

**DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY
(DC Water)**



**LINEAR CAD MANUAL
APPENDICES**

April 2023

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AUTHORIZATION FORM

Linear Water and Sewer CAD Manual LOG OF REVISIONS		
Revision Number	Date	Brief Description of Revision
1	April 2023	This is a significant rewrite superseding previous CAD manuals for linear water and sewer work.

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Appendix A: Layers

Layer Filters

Many of the DC Water templates contain Layer Filters, which allow a user to limit the layers displayed in the Layer Properties Manager and in the Layer drop-down based on one or more property values. The Layer Filters used by DC Water are described below, broken down by template.

EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt

Name	Criteria	Layers Returned
CS-LAYERS	CS*	All layers in the drawing that begin with "CS" (Civil Site)

EXISTING_UTILITY_TEMPLATE.dwt

Name	Criteria	Layers Returned
VI-COMM	VI-COMM*	All layers in the drawing that begin with "VI-COMM" (Survey Mapping GIS: Communication)
VI-LAYERS	VI*	All layers in the drawing that begin with "VI" (Survey Mapping GIS)
VI-NGAS	VI-NGAS*	All layers in the drawing that begin with "VI-NGAS" (Survey Mapping GIS: Natural Gas)
> QLB	*QLLB	Subset of "VI-NGAS" - All layers in the drawing that begin with "VI-NGAS" (Survey Mapping GIS: Natural Gas) and end in "QLLB"
> QLC	*QLLC	Subset of "VI-NGAS" - All layers in the drawing that begin with "VI-NGAS" (Survey Mapping GIS: Natural Gas) and end in "QLLC"
> QLD	*QLLD	Subset of "VI-NGAS" - All layers in the drawing that begin with "VI-NGAS" (Survey Mapping GIS: Natural Gas) and end in "QLLD"
VI-POWR	VI-POWR*	All layers in the drawing that begin with "VI-POWR" (Survey Mapping GIS: Power)
VI-SSWR	VI-SSWR*	All layers in the drawing that begin with "VI-SSWR" (Survey Mapping GIS: Sewer)
VI-STRM	VI-STRM*	All layers in the drawing that begin with "VI-SSWR" (Survey Mapping GIS: Storm)

SURFACE_RESTORATION_PLAN.dwt

Name	Criteria	Layers Returned
DESIGN LAYERS	CI* CD* 0*	Layer 0 along with any layers in the drawing that begin with "CI" (Civil Improvements) or "CD" (Civil Demolition)
> Surface Restoration	*Q*	Subset of "DESIGN LAYERS" - Any layers in the drawing that begin with "CI" (Civil Improvements) or "CD" (Civil Demolition), but also contain a "Q" in the layer name
DETAILS	CI-*-DETL	All layers in the drawing that begin with "CI" (Civil Improvements) and end with "DETL".

SURVEY_GIS_TEMPLATE.dwt

Name	Criteria	Layers Returned
ALL SURVEY LAYERS	VF*	All layers in the drawing that begin with "VF" (Survey Mapping Field)
BUILDINGS	VF-BLDG*	All layers in the drawing that begin with "VF-BLDG" (Survey Mapping Field: Building)
COMMUNICATIONS	VF-COMM*	All layers in the drawing that begin with "VF-COMM" (Survey Mapping Field: Communications)
ELECTRIC LAYERS	VF-ELEC*	All layers in the drawing that begin with "VF-ELEC" (Survey Mapping Field: Electric)
FIGURE LAYERS	*-FIGR	All layers in the drawing that end with "-FIGR" (Survey Figures)
MOT	(selection)	Only the "VF-TFCT-PSTP-TEXT" layer
POINT NODE LAYERS	VF-NODE*	All layers in the drawing that begin with "VF-NODE" (Survey Mapping Field: Node)
ROADS AND PAVEMENT	VF-ROAD* VF-PVMT*	All layers in the drawing that begin with "VF-PVMT" (Survey Mapping Field: Pavement) or "VF-ROAD" (Survey Mapping Field: Road)
SEWER LAYERS	VF-SSWR*	All layers in the drawing that begin with "VF-SSWR" (Survey Mapping Field: Sewer)
SITE LAYERS	VF-SITE*	All layers in the drawing that begin with "VF-SITE" (Survey Mapping Field: Site)
STORM LAYERS	VF-STRM*	All layers in the drawing that begin with "VF-STRM" (Survey Mapping Field: Storm)
STRIPING	*STRP*	All layers in the drawing that contain "STRP" (Pavement Striping)
TEXT LAYERS	VF-*.TEXT	All layers in the drawing that begin with VF" (Survey Mapping Field) and end with "TEXT".
VEGETATION	VF-VEGE*	All layers in the drawing that begin with "VF-VEGE" (Survey Mapping Field: Vegetation)
VI-LAYERS	VI*	All layers in the drawing that begin with "VI" (Survey Mapping GIS)
WATER LAYERS	VF-WATR*	All layers in the drawing that begin with "VF-WATR" (Survey Mapping Field: Water)

TCP_MOT_TEMPLATE.dwt

Name	Criteria	Layers Returned
PHASE 1	*-1	All layers in the drawing that end with "-1 (Phase number)
PHASE 2	*-2	All layers in the drawing that end with "-2 (Phase number)
PHASE 3	*-3	All layers in the drawing that end with "-3 (Phase number)
PHASE 4	*-4	All layers in the drawing that end with "-4 (Phase number)
PHASE 5	*-5	All layers in the drawing that end with "-5 (Phase number)
PHASE 6	*-6	All layers in the drawing that end with "-6 (Phase number)
PHASE 7	*-7	All layers in the drawing that end with "-7 (Phase number)
PHASE 8	*-8	All layers in the drawing that end with "-8 (Phase number)
PHASE 9	*-9	All layers in the drawing that end with "-9 (Phase number)
PHASE 10	*-10	All layers in the drawing that end with "-10 (Phase number)
PHASE 11	*-11	All layers in the drawing that end with "-11 (Phase number)
PHASE 12	*-12	All layers in the drawing that end with "-12 (Phase number)

Name	Criteria	Layers Returned
PHASE 13	*-13	All layers in the drawing that end with "-13 (Phase number)
PHASE 14	*-14	All layers in the drawing that end with "-14 (Phase number)
PHASE 15	*-15	All layers in the drawing that end with "-15 (Phase number)
PHASE 16	*-16	All layers in the drawing that end with "-16 (Phase number)
PHASE 17	*-17	All layers in the drawing that end with "-17 (Phase number)
PHASE 18	*-18	All layers in the drawing that end with "-18 (Phase number)
PHASE 19	*-19	All layers in the drawing that end with "-19 (Phase number)
PHASE 20	*-20	All layers in the drawing that end with "-20 (Phase number)
SUBPHASE 1	*-SUB1	All layers in the drawing that end with "-SUB1 (Subphase number)
SUBPHASE 2	*-SUB2	All layers in the drawing that end with "-SUB2 (Subphase number)
SUBPHASE 3	*-SUB3	All layers in the drawing that end with "-SUB3 (Subphase number)
SUBPHASE 4	*-SUB4	All layers in the drawing that end with "-SUB4 (Subphase number)
SUBPHASE 5	*-SUB5	All layers in the drawing that end with "-SUB5 (Subphase number)
SUBPHASE 6	*-SUB6	All layers in the drawing that end with "-SUB6 (Subphase number)
SUBPHASE 7	*-SUB7	All layers in the drawing that end with "-SUB7 (Subphase number)
SUBPHASE 8	*-SUB8	All layers in the drawing that end with "-SUB8 (Subphase number)
SUBPHASE 9	*-SUB9	All layers in the drawing that end with "-SUB9 (Subphase number)
SUBPHASE 10	*-SUB10	All layers in the drawing that end with "-SUB10 (Subphase number)
SUBPHASE 11	*-SUB11	All layers in the drawing that end with "-SUB11 (Subphase number)
SUBPHASE 12	*-SUB12	All layers in the drawing that end with "-SUB12 (Subphase number)
SUBPHASE 13	*-SUB13	All layers in the drawing that end with "-SUB13 (Subphase number)
SUBPHASE 14	*-SUB14	All layers in the drawing that end with "-SUB14 (Subphase number)
SUBPHASE 15	*-SUB15	All layers in the drawing that end with "-SUB15 (Subphase number)
SUBPHASE 16	*-SUB16	All layers in the drawing that end with "-SUB16 (Subphase number)
SUBPHASE 17	*-SUB17	All layers in the drawing that end with "-SUB17 (Subphase number)
SUBPHASE 18	*-SUB18	All layers in the drawing that end with "-SUB18 (Subphase number)
SUBPHASE 19	*-SUB19	All layers in the drawing that end with "-SUB19 (Subphase number)
SUBPHASE 20	*-SUB20	All layers in the drawing that end with "-SUB20 (Subphase number)

UTILITY_DESIGN_TEMPLATE.dwt

Name	Criteria	Layers Returned
DESIGN LAYERS	CI* CD* 0*	Layer 0 along with any layers in the drawing that begin with "CI" (Civil Improvements) or "CD" (Civil Demolition)

Layer States

Many of the DC Water templates contain Layer States, which allow a user to switch back and forth between different sets of assigned property values (on/off, frozen/thawed, color, etc.). These layer states can be created in model or layout space and are useful for quickly establishing desired layer settings and properties for different viewports. The Layer States used by DC Water are described below, broken down by template.

Note: Templates not mentioned in this section do not contain Layer States

EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt

Name	Space	Sheet/Viewport
@DC_MAP	Layout	N/A
ES_CoverSheetVP	Layout	GE-#.1 Viewport
ES_MODEL	Model	N/A - Model Space only
ES_PLAN_20SC	Layout	Plan Viewport
@KEY_PLAN	Layout	N/A

SURFACE_RESTORATION_PLAN.dwt

Name	Space	Sheet/Viewport
@DC_MAP	Layout	N/A
@KEY_PLAN	Layout	SRP-#.1, Key Viewport
SRP_MODEL	Model	N/A - Model Space only
SRP_PLAN_20SC	Layout	SRP-#.1, Plan Viewport

TCP_MOT_TEMPLATE.dwt

Name	Space	Sheet/Viewport
TCP Model - All Phases	Model	N/A - Model Space only
TCP Phase-1	Model	N/A - Model Space only
TCP Phase-2	Model	N/A - Model Space only
TCP Phase-3	Model	N/A - Model Space only
TCP Phase-4	Model	N/A - Model Space only
TCP Phase-5	Model	N/A - Model Space only
TCP Phase-6	Model	N/A - Model Space only
TCP Phase-7	Model	N/A - Model Space only
TCP Phase-8	Model	N/A - Model Space only
TCP Phase-9	Model	N/A - Model Space only
TCP Phase-10	Model	N/A - Model Space only
TCP Phase-11	Model	N/A - Model Space only
TCP Phase-12	Model	N/A - Model Space only
TCP Phase-13	Model	N/A - Model Space only
TCP Phase-14	Model	N/A - Model Space only
TCP Phase-15	Model	N/A - Model Space only
TCP Phase-16	Model	N/A - Model Space only
TCP Phase-17	Model	N/A - Model Space only
TCP Phase-18	Model	N/A - Model Space only
TCP Phase-19	Model	N/A - Model Space only
TCP Phase-20	Model	N/A - Model Space only
TCP Subphase-1	Model	N/A - Model Space only
TCP Subphase-2	Model	N/A - Model Space only
TCP Subphase-3	Model	N/A - Model Space only
TCP Subphase-4	Model	N/A - Model Space only
TCP Subphase-5	Model	N/A - Model Space only
TCP Subphase-6	Model	N/A - Model Space only
TCP Subphase-7	Model	N/A - Model Space only
TCP Subphase-8	Model	N/A - Model Space only
TCP Subphase-9	Model	N/A - Model Space only
TCP Subphase-10	Model	N/A - Model Space only
TCP Subphase-11	Model	N/A - Model Space only
TCP Subphase-12	Model	N/A - Model Space only
TCP Subphase-13	Model	N/A - Model Space only

Name	Space	Sheet/Viewport
TCP Subphase-14	Model	N/A - Model Space only
TCP Subphase-15	Model	N/A - Model Space only
TCP Subphase-16	Model	N/A - Model Space only
TCP Subphase-17	Model	N/A - Model Space only
TCP Subphase-18	Model	N/A - Model Space only
TCP Subphase-19	Model	N/A - Model Space only
TCP Subphase-20	Model	N/A - Model Space only

UTILITY_DESIGN_TEMPLATE.dwt

Name	Space	Sheet/Viewport
@DC_MAP	Layout	G-1, Main Viewport G-2, Location Viewports (Both)
@KEY_PLAN	Layout	C-#, Key Viewport
Water Design Civil Detail Viewport	Layout	CD-#.1, Detail Viewports (Both) DDOT CD-#.1, Detail Viewports (Both)
Water Design Model Space	Model	N/A - Model Space only
Water Design Plan Viewport	Layout	C-#.1, Plan Viewport CP-#.1, Plan Viewports (Both) DDOT C-#.1, Plan Viewport
Sewer Rehab Model Space	Model	N/A - Model Space only
Sewer Rehab Plan Viewport	Layout	C-#.1(SRehab) Plan Vieport

Appendix B: Annotation

Text Styles

DC Water's Standard Text Styles and Sizes are as follows:

STYLE NAME	FONT	TYPE	ANNOTATIVE	HEIGHT	WIDTH	ANGLE
ANNO .094	ARIAL	TTF	YES	0.094	1	0.00
ANNO .10	ARIAL	TTF	YES	0.1	1	0.00
ANNO .12	ARIAL	TTF	YES	0.12	1	0.00
ANNO .15	ARIAL	TTF	YES	0.15	1	0.00
ARIAL	ARIAL	TTF	NO	0	1	0.00
STANDARD	ARIAL	TTF	NO	0	1	0.00
STANDARD THIN	ARIAL	TTF	NO	0	0.75	0.00

These Text Styles reside in the following templates:

	ANNO .094	ANNO .10	ANNO .12	ANNO .15	ARIAL	STANDARD	STANDARD THIN	STANDARD WIDE
EROSION_SEDIMENT_CONTROL	X	X	X	X		X	X	
EXISING_UTILITY	X	X	X	X		X		
SURFACE_RESTORATION_PLAN	X	X	X	X		X	X	
SURVEY	X	X	X	X	X	X	X	
TCP_MOT	X	X	X	X	X	X	X	
UTILITY_DESIGN	X	X	X	X		X	X	X
UTILITY_DESIGN_GS	X	X	X			X	X	

An illustration of these Text Styles is shown below:

STYLE NAME	Sample
ANNO .094	THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG
ANNO .10	THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG
ANNO .12	THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG
ANNO .15	THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG
ARIAL BOLD	THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG
STANDARD	THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG
STANDARD THIN	THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG

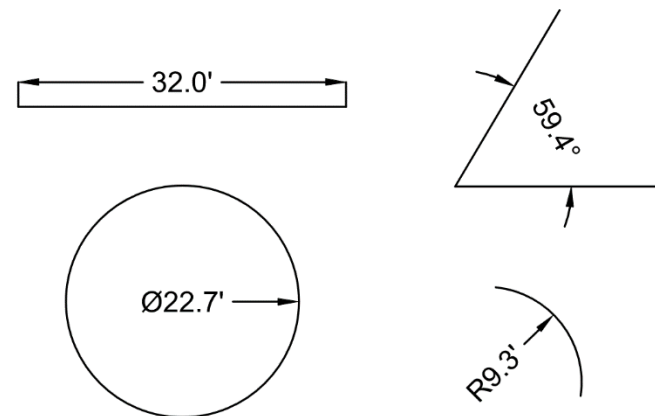
Dimension Styles

DCW has a total of 8 different Dimension Styles, all of which are mostly identical. The only variations between them are found in the “Annotative” and “Overall Scale” settings. One of the Dimension Styles is Annotative, allowing for dimensions to be placed that will plot at the correct plot height for any scale. The remaining Styles allow for dimensions to be placed that will plot at the correct height for a specific scale. The table below outlines these Dimension Styles and their unique properties.

Dimension Style	Annotative	Overall Scale
DCW_Dims	Yes	N/A
DCW_Dims (angular)	Yes	N/A
DCW_Dims_01scale	No	1
DCW_Dims_05scale	No	5
DCW_Dims_100scale	No	100
DCW_Dims_20scale	No	20
DCW_Dims_30scale	No	30
DCW_Dims_40scale	No	40
DCW_Dims_50scale	No	50

The visual properties shared by these Dimension Styles are outlined below. Graphic examples are also shown below.

Baseline Spacing:	0.01”
Extension beyond Dim Lines:	0.00”
Offset from origin:	0.00”
Arrowhead:	Closed Filled, 0.1”
Center Mark:	Mark, 0.05”
Break Size:	0.1”
Jog Height Factor:	1.5
Text Style:	Standard, 0.1”
Units:	Decimal, Decimal Degrees
Precision:	0.0
Text Alignment:	Aligned with Dimension Line
Fit Option:	Either text or arrows (best fit)



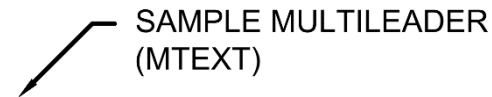
Multileader Styles

DCW has a total of 9 different Multileader Styles, 8 of which are mostly identical. The only variations between these 8 are found in the “Annotative” and “Overall Scale” settings. One of the Multileader Styles is Annotative, allowing for leaders to be placed that will plot at the correct plot height for any scale. The remaining Styles allow for leaders to be placed that will plot at the correct height for a specific scale. The table below outlines these Multileader Styles and their unique properties.

Multileader Style	Annotative	Overall Scale
DCW_Leaders	Yes	N/A
DCW_Leaders_01scale	No	1
DCW_Leaders_05scale	No	5
DCW_Leaders_100scale	No	100
DCW_Leaders_20scale	No	20
DCW_Leaders_30scale	No	30
DCW_Leaders_40scale	No	40
DCW_Leaders_50scale	No	50
DCW_Leaders_Cover	No	N/A

The visual properties shared by these Multileader Styles are outlined below. A graphic example is also shown below.

Type: Straight
 Arrowhead: Closed Filled, 0.1”
 Break Size: 0.1”
 Maximum Leader Points: 2
 Automatically Include Landing: On
 Set Landing Distance: On, 0.1”
 Multileader Type: MText
 Text Angle: Keep Horizontal
 Text Style: Standard, 0.1”
 Leader Connection: Horizontal attachment
 Landing Gap: 0.1”
 Extend Leader to Text: On



The remaining Multileader Style is called “DCW_Leaders_Cover”, and it intended for use on the cover sheet. It has the following parameters:

Type:	Straight
Arrowhead:	Dot, 0.15”
Break Size:	0.15”
Maximum Leader Points:	2
Automatically Include Landing:	On
Set Landing Distance:	On, 0.15”
Scale:	1.000
Multileader Type	MText
Text Angle:	Keep Horizontal
Text Style:	Standard, 0.15”
Leader Connection:	Horizontal attachment
Landing Gap:	0.1”
Extend Leader to Text:	On

A graphic representation of this Multileader Style is shown below:

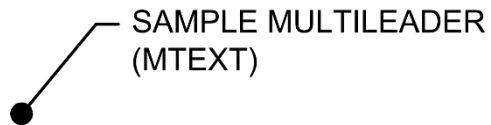


Table Styles

DCW uses 2 Table Styles for the creation of basic AutoCAD tables. Their properties are outlined below:

	SHEET INDEX	QUANTITIES
TABLE DIRECTION	Down	Down
FILL COLOR (ALL CELL TYPES)	255,255,255	255,255,255
TITLE		
<i>TEXT STYLE</i>	Standard	Standard
<i>TEXT SIZE</i>	0.15	3.0
<i>TEXT COLOR</i>	ByLayer	ByBlock
<i>TEXT ALIGNMENT</i>	Middle Center	Middle Center
<i>MARGINS</i>	Horiz: 0.06, Vert: 0.06	Horiz: 2.00, Vert: 2.00
HEADER		
<i>TEXT STYLE</i>	Standard	Standard
<i>TEXT SIZE</i>	0.125	2.5
<i>TEXT COLOR</i>	ByLayer	ByLayer
<i>TEXT ALIGNMENT</i>	Middle Center	Middle Center
<i>MARGINS</i>	Horiz: 0.06, Vert: 0.06	Horiz: 2.00, Vert: 2.00
DATA		
<i>TEXT STYLE</i>	Standard	Standard
<i>TEXT SIZE</i>	0.12	2.5
<i>TEXT COLOR</i>	ByLayer	ByLayer
<i>TEXT ALIGNMENT</i>	Middle Center	Middle Center
<i>MARGINS</i>	Horiz: 0.06, Vert: 0.06	Horiz: 2.00, Vert: 2.00

Below are graphic examples of each of the Table Styles:

SHEET INDEX		
HEADER 1	HEADER 2	HEADER 3
DATA 1	DATA 2	DATA 3

SUMMARY TAKEOFF REPORT			
AUTOCAD ID	DESCRIPTION	QUANTITY	UNIT

Appendix C: DCW Plot Styles

Plot Styles

All plotting at DCW is color dependent. This means that the color assigned to each layer in a drawing, dictates how the objects on that layer are plotted. It also ensures that all objects using the same color will be plotted the same way on the plans. Civil 3D uses color-dependent Plot Styles (.CTB file) to set the color, lineweights, and screening of the objects when they plot.

DCW uses 3 different CTB files that are designed for different circumstances. These Plot Style files are found under the “Plot Files” folder of the Standards Folder Structure.

Plot Style Table	Use
DCWASA.ctb	Standard, black and white plotting
DCWASA_COLOR.ctb	Color plotting
DCWASA_HALF_SCALE.ctb	Black and white plotting in half-scale

Appendix D: DCW Pay Items

DC Water uses a standard list of Pay Items that are assigned to Water Networks (Pressure Pipes, Fittings, and Appurtenances) and Trench materials. These Pay Items have been customized to match the categories in DC Water’s design manual. A list of these Pay Items is shown below:

Pay Item Number	Description	Unit	Formula
Division 02- Existing Conditions			
Section 02 41 00 - Itemized Demolition			
024100-90.01	Itemized Demolition – [Define Demolition Item]	LS	
024100-91.01	Itemized Demolition – [Define Demolition Item]	LF	
024100-93.01	Itemized Demolition – [Define Demolition Item]	SF	
024100-94.01	Itemized Demolition – [Define Demolition Item]	CF	
024100-95.01	Itemized Demolition – [Define Demolition Item]	TON	
Division 21 - Fire Supression			
Section 21 11 10 - Fire Hydrants			
211110-10.01	Fire Hydrants	EA	
211110-10.02	Fire Hydrants in High Security Areas	EA	
Section 21 11 17 - Remove Fire Hydrants			
211117-10.01	Remove Fire Hydrants and Hydrant Control Valves	EA	

Pay Item Number	Description	Unit	Formula
Division 31 - Earthwork			
Section 31 11 00 - Clearing, Grubbing, and Stripping			
311100-90.01	Non-Incidental Clearing, Grubbing, and Stripping	LS	
Section 31 23 10 - Trench Excavation and Backfill			
312310-10.01	Trench Excavation and Backfill (Less Than or Equal To 8-Feet Deep)	CY	
312310-10.02	Trench Excavation and Backfill (Greater Than 8-Feet Deep and Less Than or Equal to 12-Feet Deep)	CY	
312310-10.03	Trench Excavation and Backfill (Greater Than 12-Feet Deep and Less Than or Equal to 16-Feet Deep)	CY	
312310-10.04	Trench Excavation and Backfill (Greater Than 16-Feet Deep and Less Than or Equal to 20-Feet Deep)	CY	
312310-10.05	Trench Excavation and Backfill (Greater Than 20-Feet Deep)	CY	
312310-15.01	Trench Excavation and Backfill for Pipelines with Profiles	LF	
312310-15.02	Trench Excavation and Backfill for Pipelines with Profiles – Additional Depth or Reduction of Depth	FT per LF	
312310-20.01	Trench Undercut Excavation and Backfill	CY	
312310-25.01	Borrow Trench Backfill	CY	{Item Area}*4.5/27
312310-25.02	Embedment Zone Option 2	CY	
312310-30.01	Embedment Zone Option 3	CY	
312310-35.01	Rock Demolition	CY	
312310-40.01	Removal of Sheeting Encountered in Place	SF	
Section 31 23 37 - Test Pits			
312337-10.01	Test Pits	EA	
312337-10.02	Test Pits for Water Services	EA	
Section 31 25 00 - Erosion and Sediment Control			
312500-10.01	Erosion and Sediment Control	LS	
312500-10.02	Extending Erosion and Sediment Control	DAY	

Pay Item Number	Description	Unit	Formula
Division 32 - Exterior Improvements			
Section 32 12 16 - Flexible Pavement			
321216-10.01	Asphalt Base Course – General	SY	
321216-10.02	Asphalt Base Course – Over Pipelines	SY	{Item Area}*.2/9
321216-15.01	Asphalt Surface Course	SY	
321216-20.01	Milling and Overlay	SY	
321216-50.01	Traffic Signal Loop Detector Installation	LF	
Section 32 13 78 - PCC Pavement Repair			
321378-10.01	PCC Base	SY	{Item Area}*.8/9
321378-10.02	Addition/Reduction of PCC Base Thickness Per Each Inch of Depth	SY	
321378-15.01	PCC Pavement	SY	
321378-15.02	Addition/Reduction of PCC Pavement Thickness Per Each Inch of Depth	SY	
321378-20.01	Bus Pad Replacement	SY	
Section 32 16 00 - Portland Cement Curb and Gutter			
321600-10.01	Portland Cement Curb	LF	
321600-15.01	Portland Cement Gutter	LF	
321600-20.01	Portland Cement Curb and Gutter	LF	
Section 32 16 01 - Stone Curb			
321601-10.01	Reset and Adjust Existing Granite Stone Curb	LF	
321601-10.02	Install New Granite Stone Curb	LF	
321601-15.01	Reset and Adjust Existing Bluestone Curb	LF	
321601-15.02	Install New Bluestone Curb	LF	
Section 32 16 04 - Brick Gutter			
321604-10.01	Brick Gutter	LF	
321604-15.01	Brick Curb and Gutter	LF	
Section 32 16 25 - Driveways, Sidewalks, and Alleyways			
321625-10.01	Concrete Driveway Pavements	SY	
321625-10.02	Brick and Block Driveway Pavements	SY	
321625-10.03	Asphalt Driveway Pavements	SY	
321625-10.04	Stone and Cobble Stone Driveway Pavements	SY	
321625-30.01	Concrete Sidewalks	SY	
321625-30.02	Brick and Block Sidewalks	SY	
321625-30.03	Asphalt Sidewalks	SY	
321625-30.04	Stone and Cobble Stone Sidewalks	SY	
321625-50.01	Concrete Alleyway Pavements	SY	

Pay Item Number	Description	Unit	Formula
321625-50.02	Brick and Block Alleyway Pavements	SY	
321625-50.03	Asphalt Alleyway Pavements	SY	
321625-50.04	Stone and cobble Stone Alleyway Pavements	SY	
321625-50.05	Handicap Ramp	EA	
Section 32 92 23 - Sodding			
329223-10.01	Sodding	SY	

Pay Item Number	Description	Unit	Formula
Division 33 - Utilities			
Section 33 01 20 - Abandonment of Underground Utilities			
330120-10.01	Abandonment of Utilities four (4) Inches in Diameter	EA	
330120-10.02	Abandonment of Utilities six (6) Inches in Diameter	EA	
330120-10.03	Abandonment of Utilities eight (8) Inches in Diameter	EA	
330120-10.04	Abandonment of Utilities ten (10) Inches in Diameter	EA	
330120-10.05	Abandonment of Utilities 12-Inches in Diameter	EA	
330120-10.06	Abandonment of Utilities 14-Inches in Diameter	EA	
330120-10.07	Abandonment of Utilities 16-Inches in Diameter	EA	
330120-15.01	Abandonment of Utilities four (4) Inches in Diameter Under Structures, Waterways, Railroad Tracks, and Rail Right-of-Ways	LF	
330120-15.02	Abandonment of Utilities six (6) Inches in Diameter Under Structures, Waterways, Railroad Tracks, and Rail Right-of-Ways	LF	
330120-15.03	Abandonment of Utilities eight (8) Inches in Diameter Under Structures, Waterways, Railroad Tracks, and Rail Right-of-Ways	LF	
330120-15.04	Abandonment of Utilities ten (10) Inches in Diameter Under Structures, Waterways, Railroad Tracks, and Rail Right-of-Ways	LF	
330120-15.05	Abandonment of Utilities 12-Inches in Diameter Under Structures, Waterways, Railroad Tracks, and Rail Right-of-Ways	LF	
330120-15.06	Abandonment of Utilities 14-Inches in Diameter Under Structures, Waterways, Railroad Tracks, and Rail Right-of-Ways	LF	
330120-15.07	Abandonment of Utilities 16-Inches in Diameter Under Structures, Waterways, Railroad Tracks, and Rail Right-of-Ways	LF	
330120-20.01	Abandonment of Utilities 18-Inches in Diameter	LF	
330120-20.02	Abandonment of Utilities 20-Inches in Diameter	LF	
330120-20.03	Abandonment of Utilities 24-Inches in Diameter	LF	
330120-20.04	Abandonment of Utilities 30-Inches in Diameter	LF	
330120-20.05	Abandonment of Utilities 36-Inches in Diameter	LF	
330120-20.06	Abandonment of Utilities 42-Inches in Diameter	LF	
330120-20.07	Abandonment of Utilities 48-Inches in Diameter	LF	
330120-20.08	Abandonment of Utilities 54-Inches in Diameter	LF	
330120-20.09	Abandonment of Utilities 60-Inches in Diameter	LF	
330120-20.10	Abandonment of Utilities 66-Inches in Diameter	LF	
330120-20.11	Abandonment of Utilities 72-Inches in Diameter	LF	
330120-30.01	Abandonment of Tees	EA	
330120-35.01	Abandonment of Valves, Valve Casings, and Boxes	EA	
330120-40.01	Abandonment of Concrete or Masonry Structures	EA	

