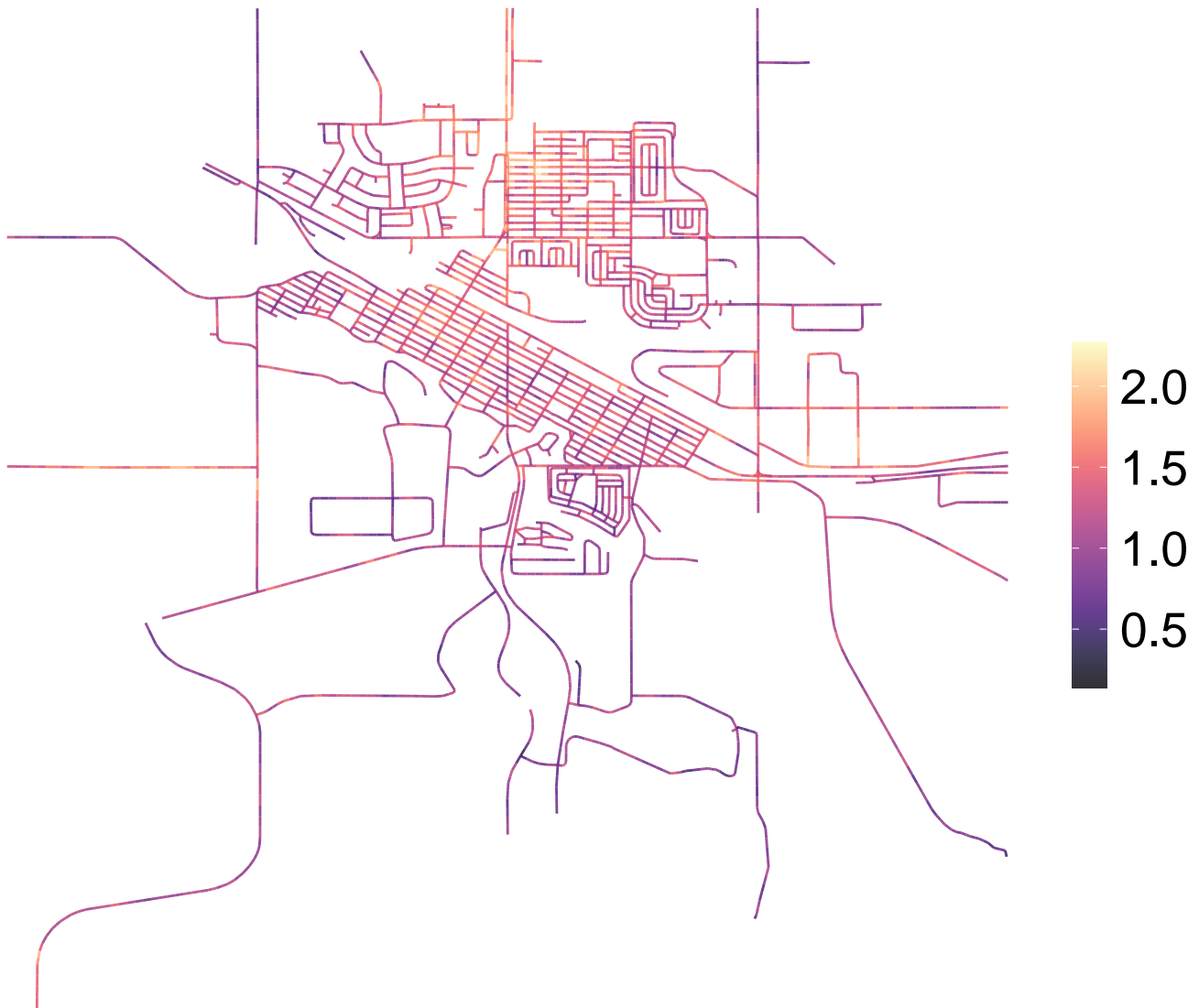


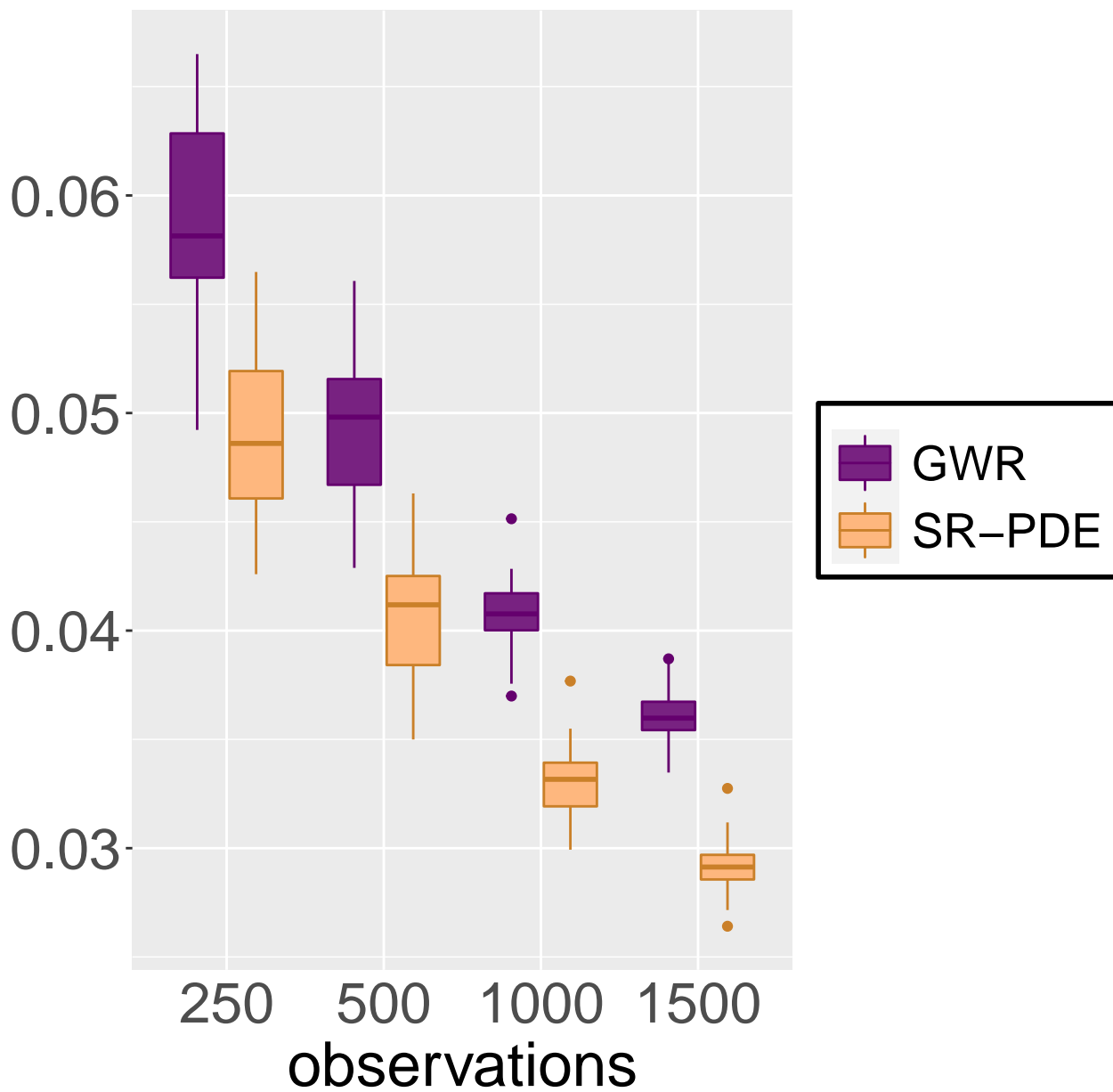
f



