Uttarakhand State Disaster Management Authority

TENDER NOTICE

State Disaster Management Authority (SDMA), Uttarakhand invites technical and financial bids from interested firms for conducting07 days training programs for masons on earthquake safe construction. Details of the training program are given in the tender document available at the website of Disaster Mitigation and Management Centre (http://dmmc.uk.gov.in).

The proposals may be submitted to Executive Director, Disaster Mitigation and Management Centre, Uttarakhand Secretariat, Dehradun – 248001 on or before 7th November, 2016.

Executive Director
Disaster Mitigation and Management Centre (DMMC)

Uttarakhand State Disaster Management Authority

TENDER DOCUMENT

Uttarakhand has geographical area of 53,483 sq km; 93 percent of which is mountainous and 64 percent is under forest cover. 27thstate of the Republic of India, Uttarakhand has two divisions;Garhwal and Kumaun. The state has 13 districts of which 07 (PauriGarhwal, TehriGarhwal, Chamoli, Haridwar, Dehradun, Uttarkashi, Rudraprayag) are in Garhwal while the remaining 06 (Almora, Bageshwar, Champawat, Nainital, Udham Singh Nagar, Pithoragarh) are in Kumaun.

Geo – tectonic set up of the region together with its evolutionary history, geomorphology and meteorological characteristics make Uttarakhand prone to a number of natural hazards. Besides earthquakes the area is vulnerable to and frequently devastated by landslides, cloudbursts, flash floods, floods, avalanches, droughts, lightening, cold waves and hailstorms.

Due to the ongoing tectonic movements the region has accumulated enormous strain that makes it susceptible to seismic tremors. The state falls in Zone IV and Zone V of Earthquake Zonation Map of India. Pithoragarh, Bageshwar, Chamoli and Rudraprayag districts together with some areas of Almora, Champawat, Tehri, Uttarkashi and Pauri district fall in Zone V while the remaining area falls in Zone IV. In the past the State has witnessed two major earthquakes (Uttarkashi 1991 and Chamoli 1999).

Buildings were traditionally constructed in the region using locally available stone and timber but with the passage of time people have switched tobrickand cement construction.This change in building material was however not accompanied by capacity building of the masons. The demand however forced them to construct with the new material. This adds to the vulnerability of building stock of the region. As per the Vulnerability Atlas of India, around 56 percent houses in Uttarakhand are constructed using mud, un-burnt bricks and stone walls. This is enough to highlight structural vulnerability of the built environment, particularly to seismic tremors to which the state is highly vulnerable.

In order to address the issue of seismic vulnerability of the region the State Disaster Management Authority (SDMA) intends to engage suitably experienced firms/agencies who could organize training programs on earthquake safe construction for the masons.

State Disaster Management Authority (SDMA), Uttarakhandtherefore invites technical and financial bids from interested firms for conducting 07 days training programs for masons on earthquake safe construction.

Scope of work

1. Selected firm would have to organize the training program at any place so identified by the SDMA in the group of districts.
2. The training program is to be organized for practicing masons who might well be illiterate and lacking communication skills. It is therefore necessary that the training program be organized hands on and in Hindi. Knowledge of the local dialects (Garhwali and Kumaoni) would be an added advantage.
3. The training program shall be of 07 days duration and would have to be organized as per the broad outline and schedule given below.

First Day		
Sl. No.	Particulars	Time
1.	Registration of Participants	1000– 1030 hrs
2.	Inauguration	1030 – 1100 hrs
	Tea break	1100 - 1130 hrs
3.	Overview of earthquake proneness of Uttarakhand with particular emphasis on the vulnerability of the district concerned.	1130 - 1300 hrs
	Lunch break	1300 - 1400 hrs
4.	Earthquake safe construction and its importance.	1400 – 1500 hrs
5.	Site selection and layout for the Demo Unit	1500 - 1600 hrs
	Tea break	1600 – 1615 hrs
6.	Excavation and Laying of PCC in foundation	1615 - 1800 hrs

Second Day		
1.	Precautions during the building construction in hilly terrains, including land selection for stability of structure.	1000 – 1100 hrs
2.	Detail of foundation of structures and overview of deferent type of foundations.	1100 – 1200 hrs

	Tea break	1200 - 1230 hrs
3.	Type of stones and materials to be used during laying of foundation	1230 – 1330 hrs
	Lunch	1330 – 1430 hrs
4.	Type of stones and materials to be used during laying of foundation	1430 – 1530 hrs
5.	Completion of foundation work up to plinth level and providing plinth band (Tea break in-between)	1530 – 1800 hrs
Third Day		
1.	Role of reinforcement in structure and how it helps in stability of the structure	1000 – 1100 hrs
2.	Diagram's and Picture Demonstration of load bearing structure.	1100 – 1200 hrs
	Tea break	1200 – 1230 hrs
3.	Role of reinforcement for reduction of tension and compression in structure.	1230 – 1330 hrs
	Lunch	1330 – 1430 hrs
4.	Role of reinforcement for reduction of tension and compression in structure.	1430 – 1530 hrs
5.	construction of brick wall up to sill level and providing sill band (Tea break in-between)	1530 – 1800 hrs
Forth Day		
1.	Detail of reinforcement in beam and column and overview in different type of reinforcement used in different earthquake zones	1000 – 1100 hrs
2.	Basic design for earthquake.	1100 – 1200 hrs
	Tea break	1200 – 1230 hrs
3.	Proper practices in concreting and material choice	1230 – 1400 hrs
	Lunch	1400 – 1500 hrs
4.	Construction of brick wall up to doorlevel and providing doorband (Tea break in-between)	1500 – 1800 hrs
Fifth Day		
1.	Film (TIFAC) on earthquake resistant's structure shown to	1000 – 1100 hrs