Pay Item Number	Description	Unit	Formula
Section 33 05 02 - Water Utility Distribution Pipe - DIP			
330502-10.01	Water Utility Distribution Piping – DIP 4”	LF	
330502-10.02	Water Utility Distribution Piping – DIP 6”	LF	
330502-10.03	Water Utility Distribution Piping – DIP 8”	LF	
330502-10.04	Water Utility Distribution Piping – DIP 10”	LF	
330502-10.05	Water Utility Distribution Piping – DIP 12”	LF	
330502-10.06	Water Utility Distribution Piping – DIP 14”	LF	
330502-10.07	Water Utility Distribution Piping – DIP 16”	LF	
330502-10.08	Water Utility Distribution Piping – DIP 18”	LF	
330502-10.09	Water Utility Distribution Piping – DIP 20”	LF	
330502-10.10	Water Utility Distribution Piping – DIP 24”	LF	
330502-10.11	Water Utility Distribution Piping – DIP 30”	LF	
330502-10.12	Water Utility Distribution Piping – DIP 36”	LF	
330502-10.13	Water Utility Distribution Piping – DIP 42”	LF	
330502-10.14	Water Utility Distribution Piping – DIP 48”	LF	
330502-10.15	Water Utility Distribution Piping – DIP 54”	LF	
330502-10.16	Water Utility Distribution Piping – DIP 60”	LF	
330502-10.17	Water Utility Distribution Piping – DIP 64”	LF	
330502-20.01	Extra Mainline Fittings – DIP	LB	
Section 33 06 20 - Concrete Valve Casings			
330620-10.01	Concrete Valve Casings	EA	
Section 33 11 20 - Concrete Thrust Restraints			
331120-10.01	Concrete Thrust Restraint 4-Inch Pipe	EA	
331120-10.02	Concrete Thrust Restraint 6-Inch Pipe	EA	
331120-10.03	Concrete Thrust Restraint 8-Inch Pipe	EA	
331120-10.04	Concrete Thrust Restraint 10-Inch Pipe	EA	
331120-10.05	Concrete Thrust Restraint 12-Inch Pipe	EA	
331120-10.06	Concrete Thrust Restraint 14-Inch Pipe	EA	
331120-10.07	Concrete Thrust Restraint 16-Inch Pipe	EA	
331120-10.08	Concrete Thrust Restraint 18-Inch Pipe	EA	
331120-10.09	Concrete Thrust Restraint 20-Inch Pipe	EA	
331120-10.10	Concrete Thrust Restraint 24-Inch Pipe	EA	
331120-10.11	Concrete Thrust Restraint 30-Inch Pipe	EA	
331120-10.12	Concrete Thrust Restraint 36-Inch Pipe	EA	
331120-10.13	Concrete Thrust Restraint 42-Inch Pipe	EA	

Pay Item Number	Description	Unit	Formula	
331120-10.14	Concrete Thrust Restraint 48-Inch Pipe	EA		
331120-10.15	Concrete Thrust Restraint 54-Inch Pipe	EA		
331120-10.16	Concrete Thrust Restraint 60-Inch Pipe	EA		
331120-10.17	Concrete Thrust Restraint 64-Inch Pipe	EA		
Section 33 12 13 - Water Service Lines				
331213-10.01	Installation of Meter Boxes, Frames and Covers	EA		
331213-15.01	Replace Water Service Line in Public Space	LF	({Item Count}*5)+{Item Length}	
331213-20.01	Replace Water Service Line on Private Property	LF		
331213-25.01	Penetrate Wall and Connect to First Fitting Inside Building	EA		
331213-30.01	Installation of Curb Stop and Curb Stop Box	EA		
331213-50.01A	Private Property Side Agreement Documentation Allowance	EA		
Section 33 12 16 - Tapping Sleeves and Valves				
331216-10.01	Tapping Sleeve and Valve – 6-Inch x 4-Inch	EA		
331216-15.01	Tapping Sleeve and Valve – 8-Inch x 4-Inch	EA		
331216-15.02	Tapping Sleeve and Valve – 8-Inch x 6-Inch	EA		
331216-20.01	Tapping Sleeve and Valve – 10-Inch x 4-Inch	EA		
331216-20.02	Tapping Sleeve and Valve – 10-Inch x 4-Inch	EA		
331216-20.03	Tapping Sleeve and Valve – 10-Inch x 6-Inch	EA		
331216-25.01	Tapping Sleeve and Valve – 12-Inch x 4-Inch	EA		
331216-25.02	Tapping Sleeve and Valve – 12-Inch x 6-Inch	EA		
331216-25.03	Tapping Sleeve and Valve – 12-Inch x 8-Inch	EA		
331216-30.01	Tapping Sleeve and Valve – 14-Inch x 4-Inch	EA		
331216-30.02	Tapping Sleeve and Valve – 14-Inch x 6-Inch	EA		
331216-30.03	Tapping Sleeve and Valve – 14-Inch x 8-Inch	EA		
331216-30.04	Tapping Sleeve and Valve – 14-Inch x 10-Inch	EA		
331216-35.01	Tapping Sleeve and Valve – 16-Inch x 4-Inch	EA		
331216-35.02	Tapping Sleeve and Valve – 16-Inch x 6-Inch	EA		
331216-35.03	Tapping Sleeve and Valve – 16-Inch x 8-Inch	EA		
331216-35.04	Tapping Sleeve and Valve – 16-Inch x 10-Inch	EA		
331216-35.05	Tapping Sleeve and Valve – 16-Inch x 12-Inch	EA		
331216-40.01	Tapping Sleeve and Valve – 18-Inch x 4-Inch	EA		
331216-40.02	Tapping Sleeve and Valve – 18-Inch x 6-Inch	EA		
331216-40.03	Tapping Sleeve and Valve – 18-Inch x 8-Inch	EA		
331216-40.04	Tapping Sleeve and Valve – 18-Inch x 10-Inch	EA		
331216-40.05	Tapping Sleeve and Valve – 18-Inch x 12-Inch	EA		

Pay Item Number	Description	Unit	Formula
331216-45.01	Tapping Sleeve and Valve – 20-Inch x 4-Inch	EA	
331216-45.02	Tapping Sleeve and Valve – 20-Inch x 6-Inch	EA	
331216-45.03	Tapping Sleeve and Valve – 20-Inch x 8-Inch	EA	
331216-45.04	Tapping Sleeve and Valve – 20-Inch x 10-Inch	EA	
331216-45.05	Tapping Sleeve and Valve – 20-Inch x 12-Inch	EA	
331216-50.01	Tapping Sleeve and Valve – 24-Inch x 4-Inch	EA	
331216-50.02	Tapping Sleeve and Valve – 24-Inch x 6-Inch	EA	
331216-50.03	Tapping Sleeve and Valve – 24-Inch x 8-Inch	EA	
331216-50.04	Tapping Sleeve and Valve – 24-Inch x 10-Inch	EA	
331216-50.05	Tapping Sleeve and Valve – 24-Inch x 12-Inch	EA	
331216-55.01	Tapping Sleeve and Valve – 30-Inch x 4-Inch	EA	
331216-55.02	Tapping Sleeve and Valve – 30-Inch x 6-Inch	EA	
331216-55.03	Tapping Sleeve and Valve – 30-Inch x 8-Inch	EA	
331216-55.04	Tapping Sleeve and Valve – 30-Inch x 10-Inch	EA	
331216-55.05	Tapping Sleeve and Valve – 30-Inch x 12-Inch	EA	
Section 33 14 00 - Gate Valves			
331400-10.01	Resilient-Seated Gate Valves – 4-Inch	EA	
331400-10.02	Resilient-Seated Gate Valves – 6-Inch	EA	
331400-10.03	Resilient-Seated Gate Valves – 8-Inch	EA	
331400-10.04	Resilient-Seated Gate Valves – 10-Inch	EA	
331400-10.05	Resilient-Seated Gate Valves – 12-Inch	EA	
331400-10.06	Resilient-Seated Gate Valves – 14-Inch	EA	
331400-10.07	Resilient-Seated Gate Valves – 16-Inch	EA	
331400-10.08	Resilient-Seated Gate Valves – 18-Inch	EA	
331400-10.09	Resilient-Seated Gate Valves – 20-Inch	EA	
331400-10.10	Resilient-Seated Gate Valves – 24-Inch	EA	
331400-10.11	Resilient-Seated Gate Valves – 30-Inch	EA	
331400-20.01	Metal-Seated Gate Valves – 4-Inch	EA	
331400-20.02	Metal-Seated Gate Valves – 6-Inch	EA	
331400-20.03	Metal-Seated Gate Valves – 8-Inch	EA	
331400-20.04	Metal-Seated Gate Valves – 10-Inch	EA	
331400-20.05	Metal-Seated Gate Valves – 12-Inch	EA	
331400-20.06	Metal-Seated Gate Valves – 14-Inch	EA	
331400-20.07	Metal-Seated Gate Valves – 16-Inch	EA	
331400-20.08	Metal-Seated Gate Valves – 18-Inch	EA	

Pay Item Number	Description	Unit	Formula
331400-20.09	Metal-Seated Gate Valves – 20-Inch	EA	
331400-20.10	Metal-Seated Gate Valves – 24-Inch	EA	
331400-20.11	Metal-Seated Gate Valves – 30-Inch	EA	
331400-30.01	Replacing Multi-Stem Valves – 4-Inch	EA	
331400-30.02	Replacing Multi-Stem Valves – 6-Inch	EA	
331400-30.03	Replacing Multi-Stem Valves – 8-Inch	EA	
331400-30.04	Replacing Multi-Stem Valves – 10-Inch	EA	
331400-30.05	Replacing Multi-Stem Valves – 12-Inch	EA	
331400-30.06	Replacing Multi-Stem Valves – 14-Inch	EA	
331400-30.07	Replacing Multi-Stem Valves – 16-Inch	EA	
331400-30.08	Replacing Multi-Stem Valves – 18-Inch	EA	
331400-30.09	Replacing Multi-Stem Valves – 20-Inch	EA	
331400-30.10	Replacing Multi-Stem Valves – 24-Inch	EA	
331400-30.11	Replacing Multi-Stem Valves – 30-Inch	EA	
Section 33 29 50 - Temporary Water Piping			
332950-10.01	Temporary Water Piping	LS	

Appendix E: DCW External Reference Structure

DC Water’s project file structure necessitates many of the drawings to have references to other drawings in the project. As the project drawings are created, they must be placed together in the DWG subfolder. Placeholder drawings have been included alongside of the templates to be used as references in the template files. Once a new drawing is created based on the templates, these placeholder files should automatically be replaced with the drawings for the current project.

Many of the templates also contain references to images, PDFs and other file types. The Attachment Type and Saved Path Type vary depending on the file. The XREFs in each template and their settings are outlined below:

EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt

XREF Name	Attachment Type	Path Type	Saved Path
301.1_DOEE_DETAIL	JPG	Relative	..\Standard Details\DOEE\2017 JPEG Details\301.1_DOEE_DETAIL.jpg
301.2_DOEE_DETAIL	JPG	Relative	..\Standard Details\DOEE\2017 JPEG Details\301.2_DOEE_DETAIL.jpg
307.2_DOEE_DETAIL	JPG	Relative	..\Standard Details\DOEE\2017 JPEG Details\307.2_DOEE_DETAIL.jpg
307.3_DOEE_DETAIL	JPG	Relative	..\Standard Details\DOEE\2017 JPEG Details\307.3_DOEE_DETAIL.jpg
309.1_DOEE_DETAIL	JPG	Relative	..\Standard Details\DOEE\2017 JPEG Details\309.1_DOEE_DETAIL.jpg
309.2_DOEE_DETAIL	JPG	Relative	..\Standard Details\DOEE\2017 JPEG Details\309.2_DOEE_DETAIL.jpg
608.10	N/A	Full	..\Standard Details\DDotPDFs\608.10.tif
608.11	N/A	Full	..\Standard Details\DDotPDFs\608.11.tif
608.12	N/A	Full	..\Standard Details\DDotPDFs\608.12.tif
702.1_DOEE_DETAIL	JPG	Relative	..\Standard Details\DOEE\2017 JPEG Details\702.1_DOEE_DETAIL.jpg
704.1_DOEE_DETAIL	JPG	Relative	..\Standard Details\DOEE\2017 JPEG Details\704.1_DOEE_DETAIL.jpg
903.1_DOEE_DETAIL	JPG	Relative	..\Standard Details\DOEE\2017 JPEG Details\903.1_DOEE_DETAIL.jpg
DC Construction Site SignErosion - 1	pdf	Relative	..\Standard Details\DOEE\DC Construction Site Sign – Erosion.pdf
ExUtil	Overlay	Relative	.\ExUtil.dwg
GIS	Overlay	Relative	.\GIS.dwg
KeyMap	Overlay	Relative	.\KeyMap.dwg
SRP	Overlay	Relative	.\SRP.dwg
Survey	Overlay	Relative	.\Survey.dwg

EXISTING_UTILITY_TEMPLATE.dwt

None

SURFACE_RESTORATION_PLAN_TEMPLATE.dwt

XREF Name	Attachment Type	Path Type	Saved Path
ExUtil	Overlay	Relative	.\ExUtil.dwg
GIS	Overlay	Relative	.\GIS.dwg
KeyMap	Overlay	Relative	.\KeyMap.dwg
Survey	Overlay	Relative	.\Survey.dwg
UtilityDesign	Overlay	Relative	.\UtilityDesign.dwg

SURVEY_GIS_TEMPLATE.dwt

None

TCP_MOT_TEMPLATE.dwt

XREF Name	Attachment Type	Path Type	Saved Path
8 600 Series Details2_Page_02	TIFF	Full	..\Standard Details\DDotTIFs\8 600 Series Details2_Page_02.tif
8 600 Series Details2_Page_03	TIFF	Full	..\Standard Details\DDotTIFs\8 600 Series Details2_Page_03.tif
8 600 Series Details2_Page_04	TIFF	Full	..\Standard Details\DDotTIFs\8 600 Series Details2_Page_04.tif
8 600 Series Details2_Page_05	TIFF	Full	..\Standard Details\DDotTIFs\8 600 Series Details2_Page_05.tif
8 600 Series Details2_Page_06	TIFF	Full	..\Standard Details\DDotTIFs\8 600 Series Details2_Page_06.tif
8 600 Series Details2_Page_07	TIFF	Full	..\Standard Details\DDotTIFs\8 600 Series Details2_Page_07.tif
8 600 Series Details2_Page_08a	TIFF	Full	..\Standard Details\DDotTIFs\8 600 Series Details2_Page_08a.tif
8 600 Series Details2_Page_09	TIFF	Full	..\Standard Details\DDotTIFs\8 600 Series Details2_Page_09.tif
8 600 Series Details2_Page_10	TIFF	Full	..\Standard Details\DDotTIFs\8 600 Series Details2_Page_10.tif
8 600 Series Details2_Page_11	TIFF	Full	..\Standard Details\DDotTIFs\8 600 Series Details2_Page_11.tif
ExUtil	Overlay	Relative	.\ExUtil.dwg
GIS	Overlay	Relative	.\GIS.dwg
KeyMap	Overlay	Relative	.\KeyMap.dwg
Survey	Overlay	Relative	.\Survey.dwg
UtilityDesign	Overlay	Relative	.\UtilityDesign.dwg

UTILITY_DESIGN_GS_TEMPLATE.dwt

XREF Name	Attachment Type	Path Type	Saved Path
215.01	pdf	Relative	..\Standard Details\DDotPDFs\215.01.pdf
215.02	pdf	Relative	..\Standard Details\DDotPDFs\215.02.pdf
215.03	pdf	Relative	..\Standard Details\DDotPDFs\215.03.pdf
215.04	pdf	Relative	..\Standard Details\DDotPDFs\215.04.pdf
501.01	pdf	Relative	..\Standard Details\DDotPDFs\501.01.pdf
501.02	pdf	Relative	..\Standard Details\DDotPDFs\501.02.pdf
612.05	pdf	Relative	..\Standard Details\DDotPDFs\612.05.pdf
GD001-1	pdf	Relative	..\Standard Details\PDF\General\GD001.pdf
GD001-2	pdf	Relative	..\Standard Details\PDF\General\GD002.pdf
GD001-3	pdf	Relative	..\Standard Details\PDF\General\GD003.pdf
KeyMap	Overlay	Relative	.\KeyMap.dwg
MD029_NOTICE OF EXCAVATION SIGN - 1	pdf	Relative	..\Standard Details\PDF\Miscellaneous\MD029_NOTICE OF EXCAVATION SIGN.pdf
MD029_NOTICE OF EXCAVATION SIGN - 2	pdf	Relative	..\Standard Details\PDF\Miscellaneous\MD029_NOTICE OF EXCAVATION SIGN.pdf
WD001 - 1	pdf	Relative	..\Standard Details\PDF\Water\WD001.pdf
WD007 - 1	pdf	Relative	..\Standard Details\PDF\Water\WD007.pdf
WD007 - 2	pdf	Relative	..\Standard Details\PDF\Water\WD007.pdf
WD007 - 3	pdf	Relative	..\Standard Details\PDF\Water\WD007.pdf
WD007 - 4	pdf		..\Standard Details\PDF\Water\WD007.pdf
WD008 - 1.pdf	pdf	Relative	..\Standard Details\PDF\Water\WD008.pdf
WD010 - 1.pdf	pdf	Relative	..\Standard Details\PDF\Water\WD010.pdf
WD011 - 1.pdf	pdf	Relative	..\Standard Details\PDF\Water\WD011.pdf
WD012 - 1.pdf	pdf	Relative	..\Standard Details\PDF\Water\WD012.pdf
WD012 - 2.pdf	pdf	Relative	..\Standard Details\PDF\Water\WD012.pdf
WD012 - 3.pdf	pdf	Relative	..\Standard Details\PDF\Water\WD012.pdf

XREF Name	Attachment Type	Path Type	Saved Path
WD012 - 4.pdf	pdf	Relative	..\Standard Details\PDF\Water\WD012.pdf
WD014 - 1	pdf	Relative	..\Standard Details\PDF\Water\WD014.pdf
WD014 - 2	pdf		..\Standard Details\PDF\Water\WD014.pdf
WD015 - 1.pdf	pdf	Relative	..\Standard Details\PDF\Water\WD015.pdf
WD016 - 1.pdf	pdf	Relative	..\Standard Details\PDF\Water\WD016.pdf
WD023-WD023 - 1.pdf	pdf	Relative	..\Standard Details\PDF\Water\WD023.pdf
WD046 - 1.pdf	pdf	Relative	..\Standard Details\PDF\Water\WD046.pdf
WD047 - 1.pdf	pdf	Relative	..\Standard Details\PDF\Water\WD047.pdf
WD048 - 1.pdf	pdf	Relative	..\Standard Details\PDF\Water\WD048.pdf
WD049 - 1.pdf	pdf	Relative	..\Standard Details\PDF\Water\WD049.pdf
WD050 - 1.pdf	pdf	Relative	..\Standard Details\PDF\Water\WD050.pdf

UTILITY_DESIGN_TEMPLATE.dwt

XREF Name	Attachment Type	Path Type	Saved Path
ExUtil	Overlay	Relative	.\ExUtil.dwg
GIS	Overlay	Relative	.\GIS.dwg
KeyMap	Overlay	Relative	.\KeyMap.dwg
Survey	Overlay	Relative	.\Survey.dwg

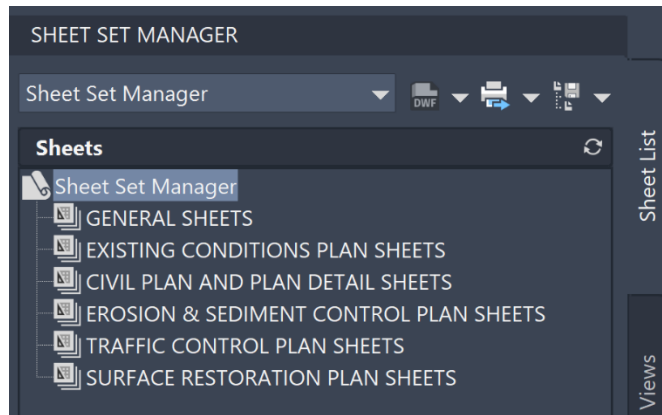
Appendix F: Sheet Sets and Title Blocks

DC Water uses a Sheet Set Template (.dst) for sheet management and plotting purposes. This Sheet Set Template contains custom Sheet Properties and custom Sheet Set Properties. Also, the Sheet Set references a drawing template for use in sheet creation that contains a titleblock with fields that reference the custom properties. When sheets are created from this titleblock and tied to the Sheet Set, the fields update if/when the Sheet Set or Sheet Properties are changed.

Information about this Sheet Set Template is provided below:

DESIGN_SHEET_SET_TEMPLATE.dst

Base Structure:



Referenced Template and Layout:

...\CAD Standards\Templates\UTILITY_DESIGN_TEMPLATE.dwt

Layout = "C-#.1"

Sheet Set Custom Properties

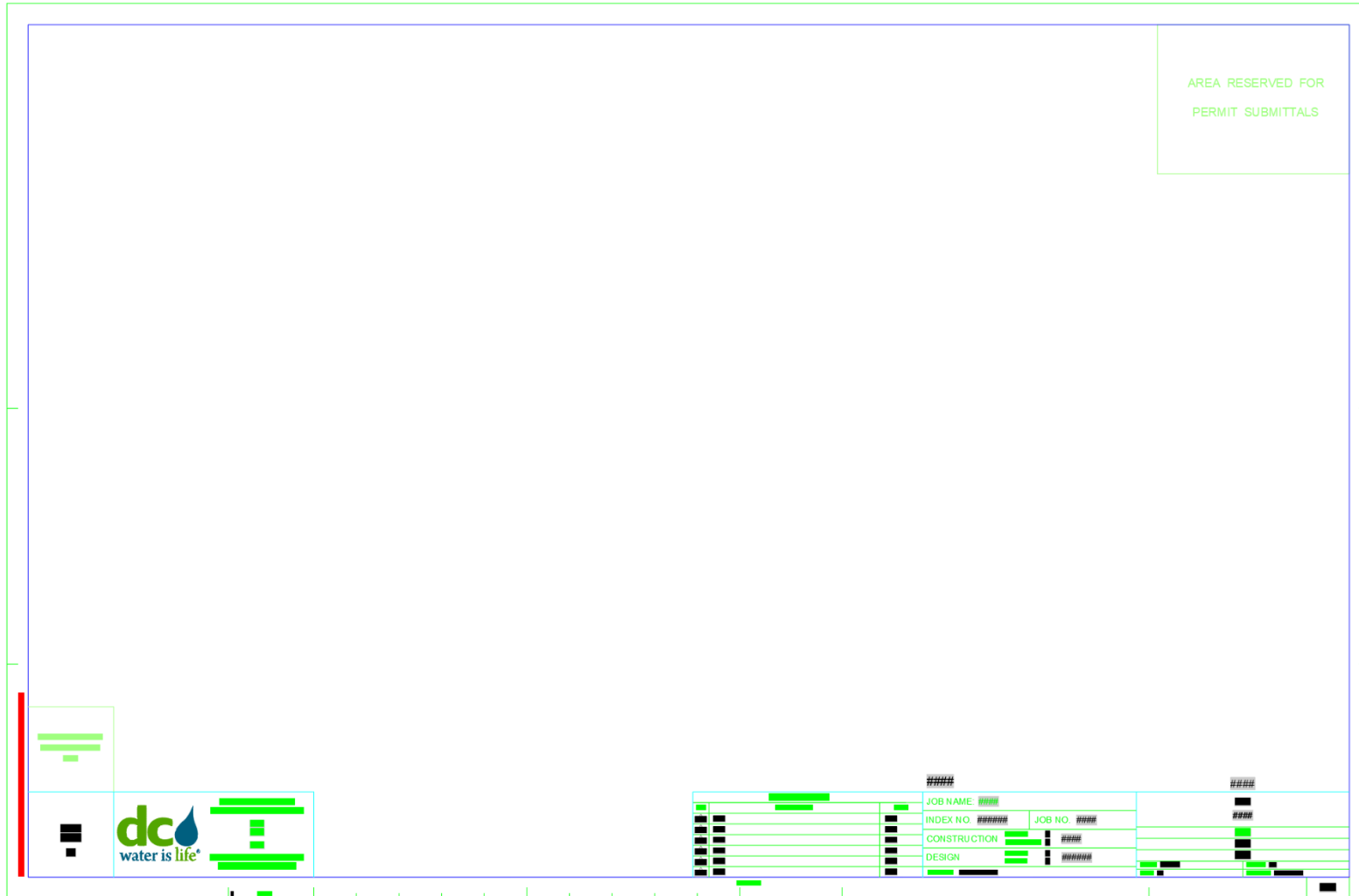
Sheet Set Custom Properties	
CC_X	X
CI_X	
CONTRACTNO	180030
DCRA_ADDRESS	0 R ST NW
DDCFA_X	
DDETS_X	X
DEPARTMENT_1	DEPARTMENT OF ENGINEERING
DEPARTMENT_2	& TECHNICAL SERVICES
DESIGN#	I-180030
DESIGN_GROUP	WATER & SEWER DESIGN
INDEX NO	WLR-GR02
JOB NAME	SDWMR 15B
JOB NO	GR02
LOCATION_NEIGHBORH...	LOCATION: BRYANT & CHANNING
NOT_FOR1	NOT FOR
NOT_FOR2	CONSTRUCTION
PHASE	Value
PHASEDATE	Value
PROJ_SERVICE_TYPE	WATER MAIN REPLACEMENT
SUBMITTAL_TITLE	ECP SUBMITTAL

Sheet Custom Properties

Sheet Custom Properties	
CHECKEDBY	CSS, MLR
DISCIPLINE	CIVIL
DRAFTEDBY	KDT
PROJ_TYPE	WATER MAIN REPLACEMENT
REV1	
REV1_DATE	
REV1_DESC	
REV2	
REV2_DATE	
REV2_DESC	
REV3	
REV3_DATE	
REV3_DESC	
REV4	
REV4_DATE	
REV4_DESC	
REV5	
REV5_DATE	
REV5_DESC	
REV6	
REV6_DATE	
REV6_DESC	
SCALE	1" = 20'
SHT_STA_RANGE	N/A

DC Water Titleblock

The Titleblock used in DCW's projects is CIP_TTLBLK with a Landscape layout. This titleblock is stored in the template files and a file called "DCW Block Library.dwg" under ...\\CAD Standards\\Templates\\Blocks. A picture of this Titleblock is shown below:

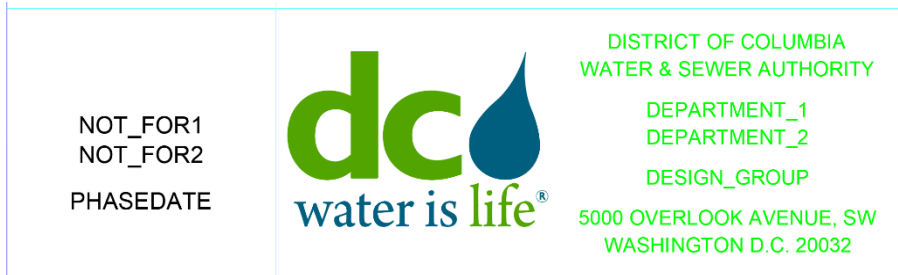


Fields

As mentioned above, DCW's titleblock contains intelligent fields. Some of these fields are pulling information from the drawing file, while others are pulling information from a Sheet Set. These fields are described below. For default values of these fields, see the Sheet Set Template screen shots above.

