



Summit Reliance Group, Inc.

Pioneering a Sustainable Future

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EXECUTIVE OVERVIEW

WORKFORCE DEVELOPMENT SOLUTIONS / CONSTRUCTION: VOCATIONAL EDUCATION, TRAINING & CERTIFICATION IN BEST PRACTICES CONSTRUCTION AND BUILDING TRADES

June 15, 2016

THE OPPORTUNITY

The traditional method of constructing buildings in India and many other countries is plastered-over brick/block and mortar (“**PB/BM**”) using mainly unskilled or minimally skilled labor that, over the centuries, learned the trade on the job from others who also learned the trade on the job, because standardized training programs did not exist. To make money and often just to break even on projects that typically have very little margin, if any, the smaller construction companies that comprise nearly all such companies in such countries, tend routinely to employ substandard construction practices (e.g., using substandard materials and less cement, mortar and/or rebar than specified, and deficient and unsafe workmanship). The result is that the structures require ongoing maintenance and repair, and are not sustainable and collapse on a regular basis, hurting/killing thousands of people, creating extensive property damage and disrupting businesses and life.

Further compounding and exacerbating the problem:

India, for example, has shortfalls of more than 30 million affordable housing units mainly as slum replacement for its Economically Weaker Sector (“**EWS**”) population, acceptable housing for its 350+ million and growing new middle class, 3-star hotels for business travelers and vacationers that fill the gap between low-end hostels and managed apartments and expensive 5+star luxury hotels, 16,000+ schools, plus malls and other such infrastructure. Not surprisingly, it is projected that 30% - 35% of all construction in the world between now and 2050 is projected to be in India. Such level of construction cannot be achieved with the traditional brick/block and mortar method, which typically can take 6 months to construct a single basic house and up to several years to build a single 4-storey building, or with any number of unskilled/semi-skilled workers.

While such construction objectives can be achieved with modern methods (e.g., on-site precast concrete panels such as Summit’s StructCrete™ Solutions, and form-in-place walls, and factory-manufactured concrete panels and modular units, hybrid prefab panels and wood frames – where wood is available, and sprayed adobe and shotcrete wall systems, as well as engineered steel buildings for commercial applications), these methods require a core of skilled workers and nearly all methods are expensive compared to PB/BM. For factory-manufactured construction systems, skilled workers are required to construct, equip, start-up and operate such facilities and the associated costs are significant. Similarly, the lost-opportunity costs associated with the time to establish the factory, which can take 6 to 18 months, as well as the costs and risks of transporting the construction elements to the project sites, also can be significant. Given the size of India and its construction objectives, as well as the generally poor condition of its roads, many such factories will be required.

The conundrum, and an opportunity, is that all of the indicated construction, and more, needs to be completed and very quickly (i.e., mostly within 5 to 10 years) as a critical step for India to achieve its national economic development objectives and goal of competing successfully with China and other aggressively emerging third-world countries/regional areas and establishing itself as a world commercial and economic power, **AND** the cost of the basic structures needs to be comparable with the cost of constructing them with the traditional PB/BM method, or approximately \$8.50 to \$12 per SQF in India.

1 of 4

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There are not sufficient numbers of Indians in India with basic capabilities to work on the Country's large and growing numbers of construction projects. Thus, increasingly, foreign construction companies and contract workers are brought in on a temporary basis to perform the projects. When the work is completed, they leave and India has no residual benefit (e.g., trained local workers), only the completed project. In recent years in an attempt to mitigate such problems, the very large builders in India, such as Larson & Toubro and Tata Housing, began to train a "captive" cadre of workers that they would employ just on their construction projects.

The Indian Government, understanding the many problems associated with the current situation and the strategic negative impacts of not correcting those problems, has made it a priority to train initially up to 10 million Indians, 1 million immediately, as qualified workers in building and construction trades over the next 5 to 7 years. Other countries, understanding the importance of an educated/trained populace, also plan to implement such programs.

THE SUMMIT CONSTRUCTION WORKFORCE SOLUTION

Summit has conceived a unique, practical, integrated national program for standardized vocational *education, training* and *certification* in best practices construction and building that is designed to provide India initially with its targeted 10 million qualified workers in those trades over the next 5 to 7 years, increase the productivity and salary of those qualified workers and sustainably expand the middle class in India, provide a critical contribution to India's national development objectives and goal, and change the face of the Country (the "**Program**").

Some of the unique features of the Program that provide the capability to achieve that objective include:

- all critical *field trades*, for example: masonry, concrete construction (e.g., panel casting & erection, forming, footers/foundations, shoring for poured floors), steel work and welding, carpentry, mechanical, electrical & plumbing ("**MEP**"), insulation and doors/windows installation, building finishing (e.g., sheetrock, painting, tile work), site preparation & finishing (e.g., excavating, grading, landscaping, parking areas, roads, security walls and systems), and equipment operation and maintenance (e.g., backhoes, graders, bulldozers, cranes);
- all critical *technical and project management/administration trades*, for example: drafting, interpretation of architectural and construction shop drawings, principles of construction methods and materials, building & construction standards and codes, construction site safety, quality assurance/control, LEED practices, project and contract legal and financial principles, and Construction Industry Management ("**CIM**");
- integrating and modifying existing education and training principles, curricula, materials and methods to create the curricula and capabilities required for the Program, rather than "reinvent the wheel – *the keystone of the Program education/training process*";
- employing a set of additional specialized education and training materials adapted by Summit specifically for the Program to be uniquely and highly effective with persons that are illiterate/uneducated and unskilled/minimally skilled – *a cornerstone of the Program education/training process*;
- establishing specialized equipment training "parks" with simulators with 3-D video training "game" modules created specifically for the Program, and full and reduced scale construction equipment – *a cornerstone of the Program education/training process*;
- establishing levels of certification based on existing construction industry practices (e.g., apprentice, journeyman, master, instructor, master instructor);
- recruiting Program participants (trainers/instructors and trainees) in India; training the Senior Indian Trainers in the USA and field instructors in India;



