California Polytechnic University - Pomona

Department of Theatre and New Dance

Mainstage Vectorworks File

General Instruction and Reference

By Trevor Edwards - Spring 2019

Contents

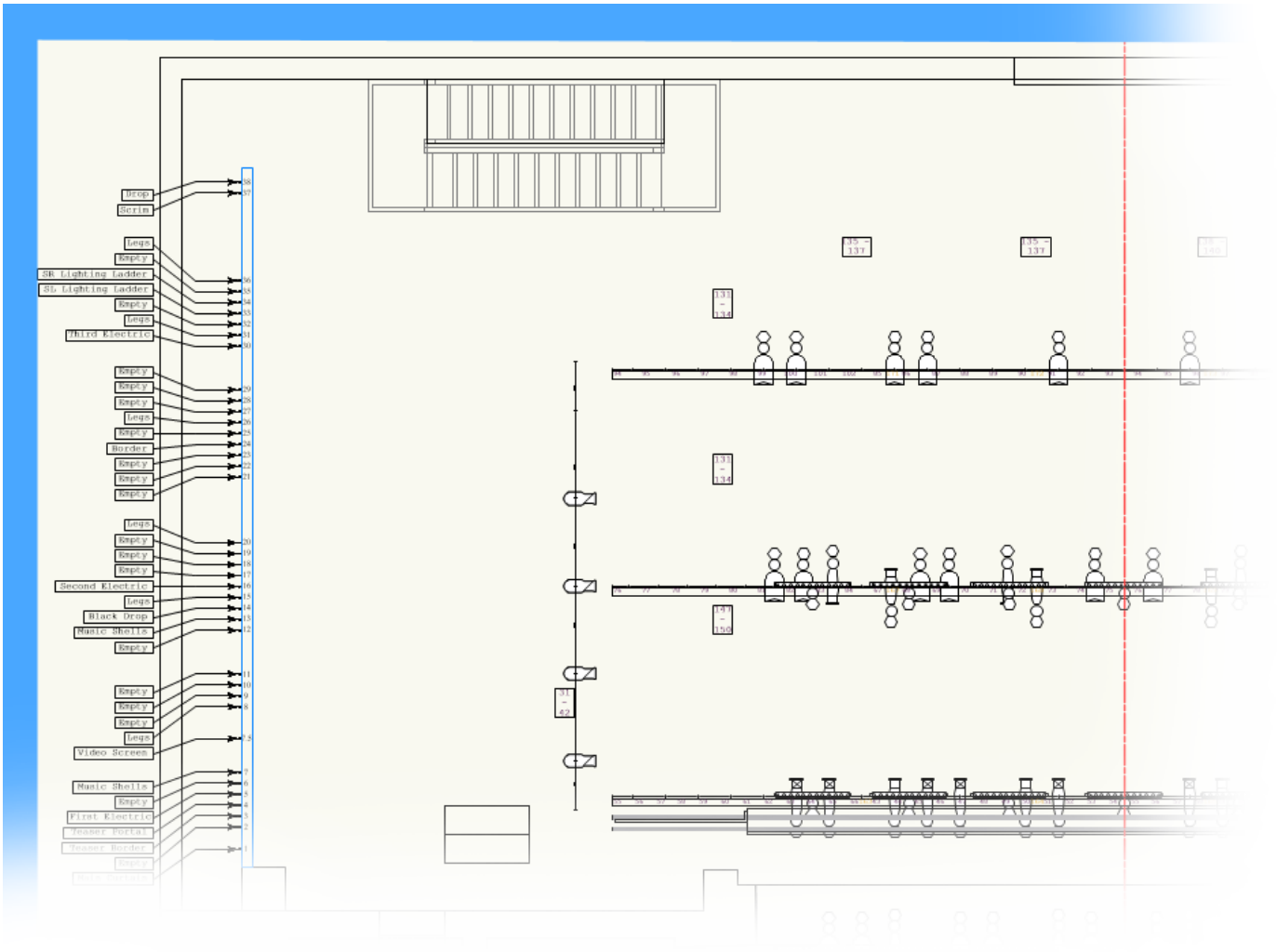
Introduction

Welcome to the 2019 Version of the California Polytechnic University Pomona Department of Theatre and New Dance's Mainstage Vectorworks file! In the exciting and ever changing world of themed entertainment and theatrical productions, Vectorworks serves as a drafting program with a heavy emphasis on lighting design. This file's primary purpose is to replace the original mainstage Vectorworks file originally created in 2009. Utilizing Vectorworks 2018, I crafted this file to be as intuitive and open to modification as possible while utilizing the suite of tools available to me at the time in the program. Inspired to take the original file and expand upon its set of information, I sought to bring it into the world of 3-dimensions and to give it the openness needed for the wide range of theatrical designers to use and create with. While my intentions were to keep the file as simplistic as possible, some elements were used to help keep organization and clarity at the forefront, therefore this instruction manual was created to help guide the file's users through the maze of features and elements. So once again welcome and I hope that you are able to get all you need out of this file and more.

Signed,

Trevor Edwards - Spring 2019

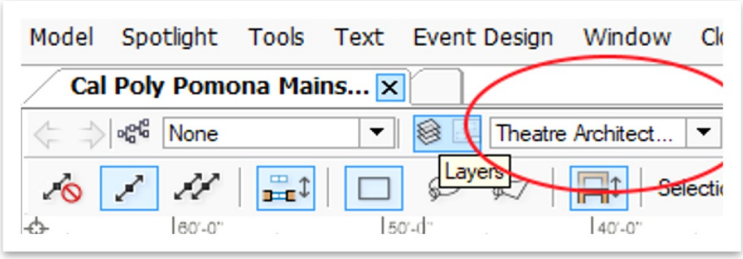
Basics


Drop
Scrim
Legs
Empty
SR Lighting Ladder
SL Lighting Ladder
Empty
Legs
Third Electric
Empty
Empty
Empty
Legs
Empty
Border
Empty
Empty
Empty
Legs
Empty
Empty
Empty
Second Electric
Legs
Black Drop
Music Shells
Empty
Empty
Empty
Empty
Legs
Video Screen
Music Shells
Empty
First Electric
Teaser Portal
Teaser Border
Empty
Main Curtain

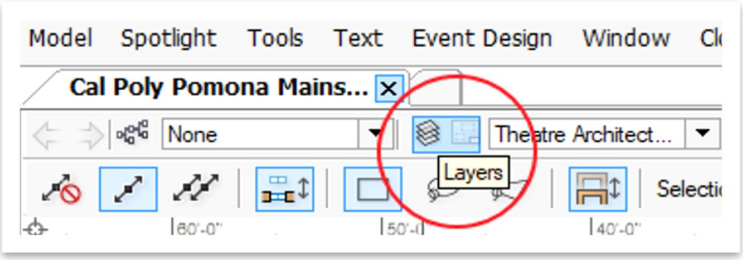
A feature in Vectorworks 2018 and its past iterations is the ability to organize various elements through the use of layers called Design Layers. Design Layers allow designers to create elements in a single environment with the ability to work in separate workspaces. This set of different workspaces prevents a crossover of design elements with the continued capability to see the other layers in both solid and greyed out forms. This section of the guide will run you through all of the design layers included in the mainstage Vectorworks file.

