Multi-Processed Raw

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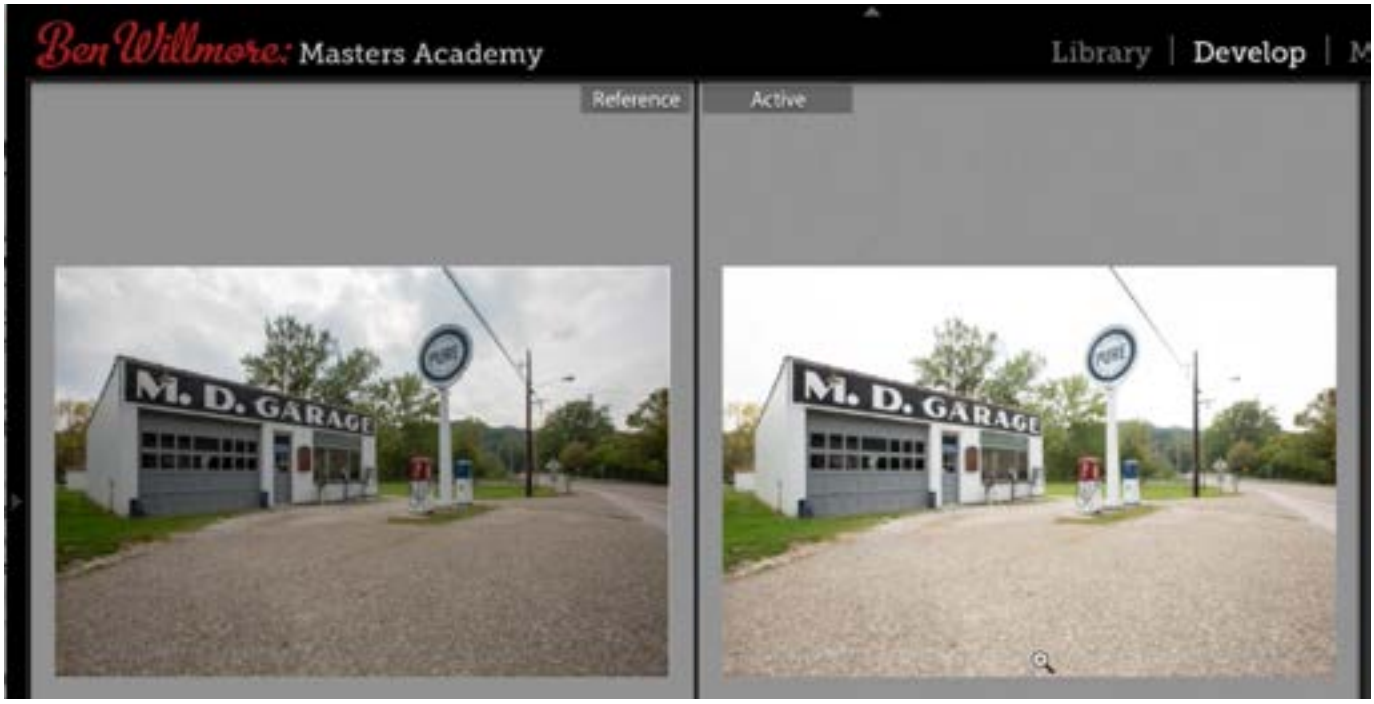
In this lesson, we're going to look at how I take many of the features that we've covered in previous lessons and combine them to work an image. In the process, I think you'll learn a lot.

The image was shot for HDR & is made up of three exposures The image I'm going to work with is made up of three exposures that were captured by using the auto-bracketing feature on my camera. They were captured at two stops apart. The really bright shot ensures that I will have detail in the shadows and the really dark exposure ensures that I will have detail in the highlights (the sky area). In order to combine them for HDR, I selected them all in Lightroom, then clicked on the Photo menu and chose Photo Merge > HDR. This brought up the HDR dialog where I could adjust a few settings (if necessary) and then send the result back to Lightroom's main interface.

The three exposures above were shot at two stops apart. At left, you can see the HDR image created by merging the three exposures.

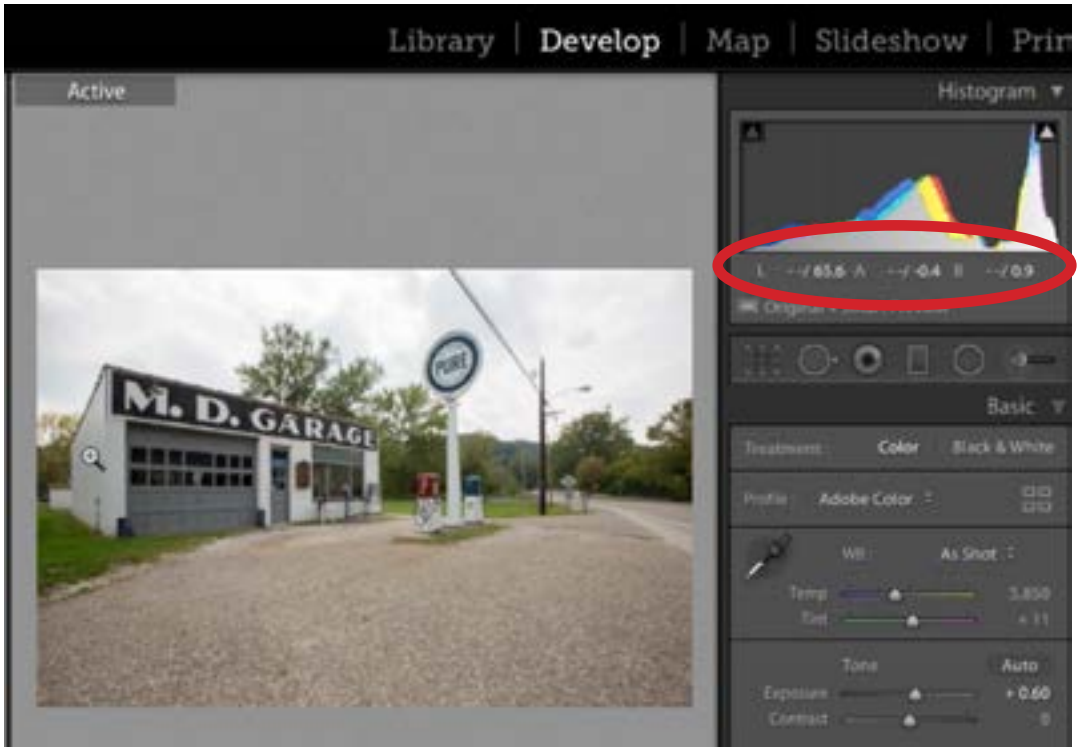
Compare the merged HDR with a single exposure

