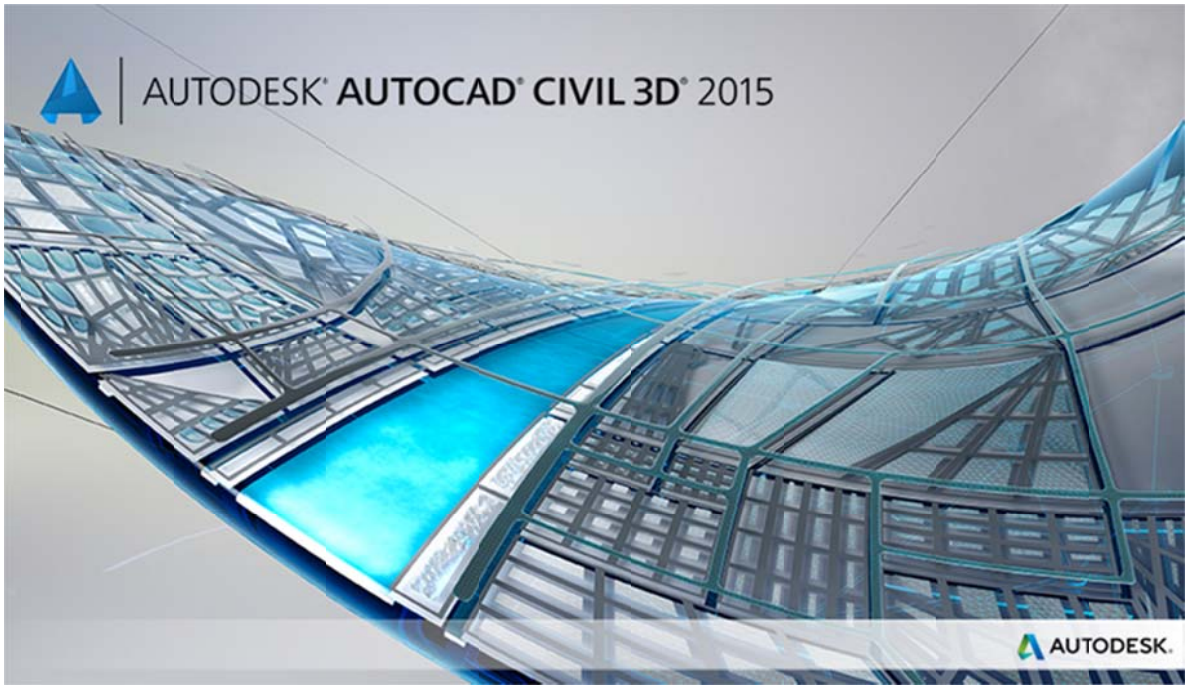
AutoCAD® Civil 3D® 2015

“Country Kit”

Documentation



Country Kit Workbook Documentation

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

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

3 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: Alignment number	white	continuous	
C-ROAD-CL-ANNOT-ALI-NOM	CIVIL TRANSPORTATION: Alignment Name	white	continuous	
C-ROAD-CORR-L-CEROS-CORTE	CIVIL TRANSPORTATION: daylight cut corridor	44	continuous	
C-ROAD-CORR-L-CEROS-TERRAPLEN	CIVIL TRANSPORTATION: daylight fill corridor	53	Dashed	
C-ROAD-LINEA-ACOTAMIENTO	CIVIL TRANSPORTATION: Shoulder line	white	continuous	
C-ROAD-LINEA-BORDILLO	CIVIL TRANSPORTATION: Curb line	blue	continuous	
C-ROAD-LINEA-CUNETA	CIVIL TRANSPORTATION: Ditch line	cyan	continuous	
C-ROAD-LINEA-DER-VIA-ADQUIRIR	CIVIL TRANSPORTATION: Right of Way Line by Acquiring	White	C-ROAD-LINEA-DER-VIA-ADQUIRIR	
C-ROAD-LINEA-DER-VIA-EXISTENTE	CIVIL TRANSPORTATION: Existing Right of Way	White	M-4-DISCONTINUA	
C-ROAD-ORILLA-CALZADA	CIVIL TRANSPORTATION: EOP line	BLUE	continuous	
C-ROAD-ORILLA-HOMBRO-NO-PAV	CIVIL TRANSPORTATION: EOS no Pavement (Shoulder Line)	BLUE	continuous	
C-ROAD-ORILLA-HOMBRO-PAV	CIVIL TRANSPORTATION: Pavement EOS (Shoulder Line)	blue		
C-ROAD-PERFIL-TN	CIVIL TRANSPORTATION: Existing Profile	green	Dashed2	
C-GRADING-BORDE-TERRAZA	CIVIL URBANIZACION: Grading border	green	Continuous	

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

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

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

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 estructuras, **Existing Bridge Items and Structures**	Red	Dashed2	
V-EX-BUILDING	EXISTING Lines- Construcciones, edificaciones y losas**, Buildings, Decks**	Red	Continuous	
V-EX-CONT-MJR	EXISTING Lines- Curvas Maestras , **Contours - MAJOR**	Yellow	Phantomx2	
V-EX-CONT-MNR	EXISTING Lines-Curvas Secundarias o delgadas. **Contours - MINOR**	Red	Continuous	
V-EX-CONT-TXT	EXISTENTE Lineas- Curvas de Nivel Etiquetas, **Contours – Label Text**	Red	Dashedx2	
V-EX-CONT-USER	EXISTING Lines- Curvas de Nivel usuario, **User-Defined Contours**	Red	Continuous	
V-EX-DETAIL	EXISTING Lines- Detalles Generales, **Miscellaneous Detail**	Red	Dashed2	
V-EX-DRAINAGE	EXISTING Lines- drenaje exsitente, **Drainage Items**	Red	Dashed	
V-EX-DRIVE	EXISTING Lines- Calzadas, Driveway Items	Red	Dashed2	
V-EX-FENCE	EXISTING Lines- Linderos, Bardas, **Fences Main**	170	Continuous	
V-EX-GEOTECH	EXISTING Lines- Geotecnia, **Geotechnical Items**	9	Continuous	
V-EX-GRAVEL	EXISTING Lines- suelo, gravas, rocas, **Soil, Gravel, and Stone**	9	Continuous	
V-EX-GROUND	EXISTING Lines- Superficie Terreno Natural , **Ground Surface**	9	Continuous	
V-EX-GUARDRAIL	EXISTING Lines- Protecciones y barreras, **Guardrail and Barrier**	9	Continuous	
V-EX-LANDSCAPE	EXISTING Lines- Vegetacion, Zona Arbolada, **Trees, Shrubs, and Vegetation**	94	Continuous	
V-EX-LN-EASE	EXISTING Lines- lineas de servidumbre, accesos**, Existing Easement Lines**	white	Continuous	

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, Overhead Wire	8	Continuous	
V-PTOS-PM	Survey Point- Marcas en el Pavimento, Pavement Markings	red	Continuous	
V-PTOS-RR	Survey Point- Ferrocarril, Railroad	red	Continuous	
V-PTOS-SIDE	Survey Point- Laterales marcados, Marked Sideline	cyan	Continuous	
V-PTOS-SP	Survey Point- Puntos Criticos elevacion, Spot Elevation	blue	Continuous	
V-PTOS-SR	Survey Point- drenaje sanitario, Sanitary Sewer	Red	Continuous	
V-PTOS-STAIR	Survey Point- Escaleras, rampas, Stair	cyan	Continuous	
V-PTOS-SW	Survey Point- Rios, Arroyos, escurrideros, Swale	cyan	ACAD_ISO14w100	
V-PTOS-TB	Survey Point- Parte Superior Bermas, Top of Berm (Bituminous)	white	Continuous	
V-PTOS-TC	Punto Topografico- Parte superior Bordillo, Top of Curb	8	Continuous	
V-PTOS-TEL	Survey Point- Telefono, Telephone	magenta	Continuous	
V-PTOS-TK	Survey Point-TANQUES, TANKS	white	Continuous	
V-PTOS-TS	Survey Point- hombro, superior talud, Top of Slope	yellow	Continuous	
V-PTOS-TW	Survey Point-TORRES TRANSMISION, TRANSMISSION TOWERS	white	Continuous	
V-PTOS-VC	Survey Point- Control Vertical, Vertical Control	magenta	Continuous	
V-PTOS-VG	Survey Point- Vegetacion, zonas arbolada, Vegetation	94	Continuous	
V-PTOS-WALK	Survey Point- Baquetas, aceras, Walkway	white	Continuous	
V-PTOS-WALL	Survey Point- Muros, Bardas, Wall	red	Continuous	
V-PTOS-WATER	Survey Point- Sistema de Agua Potable, Water Systems	cyan	Continuous	
V-PTOS-WETLAND	Survey Point- Cuerpos de Agua, cuencas, Wetland	blue	Continuous	

5 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 curvas	Alignment station & Curve report		
Secciones Transversales Terreno Natural	Existing ground cross section report		
Replanteo PI's Alineamiento Horizontal	Stakeout Alignment Report		
Secciones de Construccion	Cross sections Report		
Replanteo de Puntos Corredor	Stakeout Corridor Points		
Reporte Curvas Verticales	Vertical Curve Report		
Reporte Alineamiento Vertical	PIV stations		
Replanteo Alineamiento Vertical	Stakeout Vertical Alignment		

6 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		
Assembly	C-ROAD-SEC-TIPICA-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		
Subassembly	C-ROAD-SEC-TIPICA-TEMPLATE		
Surface Legend Table	C-TOPO-TABL	Suffix	-*
Survey Figure			
Survey Network			
Tin Surface	C-TOPO	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”)

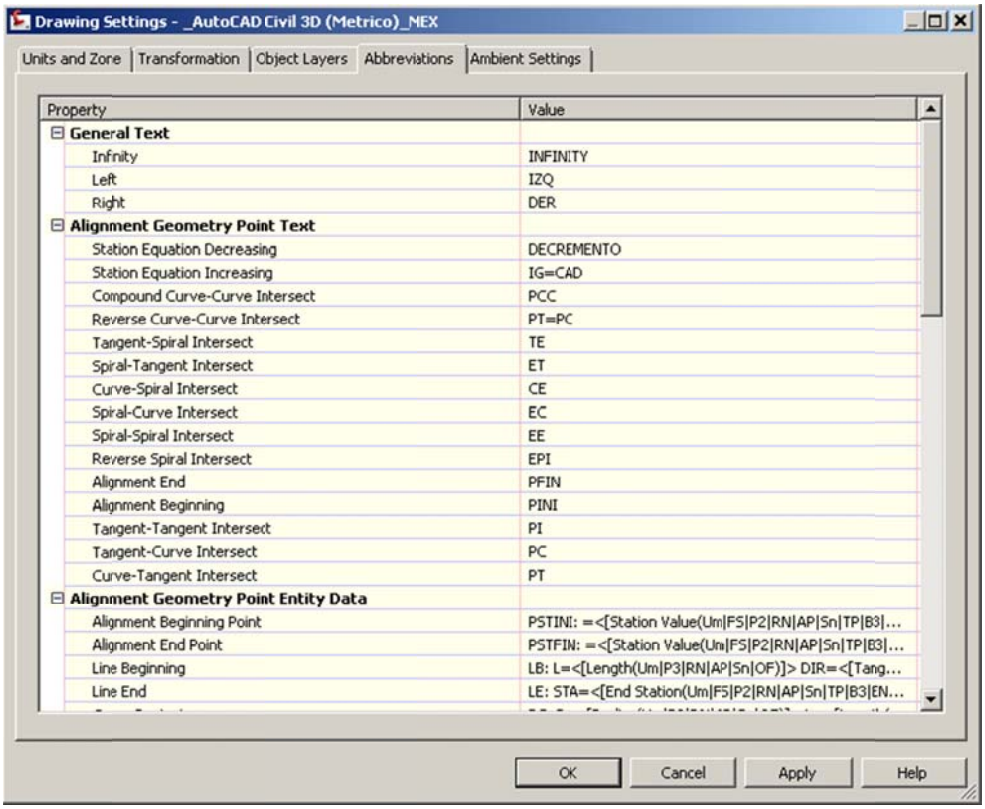
6.3 Abbreviations

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**.

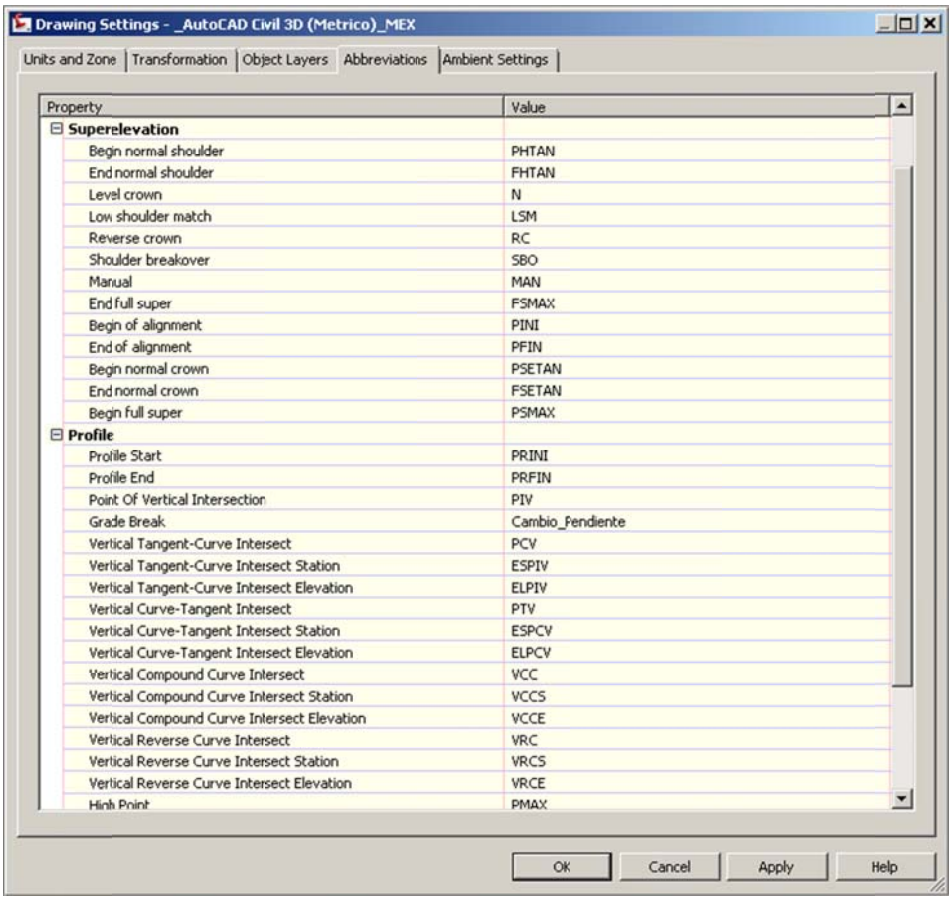
In this Country Kit changes were made in major geometric data Projects.

6.3.1 Alignment Geometry Points



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



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.

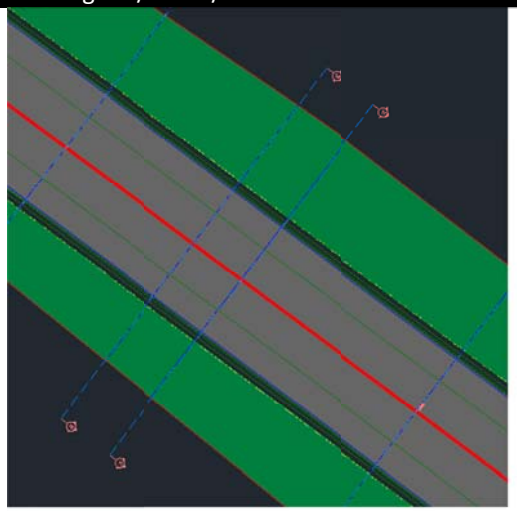
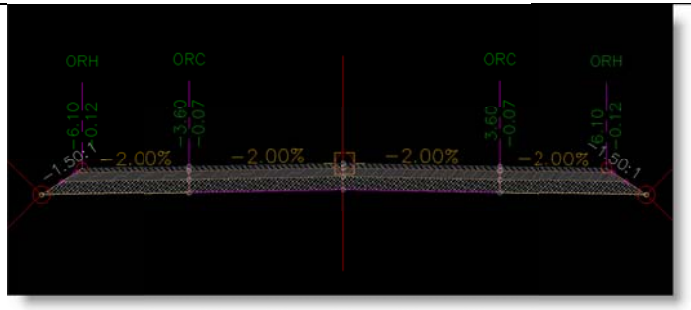
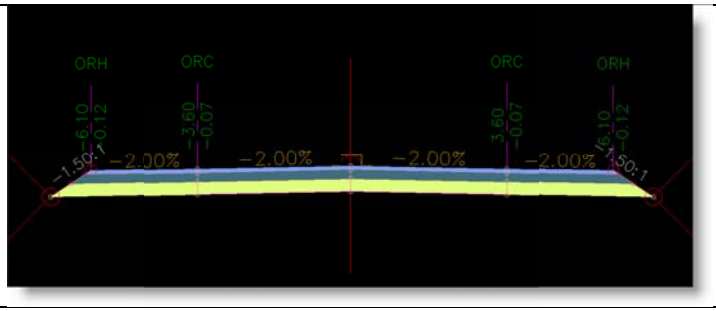
7 Object Styles

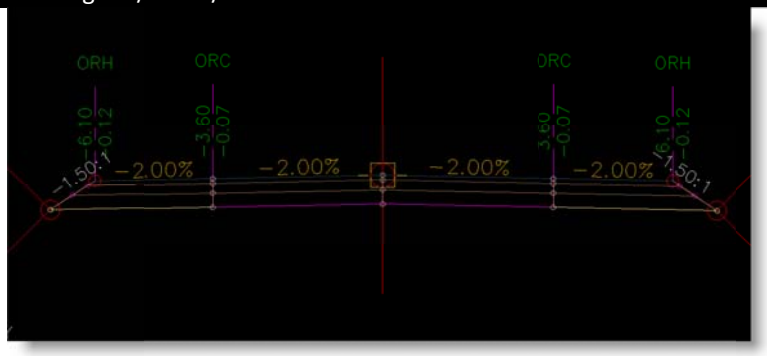
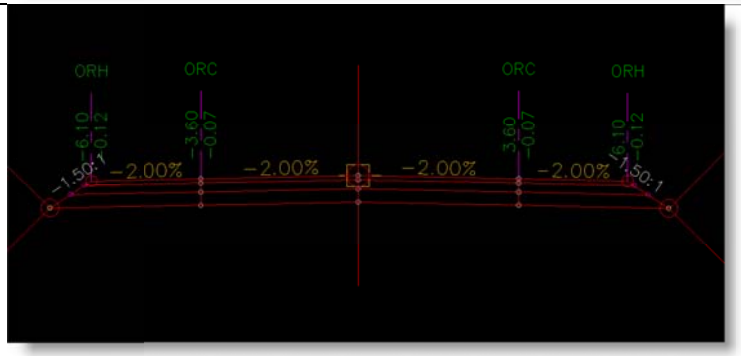
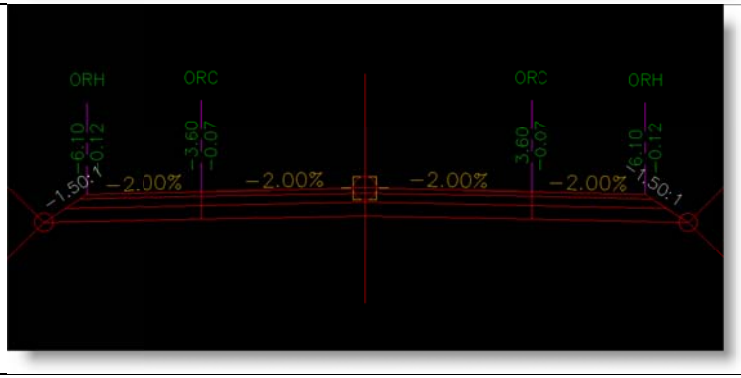
In this section we talk about pleaded entities to provide adjustments to enrich the documentation of their projects.

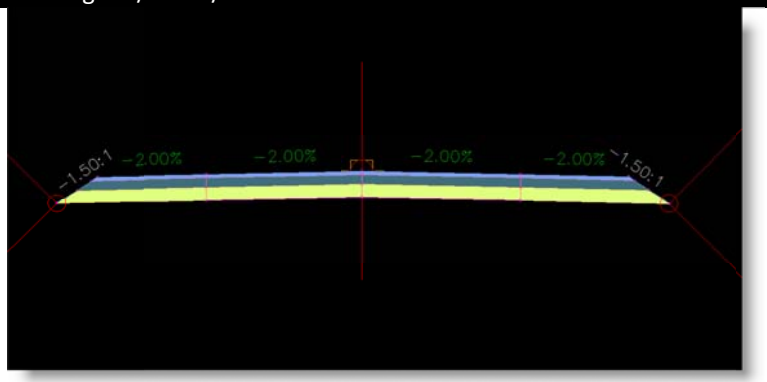
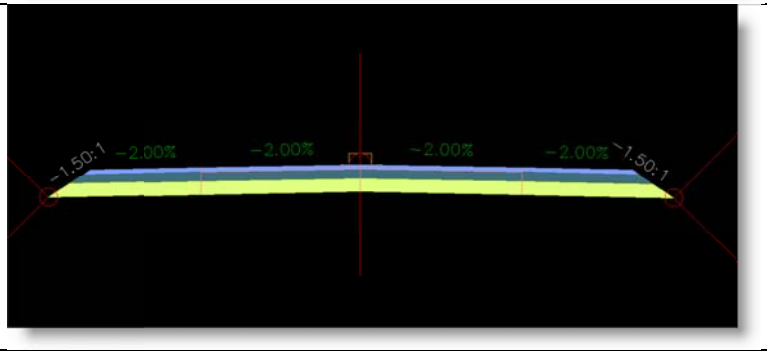
7.1 Multi-purpose Styles

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		
SECCION TRANSVERSAL CON ETIQUETAS & HATCH_SOLID	cross section style with the labels of code used to render		

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		
SECCION TRANSVERSAL DE DISENO & ETIQUETAS	Cross section Style, to represent plot final design, include codes and standard color		
SECCION TRANSVERSAL DE DISENO & ETIQUETAS - SIN LINKS	Cross section Style, to represent plot final design, include codes and standard color without links		

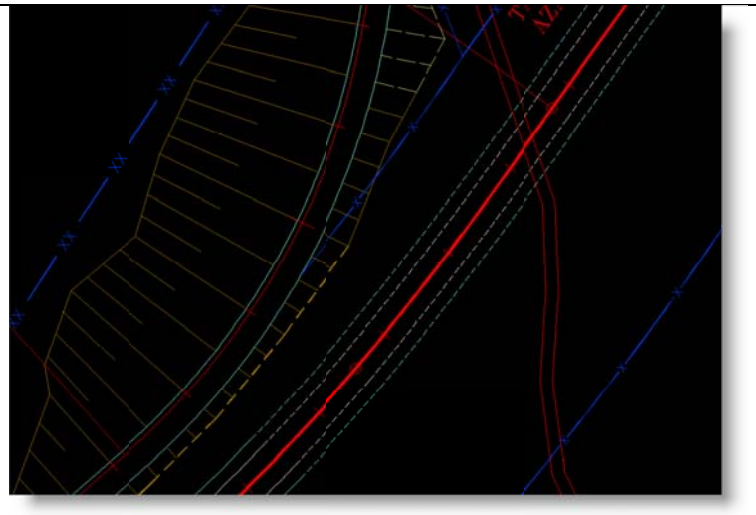
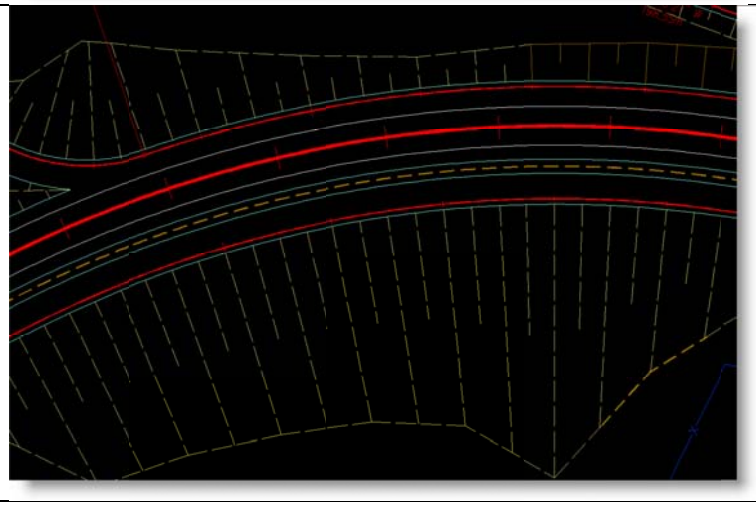
Code Set Styles	Description	Screen grab / DWF / DWG	Default
SECCION TRANSVERSAL PLANTA Y RENDER	Cross Section Style to render include links		
SECCION TRANSVERSAL PLANTA Y RENDER SIN LINKS	Cross Section Style using to rendering, links are not included		

Marker Styles	Description	Screen grab / DWF / DWG	Default

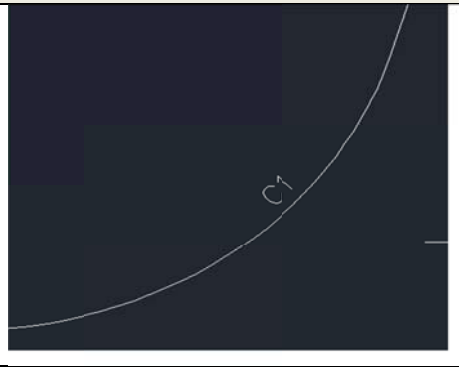
Link Styles	Description	Screen grab / DWF / DWG	Default
MX Seccion Transversal	Representación Sección Transversal		

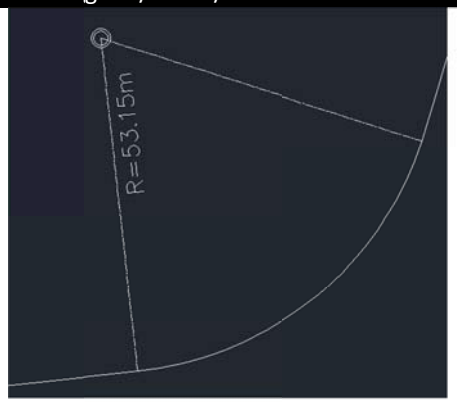
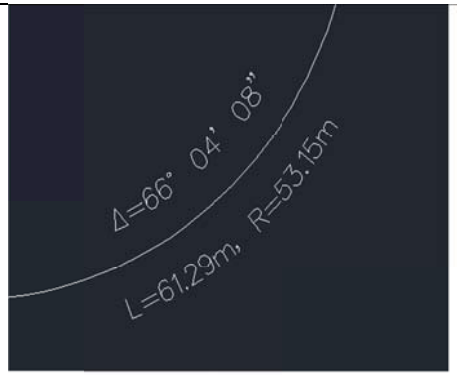
Shape Styles	Description	Screen grab / DWF / DWG	Default

Slope Pattern Style	Description	Screen grab / DWF / DWG	Default

C-GRADING-TALUD-PROY-CORTE	GRADING DAYLIGHT CUT PROJECTION		
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		

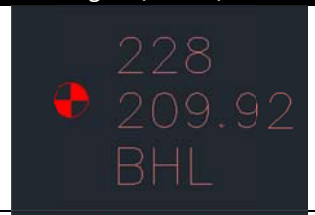
Multipurpose Label Styles	Description	Screen grab / DWF / DWG	Default
C-GRAL-CURVAS-LINEAS-RADIO	Line Radius projection and mark center of Curve		
C-GRAL-DATOS-CURVA	General Data curve entities		
Marker			
DATOS SECCIONES TRANSVERSALES	CROSS SECTIONS LABEL ELEVATIONS, MARKS AND OFFSET		
Marker			
PENDIENTE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

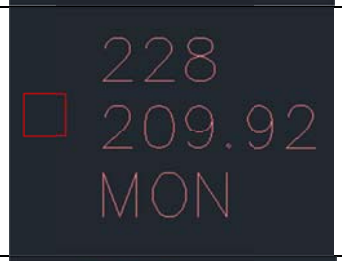
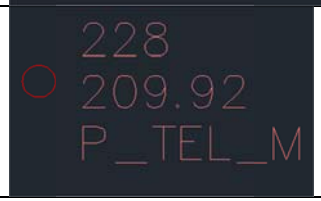
Multipurpose Label Styles	Description	Screen grab / DWF / DWG	Default
Shape			

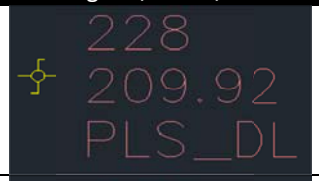
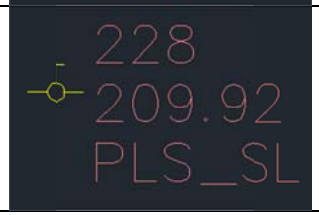
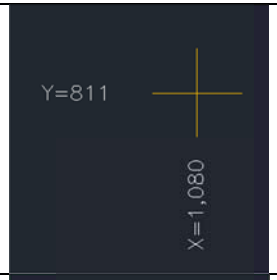
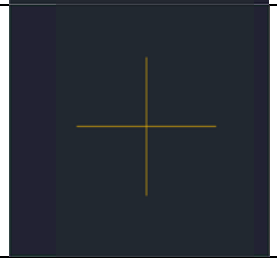
7.2 Points

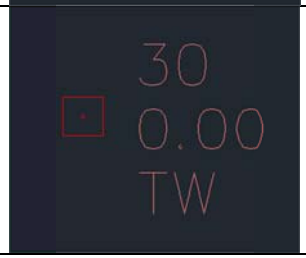
Points representation and main features like symbols, tags and tables.

