

E&PM AutoCAD Standards – 2016 Improvements:

As of 08/22/2016

- **Civil 3D 2016 CAD Standards (00_Resources):**
 - (See *ReadMe-C3D2016.doc* in the Documentation directory)
 - Updated - Civil 3D 2016 Template (*C3DCityStandard2016.dwt*)
 - Updated Plan Production Templates- General Notes Sheet for 2016:
 - *Transportation (TITLE BLOCK_Trans.dwt)*
 - *Storm Water (TITLE BLOCK_SW.dwt)*

- **Civil 3D 2016 Template improvements:**
 - *Added City Standard Section Label style.*
 - *Added Post Construction Controls Layers.*
 - *New linetypes for Greenway Easement and Post Construction Controls Easement.*

- **Example Sheets:**
 - *Linetype Example Sheet - New linetype added for Greenway Easement (--GE--).*
 - *New linetype added for Post Construction Controls Easement (--PCC--).*

- **Production Sheets:**
 - *General Notes Sheets:*
 - *Utility changes include the second bullet – Warning: Overhead utilities.*
 - *Accessible ramps and depressed curb note was update.*

- **Documentation for Civil 3D 2016:**
 - *How to apply cross slope labels using a Corridor Surface.*

E&PM AutoCAD Standards – 2016 Improvements:

As of 06/29/2016

- **Civil 3D 2016 CAD Standards (00_Resources):**
 - (See *ReadMe-C3D2016.doc* in the Documentation directory)
 - Updated - Civil 3D 2016 Template (*C3DCityStandard2016.dwt*)
 - Updated Plan Production Templates- Traffic Control Notes Sheet for 2016:
 - Transportation (*TITLE BLOCK_Trans.dwt*)
 - Storm Water (*TITLE BLOCK_SW.dwt*)
 - Added Sheet Set Manager DST file for Transportation for 2016:
 - Transportation (*TITLE BLOCK - TRANSPORTATION.dst*)
- **Production Sheets:**
 - Traffic Control Notes Sheets modified:
 - Traffic Control Notes were cleaned up for consistency.
- **Documentation for Civil 3D 2016:**
 - How to apply Sheet Set Manager and Plan Production for City Projects.

E&PM AutoCAD Standards – 2016 Improvements:

As of 03/30/2016

- **Civil 3D 2016 CAD Standards (00_Resources):**
(See *ReadMe-C3D2016.doc* in the Documentation directory)
 - Added - Civil 3D 2016 Template (*C3DCityStandard2016.dwt*)
 - Updated Plan Production Templates for 2016:
 - Transportation (*TITLE BLOCK_Trans.dwt*)
 - Storm Water (*TITLE BLOCK_SW.dwt*)
 - Updated Sheet Set Manager Templates for 2016:
 - Transportation (*CityStandardSheetSet-TRANS.dst*)
 - Storm Water (*CityStandardSheetSet-SW.dst*)

- **Production Sheets:**
 - General Notes Sheets modified:
 - Mail Box Section – The contractor shall relocate all mail boxes as required by section 107-11 of the NCDOT Standard Specifications.

- **Example Sheets:**
 - Linetype Example Sheet - New linetype added for Permanent Shelter Easement (*--PSE--*).

 - Linetype Example Sheet – Remove Sidewalk Easement (*--SE--*), Overhead Utility Easement (*--OUE--*), and Underground Utility Easement (*--UUE--*).

E&PM AutoCAD Standards – 2015 Improvements:

As of 10/16/2015

- **Civil 3D 2015_2016 CAD Standards (00_Resources):**
 - (See *ReadMe-C3D2015.doc* in the Documentation directory)
 - Added - Civil 3D 2016 Template (*C3DCityStandard2016.dwt*)
 - Updated Plan Production Templates for 2016:
 - *Transportation (TITLE BLOCK_Trans.dwt)*
 - *Storm Water (TITLE BLOCK_SW.dwt)*
- **Production Sheets:**
 - *Plan Production/Title Blocks modified.*
 - *File location path moved to the bottom of sheet.*
 - *Cover Sheets modified.*
 - *WCR symbol changed to a hatch pattern.*
 - *Example sheets modified to show the new hatch pattern.*
- **Documentation for Civil 3D 2015:**
 - *How to apply Sheet Set Manager and Plan Production for City Projects.*