Bottom Left Corner

Field Name	Description	Tied To
DEPARTMENT_1	Department 1	Sheet Set Custom Properties
DEPARTMENT_2	Department 2	Sheet Set Custom Properties
DESIGN_GROUP	Design Group	Sheet Set Custom Properties
NOT_FOR1	Not For 1	Sheet Set Custom Properties
NOT_FOR2	Not For 2	Sheet Set Custom Properties
PHASEDATE	Phase Date	Sheet Set Custom Properties



Bottom Right Corner

Field Name	Description	Tied To
SUBMITTAL_TITLE	Submittal Phase Title	Sheet Set - Sheet Custom Properties
REV1	Revision 1	Sheet Set - Sheet Custom Properties
REV2	Revision 2	Sheet Set - Sheet Custom Properties
REV3	Revision 3	Sheet Set - Sheet Custom Properties
REV4	Revision 4	Sheet Set - Sheet Custom Properties
REV5	Revision 5	Sheet Set - Sheet Custom Properties
REV6	Revision 6	Sheet Set - Sheet Custom Properties
REV1_DESC	Revision 1 - Description	Sheet Set - Sheet Custom Properties
REV2_DESC	Revision 2 - Description	Sheet Set - Sheet Custom Properties
REV3_DESC	Revision 3 - Description	Sheet Set - Sheet Custom Properties
REV4_DESC	Revision 4 - Description	Sheet Set - Sheet Custom Properties
REV5_DESC	Revision 5 - Description	Sheet Set - Sheet Custom Properties
REV6_DESC	Revision 6 - Description	Sheet Set - Sheet Custom Properties
REV1_DATE	Revision 1 Date	Sheet Set - Sheet Custom Properties
REV2_DATE	Revision 2 Date	Sheet Set - Sheet Custom Properties
REV3_DATE	Revision 3 Date	Sheet Set - Sheet Custom Properties
REV4_DATE	Revision 4 Date	Sheet Set - Sheet Custom Properties
REV5_DATE	Revision 5 Date	Sheet Set - Sheet Custom Properties
REV6_DATE	Revision 6 Date	Sheet Set - Sheet Custom Properties
PROJ_SERVICE_TYPE	Project Service Type	Sheet Set Custom Properties
SHT_STA_RANGE	Sheet Station Range	Sheet Set - Sheet Custom Properties
SCALE	Scale	Sheet Set - Sheet Custom Properties
DRAFTEDBY	Drafted By (Initials)	Sheet Set - Sheet Custom Properties
CHECKEDBY	Checked By (Initials)	Sheet Set - Sheet Custom Properties
DISCIPLINE	Discipline	Sheet Set - Sheet Custom Properties
CC_X	Yes/No Construction Contract	Sheet Set Custom Properties
CI_X	Yes/No In House Construction	Sheet Set Custom Properties


Field Name	Description	Tied To
CONTRACTNO	Contract Number	Sheet Set Custom Properties
DCRA_ADDRESS	Project Address for DCRA Submittal	Sheet Set Custom Properties
DDCFA_X	Yes/No DCFA Design	Sheet Set Custom Properties
DDETS_X	Yes/No Dets Design	Sheet Set Custom Properties
INDEX NO	Index Number	Sheet Set Custom Properties
JOB NAME	Job Name	Sheet Set Custom Properties
JOB NO	Job Number	Sheet Set Custom Properties
LOCATION_NEIGHBORHOOD	Project Location/Neighborhood	Sheet Set Custom Properties
SUBMITTAL_TITLE	Submittal Title	Sheet Set Custom Properties

REVISION BLOCK			DCRA_ADDRESS	SUBMITTAL_TITLE
NO.	DESCRIPTION	DATE	JOB NAME: JOB_NAME	PROJ_SERVICE_TYPE
REV1	REV1_DESC	REV1_DATE	INDEX NO. INDEX_NO. JOB NO. JOB_NO.	SHEET_TITLE
REV2	REV2_DESC	REV2_DATE	CONSTRUCTION <small>IN-HOUSE</small> <input type="checkbox"/> CONTRACT NO. <input type="checkbox"/>	DISCIPLINE
REV3	REV3_DESC	REV3_DATE		DESIGN <small>IN-HOUSE</small> <input type="checkbox"/> DCFA NO. <input type="checkbox"/> DDETS_X <input type="checkbox"/> DDCFA_X <input type="checkbox"/> DESIGN#
REV4	REV4_DESC	REV4_DATE	CADD FILE: CADD_FILE_NAME	SHT_STA_RANGE
REV5	REV5_DESC	REV5_DATE		SCALE: SCALE
REV6	REV6_DESC	REV6_DATE		DATE: SUBMITTALDATE
10 INCHES				DRAWN: DRAFTEDBY
				CHECKED: CHECKEDBY
				C-##

DC Water DDOT Titleblock

This Titleblock used in DCW's design projects for DDOT. This Titleblock can be found in the "UTILITY_DESIGN_TEMPLATE.dwt" template file on two pre-made layout tabs. A picture of this Titleblock is shown below:

REV		DATE	PROJECT	SHEET NO.	TOTAL SHEETS
		D.C.			PPP

		NO.	DESCRIPTION	NAME	DATE
			REVISIONS		

D.C. DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE PROJECT MANAGEMENT DIVISION	
MASSACHUSETTS AVENUE, N.W. REHABILITATION FROM 20TH STREET TO WATERSIDE DRIVE	PROJECT NO.: _____ DESIGNED BY: _____ DRAWN BY: _____ PROJECT MGR: _____
WATER MAIN DESIGN	DIVISION CHIEF: _____ DATE: _____ SHEET: _____ OF _____

Page Setups

DCW's sheet template contains 4 custom Page Setups for plotting. Two of them are used for plotting full size (ANSI D - 22" x 34"), and the other two are used for plotting at half size (ANSI B – 11" x 17"). These Page Setups and their Settings are listed below:

	ANSI_D_PDF	ANSI_D_DETS25	ANSI_B_PDF (reduced half scale ANSI D)	ANSI_B_DETS25 (reduced half scale ANSI D)
Use	Full size plot to PDF	Full size plot to Plotter	Half size plot to PDF	Full size plot to Plotter
Printer/Plotter	AutoCAD PDF (Smallest File)	HP Designjet T2300ps HPGL2	AutoCAD PDF (Smallest File)	Canon iR-ADV C5550/5560 UFR II
Paper Size	ANSI expand D (34x22)	ANSI expand D (34x22)	ANSI full bleed B (11x17)	ANSI full bleed B (11x17)
Plot Area	Layout	Layout	Layout	Layout
Plot Offset (X,Y)	-0.228100,-0.424951	0,0	-0.031250,-0.031250	-0.197916,-0.197917
Plot Style Table	DCWASA.ctb	DCWASA.ctb	DCWASA_HALF_SCALE.ctb	DCWASA_HALF_SCALE.ctb

All sheets stored in the Drawing Template files are set to use the "ANSI_D_PDF" Page Setup

Appendix G: Survey Standards

Code List

FIELD CODE	DESCRIPTION	ATTRIBUTE
AREAS		
SURF	Surface Type Label	<u>Surface Type</u> : Asphalt, Brick, Bike Lane, Bus Stop, Concrete, Cross Walk, Grass, Gravel, Landscape Area, Planter Area, Parking Space, Pavement, Speed Bump, Stone, Trolley Track
SWLK	Sidewalk Type Label	<u>Sidewalk Type</u> : Asphalt S/W, Brick S/W, Concrete S/W, Gravel S/W, Stone S/W
BARRIERS		
BBOL	Bollard	Diameter in Inches
BJER	Jersey Barrier	Note If Temporary or Permanent
BPUP	Street Pop-Up Barrier	Pop Up Bollards and Steel Plates Outline
No Code	ALL Text for Barriers	
BORINGS AND MONITORING WELLS		
BORE	Borings	Number
MOWL	Monitoring Well	Number
No Code	Text for Monitoring Wells	
No Code	Text for Borings	
BRIDGES		
ABUT	Bridge Abutment	
BRBT	Bridge Support Structure	
BRCJ	Bridge Joint	
BRCL	Bridge Crown	
BRDK	Bridge Deck	

FIELD CODE	DESCRIPTION	ATTRIBUTE
BRRL	Bridge Railing	
No Code	ALL Text for Bridges	
BUILDING		
BLDF	Building First Floor	
BLDG	Building Face	Material and Address
BLDK	Building Deck	Material
BLDO	Bldg Overhangs	Material
BLPR	Building Porch	Material
No Code	ALL Text for Buildings, Address, Type, Stories, Etc	
COMMUNICATION		
CMEM	Emergency Call Post (Button)	
CMPP	Pay Phone on Wall	
CMTB	Telephone Booth	
CMTE	Historic Telephone Post	
CMTF	Yard Telephone Pedestal	
CMVT	Communication Vault	
MHCM	Manhole Communication	Size in Inches and Ownership
UGUC	Underground Comm Paint	
No Code	ALL Text for Communications	
CONTROL		
BM	Bench Mark	What Was Set-Box Cut, Top Of Fh, Etc
FLY	Fly Not in Loop	Type= Pks, Nail, Ink
TRV	Traverse	Type= Pks, Nail, Ink
No Code	ALL Text for Control	

FIELD CODE	DESCRIPTION	ATTRIBUTE
CURBS		
CURB	Curb Type Label	<u>Curb Type</u> : Asphalt C&G, Bluestone Curb, Blustone W/ Brick Gutter, Bluestone W/ Conc Gutter, Concrete Curb, Concrete W/ Brick Gutter, Conc C&G, Granite Curb, Granite W/ Brick Gutter, Granite C&G, Granite W/ Concrete Gutter
DRIVEWAYS		
DWAY	Driveway Type	<u>Driveway Type</u> : Asphalt D/W, Brick D/W, Conc D/W, Gravel D/W, Stone D/W
ELECTRIC		
ELCB	Electric Control Box, Traffic	
ELEM	Meter	
ELGL	Ground Light	
ELGR	Round Grate In Vault	Size in Inches
ELLP	Globe Lamp Post	
ELLP2	2 Globe Lamp Post	
ELTR	Transformer	
ELVT	Electric Vault	
HAND	Hand Hole	
MHEL	Manhole Electric	Size in Inches
MHSL	Dc Street Light Mh	Size in Inches
OHWE	Overhead Wires	Over Head Wires
UGUE	Underground Elec Paint	Any Markings on Ground
No Code	All Text for Electric	

FIELD CODE	DESCRIPTION	ATTRIBUTE
FENCES		
FENC	Fence	
FNGT	Fence Gate	
GAS		
GSEM	Gas Line Monitor	
GSGM	Gas Meter	
GSGV	Gas Valve	
GSPI	Above Ground Pipe	
GSVT	Gas Vault	
GSTK	Above Ground Gas Tank	
MHGS	Manhole Gas	Size in Inches
TKLP	Tank Liquid Gas	
TKOL	Tank Oil	
UGUG	Underground Gas Paint	Any Markings on Ground
No Code	All Text for Gas	
MONUMENTS-BOUNDARY, PROPERTY AND CONTROL		
BM	Bench-Mark	Description
COP	Dc Copper	Boundary-Found
DDDK	D-Dot Disk Found	Note Marks on Disk
GPF	Dc Gas Pipe	Number on Disk
IPF	Iron Pipe Found	Pinch Pipe Or Open Pipe
IPFC	Iron Pipe Found W/Cap	Note Marks on Cap
MTDK	Metro Disk Found	Note Marks on Disk
NAIL	Nail Found	
NPDK	National Park Disk Found	Note Marks on Disk
PKF	Pk Found	

FIELD CODE	DESCRIPTION	ATTRIBUTE
STONE	Dc Boundary Stone or Parcel	Stone Number If Seen
TIL	Tack In Lead	
USDK	Usgs Disk or Control Found	Number on Disk
XCUT	Boundary Corner or Control	
PILLARS AND COLUMNS		
PILR	Pillar Type	<u>Pillar Type</u> : Brick, Concrete, Stone
PLANIMETRICS		
DTCL	Ditch Centerline-V-Ditch	
GRBK	Grade Break	
MBOXR	Residential Mailbox	
MHST	Manhole Steam	Size In Inches
MHUK	Manhole Unknown	Size In Inches
PM	Parking Meter	
PMKI	Parking Meter Kiosk	
TCAN	Trash Can	
TOPB	Top Of Bank	
TOES	Toe Of Slope	
No Code	All Text for Site Features	
RAILROAD AND METRO		
RRCL	Rail Road Center of Ties	
RREQ	Rail Equipment, gates signals, etc	
RRGT	Metro Vault Metal Grate	Steel Grate
RRTK	Rail Road Single Track	Center Line Metro, Csx
RRTR	Trolley Tracks	Each Track
RRVT	Metro Vault	Concrete Outline

FIELD CODE	DESCRIPTION	ATTRIBUTE
RIVER/CREEK		
RVED	River Edge	
RVDK	Dock	
RVPI	Pile / Pole	
SSRV	Sounding- Depth	
ROAD		
EDAS	Edge of Asphalt	
EDBR	Edge of Brick	
EDCN	Edge of Concrete	
EDDT	Edge of Dirt	
EDGR	Edge of Gravel	
EDHC	Edge of Handi-Cap Ramp	
EDSR	Edge of Stairs	
EDST	Edge of Stone	
EDWT	Edge of Water	
GDRL	Guard Rail	
GUTF	Gutter Pan Flow Line	
GUTT	Gutter Pan Edge at Road	
PSAL	Arrow Left	
PSAR	Arrow Right	
PSAS	Arrow Straight	
PSDY	Paint Strip Double Yellow Line	
PSMW	Paint Strip Multi White Line	
PSSL	Arrow Straight and Left	

FIELD CODE	DESCRIPTION	ATTRIBUTE
PSSR	Arrow Straight and Right	
PSSW	Paint Strip Single White Line	
PSSY	Paint Strip Single Yellow Line	
PVCL	Center Line Road	
TBOC	Top Back of Curb	
TFOC	Top Face of Curb	
SANITARY		
CO	Clean Out	
INVSS	Invert Sanitary Sewer	Size and Direction of Pipe
MHSS	Manhole Sanitary	Size In Inches
UGUS	Underground Sewer Paint	Paint Markings
SIGN		
SIGN	Sign on Post, Metal, Wood, Etc	Type for Marker
SIGNF	Monument Sign, Billboard, Etc	Line Work for Figure
SPOT SHOT		
GRBK	Spot Shot Grade Break	
STORM		
CATB	Catch Basin	
INVSD	Invert Stormdrain	Size and Direction of Pipe
MHSD	Manhole Storm	Size in Inches
RIP	Rip Rap	
UGUD	Paint Markings	
YI	Grate for Yard Inlet	

FIELD CODE	DESCRIPTION	ATTRIBUTE
UTILITY POLES		
GUY	Guy Wire	
GUYP	Guy Pole	
UPSL1	Utility Pole Single Light	Pole Number
UPSL2	Utility Pole Dual Lights	Pole Number
UPTL	Utility Pole Traffic Light	Pole Number
UPUP	Utility Pole	Pole Number
VEGETATION		
BUSH	Single Bush	Size in Inches
CONF	Conifer Tree Type	Size in Inches
DECD	Deciduous Tree Type	Size in Inches
SHRB	Shrub Line	
TREL	Tree Line	Office Will Set Direction Code Set for Treeline Right
LSCP	Landscape Bed	
WALLS		
WLBT	Wall Bottom	
WLTP	Wall Top	
WATER		
WTBB	Water Buffalo Box	
WTCS	Water Corporate Stop	
WTFH	Water Fire Hydrant Top Operating Nut	
WTPI	Above Ground Pipe	
WTSI	Siamese Connection "Fire"	Number of Connections

FIELD CODE	DESCRIPTION	ATTRIBUTE
WTSP	Standard Stand Pipe "Fire"	Number of Connections
WTWM12	Water Meter Standard	Street Address, Street Name
WTWM24	Water Meter	Street Address, Street Name
WTWV	Water Valve	
WTSH	Ground Sprinkler Head	
MHWT	Manhole Water	Size Inches
UGUW	Underground Water Paint	Any Markings on Ground
VTWT	Water Vault	
TKWT	Tank Water	

Description Keys

DCW has a list of description keys used for field-to-finish in Civil 3D.

DC Water

The DC Water description key exists in the SURVEY_GIS_TEMPLATE.dwt

Code	Point Style	Point Label Style	Format	Layer	Scale Parameter	Fixed Scale Factor	Apply to X-Y	Marker Rotate Parameter	Marker Fixed Rotation	Rotation Direction
ASCO	DCW_CLEAN OUT	DCW_RIM ELEV	\$*	VF-NODE-SSWR	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
ASMHCB	DCW_ASMHCB	DCW_RIM ELEV	MANHOLE \$1"	VF-NODE-STRM	Parameter 1	0.083	Yes	Parameter 2	0.0 (d)	Counter Clockwise
ASMHSD	DCW_MHSD	DCW_RIM ELEV	MANHOLE \$1"	VF-NODE-STRM	Parameter 1	0.083	Yes	Parameter 2	0.0 (d)	Counter Clockwise
ASMHSS	DCW_MHSS	DCW_RIM ELEV	MANHOLE \$1"	VF-NODE-SSWR	Parameter 1	0.083	Yes	Parameter 2	0.0 (d)	Counter Clockwise
ASMHWT	DCW_MHWT	DCW_RIM ELEV	MANHOLE \$1"	VF-NODE-WATR	Parameter 1	0.083	Yes	Parameter 2	0.0 (d)	Counter Clockwise
ASWTBB	DCW_WTBB	DCW_RIM ELEV	BUFFALO BOX	VF-NODE-WATR	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
ASWTBO	DCW_ASWTBO	DCW_TOP NUT	BLOW OFF	VF-NODE-WATR	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
ASWTCS	DCW_WTCS	DCW_RIM ELEV	WATER SHUTOFF	VF-NODE-WATR	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
ASWTFH	DCW_WTFH	DCW_TOP NUT	FIRE HYDRANT \$1	VF-NODE-WATR	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
ASWTWM	DCW_WM	DCW_RIM ELEV	WATER METER	VF-NODE-WATR	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
ASWTWT	DCW_WTWT	DCW_ASBUILT WATER TEE	\$1" X \$2"	VF-NODE-WATR	Parameter 1	1	Yes	Parameter 2	0.0 (d)	Counter Clockwise
ASWTWV	DCW_Water Valve	DCW_ASBUILT WATER VALVE	\$1	VF-NODE-WATR	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
BBOL	DCW_BBOL	DCW_BOLLARDS	\$1	VF-NODE-SITE	Parameter 1	0.083	Yes	Parameter 2	0.0 (d)	Counter Clockwise
BLAD	<default>	DCW_ADDRESS	\$1	VF-NODE-LABL	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
BLDF	<default>	DCW_FIRST FLOOR	\$*	VF-NODE-LABL	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
BM	DCW_BENCHMARK	DCW_BOUNDARY MARKERS	\$*	VF-NODE-SITE-CTRL	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
BORE	DCW_BORE	DCW_WELLS	BORING#\$1	VF-NODE-SITE	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
BUSH	DCW_BUSH	DCW_BUSH'S	\$1	VF-NODE-VEGE	Parameter 1	0.083	Yes	Parameter 2	0.0 (d)	Counter Clockwise

Code	Point Style	Point Label Style	Format	Layer	Scale Parameter	Fixed Scale Factor	Apply to X-Y	Marker Rotate Parameter	Marker Fixed Rotation	Rotation Direction
CHK	DCW_CHECK SHOTS	DCW_CONTROL	CHECK SHOT	VF-NODE-SITE-CTRL	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
CMEM	DCW_CMEM	DCW_SURVEY ELEV & DESC	\$*	VF-NODE-COMM	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
CMPP	DCW_CMPP	DCW_SURVEY ELEV & DESC	\$*	VF-NODE-COMM	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
CMTE	DCW_TELE	DCW_SURVEY ELEV & DESC	\$*	VF-NODE-COMM	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
CMTP	DCW_CMTP	DCW_SURVEY ELEV & DESC	\$*	VF-NODE-COMM	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
CO	DCW_CLEAN OUT	DCW_STRUCTURE LABELS	\$*	VF-NODE-SSWR	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
CONF	DCW_CONF	DCW_TREES	\$1	VF-NODE-VEGE	Parameter 1	1	Yes	Parameter 2	0.0 (d)	Counter Clockwise
COP	DCW_MONUMENT	DCW_BOUNDARY MARKERS	\$*	VF-NODE-BNDY	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
CURB	<default>	DCW_FULL DESC	\$1 \$2 \$3 \$4 \$5 \$6	VF-NODE-LABL	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
DDDK	DCW_MONUMENT	DCW_BOUNDARY MARKERS	\$*	VF-NODE-BNDY	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
DECD	DCW_TREE	DCW_TREES	\$1	VF-NODE-VEGE	Parameter 1	1	Yes	Parameter 2	0.0 (d)	Counter Clockwise
DECD	CRZ	<default>	\$*	VF-NODE-VEGE	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
DWAY	<default>	DCW_FULL DESC	\$1 \$2	VF-NODE-LABL	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
ELCB	DCW_ELECTRIC CONTROL BOX	DCW_SURVEY ELEV & DESC	\$*	VF-NODE-ELEC	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
ELEM	DCW_ELEM	DCW_SURVEY ELEV & DESC	\$*	VF-NODE-ELEC	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
ELGL	DCW_GROUND LIGHT	DCW_SURVEY ELEV & DESC	\$*	VF-NODE-ELEC	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
ELGR	DCW_ELECTRIC GRATE	DCW_SURVEY ELEV & DESC	\$*	VF-NODE-ELEC	Parameter 1	0.083	Yes	Parameter 2	0.0 (d)	Counter Clockwise
ELLP	DCW_ELLP	DCW_ELEV BOTTOM	P#\$1	VF-NODE-ELEC	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
ELLP2	DCW_ELLP2	DCW_ELEV BOTTOM	P#\$1	VF-NODE-ELEC	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
FLAG	DCW_FLAG POST	DCW_SURVEY FEATURES	\$*	VF-NODE-SITE	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
FLY	DCW_FLY	DCW_CONTROL	FLY(\$*)	VF-NODE-SITE-CTRL	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
GPF	DCW_MONUMENT	DCW_BOUNDARY MARKERS	\$*	VF-NODE-BNDY	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
GSEM	DCW_GSEM	DCW_SURV UTIL ELEV & DESC	\$*	VF-NODE-NGAS	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise

Code	Point Style	Point Label Style	Format	Layer	Scale Parameter	Fixed Scale Factor	Apply to X-Y	Marker Rotate Parameter	Marker Fixed Rotation	Rotation Direction
GSGM	DCW_GSGM	DCW_SURV UTIL ELEV & DESC	\$*	VF-NODE-NGAS	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
GSGV	DCW_GSGV	DCW_SURV UTIL ELEV & DESC	\$1	VF-NODE-NGAS	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
GUY	DCW_GUY WIRE	DCW_SURVEY ELEV & DESC	\$*	VF-NODE-ELEC	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
GUYP	DCW_GUY POLE	DCW_SURVEY ELEV & DESC	\$*	VF-NODE-ELEC	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
HAND	DCW_HAND HOLE	DCW_SURVEY ELEV & DESC	\$*	VF-NODE-ELEC	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
HC	<default>	DCW_HANDICAP RAMP	\$1 \$2	VF-NODE-LABL	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
INVSD	DCW_STORMDRAIN INV	DCW_PIPE INVERT	\$2 \$1	VF-NODE-STRM	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
INVSS	DCW_SANITARY SEWER INV	DCW_PIPE INVERT	\$2 \$1	VF-NODE-SSWR	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
IPF	DCW_MONUMENT	DCW_BOUNDARY MARKERS	\$*	VF-NODE-BNDY	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
IPFC	DCW_MONUMENT	DCW_BOUNDARY MARKERS	\$*	VF-NODE-BNDY	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
MBOX	DCW_MBOX	DCW_SURVEY FEATURES	\$*	VF-NODE-SITE	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
MHCM	DCW_MHCM	DCW_SURVEY ELEV & DESC	\$1	VF-NODE-COMM	Parameter 1	0.083	Yes	Parameter 2	0.0 (d)	Counter Clockwise
MHEL	DCW_MHEL	DCW_SURVEY ELEV & DESC	\$1	VF-NODE-ELEC	Parameter 1	0.083	Yes	Parameter 2	0.0 (d)	Counter Clockwise
MHGS	DCW_MHGS	DCW_SURV UTIL ELEV & DESC	\$1	VF-NODE-NGAS	Parameter 1	0.083	Yes	Parameter 2	0.0 (d)	Counter Clockwise
MHSD	DCW_MHSD	DCW_RIM ELEV	\$1	VF-NODE-STRM	Parameter 1	0.083	Yes	Parameter 2	0.0 (d)	Counter Clockwise
MHSDN	DCW_MANHOLE SD NEW	DCW_RIM ELEV	\$*	VF-NODE-STRM	Parameter 1	0.083	Yes	Parameter 2	0.0 (d)	Counter Clockwise
MHSL	DCW_MHSL	DCW_SURVEY ELEV & DESC	\$1	VF-NODE-ELEC	Parameter 1	0.083	Yes	Parameter 2	0.0 (d)	Counter Clockwise
MHSS	DCW_MHSS	DCW_RIM ELEV	\$1	VF-NODE-SSWR	Parameter 1	0.083	Yes	Parameter 2	0.0 (d)	Counter Clockwise
MHSSN	DCW_MANHOLE SS NEW	DCW_RIM ELEV	\$*	VF-NODE-SSWR	Parameter 1	0.083	Yes	Parameter 2	0.0 (d)	Counter Clockwise
MHST	DCW_MHST	DCW_SURVEY FEATURES	\$*	VF-NODE-STEM	Parameter 1	0.083	Yes	Parameter 2	0.0 (d)	Counter Clockwise
MHUK	DCW_MHUK	DCW_SURVEY FEATURES	\$1	VF-NODE-MHOL	Parameter 1	0.083	Yes	Parameter 2	0.0 (d)	Counter Clockwise
MHWT	DCW_MHWT	DCW_STRUCTURE LABELS	\$1	VF-NODE-WATR	Parameter 1	0.083	Yes	Parameter 2	0.0 (d)	Counter Clockwise
MOWL	DCW_Well	DCW_WELLS	BORING#\$1	VF-NODE-SITE	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise

Code	Point Style	Point Label Style	Format	Layer	Scale Parameter	Fixed Scale Factor	Apply to X-Y	Marker Rotate Parameter	Marker Fixed Rotation	Rotation Direction
MTDK	DCW_MONUMENT	DCW_BOUNDARY MARKERS	\$*	VF-NODE-BNDY	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
NAIL	DCW_MONUMENT	DCW_BOUNDARY MARKERS	\$*	VF-NODE-BNDY	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
NIL	DCW_MONUMENT	DCW_BOUNDARY MARKERS	\$*	VF-NODE-BNDY	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
NPDK	DCW_MONUMENT	DCW_BOUNDARY MARKERS	\$*	VF-NODE-BNDY	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
PKF	DCW_MONUMENT	DCW_BOUNDARY MARKERS	\$*	VF-NODE-BNDY	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
PM	DCW_PM	DCW_SURVEY FEATURES	\$1	VF-NODE-SITE	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
PMKI	DCW_PMK	DCW_SURVEY FEATURES	\$*	VF-NODE-SITE	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
PSAW	<default>	DCW_FULL DESC	\$1	VF-PVMT-STRP	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
RIP	<default>	DCW_SURV UTIL ELEV & DESC	\$*	VF-NODE-STRM	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
RVPI	DCW_POLE	DCW_SURVEY FEATURES	\$*	VF-NODE-RIVR	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
SIGN	DCW_SIGN	DCW_SURVEY FEATURES	\$1 \$2 \$3 \$4	VF-SITE-SIGN	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
SIST	DCW_SIGN STREET	DCW_SURVEY FEATURES	\$1 \$2 \$3 \$4	VF-NODE-SITE	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
STEP	<default>	DCW_FULL DESC	Tread Width = \$1' Treads = \$2 \$3	VF-SITE-TEXT	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
STON	DCW_MONUMENT	DCW_BOUNDARY MARKERS	\$*	VF-NODE-BNDY	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
SURF	<default>	DCW_FULL DESC	\$1	VF-NODE-LABL	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
SWLK	<default>	DCW_FULL DESC	\$1 \$2	VF-NODE-LABL	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
TCAN	DCW_TCAN	DCW_SURVEY FEATURES	\$*	VF-NODE-SITE	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
TIL	DCW_MONUMENT	DCW_BOUNDARY MARKERS	\$*	VF-NODE-BNDY	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
TRV	DCW_TRV	DCW_CONTROL	TRV(\$1)	VF-NODE-SITE-CTRL	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
UPSL	DCW_UPSL	DCW_ELEV BOTTOM	P# \$1 \$2	VF-NODE-ELEC	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
UPSL1	DCW_UPSL1	DCW_ELEV BOTTOM	P# \$1 \$2	VF-NODE-ELEC	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
UPSL2	DCW_UPSL2	DCW_ELEV BOTTOM	P# \$1 \$2	VF-NODE-ELEC	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
UPTL	DCW_UPTL	DCW_ELEV BOTTOM	P# \$1 \$2	VF-NODE-ELEC	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise

Code	Point Style	Point Label Style	Format	Layer	Scale Parameter	Fixed Scale Factor	Apply to X-Y	Marker Rotate Parameter	Marker Fixed Rotation	Rotation Direction
UPUP	DCW_UPUP	DCW_ELEV BOTTOM	P# \$1 \$2	VF-NODE-ELEC	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
USDK	DCW_MONUMENT	DCW_BOUNDARY MARKERS	\$*	VF-NODE-BNDY	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
WTBB	DCW_WTBB	DCW_RIM ELEV	BUFFALO BOX	VF-NODE-WATR	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
WTCS	DCW_WTCS	DCW_SURVEY WATER	WATER SHUTOFF	VF-NODE-WATR	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
WTFH	DCW_WTFH	DCW_TOP NUT	FIRE HYDRANT \$1	VF-NODE-WATR	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
WTSH	DCW_WTSH	DCW_SURVEY WATER	\$*	VF-NODE-WATR	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
WTSI	DCW_WTSI	DCW_TOP NUT	FIRE SERVICE	VF-NODE-WATR	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
WTSP	DCW_WTSP	DCW_STRUCTURE LABELS	\$*	VF-NODE-WATR	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
WTWM12	DCW_WM12	DCW_STRUCTURE LABELS	WATER METER	VF-NODE-WATR	Parameter 1	0.083	Yes	Parameter 2	0.0 (d)	Counter Clockwise
WTWM24	DCW_WM24	DCW_STRUCTURE LABELS	WATER METER	VF-NODE-WATR	Parameter 1	0.083	Yes	Parameter	0.0 (d)	Counter Clockwise
WTWV	DCW_Water Valve	DCW_SURVEY WATER	\$*	VF-NODE-WATR	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
XCUT	DCW_MONUMENT	DCW_BOUNDARY MARKERS	\$*	VF-NODE-BNDY	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
XWLK	<default>	DCW_FULL DESC	X-WALK	VF-NODE-LABL	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise
YI	<default>	DCW_STORM STRUCTURE LABELS	\$*	VF-NODE-STRM	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise

Critical Root Zone

The Critical Root Zone description key set exists in the EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt

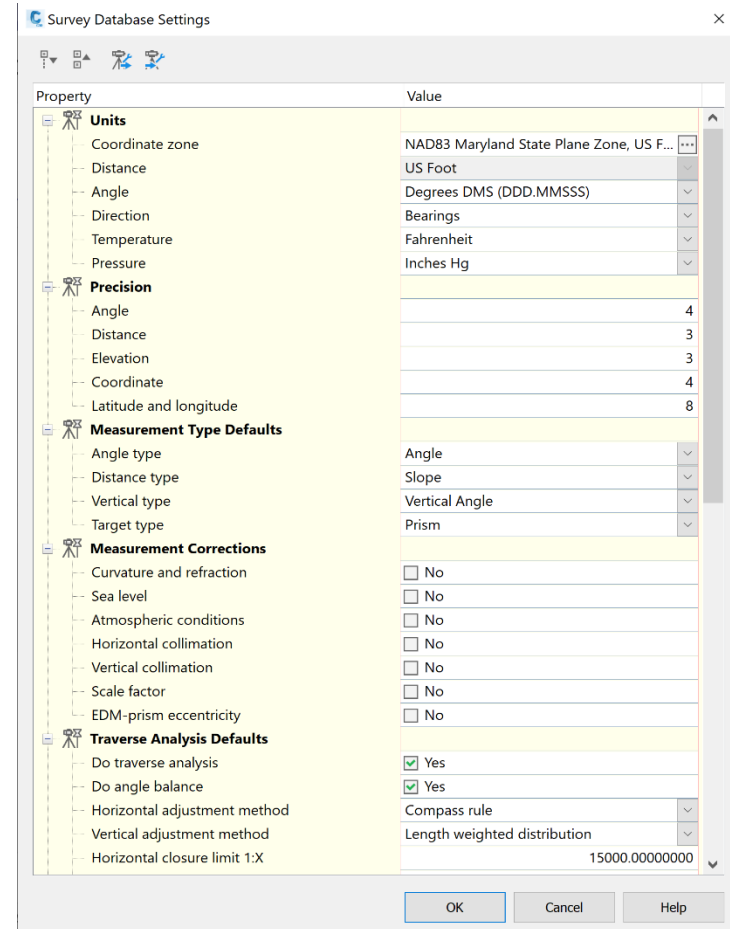
Code	Point Style	Point Label Style	Format	Layer	Scale Parameter	Fixed Scale Factor	Apply to X-Y	Marker Rotate Parameter	Marker Fixed Rotation	Rotation Direction
DECD	CRZ	<default>	\$*	VF-NODE-VEGE	Parameter 1	1	No	Parameter 2	0.0 (d)	Counter Clockwise

Survey Settings

Civil 3D's Survey functionality makes use of two different levels of settings. The first level allows for the determination of Database settings, Equipment Settings, Figure Prefix, and Linework Codes. Above these, there is a higher level of User settings that contain the paths and current selections for each of the lower settings types. All of these Survey Settings types are discussed below:

Survey Database Settings

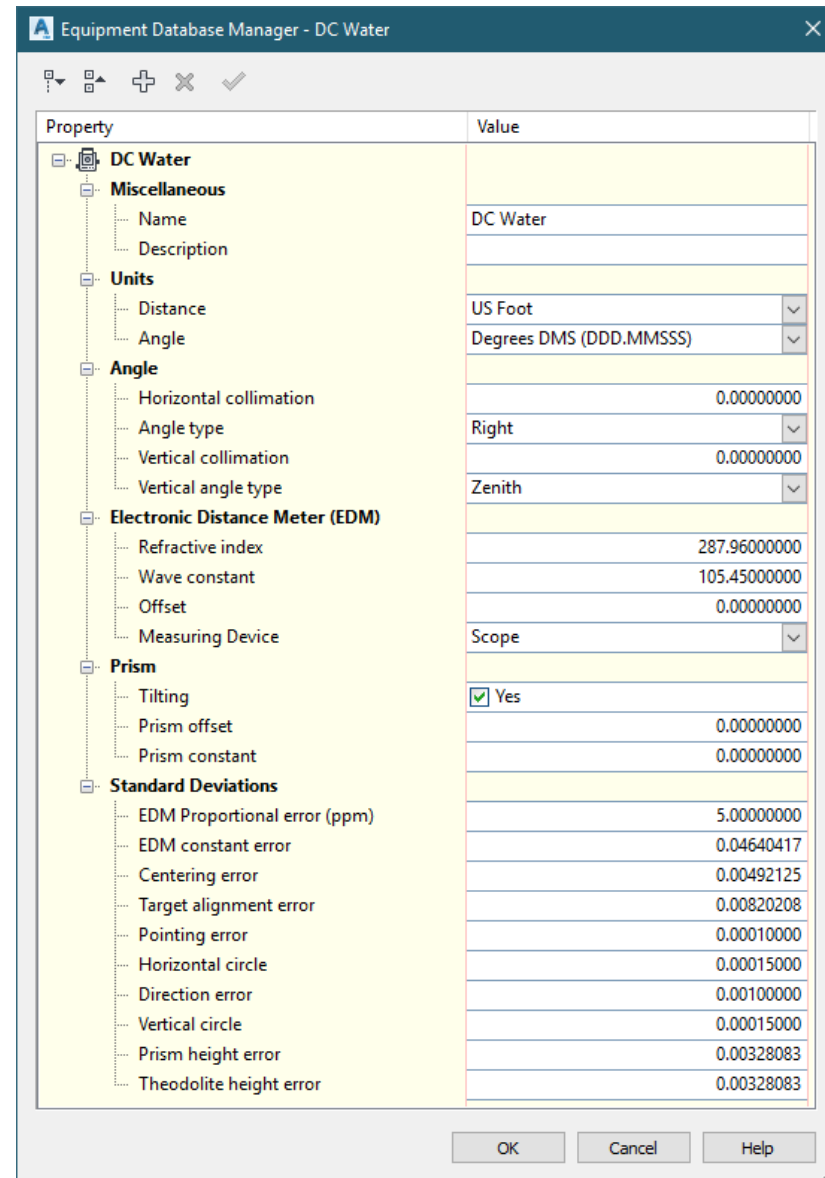
The Survey Database Settings establish a number of parameters for individual Survey Databases. These settings can be set to default for Database creation. This allows for items such as Coordinate Zone, measurement types, precision, correction, etc. to be automatically set when a new Survey Database is created. DC Water's Survey Database settings are shown here:



Equipment Database

An Equipment Database carries settings and specifications for a specific surveying instrument. This Database can be set as the default for Surveying functions inside of Civil 3D. This allows settings for EDM, Prisms, Standard Deviations, etc. to be automatically applied during field to finish calculations and network adjustments. DC Water's Equipment Database settings are shown here:

Note: This should be changed/edited if a different or new instrument is being used for field data collection.



Property	Value
DC Water	
Miscellaneous	
Name	DC Water
Description	
Units	
Distance	US Foot
Angle	Degrees DMS (DDD.MMSS)
Angle	
Horizontal collimation	0.0000000
Angle type	Right
Vertical collimation	0.0000000
Vertical angle type	Zenith
Electronic Distance Meter (EDM)	
Refractive index	287.9600000
Wave constant	105.4500000
Offset	0.0000000
Measuring Device	Scope
Prism	
Tilting	<input checked="" type="checkbox"/> Yes
Prism offset	0.0000000
Prism constant	0.0000000
Standard Deviations	
EDM Proportional error (ppm)	5.0000000
EDM constant error	0.04640417
Centering error	0.00492125
Target alignment error	0.00820208
Pointing error	0.00010000
Horizontal circle	0.00015000
Direction error	0.00100000
Vertical circle	0.00015000
Prism height error	0.00328083
Theodolite height error	0.00328083

Figure Prefix Database

A Figure Prefix Database is used in the field-to-finish process to establish desired properties. When a line is recorded in the field, the code or prefix used can determine properties that are assigned to the line during field-to-finish in Civil 3D. These codes and their corresponding drawing properties are listed below:

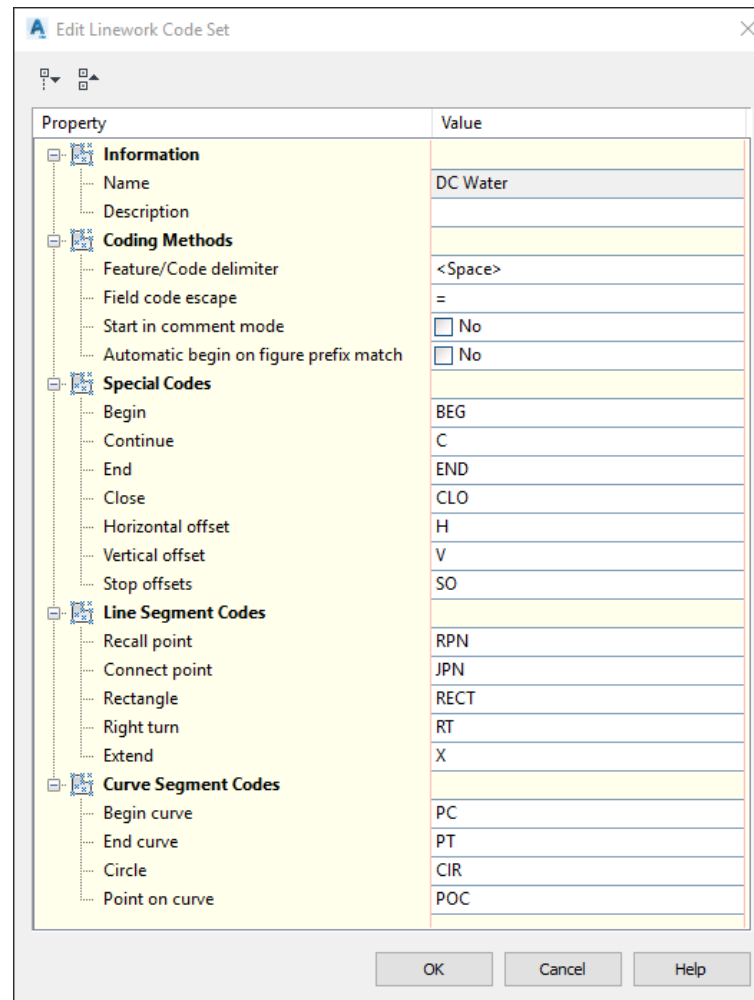
Name	Breakline	Lot Line	Layer	Figure Style	Site
BJER	No	No	VF-SITE-BARR	DCW_Flatten	Survey Site
BKRK	No	No	VF-SITE-FEAT	DCW_Flatten	Survey Site
BLDG	No	No	VF-BLDG-OTLN-FIGR	DCW_Flatten	Survey Site
BLDK	No	No	VF-BLDG-DECK-FIGR	DCW_Flatten	Survey Site
BLDO	No	No	VF-BLDG-OVHD-FIGR	DCW_Flatten	Survey Site
BLPR	No	No	VF-BLDG-PRCH-FIGR	DCW_Flatten	Survey Site
BPUP	No	No	VF-SITE-BARR-BBOL	DCW_Flatten	Survey Site
BRBT	No	No	VF-BRDG-BENT	DCW_Flatten	Survey Site
BRCJ	No	No	VF-BRDG-CTLJ	DCW_Flatten	Survey Site
BRCL	No	No	VF-BRDG-CNTR	DCW_Flatten	Survey Site
BRDK	No	No	VF-BRDG-DECK	DCW_Flatten	Survey Site
BRRL	No	No	VF-BRDG-GRAL	DCW_Flatten	Survey Site
CATB	Yes	No	VF-STRM-STRC-FIGR	DCW_Flatten	Survey Site
CMTB	No	No	VF-COMM-CMTB	DCW_Flatten	Survey Site
CMVT	No	No	VF-COMM-STRC	DCW_Flatten	Survey Site
CRWN	Yes	No	VF-ROAD-CRWN	DCW_Flatten	Survey Site
DTCL	Yes	No	VF-STRM-DTCH	DCW_Flatten	Survey Site
EDAS	Yes	No	VF-PVMT-ASPH-FIGR	DCW_Flatten	Survey Site
EDBR	Yes	No	VF-PVMT-BRCK-FIGR	DCW_Flatten	Survey Site
EDCN	Yes	No	VF-PVMT-CONC-FIGR	DCW_Flatten	Survey Site
EDGR	Yes	No	VF-PVMT-GRVL	DCW_Flatten	Survey Site
EDHC	Yes	No	VF-PVMT-CONC-FIGR	DCW_Flatten	Survey Site
EDSR	No	No	VF-PVMT-STEP	DCW_Flatten	Survey Site
EDST	Yes	No	VF-PVMT-STON	DCW_Flatten	Survey Site

Name	Breakline	Lot Line	Layer	Figure Style	Site
EDWT	Yes	No	VF-RIVR-EDGE	DCW_Flatten	Survey Site
ELGT	No	No	VF-ELEC-STRC-FIGR	DCW_Flatten	Survey Site
ELTR	No	No	VF-ELEC-STRC-FIGR	DCW_Flatten	Survey Site
EXPJ	No	No	VF-ROAD-CONC-CHNG	DCW_Flatten	Survey Site
FNCE	No	No	VF-SITE-FENC	DCW_Flatten	Survey Site
FNGT	No	No	VF-SITE-FENC-GATE	DCW_Flatten	Survey Site
GRBK	Yes	No	VF-SITE-TOES	DCW_Flatten	Survey Site
GDRL	No	No	VF-ROAD-GDRL	DCW_Flatten	Survey Site
GSTK	No	No	VF-NGAS-STRC-VALT	DCW_Flatten	Survey Site
GUTF	Yes	No	VF-ROAD-GUTF	DCW_Flatten	Survey Site
GUTT	Yes	No	VF-ROAD-GUTT	DCW_Flatten	Survey Site
OHW	No	No	VF-ELEC-OVHD	DCW_Flatten	Survey Site
PLBR	No	No	VF-SITE-BRCK	DCW_Flatten	Survey Site
PLCN	No	No	VF-SITE-CONC	DCW_Flatten	Survey Site
PLST	No	No	VF-SITE-STON	DCW_Flatten	Survey Site
PSDY	Yes	No	VF-PVMT-STRP-PSDY	DCW_Flatten	Survey Site
PSMW	No	No	VF-PVMT-STRP-PSMW	DCW_Flatten	Survey Site
PSSW	No	No	VF-PVMT-STRP-PSSW	DCW_Flatten	Survey Site
PSSY	No	No	VF-PVMT-STRP-PSSY	DCW_Flatten	Survey Site
PVCL	Yes	No	VF-ROAD-PVCL	DCW_Flatten	Survey Site
RIP	Yes	No	VF-STRM-DTCH	DCW_Flatten	Survey Site
RRCL	No	No	VF-RAIL-CNTR	DCW_Flatten	Survey Site
RREQ	No	No	VF-RAIL-EQPM	DCW_Flatten	Survey Site
RRGT	No	No	VF-RAIL-METR-GRTE	DCW_Flatten	Survey Site
RRTK	No	No	VF-RAIL-TRCK	DCW_Flatten	Survey Site
RRTR	No	No	VF-RAIL-TROL	DCW_Flatten	Survey Site
RVDK	No	No	VF-RIVR-EDGE	DCW_Flatten	Survey Site
Sample	No	No	No	DCW_Flatten	Survey Site
SHRBL	No	No	VF-VEGE-BROW	DCW_Flatten	Survey Site

Name	Breakline	Lot Line	Layer	Figure Style	Site
SIGNF	No	No	VF-SITE-SIGN	DCW_Flatten	Survey Site
TBOC	Yes	No	VF-ROAD-CURB-BACK	DCW_Flatten	Survey Site
TFOC	Yes	No	VF-ROAD-CURB-FACE	DCW_Flatten	Survey Site
TKLP	No	No	VF-NGAS-STRC-VALT	DCW_Flatten	Survey Site
TKOL	No	No	VF-NGAS-STRC-VALT	DCW_Flatten	Survey Site
TKWT	No	No	VF-WATR-STRC	DCW_Flatten	Survey Site
TOES	Yes	No	VF-SITE-TOES	DCW_Flatten	Survey Site
TOPB	Yes	No	VF-SITE-TOPB	DCW_Flatten	Survey Site
TREL	No	No	VF-VEGE-TREL-FIGR	DCW_Flatten	Survey Site
UGST	No	No	VF-STEM-UGND	DCW_Flatten	Survey Site
UGUC	No	No	VF-COMM-UGND	DCW_Flatten	Survey Site
UGUD	No	No	VF-STRM-UGND	DCW_Flatten	Survey Site
UGUE	No	No	VF-ELEC-UGND	DCW_Flatten	Survey Site
UGUG	No	No	VF-NGAS-UGND	DCW_Flatten	Survey Site
UGUS	No	No	VF-SSWR-UGND	DCW_Flatten	Survey Site
UGUW	No	No	VF-WATR-UGND	DCW_Flatten	Survey Site
VTCM	Yes	No	VF-COMM-STRC-VTCM	DCW_Flatten	Survey Site
VTEL	Yes	No	VF-ELEC-STRC-FIGR	DCW_Flatten	Survey Site
VTGS	Yes	No	VF-NGAS-STRC-VALT	DCW_Flatten	Survey Site
VTMT	No	No	VF-RAIL-METR-VALT	DCW_Flatten	Survey Site
VTRR	No	No	VF-RAIL-METR-VALT	DCW_Flatten	Survey Site
VTWT	Yes	No	VF-WATR-STRC	DCW_Flatten	Survey Site
WLBT	Yes	No	VF-WALL-BOTM-FIGR	DCW_Flatten	Survey Site
WLTP	Yes	No	VF-WALL-WTOP-FIGR	DCW_Flatten	Survey Site
YI	Yes	No	VF-STRM-STRC-FIGR	DCW_Flatten	Survey Site

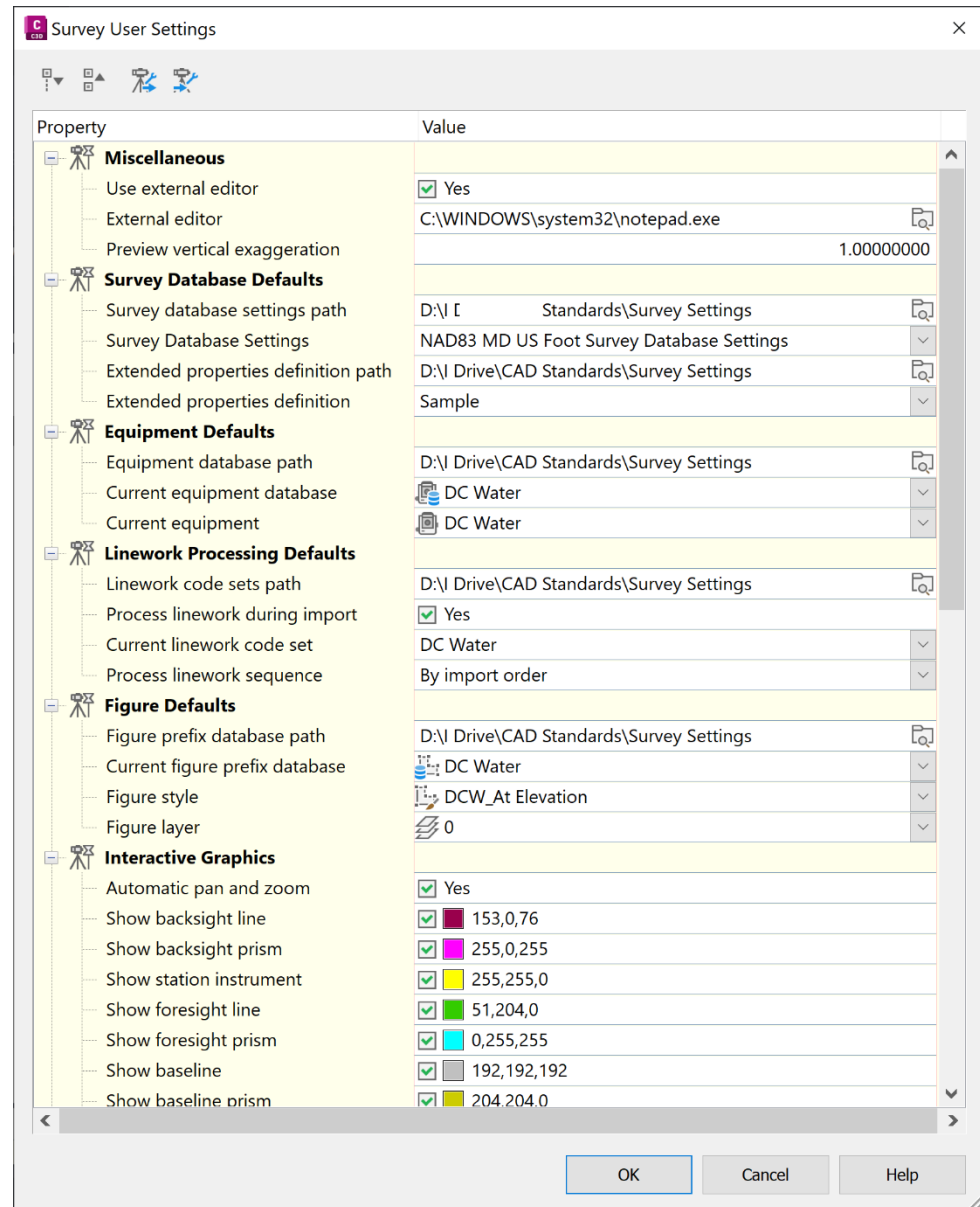
Linework Code Set

During field data collection, command codes are used in conjunction with point codes to record linework at the site (curbs, top of walls, etc.). A Linework Code Set can be created in Civil 3D to customize the linework commands that will be used during the field-to-finish process. DC Water's Linework Code Set is shown here:



Survey User Setting

Because multiple settings files, equipment databases, figure prefix databases and Linework Code sets can exist, Survey User Settings are used to point to the default selection for these items. Additional settings for user-level functions such as interactive graphics, data import, data export, previews, and reports are also stored in the Survey User Settings. DC Water’s Survey User Settings are shown here:



Appendix I: Civil 3D Styles

Surface Styles

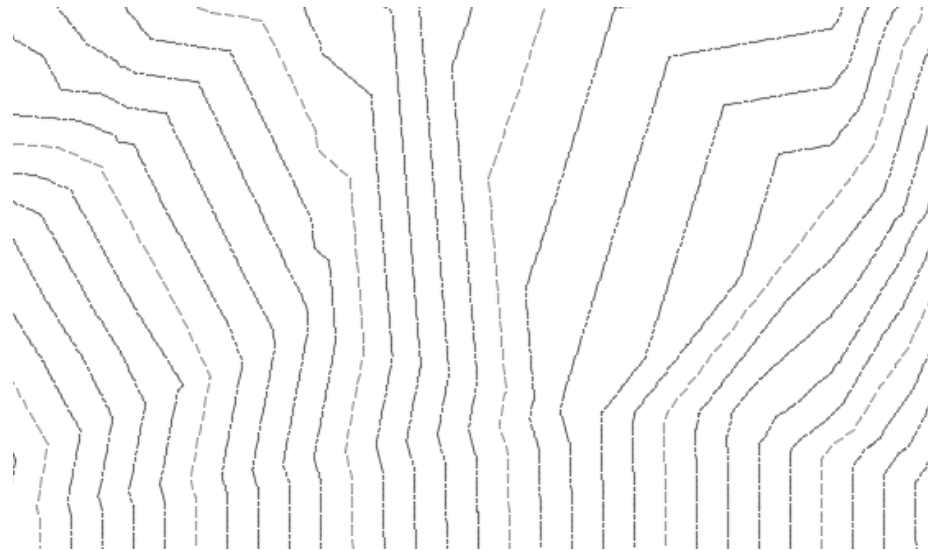
DC Water's Civil 3D templates contain 4 different Surface Styles that are to be used to correctly represent existing and proposed ground in various circumstance. The properties of these styles along with graphic examples are provided below.

