Section C – Contents

Valve and Valve Boxes

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OUC

The *Reliable* One®

Material Specifications	C 1.1

Valve, Gate – with Resilient Seat – MJ – 4” thru 12”

AKA

General:

Valves shall conform to ANSI/AWWA C509-94 and the latest revisions thereto. Epoxy coated interior.

Design:

Resilient seat gate. 200 PSI working pressure. Non-rising stem (NRS) with operating nut.

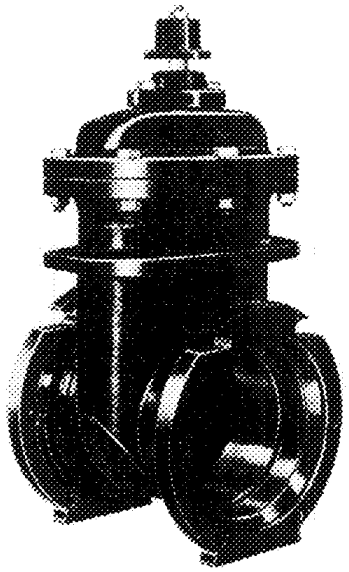
Connections:

Mechanical joint x mechanical joint.

Special Features:

Less MJ accessory kit.

See Exhibit EE (Annual Bid)



Size/Details	OUC Item ID	Manufacturer	Catalog Number
4”	061-01004	AFC	Series 500 & 2500
6”	061-01006	American-Darling Valve	“CRS-80” (No. 85)
8’	061-01008	Clow Valve	F-6100
10”	061-01010	Kennedy Valve	4000 series
12”	061-01012	M&H Valve	Style 4067-01
		Mueller	A-2360-20-LN
			A-2370-20
		U.S. Pipe & Fdry.	Metroseal (No. 5460
		Waterous	Series 500
		AVK	

Revision Date:

5/14/99 (RNK) 8/25/99 (RNK)
4/5/96 (DSW) 3/05/01 (RNK)
3/20/95 (DSW)
7/13/94 (DSW)
5/8/92 (DSW)

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Material Specifications
Water Business Unit
ORLANDO UTILITIES COMMISSION

Material Specifications C 1.2

Valve, Gate – Flanged NRS – 3” thru 12”

AKA

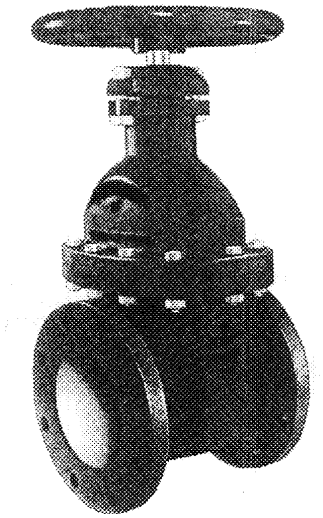
General:
Valves shall conform to ANSI/AWWA C509-94 and the latest revisions thereto. Epoxy coated interior.

Design:
Resilient seat gate. 200 PSI working pressure. Non-rising (NRS) stem with hand wheel.

Connections:
Flange x flange.

Special Feature:
Gasket, bolts and nuts must be included for each flanged end.

See Exhibit EE



Size/Details	OUC Item ID	Manufacturer	Catalog Number
3”	063-07003	AFC	Series 500 & 2500
4”	063-07004	American-Darling Valve	“CRS-80” (No. 82)
6”	063-07006	Clow Valve	F-6102
8”	063-07008	Kennedy Valve	4000 series
10”	063-07010	M&H Valve	Style No. 4067-02
12”	063-07012	Mueller	A-2360-LH A-2370-6
		U.S. Pipe & Fdry.	Metroseal (No. 5100)
		Waterous	Series 500

Revision Date: 5/14/99 (RNK) 8/25/99 (RNK)
4/5/96 (DSW)
3/20/95 (DSW)
5/8/92 (DSW)

OUC The Reliable One

Material Specifications
Water Business Unit
ORLANDO UTILITIES COMMISSION

Material Specifications C 1.3

Valve, Gate – Flanged OS & Y – 4” thru 12”

