

TABLE OF CONTENTS

Overview	2
Additions, Deletions, Modifications	3
Tapping Sleeves	4
Tapping Saddles	5
Water Meters	6
Water Meter Boxes & Lids	7
Fire Hydrants	8
Water Main Valves & Joint Restraint	9
Water Main Pipe	10
Water Main Fittings & Couplings	11
Valve Boxes & Lids	12
Backflow & Backflow Enclosures	13
Water Service Brass & Tubing	14
Sewer Main Pipe	15
Sewer Manhole Components & Lining Systems	16
Sewer Manhole & Sewer Pipe Accessories	17
Miscellaneous Items	18

City of Henderson Approved Materials List Overview

The design and construction of all water distribution and wastewater collection facilities within the City of Henderson must comply with the guidelines set forth in the Uniform Design and Construction Standards and the Design and Construction Standards for Wastewater Collection Systems along with the City of Henderson's Addenda for both documents. The Approved Materials List outlines all standard products and materials used in water distribution and wastewater collection systems, for pipe sizes up to and including 16-inches in diameter (water) and 15-inches in diameter (sewer).

All products and materials used in conjunction with water and sewer mains larger than this will be reviewed on a case-by-case basis and therefore shall be incorporated into the specific design of that system. It is not the intent of the Approved Materials List document to incorporate the types of products and materials used under those circumstances.

This document is not intended to replace or amend any adopted design and construction standards. Instead, the information contained within this document is provided as a replacement for product shop drawings that may be required for a developer project. Contact the Approved Materials List (AML) Committee for clarification where a conflict exists between this document and adopted design and construction standards.

All emergency temporary repairs will be completed at the discretion of the City of Henderson representative at the site. All permanent repairs will be completed in accordance with all applicable standards and the City's Approved Materials List.

A completed Approved Materials List New Product Application is required for any new product submittals to the AML Committee. The City will work with all parties involved to coordinate any product changes, additions or deletions but the City is not responsible for any supplier's standing inventory affected by revisions to this list.

For questions regarding this document or inquiries on how a new product may be approved for inclusion on the Approved Materials List, please contact the AML Committee at (702) 267-3671 or (702) 267-3670.

The AML can be found at - <http://www.cityofhenderson.com/dsc/php/downloadableforms.php> from this web page make the selection of Utility Services Forms.

CITY OF HENDERSON APPROVED MATERIALS LIST

ADDITIONS, DELETIONS, & MODIFICATIONS

<i>Description</i>	<i>Action</i>	<i>Date</i>	<i>Category</i>
East Jordan Iron Works, Inc.- Watermaster Fire Hydrant -5CD250	Added to the list - replacing model 5BR250	Jul-2011	Fire Hydrants
Quality Rubber Company -Gripper Gaskets - Series 3"-24"(Boltless restraint for DIP, valves, fittings)	Added to the list	Jul-2011	Water Main Valves & Joint Restraint
Star Pipe Co., Inc. – Stargrip Joint Restraint – Model 4000 – C900 4" – 12"	Added to the list	Dec-2010	Water Main Valves & Joint Restraint
3M – 4" Ball Marker – 1404-XR – U/G Utility Marking	Added to the list	Dec-2010	Miscellaneous Items
Carson Industries – Meter Box / Lid – H1730-12 – Polymer Concrete	Added to the list	Dec-2010	Meter Box and Lid Options
Carson Industries – Meter Box / Lid – H1324-12 – Polymer Concrete	Added to the list	Dec-2010	Meter Box and Lid Options
Team Industrial Services - Inserta Valve", Model RW-Gate, 4" to 12"	Added to the list	Mar-2010	Water Main Valves & Joint Restraint
Sensus Metering Systems, Omni, f2, 4" to 6"	Added to the list	Mar-2010	Water Meters
EBAA Iron – PVC Joint Restraint, 2000PV, C900 & C9 05, 4" to 12"	Added to the list	Mar-2010	Water Main Valves & Joint Restraint
EBAA Iron – PVC Joint Restraint, 1600, C900, 4" to 12"	Added to the list	Mar-2010	Water Main Valves & Joint Restraint
EBAA Iron – PVC Joint Restraint, 2800, C905, 14"	Added to the list	Mar-2010	Water Main Valves & Joint Restraint
JM Eagle Pipe	Removed from list	Feb-2010	Water Main Pipe
PVC. Sewer Pipe Fittings	Added to the list	Dec-2009	Sewer
"Sensus" Model "C2", sizes 3" – 6" Metering Systems	Added to the list	Jun-2009	Water Meters
"Sensus" Model "T2", sizes 3" – 6" Metering Systems	Added to the list	Jun-2009	Water Meters
"Sensus" Model "SRH", sizes 3" – 6" meters	Removed from list	Aug-2009	Water Meters
Expanded Application Categories	Revised and/or added	Dec-2008	Water Meters
Hersey 8x2 & 10x2 meter	Removed from the list	Dec-2008	Water Meters
Metron 6" & 8" Enduro meter	Removed from the list	Dec-2008	Water Meters
Fire hydrant guidelines added	Web link to City of Henderson fire hydrant guidelines added.	Dec-2008	Fire Hydrants