DCW_Contours_2' and 10' (Background)

This Surface Style displays 2'-interval contours in Plan view and TIN triangles in a 3D view. The Major Contours are shown on the VF-TOPO-MAJR layer and the Minor contours are shown on the VF-TOPO-MINR layer. This Surface Style is found in the following templates:

EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
SURFACE_RESTORATION_PLAN_TEMPLATE.dwt

An example of this Style applied to a Surface is shown below:

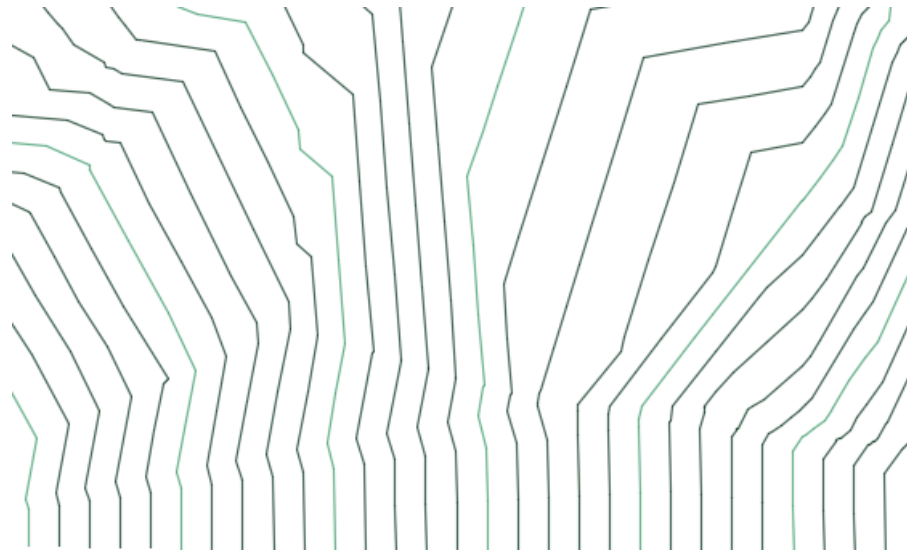


DCW_Contours_2' and 10' (Design)

This Surface Style displays 2'-interval contours in Plan view and TIN triangles in a 3D view. The Major Contours are shown on the CI-TOPO-MAJR layer and the Minor contours are shown on the CI-TOPO-MINR layer. This Surface Style is found in the following templates:

UTILITY_DESIGN_TEMPLATE.dwt

An example of this Style applied to a Surface is shown below:

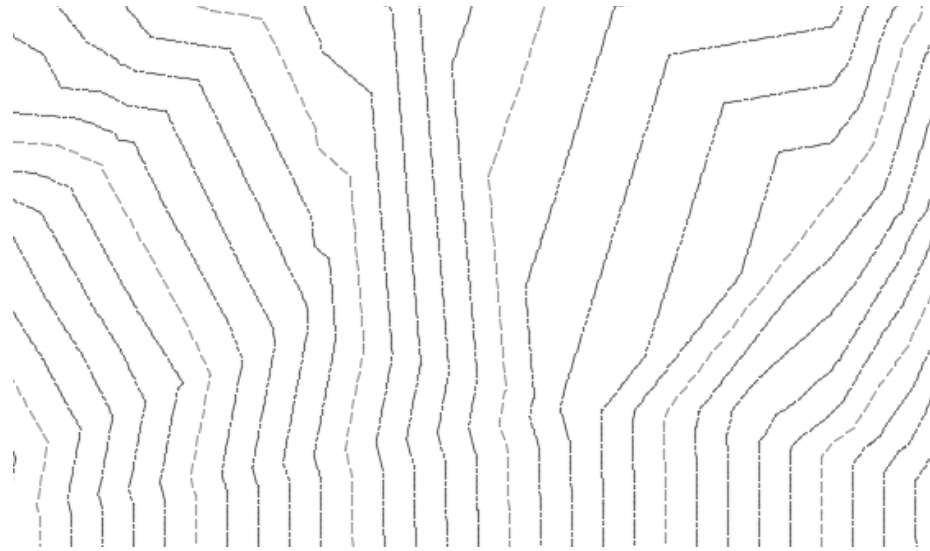


DCW_Contours_2' and 10' (Existing Surveyed)

This Surface Style displays 2'-interval contours in Plan view and TIN triangles in a 3D view. The Major Contours are shown on the VF-TOPO-MAJR layer and the Minor contours are shown on the VF-TOPO-MINR layer. This Surface Style is found in the following templates:

UTILITY_DESIGN_TEMPLATE.dwt

An example of this Style applied to a Surface is shown below:

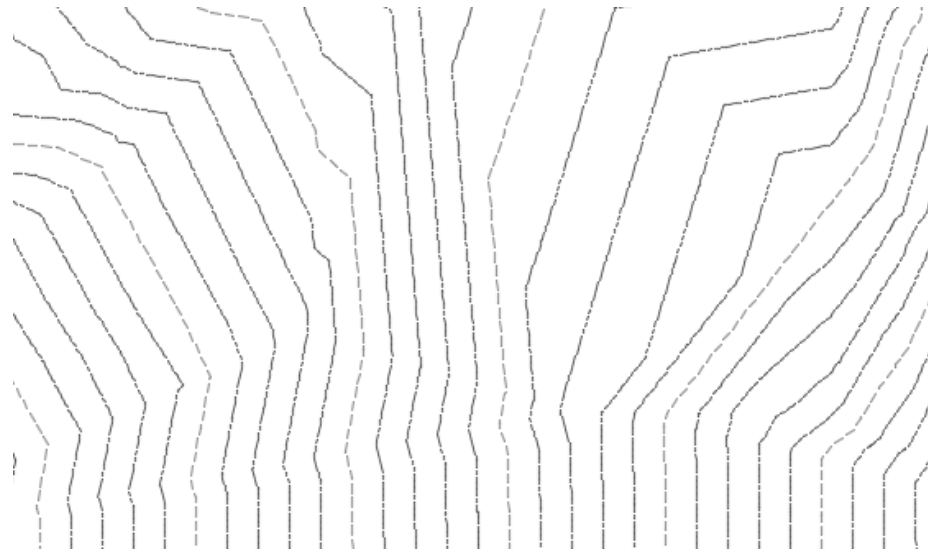


DCW_Contours_2' and 10' (Existing Digital)

This Surface Style displays 2'-interval contours in Plan view and TIN triangles in a 3D view. The Major Contours are shown on the VI-TOPO-MAJR layer and the Minor contours are shown on the VI-TOPO-MINR layer. This Surface Style is found in the following templates:

UTILITY_DESIGN_TEMPLATE.dwt

An example of this Style applied to a Surface is shown below:



DCW_SURVEY BASE

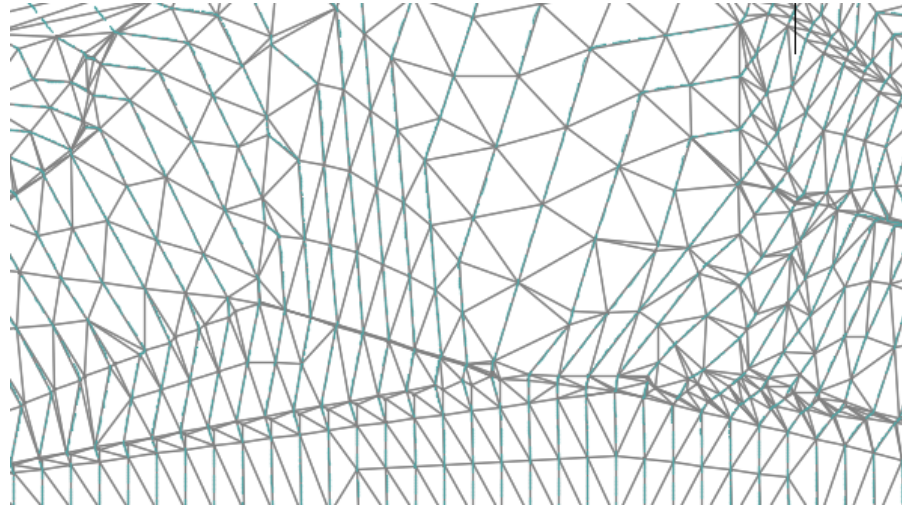
This Surface Style displays 2'-interval contours, TIN Points, TIN Triangles, and the Surface Border in Plan view and a 3D view. The chart below lists the layers used for these items. The Major Contours are shown on the CI-TOPO-MAJR layer and the Minor contours are shown on the CI-TOPO-MINR layer.

Surface Component	Layer
Points	VF-TINN-VIEW
Triangles	VF-TINN-VIEW
Border	VF-TINN-BNDY
Major Contours	VF-CONT-MAJR
Minor Contours	VF-CONT-MINR

This Surface Style is found in one template:

SURVEY_GIS_BASE.dwt

An example of this Style applied to a Surface is shown below:



DCW__No Display

In this Surface Style, all of the components are turned off. This means that regardless of which layers are being used, no portion of the Surface will appear.

This Surface Style is found in the following templates:

SURFACE_RESTORATION_PLAN_TEMPLATE.dwt
UTILITY_DESIGN_TEMPLATE.dwt

Alignment Styles, Label Styles, and Table Styles

DC Water's Civil 3D templates contain 3 different Alignment Styles and 4 different Label Sets that are to be used for multiple purposes. The properties and uses of these styles along with graphic examples are provided below.

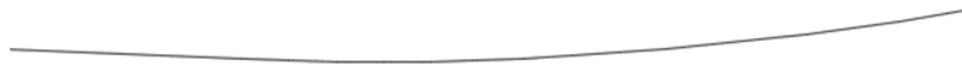
Alignment Styles

DCW_Sheet

This Alignment Style is used to build Sheet layouts. In this Style, all of the visible components are set to display on the VI-SHET-ALGN layer. This means that regardless of the layer assigned to the Alignment itself, these components will follow the properties of the VI-SHET-ALGN layer. This Style displays lines and curves only. This Style is found in one template:

UTILITY_DESIGN_TEMPLATE.dwt

An example of this Style applied to an Alignment is shown below:



DCW_Water and Sewer Design

As the name suggests, this Alignment Style is to be used for the design of Water and Sewer systems. In this Style, all of the visible components are set to display on the CI-SSWR-ALGN layer. This means that regardless of the layer assigned to the Alignment itself, these components will follow the properties of the CI-SSWR-ALGN layer. This Style displays lines, curves, spirals, line extensions and curve extensions. Points of Intersection are represented with a triangle symbol. This Style is found in the following templates

EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
SURFACE_RESTORATION_PLAN_TEMPLATE.dwt
UTILITY_DESIGN_TEMPLATE.dwt

An example of this Style applied to an Alignment is shown below:



DCW_No Display

This Alignment Style is useful when an Alignment is necessary (for the purpose of Profiles, Sections, etc.) but does not need to be displayed or plotted. In this Style, all of the components are turned off. This means that regardless of which layers are being used, no portion of the Alignments will appear. This Style is found in the following templates

EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
SURFACE_RESTORATION_PLAN_TEMPLATE.dwt
UTILITY_DESIGN_TEMPLATE.dwt

Alignment Label Sets

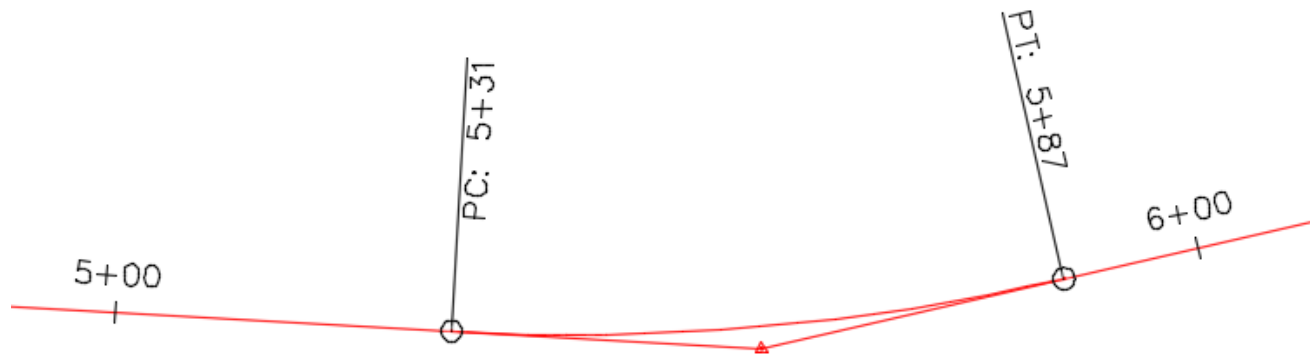
Alignment Label Sets are used to apply one or more types of station labels to an Alignment. This includes labels for major stations, minor stations, geometry points, and more.

DCW_Major Minor and Curves

This Alignment Label Set is to be used in the design drawings in DC Water projects. The set applies Major Station labels, Minor Station labels, and Geometry Point labels to an Alignment. Major Station labels are placed every 100' along the Alignment and are displayed parallel to the Alignment with a Tick at the station location. Minor Station labels are placed every 50' along the Alignment between the Major Station Labels and are shown as simple ticks. The Geometry Point labels are placed at curve PCs and PTs and are displayed with a circle at the station location, and a label placed on a line that is perpendicular to the Alignment. This Style is only found in the following template:

UTILITY_DESIGN_TEMPLATE.dwt

An example of this Label Set applied to an Alignment is shown below:



DCW_No Labels

This Label Set contains no labels and ensures that an Alignment can be created with no information displayed. This Label Set is to be used for all Alignments that are not design Alignments. This Label Set is found in the following templates:

EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
SURFACE_RESTORATION_PLAN_TEMPLATE.dwt
UTILITY_DESIGN_TEMPLATE.dwt
UTILITY_DESIGN_GS_TEMPLATE.dwt

Alignment Segment Label Styles

Alignment Segment Labels are used to add line and curve information to the Alignment. DC Water uses 3 Line Label Styles and 2 Curve Label Styles. Segment Labels typically exist in a “Label Mode” until they are used to create a table. At this point, they exist in “Tag Mode”. These are described below

Line Label Styles

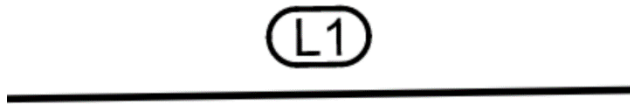
DCW Line (Tag)

This Line Label Style provides an immediate Tag number for the Alignment Line Segment. The label uses the Text Style ANNO .10 and is placed on the “CI-WATR-PIPE-TEXT” layer. The Label is inserted into the drawing in Tag Mode by default, regardless of whether or not a table has been created. The Table Tag number is displayed preceded by an “L” and the text is anchored to the Alignment by its bottom center. A Rounded Rectangular border is drawn around the tag. The grip of this label can be used to drag the label away from the Alignment to adjust its location. However, no leader is created, and the border stays intact. This Line Label Style is only found in one template:

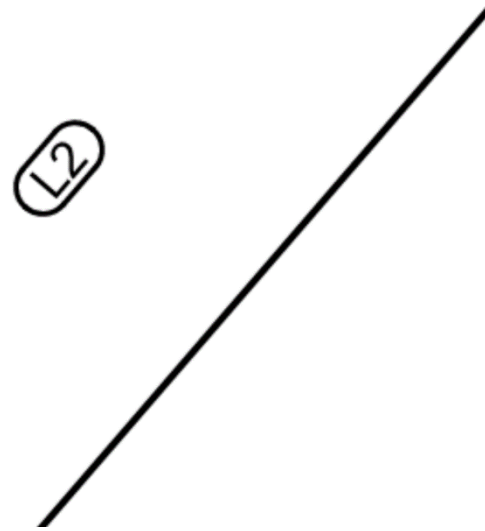
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Alignment Line Label Style is shown below:

Tag Mode:



Tag Mode (Dragged State):



DCW Line – Tag [Leader]

This Line Label Style is a child of the “DCW_Line (Tag)” Label Style, which means that it shares the majority of its properties with that Style. This Line Label Style provides line information directly on the Alignment Line Segment in Plan. The difference is the way the label behaves when the grip is used to drag the label away from the Alignment. In this Style, dragging the label using the grip creates a leader, and the rounded rectangular border disappears. This Line Label Style is only found in one template:

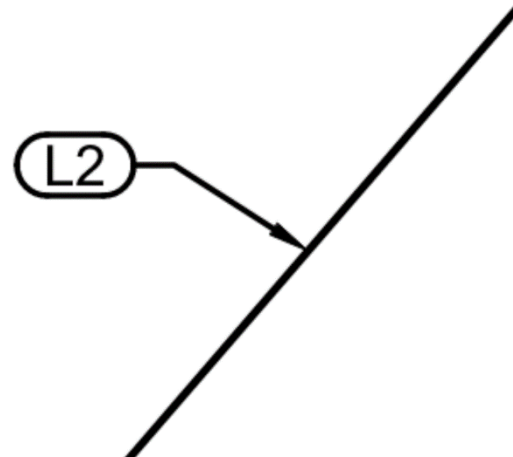
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Alignment Line Label Style is shown below:

Tag Mode:



Tag Mode (Dragged State):



Curve Label Styles

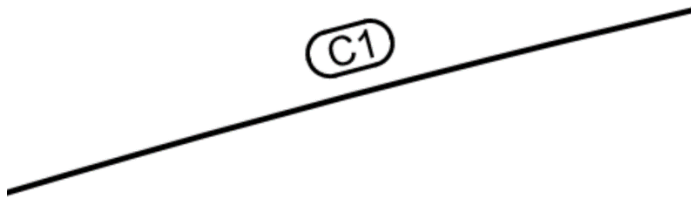
DCW Curve (Tag)

This Curve Label Style provides an immediate Tag number for the Alignment Line Segment. The label uses the Text Style ANNO .10 and is placed on the “CI-WATR-PIPE-TEXT” layer. The Label is inserted into the drawing in Tag Mode by default, regardless of whether a table has been created. The Table Tag number is displayed preceded by an “C” and the text is anchored to the Alignment by its bottom center. A Rounded Rectangular border is drawn around the tag. The grip of this label can be used to drag the label away from the pipe and automatically create a leader. In this state, the border is removed. This Curve Label Style is only found in one template:

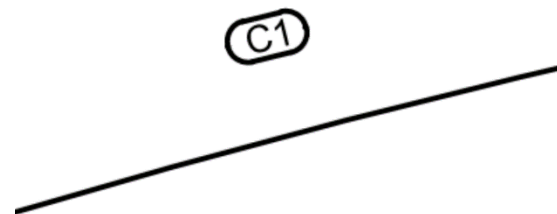
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Alignment Curve Label Style is shown below:

Tag Mode:



Tag Mode (Dragged State):



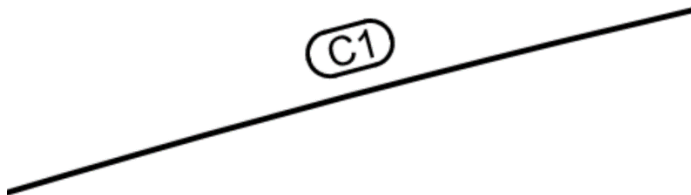
DCW Curve – Tag [Leader]

This Curve Label Style provides an immediate Tag number for the Alignment Line Segment. The label uses the Text Style ANNO .10 and is placed on the “CI-WATR-PIPE-TEXT” layer. The Label is inserted into the drawing in Tag Mode by default, regardless of whether a table has been created. The Table Tag number is displayed preceded by an “C” and the text is anchored to the Alignment by its bottom center. A Rounded Rectangular border is drawn around the tag. The grip of this label can be used to drag the label away from the pipe and automatically create a leader. In this state, the border is removed. This Curve Label Style is only found in one template:

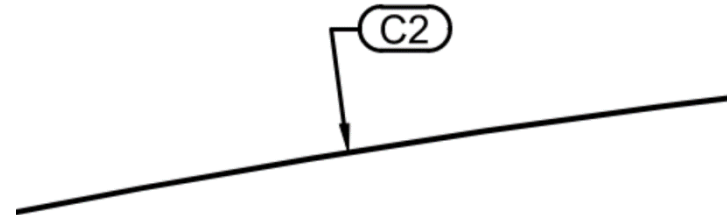
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Alignment Curve Label Style is shown below:

Tag Mode:



Tag Mode (Dragged State):



Alignment Table Styles

DCW uses Alignment Table Styles to provide information about Water system designs. In order for these tables to match the information about the Pressure Pipe Network, an Alignment must be created that follows the centerline of the Network. The two Alignment Table Styles used for this purpose are described below.

DCW_Water Design (Line Table)

This Alignment Table Style is to be used in the design drawings in DC Water projects. The border and text elements of the table are displayed on the "CI-WATR-ALGN-TABL" layer. The text in the Table Title uses the "ANNO .12" Text Style and is 0.125" tall. The column headers and the data in the cells all use the "ANNO .10" Text Style and are 0.1" tall. The columns include the line number, length, direction (bearing), start point, and end point of each line segment. Before this Table can be created, Line Labels must be applied to the Alignment (See the previous section for information on these labels). This Table Style is used in the following templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An example of this Table Style is shown below:

NEW WATER MAIN LINE TABLE						
LINE	LENGTH	DIRECTION	START POINT	START STATION	END POINT	END STATION
L1	21.3'	N87°37'14"E	N468488.0 E1306077.1	0+00.0	N468488.9 E1306098.4	0+21.3
L2	14.1'	N42°37'14"E	N468488.9 E1306098.4	0+21.3	N468499.3 E1306107.9	0+35.4
L3	1096.6'	N87°37'14"E	N468499.3 E1306107.9	0+35.4	N468544.8 E1307203.6	11+32.1
L4	490.9'	N30°05'40"E	N468681.7 E1307430.2	14+08.2	N469106.4 E1307676.3	18+99.1

DCW_Water Design (Curve Table)

This Alignment Table Style is to be used in the design drawings in DC Water projects. The border and text elements of the table are displayed on the “CI-WATR-ALGN-TABL” layer. The text in the Table Title uses the “ANNO .15” Text Style and is 0.15” tall. The column headers and the data in the cells asll use the “ANNO .10” Text Style and are 0.1” tall. The columns include the curve number, radius, length, chord length, and delta angle. Before this Table can be created, Curve Labels must be applied to the Alignment (See the previous section for information on these labels). This Table Style is used in the following templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An example of this Table Style is shown below:

NEW WATER MAIN CURVE TABLE						
CURVE#	RADIUS	LENGTH	CHORD LENGTH	DELTA	START STATION	END STATION
C1	275.0'	276.1'	264.7'	57°31'34"	11+32.1	14+08.2
C2	576.0'	331.5'	326.9'	32°58'30"	18+99.1	22+30.6

Gravity Network Pipe Styles, Label Styles, and Table Styles

DC Water uses Gravity Pipe Networks to model Sewer Rehabilitation as well as existing utilities in Plan and Profile. This section outlines the Styles that exist in DC Water’s templates for this purpose.

Pipe Styles

Five different Pipe Styles are used across DC Water’s templates.

DCW_EX_Profile

This Pipe Style is used to display existing pipes of various utilities as crossings in Profile Views. In Plan, the Pipe centerline is displayed on the “VI-PIPE-PROF” layer. In Profile, the outside walls of the pipe are shown as a crossing ellipse on the “VI-UTIL-PROF” layer. This Pipe Style is found in the following templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- EXISTING_UTILITY_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Pipe Style is shown below:

Plan:



Profile:



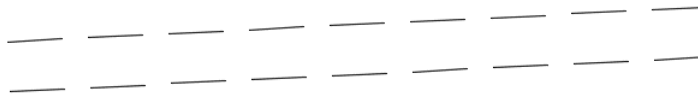
DCW_EX_Sewer

This Pipe Style is used to display existing Sanitary Sewer Pipes. In Plan, the outside walls are displayed on the “VF-SSWR-PIPE” layer, but with an override of DASHED for the linetype. In Profile, the outside walls of the pipe are displayed on the same layer. This Pipe Style is found in the following templates:

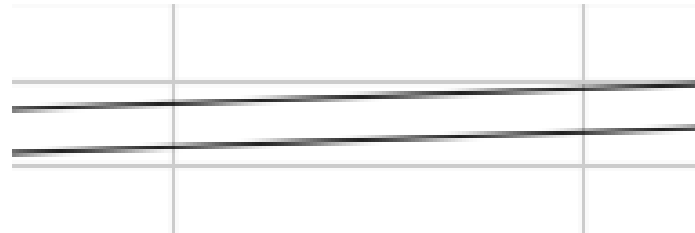
- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Pipe Style is shown below:

Plan:



Profile:



DCW_NEW_Sewer Rehab

This Pipe Style is used to display proposed Sewer Rehab Pipes. In Plan, the outside walls and hatch are displayed. The outside walls are set to the VF-SSWR-PIPE. The Pipe hatch is a solid hatch to the inner walls that is shown on the “VF-SSWR-PIPE-HTCH”. In Profile, the outside walls of the pipe are displayed, on layer 0, so they will also adopt the properties of the master layer of the Pipe object. This Pipe Style is found in the following templates:

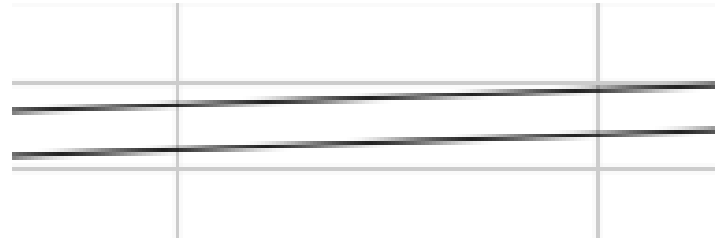
- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Pipe Style is shown below:

Plan:



Profile:



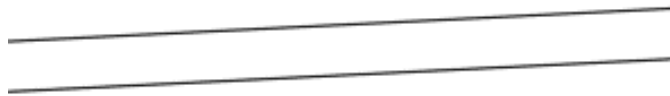
DCW_RCD_Profile

This Pipe Style is used to display pipes of various utilities in Plan and Profile in Record Drawings. In Plan, the outside Pipe walls and the hatch are displayed. The outside Pipe walls are displayed on the VF-SSWR-PIPE layer. The Pipe hatch is a solid hatch to the inner walls that is shown on the “VF-WIPE” layer. In Profile, the outside walls of the pipe are shown on the “VF-SSWR-PIPE” layer. This Pipe Style is found in only one template

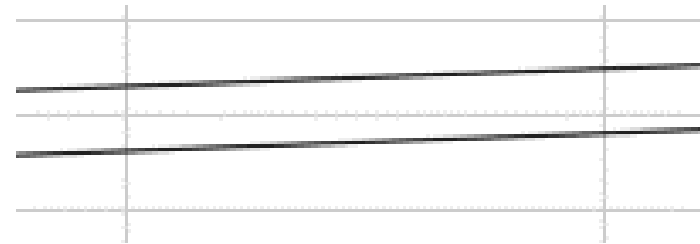
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Pipe Style is shown below:

Plan:



Profile:



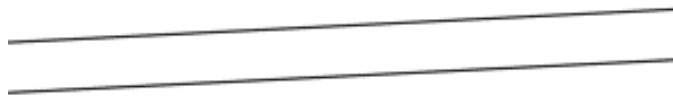
DCW_RCD_Sewer

This Pipe Style is used to display Sewer pipes in Plan and Profile in Record Drawings. In Plan, the outside Pipe walls and the hatch are displayed. The outside Pipe walls are displayed on the VF-SSWR-PIPE layer. The Pipe hatch is a solid hatch to the inner walls that is shown on the “VF-WIPE” layer. In Profile, the outside walls of the pipe are shown on the “VF-SSWR-PIPE” layer. In Profile, the outside walls of the pipe are displayed on the same layer. This Pipe Style is found in only one template.

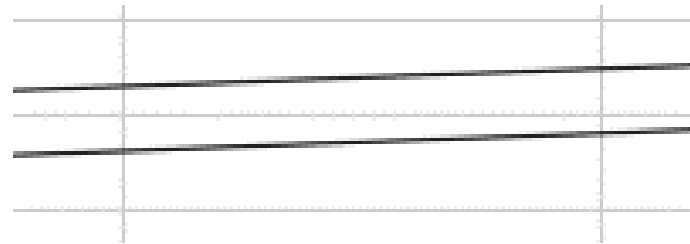
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Pipe Style is shown below:

Plan:



Profile:



Pipe Label Styles

Pipe Label Styles are broken down into three categories: Plan and Profile, Crossing Profile, and Crossing Section. These three types are used in different views and view types. DC Water uses 6 different Plan and Profile Label Styles, 2 Crossing Profile Labels, and 1 Crossing Section Label Style. These are outlined below.

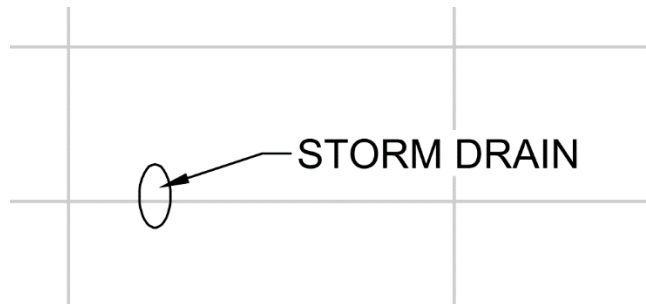
Plan and Profile Label Styles

DCW_EX_Crossing_Label

This Pipe Plan and Profile Label Style is used to label various utility crossings in Profile Views. The label uses the Text Style ANNO .09375 and is placed on the “VI-UTIL-PROF-TEXT” layer. The text contains the diameter and name of the Pipe and uses a background mask. It is attached to the bottom outer diameter of the Pipe. The grip of this label can be used to drag the label away from the pipe and automatically create a leader. This Pipe Plan and Profile Label Style is found in the following templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Pipe Label Style is shown below:

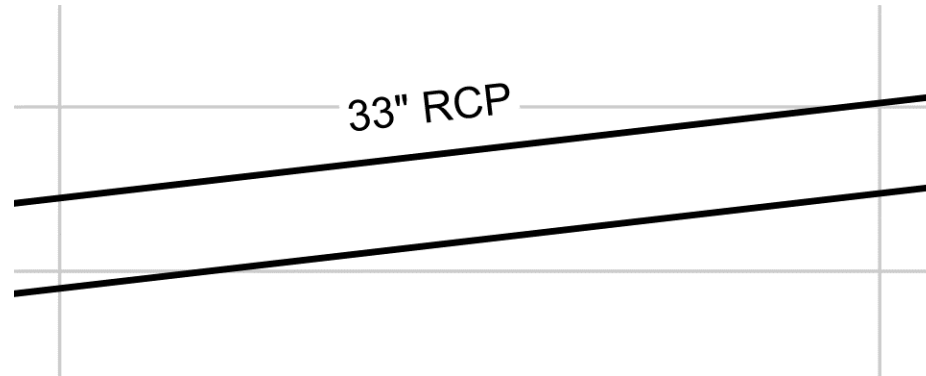


DCW_EX_Profile Pipe Data (Sewer)

This Pipe Plan and Profile Label Style is used to label existing Sewer Pipes in Profile. The label uses the Text Style ANNO .09375 and is placed on the "VF-SSWR-PIPE-TEXT" layer. The text contains the diameter and material of the Pipe and uses a background mask. It is attached to the centerline of the pipe with an offset of 0.08". The grip of this label can be used to drag the label away from the pipe and automatically create a leader. This Pipe Plan and Profile Label Style is found in the following templates.

