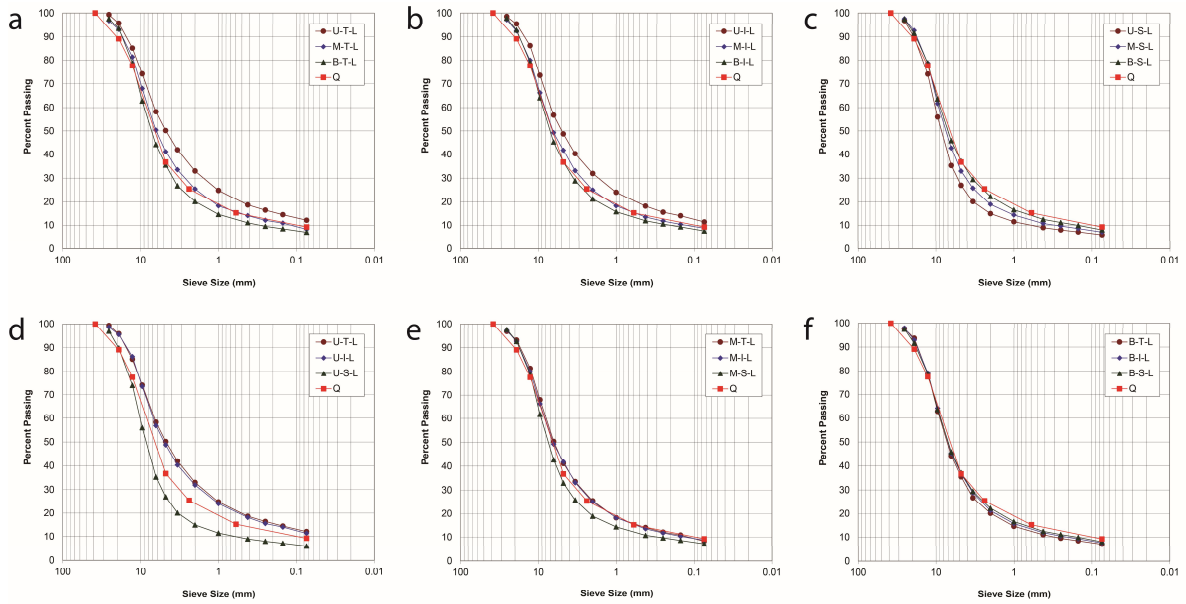
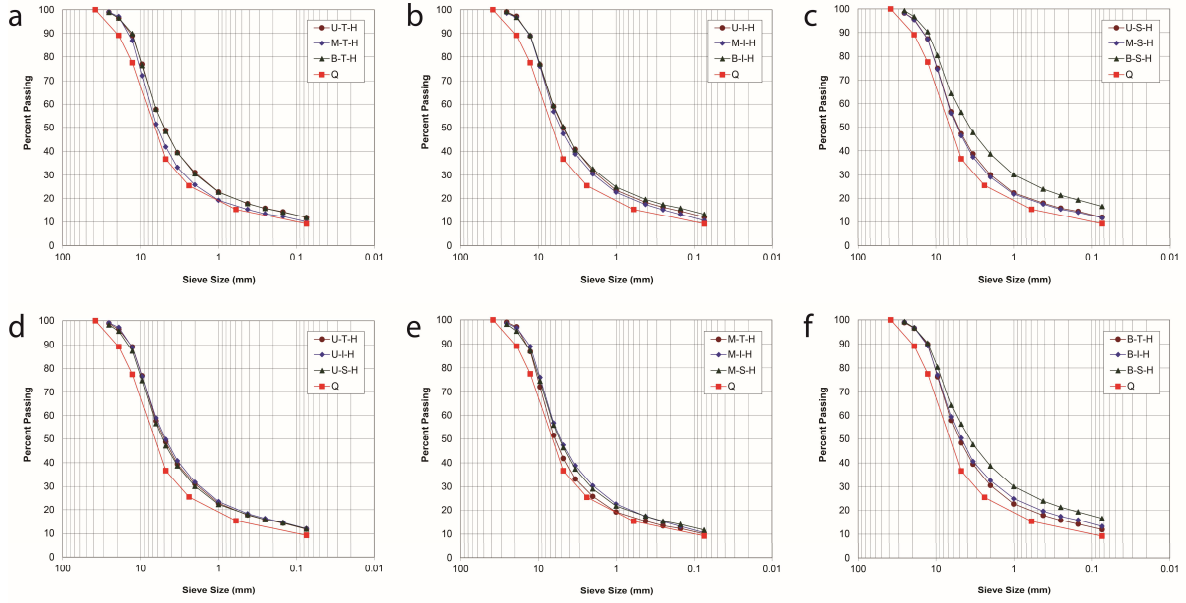