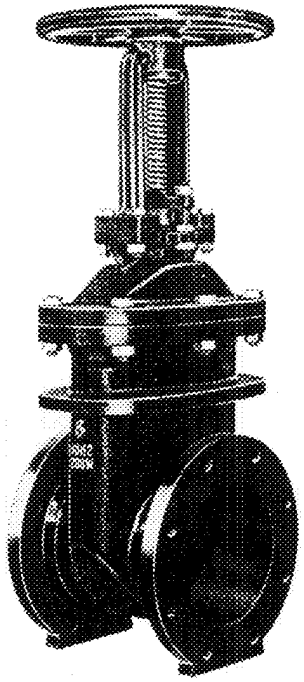
AKA

General:
Valves shall conform to ANSI/AWWA C509-94 and the latest revisions thereto. Epoxy coated interior.

Design:
Resilient seat gate, 200 PSI working pressure. Outside screw and yoke (OS & Y) with handwheel.

Connections:
Flange x flange.

Special Features:
Gasket, bolts and nuts must be included for each flanged end.



Size/Details	OUC Item ID	Manufacturer	Catalog Number
4”	063-08004	AFC	Series 500 & 2500
6”	063-08006	American-Darling Valve	“CRS-80” (No. 82–OS&Y)
8”	063-08008	Clow Valve	F-6136
10”	063-08010	Kennedy Valve	4068
12”	063-08012	M&H Valve	Style No. 4068 - OS&Y
		Mueller	R-2360-LH
			A2079-6
		U.S. Pipe & Fdry.	5120
		Waterous	Series 500

Revision Date:
8/25/99 (RNK)
5/14/99 (RNK)
4/5/96 (DSW)
3/20/95 (DSW)
5/8/92 (DSW)

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Material Specifications
Water Business Unit
ORLANDO UTILITIES COMMISSION

Material Specifications C 2.1

Valve, Tapping – with Resilient Seat – 4” thru 12”

AKA

General:

Valves shall conform to applicable requirements of ANSI/AWWA C509-94 and the latest revisions thereto. Valves must also conform to all OUC specifications outlined in Exhibit EE. Must be completely epoxy coated, inside and outside.

Design:

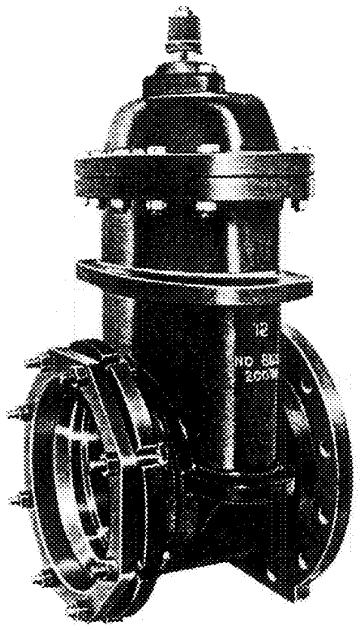
Class 250 resilient seat gate – non-rising stem with operating nut.

Connections:

Tapping valve or flanged x mechanical joint. Flanged end shall have a raised face (lip) to match groove cut within the flanged face of the tapping sleeve.

Special Features:

Less MJ accessory kit. ***Must include gasket, bolts and nuts for flanged end***



Size/Details	OUC Item ID
4”	066-01104
6”	066-01106
8”	066-01108
10”	066-01110
12”	066-01112

Manufacturer	Catalog Number
American – Darling	865/825
Valve	2500
AFC	F-6114
Clow	4000 series
Kennedy Valve	3751-01/3067-13
M&H Valve	A-2370-16
Mueller	Metroseal (No. 5960) 500TM/500FM (4”, 6” & 8” approved, 10” & 12” not approved)
U.S. Pipe & Fdry.	
Waterous	
AVK	25/3X

Revision Date: 3/15/07 (RNK)
3/05/01 (RNK)
8/25/99 (RNK)
5/14/99 (RNK)
5/28/98 (DSW) 5/8/92

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Material Specifications
Water Business Unit
ORLANDO UTILITIES COMMISSION

Material Specifications C 3.1

Valve, Butterfly – MJ – 12” thru 24”

AKA

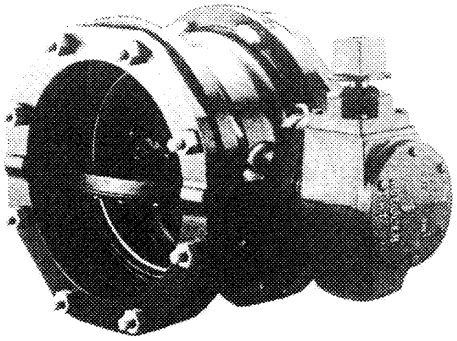
General:
Valves shall conform to ANSI/AWWA C504-94 and the latest revisions thereto. Epoxy coated.