- EXISTING_UTILITY_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Pipe Label Style is shown below:



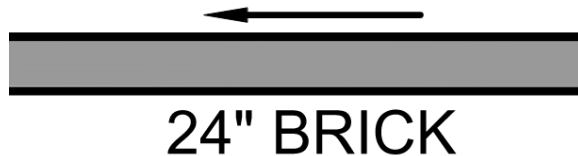
DCW NEW Sewer Rehab

This Pipe Plan and Profile Label Style is used to label new Sewer Pipes, eight inches and greater in Plan. The label uses the Text Style ANNO .10 and is placed on the “CI-SSWR-PIPE-TEXT” layer. The text contains the diameter and material of the Pipe and uses a background mask. It is attached to the centerline of the pipe with an offset of 0.08”. The grip of this label can be used to drag the label away from the pipe and automatically create a leader. This Pipe Plan and Profile Label Style is found in the following templates.

- EXISTING_UTILITY_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Pipe Label Style is shown below:

Plan:



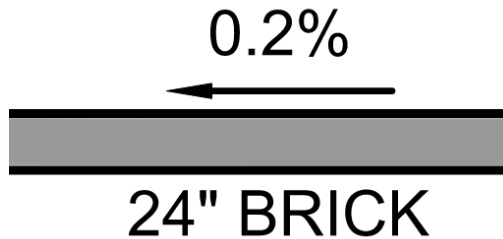
DCW NEW Sewer Rehab [Slope]

This Pipe Plan and Profile Label Style is used to label new Sewer Pipes smaller than eight inches in Plan. The label uses the Text Style ANNO .10 and is placed on the “CI-SSWR-PIPE-TEXT” layer. The text contains the diameter and material of the Pipe and uses a background mask. It is attached to the centerline of the pipe with an offset of 0.08”. The grip of this label can be used to drag the label away from the pipe and automatically create a leader. This Pipe Plan and Profile Label Style is found in the following templates.

- EXISTING_UTILITY_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Pipe Label Style is shown below:

Plan:



DCW NEW Sewer Rehab Profile

This Pipe Plan and Profile Label Style is used to label new Sewer Pipes in profile. The label uses the Text Style ANNO .10 and is placed on the “CI-SSWR-PIPE-TEXT” layer. The text contains the diameter and material of the Pipe and uses a background mask. It is attached to the centerline of the pipe with an offset of 0.08”. The grip of this label can be used to drag the label away from the pipe and automatically create a leader. This Pipe Plan and Profile Label Style is found in the following templates.

- EXISTING_UTILITY_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Pipe Label Style is shown below:

Profile:



DCW No Label

This Pipe Plan and Profile Label Style holds no text. It is used when labelling a Pipe in Profile with only a crossing label. Setting this as the Pipe Label Style in the “Add Labels” dialog when creating Pipe Profile labels will ensure that only a Crossing Pipe Label is placed on the Pipe when it is selected.

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

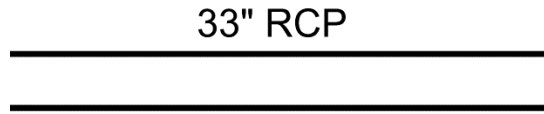
DCW RCD Plan Pipe Data (Sewer)

This Pipe Plan and Profile Label Style is used to label Sewer Pipes in Plan Record Drawings. The label uses the Text Style ANNO .10 and is placed on the “VF-SSWR-PIPE-TEXT” layer. The text contains the diameter and material of the Pipe and uses a background mask. It is attached to the centerline of the pipe with an offset of 0.1”. The grip of this label can be used to drag the label away from the pipe and automatically create a leader. This Pipe Plan and Profile Label Style is found in only one template.

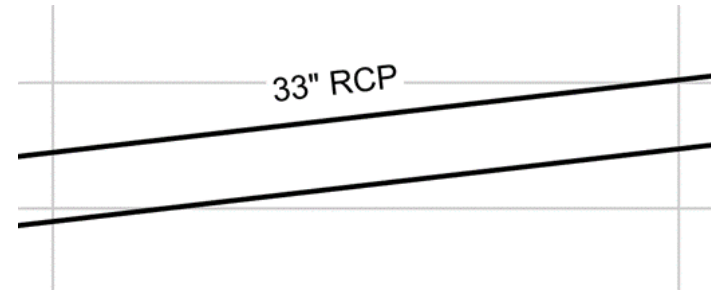
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Pipe Label Style is shown below:

Plan:



Profile:



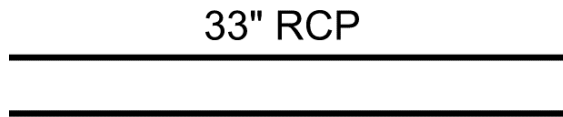
DCW RCD Profile Pipe Data (Sewer)

This Pipe Plan and Profile Label Style is used to label Sewer Pipes in Profile in Record Drawings. The label uses the Text Style ANNO .10 and is placed on the "VF-SSWR-PIPE-TEXT" layer. The text contains the diameter and material of the Pipe and uses a background mask. It is attached to the top inner diameter of the pipe with an offset of 0.08". The grip of this label can be used to drag the label away from the pipe and automatically create a leader. This Pipe Plan and Profile Label Style is found in only one template.

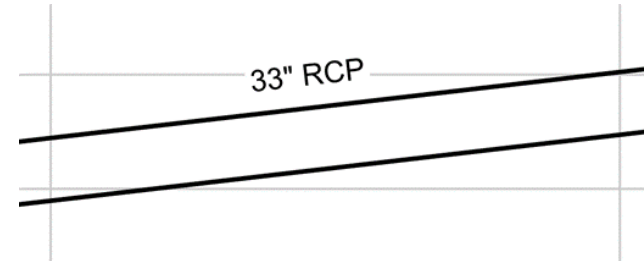
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Pipe Label Style is shown below:

Plan:



Profile:



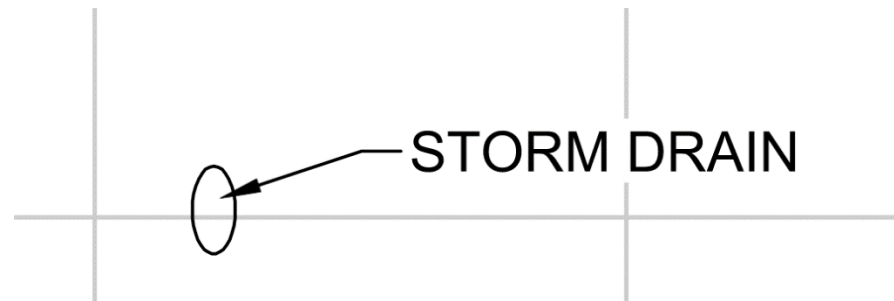
Crossing Profile

DCW EX Crossing Label

This Pipe Crossing Profile Label Style is used to label various utility crossings in Profile Views. The label uses the Text Style ANNO .1 and is placed on the “VI-UTIL-PROF-TEXT” layer. The text contains the description of the Pipe and uses a background mask. It is attached to the center of the Pipe. The grip of this label can be used to drag the label away from the pipe and automatically create a leader. This Pipe Crossing Label Style is found in the following templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- EXISTING_UTILITY_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Pipe Label Style is shown below:



DCW No Label

This Pipe Plan and Profile Label Style holds no text. It is used when labelling a Pipe in Profile with only a crossing label. Setting this as the Pipe Label Style in the “Add Labels” dialog when creating Pipe Profile labels will ensure that only a Crossing Pipe Label is placed on the Pipe when it is selected. This Pipe Crossing Label Style is found in the following templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- EXISTING_UTILITY_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

Pipe Table Styles

DCW uses a Pipe Table Style to provide information about Sewer rehab pipes.

DCW_NEW_Sewer Rehab

This Pipe Table Style is to be used in the design drawings in DC Water’s proposed sewer projects. The border and text elements of the table are displayed on the “C-ANNO-TABL” layer. The text in the Table Title uses the “Standard” Text Style and is 0.14” tall. The column headers and the data in the cells asll use the “Standard” Text Style and are 0.12” tall. The columns include the Pipe span name; upstream maintenance hole ID, downstream maintenance hole ID, dimension, length, material, service, shape, number of laterals, rehab method, upstream invert, and downstream invert.. There are also columns for asbuilt liner type, asbuilt liner thickness, and cctv direction that must be filled in by adding text items manually. This Table Style is used in the following templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An example of this Table Style is shown below:

EXAMPLE SEWER PIPE REHABILITATION SCHEDULE														
PIPE ID	UP MHID	DOWN MHID	DIMENSION (WxH)	LENGTH	MATERIAL	SERVICE	SHAPE	NO. OF LATERALS	REHAB METHOD	AB LINER TYPE	AB LINER THICKNESS	US INV	DS INV	CCTV DIRECTION
M-39789 TO M-39790	M-39789	M-39790	10"	117.96'	UNKNOWN		Circular	1	4			21.04'	20.71'	
M-39790 TO M-39884	M-39790	M-39884	10"	312.05'	UNKNOWN		Circular	1	4			19.30'	16.07'	
M-39884 TO M-39880	M-39884	M-39880	10"	330.99'	UNKNOWN		Circular	1	4			15.60'	13.68'	
M-39814 TO M-39787	M-39814	M-39787	10"	265.55'	VCP		Circular	1	4			24.51'	22.15'	
M-39787 TO M-39199	M-39787	M-39199	10"	274.42'	VCP		Circular	1	4			22.08'	21.04'	

Structure Styles

Five different Structure Styles are used across DC Water’s templates.

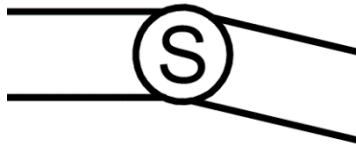
DCW_EX_Sanitary Sewer Manhole

This Structure Style is used to display existing Sanitary Sewer Manholes in Plan and Profile Views. In Plan, the “Sewer Manhole” block is used to represent the structure. This block is placed on the “VF-SSWR-MHOL” layer and is sized based on the size of the Structure it represents. In Profile, the outside walls of the structure are displayed on the same layer. This Structure Style is found in the following templates:

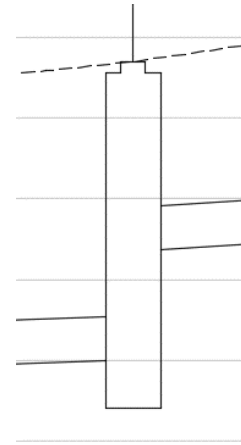
- EXISTING_UTILITY_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Structure Style is shown below:

Plan:



Profile:



DCW_New_Sewer Rehab_MH

This Structure Style is used to display proposed Sanitary Sewer Manholes (Rehab) in Plan and Profile Views. In Plan, the “DCW-AB-SMH” block is used to represent the structure. This block is placed on the “CI-SSWR-STRC” layer and is sized based on the size of the Structure it represents. In Profile, the outside walls of the structure and the outlines of perpendicular incoming pipes are displayed on the same layer. This Structure Style is found in the following templates:

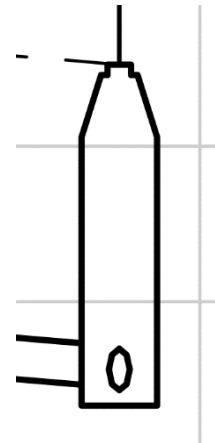
- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Structure Style is shown below:

Plan:



Profile:



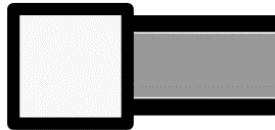
DCW_New_Sewer Rehab_Rect

This Structure Style is used to display proposed Sanitary Sewer Rectangular Structures (Rehab) in Plan and Profile Views. In Plan, the “DCW-CATCHBASIN” block is used to represent the structure. This block is placed on the “CI-SSWR-STRC” layer and is sized based on the size of the Structure it represents. In Profile, the outside walls of the structure and the outlines of perpendicular incoming pipes are displayed on the same layer. This Structure Style is found in the following templates:

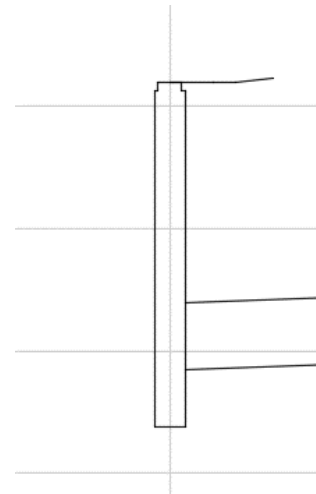
- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Structure Style is shown below:

Plan:



Profile:



DCW_Null

This Structure Style sets the visibility of all elements of the Structure to off in all view directions. This is often used where pipes connect to each other (laterals, etc.). This Structure Label Style is found in the following templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- EXISTING_UTILITY_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

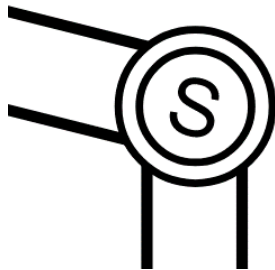
DCW_RCD_Sewer Manhole

This Structure Style is used to display Sanitary Sewer Manholes in Plan and Profile Views in Record Drawings. In Plan, the “DCW-AB-SMH” block is used to represent the structure. This block is placed on the “VF-SSWR-STRC” layer and is sized to 48”. In Profile, the outside walls of the structure are displayed on VF-SSWR-STRC and the Structure Pipe Outlines are shown on the VF-SSWR-PIPE layer. This Structure Style is found in only one template:

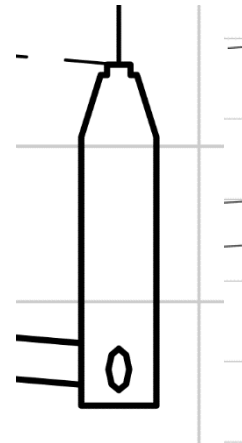
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Structure Style is shown below:

Plan:



Profile:



Structure Label Styles

Structure Label Styles can be used in Plan, Profile, or Crossing Section. DC Water uses 7 different Label Styles for Structures.

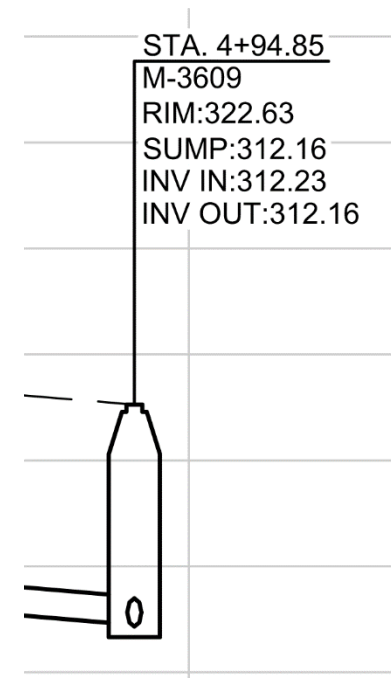
DCW_EX_Profile Data with Connected Pipes (Sewer)

This Structure Label Style is used in Profile to label existing Structures. The label uses the Text Style Standard and is placed on the “VF-SSWR-STRC-TEXT” layer. The text contains the Structure’s insertion station relative to a chosen Alignment, the Structure name, the rim and sump elevations, and inverts in and out for all connected pipes. It is attached to the the Structure Rim in the Profile View and uses a background mask. The grip of this label can be used to drag the label away from the Structure and automatically create a leader with no arrow. This allows for the creation of a vertical line from the top of the Structure to the desired location above it. This Structure Label Style is found in the following templates:

- EXISTING_UTILITY_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Structure Label Style is shown here:

Note: For the Station value to show up, a Reference Alignment must be assigned to the Structure. This can be done in the properties of the Structure or in the Item View of the Prospector when the Pipe Network > Structures collection is selected.

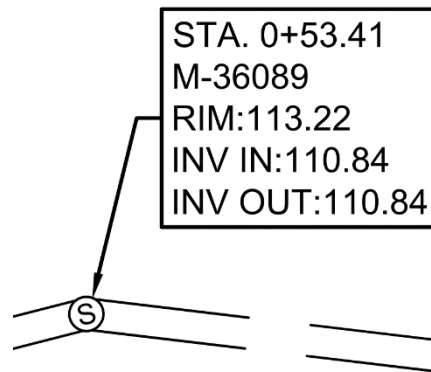


DCW_EX_Plan Data with Connected Pipes (Sewer)

This Structure Label Style is used in Plan to label existing Structures. The label uses the Text Style ANNO .10 and is placed on the “VF-SSWR-STRC-TEXT” layer. The text contains the Structure’s insertion station relative to a chosen Alignment, the Structure name, the rim elevation, and inverts in and out for all connected pipes. It is attached to the the Structure insertion point in Plan and uses a background mask. The grip of this label can be used to drag the label away from the Structure and automatically create a leader with and arrow an add a border. This Structure Label Style is found in the following templates:

- EXISTING_UTILITY_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Structure Label Style is shown below:



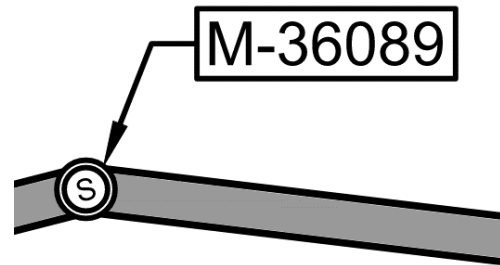
Note: For the Station value to show up, a Reference Alignment must be assigned to the Structure. This can be done in the properties of the Structure or in the Item View of the Prospector when the Pipe Network > Structures collection is selected.

DCW_NEW_Sewer Rehab

This Structure Label Style is used in Plan to label new (Rehab) Structures. The label uses the Text Style ANNO .10 and is placed on the “CI-SSWR-TEXT” layer. The text contains the Structure’s name only and uses a background mask. It is attached to the the Structure insertion point in Plan and the center of the Structure in Profile. The grip of this label can be used to drag the label away from the Structure and automatically create a leader with an arrow and add a border. This allows for the creation of a vertical line from the top of the Structure to the desired location above it. This Structure Label Style is found in the following templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Structure Label Style is shown below:



Plan:

DCW_NEW_Profile Data with Connected Pipes (Sewer)

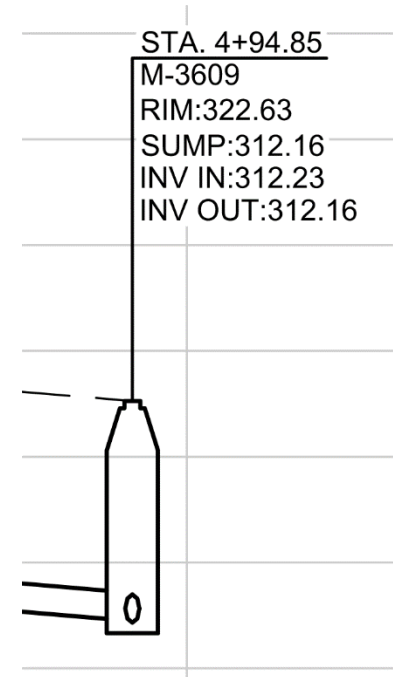
This Structure Label Style is used in Profile to label existing Structures. The label uses the Text Style Standard and is placed on the “CI-SSWR-STRC-TEXT” layer. The text contains the Structure’s insertion station relative to a chosen Alignment, the Structure name, the rim and sump elevations, and inverts in and out for all connected pipes. It is attached to the the Structure Rim in the Profile View and uses a background mask.

The grip of this label can be used to drag the label away from the Structure and automatically create a leader with no arrow. This allows for the creation of a vertical line from the top of the Structure to the desired location above it. This Structure Label Style is found in the following templates:

- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Structure Label Style is shown here:

Note: For the Station value to show up, a Reference Alignment must be assigned to the Structure. This can be done in the properties of the Structure or in the Item View of the Prospector when the Pipe Network > Structures collection is selected.



DCW_NEW_Profile Data with Connected Pipes (Sewer) [FLIPPED]

This Structure Label Style is used in Profile to label Structures in design drawings. The label uses the Text Style ANNO 0.10, is placed on the “CI-SSWR-STRC-TEXT” layer, and is justified to the right instead of the left. The text contains the Structure’s insertion station relative to a chosen Alignment, the Structure name, the rim and sump elevations, and inverts in and out for all connected pipes. It is attached to the the Structure Rim in the Profile View and uses a background mask. The grip of this label can be used to drag the label away from the Structure and

automatically create a leader with no arrow. This allows for the creation of a vertical line from the top of the Structure to the desired location above it. This Structure Label Style is found in only one template:

- UTILITY_DESIGN_TEMPLATE.dwt

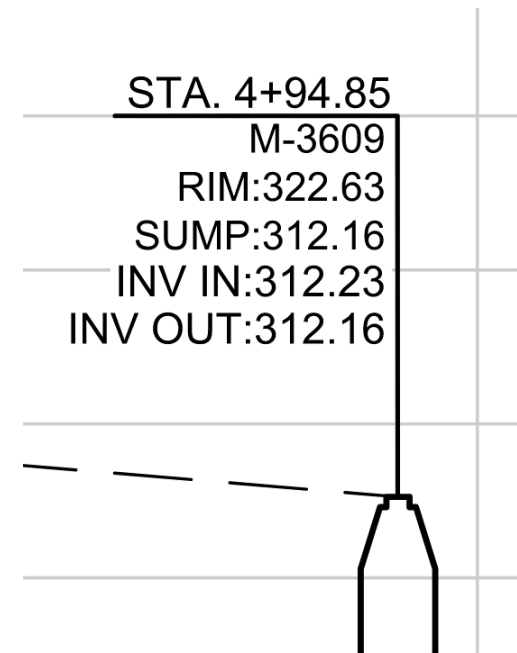
An illustration of this Structure Label Style is shown here:

Note: For the Station value to show up, a Reference Alignment must be assigned to the Structure. This can be done in the properties of the Structure or in the Item View of the Prospector when the Pipe Network > Structures collection is selected.

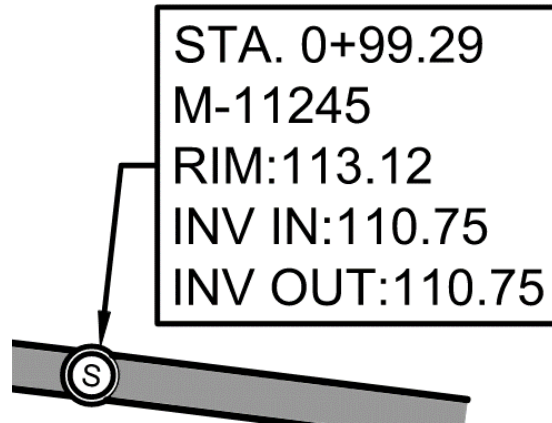
DCW_RCD_Plan Data with Connected Pipes (Sewer)

This Structure Label Style is used in Plan to label existing Structures in Redord Drawings. The label uses the Text Style ANNO .10 and is placed on the “VF-SSWR-STRC-TEXT” layer. The text contains the Structure’s insertion station relative to a chosen Alignment, the Structure name, the rim elevation, and inverts in and out for all connected pipes. It is attached to the the Structure insertion point in Plan and uses a background mask. The grip of this label can be used to drag the label away from the Structure and automatically create a leader with an arrow and add a border. This Structure Label Style is found in only one template:

- UTILITY_DESIGN_TEMPLATE.dwt



An illustration of this Structure Label Style is shown below:



Note: For the Station value to show up, a Reference Alignment must be assigned to the Structure. This can be done in the properties of the Structure or in the Item View of the Prospector when the Pipe Network > Structures collection is selected.

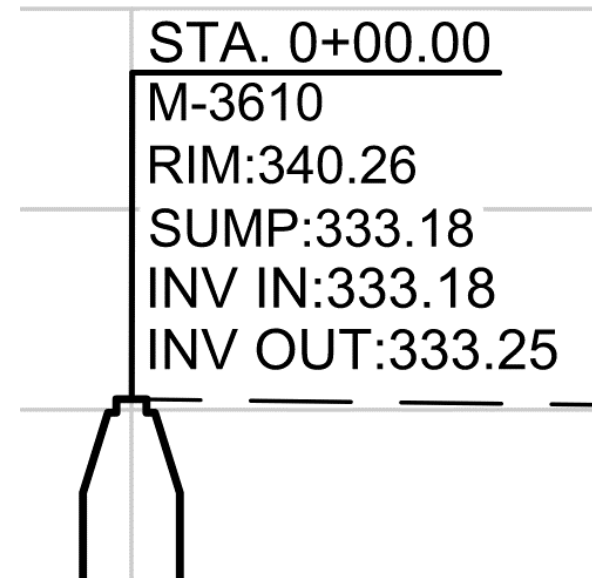
DCW_RCD_Profile Data with Connected Pipes (Sewer)

This Structure Label Style is used in Profile to label Structures in Record Drawings. The label uses the Text Style ANNO 0.09375 and is placed on the “VF-SSWR-STRC-TEXT” layer. The text contains the Structure’s insertion station relative to a chosen Alignment, the Structure name, the rim and sump elevations, and inverts in and out for all connected pipes. It is attached to the the Structure Rim in the Profile View and uses a background mask. The grip of this label can be used to drag the label away from the Structure and automatically create a leader with no arrow. This allows for the creation of a vertical line from the top of the Structure to the desired location above it. This Structure Label Style is found in only one template:

- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Structure Label Style is shown here:

Note: For the Station value to show up, a Reference Alignment must be assigned to the Structure. This can be done in the properties of the Structure or in the Item View of the Prospector when the Pipe Network > Structures collection is selected.



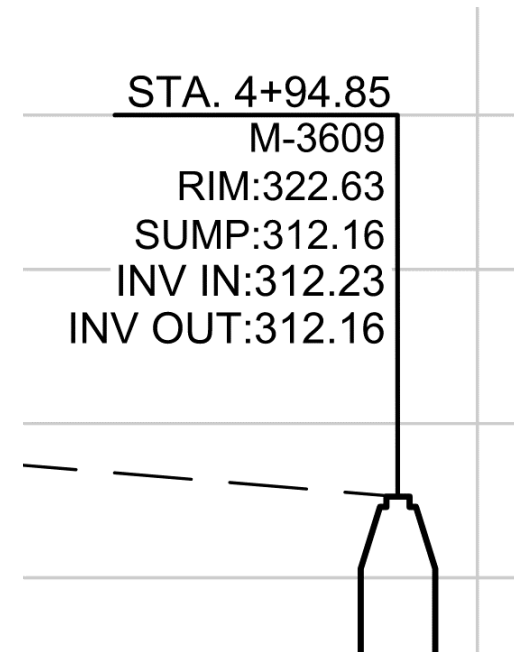
DCW_RCD_Profile Data with Connected Pipes (Sewer) [FLIPPED]

This Structure Label Style is used in Profile to label Structures in Record Drawings. The label uses the Text Style ANNO 0.09375, is placed on the “VF-SSWR-STRC-TEXT” layer and is justified to the right instead of the left. The text contains the Structure’s insertion station relative to a chosen Alignment, the Structure name, the rim and sump elevations, and inverts in and out for all connected pipes. It is attached to the the Structure Rim in the Profile View and uses a background mask. The grip of this label can be used to drag the label away from the Structure and automatically create a leader with no arrow. This allows for the creation of a vertical line from the top of the Structure to the desired location above it. This Structure Label Style is found in only one template:

- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Structure Label Style is shown here:

Note: For the Station value to show up, a Reference Alignment must be assigned to the Structure. This can be done in the properties of the Structure or in the Item View of the Prospector when the Pipe Network > Structures collection is selected.



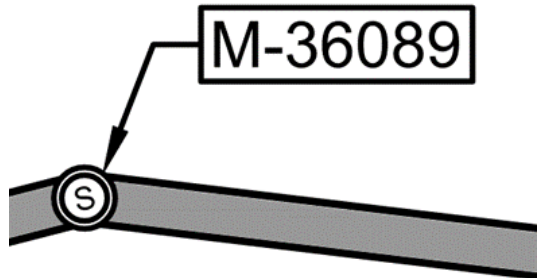
DCW_RCD_Sewer Rehab

This Structure Label Style is used in Profile to label Structures in Record Drawings. The label uses the Text Style ANNO 0.10 and is placed on the “VF-SSWR-STRC-TEXT” layer. The text contains the the Structure name. It is attached to the the Structure insertion point in Plan and uses a background mask. The grip of this label can be used to drag the label away from the Structure and automatically create a leader with an arrow and add a border. This Structure Label Style is found in only one template.

