

Selected Reference List Alfred MOERGELI**For moergeli + moergeli consulting engineering (m+m) – since April 1, 1994****For moergeli consulting, l.l.c (mllc) – since August 25, 2009**

Year	Project/Task	Client/Customer
2018	<p>North American Tunneling Congress (NAT18) Marriott Wardmann Park Hotel Washington DC – USA</p> <p>BSV Phase II - Comparative Analysis by an Independent Life-Cycle Cost Risk Assessment Paper (pdf) & Presentation (pdf & pptx)</p> <p>Together with the Owner Santa Clara Valley Transportation Authority (VTA), San José, CA – USA</p>	<p>Aldea Services LLC</p> <p>Owner: Santa Clara Valley Transportation Authority (VTA), San José, CA – USA</p>
2018- ...	<p>Leadership Excellence for Safety & Health (LES&H)</p> <p>Fostering a safety culture to control the Dirty Dozen and to improve human behavior sustainably. Especially after an incident investigation has identified human failure as the main cause and - resigned - accepted ...</p> <p>KEEP PEOPLE AWAY FROM LIQUID STEEL (KPAFLS) Audit along the way of liquid steel to improve safety by process optimization and automation.</p> <p>Update and validation of existing risk assessments, user instructions and technical documentations.</p> <p>Validation of safety-related parts of control systems of existing and new systems.</p> <p>Conformity assessments of existing and new systems.</p> <p>Program for risk-based maintenance (RbM) to optimize reliability and availability of existing systems.</p> <p>Management-Training, Audits & Process/Safety Reviews (PSR), Risk Management Workshops</p> <p>Risk Manager, System Safety Engineer</p>	<p>Steel Gerlafingen Switzerland</p> <p>Part of the Beltrame Group</p>

Year	Project/Task	Client/Customer
2017- ...	<p>Risk Manager, Safety & Health Engineer BART Silicon Valley Extension Phase II, San José, CA-USA</p> <p>Independent Risk Assessment/Comparative Analysis: for VTA's decision-making. Probabilistically aggregating all</p> <ul style="list-style-type: none"> • Base elements, • Risks (including a mark-up for unknown risks, Unknown Knowns), • Escalation, • Operations & Maintenance (O&M) for the first thirty years <p>to total project life-cycle cost by an integrated cost and schedule analysis. With RIAAT, the Risk Admin- istration and Analysis Tool of our business partner RiskConsult GmbH.</p> <p>We successfully helped VTA to make a life-cycle cost and risk-based system decision for a Single Large Bore Tunnel that has never been built and used in North America so far.</p>	<p>Aldea Services LLC</p> <p>Owner: Santa Clara Valley Transportation Authority (VTA), San José, CA – USA</p>
2016- 2019	<p>Risk Manager, Safety & Health Engineer</p> <p>CM-1561 Independent Quantity Risk Assessment Consultant Services: Rehabilitation & Core Capacity Improvement of ex- isting subway lines and "Sandy" recovery projects.</p> <p>Providing a reliable budget for cost and date(s) of completion (time/schedules - project plan) - before and after mitigation, to enable transparent funding and consistent cost controlling during project execution. Probabilistically aggregating all</p> <ul style="list-style-type: none"> • Base elements, • Risks (including a mark-up for unknown risks, Unknown Knowns), • Escalation, <p>to total project life-cycle cost by an integrated cost and schedule analysis.</p> <p>With RIAAT, the Risk Administration and Analysis Tool of our business partner RiskConsult GmbH.</p>	<p>Metropolitan Transportation Authority (MTA) New York City Transit (NYCT), NY, NY – USA</p> <p>Agreement, dated May 27, 2015, for 4 years</p> <p>Together with our Joint Venture Partner Geocomp Corporation Acton, MA – USA</p> <p>And together with our Joint Venture Subconsultant RiskConsult GmbH Innsbruck – Austria</p>

Year	Project/Task	Client/Customer
2016- ...	Risk Management & Safety & Health Albvorlandtunnel (AVT) On critical path of DB Project Stuttgart 21 Project Audit, risk based with Audit Report	Implenia Construction GmbH Munich – Germany
2016- 2017	Risk Management & Safety & Health U3 Nuernberg SW, BA 2.1 Process/Safety Review (PSR) of roadheaders in action, in situ, risk-based and with PSR Report, Update of risk assessment	Implenia Construction GmbH Munich – Germany
2016	World Tunnel Congress (WTC) Moscone Center, San Francisco, CA – USA When do you need correlations and dependencies and how to use them to model your risk scenarios: “Risk Management - Correlation and Dependencies for Planning, Design and Construction” Presentation (PowerPoint) & Paper (pdf)	m+m together with Philip Sander @ RiskConsult GmbH , and John J. Reilly @ John Reilly International
2015	Risk Management & Safety & Health Proposal for Installation, integration, commissioning & testing of permanent, turn-key railway technology Support for Project Risk Management, Safety & Health and Quality Management	Alpiq Infra Zurich – Switzerland Owner: CEVA Liaison Ferroviaire Cornavin – Eaux-Vives – Annemasse
2015	Risk Management Review of Risk Management System Stage 1 Audit with Audit Report Red Line North Underground , two parallel subway tunnels, approximately 11.6 km, D = 6.17 m, mined by four Herrenknecht Tunnel Boring Machines Doha – State of Qatar	IMPREGILO – SK E&C – Galfar Al Misnad (ISG) Doha – State of Qatar Owner: Qatar Railways Company
2015	Risk Management Proposal for Design & construction (Design – Build) of Obhur Creek Bridges, Jeddah – Saudi Arabia Support for Project Risk Management Milan – Italy	salini impregilo Milan – Italy Owner: Metro Jeddah Company

