AutoCAD® Civil 3D® 2015 "Country Kit" Documentation



Country Kit Workbook Documentation

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1 General

1.1 Introduction

This package called "Country Kit" meets a set of standards of various geometric elements of the project roads, which are in current Mexican law "Normas de Servicios Técnicos, Secretaría de Comunicaciones y Transportes (SCT)", as were conceived For over 30 years.

1.2 Template Overview: _AutoCAD Civil 3D (Metrico) _MEX_2015.dwt

This "Country Kit" for Mexico includes several templates and settings to help Civil 3D's users to create and save AutoCAD drawings which meets the requirements and standards of Mexico. Featuring all the required objects, for instance, labels, styles and tables of the various elements in the process of Highways Design Geometric, this will be applied to the following items:

- Points Point Group
- Feature Lines
- Surfaces
- Alignments
- Profiles
- Corridors Sections
- Pipes
- Parcels
- Grading
- Survey
- View Frame Groups Plan Production
- QTO

Note:

There are other Country Kits/Packs that could meet your needs, which can be downloaded from:

www.autodesk.com/civil3d-countrykits

1.3 Recommended usage for AutoCAD Civil 3D Templates (.dwt)

Drawing templates are intended to avoid duplicated efforts and help maintain consistency between drawings.

To create a new drawing in AutoCAD Civil 3D, a template file is always involved. It may contain standard AutoCAD, as layers and parameters, and AutoCAD objects such as lines and text. You can include all information in AutoCAD Civil 3D drawing shown in the Settings tree (including settings, styles, label styles, tables, descriptive codes and formats for import / export of AutoCAD Civil 3D points) or the prospector tree (including all AutoCAD Civil 3D objects, such as groups of points).

1.4 AutoCAD Civil 3D 2015 (.dwt) Template

AutoCAD Civil 3D 2015 includes several predefined templates.

AutoCAD Civil 3D 2015 includes design templates based on National CAD Standard version 3.1. Including the following templates:

- _AutoCAD Civil 3D (Imperial) NCS
- _AutoCAD Civil 3D (Metric) NCS

In Mexico Country kit find this new template:

• _AutoCAD Civil 3D (Metrico)_MEX_2015.dwt

The names of these templates show some of its parameters. The label of Metric or Imperial units indicates the main of measurement.

✓ Note:

If a new drawing based on a drawing template that is not in Civil 3D, as acad.dwt, styles are created by default called 'Standard' in the new drawing.

1.5 Layers Classification within Templates in AutoCAD Civil 3D

The layers that are created in AutoCAD Civil 3D templates follow the rules of the American National CAD Standards (NCS), focused on infrastructure.

http://www.nationalcadstandard.org

The layers follow the rules of NCS as indicated below, separating each element with a script:

< discipline > - <Principal Group> - <Secondary Group>

- ✓ Discipline: mandatory; templates in AutoCAD Civil 3D use discipline indicators C (civil) y V (survey/mapping).
- ✓ Principal Group: Mandatory; identifies elements such as roads, topographic features and drainage for rainwater. To comply with the standards, not supported core group custom fields.
- ✓ Secondary Group: optional; subelements identified as road profiles. You may include up to two groups side by layer name, and define their own custom child groups.

For example, C-ROAD-LINE-EXTN layer, it has two secondary group: "Line" y "Extn".

Another example, C-TOPO-MINR-N represent Civil - Topographic element - Minor Contours - New

1.6 Main Disciplines used on Layers Standardization

- A Architecture
- **B** Civil Geotechnical
- **C** Civil
- E Electrical
- **F** Fire Protection
- **G** General
- H Hazardous Materials
- I Interiors
- L Landscape
- M Mechanical
- P Plumbing
- S Structural
- T Telecommunications
- V Surveying and Mapping Gis
- X Other Disciplines
- Z Contractor / drawings acquired or purchased

Fonts and Text Styles

The Fonts and styles of texts used in this template are contained in the installation of Country Kit and styles are basically standard.

Text Style	Description	Font	Plotted Size
C-ROAD-ALI-TABLA-SUBT	Style used for Alignment table	Romand.shx	3.5mm
	subtitles		
C-ROAD-ALI-TABLA-TITULO	Style used for Alignment table	Arial Black	5.0mm
	titles		
C-ROAD-ANNOT-BKM	Style used in the Flag KM symbol	Verdana	4.0mm
C-ROAD-ANNOT-EST	Style used for Alignment's	Romans.shx	1.5mm
	stations		
C-ROAD-ANNOT-NOM-ALI	Style used for Alignment's name	Romand.shx	2.5mm
C-ROAD-ANNOT-PTS-GEO-	Style used for Alignment's	Romand.shx	2.75mm
HOR	geometric point		
C-TOPO-RT-UTM	Style used for the UTM Grid	Romans.shx	Function del label style

Hatch Patterns

List of Hatch Patterns used in some styles inside the template, particularly in Plots, Cross sections & Corridors

Hatch Pattern Name	Descripción	Hatch Pattern File
Solid	Solid Hatch to represent the pavement at the signaling, parcels, surfaces.	Template
Hatch Ansi 31	Hatch to represent Sidewalks and pavements or in subassemblies Base	Template
Hatch Ansi 32	Hatch to represent the pavement P1 and P2 in the subassemblies	Template
Hatch Ansi 37	Hatch to represent the curbs in the subassemblies	Template
Hatch Ansi 38	Hatch to represent the subbase in the subassemblies	Template

4 Layers

The Layers in the following list are suggested. Regarding Survey there are several elements which were defined by names that fit International projects standards.

Layer Name	Descripción	Color	Linetype	Style(s) using this
				layer (this column is
				not optional here (see
				section 6))
C-ROAD-ANNOT-ALI-NUM	CIVIL TRANSPORTATION:	white	continuous	
	Alignment number			
C-ROAD-CL-ANNOT-ALI-NOM	CIVIL TRANSPORTATION:	white	continuous	
	Alignment Name			
C-ROAD-CORR-L-CEROS-	CIVIL TRANSPORTATION:	44	continuous	
CORTE	daylight cut corridor			
C-ROAD-CORR-L-CEROS-	CIVIL TRANSPORTATION:	53	Dashed	
TERRAPLEN	daylight fill corridor			
C-ROAD-LINEA-ACOTAMIENTO	CIVIL TRANSPORTATION:	white	continuous	
	Shoulder line			
C-ROAD-LINEA-BORDILLO	CIVIL TRANSPORTATION:	blue	continuous	
	Curb line			
C-ROAD-LINEA-CUNETA	CIVIL TRANSPORTATION:	cyan	continuous	
	Ditch line			
C-ROAD-LINEA-DER-VIA-	CIVIL TRANSPORTATION:	White	C-ROAD-LINEA-	
ADQUIRIR	Right of Way Line by		DER-VIA-	
	Acquiring		ADQUIRIR	
C-ROAD-LINEA-DER-VIA-	CIVIL TRANSPORTATION:	White	M-4-	
EXISTENTE	Existing Right of Way		DISCONTINUA	
C-ROAD-ORILLA-CALZADA	CIVIL TRANSPORTATION:	BLUE	continuous	
	EOP line			
C-ROAD-ORILLA-HOMBRO-	CIVIL TRANSPORTATION:	BLUE	continuous	
NO-PAV	EOS no Pavement			
	(Shoulder Line)			
C-ROAD-ORILLA-HOMBRO-	CIVIL TRANSPORTATION:	blue		
PAV	Pavement EOS (Shoulder			
	Line)			
C-ROAD-PERFIL-TN	CIVIL TRANSPORTATION:	green	Dashed2	
	Existing Profile			
C-GRADING-BORDE-TERRAZA	CIVIL URBANIZACION:	green	Continuous	
	Grading border			

Layer Name	Descripción	Color	Linetype	Style(s) using this
				not optional here (see
				section 6))
C-PARCEL-AREA VERDE	CIVIL URBANIZATION:	94	Continuous	
	GREEN AREAS			
C-PARCEL-COMERCIO	CIVIL URBANIZATION	20	Continuous	
	SHOP AREA	20	continuous	
C-PARCEL-AREA VERDE-HATCH	CIVIL URBANIZATION:	94	Continuous	
	HATCH GREEN AREAS			
C-PARCEL-COMERCIO-HATCH	CIVIL URBANIZATION:	20	Continuous	
	HATCH SHOP AREA			
C-PARCEL-DONACION	CIVIL URBANIZATION:	9	Continuous	
	AREAS OF DONATION			
C-PARCEL-DONACION-HATCH	CIVIL URBANIZATION:	9	Continuous	
	HATCH AREAS OF			
		42	Continuous	
	EDUCATION AREA	42	Continuous	
C-PARCEL-EDUCACION-HATCH	CIVIL URBANIZATION:	42	Continuous	
	HATCH EDUCATION			
	AREA			
C-PARCEL-EQUIPAMIENTO	CIVIL URBANIZATION:	30	Continuous	
	EQUIPMENT ZONE			
C-PARCEL-	CIVIL URBANIZATION:	30	Continuous	
EQUIPAMIENTO_HATCH	HATCH EQUIPMENT			
	ZONE			
C-PARCEL-OFICINA	CIVIL URBANIZATION:	202	Continuous	
	AREA OFFICE			
C-PARCEL-OFICINA-HATCH	CIVIL URBANIZATION:	202	Continuous	
	HATCH AREA OFFICE			
C-PARCEL-SOLAR	CIVIL URBANIZATION:	white	Continuous	
Γ-ΡΔΒΟΕΙ-SOLΔΒ-ΗΔΤΟΗ		white	Continuous	
	HATCH PROPERTY	white	Continuous	
	PARCEL			

Layer Name	Descripción	Color	Linetype	Style(s) using this
				layer (this column is
				not optional here (see
				section 6))
C-PARCEL-VIVIENDA	CIVIL URBANIZATION:	40	Continuous	
	ZONA AREAS VIVIENDAS			
C-PARCEL-VIVIENDA-HATCH	CIVIL URBANIZATION:	40	Continuous	
	ZONA AREAS VIVIENDAS			
	НАТСН			
C-PARCELAS	CIVIL URBANIZATION:	white	Continuous	
	GENERAL PARCELS			
C-PARCELAS-HATCH	CIVIL URBANIZATION:	white	Continuous	
	HATCH GENERAL			
	PARCELS			
C-TOPO-MAJR-N	TOPOGRAPHY: Curvas	45	Continuous	
	de Nivel Maestras			
	Nuevas, New Major			
	Contour			
C-TOPO-MINR-N	TOPOGRAPHY:: Curvas	40	Continuous	
	de Nivel Secundarias			
	Nuevas, New minor			
	contours,			
V-BL-CT	Boundary Lines-	Red	Continuous	
	Municipios, cantones,			
	County			
V-BL-LN-STATE	Boundary Lines- Estados,	Yellow	Phantomx2	
	Departamentos, Existing			
	State Boundary Lines			
V-BL-OBJECT	Boundary Lines-	Red	Continuous	
	Objetos, OBJECT			
V-BL-RR	Boundary Lines-Vias	Red	Dashedx2	
	Ferreas, Railroad			
V-BL-TEXT	Boundary Lines-	Red	Continuous	
	Anotaciones, textos,			
	Text			
V-BL-TN	Boundary Lines-	Red	Dashed2	
	Ciudades, poblacion,			
	City/Town			
V-BL-TP	Boundary Lines- Casetas	Red	Dashed	
	peaje, Turnpike			
	Authority			

Layer Name	Descripción	Color	Linetype	Style(s) using this layer (this column is not optional here (see section 6))
V-BL-XX	Boundary Lines-	Red	Dashed2	
	Generales,			
	Miscellaneous			
V-BLDG-OTLN	Survey : Building and	170	Continuous	
	Structures			

Layer Name	Descripción	Color	Linetype	Style(s) using this
				layer (this column is
				not optional here (see
				section 6))
V-EX-BRIDGE	EXISTING Lines- Puentes y	Red	Dashed2	
	estructuras, Existing Bridge			
	Items and Structures			
V-EX-BUILDING	EXISTING Lines- Construcciones,	Red	Continuous	
	edificaciones y losas, Buildings,			
	Decks			
V-EX-CONT-MJR	EXISTING Lines- Curvas Maestras,	Yellow	Phantomx2	
	Contours - MAJOR			
V-EX-CONT-MNR	EXISTING Lines-Curvas	Red	Continuous	
	Secundarias o delgadas. Contours			
	- MINOR			
V-EX-CONT-TXT	EXISTENTE Lineas- Curvas de Nivel	Red	Dashedx2	
	Etiquetas, Contours – Label Text			
V-EX-CONT-USER	EXISTING Lines- Curvas de Nivel	Red	Continuous	
	usuario, User-Defined Contours			
V-EX-DETAIL	EXISTING Lines- Detalles	Red	Dashed2	
	Generales, Miscellaneous Detail			
V-EX-DRAINAGE	EXISTING Lines- drenaje exsitente,	Red	Dashed	
	Drainage Items			
V-EX-DRIVE	EXISTING Lines- Calzadas,	Red	Dashed2	
	Driveway Items			
V-EX-FENCE	EXISTING Lines- Linderos, Bardas,	170	Continuous	
	Fences Main			
V-EX-GEOTECH	EXISTING Lines- Geotecnia,	9	Continuous	
	Geotechnical Items			
V-EX-GRAVEL	EXISTING Lines- suelo, gravas,	9	Continuous	
	rocas, Soil, Gravel, and Stone			
V-EX-GROUND	EXISTING Lines- Superficie	9	Continuous	
	Terreno Natural , Ground Surface			
V-EX-GUARDRAIL	EXISTING Lines- Protecciones y	9	Continuous	
	barreras, Guardrail and Barrier			
V-EX-LANDSCAPE	EXISTING Lines- Vegetacion, Zona	94	Continuous	
	Arbolada, Trees, Shrubs, and			
	Vegetation			
V-EX-LN-EASE	EXISTING Lines- lineas de	white	Continuous	
	servidumbre, accesos, Existing			
	Easement Lines			

Layer Name	Descripción	Color	Linetype	Style(s) using this layer (this column is
				not optional here (see section 6))
V-EX-MONU	EXISTING Lines- Monumentos, Monuments,	Red	Continuous	
V-EX-PARCEL	EXISTING Lines- Parcelas existentes, Existing Parcel - OBJECT	white	Continuous	
V-EX-PIPELINE	EXISTING Lines- oleoductos, Pipelines	white	Continuous	
V-EX-PM	EXISTING Lines- Marcas de Pavimentos, Pavement Markings	9	Continuous	
V-EX-RAILROAD	EXISTING Lines- Lineas de Ferrocarril, Railroad Items	9	Continuous	
V-EX-ROADWAY	EXISTING Lines- Vialidades existentes, Roadway Items	9	Continuous	
V-EX-SEWER	EXISTING Lines - Drenaje, Sewer Items	24	Continuous	
V-EX-SRF-BDR	EXISTING Lines- Limite Superficie , Surface - Border	white	Continuous	
V-EX-SRF-FLT	EXISTING Lines- Lineas de Falla o quiebre, Surface - Faults, Breaklines	white	Continuous	
V-EX-SRF-OBJECT	EXISTENTE Objetos - Objetos superficie, Surface - OBJECT	white	Continuous	
V-EX-SW	EXISTING Lines- Rios, Arroyos, escurrideros, Swale	cyan	Continuous	
V-EX-TEXT	EXISTENTE Textos - Textos, Text	white	Continuous	
V-EX-UTIL	EXISTING Lines- Equipamiento, Utility Details	magenta	Continuous	
V-EX-WALK	EXISTING Lines- Aceras, banquetas, Walkways	9	Continuous	
V-EX-WALL	EXISTING Lines- Muros, Bardas, Walls	163	Continuous	
V-EX-WATERSYS	EXISTING Lines- Sistema de Agua potable, Water Systems	cyan	Continuous	
V-EX-WETLAND	EXISTING Lines- Cuerpos de Agua, cuencas, Wetlands, Ponds, Rivers	blue	Continuous	
V-PTOS-CX	Punto Topografico - Centro de Vialidad, Center of Road	yellow	Continuous	
V-PTOS-DAM	Survey Point- Presas, Diques, Dam	white	Continuous	