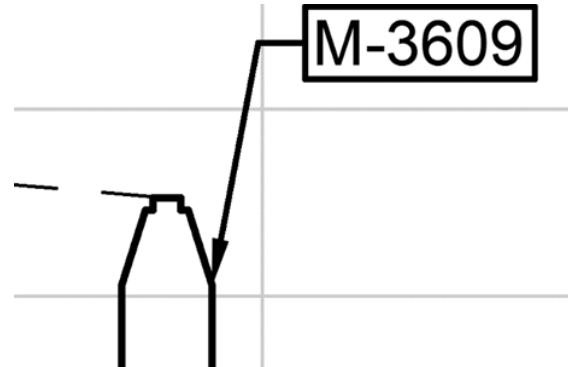
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Structure Label Style is shown here:

Plan:



Profile:



Note: For the Station value to show up, a Reference Alignment must be assigned to the Structure. This can be done in the properties of the Structure or in the Item View of the Prospector when the Pipe Network > Structures collection is selected.

Structure Table Styles

DCW uses a Structure Table Style to provide information about Sewer rehab structures.

DCW_NEW_Sewer Rehab

This Structure Table Style is to be used in the design drawings in DC Water’s proposed sewer projects. The border and text elements of the table are displayed on the “C-ANNO-TABL” layer. The text in the Table Title uses the “Standard” Text Style and is 0.14” tall. The column headers and the data in the cells asll use the “Standard” Text Style and are 0.12” tall. The columns include Structure Name, rim elevation, northing, easting, cover diameter, base diameter, and base shape. There is also a column for “Rehab Method” that must be filled in by adding text items manually. This Table Style is used in the following templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An example of this Table Style is shown below:

MAINTENANCE HOLE REHABILITATION SCHEDULE									
MH ID	RIM EL.	DEPTH	INV OUT	NORTHING (FT)	EASTING (FT)	COVER DIA.	BASE DIA.	BASE SHAPE	REHAB METHOD
M-41465	15.86'	11.037		451029.82	1326935.06	18"	48"	Cylinder	C,D,E,N
M-41466	15.33'	11.775		450915.49	1327040.90	18"	48"	Cylinder	C
M-41467	14.59'	11.149		450806.50	1327141.85	18"	48"	Cylinder	C,D,G,N
M-41461	14.03'	9.620		451334.57	1326687.91	18"	48"	Cylinder	
M-41464	13.93'	10.493		451167.98	1326815.93	18"	48"	Cylinder	C,D,G,N

Pressure Network Pipe Styles, Label Styles, and Table Styles

DC Water uses Pressure Pipe Networks to model Sewer Rehabilitation as well as existing utilities in Plan and Profile. This section outlines the Styles that exist in DC Water’s templates for this purpose.

Pressure Pipe Styles

Four different Pressure Pipe Styles are used across DC Water’s templates.

DCW_NEW_Centerline

This Pressure Pipe Style is used to display proposed water service lines in Plan and Profile. In Plan, the centerline of the pipe is displayed on the “CI-WATR-PIPE” layer. In Profile, the centerline of the pipe is displayed on the “CI-WATR-PIPE-PROF” layer. This Pressure Pipe Style is found in the following templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- SURFACE_RESTORATION_PLAN_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Pressure Pipe Style is shown below:

Plan:



Profile:



DCW_NEW_Crossing

This Pressure Pipe Style is used to display proposed water line crossings in Profile. In Plan, this Style matches the “DCW_NEW_Plan and Profile” Style. The outside walls of the pipe are displayed on the “CI-WATR-PIPE” layer as continuous lines. The pipe also shows a solid hatch in Plan on the “CI-WATR-PIPE-HTCH” layer with a color override set to 253. In Profile, the outside walls of the pipe are shown as a crossing ellipse on the “CI-WATR-PROF” layer. This Pressure Pipe Style is found in the following templates:

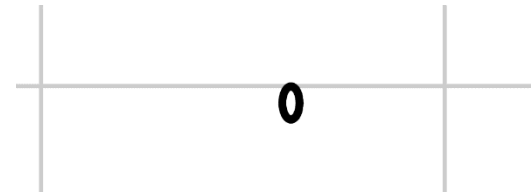
- SURFACE_RESTORATION_PLAN_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Pressure Pipe Style is shown below:

Plan:



Profile:



DCW_NEW_Plan and Profile

This Pressure Pipe Style is used to display proposed water lines in Plan and Profile. In Plan, the outside walls of the pipe are displayed on the “CI-WATR-PIPE” layer as continuous lines. The pipe also shows a solid hatch in Plan on the “CI-WATR-PIPE-HTCH” layer with a color override set to 253. In Profile, the outside walls of the pipe are displayed on the “CI-WATR-PIPE-PROF” layer. A solid hatch is also applied in Profile on layer “CI-WATR-PIPE-HTCH”. This Pressure Pipe Style is found in the following templates:

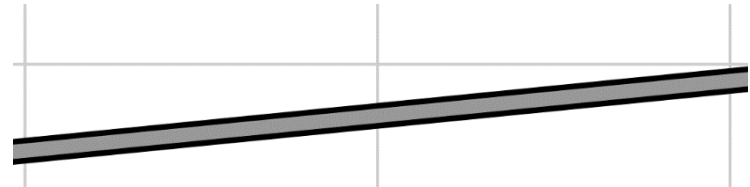
- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- SURFACE_RESTORATION_PLAN_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Pressure Pipe Style is shown below:

Plan:



Profile:



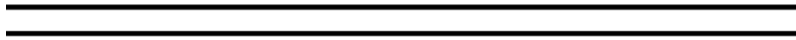
DCW_RCD

This Pressure Pipe Style is used to display water pipes in Plan and Profile in Record Drawings. In Plan, the outside walls of the pipe are displayed on the “VF-WATR-PIPE” layer and a solid hatch is drawing to the inside Pipe walls on layer VF-WATR-PIPE-HTCH. In Profile, the outside walls of the pipe on the “VF-WATR-PIPE-PROF” layer. This Pressure Pipe Style is found in only one template:

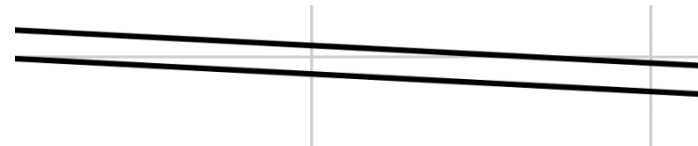
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Pressure Pipe Style is shown below:

Plan:



Profile:



Pressure Pipe Label Styles

Pressure Pipe Label Styles are broken down into three categories: Plan and Profile, Crossing Profile, and Crossing Section. These three types are used in different views and view types. DC Water uses 3 different Plan and Profile Label Styles. These are outlined below.

Plan and Profile Label Styles

DCW_NEW_Nominal Diameter and Material

This Pressure Pipe Plan and Profile Label Style is used to label existing Water pipes in Plan and Profile. The label uses the Text Style Standard and is placed on the “CI-WATR-PIPE-TEXT” layer. The text contains “PROP” to indicate it is a proposed pipe and shows the diameter of the pipe followed by “D.I. WATER MAIN” on one line of text. The text has a background mask and it is attached to the centerline of the Pipe with a Y offset of 0.1”. The grip of this label can be used to drag the label away from the pipe and automatically create a leader. This Pressure Pipe Plan and Profile Label Style is found in templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- SURFACE_RESTORATION_PLAN_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Pressure Pipe Label Style is shown below:

Plan:



Profile:



DCW_NEW Nominal Diameter and Material (Stacked)

This Pressure Pipe Plan and Profile Label Style is used to label existing Water pipes in Plan and Profile. The label uses the Text Style Standard and is placed on the “CI-WATR-PIPE-TEXT” layer. The text contains “PROP” to indicate it is a proposed pipe and shows the diameter of the pipe followed by “D.I. WATER MAIN” broken across two lines of text. The text has a background mask and it is attached to the centerline of the Pipe with a Y offset of 0.1”. The grip of this label can be used to drag the label away from the pipe and automatically create a leader. This Pressure Pipe Plan and Profile Label Style is found in one template:

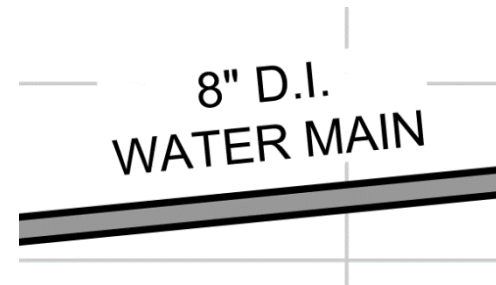
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Pressure Pipe Label Style is shown below:

Plan:



Profile:



DCW RCD Nominal Diameter and Material

This Pressure Pipe Plan and Profile Label Style is used to label Water pipes in Plan and Profile in Record Drawings. The label uses the Text Style Standard and is placed on the “VF-WATR-PIPE-TEXT” layer. The text contains the diameter of the pipe followed by “D.I. WATER MAIN” on one line of text. The text has a background mask. It is attached to the centerline of the Pipe with a Y offset of 0.11”. The grip of this label can be used to drag the label away from the pipe and automatically create a leader. This Pressure Pipe Plan and Profile Label Style is found in one template:

- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Pressure Pipe Label Style is shown below:

Plan:



Profile:



Fitting Styles

Three different Fitting Styles are used across DC Water's templates.

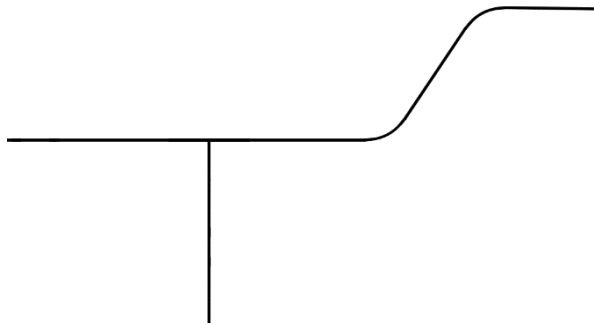
DCW_NEW_Centerline

This Fitting Style is used to display proposed Water Fittings such as Bends, Crosses, and Tees in Plan and Profile Views. In Plan, the parts are centerlines only. These Fittings are placed on the CI-WATR-FITT layer in Plan and on the CI-WATR-PROF-LINE layer in Profile. This Fitting Style is found in the following templates:

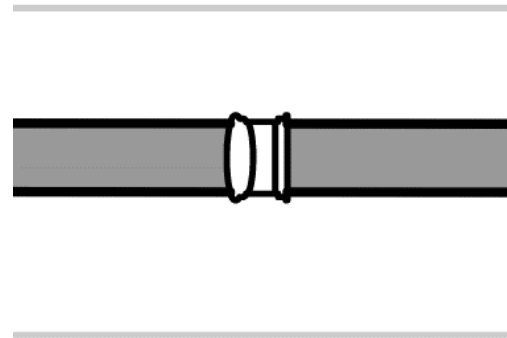
- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- SURFACE_RESTORATION_PLAN_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

Illustrations of this Fitting Style are shown below:

Plan:



Profile:



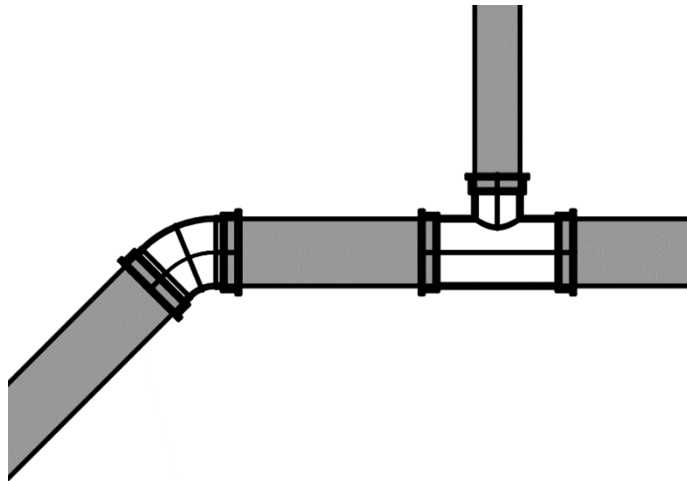
DCW_NEW_Fitting

This Fitting Style is used to display existing Water Fittings such as Bends, Crosses, and Tees in Plan and Profile Views. In Plan, the parts are displayed as they are defined in the catalog. These Fittings are placed on the CI-WATR-FITT layer in Plan and on the CI-WATR-PROF-LINE layer in Profile. This Fitting Style is found in the following templates:

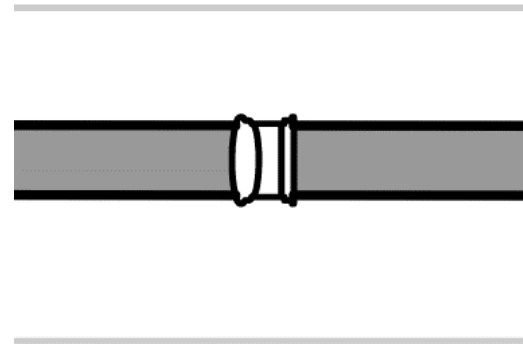
- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- SURFACE_RESTORATION_PLAN_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

Illustrations of this Fitting Style are shown below:

Plan:



Profile:



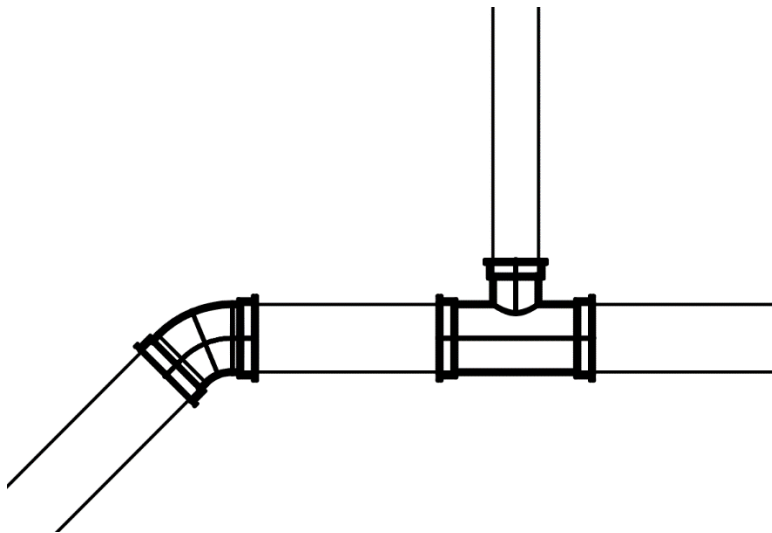
DCW_RCD_Fitting

This Fitting Style is used to display Water Fittings such as Bends, Crosses, and Tees in Plan and Profile Views in Record Drawings. In Plan, the parts are displayed as they are defined in the catalog. These Fittings are placed on the VF-WATR-FITT layer in both Plan and Profile. This Fitting Style is found in one template:

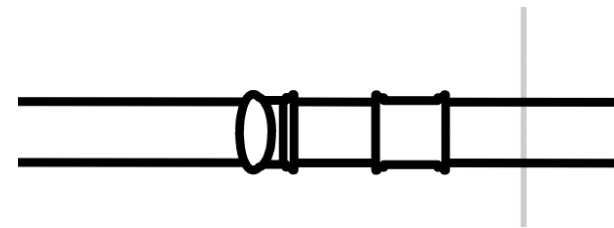
- UTILITY_DESIGN_TEMPLATE.dwt

Illustrations of this Fitting Style are shown below:

Plan:



Profile:



Fitting Label Styles

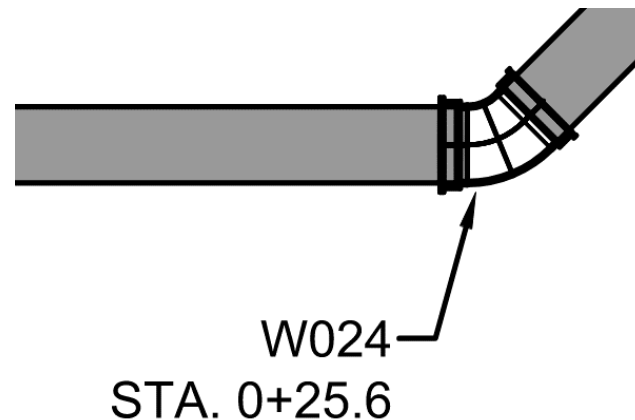
DC Water uses 7 different Fitting Label Styles. These are outlined below.

DCW_Coded Note and Station

This Fitting Label Style is typically used to label proposed Fittings in Plan. The label uses the Text Style ANNO .10 and is placed on the “CI-WATR-FITT-TEXT” layer. The text contains the Model Name and the Station of the Fitting and uses a background mask. The Station of this Label Style will only appear if a Reference Alignment has been assigned to the Fitting. If there is no assigned Alignment, this component will be shown as question marks (“???”). The Top Center point of the text is attached to center of the Fitting. The grip of this label can then be used to drag the label away from the Fitting and automatically create a leader. This Fitting Label is found in the following templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- SURFACE_RESTORATION_PLAN_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Fitting Label Style is shown below:

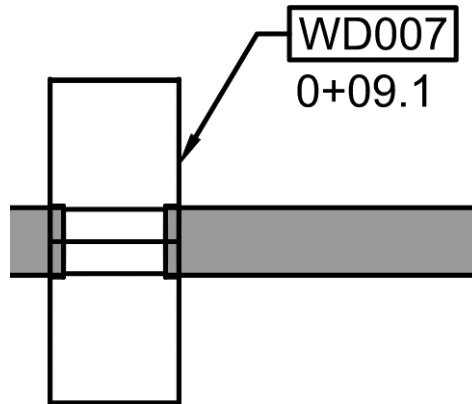


DCW_Key Note and Station (WD)

This Fitting Label Style is typically used to label proposed distribution Fittings in Plan. The label uses the Text Style Standard and is placed on the “CI-WATR-FITT-TEXT” layer. The text contains the Model Name surrounded by a border and Station of the Fitting. The Station of this Label Style will only appear if a Reference Alignment has been assigned to the Fitting. If there is no assigned Alignment, this component will be shown as question marks (“???”). The left center point of the Model Name text is attached to center of the Fitting. The grip of this label can then be used to drag the label away from the Fitting and automatically create a leader that is attached to the left center of the Model Name. For this reason, this Style is typically used to create a label that will be dragged to the right of the Fitting. This Fitting Label is found in the following templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- SURFACE_RESTORATION_PLAN_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Fitting Label Style is shown below:

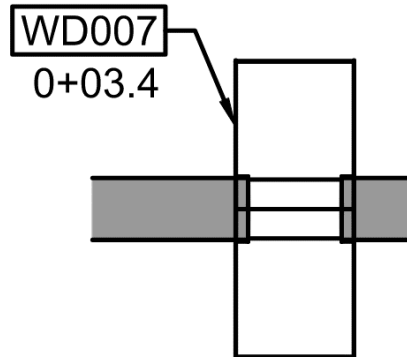


DCW_Key Note and Station (WD) [Left]

This Fitting Label Style is a child of the “DCW_Key Note and Station (WD)” Label Style, which means that it shares the majority of its properties with that Style. It is used to label proposed Fittings in Plan in the same way as its parent Label Style, but for a slightly different circumstance. The label uses the Text Style Standard and is placed on the “CI-WATR-FITT-TEXT” layer. The text contains the Model Name surrounded by a border and Station of the Fitting. The Station of this Label Style will only appear if a Reference Alignment has been assigned to the Fitting. If there is no assigned Alignment, this component will be shown as question marks (“???”). The right center point of the Model Name text is attached to center of the Fitting. The grip of this label can then be used to drag the label away from the Fitting and automatically create a leader that is attached to the right center of the Model Name. For this reason, this Style is typically used to create a label that will be dragged to the left of the Fitting. This Fitting Label is found in the following templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- SURFACE_RESTORATION_PLAN_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Fitting Label Style is shown below:



DCW_NEW_Profile_Sewer

This Fitting Label Style is used to label proposed sewer force main Fittings in Profile. The label uses the Text Style Standard and is placed on the “CD-WATR-TEXT” layer. The text contains the Model Name, the Station, and the centerline elevation of the Fitting. The Station of this Label Style will only appear if a Reference Alignment has been assigned to the Fitting. If there is no assigned Alignment, this component will be shown as question marks (“???”). The text is offset from the centerline of the Fitting by 0.1” and is rotated 90°. A line is drawn from the center of the Fitting to the far end of the line of text. The text has a background mask. The grip of this label can be used to drag the label away from the Fitting to create a leader straight up to extend the length of the line away from the Fitting (use the ORTHO setting for this). This Fitting Label is found in the following templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- SURFACE_RESTITUTION_PLAN_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Fitting Label Style is shown below:



DCW_NEW_Profile_Water

This Fitting Label Style is used to label proposed water Fittings in Profile. The label uses the Text Style Standard and is placed on the “CI-SSWR-FITT-TEXT” layer. The text contains the Model Name, the Station, and the centerline elevation of the Fitting. The Station of this Label Style will only appear if a Reference Alignment has been assigned to the Fitting. If there is no assigned Alignment, this component will be shown as question marks (“???”). The text is offset from the centerline of the Fitting by 0.1” and is rotated 90°. A line is drawn from the center of the Fitting to the far end of the line of text. The text has a background mask. The grip of this label can be used to drag the label away from the Fitting to create a leader straight up to extend the length of the line away from the Fitting (use the ORTHO setting for this). This Fitting Label is found in the following templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- SURFACE_RESTORATION_PLAN_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Fitting Label Style is shown below:

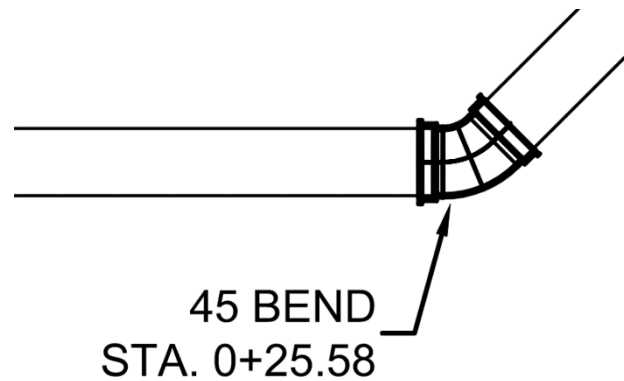


DCW_RCD_Name and Station

This Fitting Label Style is used to label distribution Fittings in Plan in Record Drawings. The label uses the Text Style Standard and is placed on the “VF-WATR-FITT-TEXT” layer. The text contains the Part Type and the Station of the Fitting. The Station of this Label Style will only appear if a Reference Alignment has been assigned to the Fitting. If there is no assigned Alignment, this component will be shown as question marks (“???”). The left center point of the text is attached to center of the Fitting. The grip of this label can then be used to drag the label away from the Fitting and automatically create a leader that is attached to the left center of the Model Name. For this reason, this Style is typically used to create a label that will be dragged to the right of the Fitting. This Fitting Label is found in only one following template:

- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Fitting Label Style is shown below:



DCW_RCD_Profile_Water

This Fitting Label Style is used to label existing Water Fittings in Profile Views. The label uses the Text Style Standard and is placed on the “VF-WATR-FITT-TEXT” layer. The text contains the Part Type, the Station, and the centerline elevation of the Fitting. The Station of this Label Style will only appear if a Reference Alignment has been assigned to the Fitting. If there is no assigned Alignment, this component will be shown as question marks (“???”). The text is offset from the centerline of the Fitting by 0.1” and is rotated 90°. A line is drawn from the center of the Fitting to the far end of the line of text. The text has a background mask. The grip of this label can be used to drag the label away from the Fitting to create a leader or straight up to extend the length of the line away from the Fitting (use the ORTHO setting for this). This Fitting Label Style is found in one template:

- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Fitting Label Style is shown here:



Appurtenance Styles

Five different Appurtenance Styles are used across DC Water's templates. These Styles control what the object looks like in Plan view. The program determines how to display the Appurtenances in Profile

DCW_NEW_Centerline

This Appurtenance Style is used to display proposed valves and hydrants in Plan. The parts are displayed as their centerline only and they are placed on the CD-WATR-STRC. Because only the centerline is shown, the Appurtenances appear the same as the Pipe and may be difficult to distinguished from the Pipes. When they are displayed in Profile, Valves are displayed as a valve block and Hydrants are displayed as a side view of a hydrant which will appear down along the pipe (this is regardless of Style). This Appurtenance Style is found in the following templates:

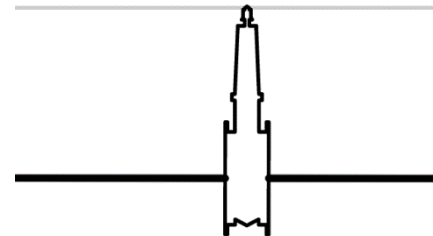
- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- SURFACE_RESTORATION_PLAN_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

Illustrations of this Fitting Style are shown below:

Plan:



Profile:



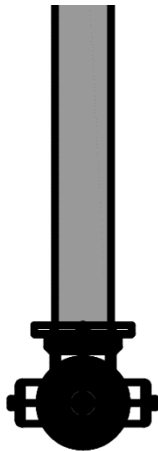
DCW_NEW_Hydrant

This Appurtenance Style is used to display proposed Hydrants in Plan. The parts are displayed as they are defined in the catalog and placed on the CD-WATR-STRC layer. When they are displayed in Profile, Hydrants are displayed as a side view of a hydrant which will appear down along the pipe (this is regardless of Style). This Appurtenance Style is found in the following templates:

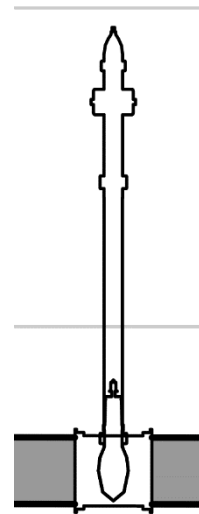
- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- SURFACE_RESTITUTION_PLAN_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

Illustrations of this Fitting Style are shown below:

Plan:



Profile:



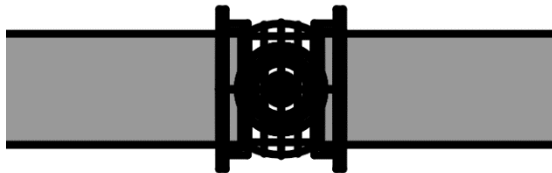
DCW_NEW_Valve

This Appurtenance Style is used to display proposed Valves in Plan. The parts are displayed as they are defined in the catalog and placed on the CD-WATR-STRC layer. When they are displayed in Profile, Valves are displayed as a valve block (this is regardless of Style). This Appurtenance Style is found in the following templates:

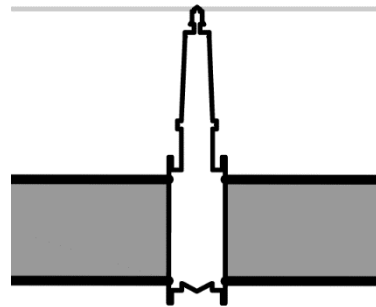
- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- SURFACE_RESTITUTION_PLAN_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

Illustrations of this Fitting Style are shown below:

Plan:



Profile:



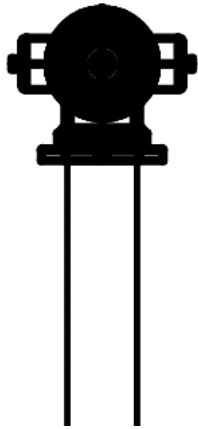
DCW_RCD_Hydrant

This Appurtenance Style is used to display Hydrants in Plan in Record Drawings. The parts are displayed as they are defined in the catalog and placed on the VF-WATR-FITT layer. When they are displayed in Profile, Hydrants are displayed as a side view of a hydrant which will appear down along the pipe (this is regardless of Style). This Fitting Style is found in one template:

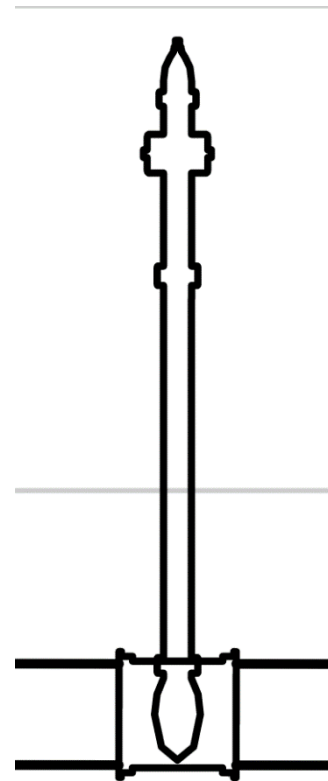
- UTILITY_DESIGN_TEMPLATE.dwt

Illustrations of this Fitting Style are shown below:

Plan:



Profile:



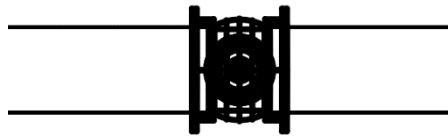
DCW_RCD_Valve

This Appurtenance Style is used to display Valves in Plan in Record Drawings. The parts are displayed as they are defined in the catalog and placed on the VF-WATR-FITT layer. When they are displayed in Profile, Valves are displayed as a valve block (this is regardless of Style). This Fitting Style is found in one template:

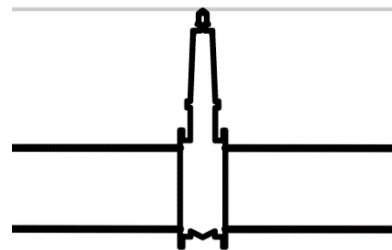
- UTILITY_DESIGN_TEMPLATE.dwt

Illustrations of this Fitting Style are shown below:

Plan:



Profile:



Appurtenances Label Styles

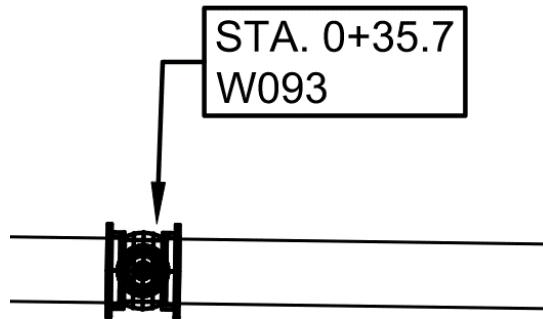
DC Water uses 7 different Appurtenance Label Styles. These are outlined below.

