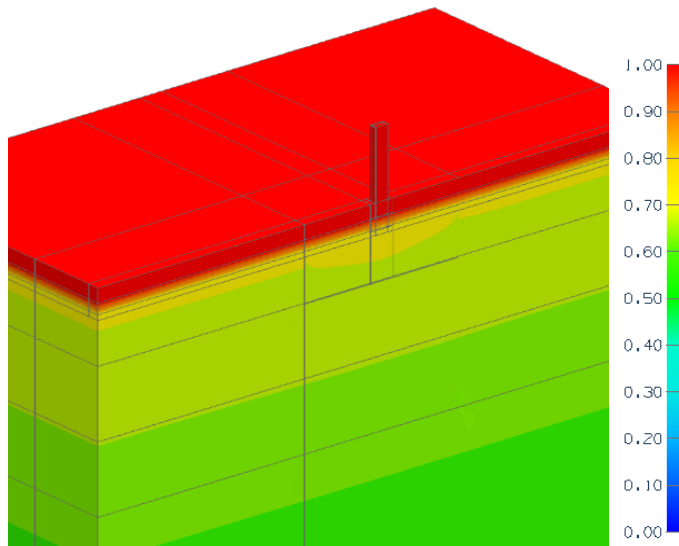


# Detail 4

## Insulated Slab on Grade – Armatherm 500 Thermal Break under Column

### Thermal Performance Indicators



|  |                  |  |
|--|------------------|--|
| Assembly 1D<br>(Nominal) R-Value                 | $R_{1D}$         | R-1.7 (0.30 RSI) + insulation                                      |
| Transmittance /<br>Resistance without<br>Anomaly | $U_o$ ,<br>$R_o$ | “clear field” U- and R-value,<br>without column                    |
| Surface Temperature<br>Index <sup>1</sup>        | $T_i$            | 0 = exterior temperature<br>1 = interior temperature               |
| Point Transmittance                              | $\chi$           | Incremental increase in<br>transmittance for column<br>and footing |

<sup>1</sup>Surface temperatures are a result of steady-state conductive heat flow with constant heat transfer coefficients. Limitations are identified in final report

View from Exterior

### Nominal (1D) vs. Assembly Performance Indicators

#### Base Assembly – Floor

| Slab Insulation<br>1D<br>R-Value<br>(RSI) | $R_{1D}$<br>ft <sup>2</sup> ·hr·°F / Btu<br>(m <sup>2</sup> K / W) | $R_o$<br>ft <sup>2</sup> ·hr·°F / Btu<br>(m <sup>2</sup> K / W) | $U_o$<br>Btu/ft <sup>2</sup> ·hr ·°F<br>(W/m <sup>2</sup> K) |
|---|--|---|--|
| R-30 (5.26)                               | R-31.7 (5.57)  | R-31.7 (5.57)   | 0.03 (0.179)   |

#### Column Point Transmittance

| R<br>ft <sup>2</sup> ·hr·°F / Btu<br>(m <sup>2</sup> K / W) | U<br>Btu/ft <sup>2</sup> ·hr ·°F<br>(W/m <sup>2</sup> K) | $\chi$<br>Btu/hr·°F<br>(W/K) |
|---|--|------------------------------|
| R-31.5 (5.55)   | 0.03 (0.180)   | 0.046 (0.079)                |