Design Layer Navigation

First, to access the Design Layers you have 3 options readily available in the workspace. The first [Figure 1.1] is located along the top under the project tab. This dropdown tab allows you to quickly select the various layers you have at your disposal such as the design layers and the sheet layers.

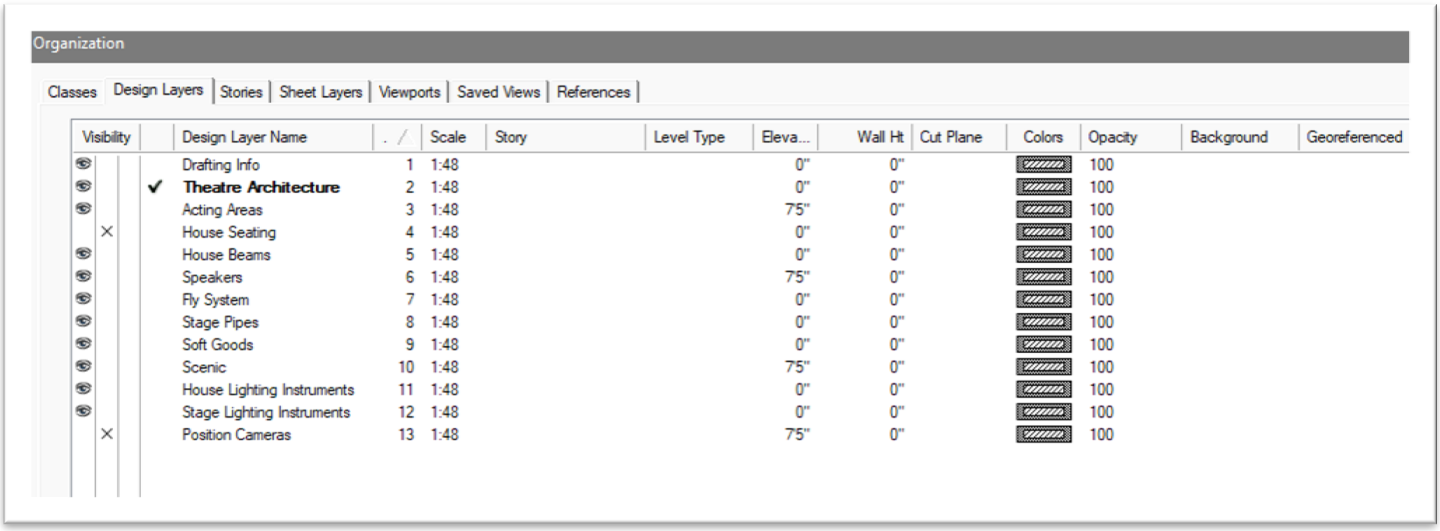


[Figure 1.1] - Layers Dropdown Tab



[Figure 1.2] - Layers Organization Tab

The second option is located right next to the dropdown box [Figure 1.2]. This options opens up the organization pop-up window. This window [Figure 1.3] allows you to easily access the various options such as design layers, classes, viewports, sheet layers, and other options that were not used in this file but can be used should you so need them. When opening this window using the layers button, the pop-up will open on the Design Layers tab. This tab will give you a full view of the Design Layers in the file and allow you to see and edit the information contained. Here you can see the names of the layers along with their relative scale, the layer's height, and the layer's visibility.

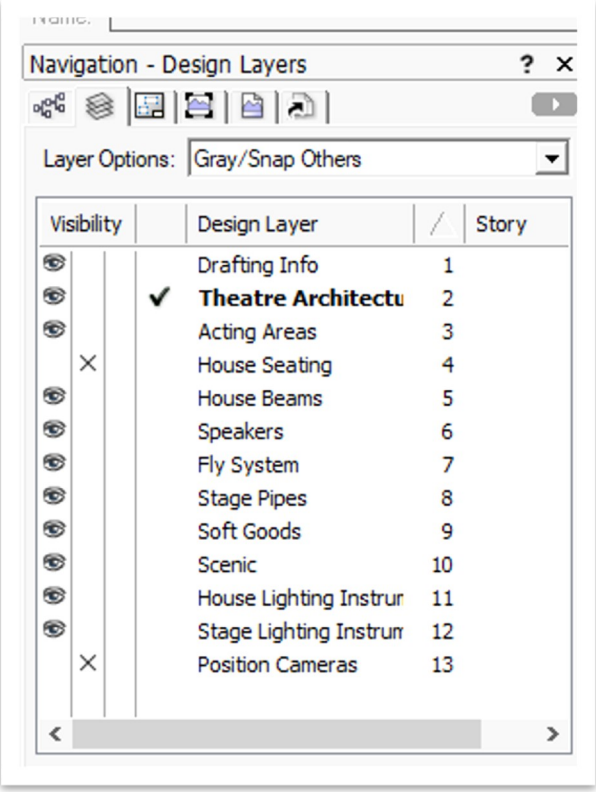


[Figure 1.3] The Organization Window. Note the different tabs allowing you to change between classes, sheet layers, etc.

Visibility, being the first column, allows you to change the layer's visibility from seen (represented by the eye), hidden (represented by the "X"), and greyed (represented by a grey eye [Not shown]). The greyed option is only applicable if the layers option, shown at the top of Figure 1.4, is on either "Show Others," "Show/Snap Others," and "Show/Snap/Modify Others." Any of the other options will automatically grey the other design layers, or hide them completely. Your active design layer can be recognized by the bolded black text and the checkmark (√) in the second column. The third column features the Design Layer Name, which is labeled already in this file. Each layer is designed to contain the labeled segments fully, such as the Theatre Architecture or the House Lighting Instruments as shown. Column four is the Stacking Order. This can be changed by either double clicking the layer and editing the Stacking Order box or by clicking and dragging the layer's corresponding number. The fifth column is the scale, which in this project is 1:48. In the sixth column is Stories, which were not used in this project but can help differentiate layers as stories such as the first or second story of a building. The Level Type column is attributed to the Stories column and defines the parameters for that Story. The seventh column is Elevation, which sets the base level for the design layer when placing objects or drawings. The eighth section is Wall Height, which is used to define the Story's wall heights and was again unused in

this project. The ninth column is the Cut Plane, again unused but it allows the walls to be removed from certain views for easy viewing. The tenth section is Color, which establishes a default color palette and fill for the design layer. It was left at the base for this project with individual elements colored independently. Eleventh column is Opacity, which can be set separately from the greyed setting and can allow a customized grey scale layout for each layer. The last two columns, Background and Georeference were unused in this project, but respectively allowed an image background for when using Renderworks and created a georeferenced base for each layer.

