

**ITEM 15603.86xx M - DRAINAGE PIPE, OPTIONAL (FOR DRIVEWAYS, GRAVEL AND DIRT SURFACED ROADWAYS-ZONE 2 - FILL HEIGHTS 300 mm OR MORE)**

**DESCRIPTION.** Under these items the Contractor shall furnish and install drainage pipe of the indicated sizes and shapes where shown on the plans or where indicated by the Engineer. The type of pipe material selected shall be at the Contractor's option from the list below.

**MATERIALS.** The type of pipe materials shall meet the requirements given below. The dimensions given in the pay items for oblate pipes are those associated with corrugated oblate metal pipe but are not meant to exclude concrete elliptical pipe with substantially close conforming dimensions. Select granular fill used shall meet the requirements for this material given in subsection 203-2.02c.

Non-Reinforced Concrete Pipe	706-01
Reinforced Concrete Pipe	706-02
Corrugated Interior Polyethylene Pipe	706-14
Corrugated Steel Pipe	707-02
Corrugated Aluminum Pipe	707-13

The pipe class or gage shall be as indicated in TABLE 1, Zone 2, for pipes with cover of 300 mm or more.

**CONSTRUCTION DETAILS.** The Construction Details of subsection 603-3 shall apply. Only one type of pipe material will be allowed in the same run of pipe.

**METHOD OF MEASUREMENT.** Pipe will be measured in meters along the bottom centerline as designated on the plans and specifications or as directed by the Engineer in writing.

**BASIS OF PAYMENT.** The accepted quantities of pipe installed under this item will be paid for at the contract price bid which shall include the cost of furnishing all labor, materials and equipment necessary to complete the work.

The cost of any required excavation, sheeting, granular fill and backfill and applying water for compaction shall be included in the price for this item.

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Payment will be made under:

<u>ITEM NO.</u>	<u>ITEM</u>	<u>PAY UNIT</u>
Item 15603.8601 M	Drainage Pipe, Optional 300 mm Diameter (For Driveways, ravel and Dirt Surfaced Roadways-Zone 2-Fill Heights 300 mm or More)	Meter
Item 15603.8602 M	Drainage Pipe, Optional 375 mm Diameter (For Driveways, Gravel and Dirt surfaced Roadways-Zone 2-Fill Heights 300 mm or More)	Meter
Item 15603.8603 M	Drainage Pipe, Optional 450 mm Diameter (For Driveways, Gravel and Dirt Surfaced Roadways-Zone 2-Fill Heights 300 mm or More)	Meter
Item 15603.8604 M	Drainage Pipe, Optional 525 mm Diameter (For Driveways, Gravel and Dirt Surfaced Roadways-Zone 2-Fill Heights 300 mm or More)	Meter
Item 15603.8605 M	Drainage Pipe, Optional 600 mm Diameter (For Driveways, Gravel and Dirt Surfaced Roadways-Zone 2-Fill Heights 300 mm or More)	Meter

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**mm OR SURFACED ROADWAYS-ZONE 2 - FILL HEIGHTS 300 MORE)**

TABLE 1 PIPES TO BE USED WHEN COVER IS 300 mm OR MORE - ZONE 2								
CLASS OR GAGE OF PIPE REQUIRED								
FILL HEIGHT METERS	NON REINFORCED CONCRETE	REINFORCED CONCRETE	REINFORCED CONCRETE (H.E.)	CORRUG POLLY		CORR. STEEL		CORR. ALUM.
	§706-01	§706-02	§706-03	§706-14		§707-02		§707-13
	CLASS	CLASS	CLASS	STIFFNESS (1)		GAUGE		GAUGE
				5%	10%	ROUND		ROUND
						COATED & PAVED		
0.3	II	II	II	45	40	14	18	16
0.6	II	II	II	45	40	14	18	16
0.9	II	II	II	45	40	14	18	16
1.2	II	II	II	45	40	14	18	16
1.5	II	II	II	45	40	14	18	16
1.8	II	II	II	45	40	14	18	16
2.1	II	II	II	45	40	14	18	16
2.4	II	II	II	45	40	14	18	16
2.7	II	II	II	45	40	14	18	16
3	NOT ALLOWED	III	III	45	40	14	18	16
3.3	NOT ALLOWED	III	III	45	40	14	18	16
3.6	NOT ALLOWED	III	III	45	40	14	18	16
3.9	NOT ALLOWED	IV	IV	45	40	14	18	16
4.2	NOT ALLOWED	IV	IV	45	40	14	18	16
4.5	NOT ALLOWED	IV	IV	45	40	14	18	16

(1) Tabular values, as determined by AASTM D2412, in psi at 5 & 10% deflection.  
Gages are based on requirements for 600 mm Round Pipes.  
For Zone 2 location refer to Highway Design Manual, Fig. 8A.