	participants	
2.	Work of District Disaster Emergence Operation Centre and Authority.	1100 – 1200 hrs
	Tea break	1200 – 1230 hrs
3.	Community Based Disaster Management	1230 – 1330 hrs
	Lunch	1330 – 1430 hrs
4.	Construction of brick wall up to slab level	1430 – 1800 hrs
Sixth Day		
1.	Film (DandiKanthiki Goad ma) on earthquake resistant's structure shown to participants	1000 – 1100 hrs
2.	Finishing the brick wall	1100 – 1300 hrs
	Lunch	1300 – 1400 hrs
3.	Providing shuttering for the slab and Bar binding (Tea break in-between)	1400 – 1530 hrs
	Tea break	1530 – 1600 hrs
4.	Concreting of slab	1600 – 1700 hrs
Seventh Day		
1.	Revision for six day training	1000 – 1130 hrs
	Tea break	1130 – 1200 hrs
2.	Examination	1200 - 1300 hrs
	Lunch	1300 - 1400 hrs
3.	Feed back of Training Programme (Tea break in-between)	1400 – 1600 hrs
	Certificate distribution and valediction	1600 - 1700 hrs

4. One qualified civil engineer with experience and expertise in conducting such program shall have to be deputed full time during the course of the training program along with other associates, as required. Bio-data of the experts should accompany the technical bid.

5. The training is intended to provide practical experience to the participants and therefore a demonstration unit of 10 X 10 feet incorporating all important earthquake safety features (sill, plinth and lintel and gable bands, corner, door and

window reinforcement) would be constructed during the training by the participants. The demonstration unit would have a door measuring 6 ½ X 2 ½ feet and a window measuring 3 X 3 feet.

6. The demonstration unit should be painted and should visibly show all earthquake safety measures that would have to be labeled in Hindi.
7. The demonstration unit complete in all respects would have to be handed over to the agency so identified by the SDMA and certificate with regard to handing over of the same would have to be provided along with the final training report.
8. Material, reinforcement and all equipment for the construction of the demonstration unit would be arranged by the agency so engaged for the training program.
9. Each training program would cater to 30 practicing masons that would be identified by the SDMA.
10. The masons participating in the training program shall have to be paid honorarium at the rate of Rs. 350 per day as compensation for their loss of wages.
11. Tea and brief refreshment would have to arranged for the participants twice daily.
12. The participants would have to be provided stationary and reading material. Training / reading material or manual prepared earlier (if any) should accompany the technical bid.
13. The participants would have to be provided certificate of participation. The format of the same would be provided by the SDMA.
14. Soft and hard copy of the training report would have to be prepared that would have besides other things complete details of the participants. Digital photographs of all the participants would be submitted separately.

Shortlisting criteria

Interested NGOs/Consultancy firms should provide information demonstrating that they have the relevant experience in disaster management and masons training. The interested firm is expected to submit technical and financial bids for the group of districts that they intend to work.

The technicalbid should include the profile of organization, experience including details of their experience in similar assignments/training works and human resource availability. The shortlisting criteria include:

1. The firm must be a registered entity.
2. The firm should be at least two years old. Audited balance sheetsof previous two years signed by authorized signatory of the firm be provided as proof thereof.
3. The firm should have prior proven experience in providing masons training.
4. The firm should demonstrate that they have capacity of conducting training program on earthquake safe construction.
6. The firm should have experience of handling projects having financial contribution/ financial grants/ financial assistance of at least Rs. 25 lakh in any year in the previous three years.
7. Experience of working in the field of disaster management and association with State/District Disaster Management Authority would be an added advantage.

Technical bid

Technical bid of the firm must reflect the firm's competence to successfully organize training programs for the masons and must contain the following:

1. Introductory letter on letter head (with complete contact details – name of contact person, mailing address, telephone, fax, email etc) explaining how the firm is best to deliver the task.
2. Organizational profile.
3. Two years annual report (FY 2014-15 and FY 2015-16) and 02 years audited financial statement duly signed and attested by authorized signatory.
4. Short note on the similar projects implemented by the firm.
5. The bid should contain sufficient supporting document to substantiate the claim of the NGO/firm towards their qualification as per the shortlisting criteria.
6. All the documents must be signed by authorised signatory.
7. Certified copy of Awards/Appreciation Certificates by State Government/Central Government/Multilateral Funding Agency (if any).

Financial bid:

For effective management and speedy implementation of these training programs the state is divided in four group of districts:

(a) Dehradun, Haridwar, Tehri and Uttarkashi

(b) Rudraprayag, Chamoli and Pauri

(c) Bageshwar, Pithoragarh and Champawat

(d) Almora, Nainital and Udhamsing Nagar

Separate financial bids should be provided for every group of districts and the same should be marked clearly on the envelope containing the bid. The firm can choose to bid for one or more group of districts, separate firms would however be chosen for different group of districts.

The interested firms can submit their technical and financial proposals sealed in separate envelopes to Executive Director, Disaster Mitigation and Management Centre, Uttarakhand Secretariat, Dehradun – 248001 on or before 7thNovember, 2016.

Executive Director

Disaster Mitigation and Management Centre (DMMC)