**Dynamic Block Standards**

The following dynamic blocks are created to facilitate STORM drawing productivity:

1. C-INLET

NOTE: The block is to be inserted into model spaces with the annotation scale in model space set to 3/8”. When making future edits the scale in block editor should also be set or changed to 3/8”

All blocks are created using the following three block authorizing sets:

* **Geometric Constrains**
* **Constraint parameters**
* **Parameters with actions**
  + Visibility
    - Different Inlet Views
  + Lookup
    - Different Holes sizes
  + Scale
  + Move
  + Stretch
  + Rotate
  + Array
  + Points = Use the control key during insertion to toggle various insertion points
  + Alignment = Use sparingly it can be quirky

*Let’s not use the following:*

* Flipping Parameter - No Flipping because if done incorrectly it can cause problems.
* Insertion point Parameter – Lets locate all blocks at the insertion point 0,0,0 and use the “Point” parameter to toggle insertion point as desired.
* NO *Parametric Dimensions* inside blocks – These are best utilized in model space. If used in model space it is recommended to use geometric contains in that environment as well, however this is NON-Standard for Oldcastle and requires a new discussion on drafting practices.

**Note:** Get into the habit of using the “Reset Block” command. You can get to this feature by right clicking on the block.

**Dimensions and scaling:**

To facilitate productivity by not having to dimension the inlets manually (Everything is dimensioned) I am using Annotative Dimensions. This enables us to use (3) three different scales in paper space (More could be added but the three currently created should be sufficient). Using annotative dimensioning is not Oldcastle standard; however, in this case it does speed up the process. The three scales are as follows:

* 1/4" = 1’=-0”
* 3/8” = 1’-0”
* 1/2"=1’-0”

Note: The viewport must be set at one of these scales for the dimensions to appear unless you set the following system variable as follows:

* + ANNOALLVISIBLE = 1

To prevent any undesirable results and if you are not used to using annotative styles and dimensions please leave the following system variable as noted below:

ANNOAUTOSCALE = -4 (AutoCAD function is turned off) This setvar can be turned on by selecting the triangle in the lower right corner of the AutoCAD paper space screen but please leave this setting off.

Note: You can use the “Oldcastle” dimension style in paper space (this is the non-annotative dimension style that we always use and is standard). The blocks I have created contain two new annotative styles to eliminate overlap and confusion. Please do not edit those styles.

* Text Style Named: OC\_Anno
* Dimension Style Named: OC\_Anno

**Block Creation Steps**

All Base & Riser views start at a “Total” height of 1’-8”

1. **Create Views** *Inlets to include the following vi*sibility parameters: Name the visibility parameter the same name as the block with the word “\_Views” added to the end. Ex: The C-INLET\_VIEWS. The default view is always “Plan View”

Start with “View-C” and create the “Base w/Grate Seat” view then complete steps 2 thru 6. Copy this view to your clipboard. Create the “Risers using the option to “Hide all existing objects in new state.” Paste the objects from your clipboard into the new view. Move the objects to the same insertion of 0,0,0. Make the changes as required reusing much of the same geometry and constraints you must add back in the stretch and array actions as these don’t carry over with the copy paste.

To create the Base w/Joints & Riser w/Joint use the option to “Leave visibility of Existing Objects unchanged in new state” option using its parent view as the copy default. Be aware the change you make will affect the original base view you copied from. You must go back and re-input the changes so make changes wisely and copy paste from one view to the other to facilitate this action.

Creating views in this manor enables future changes to be duplicated in similar views. The “Base w/Grate Seat” & Base w/Joint are linked some of the changes done in one are carried over to the other etc.

The final view will be the “Plan View” this view should be created using the “Hide all existing objects in new state.”

(Follow same procedure above for the “View-B” Inlets)

* Plan View (Default View but also the last view that will be created)
* -------------View-C (Spacer View to include all views)
* Base w/Grate Seat
* Base w/Joint
* Riser w/Grate Seat
* Riser w/Joint
* -------------View-B (Spacer View to include all views)
* Base w\_Grate Seat
* Base w\_Joint
* Riser w\_Grate Seat
* Riser w\_Joint

1. **Add Geo-Constraints** *All Inlet views to include the following geometric constraints*:

* Parallel (As Required each side of inlets & Top to Bottoms)
* Horizontal (Inside base of inlet & Top)
* Perpendicular (Sides to Bottom etc.)
* Coincident (As required)

Note: Before exiting the block editor choose to “Hide All Geometric constraints.”

1. **Add Const-Parameters** *All Inlet views to include the following constraint* parameters:

* 3.5” Bottom of Rebar to Bottom of Inlet
* 6” Base of Inlet
* Dimension Grate Seats to Top as required.

1. **Add Parameters & Actions** *All Inlet views to include the following Parameters with actions:*

* Linear Parameter Labeled:
  + Elevation (Chain=no/grips=1/show prop=yes) (Incremental = 1”)(Stretch Action – Include Array\_Rebar in the selection frame to trigger “Chain”)
* Array Parameter labeled:
  + Array\_Rebar (Chain=yes/grips=0/show prop=no)(Array Action -- Column Offset=12”)

Note: The parameters have a modifier added as follows:

* \_C = Base Inlets View C
* \_RC=Riser View
* \_B = Base Inlets View B
* \_RC=Riser View

*Notice that the linked views have the same parameter names*

1. **Add Dimensions** *All Inlet views to include the following Annotative Dimensions:*

* All Typical Inlet dimensions on all views
  + Create all Dimensions on a 3/8” scale then add the 1/4" & 1/2" scales after.
  + Dimension line is 6” from Geometry & 5” from other dimension lines.

*Note: the location of the dimension from the geometry is important to maintain to facilitate the stacking of blocks.*

1. **Add Text***:*

* Create a 3/8” scale then add the 1/4" & 1/2" scales after.

**Supplemental Blocks:**

* Rebar Tables – That include all inlet views
* Covers – Include typical covers per inlet type
* Elevation view of all the common pipe sizes
* Plan view of all the common pipe sizes
* Plan View of all the common pipe Angles

**Wish list & Ideas:**

Using “Reference constraints” to report to a chart…. As Reference Constraints, do not control the associated geometry but instead report a measurement. This is a convenient way to display measurements that you would otherwise have to calculate. Use this feature to do the following:

* Use reference dimensions and a text link to filling the IBT: value for a c-inlet.