Layer Name	Descripción	Color	Linetype	Style(s) using this layer (this column is
				not optional here (see section 6))
V-PTOS-DETAIL	Survey Point- Detalles Generales, Miscellaneous Detail	green	Continuous	
V-PTOS-DL	Survey Point- Cuneta, Ditch Lane	8	Continuous	
V-PTOS-DR	Survey Point- Drenaje, Drainage	green	Continuous	
V-PTOS-DV	Survey Point- Calzada, Driveways	white	Continuous	
V-PTOS-DW	Survey Point- Losas Vivienda, House Deck	8	Continuous	
V-PTOS-ECONC	Survey Point- Limite de concreto, Edge of Cement Concrete	white	Continuous	
V-PTOS-EDGE	Survey Point- Caracteristicas Generales bordes, Edge of Misc Feature	magenta	Continuous	
V-PTOS-EL	Survey Point- Electrico, Electric	yellow	Continuous	
V-PTOS-EOP	Survey Point- Limite de Pavimento, Edge of Pavement	green	Continuous	
V-PTOS-EX	Survey Point-Terreno Existente, Existing Ground	white	Continuous	
V-PTOS-FNC	Survey Point- Linderos, cercas, Fence	magenta	Continuous	
V-PTOS-GAS	Survey Point- Gas Natural, Natural Gas	40	Continuous	
V-PTOS-GD	Survey Point- Barrera de Proteccion, Guardrail	yellow	Continuous	
V-PTOS-GRAL	Survey Point- Generales, miscellaneous	white	Continuous	
V-PTOS-HC	Survey Point- Control Horizontal, Horizontal Control	8	Continuous	
V-PTOS-HR	Survey Point- Rampa discapacitados, Handicap Ramp	green	Continuous	
V-PTOS-LINE	Survey Point- Puntos Lineas de Limites, Marked Boundary Line	blue	Continuous	
V-PTOS-LT	Survey Point- Postes de Luz, Light Poles	cyan	Continuous	
V-PTOS-OS	Survey Point- puntos sobre el Talud, On Slope	white	Continuous	

Layer Name	Descripción	Color	Linetype	Style(s) using this
				layer (this column is
				not optional here (see
				section 6))
V-PTOS-OW	Survey Point- Alambres elevados,	8	Continuous	
	Overhead Wire			
V-PTOS-PM	Survey Point- Marcas en el	red	Continuous	
	Pavimento, Pavement Markings			
V-PTOS-RR	Survey Point- Ferrocarril, Railroad	red	Continuous	
V-PTOS-SIDE	Survey Point- Laterales marcados,	cyan	Continuous	
	Marked Sideline			
V-PTOS-SP	Survey Point- Puntos Criticos	blue	Continuous	
	elevacion, Spot Elevation			
V-PTOS-SR	Survey Point- drenaje sanitario,	Red	Continuous	
	Sanitary Sewer			
V-PTOS-STAIR	Survey Point- Escaleras, rampas,	cyan	Continuous	
	Stair			
V-PTOS-SW	Survey Point- Rios, Arroyos,	cyan	ACAD_ISO14w100	
	escurrideros, Swale			
V-PTOS-TB	Survey Point- Parte Superior	white	Continuous	
	Bermas, Top of Berm			
	(Bituminous)			
V-PTOS-TC	Punto Topografico- Parte superior	8	Continuous	
	Bordillo, Top of Curb			
V-PTOS-TEL	Survey Point- Telefono,	magenta	Continuous	
	Telephone			
V-PTOS-TK	Survey Point-TANQUES, TANKS	white	Continuous	
V-PTOS-TS	Survey Point- hombro, superior	yellow	Continuous	
	talud, Top of Slope			
V-PTOS-TW	Survey Point-TORRES	white	Continuous	
	TRANSMISION, TRANSMISSION			
	TOWERS			
V-PTOS-VC	Survey Point- Control Vertical,	magenta	Continuous	
	Vertical Control			
V-PTOS-VG	Survey Point- Vegetacion, zonas	94	Continuous	
	arbolada, Vegetation			
V-PTOS-WALK	Survey Point- Baquetas, aceras,	white	Continuous	
	Walkway			
V-PTOS-WALL	Survey Point- Muros, Bardas, Wall	red	Continuous	
V-PTOS-WATER	Survey Point- Sistema de Agua	cyan	Continuous	
	Potable, Water Systems			
V-PTOS-WETLAND	Survey Point- Cuerpos de Agua,	blue	Continuous	
	cuencas, Wetland			

Reports

List of Reports for Cross sections, Horizontal & Vertical Alignments, both for in-field & Stakeout.

Report Name	Description	Sample File Name	Priority
Alineamiento Curvas	Alignment curve data		
	report		
Alineamiento Estaciones	Alignment station & Curve		
curvas	report		
Secciones Transversales	Existing ground cross		
Terreno Natural	section report		
Replanteo Pl's	Stakeout Alignment		
Alineamiento Horizontal	Report		
Secciones de Construccion	Cross sections Report		
Replanteo de Puntos	Stakeout Corridor Points		
Corredor			
Reporte Curvas Verticales	Vertical Curve Report		
Reporte Alineamiento	PIV stations		
Vertical			
Replanteo Alineamiento	Stakeout Vertical		
Vertical	Alignment		

Drawing Settings > Object Layers

Object	Default Layer	Modifier	Value
Alignment	C-ROAD-CL	Suffix	-*
Alignment-Labeling	C-ROAD-TEXT	Suffix	-*
Alignment Table	C-ROAD-TABL		
	C-ROAD-SEC-TIPICA-		
Assembly	TEMPLATE		
Corridor	C-ROAD-CORR	Suffix	-*
Corridor Section	C-ROAD-CORR-SCTN		
Feature Line	C-TOPO-FEAT		
General Note Label	C-ANNO		
General Segment Label	C-ANNO		
Grading	C-TOPO-GRAD		
Grading-Labeling	C-TOPO-GRAD-TEXT		
Grid Surface	C-TOPO-GRID	Suffix	-*
Grid Surface-Labeling	C-TOPO-TEXT	Suffix	-*
Interference	C-STRM		
Mass Haul Line	C-ROAD-MASS-LINE		
Mass Haul View	C-ROAD-MASS-VIEW		
Match Line	C-ANNO-MTCH		
Match Line-Labeling	C-ANNO-MTCH-TEXT		
Material Section	C-ROAD-SHAP		
Material Table	C-ROAD-SHAP		
Parcel	C-PARCELAS		
Parcel-Labeling	C-PARCEL-TEXT		
Parcel Segment	C-PROP-LINE		
Parcel Segment-Labeling	C-PROP-LINE-TEXT		
Parcel Table	C-PROP-TABL		
Pipe	C-STRM		
Pipe-Labeling	C-STRM-TEXT		
Pipe and Structure Table	C-STRM-TABL		
Pipe Network Section	C-STRM		
Pipe or Structure Profile	C-STRM-PROF		
Point Table	V-NODE-TABL		
Profile	C-ROAD-PROF		
Profile-Labeling	C-ROAD-PROF-TEXT		
Profile View	C-ROAD-PROF-VIEW		
Profile View-Labeling	C-ROAD-PROF-TEXT		
Sample Line	C-ROAD-SAMP		

Sample Line-Labeling	C-ROAD-SAMP-TEXT		
Section	C-ROAD-SCTN		
Section-Labeling	C-ROAD-SCTN-TEXT		
Section View	C-ROAD-SCTN-VIEW		
Section View-Labeling	C-ROAD-SCTN-TEXT		
Section View Quantity Takeoff Table	C-ROAD-SCTN-TABL		
Sheet	C-ANNO		
Structure	C-STRM-STRC		
Structure-Labeling	C-STRM-TEXT		
	C-ROAD-SEC-TIPICA-		
Subassembly	TEMPLATE		
Surface Legend Table	C-TOPO-TABL	Suffix	_*
Survey Figure			
Survey Network			
Tin Surface	С-ТОРО	Suffix	_*
Tin Surface-Labeling	C-TOPO-TEXT	Suffix	_*
View Frame	C-ANNO-VFRM		
View Frame-Labeling	C-ANNO-VFRM-TEXT		

6.1 Object Layers

New Object Layer added since Civil 3D 2015

Object	Layer	Modifier	Value
Building Site	A-BLDG		
Intersection	C-ROAD-INTS		
Intersection-Labeling	C-ROAD-INTS-TEXT		
Grading-Labeling			
Parcel-Labeling			
Parcel Segment-Labeling			

The following table shows the objects types in the Layers tab for Objects that must have its contents "out of the box". Templates updated since Civil 3D 2015.

Object	Layer	Modifier	Value
Pipe	C-STRM-PIPE		
Pipe Network Section	C-STRM-SCTN		

6.2 Ambient Settings

The following are the new values in Ambient Setting introduced in Civil 3D 2015.

Node	Setting	Default
General	Driving Direction	Right Side of the Road (Commonwealth country kits should change this to "Left Side of the Road")

6.3 Abbreviations

The abbreviations in Civil 3D labels are used in both drawings and reports, so it is important to control those abbreviations. Here's an example:

The default abbreviation spiral-tangent intersection is **TS**, which implies that all Spiral-tangent intersections of a drawing labeled **TS**.

In this Country Kit changes were made in major geometric data Projects.

6.3.1 Alignment Geometry Points

Property	Value	-
🗉 General Text		
Infnity	INFINITY	
Left	IZQ	
Right	DER	
Alignment Geometry Point Text		
Station Equation Decreasing	DECREMENTO	
Station Equation Increasing	IG=CAD	
Compound Curve-Curve Intersect	PCC	
Reverse Curve-Curve Intersect	PT=PC	-
Tangent-Spiral Intersect	TE	
Spiral-Tangent Intersect	ET	
Curve-Spiral Intersect	CE	
Spiral-Curve Intersect	EC	
Spiral-Spiral Intersect	EE	
Reverse Spiral Intersect	EPI	
Alignment End	PFIN	
Alignment Beginning	PINI	
Tangent-Tangent Intersect	PI	
Tangent-Curve Intersect	PC	
Curve-Tangent Intersect	PT	
Alignment Geometry Point Entity Data		
Alignment Beginning Point	PSTINI: =<[Station Value(Um FS P2 RN AP Sn TP B3]	
Alignment End Point	PSTFIN: =<[Station Value(Un FS P2 RN AP Sn TP B3]	
Line Beginning	LB: L=<[Length(Um P3 RN AP Sn OF)]> DIR=<[Tang	
Line End	LE: STA=<[End Station(Um F5 P2 RN AP Sn TP B3 EN	-

- PI = Tangent-Tangent Intersect
- **PC** = Tangent curve Intersect
- PT = Curve-Tangent Intersect.
- **PCC** = Compound Curve Curve Intersect
- **TE** =Tangen- Spiral Intersect.
- **EC** = Spiral Curve Intersect.
- **CE** = Curve Spiral Intersect.
- **ET** = Spiral- Tangent Intersect.
- PINI = Alignment Beginning
- **PFIN** = Alignment End.

6.3.2 Superelevation and Profile

Property	Value	
Superelevation	- Chinase	
Begin normal shoulder	PHTAN	
End normal shoulder	FHTAN	
Level crown	N	
Low shoulder match	LSM	
Reverse crown	RC	
Shoulder breakover	SBO	
Marual	MAN	
End full super	FSMAX	
Begin of alignment	PINI	
End of alignment	PFIN	
Begin normal crown	PSETAN	
End normal crown	FSETAN	
Begin full super	PSMAX	
🗆 Profile		
Profile Start	PRINI	
Profile End	PRFIN	
Point Of Vertical Intersection	PIV	
Grade Break	Cambio_Fendiente	
Vertical Tangent-Curve Intersect	PCV	
Vertical Tangent-Curve Intersect Station	ESPIV	
Vertical Tangent-Curve Intersect Elevation	ELPIV	
Vertical Curve-Tangent Intersect	PTV	
Vertical Curve-Tangent Intersect Station	ESPCV	
Vertical Curve-Tangent Intersect Elevation	ELPCV	
Vertical Compound Curve Intersect	VCC	
Vertical Compound Curve Intersect Station	VCCS	
Vertical Compound Curve Intersect Elevation	VCCE	
Vertical Reverse Curve Intersect	VRC	
Vertical Reverse Curve Intersect Station	VRCS	
Vertical Reverse Curve Intersect Elevation	VRCE	
Hinh Point	PMAX	

- **PIV** = Point of Vertical Intersection.
- **PCV** = Vertical Tangent Curve Intersect
- **PTV** = Vertical Curve Tangent Intersect.
- **PCC** = Vertcal Tangent Curve Intersect.
- **PMAX** = High Point.
- **PMIN** = Low Point
- **A** = Grade Change
- **PRINI** = Profile Start
- **PRFIN** = Profile End.

Object Style	es
--------------	----

In this section we talk about pleaded entities to provide adjustments to enrich the documentation of their projects.

7.1 Multi-purpose Styles

Feature Line Styles	Description	Screen grab / DWF / DWG	Default
C-GRADING-BORDE-TERRAZA (PLATAFORMA)	GRADIGN BORDER FEATURE LINE		
C-ROAD-LINEA-ACOTAMIENTO	SHOULDER FEATURE LINE		
C-ROAD-LINEA-BORDILLO	CURB FEATURE LINE		
C-ROAD-LINEA-CEROS-CORTE	DAYLIGHT CUT PROJECTION		
C-ROAD-LINEA-CEROS-TERRAPLEN	DAYLIGHT FILL PROJECTION		
C-ROAD-LINEA-CUNETA	DITCH FEATURE LINE		
C-ROAD-LINEA-DER-VIA-ADQUIRIR	ACQUIRING RIGHT OF WAY LINE		
C-ROAD-LINEA-DER-VIA-EXISTENTE	EXISTING RIGHT OF WAY LINE		
C-ROAD-ORILLA-CALZADA	EDGE OF PAVEMENT FEATURE LINE		
C-ROAD-ORILLA-HOMBRO-NO-PAV	SHOULDER NO PAVEMENT FEATURE LINE		
C-ROAD-ORILLA-HOMBRO-PAV	SHOULDER PAVEMENT FEATURE LINE		

 Code Set Styles
 Description
 Screen grab / DWF / DWG
 Default

Code Set Styles	Description	Screen grab / DWF / DWG	Default
CORREDOR CODIGOS CON HATCH SOLIDO EN PLANTA	CORRIDOR SOLID HATCH WITHOUT LABELS, ROAD SIGN USE		
SECCION TRANSVERSAL CON ETIQUETAS & HATCH_ISO	cross section style with the labels of code used to plot with HATCH ISO	ORH ORC ORC ORH	
SECCION TRANSVERSAL CON ETIQUETAS & HATCH_SOLID	cross section style with the labels of code used to render	ORH ORC ORC ORH	

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Code Set Styles	Description	Screen grab / DWF / DWG	Default
SECCION TRANSVERSAL CON ETIQUETAS & LINKS	cross section style with the labels of code and links and layer separation	ORH ORC ORH	
SECCION TRANSVERSAL DE DISENO & ETIQUETAS	Cross section Style, to represent plot final design, include codes and standard color	ORH ORC ORC ORH	
SECCION TRANSVERSAL DE DISENO & ETIQUETAS - SIN LINKS	Cross section Style, to represent plot final design, include codes and standard color without links	ORH ORC ORC ORH	

Code Set Styles	Description	Screen grab / DWF / DWG	Default
SECCION TRANSVERSAL PLANTA Y RENDER	Cross Section Style to render include links	1.50 ^{.1} - 2.00% - 2.00% - 2.00% ^{1.50}	
SECCION TRANSVERSAL PLANTA Y RENDER SIN LINKS	Cross Section Style using to rendering, links are not included	150 ⁻¹ -2.00% -2.00% -2.00% -2.00% -2.00% -2.00%	

Marker Styles	Description	Screen grab / DWF / DWG	Default

Link Styles	Description	Screen grab / DWF / DWG	Default
MX Seccion Transversal	Representación Sección Transversal		

Shape Styles	Description	Screen grab / DWF / DWG	Default

Slope Pattern Style	Description	Screen grab / DWF / DWG	Default
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C-GRADING-TALUD-PROY-CORTE	GRADING DAYLIGHT CUT	
C-GRADING-TALUD-PROY-TERRAPLEN	GRADING DAYLIGHT FILL PROJECTION	
C-ROAD-TALUD-PROY-CORTE	ROAD DAYLIGHT CUT PROJECTION	
C-ROAD-TALUD-PROY-TERRAPLEN	ROAD DAYLIGHT FILL PROJECTION	

Multipurpose Label Styles	Description	Screen grab / DWF / DWG	Default
Note			

Multipurpose Label Styles	Description	Screen grab / DWF / DWG	Default
Line			
AZIMUT GEODESICO Y LONGITUD	This style labels a line segment with the		
	Geodetic Direction and Distance, if the		
	drawing has been assigned a coordinate		
	system.		
C-GRAL-LINEAS-ETIQ-LONG-DIRECCION	Label on line in general, lenght, bearing and		
	azimuth astronomical calculated.		
C-GRAL-LINEAS-ETIQ-NUMERO	LABELS ON LINE IN GENERAL IDENTIFYING		
	THE NUMBER OF LINE OR ALIGNMENT		
GRID AZIMUT Y DISTANCIA	Grid style labels a line segment with the		
	Geodetic Direction (Azimuth) and Distance,		
	if the drawing has been assigned a		
	coordinate system.		
GRID RUMBO Y DISTANCIA	Grid style labels a line segment with the		
	Geodetic Direction (Bearing) and Distance,		
	if the drawing has been assigned a		
	coordinate system.		
RUMBO GEODESICO Y DISTANCIA	This style labels a line segment with the		
	Geodetic Direction (Bearing) and Distance,		
	if the drawing has been assigned a		
	coordinate system.		
Curve			
C-GRAL-CURVAS-ETIQ-NUM	Style to put the label number on aligment		
	curve or general curve entity		
		\sim	
			1

Multipurpose Label Styles	Description	Screen grab / DWF / DWG	Default
C-GRAL-CURVAS-LINEAS-RADIO	Line Radius projection and mark center of Curve	R=53.15m	
C-GRAL-DATOS-CURVA	General Data curve entities	4=66° 04° 08° 155° 156° 1=61.29m Pro55.156°	
Marker			
DATOS SECCIONES TRANSVERSALES	CROSS SECTIONS LABEL ELEVATIONS, MARKS AND OFFSET		
Marker			
PENDIENTE (%)	GRADE LABEL STYLE (%)		
TALUD Hor:Ver (x:1)	SLOPE LABEL STYLE RUN:RISE, EXAMPLE hor:ver 1.5:1,		
Link			

Multipurpose Label Styles	Description	Screen grab / DWF / DWG	Default
Shape			

7.2 Points

Points representation and main features like symbols, tags and tables.