$$f + W\beta$$



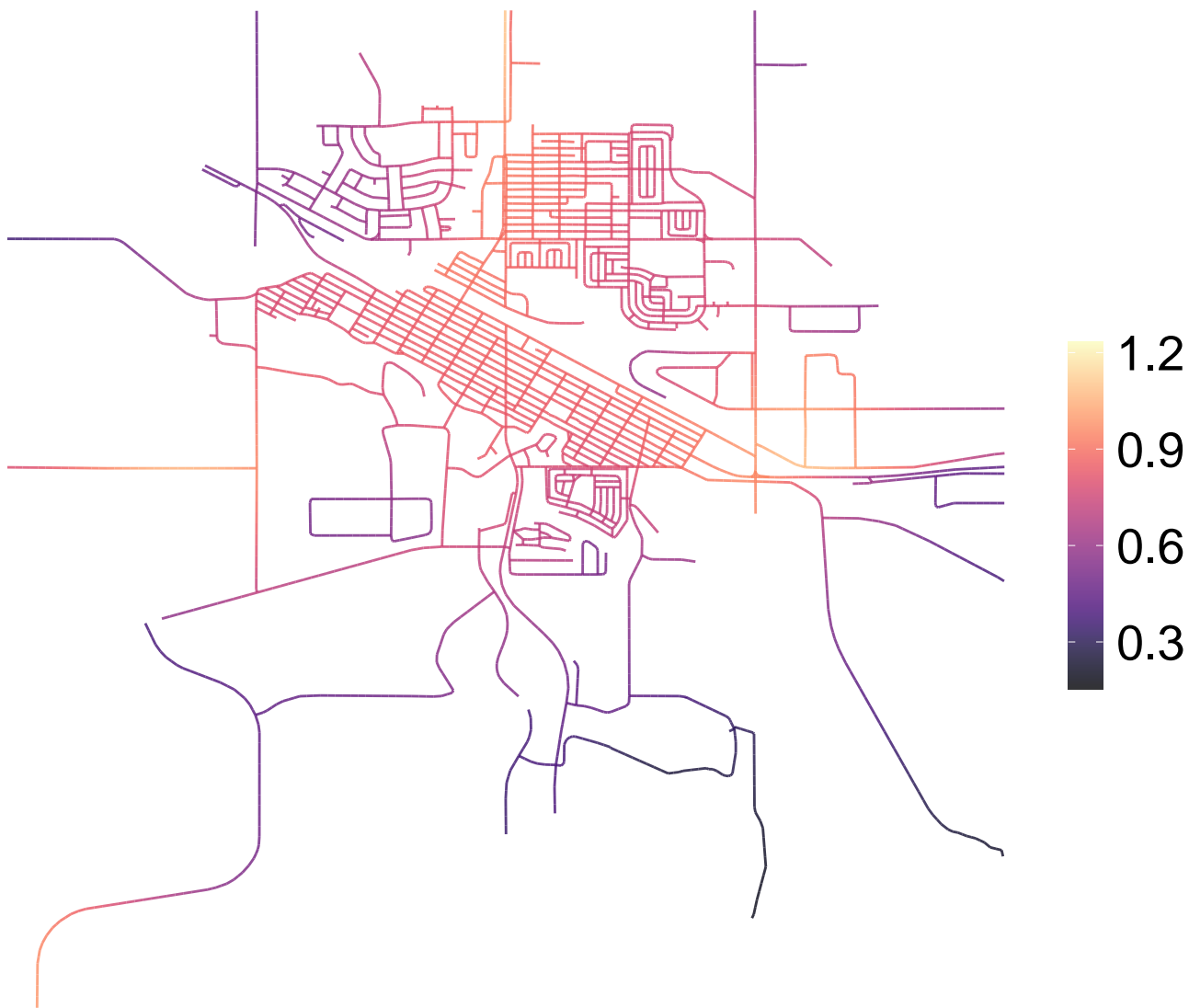
# RMSE



$\hat{f}$  (n=250)