Whenever I shoot for HDR, I will compare the HDR version to an individual exposure to see if it's truly better. Sometimes, it turns out that one of the single exposure looks better to me than the merged HDR. In order to make this comparison, I need to get the single exposure to be the same brightness as the merged HDR. I'll choose the single exposure that I think has the best tonality (In this case, it's the middle exposure) and I will open that image within Lightroom's Develop Module (or Adobe Camera Raw). In order to make the single exposure as close in tonality to the merged HDR image, I would like to view the images side-by-side. On the left side of the tool bar (beneath the image window), there are some alternative view icons. I'll click the one that contains the letters R and A. This will split the image window in half, placing the current image (the single exposure) on the right side. I can now find the merged HDR image in the Filmstrip that runs along the bottom of the interface and drag it into the left window. This will serve as the Reference photo.



Here, I am using the [R|A] view to compare the merged HDR image (on the left) with one of the single exposures (on the right). This will allow me to determine whether the HDR image is truly the better version.

I now have both images side-by-side. The version on the left is just the reference photo. The version on the right is the active image and it is the one that will change when I move the sliders. I will work with the sliders and try to get the brightness to match the brightness in the reference photo. When the cursor is hovered somewhere over the image, a series of numbers will appear beneath the Histogram and these can serve as tools when matching the brightness of the two images. By default, however, these numbers represent the RGB values (meaning the red, green and blue values) and I'll need to change that. I'll right-click within the histogram to get a little pop-up menu and I will choose "Show LAB Color Values" from that menu. Now, there are numeric values for L, A and B appearing beneath the Histogram. The L value represents the brightness of the area where the cursor is hovering. Knowing this, I can hover the cursor over an area on the reference image and make note of the L value. Then, I can hover the cursor over the SAME area on the active image and then look at the L value so I can compare how close they are in brightness. This number will also give me guidance as to how I should adjust the sliders to get the brightness of both images to match.



While in the [R|A] view, I am using the adjustment sliders to try and make the brightness of the image on the right (the active photo) match the brightness of the image on the left (the reference photo). I set the Histogram to read out LAB values (circled). The L value represents the brightness of the area under the cursor.

After adjusting the brightness, I also like to expand the Lens Corrections tab and turn on the check box to "Remove Chromatic Aberration," which removes any artifact represented as pink and green lines that sometimes appear around the edges of things. I'll also turn on the "Enable Profile Corrections" check box, which corrects for any distortion caused by the lens. After making adjustments in the Develop Module, I'll move back to Lightroom's Library Module.

Looking at the images in the Grid View within the Library Module, I now want to compare the two images and decide which is better. (The reason I didn't make this comparison in the Develop Module is that you can't zoom in on both images at the same time while in that module.) I'll select both images and then think about which one I THINK is going to be better. That's the one that should be most selected. You can determine which image should be most selected by clicking on it once. It will have a brighter highlight than the other selected image[s]. In this case, I think that the HDR image is going to be better so I'll make sure that one is the most selected. Then, I'll click the Compare View icon ([X|Y]) on the left side of the Toolbar in order to get the images side by side. The merged HDR image was the most selected so it will be positioned on the left, as the "Select." The single exposure will go on the right, as the "Candidate."

What's special about this view is that I can zoom in and move around within an image, and both images will zoom and move in the same way. This truly allows for a good comparison. When I click once on the image, it will zoom to a 1:1 view by default. If you'd like to change the zoom ratio, open the Navigator panel and either choose from the zoom options at the top, or click on the little side menu to get even more zoom options.

Change the zoom ratio in Lightroom's Develop Module by using the options at the top of the Navigator panel.

Now I will zoom in to a 1:1 view and start scrolling around the image, comparing the different areas side by side. One of the things that I notice is that there is a problem with the trees in the merged HDR image. There was some motion in the branches at the time the images were shot, and this resulted in a ghosting artifact when the images were merged for HDR. I also notice a bit of a double edge in the sign area of the merged HDR image and this could be the result of shooting hand-held, and then having poor alignment when merging the images.

Looking at the overall crispness of the images side-by-side, the single exposure is much sharper overall, and this is the one I am going to use when I move forward to process the photograph. I'll click back on the Grid View icon below the image window to get out of this comparison view.

Here, I am using the Compare View to look at the images side by side. When I zoom in on one side, the other side zooms as well, which makes it easier to compare images. Here, I can see that there is some ghosting artifact in the HDR image (on the left) and I can see that the image on the right (the single exposure) is sharper overall.

Process the image to optimize the building

Now I'm going to use the single exposure and interpret it multiple ways inside of the Develop Module. I'll create multiple versions of the image, each processed to optimize a specific area. In the end, the images will be blended together to combine all of the optimized areas.

I'll open the image in the Develop Module and use the various tonal and color sliders to first make the building look good. I'm going to ignore everything else except the building. I will also expand the Lens Corrections panel and make sure that the following check boxes are turned on: "Remove Chromatic Aberration" and "Enable Profile Corrections."

