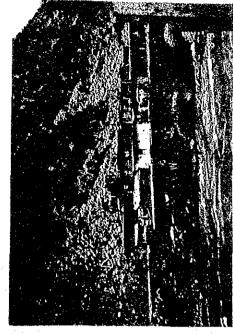
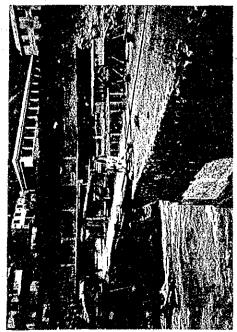
# No.15 Mankial Bridge, Swat District





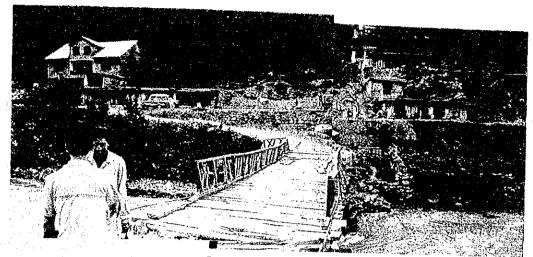
Approach on the right side bank viewed from the



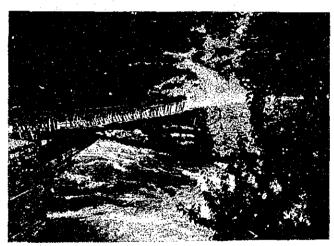
Existing Mankial Bridge made up of timber cantilever supports, wooden deck plates and suspending wires

BASIC DESIGN STUDY
ON
THE PROJECT FOR CONSTRUCTION OF BRIDGES IN NORTH WEST FRONTIER PROVINCE

# No.16 Kaidon Bridge, Swat District



Front view of the existing Kaidon Bridge



Downstream side view of the existing Kaidon Bridge



Proposed location of new bridge, approx. 25 m upstream of the existing bridge

BASIC DESIGN STUDY ON THE PROJECT FOR CONSTRUCTION OF BRIDGES IN NORTH WEST FRONTIER PROVINCE

# No.17 Peer Baba Bridge, Buner District



Upstream side view of the existing Peer Baba Bridge



Vehicle passes riverbed when water level is low



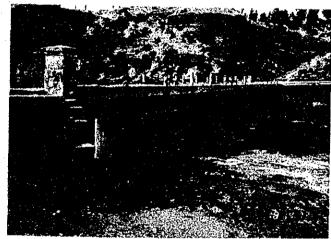
Proposed location of new bridge

BASIC DESIGN STUDY
ON
THE PROJECT FOR CONSTRUCTION OF BRIDGES IN NORTH WEST FRONTIER PROVINCE

# No.18 Jahazoona Dak Bridge, Malakand Agency



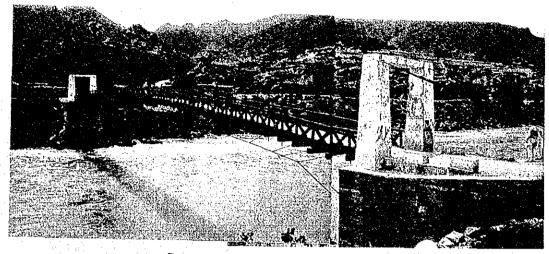
Existing Jahazoona Dak Bridge viewed from left bank side



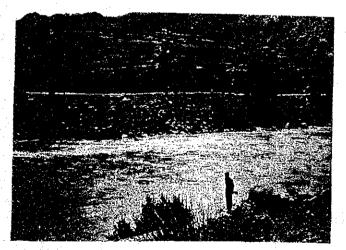
Proposed location of new bridge

BASIC DESIGN STUDY ON THE PROJECT FOR CONSTRUCTION OF BRIDGES IN NORTH WEST FRONTIER PROVINCE

# No.19 Totakan Bridge, Malakand Agency



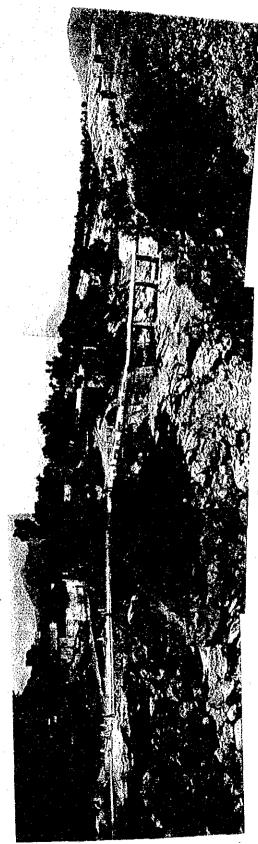
Downstream side view of the existing Totakan Bridge



Proposed location of new bridge

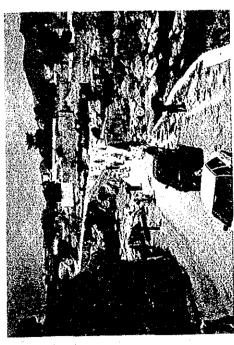
BASIC DESIGN STUDY
ON
THE PROJECT FOR CONSTRUCTION OF BRIDGES IN NORTH WEST FRONTIER PROVINCE

# No.20 Sakhakot Bridge, Malakand Agency



winstream side view of the existing Sakhakot Bridge





BASIC DESIGN STUDY ON THE PROJECT FOR CONSTRUCTION OF BRIDGES IN NORTH WEST FRONTIER PROVINCE

### Bridge in Abbottabad District

# Bridge No. 1 Narlai Bridge

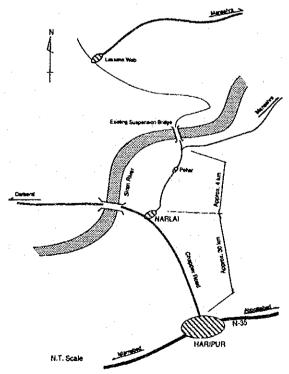
Existing Bridge: Pind Gali road crosses the Siran river approximately 10 km to the WSW of Abbottabad. The bridge is of suspension type wooden structure foot path bridge with a width of 1.0 meter. It is old and dilapidated.

<u>Benefits anticipated</u>: When the new bridge is completed, the recipient population of the benefits would be 200,000 (present)  $\sim$  approx. 300,000 (future). The area to benefit would be approx., 200 km<sup>2</sup> of agricultural region producing wheat, rice, sugar cane and beans.

<u>Proposed new Bridge</u>: The bridge site is situated in lat. 34°11'N, and long. 72°58'E, at an altitude of 600 m. There is a village in the left bank and field and gardens in the right bank.

Road connection at the left-bank side can be made by linking the Abbottabad-Haripur road running parallel to the Siran river which is now under construction. As for the approach road on the right bank side, there is a paved road up to Lassana Wab in Mansehra district and a jeepable road from there to the bridge site which can be linked to the bridge.

The proposed new bridge will be of prestressed concrete structure with an overall length of 100 m + 25 m.



### Bridge No. 2 Desal Bridge

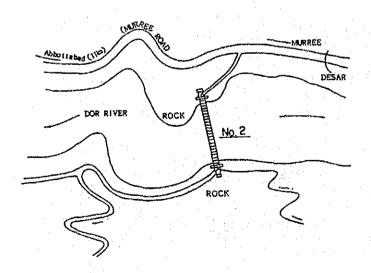
Existing Bridge: A mountain road which is linked to the Abbottabad-Murree road crosses the Dor river approx. 13 km E.S.E. of Abbottabad. The bridge is of suspension type wooden structure foot-path bridge with a width of 1.37 m and length of 88.8 m. It is old and severally dilapidated and in a hazardous state.

Benefits anticipated: When the new bridge is completed, the expected recipient population of the benefits would be approx. 20,000 (present) ~ 30,000 (future) which is quite small. The surrounding region is made up of farmland producing wheat and corn and the area to benefit is quite small.

<u>Proposed new Bridge</u>: The bridge site is situated in lat., 34°09'N and long. 73°18'E at an latitude of 1.210 m.

The surrounding terrain in mountainous and the approach road at the left-bank can be made by linking the Abbottabad-Murree road to the bridge. On the right bank side, there are merely 2 walking footpaths and there is no schedule at the moment to construct a vehicular road in the near future.

The anticipated bridge would be a wooden suspension type bridge with a length of 95 m.



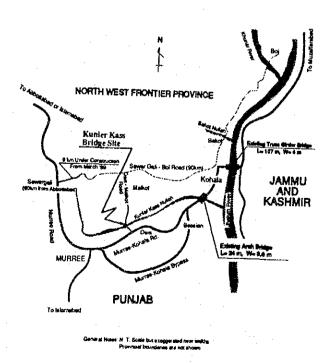
# Bridge No. 3 Kunier Kass Bridge

Existing causeway: A gravel road linking the Osia village located near Murree in the Punjab Province and the Malkot village in the NWFP crosses the Kunier Kass approx. 28 km ESE of Abbottabad. A causeway with a width of 3.5m and length of 25m was constructed 5 years ago but had been washed away 2 years ago. There is a wooden structured suspension type bridge 1.0 km downstream which was constructed 15 years ago.

<u>Benefits anticipated</u>: When the new bridge is completed, the expected recipient population of the benefits would be 30,000 (present) ~ 50,000 (future). The surrounding region is made up of farmland producing wheat and corn and the area of benefits is quite small.

<u>Proposed new Bridge</u>: The bridge site is situated in lat. 33°59'N and long. 73°27'E at an altitude of 1,110m. The site is surrounded by mountainous terrain and the dry riverbed is a quarry site. The width of the river is large but the water-way is comparatively narrow with only 20m. The Osia-Malkot road which had been constructed by the local people can be linked to the bridge on both banks.

The anticipated bridge would be a prestressed concrete bridge with a length of 50m.



# Bridges in Mansehra District

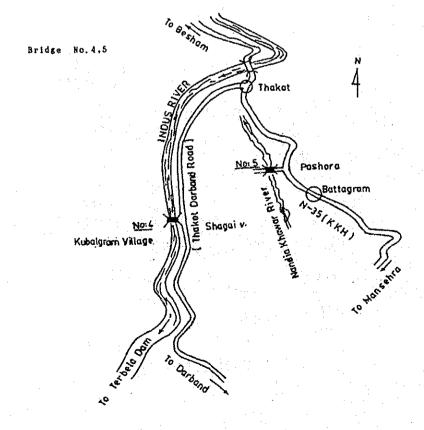
### Bridge No. 4 Shagai Bridge

Existing Bridge: The bridge links the Kubulgram village in Swat district with the Shagai village across the river by the Thakot ~Darband road at approx. 47 km NW of Mansehra.

Benefits anticipated: When the new bridge is completed, the expected recipient population of the benefits would be 180,000 (present) ~ 270,000 (future) and quite large. The surrounding region is made up of farmland producing wheat, rice, corn and vegetables but since flat land is comparatively small, the labor productivity is low due to restrictions from the geographical features.

<u>Proposed new Bridge</u>: The bridge site is situated in lat. 34°39'N and long. 72°48'E at an altitude of 540m. The surrounding is composed of farmland in both banks. The connecting road on the left bank may have the Takot ~ Darband road now under construction to be linked to the bridge, but the completion of the road is expected to be delayed due to the flood damage suffered in September this year. As for the right bank side (Swat district side) there is no vehicular road to link the bridge.

The anticipated bridge would be a suspension type bridge with a span of 185 m.



#### Bridge No. 5 Pashorai Bridge

Existing Bridge: The bridge crosses the Nandia Khawar river near the Pashorai village located at Karakoram Highway Km-171, about 6 km west of Batagram.

There is no vehicular bridge existing, only a wooden structure suspension footpath.

<u>Benefits anticipated</u>: When the new bridge is completed, the expected recipient population of the benefits would be 50,000 (present) ~ 75,000 (future) and quite small. The surrounding region is made up of farmland producing rice, wheat, corn and vegetables.

<u>Proposed new Bridge:</u> The bridge site is situated 2 km downstream of the existing bridge in approx. lat. 34°42'N and long. 72°59'E at an altitude of 960m.

The anticipated bridge would be a prestressed concrete structure bridge with a span of approx. 50 m.

The bridge location is shown on the location map of Bridge No.4.

#### Bridge No. 6 Jabrai Bridge

Existing Bridge: The bridge crosses the Jabrai river near the Jabrai village located at Darban-Suwan-Battal road Km-16, about 27 km north of Mansehra. The existing bridge is a stone masonry arch type bridge with a width of 3.3m and a span of 56m which was constructed about 50 years ago. Although there are some cracks on the slab decks, it is not considered hazardous; traffic by trucks are permissible.

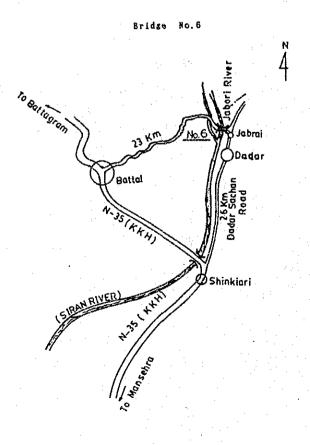
Benefits anticipated: When the new bridge is completed, the expected recipient population of the benefits would be about 80,000 (present) ~ 120,000 (future) and quite small.

The surrounding region is made up of farmland producing rice, wheat, corn, vegetables and fruits.

<u>Proposed new Bridge</u>: The bridge site will be situated about 100m, upstream of the existing bridge in approx. lat. 34°37'N and long. 73°14'E. The surrounding is made up of mountainous village.

The approach road may be linked to the existing Sachan-Battal road.

The anticipated bridge would be a prestressed concrete structure bridge with a span of 50 m.



### Bridge in Kohistan District

### Bridge No. 7 Panipa Bridge

Existing Bridge: The bridge links the Panipa village to the Gayal village across the Indus river along the Karakoram Highway at about 18 km north of Dasu.

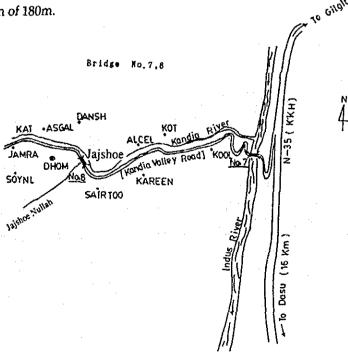
The existing bridge is a wooden structure suspension type bridge with a span of 273m. Only light weight vehicle traffic is permissible.

<u>Benefits anticipated</u>: When the new bridge is completed, the expected recipient population of the benefits would be about 30,000 (present) and quite small.

However, since the NWFP Government has in mind the "Kandia Valley Development Plan" which is aimed to exploit the abundant water resources in the region for generation of electricity which would certainly result in a considerable large number of recipient population of the benefits in the future. Although this region has an abundancy of forest resources, it is also an agricultural and forestry region producing such agricultural products as wheat and corn.

<u>Proposed new Bridge</u>: The bridge site will be situated about 45 m downstream at the high bank and 15 m downstream at the left bank in approx. lat. 35°25'E and long. 73°12'E, at an altitude of .935 m. The surrounding terrain is mountainous.

The approach road on the left bank of the Indus river may be linked to the Karakoram Highway and the Kandia valley road which is now under construction can be linked to the bridge on the right bank. The anticipated bridge would be a suspension type bridge with a span of 180m.



# Bridge No. 8 Jajshoe Bridge

Existing Bridge: The Kandia valley road crosses the bridge at Km-18 near the Jajshoe Nullah village. The existing bridge is a wooden structure suspension type bridge with a width of 2.2 m, and a span of 56 m. Only light vehicle traffic is permissible.

<u>Benefits anticipated</u>: When the new bridge is completed, the expected recipient population of the benefits would be about 30,000 (present) and quite small.

However, since the NWFP Government has in mind the "Kandia Valley Development Plan" which is aimed to exploit the abundant water resources in the region for generation of electricity which would certainly result in a considerable large number of recipient population of the benefits in the future. Although this region has an abundancy of forest resources, it is also an agricultural and forestry region producing such agricultural products as wheat and corn.

<u>Proposed new Bridge</u>: The bridge site will be situated 25 m downstream from the existing bridge site in approx. lat. 35°27'E and long. 73°03'E at an altitude of 1,285 m.

The surrounding is mountainous village. As for the approach road, it is possible to link the Kandia valley road, now under constriction but regrettably, the under construction road was partially damaged due to the big flood in September 1992.

The anticipated bridge would be a prestressed concrete bridge with a span of 75 m.

The bridge location is shown on the location map of Bridge No.7.

#### Bridge in Chitral District

# Bridge No. 9 Darband Bridge

Existing Bridge: The bridge crosses the Yarkhun river at Darband about 135 km northeast of Chitral. The access to Darband is only possible by 4-wheel drive vehicle up to Brep via Buni and Mastuj and thereafter on foot. During the site investigation trip by the team in August, the trip was made only up to Sanogar which is located between Buni and Mastuj. Since the road had been washed away and restoration work would not be completed before October (C&W); investigation of the bridge site was not made. For reference, the distance and time required to go to Darband is shown in the following Table 1-2-1, according to information received from the army scout in Chitral.

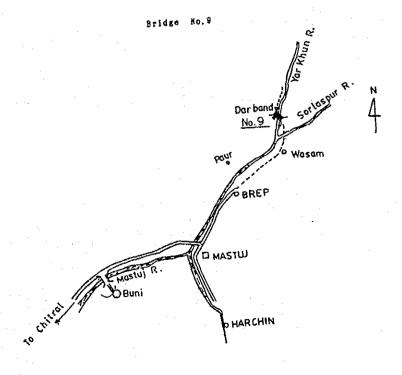
Distance & time, Chitral ~ Darband

	Section			Time	required	Remarks
Chitral	~	Buni	176 km	4 hrs.	15 min.	4-WD
Buni	, eu	Mastuj	36 "	2 "	50 "	4-WD
Mastuj	~	Brep	26 "	2 "	30 "	4-WD
Brep	inu	Paur	27 "	7"	. 00 "	On foot
Paur	~	Darband	18 "	5 "	00 "	On foot
	Tota	al	183 km	21 hrs.	35 min.	

According to the information received from the Deputy Commissioner, XEN Highway (C&W), S.D.O. (Chitral), S.D.O. (Buni) of Chitral District, Contract has been awarded to complete the 76 km of one lane road between Chitral and Buni by May 1994 but the construction is very much delayed.

Further, there is no plan contemplated for the road beyond Buni. Especially for the roads beyond Brep, there is no scheduled plan for a jeepable road at the present.

