

CURRICULUM VITAE

NAME: Trevor Townsend

ADDRESS: 1, Old Paddock Link Road, Blue Range,
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DATE OF BIRTH: 1956 June 18

NATIONALITY Citizen of Trinidad & Tobago

MARITAL STATUS Married

PROFESSIONAL REGISTRATION:

Registered Engineer with the Board of Engineering of Trinidad & Tobago. **Reg. No. 04-616**

PROFESSIONAL EXPERIENCE:

Senior Lecturer **University of the West Indies, Department of Civil & Environmental Engineering. (Sept 2014 to Present).** Duties include lecturing in Final Year Undergraduate and Master's level courses in Traffic and Transportation Engineering & Masters level course in Research Methods. Supervise students doing undergraduate Special Investigative Projects and Design Projects and graduate Master's Research Projects. Supervise M. Phil and Ph.D. candidates. Revised the content of CVNG 3009, Highway Engineering and CVNG 3010 – Transportation Engineering courses. Developed and obtained approval for a new Masters elective course CIEN – 6012 – Advanced Transportation Engineering. Chairman of the Curriculum Committee and member of the Management and Accreditation/Quality Committees of the Department.

Chief Exec Officer **Trinidad Aggregate Products Ltd. (April 2002 to Sept 2014).** Responsible for the strategic management and day to day operations

of a major clay building product manufacturer with an asset base of approx. \$60million and work force of 240. The C.E.O. leads a senior management team comprising production and engineering, finance, human resources and marketing professionals. The process involves the mining of raw material, blending and mechanical extrusion of blocks and tiles, firing "green" product in large, high temperature, natural gas fueled kilns and marketing finished product locally, regionally and internationally.

A major focus was reversing the decline in profit margins and establishing structures for market development of a new range of rustic clay tiles.

Chief Exec Officer **Caribbean Steel Mills Ltd. (September 1998 to March 2002).** Responsible for the strategic management and operations of a medium sized steel manufacturing company with assets of approx \$20million. The company utilized three production plants - the main one being a furnace and roller plant that produced hot rolled high tensile steel from billets for concrete reinforcement. The other two plants produced welded hollow steel sections and rolled steel sheets for roofing and decking.

Challenges included the development and implementation of strategies to boost market share and profitability in the face of increasing competition from extra-regional imports.

Assembled and led a team of professional managers and implemented key strategies during FY 1998/99 which resulted in reduction in unit production costs and growth in tonnage produced and sold. Overall Net Profit exceeded projected levels by 38% notwithstanding depressed prices for finished goods.

Consultant **(1996 - Present)** Traffic and Transportation Engineering Consultant for public and private sector clients. For most of these projects, I functioned as a senior Transportation/Traffic Engineer as part of the Softcom Ltd., consulting team.

General Manager: **Chief Executive Officer, Public Transport Service Corporation (1988 August to 1998 September).** Responsible for the management and performance of the Company with assets of TT\$ 70 million.

Transformed the Corporation from a heavily subsidized public utility to a more self-reliant, customer-oriented organization.

Responsibilities included (i) the recruitment of a multi-disciplinary team of dynamic professionals and managers (ii) implementation of effective revenue enhancement strategies (iii) planning and executing major cost reduction programmes and (iv) improving the organization's financial accountability.

Implemented a major project on behalf of the Ministry of Education using 120 privately owned mini-buses to provide transport for school children in rural areas.

Organizational goals were achieved through innovative and action-oriented strategies which have resulted in significant increases in revenue per bus, implementation of a major bus refurbishment programme and the establishment of a high quality Express Commuter Service.

The transformed Corporation functioned without operating subsidy during the period 1995 - 1997. (Subsidy in 1988 was TT\$120 million).

Chief Traffic Engr. **Traffic Management Branch, Ministry of Works & Infrastructure(July 1981 to Sept. 1983 and December 1986 to August 1988).**

Responsible for work programme, budget preparation and policy formation. Supervised professional and sub-professional staff involved in traffic surveys, accident data analysis and design and implementation of traffic management measures.

Chaired Cabinet-appointed technical Committee monitoring National Transport Policy Project & Inter-Ministerial Committee developing a National Internal Transport Policy framework.

Civil Eng. II **Traffic Management Branch (June 1980 to July 1981).**

Designed & implemented traffic management measures including Queen's Park Savannah One-way Scheme. Organized traffic count programmes, designed signalized intersection and measures to alleviate accident black-spots.

Civil Eng. I **Ministry of Works, Transport & Communications, Roads Planning Branch (July 1977 to August 1978).**

Designed and assisted in supervision of construction of Priority Bus Route and the Piarco Airport Runway Extension.

