COBBLESTONES OF NEW YORK STATE

The existence of cobblestone buildings in west central New York State appears to be the result of the conjunction in time and space of several factors necessary for their construction. It is evident that three factors were required, namely an available source of stones, limestone to make mortar, and men with the knowledge and ability to prepare the mortar and construct the walls.

Stones, including cobble-sized stones, are abundant in the Ontario Lake Plain and Southern Ontario Lake Plain and in the Ontario Drumlins, deposited there by the Ice Age glacier about 40,000 years ago. Some of the stones were scattered broadly, while others were deposited in large masses of ground moraine, some in the form of symmetrical mounds or drumlins. As the ice melted, the earth and stones picked up by the glacier were left in unstratified deposits and were further abraded and washed by the streams flowing from the glacier. One of the most extensive belts of drumlins known is found between Rochester and Syracuse.

In order to determine if the distribution of cobblestone buildings in the state had any direct relationship to the presence of major stone deposits, the state was divided into a western section -- west of the Genesee River in Monroe County and west of Conesus Lake in Livingston County; a middle section -- from the line described above east to Syracuse; and an eastern section -- from Syracuse to the Hudson River. It is recognized that this is an arbitrary division, but it does allow one to look at the distribution of houses in relation to known geological features. The 660 buildings examined in the study were distributed as follows:

Western section -- 35.9%
Middle section -- 59.7%
Eastern section -- 4.4%

Thus the cobblestone structures are commonest in the part of the state with the greatest potential for having glacially deposited stones.

The second factor -- limestone for making mortar must be found in rocks and is therefore related to historical geology. The area in which cobblestones (and incidentally, the Erie Canal) are found belongs to the Upper Silurian era, which is in turn divided into three periods. The rocks of the Onondaga period include Salina beds and the Water-lime group. The latter rocks are impure magnesian limestone, whose impurities allow the quicklime made from them to set under water, and are therefore useful in making hydraulic cement. This type of limestone was needed when the Erie Canal was built, and useful outcroppings of the rock were found at various locations. These Upper Silurian rocks also occur in Ontario, (Canada), in Indiana, Illinois, Wisconsin and Vermont, as well as other places.

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Their influence on the presence of cobblestone buildings in these areas is a matter for conjecture.

The third factor mentioned at the beginning if this discussion was men with the ability to prepare mortar and set the stones. It is frequently suggested that the Erie Canal masons began to build houses after their service on the canal was terminated. While this may be true, there are several factors which may have had an influence. Because of the canal, there was an influx of masons into this area of New York State and any cutback in the canal's demands would make some masons unemployed, and therefore available for construction of buildings.

The first Erie Canal (Clinton's Ditch) was started at Rome in 1817 and was completely opened to traffic in 1825. Schmidt (1966) dates the early cobblestone period from 1825 to 1835. The enlargement of the canal began in 1832 and was completed in 1862. In this period, locks were widened and lengthened and aqueducts widened to accommodate the new larger sized canal boats. This certainly ewnewed the demand for masons after a hiatus from 1825 to 1832. The final completion of the Erie Canal practically coincided with the last date given to the late cobblestone period, 1860. Thus, with the exception of the years 1825-1832, the need for masons on the canal did not stop until 1862, which was certainly at the end of the cobblestone period. This is not to suggest that masons for house building were not available from 1832-1862, but does suggest that there was probably not massive unemployment of masons on the canal.

Another way of considering the availability of masons is to determine where the demand for their services existed on the canal. If one divides the canal into segments in the same manner as suggested in the discussion of glacial effects above, - of the 71 locks, 46 were east of Syracuse, 20 between Syracuse and Rochester, and 5 west of Rochester. Of 32 aqueducts, 22 were east of Syracuse, 9 between Syracuse and Rochester, and one west of Rochester. Thus, 65% of the locks and 68% of the aqueducts on the Erie Canal were built east of Syracuse, while the cobblestone buildings east of Syracuse amounted to only about 4% of the total. Therefore, if one realizes that the demand for masons on the canal east of Syracuse was about 70% of the total demand, while the demand for cobblestone masons west of Syracuse was 95% of the total, one has to assume that the masons may have migrated considerable distances from canal to cobblestone house. Once having started cobblestone buildings in an area (e.g. in Orleans County), it would have been difficult for a mason to revert to work on the canal, since the available work might have been somewhere east of Syracuse.

Taking all known facts into consideration, it seems that while masons from the canal were involved in building cobblestone structures, all of the factors that existed in the relationship are not known.

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