1. Describe your pipeline. As part of the description, explain how you modified the draw_lines() function.

My pipeline consisted of 5 steps.

1. Convert the images to grayscale.
2. Apply gaussian filter to grayscale image.
3. Apply canny function from opencv to find all edges in image.
4. Setup one area to limit the position of edges.
5. Apply Hough Transform to these edges, find the lane lines we need and marked as red.

2. Identify potential shortcomings with your current pipeline

One potential shortcoming would be the marked lane lines is not "steady", I could tell the vibrating of red lines, even though the vehicle moving is very smooth in video.

Even, the edge between two kinds of road surface in challenge video will also be marked out.

Also, in challenge video, different color of road surface have different result of lane line recognition.

3. Suggest possible improvements to your pipeline

A possible improvement would be setting the marked red line as following a range of "angle". The slope should matcha certain limit depends on the driving direction.