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		
CU-ALCANTARILLAS	CULVERT- ALCANTARILLAS		
DT-DETALLES	GENERAL DETAILS POINTS		

Point Styles	Description	Screen grab / DWF / DWG	Default
MH-POZO	MANHOLE O POZO DE VISITA		
MHD_DRENAJE	MANHOLE DRANAIGE		
MON_MONUMENTOS	MONUMENTS STYLES POINT		
P_LUZ_CONC	STYLE FOR CONCRETE LIGHT POLES		
P_TEL_MADERA	WOOD LIGHT POLE		

Point Styles	Description	Screen grab / DWF / DWG	Default
PLS- POSTE LUZ DL	DOUBLE LAMP POST LIGHT		
PLS- POSTE LUZ SL	SINGLE POLE LIGHT LAMP		
RD- VIALIDAD	Roadwas, edges, centers, intersections, etc.		
RT-UTM-XY	LABEL STYLE UTM GRID XY X=0,000,000, Y=0,000,000		
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		
RT-UTM-Y	SIMBOL AND LABEL GRID UTM Y. Y=0,000,000		
TW - TORRES TRANSMISION	STYLE FOR TRANSMISSION TOWERS		
VG-ARBOLES ROBUSTOS	STYLES FOR REPRESENTING TREES STURDY		

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

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

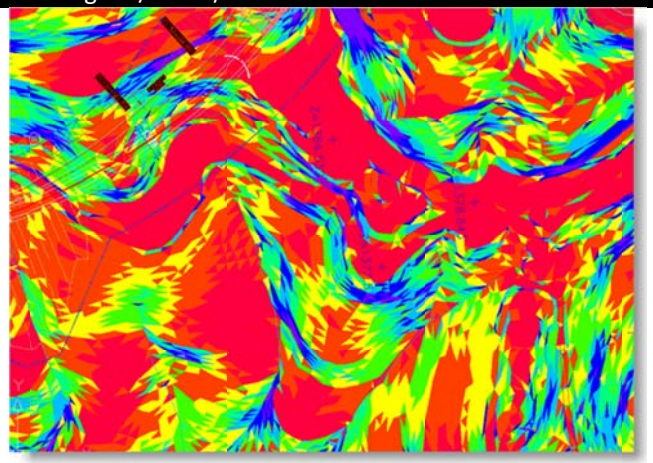
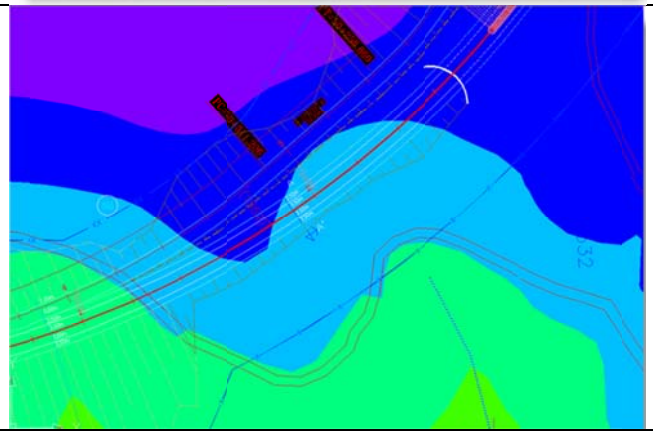
Point Table Styles	Description	Screen grab / DWF / DWG	Default
CUADRO DE CONSTRUCCION DE PUNTOS	POINT TABLE PXYZD FORMAT		

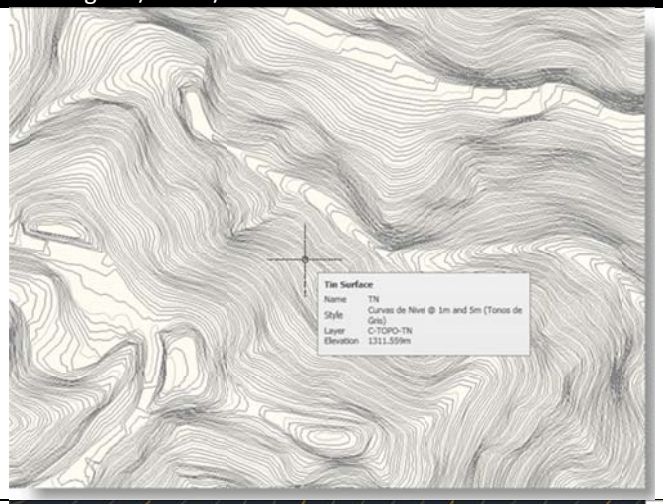
Point Cloud	Description	Screen grab / DWF / DWG	Default
Color Simple	This style display point cloud points in a single color		
Color Verdadero	This Style Display Point Cloud Points in true Color if the color cloud database contains RGB Data		

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

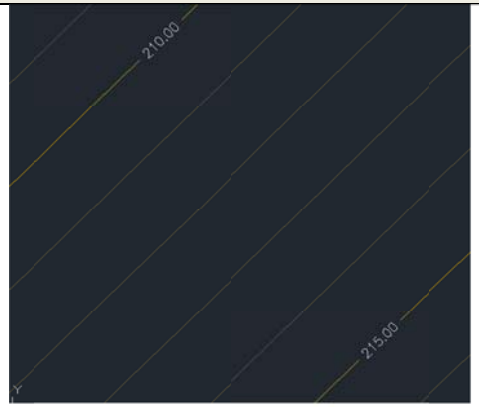
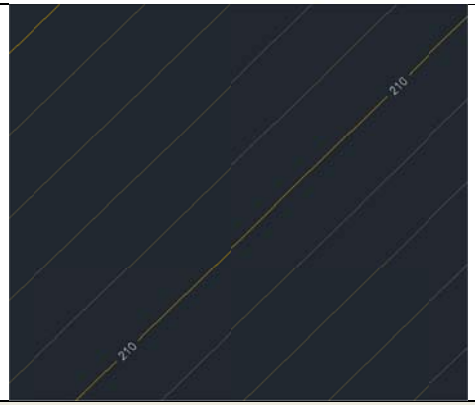
Surface visualization for different analysis.

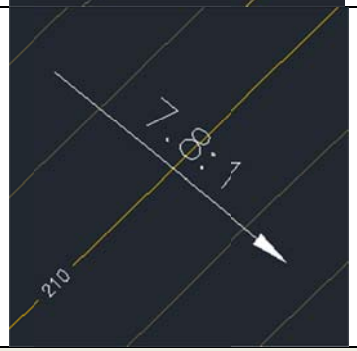
Surface Styles	Description	Screen grab / DWF / DWG	Default
Analisis de pendientes (2D)	Representation style 2D grade analysis		
Analisis de Elevaciones (2D)	Elevation banding surface style (2D)		

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 y 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)		
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		

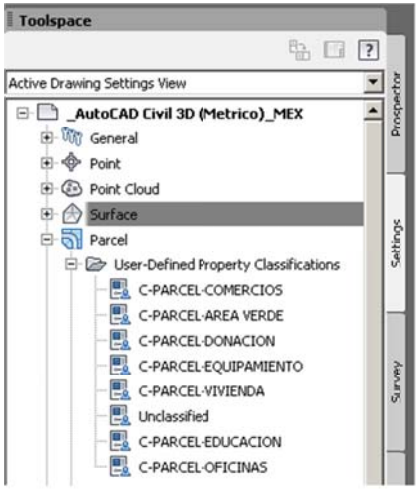
Surface Label Styles Name/Type	Description	Screen grab / DWF / DWG	Default
Contour			
C-TOPO-CURVAS-NIVEL (2 digitos)	Label Major contours two decimal digits		
C-TOPO-CURVAS-NIVEL (Cerradas)	Label Major contours has not decimal digits		
Slope			

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

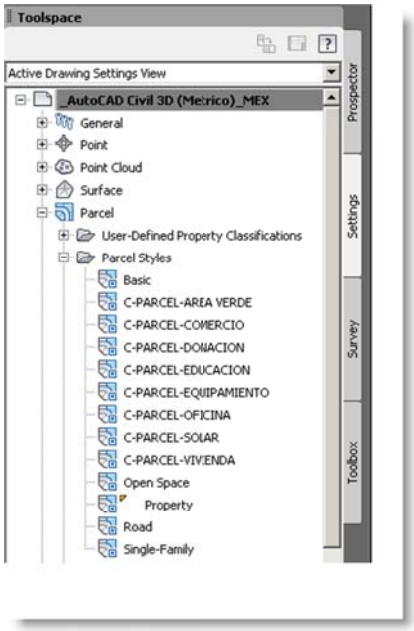
Surface Table Styles Name/Type	Description	Screen grab / DWF / DWG	Default
Direction			
Direcciones	Creates a table with columns for Number, Minimum Direction, Maximum Direction and Color		
Elevation			
Elevaciones	Creates a table with columns for Number, Minimum Elevations, Maximum Elevations, 2D Area 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

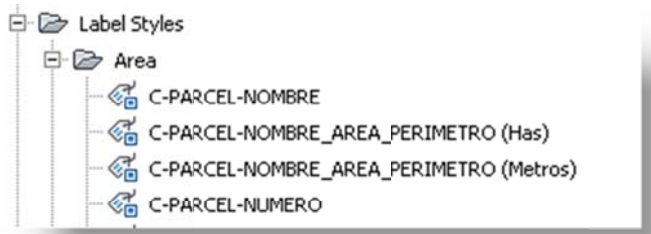
You will find a comprehensive catalog for thematic map generation and information management major

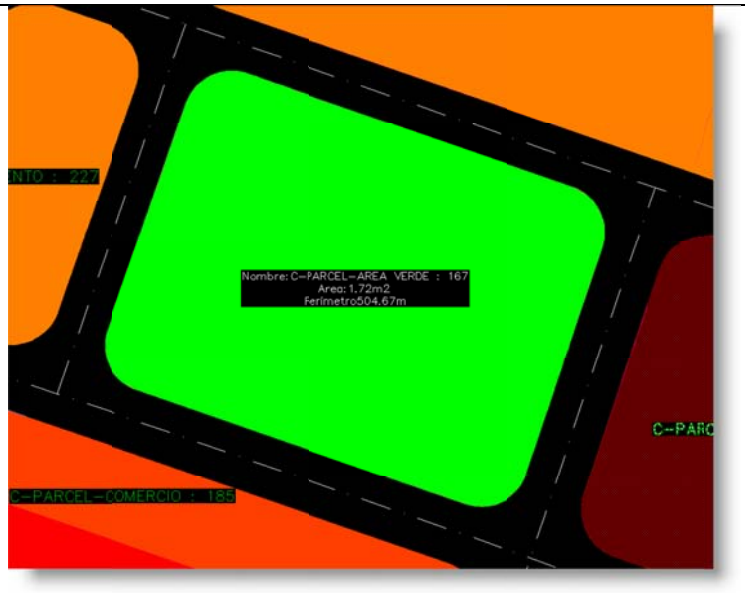


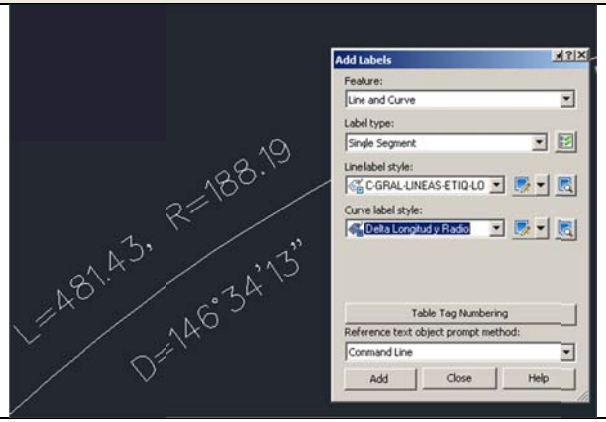
User-Defined Property Classifications	Description	Screen grab / DWF / DWG	Default
C-PARCEL-COMERCIOS			
C-PARCEL-AREA VERDE			
C-PARCEL-DONACION			
C-PARCEL-EQUIPAMIENTO			
C-PARCEL-VIVIENDA			
C-PARCEL-EDUCACION			
C-PARCEL-OFICINAS			

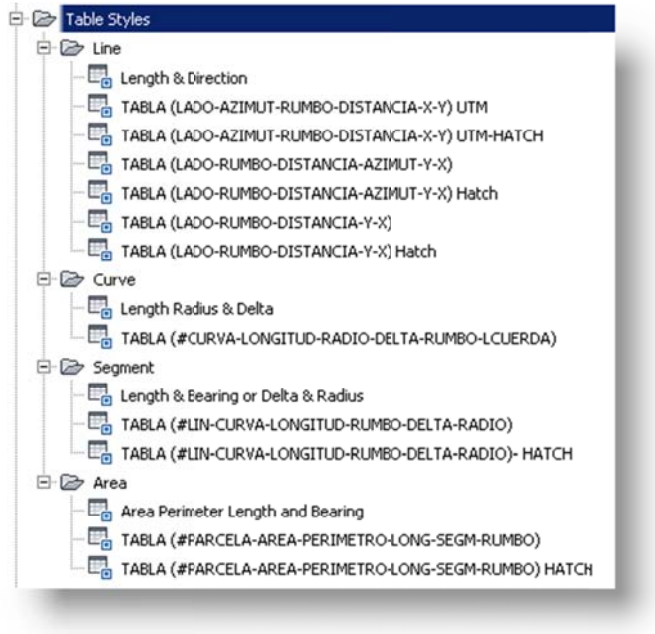


Parcel Styles	Description	Screen grab / DWF / DWG	Default
C-PARCEL-AREA VERDE	THEMATIC STYLE PARCEL TO REPRESENT GREEN AREAS	MEX-CK-PARCELS-STYLES.dwg	
C-PARCEL-COMERCIO	THEMATIC STYLE PARCEL TO REPRESENT SHOP AREAS		
C-PARCEL-DONACION	THEMATIC STYLE PARCEL TO REPRESENT DONATION AREA		
C-PARCEL-EDUCACION	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 (Has)	Label Style representing both Name, Area and Perimeter in Hectares		
C-PARCEL-NOMBRE_AREA_PERIMETRO (Metros)	Label Style representing both Name, Area and Perimeter in meters.		
C-PARCEL-NUMERO	Label Style representing the Parcel number		

Parcel Label Styles	Description	Screen grab / DWF / DWG	Default
Line			
Rumbo y Distancia	Label Line style Bearing over Distance		
Curve			
Delta Longitud y Radio	Label style data curve entities Lenght, Radius and Delta		



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 coordinate XY UTM		
TABLA (LADO-AZIMUT-RUMBO-DISTANCIA-X-Y) UTM-HATCH	Table style with columns for Side, Azimuth, Bearing, Distance, and coordinate XY UTM, hatch cell		

Parcel Table Styles	Description	Screen grab / DWF / DWG	Default
TABLA (LADO-RUMBO-DISTANCIA-AZIMUT-Y-X)	Table style with columns for Side, Bearing, Distance, Azimuth, and coordinate XY		
TABLA (LADO-RUMBO-DISTANCIA-AZIMUT-Y-X) Hatch	Table style with columns for Side, Bearing, Distance, Azimuth, and coordinate XY, and additional hatch		
TABLA (LADO-RUMBO-DISTANCIA-Y-X)	Table style with columns for Side, Bearing, Distance, and coordinate XY,		
TABLA (LADO-RUMBO-DISTANCIA-Y-X) Hatch	Table style with columns for Side, Bearing, Distance, and coordinate XY, and additional hatch		
Curve			

CUADRO DE CONSTRUCCION POLIGONALES

LADO	RUMBO	DISTANCIA	AZIMUT	Y	X
L1	S7° 26' 27"E	80.574	172° 33' 33"	338.988	-313.034
L2	S69° 15' 07"E	107.862	110° 44' 53"	259.092	-302.599
L3	N28° 23' 59"E	197.449	28° 23' 59"	220.881	-201.732
L4	N64° 12' 28"W	119.754	295° 47' 32"	394.567	-107.822
L5	S42° 07' 32"W	145.192	222° 07' 32"	446.673	-215.645

CUADRO DE CONSTRUCCION POLIGONALES

LADO	RUMBO	DISTANCIA	AZIMUT	Y	X
L1	S7° 26' 27"E	80.574	172° 33' 33"	338.988	-313.034
L2	S69° 15' 07"E	107.862	110° 44' 53"	259.092	-302.599
L3	N28° 23' 59"E	197.449	28° 23' 59"	220.881	-201.732
L4	N64° 12' 28"W	119.754	295° 47' 32"	394.567	-107.822
L5	S42° 07' 32"W	145.192	222° 07' 32"	446.673	-215.645

CUADRO DE CONSTRUCCION

LADO	RUMBO	DISTANCIA	COORDENADA Y	COORDENADA X
L1	S7° 26' 27"E	80.574	338.988	-313.034
L2	S69° 15' 07"E	107.862	259.092	-302.599
L3	N28° 23' 59"E	197.449	220.881	-201.732
L4	N64° 12' 28"W	119.754	394.567	-107.822
L5	S42° 07' 32"W	145.192	446.673	-215.645

CUADRO DE CONSTRUCCION

LADO	RUMBO	DISTANCIA	COORDENADA Y	COORDENADA X
L1	S7° 26' 27"E	80.574	338.988	-313.034
L2	S69° 15' 07"E	107.862	259.092	-302.599
L3	N28° 23' 59"E	197.449	220.881	-201.732
L4	N64° 12' 28"W	119.754	394.567	-107.822
L5	S42° 07' 32"W	145.192	446.673	-215.645

Parcel Table Styles	Description	Screen grab / DWF / DWG	Default
TABLA (#CURVA-LONGITUD-RADIO-DELTA-RUMBO-LCUERDA)	Table style with columns for Curve# , Length Curve, Radius, Delta Bearing chord, lenght chord		
TABLA (#CURVA-LONGITUD-RADIO-DELTA-RUMBO-LCUERDA) HATCH	Table style with columns for Curve# , Length Curve, Radius, Delta, Bearing chord, lenght chord, hatch cell		
Segment			
TABLA (#LIN-CURVA-LONGITUD-RUMBO-DELTA-RADIO)	Table style Line & Curve with columns Line&Curve# , Length, Delta or Bearing, Radius,		
TABLA (#LIN-CURVA-LONGITUD-RUMBO-DELTA-RADIO)- HATCH	Table style Line & Curve with columns Line&Curve# , Length, Delta or Bearing, Radius, hatch cell		

TABLA DE CURVAS

#Curva	Longitud Curva	Radio	Delta	Rumbo Cuerda	Longitud Cuerda
C1	25.71	16.50	89.28	N26° 12' 03"W	23.19
C2	26.13	16.50	90.72	N63° 47' 57"E	23.48
C3	25.92	16.50	90.00	S25° 50' 20"E	23.33
C4	25.92	16.50	90.00	S64° 09' 40"W	23.33

TABLA DE CURVAS

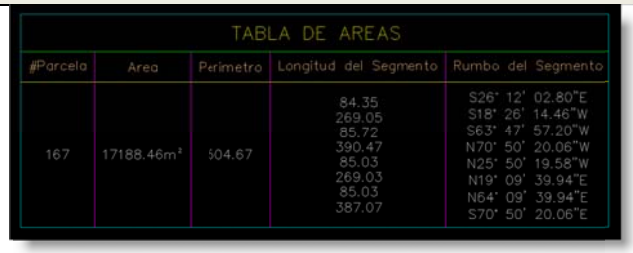
#Curva	Longitud Curva	Radio	Delta	Rumbo Cuerda	Longitud Cuerda
C1	25.71	16.50	89.28	N26° 12' 03"W	23.19
C2	26.13	16.50	90.72	N63° 47' 57"E	23.48
C3	25.92	16.50	90.00	S25° 50' 20"E	23.33
C4	25.92	16.50	90.00	S64° 09' 40"W	23.33

TABLA DE LINEAS Y CURVAS

#Linea/Curva	Longitud	Rumbo/Delta	Radio
L3	82.00	S19° 09' 39.94"W	
L4	117.98	N70° 50' 20.06"W	
L1	82.01	N18° 26' 14.46"E	
L2	119.01	S70° 50' 20.06"E	

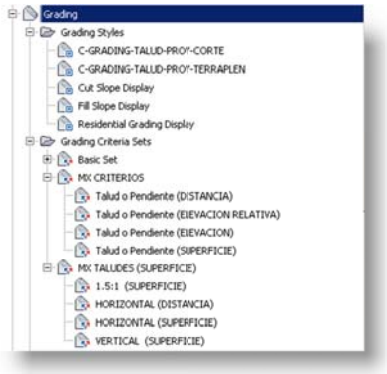
TABLA DE LINEAS Y CURVAS

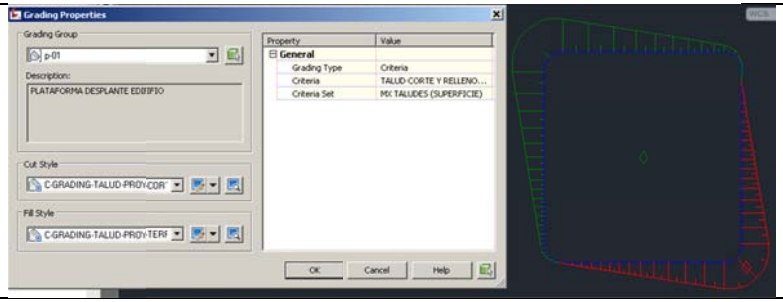
#Linea/Curva	Longitud	Rumbo/Delta	Radio
L3	82.00	S19° 09' 39.94"W	
L4	117.98	N70° 50' 20.06"W	
L1	82.01	N18° 26' 14.46"E	
L2	119.01	S70° 50' 20.06"E	

Parcel Table Styles	Description	Screen grab / DWF / DWG	Default
Area			
TABLA (#PARCELA-AREA-PERIMETRO-LONG-SEGM-RUMBO)	Table style Parcel Area with Parcel # , Area, Perimeter, Segement Length, Segment Bearing,		
TABLA (#PARCELA-AREA-PERIMETRO-LONG-SEGM-RUMBO) HATCH	Table style Parcel Area with Parcel # , Area, Perimeter, Segement Length, Segment Bearing, hatch cell		

7.5 Grading

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



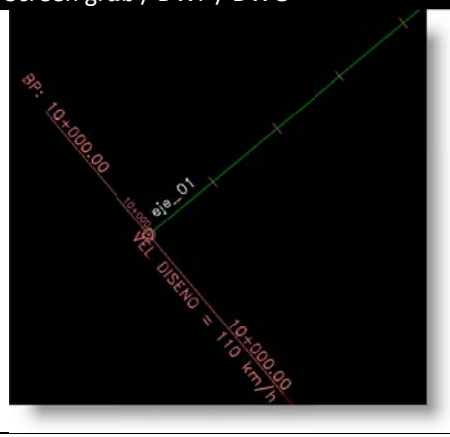
Grading Styles	Description	Screen grab / DWF / DWG	Default
C-GRADING-TALUD-PROY-CORTE	Grading Style to represent the cut slopes		
C-GRADING-TALUD-PROY-TERRAPLEN	Grading Style to represent the Fill slopes		

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

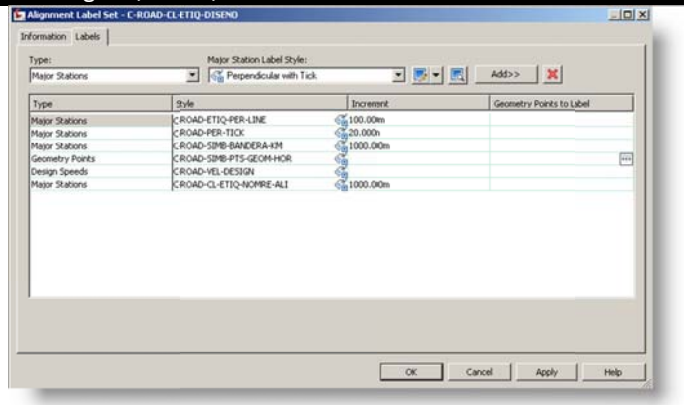
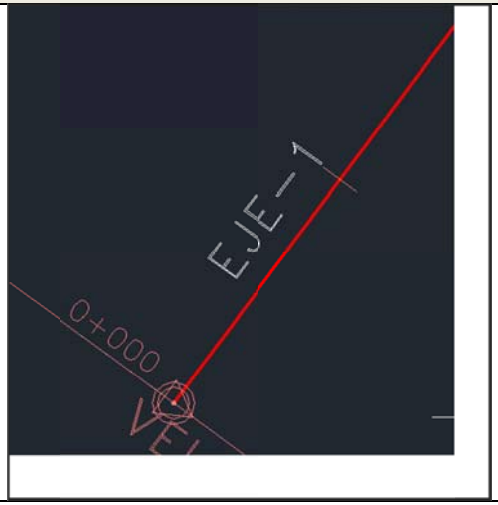
In relation to the Horizontal alignment adjustments were made in the representation, we add values or factors to improve the usage and documentation (including several tables).