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- creating incentives for prospective workers to participate in and complete the Program, including, for example, opportunities for sustainable employment with a living wage, assistance with job placement (including, as required, work for the Indian Federal & State Governments such as implemented by the USA Work Projects Administration that employed millions of unemployed people, mostly unskilled men, during the 1930's to carry out public works projects, including the construction of public buildings and roads), continuing education and career advancement, access to health/medical & dental care, and being part of a new Middle Class such as was done in India in the IT field, as well as a graduation Certificate and Program-branded hardhat, safety glasses and tee-shirt – the most important being hope of an ever better life for the Worker and their families;
- establishing a rewards program for work attendance, quality and safety performance – the Program goal is for construction and building trades to join the DabbaWalla as the other Six-Sigma business in India;
- implementing supporting initiatives, including, for example, promoting and branding construction/building trades as desired and respectable professions nationally in India, providing supplemental remedial literacy and basic arithmetic programs to Program graduates and their children where needed, creating professional trade associations and hosting construction trade shows in India, such as the World of Concrete;

Design, development, implementation and management/administration of the Program would be a collaborative effort by a consortium of USA construction industry, labor union, professional trade association, academia and Government entities and Indian counterparts, employing the principles of complex value chain/logistics operations design and management, and the techniques for performing mega-projects – the Program is similar to mobilizing for and conducting a major conflict concurrently in multiple locations; it's been done, the principles are well established and the tools are available.

As an **OPTIONAL VALUE-ADDED FEATURE OF THE SUMMIT CONSTRUCTION WORKFORCE SOLUTION FOR THE INDIAN CONSTRUCTION INDUSTRY**, to be either adopted immediately or added later...

... it is proposed to create a modern 21st Century Indian Construction Guild” to represent, support and protect construction workers that are trained and certified by the Program or otherwise “in-house” by Indian builders accepted for corporate membership in the Guild (the “**Workers**”). In this regard, the Guild would be responsible, for example, for developing, implementing and administering the various incentives and supporting initiatives and rewards programs indicated above, as well as creating and managing a Worker Pension Fund, a dedicated Credit Union with micro mortgage lending, and other services, such as legal assistance where required. Membership in the Guild would give the Workers a sense of belonging, a “voice” and access to such services, and incentivize them to perform their best. It is proposed that the Worker would pay a small fee to the Guild monthly when his/she is paid, to be withdrawn automatically from his/her pay, and the companies that employ graduates of the Program, whether or not they are sponsoring members of the Guild, would pay an initial hiring fee to the Guild for providing them with a certified trained worker rather than their having to recruit and train one, and then also an ongoing fee monthly in lieu of providing such benefits to the Workers, Payment of such fees by workers will serve to “value” his/her employment and the construction profession, and payment of such fees by the Employer will serve to “value” the workers.

PROGRAM TASKS AND ESTIMATED SCHEDULES & COSTS

The following Program tasks and estimated schedule and budgets are based on historic performance of similar types of programs, and the capabilities and experience of Summit management and its advisors and affiliates. The margin of error for the Schedule can be considered negligible, as we will be adapting existing elements, not developing new ones, and the schedule essentially depends upon how many people are doing the adapting. Thus, barring force majeure, these Tasks and all associated and any additional Tasks are expected to be performed nearly concurrently, with Tasks I through X being completed over a total 6 month period and Task XI over an additional 3 month period. The indicated ranges for the estimated costs also reflect the experience of Summit management and its advisors and affiliates over many years writing proposals for and participating in, evaluating and managing/administering many projects/programs of all sizes for private sector and Government clients.



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PROGRAM TASKS AND ESTIMATED SCHEDULES & COSTS			
Task	Description	Time / Weeks Up To...	Cost / US\$ Range...
I	Secure Approval & Initial Program Funding from the India National Skill Development Corporation (“ NSDC ”), and Form Core Program Team	6	0.5-1.0 Million
II	Prepare Detailed Program Plan, Schedule and Budget, and Secure Program Strategic Funding	10	
III	Program Strategic Funding, Organization and Mobilization – Establish USA and India Program Headquarters, Relationships and Training Venues, Recruit Trainers, and Establish Program IT and Management and Administration Information/Data Systems	12	5-10 Million
IV	Design/Create Program Curriculumms	12	
V	Design/Create Program Education/Training Materials	12	
VI	Obtain Construction Equipment and Deliver to Training Sites in India	12	40-60 Million
VII	Program Promotion and Begin Recruitment of Trainees	8	15-20 Million
VIII	Train Indian Trainers	8	
IX	Establish, Staff & Equip Education/Training Venues in India	6	
X	Launch the Program Trainee Education/Training Operations	2	
Total	Tasks I Through X	26	60.5-91
XI	Recruit, Educate/Train and Certify an Initial 1 Million Workers [Rounded]	78	70-100 Million
TOTAL	{Rounded}		130-190 Million
XII	Design and Establish Incentive and Reward Programs and Supporting Initiatives Indicated Above	24	TBD
A	Average Cost to Establish the Program and Educate/Train and Certify the Initial 1 Million Workers [Indicated as \$ per Worker]		125-190/ Worker*
B	Average Cost for the Next 9 Million Workers [Indicated as \$ per Worker]		<60/Worker*

* Includes Trainee transportation and temporary housing, subsistence and a small stipend during training, additional Trainers and education/training materials, Program-branded hardhat, safety glasses and tee-shirt, and Program management and administration.