Design:
Rubber seated – Class 150B for buried installation. Two inch square operating nut or operator as specified.

Connections:
Mechanical joint x mechanical joint.

Special Features:
Operator shall open left (counter-clockwise). Accessory kit (ductile iron gland, gasket, bolts and nuts) must be included for each MJ end.

See Exhibit GG



Size/Details	OUC Item ID	Manufacturer	Catalog Number
12” MJ	061-03012	Clow Valve	
16” MJ	061-03016	Henry Pratt	
20” MJ	061-03020	M&H Valve	
24” MJ	061-03024	Mueller	3B3211-20-MJ
24” FLG	063-07024		3B3211-6-FLG

Revision Date: 10/28/05 (RNK)
5/14/99 (RNK)
5/28/98 (DSW)
5/8/92 (DSW)

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Material Specifications
Water Business Unit
ORLANDO UTILITIES COMMISSION

Valve Box with Lid – C.I. – 5 ¼” Shaft & Lid Only

AKA

Material:

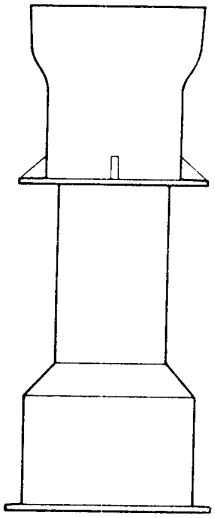
Cast iron top section, bottom section, and lid.

Design:

Two piece slip or sliding type with 5 ¼” shaft extension. 5 ¼” drop lid with “Water” marking. The drop lid shall weigh no less than 13 pounds. It shall be designed to remain seated when subjected to mobile traffic conditions.

Special Features

No.	Shaft Ext. Range	Min. Complete Weight
461	18” – 24”	59 lbs.
562	24” – 36”	79 lbs.
564	36” – 48”	90 lbs.



Size/Details	OUC Item ID
18” – 24”	063-09005
24” – 36”	063-09010
36” – 48”	063-09015
Lid Only	063-09001

Manufacturer	Catalog Number
Opelika Foundry	4908-5461-S 4908-5562-S 4908-5564-S
Russell Pipe & Fdry. (Sigma & Nappco & Russco)	VB461-AX VB562-AX VB564-AX
Tyler Pipe	6855-461-A 6855-562-A 6855-564-A
Star Pipe	VB461A W/LID-HD VB562A W/LID-HD VB564A W/LID-HD
Pipeline Components	

Revision Date:

10/30/04 (RNK)
6/07/04 (RNK)
4/12/01 (RNK)
5/14/99 (RNK)
5/8/92 (DSW)

OUC The *Reliable* One®

Material Specifications
Water Business Unit
ORLANDO UTILITIES COMMISSION

Material Specifications	C 4.1a

Valve Box Top Half Only – C.I. – 5 ¼” Shaft

AKA

Material:

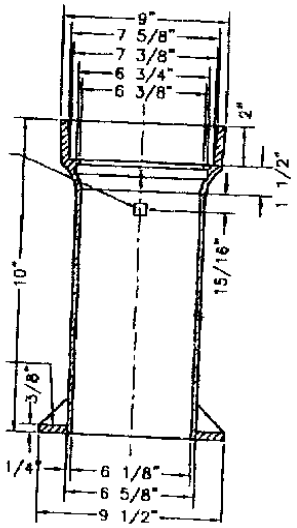
Cast iron top section, bottom section, and lid.

Design:

Top for two piece slip or sliding type with 5 ¼” shaft extension.

Special Features

Heavy Duty wall construction.



