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# Asteel 2 Tutorial



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# Introduction

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## About This Guide

This guide will walk you through creating a simple job in Asteel 2. It is designed to help you start using Asteel 2 as quickly as possible.

For more detailed information about Asteel 2, see the Asteel 2 Operation Reference.



## CHAPTER 1

# Asteel 2 Tutorial

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## Creating a Job

All work done within Asteel 2 must be associated with a job. To create a new job, launch Asteel 2. After the Asteel 2 splash screen closes, you will be taken to the main menu in Asteel 2:



Select Job Setup from the main menu. Click the "New" button. The Create New Job screen will be displayed:



The 'Create New Job' dialog box contains the following fields and controls:


- Job Number :** A text input field.
- Fabricator :** A dropdown menu with 'CDS' selected.
- Units (I/M) :** A text input field with 'I' entered.
- Server Drive:** A dropdown menu with '[None]' selected.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom.

Enter a job number for the new job. Use the format YY-NNN where YY is the last two digits of the year and NNN is a number from 1 to 999. For example, you would enter 02-1 for the first job in 2002.

Select a fabricator from the fabricator list. Asteel 2 uses the fabricator to determine certain aspects of how the sheets and details are to be produced, such as where items go in the title block and what types of piecemarks are to be used for main material and subassemblies.

The units for the job can be either imperial or metric. The default is imperial.

Click OK on the Create New Job screen. Asteel 2 will create the job and display the main Job Setup menu:



The 'Job Setup' main menu window displays the following elements:

- Menu Bar:** File, Data Entry, Connection Cals, Maintenance, Help.
- Tab Bar:** Job Number, Title Block, Reference Elevations, Job Notes, Connection Chart, Connection Setup.
- Job Number:** A dropdown menu showing '02-1' and a 'New' button.
- Buttons:** A vertical stack of buttons: Title Block, Reference Elevations, Job Notes, Connection Chart, List Types, Connection Setup, Save, and Esc to Exit.
- Footer:** F1 Next Screen, F2 Prev Screen, F5 Help.



This screen provides access to all of the job setup information, such as the title block information and reference elevations. Asteel 2 does not require any of this information to be entered before you begin detailing. You can start producing details as soon as you specify a job number and a fabricator. Also, you can go back at any time to add or change the job setup information. For the purposes of this tutorial, we will accept the default values for these items.

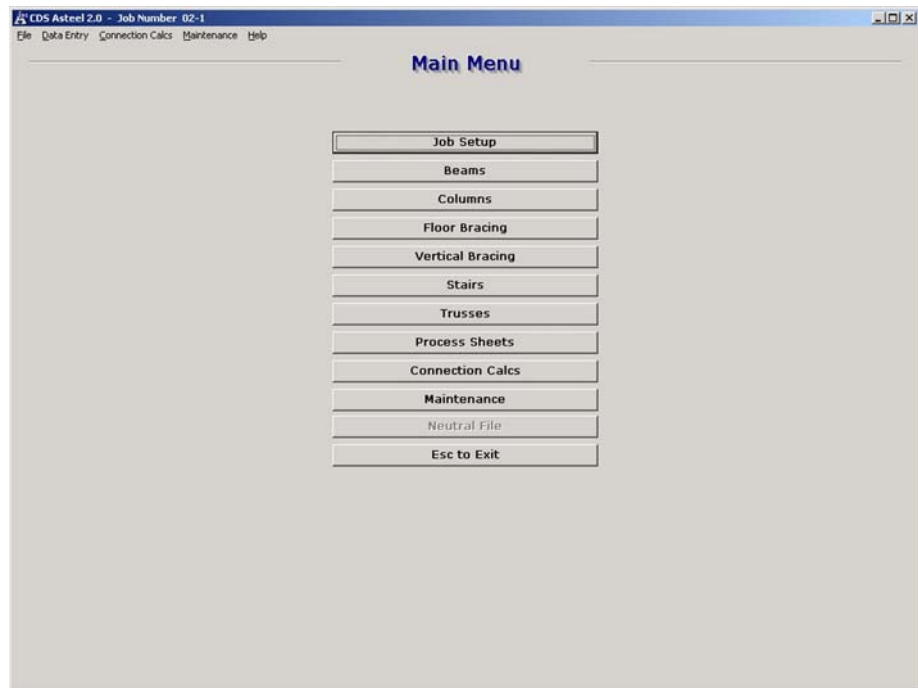
Press the escape key or click on the Esc to Exit button to exit job setup.