User Defined Attribute Classifications	Description	Screen grab / DWF / DWG	Default

Point Styles	Description	Screen grab / DWF / DWG	Default
BHL- PERFORACIONES	Puntos Para Perforaciones - BORE HOLE	 ₽ 228 ₽ 209.92 BHL 	
CU-ALCANTARILLAS	CULVERT- ALCANTARILLAS	© 228 209.92 CU	
DT-DETALLES	GENERAL DETAILS POINTS	≈ 228 209.92 DT	

Point Styles	Description	Screen grab / DWF / DWG	Default
MH-POZO	MANHOLE O POZO DE VISITA	0 228 0 209.92 MHP	
MHD_DRENAJE	MANHOLE DRANAIGE	© 228 209.92 MHD	
MON_MONUMENTOS	MONUMENTS STYLES POINT	228 209.92 MON	
P_LUZ_CONC	STYLE FOR CONCRETE LIGHT POLES	● 228 ● 209.92 P_LUZ_C	
P_TEL_MADERA	WOOD LIGHT POLE	0 228 209.92 P_TEL_M	

Point Styles	Description	Screen grab / DWF / DWG	Default
PLS- POSTE LUZ DL	DOUBLE LAMP POST LIGHT	228	
		- + 200 02	
		, <u>zoa</u> , az	
		PLS_DL	
PLS- POSTE LUZ SL	SINGLE POLE LIGHT LAMP	0.0.8	
		ZZO	
		209.92	
		DIS SI	
RD- VIALIDAD	Roadwas, edges, centers, intersections, etc.		
RT-UTM-XY	LABEL STYLE UTM GRID XY		
	X=0,000,000, Y=0,000,000		
		Y=811	
		280	
		×	
RT-UTM solo simbolo	SIMBOL ONLY GRID UTM		

Point Styles	Description	Screen grab / DWF / DWG	Default
RT-UTM-X	SIMBOL AND LABEL GRID UTM X, X=0,000,000	X=1,130	
KT-UTM-Y	Y=0,000,000	Y=870	
TW - TORRES TRANSMISION	STYLE FOR TRANSMISSION TOWERS		
		30 0.00 TW	
VG-AKBULES KOBUSTOS	STYLES FOR REPRESENTING TREES STURDY	228	

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Point Styles	Description	Screen grab / DWF / DWG	Default
VG-VEGET_EXIST	Existing vegetation, woodlands	228 209.92 VG-V	

Point Label Styles	Description	Screen grab / DWF / DWG	Default
RT-UTM-X	LABEL GRID UTM X,		
	X=0,000,000X=0,000,000		
RT-UTM-XY	LABEL GRID UTM XY		
	X=0,000,000, Y=0,000,000		
RT-UTM-XY solo simbolo	LABEL GRID UTM SIMBOL ONLY		
RT-UTM-Y	LABEL GRID UTM Y		
	Y=0,000,000		

Description Key Sets	Description	Screen grab / DWF / DWG	Default

Point Table Styles	Description	Screen grab / I	DWF / DWG				Default
CUADRO DE CONSTRUCCION DE PUNTOS	POINT TABLE PXYZD FORMAT	CUADRO DE CONSTRUCCION DE PUNTOS					
		No. Punto				Descripcion	
		48				BHL	

Point Cloud	Description	Screen grab / DWF / DWG	Default
Color Simple	This style display point cloud points in a single		
	color		
Color Verdadero	This Style Display Point Cloud Points in true		
	Color if the color cloud database contains RGB		
	Data		

Point Cloud	Description	Screen grab / DWF / DWG	Default
Escala de intensidad color - Blue	This style display point cloud points in a BLUE		
	scaled color intensity if the point cloud		
	database contains intensity data		
Escala de Intensidad Color - Green	This style display point cloud points in a GREEN		
	scaled color intensity if the point cloud		
	database contains intensity data		
Escala de Intensidad Color - Red	This style display point cloud points in a RED		
	scaled color intensity if the point cloud		
	database contains intensity data		
Escalas de Intensidad Tonos de Gris	This style display point cloud points in a		
	grayscale intensity if the point cloud database		
	contains intensity data		
LIDAR Clasificacion de puntos	This Style Display Point Cloud Points by LIDAR if		
	the point cloud database contains LIDAR point		
	clasification data		
Rango de Elevacion	This Style Display Point Cloud Points elevation		
	ranges, at a specified number of ranges or		
	ranges interval and a color scheme		
7.3 Surfaces

Surface visualization for different analysis.

Surface Styles	Description	Screen grab / DWF / DWG	Default
Analisis de pendientes (2D)	Representation style 2D grade analysis		
Analisis de Elevaciones (2D)	Elevation banding surface style (2D)		

Surface Styles	Description	Screen grab / DWF / DWG	Default
Curvas de Nivel @ 1m and 5m (Tonos de Gris)	Surface contours at 1m and 5m intervals (Background)		
Curvas de Nivel @ 1m γ 5m (Calidad Diseno)	Surface contours at 1m and 5m intervals (Design) colors		

Surface Styles	Description	Screen grab / DWF / DWG	Default
Curvas de Nivel @2m y @10m (calidad diseno)	Surface contours at 2m and 10m intervals (Design)	2100	
Curvas de Nivel @2m y @10m (Tonos de Gris)	Surface contours at 2m and 10m intervals (Background)		
Modelo Terreno 3D	3D modeling display		

Surface Styles	Description	Screen grab / DWF / DWG	Default
Ocultar Superficie	No display component surface		

Surface Label Styles Name/Type	Description	Screen grab / DWF / DWG	Default
Contour			
C-TOPO-CURVAS-NIVEL (2 digitos)	Label Major contours two decimal digits	255	
C-TOPO-CURVAS-NIVEL (Cerradas)	Label Major contours has not decimal digits	128 ¹	
Slope			

Surface Label Styles Name/Type	Description	Screen grab / DWF / DWG	Default
pendiente (%)	Grade label surface style (%) (example: 2.0%)	0.010	
Talud (hor:ver)	Label surface slope by Run over Rise (example: 2.0:1)	210	
Spot Elevation			
EL:100.00m	Spot elevation with EL as Preffix and " m" suffix (exemplo EL:100.00m)	- + EL: 207.69m	
Watershed			

Surface Table Styles Name/Type	Description	Screen grab / DWF / DWG	Default
Direction			
Direcciones	Creates a table with columns for Number, Minimum Direction, Maximum Direction and Color		
Elevation			
Elevaciones	Creates a table with columns for Number, Minimum Elevations, Maximum Elevations, 2D Area and Color		
Slope			
Pendientes	Creates a table with columns for Number, Minimum Slope, Maximum Slope, 2D area and Color		
Slope Arrow			
Sentido Pendiente	Creates a table with columns for Number, Minimum Slope, Maximum Slope and Color		
Contour			
Watershed			
User Defined Contour			

7.4 Parcels

You will find a comprehensive catalog for thematic map generation and information management major



User-Defined Property Classifications	Description	Screen grab / DWF / DWG	Default
C-PARCEL-COMERCIOS			
C-PARCEL-AREA VERDE			
C-PARCEL-DONACION			
C-PARCEL-EQUIPAMIENTO			
C-PARCEL-VIVIENDA			
C-PARCEL-EDUCACION			
C-PARCEL-OFICINAS			





Parcel Styles	Description	Screen grab / DWF / DWG	Default
C-PARCEL-AREA VERDE	THEMATIC STYLE PARCEL TO REPRESENT	MEX-CK-PARCELS-STYLES.dwg	
	GREEN AREAS		
C-PARCEL-COMERCIO	THEMATIC STYLE PARCEL TO REPRESENT		
	SHOP AREAS		
C-PARCEL-DONACION	THEMATIC STYLE PARCEL TO REPRESENT		
	DONATION AREA		
C-PARCEL-EDUCACION	THEMATIC STYLE PARCEL TO REPRESENT		
	EDUCATION AREA		
C-PARCEL-EQUIPAMIENTO	THEMATIC STYLE PARCEL FACILITIES		
	REPRESENTATION AREA		
C-PARCEL-OFICINA	THEMATIC STYLE PARCEL OFFICE		
	REPRESENTATION AREA		
C-PARCEL-SOLAR	THEMATIC STYLE PARCEL PROPERTY		
	REPRESENTATION AREA		



Parcel Label Styles	Description	Screen grab / DWF / DWG	Default
Area			
C-PARCEL-NOMBRE	Label Style representing Parcel Name	MEX-CK-PARCELS-STYLES.dwg	
C-PARCEL-NOMBRE_AREA_PERIMETRO	Label Style representing both		
(Has)	Name, Area and Perimeter in		
	Hectares		
C-PARCEL-NOMBRE_AREA_PERIMETRO (Metros)	Label Style representing both Name, Area and Perimeter in meters.	NTO 1 227 Montre C-VARCEL-AREA VERCE : 167 Area: 1.72m2 Primetro304.67m C-PARCE C-PARCE	
C-PARCEL-NUMERO	Label Style representing the		
	Parcel number		

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Parcel Label Styles	Description	Screen grab / DWF / DWG	Default
Line			
Rumbo y Distancia	Label Line style Bearing over Distance	100 100 100 100 100 100 100 100 100 100	
Curve			
Delta Longitud y Radio	Label style data curve entities Lenght, Radius and Delta	Add Labels \$21X Add Labels \$21X Feature: Line and Curve \$ Label type: Single Segment \$ Enelabel style: Corne label style: Corne dabel styl	



Parcel Table Styles	Description	Screen grab / DWF / DWG	Default
Line			
TABLA (LADO-AZIMUT-RUMBO- DISTANCIA-X-Y) UTM	Table style with columns for Side, Azimuth Bearing Distance and	CUADRO DE CONSTRUCCION	
	coordinate XY UTM	LADO AZIMUT RUMBO DISTANCIA COORDENADA UTM ESTE (X) NORTE (Y)	
		L1 112" 33" 33" 57" 26" 27"E 80.574 -31.034 338.985 L2 110" 44" 53" 586" 15" 07"E 107.862 -301.599 259.092 L3 28" 25" 59" 107.449 -20.732 220.881 L4 28" 47" 32" N44" 12" 28"w 110.754 -107.822 394.567	
		L5 222" 07" 32" \$42 07" 32"W 145.192 -215.645 446.673	
TABLA (LADO-AZIMUT-RUMBO- DISTANCIA-X-X) UTM-HATCH	Table style with columns for Side,	CUADRO DE CONSTRUCCION	
bistancia X-1) of whatch	coordinate XY UTM, hatch cell	LADO AZIMUT RUMBO DISTANCIA COORDENADA UTM ESTE (X) NORTE (Y)	
		L1 172* 33' 33" 57' 16' 27'E 80.574 -313.034 338.988 L2 110* 44' 53" 589' 15' 07'E 107.862 -302.599 259.092	
		L3 287 237 597 [10257237 597]; 197,449201,732 220,881 L4 2957 477 327 [1047127 287]; 119,754107822 3394,567 L5 2227 077 37 [54277 337]; 143,19221645 446,673	

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Parcel Table Styles TABLA (LADO-RUMBO-DISTANCIA- AZIMUT-Y-X)	Description Table style with columns for Side, Bearing, Distance, Azimuth, and coordinate XY	Screen grab / DWF / DWG CUADRO DE CONSTRUCCION POLIGONALES LOBOR DISTANCIA ZIMUT Y X L1 597-26' 2*6 60.574 172' 33' 33' 336.898 -313.034 L3 560' 15' 0*6 107.662 1107 44' 33' 2306.092 -302.096 L3 N28' 25' 9*6 197.449 28' 25' 90' 220.081 -201.732 L4 N64' 12' 31'W 119.754 299' 47' 32' 394.567 -107.822 L5 542'' 07' 31'W 146.192 222' 07' 32' 446.673 -201.545	Default
TABLA (LADO-RUMBO-DISTANCIA- AZIMUT-Y-X) Hatch	Table style with columns for Side, Bearing, Distance, Azimuth, and coordinate XY, and additional hatch	CUADRO DE CONSTRUCCION POLIGONALES LADO RUMBO DISTANCIA AZIMUT Y X L1 57° 26° 27°1 60.574 172° 13° 33° 338.960 -313.034 L2 566° 15° 07°L 107.862 110° 4° 53° 229.9992 -302.5998 L3 1928° 23° 59°C 197.449 28° 21° 59° 220.861 -201.732 L4 Hoér 12° 28'9 1107.754 295° (7° 32° 343.667 -105.822 L5 542° 07° 32°V 145.192 222° 17° 32° 446.873 -215.645	
TABLA (LADO-RUMBO-DISTANCIA-Y-X)	Table style with columns for Side, Bearing, Distance, and coordinate XY,	CUADRO DE CONSTRUCCION LADO RUMBO DISTANCIA COORDENADA Y COORDENADA X L1 57' 26' 27'T 80.574 333.968 -313.034 L2 569' 15' 07'E 107.862 259.062 -302.599 L3 N2* 23' 59'E 197.449 220.681 -201.732 L4 N64' 12' 28'W 119.754 394.567 -107.822 L5 542' 07' 32'W 145.192 446.673 -215.645	
TABLA (LADO-RUMBO-DISTANCIA-Y-X) Hatch	Table style with columns for Side, Bearing, Distance, and coordinate XY, and additional hatch	CUADRO DE CONSTRUCCION LADO RUMBO DISTANCIA COORDENADA COORDENADA L1 57' 26' 21'E 80.574 338.588 313.034 L2 569'15' 07'E 107.862 259.092 302.599 L3 N28'23' 59'E 197.449 220.881 201.732 L4 N64'12' 23'W 119.754 394.567 -107.822 L5 542' 07' 32'W 145.192 446.673 -215.645	
Curve			

Parcel Table Styles	Description	Screen g	rab / DV	WF / DW	VG							Default
TABLA (#CURVA-LONGITUD-RADIO-DELTA-	Table style with columns for				ΤA	BLA C	DE CU	RVAS				
RUMBO-LCUERDA)	Curve#, Length Curve, Radius,		#Curva	Longitud (Curva R	adio De	elta Ru	umbo Cuero	da Longitu	ıd Cuerda		
	Delta Bearing chord, lenght chord		C1	25.71	1 16	6.50 89	9.28 N	26" 12' 03"	W 23.19			
			C2	26.13	5 16	6.50 90	0.72 NE	63* 47' 57'	'E 23.48			
			C3	25.92	2 16	6.50 90	0.00 S2	25 50 20"	E 23.33			
			C4	25.92	2 16	6.50 90	0.00 Se	54" 09" 40"	W 23.33			
			_	_			_	_	_			
TABLA (#CURVA-LONGITUD-RADIO-DELTA- RUMBO-LCUERDA) HATCH	Table style with columns for Curve# , Length Curve, Radius,			T,	ABLA	DE C	URVA	AS				
	Delta, Bearing chord, lenght	#Curva	Longitud	l Curva 🕴		Delta		o Cuerda	Longitud	Cuerda		
	chord, hatch cell	C1	25.	71 1	16.50	89.28	N26' 1	2' 03 " W	23.19	71		
		C2	26.1	13 1	16.50	90.72	N63° 4	47' 57"E	23.48			
		C3	25.9	92 1	16.50	90.00	\$25' 5	0' 20'E	23.33			
		C4	25.9	92 1	16.50	90.00	S64' 0	9' 40'W	23.33			
Segment		_	_		_							
TABLA (#LIN-CURVA-LONGITUD-RUMBO-	Table style Line & Curve with											
DELTA-RADIO)	columns Line&Curve# , Length,			TA	ABLA	DE	LINE	AS Y C	CURVAS	S		
	Delta or Bearing, Radius,			#Linea/	'Curva	Longit			Delta			
				L3	5	82.0	0 S	19* 09' 3	59.94"W			
				L4		117.9	98 N	70°50'2	20.06"W			
				L1		82.0)1 N	118* 26'	14.46"E			
				12		119.(01 S	70° 50' 3	20.06"F			
									L0.00 L			
TABLA (#UN-CURVA-LONGITUD-RUMBO-	Table style Line & Curve with					-	-	-	-	_	_	
DELTA-RADIO)- HATCH	columns Line&Curve# , Length,			f	TABL/		LINE		CURVA	S		
	Delta or Bearing, Radius, hatch			#Linec	a/Curva	Long	gitud	Rumbo	/Delta	Radio		
	cell			l	L3	82.	.00	S19°09'	39.94"W			
					L4	117	.98	N70* 50'	20.06"W			
					L1	82	.01	N18' 26'	14.46"E			
				1	L2	119	9.01	S70° 50'	20.06"F			
								0.0 00	20.0012			

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Parcel Table Styles	Description	Screen grab / DWF / DWG	Default
Area			
TABLA (#PARCELA-AREA-PERIMETRO-	Table style Parcel Area with	TABLA DE AREAS	
LONG-SEGM-RUMBO)	Parcel # , Area, Perimeter,	#Parcela Area Perimetro Longitud del Segmento Rumbo del Segmento	
	Segement Length, Segment Bearing,	167 17188.46m² \$04.67 \$69.05 \$12' 02.80"E 269.05 \$18' 26' 14.46"W \$63.72 \$63' 47' 57.20"W 167 17188.46m² \$04.67 \$269.03 N19' 50' 20.06"W 259.03 N19' 09' 39.94"E \$387.07 \$70' 50' 20.06"E	
TABLA (#PARCELA-AREA-PERIMETRO-	Table style Parcel Area with	TABLA DE AREAS	
LONG-SEGM-RUMBO) HATCH	Parcel # , Area, Perimeter,	#Parcela Area Perimetro Longitud del Segmento Rumbo del Segmento	
	Segement Length, Segment Bearing, hatch cell	84.35 269.05 S26* 12' 02.80"E 518' 26' 14.46"W 85.72 167 17188.46m" \$04.67 85.03 85.03 N25' 50' 19.58"W 269.03 N19' 09' 39.94"E 387.07 387.07 570' 50' 20.06"E	

7.5 Grading

Grading Analysis. Improved styles & Design Criteria were added for a better usage experience when being designed.



