

**PIPE CULVERT MATERIAL ALTERNATES  
FOR PIEDMONT/BLUE RIDGE REGION**

TYPE OF PIPE INSTALLATION	CONCRETE	CORRUGATED STEEL AASHTO M-36		CORRU-GATED ALUM. AASHTO M-196	PLASTIC			
		ALUMINUM COATED (TYPE 2) CORR. STEEL	PLAIN ZINC COATED	PLAIN UNCOATED ALUMINUM	CORR. POLY-ETHYLENE AASHTO M-252	CORR. POLY-ETHYLENE SMOOTH LINED AASHTO M-294 TYPE 'S'	POLY VINYL CHLORIDE (PVC) PROFILE WALL AASHTO M-304	POLY VINYL CHLORIDE (PVC) CORRUGATED SMOOTH INTERIOR ASTM F-949
LONGITUDINAL INTERSTATE AND TRAVEL BEARING	X							
LONGITUDINAL NON-INTERSTATE AND NON-TRAVEL BEARING	X	X		X	X	X	X	X
STORM DRAIN	GRADE < 10%	ADT < 250	X	X	X	X	X	X
		250 < ADT < 1,500	X	X*	X	X	X	X
		1,500 < ADT < 15,000	X			X	X	X
		ADT > 15,000	X					
CROSS DRAIN	GRADE > 10%	ADT < 250		X	X	X	X	X
		ADT > 250			X	X	X	X
SIDE DRAIN	X	X	X	X	X	X	X	
PERMANENT SLOPE DRAIN		X	X	X	X	X	X	
PERFORATED UNDERDRAIN		X	X	X	X	X	X	

\* THIS TYPE PIPE CAN BE USED IF THE ADDITION OF TYPE "B" COATING (AASHTO M-190, HALF BITUMINOUS COATED WITH PAVED INVERT) IS UTILIZED.

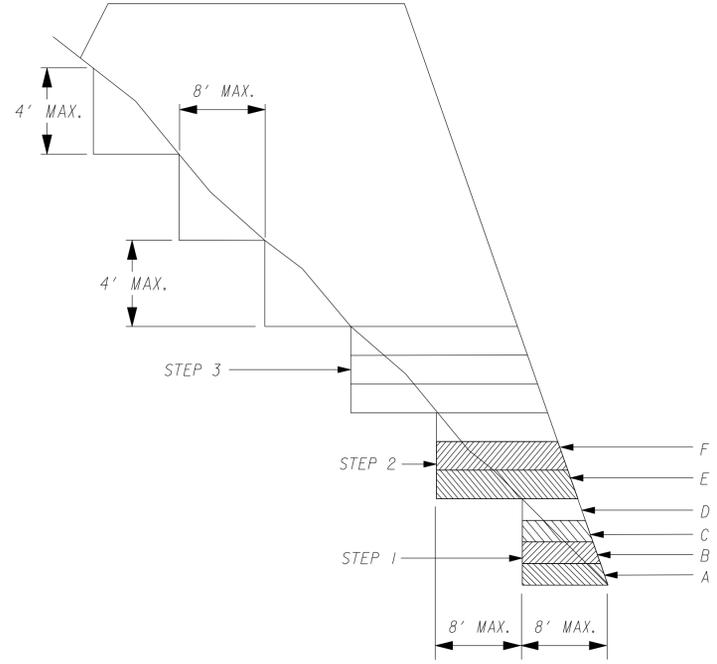
- NOTES:**
- ALLOWABLE MATERIALS ARE INDICATED BY AN "X".
  - STRUCTURAL REQUIREMENTS OF STORM DRAIN PIPE WILL BE IN ACCORDANCE WITH GEORGIA STANDARD 1030-D OR 1030-P, WHICHEVER IS APPLICABLE, AND THE STANDARD SPECIFICATIONS.
  - GRADED AGGREGATE BACKFILL SHALL BE USED IN CROSS DRAIN APPLICATIONS FOR ALL PLASTIC PIPES (AASHTO M-294, HDPE PIPE, AASHTO M-304, PVC PIPE, ASTM F-949, PVC PIPE).
  - CONTRACTOR SHALL PROVIDE ADDITIONAL STORM SEWER CAPACITY CALCULATIONS IF A PIPE MATERIAL OTHER THAN CONCRETE IS SELECTED.
  - PIPE USED UNDER MECHANICALLY STABILIZED EARTH (MSE) WALLS, WITHIN MSE WALL BACKFILL, OR WITHIN FIVE FEET OF AN MSE WALL FACE SHALL BE CLASS V CONCRETE PIPE.



