

GEOPAK[®] Element and File Naming Conventions

Design Manual
Chapter 1
Project Automation

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See page 5 of this section for an example of how these conventions are used.

General

Operator Code

Section	Operator Code
Road 1, Road 2, Road 3, Road 4, Road 5	R1, R2, R3, R4, R5
Geometrics	GE
Soils	SO
Photogrammetry	PH
Section or Office	Suggested Operator Code
Roadside Development	RS
Right of Way	RW
Preliminary Bridge and Final Bridge	BR
Consultant	Use 2-letter abbreviation for company

Job Number

3-digit route number (i.e. US 520 would be 520, Interstate 35 would be 035)

Element Naming Conventions

Chains

At the time this naming convention was originally created, the maximum name length was seven characters. With Geopak 8.8, the maximum name length has become 15 characters. Since the established naming convention has been working reasonably well, there is no reason to change everything merely due to the increased length capability. However, the longer name capability will help to provide a more accurate description of Side Roads.

Survey

mainline	<i>SURjobnumber</i> (i.e. SUR520, SUR018, SUR006)
side road	<i>SURsideRoadName</i>

Note: If survey and construction alignments are the same, use the construction naming convention.

Construction

mainline	<i>MLJobNumber</i> (i.e. ML520, ML018, ML006)
side road	<i>SideRoadName</i>
variable medians	<i>ConstructionChainName DirectionOfTravel</i> (i.e. when the median width becomes variable, the centerline of the traveled roadway is no longer parallel or concentric with the construction centerline. Therefore, if the direction of travel is east on the traveled roadway at a variable median area on a segment of US 520, the chain would be ML520E1. If there are multiple variable median segments, the number would be increased, such as ML520E2, ML520E3, etc.
ramps and loops	<i>SideRoadNameA, SideRoadNameB, SideRoadNameC, SideRoadNameD</i> , etc. (i.e. at US 520 (mainline) and County Road D35 (sideroad): D35A, D35B, D35C, D35D.

Other Elements

	Left	Right	Both (Left and Right)	Median
Ditch Grades	<i>DGLbeginning sta</i>	<i>DGRbeginning sta</i>	<i>DGBbeginning sta</i>	<i>DGMbeginning sta</i>
Backslopes	<i>BSLbeginning sta</i>	<i>BSRbeginning sta</i>	<i>BSBbeginning sta</i>	NA
Foreslopes	<i>FSLbeginning sta</i>	<i>FSRbeginning sta</i>	<i>FSBbeginning sta</i>	NA
Barn Roof	<i>BRLbeginning sta</i>	<i>BRRbeginning sta</i>	<i>BRBbeginning sta</i>	NA
Bench Grades	<i>BGLbeginning sta</i>	<i>BGRbeginning sta</i>	<i>BGBbeginning sta</i>	NA

Note: The *beginning sta* includes only the numbers to the left of the "+" sign (i.e. 235 + 55.876 is 235), therefore an example left ditch grade name could be DGL235.

Points

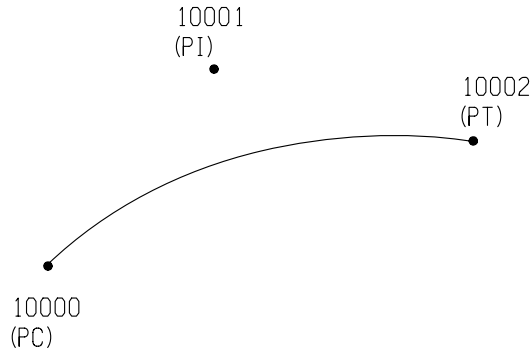
Only numeric point names should be used for critical alignment points. This is for the benefit of construction survey.

preliminary GPS and control points	1–999
Bridge	1000–1499
Transportation Center survey crews	1500–3499
Right-of-Way Design and Transportation Center Right-of-Way	
centerline points not numbered by Design	3500–3999
existing ROW points	4000–4999
new ROW points	5000–5999
temporary easement points	6000–6999
property points	7000–7999
section corners, lot corners, etc.	8000–8999
miscellaneous	9000–9999
(unused at this time)	10,000–19,999
Geometrics	
ramp, loop, etc. alignments	20,000–20,999
Road Design and Corridor Development	
mainline alignment	21,000–21,999
side road alignments	22,000–22,999
detours, run-arounds, returns, etc.	23,000–23,999
miscellaneous points	24,000–24,999

Curves and Spirals

Recommendation: name the curve according to the PI, PC, or PT point name used to store the curve.

Example: If point 10000 is used as one of the points to store the curve, the name of the curve would be 10000. It is not required to add a prefix to the curve or spiral name, as GEOPAK® will recognize that it is a curve.