In Figure 1.4 is the final Design Layer navigation window. It is located on the bottom of the Vectorworks information panel on the right side of the screen. This panel is laid out similarly to the Organization window previously mentioned. The small boxes along the top navigate between Classes, Design Layers, Sheet Layers, and more. The information here is more concise and has only five columns for the quickest navigation between layers. Again, Visibility is first with the three separate columns indicating visible (Eye), hidden (X), or greyed (Grey Eye [Not Shown]). Following this is the active layer checkmark (√) and the Design Layer Names. The active layer's name is bolded. The fourth column is the Stacking Order for the layers and is followed up by the Story column, again unused in this project.



[Figure 1.4] The Navigation - Design Layers panel located on the lower right of the Vectorworks information panel.

Design Layer Glossary

Each individual design layer was created with the intent of holding specific elements found in the file. This glossary will detail each layer and its general contents. They will be ordered in the Stacking Order found in the file.

1. Drafting Info - Contains drafting elements such as the center line, door swing radius, and the flat representations of the vertical lighting setups including the stage lighting ladders and the flippers. The lighting information is hidden by classes in the original file.

2. Theatre Architecture - Contains the structural elements of the theatre space such as the walls, doors, air ducts, staircase, and more. Some segments are turned off by default through classes including the house ceiling and floor.

3. Acting Areas - Contains the acting areas. Currently empty for the most freedom and customization per show.

4. House Seating - Contains the rows of seating in the house. Both the classes for each row, and the design layer are turned off by default. This layer is a little overly taxing on computers and is only recommended to be turned on should the seating be needed for specific designs.

5. House Beams - The lighting beams found in the house. Contains Beam 1, 2, and 3 and the house lighting boxes on house left and right.

6. Speakers - Contains the permanent speaker positions in the house and is open to be adjusted for speaker positions on the stage.

7. Fly System - Contains all the information for the visual representation of the fly system, such as the fly numbers, the labeling on each fly, and the vertical ropes on stage right.

8. Stage Pipes - Contains the pipes on the stage fly system, including the stage lighting pipes.

9. Soft Goods - Contains all the soft goods located on stage, including the main curtain, legs, and scrims.

10. Scenic - An empty design layer with the intention of being used by scenic designers.

11. House Lighting Instruments - Contains all the lighting instruments in the house.

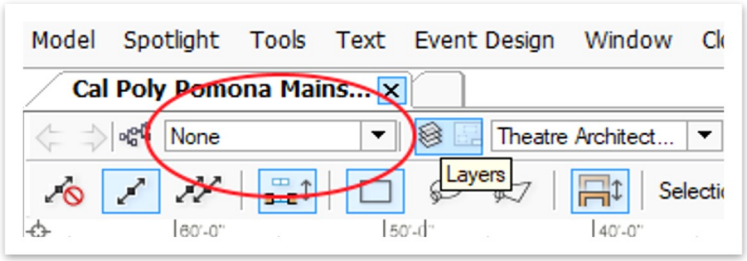
12. Stage Lighting Instruments - Contains all the lighting found on the stage with the flippers and proscenium included.

13. Position Cameras - Contains Renderworks cameras. The design layer and classes for the cameras are off by default, and the cameras are locked.

Classes are an organization tool that allows you to place objects into a set category that can span multiple design layers and give you the ability to alter the visibility and function of that said set. In the Mainstage Vectorworks file, classes were used to keep track of the smaller details in the grand overarching design layers presented in Chapter 1 - Section 1.

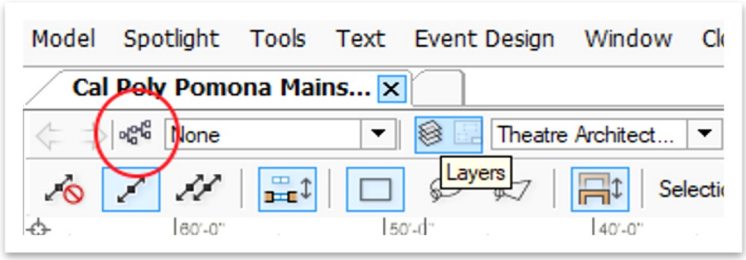
Classes Navigation

Navigation of is roughly similar to the navigation of Design Layers, albeit with a emphasis on the subclasses contained in each class. The first way to navigate is the dropdown menu located under the file tab towards the top of the workspace. This dropdown menu [Figure 1.5] allows you to quickly select a class to have as the primary active class. Anytime a class is selected as the active class, any objects or items created while it is selected will automatically be placed into that class.

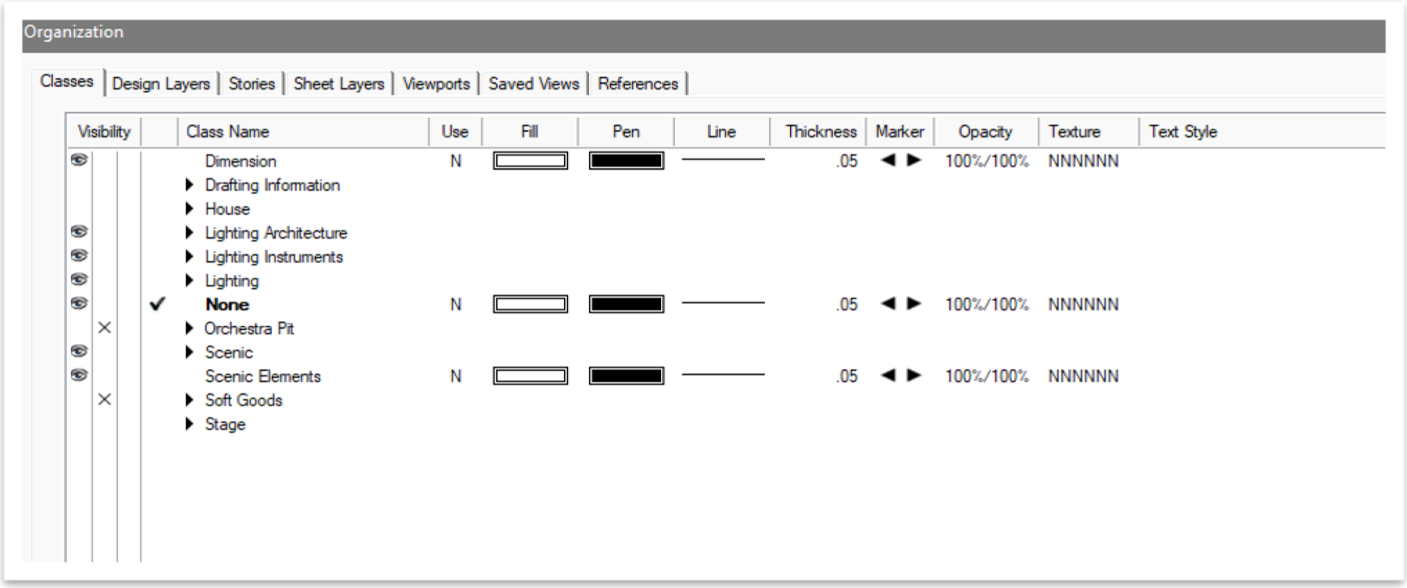


[Figure 1.5] The Class Dropdown Menu

A second way to view classes is the Classes Organization Menu button, seen in Figure 1.6. This button opens the organization pop-up window just as the Layers button does, but in this instance the pop-up opens in the Classes menu. Here you can find the Class names, various Class settings, and the Class visibilities, much like in the Design Layers. In Figure 1.7, it is shown the setup for the Classes tab in the organization menu, and will be expanded upon further later on.