Under the Detail panel, I'll work with the Masking slider to control what areas get sharpened. By holding down the Option key (Alt on Win) while dragging the Masking slider, I'll get a different view of the image that shows what areas are being sharpened. Anything that is white is being sharpened and anything that is black will not be sharpened. I will drag this slider until anything with no usable detail turns black. This will ensure that I'm not sharpening areas that just contain noise.

In Lightroom's Develop Module, I am using the Masking slider (within the Detail panel) to control what areas are being sharpened. I'm holding down the Option key (Alt on Win) to get this special view where white represents areas that will be sharpened.

The last thing I will do is reset any cropping that was done to the image. I do this whenever I know I am going to combine multiple versions of the same image. To reset the crop, I'll activate the Crop Tool (located above the adjustment panels in Lightroom) and click the Reset button.

Open the first processed version in Photoshop

After I'm finished working on this version of the image, I will open it in Photoshop as a smart object. To do that, I'll click on the Photo menu and choose Edit In > Open as Smart Object in Photoshop. This will create a special layer where the entire raw file is embedded directly in the layer. What's nice about a smart object layer is that you can double-click on the layer thumbnail to edit the original image. In the case of a raw file, double-clicking on the layer thumbnail will open the image in Camera Raw so that I could further refine the settings.

The first processed image was opened in Photoshop as a smart object. At left, you can see the layer thumbnail in the Layers panel. The icon in the bottom right corner of the thumbnail means that the layer is a smart object.

Process the image to optimize the sky

Now it's time to create the next version of the image. With the first version, I processed the image to make the building look good. In this next version, I'll process to make the sky look good.

I want to duplicate the first smart object layer, but I need to do that in a special way. If you duplicate a smart object layer in the standard way (using the shortcut Command+J / Ctrl+J), then it's going to create a second instance of the same

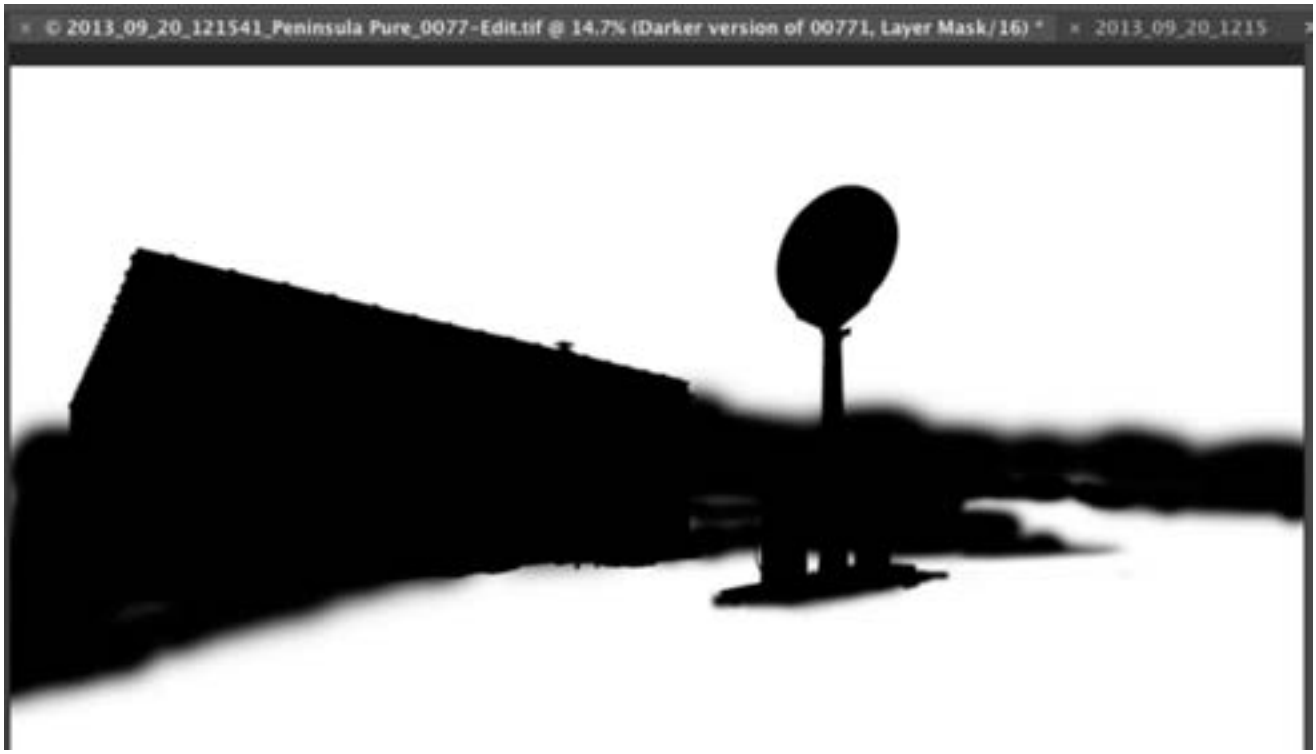
smart object. Any changes you make to it will affect ALL instances of that smart object. I don't want this. I instead want to be able to adjust this second copy independently of the first. In order to copy a smart object as a separate, independent smart object, I'll have to go to the Layer menu and choose Smart Objects > New Smart Object via copy.

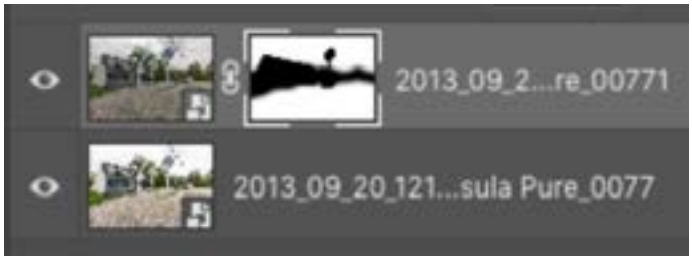
Now I have a second smart object layer in the layers panel. I will double-click on the layer thumbnail to open the image in Camera Raw. Here, I'll adjust the image to optimize the sky. Note that we're not going into detail about how I make these adjustments, as those techniques are covered in other Masters Academy lessons. I will use the Basic panel sliders to darken the sky, bringing out more detail in the clouds, and then click OK to go back to Photoshop.