Profiles

Existing Ground	Proposed	Edge of Slab (used for superelevation)
<i>chain_E</i>	<i>chain_P</i>	<i>chain_S</i>

File Naming Conventions

Most design files utilize the common file naming convention of *CCRRRPPP*, where *CC* is for the two-digit county number, *RRR* is for a three-digit route number, and *PPP* is for the three-digit “paren” number from the Project Number. (Example: The design file name for project STP-65-6(47)- -2C-42 would be 42065047.) Several other file types, such as cross-section and input files, use a more individualized descriptive file name, as shown below.

Design Files

main design file	<i>CCRRRPPP.dsn</i>
cross section design file	<i>xs_chain.dsn</i>
Project Manager PRJ file	<i>CCRRRPPP.prj</i>

Soil Files

main soils design file	<i>CCRRRPPP.sol</i>
cross section soils file	<i>xs_chain.sol</i>
project manager PRJ file	<i>CCRRRPPP.prj</i>

Input Files

shape input file	<i>shp_chain.inp</i>
Earthwork input files—same filename for .txt and .log files	<i>ew_chain_run1.inp</i> <i>ew_chain_run2.inp</i>

Cross Section Sheeting

Preliminary	
mainline	xs_chain.Wxx
sideroads	xs_chain.Xxx
ramps and loops	xs_chain.Yxx
borrows	xs_chain.Zxx
xx = 01, 02, 03, 04, etc.	
For all preliminary work, the sheet files will remain separated (i.e. individual SR sheet files, individual ramp sheet files, etc.)	
Final	
mainline	CCRRRPPP.Wxx
sideroads	CCRRRPPP.Xxx
ramps and loops	CCRRRPPP.Yxx
xx = 01, 02, 03, 04, etc.	
For final design, the cross section sheet files will be combined into one PDF file.	

Coordinate Geometry (COGO) Input

ChainJob#.iOperatorCode

The horizontal and vertical alignments should be in one input file. There should be a separate input file for the mainline and each side road. For interchanges, all ramps or loops should be combined into one input file.

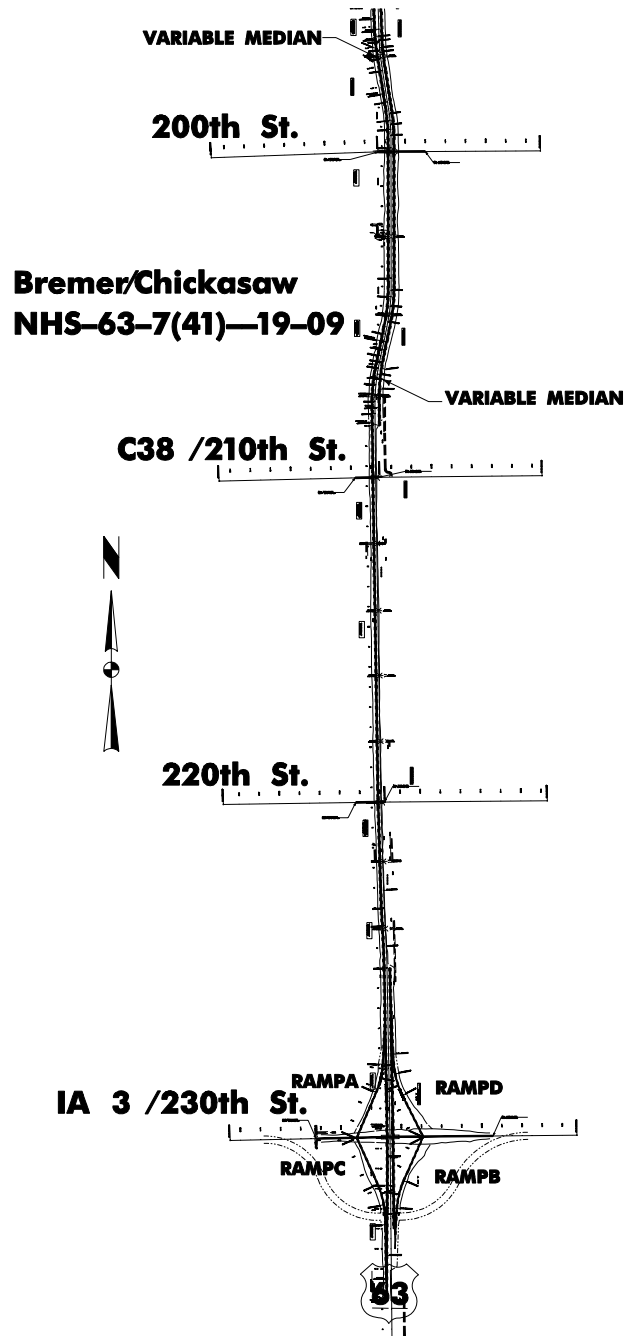
For the geometric submittal to the design squads, all ramps and loops will be included in one input file, named as follows:

preliminary interchange design	sideroadchainprejob#.ige
final interchange design	sideroadchainfnljob#.ige

Suggestion: Create “COGOInput” and “COGOOutput” subdirectories, within the project directory, to store all input and output files. This will be the default in any new project directory setup.