$\hat{f}$  (n=500)



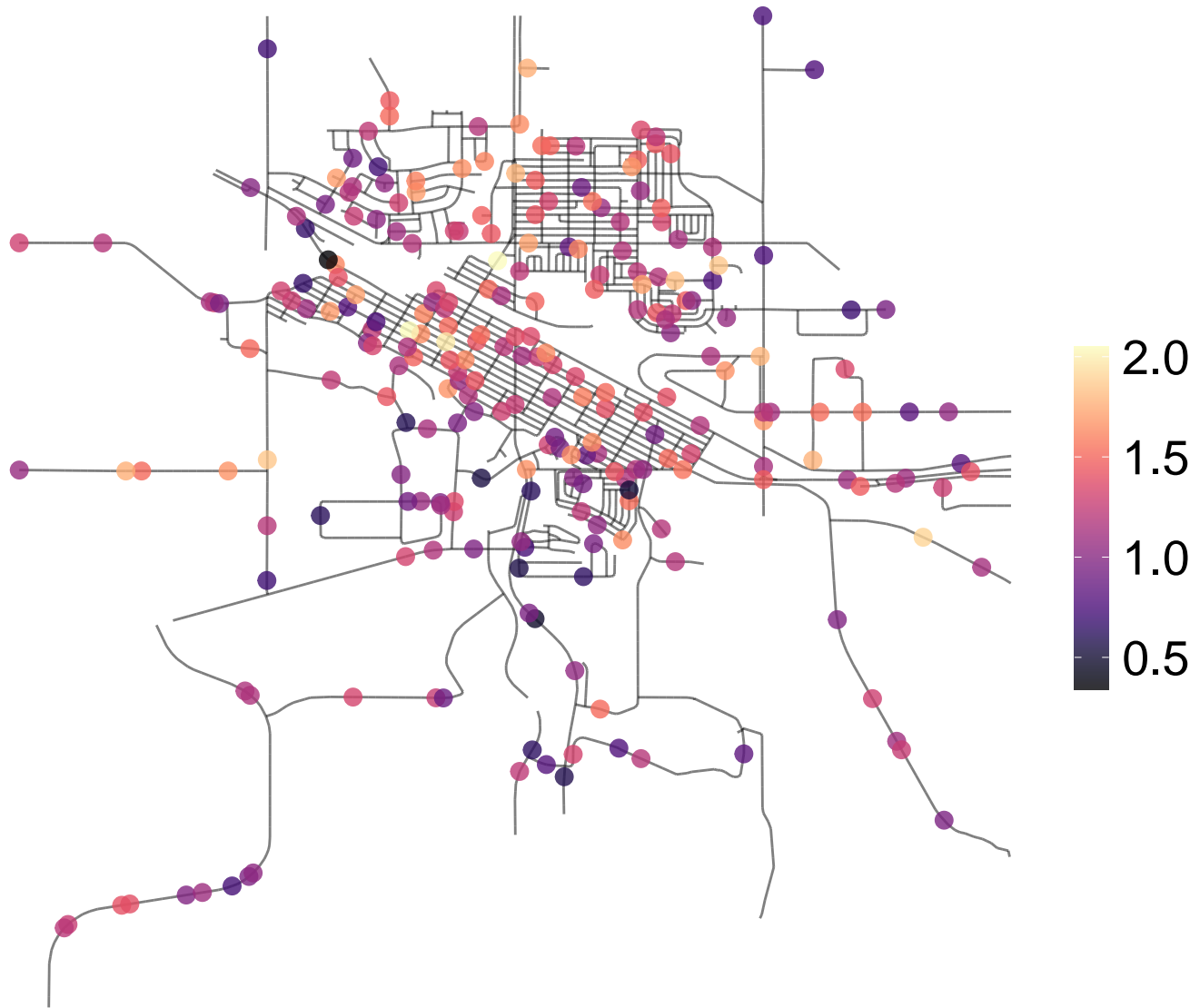
$\hat{f}$  (n=1000)



$\hat{f}$  (n=1500)



$$\mathbf{z}_i = \mathbf{w}_i^\top \boldsymbol{\beta} + f(\mathbf{p}_i) + \varepsilon_i$$





$$\mathbf{z}_i = \mathbf{w}_i^\top \boldsymbol{\beta} + f(\mathbf{p}_i) + \varepsilon_i$$