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Grading Styles	Description	Screen grab / DWF / DWG	Default
C-GRADING-TALUD-PROY-CORTE	Grading Style to represent the cut slopes	Cut Style CGRADING-TALUD-PROY-COR" Fil Style CGRADING-TALUD-PROY-TERF K K Cancel Help K	
C-GRADING-TALUD-PROY-TERRAPLEN	Grading Style to represent the Fill slopes	Cading Properties X Stating Group Image: Stating Group Description: Image: Stating Group Participation: Image: Stating Group Cading Type TableCont visibility Image: TableCont visibility Cading Table Table TableCont visibility Image: TableCont visibility Cading Table Tab	

Grading Criteria Sets	Description	Screen grab / DWF / DWG	Default
MX CRITERIOS			
Talud o Pendiente (DISTANCIA)	Slope or Grade Distance target		
Talud o Pendiente (ELEVACION RELATIVA)	Slope or Grade Relative elevation		
Talud o Pendiente (ELEVACION)	Slope or Grade absolute elevation		
Talud o Pendiente (SUPERFICIE)	Slope or Grade surface target		
MX TALUDES (SUPERFICIE)			
1.5:1 (SUPERFICIE)	Slope defined target surface		
HORIZONTAL (DISTANCIA)	Horizontal Grade to distance		
HORIZONTAL (SUPERFICIE)	Horizontal Grade to Surface		
VERTICAL (SUPERFICIE)	Vertical Slope to surface		

7.6 Alignments

In relation to the Horizontal alignment adjustments were made in the representation, we add values or factors to improve the usage and documentation (including several tables).



Alignment Style	Description	Screen grab / DWF / DWG	Default
C-ROAD-ALIN-HOR-CL-DISENO	Alignment Style Design Representation	BT. ISLANDAR HERE OF ALL HERE AND ALL HERE A	

Alignment Style	Description	Screen grab / DWF / DWG	Default
C-ROAD-ALIN-HOR-CL-EX	Alignment Style to Existing	BB: LOLIDO GO HIT BERTO U LOLIDO GO	

Alignment Design Checks	Description	Screen grab / DWF / DWG	Default
Design Check Sets			
Line			
Curve			
Spiral			
Tangent Intersection			

Alignment Label Type/Name	Description	Screen grab / DWF / DWG	Default
Alignment Label Sets			

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Alignment Label Type/Name	Description	Screen grab / DWF / DWG	Default
C-ROAD-CL-ETIQ-DISENO	Label Set to Alignment Design	Information: Label Set - C-ROAD-CLUTTI2-DISEND Information: Label Type: Maps: Statons Type: State Type: <td< td=""><td></td></td<>	
Major Station	Label at Major Stations		
C-ROAD-CL-ETIQ-NOMBRE-ALI	Alignment label style to put Alignment name	0×000	

Alignment Label Type/Name	Description	Screen grab / DWF / DWG	Default
C-ROAD-CL-ETIQ-TANG-AZAC	Alignment Label Style include Tangent Length and Geodesy Direction.	AddLabets x121× Februe: Adment Adment x Lale type: sige Segment Sige Segment x Curve ladel style: x Curve ladel style: x Curve ladel style: x Signal label style: x Curve ladel style: x Signal label style: x Curve ladel style: x Carve label style: x Carvel	
C-ROAD-ETIQ-PER-LINE	Perpendicular to alignment		
	Label Style		
C-ROAD-PER-TICK	Secondary station Mark Style		
C-ROAD-SIMB-BANDERA-KM	Simbol label style shows Km Flag Block	Km h	
Minor Station	Label at Minor Stations		
Tick			
Geometry Point	Label at Geometry Points		
C-ROAD-SIMB-PTS-GEOM-HOR	Geometry points to alignment		
Profile Geometry Point	Labels at the profile geometry points on the alignment		

Alignment Label Type/Name	Description	Screen grab / DWF / DWG	Default
Station Equation	Station equation Labels		
 Station Ahead & Back 			
Design Speed	Design Speed labels		
C-ROAD-VEL-DESIGN	C-ROAD-VEL-DESIGN		
Superelevation Critical Points	Labels at the critical		
	Superelevation points on the		
	alignment		
Station Offset	Station Offset Labels		
Line	Tangent labels		
C-ROAD-CL-ETIQ-TANG-NUM	Alignment Label Style, Entity		
	Тад	ex.	
		100	
Curve	Arc Labels		

Alignment Label Type/Name C-ROAD-CL-CURVA-CIRCULAR	Description Curve Style Label include Delta, Degree of Curve, Length, Radius	Screen grab / DWF / DWG	Default
C-ROAD-CL-ETIQ-CURVA-NUM	Label Style to put Curve		
	Number		
Spiral	Spiral Labels		
C-ROAD-CL-ESPIRALES (LE- ESTACION- A)	Spiral Label Style, Spiral Length, Station and "A" factor	LE = 62.000m $EPI = 10 + 600.54$ $A = 266.55$	
C-ROAD-CL-ETIQ-ESPIRAL-NUM	Spiral label number		
Tangent Intersection	PI Labels		



Degree of Curve Formula to Metric System (Gc)

Radius is defined as Gc relation



🗁 Tabl	e Styles
001	line
-0	C-ROAD-TABLA-GEOM-HOR-TANG
0	C-ROAD-TABLA-GEOM-HOR-TANG & COLUMNA PI
	Length Direction Start and End Point
000	Curve
-0	C-ROAD-TABLA-GEOM-HOR-CURVAS
-0	C-ROAD-TABLA-GEOM-HOR-CURVAS & ESTACIONES
-0	Radius Length Chord Start and End Point
B @ :	Spiral
-0	A Value Radius Length Direction Start and End Point
	C-ROAD-TABLA-GEOM-HOR-ESPIRALES
	Segment
E	C-ROAD-DATOS DE CURVAS (ESPIRALES)
- 0	C-ROAD-DATOS DE CURVAS (SIMPLES Y ESPIRALES)
- 6	C-ROAD-DATOS DE CURVAS (SIMPLES)
0	C-ROAD-GEOMETRIA DE ALINEAMIENTO HORIZONTAL (ESPIRALES)
-0	C-ROAD-GEOMETRIA DE ALINEAMIENTO HORIZONTAL (SIMPLES)
	Radius Length Direction and A Value

Alignment Table Type/Name	Description	Screen grab / DWF / DWG	Default
Line			
C-ROAD-TABLA-GEOM-HOR- TANG	Alignment Label Style include Geometry components as Tangent		
	#, PI, PC, PT, Start and End	GEOMETRIA ALINEAMIENTO HORIZONTAL	
	Coordinates	TANG# ESTACION INICIAL ESTACION FINAL COORDEHADAS ESTACION INICIAL COORDENADAS ESTACION FINAL (PINI, PI + PT) (PI, PC + PFIN) (X , Y) (X , Y)	
		T1 10+000.00 10+480.00 (1000.0000,1000.0000) (1394.40,1273.29)	
		T2 114088.00 114588.00 (1973.3294,1402.9257) (2446.81,1324.09)	
C-ROAD-TABLA-GEOM-HOR- TANG & COLUMNA PI	Alignment Label Style include Station and Coordinates Geometry Points #, PI, PC, PT, Start and End Coordinates	GEOMETRIA ALINEAMIENTO HORIZONTAL TANG# ESTACION INICIAL (Pint,PI,PSt o PT) ESTACION FINAL (PI, PC o Pfin) 112 10+000.000 10+559.205 112 (303547.761,4774589.3964) (303547.761 + 4774589.3964) 113 (11+036.151 11+307.045 113 (304388.464,4775182.2616) (304388.464 + 4775182.2616) 114 12+212.749 12+320.723 114 (305301.588,4776859.9397) (305301.588 - 4775859.9397)	

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Alignment Table Type/Name	Description	Screen grab / DWF / DWG	Default
Curve			
C-ROAD-TABLA-GEOM-HOR-	TABLE STYLE FOR ALIGNMENT		
CURVAS	CURVES ENTITIES	DATOS DE CURVAS Curvo # Δt Δc Gc Rc ST o STe Lc C1 44* 09' 29" 1* 27' 09" 788.89 320.000 608.00	
C-ROAD-TABLA-GEOM-HOR- CURVAS & ESTACIONES	Alignment Table Style with data Circular Curves and stations with columns for Curve #, PC, PI, Delta, Degree of Curve, radius, tangent Length, Curve lenght	DATOS DE CURVAS Curva # ESTACIÓN HIGUAL (FC o ES) ESTACIÓN FINAL (FT o CE) PI # Acc Sc Rc ST o ST o Lc 03 10+621.205 10+974.151 (304161.064, 47751)3.06933) (304061.064, 77751)2.06933 17' 36' 50' 1' 60' 00' 1145.92 17.081 352.95 04 11+307.045 12+212.749 (305068.667, 4775-28.5662) 45' 17' 66' 1' 00' 10' 1145.92 477.099 905.70	
Spiral			
C-ROAD-TABLA-GEOM-HOR- ESPIRALES	Alignment Table Style with data Spiral Curves and stations with columns for Curve #, PC, PI, Delta, Degree of Curve, radius, tangent Length, Curve lenght	DATOS DE CURVAS ESPIRALES Espiral g ESTACION INICIAL (TE o CE) ESTACION FINAL (EC o CE) LTAN S TAN 0 o Xc Le Yc K p A E33 104-559.205 (303970-40,477486.40) 104-621.205 (304024.35,4774807.64) 4.335 20.668 1' 33' 00° 61.995 62.00 0.559 30.999 0.140 266.547 E4 (304330.10,4775161.34) (304338.46,4775182.26) 4.335 20.668 1' 33' 00° 61.995 62.00 0.559 30.999 0.140 266.547	
Segment	Line, curve or spiral element in a single table		
C-ROAD-DATOS DE CURVAS (ESPIRALES)	ESTA TABLA O CUADRO ESTA COMPUESTA POR TODOS LOS ELEMENTOS ESPIRALES.		

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Alignment Table Type/Name	Description	Screen grab / DWF / DWG	Default
C-ROAD-DATOS DE CURVAS (SIMPLES Y ESPIRALES)	This Table shows main curve component data, design Alignment	Image: constrained by the second se	
C-ROAD-DATOS DE CURVAS (SIMPLES)	This Table shows main circular curve component data	DATOS DE CURVAS eje_01 CURVA Δt Δc Gc Rc ST o STe Lc C1 17' 38' 49.9897" 1' 00' 00" 1145.920 177.881 352.946 C2 45' 17' 06.1850" 1' 00' 00" 1145.920 477.999 905.705	
C-ROAD-GEOMETRIA DE ALINEAMIENTO HORIZONTAL (ESPIRALES)	Alignment Table Style where Alignment contain Spirals, whose components are considered as segments.	GEOMETRIA ALINEAMIENTO HORIZONTAL EJE-10 CURVA PC o TE EC PI o PSI CE PT o ET 11 0*234.014 10*00.000 10*00.000 10*00.000 10*00.000 11 0*234.014 10*24.401 1192.8745 11.33.0700 110*00.000 10*00.000 11 0*234.014 10*24.401 10*00.000 110*00.000 110*00.000 11 0*24.4014 1192.8745 11.33.0700 11*17.779 11*17.779 C1 1360.4706 1242.5817 10+786.687 2017.2945 114*17.779 C2 2017.2945 1380.7100 11*137.779 2017.2945 1389.7109 C2 2017.2945 1380.7100 11*317.779 211*317.779 211*317.779 12 2017.2945 1380.7100 11*317.779 211*317.779 211*317.779 12 2017.2945 1380.7100 21*35.354 13*2.2945 13*0.20245 12 2017.2945 1380.7100 21*35.354 13*2.729 21*35.354 13*2.62238	

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Alignment Table Type/Name	Description	Screen	grab / DWF	/ DWG				Default
C-ROAD-GEOMETRIA DE ALINEAMIENTO HORIZONTAL (SIMPLES)	Alignment Table Style where Alignment contain Circular Curves, whose components are considered as segments.	CURVA T1 C1 T2	GEOME		PI o PST PI 100,0000 1000,0000 1000,0000 1000,0000 134,0049 1273,3792 10,000,000 1243,4804 1273,8794 1465,4820 11,408,003 1244,841,33 1246,811,33 1324,0012	ORIZON CE	TAL PT © ET 114088.003 1973.3294 1402.9257	

7.7 Profiles

We added Plot qualities and bands in order to help us with the documentation process.

Profile Style	Description	Screen grab / DWF / DWG	Default
C-ROAD-ALIN-VER-CL-DISENO	Profile Design Style Red Color	PIV= 0+000000	
C-ROAD-PERFIL-TERRENO-EXISTENTE	Profile Existing, Green and Discontinuous lines	Profik View Name PERFL_TN_EE_10 Style C-ROAD-TERACERIA-COMPLETA Layer C-ROAD-ROF-VIEW Farst Algoment EE-1 SZ 0+11+.00m,197.90m	

Profile Design Checks	Description	Screen grab / DWF / DWG	Default
Design Check Sets			
Line			
Curve			

Profile Label Type/Name	Description	Screen grab / DWF / DWG	Default
Profile Label Sets			
C-ROAD-VERT-DISENO	Profile Label Style on Profile design	× PIV= 0+000.000 ELEV = 190.407	
Major Station			
Minor Station			
Horizontal Geometry Point			
Grade Breaks			

Profile Label Type/Name	Description	Screen grab / DWF / DWG	Default
C-ROAD-VERT-ESTACION-ELEVACION	Profile Label Style Station and Elevation data (PIV)	× PIV= 0+568.853 ELEV = 247.683	
Line	Tangent Labels		
C-ROAD-VERT-ETIQUETAS-PENDIENTE (%)	Slope Label Profile Style Finish Ground		
Curve			

Profile Label Type/Name	Description	Screen grab / DWF / DWG	Default
C-ROAD-VERT-CURVAS-COLUMPIO	Profile Label Style Sag Curve	PMIN-EST: 0+315.00 PMIN-ELEV: 217.77 PIV: 0+390.00 ELEV: 220.55 Kr13.09 CV: 150.00	
C-ROAD-VERT-CURVAS-CRESTA	Profile Label Style Crest Curve	РИАХ 551: G+26.00 РИАХ 551: G+26.00 РИАХ 551: G+26.00 РИС 21573 РИС 2157	

Profile View Type/Name	Description	Screen grab / DWF / DWG					Default
C-ROAD-CLASIFICACION-GEOTECNICA	STYLE TO RECIVE GEOTECHNICAL CLASSIFICATION DATA						
C-ROAD-SUBRASANTE-ESTRATIGRAFIA	STYLE TO RECIVE GEOTECHNICAL STRATIGRAPHY DATA						
C-ROAD-TERRACERIA-COMPLETA	PROFILE VIEW STYLE TO SHOW STATIONS, EXISTING GROUND ELEVATION, FINISH GROUND ELEVATION, AND DEPTH CUT - FILL		PIV EUE	/			
		ESPESOF TERRAPLEN				199	
		ESPESOR CORTE					
		ELEVACION SUBRASANTE	190.41	192.84	195.28	197.72	
		ELEV.TERRENO NATURAL	190.41	191.70	193.12	193.04	
		CADENAMIENTO	0+000)			

Profile View Label Type/Name	Description	Screen grab / DWF / DWG	Default
Station Elevation			
Depth			

Profile Band Type/Name	Description	Screen grab / DWF / DWG	Default
Profile Band Set			

Profile Band Type/Name	Description	Screen grab / DWF / DWG	Default
C-ROAD-CLASIFICACION-GEOTECNICA	STYLE TO RECIVE GEOTECHNICAL CLASSIFICATION DATA BILL MATERIAL	TALUDES DE PROYECTO CLASIFICACION GEOTECNICA CLASIFICACION PARA PRESUPUESTO CADENAMIENTO	
C-ROAD-SUBRASANTE-ESTRATIGRAFIA	STRATIGRAPHY		
C-ROAD-TERRACERIA-COMPLETA	BAND STYLE TO SHOW STATIONS, EXISTING GROUND ELEVATION, FINISH GROUND ELEVATION, AND DEPTH CUT - FILL	B B B B B B B B B B B B B B B B B B B	
		ESPESOF TERRAPLEN 🚦 🛔 🚦	
		ESPESOR CORTE	
		ELEVACION SUBRASANTE	
		ELEV. TERRENO NATURAL	
		CADENAMIENTO 0+000	
Profile Data			
C-ROAD-ALIN-VERT-RASANTE	PROFILE FINISH DATA P2		
C-ROAD-ALIN-VERT-SUBRASANTE	PROFILE FINISH DATA P2 MINUS PAVEMENT STRUCTURE		
Vertical Geometry			
Horizontal Geometry			
Concerning Data			
Superelevation Data			
Sectional Data			

AEC SOLUTIONS

Profile Band Type/Name	Description	Screen grab / DWF / DWG	Default
Pipe Network			

7.8 Sections

For Cross sections observed a range of styles, we suggest revising paragraph Multipurpose Styles codes when making their final impressions or representations.

