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# Council Policy

## Subdivision, Development & Servicing – Approved Products List

APPROVED July 29, 2002

RESOLUTION: R874/18/09/17

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DATE OF LAST REVIEW: September 2018

This policy specifies the Approved Products to be used in the construction of Works and Services in the City of Kelowna. This list will be expanded and amended from time to time.

The purpose of the Policy is to:

- (a) Standardize the products used across the City;
- (b) To limit the number of certain products that can be used within the City, to ensure that staff is trained to maintain those items, and to limit the inventory necessary for maintenance;
- (c) To make it easier for contractors & suppliers to select products for use and minimize errors.

See Subdivision, Development & Servicing Bylaw 7900 Schedules 4 & 5 and Standard Detail Drawings for detailed information on design and construction requirements. For Development Projects, any requests for project specific variances shall be made to the **City Engineer (Development Engineering Manager)** who will determine if the request warrants review by the respective Civic Operations Manager responsible for those products.

Manufacturers or Suppliers that would like products considered for inclusion need to submit their request in writing or by email to the **Civic Operations Engineering Technical Support Coordinator** along with all supporting technical information. The Coordinator will determine if the request warrants review by the respective Civic Operations Manager responsible for those products.

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## A. WATERWORKS DIVISION

### Note:

- Products must conform to CSA Standard, where applicable.
- All bolts to be stainless steel or high-strength low-alloy steel bolts. All bolts & unprotected metallic fittings to be protected with petrolatum primer and tape. Chipped or damaged epoxy coated fittings must be repaired as per manufactured specifications.

### 1. Watermain and Service Pipe

Manufacturer	Make/Model	Size Range	Comments/Conditions
<b>Main Line Pipe</b>			
IPEX, Royal	PVC DR 18, PR235 AWWA C900	100 to 900mm	
IPEX, Royal	PVC DR 25, PR165 AWWA C900	350 to 1500mm	Only if approved by the City Engineer.  Not to be used for pump mains or where there might be frequent transient pressure fluctuations, or where potential pressure zone changes could occur.
Canada Pipe, US Pipe	Ductile C151	400mm and up	Only if approved by City Engineer.  Soil conditions must be investigated to determine need for cathodic protection. Must be installed with Polyethylene encasement per manufacturer regardless of soil conditions. (See Bylaw 7900 Water Design section)  Pipe to be cement mortar lined to AWWA C-104.
<b>Service Pipe</b>			
Great Lakes Copper	Type K Copper	min. 19mm (3/4") max. 50mm (2")	Must conform to CSA HC.7.6 & ASTM B88
IPEX	Polyethylene*	min. 25mm (1") max. 50mm (2")	Only Series 160 or 200 conforming to CAN/CSA-B137.1-M
Rehau	MUNICIPEX*	min. 25mm (1") max. 50mm (2")	

\*Note: Due to its thicker wall, all plastic pipe's ID are smaller than copper; confirm flow capacity. Add trace wire for plastic service pipe.

## 2. Fittings & Appurtenances

Manufacturer	Material	Comments/Conditions
<b>Anti-Corrosion Petrolatum Products</b>		
Petro Coating Systems Ltd.	Paste & primer, Mastic, Tape	See City of Kelowna Standard Drawings.
Denso North America	Denso Paste, LT tape	