- GENERAL NOTES:**
- A NOTICE OF INTENT IS REQUIRED FOR THIS PROJECT.
  - THE FOLLOWING UTILITIES HAVE FACILITIES IN THE PROJECT AREA:  
 JACKSON EMC WINDSTREAM  
 ELECTRIC TELEPHONE  
 AT&T TELEPHONE (abandoned)
  - THE TOTAL AREA SHOWN ON THE PLANS FOR GRADING COMPLETE IS FOR INFORMATION ONLY. THE GEORGIA DEPARTMENT OF TRANSPORTATION ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY. THE CONTRACTOR SHALL BID ON GRADING COMPLETE LUMP SUM AND IT SHALL BE HIS RESPONSIBILITY TO DETERMINE THE ACTUAL AREA TO BE GRADED COMPLETE. NO CLAIMS WILL BE CONSIDERED FOR EXTRA COMPENSATION IF THE CONTRACTOR RELIES ON THE AREA SHOWN ON THE PLANS. REMOVAL OF EXISTING EMBANKMENT AT EXISTING BRIDGE END ROLLS IS TO BE PAID FOR UNDER GRADING COMPLETE.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AN ENVIRONMENTALLY APPROVED BORROW AND WASTE DISPOSAL SITE.
  - ALL DRIVEWAYS WHERE ACCESS IS ALLOWED SHALL BE PLACED AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH RULES AND REGULATIONS FOR CONTROL AND PROTECTION OF GEORGIA DEPARTMENT OF TRANSPORTATION RIGHTS-OF-WAY. ALL DRIVEWAYS WILL BE PAVED TO THE RIGHT OF WAY LINE OR THEIR TIE IN POINT WHICH EVER IS FURTHER. (DIRT DRIVEWAYS ONLY). REQUIRED DRIVEWAY EASEMENTS NOT SHOWN ON THE PLANS SHALL BE ACQUIRED BY THE CONTRACTOR. ALL DRIVEWAYS THAT ARE TO BE RECONSTRUCTED SHALL BE REPLACED IN KIND, I.E. ASPHALT FOR ASPHALT, CONCRETE FOR CONCRETE, AND ASPHALT FOR EARTH. THE DRIVEWAY LOCATIONS INDICATED ON THE PLANS ARE FROM THE BEST AVAILABLE DATA. THE CONTRACTOR SHALL CONSTRUCT NEW DRIVEWAYS TO MATCH THE ACTUAL FIELD LOCATION OF EXISTING DRIVEWAYS WHERE THEY ARE NOT IN CONFLICT WITH THE RULES AND REGULATIONS. RESIDENTIAL DRIVES SHALL BE 14 FEET WIDE AT THE THROAT UNLESS NOTED OTHERWISE IN THE PLANS. COMMERCIAL DRIVES SHALL BE 24 FEET WIDE UNLESS NOTED OTHERWISE IN THE PLANS. THE CONTRACTOR SHALL OBTAIN THE APPROVAL OF THE ENGINEER PRIOR TO MAKING ANY REVISIONS SUCH AS TO LOCATION, WIDTH AND/OR NUMBER OF DRIVES TO BE CONSTRUCTED. WHERE REQUIRED THE DRIVES SHALL BE PAVED AS FOLLOWS:

ASPHALTIC/UNPAVED DRIVES  
 ALL ASPHALTIC/UNPAVED DRIVES SHALL BE PAVED TO THEIR CONSTRUCTION LIMITS.  
 RESIDENTIAL (MINIMUM WIDTH OF 14 FT.)  
 RECYCLED ASPHALTIC CONCRETE 9.5MM SUPERPAVE, TYPE 1, BLEND 1,  
 INCL BITUM MATL & H LIME --- 125 lb/sy  
 6" GRADED AGGREGATE BASE