[Figure 1.6] Classes Organization Menu Button



[Figure 1.7] The Organization Menu displaying the Classes tab

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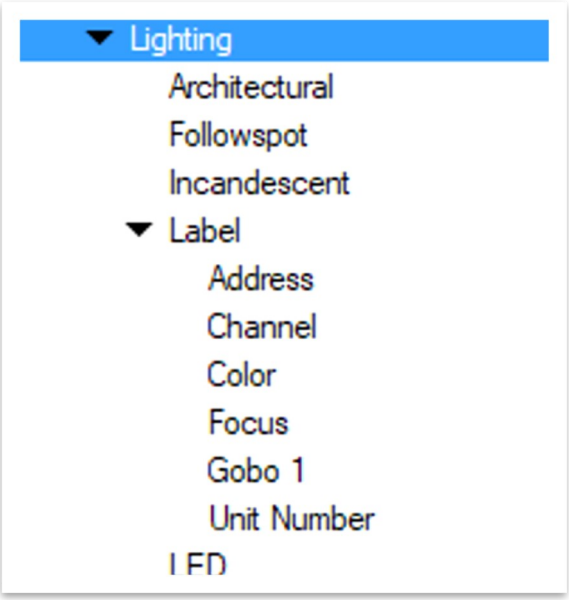
In the Organization menu for Classes [Figure 1.7] the setup displays a set of columns, much like the Design Layers. The first column is Visibility, represented by three sub-columns. The symbols in these columns represent Visible (Eye), Hidden (X), and Greyed (Grey Eye [Not shown]). Following that is the Active Class column, which shows the currently actively selected class via a checkmark (✓). The third column is the Class Name column. Here the individual classes are given their own specific names. Selected classes are shown through the bolded text. A special note for the Class Name section is the inclusion of black triangles (▶). These black triangles indicate subclasses included in the class itself which will be gone over shortly. The following column is Use. Use indicates that the class does or does not use the class settings and attributes. The fifth column is the Fill column. This column indicates the class or subclass' fill settings and color. The column after this, Pen, is similar in that it indicates the color for the drawn lines used in that class or subclass. Continuing with the topics of lines, the next column is Line, and shows the line style used in that class or subclass. Thickness follows after which is a quick reference to the line thickness in millimeters. The Markers column indicates the shape and stylings of the end of line markers, should they be used in that class. The tenth column, Opacity, shows both the opacity

percentages for the line and fill in the given class and subclass. Tab eleven, Texture, indicates the use of textures in the class or subclass. The final tab, Text, details the specifics of the text included in the class, should the class be used to categorize text information.

Subclasses

Subclasses are classes under a primary class. In Vectorworks, classes can be reduced down to four layers, indicated by arrows (▶ for closed, ▼ for open). In Figure 1.9, it is shown a class, Lighting, has several subclasses beneath it. The Lighting class and the subclasses included are automatically generated when using the Vectorworks lighting instruments and the Vectorworks label legend tool. When creating new classes, the format used by Vectorworks is "Class - Subclass - Secondary Subclass - Third Subclass." Any further attempts to create subclasses beyond the third will just create a subclass with the hyphenated notation instead of a divided subclass. Subclasses allow finer organization and labeling when it comes to the grander view of the entire file. Smaller elements can be sectioned by sides of stage or even between the house and the stage itself.



[Figure 1.9] Lighting Class and its subsequent subclasses.

Classes Glossary

Each individual Class was created with the intent of holding specific elements found throughout the file. Some classes were automatically generated according to the specifications of Vectorworks' programing. This glossary will detail each class and subclass and their general content. They will be ordered alphabetically as per the Vectorworks layout. Any element that is off by default will be noted.

1. Dimension - Contains dimension labeling, specifically used when using sheet layers to present drafted elements.

2. Drafting Information - Contains elements needed for presenting drafted elements.

2.1. Cameras - Contains the Renderworks Cameras. Off by default.

2.1.1. Extreme House Left - Camera located on the extreme far left seat of the house. Off by default.

2.1.2. Extreme House Rear - Camera located on the extreme far rear seat of the house. Off by default.

2.1.3. Extreme House Right - Camera located on the extreme far right seat of the house. Off by default.

2.1.4. House Center - Camera located on the center seat in the center of the house. Off by default.

2.2. Centerline - The centerline. Indicated by a long dash, short dash red line.

2.3. Door Swing Radius - The radius of the doors found in the stage and house. Indicated by a green long dash, short double dash line.

2.4 House - House labeling for subclasses.

2.4.1. Beams - House Beams labeling for subclasses.

2.4.1.1. Beam 1 Circuits - Circuits found on House Beam 1

2.4.1.2. Beam 2 Circuits - Circuits found on House Beam 2

2.4.1.3. Beam 3 Circuits - Circuits found on House Beam 3

2.5. House Right - Labeling to indicate House Right for Subclasses. Off by default.

2.5.1. Light Box - House Right Light Box vertical representation. Off by default.

2.6. House Left - Labeling to indicate House Left for Subclasses. Off by default.

2.6.1. Light Box - House Left Light Box vertical representation. Off by default.

2.7. Lighting - Drafting information involving lighting. Instruments shown on flat vertical representations.

2.7.1. House - Labeling to indicate House Instruments on flat vertical representations. Off by default.

2.7.1.1. House Left Light Box - Instruments hung in the House Left Lighting Box drawn in the flat vertical representations. Off by default.

2.7.1.2. House Right Light Box - Instruments hung in the House Right Lighting Box drawn in the flat vertical representations. Off by default.

2.7.2. Stage - Labeling to indicate Stage Instruments on flat vertical representations. Also indicates Stage and Flipper circuits.

2.7.2.1. Flipper Circuits - Visual indicator of the circuits located in the flippers on stage left and stage right.

2.7.2.2. Floor Circuits - Visual indicator of the circuits found in the floor of the stage and along the walls of the stage.

2.7.2.3. Stage Left Flippers - Instruments hung in the stage left flippers on the flat vertical representation. Off by default.

2.7.2.4. Stage Left Ladder- Instruments hung in the stage left ladder on the flat vertical representation. Off by default.

2.7.2.5. Stage Right Flippers - Instruments hung in the stage right flippers on the flat vertical representation. Off by default.

2.7.2.6. Stage Right Ladder - Instruments hung in the stage right ladder on the flat vertical representation. Off by default.

2.7.3. Lighting System Information - Text box located on the lower left indicating the details of the lighting system found on Mainstage.