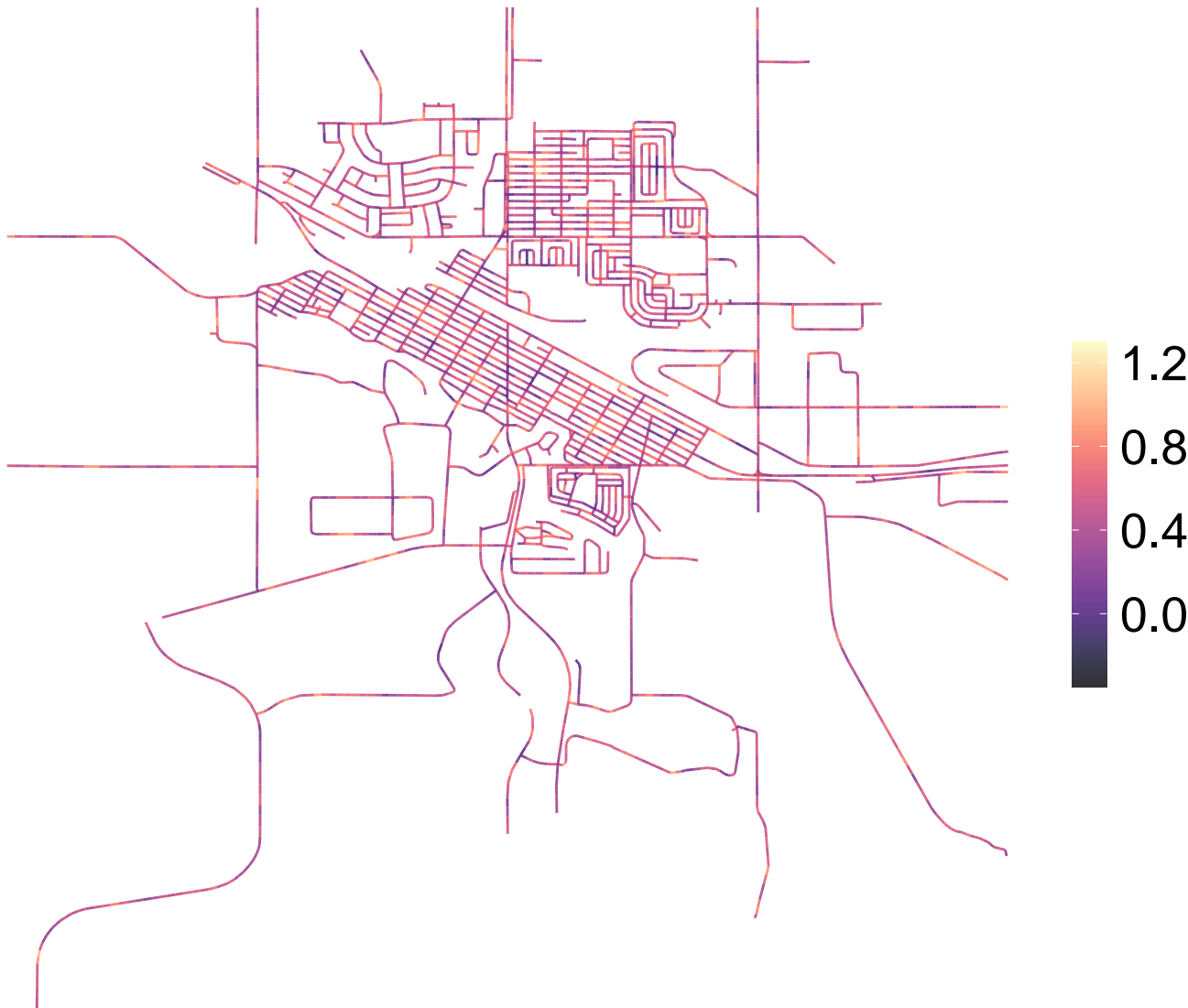
$$\mathbf{z}_i = \mathbf{w}_i^\top \boldsymbol{\beta} + f(\mathbf{p}_i) + \varepsilon_i$$



