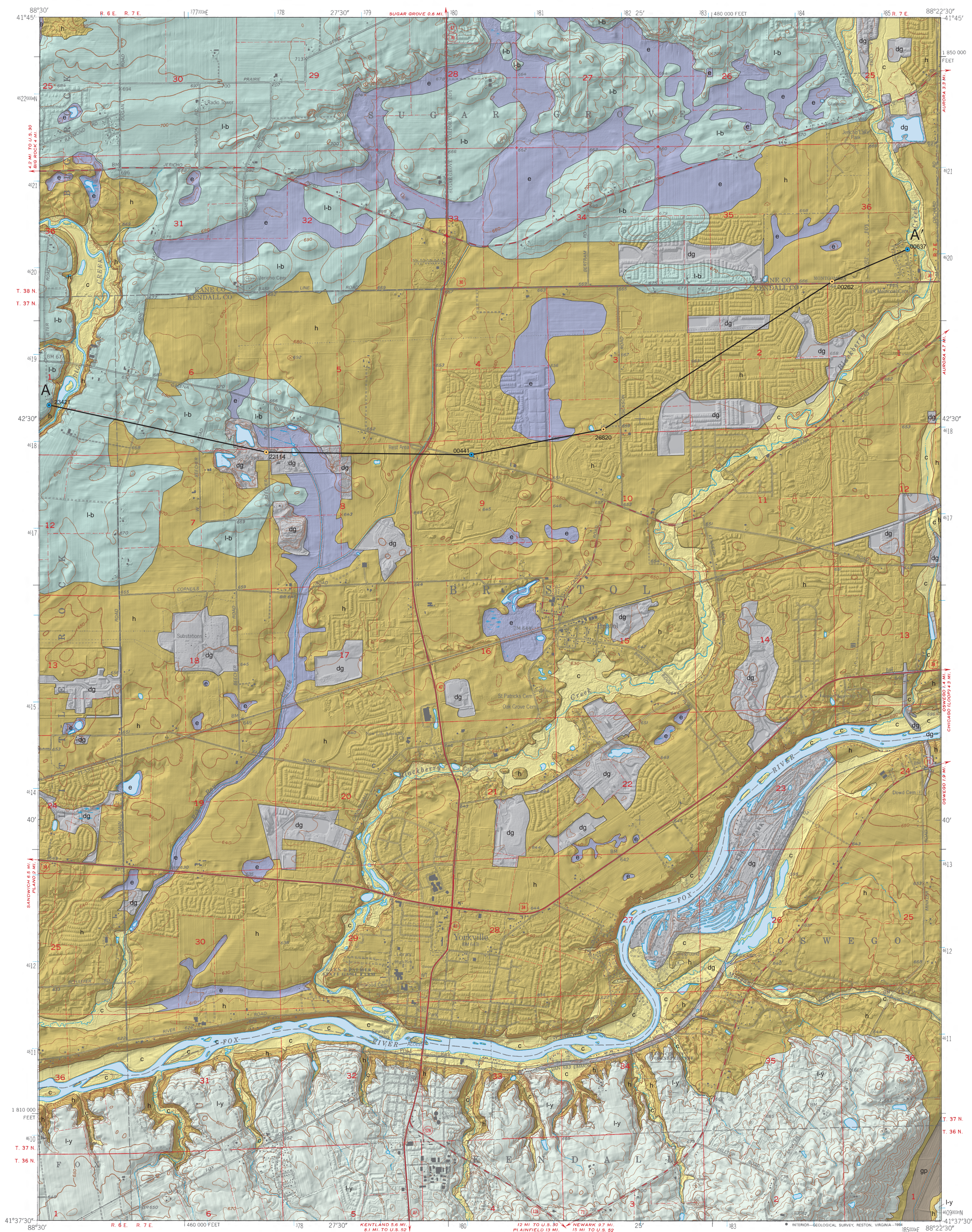


SURFICIAL GEOLOGY OF YORKVILLE QUADRANGLE
KANE AND KENDALL COUNTIES, ILLINOIS

Prairie Research Institute
ILLINOIS STATE GEOLOGICAL SURVEY

B. Brandon Curry
2011

STATEMAP Yorkville-SG



QUATERNARY DEPOSITS

Description	Unit	Interpretation
HUDSON EPISODE (~14,600 years before present (B.P.) to today)		
Diamicton, sand, gravel, silt, marl and peat; as much as 20 feet thick	Disturbed ground dg	Disturbed land; includes significant relandscaping and engineered materials in abandoned sand and gravel pits, subdivisions, water impoundments, and road improvements
Peat, muck, marl, organic silt and clay; in some places, fossiliferous and interbedded with sand, silt, and clay; as much as 5 feet thick. Fossils include wood fragments and snail shells	Grayslake Peat gp	Organic debris deposited in depressions; intertongues with the Equality and Cahokia Formations
Sand, silt, and clay; stratified; locally containing beds of sandy gravel; generally less than 10 feet thick	Cahokia Formation c	Alluvium in floodplains and channels of modern rivers and streams
Clay, silt, and very fine to medium sand; fossiliferous, laminated; as much as 20 feet thick	Equality Formation e	Lake sediment in channels and kettle basins
WISCONSIN EPISODE: Michigan Subepisode (~29,000–14,600 years B.P.)		
Sand and gravel with lenses of silt and diamicton as much as 60 feet thick	Henry Formation h	Outwash deposited in glacial meltwater channels, outwash plains, alluvial fans, and bars
Diamicton, pebbly clay, silty clay, silty clay loam and silt loam; gray to yellowish brown; with few lenses of sand and gravel or silt; as much as 70 feet thick	Yorkville Member, Lemont Formation l-y	Till and ice-marginal sediment