Manufacturer	Make/Model	Main Size Range	Comments/Conditions
<b>Fittings</b>			
TC / ACS Sigma Corporation	Iron	100 – 600 mm	C-153 Fittings only
IPEX, Galaxy Plastics Ltd, Pro-Line Fittings, Royal	PVC 5 degree CIOD bend	All Sizes	C900 / 905 / 907. PRESURE CLASS TO MEET OR EXCEED MAINLINE.
<b>Restraining Joints (not to be used on AC or CI Watermain)</b>			
Ford Meter Box Co. / Uni-Flange	UFR1300C UFR1350C UFR1390C UFR1309-C UFR1400	100 – 1050 mm 100 – 600 mm 100 – 1050 mm 100 – 600 mm 100 – 1050 mm	
Smith Blair	115 165 136 (PVC Fittings)	100 – 600 mm 100 – 600 mm 100 – 200 mm	
Sigma	PV – LOC Series  Zip Flange	100 – 600 mm 100 – 600 mm	PV-LOC is directional only for PVC. Install according to manufacturers instructions.  Zip Flange is a flange adaptor for DI pipe.
EBAA Iron	Series 1500 PVC Series 2800 Series 1900 Series 2946	100 – 300 mm 350 – 600 mm 100 – 300 mm 400mm	Series 1500 is only for C900 (i.e., 100-300mm)
<b>Service Saddles (19 – 50mm)</b>			
Robar	2616	50 – 300 mm	Dbl-bolt
	2626	100 – 450 mm	Dbl-bolt
	2706	100 – 600 mm	Dbl-strap with stainless steel straps
Canada Pipe	SC-2	100 – 400 mm	With stainless steel straps
Ford			
	FS313	100 – 300mm	
	202 BS	100 – 762 mm	With stainless steel straps
Cambridge Brass	812	100 – 300 mm	Two-piece – 4 bolts
	8403	100 – 300 mm	Single piece – 2 bolts
	8407	300mm & larger	Two-piece – 4 bolts
<b>Service Tapping Saddles (100mm &amp; larger)</b>			
Robar, Smith-Blair, JCM	All	100mm & larger	Manufactured steel for metal pipe only.
Robar, Smith-Blair, JCM	All	100mm & larger	Stainless steel for all pipe types.

**Fittings & Appurtenances cont'd**

Manufacturer	Make/Model	Main Size Range	Comments/Conditions
<b>Couplings (All couplings to be Fusion Bonded Epoxy Coated Ductile Iron)</b>			
Ford	FC1-ESH FCA-ESH	100 – 300 mm 100 – 600 mm	
	FC2W Ultra Flex	100 – 300 mm	
Robar	1506 & 1506R	100 – 600 mm	
	1596 Vantage	100 – 300 mm	
	1696 2-bolt stainless	100 – 200 mm	
Smith Blair	441	100 – 400 mm	
	421	100 – 300 mm	
Romac	XR 501 Extended Range	100 – 300 mm	All Romac to be epoxy coated
IPEX, Royal, Galaxy Plastics Ltd, Pro-Line Fittings	PVC Repair & High Deflection Couplings	All sizes	C900 / 905 / 907. Pressure class To meet or exceed mainline.
<b>Service Boxes</b>			
Meuller	A-726	20 – 25 mm	c/w Stainless Steel Rods & SS-RHD or MD-RHD Clevis Ends.
	A-728	37 – 50 mm	Nelson Valve Box with Water Lid. Riser pipe to be notched out an mounted over service and supported by precast concrete patio block. Or as required by ID.
Trojan Industries	VSB1	20 – 25 mm	c/w Stainless Steel Rods & SS-RHD or MD-RHD Clevis Ends.
	VSB2	37 – 50 mm	Nelson Valve Box with Water Lid. Riser pipe to be notched out an mounted over service and supported by precast concrete patio block. Or as required by ID.
<b>Main Valve Boxes</b>			
TC / ACS	MR-6	Minimum 375mm	Nelson Type Lid
Dobney Foundry Armtec	MR-6		Nelson Type Lid

**3. Valves**

Manufacturer	Make/Model	Main Size Range	Comments/Conditions
<b>Gate Valves – Resilient Wedge</b>			
Mueller	A-2362	50 – 100 mm	250 PSI
Mueller	A-2361	100 - 1370 mm	250 PSI – DI
TC / ACS	3100 PO x PO 3200 PO x FL 3300 MJ x MJ 3400 MJ x FL 3500 FL x FL 3700 Thrd x Thrd	100 – 300mm 100 – 300mm 100 – 300mm 100 – 300mm 50mm – 300mm 50mm – 75mm	250 PSI – DI
<b>Butterfly Valves</b>			
All design recommendations to be approved by the City Engineer. Installation requires placement within chamber for access and maintenance.			