CITY OF HENDERSON APPROVED MATERIALS LIST

ADDITIONS, DELETIONS, & MODIFICATIONS

<i>Description</i>	<i>Action</i>	<i>Date</i>	<i>Category</i>
Fire hydrant suspended from AML	Kennedy K-81A fire hydrant suspended from AML.	Dec-2008	Fire Hydrants
Griffin Pipe Products Co. Ductile Iron Water Pipe	Added to list	Oct-2008	Water Main Pipe
North American Pipe Corp. C-900 PVC Pipe	Added to list	Oct-2008	Water Main Pipe
Ford Meter Box 2" Blow-off	Added to list	Oct-2008	Miscellaneous Items
Jensen Precast G5 Valve Box	Added to list	Oct-2008	Miscellaneous Items
COR+GARD Epoxy Manhole Lining System	Added to list	Oct-2008	Sewer manhole components & lining systems
C-900 Required at 20 feet depth of cover	Revised the requirement for C-900 pipe from 15 feet to 20 feet.	Dec-2008	Sewer Main Pipe
North American Pipe Corp. SDR-35 Sewer Pipe	Added to list	Dec-2008	Sewer Main Pipe
Griffin Pipe Products Co. Ductile Iron Sewer Pipe	Added to list	Dec-2008	Sewer Main Pipe
McWane Sure Stop 350 Joint Restraint Gasket	Added to list	Dec-2008	Water Main Valves & Joint Restraint
Maximum size change	Revise maximum size for all products from 20" to 16"	Oct-2007	All
Pipeline Products – Air-Vac Cover	Added to list	Sep-2007	Miscellaneous Items
Romac - RomaGrip	Added to list	Sep-2007	Joint Restraint
Sigma - One-Lok	Added to list	Sep-2007	Joint Restraint
Vent-O-Mat - Combination Air Valve	Added to list	Sep-2007	Miscellaneous Items



**CITY OF HENDERSON APPROVED MATERIALS LIST
TAPPING SLEEVE OPTIONS**

All tapping sleeves shall have a full circumferential gasket.
All carbon steel tapping sleeves shall be fusion-bonded epoxy coated.
The diameter of asbestos cement (AC) pipe varies among manufacturers.
It is important to measure the (AC) pipe diameter at the point where the sleeve will be installed.

APPLICATION

Manufacturer	Model Number	APPLICATION							MJ Style	Approval Date	Manufacturer Web Link
		C-900 PVC	C-905 PVC	Ductile	Cast Iron	Asbestos Cement	Tapping Pipe	Tap Size			
American Flow Control	2800			•			Up To 12"	Up to Size on Size	•	Jan-2002	http://www.acipco.com/afc
American Flow Control	1004					•	Up To 12"	Up to Size on Size	•	Jan-2002	http://www.acipco.com/afc
Ford Meter Box Co.	FTSS	•	•	•	•		Up To 12"	Max 75% of pipe		Apr-1995	http://www.fordmeterbox.com
JCM Industries	JCM 432	•	•	•	•		Up To 24"	Max 75% up to 8"		Apr-1995	http://www.jcmindustries.com
Mueller	H-615	•	•	•			Up To 12"	Up to Size on Size	•	Apr-1995	http://www.muellercompany.com
Mueller	H-619				•		Up To 12"	Up to Size on Size	•	Apr-1995	http://www.muellercompany.com
Power Seal	3490 AS	•	•	•	•		Up To 24"	Max 75% of pipe		Jan-2001	http://www.powerseal.com
Romac Industries	FTS425	•	•	•	•		Up To 24"	Up to Size on Size	•	May-2007	http://www.romacindustries.com
Romac Industries	SST III	•	•	•	•		Up To 24"	Max 75% of pipe		Apr-1995	http://www.romacindustries.com
Smith-Blair	623	•	•	•	•	•	Up To 24"	Up to Size on Size	•	May-2004	http://www.smith-blair.com
Smith-Blair	664	•	•	•	•		Up To 24"	Max 75% of pipe		Jan-2001	http://www.smith-blair.com
Smith-Blair	665	•	•	•	•		Up To 24"	Max 75% of pipe		Oct-2006	http://www.smith-blair.com



**CITY OF HENDERSON APPROVED MATERIALS LIST
TAPPING SADDLE OPTIONS**

All tapping saddles are required to be a double bolt style saddle.

This can either be a single strap or a double strap.

Bronze blades or straps are approved for ductile iron, cast iron and AC pipe only.

Any saddle to be used on a main larger than 20 inches will be a case-by-case approval.

APPLICATION

Manufacturer	Model Number	APPLICATION					Tapping Pipe	Approval Date	Manufacturer Web Link
		C-900 PVC	C-905 PVC	Ductile	Cast Iron	Asbestos Cement			
A. Y. McDonald	3856	•					Up To 12"	May-2004	http://www.aymcdonald.com
A. Y. McDonald	3846	•					Up To 12"	May-2004	http://www.aymcdonald.com
Ford Meter Box Co.	202BS	•	•				Up To 20"	Apr-1995	http://www.fordmeterbox.com
Ford Meter Box Co.	202B			•	•	•	Up To 20"	Apr-1995	http://www.fordmeterbox.com
Jones	J-979			•	•	•	Up To 12"	Apr-1995	http://www.jamesjones.com
Jones	J-969	•					Up To 12"	Apr-1995	http://www.jamesjones.com
Mueller	BR2B			•	•	•	Up To 16"	Apr-1995	http://www.muellercompany.com
Mueller	BR2S	•		•	•	•	Up To 16"	Apr-1995	http://www.muellercompany.com
PowerSeal	3409	•		•		•	Up To 16"	Oct-2006	http://www.powerseal.com
Romac	202BS	•	•	•	•	•	Up To 16"	Apr-1995	http://www.romacindustries.com
Smith-Blair	325	•		•			Up To 12"	May-2004	http://www.smith-blair.com