Size/Details	OUC Item ID	Manufacturer	Catalog Number
18”	063-09105	Opelika Foundry	
24”	063-09110	Russell Pipe & Fdry. (Sigma & Nappco & Russco)	
36”	063-09115	Tyler Pipe	
		Star Pipe	
		Pipeline Components	

Revision Date: 3/22/07 (RNK)

OUC The *Reliable* One®

Material Specifications
Water Business Unit
ORLANDO UTILITIES COMMISSION

Material Specifications	C 4.2

Valve Box Riser – 1” thru 6”

AKA Adapter

Material:

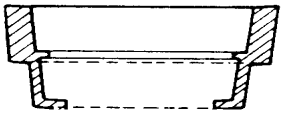
Cast Iron

Design:

For slip or sliding type 5 ¼” shaft 461, 562, & 564 valve boxes with lids. Standard lid must properly fit the riser and may be marked “Water”. Refer to page C4.1 for valve box dimension information.

Special Features:

Must securely fit in all 461, 562, and 564 valve boxes and accommodate standard 13 pound lids.



Size/Details	OUC Item ID
1 ”	063-09020
1 ½”	063-09025
2 ½”	063-09030
6”	063-09060

Manufacturer	Catalog Number
Opelika Foundry	6016-B (Water)
Russell Pipe & Fdry.	
Sigma	1” Riser w/ Std Lid
Tyler Pipe (6855 box)	1 ½” Riser w/ Std. Lid 2 ½” Riser w/ Std. Lid
Star Pipe	VBR1, VBR1.5, VBR2.5
Pipeline Components	

Revision Date:

3/15/07 (RNK)
10/30/04 (RNK)
6/07/04 (RNK)
5/28/98 (DSW)
5/8/92 (DSW)

OUC The *Reliable* One®

Material Specifications
Water Business Unit
ORLANDO UTILITIES COMMISSION

Material Specifications	C 4.2a

Valve Box Replacement Lid

AKA

Material:

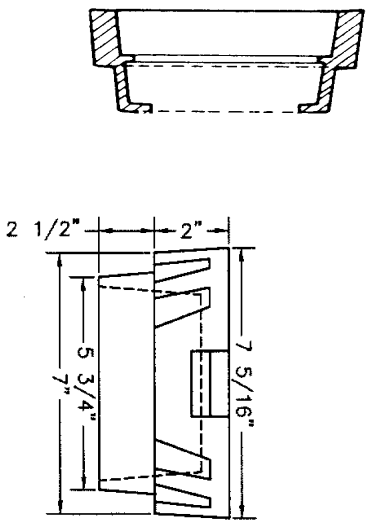
Cast Iron

Design:

For heavy duty slip valve boxes. Standard lid must properly fit the valve box and/or riser. The lid shall be designed to remain seated when subjected to mobile traffic conditions.

Special Features:

Must securely fit in all heavy duty valve boxes and the lid shall weigh no less than 13 pounds.



Size/Details	OUC Item ID	Manufacturer	Catalog Number
13 lbs	063-09000	Opelika Foundry Russell Pipe & Fdry. Sigma Tyler Pipe (6855 box) Star Pipe Pipeline Components	

Revision Date: 3/22/07 (RNK)

OUC The *Reliable* One®

Material Specifications
Water Business Unit
ORLANDO UTILITIES COMMISSION

Material Specifications C 4.3

Valve Box Lid – Non-Pop (Plastic)

AKA

Material:

Fiberglass- reinforced Nylon.

Design:

The lid will have '**Water**' molded into the top. The main body shall be constructed of high-impact, fiberglass-reinforced Nylon. Must be capable of operating at temperatures in excess of 250 degrees, and highly resistant to UV sunlight, ozone, hydrocarbon fluids, and other chemicals associated with roadways. The rubber retention seal shall be ozone and chemical resistant thermoplastic Elastomer composite. The rubber seal shall absorb the direct shock and vibration from traffic impact.