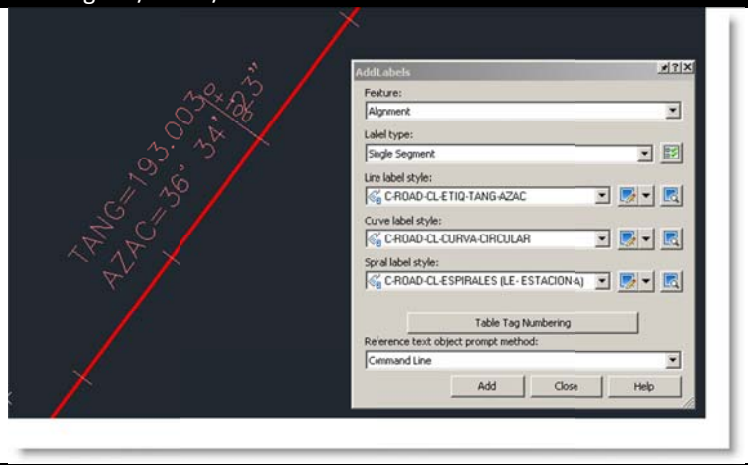
Alignment Style	Description	Screen grab / DWF / DWG	Default
C-ROAD-ALIN-HOR-CL-DISENO	Alignment Style Design Representation		

Alignment Style	Description	Screen grab / DWF / DWG	Default
C-ROAD-ALIN-HOR-CL-EX	Alignment Style to Existing		

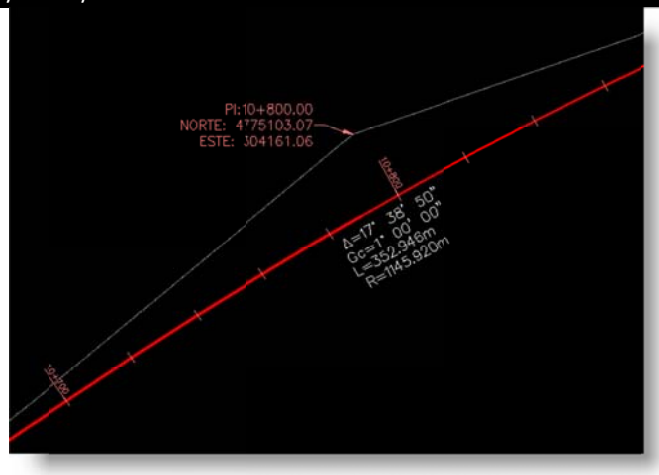
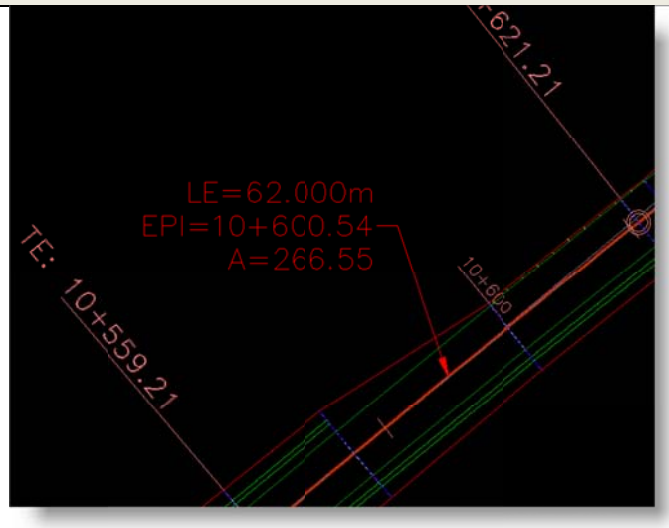
Alignment Design Checks	Description	Screen grab / DWF / DWG	Default
Design Check Sets			
Line			
Curve			
Spiral			
Tangent Intersection			

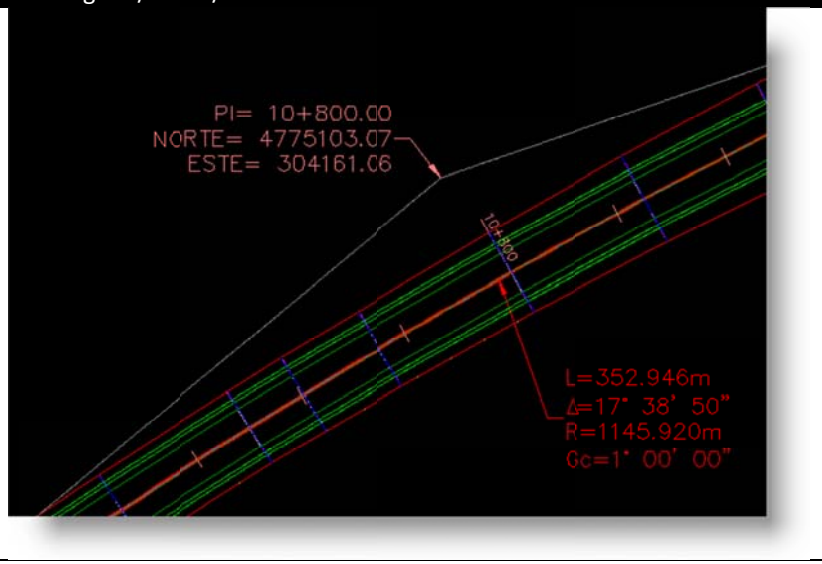
Alignment Label Type/Name	Description	Screen grab / DWF / DWG	Default
Alignment Label Sets			

Alignment Label Type/Name	Description	Screen grab / DWF / DWG	Default
C-ROAD-CL-ETIQ-DISENO	Label Set to Alignment Design		
Major Station	Label at Major Stations		
C-ROAD-CL-ETIQ-NOMBRE-ALI	Alignment label style to put Alignment name		

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.		
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		
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 Tag		
Curve	Arc Labels		

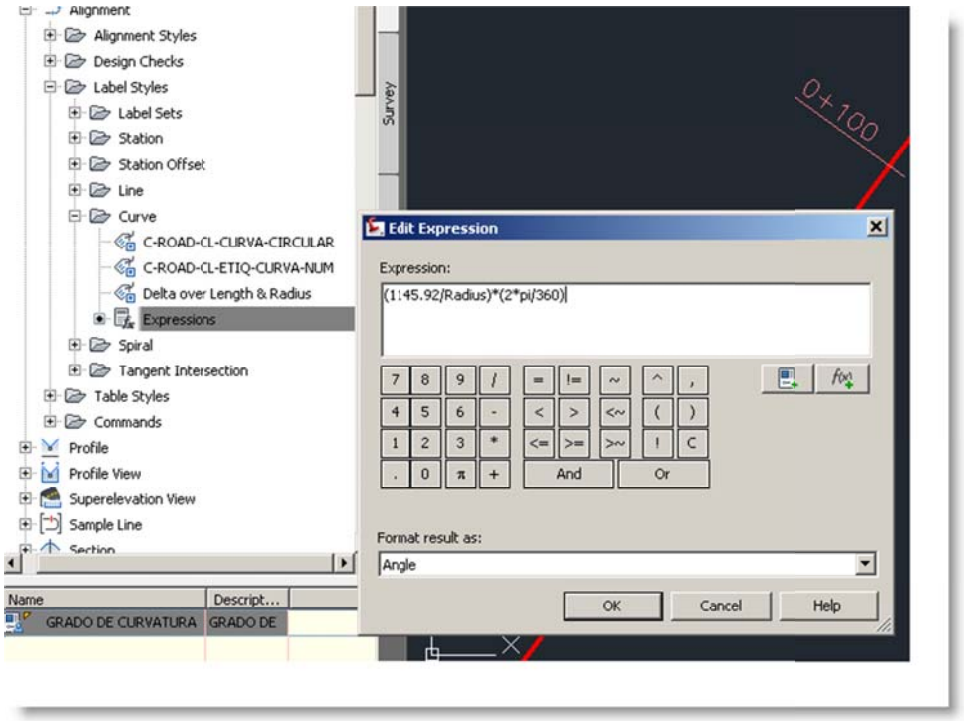
Alignment Label Type/Name	Description	Screen grab / DWF / DWG	Default
C-ROAD-CL-CURVA-CIRCULAR	Curve Style Label include Delta, Degree of Curve, Length, Radius		
C-ROAD-CL-ETIQ-CURVA-NUM	Label Style to put Curve Number		
Spiral	Spiral Labels		
C-ROAD-CL-ESPIRALES (LE- ESTACION-A)	Spiral Label Style,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

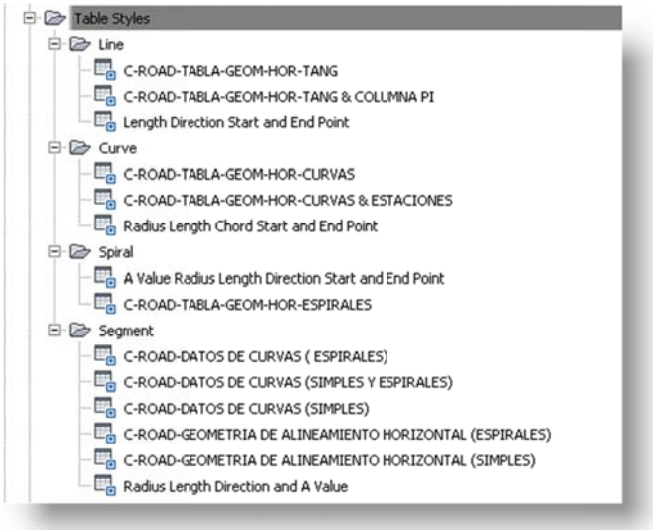
Alignment Label Type/Name	Description	Screen grab / DWF / DWG	Default
C-ROAD-PI PUNTO GEOMETRICO	Intersection Label Style Geometry PI point, station, northing & Easting coordinate		

Degree of Curve Formula to Metric System **(Gc)**

Radius is defined as Gc relation

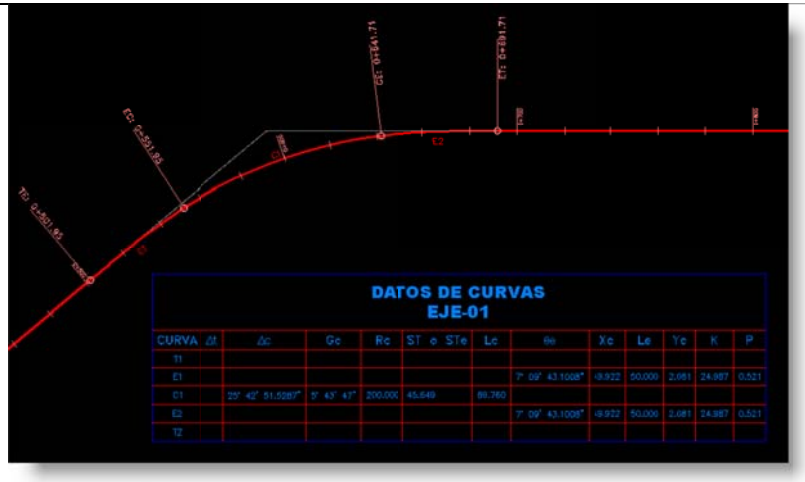
R = **1145.92** so **Gc**= **1145.92**
Gc **R**





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 Coordinates		
C-ROAD-TABLA-GEOM-HOR-TANG & COLUMNA PI	Alignment Label Style include Station and Coordinates Geometry Points #, PI, PC, PT, Start and End Coordinates		

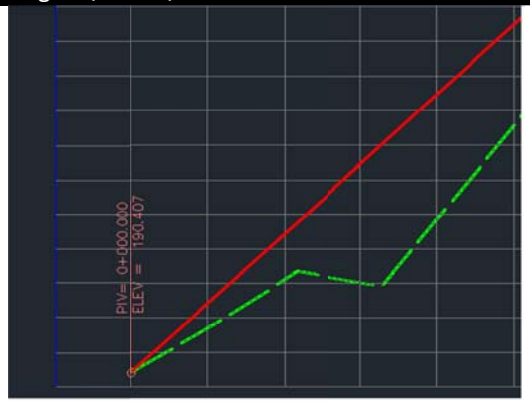
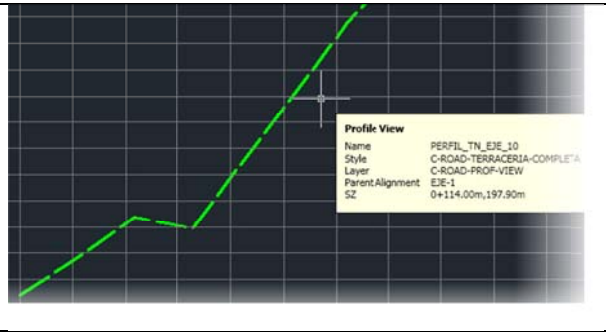
Alignment Table Type/Name	Description	Screen grab / DWF / DWG	Default
Curve			
C-ROAD-TABLA-GEOM-HOR-CURVAS	TABLE STYLE FOR ALIGNMENT CURVES ENTITIES		
C-ROAD-TABLA-GEOM-HOR-CURVAS & ESTACIONES	Alignment Table Style with data Circular Curves and stations with columns for Curve #, PC, PI, Delta, Degree of Curve, radius, tangent Length, Curve lenght		
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		
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.		

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		
C-ROAD-DATOS DE CURVAS (SIMPLES)	This Table shows main circular curve component data		
C-ROAD-GEOMETRIA DE ALINEAMIENTO HORIZONTAL (ESPIRALES)	Alignment Table Style where Alignment contain Spirals, whose components are considered as segments.		

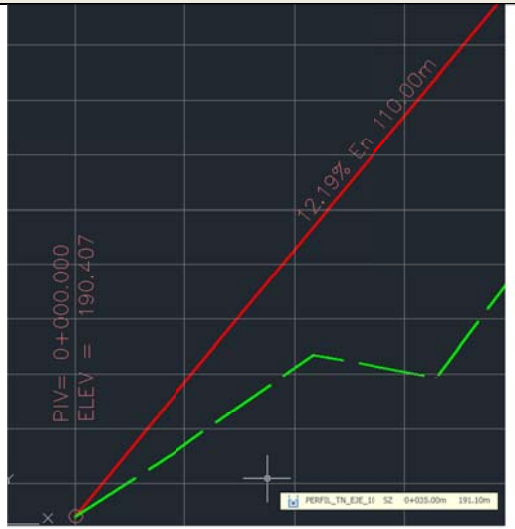
Alignment Table Type/Name	Description	Screen grab / DWF / DWG	Default
C-ROAD-GEOMETRIA DE ALINEAMIENTO HORIZONTAL (SIMPLES)	Alignment Table Style where Alignment contain Circular Curves, whose components are considered as segments.		

7.7 Profiles

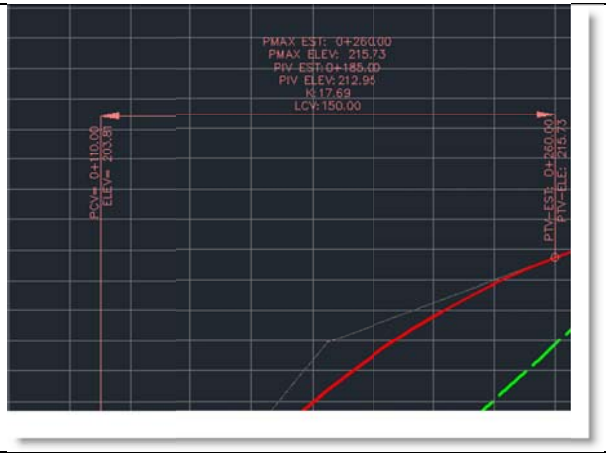
We added Plot qualities and bands in order to help us with the documentation process.

Profile Style	Description	Screen grab / DWF / DWG	Default
C-ROAD-ALIN-VER-CL-DISENO	Profile Design Style Red Color		
C-ROAD-PERFIL-TERRENO-EXISTENTE	Profile Existing, Green and Discontinuous lines		

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		
Major Station			
Minor Station			
Horizontal Geometry Point			
Grade Breaks			

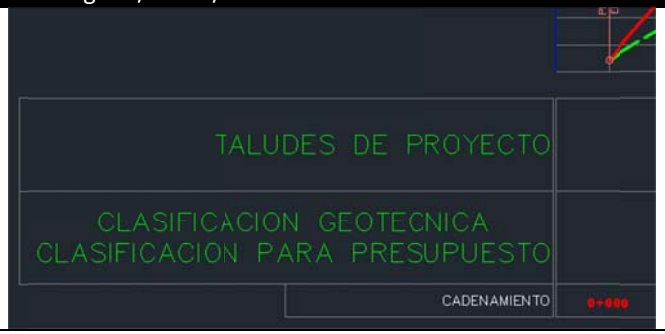
Profile Label Type/Name	Description	Screen grab / DWF / DWG	Default
C-ROAD-VERT-ESTACION-ELEVACION	Profile Label Style Station and Elevation data (PIV)		
Line	Tangent Labels		
C-ROAD-VERT-ETIQUETAS-PENDIENTE (%)	Slope Label Profile Style Finish Ground		
Curve			

Profile Label Type/Name	Description	Screen grab / DWF / DWG	Default
C-ROAD-VERT-CURVAS-COLUMPIO	Profile Label Style Sag Curve		
C-ROAD-VERT-CURVAS-CRESTA	Profile Label Style Crest Curve		

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		

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			

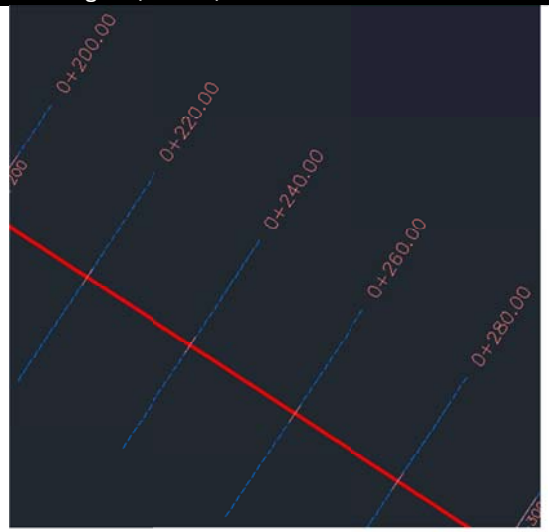
Profile Band Type/Name	Description	Screen grab / DWF / DWG	Default
C-ROAD-CLASIFICACION-GEOTECNICA	STYLE TO RECIVE GEOTECHNICAL CLASSIFICATION DATA BILL MATERIAL		
C-ROAD-SUBRASANTE-ESTRATIGRAFIA	STRATIGRAPHY		
C-ROAD-TERRACERIA-COMPLETA	BAND STYLE TO SHOW STATIONS, EXISTING GROUND ELEVATION, FINISH GROUND ELEVATION, AND DEPTH CUT - FILL		
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			
Superelevation Data			
Sectional Data			

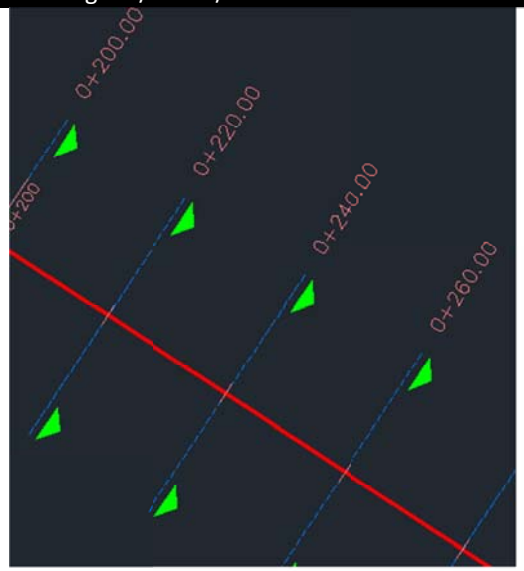
Profile Band Type/Name	Description	Screen grab / DWF / DWG	Default
Pipe Network			

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.