Year	Project/Task	Client/Customer
2015-2016	<p>Risk Management</p> <p>Proposal for construction of Brenner Base Tunnel, Lot Mules 2-3</p> <p>Support for Project Risk Management: Number 3 of 6 bidders, number 1 for technical bid. Milan – Italy & Innsbruck – Austria</p>	<p>salini impregilo Milan – Italy, and STRABAG Italy & Austria</p> <p>Owner: BBT SE Italy & Austria</p>
2015	<p>Risk Management</p> <p>Control your risks before they control you! Course „Risiko-Management für Praktiker“ (German) Hands-on Training, by Practitioners for Practitioners</p> <p>Day 1: Introduction & qualitative Risk Management Day 2: Quantitative Risk Management</p> <p>All participants will receive a fully functional excel VBA software tool to probabilistically aggregate risks by Monte Carlo Simulation (MCS).</p>	<p>m+m, together with Philip Sander @ RiskConsult Gmbh</p> <p>Swiss Safety Center (ex Swiss TS) Wallisellen – Switzerland</p>
2015	<p>Rapid Excavation and Tunneling Conference (RETC) Sheraton Hotel, New Orleans, LA – USA</p> <p>Why and how only probabilistic cost estimating gives you the complete cost picture: “Construction - You need Risk-Based Cost Estimating”</p> <p>Presentation (PowerPoint) & Paper (pdf)</p>	<p>m+m together with Philip Sander @ RiskConsult Gmbh, and John J. Reilly @ John Reilly International</p>
2015	<p>World Tunnel Congress (WTC) Dubrovnik – Croatia</p> <p>Why so many projects fail and how you can deliver a reliable budget for cost and time/schedules: “Risk-Based, Probabilistic Cost Estimating Methods”</p> <p>Presentation (Power Point) & Paper (pdf)</p>	<p>m+m together with Philip Sander @ RiskConsult Gmbh, and John J. Reilly @ John Reilly International</p>
2014-2015	<p>Conformity Assessments (CA) & CE Marking (CEM)</p> <p>Risk Assessments, Review of Safety Management System (SMS), User Instructions & Technical Files / Documentations, Process & Safety Review (PSR) of machinery/systems in situ for safe & productive operation, Legal Compliance for process systems like crystallizers & evaporators – worldwide.</p>	<p>EVATHERM Maegenwil – Switzerland</p>

Year	Project/Task	Client/Customer
2014-2015	<p>Conformity Assessments (CA) & CE Marking (CEM)</p> <p>Risk Assessments and Risk Management, Review of Safety Management System (SMS), User Instructions & Technical Files / Documentations, Process & Safety Review (PSR) of machinery/ systems in situ in situ for safe & productive operation, Legal Compliance of new products for the EU markets</p>	<p>Rain For Rent International (RFRI) Bakersfield CA – USA</p>
2014	<p>Basis introduction to risk management and quantitative risk analysis: Presentation (PowerPoint): “How to Control Your Risk in Practice?”</p> <p>Together with our business partners RiskConsult GmbH, and Simpson Gumpertz & Heger</p>	<p>m+m, together with Philip Sander @ RiskConsult GmbH</p> <p>Boston Society of Civil Engineers Section (BSCES) Boston, MA – USA</p>
2014-2015	<p>Risk Management, Coaching Planning for contingencies (Plan “B”)</p> <p>New Confederation Line, Ottawa Light Rail Transit Project (OLRT), Ontario (ON) – Canada</p> <p>First evaluation of major top risks for construction of the new mined underground stations in downtown Ottawa between existing high-rise buildings</p> <p>Sequential Excavation Method (SEM/NATM), in combination with a new & innovative solution</p> <p>System Analysis, risk evaluation with Bow Tie Analysis (combined Fault & Event Tree) and probabilistic risk quantification by RIAAT</p>	<p>Dr. G. Sauer & Partners Corporation Vancouver BC – Canada</p> <p>Owner: Ottawa Light Rail Transit (OLRT) Project, Confederation Line ON – Canada</p> <p>m+m, together with Philip Sander @ RiskConsult GmbH</p>
2013- ...	<p>SCC – Safety Certification for Contractors</p> <p>Safety Training/Instruction (in English, for two days) for internationally operating companies: Basics, legal requirements, State-of-the-art and Best Practices, practical applications</p> <p>Preparation for Test and Personal SCC Certification.</p>	<p>Swiss Safety Center (ex Swiss TS) Wallisellen – Switzerland</p>

Year	Project/Task	Client/Customer
2013	<p>Rapid Excavation and Tunneling Conference (RETC) Marriott Wardmann Park Hotel, Washington, DC – USA</p> <p>High-tech solutions for safer & faster tunneling in Switzerland & India: “Suspended Platform Heading Systems for Safe High- Performance Tunneling”</p> <p>Presentation (Prezzi) & Paper (pdf)</p>	<p>m+m together with Alberto Belloli & Theo Eggenberg, both @ ROWA Tunnelling Logistics AG Wangen – Switzerland</p>
2013	<p>Risk Management, Safety & Health Risk Mitigation Action Plan</p> <p>Access tunnels to the Cigar Lake Mine, the world’s second largest uranium mine Saskatchewan (SK) – Canada</p> <p>System Safety Approach – Risk Manager/Coach Protection against uranium radiation</p>	<p>Dr. G. Sauer & Partners Corporation Vancouver BC – Canada</p> <p>Owner: Cameco Saskatoon SK – Canada</p>
2012	<p>Risk Management</p> <p>Site Risk Reviews for East Side Access (ESA), CQ039 / Northern Boulevard Crossing (NBX)</p> <p>Sequential Excavation Method (SEM) Tunneling under multiple active NYC Subway lines, heavy traf- fic at the Northern Boulevard and an elevated train supporting steel structure with minimum cover in dif- ficult & contaminated ground.</p> <p>Safe construction of probably one of the world’s most difficult tunnels that has ever been built be- fore.</p> <p>System Safety Approach – Risk Manager/Coach, Process/Safety Reviews (PSR) in situ: the NYC Subway never had to stop due to tunnel- ing operations.</p>	<p>Metropolitan Transportation Authority (MTA) Capital Construction (MTA CC), Program Controls, Quality and Safety New York NY – USA</p>
2011- ...	<p>System Audits of Management Systems</p> <p>Lead Auditor for</p> <ul style="list-style-type: none"> • ISO 9001 • ISO 14001 • OHSAS 18001/ISO 45001 	<p>Swiss Safety Center (ex Swiss TS) Wallisellen – Switzerland</p>

Year	Project/Task	Client/Customer
2011	<p>Safety & Health, Risk Management</p> <p>Swiss Gotthard Base Tunnel (GBT) – Switzerland Review of hazard & risk assessments, CE Conformity Assessment of Concrete Train and critical key equipment/systems for the Low Vibration Track (LVT). [KOENIGSFILM, German voice only]</p> <p>System Safety Approach – Risk Manager/Coach Legal Compliance and Best Practices in Hazard & Risk Assessments</p>	<p>AFTTG ARGE Fahrbahn Transtec Gotthard Total Services Contractor Stans – Switzerland</p> <p>Owner: Alptransit Gotthard AG (ATG)</p>
2011-2012	<p>Conformity Assessments (CA) & CE Marking (CEM)</p> <p>Erection & commissioning of a new surface coating machinery/system System Safety Approach, Risk Manager, Safety & Health Engineer, Legal Compliance, Technical File & User Instructions, Best Practices in Hazard & Risk Assessments, Process/Safety Reviews (PSR) in situ</p>	<p>Swiss Steel AG Emmenbruecke – Switzerland</p>
2010	<p>Risk Management</p> <p>Risk Review of Fire Life Safety of PVC waterproofing systems underground, @ 7 Line Expansion Cavern, New York – NY</p> <p>Solution package to safely control extended amounts of unprotected, unshielded PVC waterproofing. System Safety Approach – Risk Manager/Coach Process/Safety Reviews (PSR) in situ</p>	<p>Metropolitan Transportation Authority (MTA) Capital Construction (MTA CC)</p> <p>Program Controls, Quality and Safety New York NY – USA</p>
2010-2011	<p>Risk Management</p> <p>A risk management based evaluation of additional opportunities & threats by the new North Shore Marine Transfer Station (NS MTS) at LaGuardia Airport (LGA), New York, NY – USA</p> <p>System Safety Approach – Risk Manager/Coach.</p> <p>The safety of the flying public must always be – and remain – everyone’s top priority and not be compromised by any other agenda or project, as well intended as these might be.</p>	<p>Ken Paskar & Friends of LaGuardia New York, NY – USA</p> <p>Series of risk management workshops with</p> <ul style="list-style-type: none"> • Jim E. Hall & Ken Johnson, both with Hall & Associates LLC, DC – USA, • Williams Aviation Consultants, Inc., AZ – USA, • DeTect, Panama City, FL – USA, • Russ DeFusco, etc.