The situation being as explained above, the C&W of Chitral expressed that although they would wish to change the No. 9 Darband Bridge to another bridge, they are willing to delete this bridge from the basic design if the change request to the Japanese Government would be difficult.



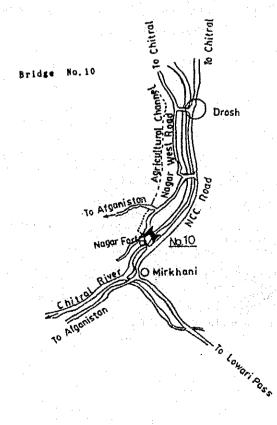
# Bridge No. 10 Naggar Bridge

Existing Bridge: The NCC (Nowshera-Chakdara-Chitral) road crosses the Chitral river at Naggar village and links with the Naggar west road at about 50 km south of Chitral. The existing bridge is a wooden structured suspension type bridge with a width of 2 m and a span of 81.5m. Light weight vehicle traffic is permissible. This bridge is built at a narrow section of the river, a little south of Naggar, and Naggar Fort can be seen near the main tower of the suspension bridge on the opposite bank.

Benefits anticipated: When the new bridge is completed, the expected recipient population of the benefits would be about 10,000 (present) ~ 15,000 (future) which is very small.

The surrounding region is made up of farmland producing such agricultural products as tobacco, fruits and lumbers.

<u>Proposed new Bridge</u>: It is not possible to locate the bridge near the Naggar Fort, although this is considered to be the most preferable site, considering the environmental aspect in the Naggar Fort surrounding. The bridge site was therefore selected at a location about 3 km upstream from the existing bridge situated in approx. lat. 35°09'N and long. 71°44'E at an altitude of 1,270 m. The surrounding is a mountainous village. As for the approach road, the NCC-Naggar road which is now under construction may be linked to the bridge but the road width has barely one lane. The anticipated bridge will be suspension type bridge with a span of 150 m.



# Bridge No. 11 Choni Bridge

Existing Bridge: The NCC road crosses the Chitral river and is connected to the southern part of the Chitral city. Chitral city lies in right bank of the Chitral river while the NCC road runs along the left bank.

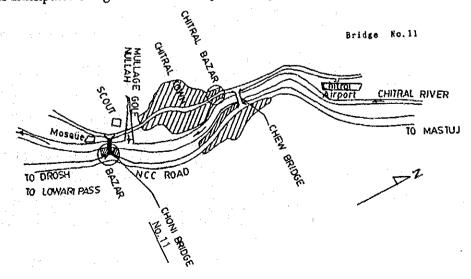
At present there is an existing prestressed concrete bridge completed in 1980 in the north of Chitral city where the river becomes narrow. The site of the proposed bridge lies in the south of Chitral city where there is an existing wooden structure suspension type bridge with a width of 2 m and span of 99 m; light weight vehicle traffic is permissible.

There is a portion on the NCC approach road to the Chew Bridge where the cut bank is ready to collapse and should it collapse, the Choni Bridge would become the only linking access between the NCC road and Chitral city so the Choni Bridge should be made as a permanent bridge.

Benefits anticipated: When the new bridge is completed, the expected recipient population of the benefits would be about 15,000 (present) ~ 20,000 - 30,000 (future) and deemed quite small but the vehicle traffic is estimated to be about 1,200/day (present) ~ 2,250/day (future) and quite large. This region has been developed as the administration center of the district together with tourism but the surrounding region is also known as an agricultural and forestry region from the older times.

Proposed new Bridge: The proposed site of the new Choni Bridge will be located about 40 m upstream of the existing bridge and situated in lat. 35°09'N and long. 71°44'E at an altitude of 1,270 m. There are mosque, school, shops, army scout barracks, etc. in the surrounding. The NCC road running along the left bank of the Chitral river will be linked to the Chitral city road via the new Bridge. Both roads are of 2 lane paved roads.

The anticipated bridge would be of suspension type bridge with a span of 100 m.



# **Bridges in Dir District**

# Bridge No. 12 Khal Bridge

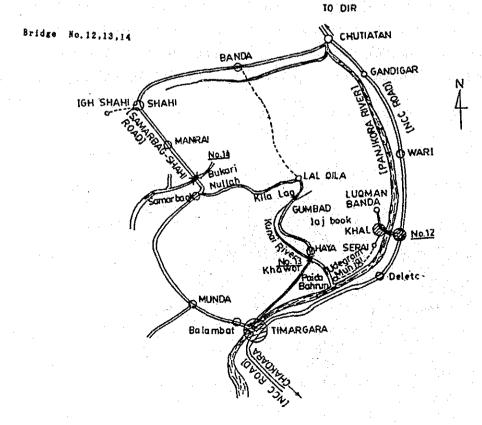
Existing Bridge: The NCC road running northward from Timargara parallel to the Panjkora river crosses the river near the town of Khal, about 16 km from Timargara. The existing bridge is of wooden suspension type bridge with a span of 120 m. Light weight vehicle traffic is permissible.

Benefits anticipated: When the new bridge is completed, the expected recipient population of the benefits would be about 40,000 (present) ~ 60,000 (future). The area to benefit in this region would be about 16 km<sup>2</sup> of agricultural farmland producing such cereal products as rice, wheat, sugar cane and vegetables and fruits such as onions, beans, oranges and apples.

<u>Proposed new Bridge</u>: The proposed site of the new bridge is located about 200 m downstream of the existing bridge and situated in approx. lat. 34°54' N and long. 71°59' E at an altitude of 930 m. There are shops and bazaars on the left bank side along the NCC road and shops, warehouses and agricultural villages on the right bank side.

The approach road will be linked to the NCC road on the left bank and the right bank side will be linked to the existing road linked to the existing bridge.

The anticipated bridge will be of steel composite girders having a total length of 88 m.



# Bridge No. 13 Haya Serai Bridge

Existing Bridge: The Kala Dag ~ Lal Qila road crosses the Haya Serai Khawar river at Haya Serai village about 10 km north west of Timargara. The bridge is a wooden structure suspension type bridge constructed in 1989 having a width of 2.8 m and span of 67.6 m. Traffic of light weight vehicles are permissible.

<u>Benefits anticipated:</u> When the new bridge is completed, the expected recipient population of the benefits would be about 50,000 (present) ~ 70,000 (future). The region's main products are rice and wheat but it also produces apples and other fruits.

<u>Proposed new Bridge</u>: The proposed site of the new bridge is located about 30 m downstream from the existing bridge and situated in lat. 34°55' N and long. 71°50' E at an altitude of 950 m. The surrounding is made up of farmland. The causeway access road to the existing bridge and the foundation of the existing suspension bridge tower would serve as a groin for the stabilization of the river course when the new bridge is constructed. The road to be linked to the bridge may be connected from the Balanbad-Lal Qila road.

The anticipated bridge will be of prestressed concrete structure with a span of 75 m. The bridge location is shown on the location map of Bridge No.12.

# Bridge No. 14 Bukari Khawar Bridge

Existing Bridge: The Samarbagh ~ Shahi road crosses the river bed of the Nullah Bukari near Bukari Khawar village at km -23, about 23 km north-west of Timargara. The river is divided into two water courses and the sand island is large with a width of 180 m. There is no existing bridge.

Benefits anticipated: When the bridge should be completed, the expected recipient population of the benefits would be about 50,000 (present) ~ 70,000 (future). The region produces rice, wheat, orange and apples.

<u>Proposed new Bridge</u>: The site of the proposed bridge will be located about 200 m downstream of the existing causeway crossing the river and situated approx. in lat. 34°59'N and long. 71°40' E. The surrounding is agricultural farmland.

The approach road to the bridge may be linked from the existing paved road of Samarbagh – Shahi road. The anticipated new bridge will be of prestressed concrete structure spanning the 2 river courses with a span of 25 m respectively and the sand island portion in between will be of causeway type structure.

The bridge location is shown on the location map of Bridge No.12.

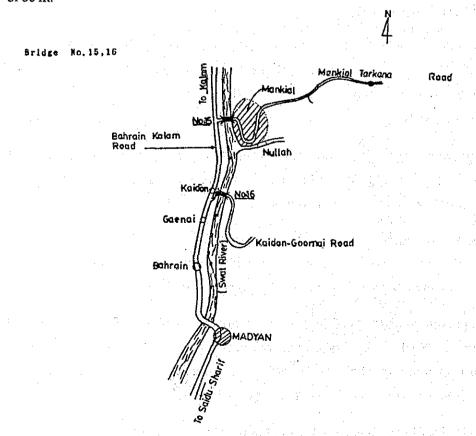
### **Bridges in Swat District**

### Bridge No. 15 Mankial Bridge

Existing Bridge: The Mankial ~ Tarkana road crosses the Swat river at km-1 (starting point) about 67 km NNW of Saidu. The existing bridge is a wooden structured suspension type bridge with a span of 50 m which was constructed about 50 years ago under the supervision of a German Engineer; the bridge was built for the purpose of hauling medical raw material products from the hinterland. The bridge is quite old and severely dilapidated.

<u>Benefits anticipated:</u> The anticipated recipient population of the benefits when the bridge will have been completed will be about 8,000 (present) ~ 12,000 (future) and deemed quite small but there are no other possible means of access to the main road from the hinterland. The region is an agricultural and forestry farmland producing rice, wheat and timbers.

<u>Proposed new Bridge:</u> The proposed site of the bridge is situated in approx. lat. 35°20' N and long. 72°37' E and there are shops, bazaars, schools, and mosque in the nearly surrounding. The connecting road to the bridge may be linked to the Mankial ~ Tarkana road. The anticipated bridge will be structural steel plate girders structure with a span of 50 m.



# Bridge No. 16 Kaidon Bridge

Existing Bridge: The Kaidon ~ Goornai road crosses the Swat river near the Kaidon village at km -1 (starting point), about 60 km north-north-west of Saidu. The existing bridge is a wooden structured bridge with a span of 40 m built approx. 30 years ago. The bridge is of wooden structure suspension type bridge with an extended built-up beam and the floor deck supported by cable, the same type as Bridge No. 15.

Benefits anticipated: The anticipated recipient population of the benefits when the bridge will have been completed will be 6,000 (present) ~ 9,000 (future) and quite small but this will be the only access to the main road. This region is an agricultural and forestry region producing rice, wheat and timbers.

<u>Proposed new Bridge:</u> The proposed site of the new bridge will be located about 15 m upstream of the existing bridge situated in lat. 35°15' N and long. 72°35' E. The surrounding area is made up of shops and farmland.

The anticipated new bridge will be of structural steel plate girders with a span of 50 m.

The bridge location is shown on the location map of Bridge No.15.

#### Bridges is Buner District

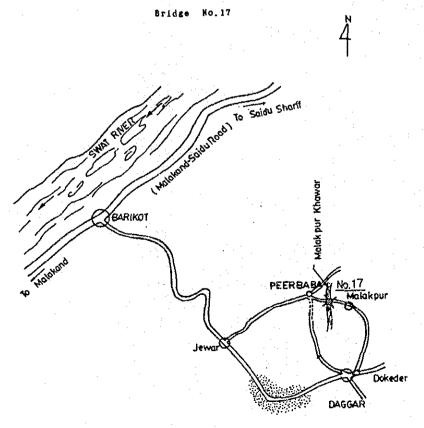
#### Bridge No. 17 Peer Baba Bridge

Existing Bridge: The Peer Baba-Malakpur Road crosses the Malakpur Khawar river near the Peel Baba village, approx. 17 km north-west of Gadar. The existing bridges is of a wooden structured suspension type bridge with a span of 20 m but since it is so old and dilapidated, it cannot be used and people are walking across the river bed. And also since the bridge length is insufficiently short, the approach road to the bridge is washed away.

<u>Benefits anticipated:</u> The anticipated recipient population of the benefits when the bridge will have been completed will be 15,000 (present) ~ 23,000 (future). This region produces such cereal products as rice, wheat, sugar cane vegetables fruits such as onions, beams, oranges and apples.

<u>Proposed new Bridge</u>: The site of the proposed bridge is located approx. 30 m upstream of the existing bridge and situated in lat. 34°37' N and long. 72°27' E. The bridge site is surrounded by factories, farmland and village houses. As for the approach road, the Peer Baba-Malakpur road may be linked to the bridge.

The anticipated new bridge will be of pre-stressed concrete structure with a span of 75 m. (The bridge span will be rather long because the bridge will be built as skew due to the relation of the approach road).



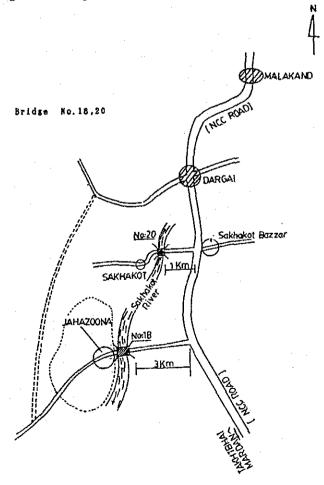
# Bridge in Malakand Agency

# Bridge No. 18 Jahazoona Dak Bridge

Existing Bridge: The Jahazoona Dak ~ Ghawar Killey road crosses the Sakhakot river near the Jahazoona Dak village approx. 12 m south-south-west of Malakand. The existing bridge is a reinforced concrete bridge with a width of 4.8 m and a span of 60.8 m and vehicle traffic is permissible but since the elevation of the bridge is below the flood water level, flood water overflows over the bridge.

<u>Benefits anticipated</u>: The anticipated recipient population of the benefits when the bridge will have been completed will be 22,000 (present) ~ 33,000 (future). This region covers an agricultural area of 70 km<sup>2</sup> and mainly produces sugar cane; sugar cane is transported to the Takht Bhai sugar plant.

<u>Proposed new Bridge</u>: The site of the proposed new bridge is located about 30 m upstream of the existing bridge and situated in approx. lat. 34°26' N and long. 71°53' E at an altitude of 450 m. There are farmland in the surrounding and plants in the back. The connecting road may be linked to the paved Jahazoona ~ Ghawar road. The anticipated new bridge will be of prestressed concrete bridge with a length of 75 m.



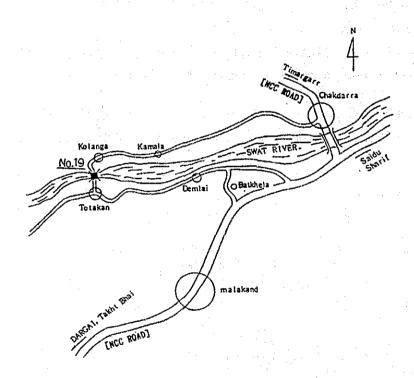
### Bridge No. 19 Totakan Bridge

Existing Bridge: The Totakan Kamala road crosses the Swat river near the Totakan village approx. 10 km north-west of Malakand. The existing bridge is a wooden structured suspension type bridge with a span of 64 m.

Benefits anticipated: The anticipated recipient population of the benefits when the bridge will have been completed will be 35,000 (present) ~ 53,000 (future). This region produces such cereal products as rice, wheat, corn and sugar cane.

<u>Proposed new Bridge</u>: The site of the proposed new bridge is located about 60 m downstream of the existing bridge situated in lat. 34°38' N and long. 71°48' E at an altitude of 660 m. There are farmland, shops and village houses in the surrounding.

The approach road to the bridge may be linked to the paved Totakan ~ Kamala road. The anticipated new bridge will be of suspension type bridge with a span of 80 m.



# Bridge No. 20 Sakhakot Bridge

Existing Bridge: The Sakhakot village road crosses the Sakhakot river running through the Sakhakot village approx. 9 km south-west of Malakand. The existing bridge is a reinforced concrete structured bridge with a span of 42 m. The bridge is old and dilapidated and there have been accidents of falling down the side because there are no high side rails. Further, traffic will be stopped during flood because the slab elevation is lower than the flood water level.

<u>Benefits anticipated</u>: The anticipated recipient population of the benefits when the bridge will have been completed will be 30,000 (present) ~45,000 (future). This region has an area of 40 km<sup>2</sup> agricultural farmland producing such cereal products as rice, wheat, sugar cane and other vegetables and fruits and transport the products to large consuming cities like Peshawar and Nowshera.

<u>Proposed new Bridge</u>: The site of the new bridge is located about 40 m downstream of the existing bridge and situated in approx. lat. 34°27' N and long. 71°54' E at an altitude of 480 m. There are quite a large number of farmhouses in the surrounding. The existing Sakhakot city road may be linked to the bridge. The anticipated new bridge will be of prestressed concrete structure with a span of 75 m.

The bridge location is shown on the location map of Bridge No.18.

