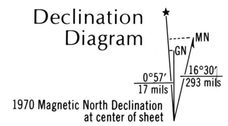
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

ATLAS OF URBAN AND REGIONAL CHANGE

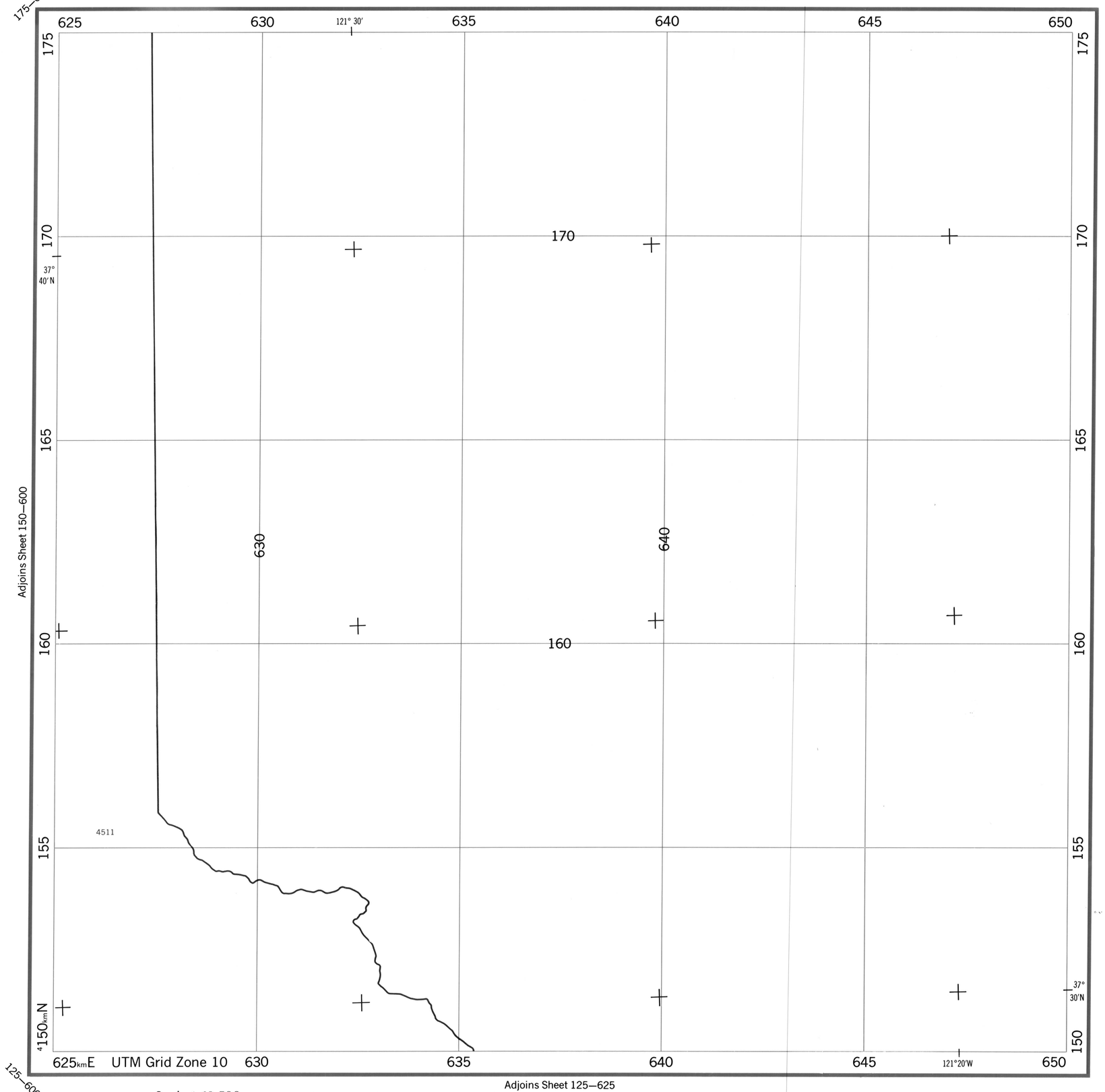
This looseleaf Atlas is one prototype product of experiments in land use change detection using remote sensors on aircraft and Earth-orbiting satellites. Sensor data and census data are being compared for a sample of urban test sites. These efforts are parts of Department of the Interior's Earth Resources Observations System (EROS) Program and National Aeronautics Space Administration's Earth Observations program. Photography for change detection by NASA, 1970, 1971, and 1972. Photogrammetry, cartography, and computer operations by divisions of U.S. Geological Survey. Analysis and applications development by Geographic Applications Program, Office of Chief Geographer, USGS.