E&PM AutoCAD Standards – 2015 Improvements:

As of 4/06/2015

- **Civil 3D 2015 CAD Standards (00_Resources):**
 - (See *ReadMe-C3D2015.doc* in the Documentation directory)
 - *Civil 3D 2015 Template (C3DCityStandard2015.dwt)*
 - *Updated Plan Production Templates:*
 - *Transportation (TITLE BLOCK_Trans.dwt)*
 - *Storm Water (TITLE BLOCK_SW.dwt)*
 - *Updated Sheet Set Manager Templates:*
 - *Transportation (CityStandardSheetSet-TRANS.dst)*
 - *Storm Water (CityStandardSheetSet-SW.dst)*
- **Production Sheets:**
 - *Sheet Set Manager and Plan Production workflow for City Projects:*
 - *CMUD changes to CLTWater.*
 - *General Notes Sheets:*
 - *Various General Note Utility changes include the contractor to stay away 5' from existing utilities.*
- **Documentation for Civil 3D 2015:**
 - *How to apply the new Code Set Style – Label Style for roadway widening widths.*
 - *Sheet Set Management and Plan Production setup in accordance with City Standards.*
 - *How to setup and apply slope labels to sidewalks.*
 - *How to modify a section using the Corridor Section Editor.*
 - *How to delete a specific Alignment Station label.*
 - *How to apply Marked Point Subassembly in the Code Set Style.*

E&PM AutoCAD Standards – 2014 Improvements:

As of 4/16/2014

- **Civil 3D 2013 CAD Standards (00_Resources):**
(See *ReadMe-C3D2013.doc* in the Documentation directory)
 - *Civil 3D 2013 Template (C3DCityStandard2013.dwt)*
 - *Updated Plan Production Templates:*
 - *Transportation (TITLE BLOCK_Trans.dwt)*
 - *Storm Water (TITLE BLOCK_SW.dwt)*
 - *Survey Figure Prefix Database:*
 - *City Survey Database Settings w/setup documentation*
(See Documentation directory)
 - *Updated Pipe Catalog:*
 - *City Pipe Catalog w/setup documentation*
(See Documentation directory)

- **Production Sheets:**
 - *Transportation Production Sheets:*
 - Trans. Cover Sheet updated
 - *New Section on cover sheet that states the Surveyor/Survey Firm who did the base mapping for the project. This should be filled in by the Consultant.*
 - Trans. General Notes Sheet updated
 - *Updated section under Traffic Control.*
 - Trans. Traffic Control Sheet updated.
 - **Use the latest Watch diagrams from CDOT:**
 - <http://charmeck.org/city/charlotte/Transportation/ROWUse/Documents/2014%20WATCH.pdf>
 - *Storm Water Production Sheets:*
 - S/W Cover Sheet updated
 - *New Section on cover sheet that states the Surveyor/Survey Firm who did the base mapping for the project. This should be filled in by the Consultant.*
 - S/W General Notes Sheet updated
 - *Updated section under Traffic Control.*
 - S/W Traffic Control Sheet updated.
 - **Use the latest Watch diagrams from CDOT:**
 - <http://charmeck.org/city/charlotte/Transportation/ROWUse/Documents/2014%20WATCH.pdf>

▪ **Civil 3D 2013 Template improvements:**

- *City Standard Civil 3D 2013 template added.*
- *City Standard Civil 3D 2013 working template added
(The working template contains a graphical representation of standard Civil 3D objects contained within the template.)*

▪ **Consultants2010.zip removed:**

- *Consultants2010.zip has been removed and replaced with Consultants2013.zip file.*

▪ **Documentation:**

- *How to apply the City Standard Pipe Structure Civil 3D Label Style.*
- *How to setup and use the City Figure Prefix Database for automated survey line work.*
- *How to adjust the pipe wall thicknesses within the Civil 3D Pipe Catalog.*

E&PM AutoCAD Standards – 2013 Improvements:

As of 10/01/2013

▪ **Production Sheets:**

- *Storm Water Production Sheets:*

- *S/W General Notes sheet:*

- *Updated section under TREES, SHRUBS, AND HEDGES.*

▪ **Civil 3D 2010 Template improvements:**

- *Added new pipe styles that show wall thicknesses for utilities with pipe diameters greater than 24inches.*
- *Added new Point Group with instructions to show all survey points in a drawing with point number, description, and elevation.*