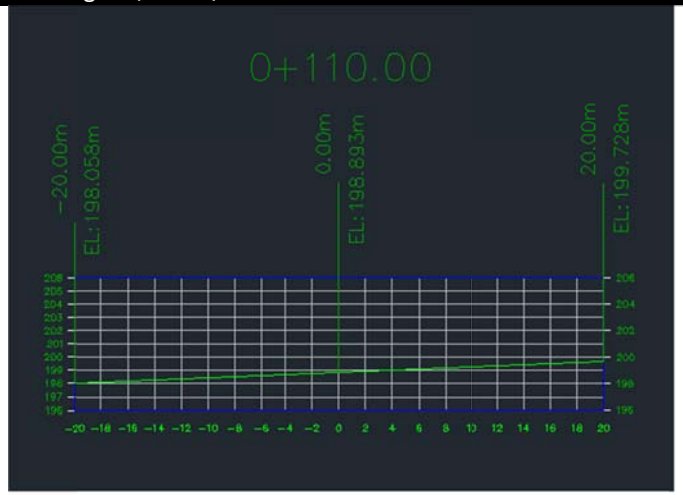
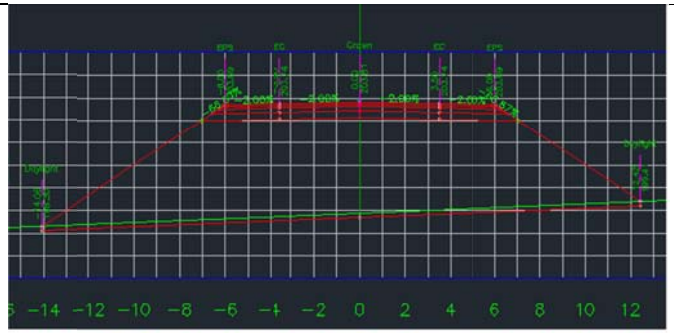
Sample Line Styles	Description	Screen grab / DWF / DWG	Default
Analisis Secciones Vial	Sample Lines Style		

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

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		

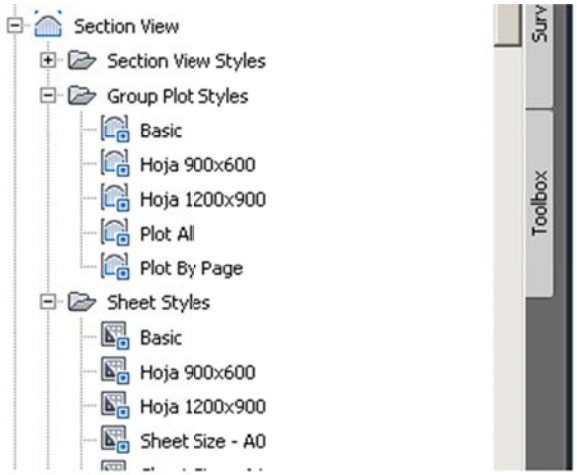
Section Styles	Description	Screen grab / DWF / DWG	Default
Terreno Natural	EXISTING GROUND CROSS SECTIONS		
Terreno Rasante	FINISH GROUND CROSS SECTIONS		

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

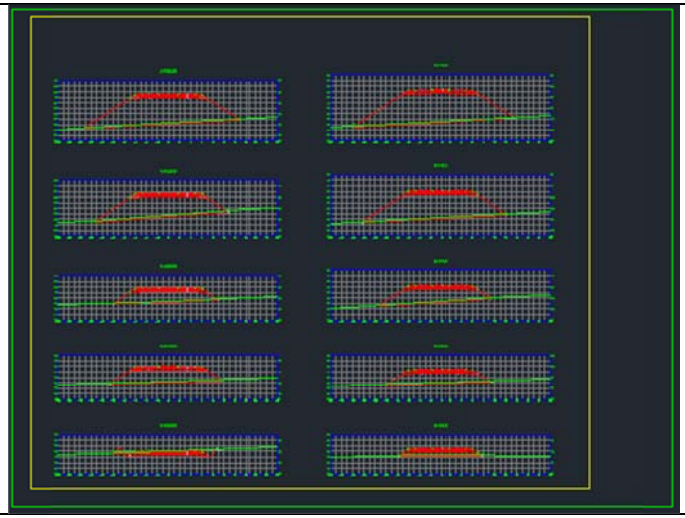
Section Label Styles	Description	Screen grab / DWF / DWG	Default
ETIQUETAS TERRENO NATURAL	SECTION LABEL STYLE EXISTING GROUND		
ETIQUETAS RASANTE	SECTION LABEL STYLE FINISH GROUND		
Major Offset			
DISTANCIA Y ELEVACION	OFFSET AND ELEVATION		
Minor Offset			
DISTANCIA Y ELEVACION	OFFSET AND ELEVATION		
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		



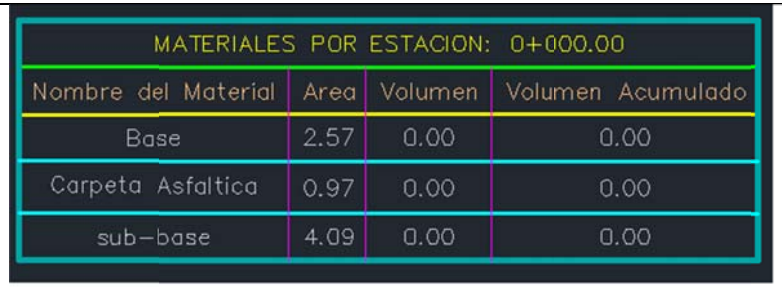
Group Plot Styles	Description	Screen grab / DWF / DWG	Default
Hoja 900x600	Group Sections sheet size 900x600mm		
Hoja 1200x900	Group Sections sheet size 1200x900mm		

Sheet Styles	Description	Screen grab / DWF / DWG	Default
Hoja 900x600	Configuration sheet size 900x600mm		
Hoja 1200x900	Configuration sheet size 1200x900mm		

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

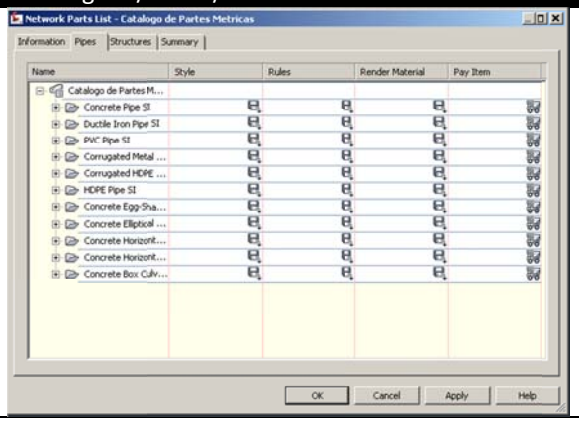
Section Band Styles	Description	Screen grab / DWF / DWG	Default
Band Sets			
DISTANCIA DESDE EL EJE	Label style to band cross sections		
Section Data			

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		
Material			
TABLA DE VOLUMEN MATERIALES	TABLE MATERIAL VOLUME AT STATIONS		

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		

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

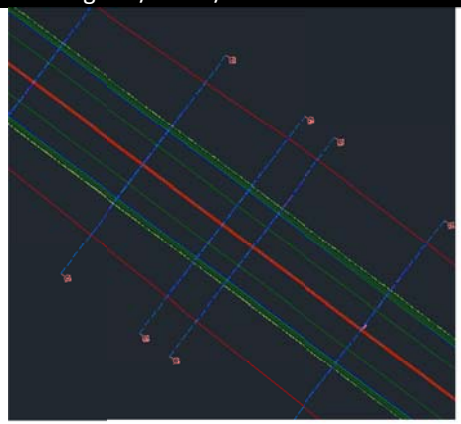
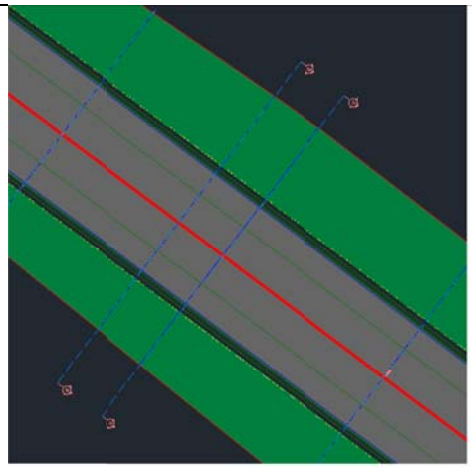
Structure Rule Styles	Description	Screen grab / DWF / DWG	Default

Structure Label Styles	Description	Screen grab / DWF / DWG	Default

Structure Table Styles	Description	Screen grab / DWF / DWG	Default

7.10 Corridors

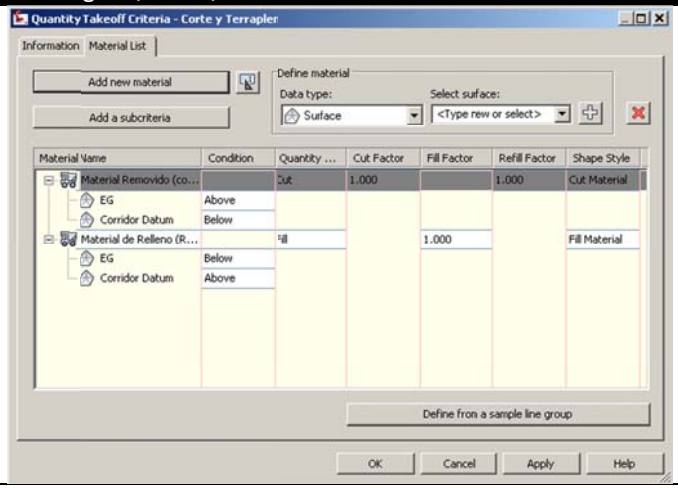
Enhancements in the Corridor representation of both design and road sign for use on render.

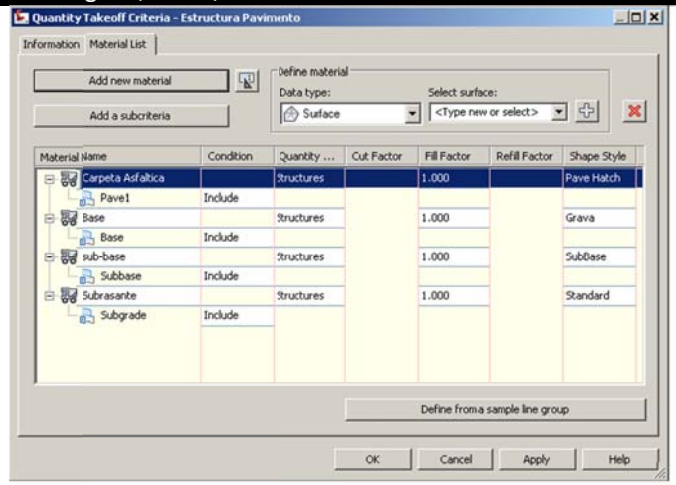
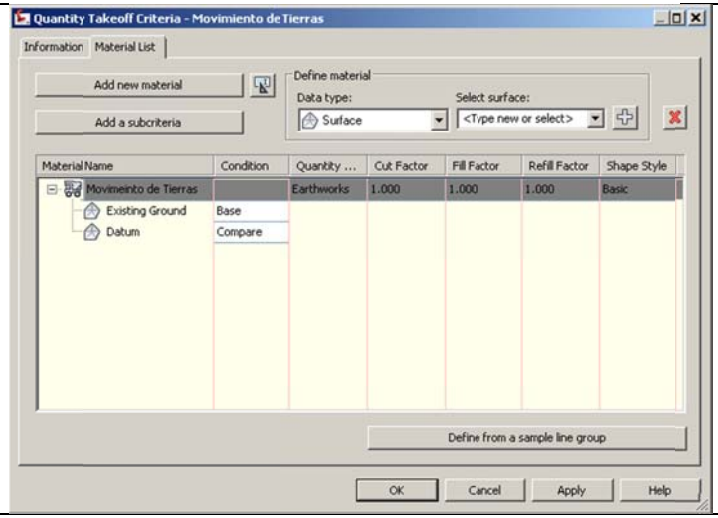
Corridor Styles	Description	Screen grab / DWF / DWG	Default
C-ROAD-CORR-DISENO	Corridor Design Style representation		
CORREDOR CODIGOS CON HATCH SOLIDO EN PLANTA	Corridor Design or render visualization hatch style		

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	Default
Corte y Terraplen	Criteria for QTO Cut and Fill.		

Quantity Takeoff Criteria	Description	Screen grab / DWF / DWG	Default
Estructura Pavimento	QTO Volume Road Structure		
Movimiento de Tierras	QTO Criteria to Earthwork		

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

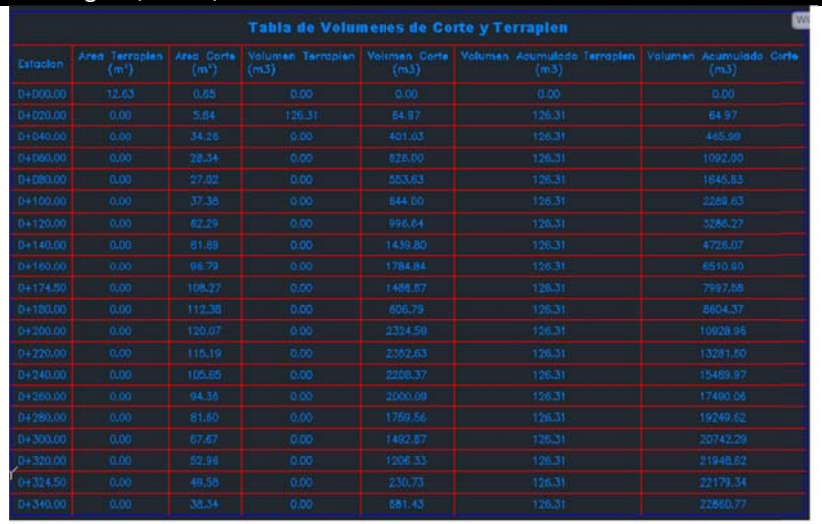
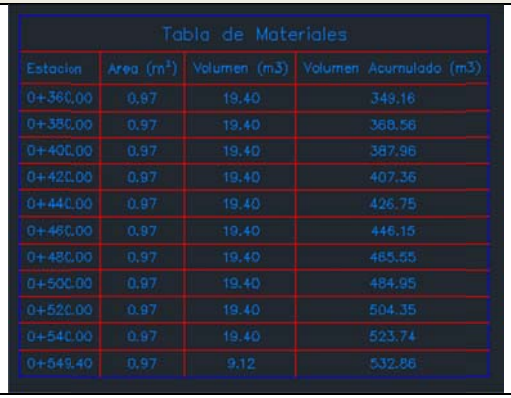
QTO Table Styles	Description	Screen grab / DWF / DWG	Default
Corte y Terraplen	Table Style to Cut & Fill		
Material			
Tabla de Area y Volumen	Table Style to Material with Columns Area, Volume and Acumulate Volume		

Tabla de Volumenes de Corte y Terraplen

Estacion	Area Terraplen (m²)	Area Corte (m²)	Volumen Terraplen (m3)	Volumen Corte (m3)	Volumen Acumulado Terraplen (m3)	Volumen Acumulado Corte (m3)
0+000.00	12.63	0.65	0.00	0.00	0.00	0.00
0+020.00	0.00	5.84	126.31	64.97	126.31	64.97
0+040.00	0.00	34.26	0.00	401.03	126.31	465.99
0+060.00	0.00	28.34	0.00	626.00	126.31	1092.00
0+080.00	0.00	27.82	0.00	553.63	126.31	1645.63
0+100.00	0.00	37.38	0.00	644.00	126.31	2289.63
0+120.00	0.00	62.29	0.00	996.64	126.31	3286.27
0+140.00	0.00	81.88	0.00	1439.80	126.31	4726.07
0+160.00	0.00	98.79	0.00	1784.84	126.31	6510.90
0+174.50	0.00	108.27	0.00	1486.67	126.31	7997.58
0+180.00	0.00	112.38	0.00	606.79	126.31	8604.37
0+200.00	0.00	120.07	0.00	2324.59	126.31	10928.96
0+220.00	0.00	115.19	0.00	2352.63	126.31	13281.60
0+240.00	0.00	105.65	0.00	2208.37	126.31	15489.97
0+260.00	0.00	94.36	0.00	2000.09	126.31	17490.06
0+280.00	0.00	81.60	0.00	1759.56	126.31	19249.62
0+300.00	0.00	67.67	0.00	1492.87	126.31	20742.29
0+320.00	0.00	52.96	0.00	1206.33	126.31	21948.62
0+324.50	0.00	49.56	0.00	230.73	126.31	22179.34
0+340.00	0.00	38.34	0.00	681.43	126.31	22860.77

Tabla de Materiales

Estacion	Area (m²)	Volumen (m3)	Volumen Acumulado (m3)
0+360.00	0.97	19.40	349.16
0+380.00	0.97	19.40	368.56
0+400.00	0.97	19.40	387.96
0+420.00	0.97	19.40	407.36
0+440.00	0.97	19.40	426.75
0+460.00	0.97	19.40	446.15
0+480.00	0.97	19.40	465.55
0+500.00	0.97	19.40	484.95
0+520.00	0.97	19.40	504.35
0+540.00	0.97	19.40	523.74
0+549.40	0.97	9.12	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

8 Object Defaults

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

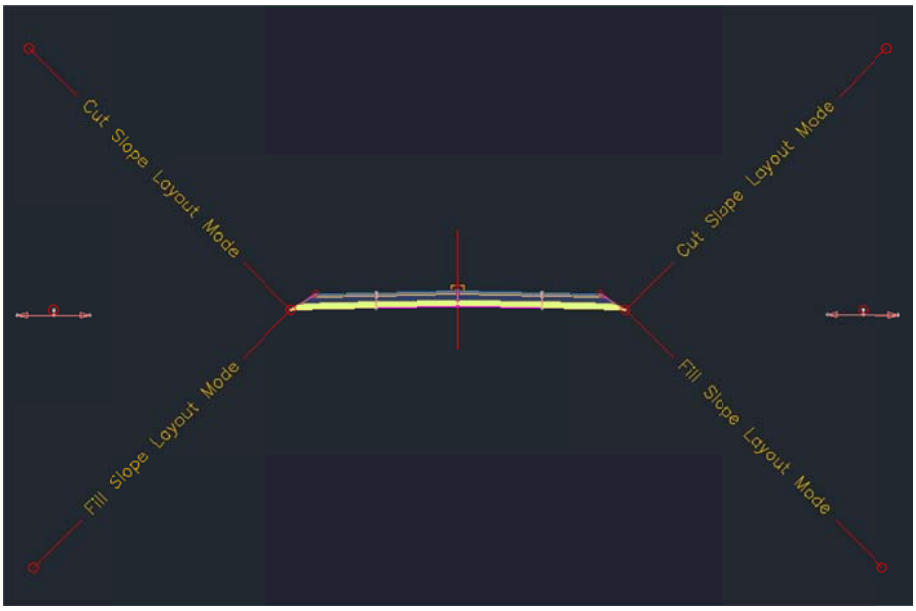
Object	Description	Default Style
		Display
Cut Slope Grading	GRADING DAYLIGHT CUT PROJECTION	C-GRADING-TALUD-PROY-CORTE
Fill Slope Grading	GRADING DAYLIGHT FILL PROJECTION	C-GRADING-TALUD-PROY-TERRAPLEN

9 Tool palettes

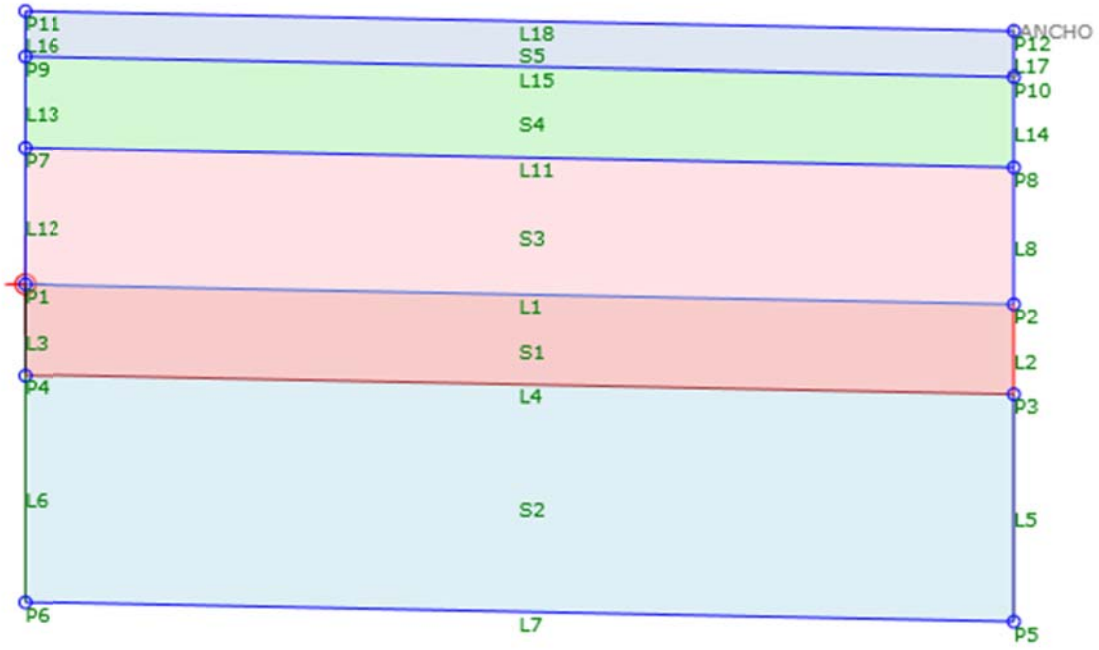
9.1 Subassemblies and assemblies

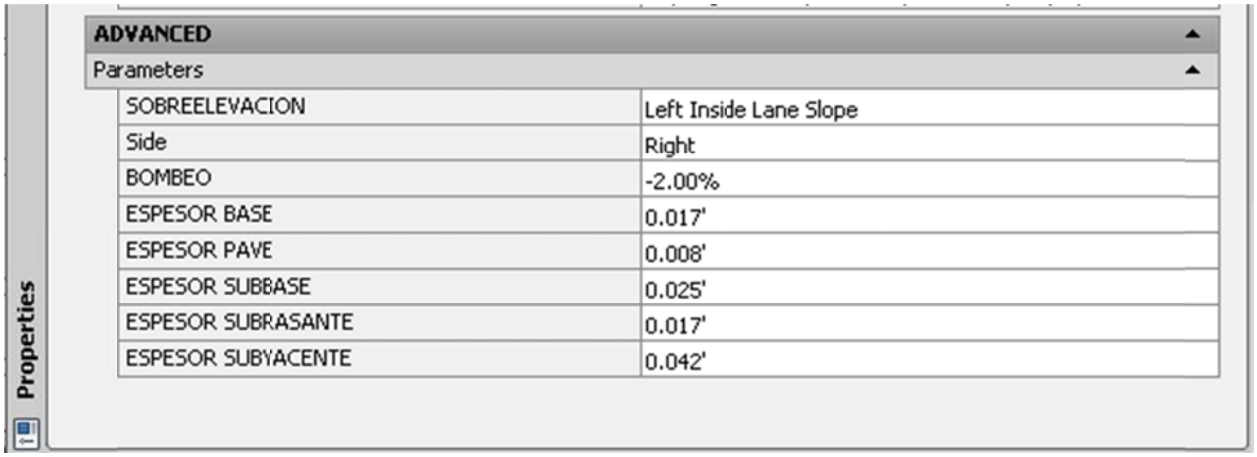
Due to the wide variety of parts used in our road projects it was decided to place a typical section by adding from "despalme" volume data, this will be found in the toolpalettes or by locating the file:

C-ROAD-SEC-TRANS-TIPO-1



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



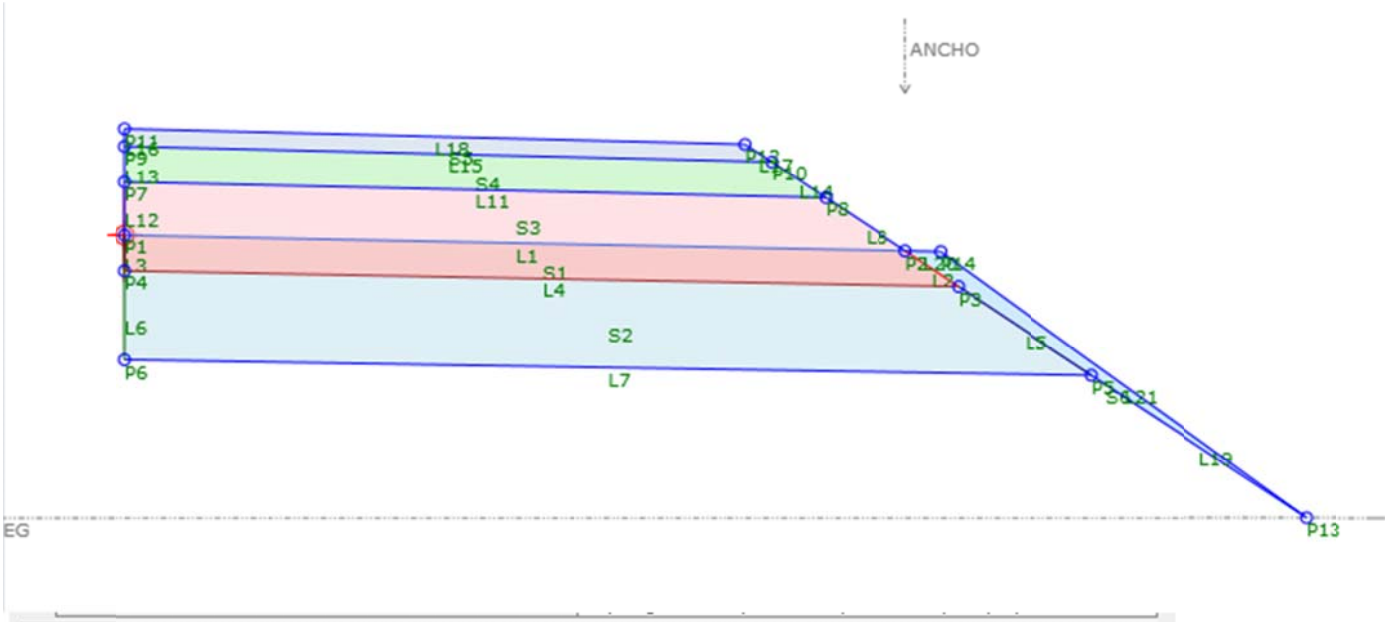


HOMB_5_CAPAS_Cu_AFIN A NIVEL DE SUBRASANTE (Shoulder_5_component SUBGRADE LEVEL insertion point)

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

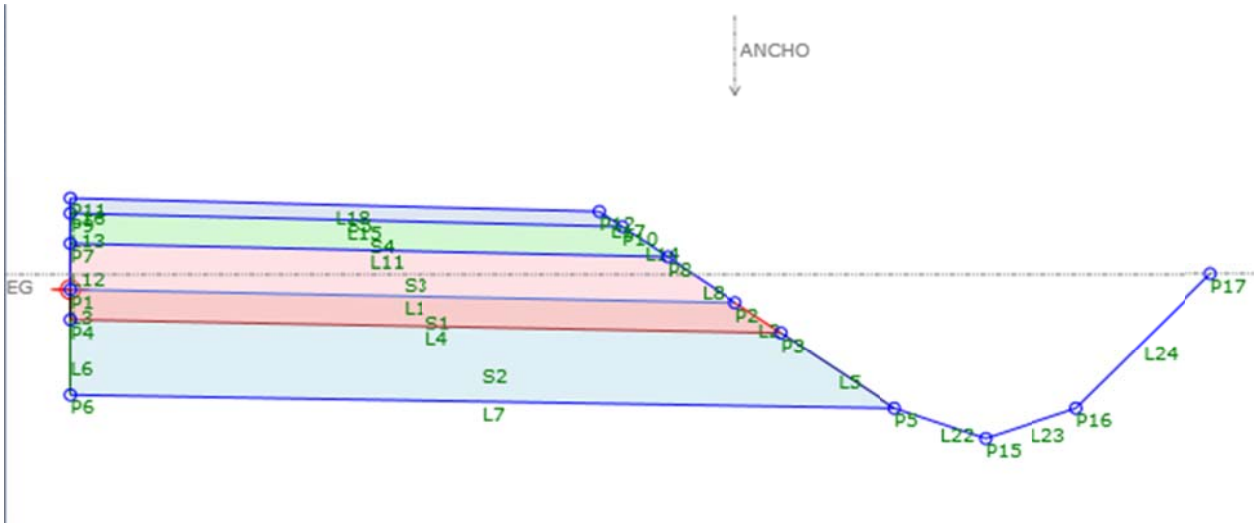
1.- If the distance between P2 (point on the subgrade level) and the surface is greater than 0.80m, then so thinning wedge placed with a horizontal distance of 0.20m joining said wedge in its completion with the projection of the slope embankment.

2.- otherwise, place a ditch en caso contrario



ADVANCED	
Parameters	
SOBREELEVACION	Left Inside Lane Slope
Side	Right
ANCHO CUNETA DER	0.050'
ANCHO CUNETA IZQ	0.050'
ANCHO SECCION	0.367'
BOMBEO	-2.00%
ESPESOR BASE	0.017'
ESPESOR PAVE	0.008'
ESPESOR SUBBASE	0.025'
ESPESOR SUBRASANTE	0.017'
ESPESOR SUBYACENTE	0.042'
TALUD CORTE	1.00:1
TALUD CUNETA	3.00:1
TALUD DE TERRAPLEN	1.50:1

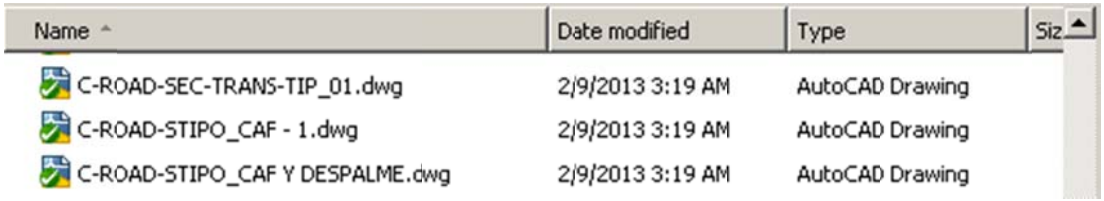
2.- otherwise, place a ditch , where there cutting condition and cut slope.