<b>Air Valves</b>			
Vent-O-Mat	RBX		

#### 4. Hydrants and Hydrant Paint

Manufacturer	Make/Model	Size Range	Comments/Conditions	
<b>Hydrants</b>				
Terminal City	C-71-P		TCH1A only c/w Storz Fitting	
Canada Valve	Mueller-Century		c/w Storz Fitting	
Identity #	Product Description	Product #	Colour	Formula per 3.78L
<b>Hydrant Paint</b> DULUX PAINTS (High gloss, lead free enamel. Self-priming with rust inhibitor)				
P-1	METALCLAD	218419	RED	STOCK COLOUR
P-2	METALCLAD	218412	BLUE	STOCK COLOUR
P-3	METALCLAD	218413	YELLOW	FFR1Y32
P-4	METALCLAD	218414	GREEN	STOCK COLOUR
P-5	METALCLAD	218427	ORANGE	STOCK COLOUR
P-6	METALCLAD	218420	BLACK	STOCK COLOUR

#### 5. Brass Service Fittings (No Lead Brass)

Manufacturer	Make/Model	Size Range	Comments/Conditions	
<b>Corporation Stops</b>				
Mueller	B-25008	20 – 50 mm	Full port only	
A.Y. McDonald	74701BQ	20 – 50 mm	Full port only	
Ford	FB 1000	20 – 50 mm	Full port only	
Cambridge Brass	Series 301	20 – 50 mm	Full port c/w new mueller gasket	
<b>Curb Stops (Stop &amp; Drains NOT permitted)</b>				
Mueller	B-25209	20 – 50 mm	Full port only	
A.Y. McDonald	76100Q	20 – 50 mm	Full port only	
Ford	B44 Series	20 – 50 mm	Only full port models 333, 444, 555, 666 & 777	
Cambridge Brass	Series 202	20 – 50 mm		
<b>Service Line Couplers</b>				
Ford	C44 Series	20 – 50 mm	Models C44-1 to C44-88	
Mueller	H-15403	20 – 50 mm	H15403, H15404 & H12940	
Cambridge Brass	Series 118 & 119	20 – 50 mm		

#### 6. Kiosks

Manufacturer	Make/Model	Size	Comments/Conditions	
<b>PRV STATIONS</b>				
Valid Manufacturing	KXXA89-150-47-01	89"Hx150"Wx47D	Quad Door Kiosk with end Cabinet	
<b>AIR VALVES</b>				
Manufacturer	Make/Model	Size Range	Comments/Conditions	
Valid Manufacturing	HRV344227-170165	25-100mm	Insulated heated enclosure where above ground air valves are utilized.	

## B. SANITARY SEWER AND STORM DRAINAGE WORKS

### Note:

- All Concrete used in construction shall be sulphate resistant cement Type HS (Type 50) or alternate cement type may be approved by the City Engineer. All manhole cast iron, steel or ductile iron components shall be coated with an asphalt varnish.