DCW_Coded Note and Station (WD)

This Appurtenance Label Style is typically used to label proposed distribution Appurtenances in Plan. The label uses the Text Style Standard and is placed on the “CI-WATR-APPT-TEXT” layer. The text contains the Model Name Station of the Appurtenance surrounded by a border. The Station of this Label Style will only appear if a Reference Alignment has been assigned to the Appurtenance. If there is no assigned Alignment, this component will be shown as question marks (“???”). This Appurtenance Label is found in the following templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- SURFACE_RESTORATION_PLAN_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Appurtenance Label Style is shown below:

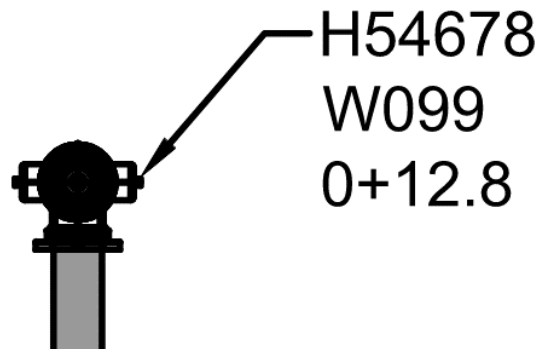


DCW_NEW_Hydrant Label and Station

This Appurtenance Label Style is typically used to label proposed Hydrants in Plan. The label uses the Text Style ANNO .10 and is placed on the “CI-WATR-APPT-TEXT” layer. The text contains the Hydrant Name, the Model Name, and the Station of the Hydrant and uses a background mask. The Station of this Label Style will only appear if a Reference Alignment has been assigned to the Appurtenance. If there is no assigned Alignment, this component will be shown as question marks (“???”). The Top Center point of the text is attached to center of the Appurtenance. The grip of this label can then be used to drag the label away from the Appurtenance and automatically create a leader. This Appurtenance Label is found in the following templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- SURFACE_RESTORATION_PLAN_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Appurtenance Label Style is shown below:



DCW_NEW_Profile_Sewer

This Appurtenance Label Style is used to label proposed sewer force main Appurtenances in Profile. The label uses the Text Style Standard and is placed on the “CI-SSWR-APPT-TEXT” layer. The text contains the Model Name, the Station, and the centerline elevation of the Appurtenance. The Station of this Label Style will only appear if a Reference Alignment has been assigned to the Appurtenance. If there is no assigned Alignment, this component will be shown as question marks (“???”). The text is offset from the centerline of the Appurtenance by 0.1” and is rotated 90°. A line is drawn from the center of the Appurtenance to the far end of the line of text. The text has a background mask. The grip of this label can be used to drag the label away from the Appurtenance to create a leader straight up to extend the length of the line away from the Appurtenance (use the ORTHO setting for this). This Appurtenance Label is found in the following templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- SURFACE_RESTORATION_PLAN_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Appurtenance Label Style is shown below:



DCW_NEW_Profile_Water

This Appurtenance Label Style is used to label proposed water Appurtenances in Profile. The label uses the Text Style Standard and is placed on the “CI-WATR-APPT-TEXT” layer. The text contains the Model Name, the Station, and the centerline elevation of the Appurtenance. The Station of this Label Style will only appear if a Reference Alignment has been assigned to the Appurtenance. If there is no assigned Alignment, this component will be shown as question marks (“???”). The text is offset from the centerline of the Appurtenance by 0.1” and is rotated 90°. A line is drawn from the center of the Appurtenance to the far end of the line of text. The text has a background mask. The grip of this label can be used to drag the label away from the Appurtenance to create a leader straight up to extend the length of the line away from the Appurtenance (use the ORTHO setting for this). This Appurtenance Label is found in the following templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- SURFACE_RESTITUTION_PLAN_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Appurtenance Label Style is shown below:

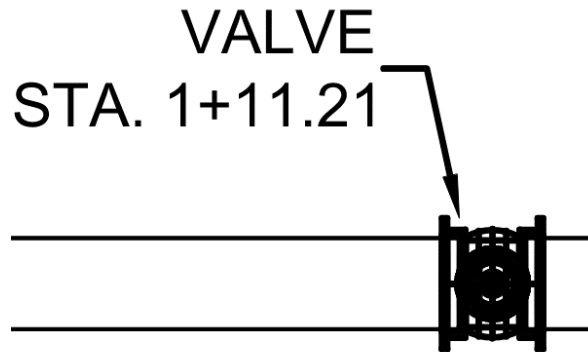


DCW_RCD_Name and Station

This Appurtenance Label Style is used to label distribution Appurtenances in Plan in Record Drawings. The label uses the Text Style Standard and is placed on the “VF-WATR-FITT-TEXT” layer. The text contains the Part Type and the Station of the Appurtenance. The Station of this Label Style will only appear if a Reference Alignment has been assigned to the Appurtenance. If there is no assigned Alignment, this component will be shown as question marks (“???”). The middle center point of the text is attached to center of the Appurtenance. The grip of this label can then be used to drag the label away from the Appurtenance and automatically create a leader that is attached to the left center of the Model Name. For this reason, this Style is typically used to create a label that will be dragged to the right of the Appurtenance. This Appurtenance Label is found in only one following template:

- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Appurtenance Label Style is shown below:



DCW_RCD_Profile_Water

This Appurtenance Label Style is used to label Water Appurtenances in Profile Views in Record Drawings. The label uses the Text Style Standard and is placed on the “VF-WATR-FITT-TEXT” layer. The text contains the Part Type, the Station, and the centerline elevation of the Appurtenance. The Station of this Label Style will only appear if a Reference Alignment has been assigned to the Appurtenance. If there is no assigned Alignment, this component will be shown as question marks (“???”). The text is offset from the centerline of the Appurtenance by 0.1” and is rotated 90°. A line is drawn from the center of the Appurtenance to the far end of the line of text. The text has a background mask. The grip of this label can be used to drag the label away from the Appurtenance to create a leader or straight up to extend the length of the line away from the Appurtenance (use the ORTHO setting for this). This Appurtenance Label Style is found in one template:

- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Appurtenance Label Style is shown here:

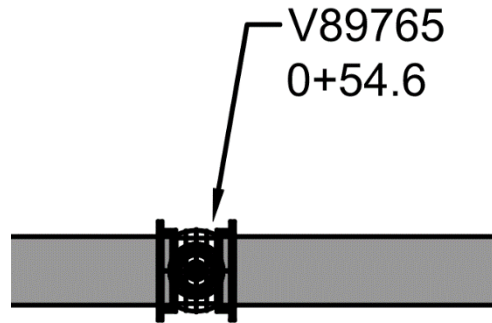


DCW_NEW_Valve Label and Station

This Appurtenance Label Style is typically used to label proposed distribution Appurtenances in Plan. The label uses the Text Style Standard and is placed on the “CI-WATR-APPT-TEXT” layer. The text contains the Valve Name and Station of the Appurtenance surrounded by a border. The Station of this Label Style will only appear if a Reference Alignment has been assigned to the Appurtenance. If there is no assigned Alignment, this component will be shown as question marks (“???”). The top center point of the text is attached to center of the Appurtenance. The grip of this label can then be used to drag the label away from the Appurtenance and automatically create a leader that is attached to the left center of the Name. For this reason, this Style is typically used to create a label that will be dragged to the right of the Appurtenance. This Appurtenance Label is found in the following templates:

- EROSION_SEDIMENT_CONTROL_TEMPLATE.dwt
- SURFACE_RESTITUTION_PLAN_TEMPLATE.dwt
- TCP_MOT_TEMPLATE.dwt
- UTILITY_DESIGN_TEMPLATE.dwt

An illustration of this Appurtenance Label Style is shown below:








Appendix I: Blocks




Overview

DCW's design and survey blocks are stored and managed in a single library file called "DCW Block Library.dwg", which is located under I:\CAD Standards\Blocks. Many of these blocks are also present in DCW's templates for use in pre-established items such as titleblocks and Civil 3D Styles. In addition, DCW's Traffic Control blocks are stored in a file called "DCW MOT Block Library.dwg" located in the same folder. The tables below provide names, descriptions, and symbols for the design and survey blocks:

Communications



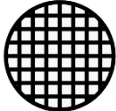




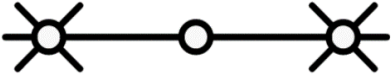




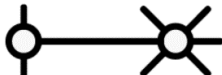
Block Name	Description	Symbol
DCW-COMM-CMTP	Communications Pedestal	
DCW-COMM-EMER	Emergency Phone	
DCW-COMM-MHOL	Communications Manhole	
DCW-COMM-TPED	Telephone Pedestal	
DCW-HIST-CALL-BOXX	Historic Call Box	



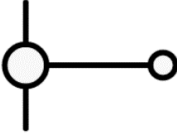
Gas

Block Name	Description	Symbol
DCW-NGAS-EMER-MONI	Natural Gas Emergency Monitor	
DCW-NGAS-METR	Natural Gas Meter	
DCW-NGAS-MHOL	Natural Gas Manhole	





DCW-NGAS-VALV	Natural Gas Valve	
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Electrical

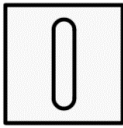














Block Name	Description	Symbol
DCW-ELEC-CNTL-BOXX	Electric Control Box	
DCW-ELEC-DCSL-MHOL	DC Street Light Manhole	
DCW-ELEC-GRTE	Electric Grate	
DCW-ELEC-GUYP	Guy Pole	
DCW-ELEC-GUYW	Guy Wire	
DCW-HAND-HOLE	Hand Hole	
DCW-ELEC-LAMP	Street Lamp	
DCW-ELEC-LAMP-DUAL	Dual Street Lamp	
DCW-ELEC-LAMP-GRND	Ground Lamp	
DCW-ELEC-MHOL	Electric Manhole	
DCW-ELEC-METR	Electric Meter	
DCW-ELEC-UPSL-DUAL	Utility Pole with Dual Street Lights	
DCW-ELEC-UPSL-SING	Utility Pole with a Single Light	

Block Name	Description	Symbol
DCW-ELEC-UPTL	Utility Pole with Traffic Light	T.L. 
DCW-ELEC-UPUP	Utility Pole	
DCW-ELEC-UPUP-LITE	Utility Pole with Light	






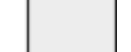

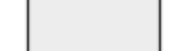




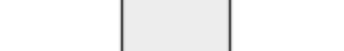
Erosion & Sediment Control








Block Name	Description	Symbol
DCW-AGIP	At-Grade Inlet Protection	AGIP 
DCW-AGIP-SMLL	At-Grade Inlet Protection - Small	AGIP 
DCW-CIP	Curb Inlet Protection	CIP 
DCW-CIP-SMLL	Curb Inlet Protection - Small	CIP 

Miscellaneous



Block Name	Description	Symbol
DCW-BIKE-RACK	Bike Rack	
DCW-BNCH	Bench	
DCW-BOLL	Bollard	
DCW-BORE	Boring	
DCW-CNTR-POINT	Center Line Point	
DCW-FLAG-POLE	Flag Pole	
DCW-HC-RAMP-Q	Handicapped Ramp	
DCW-MAIL-BOX	Mail Box	
DCW-PARK-METR	Parking Meter	
DCW-PARK-METR-KISK	Parking Meter Kiosk	
DCW-SIGN	Sign	
DCW-SIGN-STREET	Street sign	
DCW-SITE-PILE	Pile	
DCW-TCAN	Trash Can	
DCW-XWALK	Crosswalk	

PEPCO Vaults



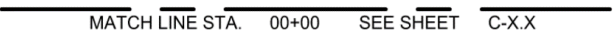
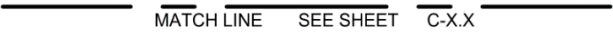


Block Name	Description	Symbol
DCW-PEPCO-2X2	2' X 2' PEPCO Vault	
DCW-PEPCO-2.33X2.33	2.33' X 2.33' PEPCO Vault	
DCW-PEPCO-2X2.5	2' X 2.5' PEPCO Vault	
DCW-PEPCO-3X3	3' X 3' PEPCO Vault	
DCW-PEPCO-4X4	4' X 4' PEPCO Vault	
DCW-PEPCO-4X6	4' X 6' PEPCO Vault	
DCW-PEPCO-4X7	4' X 7' PEPCO Vault	
DCW-PEPCO-4X8	4' X 8' PEPCO Vault	
DCW-PEPCO-5X5	5' X 5' PEPCO Vault	
DCW-PEPCO-5X8	5' X 8' PEPCO Vault	
DCW-PEPCO-5X10	5' X 10' PEPCO Vault	
DCW-PEPCO-5X12	5' X 12' PEPCO Vault	
DCW-PEPCO-5X15	5' X 15' PEPCO Vault	

Block Name	Description	Symbol
DCW-PEPCO-5.5X12	5.5' X 12' PEPCO Vault	
DCW-PEPCO-6X6	6' X 6' PEPCO Vault	
DCW-PEPCO-6X8	6' X 8' PEPCO Vault	
DCW-PEPCO-6X10	6' X 10' PEPCO Vault	
DCW-PEPCO-6X12	6' X 12' PEPCO Vault	
DCW-PEPCO-6X14	6' X 14' PEPCO Vault	
DCW-PEPCO-6X15	6' X 15' PEPCO Vault	



Proposed Markings

Block Name	Description	Symbol
DCW-PROP-ABND	Abandoned Property Marking	
DCW-PROP-RMVL	Property Removal Marking	



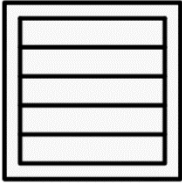



Sheet Blocks

Block Name	Description	Symbol																											
DCW-CRSS-NOTE	Utility Crossing Notes	<p style="text-align: center;">UTILITY CROSSING NOTES</p> <p>1. GAS, ELECTRIC AND COMMUNICATION CROSSINGS SHOWN ASSUME A NOMINAL DEPTH BASED ON BEST AVAILABLE RECORDS. CONTRACTOR SHOULD TEST PIT THESE LOCATIONS TO CONFIRM DEPTHS.</p> <p>2. SEWER AND STORM DRAIN CROSSINGS SHOWN ARE FROM FIELD-VERIFIED DATA. CONTRACTOR SHOULD TEST PIT THESE LOCATIONS TO CONFIRM CLEARANCES.</p>																											
DCW-DETAIL DRAWING LABEL	Detail Drawing Label/Callout	<p style="text-align: center;">  1" = 5' </p>																											
DCW-DETAIL STYLE LABEL	Detail Style Label	<p style="text-align: center;">DETAIL SHEET</p>																											
DCW-GRAPHIC-SCALE	Graphic Scale	<p style="text-align: center;">GRAPHIC SCALE</p> <p style="text-align: center;">  1" = 50' HORIZ. </p>																											
DCW-MATCH LINE-STA	Match Line	<p style="text-align: center;">  </p>																											
DCW-MATCH LINE-NO STA	Match Line	<p style="text-align: center;">  </p>																											
DCW-STMP-TITL-INFO	Title and Information	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">SHEET</td> <td style="width: 33%;">OF</td> <td style="width: 33%;"></td> </tr> <tr> <td colspan="3">JOB. NO.</td> </tr> <tr> <td colspan="3">BEGUN</td> </tr> <tr> <td colspan="3">COMPLETED</td> </tr> <tr> <td colspan="3">CONTRACT NO.</td> </tr> <tr> <td colspan="3">CONTRACTOR</td> </tr> <tr> <td colspan="3">FOREMAN INSPECTOR</td> </tr> <tr> <td colspan="3">ENGINEER</td> </tr> <tr> <td>FIELD BOOK</td> <td colspan="2">PAGE</td> </tr> </table>	SHEET	OF		JOB. NO.			BEGUN			COMPLETED			CONTRACT NO.			CONTRACTOR			FOREMAN INSPECTOR			ENGINEER			FIELD BOOK	PAGE	
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FOREMAN INSPECTOR																													
ENGINEER																													
FIELD BOOK	PAGE																												
DCW-NORTH-ARROW	North Arrow	<p style="text-align: center;">  </p>																											
DC_Water_Logo_CAD	DC Water Logo	<p style="text-align: center;">  </p>																											






Steam and Unknown Utilities

Block Name	Description	Symbol
DCW-STEM-MHOL	Steam Manhole	
DCW-UKWN-MHOL	Unknown Manhole	




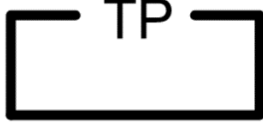

Storm and Sanitary

Block Name	Description	Symbol
DCW-AB-SMH	Abandoned Sewer Manhole	
DCW-CATCHBASIN	Catch Basin	
DCW-GRATED-INLET	Grated Inlet	
DCW-SSWR-COUT	Sanitary Sewer Cleanout	
DCW-SSWR-MHOL	Sanitary Sewer Manhole	
DCW-STRM-MHOL	Storm Manhole	





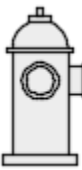



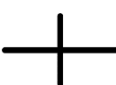

Survey Control




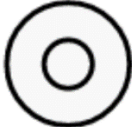
Block Name	Description	Symbol
DCW-CTRL-FLYY	Fly Point	
DCW-CTRL-TRAV	Control Traverse Point	
DCW-CTRL-TRAV-TICK	Control Traverse Table Tick	TICK UPPER LEFT CORNER OF TRAVERSE TABLE 
DCW-EX-STA-BNCH	Benchmark	
DCW-MONUMENT	Monument	

Vegetation

Block Name	Description	Symbol
DCW-VEGE-BUSH	Bush	
DCW-VEGE-TREE-CONF	Coniferous Tree	
DCW-VEGE-TREE-DECD	Deciduous Tree	
DCW-VEGE-TREE-PROT	Tree Protection Area	
DCW-VEGE-TREE-CHLK	Tree Protection Chainlink Fence	

Water

Block Name	Description	Symbol																
DCW-WATR-BBOX	Buffalo Box																	
DCW-WATR-BLOW	Blowoff																	
DCW-WATR-CORP-STOP	Corporation Stop																	
DCW-WATR-FHYD	Fire Hydrant																	
DCW-WATR-FYHD-ELEV	Fire Hydrant Elevation																	
DCW-WATR-FHYD-STMP	Fire Hydrant Data Table	<table border="1" data-bbox="1096 966 1307 1165"> <tr> <td>F.H. DATA</td> <td>#</td> </tr> <tr> <td>ELEV.</td> <td></td> </tr> <tr> <td>PRESS.</td> <td></td> </tr> <tr> <td>H.H.</td> <td></td> </tr> <tr> <td>DATE</td> <td></td> </tr> <tr> <td>F.B.</td> <td></td> </tr> <tr> <td>PAGE</td> <td></td> </tr> <tr> <td>DRAWING</td> <td>#</td> </tr> </table>	F.H. DATA	#	ELEV.		PRESS.		H.H.		DATE		F.B.		PAGE		DRAWING	#
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DCW-WATR-MHOL	Water Manhole																	
DCW-WATR-METR	Water Meter																	
DCW-WATR-METR-24IN	24" Water Meter																	
DCW-WATR-SERV-TECK	Water Service Table Tick	<p>TICK UPPER LEFT CORNER OF WATER SERVICE TABLE</p> 																
DCW-WATR-SIAM	Siamese Connection																	

Block Name	Description	Symbol																																													
DCW-WATR-SPRK-HEAD	Sprinkler Head																																														
DCW-WATR-STAN-PIPE	Standpipe																																														
DCW-WATR-VALV	Water Valve																																														
DCW-WATR-VALV-GATE	Gate Valve																																														
DCW-WATR-VALV-STMP	Water Valve Data Table	<table border="1"> <thead> <tr> <th colspan="2" data-bbox="1084 722 1328 751">VALVE DATA</th> <th data-bbox="1312 722 1328 751">#</th> </tr> </thead> <tbody> <tr><td data-bbox="1084 751 1182 779">SIZE</td><td data-bbox="1182 751 1328 779"></td><td data-bbox="1328 751 1328 779"></td></tr> <tr><td data-bbox="1084 779 1182 806">KIND</td><td data-bbox="1182 779 1328 806"></td><td data-bbox="1328 779 1328 806"></td></tr> <tr><td data-bbox="1084 806 1182 833">MAKE</td><td data-bbox="1182 806 1328 833"></td><td data-bbox="1328 806 1328 833"></td></tr> <tr><td data-bbox="1084 833 1182 861">PURPOSE</td><td data-bbox="1182 833 1328 861"></td><td data-bbox="1328 833 1328 861"></td></tr> <tr><td data-bbox="1084 861 1182 888">POSITION</td><td data-bbox="1182 861 1328 888"></td><td data-bbox="1328 861 1328 888"></td></tr> <tr><td data-bbox="1084 888 1182 915">COVER</td><td data-bbox="1182 888 1328 915"></td><td data-bbox="1328 888 1328 915"></td></tr> <tr><td data-bbox="1084 915 1182 942">MAIN STEM</td><td data-bbox="1182 915 1328 942"></td><td data-bbox="1328 915 1328 942"></td></tr> <tr><td data-bbox="1084 942 1182 970">DEPTH</td><td data-bbox="1182 942 1328 970"></td><td data-bbox="1328 942 1328 970"></td></tr> <tr><td data-bbox="1084 970 1182 997">TO CLOSE</td><td data-bbox="1182 970 1328 997"></td><td data-bbox="1328 970 1328 997"></td></tr> <tr><td data-bbox="1084 997 1182 1024">TURNS</td><td data-bbox="1182 997 1328 1024"></td><td data-bbox="1328 997 1328 1024"></td></tr> <tr><td data-bbox="1084 1024 1182 1052">PLACED</td><td data-bbox="1182 1024 1328 1052"></td><td data-bbox="1328 1024 1328 1052"></td></tr> <tr><td data-bbox="1084 1052 1182 1079">PROP. OF</td><td data-bbox="1182 1052 1328 1079"></td><td data-bbox="1328 1052 1328 1079"></td></tr> <tr><td data-bbox="1084 1079 1182 1106">KEY NUT</td><td data-bbox="1182 1079 1328 1106"></td><td data-bbox="1328 1079 1328 1106"></td></tr> <tr><td data-bbox="1084 1106 1182 1134">DRAWING</td><td data-bbox="1182 1106 1328 1134"></td><td data-bbox="1328 1106 1328 1134">#</td></tr> </tbody> </table>	VALVE DATA		#	SIZE			KIND			MAKE			PURPOSE			POSITION			COVER			MAIN STEM			DEPTH			TO CLOSE			TURNS			PLACED			PROP. OF			KEY NUT			DRAWING		#
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Appendix J: DC Water Tool Palettes

Overview

Tool Palettes are used in AutoCAD and Civil 3D to organize and provide easy access to blocks and other common tools. DC Water has three (3) Tool Palettes that point to design blocks and SRP Subassemblies. These Tool Palettes are described below.

DCW-ELECTRIC

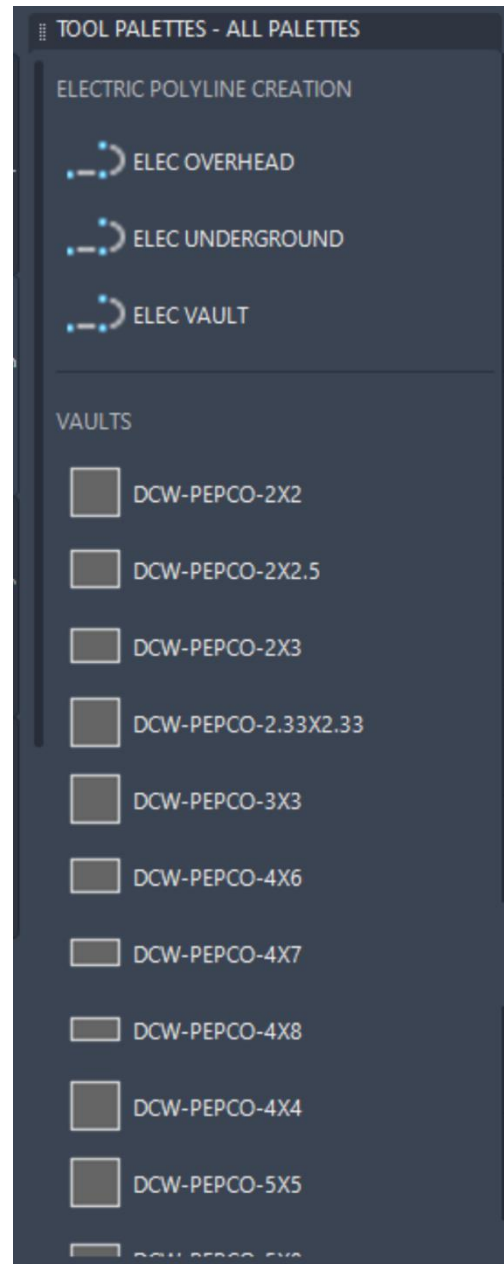
This Tool Palette is broken down in to two sections

ELECTRIC POLYLINE CREATION

This section holds tools for creating polylines that will automatically be placed on the correct layers.

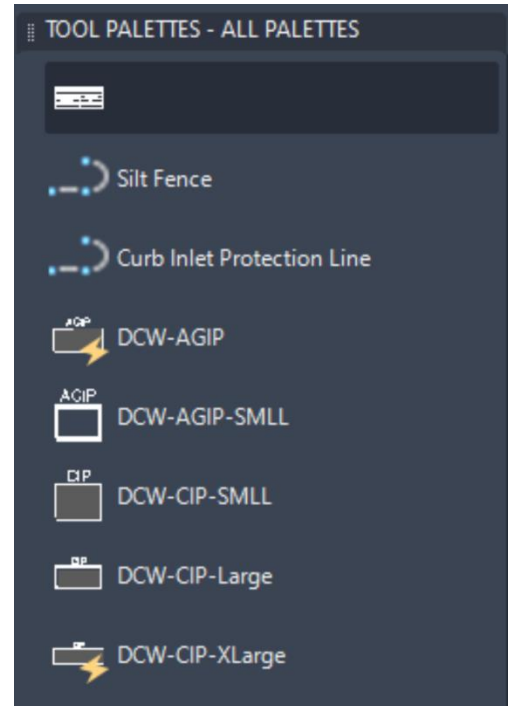
VAULTS

This section allows quick access to the PEPCO Vault blocks that are stored in the DCW Block Library. (See Appendix J)



DCW-E&S PLANS

This Tool Palette contains tools for creating Proposed Trench Tables, Silt Fences, and Curb Inlet Projection lines using a preset command and layer. It also provides access to the AGIP and CIP blocks that are stored in the DCW Block Library (See Appendix J).



DCW-TRENCH ASSEMBLIES

This Tool Palette provides access to DCW's Trench Assemblies and their Subassemblies. The Assemblies are organized into two groups, "TRENCH BENEATH ASPHALT" and "TRENCH BENEATH PCC", and they are listed in order by pipe size.