Now that you have a job created, you can begin detailing sheets in that job. This process is described in the next section.

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## Creating Detail Sheets

When you finished creating the job in the previous section of this tutorial, Asteel 2 returned to the main menu:



To begin entering information for beam sheets, click on the Beams button on the main menu. The Beam Drawing screen will be displayed:

The job number will default to the last job you were working on. Enter 1 for the drawing number. By default, the drawing will have six details with no sloping beams and no bracing. Click on the Beam Description tab at the top of the screen. The Beam Description screen will be displayed:

The following example shows how to fill this screen to create a detail for a single W14x22 beam that is 20 feet long and uses a standard welded clip angle to frame into W16x26 beams at each end.

On the Beam Description screen, enter the following:

- Quantity: 1 (1 beam)
- WP to WP: 20

**Note:** Most dimensions in Asteel 2 are specified as feet-inch-sixteenth (FIS) dimensions. FIS dimensions are entered as a string of one to three integers separated by spaces, such as '1 2 3' (the quote marks are not actually typed when the dimensions are entered). The first number is the number of feet in the dimension, the second number is the number of inches, and the third is the number of sixteenths. If only one number is supplied, it is interpreted as feet. If two numbers are supplied, they are interpreted as feet and inches. Thus, leading zeroes are required to specify a value that is just inches and sixteenths or just sixteenths. The following examples illustrate these points:

Input	Value
1	1'
1 6	1'-6"
1 6 4	1'-6 1/4"
0 6 0	6"
0 0 4	1/4"

- Member size: 14 22 (Asteel 2 will convert this to W14x22)

**Note:** Asteel 2 will assume the size is a W shape if a shape is not specified. Otherwise, the shape must be included. For example:

C10 20 would be converted to C10x20

14 22 would be converted to W14x22

Use the tab key to tab down into the Left End section. In the Left End section, enter:

- Type: 1 (welded clip angle)
- Size or Minus: 16 26 (size of supporting member)

**Beam Information**

Quantity	W.P. to W.P.	Member Size	Left End Elevation	Right End Elevation
1	20 0 0	W14 x 22		

Detail Length : 9      Steel : A36      Remarks :  
Camber :      Composite or Non-Composite : NC  
Miscellaneous :

**Beam Ends**

**Left End**

Type : 1      Condition :  
Size or Minus : W16 x 26  
Elev. Difference :  
Edge Distance :  
Gage :  
Rows : @      Spacing  
Top Block :  
Bottom Block :  
Miscellaneous :

**Right End**

Type :      Condition :  
Size or Minus :  
Elev. Difference :  
Edge Distance :  
Gage :  
Rows : @      Spacing  
Top Block :  
Bottom Block :  
Miscellaneous :

F1 Next Screen   F2 Prev Screen   F3 Copy Prev   F4 End Copy   F5 Help   F6 Copy All of End   F7 Clear Line   F8 Delete Line   F10 Clear All   F11 Copy All of Prev

The other fields (elevation difference, edge distance, gage, etc.) are only required for non-standard framing conditions.

To make the right end of the beam identical to the left, click inside any field for the right end, then press the F6 key or click the button at the bottom of the screen that says Copy All of End. All the fields for the left end are copied into the right end:

**Beam Information**

Quantity	W.P. to W.P.	Member Size	Left End Elevation	Right End Elevation
1	20 0 0	W14 x 22		

Detail Length : 9      Steel : A36      Remarks :  
Camber :      Composite or Non-Composite : NC  
Miscellaneous :

**Beam Ends**

**Left End**

Type : 1      Condition :  
Size or Minus : W16 x 26  
Elev. Difference :  
Edge Distance :  
Gage :  
Rows : @      Spacing  
Top Block :  
Bottom Block :  
Miscellaneous :