#### PHASE-I

			The second secon
		LITHOLOGIC	SYMBOLS
	A Laboratoria		UNICON LANS
1.	SOIL		P.005
2.	DETRITUS	e e e e e e e e e e e e e e e e e e e	
3.	CONGLOHERA	TE	
4.	ancta dum		
5.	FINE SAND		WHEN TO THE PARTY OF THE PARTY
6.	MEDIUM SAN	D STONE	
7. a.	LIME STONE		
i.	GRANITE		
9. 10	SCHIST		
10•	SLATE	ABBREVA	TIONS

*	MINERAL	-	Mni.
*	PEBBLES		Peb,
*	COBBLES	•	Cob.
*	DISTURBED SAMPLE	•	D.S.
t	WASH SAMPLE	-	<b>W.S</b> ,
*	CORE SAMPLE	•	C.S
*	QUARTZ		QTZ

# ASSOCIATED DHILLERS (PVT) LTD. Constitute fail basicous & Continues

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CLIENT: JICA BASIC DISIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN elibes so. | enibes so. | Boss ceres or Hosing sq.7

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11.003				TOP SOIL! SUMPY SILTY CLAY, WITH COMMISS I MOULENS, COLONED MENNISS CHES.		340		0.1
		1.0		ETER OF BOXEDENS UPTO 40 mm.	W		5.F.T. Bo.1	
		}		-90-	X	-90-	REFUEAL	7.1
		1.0		TOP SOIL!	${\mathbb N}$	-20-	8.F.T. Ho.1	
1296			1.6	SETRITUE: SILTY EARD WITH BOXILDERS & COMMITS. BOXILDER SIEZ UPTO 40 - 80 BM.	KO.	-90-	8.P.T. 20.3 REFUSAL	•.•
					8	<b> </b>		1
1				ortaltie:		- sec.	REFUSAL	•.•
***		-		DETRICAL	DX.	-30-	S.F.T. So.5	
					M			
	1.1	1.1		SHIPLE STATE SOUTHERS &	D No	-30.	REPUIAL	0.0
		7.0		SIZE OFTO 40 Mm.	Q		B.F.T. 80.7	
٠		"		-10-	PQ A	-10-	ASTUSAL	1.5
		1		ERITE:	Y	)	E.P.Y. Ro.S	`    
				-10-			8.7.T. Ba.9	
1		1.1		detrivă) -po-			BIVUSAL	
H-51		1	7.0	LINESTONE:	占	\$	S.P.T. Ro.18	-
				COLCUMED. SELECTIVE MEATHERED.	臣	9 9		_
		11.4		-so- Friezzogi	H			P.1
:Uha				LINESTONE:	E	d		-
		.		NAME TO VICT HAVE, WELL CHECKED L. GERY IN COLUMN.	臣	d		_
		157.0		-00-	世		-	
		i		LIDESTONE:		.~.		•
		15.0	-,,,		F	1		-
- };	{		1	(HOLE CLOSED)	1	Ì	1	1

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Date AND 17, 1992

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# ASSOCIATED DRILLERS (PVT) LTD. Consulting Soil Englacers & Contractors

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### CLIENT: JICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN

SITE : BIR/HARIPUR BRIDGE HO: 1 BORE CHART OF BORING NO.2

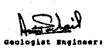
Data I	Ground		Thickness	I	T	1	Penetration Test Blow No.	
Late	Water		of Layers		Soil	Diemeter	20 40 60 80	Typero
	Level	Meter	(in Meler)		Symbol	Of Boring	to taging the state of	Sample
03/08								
V37 UQ				TOP SOIL:	N /			
					I\ /	360	-	0.5
		l		SANDY CLAY, HEDIUM DENSE.	EV/	- RR		
				YELLOWISH CREY IN COLOUR.	I V	1		
		1.0		NO GOVILLO.	۱٨.		5.P.T No.1	
				TOP SOIL:	I / \		15/9,7.5/7,7.5/7	
				SANDY CLAY, MEDIUM DENSE, YMILOWISE GREY IN COLOUR.	17 X	-00-	7.5/7, 7.5/9	D.#
				GRAVEL SIZE UPTO 7.0 cmm	// \		H=30	
		L			1000	<b> </b> -	DERSE S.P.T NO.2	
		2.0	2.0	DETRITAUS:	×Λ.			
				SILTY SAND, BEARING CONG-	Ung Y	-00-	REPUSAL	D.5
				ICHERATE (MAX DIA UPTO 7.0 cms) YELOWISH GREY IN COLCU	FY()			1
		-1.		7.0 Cos; incomish Grai in Conce	$U \cap V$			
		3.0			FINE P		S.P.T No.3	0.00
				DETRITUS:	Y Ex	-50-	REFUSAL	D.S
					TOY I	<b>~</b>		
				MAX DIA OF CONGLOMERATE	FY	j		1
				EXEEDS UPTO 8.0 com		]	S.P.T No.4	
04/08		4.0		DETRITUS				
						-00-	REFUSAL	D.8
		1		<b>-50</b> -				:
					9			
i		5.0			(-j.		5.F.T No.5	1
		1		DETRITUS: SILITY SAND BEARING CONG-	W)	-00-	REPUGAL	D.8
**		1		LONGRATE (MAX DIA UPTO	<b>5</b> ₩			
		•		9.0 cms). YELLOWISH CREY	M	1		
	6.0	6.0		IN COLOUR.	[ <i>]</i> [0]		S.P.T No.6	1.3
		1 • • •		DETRITIUS:		1		
		l	ŀ	SILTY SAND BEARING CONG-		-DO-	RE SAL	D.5
		Ì		IOMERATE (MAX DIA UPTO 5.0 cmm). YELLOWISH CREY	<b>K-47</b>			
		L		IN COLOUR.	557			
05/08		7.0	5.0			•	S.P.T No.7	
1		l	l	SLATE/PEYLLITE: HARD, WELL COMPATED GREY		-00-	REFUGAL	D. 6
		l		COLOURED. SILGHTLA.				100
ļ		}		WEATHERED.				
		8.0				İ		
05/09				STATE/PHYLLITE:				
				-00-		-00-	-	D.8
				-20-			j	
06/08		9.0		SLATE/PHYLLITE:				
						-00-	-	D, #
1				-po-				
		[ :					4 ( )	
		10.0						
		] .		SLATE/PHYLLITE:				
.				-20-		-DO-	<del>-</del>	0.5
1		11.0					<u> </u>	
		****		SLATE/PHYLLTTE:				
l						-00-		9.8
İ				<b>*10*</b>	===		in a time of the control of the	
l		Ll						
1		12.0	5.0	-			:	
1				( BOLE CLOSED )				
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لسب								

Remarks

Date AUG 12, 1992

Scale: 2.5 cms=1.0 :





1B3

# CLIENT: JICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN

SITE , SIR/HARIPUS SRIDGE NO. 1 BOSE CHART OF BORING MO.3

Dote	Greead	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Taktura		-	***************************************	Personal Table Borne	PROVINCEMENT
	Water Level		of Layers (in Meter)	Sitels Eacoustered	Soil Symbol	Diameter Of Boring	Peneirayon Teit Brown No. 20 40 60 60 60	Types of Sample
08/08	-				1000	ļ		-
	:			SAND WITH PERSONS & CORRUES.		360		p.s.
		1.0		LIGHT GERY COLLEGED. MAX DIA UPTO 90,0 mm	K	<b>9-3</b>	S.F.T Bo.1	
				CONSIDER LIGHT CREY COLCURED.	K	-00-	15/8, 7.5/7, 7.5/8, 7.5/8, 7.5/9	8.4
	8 Y.	2.0		ISX DIA UPTO 90.0 mm			DENSE E.P.T NO.2	
				-20-		+20-	15/8, 7.5/7, 7.5/8, 7.5/9, 7.5/11 H+35	D.s
9/8		3.0		DETRUTUS:	M		DENSE S.P.T RO.3 Cma/blows:	
				-bo-	Din	-100-	15/7, 7.5/6, 7.5/8, 3.0/62, ~ , REFUSAL	b.s
		4.5		erins:	Qň	-50-	B.P.T Mo.4 cms/blows: 7.0/52, - , - ,	0.6
10/8		5.9		-20-	M		REFUSAL S.P.T No.5	
÷	5,.2			DETRUTUS: SAND WITH PERSONS & CONSUMS. LIGHT GRET COLORUD. HAX DIA UPTO 80.0 Nm.		-DO-	cne/blows: 15/4, 7.5/3, 7.5/3, 7.5/2, 7.5/2 n=10	a.si
11/08		6.0		DETRITUS: SAND WITH PRESIDES & CORRESS. LUGHT GRET COLORED.		-50-	1.005E S.P.T HO.5 cms/blows: 9.5/36, -, -, -, -,	D. <b>3</b>
: 1	·	7.0				-	REFUSAL S.P.T NO.7	
				<u>                                      </u>	N	-00-	cms/block: 15/8, 7.5/7, 7.5/9, 7.5/8, 7.5/8 y=32	D.#
12/08		8.0		DETRITUS:	网	-90-	DEMSE 5.P.T No.8 cas/blows: 15/6, 7.5/9, - , - , -	D.#
				-20-	M		REFUSAL	
		9.0	9,4	DETRITUS: -IO- STATE/PRILLIE;		-90-	<del>-</del> .	D.#
		10.0	7.4	RAND, WELL COMPATED GREY COLO- LINED SLATE. SLIGHTLY WEATHERED.				
			,	SLATE/PRILLITE:		-00-	-	6.5
		11.0		SLATE/PHYLLITE:		-bo-	-	0.8
1.	:		:	-DO-				
		12.0		STATE/PHYLLIE:		-80-	-	0.8
		13.0						
. {				STATE/PHYLLITE:		-500-		5.3
ļ		14.0	4.6					
				( HOLE COLSED )				

Romerks

Date Aug 18, 1992.

Scale:3.5 cms-1.0 :

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# ASSOCIATED DRILLERS (PVT) LTD. Counciling Soil Engineers & Contractors

184

CLIENT: JICA RASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN SITE ( BIN/MARIPUR SRIDGE HO: 1 SORE CHART OF BORING HO:4

Dete	Growns		Theinen		1	1 1	Penetrauon Lett Brow No.	
	Water Level		of Layers (in Mater)	Strata Enconnteres	Soil Symbol	Deneter Of Boring		Types of Sample
13/08	-			D. TRITUS:	17			
.}		<b> </b>	} .	STINT SAND WITE GRAVEL, LIGHT GRET COLLURED, MAX DIA UPTO	KV	566	garage <del>d</del> a garage da s	8.2
				5.0 cm.	M			
		1.0			EV		S.P.T. No.1	
				ETRITUS:	$\sum_{i} V_{i}$	-50-	cme/blows: 15/7,7.5/5,7.5/5,7.5/5	D.8
			}	-DO-	NA		7.5/8 N+25	
				HAX DIA UPTO 9.0 COM	ny		HEDIUM CHORSE	
		3.0		OCORIAUS:	K)		S.P.S. HO.2 cma/blows:	ĺ
			-	-00-	$\mathbf{Y}$	-20-	13/6,7.5/7,7.5/7,7.5/8 7.5/9 ¥=31	0.5
					N			
14/08		3.0					S.P.T. No.3	
	. '			SILST SAND WITH PERSONS &		-00-	cms/blows: 13/7,7.3/6,7.5/5,7.3/7	
				CONSILES, SUN-NOUNDED TO LIGHT			7.5/9 #=27	
				MAK DIA UPTO 13.0 cms.	un		HEDIUM DENGR	
1 1		4.0		DETRUTUS	14		E.P.T. No.4 cms/blows:	
				-20-	No.	-00-	15/9,4.5/47, - , - , -	Des
			l •		O		repulat.	
15/08		5.0	1		K T		8.P.T. Bo.5	1
	}	1		CORSE SAND MITH GRAVEL, L.GREY		-50-	cms/blows: 15/3,7.5/4,7.5/4,7.5/5,	0.2
		ĺ	<b>.</b>	COLCURED.	3-9		7.5/6 #=19	
		5.5	1		( M		S.P.T. NO.6	
		] ""	1	DETRUTUS:	in (A		eme/blove:	
			ſ	CORUS SHAD WITH GRAVEL, L.GREY COLUMNS.	<b>(7)</b>	-00-	15/32,2.0/47,-,-,-,	p.s
1				HAX DIA UPTO 12.0 cmm.			Befosal.	
16/08		7.0		Ferran PRI 22.			\$.F.T. No.7	:
				ETP///S:		-20-	cme/blows: 15/9,7.5/8,7.5/12,	D.S
	1			<b>-100</b> -	7/		7.5/14,7.5/15 ¥-53	:
		8.0	1	HAX DIA UPTO 9.0 cms	$\mathcal{L}O$	1.5	S.F.T. No.8	*
				-00-	O 4	-50-	cme/bloves 4.5/48,-,-,-	D. 5
		8.5	0.5	SAIR/PHILLIE:			the state of the s	•
	'						. METCHAL	
		7.0		STATE/FRITATE:			i	
1						-50-	•	2.2
1 1								
17/08		10.0		Ct 1 mt / mm/ t mm .			7	
[ [				SATE/PRILITE:		-00-		2.5
		1						
		13.0						
				SLATE/PHYLLITE:	<u> </u>	-30-		8.8
1		[					• 1 · · · · · · · · · · · · · · · · · ·	
1,,,,,		<b></b> .						
10/08		13.0		SATE/RYLLIE:				
						-100-	-	5.8
	*							ì
		13.0		ET 1-10/1500 + ++++				
				SIATE/PRIMATE:		-00-	-	0.5
1 1		<b>'</b>						
		14.0			-			10.00
				SATE/FRILITE				
1		14.6	8.1			<del>20-</del>		0.#
				( ROLE COLSED )				£. ,
<u></u>		L	لـــــــــــــــــــــــــــــــــــــ		ليبا			

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Date AUG 23, 1992

Project.5 cms=1.0 s



# ASSOCIATED DRILLERS (PVT) LTD. Consiling Sell Engineers & Contacture

1281

CLIENT: JICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN SITE : RMAL/DIR SRIDGE NO: 12 SOBE CERRY OF BORISM NO:1

Deta	Litoned	l	Thickness		~~~	<del></del>	COLUMN THE PROPERTY OF THE PARTY	
	Water Level		of Larers (in Neter)		Soil System	Diameter Of Bones	20 40 60 80 1 1 1 1 1 1 1	Types of Semple
27/07				TOP SOIL: SANOT SILTY CLAY MITH SAND PARTICULES (30-50%) LIGHT TELLON IN COLUMN, PERMISS COBBLES AND PRISONT.	X	360		0.4
		1.6		TOP SOILS	X	-60-	8.F.T. Wo.1 cme/blows: 15/11,7.5/12,7.5/15 7.5/19,7.5/23 N=69	D.5
28/01		1.0		INCREASES WITH DEPTH.	$\langle \rangle$	-100-	VERT DERSE 8.P.T. Ec.2 cms/blows: 3.5/46,- ,- ,-, -	0.8
29/07		3.6		TOP SUIL! SAUTY-SILTY-CLAY:SILTY CLAY & CORREZ SAND (35-50%). FEBRUS & CORRES., L.YHLOM		-00-	B.F.T. BO.3 Cms/blows: 2.0/32,- ,- ,-, -	D.s
		4.0		IN CLOUR, BUILDERS ARE ABSOUT.  DETRITUS: SANDY SILTY CLAY BEARING		-90-	RRFUSAL  S.P.T. Ho.4  Can/blows 3.5/49,- ,- ,- ,-	D. 2
23/08		5.0		ARROAT PERIES : CORLES. RUNGED TO RUB-RUNGED, GRETISS TELLOW IN COLOUR. DETRITUS:	的		REFUSAL S.P.T. Ro.5 cse/bloss	
		<b>6.</b> 9		DETRITUS: SANOT-SILLY CLAY-MARING		****	7.0/32,- ,- ,-,- REFUSAL  8.9.7. No.6 Cas/blows	5.5
		7.0		ABURDAT PERMISS & CORPES, WITH BOULDERS. TELLOWISH GRET DE COLOUR. BOULDER DIA UPTO 335 ME DETRUTUS:		-00-	15/35,7.5/48,-,- REFUEAL S.P.T. Eq.7 Che/bloup:	D.#
		●.0	·	HAX BOULLER DIA UPTO 435 mm.		-00-	3/43,-,-,- REFUSAL	D.e
		9.0		-00- HAX BOULDER DIA UPTO 530 mm		-00-		Dış
				netatus: -ec- han boulder dia upto 486 mb		-50-	_	Ded
04/05		10.0	ļ	CHANTE: NATO MASSIVE, WITHISE CRIT IN COLUMN. RECOVERT: 364		74 <b></b>	• • · · · · · · · · · · · · · · · · · ·	C.8
		11.3	1.3	CRUATITE!		•5G•	<u>-</u>	e.s
05/08		12.5	1.2	DETRITUS: SANDY BILLY CLAY BLAKING PLABLE & COBBLES NASH SANDLE COLLECTED		-00-	<u>-</u>	C.S
06/08		13.0				-00-	_	C.3
		14.0	- 1	-DO-	然	+20-	-	C.8 4 4.8
7		15.0	1	RECOVERY: 59% RAMITE: -po- RECOVERY: 20%		-00-		C.S A R.S
		15.5	3-0	(HOLE CLOSED)				

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scales2.5 cms=1.0 m

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## ASSOCIATED DRILLERS (PVT) LTD. Contailing Soil Beginners & Commissions

1282

CLIENT: JICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN STITE : SWAL/DIR SRIDGE NO: 12 BORK CHART OF BORING NO.2

Date	Ground Water Level		Thickeen of Layers (in Meter)		Sail Symbol		Penetrandon fem Blow No. 20 40 60 80	Type: Sami
3/07		<del> </del> -			00/			
ı				COSMES & SOULDERS, IN SILTY	nus	340		0.1
1			}	SAND. L. GREY COLOURED.	HAL)	-		
i		ŀ		MAX DIA UPTO 350 ma.	WM			
l		1.0		MEDIUM RAGO.	111/2		S.F.T Wo.1	l .
1			1	ortritus:	173			
- 1			1	-20~	1	-53-	refusal	٥.
ı					177.0			
- 1		2.0	l		HA	J	S.F.T #0.2	
ĺ		4.0	l	DESPITUS:	Dir		*****	l
1			1		MY	-00-	REFUSAL	٥.
				-20~	KW	1		1
					I M			1
1		3.0	1	DETRITUS:	MU		8.F.T No.3	].
. [		1	l •	SILTY SAND BEARING CONGLOPERAD	$UT^{0}$	-00-	REPUSAL	٥.
				HAX DIA UPIC \$0 ma. L. GREY				1
	3.9			COLOURED.	E S			1
į		4.0	1		M		A.F.T No.4	l '
1		<b>\</b>	1	DETRITUS:		-00-	REFUSAL	۵.
			l	-60-	NA.			``
- 1	1	ĺ				1		1
1/07		5.0			1271	J	5.2.T Ho.5	1
		1	1	DEDRITUS:		1	B B 10-14 4 4	1.
.	ľ	Į		COARSE SAND REARING CONCLONE-	NY.	-00-	REFUSAL	٥.
			l	L. CREY COLOURED.	TY.			1
1/08		6.0	1			<b> </b>	S.P.T Bo.5	
1700	(	ļ •	1	DETRINUS:		1	2.5.1	
				COARSE SAND BEARING CONCLORE-	F9 .	-00-	REFUSAL	b.
			1	PATE MAX DIA UPTO 80.0 mm. CONASTRUMILI GRANITIC BOXILIERS				
	<b>{</b>	<u>L_</u>	]	ARE EXCUSSIVED.		1		1
	1	7.0				j	8.P.T Ho.7	
			Į	-po-	1	-00-	REFUSAL	6.
	1	1	]	HAX DIA, OF CONCLUMERATE RANGE	₹ <i>[</i> ]	3		1
		1	1	RETWEEN 40.0 TO 60.0 ma	DAO	1		l
2/08	l	1.0	1	:	U 7		E.P.T #0.#	l
		1	l	DETECTION: COARSE SAND MEANING CONGLONE-		-00-	15/9,7.5/8,7.5/11,	۵.
	:		l	RATE WITH AN AVERAGE DIA RANGE			7.5/13,7.5/17	
- 1	Į.	1		BETWEEN 20.8 TO 50.0 max.	U		N=47 DEMSR	1
		9.0	1.	HEDEUN ZARD.		]	5.P.T No.5	i.
	Ī	1	1	CALIFORNIA I	(1/2			l
1		}	1	COARSE SAND BEARING CONGLONE- PAIR (10.0 TO 20.0 mm) WITH	<b>40%</b>	-20-	REPUBAL	D.
1	ŀ		•	BOULDEES.	No.	<b>f</b>		
3/Q8	Ì	10.0	ł	MEDIUM BARD.	$\mathbf{D}I$		8.F.T E0.10	
	1.	l''''	]	DERETIUS:	Q.		cas/blove:	]
			1		MC	-50-	15/12,7.5/11,7.5/13 7.5/16,7.5/19	Þ.
		[	ļ	J	1		x=59	
	l		I		<b>M</b>		VERY DESE	ĺ
	Ī	11.0	1	DETRICE			8.7.T Ho.11	
		1	1	COARGE SAND, BEARTING HOULDERS	M	-29-	rrfusai.	٠.
	Ī	Į		WITH AN AVERAGE DIA RANGE PRON 250.0 TO 500.0 Mm.	Pi)			
			•		LÅ			
/08	1	12.0	}	DETAILUS: CONSE SAND, BEARING BOULDERS	D	1	3.P.T Bo.17	1
ļ		]	ĺ	WITH AN AVERAGE DIA RANCE FROM	W		REFUEAL	۵.
ı		1	Į	250.0 TO 500.0 ma.	H E			Į
ı					F AN	1	rain in the second	:
/08		13.0	l		W		8.P.T #0.13	1
,, ,,,,		ì	1	Designates:	Y			1
		•	·		NH.		REPUSAL	٥.
		Į	1	-90-				1
		ŧ			المتكنها			١ .
		1	1		, W			9
		14.0	14.0					
		14.0	14.0	( BCTLE CLOSED )				
		14.0	14.0	( MEZ CLOSED )				

