DISCUSSION ON LOW COST BRIDGES

ABSTRACTED

PROFESSOR LYNN PERRY, *Lafayette College* In addition to the data on the economic service period of steel and concrete bridges given by Mr Seiler in his Figure 1, a similar curve for creosoted timber would have been very interesting The tie service record in Table I has been prepared from a recent report of a joint committee of the American Railway Engineering Association and the American Wood Preservers' Association, covering the five year period 1924-1928 in-

TABLE I

THE SERVICE RECORD

FOR TREATED TIES FROM REPORT OF COMMITTEE ON TIE SERVICE RECORDS, A R E A, FOR FIVE YEARS AVERAGE ENDING 1928

Percentage of Treated Ties in Track	Railroad	Miles of Track	Ties Renewed per Mile of Track			
			1928		Five Year Aver	
			Number	%	Number	%
100	C & E I	1,675	122	4 2	107	3 7
99	C R R of N J	1,531	85	2 9	97	3 4
98	Monon	956	120	4 2	129	4 5
97	C B & Q	13,620	164	5 6	154	5 3
95	N Y C (West)	5,317	89	3 1	102	3 5
94	A T & S F	19,252	156	5 4	125	4 3
92	D L & W	2,505	91	3 1	93	3 2
92	C C C & St L	4,096	100	3 5	117	4 0
		Average	116	4 0	116	4 0

clusive It shows conclusively that treated ties may be expected to give service for an average of 25 years Since most treated ties are removed for other causes than decay, the more expensive timbers in a bridge should be expected to give longer service than this

The matter of obsolescence should receive more attention Many bridges have become obsolete and have been replaced years before they should have ceased to be useful In a city of 15,000 inhabitants a wooden pivot bridge was replaced by a steel structure in 1905, which was in turn replaced by a bascule span to provide a wider channel in 1921 This bridge is now too narrow to accommodate the traffic and must soon be replaced with a wider span The bonds issued in 1905 will not fall due until 1935