Year	Project/Task	Client/Customer
2010	<p>Risk Management</p> <p>Airline Highway Pipeline Project (SGC-C-0002), part of Sanitary Sewer Overflow Project (SSO), Baton Rouge, LA – USA</p> <p>Together with Sigma Consulting Group, Inc., Baton Rouge, LA – USA</p> <p>Risk Manager/Coach – Best Practices in Hazard & Risk Assessments</p>	<p>CH2M Hill</p> <p>Baton Rouge SSO Program Manager</p> <p>Owner: East Baton Rouge Parish, Department of Public Works Baton Rouge, LA – USA</p>
2009-2014	<p>Safety & Health, Risk Management</p> <p>Swiss Gotthard Base Tunnel (GBT) – Switzerland</p> <p>Installation, integration, commissioning & testing of permanent, turn-key high-speed railway technology, incl. Low Vibration Track (LVT), for the complete GBT (one lot only)</p> <p>System Safety Approach – Risk Manager/Coach, Legal Compliance, Support for RAMS (Reliability, Availability, Maintainability, Safety) Audits, Best Practices in Hazard & Risk Assessments, Process/Safety Reviews (PSR) in situ</p>	<p>Transtec Gotthard AG</p> <p>Total Services Contractor Zurich – Switzerland</p> <p>Owner: Alptransit Gotthard AG (ATG)</p>
2009-2010	<p>Risk Management</p> <p>Government Cut, Miami, FL – USA, Utility & Water Main Tunnels</p> <p>Risk Management Plan & Risk Register for Design Criteria, Phases 1 & 2 of Design-Build Procurement</p> <p>System Safety Approach – Risk Manager/Coach, Best Practices in Hazard & Risk Assessments</p>	<p>Dr. G. Sauer Corporation</p> <p>Herndon, VA – USA</p> <p>Owner: Miami Dade Water and Sewer Department, Miami, FL – USA</p>
2009-2010	<p>Risk Management</p> <p>ARC – Access to the Region’s Core, Palisades Tunnels and Hudson River Tunnels</p> <p>Risk Management Plan & Hazard Assessment in a series of risk management workshops for Technical Proposals, 2nd phase within a three-phase Design-Build procurement process, until the ARC project was cancelled in Oct. 2010 ...</p> <p>System Safety Approach – Risk Manager/Coach, Best Practices in Hazard & Risk Assessments</p>	<p>Dr. G. Sauer Corporation</p> <p>Herndon, VA – USA</p> <p>Designer for OHL – Tully Joint Venture New York NY – USA</p>

Year	Project/Task	Client/Customer
2009-2010	<p>Conformity Assessments (CA) & CE Marking (CEM)</p> <p>Risk Assessments, User Instructions & Technical Documentation, development of standard Risk Assessments, training of project managers through a series of risk management workshops</p> <p>Desktop reviews of Vacuum Degassers (VD) and systems for steelworks, like Voest Alpine, Linz – Austria, and others.</p> <p>System Safety Approach – Risk Manager/Coach Legal Compliance, Technical File & User Instructions, Best Practices in Hazard & Risk Assessments</p>	<p>Marti Technologie AG, Emmenbruecke – Switzerland</p>
2008-2009	<p>Conformity Assessments (CA) & CE Marking (CEM)</p> <p>Swiss Gotthard Base Tunnel (GBT) – Switzerland, Faido Lotto 452</p> <p>Two new / revamped Steel Bridges (“Worms” – world’s first – 600 m long systems) to pour the final lining behind two Tunnel Boring Machines and trail- ing backup equipment [see some of our pictures & our NAT06 Presentation]</p> <p>System Safety Approach – Risk Manager, Project Manager</p> <p>Legal Compliance, Technical File & User Instruc- tions, Best Practices in Hazard & Risk Assessments, Process/Safety Reviews (PSR) in situ</p>	<p>Herrenknecht (Switzerland) AG</p> <p>Support for Contractor Consorzio (JV) TAT Tunnel AlpTransit Ticino Faido – Switzerland</p> <p>Owner: Alptransit Gotthard AG (ATG)</p>
2008	<p>Conformity Assessments (CA) & CE Marking (CEM)</p> <p>Check relevant standards, assist with Risk Assess- ments & review implementation of safety-related measures for revamping existing tunnel boring sys- tems (three Robbins Tunnel Boring Machines, TBM’s, with existing trailing backup equipment)</p> <p>System Safety Approach – Risk Manager/Coach Legal Compliance, Technical File & User Instructions</p>	<p>ROWA Tunnelling Logistics AG Wangen – Switzerland</p> <p>For contractor: Implenia Bau AG – Switzerland</p>

Year	Project/Task	Client/Customer
2007-2008	<p>Conformity Assessments (CA) & CE Marking (CEM)</p> <p>Risk Assessment, Review of User Instructions with DOGREL AG, Mobile Rock Crusher for Powerscreen, CA – USA</p> <p>System Safety Approach – Safety & Health Engineer, Risk Manager/Coach</p> <p>Legal Compliance, Technical File & User Instructions, Best Practices in Hazard & Risk Assessments</p>	<p>IBL Solutions GmbH, Rorschacherberg – Switzerland</p> <p>For manufacturer: Emil Gisler AG / GIPO – Switzerland</p>
2007-2010	<p>Risk Management</p> <p>Risk Mitigation, Residual Risk Evaluation, Risk Response Audits Support for CALTRANS Construction Management / Claims & Scheduling</p> <p>Devil's Slide Tunnels (Los Lantos Tunnels), Pacifica, CA – USA New road tunnel (on HWY No. 1), Drill & Blast – Sequential Excavation Method (SEM/NATM)</p> <p>System Safety Approach – Risk Manager/Coach 2nd Level Support</p> <p>Best Practices in Hazard & Risk Assessments, Hands-on support for Risk Owners in situ, Process/Safety Reviews (PSR) in situ</p> <p>Owner Controlled Insurance Program (OCIP) – Contribution to one of the lowest Incident/Accident Rate (Loss Time Rate) of any tunneling project, and therefore to a record low insurance premium. Everyone involved could save a lot of money.</p> <p>Opening to traffic on March 25, 2013 – Congratulations to Caltrans, Dr. Sauer Group, AECOM (ex URS), HNTB, ILF, Kiewit and everyone involved!</p> <p>[see our Media Page, courtesy of TunnelTalk]</p>	<p>Dr. G. Sauer Corporation Herndon, VA – USA</p> <p>Owner: CALTRANS, 4th District Oakland CA – USA</p>