Raperke

Data AUG 69, 1992.

scalm:2.5 cm;=1.0 m





# ASSOCIATED DRILLERS (PVT) LTD. Constiting 3-31 Engineers & Contractors

#### 1283

#### CLIENT: JICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN

SITE ! BIR/HARIFUR BRIDGE NO. 13 BORE CHART OF BORING NO.3

Dete	Gressd Water	Depih	Thickness of Lavers	And the second s	Ţ		Penetreuon Jest Blow No.	
	Level		(in Mater)	State Escouenced	Seil Symbol	Diameter Of Boring	20 40 40 84	Types of Sample
06/08			<u> </u>		10000			34 11 514
Ī		\	<b>.</b>	TETRITUS:	身份	1		1
•			l	PERRUES/CORRIES & BOUTLINES IN	10.48	360	· -	9.8
		ļ		SILTY SAND, LIGHT GREY COLOURES	<b>*</b>	itah		
	ĺ	1.0	i	HAX DIA UPTO 420.0 am	SX	[ <del></del> -	E.P.T Wo.1	
		<b> </b>	1	ETRINE:	$Q \cap$	. '		1
				-00-	)-\d	-00-	Refusal	0.8
						}		]
1		3.0		tentius:	$1/\gamma$ 0		5.F.T 80.2	1
	<b> </b> -	1	1	erwing!	M	-00-	RRFUSAL	D.8
			1	-00-	一条			
·	ľ	<u> </u>	ļ					j
	<u> </u>	3.6		PETRUTUS:	$\bigcup X$		5.P.T 80.3	
	•		1		2	-bo-	REFUSAL	9.8
		ĺ .		HAX DIA OF BOULERS UPTO	处议			
07/08	ļ :	4.0	1	480.0 sea.	00		5.7.T No.4	
				DETRIBUS	0.5		cen/blows:	
	ŀ	١.	1	SILTY SAND BEARING CONCLONERATE HAX DIA UPTO 75.0 km.	h.C	-00-	15/19,7.5/16,7.5/17, 7.5/18,7.5/18	3.8
	4.7	1		L. GREY COLOURED. HEDIUM BARD.	17		H=69	ļ
i	• • • • • • • • • • • • • • • • • • • •	5.0	1	TEDION BACO.		<b> </b>	VERY DENSE E.F.T Bo.5	
			Ì	CEDRUTUS:	W	-00-	REFUSAL	p.5
. !		<b>\</b> '	1	-00-	201	"	*********	1
	} ·		1		$r_{\rm M}$			
00/00	1	6.0	1	etatus:	<b>7</b>		S.P.T Bo.5	1
			]	COARSE SAND MEARING CONTLONE-	$\mathcal{L}()$	-00-	15/13,7.5/11,7.5/13	0.5
		1	<b>.</b>	RATE, MAX DIA UPTO 45.0 mm. L. GREY COLOURED.	$Q_{C_{2}}$		7.5/15,7.5/21 H=60 NO SAMPLE, CONCLOMENATE	
			1		W		ENCOUNTERED.	
		7.0	l	DETRUTE:	<b>₩</b>		5.F.T 20.7	ĺ
100				COARSE SAND BEARING CONNELES & BOULDERS, MAX DIA UPTO 380.0 mm	L)\	-00-	refusal	D.5
		1	İ	L. GROT COLORED.	ЮJ,			•
09/08		8.0					S.P.T Bo. 8	
7.	,	<b>1</b>	ĺ	DETRUCE	Sh			١
				· · -po-	ŽX	-to-	REFUSAL	0.5
		!			1	1		•
		9.0			40		5.7.T No.9	)
				DETRITUS:	<b>X</b> #	-01-	REFUSAL	D.5
	. :			-BO-				
. 1				·				1
10/08		10.0			140	1	S.P.T Mo.10	1
				DETRUTUSE	U.A.	-00-	REFUSAL	9.2
1 .				-po-	₹			
12/09		11.9	1		$\langle \gamma \rangle$		#.F.T #0.11	1
				C-PUIUS:	170	-00-	RRFUHAL	0.5
.				-po-				
					$\cap$		E.P.T Ho. 12	┨
13/08		12.0		DETRITUS:	V			1.
				CHARSE EARD, BEARDING CONCLORE- PAIE, HAX DIA UPTO 80.0 HM.	1	-00-	REFUEAL	D.3
				MITTE LANCE GRANITZ BOULDERS	X			
· I	. :	13.0		(300.0 UPTO 750.0 mm)			5.P.T Ho.13	1
				DERMUS:	<b>X</b> .A	-00-	RRFUSAL	0.5
				-00-	$\mathcal{N}$			1
	i a							l
		14.0	14.0					1
[				( NOTE COLUED )		}		1
1	' I			,				1
- 1	į			:	<b>.</b>			<u>L.</u>

| oneth

Date AUG 14, 1992.

scale:1.5 cms-1.0 :



Geologiet Engineer

### ASSOCIATED DRILLERS (PVT) LTD. Considing Soil Segments & Continues

1284

CLIENT: JICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN anter of beauty no.

Nate   Chart   Olivery   Strate Excession   Series   Chart   1   1   1		Dela	Greated	****	7147219	NAME OF TAXABLE PARTY OF TAXABLE PARTY.	-	1	Praguation last there for		ł
STRAINS	١	Dale	Water -	Depta Metar	of Livers	Sersia Encountred	Smi Sympo	Diameter ( Of Banas	20 60 60 80	Types of Sumpos	l
	I	12700									ı
COMMEND   SANCE NUMBER TO SANCE	ı	13/04				DEDUTE:	Q/2	[			Į
1.0	ı						1975			0.4	l
1.1   1.0	- 1				1	ROUNDED. MAX DIA OF BOULDERS	1				l
1.1   1.0	1	J	. :	1.0	l. ;	UPTO #10.0 mm. L.GUTY IN COLOR	Òά		8.P.T. 20.1		l
1.1   1.0	ı	1	1			EED271521	4.0		cariblass;	١	l
1.0	- [	1				-100-	4 /	-80-	1.5 4	9.9	ĺ
15/08   1.0	1		1.1				1)	77 E	REFUSAL		l
15/08  3.0  15/08  3.0  15/08  3.0  15/08  3.0  15/08  3.0  15/08  3.0  3.0  3.0  3.0  3.0  3.0  3.0  3	-[	ı		2.0	[ .		4	<u>                                     </u>	E.P.T. 80.2	ľ	ı
10/00   3.0	- 1				•	CERTIFIES:	<b>K</b>				I
15/00   3.0	١	1				-50-	14			""	l
15/00   3.0	1	. 1		ĺ			LA		. UMELWISPACTORY .		ı
PRESENT CONCRET & SOUTHER   100	1	16/00		3.0		1	$r_{\mathcal{U}}$		\$.P.T. Bo.3	1	ļ
## SECURION SECURIOR SECURION SECURION SECURIOR	- 1	1	·	•	]	PERSONAL CONTRACT & BOTTLESS	$\sim$	*200-	3.0/43	0.0	İ
### 17/08  17/08  18/09	İ	- 1			1	IN SIZAT SAND. NOUMOED TO SAN-		:			l
17/08   S.4	- [	- 1		[ ]	l				REFUSEL.		l
17/00   5.0	- 1			4.5					2.P.T. No.4		ĺ
17/00	ı				1 .	DETECTION!	# <i> </i>	-90-	15/7,7.5/6,7.5/7,7.5/7	0,2	l
1970	1			ľ	ļ	-30^	24				l
19700   1.00	1			<u> </u>	1		$\wedge y$		THE PERSON NAMED IN		ĺ
18/08   6.0   15/77.7.3/6.7.5/7.2   15/77.7.3/6.7.5/7.3/6.7/6.7/6.7/6.7/6.7/6.7/6.7/6.7/6.7/6.7	١	17/08	l	3.0		CONTROL OF	NO.		8.7.1. Ho.3		ı
18/00   1.0   1000,0 mm   REPUBLIC   1000,0 mm   REPUBLIC   1000,0 mm   1000	1	į		ł	l	-50>	1 1	-00-	15/7,7.5/6,7.5/7.2/47,-	9.8	ĺ
19/00   1.0	Į	. [			į .					l .	ĺ
TENTIS:  STATE SAND MEANING PRAMES & COMMISS. SCHOOL TO AND-COMMISS. SCHOOL TO AND-COMMISS. LOREY IN COMMISS. SCHOOL TO AND-COMMISS. SCHOOL TO COMMISS. SCHOOL TO COM	1			1	1		y h				ĺ
SILIT SAND MEANING PRIMERS   COMMENT & SONG METURAL   CONTENT OF COMMENT   CONTENT OF COMENT   CONTENT OF COMMENT   CONTENT OF COMMENT   CONTENT OF COMMEN	- 1	18/08		6.1		rements.	47				l
19/08   19.0	.		1		l	STLTS SAND PEARING PRINCES &	₩.	-00-		0.3	ı
19/08   19.0	- 1		<b>,</b>			CORREST SOME BOULERS.	<b>3/7</b>	}	REPUSAL		ŀ
### PRINTED  ###################################	- 1			<u> </u>			1				ĺ
### 19/08   S.0   SETATURE   -DO   SETATURE   S.7.7. No.   SETATURE   S.7.7. N	- 1	i		7.0			2.4	i i		:	l
### 19/08  5.0  #################################	ŀ			1			1.5	-20-	12/41, - , - , -	2,\$	l
19/08 3.0 EXERTISE  19/08 10.0 EXERTISE  LANCE SCUNDIN ENGLAPTION DIA UPTO \$00.0 mm (APPROX)  EXPLINE:  -DO-  11.0	. 1	4.	1	) ::	1	-50-	HU.	, ,	REFUSAL	<u> </u>	l
19/08 3.0 EXERTISE  19/08 10.0 EXERTISE  LANCE SCUNDIN ENGLAPTION DIA UPTO \$00.0 mm (APPROX)  EXPLINE:  -DO-  11.0	- 1			٠	ļ					١.	ı
19/08  19/08  10.0  LANCE SURNICH ENGINTED CONCLOSE- DIA UPTO \$00.0 mm (APPROX)  ETRITUS:  -DO-  ETRITUS:  -DO	1			l *··	1	A Daniel	M		cud/33ees:		
19/08   5.0						-00-	X E	~80~	15/7,7.3/4,7.3/9,7.3/9	8,5	
19/08   5.0	1				1		<b>37</b> /				ĺ
10.0   10.0   15/22,7.5/15,3.0/4   15/22,7.5/15,3.0/4   10.0   15/22,7.5/15,3.0/4   10.0   15/22,7.5/15,3.0/4   10.0		19/64		<u></u>	<b>!</b> .		<i>F</i> .4		TEXT DESCRI		
10.0	- 1			···	1	ERMS:	$\mathcal{H}_{\mathcal{A}}$	j	car/blove:		i
10.0  DIA UPTO 500.0 MM (APPROX)  FERRITS:  -DO-  SERVINAL  11.0  DETRITS:  -DO-  SERVINAL  S. P. T. BO.  MATHRAL  S. P. T. BO.  MATHRAL  S. P. T. BO.  MATHRAL  S. P. T. BO.  MATHRAL  S. P. T. BO.  MATHRAL  S. P. T. BO.  MATHRAL  S. P. T. BO.  MATHRAL  S. P. T. BO.  MATHRAL  S. P. T. BO.  MATHRAL  S. P. T. BO.  MATHRAL  S. P. T. BO.  MATHRAL  S. P. T. BO.  MATHRAL  S. P. T. BO.  MATHRAL  S. P. T. BO.  MATHRAL  S. P. T. BO.  MATHRAL  S. P. T. BO.  MATHRAL  S. P. T. BO.  MATHRAL  S. P. T. BO.  MATHRAL  S. P. T. BO.  MATHRAL  SETURAL  S. P. T. BO.  MATHRAL  SETURAL  DIA 570.0 MM (ATTRIX)  -DO-  SETURAL  S. P. T. BO.  MATHRAL  SETURAL  S. P. T. BO.  MATHRAL  SETURAL  S. P. T. BO.  MATHRAL  SETURAL  S. P. T. BO.  MATHRAL  SETURAL  DIA 570.0 MM (ATTRIX)  -DO-  SETURAL  S. P. T. BO.  MATHRAL  SETURAL  DIA 570.1 MM (ATTRIX)  -DO-  SETURAL  S. P. T. BO.  MATHRAL  SETURAL  S. P. T. BO.  MATHRAL  S. P. T. BO.  MATHRAL  SETURAL  S. P. T. BO.  MATHRAL  S. P. T. BO.  MATHRAL  SETURAL  S. P. T. BO.  MATHRAL  SETURAL  DIA 570.1 MM (ATTRIX)  -DO-  SETURAL  S. P. T. BO.  MATHRAL  SETURAL  S. P. T. BO.  MATHRAL  SETURAL  S. P. T. BO.  MATHRAL  MATHRA	ì			1	} `		JO	-50-	721375112172'1'0141'-'-	0.3	
10.0	.						(17		PETURAL		i
11.0	- [	20/98		10.0		DUCCESO SOC.0 M (APPALIX)	$\mathcal{F}$		E.P.T. Ec.10		
13.0   DETRITUS:   -50-   DETR	ļ	.				Grand:	°U/		mme/01040:		
### 13.0    TENTING	ı			1		-50	$\lambda Q$	****		9.9	l
13.0   DETRITUS:	ı	l			Į į	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -			MEPUSAL.		ı
13.4 INTERING CONCLOSE - PO- 1376-7.5/9,3.0/43 - p. p. p. p. p. p. p. p. p. p. p. p. p.	- 1			12.0			$\Pi$ ( $k$		2. P. T. Fo. 11		l
13.4	ı			1	1	SERVITOR I	\$ )	-20-		0,5	İ
13.0	- 1		f			-50-	3.5				l
DETRITUS    CONSECUTION   SEARCH CONCERNATION   13/28,7.3/9,3.0/41   1				L_			چار	l			ł
13.0   14.6   14.5	Į	,	l	11.0	<b>.</b>	IEDRITA.	773		8.P.Y. Bo.12	ļ	Į
23.0   NOTRACE DIA STREET 20.0   REFURNAL				1	ļ .	COARSE SAND MEARING CONCLORE-		-80-	19/26,7.5/9,3.0/43,-,-	2.0	ĺ
10.0   20.0						AVERAGE DIA BETHEER 20.0			REPUBLIC		ı
DEFECTIVE	ļ		İ	جي: ا		70 70.0 mm. L. GROT DI COLUM,					l
-DO-  15.6  GRANITIC BOULDER PRIMAYDED  DIA 550.0 mm (AFFERM)  -DO-  15.6  DETRITUS:  -DO-  DETRITUS:  DETRITUS:  -DO-  DETRITUS:  DETRITUS:  -DO-  DETRITUS:	١		l	```	1	MATERIAL STATES	7.		ceo/bleve:		l
15.0   DETRITUS:				١.	•		X.A	-80-	7.0/53, - , -,-,-	0.0	l
15.4	J				i i	GAMITTIC BOLLDER PROTUNERED.		71.14	METORAL,	1.1	ĺ
15.4 DERRITES:  -DO-  15.4 DERRITES:  -DO-  16.6 DERRITES:  -DO-  16.6 DERRITES:  -DO-  16.7 DERRITES:  -DO-  16.8 DERRITES:  -DO-	Į			1		DIA 950.0 Mm (APPRIX)	MC.	<b>  </b>	8. P. P. Bo 32		
15.4   DETRITUES   -DO-			l	''''		DEDRUTUS:			eme/hlevs:		l
15.4 DETECTOR: S.P.Z. BO.1 (00/31000) 10/41; -; -; DD- CD- CD- CD- CD- CD- CD- CD- CD- CD-	1		1			-m-		-00-	15/29,7.5/21,7.5/9,	0.5	ŀ
-DO- CENTURE -DO-	J					~	K V				
-DO- CENTURY 10/41, -, - , SEFURAL.	1		-	15.0			177		6.P.7 =a 25		
16.0 DETRITUES -DUDO-	Į	İ	[	"		erite:	747		emp/blows:		i
16.6 UNINITUE: -DUDU-	1					-20-	$\mathbf{L}$	-90-		₽. <b>.</b> ₹	
-50-	. [		[					i	REPUGAL,		
-50-	ı			16.0	'	DETRITUE:	NO CO	<u> </u>			
16.6	- 1					-	(In	· 1			
	ı		•	i		-00-	F-16	-00-		1.5	
	١	. 1		•	<b>i</b>			1		1	
	-	ļ		16.0	16.5		W Y			1	
	Ì	1				( NOLE CLOSED )				5 %	
	- [				[		į į			٠ ا	
	L								j	]	

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Date AUG 23, 1992.

