

CADD Coordination Policy

Date: February 6, 2017

The following is the revised CADD Coordination Policy for Roadway Design and its Consultants. It is maintained by the Roadway CADD Coordination Group. The CADD Coordination Group is under the supervision of the Roadway Design Assistant Design Engineer for Support.

PURPOSE:

The CADD Coordination Policy was created by the CADD Coordination Group using input from CADD users. Its Purpose is to promote better communication, save time and increase efficiency for everyone involved. To ensure success, the CADD Coordination Group will monitor, review and revise the CADD Coordination Policy. The Section Heads and Unit Heads will be involved with the implementation and compliance with this policy.

Policy:

1. Follow the standards detailed in the CADD Coordination Policy when working in CADD files for all projects.
2. The most current version of all CADD files should be maintained in ProjectWise.
3. Designers and Technicians will follow all standards when setting up and working in design files and sheet files.
4. Use the Feature Definition Toggle Bar for design features in CADD files.
5. The level name documentation is located in the BTSD Software Documentation section of Onbase. Also in MicroStation or Geopak look in Project Explorer > Links > MicroStation Level Guide > MicroStation Levels.
6. Meetings from the Roadway Design Manual for coordination between the Designer and PDU will be conducted at the following Phases.

5200 Base Plan Coordination Meeting.
5300 Preliminary Plan Coordination Meeting.
5400 Functional Plan Coordination Meeting.
5500 PS&E Turn in Plan Coordination Meeting.

Guides for these meetings are attachments 1 thru 5 to this policy.

7. Text guides for 100, 50 and 20 scale text is included in the Policy

CADD Coordination Policy

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File Naming Conventions	2, 3, 4, 5, 6	January 2017
Standard Text Sizes	7, 8, 9	January 2017
Attachments		
Base Plan Coordination Meeting	10	January 2017
Preliminary Plan Coordination Meeting	11	January 2017
Functional Plan Coordination Meeting	12	January 2017
PS&E Turn-in Plans Coordination Meeting	13	January 2017

3. TYPE OF SHEET FILE (8th Character)

1 2 3 4 5 0 ddgn

- a _____ AERIALS (includes Wetland Delineation)
- c _____ CONSTRUCTION (includes Resurfacing Projects)
- d _____ DRAINAGE
- e _____ GRADES
- f _____ FENCE
- g _____ GEOMETRICS or GEOMETRICS and GRADES
- h _____ ALIGNMENT ORIENTATION (Alignment Info., Ties and Bench Marks)
- j _____ JOINTS
- k _____ SUMMARY of SOILS and MATERIALS SURVEY INFORMATION
- l _____ LIGHTING
- m _____ MISCELLANEOUS (Location Maps and Exhibits)
- n _____ GENERAL INFORMATION
- p _____ PLAN AND PROFILE (includes Full Profile)
- r _____ REMOVALS
- s _____ SPECIAL PLAN (Guardrail, etc.)
- t _____ TYPICALS (includes Joint Repair)
- w _____ LANDSCAPING
- x _____ EROSION CONTROL
- z _____ PHASING

Examples:

Example: 1 2 3 4 5 0 d p 0 5.dgn (Plan and Profile sheet file #5)

Example: 1 2 3 4 5 0 d p 1 1 6.dgn (Plan and Profile sheet file #116)

4. OTHER SHEET FILES

1 2 3 4 5 0 x e w s h t 0 1(chain name).dgn* _____ EARTHWORK QUANTITIES (Mainline Earthwork Sheet)

1 2 3 4 5 0 x c u l x s s h t 0 1.dgn* _____ DRAINAGE XS SHEETS (Mainline Cross Section Sheet)

1 2 3 4 5 0 x c u l x s s h t 0 2.dgn* _____ DRAINAGE XS SHEETS (Other Alignment Cross Section Sheet)

1 2 3 4 5 0 x x s s h t 0 1(chain name).dgn* _____ ROADWAY XS SHEETS (Mainline Cross Section Sheet)

5. CORRIDOR MODELING FILE NAMES

1 2 3 4 5 0 xa_ corr. dgn Horizontal Alignment File
1 2 3 4 5 0 x main_corr.dgn Main is name of corr.

Model Surface Deliverable Files

Existing Ground 123450xexisting.xml
Proposed Finish Grade 123450x(chain name)final_top.xml
Proposed Grading Surface 123450x(chain name)proposed_grading_surface.xml

Superelevation Deliverable file 123450x(chain name)super.xls

6. NOTES FILE NAMES

1 2 3 4 5 0 x n ?. dgn _____ Overall Project Notes file (n = Notes).

? = Multiple files may be necessary.

Examples:

1 2 3 4 5 0 x n c. dgn _____ Overall Project (n = Notes File, c= construction notes)

1 2 3 4 5 0 x n e c. dgn _____ Overall Project (n = Notes File, e c= erosion control)

1 2 3 4 5 0 x n r. dgn _____ Overall Project (n = Notes File, r= removal notes)

The Roadway Design Manual, Chapter 11- Highway Plans Assembly: Identifies the Plan Sheet Organization used in the Contract Plans.

