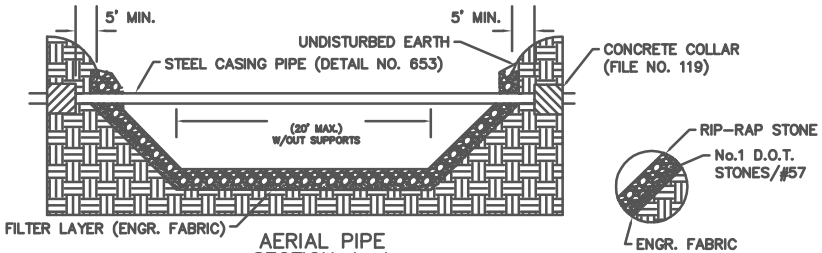
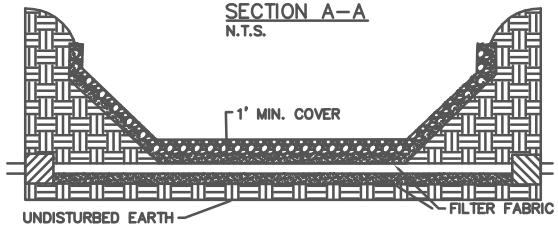
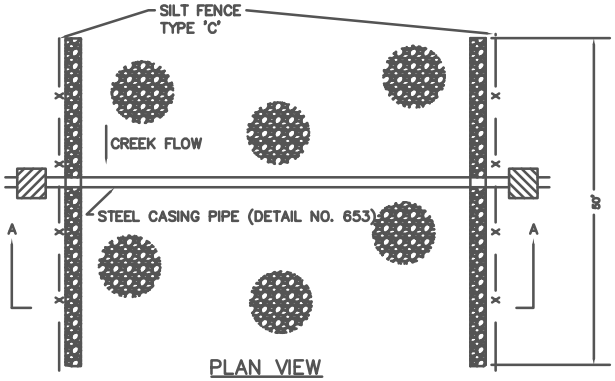
NOTE REQUIRED
CONCRETE STRENGTH TEST MAY BE REQUIRED
FOR ALL POURED IN PLACE CONCRETE



AERIAL PIPE
SECTION A-A
N.T.S.



UNDERGROUND PIPE
SECTION A-A
N.T.S.



PLAN VIEW

GRADED RIP-RAP STONE

FLOW VELOCITY (FT./SEC.)	N.S.A. *1	SIZE INCHES (SQ. OPENING) MAX.	AVG.	MIN.	PARTICLE WEIGHT (LBS.)*2
2.5	R-1	1 1/2	3/4	NO.8	--
4.5	R-2	3	1 1/2	1	--
6.5	R-3	6	3	2	20
9.0	R-4	12	6	3	60
11.5	R-5	18	9	5	150
13.0	R-6	24	12	7	300
14.5	R-7	30	15	12	700
--	R-8	48	24	15	1500

*1. NATIONAL STONE ASSOCIATION.

*2. AT LEAST 50% OF ALL INDIVIDUAL STONE PARTICLES MUST WEIGH AT LEAST THE LISTED AMOUNT.

GRADED RIP-RAP STONE

D.O.T. *NO.1	SIZE INCHES (SQ. OPENING) MAX.	AVG.	MIN.	COMMON USES
TYPE 3	12	9	5	CREEK BANKS, PIPE OUTLETS, LAKES, SHORELINES & RIVERS
TYPE 1	24	12	7	

*1. GEORGIA DEPARTMENT OF TRANSPORTATION.

NOTES:
1. MINIMUM STONE SIZE SHALL BE 125 LBS.
2. STONE SIZE SHALL BE PROVIDED BY DESIGN ENGINEER OR FULTON COUNTY PUBLIC WORKS ENGINEER
3. ALL EROSION CONTROL DEVICES MUST BE IN PLACE PRIOR TO ANY GRADING OR CLEARING.
4. ALL EROSION CONTROL SHALL CONFORM TO FULTON COUNTY STANDARDS.
5. RIM OF MANHOLE SHALL BE 2' ABOVE GRADE. IF IN A FLOOD ZONE, RIM SHALL BE ABOVE 25 YEAR STORM ELEVATION.
6. SEE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA FOR MORE INFORMATION.

GRADED RIP-RAP STONE

TYPE 3: FOR GENERAL USE NORMAL DRAINAGE CONDITIONS: THE LARGEST PIECES OF MATERIAL SHALL HAVE A MAXIMUM APPROXIMATE VOLUME OF ONE CUBIC FOOT. AT LEAST 35% OF THE MASS SHALL BE COMPRISED OF PIECES WHICH WEIGH 15 POUNDS OR MORE.

TYPE 1: FOR SEVERE DRAINAGE CONDITIONS OR MODERATE WAVE ACTION: THE LARGEST PIECES OF MATERIAL SHALL HAVE A MAXIMUM OF TWO CUBIC FEET, AT LEAST 35% OF THE MASS SHALL BE COMPRISED OF PIECES WHICH WEIGH 125 POUNDS OR MORE.

FULTON COUNTY STANDARD DETAIL 401
SANITARY SEWER TYPICAL RIP-RAP
CHANNEL PIPE CROSSING

DATE	REVISIONS	DATE	REVISIONS
8/08	NRR		

DGS/DRN/CHKD: REB
APPROVED: REW
DATE: 12-2-05

FULTON COUNTY

FULTON COUNTY PUBLIC WORKS
141 PRYOR ST. ATLANTA, GA. 30303
404-612-7400 FAX: 404-224-0498

DRAWING NO. 401