The smart object image layer was copied as a new smart object in Photoshop. I double-clicked on this new smart object layer to open it in Camera Raw. Here, I am adjusting this version to optimize the sky.

Use a layer mask to combine the two processed versions

In this Photoshop document, there is now one layer where the building looks good and another layer where the sky looks good. I'm going to use a layer mask to blend the two together. With the top layer active (the one where the sky looks good), I'll click on the Layer Mask icon at the bottom of the Layers panel. This adds a white layer mask to the layer. When a layer mask is all white, it means that the entire layer is visible. I will use the Brush Tool along with some selection tools in order to add black to the mask in the area where I don't want this layer to be visible, and this is going to be the area containing the building and the sign. By hiding the building and the sign in this layer, I'm allowing the underlying layer to show through, and this is the layer where the building and the sign have been optimized.





At left, you can see that a layer mask was added to the sky layer and black was added to the mask in order to hide the building and the sign. Above, you can see a view of the layer mask itself. It was created by using the Brush Tool as well as some selection tools.

Use the blending sliders to fine-tune the mixing of layers

I don't like how dark the trees are at this stage, so I'm going to use the blending sliders to fix this darkening effect.

The building and sky are both looking good now, but I don't like the darkening effect on the trees in the center of the image. This is happening because the trees are located on the sky layer, which has been darkened. We can fix this by using a special technique involving the blending sliders. With the sky layer active (this should be the top layer), I'll click on the FX icon at the bottom of the Layers panel and choose Blending Options from the pop-up menu. This will call up the Layer Style dialog box, and the blending sliders will appear in the bottom half of this dialog.

We're working on the top layer that is also the darker layer. What we want to do is allow the brighter, underlying layer to break through in the area where the trees are. Because we want the underlying layer to break through, we're going to use the sliders attached to the "Underlying Layer" gradient within the blending sliders. We'll drag the black slider (on the left) over to the right until we can see the tree start to change. It will become brighter and brighter the more we drag this slider because it is allowing the underlying layer to break through in the darker areas.

The only problem is that the transition is choppy. It has a hard edge as if I used an exacto knife to cut through the layer. In order to create a softer transition, I need to break this little black slider in half. Breaking the slider in half will create a smooth transition and the farther apart I drag the two halves, the softer the transition will be. I'll split the slider by holding the Option key (Alt on Win) and pulling on one half of the slider. After they've separated, the two halves can be moved independently of one another.

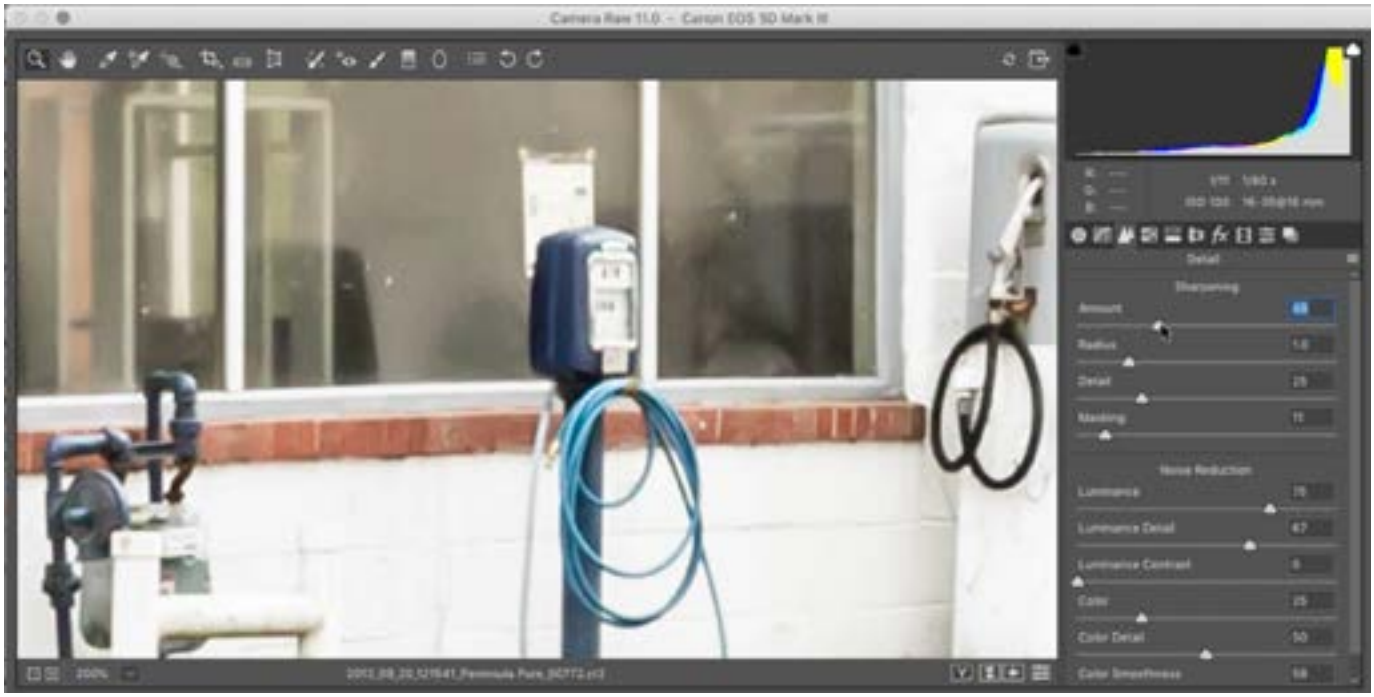
I am using the blending sliders within the Layer Style dialog to hide the darkening effect on the trees. I used the Underlying Layer slider because I want the underlying layer (the brighter layer) to break through in the area where the trees are. I split the slider in half to create a smooth transition.

