

```

1 function plotMomentCurvature(figName, folder, direction)
2     arguments;
3     figName = "temp";
4     folder = "static_EW_force";
5     direction = "EW";
6 end
7
8 idx = getMaxDisplIdx(folder);
9
10 try
11     [~, kx, ky, ~] = readvars("\\" + folder + "\Results_static\SecD_W1_base.txt");
12     [~, Mx, My, ~] = readvars("\\" + folder + "\Results_static\SecF_W1_base.txt");
13 catch
14     [~, kx, ky, ~] = readvars("\\" + folder + "\Results_dynamic\SecD_W1_base.txt");
15     [~, Mx, My, ~] = readvars("\\" + folder + "\Results_dynamic\SecF_W1_base.txt");
16 end
17
18 figure(1); hold on;
19 set(gca,'DefaultLineLineWidth',2)
20 title('Moment Curvature of Base Section');
21 if direction == "EW"
22     plot(ky,My,'r','DisplayName','Wall 1');
23     scatter(ky(idx),My(idx),50,'ks','filled','HandleVisibility','off') % Wall 1
24 elseif direction == "NS"
25     plot(kx,Mx,'r','DisplayName','Wall 1');
26     scatter(kx(idx),Mx(idx),50,'ks','filled','HandleVisibility','off') % Wall 1
27 end
28
29 try
30     [~, kx, ky, ~] = readvars("\\" + folder + "\Results_static\SecD_W2_base.txt");
31     [~, Mx, My, ~] = readvars("\\" + folder + "\Results_static\SecF_W2_base.txt");
32 catch
33     [~, kx, ky, ~] = readvars("\\" + folder + "\Results_dynamic\SecD_W2_base.txt");
34     [~, Mx, My, ~] = readvars("\\" + folder + "\Results_dynamic\SecF_W2_base.txt");
35 end
36
37 if direction == "EW"
38     plot(-ky,-My,'b','DisplayName','Wall 2');
39     scatter(-ky(idx),-My(idx),50,'ks','filled','DisplayName','Max. Drift') % Wall 2
40 elseif direction == "NS"
41     plot(-kx,-Mx,'b','DisplayName','Wall 2');
42     scatter(-kx(idx),-Mx(idx),50,'ks','filled','DisplayName','Max. Drift') % Wall 2
43 end
44
45 legend('Location','Best');
46 grid on;
47 box on;
48 if direction == "EW"
49     xlabel('Curvature \kappa_y [1/in]');
50 elseif direction == "NS"
51     xlabel('Curvature \kappa_x [1/in]');
52 end
53
54 ylabel('Moment [kip-in]');
55
56 print_figure(figName)
57 end

```

