Large-Site Data Management for AutoCAD Civil 3D

JT McManmon

Application Engineer
CAD Technology Center

Class summary

Large site data management challenges, including project structure, and how to properly break up drawings for effective project collaboration.

Learning objectives

1. Standardize a scalable file structure for all project types
2. Understand when and how to split drawings
3. Maintain efficient drawings though proper display control

Scalable File Structure

- Base drawings (main focus)
  - Source for all design objects; no sheets
- Sheet drawings
  - Xrefs & Drefs of base drawings
  - Annotation and plotting

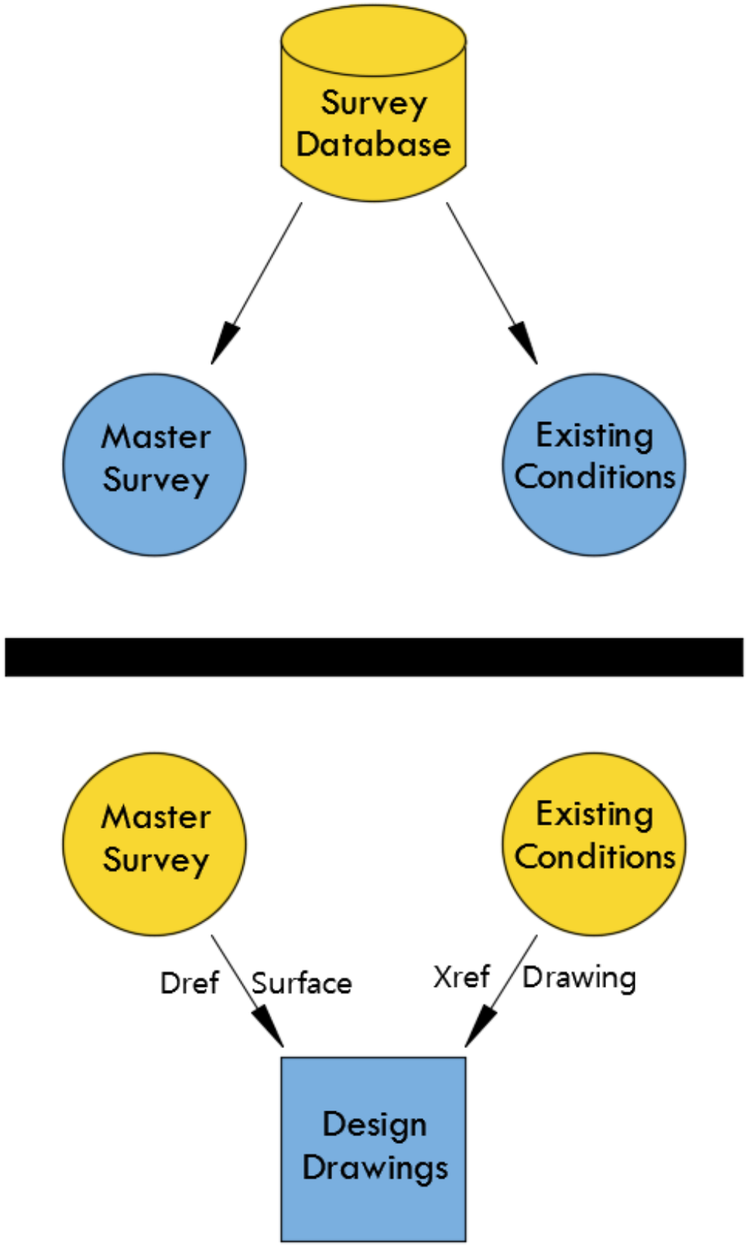
Scalable File Structure

BASE DRAWINGS	CONTENTS	EXTERNAL REFERENCES	DATA SHORTCUT "OUT"	DATA REFERENCES
Master Survey	Points, Linework, Surface(s)	-	Composite Existing Surface	-
Existing Conditions	Points, Linework	-	-	-
Alignments and Profiles	Centerline Only	Existing Conditions Proposed Linework	Alignments and Profiles	Composite Existing Surface
Proposed Linework	AutoCAD Entities only	Existing Conditions	-	Alignments
Grading	Corridor, Feature Lines, Gradings, Proposed Surface	Proposed Linework Existing Conditions	Proposed Surface(s), Corridor(s)*	Alignments, Profiles, Existing Surface
Sanitary Sewer & Watermain	Pipe and Pressure Networks	Existing Conditions Proposed Linework	Pipe and Pressure Networks	Surfaces, Pipe Network Alignments
Storm Sewer	Pipe Networks	Existing Survey Proposed Linework	Pipe Networks	Surfaces, Pipe Networks Alignments
Cross Sections	Cross Sections	-	-	Alignments, Corridor*, Pipes, Surfaces