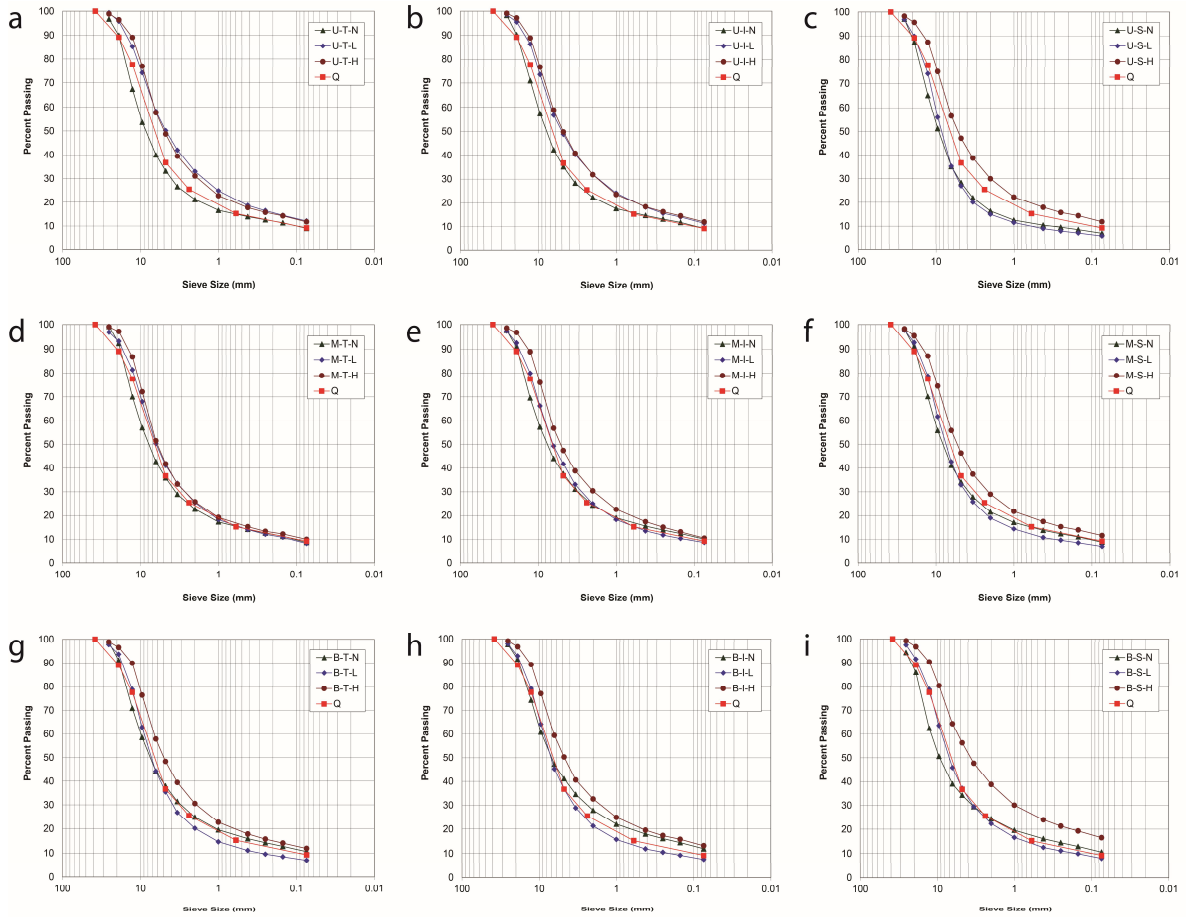
**Figure S1.** The particle-size distributions from different vertical layers and horizontal locations on no traffic use (N): (a) the particle-size distributions from different vertical layers at tire track (T); (b) at in-between (I); (c) at shoulder (S); (d) the particle-size distributions from different horizontal locations at upper (U); (e) at middle (M); and (f) at bottom (B). The particle-size distributions were based on average values of five replications [48].



**Figure S2.** The particle-size distributions from different vertical layers and horizontal locations on light traffic use (L): (a) the particle-size distributions from different vertical layers at tire track (T); (b) at in-between (I); (c) at shoulder (S); (d) the particle-size distributions from different horizontal locations at upper (U); (e) at middle (M); and (f) at bottom (B). The particle-size distributions were based on average values of five replications [48].



**Figure S3.** The particle-size distributions from different vertical layers and horizontal locations on heavy traffic use (H): (a) the particle-size distributions from different vertical layers at tire track (T); (b) at in-between (I); (c) at shoulder (S); (d) the particle-size distributions from different horizontal locations at upper (U); (e) at middle (M); and (f) at bottom (B). The particle-size distributions were based on average values of five replications [48].



**Figure S4.** The particle-size distributions from different traffic uses (no (N), light (L), and heavy (H)) at the same cross-sectional locations: (a) the particle-size distributions in upper

layer at tire track location (U-T); **(b)** in upper layer at in-between location (U-I); **(c)** in upper layer at shoulder location (U-S); **(d)** in middle layer at tire track location (M-T); **(e)** in middle layer at in-between location (M-I); **(f)** in middle layer at shoulder location (M-S); **(g)** in bottom layer at tire track location (B-T); **(h)** in bottom layer at in-between location (B-I); and **(i)** in bottom layer at shoulder location (B-S). The particle-size distributions were based on average values of five replications [48].