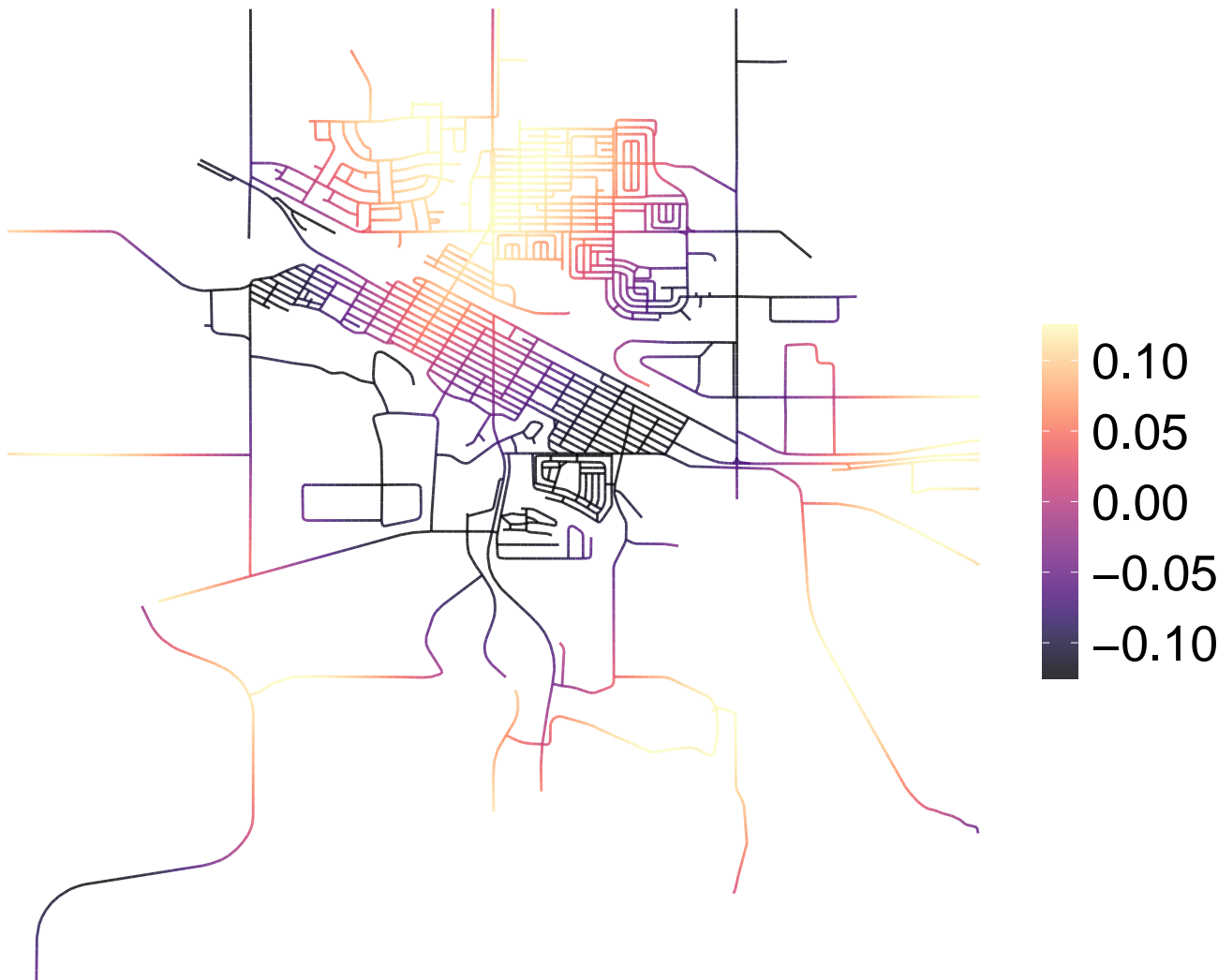
$$\mathbf{z}_i = \mathbf{w}_i^\top \boldsymbol{\beta} + f(\mathbf{p}_i) + \varepsilon_i$$