2.8. Stage - Labeling to indicate the subclasses for the fly system and circuits found on the stage.

2.8.1. Fly System - Labeling to indicate the notation for the Fly System.

2.8.1.1. Numbers - Numbering system on the fly rail.

2.8.1.2. Purpose - The purpose of each fly line or its contents.

2.8.2. Pipes - Labeling to indicate the circuits on the stage lighting pipes.

2.8.2.1. First Electric Circuits - Circuits found on the first electric.

2.8.2.2. Ladder Circuits - Circuits found on the stage left and right ladders.

2.8.2.3. Pro Electric Circuits - Circuits found on the proscenium electric.

2.8.2.4. Second Electric Circuits - Circuits found on the second electric.

2.8.2.5. Third Electric Circuits - Circuits found on the third electric.

2.9. Stage Left - Labeling to indicate the subclasses for Stage Left. Off by default.

2.9.1. Flipper Trusses - Flat representation of the vertical trusses attached to the stage left flippers. Off by default.

2.9.2. Ladder - Flat representation of the vertical ladder on stage left. Off by default.

2.10. Stage Right - Labeling to indicate the subclasses for Stage Right. Off by default.

2.9.1. Flipper Trusses - Flat representation of the vertical trusses attached to the stage right flippers. Off by default.

2.9.2. Ladder - Flat representation of the vertical ladder on stage right. Off by default.

3. House - Contains structural elements found in the house.

3.1. Ceiling - Ceiling of the house. Off by default.

3.2. Floor - Floor of the house and its subclasses. Off by default.

3.2.1. Main - The main floor of the house. Off by default.

3.2.2. Orchestra Cover - Floor covering the orchestra pit. Off by default.

3.3. Seating - Seating rows labeled by subclasses. Off by default.

3.3.1. Row A - Row A, third row from the stage. Off by default.

3.3.2. Row AA - Row AA, second row from the stage. Off by default.

3.3.3. Row B - Row B, fourth row from the stage. Off by default.

3.3.4. Row BB - Row BB, first row from the stage. Off by default.

3.3.5. Row C - Row C, fifth row from the stage. Off by default.

3.3.6. Row D - Row D, sixth row from the stage. Off by default.

3.3.7. Row E - Row E, seventh row from the stage. Off by default.

3.3.8. Row F - Row F, eighth row from the stage. Off by default.

3.3.9. Row G - Row G, ninth row from the stage. Off by default.

3.3.10. Row H - Row H, tenth row from the stage. Off by default.

3.3.11. Row J - Row J, eleventh row from the stage. Off by default.

3.3.12. Row K - Row K, twelfth row from the stage. Off by default.

3.3.13. Row M - Row M, thirteenth row from the stage. Off by default.

3.3.14. Row N - Row N, fourteenth row from the stage. Off by default.

3.3.15. Row O - Row O, fifteenth row from the stage. Off by default.

3.3.16. Row P - Row P, sixteenth row from the stage. Off by default.

3.3.17. Row Q - Row Q, seventeenth row from the stage. Off by default.

3.3.18. Row R - Row R, eighteenth row from the stage. Off by default.

3.3.19. Row S - Row S, nineteenth row from the stage. Off by default.

3.3.19. Row T - Row T, twentieth row from the stage. Off by default.

3.3.19. Row U - Row U, twenty-first row from the stage. Off by default.

3.4. Speakers - Speaker placements found in the house.

3.5. Walls - Label for subclasses containing the structural elements of the house.

3.5.1. Back - The back wall of the house.

3.5.2. Doors - The doors found in the house.

3.5.3. House Left - The house left wall.

3.5.4. House Right - The house right wall.

4. Lighting Architecture - The structural elements for the lighting setup on the stage and in the house.

4.1. House Beams - Labeling for the house beams.

4.1.1. Beam 1 - House Beam 1, the circuit boxes, and bridge boxes.

4.1.2. Beam 2 - House Beam 2. the circuit boxes, and bridge boxes.

4.1.3. Beam 3 - House Beams 3, the circuit boxes, and bridge boxes.

4.2. House Boxes - 3D visual representation of the vertical house boxes.

4.2.1. House Left Box - House left box in 3D.

4.2.2. House Right Box - House right box in 3D.

4.3. Stage Ladders - 3D visual representation of the stage ladders.

4.3.1. Stage Left Ladder - Stage left ladder in 3D.

4.3.2. Stage Right Ladder - Stage right ladder in 3D.

4.4. Stage Pipes - Labeling for the stage pipes.

4.4.1. First Electric - First Electric and its circuit boxes.

4.4.2. Proscenium Electric - Proscenium Electric and its circuit boxes.

4.4.3. Second Electric - Second Electric and its circuit boxes.

4.4.4. Third Electric - Third Electric and its circuit boxes.

4.5. Stage Trees - Template Class. Empty.

5. Lighting Instruments - Lighting instruments per position.

5.1. House - Labeling for house instrument subclasses.

5.1.1. Beam 1 - All instruments on House Beam 1.

5.1.2. Beam 2 - All instruments on House Beam 2.

5.1.3. Beam 3 - All instruments on House Beam 3.

5.2. Stage - Labeling for stage instrument subclasses.

5.2.1. First Electric - All instruments on the First Electric.

5.2.2. Proscenium - All instruments on the Proscenium.

5.2.3. Second Electric - All instruments on the Second Electric

5.2.4. SL Flippers - Subclasses for instruments on the stage left flipper trusses.

5.2.4.1. Downstage - All instruments on the stage left downstage flipper truss in 3D.

5.2.4.2. Middle - All instruments on the stage left middle flipper truss in 3D.

5.2.4.3. Upstage - All instruments on the stage left upstage flipper truss in 3D.

5.2.5. SR Flippers - Subclasses for instruments on the stage right flipper trusses.

5.2.5.1. Downstage - All instruments on the stage right downstage flipper truss in 3D.

5.2.5.2. Middle - All instruments on the stage right middle flipper truss in 3D.

5.2.5.3. Upstage - All instruments on the stage right upstage flipper truss in 3D.

5.2.6. Stage Left Ladder - Subclasses for instruments on the stage left ladder.

5.2.6.1. Upper - All instruments on the upper pipe of the stage left ladder.

5.2.6.2. Lower- All instruments on the lower pipe of the stage left ladder.

5.2.7. Stage Right Ladder - Subclasses for instruments on the stage right ladder.

5.2.7.1. Upper - All instruments on the upper pipe of the stage right ladder.

5.2.6.2. Lower- All instruments on the lower pipe of the stage right ladder.

5.2.8. Third Electric - All instruments on the Third Electric.

6. Lighting - Automatically generated classes and subclasses for lighting instruments and labels.

6.1. Architectural - Architectural lighting elements.

6.2. Followspot - Followspot instruments.

6.3. Incandescent - Incandescent instruments.

6.4. Label - Lighting Label Legend subclasses.

6.4.1. Address - Instrument Address or Circuit.

