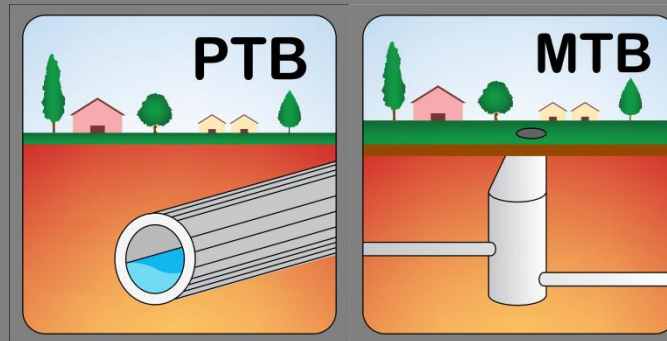




**VANTEC
SOLUTIONS**

PipesToolBox – User Manual



Version 1.1

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1. Introduction

PipesToolBox is an easy-to-use app that simplifies the modification of pipe networks in AutoCAD[®] Civil 3D[®]. This application is a bundle of two programs, ***PipesToolBox*** and ***ManholesToolBox***. These can be launched by clicking the corresponding buttons at the Add-ins tab, as shown in *Figure 1*, or by typing ***ptb*** or ***mtb*** in the command line.

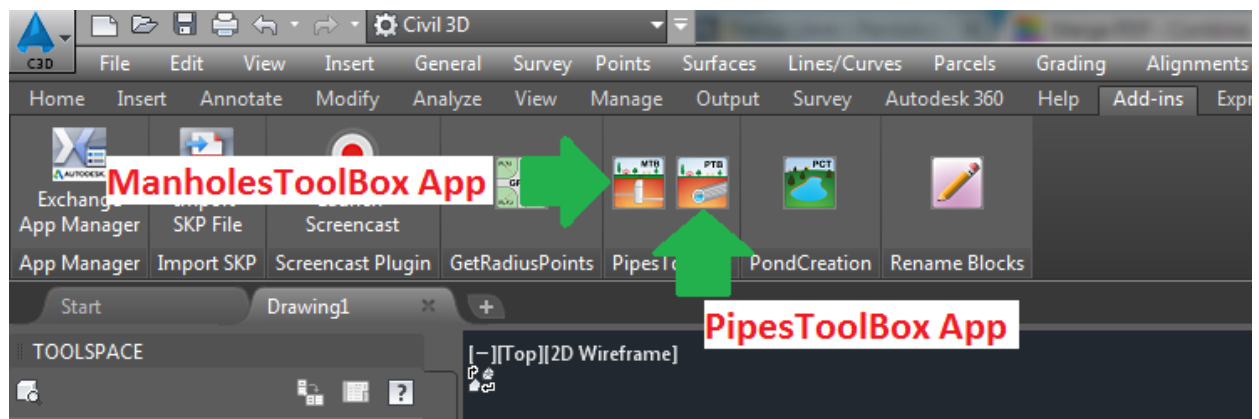


Figure 1

¹ Autodesk, AutoCAD and AutoCAD Civil 3D are registered trademarks or trademarks of Autodesk, Inc., and/or its subsidiaries and/or affiliates in the USA and other countries.



2. Program Validation

The first time the application is launched, the user will be asked to validate the license. As shown in *Figure 2*, the program will create a text file with a Request Code that must be sent to Vantec Solutions (support@vantecsolutions.com). Please also forward the confirmation email that you received either from our website or the Autodesk App Store with the order number.