OTHER WORK EXPERIENCE:

- Lecturer **University of the West Indies, Department of Civil Engineering.**
(Part Time). Taught Final Year courses in Transportation Engineering
(October 1981 to June 1983, December 1986 to June 1987,
September 1998 to June 2002).
- Research Asst. Northwestern University, Transportation Center. Assisted Associate
Professors on several Transportation Planning research projects
(September 1985 to December 1986).
- Research Asst. University of Manitoba, Dept. of Industrial Research (Sept. 1978 to
April 1980). Project for Federal Government of Canada. Examined
the effects of a chemical de-icer additive to asphalt pavements.
- Teaching Asst. University of Manitoba, Dept. Of Civil Engineering (Sept. 1978 to
April 1980). Conducted tutorials for final year Urban Transportation
and Traffic Systems Analysis courses.

TECHNICAL REPORTS AND RESEARCH PAPERS

- (1) Utility Based Time Allocation Decisions of Household Members., T. Townsend & F.S. Koppelman. Presented at the 64th. Annual Conference of the Transportation Research Board, Washington, D.C., 1987.
- (2) Time Allocation Among Household Members: Theory and Analysis., F.S. Koppelman & T.A. Townsend. Presented at the 5th. International Conference on Travel Behaviour, France, 1987.
- (3) Classification and Analysis of the Multi-Day Travel/Activity Patterns of Households and Their Members., T. Townsend. Presented at the 6th. International Conference on Travel Behaviour, Quebec, 1991.
- (4) The Effects of Household Interdependencies on Multi-Day Travel/Activity Behaviour., T. Townsend & F.S. Koppelman. Presented at the 6th. World Conference on Transport Research, Lyon 1992.

- (5) Paratransit - Blessing or Curse? - The Trinidad and Tobago Experience., T. Townsend. Presented at the Symposium on African-American Mobility Issues, Center for Urban Transportation Research, University of South Florida, Tampa, 1994.
- (6) Sustainable Transportation Development - A Trinidad and Tobago Perspective. Presented at the Panel Discussion on Small Island Developing States, Intergovernmental Preparatory Meeting CSD - 19, United Nations Commission on Sustainable Development, United Nations, New York, 2011.
- (7) A Scoping Study & Preparation of Terms of Reference for a Comprehensive Transportation/Land Use Plan for San Fernando
 This project involved a review of the traffic and transportation system characteristics including key generation points, modal usage, termini and public transportation routes and facilities. It included an examination of main developmental plans for the region which would impact the requirement for transportation facilities, an identification of the key issues and a determination of the basic methodologies which the consultants would need to apply.
- (8) Proposals for Traffic Mitigation measures in support of Land Development Applications
 These projects were done for private clients who had to obtain approvals for development or change of use. The work involved determining the traffic generated by the development and designing mitigating measures if and when required.
- (9) Traffic Analysis and Planning for the Siparia Urban Center Redevelopment. (2004)
 The project required the collection and analysis of traffic data, the development of short and medium term traffic forecasts and the design of suitable solutions.
- (10) Traffic Impact Analysis for Multi-story Car Park for proposed Port of Spain Government Campus Plaza. (2004)
 This project was a TIA for a proposed 1600 vehicle multi-story car park. The project required the collection and analysis of traffic data, the development of short and medium term traffic forecasts, determining the traffic generated by the development and designing mitigating measures.
- (11) Transportation analysis and development of Architect's Brief for the design of proposed San Fernando Transit Hub. (2004)
 The project involved a multi-step methodology starting with site surveys and including O-D passenger surveys, Passenger profile studies, Transit and para-transit route and operating studies and analysis and the development of an

conceptual framework, administrative plan and architect's brief.

- (12) TIA for Proposed Lambert Resort Development Project, British Virgin Islands (2006)
The project involved the assessment of the traffic and transportation related issues in Road Town, BVI. Based on a review and analysis of the current situation as well as a projection of future development a position paper outlining the major issues and how they should be addressed was submitted to the client, the Government of the BVI.

- (13) Regional Development Plans (2009)
Reviewed Proposed Spatial Development Plans for Arima, Tunapuna-Piarco and Sangre Grande. Tasks included a situational review, an analysis of the key traffic and transportation issues facing the municipality and the presentation of recommendations for transportation system projects to support the projected municipal plans.

- (14) Transport Policy Framework Project for NIDCO (2010)
Worked with a team of consultants to develop a framework for transportation sector investment in the short and medium term. Areas under our review were Public Transportation development and management including the Water Taxi System

- (15) JCC Highway Review Committee (2013)
Traffic/Transportation Engineering Consultant and Member of the multi-disciplinary team appointed by the JCC to review the feasibility analysis, design, planning & approval process and for the Point Fortin to San Fernando Highway under the chairmanship of Senator Dr. James Armstrong.