Sample Line Styles	Description	Screen grab / DWF / DWG	Default
Analisis Secciones Vial	Sample Lines Style		

Sample Line Label Styles	Description	Screen grab / DWF / DWG	Default
ESTACIONES	Sample Line label style , with station linetype Plan direction	10000000000000000000000000000000000000	

Sample Line Label Styles	Description	Screen grab / DWF / DWG	Default
Seccion Estacion y Simbolo	Sample Line label style , with station linetype Plan direction and station symbol	00-00-00-00-00-00-00-00-00-00-00-00-00-	

Section Styles	Description	Screen grab / DWF / DWG	Default
Terreno Natural	EXISTING GROUND CROSS SECTIONS		
Terreno Rasante	FINISH GROUND CROSS SECTIONS		

Section Label Styles	Description	Screen grab / DWF / DWG	Default
Label Sets			

Section Label Styles	Description	Screen grab / DWF / DWG	Default
ETIQUETAS TERRENO NATURAL	SECTION LABEL STYLE EXISTING GROUND		
Major Offset			
DISTANCIA Y ELEVACION	OFFSET AND ELEVATION		
Minor Offset			
DISTANCIA Y ELEVACION	OFFSET AND ELEVATION		
Grade Break			
RASANTE DISTANCIA Y ELEVACION	FINISH GROUND DATA OFFSET AND DISTANCE		
Section Label Styles	Description	Screen grab / DWF / DWG	Default
--------------------------	-----------------------------	-------------------------	---------
TN DISTANCIA Y ELEVACION	EXISTING GROUND DATA OFFSET		
	AND DISTANCE		
Segment			
PENDIENTE %	LANE GRADE CROSS SECTIONS		

Section View Styles	Description	Screen grab / DWF / DWG	Default
X Seccion Sin Exageracion	Style Metric to General sections		
Seccion Transversal (sec View)	Style Metric to sections General plot		



Group Plot Styles	Description	Screen grab / DWF / DWG	Default
Hoja 900x600	Group Sections sheet size 900x600mm		
Hoja 1200x900	Group Sections sheet size 1200x900mm		

Sheet Styles	Description	Screen grab / DWF / DWG	Default
Hoja 900x600	Configuration sheet size		
	900x00011111		
Hoja 1200x900	Configuration sheet size		
	1200x900mm		
		Commencement Commencement	
		Supported and the second secon	
		- manufacture	
		Suppling and suppling the suppl	
		statementer structurenes	

Label Styles	Description	Screen grab / DWF / DWG	Default
Offset Elevation			
Grade			

Section Band Styles	Description	Screen grab / DWF / DWG	Default
Band Sets			
DISTANCIA DESDE EL EJE	Label style to band cross sections		
Section Data			

Section Table Styles	Description	Screen grab / DWF / DWG	Default
Total Volume			

TABLA DE VOLUMENES CORTE Y TERRAPLEN	TABLE CUT AND FILL VOLUME DATA AT STATIONS	VOLUMEN TOTAL ESTACION: 0+100.00					
		Area Cort	e		37.38		
		Area Terrap	olen		0.00		
		Vol. Acumul.	Corte	2:	289.63		
		Vol. Acumul. Te	erraple	n 1	26.31		
		Vol. Neto	>	2 ⁻	163.32		
		Volumen Co	orte	6	44.00		
		Volumen de Te	rraple	n	0.00		
		Ale.				_	
Material							
TABLA DE VOLUMEN MATERIALES	TABLE MATERIAL VOLUME AT STATIONS	MATERIALES	S POR	ESTACION:	0+000.C	0	
		Nombre del Material	Area	Volumen	Volumen	Acumulado	
		Base	2.57	0.00	(0.00	
		Carpeta Asfaltica	0.97	0.00	(0.00	
		sub-base	4.09	0.00	(00.00	
							•

7.9 Pipe Networks

The complete catalog was enabled in the templates of their respective pipes and manholes or structures.

Parts Lists	Description	Screen grab / DWF / DWG	Default
Catalogo de Partes Metricas	This catalog contains the complete catalog of the pipes in Metric System	■ Network Parts List - Catalogo de Partes Metricas □ X Information Pers Structures Summary Name Style Rules Render Material Parts Image: Structures Summary Image: Structures Summary Image: Structures Style Rules Render Material Parts Image: Structures Style Rules Rules Rules Rules Image: Structures Structures Rules Rules <t< td=""><td></td></t<>	

Interference Styles	Description	Screen grab / DWF / DWG	Default

Pipe Styles	Description	Screen grab / DWF / DWG	Default

Pipe Rule Set	Description	Screen grab / DWF / DWG	Default

Pipe Label Styles	Description	Screen grab / DWF / DWG	Default
Plan Profile			
Crossing Section			

Pipe Table Styles	Description	Screen grab / DWF / DWG	Default

Structure Styles	Description	Screen grab / DWF / DWG	Default

Structure Rule Styles	Description	Screen grab / DWF / DWG	Default

Structure Label Styles	Description	Screen grab / DWF / DWG	Default

Structure Table Styles	Description	Screen grab / DWF / DWG	Default

7.10 Corridors

Enhancements in the Corridor representation of both design and road sign for use on render.

Corridor Styles	Description	Screen grab / DWF / DWG	Default
C-ROAD-CORR-DISENO	Corridor Design Style representation		
CORREDOR CODIGOS CON HATCH SOLIDO EN PLANTA	Corridor Design or render visualization hatch style		

Assembly Styles	Description	Screen grab / DWF / DWG	Default

Mass Haul Line Styles	Description	Screen grab / DWF / DWG	Default

Mass Haul View Styles	Description	Screen grab / DWF / DWG	Default

Quantity Takeoff Criteria	Description	Screen grab / DWF / DWG
Corte y Terraplen Criteria for QTO Cut and Fill.	🔄 Quantity Takeoff Criteria - Corte y Terrapler	
		Information Material List Add new material Image: Constrained internation internatin
		Material Name Condition Quantity Cut Factor Fill Factor Refill Factor Shape Style
		다. 문공 Material Removido (co Dut 1.000 1.000 Cut Material
		Grider Datum Below
		🖂 🔯 Material de Relleno (R 11) 1.000 Fill Material
		G Below Corridor Datum Above
		Define from a sample line group
		OK Cancel Apply Help

Quantity Takeoff Criteria	Description	Screen grab / DW	/F / DW	/G						Default
Estructura Pavimento	OTO Volume Road Structure	🔄 Quantity Takeoff Criteria - E	structura Pavi	minto					×	
		Information Material List								
				-Define materia						
		Add new material	<u></u>	Data type:		Select surfa	ce:			
		Add a subcriteria		Surface		<type new<="" td=""><td>v or select></td><td>코 쇼 🗡</td><td></td><td></td></type>	v or select>	코 쇼 🗡		
		Material Name	Condition	Quantity	Cut Factor	Fill Factor	Refill Factor	Shape Style		
		🖃 🐺 Carpeta Asfakica		tructures		1.000		Pave Hatch		
		Pave1	Include							
		E Base		\$tructures		1.000		Grava		
		B B sub-base	Include	Inchures		1.000	-	SubBase		
		Subbase	Include							
		E 😽 Subrasante		Structures		1.000		Standard		
		- 1 Subgrade	Include							
						Define froma	sample line gro	oup		
								<u> </u>		
					ок	Cancel	Apply	Help	1	
									200	
Movimiento de Tierras	OTO Criteria to Farthwork	🛃 Quantity Takeoff Criteria -	Movimiento	deTierras					_ 0 ×	
		Information Material List								
		Add new material	10	Define mai	terial					
				Data type	B:	Select	t surface:		-	
		Add a subcriteria		Surfa	ace	<u>▼</u> <₩	pe new or sele	**> • •	<u> </u>	
		MaterialName	Condition	Quantity	Cut Fac	tor Fill Fat	tor Refil	Factor Shape Sty	yle	
		🖃 😽 Movimeinto de Tierr	as	Earthworks	s 1.000	1.000	1.000	Basic		
		- 💮 Existing Ground	Base							
		- 💮 Datum	Compare	_						
		J							_	
						Define	from a sample	line group		
					ОК	_ a	ncel	Apply H	rtelp /	

QTO Table Styles	Description	Screen grab / DWF / DWG	Default
Total Volume			

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QTO Table Styles	Description	Scree	n grab / D	WF/C	DWG				Default
Corte y Terraplen	Table Style to Cut & Fill	Tabla de Volumenes de Corte y Terrapien 🕷							
		Estacion						rrapten Volumen Acumulado Corte (m3)	
		0+000.00						0.00	
		0+020.00						64.97	
		0+040.00						465.89	
		0+060.00						1092,00	
		0+080.00						1646.83	
		0+100.00						2269.63	
		0+120.00						3286.27	
		D+140.00				1439.80		4726.07	
		D+160.00				1784.84		6510.00	
		04174.00				1400.07	120.31	7997.08	
		0+180.00						10078-05	
		04 200.00						13281 50	
		0+240.00						15489.97	
		0+260.00						17490.06	
		04280.00						19249.62	
		0+300.00						20742.29	
		0+320.00						21948.62	
		0+324.50						22179.34	
		D+340.00	0.00	38.34	0.00	581.45	126.31	22860,77	
Material									
Tabla de Area y Volumen	Table Style to Material with							terioles	
	Columns Area, Volume and				12			Columan Acumulado (m3)	
	Acumulate Volume						0.97 19.40	349.16	
					04			368.56	
					0			387.96	
					04			407.36	
					04			426.75	
					0			446.15	
					01			465.55	
					0			484.95	
					0			504.35	
					04			523.74	
					0.			532.86	

7.11 Plan and Profile Sheets

This Country Kit include two additional templates to plot Plant, Profile and Cross Sections:

_AutoCAD Civil 3D (Metrico)_Planta_Perfil_MEX.dwt

_AutoCAD Civil 3D (Metric)_secciones_MEX.dwt

View Frame Styles	Description	Screen grab / DWF / DWG	Default

View Frame Label Styles	Description	Screen grab / DWF / DWG	Default

Match Line Styles	Description	Screen grab / DWF / DWG	Default

Match Line Label Styles	Description	Screen grab / DWF / DWG	Default
Match Line Left			
Match Line Right			

7.12 Survey

<Template file name, start a new table for each template file>

Network Styles	Description	Screen grab / DWF / DWG	Default

Figure Styles	Description	Screen grab / DWF / DWG	Default

•

7.13 General - Multipurpose Styles – Shape Styles

The following table lists all *new* object types added to the object layers tab in Civil 3D 2015 and their content for "out of the box" templates.

Name: Multiple Boundary Material

Display Component	Visible	Layer	Color	Linetype	LTScale	Lineweight	Plot Style
All View Directions:							
Shape Border Line	On	C-ROAD-SHAP	Blue	ByLayer	1.0000	ByLayer	NA
Shape Area Fill	On	C-ROAD-SHAP-PATT	Blue	ByLayer	1.0000	ByLayer	NA

Hatch Display Component Type	Pattern	Angle	Scale			
All View Directions:						
Shape Area Fill	ANSI31	0	1.7500			

Object Defaults

8

Object	Description	Default Style
General Note Label Style	Notas generales	General Note
	Label on line in general, lenght, bearing and	C-GRAL-LINEAS-
	azimuth astronomical calculated.	ETIQ-LONG-
General Line Label Style		DIRECCION
	General Data curve entities	C-GRAL-DATOS-
General Curve Label Style		CURVA
	ESTILO DE PUNTOS GENERICOS REPRESENTADO	Basic
Point Style	POR UNA CRUZ	
	Point Number, Elevation and Description format	Point#-Elevation-
Point Label Style		Description
	Table style PXYZD format	CUADRO DE
		CONSTRUCCION
Point Table Style		DE PUNTOS
	Surface contours at 2m and 10m intervals	Curvas de Nivel
	(Background)	@2m y @10m
Surface Style		(Tonos de Gris)
Surface Marker Style		
	Spot elevation with EL as Preffix and "m" suffix	EL:100.00m
Surface Spot Elevation Label Style	(exemplo EL:100.00m)	
	Label surface slope by Run over Rise (example:	Talud (hor:ver)
Surface Slope Label	2.0:1)	
	Label Major contours two decimal digits	C-TOPO-CURVAS-
Contour Label Major		NIVEL (2 digitos)
Contour Label Minor	<none></none>	<none></none>
	Label Major contours two decimal digits	C-TOPO-CURVAS-
Contour label User-defined		NIVEL (2 digitos)
	THEMATIC STYLE PARCEL PROPERTY	C-PARCEL-SOLAR
Parcel Style	REPRESENTATION AREA	
	Label Style representing the Parcel number	C-PARCEL-
Parcel Area Label		NUMERO
Parcel Line label	Label Line style Bearing over Distance	Rumbo y Distancia
	Label style data curve entities Lenght, Radius	Delta Longitud y
Parcel Curve Label	and Delta	Radio
	FEATURE LINE GRADIGN BORDER	C-GRADING-
		BORDE-TERRAZA
Feature Line Style		(PLATAFORMA)
Grading	Residential Grading	Residential Grading

Object	Description	Default Style
		Display
	GRADING DAYLIGHT CUT PROJECTION	C-GRADING-
		TALUD-PROY-
Cut Slope Grading		CORTE
	GRADING DAYLIGHT FILL PROJECTION	C-GRADING-
		TALUD-PROY-
Fill Slope Grading		TERRAPLEN

9 Tool palettes

9.1 Subassemblies and assemblies

Due to the wide variety of parts used in our road projects it was decided to place a typical section by adding from "despalme" volume data, this will be found in the toolpalettes or by locating the file:

C-ROAD-SEC-TRANS-TIPO-1





CARRIL_5_CAPAS A NIVEL DE SUBRASANTE (LANE_5_component SUBGRADE LEVEL insertion point)

Slope

HOMB_5_CAPAS_Cu_AFIN A NIVEL DE SUBRASANTE (Shoulder_5_component SUBGRADE LEVEL insertion point)

This assembly contains conditions to add a wedge of refinement, which considers the following condition:

1.- If the distance between P2 (point on the subgrade level) and the surface is greater than 0.80m, then so thinning wedge placed with a horizontal distance of 0.20m joining said wedge in its completion with the projection of the slope embankment.



2.- otherwise, place a ditch en caso contrario

2.- otherwise, place a ditch , where there cutting condition and cut slope.



9.2 Drawing symbols and (MV) Blocks

List of files used to generate our palettes

_AutoCAD Civil 3D (Metrico)_MEX_2015.dwg C-ROAD-SIMB-SV-MEX_SENALAMIENTO-VIAL.dwg C-ROAD-SEC-TRANS-TIP_01.dwg C-ROAD-STIPO_CAF -1.dwg C-ROAD-STIPO_CAF Y DESPALME.dwg

Name ^	Date modified	Туре	Siz 🔺
C-ROAD-SEC-TRANS-TIP_01.dwg	2/9/2013 3:19 AM	AutoCAD Drawing	
C-ROAD-STIPO_CAF - 1.dwg	2/9/2013 3:19 AM	AutoCAD Drawing	
🎘 C-ROAD-STIPO_CAF Y DESPALME.dwg	2/9/2013 3:19 AM	AutoCAD Drawing	







🗃 🗲 JIUTEPEC 2				km 2 4 0	km 1 7 4
SID-8.png	SII-11.png	SII-12.png	SII-13.png	SII-14.png	SII-15.png
SIS-1.png	SIS-2.png	SIS-3.png	SIS-4.png	SIS-5.png	SIS-7.png
SIS-8.png	SIS-9.png	SIS-10.png	SIS-11.prg	SIS-12.png	HOTEL SIS-13.png
515-14.png	SIS-15.png	SIS-16.png	SIS-17.prg	515-18.png	SIS-19.png
SIS-20.png	SIS-21.png	SIS-22.png	SIS-23.prg	SIS-24.png	SIS-25.pnq
5 <u>IS-26.png</u>	SP-6.png	SP-7.png	SP-8.png	SP-9.png	SP-10.png





10 Pipe and Structure Catalogs

In this template was enabled the complete catalog of the parties in Metric system, pipes both their respective structures.