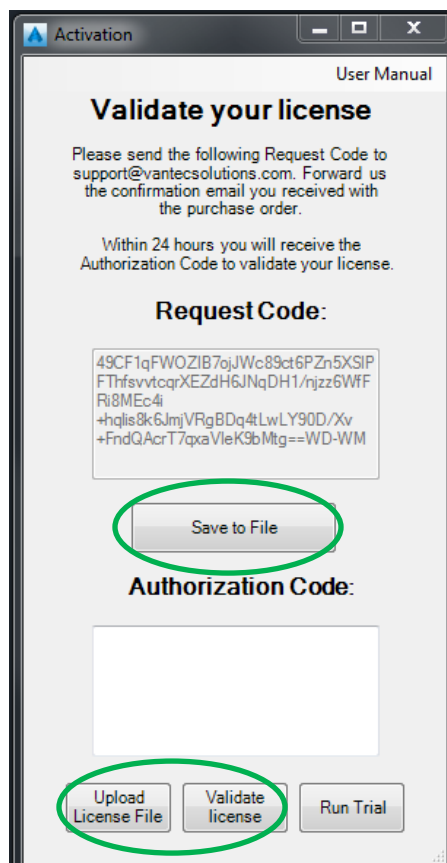


Figure 2



Within 24 hours we will send you back a text file with the Authorization Code. You must upload this file by clicking “Upload License File” and then “Validate License”. In the meantime, you can run the program in trial mode using the “Run Trial” button.

3. PipesToolBox App

Figure 3 shows the main window of the ***PipesToolBox*** app. The program provides a set of tools that can be used to modify a single pipe or multiple pipes. While some of the functions are always enabled, others are only enabled after the user clicks in the *Select Pipe* button and selects a single pipe in the drawing. This pipe can be selected in plan or profile view.

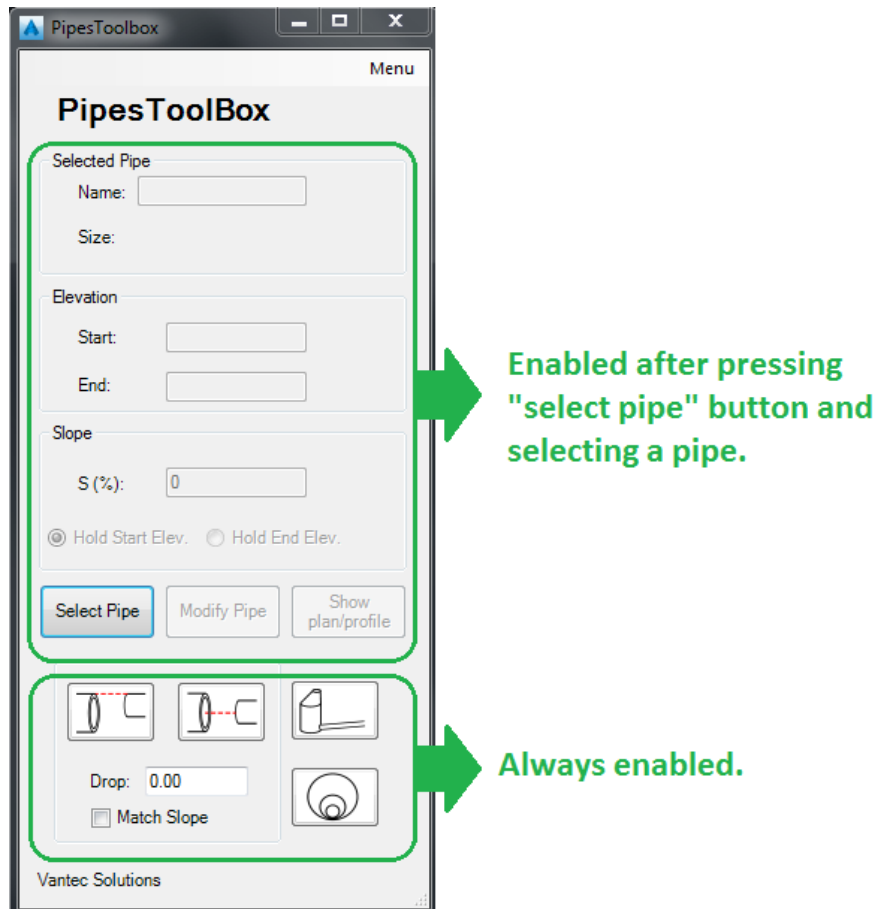


Figure 3

3.1. Show the Pipe in Plan and Profile

After selecting the pipe in the drawing, the information of this pipe will be shown in the app main window, including the name, part size, start invert elevation, end invert elevation and slope, as shown in *Figure 4*. When clicking the “Show plan/profile” button, the program will create a new



viewport and will zoom to the plan and corresponding profile view of the selected pipe.

