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INJURY AND CRASH ANALYSIS, LLC

DOUGLAS N. HEAD
curriculum vitae

EDUCATION

High School Graduation, Walla Walla, Washington, June 1961
BS Civil Engineering, Washington State University, Pullman, Washington June 1966
Work on MS Environmental Resource Management, Governors State University, Illinois
1977
Professional training courses from Federal Highway Administration, U.S. DOT 1974
through 1998

Professional License

Registered Professional Engineer – Michigan – 1974

Professional Experience

Jan 1999 to present, self employed engineer

Mar 1991 to Jan 1999, Indiana Division, Federal Highway Administration, U.S. DOT,
Indianapolis, Indiana - Program Operations Engineer, (District Engineer)

Team Leader supervising a staff of professional engineers involved in highway geometric design, safety analysis, program administration, oversight of construction projects using Federal Aid funds, authorization and determination of eligibility for highway projects to receive Federal funds, pavement design, contract administration, design and construction of bridges and other highway structures, preparation and review of environmental documents under National Environmental Protection Act (NEPA), review and application of highway signs, pavement markings and traffic control devices under the Manual on Uniform Traffic control Devices (MUTCD), review and oversight of work zone safety in construction projects, highway safety, pedestrian/highway interface, Intelligent Transportation System deployment and highway maintenance activities which included snow and ice control.

Served on a technical working group (twg) for the national research project entitled “Integrated Highway Safety design Model” 1996 - 1999; served on the study advisory committee (SAC) for several research studies being conducted by Purdue University for the Indiana Department of Transportation.

September 1975 to March 1991, Region 5 Office, Federal Highway Administration, U.S. DOT, Homewood, Illinois (subsequently relocated to Olympia Fields, IL and as of Oct 1, 1998 renamed as an FHWA Resource Center under an agency reorganization)

Safety and Geometric Design Engineer – Staff Specialist for highway safety and geometric design for the FHWA Region 5 (states, IL, IN., MI., MN, OH, WI); provided expert guidance and advice to the FHWA division offices in each state and through them to the State Highway Agencies and Highway Agencies of sub state governmental units; taught professional level short courses to FHWA division staff and State Highway Agency staff; taught professional level courses for the National Highway Institute (NHI) (#38032 Roadside Safety and Capacity , AASHTO ROADSIDE DESIGN GUIDE and #13305, HIGHWAY CAPACITY & QUALITY OF FLOW) [In addition to the region 5 states; taught courses in Montana, New York and Texas]; served on multi-regional and national task forces reviewing changes to FHWA technical and policy guidelines or regulations; reviewed selected projects and traffic crashes to determine if possible changes in highway design standards or procedures could reduce severity or likelihood of crashes or improve safety.

Urban Planning Engineer – Staff Specialist for urban planning in the six Region 5 states; provided expert guidance and advice to the FHWA division offices in each state and through them to the state Highway Agencies and transportation planning organizations located at the sub state governmental level; taught professional level courses to FHWA division staff and State Highway Agency staff; served on multi-regional and national task forces reviewing changes to FHWA technical and policy guidelines or regulations

1988-1991, South Suburban College, South Holland, Illinois; instructor in evening computer courses -- Lotus, dBase, DOS, constructing and maintaining a PC, wordperfect

August 1974 to September 1975, Michigan Division Office, FHWA, U.S. DOT, Assistant Planning engineer – worked with State Highway Agency staff to implement planning procedures for the state and in metropolitan planning areas, conducted oversight reviews of planning procedures and operations to ensure compliance with FHWA guidelines and regulations.

August 1973 to August 1974, Michigan Division Office, FHWA, U.S. DOT, Assistant Area Engineer -- worked with state Highway Agency Staff to design and construct highway projects; conducted oversight reviews of state design and construction operations to ensure compliance with FHWA guidelines and regulations; provided input to and oversight in the preparation of NEPA documents; conducted on site reviews of construction work zones to ensure compliance with workzone safety guidelines.

June 1971 to August 1973, FHWA training assignments in Colorado, Texas, Pennsylvania, Washington D.C., and Wisconsin in construction operations, project inspections, contract administration, project design, and planning operations (chief of survey party in Colorado).

June 1969 to May 1971, Lt., U.S. Navy, Oakland Naval Supply Center, Oakland, California, Public Works Department – contract administration; third senior officer in chain of command for the Public Works Department (600 personnel public works department that supplied

transportation, utilities and maintenance support for the Supply Center, including operating and maintaining the base railroad system). Other military duties.

June 1967 to June 1969, Lt., jg, U.S. Navy, Argentia, Newfoundland, Canada – In charge of transportation division of the public works department, responsible for operation and maintenance of all light and heavy duty mobile equipment on base, operated motor pool for general use, managed and operated military and civilian on-base bus system, base school bus system, base taxi system, base snow removal system including keeping military air field open for operations under all weather conditions, snow and ice removal for airfield and all of the base. Reported to base judge advocate officer as the investigating officer for all traffic crashes involving Navy owned vehicular equipment. Other military duties.

October 1966 – June 1967, Officer Training School and specialized training U.S. Navy resulting in reserve commission U.S. Navy, Civil Engineer Corps, military designation code 5105

June 1966 – October 1966, Engineer trainee with U.S. Army Corps of Engineers, Walla Walla district, Walla Walla, Washington, design of hydraulic structures.

June 1965 – September 1965, summer, Peter Kiewit Construction Inc., Engineering aid, construction grade control, engineering studies of operational efficiency

June 1964 – September 1964, summer, Murphy Bros. Construction Inc., instrument man on survey crew setting grade control points and construction staking, grade control for cuts and fills

PUBLICATIONS

Mathematical Approach to Side Underride Vehicular Accidents; Mathematical Modeling and Scientific Computing, Vol. 13, Number 1-2, 2001; Bruce E. Enz, Yoshiki Oshida, Douglas N. Head, et al

Analysis of Side Underride Crashes Misconceptions and the Problems; Accident Investigation Quarterly, Issue 27, Summer 2001; Angela Trego Ph.D., Bruce Enz, AA, BA, Douglas N. Head, PE

Trego A, Enz B, Head D and Oshida Y. A Scientific Approach to Tractor-Trailer Side Underride Analysis. In: Advances in Vehicle Aggressivity and Compatibility, Side and Rear Impact and Rollover Protection, SP-1775, Society of Automotive Engineers, Warrendale, PA, SAE Technical Paper No. 2003-01-0178, pp. 41-47, 2003.