**F.8.5.2.1.13** **Derivation process for a predicted depth value**

This process is not invoked when pdm\_generation is equal to 0.

Inputs to this process are:

– a luma location ( xP, yP ) of the top-left luma sample of the current prediction unit relative to the top-left luma sample of the current picture,

– variables nPSW and nPSH specifying the width and the height, respectively, of the current prediction unit,

– a variable refViewId specifying the view identifier ViewId of the reference view.

Outputs of this process is a predicted depth value predDepthVal.

The variables subDX and subDY are derived as follows:

– If pdm\_generation is equal to 1, subDX and subDY are set equal to 2.

– Otherwise (pdm\_generation is equal to 2), subDX and subDY are set equal to 0.

Let predDepthMap represent a (PicWidthInSamplesL >> subDX)x(PicHeightInSamplesL >> subDY) array of predicted depth values. Depending on pdm\_generation, predDepthMap is obtained as follows:

– If pdm\_generation is equal to 1, predDepthMap is created by using decoded motion and disparity vectors.

[Ed. The process for creating predicted depth maps for pdm\_generation equal to 1 is not described in this draft.]

– Otherwise (pdm\_generation is equal to 2), the array predDepthMap is obtained based on a decoded depth map as specified by the following ordered steps:

1. Let decDepthMap be the (PicWidthInSamplesL)x(PicHeightInSamplesL) array of decoded depth samples that are associated with the view with ViewId equal to refViewId.
2. The derivation process for a predicted depth map based on a coded depth map as specified in subclause F.8.5.2.1.14 is invoked with decDepthMap, sourceViewId equal to refViewId, and targetViewId equal to ViewId as the inputs and the output is the predicted depth map predDepthMap.

NOTE – It is sufficient to invoke the derivation process for a predicted depth map based on a coded depth map as specified in subclause  once per view component. Multiple invocations of the derivation process for a predicted depth map based on a coded depth map for a view component will have the same output.

The variables x0, y0, x1, and y1 are derived by

x0 = xP >> subDX (F‑54)  
y0 = yP >> subDY (F‑55)  
x1 = ( ( xP + nPSW) >> subDX ) − 1 (F‑56)  
y1 = ( ( yP + nPSH) >> subDY ) − 1 (F‑57)

The variable prdDepthVal is set equal to predDepthMap[ x0, y0 ].

– If predDepthMap[ x0, y1 ] is greater than prdDepthVal, prdDepthVal is set equal to predDepthMap[ x0, y1 ].

– If predDepthMap[ x1, y0 ] is greater than prdDepthVal, prdDepthVal is set equal to predDepthMap[ x1, y0 ].

– If predDepthMap[ x1, y1 ] is greater than prdDepthVal, prdDepthVal is set equal to predDepthMap[ x1, y1 ].