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#### ASSOCIATED DRILLERS (PVT) LTD. Consulting Soll Engineers & Contractors

#### 18B1

#### CLIENT: JICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN

SITE I SAKHA ROT/HALAKAND BAIDGE NO: 18 BORE CHART OF BORING NO.1

Date	Ground		Thickness	A #=				enetra						
1	Water Level	Depth	of Layers (in Meter)		Soil Symbol	Diameter Of Boring		0	40 	64 	٠.	80	1	Types of
	20.0		(		1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	O. 5001115	<u>'</u>	• •	·	• •			_'.	
		ļ ———		TOP SOIL: SILTY SAND BEARING										
6/05		ĺ		GRAVEL PERBLES & CORRIE. L.GREY COLOURED. FINE MATRIX WASHED.	1	75								W.5
- 1		0.5	0.5	DETRITUS: SILTY SAND ARARING	1000	223			Ī	•				"""
		1 *	,,,	GRAVAL, WEITISH GREY IN COLOUR	0.0								1	
1		<u> </u>		FINE HATRIX IS WASHED OUT	KAY								_	
		1.0		LEDRITUS:	)±4₹				P.T		10.	Ĺ		
		ļ		SILTY SAND BEARING GRAVEL, PERMISS & CORRES WITH COLOURED	ЫA	-00-		pth/8 /2,7.			/2 7	.5/	, ]	W. 8
		į		WHITISH GREY. DIA RANGES FROM	13.2	-20-		5/3	-, -,		٠,.	/		
			1	25-75 ma. 808-ROUNDED TO	144	j				N=9				
	,	<u> </u>	1	ANGUAR.	(4)			5.	<u>- 8</u>			,		
		2.0	1	DETRITUS: SILTY SAND BEARING GRAVEL,	$Q_{\lambda 7}$			eth/8			10.4	٤		
Į		i	i '	PEBALES & CORRESS WITH COLOURED	14.30	-Do-		/1,7.			/2,7	.5/	2	W.S
		ł		WEITISH GREY, DIA RANGE FROM	44		7.	5/5						
		1		25-75 mm. SUB-ROUNDED TO	$\mathcal{T}\mathcal{U}$			٠		1-15				
	7.9	<u> </u>	}	DETRUTUS:	Ties!		<u>ا</u>	g.	- 8			3	_	
1		3.0		-D0-	120		De	pth/i						
.	, )					-00-	15	/1,7.	5/1,	7.5		.5/	3	C.8
		3.5	3.0	MUD. STONE: GREENISH GREY, LESS	<b></b>		7.	5/6	. 1	(=1)			ļ	*.*
		<u> </u>		COMPACTED	70-1		1	-	10 D	医菌虫			٠.	<b>"''</b>
		3,75	0.25	THE SAMP STOKE:					PT			•	_	:
		4.0	1	FIRE SAND STUNE	111		De	pth/	lovs	ŀ				C.5
	i		1	BARD LIGHT GREY.		-00-	15	/25,7	.5/1	1,7	.5/1	1		
	l	}	l	SOME ARGILLACEOUS CONTENT IS	1000		] 7-	5/17	L.Z/					""
		ļ		PRESENT.	Truck		ļ	J.	1100	~				
	İ	I	<b> </b>		-dinitiv		-	8	P.T	. 1	io.	š		
09/08		5.0	1.25	MEDIUM SAND STORE: LIGHT GREY COLORED, WELL	-111-111	1	D.	pth/I	lows					1
	ł	1	i	COMPACTED.		-00-		/3,7				.5/	7	C.0
	·				2111.77		7.	5/10	,	H-2	5			*.
		5.65	0.65	MUD STOKE:	-	1	ļ ·	M**	en e	RM	88			""
	ł	ļ	1	GREENISH GRET WILL COMPACIED.			I	<u>-</u> -	ED D		io.	6		
	ł	6.0	1	MID STONE YELLOWISH GREY WILL COMPACTED.		1	D.	p15/2	alowe		+ 1			C-1
	•	}		Indiana	4.55	-00-	15	/6.7	5/9,	7.5	/10,	•		W.1
	1						7.	5/16,		23 8=6:	n.			7,1
		1				1.	l	D)	ens e		•			i
	1	l	1	APCOVERY: 29%		}	<del> </del>		. 2.2		io.	7		]
		7.0		HUD STONE		}	p.	pth/	lovs	١_	_ •••			C.1
		{	ļ	-Do-		-00-	1.5	/8.7	.5/11	.7.	5/1:	3,		g.,
	1			İ		1	۱7۰	5/15		H-2	<b>a</b>			] ""
	l	7.69	2.03	HEDIUM SAND STONE:		3	)	. D	EXSI		•			j
Í	•		j.	MHITISH GREY WELL COMPACIED			┢		. P. T		ĸo.	6		7
10/08	i			MEDIUM SAND STONE:		Ì		pth/l			_ ,,			١.,
		•	1	TRADIOTI GREEN		-00-		/11,		2,7	.5/	13,		C.1
	l :	1	]	-50-		]	۱"	5/35	,~ RBF	20	L.			W.,
]		1	1							:				]
		L	1	RECOVERY: 68%			i		P.7		No.	9		
1/08	· ·	9.0	:	MEDIUM SAND STORES		4		oth/						ic.,
		)	] .	J		-00-	J 15	/27,	4.5/3	٤,	-, -	• • •	-	'ز' ا
1		ļ		-00-		Ì	1		REF	US!	LL.			R.1
							1							1
	:	L		RECOVERY: 51%	1		t-							1
	1:	10.0	2,32	(HOLE CLOSED)	}	]	1							1
1		1		1000-000-0			ļ							
		1	1		1		Į.							i i
		1	l		1 1	i	•							I

Remarks

mto AUG 13, 1992.

scale:2.5 cme=1.0 1



Geologist Engineers

# ASSOCIATED DRILLERS (PVT) LTD. Consulting Soll Engineers & Contractors

1882

CLIENT: JICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN SITE 1 SARHA KOT/HALAKAND BRIDGE HO! 16

BORE CHART OF BORING NO. 2

Date	Ground		Thickness				Penetration Test Blow No.	
	Water		of Layera		Soil	Diameter Of Boring	20 40 60 60	Types of Sample
1	Level	Meter	(in Meter)		Зутос	O. Doring		
28/07				TOP SOIL:	$\nabla Z$			
				SILTY SAND WITH PERSLES 4 GRAVEL, RECOVERY: 50%	$\perp \wedge$	75		W.5
		0.5	0.5	MEDIUM SAND STONE:	3333			c.s
			:	LIGHT GREY CULOURED SOFTER.				. 6
						<b></b> _	S.P.T No.1	W. 5
		1.0	i	MEDIUM SAND STORE	-		CRE/blows1	
		!		LIGHT GREY COLOURED. FINE			15/6,7.5/4,7.5/6,7.5/8	c.s
1				MATRIX WASHED OUT.		-00-	7.5/11	- 4
1	İ		i	RECOVERY 45 %			H=29 MEDIUM DENSE	¥.8
29/7		2.0		MEDIUM SAND STORE	_		S.P.T Wo.2	C.B
<b> </b>				-00-	*******		cms/blowst	
				RECOVERY : 45 %	72.54.7	-00-	15/11,7.5/0,7.5/9,7.5/9 7.5/11	* . s
	2,6	2.5	2.0	DETRITUS: SILATY SAND REARING PERBLES &	域次		7.3/11 N=37	N. 6
			:	COSELES (25-40 mm)	TAKE.		DERSE	
. 1		3.0		Denritus:			S.P.T No.3	
1		3.4	0.9	-DO- MEDIUM SAND STONE:	73.70	-00-	cms/blows: 15/11,7.5/10,2.0/20, -	₩.\$
- 1		J. 4	***	HARD LIGHT GREY			=	C.S
- 1		<b>i</b> i					REPUBAL	
30/7				RECOVERY: 75 %			S.P.T No.4	3.8
30//		4.0		MEDIUM SAND STORE:	<i>*************************************</i>		Cae/blove:	c.s
		İ	1			-DO-	15/5,7.5/14,7.5/16, - ,	- 6
			<b>.</b>	-10-			7.5/19,7.5/19	W.E
				RECOVERY: 45%			X=44 Drese	
31/07		5.0	1.60	RESOVERT 454	22.2		S.P.T No.5	
				MUD STORE			cms/blows:	C.E
ì				-00-		-00-	3/28, - , - ,- ,-	¥.6
- 1					2177		REFUSAL	# . B
į				RECOVERY: 75%				
01/08		6.0					S.P.T No.6	1, 5
ļ				MUD STOKE		~DO~	cmm/blows: 15/9,7.5/11,7.5/12,	C.5
				HARD, GREENISH GREY		-60-	7.5/14,7.5/17	¥.\$
I				RECOVERY: 291, WASHED OUT 63.6	1		N=54	
1					- 886		DERSE	
l		7.0		MENTS STEVENS	34.2		S.P.T MG.7	C. 5
ı	i	i		MUD STOKE -DO-	3333	-00-	15/10,7.5/13,7.5/12,	6
ŀ					1555		7.5/16,7.5/19	W.E
İ		7.68	2.68	FINE SAND STONE			N=60 DENSE	
03/08	j	8.0		HARD, LIGHT GREY RECOVERY: 100	-		S.P.T No.8	
		,		FINE SAND STORE	HAMIN		cms/blows:	C.E
I	į				hive	-00-	15/30, -, - ,- ,-	
-				-00-	1444.55			W.S
07/08	i			RECOVERY: 100%	1	f	refusal	
	l	9.0					5.P.T No.9	· - :
9/08	1			FINE SAND STONE		-00-	REPUSAL	C.S
.,, 00	ļ			-po-		-00-	Ket vertu	W.B
Í	. [			u et la la la la la la la la la la la la la	1			
ļ	· [			RECOVERY: 68% WASHED 32%		[		
-	1	10.0	2.32	4			l l	
1	-	1		( HOLE CLOSED )				: .
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## ASSOCIATED DRILLERS (PVT) LTD. Consulting Soil Busineers & Contractors

#### 1883

#### CLIENT: JICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN

SITE 1 SARHA KOT/MALAKAND BRIDGE NO: 18 BORE CHART OF BORING NO.3

Date	Ground		Thickness				Penetrauon Test Illow No.	
	Water Lavel		of Layers (in Meter)		Soil Symbol	Diameter Of Boring		Types of
07/08					2000			
		ĺ	[	MUD STONE				
1	,			· · · · · · · · · · · · · · · · · · ·	W. &	56	-	c.s
			l	SOFT, LIGHT GREY IN COLOUR	***	- 24		
į		_	} '	ONLY WASH SAMPLE CULLECIED 100 % WASHED, NO RECOVERY	##			Ħ.\$
		1.0	<b>!</b>	TOO & PROMED, NO PERCUITA			S.P.T No.1	
				MID STORE			cms/blows	c.s
				SOFT, LIGHT GREY IN COLOUR	illass.	-00-	15/10,7.5/13,7.5/17,	¥.
				RECOVERY 65%, WASRED 34%			7.5/21,7.5/20 #-71	¥.5
	1.8						VERY DENSE	
	4.4	2.0		MUD STURE			5.P.T No.2	
- 1				HARD, LIGHT GREY COLOURED	4.4		cms/blows	C.S
1				RECOVERY: 1004		-00-	15/11,7.5/11,7.5/18,	£ W.S
- 1		2.35	2,35	MEDIUM SAND STONE HARD, MHITISH GREY IN COLOUR.			7.5/24,7.5/35 N=88	₩ . 3
	-			RECOVERY: 65%, WASHED 35%			VERY DESSE	
09/08		3.0					S.P.T No.3	
				MEDIUM SAND STONE		i i	cms/blows	C.5
				HARD, WHITISH GREY IN COLOUR.		-00-	15/9,7.\$/6,7.5/7,7.5/12 7.5/13	. N.S
f	- 1			RECOVERY: 50%, WASHED 50%			×=38	
		3					DENSE	
- 1		4.0			::		S.P.T RO.4	
ı		1		MEDIUM SAND STONE		-00-	cms/blows 15/9.7.5/11,7.5/14,	C.\$
1		1		HARD, WHITISH CRET IN COLOUR.		-50-	7.5/17.7.5/15	W.8
	. 1	!		RECOVERY: 75%	###		พ=57	
- 1			i				DENSE	
9/08		5.0		MEDIUM SAND STORE	[::::::	-DO-	S.P.T No.5	c. <b>s</b>
j	]	}	j	V.HARD, WHITISH GREY IN COLOUR. REIX/FRY: 56%		-00-	15/41,-, -, -, -	
	1	5.45	3.10	KECUVERII JOS			REPUSAL	W.S
- 1	1	3,43	7.10					
	1	. 1	- 1					
1	.	į	1	-				
- [	- 1	[	Í	( ROLE COLSED )	ĺĺ			
	l	i		( HULE COLDED )				

Romarku

Date AUG 09, 1992.

Scaler2.5 cms=1.0 i

0 m m m

Geologiet Engineer

#### 1981

#### CLIENT: HCA BASIC DISKIN STUDY THAM FOR HRIDGES IN N.W.F.P PARISTAN

SITE | BALANGI TRIDGE NO. 17 BORE CHART OF BORING NO.1

				MANAGEMENT OF A STATE OF THE PARTY OF THE PA	·		Lautranca Ten man bio	
1,561.0	baseut baset	the arch	Property Property	Strata Extensionad	Sau!	Denstei	्रक्ष का का का	Tricial
l i	Level	Meier	jes Maler)		States	Of Berits		Sample
		a	*********	DE PAITES	bon	ACCORPANIES :	CANADA Anna Anna - Martinagra V	
18.57				DETRITUS SELYY-CLAYEY-SAID, MERRING CONG- LOWERATE, AVERAGE DIA RANGE PROP 1.0-25mm, ROLNIED TO SUB-MICHIAN	ል ዓላ	16		
		ļ	İ	1.0-25mm, POLINICED TO SER-ANGELAN	M2.	***		177
1 1				COLOURD YTLLIMIEN CHEY WAR	ŞQ.	1.5		
1 1				PALLYTE BENEFT IS COLLECTED.	11/4		g.r.y. wo.1	
1 1		1.0	1.0	HOND MILLISH-COREA IN COUNTY	<i>981)</i>	ļ	ens/block:	
1			1	WITH PREDICT OIL VEING.	74	• Ind	3.5/7,-,-,-,-	C.0
1 1			Ì	RECOVERE 40%	11/19		REPUBAL	
			ĺ		200			
29/07	1	3.0			1000			
				METATE CONTAIL	1.27	-E0-		2.8
-1				-30-	10			
			1		100			• •
1 1			Į i	RECOVERY: 75%	2.2			
1 1		3.0		Servic serving	534			
1 1			··			- 80-		6.8
	-	3.4	2.4	SNEW BOXIST	10			l 👬 l
1 1				WELL COMPACTED E.GROY COLCUROD.	7.0			l ''' l
30/07		4.0			4.3			i i
33,707			•	BANCE ROBLES		1		١ ا
				- 60-		10-		6:0
1 1		1	•	.62-	30	•		
	i .	1	1	RECOVERY: 618	TARY.	<b>1</b>	L_2	
1		5.0	ł		1			( I
	1	1	1	PRICE ECHTEL		50-		
1 1		ŀ		-90-	<b>F.</b> 2	1		
1		ŀ	1	i .		1	1	P.9
1			i .	RECOVERS: 16.38	277	i		] 1
33/07	F	*.*	1	SANUT SCHIET NAME, WELL COMPACTED SCHIET,	E.A.			
		I	1	GROSSIAN CHOST THE COLUMN, WITH	12.5			E.8
		Į.	1	AMUNICANT OTE, VETRS, THEORIES	175	1	{ · · · · · ·	1 4
]	ľ	1	l	0.2-1.5 cms. MRCOVERY: 24%	160	1		* °
1	Ī	٠	1		DW.	<b>3</b>		[ - ::l
1	l	7.4		MARCE SCREET	6	3		2.5
1	ŧ	1.	1	1	15	- 10-	l .	[
		1	ı	-30-	<b>763</b> 2	4	1	***
1	ł	[ .	1	PEDDYON 486	JAMES A		1	] , [
1	i	9.0	1	1	1	4		
1	ł	İ	i	SHOT SENT				`;"
1	i .	1	i	-20-		]		10.0
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01/08	l	٠.,	i	MEDINEGI 364	1/25	<b>A</b> -	l	] [
	1	1 ""		SMET SCHAFT		1		2.0
	1	1	!	-20-		4 - 00-		6.6
1	1	1	1.		<b>F</b> 33	1	1	] " [
1	1	1	.1	RECOVERY: 38.51	THE STATE OF	<u></u>	<b> </b>	
ĺ	Í	18.5	1	SMER SCHIEF	della			
ŀ	l	'*.*	1			90	-	c.s
i i	1	1		*20*	2000	4		
.	i	l	1 .	SECONDO: 351		4	1 1 1 1 2 2 2	""
02.01		11.0	1		<i>0</i> %	2	T	F
	Į.	ĺ		EARCY SCRIPT	1,37	]		1 7
	l		1	jet.	1	]		E.0
- 1		1		16200WERT 1 251	1000	2		1 1
	l	12.0		SANCE SCREET	1			1
- 1	i		1 .	MAND, MELL, COMMACTED SCRIST ONESSEEM GREY IN COLOUR WITH			1	4.
	1	1	1	ARTHUMIT OTS. VEINE, TRICOGES		3	1	9,4
П	1	1.	1	TYMESES FROM 1.0 TO 2.0 GHB.		ğ	to the second	1
- 1	ĺ	ļ.,,	.l	KZCOVZKI 12.5%		3		1
1	<b>i</b> :	1''''	1	CAMER SCREET	122	3	I	ε.
1	1	1	1		***	, po		
- 1	1	i	1	-20-		<b>a</b>		1 ""
- 1		1	.1	14.51	- 2	<b></b>	. <b> </b>	-
93/00	4	14.0	1	1	177	<b>a</b>		1
1	ł	ì	1	SYMPX SCHIES	1	<b>∭</b>	1	c.s
1	1		1	-90-		3	1	
1	1	1	1	L		<b>3</b>	La contraction of the second	W.3
.	1	1	.1	RODVERT: 413	· 🔯	<b>3</b> —	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1
ł	1	25.0	1	POWER SCHOOL		3	1.5	1
Ţ	15.7	ı	1.	OWNER (1900) THE PROPERTY		> ∞	•	C.s
Į	1	1		TEMED.	1	*	1	
1	1		1 .	MECCANDER 43%		3	1 1 1 1 1 1 1 1	1 ***
j	1	1		SAMPL BOILET	VA	1		1
1	1		100		1	H		C.6
1	1	1		-a-c-	1	~	1	
		Ì	ł	The second second	100	<b>a</b>	1	1
Ţ	1		. [	RECOVERS 1 431		M		1.
	1	17.	°	Same are in	(3))),	8	1	5.6
1	1	1	1	8/57.25E	MI	-20-	1 .	
ł	1	1	1	-80-		À		
1	1	1	1	RECOVERY 66 %	W	Ø1	1	1
J	1	1:00	:1.	SACT FIELD.	K.	4	1	1
1	1	1	1	SARC MELL COMPACIED SCHOOL		3	1	
- 1	ļ	1	1	GREENISH GRET IN COLOUR, AMERICANT OTL. VETES (0.5 TO	100	<b>3</b> .		n.a
ı	l	Į.	1	2.5 cm) IN THICHNESS,	18		1	
	i	1	.1	MEDIOVERE 534	- MX	,		C.S
ı	1	17.0		SANTY SCHOOL RECOVERS 829	1000	1	<b> </b>	#.s
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	ł	1	1	1	1	1		
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Date Ave 15. 1992,

