FORM TECH-6 CURRICULUM VITAE (CV) FOR PROPOSED PROFESSIONAL STAFF

1. **Proposed Position:** Contract's Specialist, I-12

2. **Name of Firm**: Hydrau-Tech, Inc.

3. **Name of Staff** : Dr. Abdul Wahed Hassani

4. **Nationality**: USA

5. **Education**]:

Ph.D., Civil Engineering (Water Resources Development), University of Roorkee, India, 1981-85
M.S., Civil Engineering (Soil Mechanics), University of Roorkee, India, 1979-1981
B.S., Civil Engineering, Faculty of Engineering, Kabul University, Afghanistan, 1970-1975

1. **Membership of Professional Associations**:
   American Society of Civil Engineering (ASCE)
   Society of Afghan Engineers (SAE)

2. **Other Training** :

MANAGERIAL TRAINING

1. Afghanistan Engineering Capacity Building Workshop, Faculty of Engineering, Kabul University, Afghanistan, October 26 to November 7, 2007.,
2. Afghanistan Engineering Capacity Building Training the Trainer, sponsored by ASCE, Washington D.C., June 23-25, 2007.
3. Fearless Facilitation: How to Conduct Effective meetings, Nebraska Department of Roads, Sept. 27, 2007.
4. Interviewing, Nebraska Department of Roads, August 23, 2007.
5. Time Management and Organizational Skills for Busy Professionals, Nebraska Department of Roads, March 8, 2007.
6. Supervisor Training, Nebraska Department of Roads, July 25-26, 2007.
7. Managing a Diverse Workforce, Nebraska Department of Roads, May 24, 2007.
8. Delegating for Shared Success, Nebraska Department of Roads, June 13, 2007.
9. Addressing Emotions at Work, Nebraska Department of Roads, April 25, 2007.
10. Workplace Motivation, Nebraska Department of Roads, April 17, 2007.
11. Problem Solving, Nebraska Department of Roads, March 29, 2007.
12. Generational Differences, Nebraska Department of Roads, February 15, 2007.
13. On the Job Training, Nebraska Department of Roads, January 24, 2007.
14. Correcting Performance Problems, Nebraska Department of Roads, November 29, 2006.
15. Clarifying Performance Expectation, Nebraska Department of Roads, November 28, 2006.
16. Project Management, Rock Hurst University Continuing Education Center, Inc., Lincoln Nebraska, January 27-27, 2004.

TECHNICAL TRAINING

Erosion and Sediment Control Training for Designers, Nebraska Department of Roads, January 22 -23, 2008., Pavement Design Workshop, Nebraska Department of Roads, July 18-19, 2007., Soil Nail Walls: Design and Construction Inspection, Nebraska Department of Roads, May 25, 2007., Intersections: Key Concept for Optimal Design, Mid-American Transportation Center, Lincoln, Nebraska, April 12, 2006., Interchanges & Traffic Analysis Training, Nebraska Department of Roads, November 29, 2007., Horizontal & Vertical Alignment Design of Roadways in Nebraska, March 12, 2006., Storm Water and Erosion Control, Emmons &Oliver Resources, Nebraska, Feb. 16, 2006., Roundabout Design Workshop, Nebraska Department of Roads, October 25-26, 2005.,
Designing Pedestrian Facilities for Accessibility, Nebraska Department of Roads, Sept. 27, 2005, MicroStation V8, Bentley Institute, Lincoln Nebraska, April, 2005, Geometrical Aspects of Pavement Design, National Highway Institute, Lincoln Nebraska, April 5-7, 2005, Pavement Preservation & Management, National Highway Institute, Lincoln Nebraska, March 29-30, 2005, Roadside Design Guide Workshop, Midwest Roadside Safety Facility, Dec. 1, 2004, Overview of NDOR Roadway Design Manual, Mid-American Transportation Center, Lincoln, Nebraska, Nov. 16, 2004, Conducting Reviews that Get Results, National Highway Institute, Lincoln Nebraska, Nov. 3-4, 2004, Storm Sewer Design & Analysis, Nebraska Department of Roads, July 22-23, 2004, Advanced Hydrology & Hydraulics, Nebraska Department of Roads, July 12-14, 2004, Public Works & Utilities: Watershed Management, NPDES Sediment & Erosion Control Workshop, Lincoln Nebraska, April 1, 2004, DOT Effective Negotiation, KARRASS, Lincoln Nebraska, April 1, 2004-January 22-23, 2003, Hot Mix Asphalt Delivery, Nebraska Department of Roads, Dec. 2, 2003,
NDOR Geotechnical Manual Presentation, Nebraska Department of Roads, Dec. 4, 2003, Soils and Foundation Workshop, National Highway Institute, Lincoln Nebraska, January 7-11, 2002, Construction of Portland Cement Concrete Pavement, National Highway, Institute, Lincoln Nebraska, January 21-22, 2002, Geology of Nebraska, Significance to Engineers, Lincoln Nebraska, February 6, 2002, Roadway Design Instructional Review, Nebraska Department of Roads, March 18, 2002, Essential MicroStation, ITASCA Group University, Lincoln Nebraska, April 15-17, 2002, GeoPak Road 1, ITASCA Group University, Lincoln Nebraska, April 29-May 3, 2002, Roadway Design Guide, National Highway, Institute, Lincoln Nebraska, Sept. 10-11, 2002, Overview of Revision to Green Book, Mid-America Transportation Center, Lincoln Nebraska, October 9, 2001,
AutoCAD R14 updates, Avatech Auto-desk Training Center, Sioux City, Iowa, January 18, 2000, Autodesk Civil Design & Auto desk Land Development Desktop, Avatech Auto-desk Training Center, Sioux City, Iowa, January 22-23, 2000, Drainage System Design, University of Wisconsin, Madison, Wisconsin, October 25-28, 1999, Softdesk Series & Civil Training, Iowa Lakes Community Collage, January 4-7, 1999, Evaluation & Rehabilitation of Pavements, University of Wisconsin, Madison, Wisconsin, November 4-6, 1998, Design of Culverts, Iowa University of Science & Technology, Ames, Iowa, March18-20, 199, Concrete Process & Restoration, Western Iowa Tech Community College, Sioux City, Iowa, February 12, 1998, Improving Public Works Construction Inspection Skills, University of Wisconsin, Madison, Wisconsin, February 24-26, 1997,
Soil Compaction Techniques, Budinger & Associates, Western Iowa Tech Community College, Sioux City, Iowa, February 17,1997.