6.4.2. Channel - Instrument universe and channel. Display as “Uni.Cha”

6.4.3. Color - Instrument gel color.

6.4.4. Focus - Instrument’s acting area focus or other focus.

6.4.5. Gobo 1 - Instrument gobo selection.

6.4.6. Unit Number - Instrument unit number.

6.5. LED - LED instruments.

7. None - Default Vectorworks Class. All objects created will start as none save for dimensions and lighting elements.

8. Orchestra Pit - Label for the Orchestra Pit subclass. Off by default.

8.1. Floor - Orchestra Pit floor. Off by default.

9. Scenic - Empty Class and Subclasses for scenic elements per act and scene.

9.1. Act 1 - Subclass for Act 1 Scenic placement.

9.1.1. Scene 1 - Subclass for Act 1 Scene 1 Scenic placement.

9.1.2. Scene 2 - Subclass for Act 1 Scene 2 Scenic placement.

9.1.3. Scene 3 - Subclass for Act 1 Scene 3 Scenic placement.

9.1.4. Scene 4 - Subclass for Act 1 Scene 4 Scenic placement.

9.1.5. Scene 5 - Subclass for Act 1 Scene 5 Scenic placement.

9.2. Act 2 - Subclass for Act 2 Scenic Placement

9.2.1. Scene 1 - Subclass for Act 2 Scene 1 Scenic placement.

9.2.2. Scene 2 - Subclass for Act 2 Scene 2 Scenic placement.

9.2.3. Scene 3 - Subclass for Act 2 Scene 3 Scenic placement.

9.2.4. Scene 4 - Subclass for Act 2 Scene 4 Scenic placement.

9.2.5. Scene 5 - Subclass for Act 2 Scene 5 Scenic placement.

10. Scenic Elements - Generic Scenic Elements class. Good for unit sets.

11. Soft Goods - Label for the Soft Goods subclasses. Off by default.

11.1. Black Drop - Label for Black Drop subclasses on stage. Off by default.

11.1.1. 1 - First black drop on Mainstage. Off by default.

11.2. Border - Mainstage Border Drop. Off by default.

11.3. Drop - Mainstage Drop. Off by default.

11.4. Legs Set - Label for Leg Set subclasses on Mainstage. Off by default.

11.4.1. 1 - Furthest downstage Legs Set. Off by default.

11.4.2. 2 - Second furthest downstage Legs Set. Off by default.

11.4.3. 3 - Downstage middle Legs Set. Off by default.

11.4.4. 4 - Upstage middle Legs Set. Off by default.

11.4.5. 5 - Second furthest upstage Legs Set. Off by default.

11.4.6. 6 - Furthest upstage Legs Set. Off by default.

11.5. Main Curtain - Mainstage Main Curtain. Off by default.

11.6. Scrim - Scrim

12. Stage - Contains structural elements found on the stage.

12.1. Ceiling - Subclasses for stage ceiling segments. Off by default.

12.1.1. Flipper Ceiling - Flipper ceiling segments. Off by default.

12.2. Doors - Subclasses for stage doors.

12.2.1. Electrical Lockup - Electrical lockup located on stage left.

12.2.2. Shop Door - Large sliding sound door between shop and Mainstage.

12.2.3. Various Doors - Various doors around Mainstage.

12.3. Downstage Vent Duct - Downstage air vent ducts. Contains both stage left and stage right air ducts.

12.4. Floor - Mainstage Floor

12.5. Fly System - Label for fly system fixtures.

12.5.1. Fly Rail - Fly system locking rail.

12.5.2. Ropes - Visual representation of the vertical fly ropes.

12.6. Permanent Fixtures - Label for permanent fixtures found around Mainstage.

12.6.1. Dimmer Rack - Mainstage dimmer rack located downstage left.

12.6.2. Electrical Box - Various electrical boxes found on mainstage.

12.6.3. Stage Manger's Station - Stage manager's station. Semi-permanent.

12.7. Pipes - Label for stage pipes no included on the Soft Goods or Lighting classes.

12.7.1. Pipe 2 - Empty pipe.

12.7.2. Pipe 3 - Label for pipe 3 contents.

12.7.2.1. Teaser - Teaser proscenium. ~8'6" tall. Closes Proscenium to 14'.

12.7.3. Pipe 4 - Label for pipe 4 contents.

12.7.3.1. Portal - Portal false proscenium.

12.7.4. Pipe 6 - Empty pipe.

12.7.5. Pipe 7 - Label for pipe 7 contents.

12.7.5.1. Music Shell - Music shell pipe 1.

12.7.6. Pipe 7.5 - Label for pipe 7 contents.

12.7.6.1. Video Screen - Large solid frame video screen.

12.7.7. Pipe 9 - Empty pipe.

12.7.8. Pipe 10 - Empty pipe.

12.7.9. Pipe 11 - Empty pipe.

12.7.10. Pipe 12 - Empty pipe.

12.7.11. Pipe 13 - Label for pipe 3 contents.

12.7.11.1. Music Shell - Music shell pipe 2.

12.7.12. Pipe 17 - Empty pipe.

12.7.13. Pipe 18 - Empty pipe.

12.7.14. Pipe 19 - Empty pipe.

12.7.15. Pipe 21 - Empty pipe.

12.7.16. Pipe 22 - Empty pipe.

12.7.17. Pipe 23 - Empty pipe.

12.7.18. Pipe 25 - Empty pipe.

12.7.19. Pipe 27 - Empty pipe.

12.7.20. Pipe 28 - Empty pipe.

12.7.21. Pipe 29 - Empty pipe.

12.7.22. Pipe 32 - Empty pipe.

12.7.23. Pipe 35 - Empty pipe.

12.7.24. Stage Left Ladder - Stage Left Ladder 3D visualization.

12.7.25. Stage Right Ladder - Stage Right Ladder 3D visualization.

12.8. Stage Extension - Label for segmented stage extension.

12.8.1. 1 - First stage extension. Furthest upstage.

12.8.2. 2 - Second stage extension. Middle segment. Off by default.

12.8.3. 3 - Third stage extension. Furthest downstage. Off by default.

12.9. Stage Left - Label for stage left.

12.9.1. Flipper - Label for the stage left flippers.

12.9.1.1. Down - Open - Downstage left flipper in open position.

12.9.1.2. Mid - Open - Middle left flipper in open position.

12.9.1.3. Set Closed - All stage left flippers closed. Off by default.

12.9.1.4. Upper - Open - Upstage left flipper in open position.

12.10. Stage Right - Label for stage right.

12.10.1. Flipper - Label for the stage right flippers.

12.10.1.1. Down - Open - Downstage right flipper in open position.

12.10.1.2. Mid - Open - Middle right flipper in open position.

12.10.1.3. Set Closed - All stage right flippers closed. Off by default.

12.10.1.4. Upper - Open - Upstage right flipper in open position.

12.11. Stage Right Staircase - Staircase leading to prop storage and upper electric.

12.12. Upstage Vent Duct - Upstage left vent duct.

12.13. Walls - Label for Mainstage walls.

12.13.1. Proscenium Wall - Wall above the proscenium arch.

12.13.2. Shop Door Wall - Wall above the sliding shop sound door.

12.13.3. Stage Left Flipper Alcove - Wall isolating the stage left flipper.

12.13.4. Stage Left Wall - Wall on the stage left wing.

12.13.5. Stage Right Flipper Alcove - Wall isolating the stage right flipper.

12.13.6. Stage Right Wall - Wall on the stage right wing.

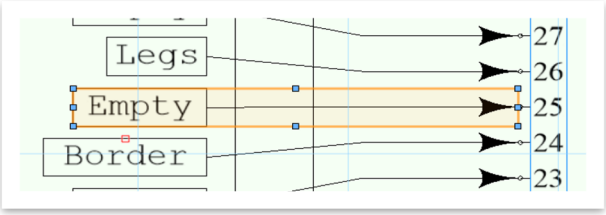
Groups are a simple technique in Vectorworks that allows you to combine elements together without the need to use classes or layers. Groups are easily editable as well. By double clicking a grouped object, it allows you to enter the group and manipulate the objects inside it free from the rest of the workspace. It is almost like its own miniature design layer that is movable in the overarching design layers.