Year	Project/Task	Client/Customer
2007	<p>Rapid Excavation and Tunneling Conference (RETC) Sheraton Centre, Toronto, ON – CA</p> <p>Updated best practice from the Swiss Gotthard Base Tunnel (Update of our 2005 RETC contribution): „Risk Management in Action – Controlling Difficult Ground by Innovation (Update)“</p> <p>Presentation (PowerPoint) & Paper</p>	m+m
2007-2012	<p>Conformity Assessments (CA) & CE Marking (CEM)</p> <p>Risk Assessments, integration in standard operating procedures, design of Control Systems by ISO 13849-1/2, training project managers through a series of risk management workshops</p> <p>Desktop & in-situ reviews of latest state of the art & cutting-edge solutions for complex steelmaking systems like</p> <ul style="list-style-type: none"> • Continuous Casting Machines (CCM), • Vacuum Degasser (VD), • Material Handling Systems (MHS), • Water Treatment Plants (WTP) etc. <p>for steelworks – worldwide, e.g.</p> <ul style="list-style-type: none"> • New VD, Revamp of MHS, WTP, CCM, Dufenco La Louvière, La Louvière – Belgium, • New CCM, Tung Ho Steel – Taiwan, • New CCM, Siam Yamato – Thailand, • New CCM, PNTZ – Russia, • New 3 (4) Strand CCM, RIVA Group, Caronno Pertusella – Italy, • Revamp S3, Saerstahl, Voelklingen – Germany, • New 4th CCM Strand CCM, Swiss Steel, Emmenbruecke – Switzerland, etc. <p>Coaching to maintain & expand ISO 9001:2008 Integrated Management System, integration of Safety & Health by OHSAS 18001.</p> <p>System Safety Approach – Risk Manager/Coach, Safety & Health Engineer</p> <p>Legal Compliance, Technical File & User Instructions, Best Practices in Hazard & Risk Assessments, Process/Safety Reviews (PSR) in situ</p>	<p>SMS Concast AG Zurich – Switzerland and SMS Concast SpA Italia Udine – Italy</p>

Year	Project/Task	Client/Customer
2007-2008	<p>Conformity Assessments (CA) & CE Marking (CEM)</p> <p>Swiss Gotthard Base Tunnel (GBT) – Switzerland, Faido Lotto 452</p> <p>Complete Tunnel Boring Systems, refurbished @ Faido (two Tunnel Boring Machines with trailing backup equipment, TBM's) [see some of our pictures]</p> <p>System Safety Approach – Risk Manager, Safety & Health Engineer, Project Manager</p> <p>Legal Compliance, Technical File & User Instructions, Best Practices in Hazard & Risk Assessments, Process/Safety Reviews (PSR) in situ</p>	<p>Consorzio (JV) TAT Tunnel AlpTransit Ticino Pollegio – Switzerland</p> <p>Owner: Alptransit Gotthard AG (ATG)</p>
2007	<p>Risk Management</p> <p>Dulles Corridor Metrorail Project, Preliminary Engineering of Large Bore Tunnel Alternative for Tunnel @ Tysons Corner, VA – USA</p> <p>Risk Management Plan, Risk Assessment of Tunneling @ Preliminary Engineering</p> <p>System Safety Approach – Risk Manager</p> <p>Best Practices in Hazard & Risk Assessments</p>	<p>Dr. G. Sauer Corporation Herndon, VA – USA</p>
2006-2008	<p>Moving a company to a new location</p> <p>Explosion and Fire Protection Programs, Summary Report by Swiss Ordinance on Major Accidents, Training/Checks for Swiss Safety Management System</p> <p>System Safety Approach – Risk Manager, Safety & Health Engineer</p> <p>Legal Compliance, Best Practices in Hazard & Risk Assessments, Process/Safety Reviews (PSR) in situ</p>	<p>Total Services Contractor Steiner AG Zurich – Switzerland</p> <p>For customer: Lateltin AG, Winterthur – Switzerland</p>
2006-2007	<p>Design & implementation of a Management System by ISO 9001:2000 (First Certificate per 02/02/2007)</p> <p>Consultant/Coach, Best Management Practices</p>	<p>Amitech USA Zachary/LA – USA [new Thompson Pipe Group]</p>

Year	Project/Task	Client/Customer
2006-2007	<p>Risk Management</p> <p>East Side Access (ESA), CQ028 (new: CQ039), Northern Boulevard Crossing New York, NY – USA</p> <p>System Safety Approach – Risk Manager, risk based design for a safe construction sequence</p>	<p>Dr. G. Sauer Corporation Herndon, VA – USA</p> <p>For customer: Pile Foundation Construction Company, Inc. New York NY – USA</p>
2006	<p>North American Tunneling (NAT) Conference Palmer House Hilton, Chicago/IL – USA</p> <p>Safe and efficient tunneling operations for the final lining behind advancing TBM's at the Swiss Gotthard Base Tunnel: „Risk Management in Action – Final Lining Behind TBM's“</p> <p>Presentation (PowerPoint) & Paper</p>	m+m
2006	<p>Presentation (undisclosed): “Challenges at the SWISS Gotthard Base Tunnel”</p>	<p>Caterpillar Inc. Peoria, IL – USA</p>
2006-2007	<p>Conformity Assessments (CA) & CE Marking (CEM)</p> <p>Swiss Gotthard Base Tunnel (GBT) – Switzerland, Bodio Lotto 554</p> <p>Two new Tunnel Boring Machines including backup equipment [some of our pictures]</p> <p>System Safety Approach – Risk Manager, Safety & Health Engineer, Project Manager Legal Compliance, Technical File & User Instructions, Best Practices in Hazard & Risk Assessments, Process/Safety Reviews (PSR) in situ</p>	<p>Consorzio (JV) TAT Tunnel AlpTransit Ticino Pollegio – Switzerland</p> <p>Owner: Alptransit Gotthard AG (ATG)</p>
2005-2006	<p>Risk Management</p> <p>Support for Construction Management Sequential Excavation Method (SEM/NATM)</p> <p>Beacon Hill Tunnel Station, Seattle, WA – USA</p> <p>System Safety Approach – Risk Manager, Best Practices in Hazard & Risk Assessments, Process/Safety Reviews (PSR) in situ</p>	<p>Dr. G. Sauer Corporation Herndon, VA – USA</p> <p>Owner: SoundTransit Link Light Rail Seattle WA – USA</p>