Special Features:

Must securely fit in all 461, 562, and 564 valve boxes. (OUC Specification C 4.1)

Size/Details	OUC Item ID	Manufacturer	**Catalog Number**
5 ¼" Non-Pop Lid	063-09016	SW Services (LJ Ruffin & Associates)	**'MIZI' (WATER) Non-Pop Lid**

Revision Date: 11/4/99 (RNK)

OUC The Reliable One

Material Specifications
Water Business Unit
ORLANDO UTILITIES COMMISSION

4" through 12" Gate Valves with Resilient Seats

Specifications

All resilient seat gate valves purchased under these specifications shall as a minimum conform to AWWA Standard C509-94 and the latest revisions thereto. The resilient seat gate valve body and bonnet shall be made of Class B gray iron meeting ASTM 126 or ductile iron conforming to ASTM A395 or ASTM 536 and shall be provided with mechanical joint ends complete with accessories and suitable for 200 PSI working pressure. Test pressure shall be twice the rated working pressure and at all times zero leakage will be maintained. The dual sealing mechanism must be a replaceable reinforced specially contoured molded rubber wedge or disc. Valve stem seals will be "O" ring. Valves shall be delivered to OUC with all nuts and bolts properly tightened and ready for installation.

Resilient seat gate valves are to operate in a vertical position, shall open left (counter-clockwise) with non-rising stem (NRS), and have a 2-inch square operating nut. Accessories for the mechanical joint ends shall include rubber gaskets with glands, COR-TEN bolts and nuts packaged in the proper manner to accommodate each individual MJ valve end. Valves must be delivered securely on pallets with accessory packages.

The interior areas of the cast iron shall be provided with a two part thermosetting epoxy protective coating and shall function as a physical, chemical, and electrical barrier between the base metal to which it is applied and the surrounding medium. The coating shall be non-toxic and shall not impart taste to the water. The coating must be formulated from materials deemed acceptable per the Food and Drug Administration Document Title 2 of the Federal Regulations on Food Additives, Section 175.300, entitled, Resins and Polymeric Coatings. The coating shall have a successful record of performance in valves, pipe and other allied equipment.

The number of valves in each size class, as shown on the bid form, are estimated requirements of the Orlando Utilities Commission for a period of 12 months, beginning with the latest bid date. However, the Orlando Utilities Commission reserves the right to increase or decrease the number of gate valves from the quantities as shown. All bids must be firm for a twelve month period, and prices quoted will be f.o.b. delivered to Orlando Utilities Commission Warehouse. Manufacturer shall maintain an inventory of valves furnished within the State of Florida that may be delivered to Orlando Utilities Commission within a 48 hour time limit.

4" through 12" Gate Valves with Resilient Seats

Specifications (cont)

The Orlando Utilities Commission reserves the right to accept the bid in whole or in part, the right to reject any or all bids and re-advertise, and the right to decide for itself just which is the lowest and best bid. Delivery time will be a consideration in awarding the bid. Delivery time will be guaranteed and failure to meet schedule will be cause for Orlando Utilities Commission to cancel successful bidders contract and re-advertise.

The Orlando Utilities Commission further reserves the right to decide for itself if the quoted material is an equal to the material for which specifications have been given.

By mutual consent this agreement can be extended by periods of twelve months.

Written releases will be made as required by the Purchasing Division.

Butterfly Valves

Specifications

All butterfly valves purchased under these specifications shall as a minimum be manufactured to conform to ANSI/AWWA C504-94 and the latest revisions thereto. The body, disc, shaft, seats, bearings, and actuators shall be designed based on Class 150B valves and may be of either the short or long body type. All valves shall have a minimum of 4 mil factory applied thermosetting (epoxy coating) on all internal ferrous surfaces. Coatings shall meet all FDS and government regulations. The valves shall have mechanical joint ends with accessories.

The valve disc shall be corrosion-resistant alloy, cast iron, or ductile iron and shall be pressure sealed to the stainless shaft. The valves shall be equipped with a stop in the actuator. The shaft seals shall be the self-adjusting Chevron "Split-V" or "O-ring" type, suitable for buried service. The shaft may be of the through type or stub type and shall be marked on the end to indicate the position of the valve disc in relation to the shaft. It shall be equipped with a (2) two inch square operating nut or operator as specified.

The valve seat shall be made of rubber and may be located either in the body of the valve or in the disc. Rubber seats located in the body of the valve shall be encapsulated on three sides within the body. If the valve has the rubber seat in the disc, the valve must have a floating "O" ring under the seat ring. On butterfly valves 24" and larger the seat shall be adjustable and replaceable in the field.

The actuator shall open left (counter-clockwise) and shall be of the traveling nut type. The actuator housing shall be removable under pressure to facilitate repair or replacement. The actuator shall be capable of handling 450 foot pounds of torque at the stops without damage.