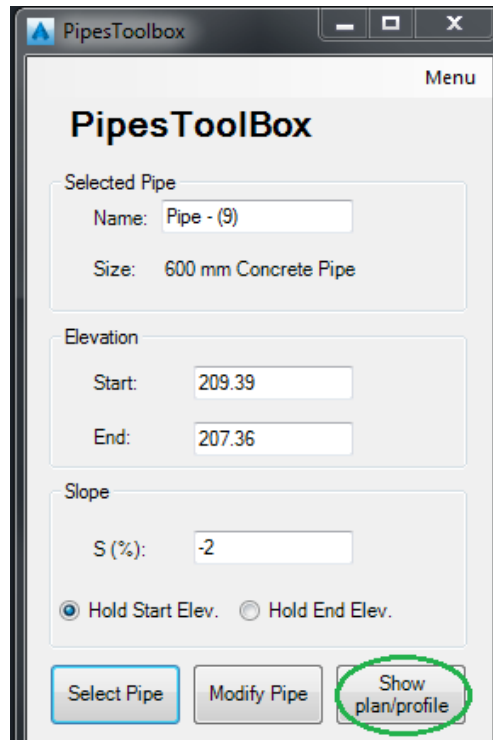


Figure 4

3.2. Change Pipe Name

The user can enter a new name for the selected pipe in the first textbox. The name will be updated after clicking the button “Modify Pipe”.



3.3. Modify Slope and Invert Elevations

The user can modify the slope and invert elevation of the selected pipe by changing its values in the corresponding textboxes. For the slope, the user must also indicate whether the fixed elevation is the start or end invert.

At the moment the user enters a new elevation or slope, the values in the others textboxes are updated automatically. **Note: the pipe will be modified only after the user clicks the “Modify Pipe” button.**

3.4. Match the Crown of Pipes

The match crowns button shown in *Figure 5* allows the user to match the outvert elevation of two pipes.

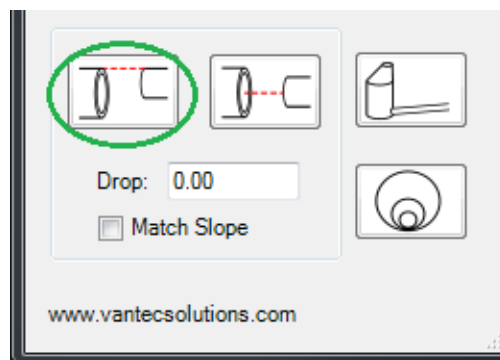


Figure 5



The user must first select the pipe that will be used as a reference and the pipe that will be modified. The program will match the crown of the second pipe with the crown of the first pipe.