CITY OF HENDERSON APPROVED MATERIALS LIST

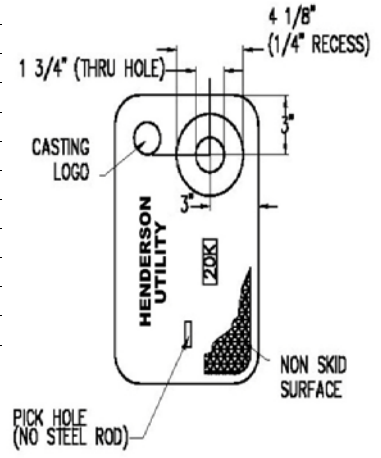
WATER METER OPTIONS

ALL meters shall read in cubic feet and have encoded registers. All water meters 2 inches and smaller will be supplied and installed by the City of Henderson.
 All water meters 3 inches and larger will be supplied and installed by the Contractor. Non-rising stem valves only are to be used in any meter vault.
 Non-rising stem valves only are to be used in any meter vault. ALL Neptune Protectus III Combination Fire and Domestic meters shall include Stainless Steel Strainers and Valve Covers.

APPLICATION													
Meter Type	SIZE	Model	Domestic - Multi-Family	Domestic - Light Commercial	Domestic - Heavy Commercial & Industrial	Domestic - School	Domestic - Hotel & Casino	Combination Fire & Domestic Low Domestic Flow (School, Church, Office)	Combination Fire & Domestic High Domestic Flow (Multi-Family, Hospital, Industrial)	Irrigation	UDACS Plate Reference	Approval Date	Manufacturer Web Link
Turbine with Strainer													
Sensus	3"	W350DRS			•					•	50	Apr-1995	http://www.sensus.com
Sensus	4"	W1000DRS			•					•	50	Apr-1995	http://www.sensus.com
Sensus	4"	F2			•					•	50	Mar-2010	http://www.sensus.com
Sensus	6"	F2			•					•	50	Mar-2010	http://www.sensus.com
Sensus	6"	W2000			•					•	50	Apr-1995	http://www.sensus.com
Sensus	8"	W3500			•					•	50	Apr-1995	http://www.sensus.com
Sensus	10"	W5500			•					•	50	Apr-1995	http://www.sensus.com
Sensus	3"	OMNI T2			•					•	50	Jun-2009	http://www.sensus.com
Sensus	4"	OMNI T2			•					•	50	Jun-2009	http://www.sensus.com
Sensus	6"	OMNI T2			•					•	50	Jun-2009	http://www.sensus.com
Sensus	3"	OMNI C2			•					•	50	Jun-2009	http://www.sensus.com
Sensus	4"	OMNI C2			•					•	50	Jun-2009	http://www.sensus.com
Sensus	6"	OMNI C2			•					•	50	Jun-2009	http://www.sensus.com
Neptune	3"	HP			•					•	50	Oct-2006	http://www.neptunetg.com
Neptune	4"	HP			•					•	50	Oct-2006	http://www.neptunetg.com
Neptune	6"	HP			•					•	50	Oct-2006	http://www.neptunetg.com
Neptune	8"	HP			•					•	50	Oct-2006	http://www.neptunetg.com
Neptune	10"	HP			•					•	50	Oct-2006	http://www.neptunetg.com
Compound with Strainer													
Sensus	3"	SRH				•					50	Apr-1995	http://www.sensus.com
Sensus	4"	SRH				•					50	Apr-1995	http://www.sensus.com
Sensus	6"	SRH				•					50	Apr-1995	http://www.sensus.com
Neptune	3"	TRU/FLO				•					50	Oct-2006	http://www.neptunetg.com
Neptune	4"	TRU/FLO				•					50	Oct-2006	http://www.neptunetg.com
Neptune	6"	TRU/FLO				•					50	Oct-2006	http://www.neptunetg.com
Combination Fire & Domestic													
Hersey	6" x 2"	MFMI with MVR bypass							•		53 & 54	Oct-2006	http://www.herseymeters.com
Hersey	8" x 2"	MFMI with MVR bypass							•		53 & 54	Oct-2006	http://www.herseymeters.com
Hersey	10" x 2"	MFMI with MVR bypass							•		53 & 54	Oct-2006	http://www.herseymeters.com
Neptune	6" x 1 1/2"	Protectus III					•				53 & 54	Apr-1995	http://www.neptunetg.com
Neptune	6" x 2"	Protectus III					•				53 & 54	Apr-1995	http://www.neptunetg.com
Neptune	8" x 2"	Protectus III					•				53 & 54	Apr-1995	http://www.neptunetg.com
Neptune	10" x 2"	Protectus III					•				53 & 54	Apr-1995	http://www.neptunetg.com
Sensus	6" x 2"	Compact FireLine							•		53 & 54	Apr-1995	http://www.sensus.com
Sensus	8" x 2"	Compact FireLine							•		53 & 54	Apr-1995	http://www.sensus.com
Sensus	10" x 2"	Compact FireLine							•		53 & 54	Apr-1995	http://www.sensus.com
Single Jet													
Metron	3"	Spectrum 175 & 260	•	•		•	•				53 & 54	Jan-2002	http://www.metronfarnier.com
Metron	4"	Spectrum 260 & 440	•	•		•	•				53 & 54	Jan-2002	http://www.metronfarnier.com
Metron	6"	Spectrum 440	•	•		•	•				53 & 54	Jan-2002	http://www.metronfarnier.com

**CITY OF HENDERSON APPROVED MATERIALS LIST
METER BOX & LID OPTIONS**

All meter box top sections and lid components shall be an approved polymer concrete type material with a 20K or Tier 15 rating. All lids are required to have a manufacturer casting stamp. All boxes shall have a manufacturer label on the inside wall of the box.
3/4" and 1" meters require a 1" meter box. 1 1/2" and 2" meters require a 2" meter box. ALL lids shall be stamped "HENDERSON UTILITY".

