Harbord Street arch and the concrete bridges at Centre Island show what the works department has accomplished in the past in very satisfactorily harmonizing structures to their surroundings.

Great stress is laid on the fact that good foundations must be obtained for a concrete arch, and this elementary engineering consideration is granted. The steel superstructures of the skyscraper office buildings can stand an amount of settlement which would wreck a concrete arch, but they are carried to rock on concrete footings. The foundations of a steel viaduct ought to be at least as secure, and, if made so, can as safely carry a superstructure of concrete as of steel. As a matter of fact, it is doubtful if the foundations for the. Bloor Street viaduct would require to be carried as far down as the piers under the C.P.R. building. In the absence of information to the contrary it is fair to assume that only ordinary difficulties would have to be overcome in getting down to depth.

The point has been raised that failures of concrete structures have occurred. Leaving out the "tu quoque" arguments of the failure of brick and steel which prove nothing concerning concrete, the fact need only be emphasized that in every case the contributing cause was outside entirely of the material used—dishonest or unskillful workmanship or design, not poor material.

One argument on which might be poured the choicest sarcasm of a Macaulay flaying a Montgomery is that it is inadvisable for the city of Toronto to take the lead in using concrete for a work of such unheard-of magnitude. With a graduate of Toronto University building the largest steel truss bridge in the world, another responsible for the foundations of most of the office buildings in America and a Toronto engineer building concrete arches unsurpassed for magnitude in Canada, it is time some one awakened the Ripvan-Winkle responsible for this amazing argument. Without leaving this continent for examples we can find one viaduct with foundations going to double the depth required, another of double the proposed height, another of double the length, and still have left the notable achievement at the Florida Keys of one running over two miles over the ocean. If these are too far afield we shall be content to mention that the pioneer work has been done by Port Arthur and that before the Bloor Street viaduct is designed in steel the city of St. Catharines will have one of concrete 70 feet high and 700 feet long.

Were it not for the size and importance of the city of Toronto it would not be worth while to take up this matter seriously. But we have here a case in which steel is to be recommended to the express exclusion of concrete when the latter is necessarily permanent as against the certain deterioration of steel, whence an artistic architectural effect is certain to be obtained in concrete and almost certainly not in steel, and where it is within the bounds of possibility that concrete construction may be cheaper in first cost and is certain to be cheaper if a fair valuation is placed on maintenance expenses.

The Canadian Cement and Concrete Association is not opposed to steel construction and will not oppose steel for the Bloor Street viaduct if a committee of engineers should recommend it. The stand taken by the association is that the city of Toronto has much to gain and nothing to lose by rejecting the present recommendation of the Commissioner of Works and allowing concrete and steel to compete on equal terms for use in the construction of the Bloor Street viaduct.

CANADIAN CEMENT AND CONCRETE ASSOCIATION. W. SNAITH,

Secretary-Treasurer.

Toronto, August 6th, 1912.

PROGRAM FOR THE SIXTH ANNUAL CONVEN-TION OF THE ILLUMINATING ENGINEER-ING SOCIETY TO BE HELD AT HOTEL CLIFTON, NIAGARA FALLS, ONT., SEPTEMBER 16th to 19th, 1912.

1. Report of Committee on Progress. This report will deal with the recent progress and developments in the lighting industry both in this country and abroad.

2. A report of the Committee on Nomenclature and Standards, which will deal with certain definitions and terminology of illuminating engineering.

3. "Steel Mill Lighting"—a report of the committee on illumination of the Association of Iron and Steel Electrical Engineers—to be presented by the chairman, Mr. C. J. Mundo.

4. "High Pressure Gas Lighting," by Mr. F. W. Goodenough, chairman of council, Illuminating Engineering Society, London, Eng.

5. "The Status of High Pressure Gas Lighting," by Mr. George S. Barrows. This paper will be a collation of domestic and foreign correspondence pertaining to high pressure gas lighting.

6. "Recent Developments in Gas Lighting," by Mr. R. F. Pierce.

7. "Indirect and Semi-Indirect Illumination," by Mr. T. W. Rolph.

8. "Recent Developments in Series Street Lighting," by Dr. C. P. Steinmetz.

9. "Research Methods," by Dr. E. P. Hyde.

10. "The Problem of Heterochromatic Photometry and a Rational Standard of Light," by Dr. H. E. Ives.

11. "Reflection from Colored Surfaces," by Claude W. Jordan.

12. "Diffuse Reflection," by Dr. P. G. Nutting.

13. A Study of Natural and Artificial Light Distribution in Interiors," by Mr. M. Luckiesh.

14. "The Physiology of Vision," by Dr. T. A. Wood-ruff.

. 15. "The Efficiency of the Eye Under Different Systems of Illumination," by Dr. C. E. Ferree. This paper will be a report of a research carried on for the American Medical Association.

16. "A Proposed Method of Determining the Diffusion of Translucent Media," by Mr. E. L. Elliott.

17. "Illumination Charts," by Mr. F. A. Beuford.

18. "The Determination of Illumination Efficiency," by Mr. E. L. Elliott.

19. "An Absolute Reflectometer," by Dr. P. G. Nutting.

20. "Colored Values of Illuminated Surfaces," by Mr. Bassett Jones, Jr. This subject will be presented in the form of a series of experimental demonstrations.

21. One session will be arranged for, a potpourri, at which discussions will be in order on miscellaneous phases of illuminating engineering. It is expected that this session will bring out interesting and valuable points not particularly covered by the above papers and reports.

The scenic wonders of the Falls render possible an entertainment program which will surpass that given at any previous convention of this society.

Inspection tours of the power houses and other wonderful development enterprises peculiar to this location have been arranged for.

Reduced railroad fares will be available for delegates.