Scales2.5 cmis),0 m



#### 1982

#### CLIENY: JICA BASIC DISKIN STUDY THAM PON BRIDGES IN N.W.F.P FAKESTAN

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ł		Street.	Death	of Lasers	Betras Espanatures	Sect	Denter	Şu Çandin	2 hEG_] 6	a ilon	po Po	T	1
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F	170	-	1	1	PLUTTE KOLST:			CORP. PROPERTY.	•	-	, ,		l
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-1		1	l	1	INCERNITY MEATHERED.		7å Me2s		-			C.5	l
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- 1		ŀ	l	l	VEDERTE, GREENING CREEK THE	V 💥	i I					W.8	ı
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-1		1	33	3.3	MED MAD, WILL COMPACTED SCRIST.	橡	-80-		-			١ ،	t
-		1		İ			1					•.6	ł
d	2/01	1	0.0	1	200 VEDES 0.0-22.0 Cmm. RDC.451							1	ĺ
1		1	1.	1	QUARTE VEENS, THICKNESS 10,12 6 17 cm. QUARTE ES ENTROY 6 18	7.2	1 1						ŀ
1		1		<b>1</b> :	IT COM. QUARTE ES ENTACY 6 18	12/2	-00-		-			C.6 .	ĺ
Į		<b> </b>		Í	1	2	1. 1					*.	ı
ĺ		4.7	3.0	1		100	<u> </u>					i "" :	ı
ĺ		1	1	i i	EMENT BONISTI	LOW	1 1					1	I
- )		1		)	-50-	四是	-90-		_			¢.s	١
				İ	1	1218						F.8	١
ı,	3/00	}	١.,	1	RECOVERY: 241		<b> </b>	_				- · · · · ·	١
ľ	3644	1	ļ •.°		ENDY SERIET!	1/8	'	-				1	١
ı			l	1	CONCLUDED SCHOOL BEARING THICK		+80-					z.s	١
1		ł	l	ł	GUARTE VEIDE. THEODRES UPTO	166							١
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l°	4/68	į	7.0	ļ	MST. FILITI	N.W							١
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ľ	5/09	i	2.0		SHEET SCRIPT!	delle							ĺ
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1			12.0		SAMOT BOXIST:	200		<del>-</del>					
	ł				RAND WELL, COMPACTED BOHIST. L. GREY TH ESLEUR MEASURG OTL.	纵值	-90-					e.1	
	ſ				ANDRE ANICHMENT ANGLES								
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١,,,	/08	1	15.0		RECOVERT 1 39%		—··· j-	-	-		• •		
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AuG 15, 1992. grale:2.5 cms



# ASSOCIATED DRILLERS (PVT) LTD. Consulting Soil Bagineers & Contractors

19B3

CLIENT: JICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN

: KALANGI/HALAKAND

BRIDGE NO: 19

BORE CHART OF BORING NO.3

Date	Ground	-	Thickness				Penetration Test Blow No.	
	Water	Depih		Strata Encountered	Soil	Dismeter	20 40 60 80	Types of
	Level		(in Meter)			Of Boring		Sample
			<u> </u>		1			04.mp.c
16/08					$\nabla \cdot \nabla$			
i				TOP SOIL:	[X, Z]			
į					IV	76	24 (A)	H.S
				SANDY CLAY, COLOURED L.YELLOW	$I \land I$	ava .		
1				SAND IS FINE. CONGLOMERATE IS	I/ \			
				ABSENT. RECOVERY: WASH SAMPLE.	$\angle$			
		1.0		PLEITIC SCHIST			S.P.T No.1	
				SLIGHTLY WEATHERED YELLOWISH			cms/blows:	
				GREY IN COLOUR. FISSILE ALONG	57(()()()		15/7,7.5/6,7.5/9	C.S
				SCHISTOSITY PLANES.	Yillin il	-00-	7.5/10, 7.5/12	Ŀ
				RECOVERY: 64%	DHUHU		พ=35	W.S
		2.0					DENSE S.P.T No.2	
		2.1	1.1	SANDY SCHIST	the state of the s		cms/blows:	c.s
	ł			WELL COMPACTED LIGHT GREY	Mann	-00-	4.6/31,-,-,-,-,	6
				COLOURED	<i>{{///////////////////////////////////</i>			W.S
				RECOVERY: 52%	VII888111		REFUSAL	
17/08		3.0			William Contraction	, 11		
				SANDY SCHIST	<i>Yellini</i>			c.s
				-00-	KIIII	-00-	-	
		٠.			111111111			W.S
-				RECOVERY: 76%		4 11 11 11 11		
		4.0						
18/08				SANDY SCHIST				
- 1						-DO-	-	C.S
				-DO-	ZIIIIII V			
Ì								W.5
į				RECOVERY: 40%	ESTIN .			
	5.1	5.0		SANDY SCHIST -DO-			:	C.S
1				RECOVERY: 42%		-00-		W.S
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l				( HOLE CLOSED )				
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Date AUG 19, 1992.





# ASSOCIATED DRILLERS (PVT) LTD.

1984

CLIENT: IICA BASIC DESEM STUDY THAM FOR BRIDGIS IN H.W.E.P PAKISTAN

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100   1.4	4207	,				Speak			
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1.0   COUNTY   STATES   STATES		{	•	ľ	STETY CLAY, MEDIUM DENGE.	IV	300		lí
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100   100		,	1.0		TOP SOILs	K /	/	\$.P.T. Bo.1	i l
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1.0					-80-	IA.		7.5/3, 7.5/6	
1.0   1.0	l					V \	•	MEDIUM DENSE	
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1.0	1	ł i			SANCE SELECT CLAY, MEDITAL OPERS	ĮV.	-20-	13/4, 7.5/5, 7.5/5,	9.4
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DEPAILS   COMMENT IN SILITY SAND   STATE AND						<i>۱</i> /			
PROJECT   10.0	00-		3.0	9.6	DETRITUE	200	1	8.2.7. 80.5 ~	1 1
PRINCES   COMMENT   SELECT MADE						On	-20-	REPUSAL	0.0
COLLEGE LIGHT TELLOW  COLLEGE LIGHT TELLOW  CRAYER & SCALEGES IN SILTY SHOW WITH RICHE CLAY, CELCURED  LIGHT TELLOW, MARKARE DLA  7.0  CHENTINE  100  MA. DIA OF SCALEGES UPTO  MY. SCHOOL I SCALEGES UPTO  150  MY. SCHOOL I SCALEGES UPTO  150  MY. SCHOOL I SCALEGES UPTO  150  MY. SCHOOL I SCALEGES UPTO  150  MY. SCHOOL I SCALEGES UPTO  150  MY. SCHOOL I SCALEGES UPTO  150  MY. SCHOOL I SCALEGES UPTO  150  MY. SCHOOL I SCALEGES UPTO  150  MY. SCHOOL I SCALEGES UPTO  150  MY. SCHOOL I SCALEGES UPTO  150  MY. SCHOOL I SCALEGES UPTO  150  MY. SCHOOL I SCALEGES UPTO  150  MY. SCHOOL I SCALEGES UPTO  150  MY. SCHOOL I SCALEGES UPTO  150  MY. SCHOOL I SCALEGES UPTO  150  MY. SCHOOL I SCALEGES UPTO  150  MY. SCHOOL I SCALEGES UPTO  150  MY. SCHOOL I SCALEGES UPTO  150  MY. SCHOOL I SCALEGES UPTO  150  MY. SCHOOL I SCALEGES UPTO  MY. SCHOOL					PERSONAL PROPERTY OF STEEL SAND	Pi			1
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SAMP SCHIET:   SAMP	04/1#		6.0		DEBUTUS	$\cap \mathbb{W}$		3.P.Y. Ho.6	
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1000   1.0	100		1.0		o <del>zguto\$</del> ;	RY.			
10	1				*DO-	ĊΫ́	-80-	REFUSAL	D.6
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10.15   MATTER CHAIL CECLURED LIGHT   STELLEN AND MATTER CHAIL   S.P.T. BO.10   B.S. P.T. BO.10   B.						Οĕ			
10.15   MATTER CHAIL CECLURED LIGHT   STELLEN AND MATTER CHAIL   S.P.T. BO.10   B.S. P.T. BO.10   B.	***		1.9		CHANTLE BRELDERS IN SILTY SAND	W.	-10-	E.F.T. 80.9	5.5
10.0 STRIPES  10.1 3.1 SARRY SCRIPT  11.0 SARRY SCRIPT  SARRY SCRIPT  SARRY SCRIPT  SARRY SCRIPT  SARRY SCRIPT  FAND, DARK GREY IN COLUMN  SARRY SCRIPT  FAND, DARK GREY IN COLUMN  SARRY SCRIPT  FAND, DARK GREY IN COLUMN  SECONDRY   431  SARRY SCRIPT  SARRY SCRIPT  -DO-  SETULATION  SARRY SCRIPT  -DO-  SECONDRY   523  SARRY SCRIPT  -DO-  SECONDRY   524  SARRY SCRIPT  -DO-  SECONDRY   524  SARRY SCRIPT  -DO-  SECONDRY   524  SARRY SCRIPT  -DO-  SECONDRY   524  SARRY SCRIPT  -DO-  SECONDRY   524  SARRY SCRIPT  -DO-  SECONDRY   524  SARRY SCRIPT  -DO-  SECONDRY   524  SARRY SCRIPT  -DO-  SECONDRY   524  SARRY SCRIPT  -DO-  SECONDRY   524  SARRY SCRIPT  -DO-  SECONDRY   534  SARRY SCRIPT  -DO-  SECONDRY   534  SARRY SCRIPT  -DO-  SECONDRY   534  SARRY SCRIPT  -DO-  SECONDRY   534  SARRY SCRIPT  -DO-  SECONDRY   534  SARRY SCRIPT  -DO-  SECONDRY   534  SARRY SCRIPT  -DO-  SECONDRY   534  SARRY SCRIPT  -DO-  SECONDRY   534  SARRY SCRIPT  -DO-  SECONDRY   534  SARRY SCRIPT  -DO-  SECONDRY   534  SARRY SCRIPT  -DO-  SECONDRY   534  SARRY SCRIPT  -DO-  SECONDRY   534  SARRY SCRIPT  -DO-  SECONDRY   534  SARRY SCRIPT  -DO-  SECONDRY   534  SECONDRY   534  SARRY SCRIPT   534		7.3			WITH RIDER CLAY, COLCLEGE LIGHT				1 1
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10.1 3.3 SAREY SCRIET; SEE SPLIN; 16 40 40 40 40 40 40 40 40 40 40 40 40 40	1 1		10.0		DETRIVES	42	-20-	METUARL	B.5
11.0 SANDY SCRIET: SIGNATURED. RELATIVELY -00-  11.0 SANDY SCRIET: WEATHERED. RELATIVELY -00-  11.0 SANDY SCRIET: WEATHERED. RELATIVELY -00-  11.0 SANDY SCRIET: GREY IN COLORS.  12.0 RECOVERY   431  11.0 SANDY SCRIET: -00-  11.0 SANDY SCRIET: -00			10.3	\$.3 T	they swift.	<b>8.8</b>			
11.0 SARTY SCRIPT: SLIGHTLY WEATHERED. RELATIVELY SOFT. TELLORIES GREY IN COLORS  11.0 SARTY SCRIPT: FAMO, DANK GREY IN COLORS.  RELASS ALONG SCRIPT FLAMES  12.0 SARCY SCRIPT: -DO- RECOVERY : 714  3AMEN SCRIPT: -DO- RECOVERY : 523  13.0 SARCY SCRIPT: -DO- RECOVERY : 524  13.0 SARCY SCRIPT: -DO- RECOVERY : 594  14.0 SARCY SCRIPT: -DO- RECOVERY : 594  14.0 SARCY SCRIPT: -DO- RECOVERY : 594  14.0 SARCY SCRIPT: -DO- RECOVERY : 533					- MES MOTAL -		_	**	1 • 1
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13.0 SANCT SCRIBT: RAND, DANK GRET IN CECURE. RECOVER:   431  12.0 SANCT SCRIBT: -00- RECOVER:   716  SANCT SCRIBT: -00- RECOVER:   523  SANCT SCRIBT: -00- RECOVER:   524  SANCT SCRIBT: -00- RECOVER:   594  SANCT SCRIBT: -00- RECOVER:   594  SANCT SCRIBT: -00- RECOVER:   594  SANCT SCRIBT: -00- RECOVER:   594  SANCT SCRIBT: -00- RECOVER:   594  SANCT SCRIBT: -00- RECOVER:   594			1		SOFT. TELLONDE CREY IN COLOR		· · · ]		v.:
13.0 SANCT SCRIBT: RANC DARK GRET IN CECUR. RELIANDED CO. 2.0 - 20 - 2.0			Ì	ŀ					
10.0   10.0	1599	1	12.0	1					
12.0 SECONDET   431.  SAMET SCRIPT: -00-  SECONDET   118  SAMET SCRIPT: -20-  SECONDET   528  SAMET SCRIPT: -00-  SECONDET   494  SAMET SCRIPT: -00-  SECONDET   594  SAMET SCRIPT: -00-  SECONDET   594  SAMET SCRIPT: -00-  SECONDET   594  SAMET SCRIPT: -00-  SECONDET   594	1 1		- 1	1	MAND, DAKK GREY IN COLCUR.		-80-	<b>-</b> .	
10.0 SANCY SCRIPT:  -90-  -90-									
16.0   16.0	[ - [	ļļ	_	İ	TESTONISE T 41/				
16.00  PRICOVERT : 716  SAMET SCHIST:  -DO-  PRICOVERT : 518  SAMET SCHIST:  -DO-  PRICOVERT : 594  SAMET SCHIST:  -DO-  PRICOVERT : 594  SAMET SCHIST:  -DO-  RECOVERT : 518	1	i [	13.0		SMOT SCHAFF				
16.00   NECOVERY   716   SAMEY SCHIST    -BO-   C.S   6   6   6   6   6   6   6   6   6							-90-	-	<b>5:</b> *:
10.0 SAMEN SCHIST)  -00-  -0000000000000000000000000000-	] ]		j	i. ]		311			
13.0	1	i		.	RECOVERE 1 714				
-90-   PRICE   5218   -90-   SHEET REVIEW   5218   -90-   SECONDAY   694   -90-   SECONDAY   694   -90-   RECONDAY   5318   -90-   RECONDAY   5318   -90-	1849	ļ <b>j</b>	14.0		SMEN SCHIST:				
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17AR 16.0 SARCY SCRIST: -50- RECOVERY : 533	1 1		-	-	percoving 1 521		- 1		
-90- 9ECONTROL   494  BANKET SCRIEFT: -90- RECENTRAL : 533		1	13.4	i	SHOW SCHIET!	1/10			
11.0 6.7 PECUATRY 1 533	1 İ			Į.			-90-	•	c.#
17AN 16.0 SANCY SCRIST: -po- -po- RECOVERY : 533	, ,		Ì	ĺ	-90-				
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Date AVG 15, 1992.