10.1 Metric Part List Catalog

Pipe Network	
🖻 🗁 Parts Lists	
- 😭 Catalogo de Partes Metricas	
- C Full Catalog	
- Canitary Sewer	
🕝 Standard	
Storm Sewer	
🗈 🗁 Interference Styles	
🖭 🗁 Commands	

etwork Parts List - Catalogo de Partes Metricas		
ormation Pipes Structures Summary		
Name:	Created by:	Date created:
Catalogo de Partes Metricas	Autodesk	2/15/2010 1:23:24 AM
Description:	Last modified by:	Date modified:
Este Catalogo contiene todo el catalogo de las tuberias en sistema Metrico	Autodesk	2/15/2010 1:28:24 AM

10.2 Pipe List

Vame	Style	Rules	Render Material	Pay Item
🖃 😭 Catalogo de Partes M	•			
🕒 🍃 Concrete Pipe SI	Ę	Ę	ę	20
🗈 🍃 Ductile Iron Pipe SI	Ę	ę	ę	20
🕀 🗁 PVC Pipe SI	Ę	e,	e,	23
🕒 🍃 Corrugated Metal .	6,	Ę	e,	20
Corrugated HDPE .	6,	ę	ę	20
HDPE Pipe SI	e,	e,	e,	20
🗈 🍃 Concrete Egg-Sha.	6,	Ę	e	20
🕑 🍺 Concrete Elliptical .	6	e,	e,	20
🗈 🍃 Concrete Horizont.	6,	e,	e,	20
🗈 🍃 Concrete Horizont.	6,	e,	e	20
Concrete Box Culv.		Ę	e,	<u></u>

10.3 Structure List

Name	Style	Rules	Render Material	Pay Item
🖃 😭 Catalogo de Partes M	h			-
🕀 🗁 Null Structure	e,	ę	ę	ģ
🕀 🍃 CMP Rectangular	6,	ę	ę	ģ
🕀 🎯 Concrete Rectan	g 🤤	ę	ę	<u>s</u>
🗈 🍃 Concrete Flared I	: C,	e,	e,	0
🗈 🍃 Rectangular Head	i C	C,	e,	
🗈 🍃 Concrete Rectan	g 尾	C,	e,	
🕀 🎯 Concrete Rectan	g 尾	e,	e,	9
🕀 🍃 Concentric Cylind	ri 尾	Ę	e,	9
🕀 🗁 Cylindrical Struct	J C	e,	e,	1
🗈 🎯 Eccentric Cylindri	c 尾	e,	e,	1
🗈 🎯 Rectangular Stru	c 尾	e,	e,	
🗈 🍃 Rectangular Stru	尾	Ę	e,	
🕀 🎯 Eccentric Cylindri	C	C,	e,	ē
🕀 🗁 Rectangular Stru	C	e,	e,	<u>a</u>
🕀 🎯 Cylindrical Junctio	C	e,	e,	9
TI F2 Dectangular June	6 A	9	A	គ

11 Highway design check files

11.1 Standard Highway Design (SCT)

This package called "Country Kit" meets a set of standards of various geometric elements of the project roads, which are in current Mexican law "Normas de Servicios Técnicos, Secretaría de Comunicaciones y Transportes (SCT)", as were conceived For over 30 years.

The standards included in this Country Kit Mexico are:

□	+ ×		
🗁 Units	▲ Speed	Radius	
Alignments	40	38.200	
E 🗁 Minimum Radius Tables	50	67.410	
NST SCT TABLA 004-5 TIPO E y D eMa	60	104.170	
NST SCT TABLA 004-6 TIPO C eMax 1	70	152.790	
NST SCT TABLA 004-6 TIPO C eMax 1	80	208.350	
- INST SCT TABLA 004-7 TIPO B y A (A2	90	269.630	
- NST SCT TABLA 004-7 TIPO B y A (A2	100	352.590	
NST SCT TABLA 004-8 TIPO A(A45 y			
NST SCT TABLA 004-8 TIPO A(A4 y A			
AASHTO 2004 Metric eMax 4%			
AASHTO 2004 Metric eMax 6%			
AASHTO 2004 Metric eMax 8%			
AASHTO 2004 Metric eMax 10%		1	
AASHTO 2004 Metric eMax 12%	Comments		
Superelevation Attainnent Methods			
Superelevation Tables			
WideningMethods			
Profiles	-		
•	3		3

11.1.1 Tabla de Radios Mínimos de Curvas

Design Criteria EditorAutodesk Civil 3D Metric MEX	C13N_SCT.xml		×
	수 🗙		
NST SCT TABLA 004-5 TIPO E y D eMa	Туре	Formula	
- III NST SCT TABLA 004-6 TIPO C eMax 1	LCtoFS	{t}	
- INST SCT TABLA 004-6 TIPO C eMax 1	LCtoBC	{p}*{t}	
- III NST SCT TABLA 004-7 TIPO B y A (A2	NCtoLC	{t}*{c}/{e}	
- III NST SCT TABLA 004-7 TIPO B y A (A2	LCtoRC	{t}*{c}/{e}	
NST SCT TABLA 004-8 TIPO A(A45 y	NStoNC	{t}*({s}-{c})/{e}	
- III NST SCT TABLA 004-8 TIPO A(A4 y A			
- AASHTO 2004 Netric eMax 4%			
AASHTO 2004 Netric eMax 6%			
AASHTO 2004 Netric eMax 8%			
AASHTO 2004 Netric eMax 10%			
AASHTO 2004 Netric eMax 12%			
Superelevation Attainment Methods			
AASHTO 2004 Crowned Roadway	Commente	1	
Transition Style Standard	Comments		
🕀 🗁 Planar Roadway			<u></u>
KST SCT Carretera con Bombeo			
Transition Style Standard			
🕂 🗁 Carretera sin Dividir y sin Bombeo			× .
	4		F
Make file read-only		Save and Close Cancel	Help

11.1.2 Methods of Cross Section superelevation

• <u></u>	수 🗙		
SuperelevationTypeByTable	A Radius	Transition Length	-
- E Design speed 40	4583.680	56	
Design speed 50	2291.840	56	
Design speed 60	1527.890	56	
Design speed 70	1145.920	56	
Design speed 80	916.740	56	
Design speed 90	763.940	56	
Design speed 100	654.810	53	
	572.960	65	
□ 🗁 2 Carriles	509.300	70	
TransitionLengthTypeByTable	458.370	74	
Design speed 40	416.700	77	
Design speed 50	1	70	<u> </u>
Design speed 60 Design speed 70	Comments		
Design speed 80			
- Design speed 90			
MST SCT TABLA 004-7 TIPO B v A (A2) eMay 10% ci	-		
101 DCT TABLA 001-7 TIPO D V A (A2) 6110X 1078 31.			E.

11.1.2 Transition lenghs Tables to different types of roads

11.1.2.1 Table Parameter "K" which defines the sight Distance (Stopping, Passing and Headlight)

🚺 Design Criteria EditorAutodesk Civil 3D Metric MEX	C13N_SCT.xml			×
🛍 🗔 🔒 😽 h nh				
	+ ×			
🕀 🗁 Units				
🕀 🗁 Alignments				
🖻 🗁 Profiles				
🖻 🗁 Minimum K Tables				
🗈 🦢 AASHTO 2004 Standard				
B B NST SCT TABLA 004-3 Parametro K Valor				
Stopping Sight Distance				
Passing Sight Distance	L			
Headlight Sight Distance				
	Comments			
				<u>^</u>
	and and			¥
				P
Make file read-only		Save and Close	Cancel	Help

• <u></u>	수 🗙	ት 🗙		
🕞 Units	к	Speed		
- 🗁 Alignments	3	30		
Profiles	4	40		
E 🗁 Minimum K Tables	8	50		
AASHTO 2004 Standard	14	60		
- 🕼 NST SCT TABLA 001-3 Parametro K Val	or 20	70		
Stopping Sight Distance	31	80		
Passing Sight Distance	43	90		
Headlight Sight Distance	57	100		
	72	110		
	Comments			
	► I set		18	

]≁ 『✓	수 🗙		
∃- ≧> Units	К	Speed	
Alignments	18	30	
> Profiles	32	40	
🗄 🗁 Minimum K Tables	50	50	
AASHTO 2004 Stardard	73	60	
- B NST SCT TABLA 001-3 Parametro K Valor	99	70	
Stopping Sight Distance	130	80	
Passing Sight Distance	164	90	
Headlight Sight Distance	203	100	
	245	110	
		1	
	Comments		
•	3		F

• <u>-</u>	· · · · · · · · · · · · · · · · · · ·		
- 🗁 Units	К	Speed	
- 🗁 Alignments	4	30	
- 🗁 Profies	7	40	
🗄 🗁 Minimum K Tables	10	50	
AASHTO 2004 Standard	15	60	
- Dr NST SCT TABLA 001-3 Parametro K Valor.	20	70	
- Stopping Sight Distance	25	80	
Passing Sight Dstance	31	90	
Headlight SightDistance	37	100	
	43	110	
	Comments	· · · · · · · · · · · · · · · · · · ·	

12 Quantity Take Off (Cantidades de Obra)

12.1 QTO Overview

The QTO feature of Civil 3D 2015 is designed to create links between pay items from a DOT master pay items list and elements in the Civil 3D model. After the links are created, the QTO tools can extract the information and create reports or export the information to be used in estimation applications.

For the CK, there are four things that will be needed to make QTO work: a master pay items file, a pay items index file, a units mapping file and a series or custom report templates.

12.2 QTO Creation

12.2.1 Master Pay Items List

The Master Pay Items List can have three formats, but the most common will be a CSV file (comma separated file) that contains three fields of information: Pay Item Number, Pay Item Description and Units. The program will use the Windows regional setting for the "List Separator" to split the file on. By default in English (US) this is a ",".

12.2.2 Pay Items Index

The Pay Items Index file is used to categorize the Master Pay Items file from a flat list to a tree structure.

12.2.3 Units Mapping File

The Units Mapping file will map the strings for the units from the local to the system units.

Unit	Description
PZA	Each
m	Linear Meter
M2	Square Meters
M3	Cubic Meters

12.2.4 Reports

Reports for the QTO feature are made using HTML style sheets (.XSL) files to format the QTO output. The output will be formatted by Civil 3D using the ambient settings for the QTO command. The report will list all the QTO items found in the model for the region specified.

12.2.5 QTO Command Settings

The command settings for the QTO are used to control the output of the xml file that will be published when the user makes a quantity takeoff. The primary settings are:

Setting	Description
Linear Unit	m
Unidades de Area	M2
Volume Units	M3
Station	EST

The file supplied for this topic is called:

CATALOGO_OBRA PESADA_MEX.csv

_AutoCAD Civil 3D (Metrico)_pipes_MEX.dwt

path :

C:\ProgramData\Autodesk\C3D 2015\enu\Data\Pay Item Data\MEX

X		ter text to filter pay items 👫 💱 💀 😨 👘 👘 🖓 🕶 😰	
	Pay Item ID	Description	
	Favorites	Favorites	1
	- A12-100-005-00	Carga y acarreo en carretilla a 20 m de distancia de material producto de excavaciones y/o despalmes	110
	- A12-100-010-00	Acarreo en carretilla de material producto de excavación y/o despalmes a estaciones subsecuentes a cada 20 m.	
	- A12-100-015-00	Carga y acarreo en carretilla a 20 m de distancia de material producto de demoliciones.	
	- A12-100-020-00	Acarreo en carretilla de material producto de denioliciones a estaciones subsecuentes a cada 20 m.	II.
	- A12-100-025-00	Carga y acarreo total fuerade la obra a tiradero oficial de material producto de excavaciones y/o despalmes.	
	- A12-100-030-00	Carga y acarreo total fuerade la obra a tiradero oficial de material producto de demolicón.	
	- A12-100-035-00	Excavación manual en zanja, material seco tipo A de 0.00 a 2.00 m. Incluye: afine de talud, fondo con colocación de material a pie de :	
	- A12-100-040-00	Excavación manual en zanja, material seco tipo A de 2.01 a 4.00 m. Incluye: afine de talud, fondo con colocación de material a pie de :	
	- A12-100-045-00	Excavación manual en zanja, material seco tipo A de 4.01 a 6.00 m. Incluye: afine de talud, fondo con colocación de material a pie de :	
	- A12-100-050-00	Excavación manual en zanja, material seco tipo B de 0.00 a 2.00 m. Incluye: afine de talud, fondo con colocación de material a pie de z	
	- A12-100-055-00	Excavación manual en zanja, material seco tipo E de 2.01 a 4.00 m. Incluye: afine de talud, fondo con colocación de material a pie de z	
	- A12-100-060-00	Excavación manual en zanja, material seco tipo B de 4.01 a 6.00 m. Incluye: afine de talud, fondo con colocación de material a pie de z	
g	- A12-100-065-00	Excavación manual en caja, material seco tipo A de 0.00 a 2.00 m. Incluye: afine de talud, fondo con colocación de material a pie de c	
rai	A12-100-070-00	Excavación manual en caja, material seco tipo A de 2.01 a 4.00 m. Induye: afine de talud, fondo con colocación de material a pie de ca	
and	- A12-100-075-00	Excavación manual en caja, material seco tipo A de 4.01 a 6.00 m. Induye: afine de talud, fondo con colocación de material a pie de ce	1
Ç	•	- · · · · · · · · · · · · · · · · · · ·	

13 Superelevation standards

As mentioned in chapter 11 of this workbook here meet a set of standards of various geometric elements of the project roads, which are in current Mexican law law "Normas de Servicios Técnicos, Secretaría de Comunicaciones y Transportes (SCT)" were conceived as more than 30 years.

File Name:

_AutoCAD Civil 3D Metric _MEX C13N_SCT.xml

The standards included in this Country Kit Mexico are:

13.1.1 Tabla de Sobre-elevaciones y ampliaciones de curvas

• 🖓	+ ×	
lacksquare Superelevation Attainment Methods	1	
Superelevation Tables		
🕀 🗁 NST SCT TABLA 004-5 TIPO E y D eMa	1	
🕒 🥏 NST SCT TABLA 004-6 TIPO C eMax 1		
🕀 🗁 NST SCT TABLA 004-6 TIPO C eNax 1		
🕀 🗁 NST SCT TABLA 004-7 TIPO B y & (A2		
🕀 🗁 NST SCT TABLA 004-7 TIPO B y A (A2		
🕀 🗁 NST SCT TABLA 004-8 TIPO A(A4S y		
🕑 🗁 NST SCT TABLA 004-8 TIPO A(A4 y A		
🕑 🥟 AASHTO 2004 Metric eMax 4%		
🕀 🗁 AASHTO 2004 Metric eMax 6%	J	
🕑 🤛 AASHTO 2004 Metric eMax 8%		
🕑 🥏 AASHTO 2004 Metric eMax 10%		
🕑 🥏 AASHTO 2004 Metric eMax 12%	Comments	
🗄 🤛 Superelevation Rate By Formula	Commence	
🖻 🗁 WideningMethods		
🕒 🥏 AASHTO Simple Formula		
🕒 🤛 AASHTO Standard Formula		
AASHTO Metric Table- Vehicle Type W,		

Design Criteria Editor - _Autodesk Civil 3D Metric MEX C13N_SCT.xml X 🎦 🗟 🔒 🔜 🤝 🖻 -+ × ٠ E- D WideningMethods 🗄 🤛 AASHTO Simple Formula 🗷 🤛 AASHTO Standard Formula 🗄 🤛 AASHTO Metric Table- Vehicle Type W... 🗈 🧁 AASHTO Metric Table - Vehicle Type SU 🗄 🥟 AASHTO Metric Table - Vehicle Type ... 🗄 🦢 AASHTO Metric Table - Vehicle Type ... 🗄 🧁 AASHTO Metric Table - Vehicle Type ... 🕀 🥟 AASHTO Metric Table - Vehicle Type ... 🗄 🧁 AASHTO Metric Table - Vehicle Type ... 🖻 🥟 AASHTO Metric Table - Vehicle Type ... 🕀 🗁 NST SCT TABLA 004-S TIPO E y D E D NST SCT TABLA 004-6 TIPO C 🖻 🗁 WideningTypeByTable Comments 🖻 🗁 LaneWidth . Design speed 40 Design speed 50 Design speed 60 Desian speed 70 > 4 Make file read-only Save and Close Cancel Help

13.1.2 References

1. book 2, Normas de Servicios Técnicos, Parte 2.01, Proyecto Geométrico, Título 2.01.01, Carreteras. Secretaría de Comunicaciones y Transportes (SCT), México, D F (1984).

2. Manual de Proyecto Geométrico de Carreteras. Secretaría de Asentamientos Humanos y Obras Públicas (SAHOP), México, D F (1977).