* New in 2017

Existing Conditions Workflow

1. Import data into SDB and ***MasterSurvey.dw***
2. Edit data and create existing surface
3. Paste surface into master existing surface
4. SaveAs to create ***ExistingConditions.dwg***
5. Delete surface from ***ExistingConditions.dw***
6. Design Drefs surface from ***MasterSurvey.dw***
7. Design Xrefs ***ExistingConditions.dwg***



When to Split Drawings

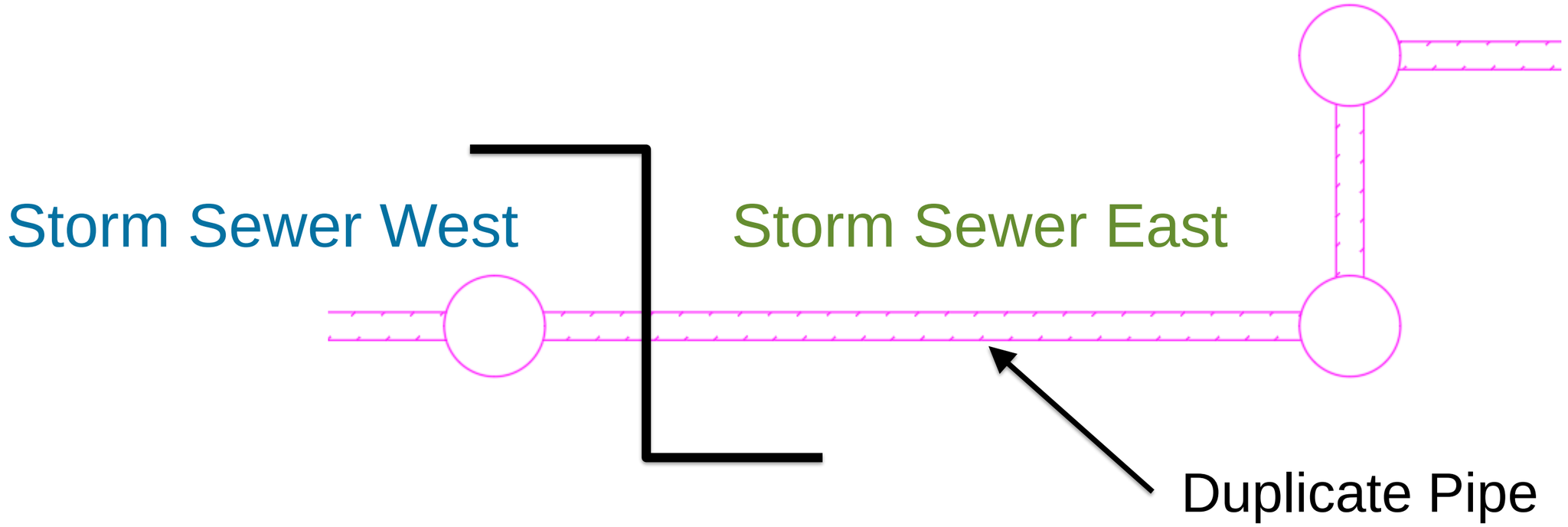
- Grading
  - Municipal Roads
    - < 6 intersections
    - 2 miles (simple), 0.5 mile (more complex)
    - Divided roads: halve these numbers
    - < 15 MB file size
  - Residential Development
    - Same as Municipal Roads, also ~100 lots
  - Commercial Sites
    - ~2 acres

Where to Split Drawings



When to Split Drawings

- Storm or Sanitary & Watermain
  - Less than 100 parts



Visibility Setting for Efficient Drawings

- Utilize no-display Styles
- Set up minimal-display Styles
- Turn off Corridor Baselines
- Unload Xrefs when not in use

Conclusions

1. Choose a company-wide file structure and stick with it
2. Splitting Drawings: test, document, educate
3. Efficient drawings: Effective templates, educate

How did I do?

- Your class feedback is critical. Fill out a **class survey** now.
- Use the AU mobile app or fill out a class survey online.
- Give feedback after each session.
- AU speakers will get feedback in real-time.
- **Your feedback results in better classes and a better AU experience.**



Stop By Our Booth

- ✓ Please come stop by CTC Express Tools Booth #2777
- ✓ We would be happy to talk more about the software!



Autodesk is a registered trademark of Autodesk, Inc., and/or its subsidiaries and/or affiliates in the USA and/or other countries. All other brand names, product names, or trademarks belong to their respective holders. Autodesk reserves the right to alter product and services offerings, and specifications and pricing at any time without notice, and is not responsible for typographical or graphical errors that may appear in this document. © 2016 Autodesk, Inc. All rights reserved.

© 2016 Autodesk. All rights reserved.