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5 CONCLUSION and SUGGESTIONS

In this study, the following results were obtained and the suggestions related to the topic were summarized.

- In this study, preparation of "Soil and Basic Study Report" based on sounding which will constitute the basis of "Static Projects" in Bitlis City Merkez County Beşminare district L48-A-04-B-1-D Sheet, 829 Islands, 11 Nolu Parcel Targeted.
- For this purpose, in order to determine the distribution of geological units and the level of groundwater in the scope of the project, vegetable soil between 0.00-0.30 meters and ignimbrite rock units between 0.30-3.00 meters were generally passed in SK-1, SK-2, SK-3. The values obtained are indicated in the annexes. Underground water was not encountered during drilling work.
- Bitlis City Merkez County Beşminare district L48-A-04-B-1-D Sheet, 829 Island, 11 Parcel Area By the results of geological and geotechnical ground survey studies on the construction site of the Static Projects, The floor safe stress value to be used in the static projects of the existing building project; $Q_{emn} = 2,50 \text{ kg / cm}^2$.
- Bitlis City Merkez County Beşminare district For the static projects to be prepared for the building of L48-A-04-B-1-D Sheet, 829 Island, 11 Nolu Parcel, the floor safety stress should be taken as $q_{emn} = 2,50 \text{ kg / cm}^2$.
- It is not anticipated that there will be any settlement-dislocation problem on the site since the structure planned to be done in the investigation area will sit on the ignimbrite rock unit.
- Liquefaction is not expected due to the presence of rocks in the study area.
- As Merkez District is located in the dangerous earthquake zone at 2nd degree, it is a necessity to comply with the provisions of the "Regulation on Buildings to be Performed in Earthquake Regions" by the engineer who will do the static project.
- As a result of calculations made (Bowles 1988), the coefficient of soil reaction $A_{ks} = 4000 \text{ t / m}^3$ has been reached.
- The survey area should include B as the ground group and Z2 type ground as the local ground class. In this case it is recommended to use the soil characteristic periods $T_A (s) = 0.15$ $T_B (s) = 0.40$ for earthquake analyzes.

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Profile No	Sheet No	Vs m/sn	Vp m/sn	Vs30 m/sn	h (m)	ρ gr/cm ³	Gmax kg/cm ²	E _{max} kg/cm ²	K kg/cm ²	Poisson Ratio	V _p /V _s
MASW-1	1	400	920	765	1.00	1.78	2910	8051	11513	0.38	2.30
	2	675	1585		2.50	1.92	8903	24738	37221	0.39	2.35
	3	800	1880		∞	1.98	12891	35824	54004	0.39	2.35
MASW-2	1	415	945	870	1.00	1.79	3141	8672	12098	0.38	2.28
	2	715	1600		3.00	1.92	10006	27520	36763	0.38	2.24
	3	925	2020		∞	2.00	17479	47799	60050	0.37	2.18

- When the dynamic elasticity modulus (Ed) values are examined: According to Bowles (1988), in parallel to the change of G value, it enters "Medium Sturdy Soil" classes up to depths of 0.00 m to 1.00 m from the 1st level surface level. 2. From the surface level of the gate to the depths of 1.00 m to 3.00 m, "Solid Ground" classes are entered. 3. From the surface level of the plate to the depth of 3.00 m to 30.00 m "Very Solid Ground or Rock Unit" enters the class
- When the maximum shear modulus (G) values are examined in the study area: According to Kramer (1996), it falls into the "Moderately Sturdy Soil" classes up to a depth of 0.00 m to 1.00 m from the surface area of the 1st story. 2. From the surface level of the gate to the depths of 1.00 m to 3.00 m, "Solid Ground" classes are entered. 3. From the surface level of the plate, it goes into the "Very Solid Ground or Rock Unit" classes from 3.00 m to 30.00 m depth. In order to avoid the structural damage that may be caused by the roof, it is necessary to adhere strictly to the principles of "stable structure design".
- Seismic velocities measured at the survey area consist of Rugged Soil units from the top to the second level, usually from ambient speed, from the surface, and from the second to the lowest level, a Very Solid Soil or Rock Unit. The ground dominant vibration period (To) was calculated as 0.14-0.16 in the range of 765-870 m / s (Vs30) obtained by the MASW method in which the average shear wave velocity for the survey area is 30 meters depth.
- Periodically dominant vibration periods in the study area: Medium Sturdy Soil and Very Strong Soil or Rock units "range from 0.11 <To <0.24 sec". Calculated ground prevailing

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vibration period values have a general purpose of forecasting the swing conditions of the units in the project area. According to Ansal et al. (2004), the dominant vibration period value changes according to the measure are mainly in the class "B" for the general of the study area.

- Detailed information is provided in the charts presented in the seismic evaluation results (Annex te) for the static project and other matters to be considered.
- If the region is a 2nd degree earthquake zone, effective ground acceleration coefficient $A_0 = 0.30$ "Regulation on Buildings to be Performed in Disaster Areas" should be observed exactly.

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