APPLICATION						
Model Number	Component	Lid Size	Lid Markings	Approval Date	Manufacturer Web Link	Lid Configuration
A6001946PCX12	1" Box			Jan-2001	http://www.armorcastprod.com	
A6001969-H1	1" Lid	23 1/4" x 13 3/4"	WATER	Jan-2001	http://www.armorcastprod.com	
A6001640PCX12	2" Box			Jan-2001	http://www.armorcastprod.com	
A6001947T-H1	2" Lid	30 1/2" x 17 1/2"	WATER	Jan-2001	http://www.armorcastprod.com	
WB03-1324-12	1" Box			Oct-2006	http://www.cdrrsystems.com	
WC02-1324-02	1" Lid	23 1/4" x 13 3/4"	WATER	Oct-2006	http://www.cdrrsystems.com	
WB03-1730-12	2" Box			Oct-2006	http://www.cdrrsystems.com	
WC02-1730-02	2" Lid	30 1/2" x 17 1/2"	WATER	Oct-2006	http://www.cdrrsystems.com	
SYN1324X12	1" Box			Oct-2006	http://www.christyconcrete.com	
SYN1324P	1" Lid	23 1/4" x 13 3/4"	WATER	Oct-2006	http://www.christyconcrete.com	
SYN1730X12	2" Box			Oct-2006	http://www.christyconcrete.com	
SYN1730P	2" Lid	30 1/2" x 17 1/2"	WATER	Oct-2006	http://www.christyconcrete.com	
RPC-38B	1" Box			Oct-2006	http://www.rockwayprecast.com	
RPC-38	1" Lid	23 1/4" x 13 3/4"	WATER	Oct-2006	http://www.rockwayprecast.com	
RPC-66B	2" Box			Oct-2006	http://www.rockwayprecast.com	
RPC-66	2" Lid	30 1/2" x 17 1/2"	WATER	Oct-2006	http://www.rockwayprecast.com	
PG1324B531	1" Box			Oct-2006	http://www.strongwell.com	
PG1324H519HY	1" Lid	23 1/4" x 13 3/4"	WATER	Oct-2006	http://www.strongwell.com	
PG1730B568	2" Box			Oct-2006	http://www.strongwell.com	
PG1730H521HY	2" Lid	30 1/2" x 17 1/2"	WATER	Oct-2006	http://www.strongwell.com	



**CITY OF HENDERSON APPROVED MATERIALS LIST
FIRE HYDRANT OPTIONS**

The main valve is 5 1/4".
 The pumper nozzle is 4" Higbee Cut National Standard Thread.
 The hose nozzle is 2 1/2" Higbee Cut National Standard Thread.
 All hydrants shall have a 1 1/8" operating nut.
 Some hydrants may be approved for a vertical shoe configuration.
 This approval will be a project specific approval.
 Any fire hydrant for new construction must be a new hydrant.
 The relocation of existing hydrants is not approved within the City.

APPLICATION

Manufacturer	Model Number	Configuration	Vertical Shoe Configuration	Approval Date	Manufacturer Web Link
American Flow Control Waterous	Pacer	WB67		Apr-1995	http://www.acipco.com/afc
Clow	Medallion	F-2546 LVD	Yes	Apr-1995	http://www.clowvalve.com
East Jordan Iron Works	5CD250			Oct-2006	http://www.ejiw.com
Mueller	Super Centurion 250	A-423	Yes	Apr-1995	http://www.muellercompany.com



**CITY OF HENDERSON APPROVED MATERIALS LIST
WATER MAIN VALVE OPTIONS**

The minimum water main valve size is 6 inch.
All gate valves shall be resilient seated wedge type, fusion bonded epoxy coated to ANSI/AWWA C550. Gate valves shall comply with AWWA C509 or C515.
No butterfly valves shall be used for normal distribution applications.

APPLICATION

Manufacturer	Model Number	APPLICATION			
		Type	Size	Approval Date	Manufacturer Web Link
American Flow Control	2500 Series	Gate	6" - 16"	Jan-2001	http://www.acipco.com/afc
Clow	2640	Gate	6" - 12"	Apr-1995	http://www.clowvalve.com
Clow	2639	Gate	6" - 12"	Apr-1995	http://www.clowvalve.com
Clow	2638	Gate	6" - 16"	Apr-1995	http://www.clowvalve.com
East Jordan Iron Works	Flowmaster Series	Gate	6" - 16"	Mar-2005	http://www.ejiw.com
Kennedy	8000 Series	Gate	6" - 12"	Apr-1995	http://www.kennedyvalve.com
M&H	7000 Series	Gate	6" - 12"	Apr-1995	http://www.mh-valve.com
M&H	4067	Gate	6" - 12"	Apr-1995	http://www.mh-valve.com
Mueller	A-2361	Gate	16"	Apr-1995	http://www.muellercompany.com
Mueller	A-2360	Gate	6" - 12"	Apr-1995	http://www.muellercompany.com
Waterous	500 Series	Gate	6" - 12"	Apr-1995	http://www.acipco.com/afc
Team Industrial Services	InsertaValve - RW-Gate	Gate	4" - 12"	Mar-2010	http://www.teamindustrialservices.com