Process the image to optimize the details

The building and the sky are both looking good now, so I'll look around the image to see if there's anything else that needs to be optimized. I notice that the air pump in front of the building is very dark and should be lightened. I'll create a third processed version of the image to accomplish that.

I'll use the original image layer to base this copy on because it has no layer mask or blending slider adjustments applied. I'll activate that bottom layer, click on the Layer menu and choose Smart Objects > New Smart Object via Copy. Remember, by duplicating the smart object this way, I'm creating a new, independent layer that I can adjust separately from the other smart objects.

I will move this new layer to the top of the layer stack and then double-click on the thumbnail to bring it back into Camera Raw. Here, I will zoom in on the air pump and use the adjustment sliders to optimize just this object. I'll ignore what's happening in the rest of the image. To optimize the pump, I will use the Exposure and Shadows sliders to make it brighter, and I will also apply some noise reduction and sharpening. When I'm happy with the way it looks, I'll click OK to get back into Photoshop.



Here, I am processing another version of the image in Camera Raw. This time, I'm using the adjustment sliders to optimize the air pump by lightening it up.

Now I need to mask this layer so the brightening effect is only visible on the air pump. This will require a mask that is black in all areas except for the air pump, so it's going to be easier to start off with a black mask instead of a white one. When you click on the Layer Mask icon to add a mask, that mask will be white by default. To create a layer mask that is completely black, hold down the Option key (Alt on Win) while clicking on the Layer Mask icon at the bottom of the Layers panel. I'll now use a small, fairly hard-edged brush and paint on the mask with white in the areas where the pump is. This will reveal the contents of the layer in just the areas where I paint.

Looking at the image, there are a few other details that I would like to lighten, and I can use this same layer to lighten those areas. I'll simply adjust the layer mask in the areas I want lightened. One such area is the blue elements in the "Pure" sign. This is a pretty detailed area, so it would be difficult to get the precision I need by painting on the mask with the Brush Tool. Instead, I'll need to make a selection around the area I want lightened, and then I'll fill that selection.

There is a way to create a selection based on the brightness in the image and that can be done by using the Channels panel. This technique will create a selection where all white areas are completely selected and all black areas are not selected at all. Anything in between will be partially selected. To get this selection, I'll first open the Channels panel, which is usually docked along with the Layers panel in the Photoshop interface. I'll hold down the Command key (Ctrl on Win) and click on the thumbnail for the top-most channel, labeled RGB. This will create a selection of all the bright information in the image. This selection will vary a lot, because there are many different brightness levels in the image. I want to adjust this selection to control what areas are selected. I'll enter Quick Mask mode by tapping the Q key. This mode shows the selection in the main image window and it is shown as a red overlay. While viewing the selection like this, I can adjust the selection by using regular adjustments like Levels. I'll click on the Image menu and choose Adjustments > Levels.

Within the Levels dialog, I will use the eyedropper tools to adjust the selection. The white eyedropper will force an area to white so I will use this to click on the white part of the sign. The black eyedropper will force areas to black, so I will use this to click on the dark part of the sign (part of the blue text or graphics). I'll click OK. Now the white part of the sign should be completely selected and the dark part of the sign should be completely deselected.

I am adjusting a selection of the Pure sign while in Quick Mask Mode. The Levels eyedropper tools are being used to fine-tune the selection.

Now the only area that I really want to select is within the sign, so I will make sure the rest of the image is deselected. I'll use the Lasso Tool to draw out a circular selection around the sign. Then, I will get the opposite of that selection by going to the Select menu and choosing Inverse. Now there is a selection of everything EXCEPT the sign. I'll go to the Edit menu and choose Fill. When the Fill dialog appears, I'll choose to fill with White and then click OK. Now, the only area that contains any of the Quick Mask overlay is in the sign. I'll go to the Edit menu and choose deselect to get rid of the selection created by the Lasso Tool. I'll also use the Brush Tool and paint with white to clean up the mask. I'll paint away the red overlay in any areas where it appears outside of the blue text and graphics of the sign.

I have isolated a brightness range while in Quick Mask Mode. I then made a selection around the sign, inverted that selection and then filled the selection with White. This makes it so that ONLY the dark parts of the sign have the red overlay.

I'm still in Quick Mask Mode and am painting with white to clean up the mask.

The red overlay now covers ONLY the blue area of the sign. Because the overlay represents the area that is NOT selected, I'll need to get the opposite. After all, I need the selection around the blue area of the sign in order to apply it to the layer