Year	Project/Task	Client/Customer
2006	<p>Risk Management, Safety & Health</p> <p>Rehabilitation of unexpected, massive invert uplift Chienbergtunnel (Sissach By-Pass Tunnel) – Switzerland</p> <p>System Safety Approach – Risk Manager, Safety & Health Engineer, Coach</p> <p>Best Practices in Hazard & Risk Assessments, Process/Safety Reviews (PSR) in situ</p>	<p>Joint Venture (JV) Sohlhebung Tunnel Chienberg (ASTC) Sissach – Switzerland</p> <p>Owner: Bau- und Umweltschutz Direktion Kanton Basel-Landschaft, Public Works Department, Sissach – Switzerland</p>
2005-2006	<p>Safety & Health, Risk Management</p> <p>Rehabilitation of unexpected, massive invert uplift Chienbergtunnel, Sissach By-Pass Tunnel – Switzerland [some of our pictures]</p> <p>Construction Inspection, Safety & Health Engineer, Coach</p> <p>Process/Safety Reviews (PSR) in situ</p>	<p>Bau- und Umweltschutz Direktion Kanton Basel-Landschaft, Public Works Department, Sissach – Switzerland</p>
2005	<p>XVIIth World Congress on Safety & Health at Work Orange County Convention Center Orlando, FL – USA</p> <p>Risk Management helps to establish successful leadership – and leadership is the basis for successful Safety Management Systems (SMS): “Risk Management – Your Key to Successful Leadership”</p> <p>Presentation (PowerPoint) & Paper</p>	m+m
2005	<p>Rapid Excavation and Tunneling Conference (RETC) The Westin, Seattle, WA – USA</p> <p>High-tech solutions help to master challenging soft ground zones at the Swiss Gotthard Base Tunnel: „Risk Management in Action – Controlling Difficult Ground by Innovation“</p> <p>Presentation (PowerPoint) & Paper [some of our pictures]</p>	m+m

Year	Project/Task	Client/Customer
2004-2006	<p>Safety & Health, Risk Management</p> <p>Swiss Gotthard Base Tunnel (GBT) – Switzerland, Bodio Lot 554 & Faido Lot 452</p> <p>Site-specific design & implementation of Swiss Safety Management Systems (by EKAS/ASA), Moderation of a Safety Team, “Go for Safety” (STOP Risk) Campaign, Site-specific Safety & Health Plans and Emergency Response & Rescue Plans</p> <p>Process Optimization of tunneling and final lining [some of our pictures]</p> <p>System Safety Approach – Risk Manager, Safety & Health Engineer, Coach</p> <p>Best Practices in Hazard & Risk Assessments, Process/Safety Reviews (PSR) in situ</p>	<p>Consorzio (JV) TAT Tunnel AlpTransit Ticino Pollegio – Switzerland</p> <p>Owner: Alptransit Gotthard AG (ATG)</p>
2004-2013	<p>European CE Conformity Workshops</p> <p>Trainer/Coach – Practical training in Risk Assessments as required by the Machinery Directive, Conformity Assessments (CA) & CE Marking (CEM) of Machinery/Systems</p> <p>Hands-on training for evaluation and controlling of Residual Risks [Presentation]</p>	<p>IBL Solutions GmbH Rorschacherberg – Switzerland</p>
2004-2005	<p>Conformity Assessments (CA) & CE Marking (CEM)</p> <p>Swiss Gotthard Base Tunnel (GBT) – Switzerland, Lot 252, Tunnel Amsteg</p> <p>Two new Tunnel Boring Machines including backup equipment [some of our pictures]</p> <p>System Safety Approach – Risk Manager, Safety & Health Engineer, Project Manager</p> <p>Legal Compliance, Technical File & User Instructions, Best Practices in Hazard & Risk Assessments, Process/Safety Reviews (PSR) in situ</p>	<p>Joint Venture (JV) Amsteg, Lot 252, AGN Amsteg – Switzerland</p> <p>Owner: Alptransit Gotthard AG (ATG)</p>

Year	Project/Task	Client/Customer
2004	<p>North American Tunneling (NAT) Conference Hyatt Regency, Atlanta, GA – USA</p> <p>Safe tunneling at the Swiss Gotthard Base Tunnel by Safety & Health Plans for Drill & Blast and TBM operations: „Risk Management in Tunneling“</p> <p>Presentation (PowerPoint) & Paper (pdf)</p>	m+m
2004	<p>Safety & Health, Risk Management</p> <p>Total Remediation of Hazardous Waste Landfill, Koelliken/AG – Switzerland Support for contractor’s proposal for Lot I(nfrastructure)</p> <p>System Safety Approach – Risk Manager, Safety & Health Engineer</p> <p>Best Practices in Hazard & Risk Assessments</p>	Zueblin Strabag AG, Zurich – Switzerland
2003- 2004	<p>Risk Management</p> <p>Integral Safety & Security Plan for Sihlcity, “The World’s Smallest City”, Switzerland’s largest building project at that time</p> <p>Moderation of a safety team, Safety & Security Plan System Safety Approach – Risk Manager, Safety & Health Engineer</p> <p>Legal Compliance, Best Practices in Hazard & Risk Assessments, Process/Safety Reviews (PSR) in situ</p>	Total Services Contractor Steiner AG Zurich – Switzerland
2003- 2004	<p>Safety & Health, Risk Management</p> <p>Customer-specific design & implementation of a Swiss Safety Management System, Preliminary Hazard Analysis, integration in existing management system</p> <p>System Safety Approach – Risk Manager, Safety & Health Engineer</p> <p>Legal Compliance, Best Practices in Hazard & Risk Assessments, Process/Safety Reviews (PSR) in situ</p>	Living & Working for People with special needs Arbeitsheim Wangen, Wangen – Switzerland