**Right End**

Type : 1      Condition :  
Size or Minus : W16 x 26  
Elev. Difference :  
Edge Distance :  
Gage :  
Rows : @      Spacing  
Top Block :  
Bottom Block :  
Miscellaneous :

F1 Next Screen   F2 Prev Screen   F3 Copy Prev   F4 End Copy   F5 Help   F6 Copy All of End   F7 Clear Line   F8 Delete Line   F10 Clear All   F11 Copy All of Prev

Copy all of other end

To add framing connections to the beam, click on the Beam Framing tab at the top of the screen. The Beam Framing screen will be displayed:

	SPACING	TYPE	GAGE	ROWS	SPA	C/C	THK	MISC	FOR
Line 1									
Line 2									
Line 3									
Line 4									
Line 5									
Line 6									
Line 7									
Line 8									
Line 9									
Line 10									
Line 11									
Line 12									
Line 13									
Line 14									
Line 15									
Line 16									
Line 17									
Line 18									
Line 19									
Line 20									
Line 21									
Line 22									

To create a connection five feet from the workline (centerline of the 16x26 at the left end) with two holes three inches apart using a gage of three inches, enter the following:

- spacing: 5
- type: W (web punching)
- gage: blank (defaults to 3")
- rows: 2
- spa: blank (defaults to 3" spacing between rows of holes)
- c/c: blank (defaults to fabricator's standard c/c)

CDS Asteel 2.0 - Job Number 02-1 - Beam Data Entry - Drawing Number 1 - Detail Number 1

File Data Entry Connection Calcs Maintenance Help

Drawing Beam Description Beam Framing

### Beam Framing

	SPACING	TYPE	GAGE	ROWS	SPA	C/C	THK	MISC	FOR
Line 1	5 0 0	W		2					
Line 2									
Line 3									
Line 4									
Line 5									
Line 6									
Line 7									
Line 8									
Line 9									
Line 10									
Line 11									
Line 12									
Line 13									
Line 14									
Line 15									
Line 16									
Line 17									
Line 18									
Line 19									
Line 20									
Line 21									
Line 22									

F1 Next Screen F2 Prev Screen F3 Copy Prev F4 Line Copy F5 Help F6 Copy All of Line F7 Clear line F8 Delete Line F10 Clear All F11 Copy All Of Prev

To create two more framing connections that are identical to the first and are spaced five feet apart, press the F6 key or click the button at the bottom of the screen that says Copy All of Line. Do this three times (the first time will just move the cursor from the first framing record to the second) to create the additional framing:

CDS Asteel 2.0 - Job Number 02-1 - Beam Data Entry - Drawing Number 1 - Detail Number 1

File Data Entry Connection Calcs Maintenance Help

Drawing Beam Description Beam Framing

### Beam Framing

	SPACING	TYPE	GAGE	ROWS	SPA	C/C	THK	MISC	FOR
Line 1	5 0 0	W		2					
Line 2	5 0 0	W		2					
Line 3	5 0 0	W		2					
Line 4									
Line 5									
Line 6									
Line 7									
Line 8									
Line 9									
Line 10									
Line 11									
Line 12									
Line 13									
Line 14									
Line 15									
Line 16									
Line 17									
Line 18									
Line 19									
Line 20									
Line 21									
Line 22									

F1 Next Screen F2 Prev Screen F3 Copy Prev F4 Line Copy F5 Help F6 Copy All of Line F7 Clear line F8 Delete Line F10 Clear All F11 Copy All Of Prev

Press F1 or click the button at the bottom of the screen that says Next Screen to go to the Beam Description for the second detail on the sheet:

The screenshot shows the CDS Asteel 2.0 software interface. The title bar indicates the job number is 02-1 and the detail number is 2. The menu bar includes File, Data Entry, Connection Calcs, Maintenance, and Help. The main window has tabs for Drawing, Beam Description, and Beam Framing. The current view is the Beam Description section, which is divided into two main parts: Beam Information and Beam Ends.

