



BENCHING DETAIL
 Revised 6/18/09 4.5.28 NO SCALE

1. 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.)

2. 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 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.

3. 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.

BOX CULVERT REQUIREMENTS

1. MINIMUM FILL HEIGHT FROM TOP OF CULVERT TO BOTTOM OF BASE WITHIN TRAVEL WAY SHALL BE 12 INCHES.
2. MAXIMUM POUR LENGTH SHALL NOT EXCEED 30 FEET ALONG THE LENGTH OF THE CULVERT.
3. TRAVERSE CONSTRUCTION JOINTS SHALL BE PLACED IN THE BARREL, NORMAL TO THE CENTERLINE OF CULVERT, AT THE OUTSIDE SHOULDER BREAK POINTS. LONGITUDINAL BARREL REINFORCING STEEL SHALL NOT BE CONTINUOUS THROUGH THESE JOINTS, PROVIDED THAT THE JOINTS ARE MORE THAN 15 FEET FROM THE BARREL ENDS. WHEN TRANSVERSE CONSTRUCTION JOINTS OCCUR WITHIN 15 FEET OF THE BARREL ENDS OR WITHIN THE LIMITS OF THE PAVEMENT, THE LONGITUDINAL BARREL REINFORCING SHALL THEN BE CONTINUOUS THROUGH SUCH JOINTS. THE MINIMUM LENGTH OF LAP SPLICE FOR LONGITUDINAL REINFORCING SHALL BE 24 INCHES.
4. TRANSVERSE CONSTRUCTION JOINTS PLACED AT ANY OTHER LOCATION NOT SPECIFIED ABOVE SHALL BE FORMED WITH NO LONGITUDINAL REINFORCING STEEL PASSING THROUGH THE JOINTS.

PIPE CULVERT MATERIAL ALTERNATES FOR PIEDMONT/BLUE RIDGE REGION

TYPE OF PIPE INSTALLATION	CORRUGATED STEEL AASHTO M-36	CORRUGATED STEEL AASHTO M-36		PLASTIC				
		ALUMINUM COATED (TYPE 2) CORR. STEEL	PLAIN ZINC COATED	CORR. UNCOATED ALUMINUM	CORR. POLY-ETHYLENE AASHTO M-252	POLY-VINYL CHLORIDE SMOOTHED LINED AASHTO M-294 TYPE "S"	POLY VINYL CHLORIDE (PVC) PROFILE WALL AASHTO M-304	POLY VINYL CHLORIDE (PVC) CORRUGATED SMOOTH INTERIOR AASHTO F-949
LONGITUDINAL INTERSTATE AND TRAVEL BEARING	X							
LONGITUDINAL NON-INTERSTATE AND NON-TRAVEL BEARING	X				X	X	X	
CROSS DRAIN	ADT < 250	X			X	X	X	
	250 < ADT < 1500	X			X	X	X	
	1500 < ADT < 15,000	X			X	X	X	
	ADT > 15,000	X						
DRAIN	ADT < 250				X	X	X	
	ADT > 250				X	X	X	
SIDE DRAIN	X				X	X	X	
PERMANENT SLOPE DRAIN		X	X	X	X	X	X	
PERFORATED UNDERDRAIN		X	X	X	X	X	X	

NOTE:

1. ALLOWABLE MATERIALS ARE INDICATED BY AN "X".
2. 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.
3. 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).
4. THE CONTRACTOR SHALL PROVIDE ADDITIONAL STORM SEWER CAPACITY CALCULATIONS IF A PIPE MATERIAL OTHER THAN CONCRETE IS SELECTED.

REV. 09-03-08

PROJECT NOTES

THE CONTRACTOR SHALL FIND AN ENVIRONMENTALLY APPROVED PLACE TO DISPOSE OF THE EXISTING CONSTRUCTION DEBRIS AT NO ADDITIONAL COST TO THE DEPARTMENT.

ALL WASTE AND/OR BORROW SITES FOR THIS PROJECT SHALL BE ENVIRONMENTALLY APPROVED BY GEORGIA DOT BEFORE USE.

A NOTICE OF INTENT (NOI) WILL BE REQUIRED FOR THIS PROJECT.

UTILITY OWNER	SERVICE	CONTACT NUMBERS	SHEET NUMBERS
GEORGIA POWER COMPANY - DISTRIBUTION	ELECTRICAL		
MEAG POWER - TRANSMISSION	ELECTRICAL		
AGL RESOURCES	GAS		
DEKALB COUNTY WATERSHED MANAGEMENT	WATER		
DEKALB COUNTY WATERSHED MANAGEMENT	SEWER		
AT&T	TELEPHONE		
AGL NETWORKS	TELEPHONE		
COMCAST	CABLE TV		
DEKALB COUNTY TRAFFIC AND SAFETY GADOT	OTHER		



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GEORGIA DEPARTMENT OF TRANSPORTATION

REVISION DATES

STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION
 OFFICE: GENERAL NOTES

1-20 EASTBOUND CD LANES
 1-285 TO PANOLA ROAD

DRAWING No. 4-01