

TYPICAL CROSS SECTION

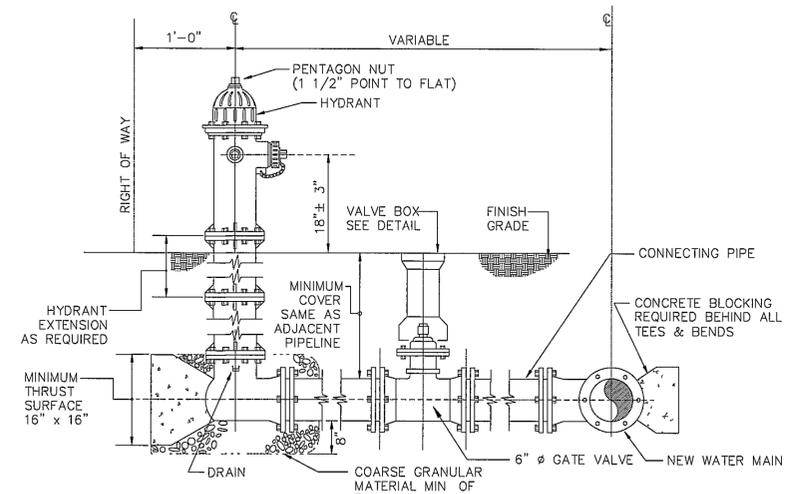
PIPE SIZE	MINIMUM BEARING SURFACE AREA (SQ. FT.)			TEE OR DEAD END
	22 1/2	45	90	
4"	1.00	1.00	2.00	1.50
6"	1.25	2.25	4.75	3.00
8"	2.00	4.00	8.20	5.25
10"	4.25	8.25	16.75	11.00

NOTES

- BEARING SURFACES IN CHART ARE MINIMUM REQUIRED AREAS BASED ON THE FOLLOWING:
 A SOIL BEARING CAPACITY = 3000 PSF
 B INTERNAL PIPE PRESURE = 150 PSI + WATER HAMMER OF 120 PSI FOR 4" - 8" SIZE, 110 PSI FOR 12" SIZE, AND 70 PSI FOR 16" AND 20" SIZES
- 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.
- 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.

TYPICAL UNDERGROUND PIPE THRUST RESTRAINT

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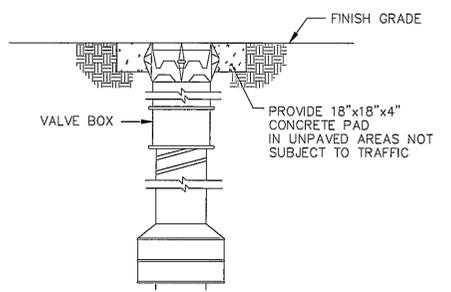


NOTES

- HYDRANT LUGS AND TIE RODS OR MECHANICAL JOINT RESTRAINT MAY BE USED IN LIEU OF CONCRETE REACTION BRACING AT CONTRACTOR'S OPTION.
- FOR STANDARDIZATION WITH EXISTING SYSTEM, PROVIDE THREE WAY FIRE HYDRANT OF ONE OF THE FOLLOWING TYPES: MUELLER CENTURION MODEL (A-42), M&H VALVE COMPANY TRAFFIC MODEL (STYLE 123), MCWANE INC KENNEDY VALVE DIVISION (KENNEDY GUARDIAN, AMERICAN AVK CO (2780 NOSTALGIC), AMERICAN-DARLING MARK (73-5), OR APPROVED EQUAL.
- PAINT HYDRANT IN ACCORDANCE WITH W/AWMA C502, COLOR RED.
- EXACT LOCATION OF HYDRANTS TO BE DETERMINED IN FIELD BY PROJECT COORDINATOR.