CITY OF HENDERSON WATER MAIN JOINT RESTRAINT OPTIONS

Ductile Iron pipe and PVC are the only pipe materials approved within the City for any joint restraint system.
Gasket-type joint restraint systems are approved for straight runs of ductile iron pipe only,
and are not to be used at any fitting or valve joint.

EBAA Iron	MEGALUG 1100	Mechanical	4" - 16"		http://www.ebaa.com
EBAA Iron	2000PV (PVC)	Mechanical	4" - 12"	Mar-2010	http://www.ebaa.com
EBAA Iron	1600 (PVC)	Mechanical	4" - 12"	Mar-2010	http://www.ebaa.com
EBAA Iron	2800 (PVC)	Mechanical	14"	Mar-2010	http://www.ebaa.com
Ford Meter Box	Uni-Flange 1400	Mechanical	4" - 16"		http://www.fordmeterbox.com
Romac	RomaGrip	Mechanical	4" - 16"	Sep-2007	http://www.romacindustries.com
Star Pipe	Star Grip 3000	Mechanical	4" - 16"		http://www.starpipeproducts.com
Sigma	One-Lok	Mechanical	4" - 16"	Sep-2007	http://www.sigmaco.com
American	Fast-Grip	Gasket	4" - 16"		http://www.acipco.com
American	Flex-Ring	Gasket	4" - 16"		http://www.acipco.com
Pacific States	Thrust-Lock	Gasket	4" - 12"		http://www.pscipco.com
Pacific States	MJ TJ	Gasket	16"		http://www.pscipco.com
U.S. Pipe	Field-Lok 350	Gasket	4" - 16"		http://www.uspipe.com
U.S. Pipe	TR Flex	Gasket	4" - 16"		http://www.uspipe.com
U.S. Pipe	TR Flex	Gasket	4" - 16"		http://www.uspipe.com
McWane Pipe	Sure Stop 350	Gasket	3" - 16"	Dec-2008	http://www.mcwanepipe.com/



**CITY OF HENDERSON APPROVED MATERIALS LIST
WATER MAIN PIPE OPTIONS**

No thrust blocks shall be used on pipe above 12 inches in diameter.
Where required, an approved mechanical joint restraint must be used on all pipe larger than 12 inches.
Any pipe used on the discharge side of a fire pump must be minimum pressure class 200.
All ductile iron pipe shall be poly wrapped in a minimum of two wraps of 8 mils each for a total of 16 mils.
Ductile iron pipe will usually have a pressure class rating or a thickness class rating.

APPLICATION

Manufacturer	Model Number	Type	Pressure Class	Thickness Class	Size	Dimension Ratio	Approval Date	Manufacturer Web Link
Diamond Pipe Co	C 900	PVC	150		4" - 12"	DR 18	Apr-1995	http://www.dpcpipe.com
Vinyltech	C 900	PVC	150		4" - 12"	DR 18	Apr-1995	http://www.vtpipe.com
North American Pipe Corp.	C 900	PVC	150		4" - 12"	DR 18	Oct-1995	http://www.northamericanpipe.com/
Diamond Pipe Co	C 900	PVC	200		4" - 12"	DR 14	Apr-1995	http://www.dpcpipe.com
Vinyltech	C 900	PVC	200		4" - 12"	DR 14	Apr-1995	http://www.vtpipe.com
North American Pipe Corp.	C 900	PVC	200		4" - 12"	DR 14	Oct-1995	http://www.northamericanpipe.com/
American	Mechanical Joint Pipe	Ductile	350	Minimum 50	4" - 12"		Apr-1995	http://www.acipco.com
American	Fastite	Ductile	350	Minimum 50	4" - 12"		Apr-1995	http://www.acipco.com
Pacific States	Tyton Joint	Ductile	350	Minimum 50	4" - 12"		Apr-1995	http://www.pscipco.com
Pacific States	Mechanical Joint Pipe	Ductile	350	Minimum 50	4" - 12"		Apr-1995	http://www.pscipco.com
U.S. Pipe	Tyton Joint	Ductile	350	Minimum 50	4" - 12"		Apr-1995	http://www.uspipe.com
American	Mechanical Joint Pipe	Ductile	250	Minimum 50	16"		Apr-1995	http://www.acipco.com
American	Fastite	Ductile	250	Minimum 50	16"		Apr-1995	http://www.acipco.com
Pacific States	Tyton Joint	Ductile	250	Minimum 50	16"		Apr-1995	http://www.pscipco.com
Pacific States	Mechanical Joint Pipe	Ductile	250	Minimum 50	16"		Apr-1995	http://www.pscipco.com
U.S. Pipe	Tyton Joint	Ductile	250	Minimum 50	16"		Apr-1995	http://www.uspipe.com



**CITY OF HENDERSON APPROVED MATERIALS LIST
WATER MAIN FITTING OPTIONS**

This includes tees, bends, crosses, wyes, reducers, plugs and caps.
All water main fittings are required to be ductile Iron
and have a minimum working pressure rating of 250 psi.