### 1. Sanitary Sewer and Storm Drainage Pipes

Manufacturer	Model / Type	Size Range	Comments / Restrictions
<b>Pipes</b>			
IPEX "Ring-Tite" Royal "Flex-Lox"	PVC DR35	For 200mm diameter and up.	Must meet CSA B182.2 Gasket joint.
IPEX "Ring-Tite" Rehau "BondLoc" Royal "Flex-Lox"	PVC DR28	100 – 150mm (All Makes)	Must meet CSA B182.2 Gasket joint
IPEX "Ultra Rib" Royal "Kor Flo"	Ribbed PVC (storm only)	200 – 600mm	Must meet CSA B182.4 Concentric ribbed pipe only is accepted. (storm only). No spiral ribbed pipe.
(as above)	Perforated PVC (storm only)	200 – 600mm	With perforations as per Standard Drawing SS-S53 (storm only)
IPEX "Blue Brute" Royal "FlexLox"	Pressure Pipe for Sewer Forcemains	100 – 300mm 350 – 900mm	Colour to be White with "SEWER FORCEMAIN" Printed on it. Must meet CSA B137.3, C900, Class 235 (DR 18), gasket joint.
Langley Ocean Pipe A.E. Concrete Armtec	Reinforced Concrete	300 – 3000mm	Concrete pipe must meet CSA A257 Series-14, C 789M-95a specification for Precast Reinforced Concrete Pipe. Sulphate resistant ASTM E 632.
<b>Culverts</b>			
Langley Concrete Ocean A.E. Concrete Armtec Atlantic Industries	Non-reinforced Concrete Reinforced Concrete Reinforced Concrete Arch Reinforced Concrete Box Corrugated Steel Multi-Plate BOSS 2000 HDPE Ribbed	See manufacturer spec's	Concrete pipe must meet CSA A257 Series-14. Soils testing required for suitability when specifying metal pipe. C 789M-95a Specification for Precast Reinforced Concrete Box Sections for Culverts, Storm Drains, and Sewers. C 850M-95b Specification for Precast reinforced concrete Box Sections for culverts, Storm Drains and Sewers with less than 0.6 m of cover subjected to Highway Loadings. <b>Note: Corrugated steel pipe (CSP) limited to driveway and road crossings only. Not to be used contiguous with collection pipe networks.</b>
<b>Headwall Inlet</b>			
Kon Kast	Inlet structure with grillage Model 1487		Grills required for 450mm and larger pipes longer than 30m.
<b>Headwall</b>			
Langley Concrete, Ocean Pipe, Tri-Kon, AE Concrete	Pre-cast concrete headwalls		Grills required for 450mm and larger and pipes longer than 30m

## 2. Fittings and Appurtenances

Manufacturer	Model / Type	Size Range	Comments / Restrictions
<b>Couplings</b>			
IPEX Royal Galaxy Plastics Ltd. Mission Rubber (Flex-Seal)	PVC Gasketed  Corebell Adaptor Shielded Transitional PVC 100 to 675mm	100 – 675mm 100 – 675mm 100 & up	Must not be plasticized PVC. Shear band and clamps to be 316 Series stainless steel. Clamps must be nut & bolt design. Bushings to be integral.
<b>Inserted Service Connections</b>			
Galaxy Plastics Ltd. Inserta Fittings Co. Royal	EZ Tee Inserta Tee Fat Boy, PVC gasket type	100mm	May be used on existing mains 200mm & larger or on new mains 375mm & larger
“	“	150mm	Refer to STD DWG SS-50 for Manhole requirement. May be used on existing mains 300mm & larger or new mains 375mm & larger
“	“	200mm	Manhole required on services 200mm and up. Special Approval required for existing mains 300mm & larger or new mains 375mm & larger
<b>Inspection Chambers</b>			
Royal Galaxy Plastics	Sewer Gasketed Fittings	100 – 200mm	Single service IC's only. With provision for “add-a-flap” check valve (PICF04*SS).
<b>Inspection Chamber Caps &amp; Lids</b>			
Royal Galaxy Plastics	191-LL (Red/Green)	200mm	PVC. Must be locking type. Red in colour for sanitary sewer Green in colour for storm drainage
<b>Service Boxes</b>			
Langley Concrete Kon Kast	WM-37-1 No. 1480	590 x 410mm 545 x 370mm	Brooks style box. State “Sanitary” or “Storm” on cover.
<b>45 Degree Wye</b>			
Royal IPEX Galaxy Plastics Ltd.	Services	All	PVC gasket type. No wye saddles allowed.
<b>Bends</b>			
Royal Galaxy Plastics Ltd.	Service sweep Fittings	All	Long radius sweeps only. PVC Gasketed. PVC Gasketed Sewer Fittings
<b>Catch Basin Rollover Frame and Grate</b>			
Westview Dobney Foundry Ltd. Terminal City Ironworks Trojan Industries	RB7 frame & grate B-39M – modified grate T-K7	632mm (~25in)	Specified by design engineer where location of driveway letdowns are unknown.
<b>Catch Basin Combined Side &amp; Gutter Inlet</b>			
Westview Sales Ltd. TC/ACS Dobney & Trojan	TR-39B – 3-piece storm with side inlet	627mm (~25in)	To be used with standard barrier curb or as specified by design engineer.
<b>Gaskets</b>			
IPEX Rehau Royal	“Ring-tite” PVC “BondLoc” PVC “Flex-Lox” PVC	200 – 1200mm	