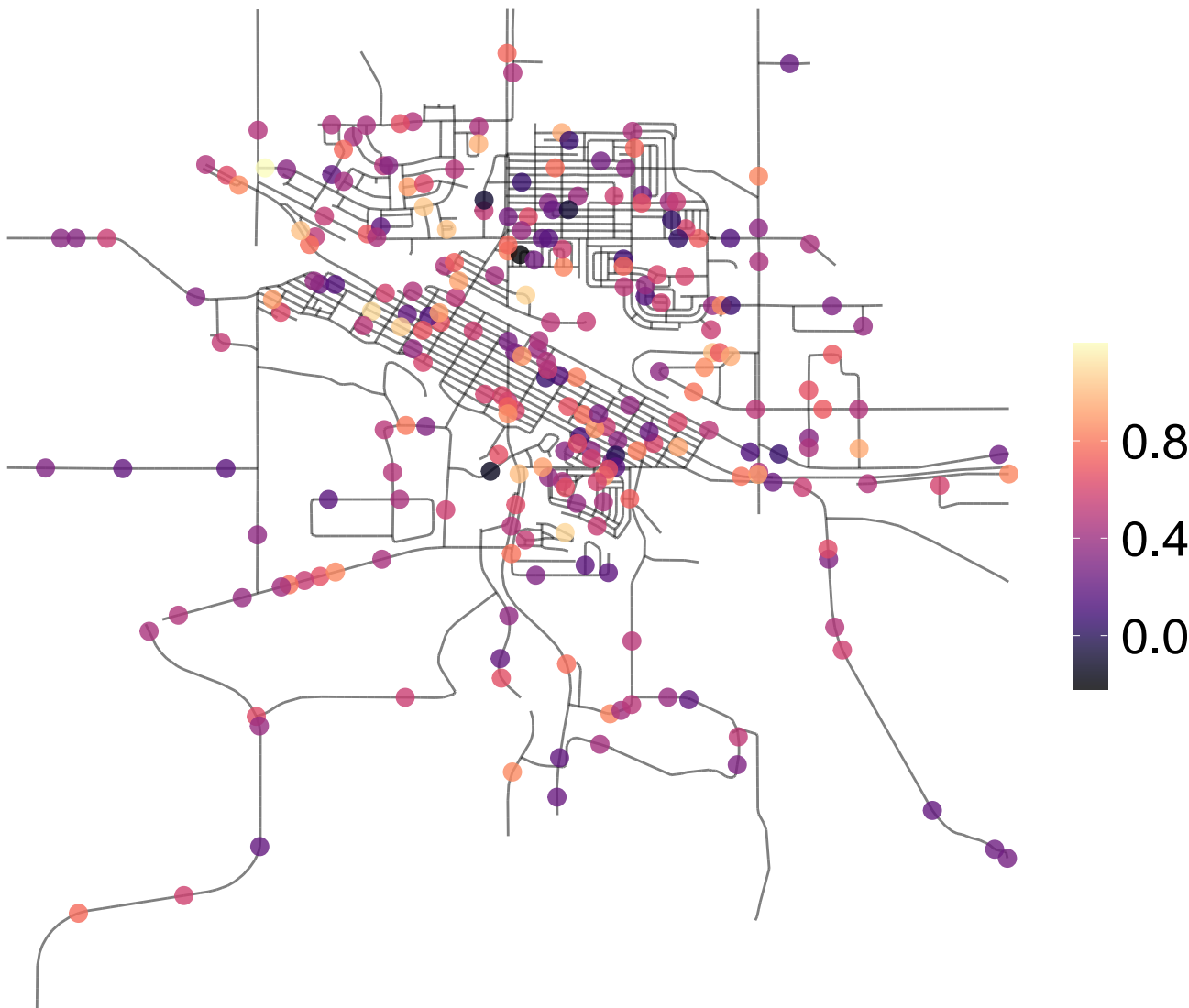
$N(0.5, 0.25^2)$



# sinusoidal function



# First Covariate(n=250)



# First Covariate(n=500)

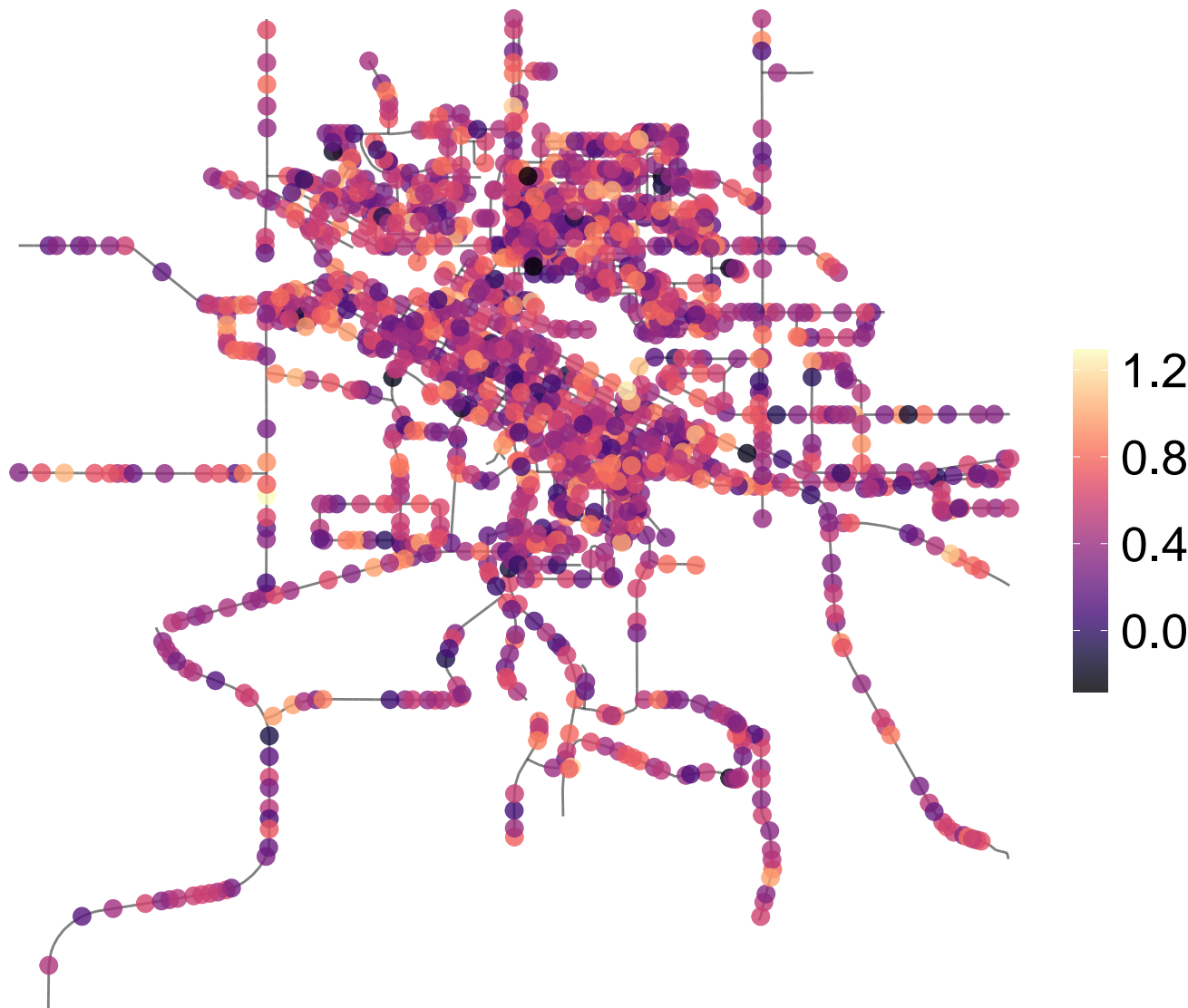