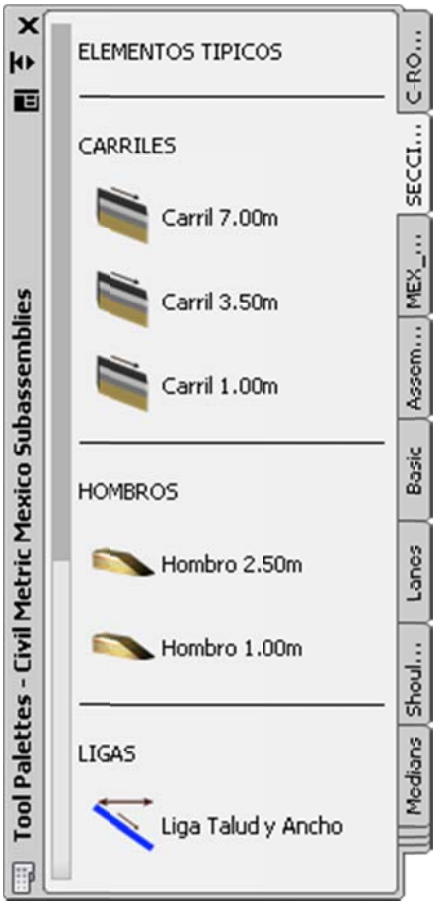


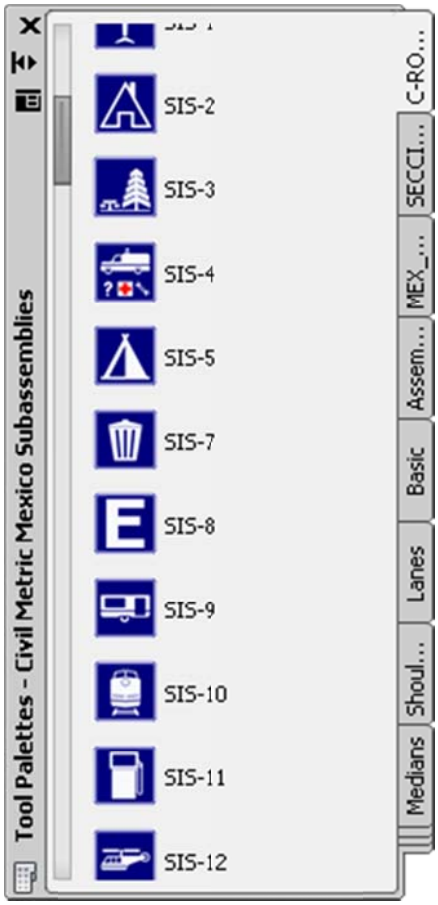
9.2 Drawing symbols and (MV) Blocks

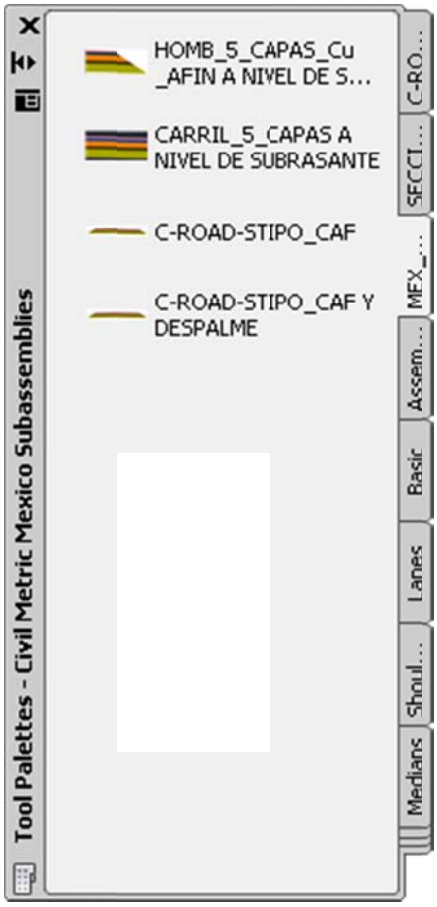
List of files used to generate our palettes

_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








Tool Palettes - Civil Metric Mexico Subassemblies
HOMB_5_CAPAS_Cu _AFIN A NIVEL DE S...
CARRIL_5_CAPAS A NIVEL DE SUBRASANTE
C-ROAD-STIPO_CAF
C-ROAD-STIPO_CAF Y DESPALME
C-RO...
SECCI...
MEX_...
Assem...
Basir
Lanes
Shoul...
Medians


JIUTEPEC 2
km 240
km 174
HOTEL
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.png
SIS-12.png
SIS-13.png
SIS-14.png
SIS-15.png
SIS-16.png
SIS-17.png
SIS-18.png
SIS-19.png
SIS-20.png
SIS-21.png
SIS-22.png
SIS-23.png
SIS-24.png
SIS-25.png
SIS-26.png
SP-6.png
SP-7.png
SP-8.png
SP-9.png
SP-10.png

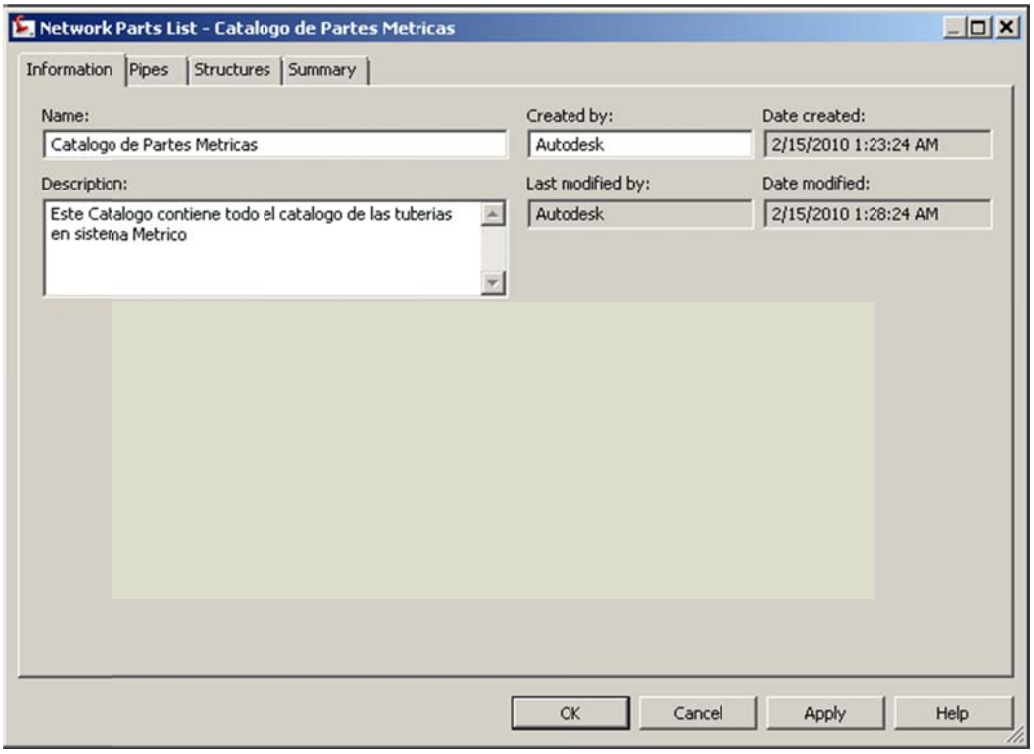

SP-11.png
SP-12.png
SP-13.png
SP-14.png
SP-15.png
SP-16.png
SP-17.png
SP-18.png
SP-19.png
SP-20.png
SP-21.png
SP-22.png
SP-23.png
3.20 m
SP-24.png
4.20 m
SP-25.png
SP-26.png
SP-27.png
SP-28.png
SP-29.png
SP-30.png
SP-31.png
SP-32.png
SP-33.png
SP-34.png
SP-35.png
SP-36.png
SP-37.png
SP-38.png
SP-38A.png
SP-39.png
SP-40.png
ALTO
SR-6.png
CEDA EL PASO
SR-7.png
SR-8.png
100
km / h
SR-9.png
SR-10.png


SR-11.png
SR-11A.png
SR-12.png
SR-13.png
SR-14.png
SR-15.png
SR-16.png
SR-17.png
SR-18.png
SR-19.png
SR-20.png
SR-21.png
SR-22.png
SR-23.png
SR-24.png
SR-25.png
SR-26.png
SR-27.png
SR-28.png
SR-29.png
SR-30.png
SR-31.png
SR-32.png
SR-33.png

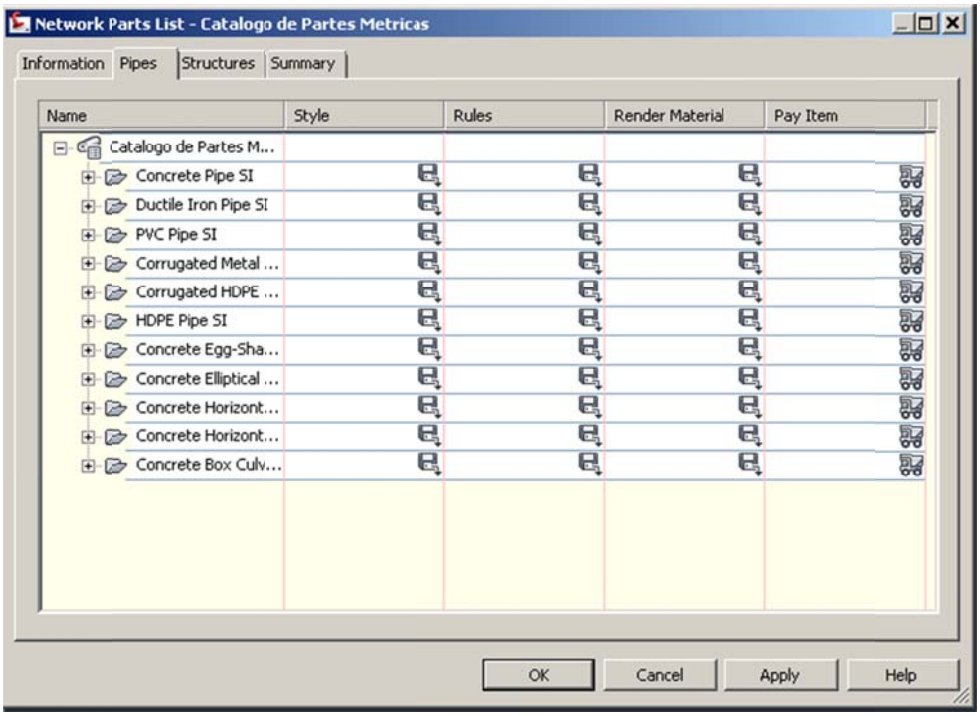
10 Pipe and Structure Catalogs

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

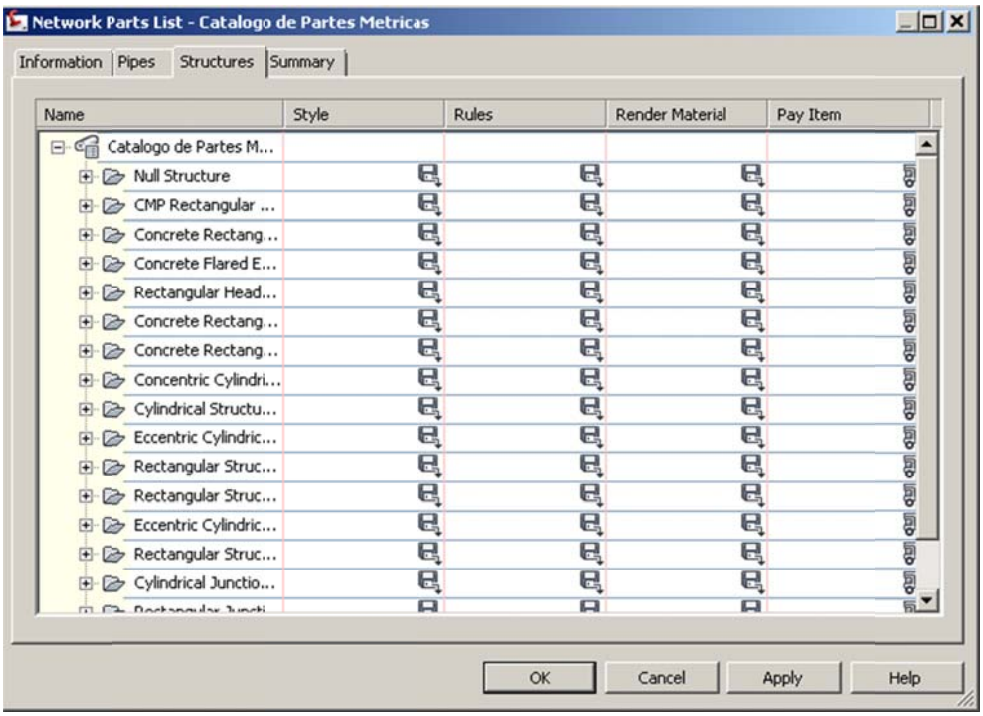
10.1 Metric Part List Catalog



10.2 Pipe List



10.3 Structure List



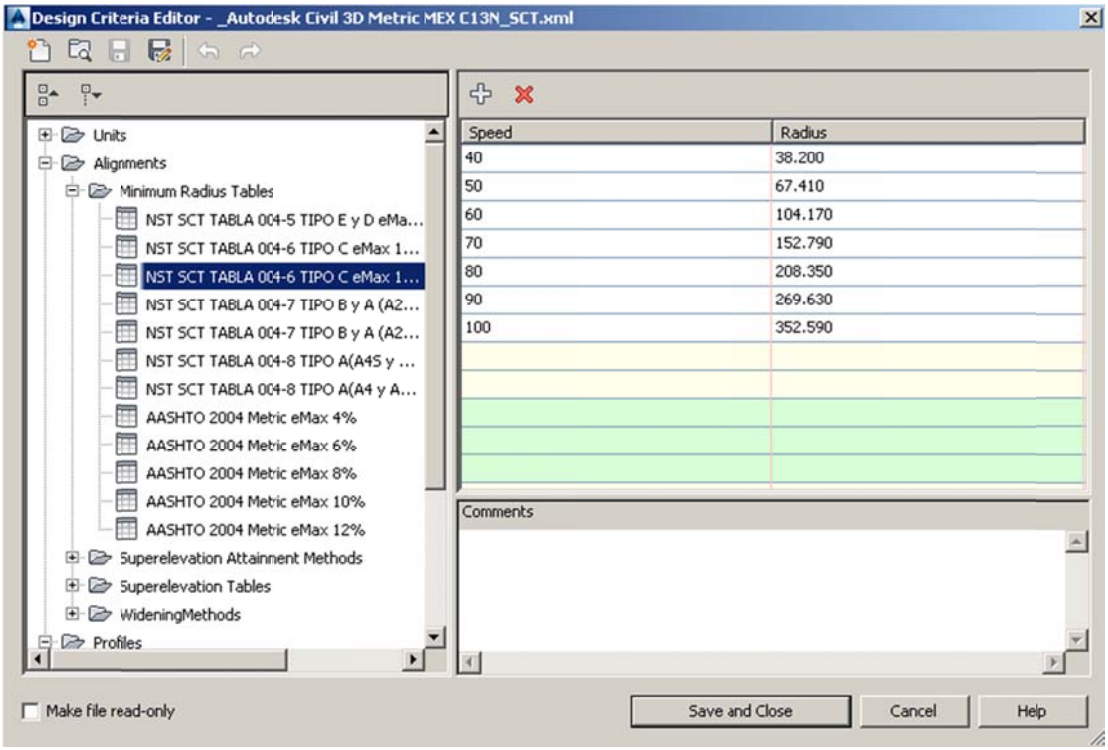
11 Highway design check files

11.1 Standard Highway Design (SCT)

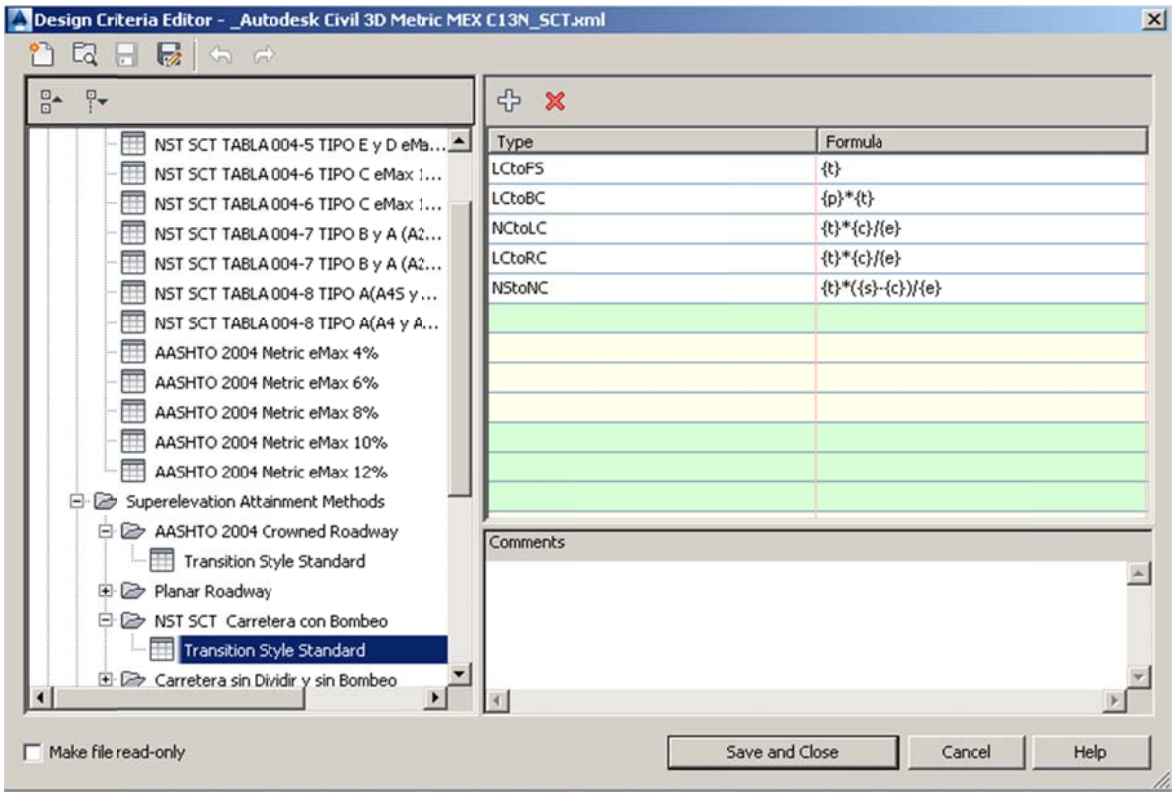
This package called "Country Kit" meets a set of standards of various geometric elements of the project roads, which are in current Mexican law “Normas de Servicios Técnicos, Secretaría de Comunicaciones y Transportes (SCT)”, as were conceived For over 30 years.

The standards included in this Country Kit Mexico are:

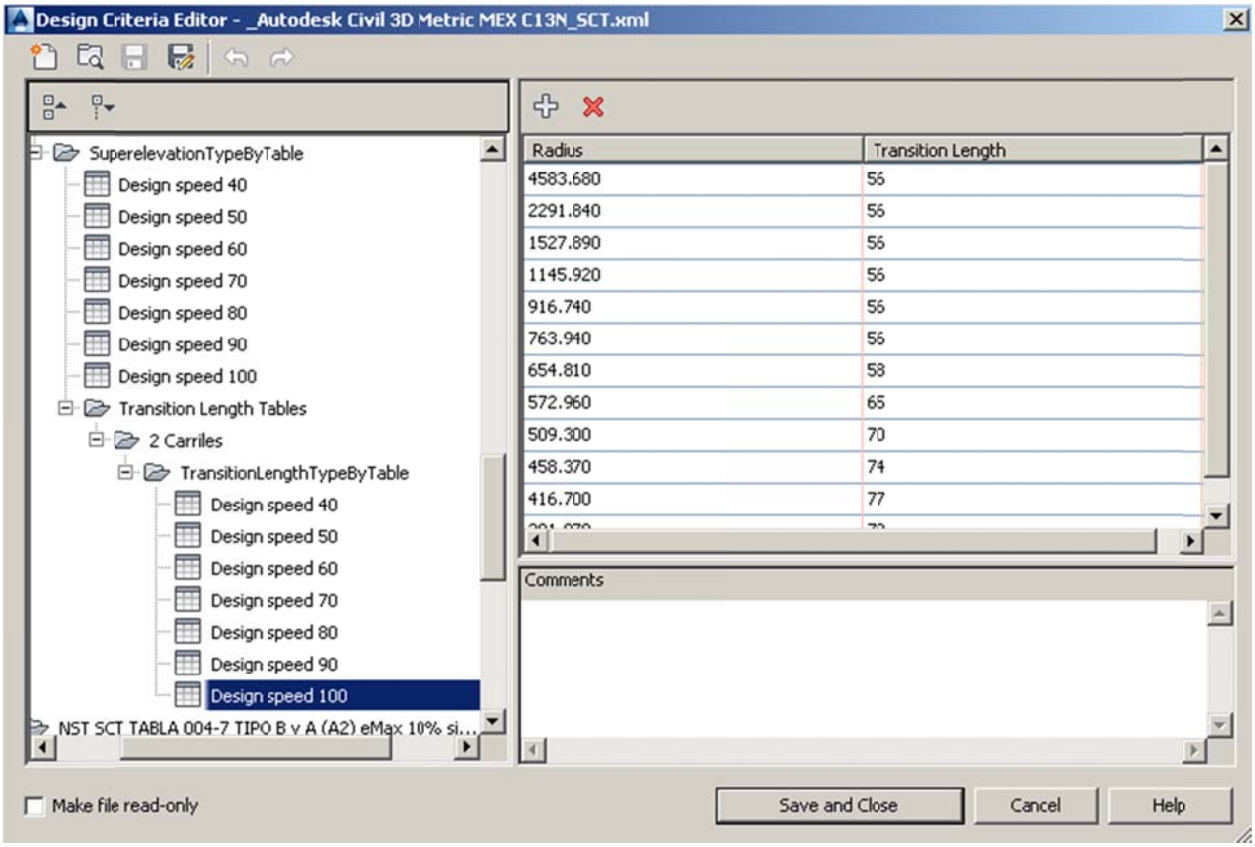
11.1.1 Tabla de Radios Mínimos de Curvas



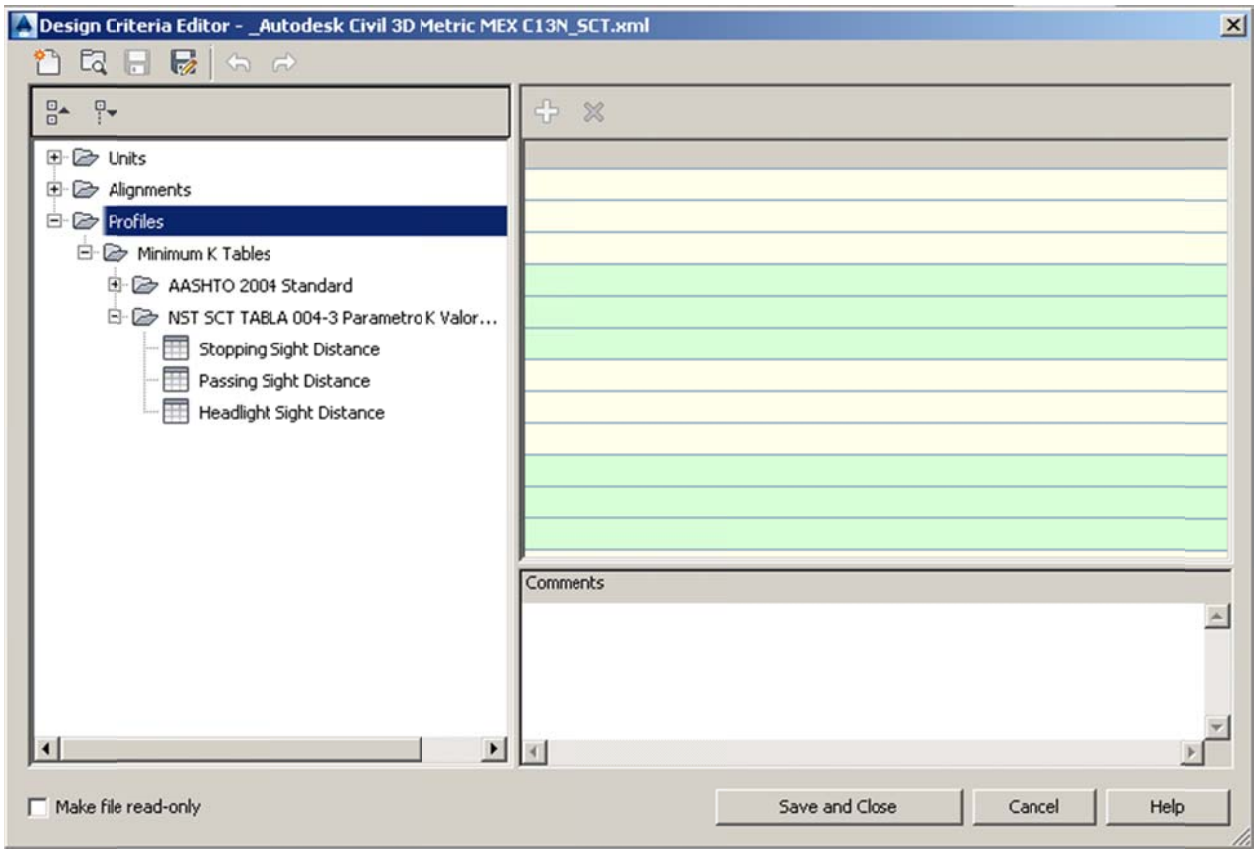
11.1.2 Methods of Cross Section superelevation

