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Supplemental Material

Residential Proximity to Major Roadways at Birth, DNA Methylation at Birth and Midchildhood, and Childhood Cognitive Test Scores: Project Viva (Massachusetts, USA)

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Table S1. Summary statistics of FDR-significant CpG sites (for the association between residential proximity to roadways at birth and cord blood DNA methylation) in cord blood (N=482) and in peripheral blood (N=457) in Project Viva. Summary statistics are present on the beta-value scale (0%-100% methylation).

Table S2. Differential methylation (%) (95% CI) in cord blood DNA associated with a 50% reduction in prenatal residential proximity to major roadways, stratified by sex and race/ethnicity.

Figure S1. Q-Q plot of the association between residential proximity to roadway at birth and cord blood epigenome-wide DNA methylation (x-axis is the expected $-\log_{10}(\text{p-value})$, y-axis is the observed $-\log_{10}(\text{p-value})$, $\lambda = 0.97$).

Figure S2. Scatter plot of residential proximity to major roadways at birth and DNA methylation in cord blood for the 4 CpG sites that met $\text{FDR} < 0.05$ epigenome-wide threshold.

Figure S3. Scatter plot of DNA methylation in cord blood of newborns and peripheral blood at mid-childhood for the 4 CpG sites that met $\text{FDR} < 0.05$ epigenome-wide threshold.

Figure S4. Correlation between residential proximity to major roadways at birth and cell proportions (a) in cord blood and (b) in peripheral blood at mid-childhood.

Figure S5. A comparison between blood and post-mortal brain tissues (prefrontal cortex, entorhinal cortex, superior temporal gyrus and cerebellum) for the FDR significant CpGs we identified.

Additional File - Excel Document