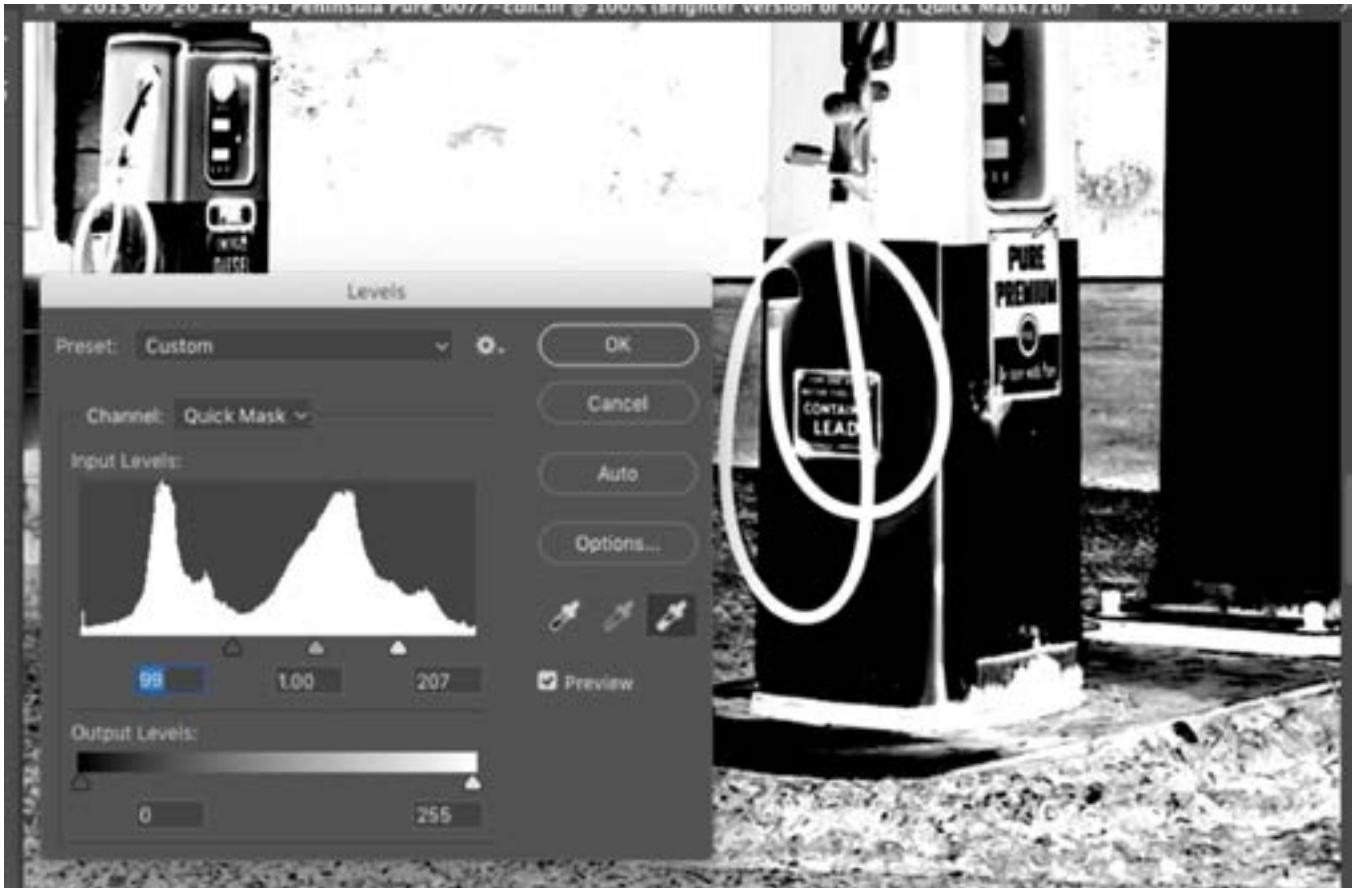
mask. I'll go to the Image menu and choose Adjustments > Invert. Then, I'll tap the Q key to exit Quick Mask Mode. This will remove the red overlay so that I can only see the "marching ants" selection around the blue part of the sign. Since this selection took a while to create, I'll save it by going to the Select menu and choosing Save Selection.

I'm now going to do a similar thing with a different part of the image. There are a few other details that I would like to adjust and make a little brighter, including some of the details on the fuel pumps in the image. These details are much darker than their surroundings and therefore, I can select them by using the same technique that was used to select the detail in the sign. I'll open the Channels panel, hold down the Command key (Ctrl on Win) and click on the thumbnail for the topmost channel, named "RGB." This will create a selection based on brightness. I'll tap the Q key to enter Quick Mask Mode. Now this mode can sometimes be confusing because you're seeing both the red overlay AND the underlying image at the same time. While Quick Mask Mode is active, there will be an extra channel at the bottom of the Channels panel and this channel will represent the Quick Mask. I can activate this channel and then turn off the visibility of all the other channels so that I'm viewing the mask in the main image window. It will look like a black and white version of the image. The white areas are the parts of the image that are selected.

I made a selection based on the brightness of the image and then entered Quick Mask Mode to view that selection as a red overlay. While in Quick Mask Mode, I opened the Channels panel, where there is a temporary channel for the Quick Mask. We're viewing that here.

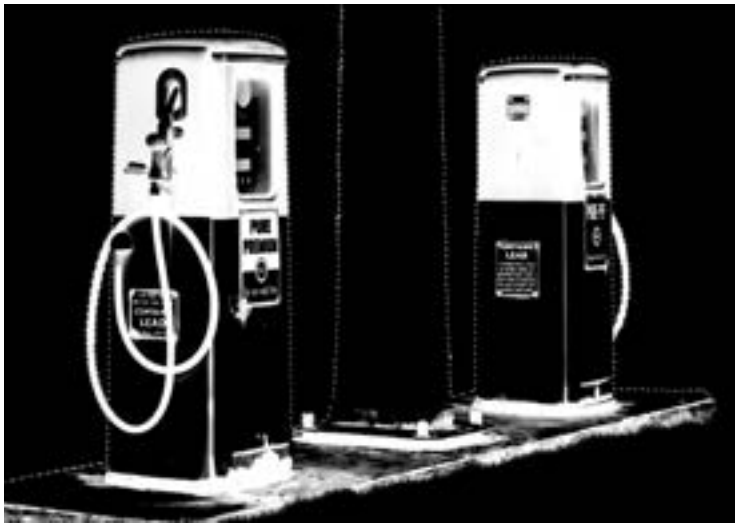
I would like to adjust the text that's on the gas pumps, and this text is dark, so I will need to invert the mask so that the text becomes light, and therefore will be selected. To Invert the mask, I'll click on the Image menu and choose Adjustments > Invert.

