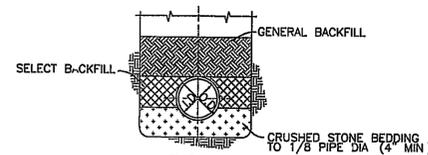


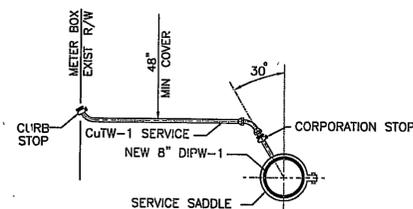
NOTES:
 -MJ TEE AND SLEEVE MAY BE USED IN LIEU OF TAPPING SLEEVE AND VALVE IF APPROVED BY THE ENGINEER AND OWNER AND IF THERE ARE A SUFFICIENT AMOUNT OF EXISTING LINE VALVES
 -SEE SPECS FOR TYPE OF TAPPING SLEEVE REQUIRED FOR DIFFERENT PIPE MATERIALS

TYPICAL CONNECTION TO EXISTING MAIN
 NTS



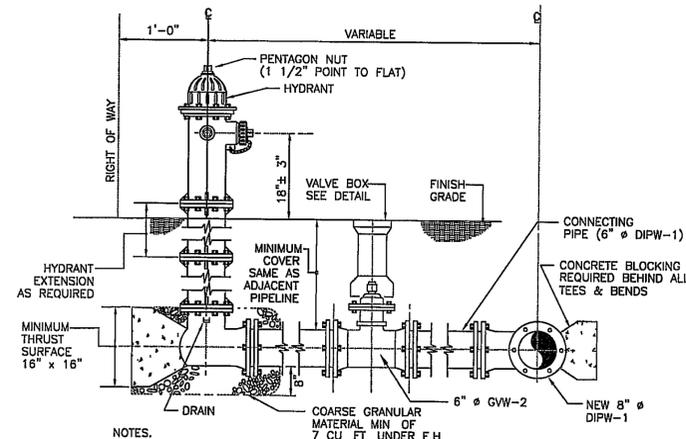
TYPE 4
 PIPE BEDDED IN SAND, GRAVEL, OR CRUSHED STONE TO DEPTH OF 1/8 PIPE DIA (4" MIN.) WITH BACKFILL COMPACTED TO TOP OF PIPE (APPROX. 80% STANDARD PROCTOR)

DUCTILE IRON PIPE BEDDING DETAIL
 NTS



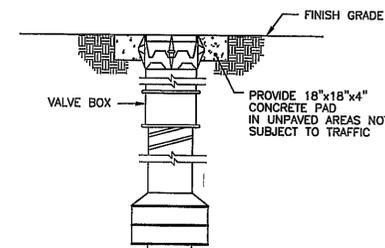
NOTE
 1. PROVIDE 2" PVC CONDUIT CASING FROM CORPORATION STOP TO 5' BEYOND PAVEMENT EDGE

SERVICE CONNECTION DETAIL
 NTS

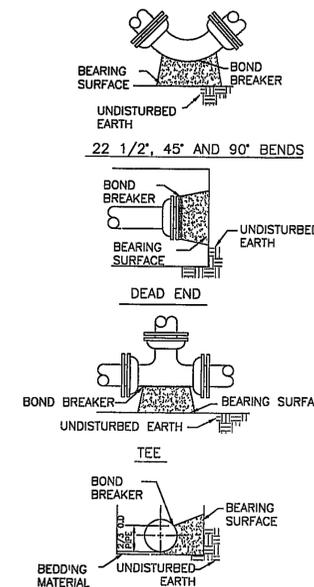


NOTES:
 1. HYDRANT LUGS AND TIE RODS MAY BE USED IN LIEU OF CONCRETE REACTION BRACING AT CONTRACTOR'S OPTION
 2. PAINT HYDRANT IN ACCORDANCE W/AWWA C502 COLOR TO BE APPROVED BY OWNER.
 3. EXACT LOCATION OF HYDRANTS TO BE DETERMINED IN FIELD BY ENGINEER & OWNER

TYPICAL HYDRANT INSTALLATION
 NTS



TYPICAL VALVE BOX INSTALLATION
 NTS



TYPICAL CROSS SECTION

PIPE SIZE	MINIMUM BEARING SURFACE AREA (SQ. FT.)		
	BENDS	TEE OR DEAD END	
4"	1.00	1.00	1.50
6"	1.25	2.25	3.00
8"	2.00	4.00	5.25
12"	4.25	8.25	11.00
16"	6.50	12.50	16.50
20"	10.00	19.50	25.00

NOTES:
 1. BEARING SURFACES IN CHART ARE MINIMUM REQUIRED AREAS BASED ON THE FOLLOWING
 A. SOIL BEARING CAPACITY = 3000 PSF
 B. INTERNAL PIPE PRESSURE = 150 PSI + WATER HAMMER OF 120 PSI FOR 4" - 8" SIZE, 110 PSI FOR 12" SIZE, AND 70 PSI FOR 16" AND 20" SIZES
 2. ACTUAL SOIL AND INSTALLATION CONDITIONS VARY AND MAY REQUIRE ADDITIONAL ANCHORAGE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO RECOGNIZE SUCH VARIANCES AND ADDITIONAL REQUIREMENTS AND TO PROVIDE APPROPRIATE ADDITIONAL ANCHORAGE
 3. PROVIDE CONCRETE REACTION OR THRUST BACKING OF A MIX NOT LEANER THAN 1 CEMENT, 2 - 1/2 SAND, 5 STONE, HAVING COMPRESSIVE STRENGTH OF NOT LESS THAN 2,000 PSI PLACE BACKING BETWEEN SOLID GROUND AND THE FITTING TO BE ANCHORED. LOCATE THE BACKING SO THAT THE PIPE AND THE FITTING JOINT WILL BE ACCESSIBLE FOR REPAIRS MECHANICAL JOINT RETAINER GLANDS OF ADEQUATE STRENGTH TO PREVENT MOVEMENT OR OTHER SUITABLE MEANS MAY BE USED INSTEAD OF CONCRETE BACKING
 4. THRUST RESTRAINT SHALL BE CLASS A CONCRETE CONSTRUCTED IN ACCORDANCE WITH GDOT SPECIFICATION SECTION 500, AND AS DEFINED TO AS CONCRETE BLOCKING BY GDOT SPECIFICATION SECTION 670.

TYPICAL UNDERGROUND PIPE THRUST RESTRAINT



KECK & WOOD, INC.
 2750 PREMIERE PARKWAY
 SUITE 900
 DULUTH, GEORGIA 30097
 Phone: (678) 417-4000
 Fax: (678) 417-4055
 ENGINEERS SURVEYORS
 PLANNERS



REVISION DATES	

STATE OF GEORGIA
 DEPARTMENT OF TRANSPORTATION
 OFFICE: DISTRICT 2 DESIGN - TENNILLE
 UTILITY RELOCATION PLANS
 WATER RELOCATION DETAILS
 DRAWING No 44-08