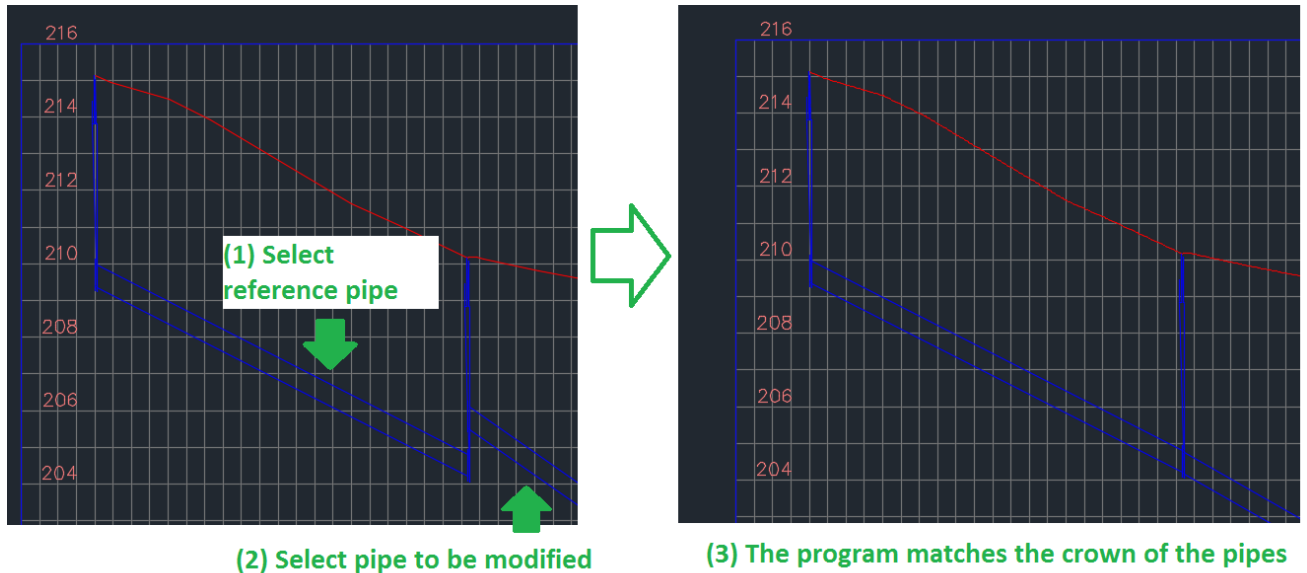


Figure 6

3.5. Match the Centerline of Pipes

Similarly, the program can also be used to match the centerline of two pipes by pressing the button shown in *Figure 7*.

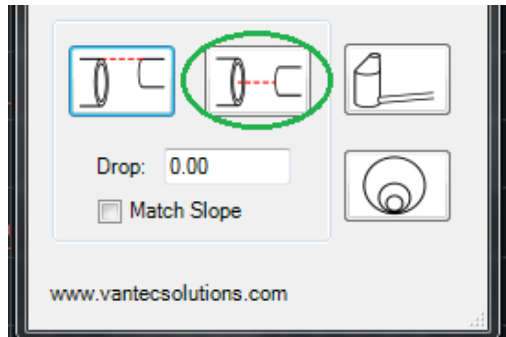


Figure 7

3.6. Match Slope of Pipes

For both the *Match Crown* and *Match Centerline* functions, the user can indicate that the slope of the pipe to be modified will be matched to the reference pipe. To do this, the user must select the “Match Slope” box shown in *Figure 8* before pressing the *Match Crown* or *Match Centerline* buttons.



Figure 8



3.7. Assign a Drop Between Pipes

The user can also decide to have a drop between two pipes. This must be indicated in the textbox shown in *Figure 9* before pressing the *Match Crown* or *Match Centerline* buttons. The *Drop between Pipes* function can be combined with the *Match Slope* function.

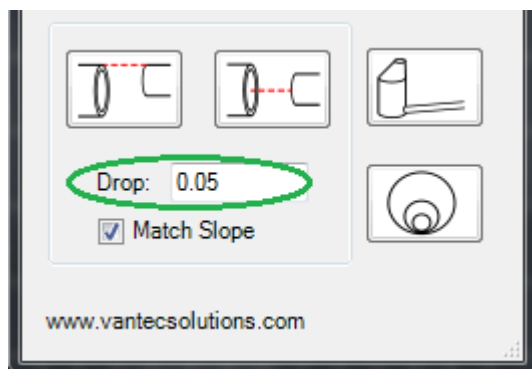


Figure 9

3.8. Set Pipe invert at bottom of Manhole

The invert elevation of a pipe can also be set equal to the bottom elevation of the corresponding start or end structure. After clicking the button shown in *Figure 10*, the user must first select the structure that will be used as a reference and then the pipe that will be modified. The program will set the invert



elevation of the pipe equal to the bottom elevation of the selected structure.

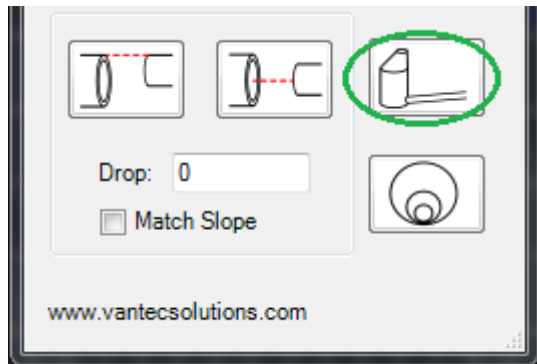


Figure 10

3.9. Swap Pipes Parts

The program allows the user to quickly swap the part of single or multiple pipes. After clicking the button shown in *Figure 11*, the Swap Pipes Parts window shown in *Figure 12* will pop out. If the user has selected a pipe using the *Select Pipe* button in the main window, the *Modify selected pipe* button will be enabled. After selecting a new Pipe Family and Size and pressing this button, the previously selected pipe will be updated.