### 3. Manholes and Drywells

Manufacturer	Model / Type	Size Range	Comments / Restrictions
<b>Manhole Frame &amp; Cover</b>			
Terminal City Ironworks Dobney Foundry Trojan Industries Westview Sales Armtec/AE Concrete	Adjustable C18 & C44 C44A TR40 C23 C18	762mm (30 in)	Refer to Supplementary Standard Detail Drawings for required lettering on manhole covers. Refer to installation specifications.
<b>Manhole Grade Rings</b>			
Kon Kast Langley Concrete AE Concrete	720 – 723 MH-6 915	50 - 150mm	760mm diameter opening 760mm, 565 Sloped rings
<b>Manhole Barrel Sections</b>			
Kon Kast Langley Concrete	Concrete	1050 – 2400mm	Refer to Standard Detail Drawings
<b>Manhole Rungs</b>			
	Aluminum		Refer to Standard Detail Drawings
<b>Manhole Barrel Lids (donuts)</b>			
Kon Kast Langley Concrete	Concrete	1050 – 2400mm	Refer to Standard Detail Drawings 760mm diameter opening
<b>Manhole Barrel Bases</b>			
Kon Kast Langley Concrete	Concrete	1050 – 2400mm	Refer to Standard Detail Drawings
<b>Flow Control</b>			
Galaxy Plastics Ltd.	Inlet Control Device	100mm & larger	For use in Flow Control Manholes Debris Screens
<b>Internal Drops</b>			
Royal Reliner/Duran	PVC A-4 A-6 B-8 B-10	100 - 200mm 100mm 150mm 200mm 250mm	Refer to Standard Detail Drawings Inside drop bowl.

#### 4. Containment Devices and Oil/Grit Separators

Product/Supplier	Unit Type	Comments
Armtec	Pro-Eco-Lite Headwalls	300mm – 2000mm
Armtec Downstream Defender	Swirl-type oil/water separator <sup>1</sup>	
Armtec Hydro-Brake	Vortex flow control	Alternate to orifice control. Must be engineered and design verified by Armtec.
Contech Construction - CDS Technologies	Swirl-type oil/water separator <sup>1</sup>	
Contech CON/SPAN	Concrete Detention & Infiltration	Large volume underground detention. Open bottom optional for infiltration.
Imbrium Stormceptor – Langley Concrete	Swirl-type oil/water separator <sup>1</sup>	
Infiltrator Water Technologies	Infiltrator systems	Where infiltration is recommended.
PolyDrain - Interceptor A-67	Drain systems	Interceptor trench drains.
Snout – Best Management Products	Enhanced trapping hood system for gravity separation.	Installed in minimum 1050mm manhole barrel to replace standard catch basin. Use of these devices to be limited to intersections and not used as primary outfall treatment device.
Stormtech Chambers	Chamber / Infiltrator	

<sup>1</sup> Units are to be verified by Canadian Environmental Technology Verification Program (Canadian ETV) and have sufficient capacity to meet regulatory requirements for water quality to receiving waters.