Diamicton, pebbly loam to sandy loam; light brown, gray in places, with abundant, thick and continuous lenses of sand and gravel; as much as 50 feet thick	Batestown Member, Lemont Formation l-b	Till and ice-marginal sediment
Diamicton, loam to clay loam; reddish brown with lenses of sand and gravel; gradational upper contact with diamicton of the Batestown Mbr.; as much as 30 feet thick	Tiskilwa Formation t	Till and ice-marginal sediment
ILLINOIS EPISODE (~200,000–~130,000 years B.P.)		
Diamicton with thick and continuous beds of silt or bouldery sand and gravel; the diamicton is sandy loam, pebbly to cobble-rich (approaching clast supported diamicton), and light brown; as much as 50 feet thick	Glasford Formation (cross sections only) g	Till and ice-marginal sediment in bedrock valleys; debris coarseness suggests environment proximal to glacier; thick silt deposits are likely slackwater lacustrine deposits; deposits of coarse, sorted sediment likely occur in channels parallel to the valley walls

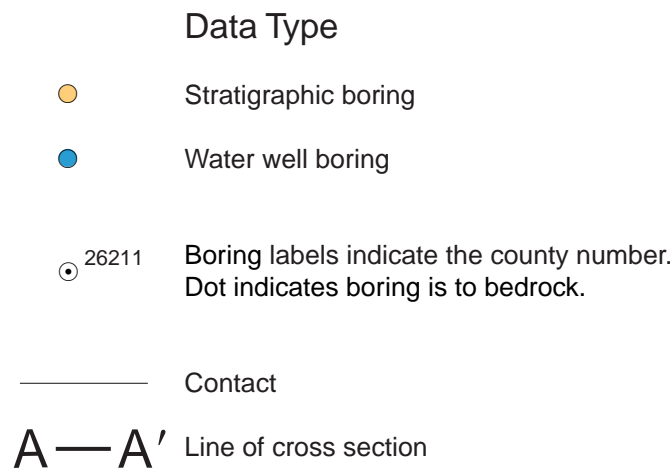
PRE-QUATERNARY DEPOSITS

Description	Unit	Interpretation
ORDOVICIAN SYSTEM (490–440 million years B.P.)		
Shale, dolomite, limestone	Paleozoic bedrock, undifferentiated (cross sections only) Pz	
Shale, shaly dolomite; dolomite; brown, gray and greenish gray; the dolomite is vuggy and fossiliferous; about 100 to 210 feet thick	Maquoketa Group (cross sections only) Om	Subtidal to intertidal clastic deposits interbedded with dolomitized carbonate bank deposits (Graese 1991)
Dolomite; microcrystalline; cherty and shaly in places; white, light yellowish brown, light gray, and greenish gray; about 160 to 200 feet thick (Graese et al. 1988)	Galena Group (cross sections only) Og	Dolomitized carbonate shelf deposits
Dolomite; fine to medium-grained, slightly cherty, some shaly, sandy at base	Platteville Group (cross sections only) Op	Dolomitized carbonate shelf deposits