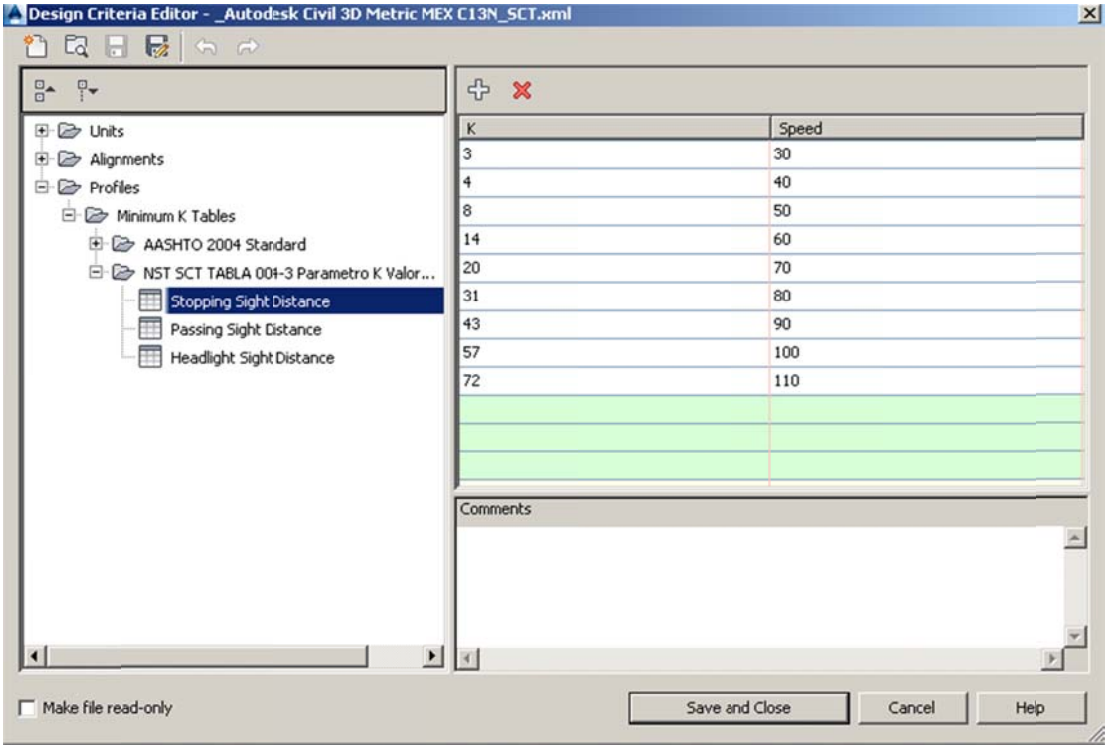


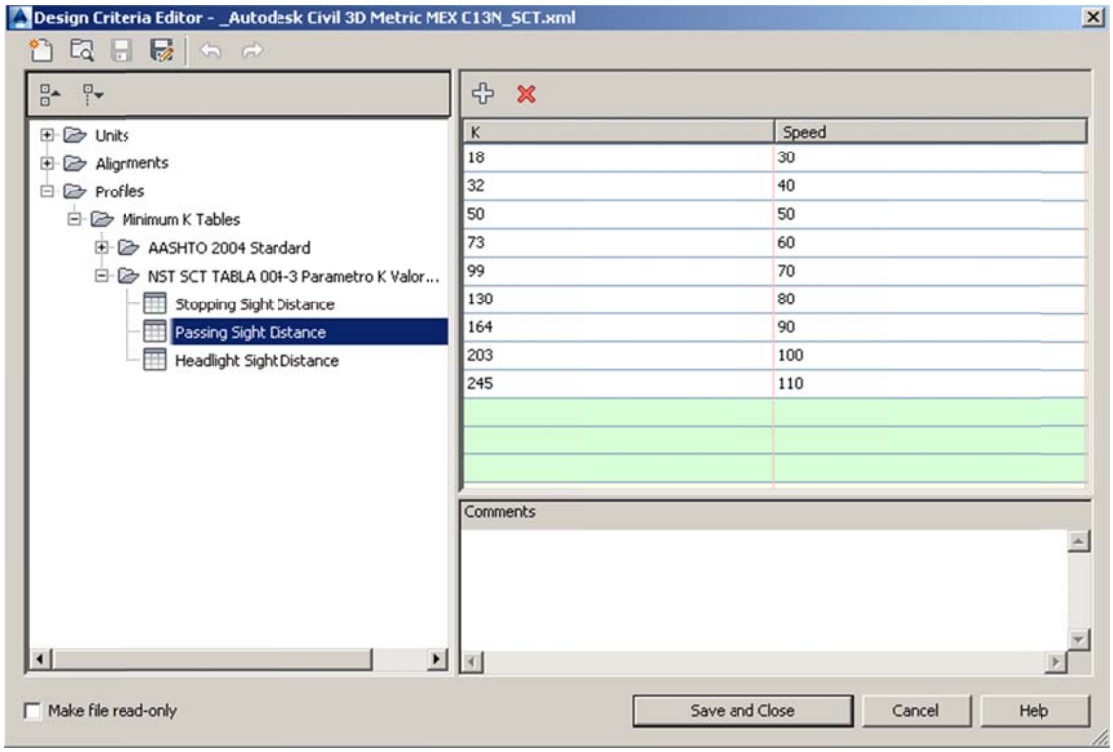
11.1.2 Transition lenghs Tables to different types of roads

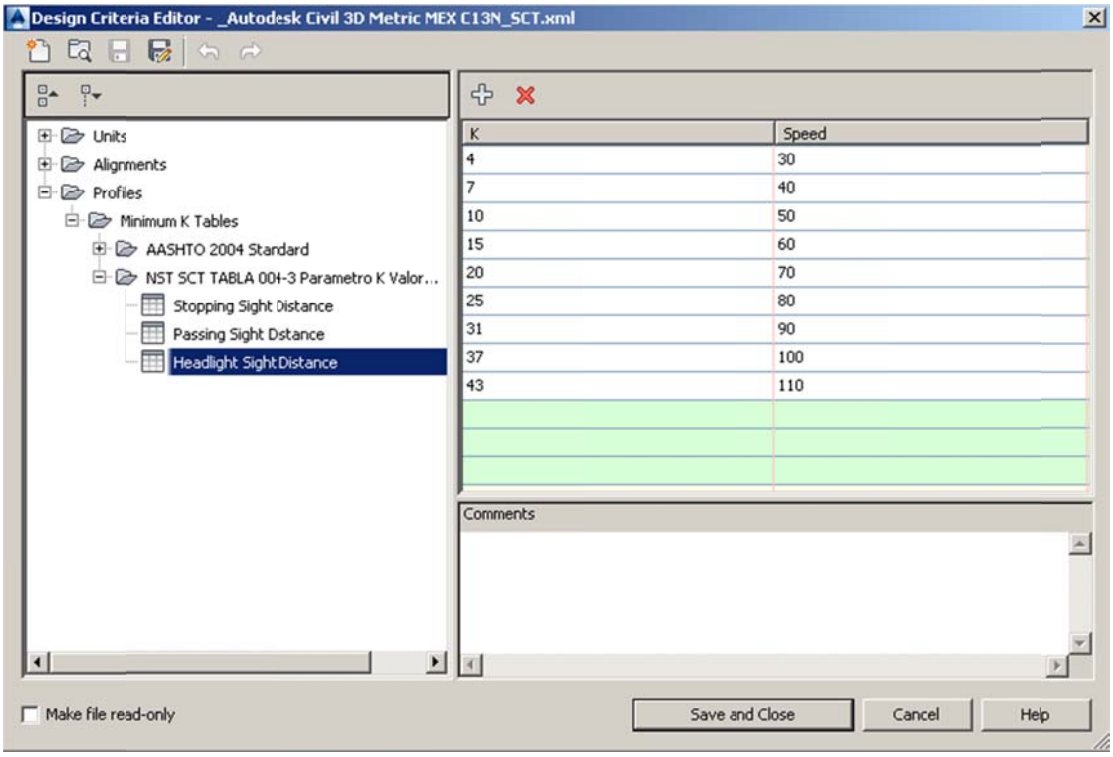


11.1.2.1 Table Parameter "K" which defines the sight Distance (Stopping, Passing and Headlight)




Design Criteria Editor - _Autodesk Civil 3D Metric MEX C13N_SCT.xml
Units
Alignments
Profiles
Minimum K Tables
AASHTO 2004 Standard
NST SCT TABLA 001-3 Parametro K Valor...
Stopping Sight Distance
Passing Sight Distance
Headlight Sight Distance
K
Speed
3
30
4
40
8
50
14
60
20
70
31
80
43
90
57
100
72
110
Comments
Make file read-only
Save and Close
Cancel
Help


Design Criteria Editor - _Autodesk Civil 3D Metric MEX C13N_SCT.xml
Units
Alignments
Profiles
Minimum K Tables
AASHTO 2004 Standard
NST SCT TABLA 001-3 Parametro K Valor...
Stopping Sight Distance
Passing Sight Distance
Headlight Sight Distance
K
Speed
18
30
32
40
50
50
73
60
99
70
130
80
164
90
203
100
245
110
Comments
Make file read-only
Save and Close
Cancel
Help


Design Criteria Editor - _Autodesk Civil 3D Metric MEX C13N_SCT.xml
Units
Alignments
Profiles
Minimum K Tables
AASHTO 2004 Standard
NST SCT TABLA 00H-3 Parametro K Valor...
Stopping Sight Distance
Passing Sight Dstance
Headlight SightDistance
K
Speed
4
30
7
40
10
50
15
60
20
70
25
80
31
90
37
100
43
110
Comments
Make file read-only
Save and Close
Cancel
Help

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

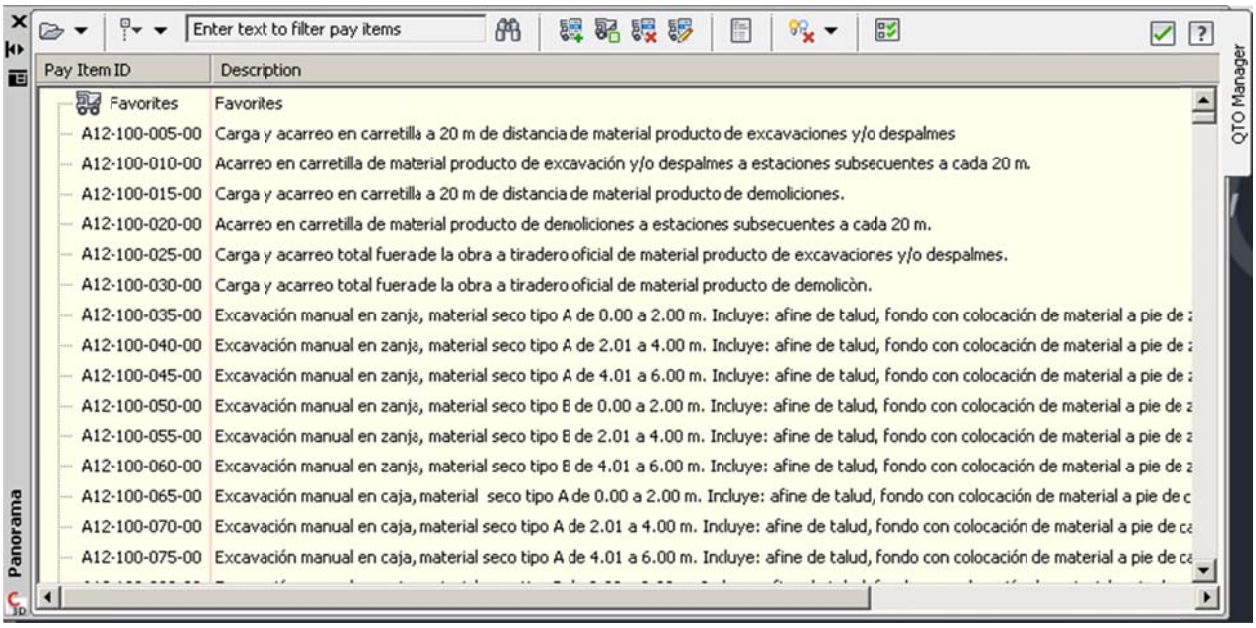
The command settings for the QTO are used to control the output of the xml file that will be published when the user makes a quantity takeoff. The primary settings are:

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



13 Superelevation standards

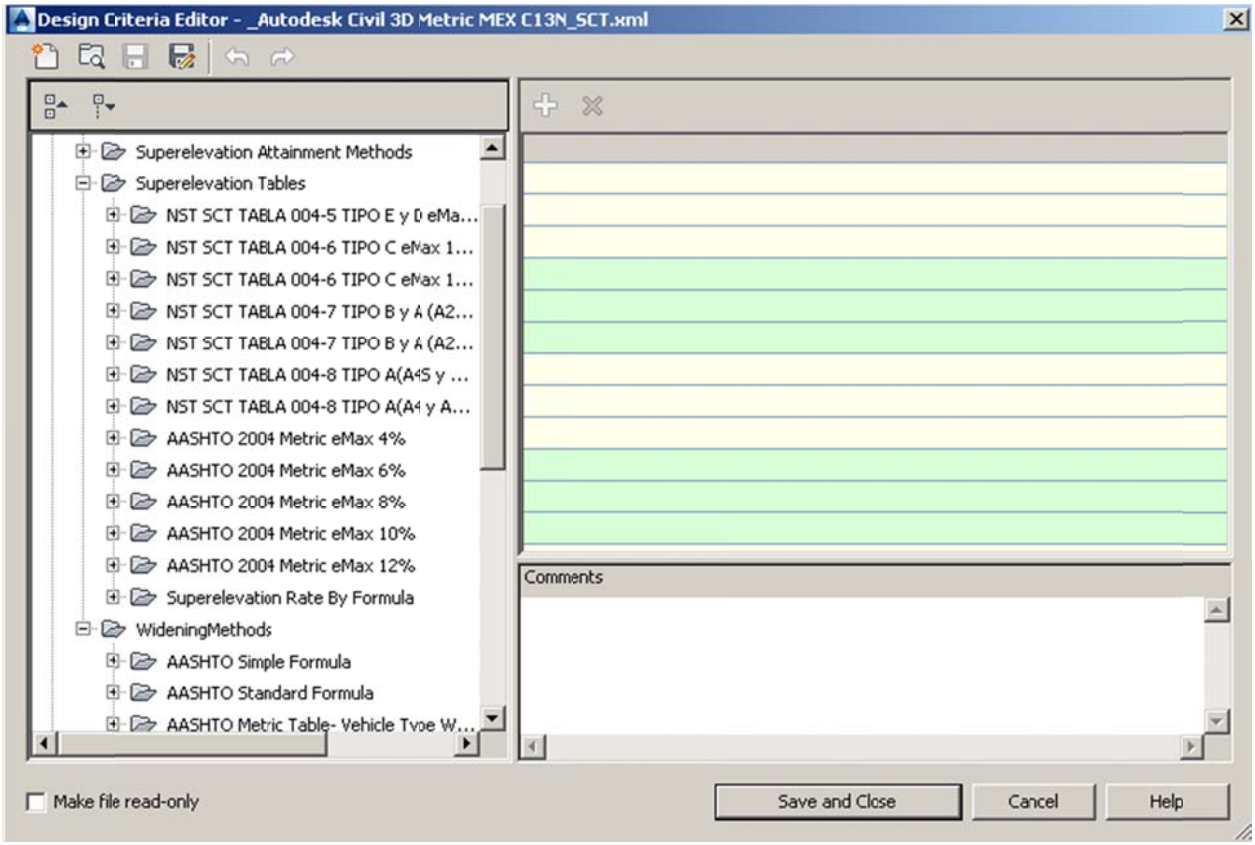
As mentioned in chapter 11 of this workbook here meet a set of standards of various geometric elements of the project roads, which are in current Mexican law law “Normas de Servicios Técnicos, Secretaría de Comunicaciones y Transportes (SCT)” were conceived as more than 30 years.

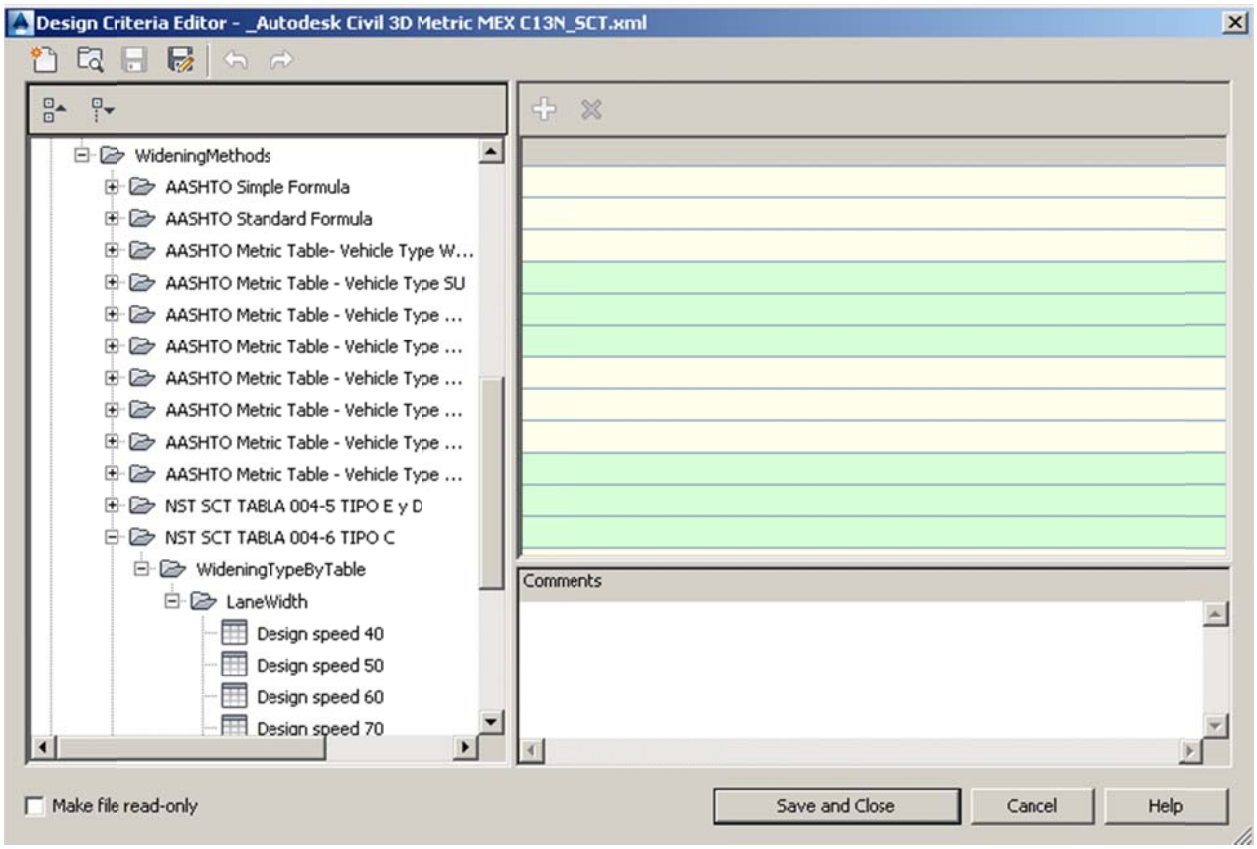
File Name:

_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





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).

14 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)		

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	CP	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	CPB	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	Top	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	CP	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 inicia
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	Tapa	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	P3	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:

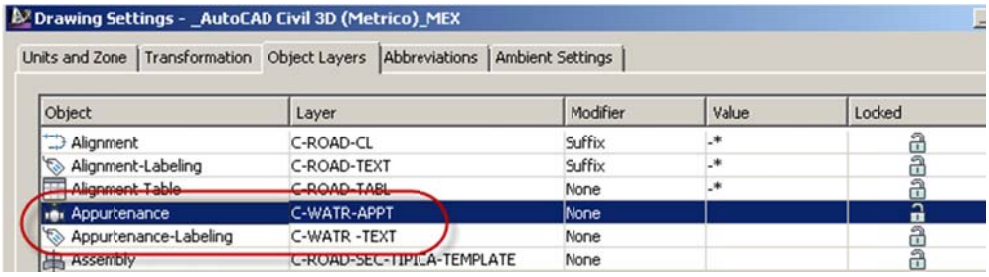
Drawing Settings
Feature Settings
Command Settings
Object Styles
Label Styles
Preview Drawings
Layers
Pressure Parts Catalogs
Pressure Parts Lists

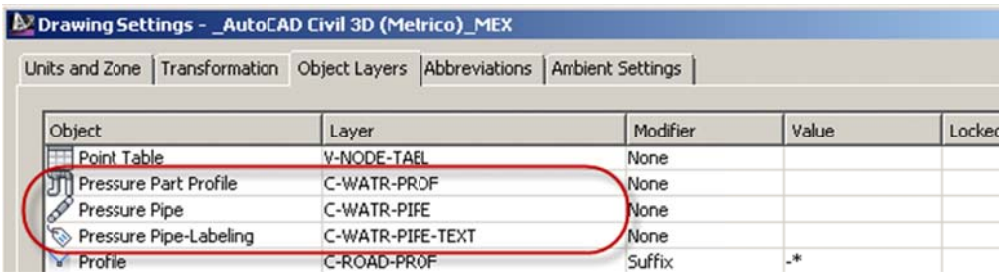
16.2 Drawings Settings (Configuración del archivo)

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

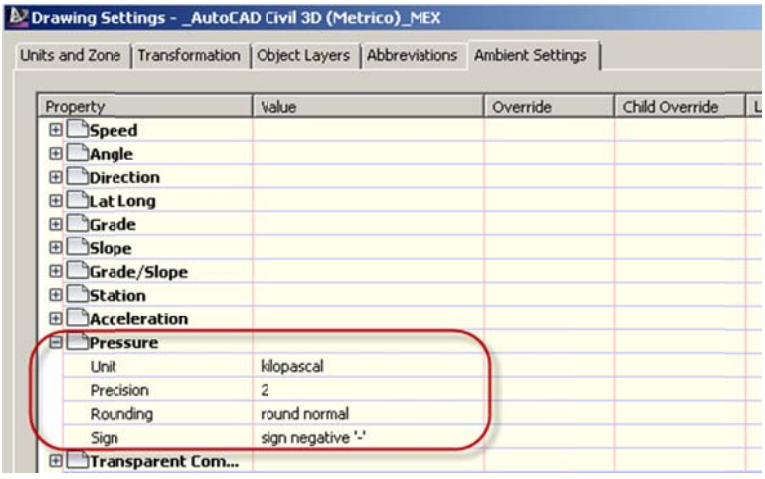
In subsequent images check updated data regarding pressure pipes:





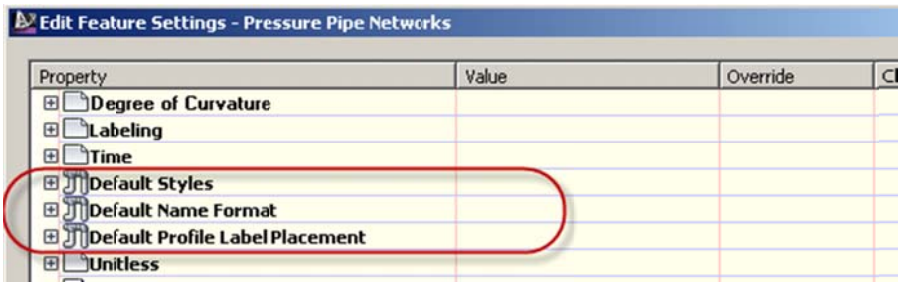
16.2.2 Ambient Settings (configuración propiedades de Ambiente)

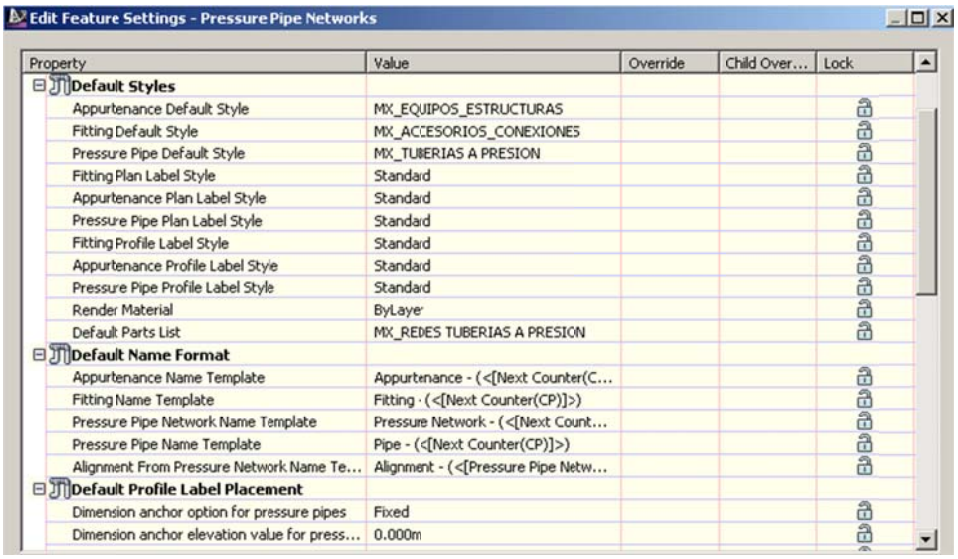
Ambient Settings tab (properties Environment) to look at data that were added to this new version, related pressure pipes:



16.3 Features Settings (Configuración de estilos o características)

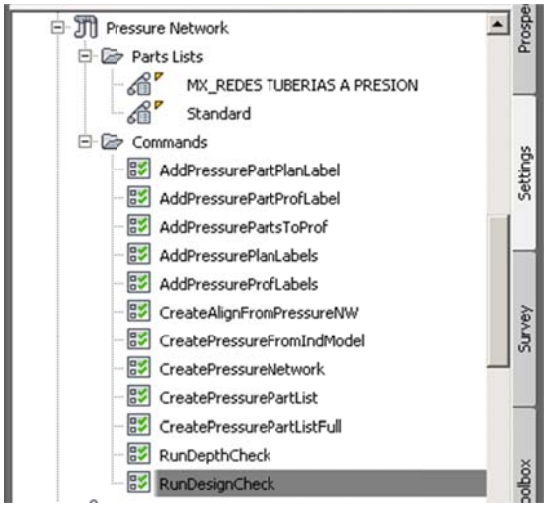
Inside the Pressure Setting in Network tab added these three new groups: **Default Styles, Default Name Format, and Default Profile Label Placement.**



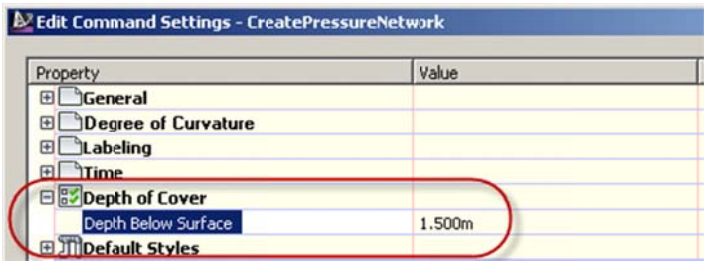


16.4 Additional Commands Settings (Configuración adicional)

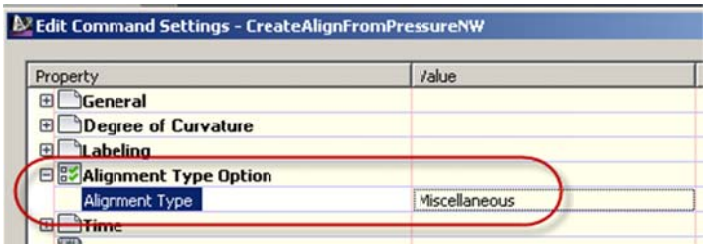
Within the Network tab Pressure Setting on additional parameters are related to configuration when generating pressure pipes, see image.