## C. PARKS, LANDSCAPING & IRRIGATION

### 1. Irrigation Products

Product	Manufacturer	Make/Model	Comments/Conditions
Controller	Toro	Sentinel V3	Configured to communicate with Sentinel Central Control c/w level 3 surge protection
	Rain Bird	ESP LXMEF	Configured to communicate with Rain Bird IQ Central Control
	Rain Bird	ESP LXD	For decoder systems; configured to communicate with Rain Bird IQ Central Control
Controller Kiosk	Valid Manufacturing	Dwg# KSDA48-36-16-02	48"Hx36"Wx16"D W/MW and lockable handles
Controller Kiosk Base	Leko Precast Ltd.	Per Detail Drawing	
Backflow Prevention Assembly - DCVA	Apollo	4A-100 Series	Up to 2"
	Apollo	4A-100 Series	2 1/2" or greater
	Watts	Series 709w/NRS	2 1/2" or greater
Pressure Regulating Valve	Watts	LF25 AUB-DU-Z3	Up to 2" , lead free, double union
	Watts	Watts PV 10M	Greater than 2"
Hydrometer (1.5")	Netafim	LHM15EM11AAFMEI	ER register preprogrammed. Output: gal/pulse red: 0.1 green: 1.0 Instructions: wire controller to red wire only. Decoder systems require manufacturer's decoder cable. Other systems require PE39 cable
Hydrometer (2")	Netafim	LHM2EM11AAFMEI	
Hydrometer (3")	Netafim	LHM3EM11AAFMEI	
Electrical Control Valve	Hunter	ICV	
	Rain Bird	PEB	
	Toro	P-220	
Low Flow Control Valve	Hunter	ICV	
	Rain Bird	PEB	
	Toro	TPV	

Low Flow Filter	Rain Bird	QKCHK	
	Rain Bird	PRB-QKCHK	
High Flow Filter	Amiad	Amiad 1.5" Super	Installed as per Detail Drawings.
Air Relief Valve	Rain Bird	ARV050	0.5" air relief valve
	Rain Bird	Air/Vacuum Relief Valve Kit	0.75" air relief valve w/ compression tee and flush cap
	Toro	T-YD-500-34	0.5" air relief valve
Isolation Valve	Red & White	206	Up to 2"
	Clow	Resilient Wedge Gate Valve Model C509 w/flanged ends	3"
	Clow	Resilient Wedge Gate Valve Model C515 w/flanged ends	4" or greater
Quick Coupler Valve	Rain Bird	5-RC	
Sprinklers - Sprayhead	Hunter	PRO-SPRAY PRS30	
	Hunter	PRO-SPRAY PRS40	
	Rain Bird	PRS-SAM Series	
	Toro	PRX-COM Series	
Sprinklers - Rotor	Hunter	PGJ	
	Hunter	I-20	
	Hunter	I-25	
	Hunter	I-40	
	Rain Bird	3500 SAM	
	Rain Bird	5000 PL SAM PRS	
Sprinklers - Rotor	Rain Bird	5500	
	Rain Bird	6504	

	Rain Bird	8005	
	Toro	Mini 8	
	Toro	T5	
	Toro	T7	
Drip Emitter / Bubblers	Hunter series		Installed as per Detail Drawings.
	Rain Bird series		Installed as per Detail Drawings.
	Toro series		Installed as per Detail Drawings.
Sub-surface Dripline	Hunter	PLD	
	Rain Bird	XFS	
	Toro	DL2000 Series	
	Netafim	Techline HCVXR	
Root Zone Watering System	Hunter	RZWS	w/ root watering sock
	Rain Bird	RWS Series	
Valve Box / Extensions	Carson Industries	LLC Specification Grade	Locking lid w/stainless steel bolt and washer
	NDS Manufacturing	Pro Series	
	Rain Bird	VB-SPR (Super Jumbo Valve Box)	for Auto Flush Filter
Meter Vault	Kon Kast	1102	
Meter Vault Lid	Kon Kast	1102B	
Irrigation Vault	Kon Kast	1102	
Irrigation Vault Base	Kon Kast	1102B	
Irrigation Vault Lid	Excel Metal Fab	3974-2	c/w locking hinge for support when open
Irrigation Vault c/w Base	Kon Kast	1132	