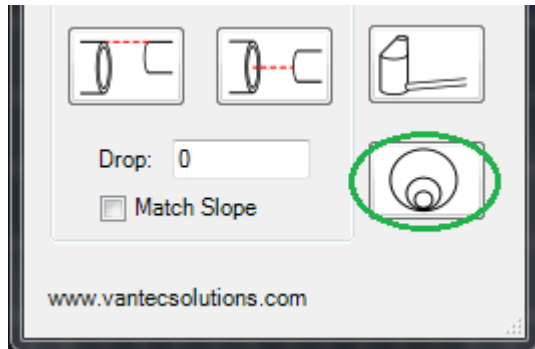


Figure 11

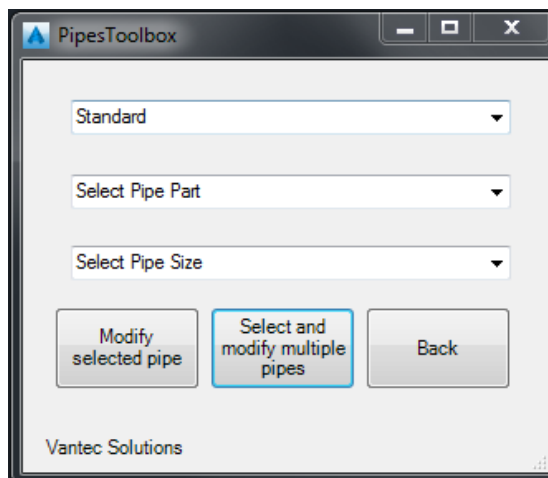


Figure 12

The user can also change multiple pipes by pressing the *Select and modify multiple pipes* button. The user will be prompted to select the pipes in plan or profile view.



4. ManholesToolBox App

The main window of the **ManholesToolBox** app is shown in *Figure 13*.

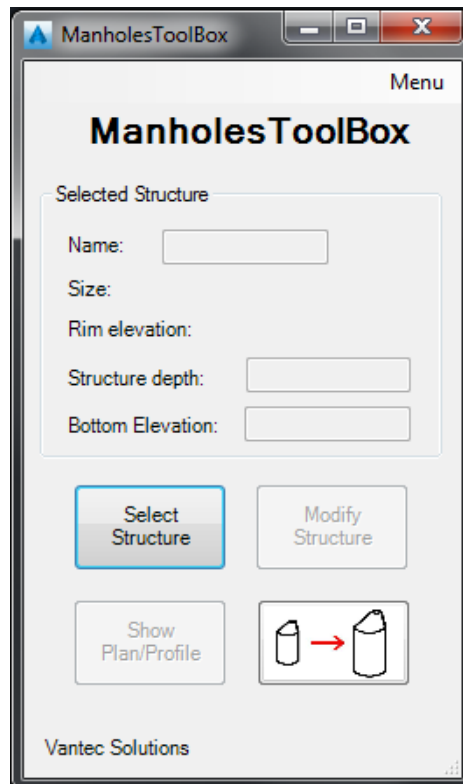


Figure 13



4.1. Show the Manhole in Plan and Profile

After pressing the *Select Structure* button, the user will be prompted to select a structure in plan or profile. The information of this structure will be shown in the app main window, including the name, part size, rim elevation, rim to sump depth and sump elevation, as shown in *Figure 14*. When clicking the “Show plan/profile” button, the program will create a new viewport and will zoom to the plan and corresponding profile view of the selected structure.

4.2. Change Structure Name

The user can enter a new name for the selected structure in the first textbox. The name will be updated after clicking the button “Modify Structure”.