**Beam Information**

Quantity:  W.P. to W.P.:  Member Size:  Left End Elevation:  Right End Elevation:

Detail Length:  Steel:  Remarks:

Camber:  Composite or Non-Composite:

Miscellaneous:

**Beam Ends**

**Left End**

Type:  Condition:

Size or Minus:

Elev. Difference:

Edge Distance:

Gage:

Rows:  @  Spacing

Top Block:

Bottom Block:

Miscellaneous:

**Right End**

Type:  Condition:

Size or Minus:

Elev. Difference:

Edge Distance:

Gage:

Rows:  @  Spacing

Top Block:

Bottom Block:

Miscellaneous:

The bottom of the screen features a row of function key buttons: F1 Next Screen, F2 Prev Screen, F3 Copy Prev, F4 End Copy, F5 Help, F6 Copy All of End, F7 Clear Line, F8 Delete Line, F10 Clear All, and F11 Copy All Of Prev.

To make the second detail identical to the first except with a different supporting member size on the right, press F11 or click the button at the bottom of the screen that says Copy All of Previous to copy all the data from the Beam Description of the previous detail:

CDS Asteel 2.0 - Job Number 02-1 - Beam Data Entry - Drawing Number 1 - Detail Number 2

File Data Entry Connection Calcs Maintenance Help

Drawing Beam Description Beam Framing

### Beam Information

Quantity	W.P. to W.P.	Member Size	Left End Elevation	Right End Elevation
1	20 0 0	W14 x 22		
		Detail Length : 9	Steel : A36	Remarks :
		Camber :	Composite or Non-Composite : NC	
Miscellaneous :				

### Beam Ends

#### Left End

Type : 1	Condition :
Size or Minus : W16 x 26	
Elev. Difference :	
Edge Distance :	
Gage :	
Rows :	Spacing
Top Block :	
Bottom Block :	
Miscellaneous :	

#### Right End

Type : 1	Condition :
Size or Minus : W16 x 26	
Elev. Difference :	
Edge Distance :	
Gage :	
Rows :	Spacing
Top Block :	
Bottom Block :	
Miscellaneous :	

F1 Next Screen F2 Prev Screen F3 Copy Prev F4 End Copy F5 Help F6 Copy All of End F7 Clear Line F8 Delete Line F10 Clear All F11 Copy All of Prev

Click into the Size or Minus field for the right end, and change the member size to “16 40” (Asteel 2 will convert this to “W16x40”):

CDS Asteel 2.0 - Job Number 02-1 - Beam Data Entry - Drawing Number 1 - Detail Number 2

File Data Entry Connection Calcs Maintenance Help

Drawing Beam Description Beam Framing

### Beam Information

Quantity	W.P. to W.P.	Member Size	Left End Elevation	Right End Elevation
1	20 0 0	W14 x 22		
		Detail Length : 9	Steel : A36	Remarks :
		Camber :	Composite or Non-Composite : NC	
Miscellaneous :				

### Beam Ends

#### Left End

Type : 1	Condition :
Size or Minus : W16 x 26	
Elev. Difference :	
Edge Distance :	
Gage :	
Rows :	Spacing
Top Block :	
Bottom Block :	
Miscellaneous :	

#### Right End

Type : 1	Condition :
Size or Minus : W16 x 40	
Elev. Difference :	
Edge Distance :	
Gage :	
Rows :	Spacing
Top Block :	
Bottom Block :	
Miscellaneous :	

F1 Next Screen F2 Prev Screen F3 Copy Prev F4 End Copy F5 Help F6 Copy All of End F7 Clear Line F8 Delete Line F10 Clear All F11 Copy All of Prev

Use F1/Next-Screen to go to the Beam Framing for the second detail, then use F11/Copy-All-of-Previous to copy all the framing from the first detail:



	SPACING	TYPE	GAGE	ROWS	SPA	C/C	THK	MISC	FOR
Line 1	500	W		2					
Line 2	500	W		2					
Line 3	500	W		2					
Line 4									
Line 5									
Line 6									
Line 7									
Line 8									
Line 9									
Line 10									
Line 11									
Line 12									
Line 13									
Line 14									
Line 15									
Line 16									
Line 17									
Line 18									
Line 19									
Line 20									
Line 21									
Line 22									