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### ASSOCIATED DRILLERS (PVT) LTD. COMMAND SAN REPLEMENTS

2081

CLIENT: JICA BASIC DISKIN STUDY TEAM FOR BRIDGIS IN N.W.E.P. PAKISTAN SOME CHART OF BOSING BG'1 BEIDGE BO: 36 CHART SOALWEIGHT

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Zigita	tireses Water	i he pit b	d laces	Serma hacessares	Seal :	Diameter (N Switz)	20 40 40 80	37744
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1751				TOP SOIL SANDY CLAY MARLING	-			****
''''']				PERSONAL & COMMERCE TO :	IX.		4.2.4	1
- 1		l .	Į i	SAR-ADDRESS, GREYLEN YELLON	(m.)			W. E
- 1		8.5	0.5	DETRITUE: SILTY AND BRANCH!	แซน	{ <b>**</b>		
ı		1	1	MATRIX MARKED COT. W.S. TAKEN	l X	1		
ŀ		1,0	l	DETRITUS:	K/YC		5.P.T. Ma.1	
ĺ				STLTY BAND BEARING PERSONS &	V(6)		ens/blows:	
		i		COMMENTS WITH SOME SCREENES.	إبلاد	-60-	13/5,7.5/6,7.5/3,7.5/7	4.6
- 1		ŀ	· . '	SCHOOLDER FACTORISE ALLE	2-4-	1	F=//	
- 1		Į.	l	SOME COME OF BOLLEGES, LEGGTHS 5-11 com ETC. REC. 151	$D\mathcal{U}$	4		
14/04		ن ، ا		CETRITURE SILEY SAMO SEARCHS	8		8.P.T. Fo.2	
וייייין	Ì	3.0		PERSONAL A COMMUNES DER 10-25mm	Dť).		rea/blows:	#,f
		1	l		75.	-00	15/25,-,-,-	
1		2.5	2.0	COMEZ/DECHATE HAND PED. & COS. IN	400	1		
		Ì		Indicate our constant that make	~~	1	REPUSAL.	
3/00		l-: .	1	CETATURE	٠.,		"" #.P.T. #0.3"	-"
ומטיני.	787	3.0	0.3	COMESC STLTY SAME MANAGED	10.0		spe/bleve:	
- 1		1	1	MEDICART CONTACHERATE ANNUALE	0	-26-	2.3/65,-,-,-	***
		l	ı	5.0-30.0 mm.1.0027 DECEMED.	POS	]		
- l	ļ.	1		DALS HADE SAMPLE COLLECTED.	la:U	]	refusal	
1			i	DETRIVE.			8.P.T. 30.4	
ı		4.0	1	CONST CITAL COND RESIDED WITH-	PΩ		cna/blaws:	
. 1		!		DEST COMMENSAIR, AVENUE DIA	170	-00-	15/5,2.9/39, - , - , -	4.0
1		ŀ		25-65mm, L.OMEY COLUM. CULY	N.C	1 1		
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16/0E	ı	3.4	2.0	VERT HARD FEMALES & COS. HELL	000	3	Cos/b) ero	1
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79/08		9.0	!	CONCUENTS	000	1		
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- 1		1	ł	RECOVERY 281	1000			
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· · · )	1	1	ŀ	NAME OF THE PARTY OF THE COLUMN.		-00-	15/16,7.5/9,7.5/22.	e.4
1		1	1	MELL COMPACTED.	t ::::	1 1	7.5/23.7.5/40	
į	1	ı	1	PERSONERY 1351 CRIPP 61		] i	VIERT SIGNAL	
13/01		12.0		MD STORE:		1 !	8.7.1. 90.7	
~	ł	١	1	WHEN CHETTER TELLOW IN COLOUR.	: ****	<b>1</b>	contators	· c.
ŀ		1.	1	HELL COMPACTED.		-00-	15/11.7.5/13,7.5/15,	
ı		ľ	i .	l end		]	7.5/18,7.5/19,	₽,1
j			ł	PRODVERT 65%	100	1	VERTY DECISION	
- 1		111.0		[		<b>!</b>	3.F.T. P3.6	1
1		1	1	NED BYONE:	N.	•	cos/bloss	e.,
- }	ł	1	l		1400	-90-	2.3/37,~,-,-	
- 1		i	ł	-20-		}		
- 1	:	Ι.	1	REGG/ERY: 23.5%		1		
2/08		14,0	1	1	1	1 !	#.F.T. 80.3	1
- 1		1	1	HAU DOLLE.	100	}	-wallstreet	e,
- 1			I	_		-20-	15/22.7.5/12,7,5/19,	٠
		1	1			1	7.3/26,7.5/31	₹.
Į	l	į	Į.	70007 <u>90</u> 1 521, 151		1	YMAY MANAGE	
ı	!	15.0	1			3		
ŀ	i	Į ``` <b>`</b>	1	NO STORE	F 1881	]		
		i	l '	1	140	-00-	•	c.
J		1	Ì	-10		3		٠
		1	1	<b>)</b>	100	<b>!</b>		u,
	:	ı	1	ACCOVERED SHIP	1000	3	į	l Ì
			l .	1	1.00	1		1.
3/00		14 10		TUU STURE	1.88	į		l
3/0 <del>e</del>		14.10	1	I NO SIUMEI	1000	-90-		l ۵.
3/0 <del>0</del>		TA Se	j		1,400	1	-	: ۱
3/0 <del>2</del>		Ta . ie						
3/08	  - 	14.14		-50-		1		١.
3/08		14.34						:
3/0e				-50- INDOON/SMY 65%			•	
3/0e		31.6	4.3	MECODYEMY, 63%			•	
3/0 <del>e</del>			4.3				•	
3/0e			4.3	MECODYEMY, 63%			<u>.</u> .	
3/0 <del>e</del>			4.3	MECODYEMY, 63%			•	

home 2 a p

Gate ADG 14, 1987.

السليك

# ASSOCIATED DRILLERS (PVT) LTD. Coesulting Soil Engineers & Contractors

#### 20B2

#### CLIENT: JICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN

SITE : BAKNA KOT/MALAKAND. BRIDGE NO: 20 BORE CHART OF BORING NO.2

Date	Ground	T-	Thickness		Ţ		Penetration	Test Blow No.	T
	Water	Depth			Soil	Diameter	20 40	60 80	Types of
	Level	Meler	(in Meter)		Symbo	Of Boring		1 1 1 1	Sample
04/08				TOP SOIL: SANDY CLAY BEARING	K /	75			1
				PERMIES & CORRIES ROUNDED TO	I X	700,000.	."		I.
				SUB-ROUNDED GREISH YELLOW COL.	$\sim$	l i			
		0.4	0.4	DETRITUS: SHATY CLAYEY SAND	7. Y	1 1		-	W.S
				BEARING CONSI, DIA 5-25mm WITH	$\nabla \nabla$				
				COL. L.GREY W.S COLLECTED.	1771	L	<u></u>		1 1
		1.0			MAA			T Mo.1	1
				DETRITUS:	100	i i	cms/blows:		
1				SILITY SAND BEARING CONGLOMERATE	M E	+00-		5,7.5/6,7.5/6	W.5
	1.4	1		AVERAGE DIA 10-50 mm. L.GREY			7.5/7		
				COLOURED ONLY WASH SAMPLE	MY	1		N=24	1 !
	i			COLLECTED.	2.4	100		UN DEMSE	. 1
05/08		2.0			0/1			T ¥0.2	1 1
			]	DETRITUS:			CRE/blove:		1 1
					$\cup_{\mathcal{O}^{\vee}}$	. ~DO~	4.5/36,-,-	,-,-	W.5
•				<b>-D0-</b>	70.7		4.0		
ı							REF	UEAL	1 1
ı		2.8	2.4	CONGLOMERATE RECOVERY: 16%					. 1
06/08		3.0		CONGLOMERATE	030			7 ¥o.3	1
1				HARD WITH PERSIES & CORRLES	<b>1989</b>	40.	cms/blows:		1 1
ì			1	CEMENTED IN CALCIC OR SILICIC	-	-DO-	5/37,-	,-,-,-	C.s
				MATRIX. OCHRE IN THE FORM OF	20				١ ٠
1				YELLOW PATCEES. MITTISH GREY	1		REFUS	AL	₩.8
ı				WITH YELLOW PATCHES REC.:244					
ì	· •	4.0		CONCLINERATE	77.7%		S.P.	T #0.4	l !
- 1		. 1		-50-	Oil		cms/blovs:		C.5
- 1	1				22 Pg		15/9,7.5/1		
1	1	4.5		MUD STORE		-00-	7.5/11,7.5		W.6
l		- 1		HARD WELL COMPACTED WITH COLOU-			-	i+52	1 1
				RED GREYISH YELLOW REC. 244			VERI	Defise	1 _ 1
10/8	· • •	5.0	1	MUD STOKE					C.8
		i	:	RECOVERY: 45%		-00-		-	
				-20-			<del></del>		W.8
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**Веласка** 

Date AUG 10, 1992.

Scale: 2.5 cms=1.0 m



Geologist Engineer:

2083

CLIENT: JICA BASIC DISKIN STUDY TRAM FOR BRIDGES IN N.W.F.P PAKISTAN

SIYE I SAESA SOY/MALASADO BAIDES NO: 26 BOSE CHART OF BOSEMO PO.)

	-			-	Name and Address of the Owner, which was not the Control of the Co	1		Libiniase 1	SEL PROPERTY		i
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-1.	:	I		-	CENTRE SILTY-CLAYEY SAID	~	********		- 1 30-00 1 40	AUTOVIOUS	
ď	HAH.	i			PRINTING CONTRACTOR DIA 3.0-	$ \nabla$				4.0.	
ı	l	- 4			25 min WITH COLORED LIGHT GROY	Λ	74. 048		-	c	i
ţ	Į	. 1	·=.5		CONTRACTOR COLLECTED.	20.73				ا با	ŀ
-4	-				CONSTUMENTS!	000			, mo.1	4.5.	ı
- 1			2.0		NARD. WITH PENGLES & COMMERS			man/Alamas		C. S.	Į
ı	- 1			l .	CHANGER IN CYTCLE OF SITTLE	00	-90-	15/\$ 7.5/1	0, 7.5/9		l
- 1	- 1				MATRIX. COME IN THE POWERS			7.5/11, 7.5	9/13. P=63	*.*.	ı
- [	- 1			1	HELTING GREY IN COLOUR.	XX			· · · · · · · · · · · · · · · · · · ·		ı
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- (	-		3.0		CONTRACTOR	ולב'נו		8.P.T	, pa.3	[ c.s. ]	l
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ı	0444		3.0	1	GETALITÄS:	67	1			1	١
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١		l	ł	l .	Page at the second		ļ		y-81	1	ļ
I	INAM	I	4.0		DETRITUE:	$\mu U$	]		, po.6	1	۱
. 1		·	1		SILTY SAND BEARING, DONGLOHEARTE HTTE AVENAGE DIA	1701	• pa-	7.5/36, 0.	-, -, -,	1.5	
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ŀ		l		1	LOUGELY COMPACTED.	340	1	MATERIAL SERVICE		· 1	١
- 1	1	i	7.0	[	HAR SHELD CILLETTO.	V)\$	<b>,</b> -		. ma . 2	1	١
- 1		I	1	l	CENTRAL	MI	-50-	13/2, 7,5/	3, 7.5/3, 7.		ı
- 1		l	1	ı	-20-	30	1	7.5/5	-,	1	ı
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- 1		!	1	1	-10-	$\mathbf{p}(\mathbf{r})$	-20-	5.3/40, -/	-, -,	7.0	ŀ
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- 1		_	1	1			-00-	154, 7.5/4	, 7.9/0,	1 53	Ī
1		9,4	1	1	NAMED, NETTH COLUMNIC GREY LAND TILLION		1	7.5/10, 7.	2712		ı.
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i		l	1	i .	MSCOVERY (4)5		3 10	15/9. 7.5/	12, 2.3/36, -	. c.s	1
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- 1	, 1	l .	i		ZE CETOF	2,000	1			4.5	l
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1		ļ	13.0	1	PRODVERT 1 45%	300	3	1	4.4	1	ĺ
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Date AUG 14, 1992.



## PHASE - II

### LITHOLOGIC SYMBOLS

1. SOIL	
2. DETRITUS	88.00 g
3. SILTY CLAYEY SAND	550 <b>0:00</b> 505666 8000000000000
4. SILTY CLAY	12-1-12-14-14-14-14-14-14-14-14-14-14-14-14-14-
5. GRANITE GNEISS	
6. MUSCOVITE SCHIST	

### ABBREVATIONS

*	Colour	-	Col.
*	Mineral	_	Mni
*	Debbies	-	Peb
# ,	Cobbles	_	Cob
*	Disturbed Sample	-	D.S.
*	<b>Wash Sample</b>		W.S.
*	Core Sample	_	C.S.
*	Quartz	_	OTT

#### 5B1

#### CLIENT: JICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN

PAGE COTT OR MANUAL MET. E BELGGE ED! A BELGGE ED! A

	Fresh Garan Ca Ca Ca Ca Ca Ca Ca Ca Ca Ca Ca Ca Ca	Person Person Takes	i but aris of Lasons (so Motor)	1	Lotes Symbol	Donner Of Barrey	M M M M M M M M M M M M M M M M M M M	Types Sy my
0712		1		SELLIA SAND RESERVED COUNTY	٩٩			
		1		STATE MADE RESIDENCE CHANGE HAR. DES ROUNDED TO PAR-ROUNDED HAR. DES LIPTO 63 DEL L.CORET DE CONTRE.	20	550		*.0
					57	-	8.P.Y 89.1	1
•		["		montali	(Zó	-64-	25/12.7.5/7.7.3/26.	١.,
]			·	-20-	5/2		S.N.M	
1/12					$\mathcal{L}_{\Delta}$		8.F. # 54.2	
				-#0-	0.9	~24	7.0/39,~,=,=,	8.1
. 1		\	1		OD		REFUGAL	
		3.0		CHTRUTURE	34		#. P. F #0. J	ĺ
			]	BANCY CLAY SCHALDS CHANG. BUNKER TO BUS-ROUNESD HAZ. BLA WITO THEM S. GREY IN COS	78	-30	13/39~,	3.4
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i				-86-			REFUSAL.	· · ·
ונע		-5.7	l		12		8.7.2 80.5	
- 1		1	1	**************************************		-90-	12/19,7.3/13,5.9/61,-,-	
					O F		REPVELL	
- 1		•.•	4.5	MACOVITY STREET;	WIT:		<del></del>	
١		[	,	SOFT TO PROTUS MARK SCRIPT CONFORD PRODUCTION OF MARKET CONFORM A SUPERIOR	Wit.	-24-	-	9.4
ĺ				RECOVITÉ CALALITÉ À SIGNICA. (SEPLE MANUELLO, CALALITÉ CALT IN CILCUL.				
ווע		7.0		PERMITTE SELECT				
	PRT		l	- 140-		- 00-	-	9.5
1				MANAGEMENT STREET	<b>33</b>			
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A.SOFAN

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### 5B2

CLIENT: JICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN Moss cares on source norsh September 7 Tits F Statementonesses

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				DIA UNTO TONE BUE-ROUNCED TO REPUBBLISH TELEVISION CHET COL.	O.	-90-	REPUBL	""
ı		3.9		research to the little	4/		B.P.T 84.2	ĺ
				DETRIȚUS: SLITT SAND BEALING GRAVE, AME. DIA LUPO 110mm. ROLDERO TO SUM-	44	-34-	gas/81auts g/31,*,*,*,*.	*
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- 1				COMMETTE CONTROL	32	-50-	-	٠.,
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1/12		•.•						
- 1				CONTINUE CHECKES	勰	·#-	-	9.1
ļ	·			•	8.1			
į		10.4						
I	. ;	li		-m-	33.4	-50-		
1					<b>200</b>	1		
27.2		11.0		OWNER OFFICE	紭			
Į				-	慈	-00-	-	8.5
Į			19.5		鄉			-
ĺ		12.0		HEALTH TO MAKE PHANTYS GRAFTED				
ļ				CHETTE CHETTERED BANKS AND COP ALTERED SCREET.	801	-100-	. ~	
- 1					纷			:
1,15	. (	12-1		GANGE CHEESE!	对			
1	- 1			*90-	铋	-00-	-	2.6
				• • • •	绞泪	• 1		
-		14.0		GWITT GELE:	缴	- 1	*	
- 1				-14-	<b>!!!!</b>	- <b>3</b> c-	•	9.5
- (					滔			
Uzz		13.0		GANITE GELSE:	愆			٠.,
ŀ				-90-	174		,	"
Į				-	3	- 1	•	
1		15.0	1	OWILL GETTS!	ソバ	I	· · · · · · · · · · · · · · · · · · ·	
ı		į Į		-90-	44	.a.	-	9.5
-	,	ŀ Į			83			
ŀ		12.4		GWHTS (SREER)	1			l
]				-30-	<i>??</i> ₹	-90	•	9.4
ļ					刻	.		
5/12	- :	18.0		GMITTE GRIES! NMD, NASTYE GWEITE GREES		, l		
ı				L. CHEY IN COLCUM, WITH CHETCHER SANDS AND OF ALTERNA	17.7	-90-		0.1
ı				SCHLST.	27:3			
		17.8		GAPITE OFFISE:	(A)			9.2
-				-00-	谷			
u ta	ļ	35.4	. [	amilia agrini	<i>5</i> ::1	· [	-	
				- 90-			· +	a. e
- {	į		14.		松計			
- 1		31.9		GIVELES GRETTES:	<b>%</b>		-	
- 1				-80-	333	-90-	•	•.•
- }								
		** '	14.3		l			

#### 5B3

#### CLIENT: JICA BASIC DESKIN STUDY TEAM FOR BRIDGES IN N.W.E.F PAKISTAN

#172 | #Areshe/MAGESAA Beloke mgt 5 Boos CSAFT OF Begins Dg.3

- 1	tress.	Lietts 19	of Locat	Service Buchysomeric	Letter Ipopia	Duniur Cr Berny	to we we go file general gin	Types o
	Land Service	Messe	THE PARTY OF	2. 3 1 15 00000000000000000000000000000000	1907			42-Mars
6113		1		STILL CITY ALLE MONTHS ?	X			
			٠.,	COMPLET, L. THEIR CHARGE.		85a bec		F.0
		[		SOUND & BOXEDING PARTOR UPTO	Ű:	·		1
- 1		1.*		CERCION)	$\mathcal{O}U$		3, p. 2, 50, ]	
- 1					$\mathcal{O}_{\sim}$	-80-	19/4,7.5/3,7.5/21,	٠.د
- }		\		• #0-	OX		republic	
- 1				CETRITUE:	177		S.F.T. 20,2	1
.				SCITT SHED BEARING FORMULE COMMENT & BERZONS, PERSONS TO RES-COLUMNS, MARIOLA LETTO 35-Res	175	-20-	15/21,2.0/5,~,-,	
1		•		FOR-HOLDINGS. MANUAL PRO 35-MAN L. CHET IN COLORA.	XX		B279542	l
[		1.4	- 11	(EDATIVE)	LY.			
٠.,					ΗÓ		#00/0]=001 7.0/23,-,-,-,-	١
.				•##•	$\omega$	-	REPUBAL	7.7
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1		1.5		orming;	170	1	S.P.T. Zo. 4 Castlinet	
- 1	(	1	Ī i	-20-	×4	29	3/3,-,-,-,-	0.0
- [			1	14.	$Q_{r}$		REPVIAL	
61.73		3.0	<b>i</b>	CONTRACTOR OF THE PARTY OF THE	570		E. P. T. So. 5	
		ĺ		COMPART LAND MEMORIAL PROMICES TO RES-MICHAEL LAND MEMORIA DESCRIPTION OF COMPARTS.	12		3/11,-,-,-,-	9.4
- }			1	2 3 4 4	X.		RESTORAL	ŀ
1/12		4.7	3.5	GENETTE GREEN	:22			1
١.		1	•	PEDICH MIND GRAFITS CHEISE BLIGHTLY MINISTERS, L. GREY CX.	%	-89-	-	
1					1335	]		
٠	- 3	.,,			1		<u> </u>	1
- (		ļ '' <b>'</b>		ONELEE CONTROL	16		,	
	P#7		l '	1994		~		l '''
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- 1		1.5		CONNECTE CONSTRU	忿		i	1
		ĺ		PART HASTVE FAIRLY CORRECTION OF THE CONTROL OF THE		207	-	*
				BE BANGE FAR OF ALTERIAN SCREET, LORSE IN CITAL				l
נוע		1.6		OWITE OF IS	7.5			1
J				+D-	釜	- 84-	-	9.5
Į		ļ .			禁			l
- 1		11.4			缕			
				CHARITE CHECK!	234	₩.		2.8
. 1		1		-60	8			
ווע	•	11.77			绣			
	l		1	Secure Order	1	<b></b> .		ē. a
Ì				-95-	然			
- 1		11.6			14	~[		
- 1		· · · · ·	}	GAMETTE CONTINE!	茄			
				AND PARTYE CHAPTES CHEESE. L. CHEE EN CERCUR.	級	_		7.5
ا.,,					深。	I		;
C 12		0.4		CHARLES CONTRACT		1		
				-80-		DE.	. 1	3.5
1							: I	
Į		14.4		CAMPLE CHEESE	-31			
- 1		١.	'		25		-	2.0
ł		•		****		" , <b> </b>		
3/12		13.4		CANALE CHEERIT	(3)			
- 1					洲			2.5
				-90-				
- 1		14.0	}	Owelfs onelie!	14	. <del>-</del>		
1	,		1	- 17-27-7771	14.3			9.6
- 1				₩-	14.	~		4.6
- 1	Ì		. 1		<b>Y</b> \$\$[	l	<u>.                                    </u>	
. 1		13.6	`	CONSTRUCTION CONTRACT	※	Ì		
. [				SHO PURITY GRAFTS DALLE. L. GET IN COLOUR.	伙	**	. • . :1	9, 5
- 1			. [	93 VERN BOOMS (BEEN THEOREM)	洮		. <u> </u>	
		18.0		CHANTE CHILING	الا:	[		
- 1			٠. ا	NATO PROGRES GLACITE CHELLES. L. CHIT IS COLCUE.	(1)			4.5
j	1		1		泌	1		
5/12		11.0		OWNERS CHEEN	②	.	_	
- 1	.	ĺ			滋	-100-	_	
İ				90	W.	ľ		
ı		70.0	'	GNACTE_GREESE:	<i>[</i> 22]			
- }			ſ		1			9.0
. [	i			-90-	\Z\		.	
			ĺ		***			
*/12	١	11.5	Ì	SHEETER CHICAGO		- 1		
- 1		-	[	-20-			- 1	D, 8
ĺ	(	. [	- :		<b>7</b> %]	_		
- 1		12.0	10.0		Ţ			
- {	1	'		(COMO) BACK!		٠	1	
					1	•		1.0