8. Countries of Work Experience:
USA, Afghanistan, Pakistan, India

9. Languages:
English Good (written and spoken)

Pashtu Good (written and spoken)

Persian (Dari) Good (written and spoken)

Urdu Good (written and spoken)

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10. Employment Record [*Starting with present position, list in reverse order every employment held by staff member since graduation, giving for each employment (see format here below): dates of employment, name of employing organization, positions held.*]:

RELEVANT WORK EXPERIENCE

Roadway Design Consultant Coordinator: Review over all design of projects including plan and profile, cross sections, drainage, utility, traffic, bridge, material and research and right of way. Make decisions and suggestions to the consultants. Coordinate all aspects of project design and construction with various divisions of Department of Roads and consulting firms.

City Senior Civil Engineer: Planning, design, construction supervision, preparation and review of plans, construction specifications, inspections, reports, contract documents and cost estimates of roads, streets, culverts, storm sewers, sanitary sewers, water mains, and related public works, municipal, and utility projects.

Geotechnical Engineer: Performed Geotechnical analysis and soils testing of numerous projects, design of foundations, settlement and slope stability, analysis.

Coordinator of Science and Engineering programs: Responsible for recruiting and supervising staff, monitoring budgets and program expenditures, developing funding proposals and activity reports, advising students during practical training, and participating in teaching, curriculum development and research.

Research Scholar: Had a full scholarship from 1979 to 1985 leading to completion of M.S. and Ph.D. Participated in research and consultancy of the water resources projects including planning, design, construction, and monitoring stages.

Assistant Professor: As an educator taught various Civil Engineering undergraduate courses both in U.S. and abroad. Participated in Engineer Consultancy Services and Applied Research for more than 50 projects.

From [*Year*]: January 2001 To [*Year*]: 2008

Employer: Nebraska Department of Roads, Lincoln, Nebraska USA

Positions held: Roadway Design, Consultant Design Coordinator
From [*Year*]: September 1998 To [*Year*]: December 2000

Employer: Public Works Department, City of Sioux City, Iowa, USA

Positions held: Senior Civil Engineer

From [*Year*]: April 1996 To [*Year*]: September 1998

Employer: Public Works Department, City of Sioux City, Iowa, USA
Positions held: Civil Engineer

From [*Year*]: November 1993 To April 1996
Employer: Thompson Dreessen and Dorner, Engineering Consultancy Firm, Omaha, Nebraska, USA
Positions held: Geotechnical Engineer

From [*Year*]: February 1994 To May 1996
Employer: Metropolitan Community College, C.E. Department, Omaha, Nebraska, USA
Positions held: Part Time, Civil Engineering Instructor

From [*Year*]: August 1988 To February 1993,
Employer: International Rescue Committee, Peshawar, Pakistan
Positions held: Coordinator, Science and Construction Related Training Programs

From [*Year*]: October 1986 To August 1988
Employer: International Rescue Committee, Peshawar, Pakistan
Positions held: Director Teacher Training and Sciences and Math Text Books Programs

From [*Year*]: July 1985 To October 1986
Employer: United Nation High Commissions for Refugee, Peshawar, Pakistan
Positions held: Manager, Assistance to Skilled Afghan Refugees

From [*Year*]: August 1979 To March 1985
Employer: University of Roorkee, Roorkee, India
Positions held: Research Scholar, leading to Master's and Ph. D. Degrees in C. E.