- THIS PROJECT LIES WITHIN THE LIMITS OF AN INSECT INFESTED AREA. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FOLLOWING SUB-SECTIONS OR SPECIAL PROVISIONS TO THE GADOT STANDARD SPECIFICATIONS: A) SUB-SECTION 107.13D - INSECT CONTROL REGULATIONS; B) SUB-SECTION 155 - INSECT CONTROL; AND C) SUB-SECTION 893 - MISCELLANEOUS PLANTING.
- ALL EXISTING PIPE WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED UNLESS OTHERWISE NOTED ON PLANS OR AS DIRECTED BY THE ENGINEER. COST FOR REMOVAL SHALL BE INCLUDED IN THE PRICE BID FOR GRADING COMPLETE.
- AT LOCATIONS WHERE NEW PAVEMENT IS TO BE PLACED ADJACENT TO EXISTING PAVEMENT WITHOUT AN OVERLAY OR WHERE CURBING IS TO BE PLACED ACROSS A PAVED AREA, A JOINT SHALL BE SAWS ON A LINE ESTABLISHED BY THE ENGINEER TO ENSURE A PAVEMENT REMOVAL TO A NEAT LINE. THE COST FOR SAWS JOINTS, WHEN REQUIRED SHALL BE INCLUDED IN PRICE BID FOR OTHER CONTRACT ITEMS, EXCEPT WHEN SAWING P.C.C. CONCRETE PAVEMENT.
- THE CONTRACTOR SHALL ENSURE THAT POSITIVE AND ADEQUATE DRAINAGE IS MAINTAINED AT ALL TIMES WITHIN THE PROJECT LIMITS. THIS MAY INCLUDE, BUT NOT BE LIMITED TO, REPLACEMENT OR RECONSTRUCTION OF EXISTING DRAINAGE STRUCTURES THAT HAVE BEEN DAMAGED OR REMOVED OR REGRADED AS REQUIRED BY THE ENGINEER, EXCEPT FOR THOSE DRAINAGE ITEMS SHOWN AT SPECIFIC LOCATIONS IN THE PLANS AND HAVING SPECIFIC PAY ITEMS IN THE DETAILED ESTIMATE. NO SEPARATE PAYMENT WILL BE MADE FOR ANY COSTS INCURRED TO COMPLY WITH THIS REQUIREMENT.
- NO SUITABLE PLACE TO BURY THE EXISTING BRIDGE IS LOCATED WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL FIND A SUITABLE PLACE TO DISPOSE OF THE EXISTING BRIDGE. AT NO ADDITIONAL COST TO THE DEPARTMENT.
- SR 191 WILL BE CLOSED DURING CONSTRUCTION. AN OFFSITE DETOUR WILL BE UTILIZED. THE CONTRACTOR SHALL CLOSE THE ROAD, SIGN AND MAINTAIN THE DETOUR WHICH WILL BE IN PLACE FOR APPROXIMATELY 12 MONTHS. MADISON COUNTY SHOULD BE GIVEN 14 DAYS ADVANCE NOTICE BEFORE THE ROAD CLOSURE. CONTACT: TBD.



- BENCHING NOTES:**
- WHERE THE EMBANKMENT IS TO BE PLACED ON A HILLSIDE OR ANOTHER EXISTING EMBANKMENT HAVING A SLOPE OF 3 TO 1 OR STEEPER, THE FOUNDATION MUST BE BENCHED WHILE THE EMBANKMENT IS BEING MADE. (SEE DIAGRAM AT LEFT.)
  - THE DIAGRAM SHOWS THAT BEFORE LAYER "A" IS PLACED THE FIRST STEP IS TO (1) CUT INTO THE SLOPE A MAXIMUM DISTANCE OF ABOUT 8 FEET (ABOUT 1/2 THE WIDTH OF THE TYPICAL D-8 BULDOZER BLADE). SUCCESSIVE LAYERS B, C, AND D ARE THEN PLACED BEFORE LAYER "E" IS PLACED. THE SECOND STEP IS CUT 8 FEET INTO THE SLOPE AND SUCCESSIVE LAYERS ARE AGAIN PLACED. IF IT IS ANTICIPATED THAT THE VERTICAL PART OF THE STEP WILL EXCEED 4 FEET IF A 8 FEET HORIZONTAL CUT IS MADE, THEN THE ACTUAL CUT STOPS WHEN THE VERTICAL PART REACHES A MAXIMUM OF 4 FEET ALLOWING THE HORIZONTAL DISTANCE TO VARY.
  - THE PROCESS OF BENCHING IS CONSIDERED INCIDENTAL TO THE ITEM OF UNCLASSIFIED EXCAVATION AND BORROW OR GRADING COMPLETE IN CONSTRUCTION OF THE EMBANKMENT AND NO ADDITIONAL MEASUREMENT OF QUANTITY OR PAYMENT WILL BE MADE FOR BENCHING.

**BENCHING DETAIL**

Revised 9/29/08 4.5.28 NO SCALE



REVISION DATES _____ _____ _____	STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE: <b>GENERAL NOTES</b> SR 191 OVER SCULL SHOAL CREEK BRIDGE REPLACEMENT BR000-0005-00(531)4/7/2011
	DRAWING No. <b>04-001</b>