Year	Project/Task	Client/Customer
2003-2006	Coaching Best Practices in Claim Management for a new Swiss freeway road tunnel project	Consulting Engineers – Switzerland [Data undisclosed]
2003	Safety & Health, Risk Management Design of a Swiss Safety Management System, Integration in existing management system, Training of executive staff System Safety Approach – Risk Manager, Safety & Health Engineer Legal Compliance, Best Practices in Hazard & Risk Assessments	Zueblin Schlittler Spaltenstein Bau AG Zurich – Switzerland
2003	Risk Management Beacon Hill Tunnel Station, Light Rail, Seattle, WA – USA Risk Manager Contribution to project risk management, Best Practices in Hazard & Risk Assessments	Dr. G. Sauer Corporation Herndon, VA – USA Owner: SoundTransit Link Light Rail , Seattle WA – USA
2002-2003	Safety & Health, Risk Management Management Summary [German only] (PowerPoint Presentation) Diploma Thesis SWISS Safety & Health Engineer EigV/BSV Swiss Gotthard Base Tunnel (GBT) – Switzerland, Lot 360, Tunnel Sedrun – Switzerland [some of our pictures]	Thank you Joint Venture TRANSCO Sedrun – Switzerland Owner: Alptransit Gotthard AG (ATG)
2002-2005	Safety & Health, Risk Management Risk Assessments Swiss Gotthard Base Tunnel (GBT) – Switzerland, Lot 360, Tunnel Sedrun System Safety Approach – Risk Manager, Safety & Health Engineer Legal Compliance, Best Practices in Hazard & Risk Assessments, Process/Safety Reviews (PSR) in situ	Joint Venture TRANSCO Sedrun – Switzerland Owner: Alptransit Gotthard AG (ATG)

Year	Project/Task	Client/Customer
2002-2003	<p>Contract Analysis, Cost Controlling</p> <p>Swiss Gotthard Base Tunnel (GBT) – Switzerland, Lot 360, Tunnel Sedrun</p> <p>Cost estimation, consulting/coaching</p>	<p>Joint Venture TRANSCO Sedrun – Switzerland</p> <p>Owner: Alptransit Gotthard AG (ATG)</p>
2002-2006	<p>Safety & Health, Risk Management</p> <p>Site specific design & implementation of a Swiss Safety Management System (by EKAS/ASA), Safety Team, Preliminary Hazard Analysis, Risk Assessments</p> <p>Safety Plans and Emergency Response and Rescue Plans, Process/Safety Reviews (PSR) with the owner, construction management, Swiss National Accident Insurance Fund (suva) and local authorities [some of our pictures]</p> <p>Swiss Gotthard Base Tunnel (GBT) – Switzerland, Lot 252, Tunnel Amsteg</p> <p>System Safety Approach – Risk Manager, Safety & Health Engineer Legal Compliance, Best Practices in Hazard & Risk Assessments Process/Safety Reviews (PSR) in situ</p>	<p>Joint Venture (JV) Amsteg, Lot 252, AGN Amsteg – Switzerland</p> <p>Owner: Alptransit Gotthard AG (ATG)</p>
2002-2003	<p>Safety & Health, Risk Management</p> <p>Site specific design & implementation of a Swiss Safety Management System (by EKAS/ASA), Integration in existing management system by ISO 9001.</p> <p>Risk Manager, Safety & Health Engineer Legal Compliance, Best Practices in Hazard & Risk Assessments, Process/Safety Reviews (PSR) in situ</p>	<p>Contractor EGG Bau AG Buelach – Switzerland</p>
2002-2006	<p>Management System</p> <p>Audit support, consulting/coaching.</p>	<p>Contractor EGG Bau AG Buelach – Switzerland</p>
2002	<p>Management System</p> <p>ISO 9001:2000 Upgrade (Certificate per 07/03/2002), consulting/coaching.</p>	<p>Contractor EGG Bau AG Buelach – Switzerland</p>

Year	Project/Task	Client/Customer
2002	<p>Project Management System</p> <p>Swiss Gotthard Base Tunnel (GBT) – Switzerland, Lot 360, Tunnel Sedrun</p> <p>Design & implementation of a site-specific management system (PQM) by ISO 9001:2000 and sia Guideline 2007, Safety & Emergency Response and Rescue Plans for underground operations</p> <p>Risk Manager, Safety & Health Engineer</p> <p>Legal Compliance, Best Practices in Hazard & Risk Assessments, Process/Safety Reviews (PSR) in situ</p>	<p>Joint Venture TRANSCO Sedrun – Switzerland</p> <p>Owner: Alptransit Gotthard AG (ATG)</p>
2002	<p>North American Tunneling (NAT) Conference The Westin, Seattle, WA – USA</p> <p>Project-specific Management Systems foster safe & efficient tunneling at the Swiss Gotthard Base Tunnel: „Integrated Management System for Tunneling Projects – Principles and Examples“</p> <p>Presentation (PowerPoint) & Paper</p>	m+m
2002-2016	<p>Conformity Assessments (CA) & CE Marking (CEM)</p> <p>Latest state of the art and cutting-edge solutions for tunnel & complex logistics systems – worldwide, e.g.</p> <ul style="list-style-type: none"> • ROWATRAN (RT) for Brenner Base Tunnel, Austria, ARGE Tulfes Pfons (ATP) Human kind's first train on wheels underground! System Safety Analysis by RAMS (Reliability, Availability, Maintainability & Safety) • Rio Tinto's Mine of the Future Program => Akker Wirth (AW) – MTM (Mobile Tunnel Miner) System for Northparkes Copper Mine, NSW – Australia => Atlas Copco's (AC) MMM (Modular Mobile Miner, Modular Mining Machine) System for Kennecott Utah Copper Mine, Utah – USA, • Rothang Pass Highway Tunnel (RHT) Project, Himachal Pradesh – India, • Koraln Tunnel, ARGE (Joint Venture) kat2 – Austria, 	<p>ROWA Tunnelling Logistics AG Wangen – Switzerland</p>

Year	Project/Task	Client/Customer
	<ul style="list-style-type: none"> • AlpTransit, Ceneri Base Tunnel (CBT) – Switzerland, • Hydro Plant Kraftwerk Linth Limmern (KLL), Tierfehd – Switzerland, • Niagara Tunnel Project (NTP), Niagara Falls, Ontario – Canada, • AlpTransit, Gotthard Base Tunnel (GBT) – Switzerland, Lot 360, Tunnel Sedrun, • AlpTransit, Gotthard Base Tunnel (GBT) – Switzerland, Lot 252, Tunnel Amsteg, and • Many others. <p>System Safety Approach – Safety & Health Engineer, Risk Manager, Legal Compliance, Technical File & User Instructions, Best Practices in Hazard & Risk Assessments. Process/Safety Reviews (PSR) in situ allow for safe delivery & commissioning and top customer productivity of high-tech solutions – well proven by hard facts, worldwide.</p> <p>Co-Author of “Suspended Platform Heading Systems For Safe High-Performance Tunneling“ Presentation (Prezzi) & Paper (pdf)</p>	
2001-2002	<p>Risk Review</p> <p>Gathering background information & assessment: Reviewing the life expectancy of Polymer Concrete Pipes for sewers in a southern US environment</p> <p>Presentation & report of recommendations for Microtunneling (tendering, contracts & execution)</p>	<p>Sigma Consulting Group, Inc. Baton Rouge, LA–USA</p> <p>Owner: East Baton Rouge Parish, Department of Public Works Baton Rouge, LA – USA</p>
2001-2005	<p>Safety & Health, Risk Management</p> <p>Design & implementation of Integral Safety Plan, Internal Audits, Support for Claim Management New Engelberg Tunnel [some of our pictures]</p> <p>System Safety Approach – Risk Manager, Safety & Health Engineer</p> <p>Legal Compliance, Best Practices in Hazard & Risk Assessments, Process/Safety Reviews (PSR) in situ</p>	<p>Joint Venture (JV) Tunnel Engelberg, Swietelsky Bau Tunnelbau m. b. H. Graz – Austria</p> <p>Owner: Railway Luzern-Stans-Engelberg (LSE)</p>