E&PM AutoCAD Standards – 2013 Improvements:

As of 5/01/2013

▪ **Production Sheets:**

- *Transportation Production Sheets:*
 - Transportation Cover Sheet updated
 - *Right of Way Utility Easement has changed to Sidewalk Utility Easement.*
 - *The PB-EASEMENT-RUE layer changes to PB-EASEMENT-SUE.*
 - *Pavement Degradation Details updated.*
 - *Proposed Property Line changes to New Property Line with a ROW linetype.*
- *Storm Water Production Sheets:*
 - S/W Cover Sheet updated
 - *Right of Way Utility Easement has changed to Sidewalk Utility Easement.*
 - *The PB-EASEMENT-RUE layer changes to PB-EASEMENT-SUE.*
 - *Pipe flow direction arrow modified to a straight flow direction arrow.*
 - *PE # required on Storm Water Cover sheet.*
 - *Proposed Property Line changes to New Property Line with a ROW linetype.*

▪ **Civil 3D 2010 Template improvements:**

- *Pipe Flow Direction Arrow added to all Civil 3D Pipe Label Styles.*
- *Added Table Style for Drainage Structure Summary Tables.*
- *Radius Return label style.*
- *UBO (Utility by Others) label style.*
- *Added Photogrammetric Layers.*
- *New hatching layers added for Sidewalk Bridging – PHTCH-SIDEWALKBRDG and 4" Sidewalk Reinforcement – PHTCH-4SIDEWALKREINF.*

▪ **REM template removed:**

- *REM Directory and readme document removed.*

▪ **Consultants2007.zip removed:**

- *Land Desktop and Civil 3D 2007 city standard files have been removed.*

▪ **CAD Details:**

- *Pavement Degradation Details updated.*
- *4" Reinforced Concrete Sidewalk added.*

▪ **Documentation:**

- *Drainage Structure Summary Table.*
- *Elevation, Station, and Offset label style.*
- *Data Link Pipe Network.*
- *Radius Return Civil 3D Label Style.*

E&PM AutoCAD Standards – 2012 Improvements:

As of 4/19/2012

▪ **Production Sheets:**

• *Transportation Production Sheets:*

- Cover Sheet updated
 - *North Arrow should include (Enter Datum Info.)*
 - *Parenthesis should contain base mapping datum that was used in the drawing.*
 - *2012 Standard Specifications*
 - *NCDOT 2012 Standard Specifications*
 - *Sidewalk Utility Easement has changed to Right of Way Utility Easement.*
 - *The PB-EASEMENT-SUE layer changes to PB-EASEMENT-RUE with the R/Wue linetype.*

• *Storm Water Production Sheets:*

- Cover Sheet updated
 - *Signature line added for Storm Water Construction Mgr.*
 - *Sidewalk Utility Easement has changed to Right of Way Utility Easement.*
 - *The PB-EASEMENT-SUE layer changes to PB-EASEMENT-RUE with the R/Wue linetype.*
- *General Notes Sheet updated*
 - *Tolerance added under General Notes*
 - *Box added for Base Survey Data*
 - *Base Survey Data box should contain information on the project's base mapping.*

▪ **New Linetype Definition:**

- *Applies to Civil 3D 2010, Civil 3D 2007& Land Development Desktop 2007 templates.*
 - *Added R/Wue linetype to the City standard (Citystd.lin) linetype file.*

▪ **Example Sheets:**

- *Linetype for Right of Way Utility Easement on layer PB-EASEMENT-RUE. See the CADD STANDARD LINETYPE example sheet.*

E&PM AutoCAD Standards – 2011 Improvements:

As of 8/01/2011

- **Civil 3D 2010 CAD Standards (00_Resources):**
 - (See *ReadMe-C3D2010.doc* in the *Documentation* directory)
 - *Civil 3D 2010 Template (C3DCityStandard2010.dwt)*
 - *Plan Production Templates:*
 - *Transportation (TITLE BLOCK_Trans.dwt)*
 - *Storm Water (TITLE BLOCK_SW.dwt)*
 - *Survey Database:*
 - *City Survey Database Settings w/setup documentation*
(See *Documentation* directory)
 - *Pipe Catalog:*
 - *City Pipe Catalog w/setup documentation*
(See *Documentation* directory)
 - *Assemblies:*
 - *City Transportation Assemblies*
 - *Linetype Definition w/Shape files:*
 - *City Standard Linetypes (Citystd.lin)*
 - *New Slope Easement – SLE Linetype*
- **City Project Structure:**
 - *Contains _Design Folder Template (See ReadMe-C3D2010.doc)*
To be copied to consultants project directory and used for submittals:
 - *_Design Folder Template*
 - *Drawings*
 1. *_Shortcuts*
 2. *50% Submittals*
 3. *70% Submittals*
 4. *90% Submittals*
 5. *External References*
 6. *Final Plans*
- **Documentation:**
 - *ReadMe-C3D2010*
 - *Civil 3D 2010 setup*
 - *City Pipe Catalog Path*
 - *City Pipe Catalog setup*
 - *City Survey Database*
 - *City Survey Database setup*
- **Examples:**
 - *ExampleProfileView.pdf*
 - *SampleRecordDrawing.pdf*

E&PM AutoCAD Standards – 2010 Improvements:

As of 11/24/2010

▪ New Linetype Definition:

- *Applies to Civil 3D 2007& Land Development Desktop 2007 templates.*
 - *Added proposed Ditchline linetype to the City standard (Citystd.lin) linetype file.*

▪ Example Sheets:

- *New requirement on survey plats. See plat sample sheets.*
 - *Add – “Computed Project Distance____*” in the notes section where applicable.*
- *Procedure for creating easement lines in AutoCAD. See the note on the CADD STANDARD LINETYPE example sheet.*
 - *Easement lines should **NOT** be generated from offset of other lines.*
- *Linetype for Proposed Ditch on layer PD-DITCH. See the CADD STANDARD LINETYPE example sheet.*
 - *Proposed ditch lines should use layer PD-DITCH with the Ditchline linetype.*

E&PM AutoCAD Standards – 2010 Improvements:

As of 02/25/2010

- **CAD Templates:**
 - *Civil 3D 2007& Land Development Desktop 2007*
 - *Added Photogrammetric Layers as part of our City Survey CAD Standards.*
- **Production Sheets:**
 - *Transportation Production Sheets:*
 - Traffic Control Notes updated
 - *Traffic Control Notes Sheet updated per CDOT.*
 - *Added “Utility by Others” (UBO) Sheet*
 - *Storm Water Production Sheets:*
 - Traffic Control Notes updated
 - *Traffic Control Notes Sheet updated per CDOT.*
 - Storm Water Cover Sheet
 - *“INDEX OF SHEETS” Revised*
- **New REM Procedure:**
 - *Use the REM template to enter property owner and easement information from CAD drawings.*
 - See the REM-Readme document for instructions.
- **New City Plot Style (Citystd.ctb) Screening Options:**
 - *Color-25 shall be used for any plot that requires a 25% screen.*
 - Transportation Production Sheets:
 - *Note: UBO plots require that all plan information **except utilities** is set at 25% screening.*
 - *Color-26 shall be used for any plot that requires a 15% screen.*

▪ **New CAD File Naming Convention for Submittals:**

- *Civil 3D file submittals:*
 - File naming convention: **“Project description_C3DVersion”**
- *Land Desktop file submittals:*
 - File naming convention: **“Project description_LDDVersion”**
- *AutoCAD file submittals:*
 - File naming convention: **“Project description_AutoCADVersion”**

E&PM AutoCAD Standards – 2009 Improvements:

As of 07/01/2009

▪ **Production Sheets:**

- *Storm Water & Transportation Production Sheets:*
 - General Notes Sheet
 - *Landscape Management Note Revised (Trees, Shrubs, and Hedges Section)*
 - *Piedmont Natural Gas Note Revised (Utilities Section)*
 - Traffic Control Notes Sheet
 - *W.A.T.C.H. Note updated*

▪ **CAD Details:**

- *Pavement Degradation Detail #2 Revised.*

▪ **Standard Files:**

- *New Storm Water & Transportation Standard Check Files*
 - *S/W LDD & C3D.dws*
 - *Trans.LDD & C3D.dws*