From [*Year*]: January 1976 To August 1979
Employer: Faculty of Engineering Kabul University, Afghanistan
Positions held: Assistant Professor, Civil Engineering Department

11. Detailed Tasks Assigned	**12. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned**
[*List all tasks to be performed under this assignment*] Contract's specialist. Procurement and the tendering and administration of civil and M&E contracts, packaging of works, and preparation of tender documents.	[*Among the assignments in which the staff has been involved, indicate the following information for those assignments that best illustrate staff capability to handle the tasks listed under point 11.*] **Name of assignment or project:** **1. Afghanistan Engineering Capacity Building** **Year:** 2008 **Location:** Faculty of Engineering, Kabul University, Afghanistan **Client:** American Society of Civil Engineering **Main project features:** Help Afghans to establish their own consultancy firms and help existing companies improve their operation **Positions held:** Trainer **Activities performed:** Presented 10 modules developed by American Society of Civil Engineering, Covered topics: Business Plan, Financing & Financing Management, Human Resources Management, Marketing & Sales, Effective Project Management, Risk & Contingency Management, Leadership and Management, Quality Assurance & Quality Control, Communications & Coordination, Focusing on Client Service-Creating Additional Value **2. Construction Related Training for Afghanistan** **Year:** 1987-1992 **Location:** Peshawar, Pakistan **Client:** International Rescue Committee **Main project features:** Established; Construction Engineering, Construction Supervisors, Construction Foreman and Refresher and professional development Programs. **Positions held:** Coordinator Construction Related Training for Afghanistan **Activities performed:** Curriculum development, Training & Management of the following Programs: -Established a four years construction engineering for the Afghan Refugees in Pakistan -Established an 18 months Construction Supervisor program for Afghan Refugees in Pakistan -Established a 9 month construction Foreman program for Afghan Refugees in Pakistan -Established a 2 month Refresher and Professional Training

	program for in service Afghan Engineers **3. Science and Teacher Training Programs** **Year:** 1986-1993 **Location:** Peshawar, Pakistan Client: International Rescue Committee **Main project features:** Preparation of Science and math text books and training of science and math teachers **Positions held:** Director teacher training and text book programs **Activities performed:** Trained science and math teachers of middle and high schools Prepared science and math textbooks for grade 7 to 12 in both Pashto and Dari (Persian) languages for Afghan pupils. The textbooks were in the area of; math, geometry, geology, biology, chemistry and physics. **4. River Valley Development Project Design** **Year:** 1980 **Location:** India **Client:** Water Resources Development Centre, University of Roorkee **Main project features:** Design and Analysis of a river valley development project required for undergraduate degree(Diploma) **Positions held:** Research Scholar **Activities performed:** Hydrologic and Hydraulic study of Earth Dam, Spillway, Canal, Barrage, Access roads, Culverts, Soil investigation, Slope stability analysis &, Design of Earth dam, Design of Spillway, Design of Hydro power plant, Earth work and quantity calculations, Machinery and equipment. **5. Developing Peak Flood Enveloping Curves For Five River Basins of Afghanistan:** **Year:** 1977 **Location:** Kabul, Afghanistan **Client:** Faculty of Engineering, Kabul University **Main project features:** Peak Discharge flow vs. Catchment Area enveloping Curves and Equations were prepared for Five River Basins of Afghanistan **Positions held:** Assistant Professor **Activities performed:** Twenty Five Years, maximum flood data vs. catchment area of Kabul River Basin, Helmand River Basin, Kundoz River Basin Farah Rud River Basin and Hari Rud River Basins in Afghanistan were collected from the hydrology department of ministry of water and power. This data of Peak Discharge vs. Catchment area was plotted and enveloping curves

were created. Empirical equations were established for each basin. These curves or the empirical equations could be used in preliminary design of the river valley development projects.