7. PHASING SHEET FILES

File Naming For Phased Lighting, Phased Construction, Phased Removals and Phased Cross Sections

File Naming For Phased Lighting,
Phased Construction, Phased Removals
and Phased Cross Sections.

General Phasing sheets should be named as follows:

123450 d z p1 s2 _01.dgn

* The Base Sheet number comes from the Base set of plans use to make the different sets of sheets. (construction, removals, erosion control, drainage etc.)

Phasing sheets for Lighting should be named as follows:

123450dzlp1s2_01.dgn

Phasing sheets for Construction or Removals should be named as follows:

123450dzcp1s2_01.dgn

Phasing sheets for Roadway Cross Section Sheets should be named as follows:

123450dzxschainnamep1s1_01.dgn

8. REQUIRED REFERENCE FILE LOGICAL NAMES

Alignment file . . . use "a*".

Notes file . . . use "n*".

Borders . . . use "s*" or "*border*".

Planimetrics (Topog). . . use "t*" or "50t*" or "20t*" or "10t*" or "40t*".

Wetlands . . . use "w*" or "50w*" or "20w*"

Feature . . . use "f*" or "50f*" or "20f*".

Contours files may have a logical name "c*" or "50c*" or "20c*" or "40c*"

Contours printed black use "bc"

9. REVISION – ADDED SHEET

When adding a sheet for a revision, the file name shall end with an "a".

Example: 1 2 3 4 5 0 d p 0 5 a. dgn (Plan and Profile, added sheet file #5a)

10. AERIAL FILE NAMES With Year

123450po_08.tif (photogrammetry digital ortho file plus yr)

123450po_08.tfw (photogrammetry coords for digital ortho)

123450powl_07.kmz (photogrammetry ortho wetland for google earth)

123450poniroc_08.tif (photogrammetry ortho niroc file plus yr)

123450pofas_96.tif (photogrammetry ortho fsa file plus yr)

123450powl_07.tif (photogrammetry ortho wetland file plus yr)

We really need to add the year to the file.

We have an original ortho and sometimes they want the latest images that are available.

Example:

NH-275-6(140), N-57 - WISNER, C.N. 31938 has 1996 and 2004 flights

319380po_96.tif

319380po_04.tif

The warped 9x9 photos shall be named according to their flight and frame numbers.

Example: 9 5 0 1 0 4. tif (Flight number = 9501 and Frame number = 04)

11. PRINT ORGANIZER FILE NAMES

Full Size = 123450full.pset

Half Size = 123450_traf_half.pset

row

mr

rdwy

brg

pse

STANDARD TEXT SIZES

Plot Scale 100:1

PRELIMINARY SURVEY

	<u>CASE</u>	<u>TX</u>	<u>WEIGHT</u>	<u>FONT</u>
Station & Offset Text	N/A	10	1	5
Topog. & Driveway Notations	UPPER	10	1	5
Section-Township-Range Example: SEC. 35-T31N-R1E	UPPER	12	1	5
Hwy. No., Co. Rd. & Street Names	UPPER	12	2	5
Notes for Pipes & Structures	UPPER	10	1	5
Streams, Rivers, Railroads	UPPER	12	1	5 *
County Names	UPPER	14	2	5
City Names	UPPER	18	2	9
Contours	N/A	10	1	5
Section Line	UPPER	12	1	5

DESIGN

HORIZONTAL ALIGNMENT

Stationing Text	N/A	14	2	5
P.C. or P.T. on Alignment	UPPER	12	1	5
Equations & P.I. Data	UPPER	12	1	5

VERTICAL ALIGNMENT

Reference Line	N/A	14	2	5
Alignment Annotation	N/A	14	2	5
V.P.I. Data	U/L	14	2	5
Profile Elevations – Existing	N/A	12	1	5
Profile Elevations – Design	N/A	14	2	5
Construction Notes	U/L	14/12	2	5 *
Contours	N/A	12	2	5
Tabular Note Information (Prelim. info. UPPER case. Design info. U/L case)		12	2	5

* 15 degree slant.

Note: Line spacing should be .75 of TX

STANDARD TEXT SIZES

Plot Scale 50:1

PRELIMINARY SURVEY

	<u>CASE</u>	<u>TX</u>	<u>WEIGHT</u>	<u>FONT</u>
Station & Offset Text	N/A	5	1	5
Topog. & Driveway Notations	UPPER	5	1	5
Section-Township-Range Example: SEC. 35-T31N-R1E	UPPER	6	1	5
Hwy. No., Co. Rd. & Street Names	UPPER	6	2	5
Notes for Pipes & Structures	UPPER	5	1	5
Streams, Rivers, Railroads	UPPER	6	1	5 *
County Names	UPPER	7	2	5
City Names	UPPER	9	2	9
Contours	N/A	5	1	5
Section Line	UPPER	6	1	5

DESIGN

HORIZONTAL ALIGNMENT

Stationing Text	N/A	7	2	5
P.C. or P.T. on Alignment	UPPER	6	1	5
Equations & P.I. Data	UPPER	6	1	5

VERTICAL ALIGNMENT

Reference Line	N/A	7	2	5
Alignment Annotation	N/A	7	2	5
V.P.I. Data	U/L	7	2	5
Profile Elevations – Existing	N/A	6	1	5
Profile Elevations – Design	N/A	7	2	5
Construction Notes	U/L	7/6	2	5 *
Contours	N/A	6	2	5
Tabular Note Information (Prelim. info. UPPER case. Design info. U/L case)		6	2	5

* 15 degree slant.