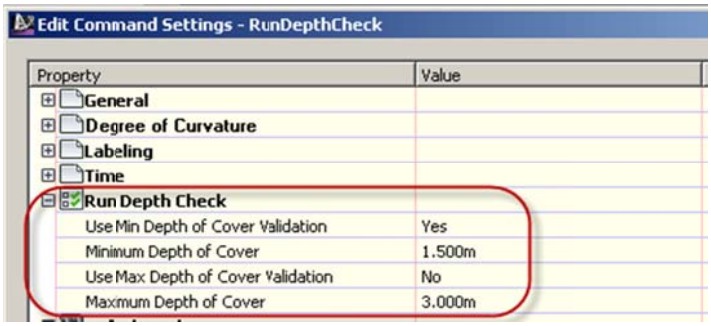
Depth of Cover from surface.



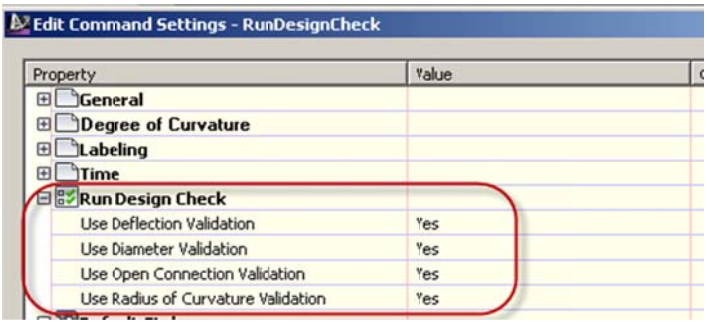
Alignment Creation based on the pressure lines are misellaneous default.



Revision of minimum and maximum depth.

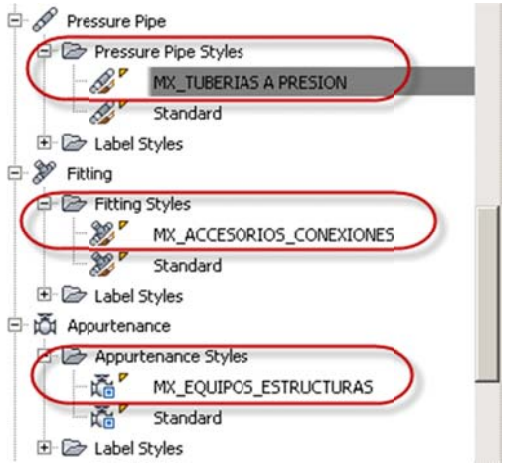


General Data Validation.

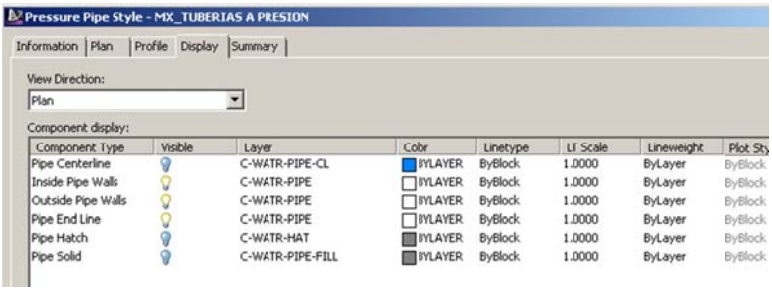


16.5 Styles: Pressure Pipe Style, Fitting, Appurtenance (Tuberías, accesorios y Equipos)

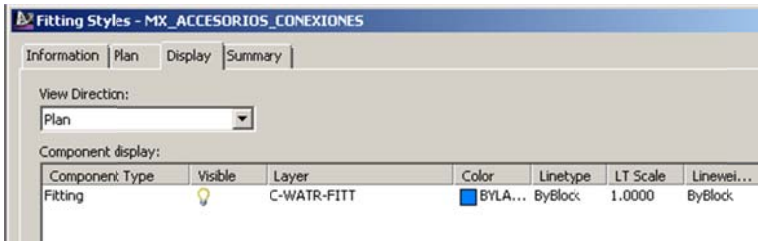
In this section we review the different types of styles that apply to the parts of pressure pipes.



Pressure Pipe Styles (tuberías a Presión)



Fitting Styles (accesorios)



Appurtenance Styles (equipos y estructuras)

17 Transportation/Rail Content Specification (Vías Férreas Especificaciones)

17.1 Resumen de "Rail" (Vías Férreas)

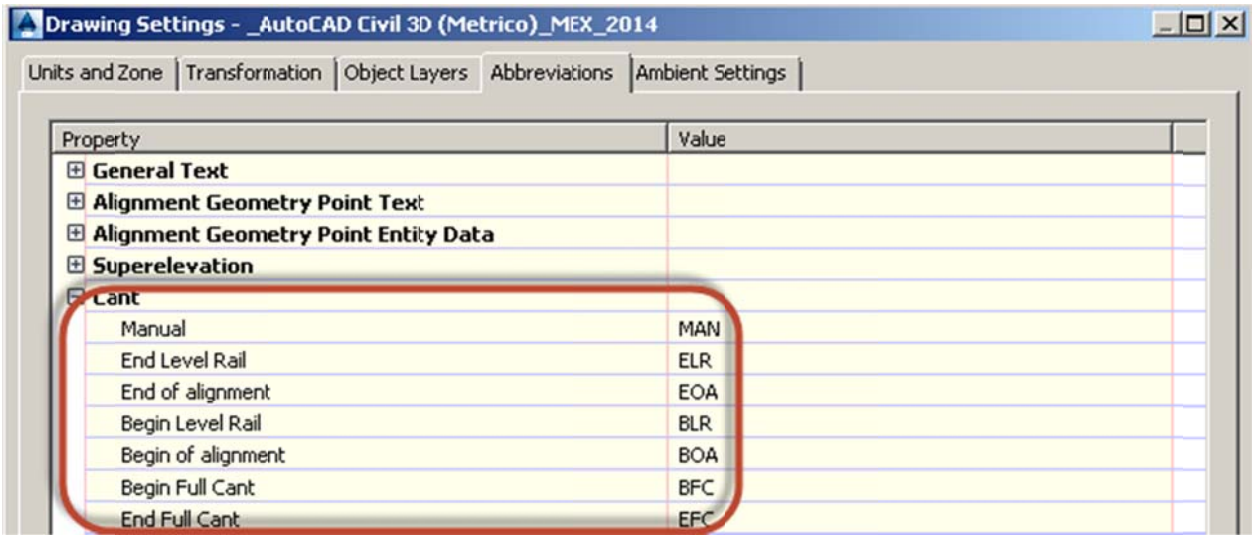
This section focuses on the features of the components of the rail in Civil 3D, to see in the following configurations:

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)

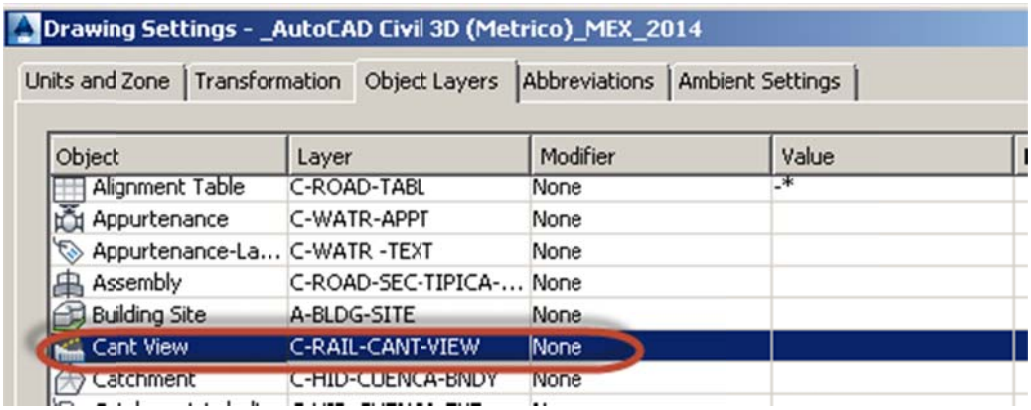
Check the new section on abbreviations to Cants in Drawings Settings).

17.2.1 Abbreviations (Abreviaciones)



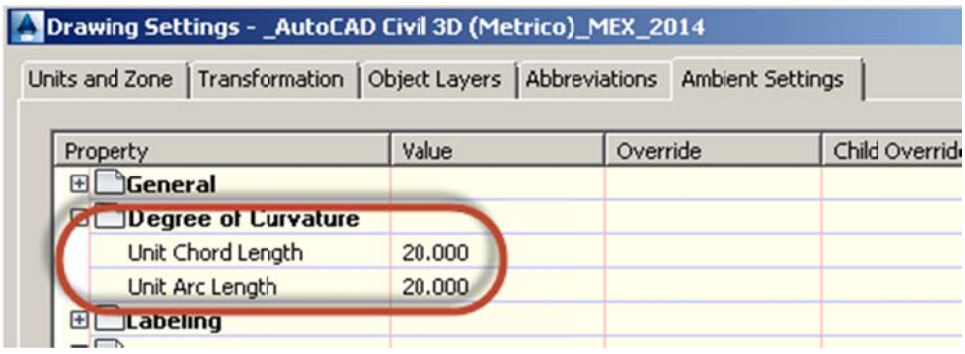
17.2.2 Object Layers

The following images revise the updated data related to railroads:



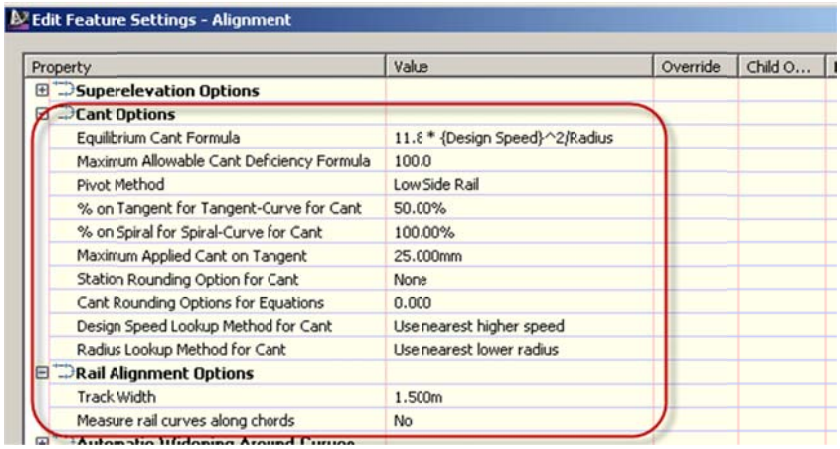
17.2.3 Ambient Settings (configuración propiedades de Ambiente)

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



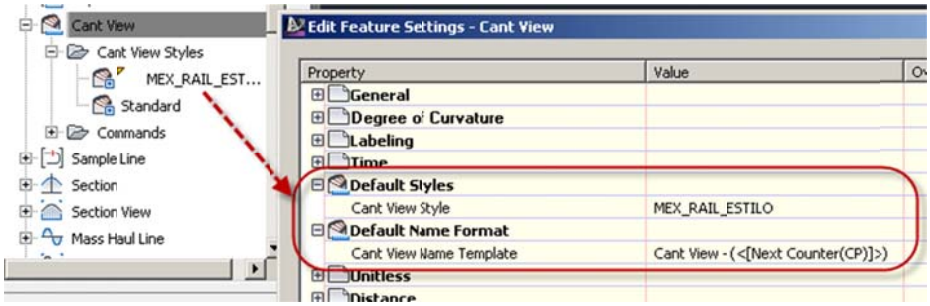
17.3 Features Settings (Configuración de estilos o características)

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



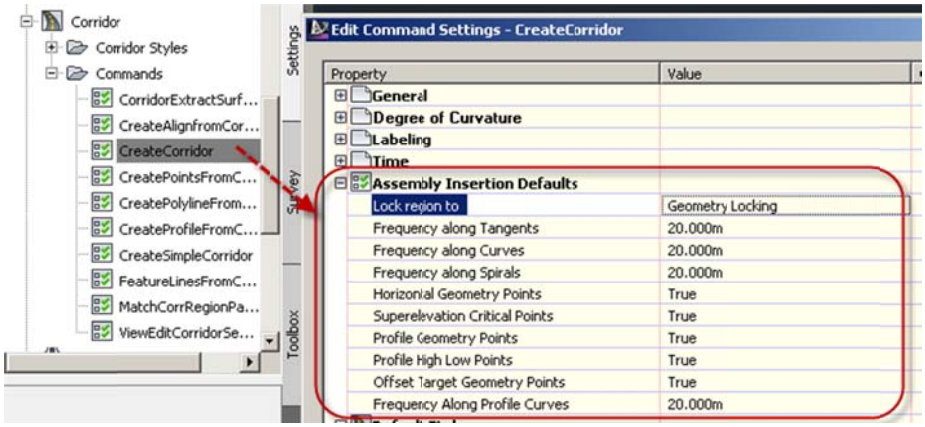
17.4 CANT View (Estilo PerfilSobre-elevacion en Vias Ferreas)

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



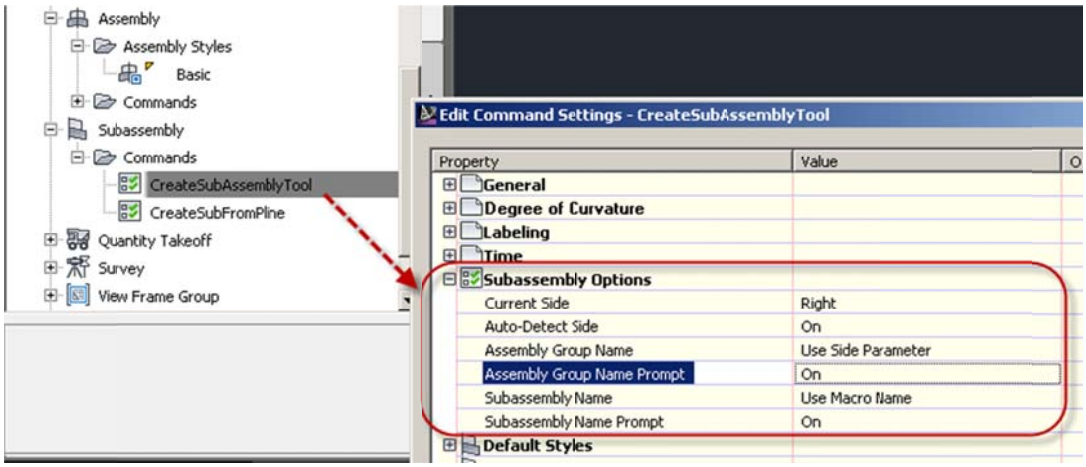
17.5 Create Corridor: command Settings (parámetros de creación del Corredor)

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).



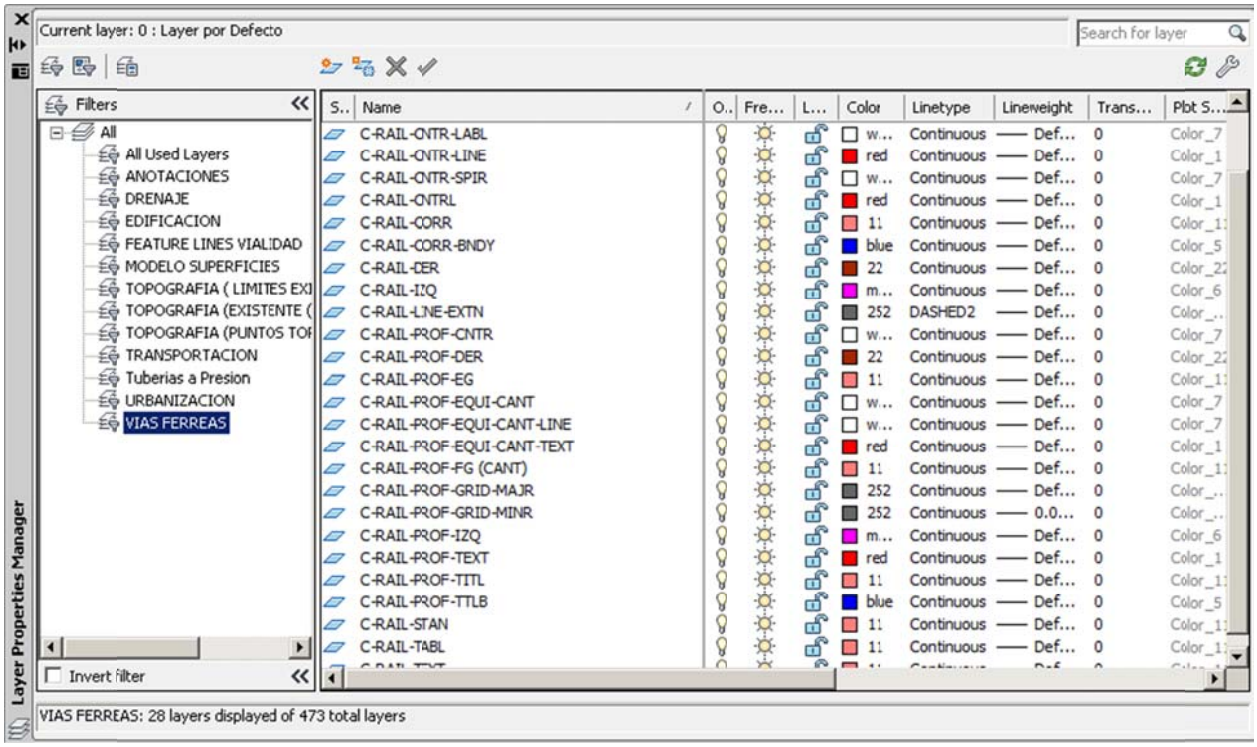
17.6 CreateSubAssemblyTool: command Settings (Herramientas en la creación del Subassembly)

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

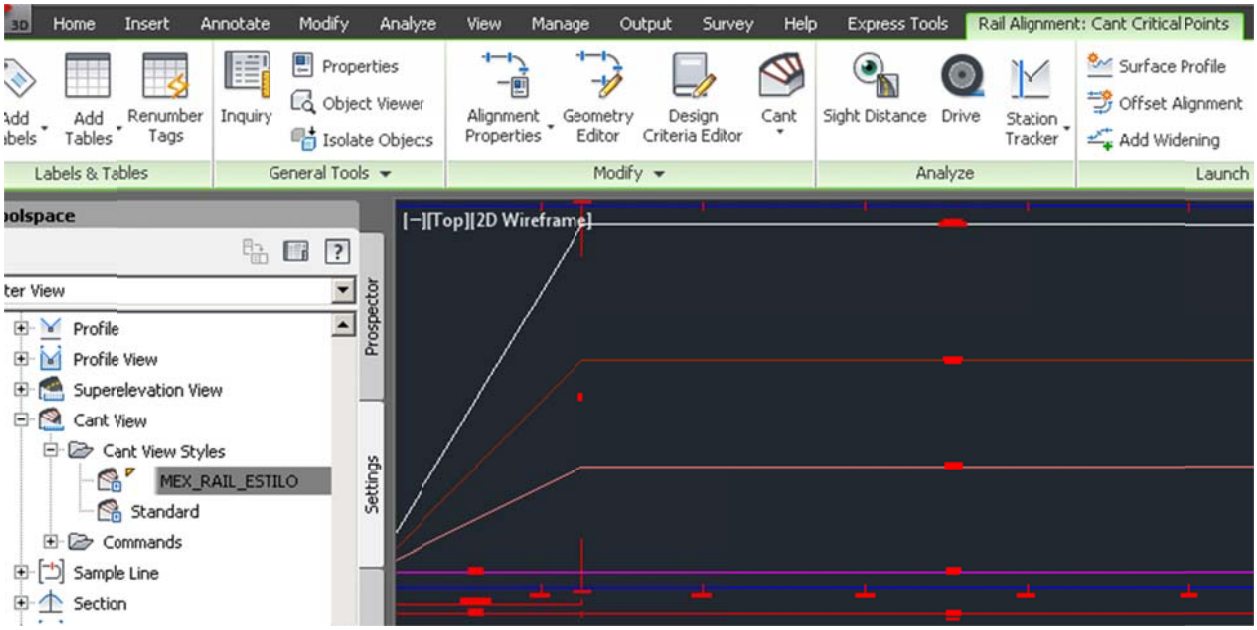


17.7 New Layer's (Vias férreas)

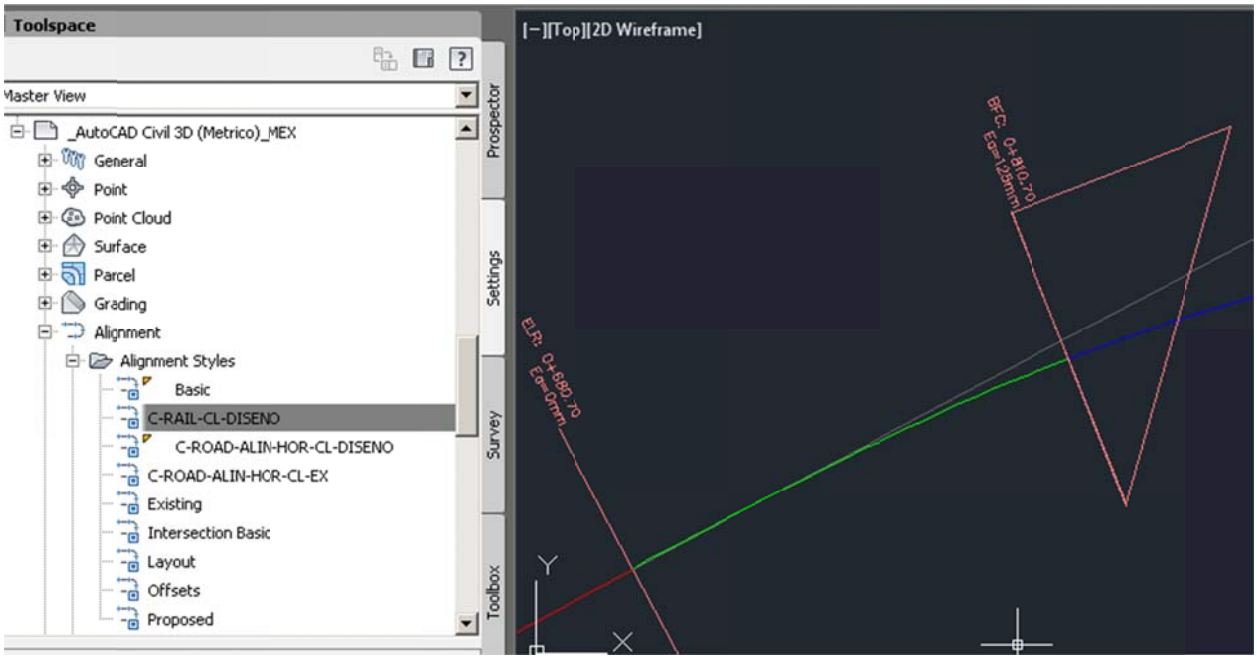
To organize the new items we have created different layer's see image



