

$$\begin{aligned}
& \text{Minimize } P_1 d_1^- + P_2 d_{21}^+ + 2P_3 d_2^- + P_3 d_3^- + P_4 d_2^+ + 3P_4 d_3^+ \\
& \text{Subject to: } 5X_1 + 2X_2 + d_1^- - d_1^+ = 5500 \\
& \quad X_1 + d_2^- - d_2^+ = 800 \\
& \quad X_2 + d_3^- - d_3^+ = 320 \\
& \quad d_{21}^- + d_2^+ - d_{21}^+ = 100 \\
& \quad d_1^- \leq 5500Y_{11} \\
& \quad d_1^+ \leq 5500Y_{12} \\
& \quad Y_{11} + Y_{12} = 1 \\
& \quad d_2^- \leq 800Y_{21} \\
& \quad d_2^+ \leq 100Y_{22} \\
& \quad Y_{21} + Y_{22} = 1 \\
& \quad d_3^- \leq 320Y_{31} \\
& \quad d_3^+ \leq 320Y_{32} \\
& \quad Y_{31} + Y_{32} = 1 \\
& \quad d_{21}^- \leq 100Y_{41} \\
& \quad d_{21}^+ \leq 100Y_{42} \\
& \quad Y_{41} + Y_{42} = 1 \\
& \quad X_1, X_2, d_1^-, d_2^-, d_3^-, d_{21}^-, d_1^+, d_2^+, d_3^+, d_{21}^+ \in \mathbb{N}_0 \\
& \quad Y_{11}, Y_{12}, Y_{21}, Y_{22}, Y_{31}, Y_{32}, Y_{41}, Y_{42} \in 0, 1
\end{aligned}$$