Note: Line spacing should be .75 of TX

STANDARD TEXT SIZES

Plot Scale 20:1

PRELIMINARY SURVEY

	<u>CASE</u>	<u>TX</u>	<u>WEIGHT</u>	<u>FONT</u>
Station & Offset Text	N/A	2	1	5
Topog. & Driveway Notations	UPPER	2	1	5
Section-Township-Range Example: SEC. 35-T31N-R1E	UPPER	2.4	1	5
Hwy. No., Co. Rd. & Street Names	UPPER	2.4	2	5
Notes for Pipes & Structures	UPPER	2	1	5
Streams, Rivers, Railroads	UPPER	2.4	1	5 *
County Names	UPPER	2.8	2	5
City Names	UPPER	3.6	2	9
Contours	N/A	2	1	5
Section Line	UPPER	2.4	1	5

DESIGN

HORIZONTAL ALIGNMENT

Stationing Text	N/A	2.8	2	5
P.C. or P.T. on Alignment	UPPER	2.4	1	5
Equations & P.I. Data	UPPER	2.4	1	5

VERTICAL ALIGNMENT

Reference Line	N/A	2.8	2	5
Alignment Annotation	N/A	2.8	2	5
V.P.I. Data	U/L	2.8	2	5
Profile Elevations – Existing	N/A	2.4	1	5
Profile Elevations – Design	N/A	2.8	2	5
Construction Notes	U/L	2.8/2.4	2	5 *
Contours	N/A	2.4	2	5
Tabular Note Information (Prelim. info. UPPER case. Design info. U/L case)		2.4	2	5

* 15 degree slant.

Note: Line spacing should be .75 of TX

BASE PLAN COORDINATION MEETING

The following is a guide to conducting the Base Plan Coordination Meeting in activity 5200. The meeting is intended coordinate the plan setup between the Designer and Plan Development Squad assigned the project. The Designer is responsible for scheduling the meeting.

Attendees:

- Roadway Designer
- Roadway Designer Unit Head
- Plan Development Technician
- Plan Development Squad leader

Items that need to be covered

Type and Scale of plans needed to cover the project. The need for 2L sheets. Guardrail special plans for guardrail. Type of Design files Etc. See attached CADD Coordination Checklist. (Attachment 5)

PRELIMINARY PLAN COORDINATION MEETING

The following is a guide to conducting the Preliminary Plan Coordination Meeting in activity 5300. The meeting is intended coordinate the plan setup between the Designer and Plan Development Squad assigned the project. The Designer is responsible for scheduling the meeting.

Attendees:

- Roadway Designer
- Roadway Designer Unit Head
- Plan Development Technician
- Plan Development Squad leader

Items that need to be covered:

- Changes from Plan-In-Hand
- Public Meeting displays
- Mitigation sites

FUNCTIONAL PLAN COORDINATION MEETING

The following is a guide to conducting the Functional Plan Coordination Meeting in activity 5400. The meeting is intended coordinate the plan setup between the Designer and Plan Development Squad assigned the project. The Designer is responsible for scheduling the meeting.

Attendees:

- Roadway Designer
- Roadway Designer Unit Head
- Plan Development Technician
- Plan Development Squad leader

Items that need to be covered:

- Changes from Public Meeting
- Changes from ROW

PS&E TURN-IN PLANS COORDINATION MEETING

The following is a guide to conducting the PS&E Turn in Plan Coordination Meeting in activity 5500. The meeting is intended coordinate the plan setup between the Designer and Plan Development Squad assigned the project. The Designer is responsible for scheduling the meeting.

Attendees:

- Roadway Designer
- Roadway Designer Unit Head
- Plan Development Technician
- Plan Development Squad leader

Items that need to be covered:

- PNF off
- Seals on

CADD COORDINATION CHECKLIST

PROJECT NO. _____ ROADWAY DESIGNER/EXT. _____
 CONTROL NO. _____ TECHNICIAN/EXT. _____
 R.O.W. DESIGNER/EXT. _____

DATES:
 MEETING "A" _____ MEETING "B" _____ MEETING "C" _____

INFO MEETING _____ HEARING _____

WHO IS GENERATING THE FOLLOWING ITEMS IN CADD FILES.

DES	TECH	ITEMS	REMARKS
		DRAINAGE	
X		EDGE OF PAVEMENT	
		EROSION CONTROL	
		FENCING	
		GEOMETRICS ANOTATION	
		GRADES	
X		GUARDRAIL	
X		JOINTS	
X		LIGHTING	
X		LIMITS OF CONSTRUCTION	
		NOTES	
		PHASING	
		SPECIAL DITCHES	
	X	TYPICALS	
	X	2-N SHEET	
X		LANDSCAPING	
		WETLANDS	
	X	SPECIAL PLANS	