Use of Groups

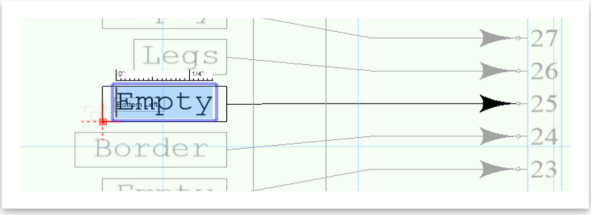
Groups are not able to be easily categorized in Vectorworks like the Design Layers and Classes, so due to this, groups can easily be lost in the design layers. The noteworthy groups are the downstage, middle, and upstage flippers on stage left and stage right; the sets of legs in soft goods; and the electrics and beams. Double clicking these groups allows easy access into the isolated workspace inside the group. For the legs it can be used to adjust the onstage positioning of the legs customized to the designer's choice. The flippers can be rotated along the pivot in the middle of the vertical trusses on each flipper. Of note for the flippers, the group appears to stretch onto the stage in the plan view. This is due to the trusses being drawn in plan view horizontally along a two-dimensional axis, and being rotated to be vertical in 3D.

An additional element that is grouped is the purpose notes for the individual fly lines. The empty fly lines are easily editable by selecting the group for the line and by double clicking can enter the group. Once inside the purpose's group, the text and box around the text can be edited to better represent the changes made to the fly line.

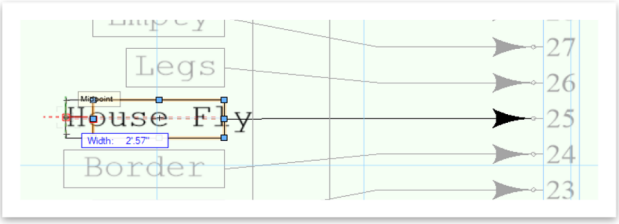
Editing Fly System Groups - Illustrated



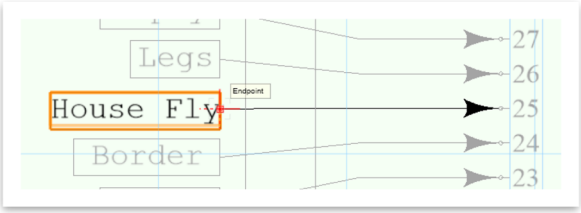
Step 1: Select the fly line's purpose and enter the group.



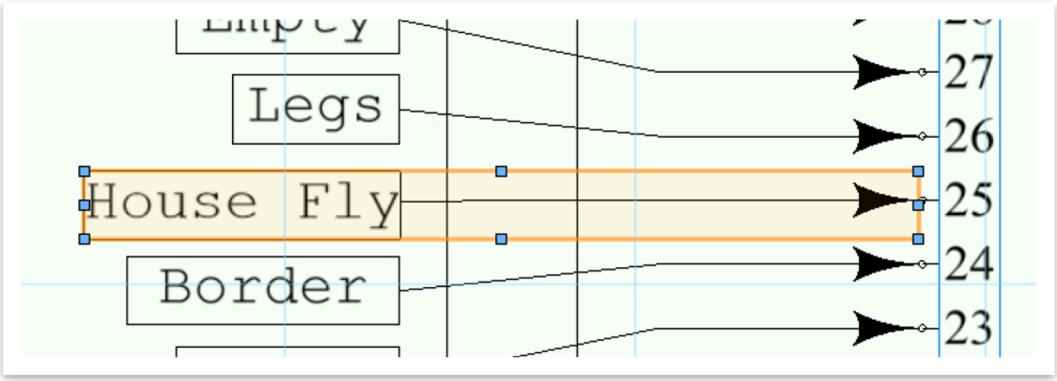
Step 2: Edit the text to fit what will be on the line.



Step 3: Adjust box to fit text box size.

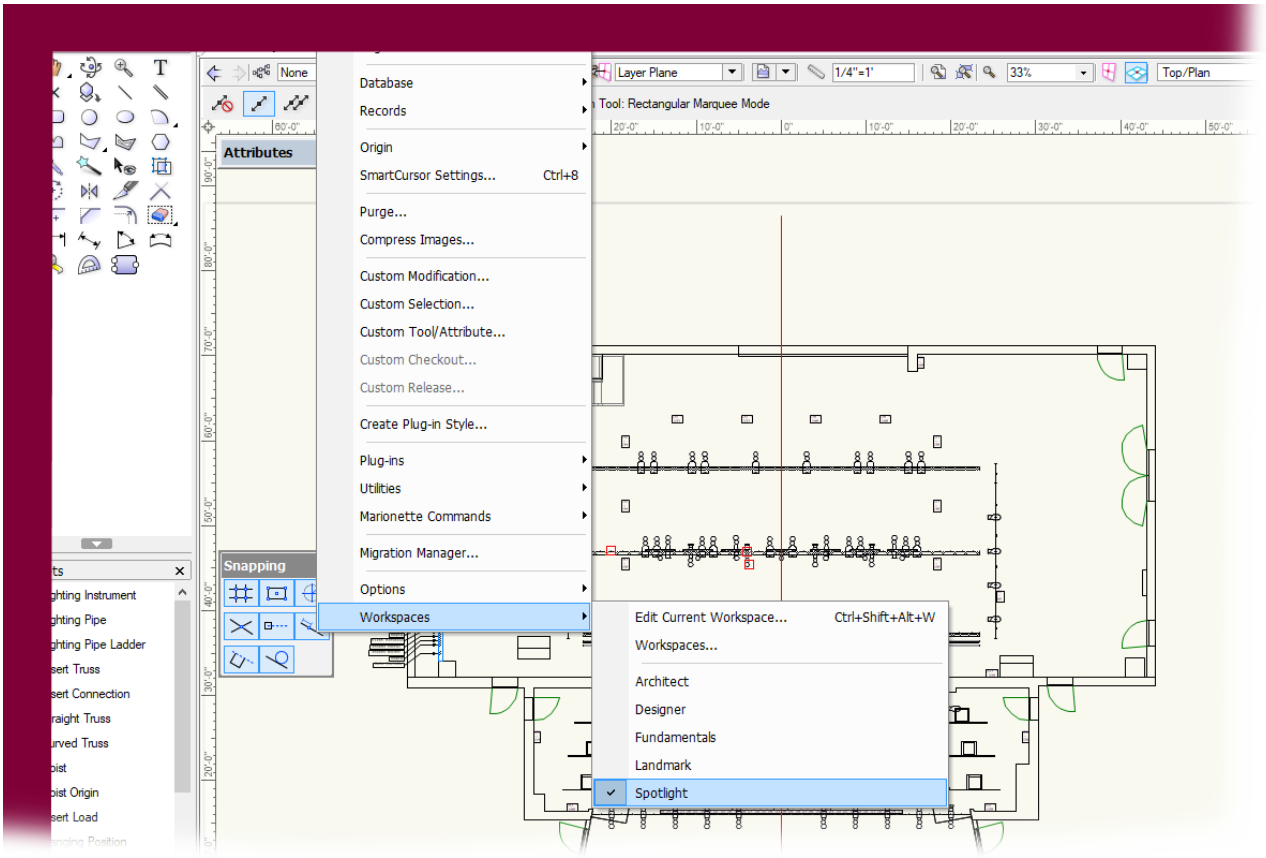


Step 4: Move text and box to line up with center of line.



