

CALGARY 2024 ORTHOPHOTO MOSAIC

Data Steward Contact: Geospatial Business Solutions division, GBS@Calgary.ca

Updated: 2025/02/07

Calgary 2024 Orthophoto Metadata

The orthophoto is a seamless mosaic of accurately positioned aerial images. These aerial images are geometrically corrected for camera perspective and terrain relief so that they have a consistent scale and can be used for direct positional measurements of ground features like a map.

The aerial photo was captured using a fixed wing aircraft equipped with a special aerial camera sensor and high accuracy GNSS/INS positioning systems to gather thousands of overlapping images in a grid pattern across the entire city. These stereo images were accurately geo-referenced and tied together using the airborne and ground control data in a photogrammetric aerial triangulation. The imagery was then orthorectified using the Calgary 2022 LIDAR bare-Earth DEM.

Orthophoto is considered a core geospatial dataset. It is commonly used for many applications such as geospatial analysis, engineering designs, asset management and as a base GIS dataset providing rich contextual information for anywhere in the city. The Calgary orthophoto is updated annually with a city-wide aerial survey flown each spring.

- Photo Date: Jun 11, 20, Jul 20 & Aug 29, 2024
- Pixel Size: 10 cm
- Bands: RGB Colour & NIR
- Airborne Sensor: Leica DMCIII
- Horizontal Accuracy: +/- 15 cm at 95% confidence level on flat ground surfaces (Confirmed with 70+ surveyed ground control points)

The City of Calgary Geospatial Coordinate System

- Name: 3TM NAD83 Alberta 114W
- EPSG Code: 3776
- Projection: Transverse Mercator – 3TM (3 degree zone width)
- Horizontal Datum: NAD83 (Adopted/Original)
- Ellipsoid: GRS80
- Central Meridian: 114°00'00.0" W
- Scale Factor: 0.9999
- Origin Latitude: 0°00'00.0" N
- False Easting: 0 m
- False Northing: 0 m
- Positive Axes: North and East
- Planar Units: Meters

- Vertical Datum: CGVD28
- Geoid Model: GSD95 (ITRF version)
- Elevations: Orthometric (above mean sea level)
- Vertical Units: Meters

COPYRIGHT © 2024 The City of Calgary

All rights reserved. No part of this propriety product may be reproduced in any form or by any means without the written consent of The City of Calgary and a license agreement. The City of Calgary provides this geospatial data in good faith, but provides no warranty, nor accepts any liability arising from incorrect, incomplete or misleading information or its improper use.



2024 Orthophoto snapshot: The BMO Centre Expansion at Stampede Park was completed in spring 2024 and opened on June 5. Since 1982, the BMO Centre has been Calgary's top venue for shows, events, and conferences. Now with over one million square feet of total space, the BMO Centre stands as Western Canada's largest convention centre.