

NYS Statewide Digital Orthoimagery Program Upgrades

1. Replace 2-ft Resolution with true 1-ft Resolution

In this upgrade, 2-ft resolution coverage is replaced with 1-ft resolution orthoimagery produced by flying at a lower altitude optimized for producing the 1-ft resolution imagery. The final product will have the improved spatial accuracy consistent with NYSDOP 1-ft resolution products.

2. Replace 1-ft Resolution with Half-ft Resolution (only in select areas)

This upgrade is based on flights at much lower altitudes than the flights used for 1-ft resolution products. The final 0.5-ft resolution orthoimagery will have the same spatial accuracy standards as the 1-ft resolution product.

3. True Orthorectification for Selected Areas, one foot and half foot only (see below)

Standard orthorectification removes displacements from terrain relief of the ground and key structures like bridges but does not account for the height of buildings and the resulting apparent “lean” of buildings in the imagery. In the case of tall buildings, the lean may obscure ground features as shown in the 2001 sample below. True orthorectification removes this artifact by incorporating elevation models of tall buildings so they are viewed from directly above and all neighboring ground features are visible, as shown on the 2010 true orthorectification sample.

The impact of building lean is most critical in urban areas with many tall buildings (over 5-stories for NYSDOP flying heights) in a concentrated area. The extra work needed for true orthorectification results in costs several times higher than regular orthorectification. Thus, it is recommended to limit true orthorectification to dense collections of tall buildings. Since previous NYSDOP coverage of urban areas was produced with regular orthorectification, potential upgrade partners are encouraged to review this existing orthoimagery to determine if and where true orthorectification would be worthwhile.



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2001 Natural Color 1 foot GSD - Orthophoto



NYSDOP

2010 4-band half foot GSD - True Ortho