Intersection feature – Styles, Names and Assembly sets

Name	DWT Value	Comments	Screengrab/DWG/DWF
Intersection Style	Intersection Marker	New Style Needed (see	
		below)	
Intersection Label Style	Intersection Label	New Style Needed (See	
		below)	
Offset Alignment Style	Design		
Curb Return Alignment Style	Basic		
Offset Profile Style	Design Profile		
Curb Return Profile Style	Design Profile		
Offset Alignment Label Set	Major and Minor Only		
Curb Return Alignment Label Set	Major and Minor Only		
Offset Profile Label Set	_No Labels		
Curb Return Profile Label Set	_No Labels		
Intersection Name Format	(Intersection) - (Next Counter)		
Intersection Quadrant Name Format	(Intersection Name) –(Quadrant Location)		
	– QUADRANT		
Offset Alignment Name Format	(Parent Alignment Name) – (Side) – (Offset		
	Distance)		
Curb Return Alignment Name Format	(Intersection Name) – (Intersection		
	Quadrant Name)		
Offset Profile Name Format	(Parent Alignment Name) – (Side) – (Offset		
	Profile Nominal Cross Slope)		
Curb Return Profile Name Format	(Parent Alignment Name) - (Intersection		
	Name) – (Intersection Quadrant Name)		

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AUTODESK, INC. AEC SOLUTIONS

Name	DWT Value	Comments	Screengrab/DWG/DWF
Corridor Region Name Format	(Intersection Name) – (Baseline Name) –		
	(Assembly Name)		

15 Codes File

The following table is used to catalog all the files that are part of the CK along with a brief description, the current location and the folder where they will be installed, and if the file is added to the user cache for second and subsequent restricted rights user installation. This information will be used when the install is created for the CK.

Code #	Local	Original	Description
1	CL	Crown	Eje de la corona de la carretera
2	CLP1	Crown_Pave1	Eje de la corona pavimento capa 1
3	CLP2	Crown_Pave2	Eje de la corona pavimento capa 2
4	CLB	Crown_Base	Eje de la corona de la base O Rasante de la base
5	CLSb	Crown_Sub	Eje de la corona de la base O Rasante de la Subbase
6	ORC	ETW	Orilla Calzada
7	ORC_P1	ETW_Pave1	Orilla Calzada pavimento capa 1
8	ORC_P2	ETW_Pave2	Orilla Calzada pavimento capa 2
9	ORC_B	ETW_Base	Orilla Calzada de base
10	ORC_Sb	ETW_Sub	Orilla Calzada de subbase
11	СР	Lane	Cambio de pendiente transversal entre carriles
12	CPP1	Lane_Pave1	Cambio de pendiente transversal entre carriles capa 1
13	CPP2	Lane_Pave2	Cambio de pendiente transversal entre carriles capa 2
14	СРВ	Lane_Base	Cambio de pendiente transversal entre carriles Base
15	CPSb	Lane_Sub	Cambio de pendiente transversal entre carriles Subbase
16	ORH	EPS	orilla Hombro
17	ORH_P1	EPS_Pave1	orilla Hombro pavimento capa 1
18	ORH_P2	EPS_Pave2	orilla Hombro pavimento capa 2
19	ORH_B	EPS_Pave3	orilla Hombro base
20	ORH_Sb	EPS_Sub	orilla Hombro subbase
21	ORH_B_In	EPS_Base_In	orilla interior del Hombro capa base
22	ORH_Sb_In	EPS_Sub_In	orilla interior Hombro subbase
23	ORACO_NP	EPS_Unpaved	orilla de acotamiento no pavimentado.
24	LC_Sb	Daylight_Sub	Talud estructura vialidad entre subbase y rasante.
25	CEROS	Daylight	Talud linea de Ceros de corte o terraplen
26	LCT	Daylight_Fill	Linea de Ceros en talud de terraplen
27	LCC	Daylight_Cut	Linea de Ceros en talud de corte
28	Cun_In	Ditch_In	Borde interior de cuneta
29	Cun_Ex	Ditch_Out	Borde interior de cuneta
30	Berma_In	Bench_In	borde interior de la berma
31	Berma_ext	Bench_Out	borde exterior de la berma
32	Linescurr_cuneta	Flowline_Ditch	Linea de escurrimeinto de cuneta.
33	OR_izq_cuneta_cent	LMedDitch	orilla izquierda de la cuneta central

Code #	Local	Original	Description
34	OR_der_cuneta_cent	RMedDitch	orilla izquierda de la cuneta central
35	Canaleta	Flange	Punto de la canaleta.
36	Escurr_canaleta	Flowline_Gutter	linea canaleta o linea base bordillo y canaleta.
37	sup_bordillo	Top_Curb	Parte superior bordillo
38	base_bordillo	Bottom_Curb	base bordillo sin canaleta.
39	resp_bordillo	Back_Curb	respaldo bordillo.
40	Acera_In	Sidewalk_In	orilla interior de la banqueta o acera
41	Acera_ext	Sidewalk_Out	orilla exterior de la banqueta o acera
42	ITC	Hinge_Cut	Cero en corte
43	ITT	Hinge_Fill	cero en terraplen
44	Rasante	Тор	superficie de rodameinto en secciones pavimentadas y
			no pavimentadas.
45	Subrasante	Datum	subrasante en secc. pavimmentadas y superficie
			terminada en secciones no pavimentadas.
46	Pavim	Pave	Pavimento o carpeta asfaltica
47	P1	Pave1	segunda capa o pavimento
48	P2	Pave2	tercer capa pavimento
49	Base	Base	base en secciones pavimentadas
50	SubBase	SuBbase	subbase en secciones pavimentadas
51	Grava	Gravel	Superficie grava Hombro
52	Ras_bordillo	Top_Curb	Superficie terminada bordillo y canaleta
53	resp_bordillo	Back_Curb	Back of curb
54	bordillo	Curb	forma del bordillo
55	Acera	Sidewalk	Forma de la acera
56	IT	Hinge	ceros en taludes
57	OR_P_EX	EOV	Limite pavimento existente
58	OR_PREX	EOV_Overlay	Orilla capa Recubrimiento pavimento existente
59	CL_Rec	Level	rasante de nivelación de los materiales de recubrimiento
60	FR	Mill	fresado superficie pavimento existente
61	Rec	Overlay	recubrimiento sobre la capa del pavimento existente
62	CL_PEX	Crown_Overlay	Eje de la rasante del pavimento existente
63	Barrera	Barrier	barrera y forma de la barrera
64	OR_LP	EBD	orilla de la losa del puente
65	CL_L	Crown_Deck	Eje de la rasante del puente
66	L	Deck	Superficie losa puente

Code #	Local	Original	Description
67	V	Girder	Superficie viga puente
68	OR_BAL_H	EBS	orilla balasto hombro
69	OR_Dur	ESL	orilla del durmiente
70	Ceros_balasto	Daylight_Ballast	Ceros en balastos
71	OR_Sbal	ESPS	orilla subbalasto hombro
72	L_ceros_sbal	Daylight_Subballast	linea de ceros subbalasto
73	Bal	Ballast	Balasto capa de material como grava
74	Dur	Sleeper	forma del durmiente
75	Sbal	Subballast	Subbalasto
76	Riel	Rail	forma del riel
77	R1	R1	puntos sobre el riel
78	R2	R2	puntos sobre el riel
79	R3	R3	puntos sobre el riel
80	R4	R4	puntos sobre el riel
81	R5	R5	puntos sobre el riel
82	R6	R6	puntos sobre el riel
83	PTE	Bridge	puntos de liga y forma de la estructura del puente
84	Cuneta	Ditch	Forma de la cuneta
85	CL	Crown_Fin	Eje rasante
86	CL_Sb	Crown_SubBase	Eje rasante Capa Subbase
87	OR_C_sb	ETW_SubBase	orilla calzada en la capa subbase
88	PM	MarkedPoint	se utiliza para ubicar una marca en los puntos
			especificos de la seccion
89	BM	Guardrail	barrera metalica o barandal de proteccion
90	Med	Median	orilla de la mediana
91	OR_C_PEX	ETW_Overlay	orilla de la calzada pavimento existente
92	Zanja_Fondo	Trench_Bottom	Trench bottom and top of the bedding
93	Zanja_linea_ceros	Trench_Daylight	Top of the back fill in trench
94	Zanja_plantilla	Trench_Bedding	Plantilla Zanja
95	Zanja_relleno	Trench_Backfill	relleno de la Zanja
96	Zanja	Trench	Trench
97	СР	LaneBreak	cambio de pendiente transversal
98	CP_firme_reparado	LaneBreak_Overlay	Cambio de pendiente transversal del firme reparado
99	DP	Sod	liga capa vegetal

Code #	Local	Original	Description
100	DP_L_ceros	Daylight_Strip	Linea de Ceros en despalme
101	Foreslope_Stripping	Foreslope_Stripping	Stripping foreslope link defining backfill
102	Despalme	Stripping	liga en despalme
103	Canal_escurrimiento	Channel_Flowline	escurrimiento fondo del canal
104	Canal_Fondo	Channel_Bottom	Fondo del canal
105	Canal_rasante	Channel_Top	puntos internos rasante canal
106	Canal_bordo	Channel_Extension	puntos bordo canal donde el talud del respaldo
107			
107	Canal_talud_bordo	Channel_Backslope	Puntos del talud del bordo del canal
108	proteccion_canal	Lining_Material	material recubrimiento o proteccion del canal
109	Cuneta_revest_tierra	Ditch_Back	revestimento tierra en los lados de la cuneta
110	Cuneta_cara	Ditch_Face	puntos superiores del revestimiento de la cuneta
111	Cuneta_sup	Ditch_Top	puntos superiores del revestimiento de la cuneta
112	Cuneta_fondo	Ditch_Bottom	fondo de la cuneta
113	Cuneta_relleno	Backfill	relleno cuneta
114	Cuneta_cara_relleno	Backfill_Face	frente de la cuneta relleno
115	Cuneta_tapa_superior	Ditch_Lid_Face	Tapa superior de la cuneta
116	Canal_cubierta	Lid_To	Tapa del canal
117	Cuneta_poster_relleno	Ditch_Back_Fill	Ditch edge point on the back fill face of side ditch
			subassemblies
118	Тара	Lid	Tapa estaructura
119	Zanja_fondo_eje	Drain_Bottom	punto central del fondo de la zanja
120	Zanja_fondo_ext	Drain_Bottom_Outside	punto exterior fondo zanja
121	Zanja_sup_ext	Drain_Top_Outside	punto exterior superior Zanja
122	Zanja_sup_int	Drain_Top_Inside	punto interior superior Zanja
123	Zanja_fondo_int	Drain_Bottom_Inside	punto interior fondo Zanja
124	tubo_central	Drain_Center	punto central del tubo en la zanja
125	Escurrimiento	Flow_Line	punto sobre la linea de escurrimiento den la zanja
			del tubo
126	Zanja_sup	Drain_Top	liga en la parte superior Zanja
127	Zanja_Estructura	Drain_Structure	forma de estructura zanja
128	Zanja_Area	Drain_Area	Area de la zanja
129	MC_frente	RW_Front	Punto en la cara frontal del muro de contencion
130	MC_Sup	RW_Top	Punto en la cara superior del muro de contencion
131	MC_respaldo	RW_Back	punto posterior a la cara superior del muro de
			contencion
132	MC_cero	RW_Hinge	Cero punto posterior a la cara superior del muro de
			contencion

Code #	Local	Original	Description
133	MC_Int	RW_Inside	punto interior en la parte superior de la zapata
134	MC_ext	RW_Outside	punto exterior en la parte superior de la zapata del muro
135	MC	Wall	Muro de Contencion
136	MC	RWall	Forma muros de contencion
137	MC_B1	RWall_B1	punto en los muros de contencion
138	MC_B2	RWall_B2	punto en los muros de contencion
139	MC_B3	RWall_B3	punto en los muros de contencion
140	MC_B4	RWall_B4	punto en los muros de contencion
141	MC_K1	RWall_K1	punto en los muros de contencion
142	MC_K2	RWall_K2	punto en los muros de contencion
143	MC_Zap_inf	Footing_Bottom	liga inferior de la zapata del muro de contencion
144	OR_Acera	Walk_Edge	Orilla ancho Acera
145	Lote	Lot	puntos del lote creados por el subensamble lotgrade
146	Talud_liga	Slope_Link	Utilizado para render y hatch en los taludes en los
			codigos de rasante o subrasante.
147	Canal_bordo	Channel_Side	orilla del canal
148	Zanja	Bench	puntos de liga en Zanja
149	CL_P3	Crown_Pave3	eje rasante capa pavimento 3
150	carril_P3	Lane_Pave3	cambio de pendiente en la capa Pavimento 3
151	OR_C_B1	ETW_Base1	Orilla Calzada capa base 1
152	CL_B1	Crown_Base1	Eje rasante capa Base 1
153	Carril_B1	Lane_Base1	cambio de pendiente en la capa base 1
154	OR_C_B2	ETW_Base2	Orilla Calzada capa base 2
155	CL_B2	Crown_Base2	Eje rasante capa base 2
156	Carril_B2	Lane_Base2	cambio de pendiente en la capa base 2
157	OR_C_B3	ETW_Base3	Orilla Calzada capa base 3
158	CL_B3	Crown_Base3	Eje rasante capa base 3
159	Carril_B3	Lane_Base3	cambio de pendiente en la capa base 3
160	OR_C_Sb1	ETW_Sub1	Orilla Calzada capa SubBase1
161	CL_Sb1	Crown_Sub1	Eje rasante capa subBase 1
162	Carril_Sb1	Lane_Sub1	cambio de pendiente en la capa SubBase1
163	OR_C_Sb2	ETW_Sub2	Orilla Calzada capa SubBase 2
164	CL_Sb2	Crown_Sub2	eje rasante capa subBase 2
165	Carril_Sb2	Lane_Sub2	cambio de pendiente en la capa SubBase2

Code #	Local	Original	Description
166	OR_C_Sb3	ETW_Sub3	Orilla Calzada capa subBase3
167	CL_Sb3	Crown_Sub3	Eje rasante capa subBase 3
168	Carril_Sb3	Lane_Sub3	cambio de pendiente en la capa subBase3
169	Р3	Pave3	Limite cuarta capa en secciones pavimentadas
170	B1	Base1	material en la base tipo 1
171	B2	Base2	material en la base tipo 2
172	B3	Base3	material en la base tipo 3
173	Sb1	Subbase1	parte inferior de la SubBase1 en secciones pavimentadas
174	Sb2	Subbase2	parte inferior de la SubBase2 en secciones pavimentadas
175	Sb3	Subbase3	parte inferior de la SubBase3 en secciones pavimentadas
176	ORH_B1	EPS_Base1	Orilla Hombro pavimentado en capa Base1
177	ORH_B2	EPS_Base2	Orilla Hombro pavimentado en capa Base2
178	ORH_B3	EPS_Base3	Orilla Hombro pavimentado en caba base3
179	ORH_Sb1	EPS_SubBase1	Orilla Hombro Pavimentado en capa subbase1
180	ORH_Sb2	EPS_SubBase2	Orilla Hombro Pavimentado en capa subbase2
181	ORH_Sb3	EPS_SubBase3	Orilla Hombro Pavimentado en capa subbase3
182	OR_C_P3	ETW_Pave3	Orilla Calzada pavimento capa 3

16 Pressure Pipes Specification

16.1 Summary of Pressure Pipes (Tuberías a Presión)

This section focuses on the features of the components of the pressure pipes in Civil 3D, be conducted in the following configurations:

Drawing Settings
Feature Settings
Command Settings
Object Styles
Label Styles
Preview Drawings
Layers
Pressure Parts Catalogs
Pressure Parts Lists

16.2 Drawings Settings (Configuración del archivo)

7 new objects were added to both labels to the parts of the network under pressure, within the Object Layers tab (in Settings Drawings).

16.2.1 Object Layers

In subsequent images check updated data regarding pressure pipes:

Drawing SettingsAutoCAD Civil 3D (Metrico)_MEX				
nits and Zone Transformation	Object Layers Abbreviations Ambie	nt Settings		
Object	Layer	Modifier	Value	Locked
Alignment	C-ROAD-CL	Suffix	.*	â
S Alignment-Labeling	C-ROAD-TEXT	Suffix	.*	
Alignment Table	C-ROAD-TABL	None	.*	8
Appurtenance	C-WATR-APPT	None		a
S Appurtenance-Labeling	C-WATR -TEXT	None		8
LA Assembly	C-ROAD-SEC-TIPICA-TEMPLATE	None		a

Drawing SettingsAutoC	AD Civil 3D (Metrico)_MEX				
Units and Zone Transformation	Object Layers Abbreviations	Ambien	t Settings		
Object	Layer		Modifier	Value	[1
Corridor	C-ROAD-CORR		Suffix	_*	
Corridor Section	C-ROAD-CORR-SCTN		Suffix	_*	
Feature Line	C-TOPO-EFAT	-	None		
Fitting	C-WATR-FITT		None		
Fitting-Labeling	C-WATR -TEXT		None		
Seneral Note Label	C-ANNO		None		

nits and Zone Transformation	Object Layers Abbreviations	Ambient Settings		
Object	Layer	Modifier	Value	Locked
Point Table	V-NODE-TAEL	None		
Pressure Part Profile	C-WATR-PROF	None		
Pressure Pipe	C-WATR-PIFE	None		
No Pressure Pipe-Labeling	C-WATR-PIFE-TEXT	None		
V Profile	C-ROAD-PROF	Suffix	_*	

16.2.2 Ambient Settings (configuración propiedades de Ambiente)

Ambient Settings tab (properties Environment) to look at data that were added to this new version, related pressure pipes:

			1
			T
			T
			T
klopascal			
2			
round normal			
sign negative '-'			
	klopascal 2 round normal sign negative ¹¹	klopascal 2 round normal sign negative '.'	klopascal 2 round normal sign negative '.'