¹The time periods for the Wisconsin Episode and the Hudson Episode are reported as calibrated radiocarbon years and can be directly compared to calendar years before 1950 (Stuiver et al. 2005).

REFERENCES

Graese, A.M., 1991, Facies analysis of the Ordovician Maquoketa Group and adjacent strata in Kane County, northeastern Illinois: Illinois State Geological Survey, Circular 547, 36 p.
Hansel, A.K., and W.H. Johnson, 1996, Wedron and Mason Groups: Lithostratigraphic reclassification of deposits of the Wisconsin Episode, Lake Michigan Lobe area: Illinois State Geological Survey, Bulletin 104, 116 p.

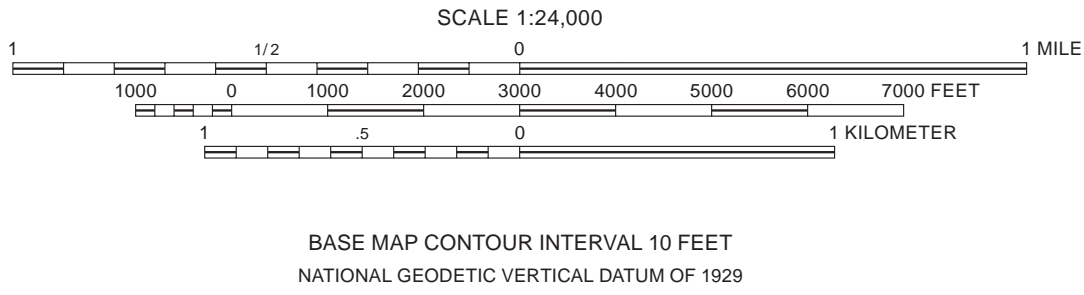


Note: The county number is a portion of the 12-digit API number on file at the ISGS Geological Records Unit. Most well and boring records are available online from the ISGS Web site.

Base map compiled by Illinois State Geological Survey from digital data (Raster Feature Separates) provided by the United States Geological Survey. Topography by photogrammetric methods from aerial photographs taken 1952 and planetable surveys 1953. Revised from aerial photographs taken 1986. Field checked 1991. Map edited 1993.

North American Datum of 1927 (NAD 27)
Projection: Transverse Mercator
10,000-foot ticks: Illinois State Plane Coordinate system, east zone (Transverse Mercator)
1,000-meter ticks: Universal Transverse Mercator grid system, zone 16

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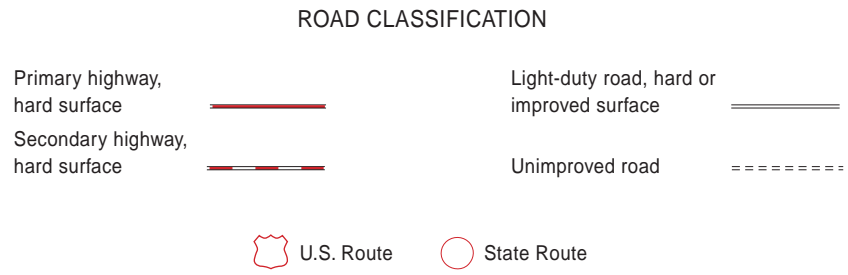
Geology based on field work by B. Brandon Curry, 2010–2011.

Digital cartography by Jennifer E. Carrell and Jane E.J. Domier, Illinois State Geological Survey.

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1	2	3
4	5	
6	7	8

ADJOINING QUADRANGLES
1 Big Rock
2 Sugar Grove
3 Aurora North
4 Plano
5 Aurora South
6 Newark
7 Platteville
8 Yorkville SE