- (16) Committee for the Rationalisation of the PTSC Bus Fleet. (2014)
Chairman of the Cabinet-appointed committee that reviewed the problem of a proliferation of vehicle types, sizes and models which currently comprise the fleet of the PTSC. On the basis of its analysis, the Committee submitted a report to the Cabinet with several recommendations for fundamentally altering the procurement processes which led to the problems. It also recommended some key performance measures and standards for the improved management of the PTSC.

- (17) Traffic Impact Analysis of Parliamentary Complex for Administrative & Ancillary Services. (2014)
This project was a TIA for a proposed multi-story building to house the proposed "Companion" building for the renovated "Red House" that houses the Trinidad and Tobago Parliament. The project included a proposal to "pedestrianize" Knox Street between St. Vincent and Abercromby Streets, POS. The project required the

collection and analysis of traffic data, the development of short and medium term traffic forecasts, determining the traffic generated by the development and designing mitigating measures.

- (18) Travel Survey Consultancy Services. (2015)
Provision of Traffic and Transportation Planning consultancy advice to a consulting firm working on an Inter-American Development Bank sponsored project in Barbados. The project involves traffic and transportation demand surveys and training of Ministry of Transport and Works personnel on survey and analysis techniques.

STATEMENT OF RECENT PUBLIC, PROFESSIONAL AND/OR EXTRA-DEPARTMENTAL SERVICE

- Member of the Campus Traffic Consultation Meeting chaired by the Campus Registrar (August 2015 to present).
- Chairman of the APETT Transportation Sub-Committee. In this regard provided professional expertise and advice in the following areas:-
 - Ministry of Works and Transport Roundtable Discussion on Traffic Management & Problem Alleviation (Nov 2015).
 - Met with the IDB Team reviewing the Government's plan for a Mass Transit System and commented on the team's interim report (Nov 2015 & Feb 2016).
 - A presentation to the Prime Minister's Economic Development Advisory Board on Transportation Policy and Development for the next 15 -20 years (April 2016) especially in the context of the Government's mid-year budget review.
 - Developed and disseminated APETT public statement on the issue of the enforcement of speed limits using "radar guns" (May 2016).
 - Reviewed the IDB Final Report Executive Summary on "Analysis of Mass Transit Alternatives for Port of Spain and Main Urban Corridors of Trinidad". Review submitted to the Ministries of Planning & Development & Ministry of Works & Transport (Feb 2017).
 - Developed a Conceptual Design of a Mass Transit System for the East-West Corridor. Submitted to the Ministries of Planning & Development & Ministry of Works & Transport (May 2017).

EDUCATION:

Northwestern University, Evanston, IL.	Ph.D., Transportation Systems Analysis, Department of Civil Engineering (June 1987)
University of Manitoba, Canada	M.Sc. Civil Eng., Major - Transportation Engineering, Minor - Operations Research (June 1980).
University of the West Indies, Trinidad.	B.Sc., Civil Engineering (First Class Honours) (June 1977).

SPECIALTIES: Transit Policy and Operations, Traffic Management, Econometric modeling, logistics, project planning and quantitative analysis.

PROFESSIONAL AFFILIATIONS:

F.APETT	Fellow of Association of Professional Engineers of Trinidad and Tobago.
F.ITE	Fellow of Institute of Transportation Engineers.
F.CIHT	Fellow of The Chartered Institution of Highways & Transportation
M.ASCE	Member American Society of Civil Engineers.

Summary:

Dr. Townsend is currently the Senior Lecturer in Transportation Engineering in the Civil & Environmental Engineering Department, University of the West Indies. He has worked in both the public and private sectors during his career. An engineer by training, he has worked extensively in the areas of traffic, public transportation and public policy with regard to infrastructural development. Over the last twenty years, Dr. Townsend has been engaged as a private consultant on a number of transportation policy & planning and traffic impact assessment studies. For the period 1998 to 2014 he worked in manufacturing as a Chief Executive Officer dealing with the challenges of sustaining small and medium sized manufacturing companies in today's competitive global environment. Dr. Townsend has served as a member of the Boards of two state enterprises, the National Insurance Property Development Company and the National Infrastructure Development Company. He was also a member of the Board of Trinidad and Tobago

Manufacturers Association from 2005 to 2012 and served as a Vice President and Chairman of the Port, Transport & Logistics Committee. He is also a former member of the Executive Council of the Association of Professional Engineers of Trinidad & Tobago. In this regard he was one of the council members who drafted and publicly advocated the Association's position with regard to the proposed Trinidad Rapid Rail Project. He is currently chairman of the APETT Transportation Sub-Committee advocating for improved transportation systems management and the development of BRT solutions to the country's traffic and land transportation challenges.