17.8 CANT View (Perfil de la Sobre-elevacion Vias férreas)

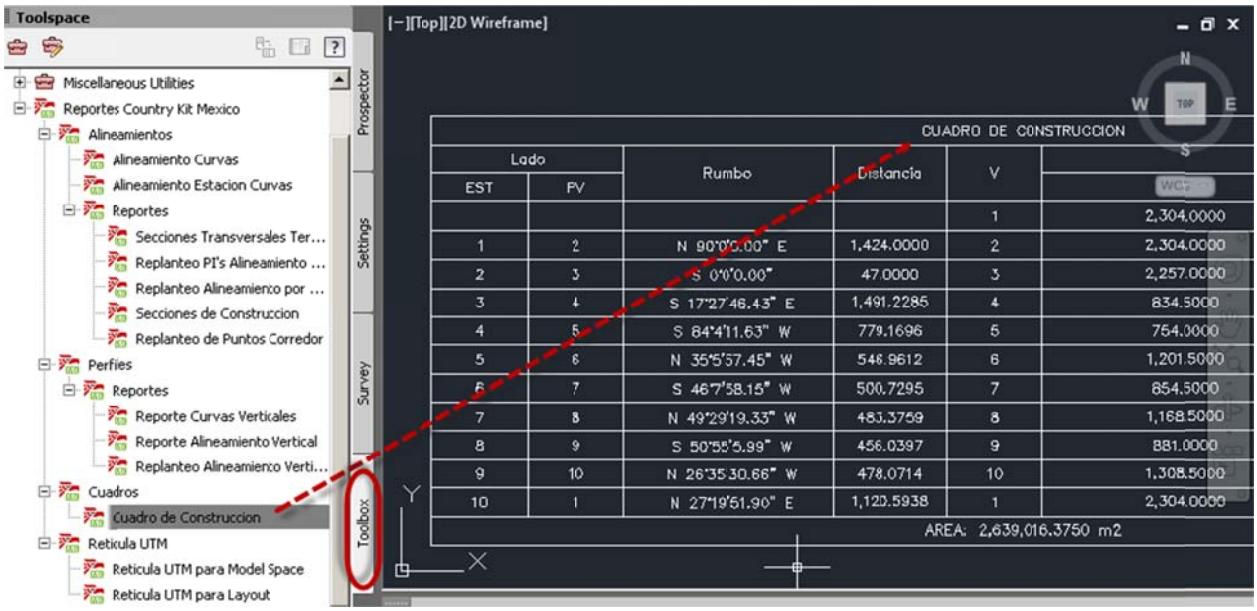


17.9 CANT Critical Point (Geometría Puntos Criticos)



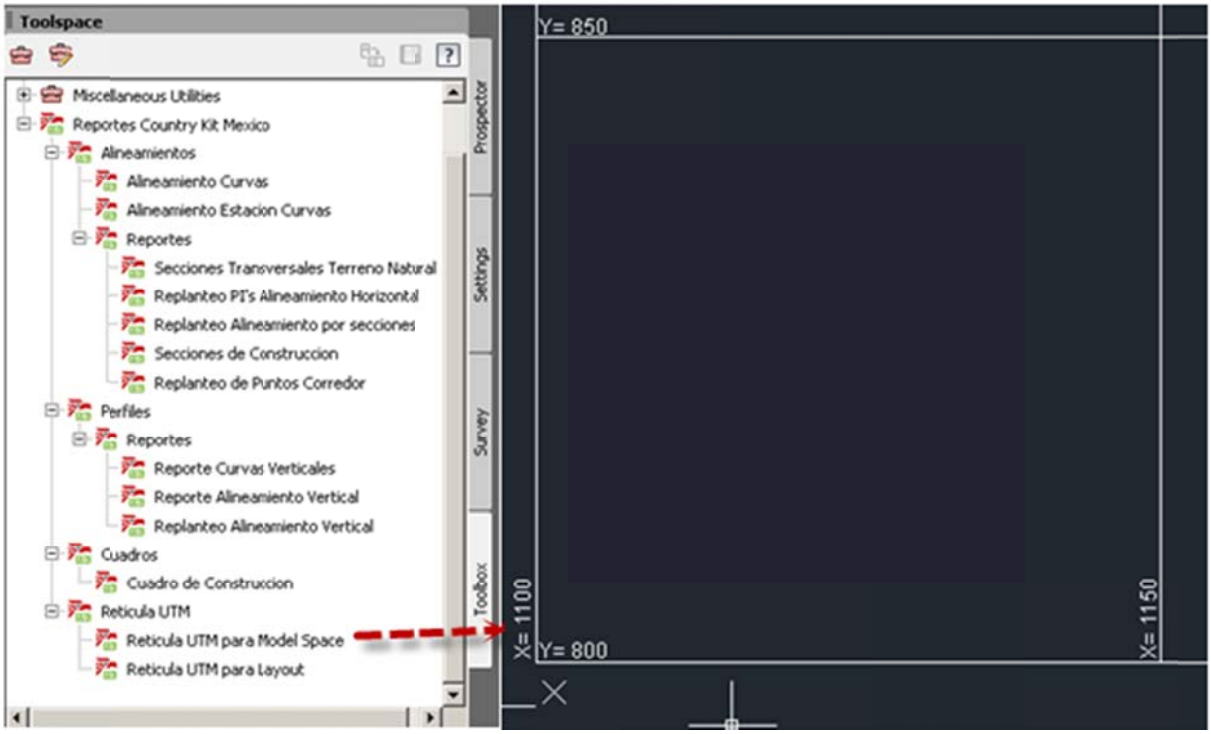
18 Documentation Table (Cuadro de Construcción)

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



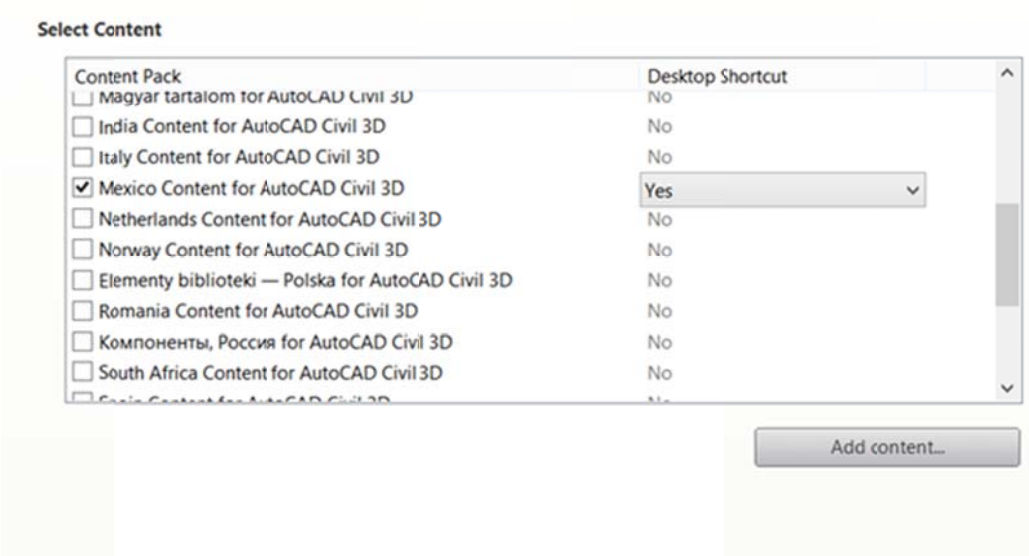
19 Documentation GRID UTM (Creación Reticula UTM)

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.

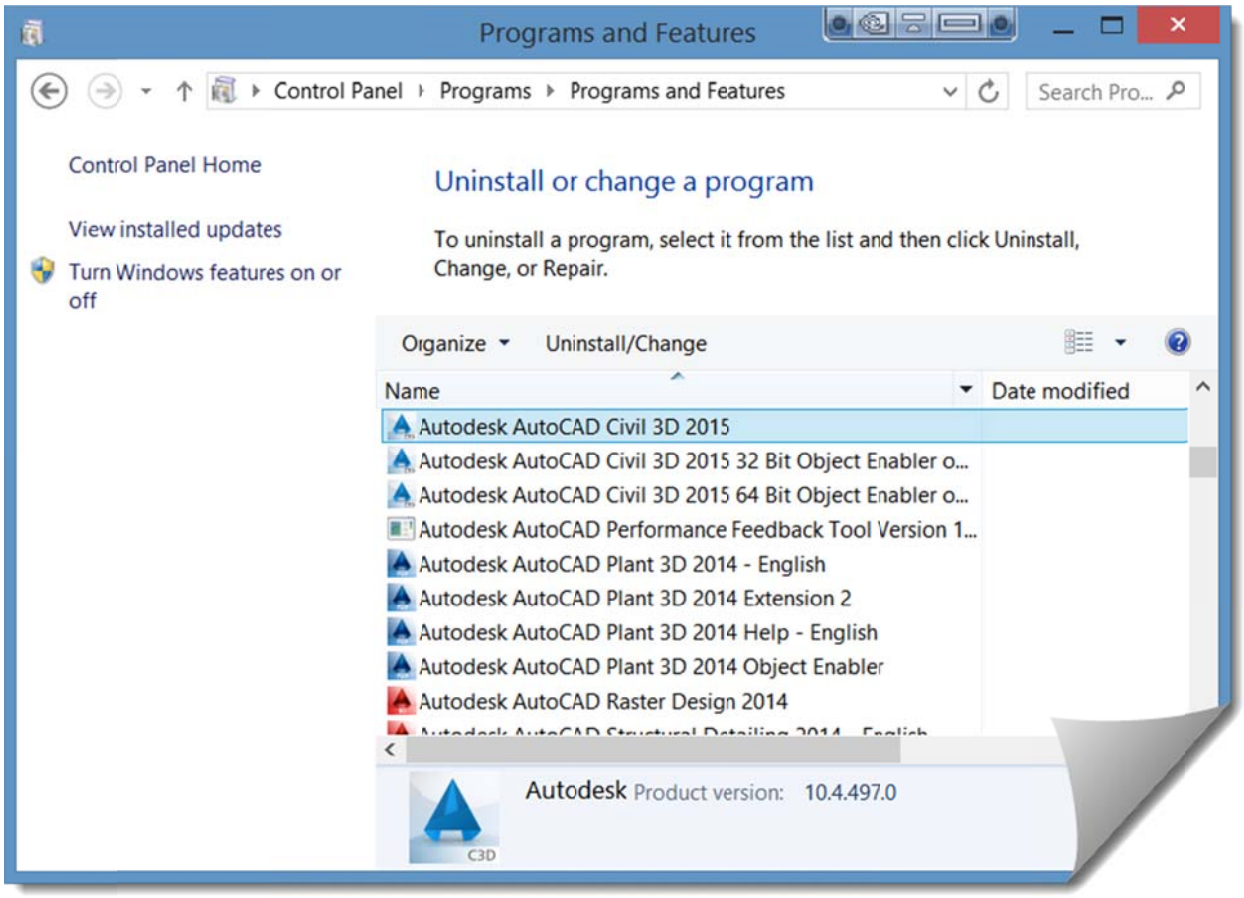


NOTE:

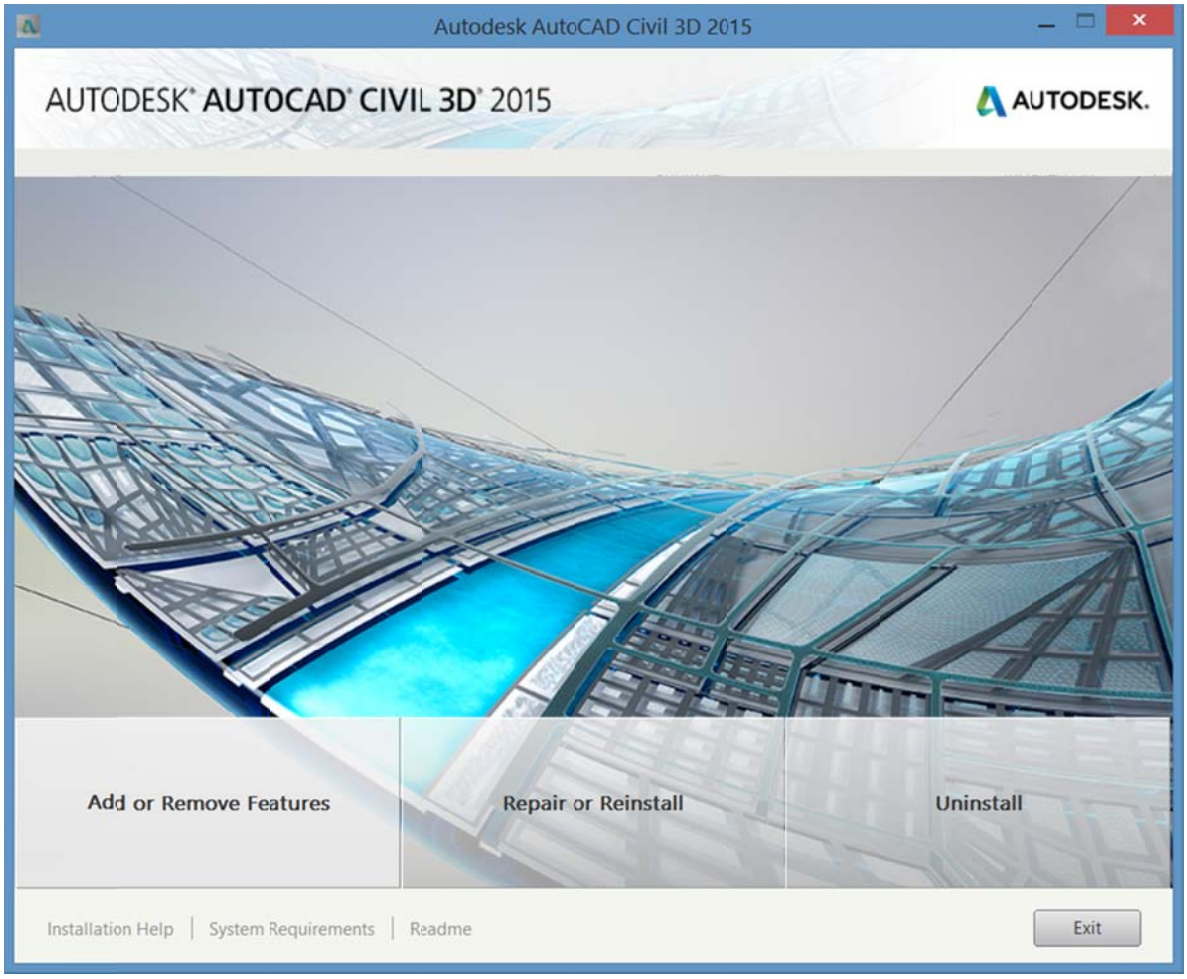
If you, During Installation Process you did a Typical Installation, after you can incorporate any Content Pack, proceed as follows:

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

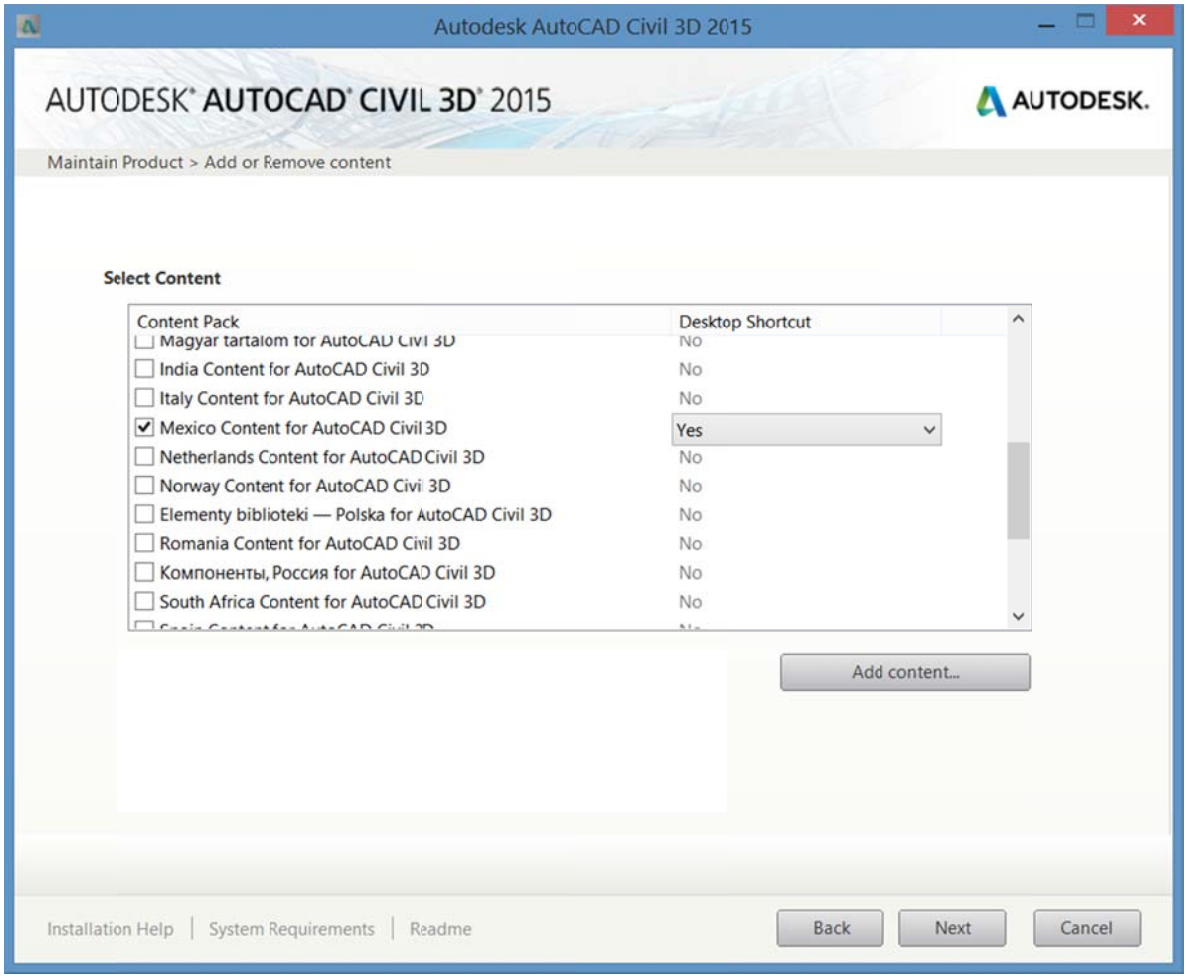
2.- Find AutoCAD Civil 3D 2015 , click **Unistall/Change**



3.- Select ***Add or Remove Features***



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



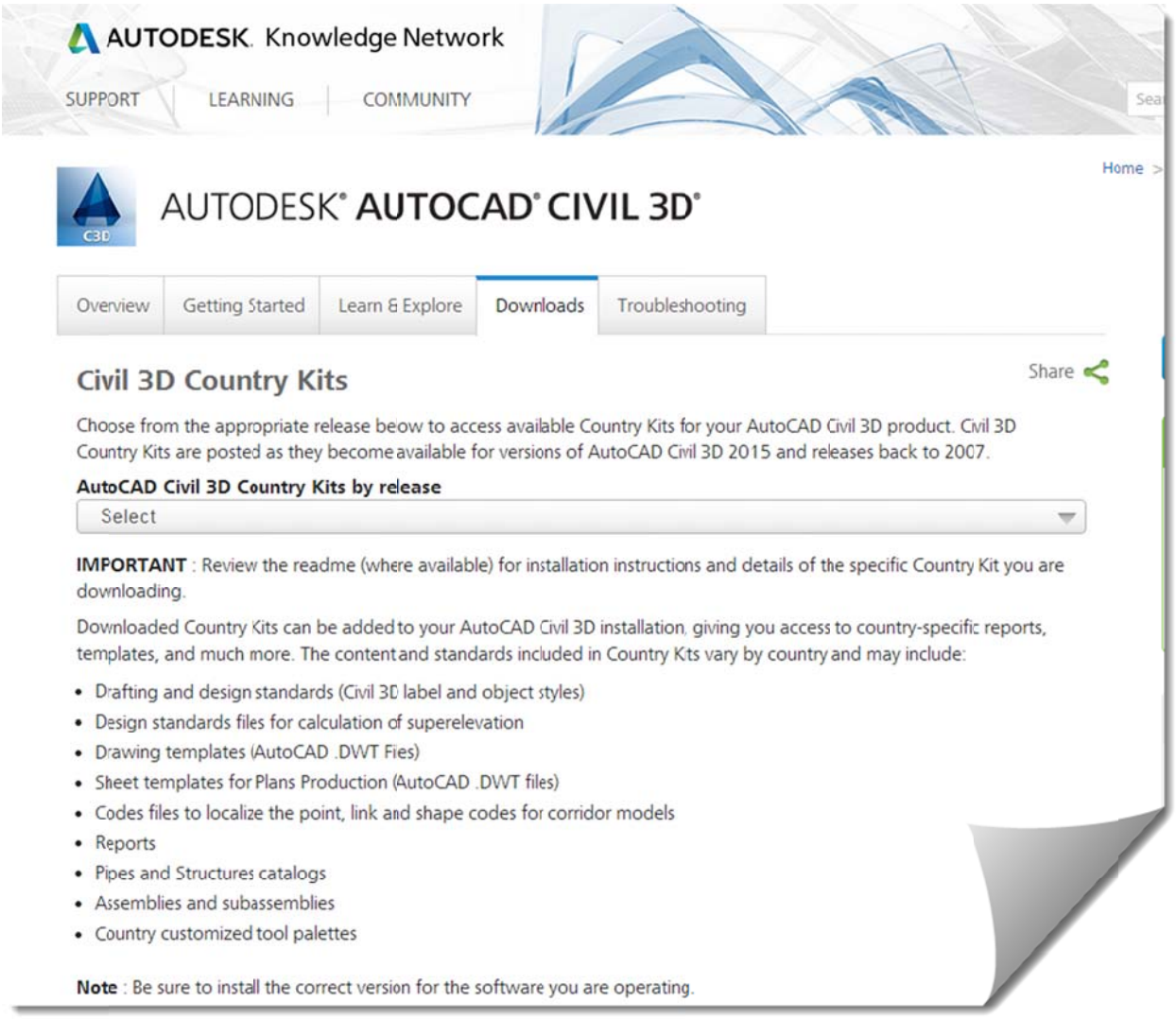
NOTE:

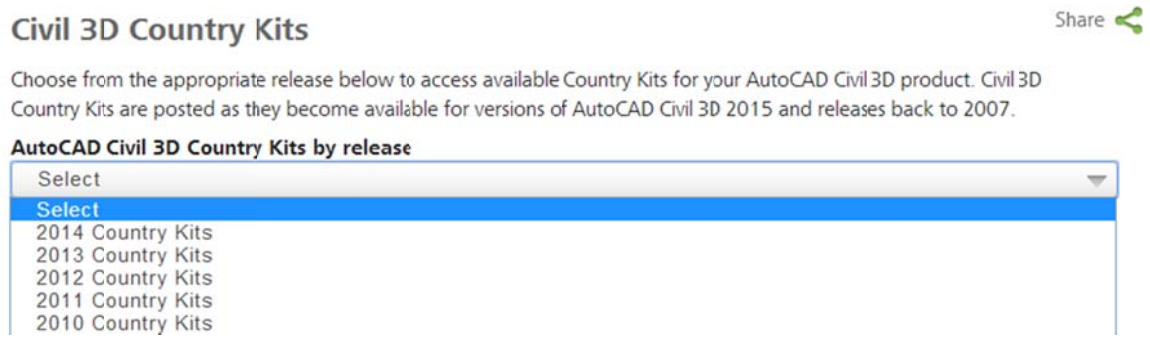
Program is likely to ask for the installation disk AutoCAD Civil 3D 2015.

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**

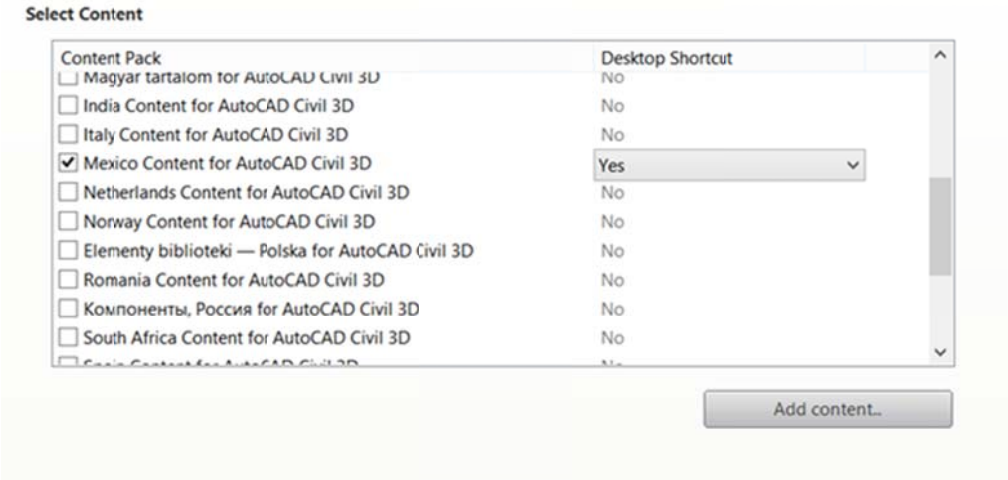
There are several packages or Country Kits that can be adjusted to your needs. In this case select the product version in the list and locate Mexico (example), proceed to download the zipped file.





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

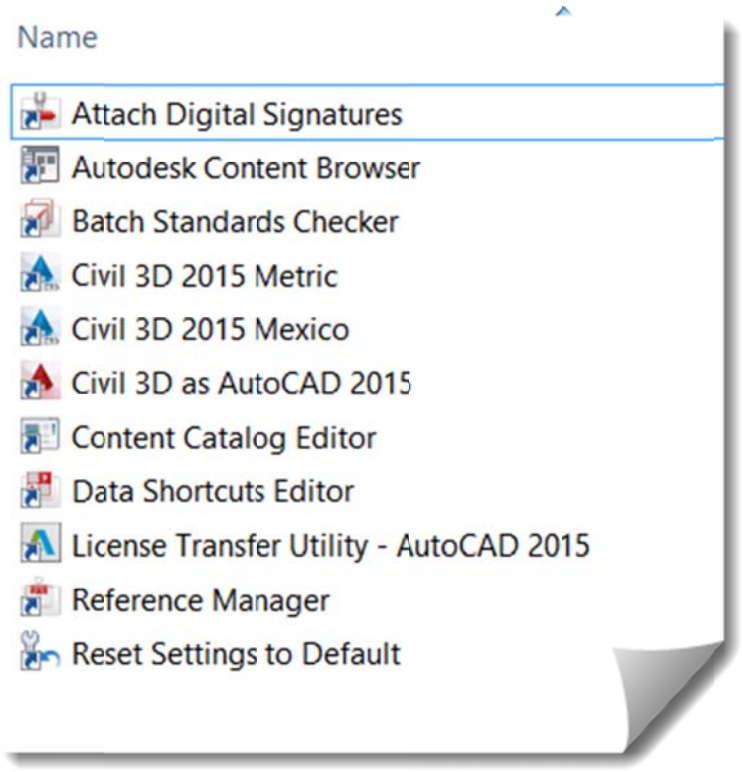
3. - In dialog box Maintain ***Product >Add or Remove Content***, Select ***Add content…***option



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
Civil 3D 2015 Metric
Civil 3D 2015 Mexico
Civil 3D as AutoCAD 2015
Content Catalog Editor
Data Shortcuts Editor
License Transfer Utility - AutoCAD 2015
Reference Manager
Reset Settings to Default

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