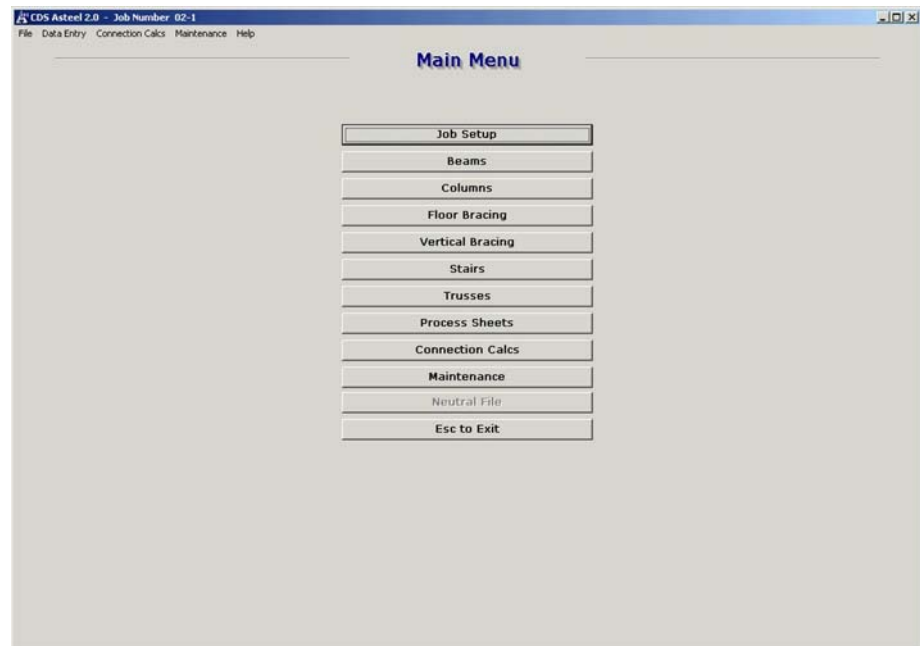
Press the Esc key to exit the drawing. Asteel 2 will prompt you to save the drawing:

Click Yes to save the drawing.

Now that you've entered the data for a sheet, you can process that data to create an AutoCAD drawing. This procedure is described in the next section.

## Processing Detail Sheets

This section of the tutorial will show you how to process the beam data into an AutoCAD drawing of beam details. Start at the Asteel 2 main menu screen:

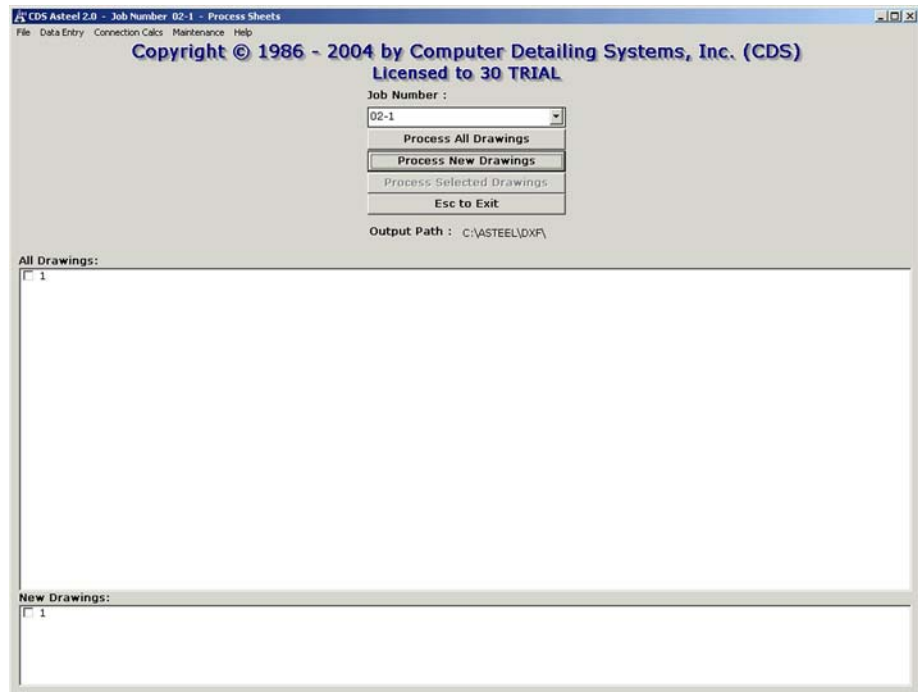


Click on the Process Sheets button.