# First Covariate(n=1000)

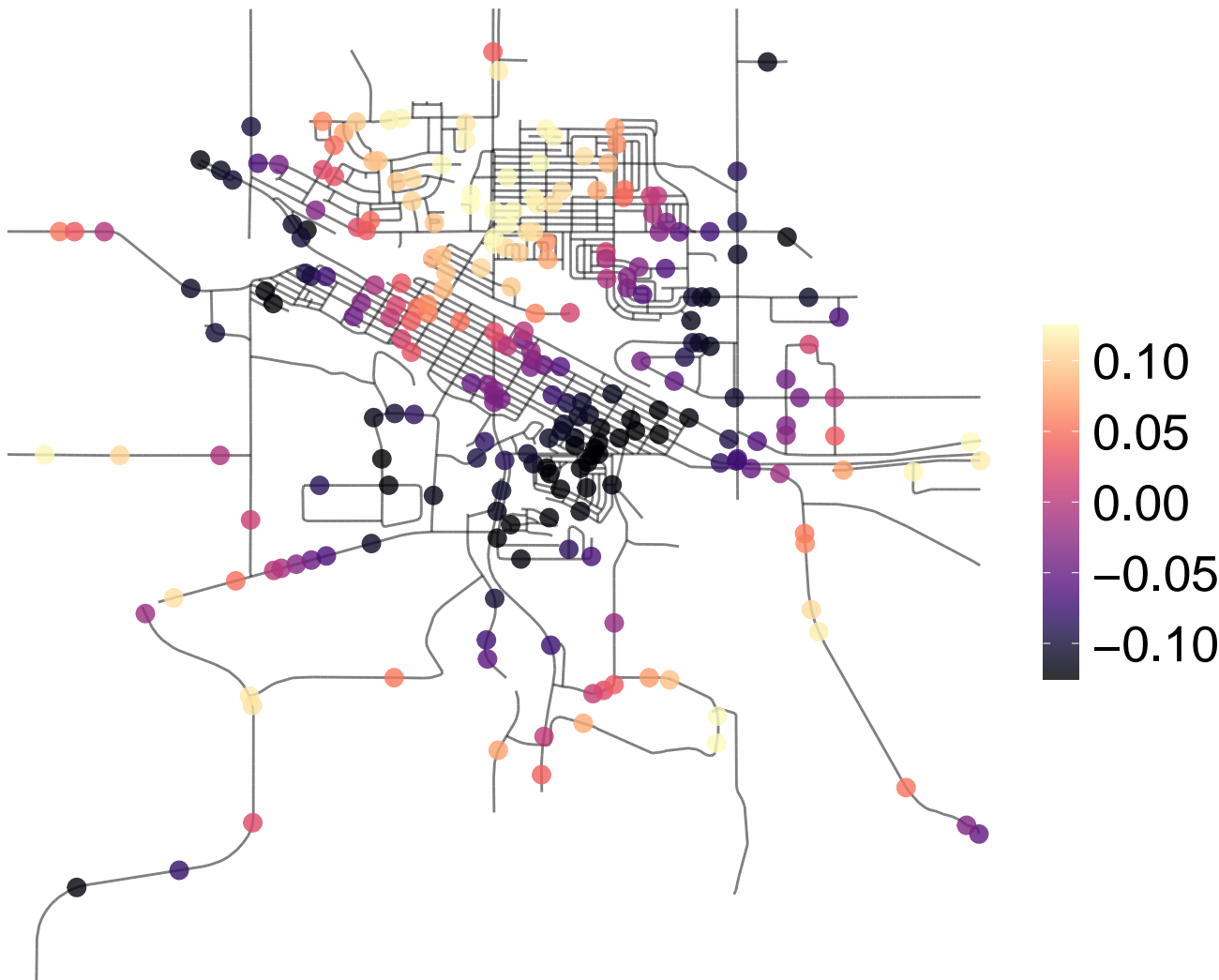




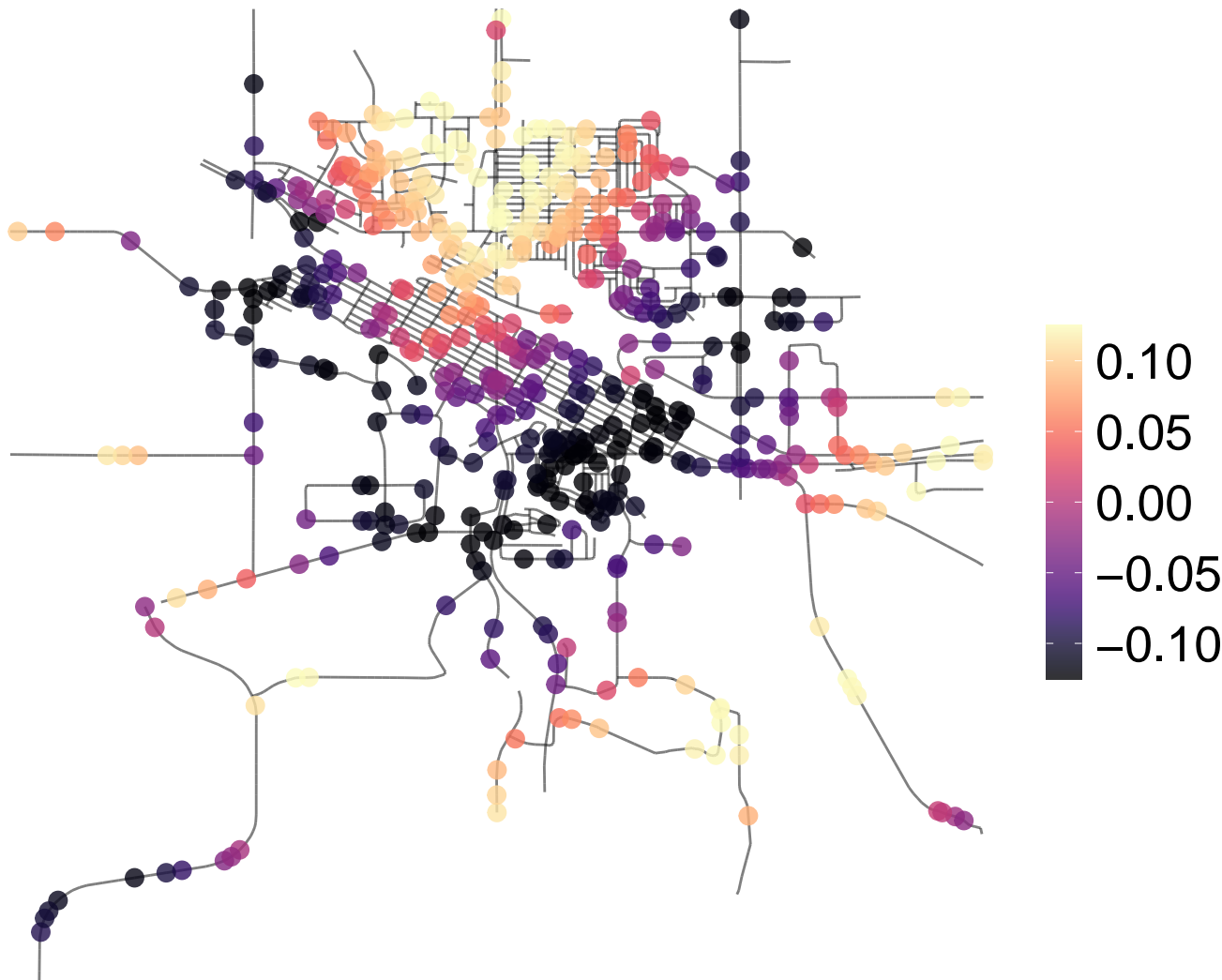
# First Covariate(n=1500)