Declination Diagram



1970 Magnetic North Declination at center of sheet

There are three Norths on this map. The vertical grid lines represent Grid North. A meridian line connecting grid ticks represents True North, according to the map projection. Grid North and Magnetic North decline from True North as shown in the diagram. These values are for the center of the map, but may be taken as a sheet average.



Scale 1:62,500 For graphic scale in kilometers use neat frame border

Thousands of Feet
5 0 5 10 15 20 25 30

Statute Miles
1 0 1 2 3 4 5 6

The geographic coordinate system at five-minute interval is based on a conformal projection centered on the area mapped. Universal Transverse Mercator (UTM) coordinate system is shown with grid interval of five kilometers. This grid forms the basis for sheetlines, sheet numbering, and location control for computer mapping. The map is based on an orthophoto mosaic made from high altitude aircraft photography acquired by U.S. Geological Survey, May 1970. Mosaic, projection and control by USGS.

San Francisco 150–625

Open File 76-396

ATLAS OF URBAN AND REGIONAL CHANGE

San Francisco 150–625/25

This experimental map series shows changes in land use from 1970 to 1972 in the nine-county San Francisco Bay Region. Land use and change for areas 10 acres and larger are derived primarily by interpretation of high-altitude color infrared photography. A limited field check also has been made. Sensor data and census data are aggregated by census tract, by county, by region, and by urban area, 1970 and 1972. The latter uses visible land use boundaries so that changes occurring between census years can be monitored using remote sensors aboard aircraft and/or satellite. The land use maps and data augment Earth science materials from the San Francisco Bay Region Environment and Resources Planning Study, a joint effort by USGS and U.S. Department of Housing and Urban Development. Inquiries and suggestions may be addressed to Director, U.S. Geological Survey, Reston, Virginia, 22092.

Census Areas 1970

County boundary.....

Census tract boundary.....

Census tract centroid and number..... 3560

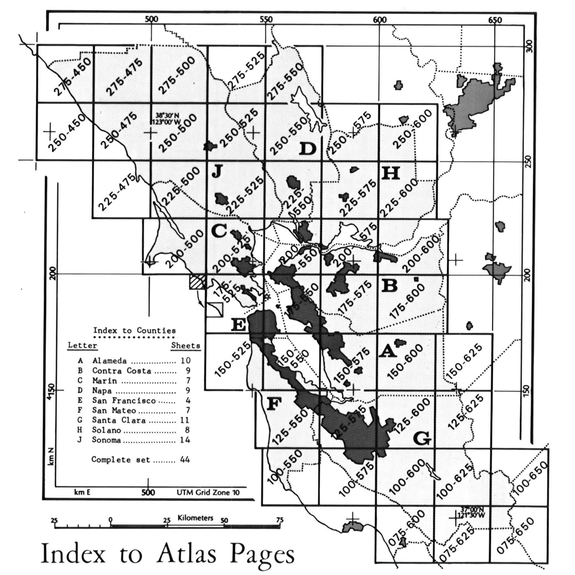
Boundary of Urban Area, 1970, based on land use.....

Boundary of Urban Area added between 1970 and 1972.....

Land Use Change 1970–1972

	From-To
Commercial, Public and Private Services.....	0 0
Industrial, Extractive.....	1 1
Transportation.....	2 2
Multi-Family Residence.....	3 3
Single-Family Residence.....	4 4
Strip and Cluster Development.....	5 5
Agriculture (Cropland and Pasture, Orchards, Groves).....	6 6
Improved Open Space.....	7 7
Unimproved Open Space.....	8 8
Water.....	9 9

Change polygons are identified by a two-digit number; the first digit identifies the land use in 1970 and the second digit the land use in 1972. For example, a change polygon coded 64 means that the land use changed from Agriculture (6) in 1970 to Single-Family Residence (4) in 1972. Land use in transition is shown by an asterisk (*) following the use code.



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