Irrigation Vault Lid	Excel Metal Fab	11040-4	3974-2
Vault support jack	Excel Metal Fab	VPSS-1 - with s/s pipe clamp and 1/8 rubber liner	Specify pipe size and adjustment length when ordering
Vault sealant foam	Dow	Great Stuff Pro	to be utilized around vault openings
Wire Splice Box	Carson Industries	LLC Specification Grade	Locking lid w/stainless steel bolt and washer. Grey in color
	NDS Manufacturing	Pro Series	
Wire Splices	3M	DBY	2-step direct bury splice kit
Pipe	PVC	CSA	
	HDPE	UL, ULC, CSA	
	PE	UL, ULC, CSA	
Fittings	PVC	CSA	
	HDPE	UL, ULC, CSA	

## D. STREET LIGHTING

### 1. LED Cobra Luminaires

Style	Description	Man.	Model
Cobra	31W, LED, 4000 Lumens, Type II Wide, 3000K 120V-277V, ANSI C136.41 7 Pin, Gray, IP66, Tool-less Entry, Optional Secondary Enhanced Surge Protection	GE GE	31W_ERL1_0_04_B3_30A_GRAY_ILR 31W_ERL1_0_04_C3_30A_GRAY_ILR
Cobra	39W, LED, 5000 Lumens, Type II Wide, 3000K 120V-277V, ANSI C136.41, 7 Pin, Gray, IP66, Tool-less Entry, Optional Secondary Enhanced Surge Protection	GE GE	39W_ERL1_0_05_B3_30A_GRAY_ILR 39W_ERL1_0_05_C3_30A_GRAY_ILR
Cobra	47W, LED, 6000 Lumens, Type II Wide, 3000K 120V-277V, ANSI C136.41, 7 Pin, Gray, IP66, Tool-less Entry, Optional Secondary Enhanced Surge Protection	GE GE	47W_ERL1_0_06_B3_30A_GRAY_ILR 47W_ERL1_0_06_C3_30A_GRAY_ILR
Cobra	71W, LED, 8000 Lumens, Type II Wide, 3000K 120V-277V, ANSI C136.41, 7 Pin, Gray, IP66, Tool-less Entry, Optional Secondary Enhanced Surge Protection	GE GE	71W_ERL1_0_08_B3_30A_GRAY_ILR 71W_ERL1_0_08_C3_30A_GRAY_ILR
Cobra	82W, LED, 10000 Lumens, Type II Wide, 3000K 120V-277V, ANSI C136.41, 7 Pin, Gray, IP66, Tool-less Entry, Optional Secondary Enhanced Surge Protection	GE GE	82W_ERL1_0_10_B3_30A_GRAY_ILR 82W_ERL1_0_10_C3_30A_GRAY_ILR
Cobra	136W, LED, 15000 Lumens, Type II Wide, 3000K 120V-277V, ANSI C136.41, 7 Pin, Gray, IP66, Tool-less Entry, Optional Secondary Enhanced Surge Protection	GE GE	136W_ERL1_0_15_B3_30A_GRAY_ILR 136W_ERL1_0_15_C3_30A_GRAY_ILR