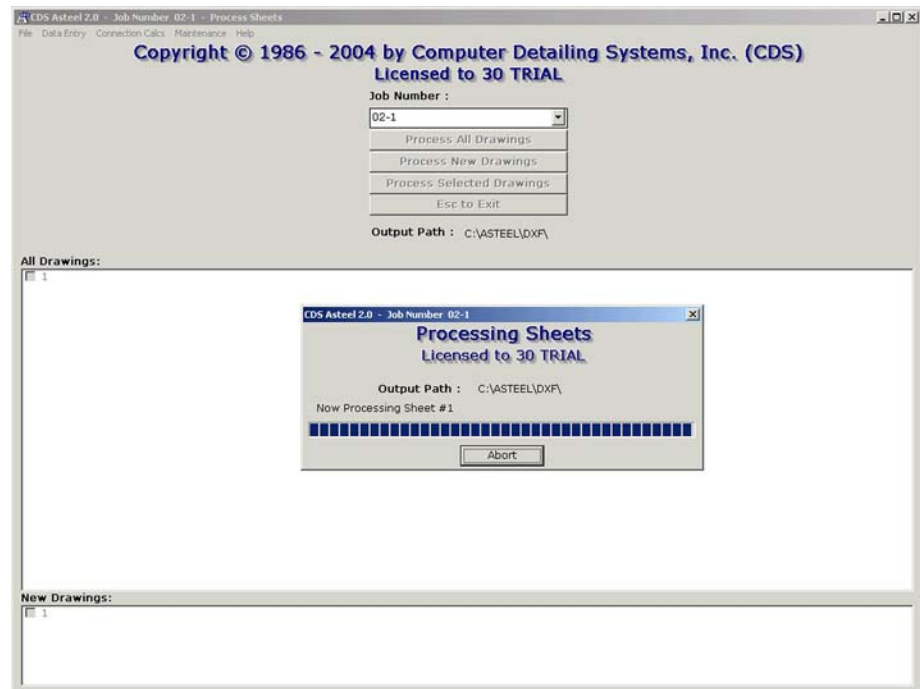
You may be prompted for authorization codes. Contact CDS at (843) 552-6741 for these codes. Our hours of operation are 7:30 AM to 4:00 PM (EST), Monday through Friday. The Authorization Required screen is shown below:

The screenshot shows the 'Authorization Required' dialog box. It has a title bar with 'Authorization Required' and a close button. The main text reads: 'Asteel must be authorized before it will generate drawings. Contact CDS toll free at (888)263-5892, by fax at (843)552-3455, or by email at cds@asteel.com with the key codes shown below. Once you receive the authorization codes from CDS, enter them below.' Below the text are four input fields: 'Current Date:' with '07/29/2004', 'Current Time:' with '09:19:00', 'Key Code #1:' with '33007295', and 'Key Code #2:' with '155909'. At the bottom are two empty input fields for 'Authorization Code #1:' and 'Authorization Code #2:'. At the very bottom are 'OK' and 'Cancel' buttons.