Year	Project/Task	Client/Customer
2000-2001	<p>Project Management, Estimate and Proposal</p> <p>Swiss Gotthard Base Tunnel (GBT) – Switzerland, Lot 252, Tunnel Amsteg</p> <p>Estimating and bidding in joint venture (JV), answers to owner's Requests For Information (RFI's)</p> <p>Chief Project Manager</p>	<p>Ast-Holzmann Baugesellschaft m. b. H. Graz – Austria</p> <p>Owner: Alptransit Gotthard AG (ATG)</p>
2000-2001	<p>Price Escalation by Project Index (by Swiss OIV, sia 121)</p> <p>A2, Freeway Tunnel Wanne Schlund – Switzerland</p> <p>Consulting/Coaching</p>	<p>Joint Venture (JV) A2, Lucerne Sued, Lucerne – Switzerland</p>
2001	<p>Answers to owner's Requests For Information (RFI's)</p> <p>Swiss Gotthard Base Tunnel (GBT) – Switzerland, Lot 360, Tunnel Sedrun</p> <p>Consulting/Coaching in Joint Venture</p>	<p>Ast-Holzmann Baugesellschaft m. b. H. Graz – Austria</p> <p>Owner: Alptransit Gotthard AG (ATG)</p>
1999-2001	<p>Price Escalation by Project Index (by Swiss OIV, sia 121)</p> <p>Swiss Gotthard Base Tunnel (GBT) – Switzerland, Lot 251, Access Tunnel Amsteg</p> <p>Consulting/Coaching</p> <p>Correct owner's works contract – and, therefore, help our customer to receive millions in additional compensation for price escalation.</p>	<p>Joint Venture (JV) Access Tunnel Amsteg/ Ast-Holzmann Baugesellschaft m. b. H. Graz – Austria</p> <p>Owner: Alptransit Gotthard AG (ATG)</p>
1999-2000	<p>Cost Controlling</p> <p>Swiss Gotthard Base Tunnel (GBT) – Switzerland, Lot 251, Access Tunnel Amsteg</p> <p>Implementation and maintenance of an IT-based Cost Controlling</p> <p>Best Practices in Cost Controlling</p> <p>Chief Project Manager</p>	<p>Joint Venture (JV) Access Tunnel Amsteg/ Ast-Holzmann Baugesellschaft m. b. H., Graz – Austria</p> <p>Owner: Alptransit Gotthard AG (ATG)</p>

Year	Project/Task	Client/Customer
1999-2000	<p>Safety & Health, Risk Management</p> <p>Swiss Gotthard Base Tunnel (GBT), Lot 251, Access Tunnel Amsteg – Switzerland</p> <p>Site specific integration of a Safety Management & Emergency Response and Rescue System into a project-specific management system (PQM)</p> <p>Chief Project Manager</p>	<p>Joint Venture (JV) Access Tunnel Amsteg/ Ast-Holzmann Baugesellschaft m. b. H. Graz – Austria</p> <p>Owner: Alptransit Gotthard AG (ATG)</p>
1999	<p>Cost estimation and submitting proposals</p> <p>Alptransit, Loetschberg Base Tunnel, Lots Steg and Mitholz – Switzerland</p> <p>Cost estimation, consulting/coaching and team training in Joint Venture (JV)</p>	<p>Balfour Beatty Major Projects London – Great Britain</p>
1999-2000	<p>Project Management, Management System</p> <p>Swiss Gotthard Base Tunnel (GBT), Lot 251, Access Tunnel Amsteg – Switzerland</p> <p>Design & implementation of a project-specific Management System (PQM) by ISO 9001 and sia Guideline 2007, Internal Audit with Owner and Construction Management</p> <p>Chief Project Manager – Best Management Practices</p>	<p>Joint Venture (JV) Access Tunnel Amsteg/ Ast-Holzmann Baugesellschaft m. b. H. Graz – Austria</p> <p>Owner: Alptransit Gotthard AG (ATG)</p>
1999-2002	<p>Management System</p> <p>Maintaining the existing management system by ISO 9002:1994</p> <p>Consulting/Coaching – Best Management Practices</p>	<p>Contractor EGG Bau AG Buelach – Switzerland</p>
1999	<p>Management System</p> <p>Design & implementation of a management system by ISO 9002:1994 (First Certificate per 06/26/1999)</p> <p>Project Manager – Best Management Practices</p>	<p>Contractor EGG Bau AG Buelach – Switzerland</p>

Year	Project/Task	Client/Customer
1998	Project Management, Estimate and Proposal Chienbergtunnel, Sissach By-Pass Tunnel – Switzerland Swiss Freeway Tunnel, rock & soft ground Cost estimating and bidding in Joint Venture (JV) Chief Project Manager	Ed AST & Co Baugesellschaft m. b. H. Graz – Austria
1997-1999	Management System Design & implementation of a new management system by ISO 9002:1994 (First Certificate per 04/16/1999) Chief Project Manager – Best Management Practices	Concrete Batching Plant Ch. Gerster AG Vaduz – Lichtenstein
1995-1998	Project Management Construction Permit Project for a new access road Chief Project Manager.	Schmerikon – Switzerland [Data undisclosed]
1997	Exhibitor at Ligna 97 , Hannover – Germany World leading fair for wood-processing industries	Moergeli Consulting
1996	Cost Estimate Cost estimating Rehabilitation & expansion of existing Water Treatment Plant, Buelach – Switzerland Consulting/Coaching, Estimating	Contractor EGG Bau AG Buelach – Switzerland
1995-1996	Project, design and construction management of an underground extension to an existing building in difficult ground Chief Project Manager	Schmerikon – Switzerland [Data undisclosed]
1995	Project Management, Estimate and Proposal Estimating and bidding in Joint Venture (JV) SWISS Railway 2000, Tunnel Murgenthal Murgenthal – Switzerland Chief Project Manager, Estimator	Contractor Infra 2000 SA Marin – Switzerland