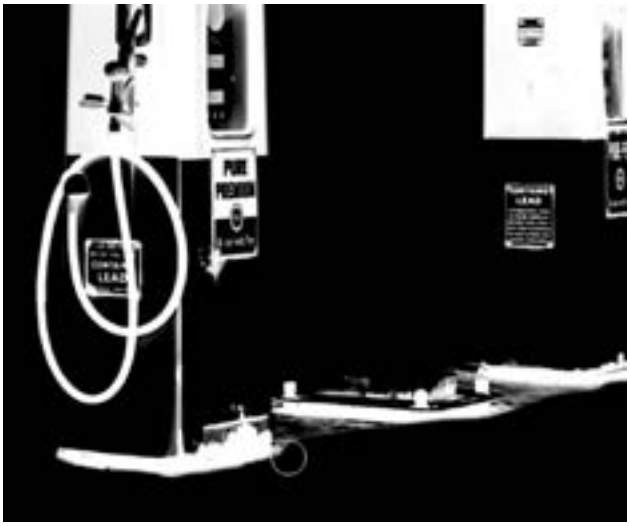
I'll now use a Levels adjustment to further refine the mask and force more areas to black and white (instead of a shade of gray). I'll again use the eyedroppers to do this. With the black eyedropper active, I'll click on part of the pump that is dark gray. That will force the targeted tone to become black. Then I'll activate the white eyedropper and click on part of the text that I want to be completely selected. This will force that area to be completely white. I'll click OK to exit the Levels dialog.



The Levels adjustment is being used to force more areas of the mask to solid white and more areas of the mask to solid black.

Now I have the text and other details on the pumps selected. I just need to make sure those are the ONLY areas selected, so I need to make sure that the rest of the mask is completely black. I'll make a selection around those pumps, invert the selection so that everything ELSE is selected, and then Fill the selection with black. I can now deselect. I'll use the Brush Tool to fine-tune the mask, painting with black in any additional areas I don't want selected.





LEFT: I made a selection around the pumps, inverted the selection (so that the rest of the image was selected) and then filled the selection with black. RIGHT: I am cleaning up the mask by painting with black in any additional areas that I don't want selected.

Remember, I'm still in Quick Mask Mode. I'm just viewing it in the channels panel to get a black and white view of it. To go back to viewing the red overlay, I'll simply turn on the visibility of the other channels in the Channels panel. I'll then tap the Q key to exit Quick Mask Mode.

To apply this selection to the mask, I'll activate the layer mask that's attached to the bright layer and then fill the selection with white (Edit menu > Fill). Now the details on the pumps will get the same brightening effect as the blue water pump. The problem is that I think they're a little TOO bright. That's OK though. I can just alter

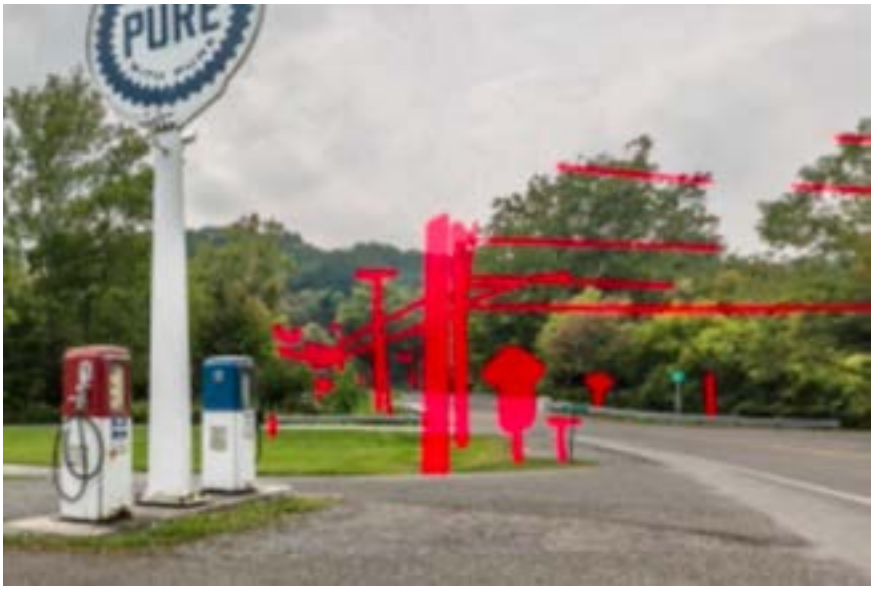
the mask so that only 50% of the bright layer is allowed to show through. With the mask active, I'll set the Brush Tool to paint with black, but I will change the Opacity setting (in the Options Bar) to 50%. Then, I'll paint over the parts of the pumps that I think are too bright. This will make the pump details half as bright.

Now if you look at my Layers panel, you will see three different interpretations of the same image. Each is a raw file with different settings applied. One is adjusted to optimize the sky. Another is adjusted to optimize the building and the third is adjusted to optimize the details. I will take these three layers and place them in a folder titled "main image blend." Now I can apply any necessary retouching to an empty layer above this folder.

How to keep track of what needs to be done to the image

I might close this image and come back to it layer, so how can I remind myself of what needs to be done to the document? The following is my system for keeping track of where an image is in the editing process and what still needs to be done. I'll create a Solid Color layer by clicking on the Adjustment Layer icon at the bottom of the Layers panel and choosing Solid Color from the pop-up menu. The Color Picker will appear and I'll set it to bright red and then click OK. I want to be able to see through this layer to the image so I will set the opacity of the layer to 50%.

Now I will add a layer mask to this solid color layer, and I want the mask to start out completely black. Remember, you can get a black mask by holding down the Option key (Alt on Win) while clicking the Layer Mask icon at the bottom of the Layers panel. This will hide the entirety of the red layer. I will now use a hard-edged brush and paint with white on the mask in the areas that need to be retouched. This will reveal the red layer in these areas. I'll name this solid color layer "Retouching Needed" so that I know what still needs work. As I complete this retouch work, I'll paint with black on the mask in the areas that are completed, therefore removing the red overlay.