### 2. LED Decorative Luminaires

Style	Description	Man.	Model
Post Top	Post Top, LED 4000 Lumens, Type II 3000 K 120-277V, Flat glass dimmable, UL/CSA listed, 10 KV/KA surge protection, Gray, 7 pin photoeye receptical, meets ANSI C136.31, UL8750, UL1598, B2-U2-G1	Phillips  Phillips	PDP10050W64LED3KMPPCCLE2 UNIVRCD7MGY  PDP10050W64LED3KMPPCCLE5 UNIVRCD7MGY
Decorative Post Top	WELLINGTON STYLE Luminaire , LED, 4000 Lumens, Type II Wide, 3000K 120V-277V, with Photoeye receptical and side shield	King Luminaire	K123R-B2AR-II-50(SSL)-1042-120: 277-3K-HSS-K14
Decorative Post Top	ACCORN STYLE Luminaire , LED, 4000 Lumens, Type II Wide, 3000K 120V-277V, with Photoeye receptical and side shield	King Luminaire	K425R-T1AR-II-50(SSL)-4004-120: 277-3K-HSS-K14
Decorative Pendant	AURORA SAG STYLE Luminaire , LED, 4000 Lumens, Type II Wide, 3000K 120V-277V, with Photoeye receptical and side shield, c/w Plumbizer	King Luminaire	47W_ERL1_0_06_B3_30A_GRAY_ILR

Decorative Pendant	HARBOUR STYLE Luminaire , LED,4000 Lumens, Type II Wide, 3000K 120V-277V, with Photoeye receptical and side shield, c/w Plumbizer	King Luminaire	47W_ERL1_0_06_C3_30A_GRAY_ILR
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### 3. Photocell

Style	Description	Man.	Model
	LOCKING TYPE 120-277 Volt	INTERMATIC	LED4536SC

### 4. Galvanized Powder Coated Green Poles

Style	Description	Man.	Model
Davit	22x6 Single Davit, C/W 10"-11" BCD, Galv. & Powder Coated Green	Nova Pole, Valmont	122-30-A2206A-F5 10020-07
Davit	30x8 Single Davit, C/W 10"-11" BCD, Galv. & Powder Coated Green	Nova Pole, Valmont	122-30-A3008A-F5 10170-07
Double Davit	Type 2C Double Davit Arm, Type 1 Flange Galv. & Powder Coated Green	Nova Pole, Valmont	102-75-60202C-F5
Double Davit Pole	Type 2 Shaft, 6.5 m, Type 1 Flange, Galv. & Powder Coated Green	Nova Pole, Valmont	
Post Top	6 metre Galv. & Powder Coated Green	Nova Pole, Valmont	
Post Top	7.5 metre Galv. & Powder Coated Green	Nova Pole, Valmont	

### 5. Decorative Powder Coated Black Poles

Style	Description	Man.	Model
Decorative Davit Pole	30 ft (9.1 m), 6 in (150 mm) Dia., Powder Coated Black	Nova Pole, Valmont	NSR630LD
Decorative Davit Arm	Truss 1 , Single Davit Arm 2.5 m, Powder Coated Black	Nova Pole, Valmont	S15-50-SCK-S01
Decorative Post Top	16 ft (4.9 m) Straight Round 4 in (100 mm) Dia., Powder Coated Black	Nova Pole, Valmont	NSR416LD
Decorative Post Top	20 ft (6.1 m) Straight Round 4 in (100 mm) Dia., Powder Coated Black	Nova Pole, Valmont	NSRS420LD
Decorative Arm	Marina, Powder Coated Black	Nova Pole, Valmont	S15-50-COQ-A001

### 6. Decorative Bases

Style	Description	Man.	Model
Decorative Base	Henderson With Transition adapter Powder Coated Black	Nova Pole, Valmont	



**REASON FOR POLICY**

To standardize products used for City infrastructure.

**LEGISLATIVE AUTHORITY**

Local Government Act, Sec. 938 "subdivision servicing requirements"; Subdivision, Development & Servicing Bylaw, Schedule 5, Sec. SO2666, 2.1.2; MMCD Volume III

**PROCEDURE FOR IMPLEMENTATION**

Policy and products referred to in contracts and engineering drawings.