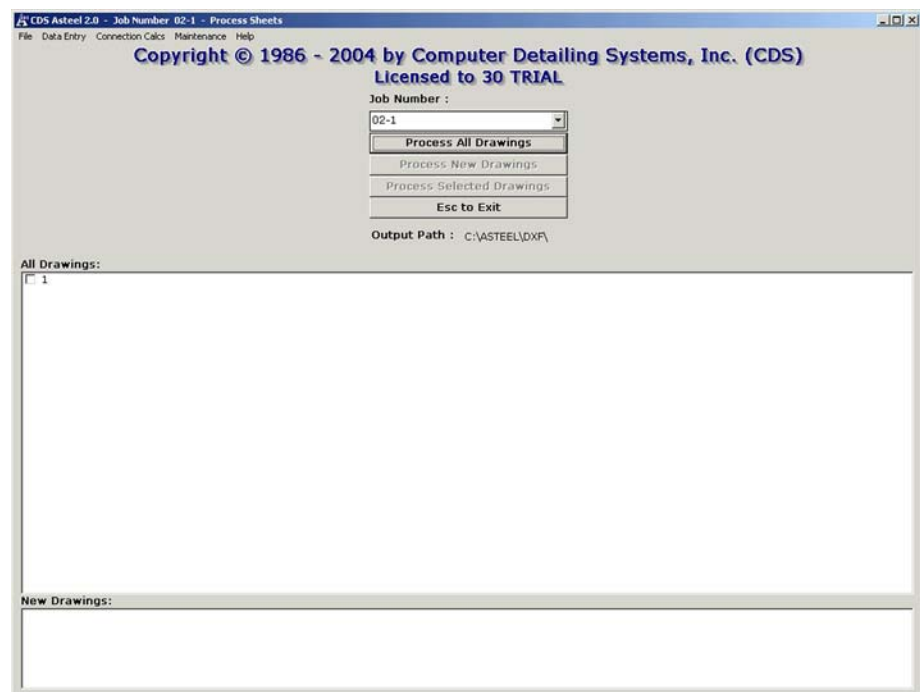
The Process Sheets screen will be displayed. This screen shows two lists of drawings for the current job. The first list shows all drawings in the job, and the second list shows only the new drawings (drawings that have not yet been processed into AutoCAD files):



Click Process New Drawings to convert the data you entered for the beams into an AutoCAD DXF file. The DXF files will be created in the output path listed below the buttons. The status area in the middle of the screen will be updated to indicate which file is being processed:

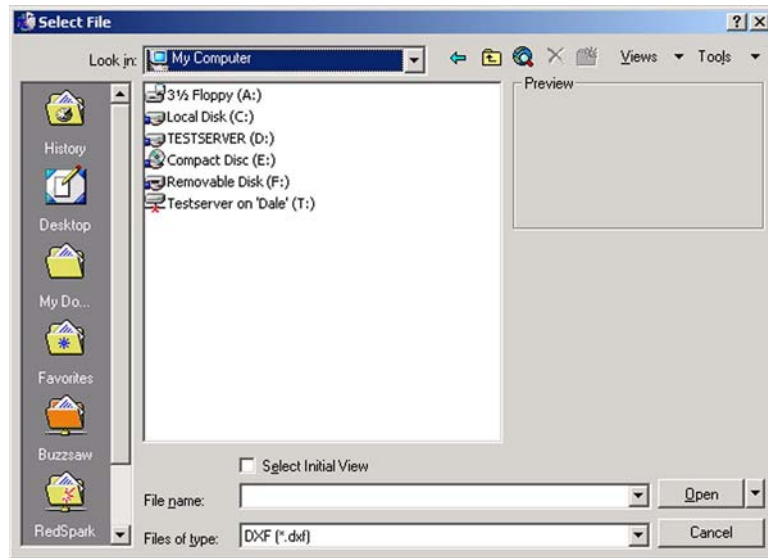


When processing is complete, the status area is updated again to reflect this:

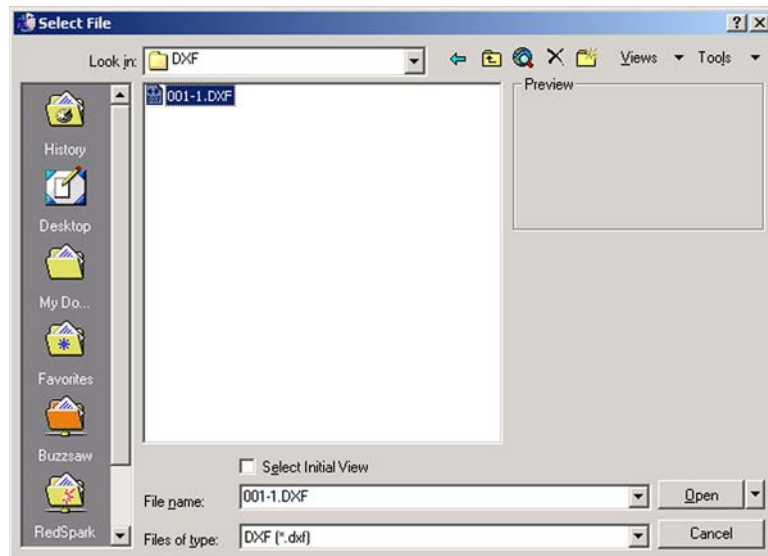


The beam data has been processed into an AutoCAD DXF file and placed in the DXF output folder.

