER PLAN.

ITEM 653 - TOPSOIL FURNISHED AND PLACED, AS PER PLAN 200 CU. YDS.

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 207 - TEMPORARY SEEDING AND MULCHING	14,800 SQ. YD.
ITEM 207 - STRAW OR HAY BALES	300 EACH
ITEM 207 - FILTER FABRIC FENCE	1,000 LIN. FT.
ITEM 659 - MOWING	166 M SQ. FT.
ITEM 659 - COMMERCIAL FERTILIZER	3.8 TON
ITEM 659 - REPAIR SEEDING AND MULCHING	3,700 SQ. YD.
ITEM 659 - WATER	40 M. GAL.

WATERING AND MOWING PERMANENT SEEDED AREAS

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

ITEM 659 - WATER	160 M. GAL.
ITEM 659 - MOWING	166 M. SQ. FT.

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 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.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR 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 ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLANS ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

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 605 - 6" SHALLOW OR DEEP UNDERDRAIN, AS PER PLAN

THE PROPOSED UNDERDRAIN SYSTEM SHALL BE COORDINATED AND MATCHED WITH THE EXISTING SYSTEM AS FAR AS LINE, GRADE, AND OUTLET CONDITIONS, WITHOUT BLOCKING OR DAMAGING EXISTING PIPES. THE COVER OVER THE UNDERDRAINS WILL VARY FROM 16" MIN. TO 32" MAX.. UNDERDRAINS DEEPER THAN 32" COVER SHALL BE PAID FOR AS DEEP UNDERDRAINS, IF ENCOUNTERED.

THE NEW UNDERDRAIN SYSTEM SHALL PROVIDE FREE FLOW AT ALL OUTLET LOCATIONS, INTERCEPTING THE EXISTING SYSTEM. IN CASE OF EXISTING BLOCKAGES, THE FLOW IN THE OLD UNDERDRAINS SHALL BE RESTORED, OR ADDITIONAL OUTLETS SHALL BE ADDED AS NECESSARY AND AS DIRECTED BY THE ENGINEER, OUTLETTING BOTH EXISTING AND PROPOSED UNDERDRAINS. OUTLET CONDUIT SHALL BE ITEM 603 - 6" CONDUIT, TYPE F OR B.

AN ESTIMATED QUANTITY OF MATERIAL IS CARRIED TO THE GENERAL SUMMARY, "AS DIRECTED BY THE ENGINEER", TO CONSTRUCT NEW OUTLETS.

ITEM 603 - 4" CONDUIT, TYPE F	707.17, NON-PERFORATED	500 LIN. FT.
ITEM 603 - 6" CONDUIT, TYPE F	ASTM D-3034, SDR-35.	500 LIN. FT.
ITEM 603 - 8" CONDUIT, TYPE F	SS 931, SS 944.	250 LIN. FT.
ITEM 603 - 6" CONDUIT, TYPE B		250 LIN. FT.
ITEM 603 - 8" CONDUIT, TYPE B		250 LIN. FT.
ITEM 604 SPECIAL PRECAST REINF. CONCRETE OUTLET		24 EACH

PROPOSED PLAN ELEVATIONS SHOWN ON UNDERDRAINS HAS BEEN DEVELOPED USING EXISTING PLAN DATA AND DOES NOT NECESSARILY REPRESENT EXISTING CONDITIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THE VALIDITY OF ELEVATIONS AND MAKE THE NECESSARY CORRECTIONS.

AT THE PRE-CONSTRUCTION CONFERENCE THE CONTRACTOR SHALL BE FURNISHED FULL SIZE PRINTS SHOWING THE ORIGINAL UNDERDRAIN LOCATIONS AND HIGHLIGHTING THE PROPOSED UNDERDRAIN WORK. THIS WORK IS TABULATED ON SHEET NO. 14, 15 AND 16 FOR INFORMATIONAL PURPOSES.

ITEM 604 - MANHOLE ADJUSTED/RECONSTRUCTED TO GRADE, AS PER PLAN

THE WORK PERFORMED UNDER THIS ITEM SHALL CONSIST OF ADJUSTING OR RECONSTRUCTING NO. 1 AND NO. 2 MANHOLES, AS DIRECTED BY THE ENGINEER CONFORMING TO ALL PROVISIONS OF ITEM 604, AND SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY TO:

- A. ADJUST MANHOLE TO GRADE; AS PER 604.03 EXCEPT NO ADJUSTING RINGS CAN BE USED
- B. RECONSTRUCT MANHOLE TO GRADE, AS PER 604.03
- C. REPLACE AND RECONNECT ALL CONDUITS AS NEEDED
- D. CLEAR MANHOLE FROM ACCUMULATED DEBRIS AND CLEAR INVERT OF ALL PIPES

PAYMENT FOR THIS WORK WILL BE UNDER ITEM 604 - EACH MANHOLE ADJUSTED/RECONSTRUCTED TO GRADE, AS PER PLAN AND WILL INCLUDE ALL LABOR, MATERIALS AND INCIDENTALS TO CONSTRUCT THIS ITEM.

REPLACEMENT CASTINGS

LIGHT MANHOLE FRAME AND COVERS UNDER PAVEMENT OR PAVED SHOULDERS SHALL BE REPLACED WITH HEAVY DUTY CASTINGS. REMOVED CASTINGS SHALL BE STORED ON THE PROJECT SITE FOR PICK-UP BY STATE FORCES.

PAYMENT FOR THIS ITEM WILL BE THE UNIT PRICE BID FOR ITEM 604 - MISCELLANEOUS METALS, AND WILL BE THE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND ALL INCIDENTALS NECESSARY TO CONSTRUCT THIS ITEM.

ITEM 604 - CATCH BASIN ADJUSTED/RECONSTRUCTED TO GRADE, AS PER PLAN

THE WORK PERFORMED UNDER THIS ITEM SHALL CONSIST OF ADJUSTING OR RECONSTRUCTING NO. 4, 5, & 8 CATCH BASINS AS DIRECTED BY THE ENGINEER, AND SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY TO:

- A. ADJUST CATCH BASIN TO GRADE; AS PER 604.03, OR
- B. RECONSTRUCT CATCH BASIN TO GRADE; AS PER 604.03
- C. REPLACE APRONS WITH RIP-RAP USING 6" REINFORCED CONCRETE SLAB;
- D. PLACE JUTE MATTING OR SODDING OR EXCELSIOR MATTING;
- E. RECONNECT OR REPLACE ALL CONDUITS IN KIND, AS NECESSARY
- F. BACKFILL WITH GRANULAR MATERIAL; AS PER 604.04, AND AS SHOWN ON SHEET NO. 164
- G. CLEAR CATCH BASIN FROM ACCUMULATED DEBRIS; AND CLEAR INVERT OF ALL PIPES
- H. REBUILD DAMAGED CATCH BASIN WALLS;

ALL WORK PERFORMED SHALL MEET THE REQUIREMENTS OF ITEM 604.

THE REPLACEMENT OF EXISTING CASTINGS WILL BE PAID UNDER ITEM 603 - SPECIAL MISCELLANEOUS METALS, AND SHALL MEET ALL THE REQUIREMENTS OF ITEM 604.

PAYMENT FOR THIS WORK WILL BE UNDER ITEM 604 - EACH CATCH BASIN ADJUSTED/RECONSTRUCTED TO GRADE, AS PER PLAN AND WILL INCLUDE ALL LABOR, MATERIALS AND INCIDENTALS NECESSARY TO CONSTRUCT THIS ITEM.