6. An Undershot Paddlewheel Turbine for Flour-Mile Water Chutes in Afghanistan

Year: 1992
Location: Peshawar, Pakistan
Client: International Rescue Committee
Main project features: A small turbine was designed and tested using the basic principles of appropriate technology for Third World countries so that it can be built locally out of readily available materials and equipment and then installed, operated serviced, maintained and repaired by local people.
Positions held: Coordinator, Construction Related programs (Researcher of the project)

Activities performed: The turbine is intended to produce only a few kilowatts of electricity for lights and possibly refrigeration of medical supplies, maintained and repaired by local people. Two turbines models were fabricated utilizing bicycle wheels and locally fabricated blades. The models were tested in a hydraulic lab in Peshawar University. The turbine and support frame were installed on top of a steel tank and connected by a belt to a generator to produce electricity, and used as a demonstration project for the construction engineering and construction supervisors students and Afghan Refugees. The turbine should be able to produce several kilowatts of power for many sites of water flour miles in Afghanistan.

7. Collapsing Properties of Loess Soils

Year: 1979
Location: Midan shaher, Afghanistan
Client: Faculty of Engineering, Kabul University
Main project features: Investigated Collapsing properties of loess soil caused tremendous settlement, cracks and subsidence of the structures in Maidan Shaher just west of Kabul.
Positions held: Assistant Professor

Activities performed: The main purpose of this investigation was to study the collapsing properties of loess soils which covered a large area in Midan shaher about 70 km. west of Kabul. Settlement occurred and Cracks developed in the wall of houses and also soil was subsiding around the structures. Undisturbed soil samples were obtained from six different locations from a depth ranging from 1m to 12m. Tests were performed to evaluate index properties of soil, Consolidation test were performed to evaluate collapsing properties and Direct share tests were performed to evaluate the share strength parameters. Similar tests were performed on a sample of silty clay to compare the results with collapsing properties of loess soils. It was found the change in

	void ratio of loess soil was 2. to 20 times that of the silty clay. Loess soil subsides immediately with the water reaches to such soil. It will be advantageous if loess soil is subjected to water before the construction. **8. Alternative analysis and design of Macy South Project** **Year**: 2008 **Location:** Highway 75, Macy, Nebraska, USA **Client:** Nebraska Department of Roads **Main project features:** This Project consists hydrological analysis, Pavement design, Wetland mitigation, United States Water Jurisdictional channel change , Environmental impacts, and Design of two new Bridges **Positions held:** Roadway Design Consultant Coordinator **Activities performed:** Three alternative analysis were performed; Design of road on existing alignment, Design of road on an off-set alignment to the east and Design of an off-set alignment to the west of existing roadway. Wetland impacts varied, but all the three alternatives required wetland mitigation. , United States Water Jurisdictional channel was impacts in the existing alignment and the east off-set alignment. , Construction cost estimate was slightly higher on the east off-set compared to the other two alignments. The main obstacle on the west and existing alignment was the impacts to the two lagoons, High hills, and a house and a grain bin located on the west side. Traffic detour cost was higher with the use of existing alignment. Though the cost was slightly high, East alignment was found to be the least environmentally impacting practical alternative.

OTHER PROJECTS:

Projects designed and constructed in Sioux City Iowa:

a. Water Main;

Water main Jennings Street, Water main Court Street, Water main Country club, Water main 33rd street, Gordo Drive water main, Water main west 14th street, Lafayette street water main

b. Pavement Storm water management and Culvert Design

Floyd Boulevard Reconstruction and widening, South Lakeport road extension, Various parking lots rehabilitation, Tennis court rehabilitation, Pocket park shelter, Grand park Baseball seating project, Museum handicap ramp, Sergeant Floyd Monument rehabilitation, Parking Lots, Access Road and Trail, Pavement & Storm Water System Analysis and Design, Riverside Sports Complex, Design and Analysis of Detention Pond along Highway 75 of Plattsmouth to Bellevue Project.

c. Storm Sewer Design

South Mulberry Street, Highway 75 outlet north of Glenn Avenue, Isabella street, Mound Avenue, Hydrologic Analysis and Roadway Design and Construction of South Lakeport Extension Project, Hydrological Analysis, and Culvert Design, of Floyd Boulevard Reconstruction and Widening

d. Sanitary Sewer Design.

Hamilton Boulevard Sanitary sewer, Nebraska street Sanitary Sewer, Omaha street Sanitary, Gordon Drive sanitary sewer, Sanitary Sewer Design and Analysis of Floyd Boulevard Reconstruction and Widening

Consultant designed projects reviewed at Nebraska Department of Roads:
Highway-77, (Ceresco to Wahoo, Wahoo Bypass,), Hihway-91(Oconto North), Highway 281(O'Neil North), Highway-81(York Bypass, York north, Osceola, Shelby East and West), Highway-75(Plattsmouth- Bellevue, Murray Plattsmouth, Macy South, Winnebago to Macy, Winnebago East), Highway 66(Lake McCanoughy Overpass,), Elm Creek South, Highway-34 (Missouri River Bridge Approach, Design and Analysis of Detention Pond along Highway 75, Plattsmouth to Bellevue Project.