Example Project

The following example is for the Bremer/Chickasaw Highway 63 project (NHS-63-7(41)--19-09) designed by the Rural 3 Design Section.



General

Operator Code: R3

Job Number: 063

Element Naming Conventions

Chains

Survey

mainline	SUR063
side road	SURIA3, SUR220TH, SURC38, SUR200TH

Construction

mainline	ML063
side road	IA3, 220TH, C38, 200TH
variable medians	ML063N1, ML063S1
Ramp A	IA3A
Ramp B	IA3B
Ramp C	IA3C
Ramp D	IA3D

Other Elements

	Left	Right	Both (Left and Right)	Median
Ditch Grades	DGL <i>beginning sta</i>	DGR <i>beginning sta</i>	DGB <i>beginning sta</i>	DGM <i>beginning sta</i>
Backslopes	BSL <i>beginning sta</i>	BSR <i>beginning sta</i>	BSB <i>beginning sta</i>	NA
Foreslopes	FSL <i>beginning sta</i>	FSR <i>beginning sta</i>	FSB <i>beginning sta</i>	NA
Barn Roof	BRL <i>beginning sta</i>	BRR <i>beginning sta</i>	BRB <i>beginning sta</i>	NA
Bench Grades	BGL <i>beginning sta</i>	BGR <i>beginning sta</i>	BGB <i>beginning sta</i>	NA

Note: *beginning sta* is only the numbers to the left of the "+" sign (i.e. 235 + 55.876 is 235)

Points

Points for setting the alignment centerlines should be numeric only.

Curves and Spirals

Recommendation: name the curve according to the PI, PC, or PT point name used to store the curve.

Profiles

Existing					
ML063_E	ML063S1_E	220TH_E	200TH_E	IA3B_E	IA3D_E
ML063N1_E	IA3_E	C38_E	IA3A_E	IA3C_E	
Proposed					
ML063_P	ML063S1_P	220TH_P	200TH_P	IA3B_P	IA3D_P
ML063N1_P	IA3_P	C38_P	IA3A_P	IA3C_P	
Edge of Slab (used for superelevation)					
ML063_S	ML063S1_S	220TH_S	200TH_S	IA3B_S	IA3D_S
ML063N1_S	IA3_S	C38_S	IA3A_S	IA3C_S	

File Naming Conventions

Design Files

Main Design File
09063041.dsn
Cross Section Files
xs_ML063.dgn
xs_C38.dgn
xs_IA3B.dgn
xs_IA3.dgn
xs_200TH.dgn
xs_IA3C.dgn
xs_220TH.dgn
xs_IA3A.dgn
xs_IA3D.dgn
Project Manager File
09063041.prj

Input Files

Shape Input File		
shp_ML063.inp	shp_C38.inp	shp_IA3B.inp
shp_IA3.inp	shp_200TH.inp	shp_IA3C.inp
shp_220TH.inp	shp_IA3A.inp	shp_IA3D.inp
Earthwork Input File		
ew_ML063_run1.inp	ew_C38_run1.inp	ew_IA3B_run1.inp
ew_ML063_run2.inp	ew_C38_run2.inp	ew_IA3B_run2.inp
ew_IA3_run1.inp	ew_200TH_run1.inp	ew_IA3C_run1.inp
ew_IA3_run2.inp	ew_200TH_run2.inp	ew_IA3C_run2.inp
ew_220TH_run1.inp	ew_IA3A_run1.inp	ew_IA3D_run1.inp
ew_220TH_run2.inp	ew_IA3A_run2.inp	ew_IA3D_run2.inp
<p>Note: There are additional earthwork calc files "plowing and shaping", "moisture and density", and "granular blankets". These can be named run3, run4, etc.</p>		

Cross Section Sheeting

Preliminary	
Mainline	xs_ML063.W01
	xs_ML063.W02
Side Roads	xs_IA3.X01
	xs_220TH.X01
	xs_C38.X01
	xs_200TH.X01
Ramps and Loops	xs_IA3A.Y01
	xs_IA3C.Y01
	xs_IA3B.Y01
	xs_IA3D.Y01
Borrows	xs_ML063.Z01
Final	
Mainline	09063041.W01
	09063041.W02
Side Roads	09063041.X01
	09063041.X02
Ramps and Loops	09063041.Y01

Coordinate Geometry (COGO) Input

ML063063.iR3	IA3063.iR3	200TH063.iR3
ML063N1063.iR3	220TH063.iR3	IA3INT063.iR3
ML063S1063.iR3	C38063.iR3	

For Geometric submittal to the design squads:

preliminary interchange design	IA3pre063.ige
final interchange design	IA3fnl063.ige