APPLICATION

Manufacturer	Model Number	Size	Application	Approval Date	Manufacturer Web Link
Clow		4" - 16"	Push-On & MJ Fittings		http://www.clowwatersystems.com
Sigma		4" - 16"	Push-On & MJ Fittings		http://www.sigmaco.com
Star Pipe		4" - 16"	Push-On & MJ Fittings		http://www.starpipeproducts.com
Tyler/Union		4" - 16"	Push-On & MJ Fittings		http://www.tylerpipe.com
U. S. Pipe		4" - 16"	Push-On & MJ Fittings		http://www.uspipe.com



CITY OF HENDERSON WATER MAIN COUPLING OPTIONS

Dresser	38	4" - 12"			http://www.dressercouplings.com
Ford	FC1	4" - 12"			http://www.fordmeterbox.com
PowerSeal	3506	4" - 16"			http://www.powerseal.com
Romac	501	4" - 16"			http://www.romacindustries.com
Romac	XR501	4" - 12"			http://www.romacindustries.com
Smith-Blair	411	4" - 10"			http://www.smith-blair.com
Smith-Blair	441	4" - 16"			http://www.smith-blair.com
U. S. Pipe	210	4" - 12"			http://www.uspipe.com



**CITY OF HENDERSON APPROVED MATERIALS LIST
VALVE BOX & LID OPTIONS**

The minimum valve can lid weight is 14 pounds for a 4" skirt and 16 pounds for a 2" skirt.
The minimum valve can lid weight for a Right-of-Way larger than 60 feet is 22 pounds.

APPLICATION								
Manufacturer	Item	Model Number	Approved For All Applications	Approved For 60' Right-of-Way And Smaller	Lid Skirt Length	Lid Weight	Approval Date	Manufacturer Web Link
Bingham & Taylor	Valve Box Lid		•	•	4"	25 lbs	Oct-2006	http://www.binghamandtaylor.com
East Jordan Iron Works	Valve Box Lid	6800045	•	•	4"	23 lbs	Oct-2006	http://www.ejiw.com
East Jordan Iron Works	Valve Box Lid	6800007		•	2"	17 lbs	Oct-2006	http://www.ejiw.com
NEENAH	Valve Box Lid	1913		•	4"	14 lbs	Oct-2006	http://www.nfco.com
D&L	Valve Box Lid	M-8045		•	4"	14 lbs	Oct-2006	http://www.dfoundry.us
Sigma	Valve Box Lid	VB 2600WLV-35		•	4"	15 lbs	Oct-2006	http://www.sigmaco.com
Star	Valve Box Lid	VBLIDL V		•	4"	16.5 lbs	Oct-2006	http://www.starpipeproducts.com
Bingham & Taylor	Valve Boxes		•				Oct-2006	http://www.binghamandtaylor.com
East Jordan Iron Works	Valve Boxes	562-A	•				Oct-2006	http://www.ejiw.com
Tyler	Valve Boxes	6855	•				Oct-2006	http://www.tylerpipe.com
D&L	Valve Box - Upper	M-8058	•				Oct-2006	http://www.dfoundry.us
D&L	Valve Box - Lower	M-8064	•				Oct-2006	http://www.dfoundry.us
Sigma	Valve Boxes	564-A	•					http://www.sigmaco.com
Star	Valve Boxes	564-A	•				Oct-2006	http://www.starpipeproducts.com



**CITY OF HENDERSON APPROVED MATERIALS LIST
BACKFLOW ASSEMBLY OPTIONS**

Any backflow assembly listed on the most current Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California (USC) list of approved backflow assemblies is acceptable for use within the City of Henderson.
All backflow assembly valves 3" and larger are required to be an Outside Stem & Yoke (OS&Y) configuration.
All City of Henderson backflow assemblies installed are privately owned and maintained.
Review the most current UDACS Table E and NAC 445A.67185 - 445A.6724 for requirements of each application.



CITY OF HENDERSON BACKFLOW ENCLOSURE OPTIONS

All enclosures are required to have ASSE 1060 Class II certification.
(freeze retardant enclosures with insulation)
All enclosures are required to have a manufacturer label showing manufacturer name and model number.

APPLICATION

Manufacturer	Model Number	APPLICATION			
		Type	Size	Approval Date	Manufacturer Web Link
HydroCowl				Oct-2006	http://safe-t-cover.com
Jandec Marketing				Aug-2002	
Hot Box				May-2004	http://www.hot-box.com
G&C				Oct-2006	http://www.gcenclosures.com
Safe-T-Cover				Oct-2006	http://safe-t-cover.com



**CITY OF HENDERSON APPROVED MATERIALS LIST
WATER SERVICE TUBING OPTIONS**

UDACS plates 1, 3 and 5 are the only water service configurations used within the City.