Year	Project/Task	Client/Customer
1995	Estimating and bidding (in French) Construction Work for Convoyeur Juracime Cornaux – Switzerland Mining of a new inclined shaft by road header Project Manager, Estimator	Contractor Infra 2000 SA Marin – Switzerland
1995-2002	Adult Professional Training in <ul style="list-style-type: none"> • sia/ISO-Standards, • Management Systems, • Planning and Scheduling, • Construction Materials 	Training Center of Swiss Union of Carpenter Masters and Furniture Manufacturers (VSSM) Buergenstock – Switzerland
1994-1997	Assistant Professor @ Technical School Chur for <ul style="list-style-type: none"> • „Construction Management & Costs“ (for three years), • „Best Practices“ (for two years), • Team Manager and Co-Author of Textbook “Construction Management & Costs“ (for two years) 	Institute for Professional Education Chur – Switzerland
1994	Technical Support A5, Freeway Tunnel “Birchitunnel”, Solothurn – Switzerland Pilot tunnel by roadheader (within a shield) Consulting/Coaching	Contractor Meier + Jaeggi AG Zofingen – Switzerland
1994	Project Management, Estimate and Proposal Estimating and bidding in Joint Venture (JV) A5, Freeway, two new road tunnels “Birchitunnel” Solothurn – Switzerland Project Manager, Estimator	Contractor Infra 2000 SA Marin – Switzerland
1994	Project, design and project management of a single-family house (incl. air-raid shelter) Buchberg – Switzerland	T. Mischia Buchberg – Switzerland
1994	Project and design for rehabilitation of a single family house, Buchberg – Switzerland	T. Mischia Buchberg – Switzerland
1994	Feasibility Study – Switzerland Underground drainage of a new waste disposal site	Consulting Engineers – Switzerland [Client undisclosed]

Year	Project/Task	Client/Customer
1994	Feasibility Study Rehabilitation of an existing railway tunnel – Switzerland	Consulting Engineers – Switzerland [Client undisclosed]
1994- ...	Training/Coaching of Chief Executive/Operating Officers (CEO's/COO's) and staff in Switzerland and abroad for a successful planning & implementation of <ul style="list-style-type: none"> • Marketing • Customer Relationship Management (CRM) • Bidding and acquisition • Work preparation • Investment calculations/decisions • Cost Controlling • Contract & claim management • Alternative Dispute Resolution (ADR) • Human Resource Management (HRM) • Cost Controlling • Succession plans • Mastering of various business challenges 	Various small and medium-size enterprises (SME) – Switzerland [Clients undisclosed]

Employed as Estimator/Project Engineer & Project Manager:

Year	Project/Task	Customer – Employer
1994	Cost Estimate and Proposal Unique Zurich International Airport, Operations-Center FIG, Kloten – Switzerland Estimating and bidding in Joint Venture (JV)	Flughafen Immobilien- Gesellschaft (FIG) Kloten – Switzerland Spaltenstein Hoch + Tiefbau AG Zurich – Switzerland
1993	Cost Estimate and Proposal Water Supply Hard-Moos, Lots A, B, C, Zurich – Switzerland Estimating and bidding in Joint Venture (JV)	TBA (Public Works Depart- ment)/ City Water-Supply Zurich Zurich – Switzerland Spaltenstein Hoch + Tiefbau AG Zurich – Switzerland
1992- 1993	Cost Estimate and Proposal Power Plant Amsteg, Lots 4, 5 & 6, Amsteg – Switzerland Estimating and bidding in Joint Venture (JV)	Power Plant Amsteg AG (Swiss Federal Railways & Canton of Uri) Amsteg – Switzerland Spaltenstein Hoch + Tiefbau AG Zurich – Switzerland
1992- 1993	Cost Estimate and Proposal Inclined shaft Sasso, San Bernardino – Switzerland, Rehabilitation of existing ventilation shaft. Estimating and bidding in Joint Venture (JV)	TBA Canton of Grisons Chur – Switzerland Spaltenstein Hoch + Tiefbau AG Zurich – Switzerland
1991- 1993	Cost Estimate and Proposal Sewage Systems Glatt, Zurich – Switzerland Preliminary and tender project with lump sum pro- posal as total services contractor for a bid by Model C (by functional requirements, Design-Build)	TBA/City Drainages Zurich Zurich – Switzerland Spaltenstein Hoch + Tiefbau AG Zurich – Switzerland

Year	Project/Task	Customer – Employer
1987	<p>Technical Support</p> <p>San Antonio River and San Pedro River Tunnels, TX – USA.</p> <p>Combined Sanitation Sewage Overflow (CSSO), review the design of precast concrete elements & develop contractor's alternatives</p>	<p>San Antonio River Authority, San Antonio TX – USA</p> <p>Prader AG Zurich – Switzerland</p>
1987	<p>Cost Estimate and Proposal</p> <p>Grauholztunnel, New SBB railway tunnel Bern – Switzerland</p> <p>Estimating and bidding Joint Venture (JV), Review the design of precast concrete elements & develop contractor's alternatives</p>	<p>Swiss Federal Railways (SBB) Bern – Switzerland</p> <p>Prader AG Zurich – Switzerland</p>

Employed as Chief Project Manager:

Year	Project/Task	Customer – Employer
1990-1991	<p>Consortium (Joint Venture) Pierre Pertuis Sonceboz – Switzerland</p> <p>Freeway A5 Bypass Biel/Bienne, Two new 2-lane road tunnels</p> <p>Exploration tunnel, Jura Limestone with karst cavities, Tunnel Boring Machine & Backup (TBM) with 3.50 m diameter, 5 % uphill, length = 2,050 m, CHF 3 million</p> <p>Follow-up with a pilot tunnel, Sub-contractor of ARGE (Joint Venture) Tunnel Pierre Pertuis, Jura Limestone with karst cavities, Tunnel Boring Machine & Backup (TBM) with 3.50 m diameter, 5 % uphill, length = 2,050 m, CHF 3 million</p>	<p>TBA (Public Works Department) Canton of Bern Bern – Switzerland</p> <p>Murer AG Erstfeld – Switzerland</p>
1989-1990	<p>ARGE Aclatobel-Tunnel (Joint Venture) Versam – Switzerland,</p> <p>New 2-lane road tunnel in a remote mountain valley</p> <p>Drill & Blast, instable Grison Schist, fault zones, Section = 60 m², length = 1,700 m, CHF 30 million</p>	<p>TBA (Public Works Department) Canton of Grisons Chur – Switzerland</p> <p>Pitsch AG Thusis – Switzerland</p>
1988-1989	<p>Water Reservoir Val da Siat Ruschein – Switzerland</p> <p>Water inlet plant, complex civil engineering works in a remote mountain valley at 1,600 m above sea level, CHF 2 million</p>	<p>Power Plant Ilanz AG, NOK Baden – Switzerland</p> <p>Pitsch AG Thusis – Switzerland</p>