At left, a Solid Color layer is being used as a visual reminder as to what areas still need retouching. As I complete the retouching tasks, I'll remove the red overlay from the completed areas.

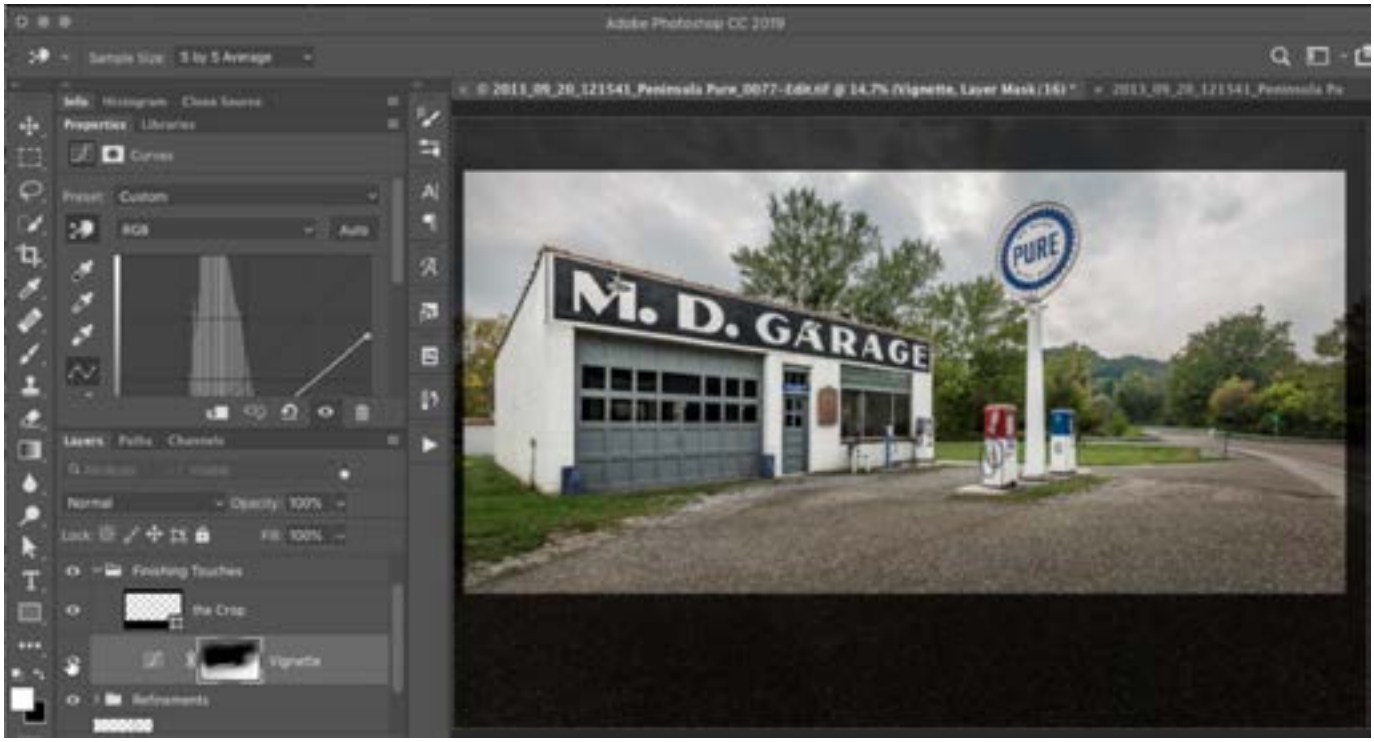
Image refinements

After retouching the image, I like to do all of my refinements using a series of adjustment layers. All of these adjustment layers will go into a folder (or group) named "Refinements." We have discussed these adjustments in other lessons, so I wont go into detail about them here. Instead, here is the list of adjustments that were used to further refine this image:

- Curves adjustment layer to bring out detail in the pavement
- Hue/Saturation adjustment layer to desaturate the green grass
- Curves adjustment layer to darken the highlights in small areas (distracting bright areas in the windows)
- Curves adjustment layer to remove a blue color cast from the sign.
- Hue/Saturation adjustment layer to make the blues pop out more
- Curves adjustment layer to remove the yellow cast on the inside of the lights
- Curves adjustment layer to add contrast to the sign that's mounted on the wall of the building

Finishing Touches

The last thing that I'll do to the image is a small series of finishing touches. These will also be placed inside a separate folder (or group), titled "Finishing Touches." One of these finishing touches layers will designate how I'd like to crop the image. I won't actually crop the image in Photoshop, but I will use a shape layer to place black bars on the image, showing what the ideal crop would be. I will also create a Curves Adjustment layer to add a vignette, darkening the edges of the image and therefore drawing the viewer's eye toward the subject.



A Shape Layer was used as a visual guide as to what the ideal crop is. A Curves Adjustment layer was also used to vignette the image.

Retouching Trick

Before wrapping up the lesson, I want to share a retouching trick I used to remove a sign that was on the window behind the air pump. If I tried to use the Spot Healing Brush to paint over the sign, it would mess up because it merges with the pump. Here's a quick way to get around that.

I'll create a new, empty layer to apply this retouching on and I'll instead retouch out both the sign AND the pump using a combination of the Clone Stamp Tool and the Spot Healing Brush. Then, I will add a black layer mask to this retouching layer. Remember, to add a mask that is filled with black, hold down the Option key (Alt on Win) while clicking the Layer Mask icon at the bottom of the Layers panel. This will completely hide the retouching layer, making both the pump and the sign visible again. Then, I'll make sure I'm zoomed in on the area and I will paint on the mask with white in the area where the undesirable sign is. This method gives me a lot more control in retouching out the sign.

ABOVE LEFT: I want to remove the sign that's behind the air pump. ABOVE RIGHT: The retouching tools are being used to remove both the sign AND the pump. LEFT: I am painting with white on the layer mask to remove just the sign, while keeping the pump intact.