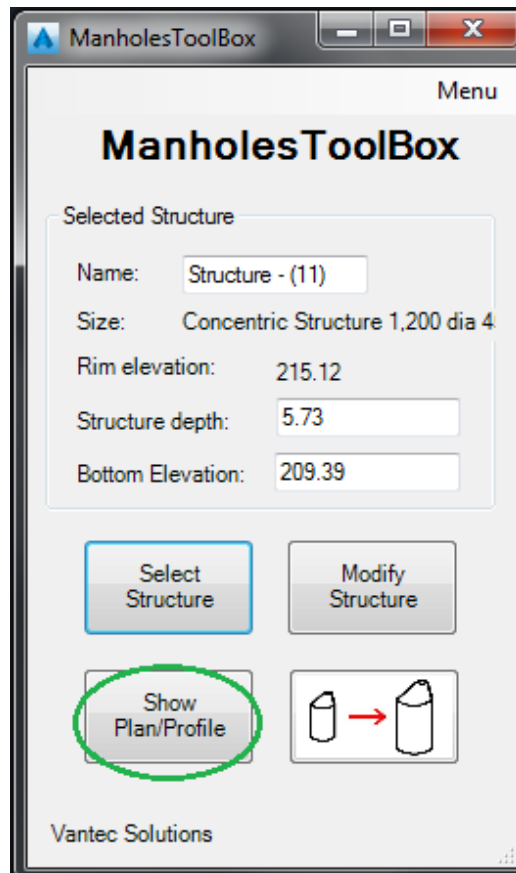


Figure 14

4.3. Modify Depth and Sump Elevation of Structure

The user can modify the depth and sump elevation of the selected structure by changing its values in the corresponding textboxes. At the moment the user enters a new depth or sump elevation value, the value in the other textbox is updated



automatically. **Note: the structure will be modified only after the user clicks the “Modify Structure” button.**

4.4. Swap Structure Parts

The program allows the user to quickly swap the part of single or multiple structures. After clicking the button shown in *Figure 15*, the Swap Structures Parts window shown in *Figure 16* will pop out. If the user has selected a structure using the *Select Structure* button in the main window, the *Modify selected structure* button will be enabled. After selecting a new Structure Family and Size and pressing this button, the previously selected structure will be updated.

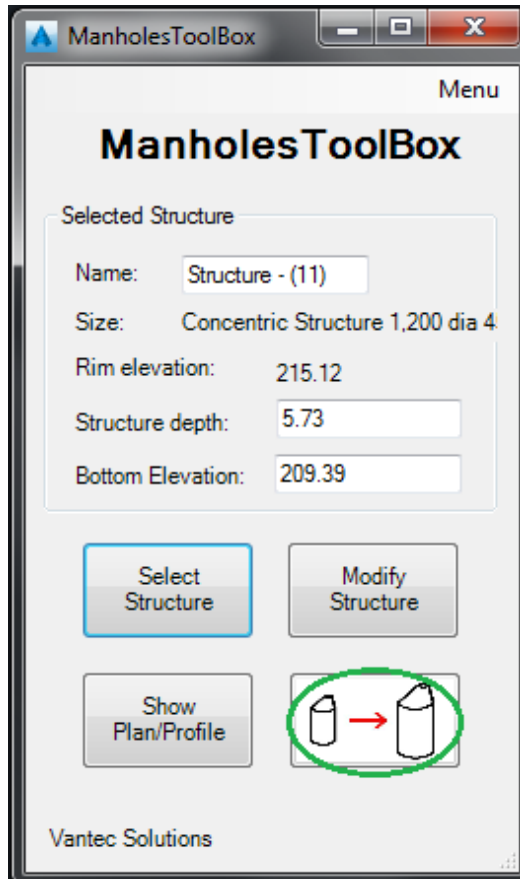


Figure 15

The user can also change multiple structures by pressing the *Select and modify multiple* structures button. The user will be prompted to select the structures in plan or profile view.

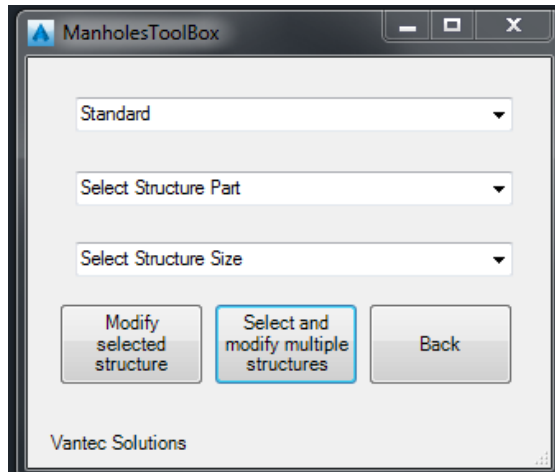


Figure 16

5. Support

Please let us know if you have further questions. Our contact email is support@vantecsolutions.com.