Step 5: Finalize and exit group.

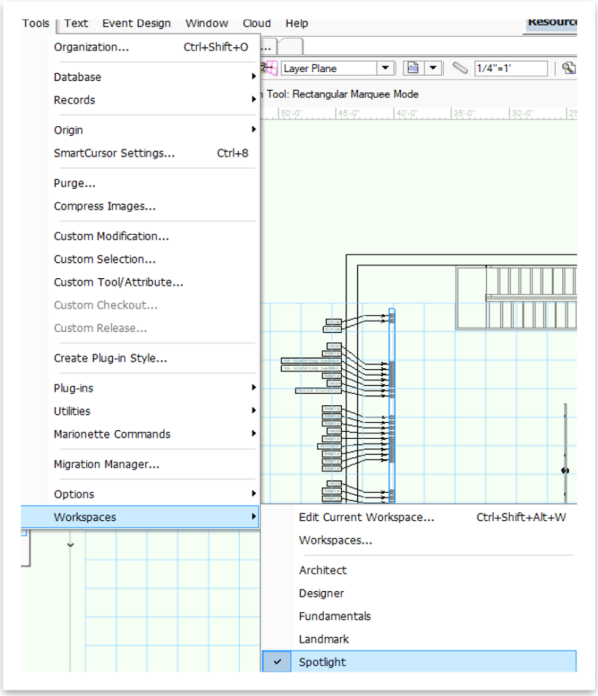
Using the File



In this section we will go over the updating of information in the file with emphasis on lighting and the elements included in that.

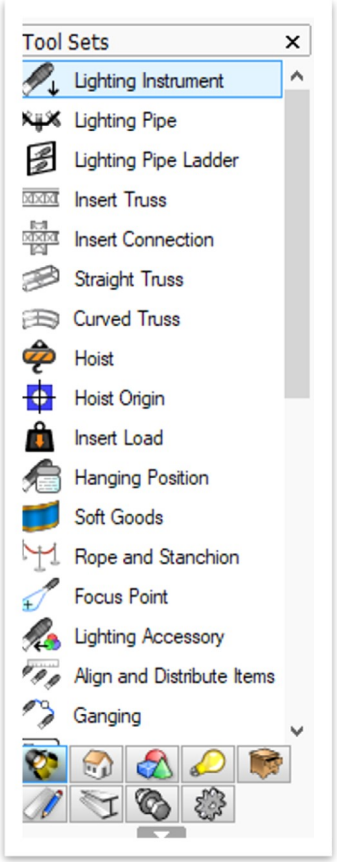
Adding Lighting Instruments

To add lighting instruments to the file, make sure that you are working in the Spotlight workspace. To check this select Tools on the upper tool bar, then select Workspaces and finally Spotlight [Figure 2.1]. Once in spotlight, select the Spotlight toolset from the toolset section in the lower left hand corner. Once in that toolset select the Lighting Instrument Tool [Figure 2.2]. This tool will automatically place any selected symbol or lighting instrument selected in the Resource Manager. Once you are in the tool, clicking once will place the selected symbol or instrument. A dotted line will extend from the insertion point of the object in a radius around it to the users mouse. Clicking again will angle the object to this orientation. A secondary way to select and place instruments is from the aforementioned Resource Manager. This menu is usually open automatically as a hover dropdown menu located near the top of the workspace, however it can be found via the "Window>Palettes>Resource" Manager option located at the top, or "Control+R." Once open, hovering over the Resource Manager bar will open the window. In the tabs on the left go into Vectorworks Libraries and expand the tab titled "Ent Lighting Instruments." This will expand to include all included Lighting Instrument companies and their products. Selecting the preferred company and instrument and double



[Figure 2.1] Selecting the Spotlight workspace from the Tools menu.

clicking will automatically open the Lighting Instrument tool.



[Figure 2.2.] Selecting the Spotlight toolset and using the Lighting Instrument Tool.

Note: if using the school computers, upon opening Vectorworks for the first time you will be prompted to update the resource libraries. Select yes. If you do not you will be limited to very few lighting instruments in the Vectorworks libraries. If you did select no or cancel clicking the cog symbol in the Resource Manager and selecting "Refresh Libraries" will prompt this update. If you use the file at home, any instruments used will remain in the file when transferring between school and personal computers.

Lighting Labels

A feature in Vectorworks is the ability to set up a Lighting Label Legend to apply to the various instruments on a light plot. The legend set up in this file is a standard setup according to USITT standards. The label legend includes focus, color, unit number, gobo 1, channel, and address arranged in their proper order and symbols. The instruments currently on the plot have the legend applied but do not have the accompanying information input into the proper sections. To edit this, each instrument can be selected individually and the data can be edited through the Object Info palette on the right of the workspace. An alternative and faster way is to edit the information of the instruments is to select all the instruments on an individual pipe or beam. After selecting them, select the Spotlight menu on the menu bar and choose the option "Number Instruments." In this you are able to set parameters from starting numbers, limits, and numbering increments to be applied to various pieces of information such as unit numbers and channels. Fine tuning will still have to be made manually with each individual instruments.

Conclusion

To conclude this instruction manual and general reference for the Mainstage Vectorworks file, I impart the fact that not every bit of information on how to use or manipulate the file was put into this manual. This guide is not intended to teach the deeper intricacies of Vectorworks but instead to provide a quick reference for the file and some general knowledge for the file's upkeep and maintenance. Other information such as the actual development of scenic elements or the implementation of elements such as sheet layers and title blocks are best researched and understood through Vectorworks' own tutorials or through a class teaching the tools of Vectorworks. Even videos on the subject of how to use Vectorworks can be utilized to flesh out your designs and your skills. It is worth it to note that the sheet layer included in the file is setup with a title block border, and is only in need of the title block to complete the sheet layer. The tools to do this are easily accessible and the information is very clearly available on Vectorworks' site. While this file's completion at the end of my senior year was my capstone project, I hope to see it evolve and develop further over the next several years out. I want to see the implementation of newer tools and techniques that Vectorworks might include with newer iterations of the software or through newer skills developed by other users.

J'ai survécu

Trevor Edwards - Class of 2019