Manufacturer	Model Number	Type	Size	Approval Date	UDACS Plate	Manufacturer Web Link
Halstead		Type K Copper	1" - 2"	Apr-1995	1, 3 or 5	http://www.muellerindustries.com/
Cambridge-Lee		Type K Copper	1" - 2"	Apr-1995	1, 3 or 5	http://www.camlee.com
Cerro		Type K Copper	1" - 2"	Apr-1995	1, 3 or 5	http://www.cerroflow.com
Mueller	Streamline	Type K Copper	1" - 2"	Apr-1995	1, 3 or 5	http://www.muellercompany.com
Freedom-Flo	SDR 9, 200 PSI	Polyethylene	1" - 2"	Apr-1995	1, 3 or 5	http://www.pep-plastic.com
Phillips Drisco Pipe	SDR 9, 200 PSI	Polyethylene	1" - 2"	Apr-1995	1, 3 or 5	http://www.performancepipe.com/bl/performancepipe/en-us/Pages/default.aspx
Westflex Gold Label	SDR 9, 200 PSI	Polyethylene	1" - 2"	Apr-1995	1, 3 or 5	http://www.westflex.com/



CITY OF HENDERSON WATER SERVICE BRASS OPTIONS

UDACS plates 1, 3 and 5 are the only water service configurations used within the City.

A.Y. McDonald				Jan-2001		http://www.aymcdonald.com
Cambridge				May-2004	1, 3 or 5	http://www.cambridgebrass.com
Ford Meter Box				Apr-1995	1, 3 or 5	http://www.fordmeterbox.com
James Jones				Apr-1995	1, 3 or 5	http://www.jamesjones.com
Mueller				Apr-1995		http://www.muellercompany.com

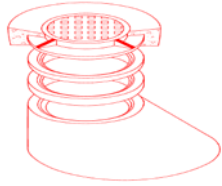


**CITY OF HENDERSON APPROVED MATERIALS LIST
SEWER MAIN PIPE OPTIONS**

Any sewer main not meeting minimum cover required by the standards shall be either C 900 PVC or Epoxy lined Ductile, as required by the City.
Any ductile iron pipe used for a sewer application is required to have a manufacturer-applied epoxy lining.
Any sewer main deeper than 20 feet shall be a minimum C-900 pipe.
All ductile iron pipe shall be poly wrapped in a minimum of two wraps of 8 mils each for a total of 16 mils.

APPLICATION

Manufacturer	Model Number	Type	Pressure Class	Size	Dimension Ratio	Approval Date	Manufacturer Web Link
Diamond Pipe Co	SDR 35	PVC		4" - 15"		Apr-1995	http://www.dpcpipe.com
Vinyltech	SDR 35	PVC		4" - 15"		Apr-1995	http://www.vtpipe.com
North American Pipe Corp.	SDR 35	PVC		4" - 12"		Oct-2008	http://www.northamericanpipe.com/
Diamond Pipe Co	C 900	PVC	150	4" - 12"	DR 18	Apr-1995	http://www.dpcpipe.com
Vinyltech	C 900	PVC	150	4" - 12"	DR 18	Apr-1995	http://www.vtpipe.com
GPK Products, Inc	Fittings	PVC			SDR-35	Dec-2009	http://www.gpk-fargo.com/
Any ductile iron pipe used for a sewer application is required to be epoxy lined.							
American	Mechanical Joint Pipe	Ductile	350	4" - 12"		Apr-1995	http://www.acipco.com
American	Fastite	Ductile	350	4" - 12"		Apr-1995	http://www.acipco.com
Pacific States	Tyton Joint	Ductile	350	4" - 12"		Apr-1995	http://www.pscipco.com
Pacific States	Mechanical Joint Pipe	Ductile	350	4" - 12"		Apr-1995	http://www.pscipco.com
U.S. Pipe	Tyton Joint	Ductile	350	4" - 12"		Apr-1995	http://www.uspipe.com
Griffin Pipe Products	Mechanical Joint Pipe	Ductile	350	4" - 12"		Oct-2008	http://www.griffinpipe.com/
The two epoxy products approved for ductile sewer pipe lining are: PROTECTO 401 and SP-2000M							

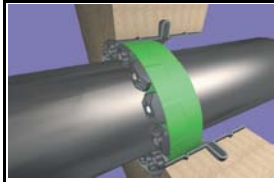


**CITY OF HENDERSON APPROVED MATERIALS LIST
SANITARY SEWER MANHOLE OPTIONS**

The standard manhole lid configuration is a 30" rough opening with a frame and a 24" lid.
All sanitary sewer lids shall have CITY OF HENDERSON SANITARY SEWER cast into the lid.
All manhole frame openings shall be a minimum 21" clear.
All manhole lid and frame components shall have a minimum H-20 load rating.
Steps within manholes are no longer required or authorized.

APPLICATION

Manufacturer	Item	Model Number	Size		Lid Weight	Approval Date	Manufacturer Web Link
			Size	Size			
Geneva Pipe	Precast Manhole Components		48"	60"		Apr-1995	http://www.geneva-pipe.com
Jensen Precast	Precast Manhole Components		48"	60"		Apr-1995	http://www.jensenprecast.com
Olson Precast	Precast Manhole Components		48"	60"		Apr-1995	http://www.olsonprecastcompany.com
Rockway Precast	Precast Manhole Components		48"	60"		Apr-1995	http://www.rockwayprecast.com
Alhambra Foundry	Manhole Frame & Cover	A-1310	24"		170 lbs	Apr-1995	http://www.alhambrafoundry.com
D&L Foundry	Manhole Frame & Cover	1180	24"		142 lbs	Apr-1995	http://www.dlfoundry.us
D&L Foundry	Cover within a Cover & Frame	A-1425	24" within a 36"			Apr-1995	http://www.dlfoundry.us
East Jordan Iron Works	Manhole Frame & Cover		24"		190 lbs	Oct-2006	http://www.ejiw.com
East Jordan Iron Works	Cover within a Cover & Frame		24" within a 36"		180/195 lbs	Oct-2006	http://www.ejiw.com
South Bay Foundry	Manhole Frame & Cover	SBF-1310	24"		155 lbs	Apr-1995	http://www.southbayfoundry.com/
South Bay Foundry	Cover within a Cover & Frame	SBF-1325	24" within a 36"		155/320 lbs	Apr-1995	http://www.southbayfoundry.com/
	MANHOLE LINING SYSTEMS						
	All lining systems shall be applied by a manufacturer certified contractor according to the manufacturer's recommendations. All lining systems require a copy of the certified spark test be supplied to the City of Henderson inspector.						
Raven Lining System						Oct-2006	http://www.ravenlining.com
Sauereisen Lining system						Oct-2006	http://www.sauereisen.com
Poly-Triplex Lining System						Oct-2006	http://www.poly-triplex.com
CORGUARD Epoxy Lining System						Dec-2008	http://www.corquard.net/index-2.html