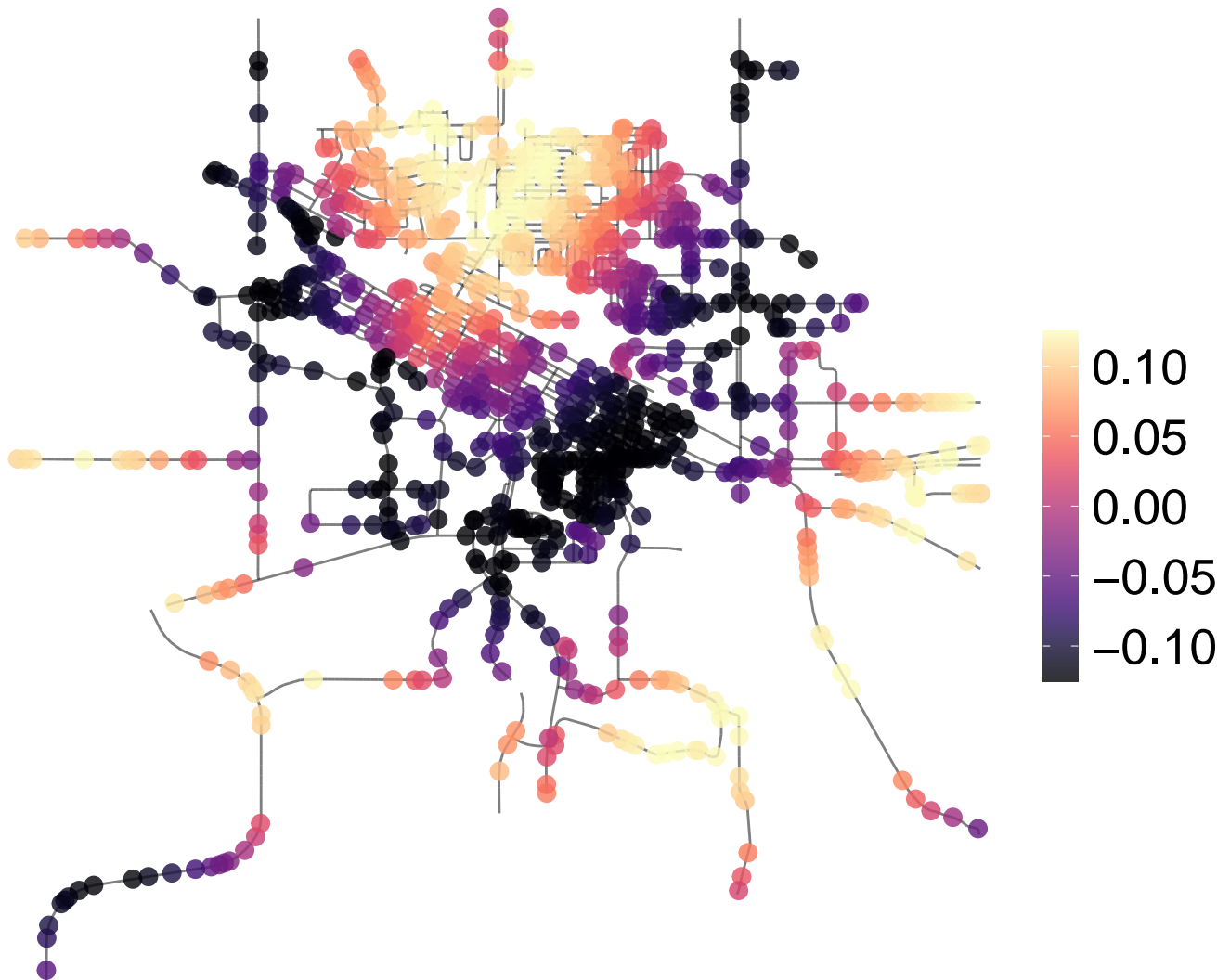
# Second Covariate(n=250)



# Second Covariate(n=500)



# Second Covariate(n=1000)



# Second Covariate(n=1500)