16.3 Features Settings (Configuración de estilos o características)

Inside the Pressure Setting in Network tab added these three new groups: Default Styles, Default Name Format, and Default Profile Label Placement.

Market Settings - Pressure Pipe Networks

Property	Value	Override	C
Degree of Curvature			
🗄 🕒 Labeling			
🗄 🛄 Time			
🗄 🗍 Default Styles			
🗉 🇊 Default Name Format			
Default Profile Label Placement			
1 Unitless			
	Property	Property Value Degree of Curvature Labeling Time Default Styles Default Name Format Default Profile Label Placement Unitless	Property Value Override

Property	Value	Override	Child Over	Lock	
🗆 🎵 Default Styles					
Appurtenance Default Style	MX_EQUIPOS_ESTRUCTURAS			8	
Fitting Default Style	MX_ACCESORIOS_CONEXIONES			8	
Pressure Pipe Default Style	MX_TUBERIAS A PRESION			8	
Fitting Plan Label Style	Standard			8	
Appurtenance Plan Label Style	Standard			8	
Pressure Pipe Plan Label Style	Standard			1	
Fitting Profile Label Style	Standard			8	
Appurtenance Profile Label Style	Standard			8	
Pressure Pipe Profile Label Style	Standard			8	
Render Material	ByLaye			8	
Default Parts List	MX_REDES TUBERIAS A PRESION			8	
🗆 🎵 Default Name Format					
Appurtenance Name Template	Appurtenance - (<[Next Counter(C			8	
Fitting Name Template	Fitting · (<[Next Counter(CP)]>)			8	
Pressure Pipe Network Name Template	Pressure Network - (<[Next Count			8	
Pressure Pipe Name Template	Pipe - (<[Next Counter(CP)]>)			8	
Alignment From Pressure Network Name Te	Alignment - (<[Pressure Pipe Netw			1	
🗆 🎵 Default Profile Label Placement					
Dimension anchor option for pressure pipes	Fixed			8	
Dimension anchor elevation value for press	0.000m			8	

16.4 Additional Commands Settings (Configuración adicional)

Within the Network tab Pressure Setting on additional parameters are related to configuration when generating pressure pipes, see image.



Depth of Cover from surface.

operty	Value
🗄 🔜 General	
Degree of Curvature	
🗄 🕒 Labeling	
⊞ Time	
E Depth of Cover	
Depth Below Surface	1.500m
T Default Styles	

Alignment Creation based on the pressure lines are misellaneous default.

Miscellaneou

Revision of minimum and maximum depth.

operty	Value
General	
Degree of Curvature	
🗄 🕒 Labeling	
⊕Time	
🖃 🐯 Run Depth Check	
Use Min Depth of Cover Validation	Yes
Minimum Depth of Cover	1.500m
Use Max Depth of Cover Validation	No
Maxmum Depth of Cover	3.000m

General Data Validation.

Property	Yalue	
🗄 📑 General		
Degree of Curvature		
🗄 🕒 Labeling		
Time		
🖃 💱 Run Design Check		
Use Deflection Validation	Yes	
Use Diameter Validation	Yes	
Use Open Connection Validation	Yes	
Use Radius of Curvature Validation	Yes	

16.5 Styles: Pressure Pipe Style, Fitting, Appurtenance (Tuberías, accesorios y Equipos)

In this section we review the different types of styles that apply to the parts of pressure pipes.



Pressure Pipe Styles (tuberías a Presión)

formation Plan P	rofile Display	y Summary					
View Direction:							
Plan		•					
Component display:							
Component Type	Visible	Layer	Cobr	Linetype	LI Scale	Lineweight	Plot S
Pipe Centerline	9	C-WATR-PIPE-CL	BYLAYER.	ByBlock	1.0000	ByLayer	ByBloc
Inside Pipe Walls	8	C-WATR-PIPE	BYLAYER.	ByBlock	1.0000	ByLayer	ByBloc
Outside Pipe Walls	2	C-WATR-PIPE	BYLAYER	ByBlock	1.0000	ByLayer	ByBlog
Pipe End Line	R	C-WATR-PIPE	BYLAYER	ByBlock	1.0000	ByLayer	ByBlog
Dine Hatch	8	C-WATR-HAT	BYLAYER	ByBlock.	1.0000	ByLayer	ByBloc
ripe naccii						-	n

Fitting Styles (accesorios)

nformation Plan C	isplay Sum	mary				
View Direction:						
Provide statement of the second statement of the secon						
Plan	*					
Plan Component display:	•					
Plan Component display: Component Type	Visible	Layer	Color	Linetype	LT Scale	Linewei.

Appurtenance Styles (equipos y estructuras)

formation Plan D	isplay Sum	mary					
View Direction:		2					
Plan	•						
Component display:				5	201		
Component Type	Visible	Layer	Celor	Linetype	LT Scale	Linewei	Plot Sty
Appurtenance	0	C-WATR-APPT	BYLA	ByBlock	1.0000	ByBlock.	ByBlock.

17 Transportation/Rail Content Specification (Vías Férreas Especificaciones)

17.1 Resumen de "Rail" (Vías Férreas)

This section focuses on the features of the components of the rail in Civil 3D, to see in the following configurations:

Feature	Content Summary	Comments
Drawing Settings	Nuevas a breviaciones en las etiquetas	
	de Sobre-elevación en Vías Férreas	
	(CANT), y Nuevo apartado para el	
	grado de curvatura (Degree of	
	Curvature).	
Feature Settings	Nuevas caracteristicas tanto para	
	vistas de Sobre-elevación (Cant View),	
	Nuevo apartado para Alineamientos	
	(Cant Options and Rail Alignment	
	Options).	
Command Settings	Nuevos parametros (settings).	
Layers	Nuevos Layers .	
Object Styles	Nuevos estilos (cant view object).	
Label Styles	Nuevas etiquetas para puntos criticos	
	en sobre-elevación de vias ferreas	
	(Cant Critical Point label).	

17.2 Drawings Settings (Configuración del archivo)

Check the new section on abbreviations to Cants in Drawings Settings).

17.2.1 Abbreviations (Abreviaciones)

Drawing SettingsAutoCAD Civil 3D (Metrico)_MEX_	2014	
its and Zone Transformation Object Layers Abbreviation	Ambient Settings	
Property	Value	
🗄 General Text		
🗄 Alignment Geometry Point Text		
🗄 Alignment Geometry Point Entity Data		
🗄 Superelevation		
Frant		
Manual	MAN	
End Level Rail	ELR	
End of alignment	EOA	
Begin Level Rail	BLR	
Begin of alignment	BOA	
Begin Full Cant	BFC	
End Full Cant	EFC	

17.2.2 Object Layers

The following images revise the updated data related to railroads:

Drawing SettingsAutoCAD Civil 3D (Metrico)_MEX_2014						
nits and Zone Transform	nation Object Layers	Abbreviations Am	bient Settings			
Object	Layer	Modifier	Value	1		
Alignment Table	C-ROAD-TABL	None	-*			
Appurtenance	C-WATR-APPT	None				
Appurtenance-La	C-WATR -TEXT	None				
Assembly	C-ROAD-SEC-TIPICA	None				
Building Site	A-BLDG-SITE	None				
Cant View	C-RAIL-CANT-VIEW	None				
Catchment	C-HID-CUENCA-BNDY	None				

17.2.3 Ambient Settings (configuración propiedades de Ambiente)

Ambient Settings tab (properties Environment) to look at data that were added to this new version, related to railways:

ts and Zone Transformation C	bject Layers Ab	breviations Ambient :	Settings
Property	Value	Override	Child Ove
🗄 🗖 General			
Degree of Curvature			
Unit Chord Length	20.000		
Linik Ave Longth	20.000		

17.3 Features Settings (Configuración de estilos o características)

New Features and components to Railroads and CANT options: Cant Options y Rail Alignment Options.

Property	Value	Override	Child O	
Superelevation Options				T
Cant Options				
Equilibrium Cant Formula	11.8 * {Design Speed}^2/Radius			
Maximum Allowable Cant Deficiency Formula	100.0			
Pivot Method	LowSide Rail			
% on Tangent for Tangent-Curve for Cant	50.00%			
% on Spiral for Spiral-Curve for Cant	100.00%			
Maximum Applied Cant on Tangent	25.00mm			
Station Rounding Option for Cant	None			
Cant Rounding Options for Equations	0.000	_		
Design Speed Lookup Method for Cant	Usenearest higher speed			
Radius Lookup Method for Cant	Usenearest lower radius			
🗄 🗇 Rail Alignment Options				
Track Width	1.500m			
Measure rail curves along chords	No			

17.4 CANT View (Estilo PerfilSobre-elevacion en Vias Ferreas)

In edit Feature Settings – Cant View... Cant View>Cant View Styles, visualize the default styles of the graph, see image.

E 🙆 Cant Vew	🗕 🛃 Edit Feature Settings - Cant View	
Cant View Styles Cant V	EST Property © General © Degree of Curvature © Labeling © Time	Value C
E Section	Cant View Style	MEX RAIL ESTILO
A Mass Haul Line	Cant View Name Template	Cant View - (<[Next Counter(CP)]>)

17.5 Create Corridor: command Settings (parámetros de creación del Corredor)

The creation of the corridor presents a new value based on the geometry placing a padlock to regions on the insertion point of the template (Assembly).

🗁 Commands ග්	Property	Value	
- E CorridorExtractSurf	🕀 🛄 General		
- CreateAlignfromCor	E Degree of Curvature		
CreateCorridor	⊞Labeling		
Productoring and a second	1 Time		-
CreatePointsFromC	Assembly Insertion Defaults		_
CreatePolylineFrom	Lock region to	Geometry Locking	
CreateProfileFromC	Frequency along Tangents	20.000m	
CreateSimpleCorridor	Frequency along Curves	20.000m	
- By Featurel inecFromC	Frequency along Spirals	20.000m	
	Horizontal Geometry Points	True	
MatchCorrRegionPa	Superelevation Critical Points	True	
- 📴 ViewEditCorridorSe 💡 용	Profile Geometry Points	True	
	Profile High Low Points	True	
	Offset Target Geometry Points	True	
	Frequency Along Profile Curves	20.000m	

17.6 CreateSubAssemblyTool: command Settings (Herramientas en la creación del Subassembly)

New tool in the creation of the subassembly in paramentros, see image.



17.7 New Layer's (Vias férreas)

To organize the new items we have created different layer's see image

	27 -6 X V									1
🐳 Filters 🛛 🛠	S. Name	/	0	Fre	L	Color	Linetype	Lineweight	Trans	Plot S
∃-∉ All	C-RAIL-ONTR-LABL		8	-Ò-	ď	- w	Continuous	Def	0	Color
All Used Layers	C-RAIL-ONTR-LINE		8	÷Ż.	đ	red	Continuous	Def	0	Color
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-E MODELO SUPERFICIES	C-RAIL-DER		8	-Ò-	ď	22	Continuous	Def	0	Color
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-E URBANIZACION	C-RAIL-PROF-EQUI-CANT		Ň	-Q-	E.	- w	Continuous	Def	0	Color
1 VIAS FERREAS	C-RAIL-PROF-EQUI-CANT-LINE		Ň	à.	Ē	D w	Continuous	Def	0	Color
	C-RAIL-PROF-EQUI-CANT-TEXT		Ň	×	- F	red	Continuous	Def	0	Color
	C-RAIL-PROF-FG (CANT)		Ň	-Q-	đ	11	Continuous	Def	0	Color
	C-RAIL-PROF-GRID-MAJR		Ñ	·Q·	Ē	252	Continuous	Def	0	Color
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	C-RAIL-PROF-TITL		Ň	-0-	F	11	Continuous	Def	0	Color
	C-RAIL-PROF-TTLB		Ň	-Q-	di la	blue	Continuous	Def	0	Color
	C-RAIL-STAN		Ň	·Q·	F	11	Continuous	Def	0	Color
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17.8 CANT View (Perfil de la Sobre-elevacion Vias férreas)

17.9 CANT Critical Point (Geometría Puntos Criticos)



18

Documentation Table (Cuadro de Construcción)

From Toolspace select Toolbox, click in Cuadro de Construccion this one build a table as to see in the image.



19

Documentation GRID UTM (Creación Reticula UTM)

From Toolspace, in Toolbox tab, select Reticula UTM para Model Space o Reticula UTM para el Layout.



20 Installation Process

When installing AutoCAD Civil 3D, you must expand "Autodesk AutoCAD Civil 3D 2015" option in order to install the contents of several countries including Mexico, select the Content Packs you want to install, in this case select Mexico.

Select Content

Content Pack	Desktop Shortcut	^
India Content for AutoCAD Civil 3D	No	
Italy Content for AutoCAD Civil 3D	No	
 Mexico Content for AutoCAD Civil 3D 	Yes	~
Netherlands Content for AutoCAD Civil 3D	No	_
Norway Content for AutoCAD Civil 3D	No	
Elementy biblioteki — Polska for AutoCAD Civil 3D	No	
Romania Content for AutoCAD Civil 3D	No	
Компоненты, Россия for AutoCAD Civil 3D	No	
South Africa Content for AutoCAD Civil 3D	No	
Carlo Cartantes A tarCAD Carlo DD	A1	~
	Add con	tent

NOTE:

If you, During Installation Process you did a Typical Installation, after you can incorporate any Content Pack, proceed as follows:

1.- From Control Panel > Programs > Unistall a program



Autodesk and contractor Confidential

2.- Find AutoCAD Civil 3D 2015 , click Unistall/Change



3.- Select Add or Remove Features



4.- In select Content, check on box *Mexico Content*.

1	Autodesk AutoCAE	0 Civil 3D 2015	_ 🗆 🗙
AUTOD	ESK" AUTOCAD" CIVIL 3D" 2015		🙏 AUTODESK.
Maintain Pre	oduct > Add or Remove content		
Selec	et Content		
[Content Pack	Desktop Shortcut	^
L	Magyar tartalom for AutoCAD Civil 3D	No	
L	India Content for AutoCAD Civil 3D	No	
	Italy Content for AutoCAD Civil 30	No	
	Mexico Content for AutoCAD Civil 3D	Yes	×
		No	
	Elementy biblioteki — Polska for AutoCAD Civil 3D	No	
1	Romania Content for AutoCAD Civil 3D	No	
1	Компоненты, Россия for AutoCAD Civil 3D	No	
	South Africa Content for AutoCAD Civil 3D	No	
		N1	~
		Add	content
Installation H	Help System Requirements Readme	Back	Next Cancel

NOTE:

Program is likely to ask for the installation disk AutoCAD Civil 3D 2015.

If you don't have the installation disk or media source, please follow the procedure described below:

1. - Go to the following URL: www.autodesk.com/civil3d-countrykits

There are several packages or Country Kits that can be adjusted to your needs. In this case select the product version in the list and locate Mexico (example), proceed to download the zipped file.



Country Kits are posted as they become available for versions of AutoCAD Civil 3D 2015 and releases back to 2007.

AutoCAD Civil 3D Country Kits by release

Select	~
Select	
2014 Country Kits 2013 Country Kits 2012 Country Kits 2011 Country Kits 2010 Country Kits	

2. - Uncompress the ZIP file as prompted for a file with an XML like this



3. - In dialog box Maintain Product >Add or Remove Content, Select Add content... option

Content Pack	Desktop Shortcut		^
Magyar tartalom for AutoCAD Civil 3D	No		
India Content for AutoCAD Civil 3D	No		
Italy Content for AutoCAD Civil 3D	No		
Mexico Content for AutoCAD Civil 3D	Yes	~	
Netherlands Content for AutoCAD Civil 3D	No		
Norway Content for AutoCAD Civil 3D	No		
Elementy biblioteki — Polska for AutoCAD Civil 3D	No		
Romania Content for AutoCAD Civil 3D	No		
Компоненты, Россия for AutoCAD Civil 3D	No		
South Africa Content for AutoCAD Civil 3D	No		
Carlo Cantant for Autoran Chillian	N1-		~

4. - Continue with the installation by clicking the *Next* button.

5- When installation is complete, you will have added another icon on your desktop or from the program list will show: *AutoCAD Civil 3D 2015 Mexico.*



Or in all programs>Autodesk>

Name

🎽 Attach Digital Signatures	
📰 Autodesk Content Browser	
🔊 Batch Standards Checker	
A Civil 3D 2015 Metric	
A Civil 3D 2015 Mexico	
A Civil 3D as AutoCAD 2015	
Content Catalog Editor	
📕 Data Shortcuts Editor	
\Lambda License Transfer Utility - AutoCAD 2015	
Reference Manager	
Reset Settings to Default	

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