**CITY OF HENDERSON APPROVED MATERIALS LIST
SEWER MANHOLE & PIPE ACCESSORY OPTIONS**

All bolt assemblies and clamps shall be stainless steel.
All pipe penetrations, 15 inches and smaller into an existing manhole, shall be core drilled.

APPLICATION				
Manufacturer	Description	Comments	Approval Date	Manufacturer Web Link
Fowler	Inserta Tee products		Apr-1995	http://www.hdfowler.com/waterworks.aspx
KOR-N-SEAL I	Pipe to manhole connectors		Apr-1995	http://www.trelleborg.com/en/Pipe-Seals-Milford/
Link-Seal	Modular Seal		Oct-2006	http://www.linkseal.com/
Multi Fittings	Pipe Fittings		Oct-2006	http://www.multifittings.com/Content/General/Home.aspx
Newby Rubber	Manhole Stop Rings	Used with cast-in-place manholes only	Oct-2006	http://www.newbyrubber.com/
Plastic Trends	Pipe Fittings		Oct-2006	http://www.plasticrends.com/
Press-Seal	Press-Boot pipe to manhole connector with glass reinforced nylon expansion ring.		Apr-1995	http://www.press-seal.com/
Press-Seal	PSX Positive Seal pipe to manhole connector		Apr-1995	http://www.press-seal.com/
Romac Industries	style "CB" sewer saddle		Apr-1995	http://www.romacindustries.com/



**CITY OF HENDERSON APPROVED MATERIALS LIST
MISCELLANEOUS ITEMS**

APPLICATION

Manufacturer	Model Number	Description	Size	Comments	Approval Date	Manufacturer Web Link
A.Y. McDonald	6109BQ	Blow-Off/Flushing Valve	2"	UDACS Plate 36	Oct-2006	http://www.aymcdonald.com
Jones	J1998	Blow-Off/Flushing Valve	2"	UDACS Plate 36	Oct-2006	http://www.jamesjones.com/
Kupferly Foundry	TF550	Blow-Off/Flushing Valve	2"	UDACS Plate 36	Oct-2006	http://www.hydrants.com/
Val-Matic	201C.2	Combination Air Valve	1"	Fusion bonded epoxy coated with all stainless steel internal parts	Oct-2006	http://www.valmatic.com
Val-Matic	202C.2	Combination Air Valve	2"	Fusion bonded epoxy coated with all stainless steel internal parts	Oct-2006	http://www.valmatic.com
Val-Matic	203C.2	Combination Air Valve	3"	Fusion bonded epoxy coated with all stainless steel internal parts	Oct-2006	http://www.pep-plastic.com
Val-Matic	204C.2	Combination Air Valve	4"	Fusion bonded epoxy coated with all stainless steel internal parts	Oct-2006	http://www.valmatic.com
APCO/Willamette	143C	Combination Air Valve	1"	Fusion bonded epoxy coated with all stainless steel internal parts	Oct-2006	http://www.apcovalves.com
APCO/Willamette	145C	Combination Air Valve	2"	Fusion bonded epoxy coated with all stainless steel internal parts	Oct-2006	http://www.apcovalves.com
APCO/Willamette	147C	Combination Air Valve	3"	Fusion bonded epoxy coated with all stainless steel internal parts	Oct-2006	http://www.apcovalves.com
APCO/Willamette	149C	Combination Air Valve	4"	Fusion bonded epoxy coated with all stainless steel internal parts	Oct-2006	http://www.apcovalves.com
A.R.I.	D-040	Combination Air Valve	1" & 2"		Jun-2007	http://www.airvalves.com/
Vent-O-Mat	2521 RBX Series	Combination Air Valve	1" & 2"	Stainless steel only	Sep-2007	http://www.ventomat.com
Vent-O-Mat	1631 RBX Series	Combination Air Valve	3" & 4"	Fusion bonded epoxy coated	Sep-2007	http://www.ventomat.com
Steel fabricated	Steel fabricated	Air Valve Enclosure		Per UDACS Plate 38		http://fabricatedsteel.net/
Hot Box	Vent Guard	Air Valve Enclosure			Oct-2006	http://www.hot-box.com
Pipeline Products	1424 & 1830	Air Valve Enclosure		Neutral earth tone colors only	Sep-2007	http://pipelineproducts.com/main/
Presto Products		Geoblock		Used with an alternative pavement system for sewer and water main access.	Oct-2006	http://www.prestoproducts.com