TYPICAL HYDRANT INSTALLATION

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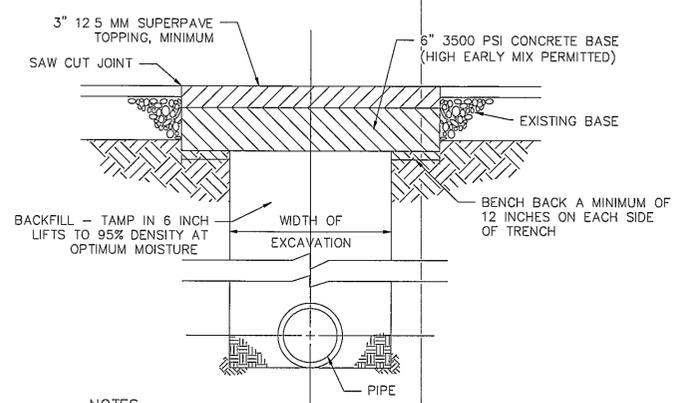


TYPICAL VALVE BOX INSTALLATION

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NOTES

- FOR STANDARDIZATION WITH EXISTING SYSTEM, PROVIDE GATE VALVE BY ONE OF THE FOLLOWING MANUFACTURERS: MCWANE, INC; M&H VALVE COMPANY DIVISION; MUELLER CO; WATER PRODUCTS DIVISION, OR APPROVED EQUAL.

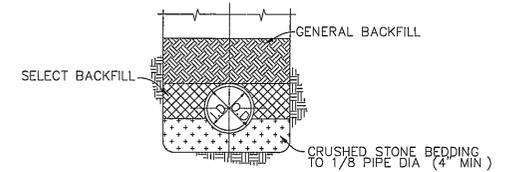


NOTES

- ALL LATERAL STREET CUTS MUST BE COVERED WITH STEEL PLATES OF SUFFICIENT THICKNESS TO SPAN THE CUT WITHOUT NOTICEABLE DEFLECTION. PLATES TO REMAIN IN PLACE UNTIL THE CONCRETE BASE HAS GAINED SUFFICIENT STRENGTH TO WITHSTAND TRAFFIC LOADS (24 HOUR MINIMUM).
- NEW BASE FOR DRIVEWAY, SIDEWALK AND PARKING LOT REPAIR TO CONSIST OF GRADED AGGREGATE.
- COORDINATE WITH GDOT ROAD IMPROVEMENTS AT GDOT ROAD. CONTRACTOR OPTION, IF NEW ROADWAY IS TO BE LOWERED MORE THAN 3", CONTRACTOR MAY SUBSTITUTE GRADED AGGREGATE BASE OF 95% COMPACTION IN PLACE OF 6" CONCRETE BASE. CONCRETE BASE IS REQUIRED IN OPEN CUTS WITHIN ROADS TO BE LOWERED LESS THAN 3" OR TO BE RAISED.

PAVEMENT PATCH DETAIL

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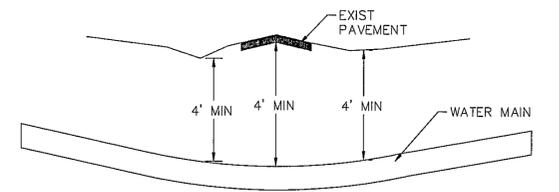


TYPE 4

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, AASHTO T-99)

DUCTILE IRON OR PVC PIPE BEDDING DETAIL

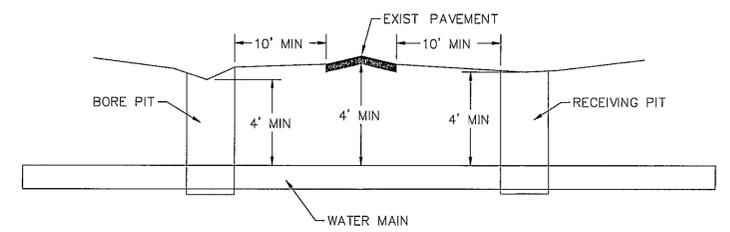
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BY DIRECTIONAL BORE METHODS

TYPICAL UNTRENCHED PAVEMENT CROSSING DETAIL

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BY JACK & BORE METHODS

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OFFICE: DISTRICT 2 DESIGN - TENNILLE
WATER RELOCATION PLANS

DETAILS

DRAWING No
44-006