To view the beam details, run AutoCAD. Choose File/Open from the main AutoCAD menu. The Select File screen will be displayed:

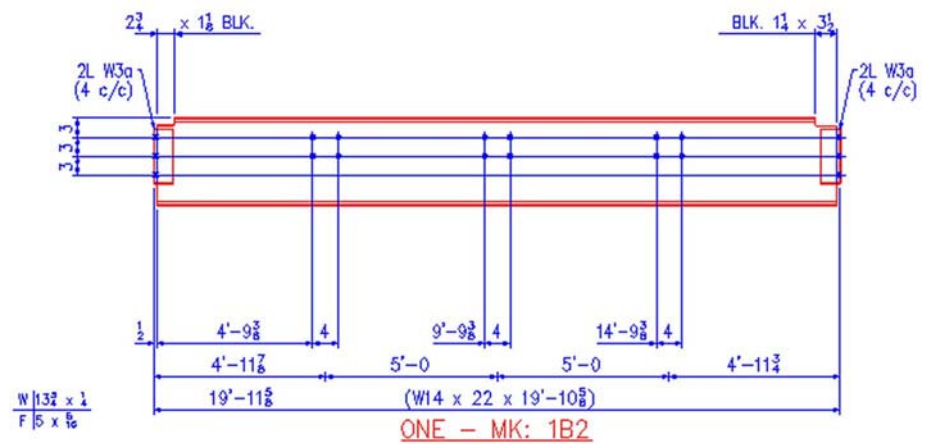
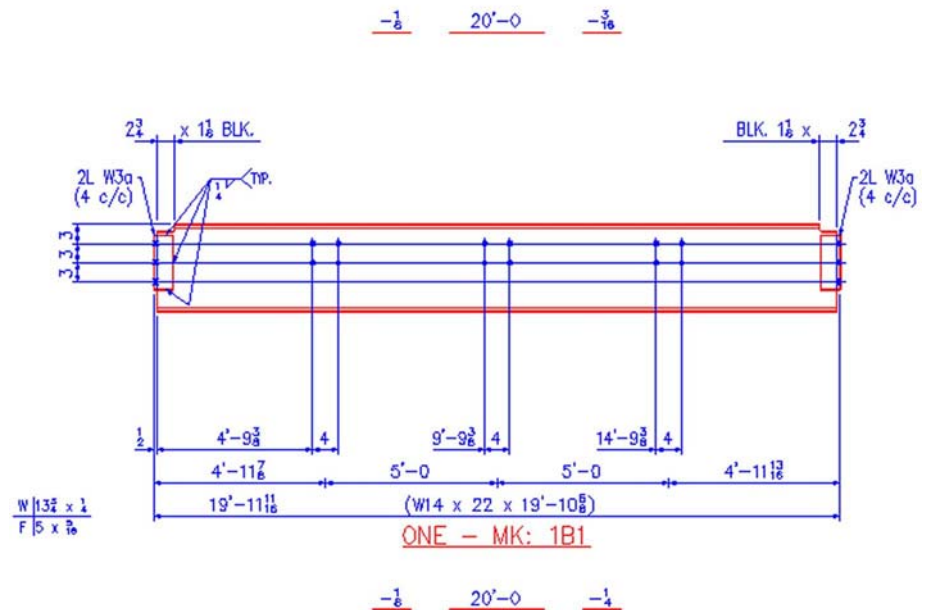


Use the mouse to navigate to the DXF output directory that was shown on the Process Sheets screen in Asteel 2:



The DXF file you created will be named <job>-<drawing>.DXF, so job 1, sheet 1 is in 001-1.DXF. Click on this file name to highlight it, then click the Open button to open the drawing in AutoCAD. Use zoom/extends to see the details.

The details produced by Asteel 2 are shown below:



From this point, you can modify the details manually, or you can go back into Asteel 2 and change the beam data, then re-process the sheet to produce a new version of the DXF file.

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