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Sein SEC 14, 1441. Scaterilis courtis a

### 13B1

#### CLIENT: JICA BASIC DESIGN STUDY TRAM FOR BRIDGES IN N.W.F. P PAKISTAN

BUTE & NATA SANAI/DI BRIDGE NO: 13

	· •	ON 25		IN N. R.P.P PARISTAN				· ·
Date	Ground Water Lovel	i.	Thickness of Layers (in Meres)	Strate Engineered	Little Symbo	Diameter Of Boring	Penetration   Cet   Slow No.   20   40   90   80     1   1   1   1   1   1   1   1   1	Types o Sample
1	-			SET STATES	13.43		CHARLES IN CASE OF THE PARTY OF	
23/11	1		1	CONTOSED OF VERILES, CORRLES		1	•	1.
1	1	1	1	S BOULDERS IN CLARSE SAND. AVE DIA OF GRAVEL IS 60 mm. HAX DIA	ביללו	540		D.5
1	ı	i		TOT BOULDERS UPTO 850 am.	ሃንኣና	<b>250</b>		1
1	1	l	1	L.GGT COLAR.	0392	·		I
1	<b></b>	1.0	•		Dea		\$. P. S. No. 1	l
1	1.1	1	1	CETPLITUR <sub>1</sub>	102		emp/blows:	
	1	1	i	-00-	lo C	-00-	. 15/5,7.5/4,4/19,-,	D. 8
1	1	1.			1773	į	RRFUSAL	
1	1	l			No.			1
24/11	4	2.0		DETRUTUR:	$\mathcal{W}$	1	8.7.T. #o.2	1
1	1	1		-bo-	እማገ	-00-	6.5/23,-,-,-,	0.5
1		i i	1	DIA 930 mm (APPROX)			4.37237 7 7 7	
1					$\mathcal{L}\Delta$		REFUSAL	İ
	1				$MC_{A}$			
ZWIL	1	3.*		istarine;	CSA		8.7.5. Ro.3	l
	1 .			-200∽		-00-	5/\$,-,-,-	0.8
1		1 1 1			M/	-		
1	1		1		(1/7)	1.	REFUSAL	I
1	1						8.5.5. 80.4	1 : .
		4.9		DETRUTUS: PERSEAS, CORRESS & SPALL BOAL	<b>K</b> X Y		cas/blows:	l .
1	1		1	DERS IN MEDIUM BAND, NOUNCED	K Z	-00-	15/11,7.5/9,7.5/29,2/7	D.#
ł				TO SUB-HOURDED. MAX. DIA OF	377		-	l
	1 . 1	1	1	OF BOULDERS UPTO 600 mm L.QUET	1		REFUSAL	
				IN CHECK.	[(,/;']		\$.P.T. NO.5	
2W13		""		THE REAL PROPERTY OF THE PERSON NAMED IN COLUMN 1	K. 7.4	2	cos/blows	}
	1 1			<b>≁ BO</b> ~	OU	-00	9/21,-,-,-,-,	₽.€
	1 1	ll			333			
1		5.7	5.7	QUANTE CHEISS: ( SEE MELON )	7.4		REFUSAL	
	1	6.8	į ,	CHARLES CHEISS	1.11			· ·
		7	1.	HARD, MASSIVE, COARSE GRAINED				
		!!		CRANTTE CHEISS. L. CRET IN COL.	スタ	-90-	-	9.6
	h . I		1	SLIGHTLY WEATHERED. SEARS GROSS	<b>(-1)</b>		•	
	1 . !			COL. HIMEPAL VEINS MAT BE OF CREATURE, EXICUTE, OR TOURWALLING.	V.25			
30/11	]	-;-;-		CHARLES IN TOOLS IN TOOLS INC.	经统			
1				CRAKITE CHEISS:	\$\displaystar	J		
	ļ. ļ			for the second	846	-00-		0.8
	100	i i		-00-	トゥス		4 1 1	
1					经之			
01/12	1 1	1.6		GRANITE CHEISS)	$U \subset U$	4 3		
1	1	li	i .	rand, hresive, coarse grained Greiss L.Grey in Colour Bearing	アノデリ	-90-	· _	0,8
1				ABUNEANT GREEN COLOURED HAL.	ビデン			2,2
	1 1		i l	VEIRS, MAX. TRICOGRESS UPTO	ケタ			
1	1 1			2,5 cam.	K. "I			
		•.•		GRANITE GREEK	27.5			
1	l l			ministra weeks	(~X)	-00-		D.\$
	[ ·			-50-	55	. 1		
1		l	. 1		5/2			
02/12	į	10.0			17/11			
	( I			QUARITE GREESE:	汉	1		
					14	-00-		0.5
1 1			. !	-50-	214	[		1
					147			
CNIE		21.0	į		公道			
1 1	i I			GRANITE GREISS:	ケベー			D.E
		- 1	. !	-00-	₹(4	-90-	-	0.1
1 1	. 1	ı	· I		<b>(</b> 5)	I		
1 . [			i		731			
9 <b>4</b> 12		12.0	ŀ	A	أجآبها	1		1
<u> </u>	1	ł		CRANITE CHEISE: NAME MASSIVE FAIRLY CONSSE	<i>}74</i>	-00-	. [	
		- 1	. 1	GNAINED CHEISS. L.CHEY IN	411			
[ · · [		: [		COLOUR WITH BONZ GREEN COLOURED	11-11	- 1		0.5
1	İ	<del></del>	į.	HINERAL VEINS.				
05/12		13.0	1					
- 1		į	- 1	mvn:110 MW1504	巡	-00-	<u>.</u>	D.5
J I	1.	ı	1	-80-	1.3			
		- 1	j		<b>622</b>			
		13.7	0.0		- 1		· · · · · · · · · · · · · · · · · · ·	
		.	1	( HOLE CLOSED )	I	- 1		ì
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#### 13B2

CLIENT: JICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN SITE | DATA CARDITUS BRICGE DO: 13 DOOR CRAAT CO DOSING DO.2

	Light 3	Lercicad Braige Leval	Direct In	I face ners of Lance (15 Meas)	Sease Edenburge	inter Sympa	Daniel Of Bering	Francesco (or more too	Typers at Secoptu
	17711	***************************************			DETRUCTUS COURSE SAND WITH RENGE LEAS,	0.39	, press		
					MEALING PERMET, COMMENT & MORE- DISM RELEGIO TO BEN-HOLMERY, AME, DEA OF CHANGE ZG 54 MM.	0 0 0 0	11/		***
			1++		ANT DEA OF BELLENIAS 15 \$70.0 sm DERECTES	10		\$. p. T 80. ; em/\$issq: [5/10,7.5/7,5.0/41,-,	
		1.0		·	-May-		-94	REFERE	3.8
			2.0		CHARLE SAND WITH SCHE DILT		-80-	#.P.T 20.2 enr/blooms 15/9;2/43,~:~;*-	9.5
		,			BYANTHO PERMITS COMMUNE & MCLUSTER ROLLESSO TO SAMERICANS MCL CITY 450 YOL L. CHOS CHARLES.	3		<b>200700514</b> .	
*	14/11		1,0		paratitis)	ġ,	-80-	8. P. 7 Su. 3 ens/klases 15/5,7.5/4,7.5/30,	
					•••	ÞÇ		2/40,-	
			1.4		DETRUTUE:		-90-	8,8,7 #0.4 chilima 5/29,-,-,-,-	
	23/11				TARCE BULLDER DIA 810 mm DESCRIPTION DETRITORY	KÖ.	-	servet s.p.f so.i	
l			3.5	- <sub>5.1</sub> -	GWENTE GREEKE	Øø:	-340-	15/9,7.3/11,1/39,-,	0.5
. :		,		'''	(MEZ (MELON)			parants'	
•					TANTE GREEN: MAD, HERRYE, PADRET COMME GAINES GREEN, L. GREY DI COL-		-80-		2.5
-	.;		7.1		TOTAL PROPERTY.				
-					-bo-		-210 -		1.5
		15							
					CHARLETE CREIMI HORD, MESSITYE, FALBELT COUNTY CHALLED CREIFIE, I. CHET IN COL. SACRIFIE CREEK CAL. PML. VYTHE (1.5-3.0 maj IN THICHEM)		-pa-		2,5
i	36/11		2.8	}	(1.5-3.9 eat in Inicates Security Contains	CON			
					-8/2-	<u>````</u>	-20-		0.0
			16.0		Sentati dessei		- 30	· · · · · · · · · · · · · · · · · · ·	
					- ■30-				**
			11.8		Cappellar Contrast		-30-		,,,
•					•••				
	27/11		13.0		IN CORPUS SEVERING CHICAN SWALLES SEVERING CHICAN CONTRACTOR SEVERING CHICAN	(()	·\$0	-	
			Ì.,,		CHANGO, KINGMA VEING.	然	1		
			13.0		-80-	浴	-80-		
	20/13		14.0		OMMITTE CHETER)			-	
				,	-30-		-20-		
			13.0		OWNITE CHELLE:		-1.	-	
					-90-	慾	-80-		***
			16.4		CHANITZE CONSTRUCT	<b>33</b>			
					OLA ASSA ENCORALIZACO LHICCHES'S		-90		0.5
			17.1		(1-1) con. CAMITY CONTRIL.				
4.				•	- <b>190</b> 0				
	19/11		10.0	· ·	GANTER CHELSE:	×		-	
					-30	谿			
•			19.0		GARLITE GREEK!		-80-		0.0
	30111				onderere courses.	淡	- · · ·		
	×""		20.5		CONTRACTOR CONTRACTOR	缀	-90-		
			ń.		OWITE GEISE,	談			
;					-\$a-	劉	-00-	-	
İ			21.e	. 15.3		<b>*</b> **			
!					*				
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	pare f						M.	<u>.</u>	

-228-

#### ASSULAN Compression

13B3

CLIENT: JICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN SITE | SATE SATE(19)S SAISON SON 1) COST CAAST OF BONING NO.3

-	er T	148925		(INCHA)	IN N.W.P.P PAAIS 1807		-	745	دندسين ا <del>ڪر</del> دو بن	4 m 2000 i		-
ľ	٦,	Walci Level	la Metir	of Larges	Street & service.	Labor Special	Of Beich	Ä	1	ba j	j I	Langua Langua
23	711			*********	DETRITOS COMMEZ EMO MITE CIAT.	3000						
					MEANING PERMISS, COOKERS & SOLE- DERE ROLLINGS TO BEN-ROLLINGED. AVE. DIA OF GRAVES, 15 58 BB.	p:Ø¢	1			•		0.4
İ			1.0		MILE TEAT OF SOUTHERS IS 100	00		-	8.7.1	. #6.4		
		ĺ	.,.		E Dance	<u>رځ</u> ۲		5/40				
١	١	1.1			•95•	lor.	-80-		retvi	ULL.		*.
			2.0		SESSITUS; SILTY COMME SAND MARING PER-	陵		,		20.2		1
١	Ì	ļ			REST CORNERS & ROUNCED TO SUB- ROUNCED AVE. OLA UPTO 350 MA.	緩	-60-	19/7 9/37	1.5/4,			*.*
1			2.0	3.8	OMMELLE CONTRACT (SEE GREEN)	797		ļ		•		ļ
ľ	/12		3.0		GRAFFIE GREIN: BARD, HASSIVE COMMON GRAINSE GRAFFIE GREISS L. GREY DE		-90-			-		9.4
l			l		CHANTLE CHESS L. CHET IN CLEAR, SLIGHTLE WEATHER.	X						
l			4.4		÷	D 🐃						
l					GENELLE GRETZE	W	-90-			-		0.0
1						<b>*</b>		l				ļ
		· ·	3.1		WAND MYSELAS CONNES CONNESCO.	1	-20-					ء.و
1		İ			CHELIES I., CHEY IN COLUM.	13						
	3/12	į	١.,			N						l
ľ		İ		1	OWNELLE CHETTER!	(X)	-05	ļ		-		2.5
	ł		ŀ	1.	SUST AZIN BEZINLEND LEICHNING BLANK AZIN BEZINLEND LEICHNING	P 3/		1				
l		i	1.4	1	OMETS CHEST	144	1				_	
1				1		17//	i I	1		-		*.*
1					GRAUGO GRISS, L.QUET DE COL., MESS TRUM QUE VELIGLETS.	13	1	1				
ľ	4/12		ļ · ·		GAMETE OFFINI	183	<b>F0</b>					0.4
		1			20-	[30]						
ĺ			•		Quartz Gelati	<b>1</b> %						
ı				1	Gratte getta.	盛	.#3-			-		5.8
1		İ				74%		ļ			٠,	l
l		1	11.0		GWELLE CHIEFE	13%		l				١
ı		1			-30-	<b>1</b> %	1 ~	1				
١		1	l.,,		GRAFITE CHEISE:	1	1	ı				
1		]		İ	MADD. RESERVE, FALSET COMME GRATIES CHESEL, L. CHEST DE COL. MENASTE CHESEL CEL. MEL. VESSE	(£)				-		9.2
1		ł		1	17.5+1.0 cm Dr TRICOWNE	ķ	1		1.			
ŀ	17/12	l	12.		Switz cents	<b> </b> \%						
1					- 200	133	-10-			-		0.5
1			Ì		<b>†</b>	13						
١	2	1	17.0	1	CANELLE CHESSES			Ì				١
1			ŀ		-50-	20						"
ı			10.1		(BARTE GEISS)		J				•	1
ı						46	-90-	l		-		0.6
1			١.		-90+	<b>(</b> 2)						1
١			15.1	1	QUALTE GELLS:	W	1					
				1		屬	*	ı		-		*.*
					OTT YELD DOCUMENTS TRICHESS 3-15 cm. (APPELL)	隊			÷			1
ľ	4/17		16.1	1	COMPLETE CONCUES.	18						,.,
Į					-60-	1	1					_
١			11.4	.[	GMALLE GETER	冷		l				1
ĺ			1	1	HAND HUSTYT, CHEIST L. ORDZ IN COLOUR MEANING CHEZH	13				-		9.4
					CECUMED. NUMBER VEINS.	区	4					1
ŀ	77/12		19-8		CHAPITE CHEIR:	於	1					
I		1			NAME PRINCIPE COMPANIE CONTINUE CONTINUE THE CONTINUE CONTINUE CONTINUE CONTINUE CONTINUE CONTINUE CONTINUE CONTINUE CONTINUE CONTINUE CONTINUE CONTINUE CONTINUE CONTINUE CONTINUE CONTINUE CONTINUE CONTINUE CONTINUE CONT	183	PO			•		3.5
1		1	\	}	MR. VEING, MAY BE CRAINITE, EPIDOTE OR TOWNSLIAM. GRANITE CREISE:	於	4	1				1
1		.	15.4	Ί	AMERICA CAMETORS	3)	4	1				1.4
1				[ "	+90-	1%	1	1				
			34.		CANNITE CHESSES			ŀ		:		
		-			-190-	\$	-20-			-		9.9
					TEV-	፠	1	1				
ŀ	10/12	4	31.	1	GRANKITE CHELLES:	13	1	1				1.
1		'	1	.		15	/ <b>"</b> "			-		2.5
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ļ		1	1	1		1						

A 7-TOPAR

nata life for US

#### Caasaking Boil Suprasies & Courseson

### 14B1

#### CLIENT: JICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN

SELECT 1 SENSE STORISHOODS.

Section   Sect				-	_			-	The second second second	
Determined   Det		Dese				Strata Encountred	Luine Make	fineiterter Of Beeing		lyprod jampe
00/12 1.0 DETAILED 1 00/12 1.0			¥46.230			DETRITUE!	ļ		described of the same and the same of the	
960.0 DR. L.CHET IN COLUMN.  1.0 DETRINS:  1		DV)?		1		COMMENS & BOURDERS, MOUREED TO	Qo	450	•	0.8
DECRITES						MAGO MA. L. CRET IN COLUMN.	(4)	-	All the state of t	
1007   1007				1.8			₩			
OFFICE   100   OFFICE   100	ŀ			١,				-00-	15/13.7.5/9.7.3/39.	9.0
1001   1.0						-15-0-			2.3/7,2/35 EFFUSAL	
1001   1.4		04/17		1.0		CENTRE!	$\mathcal{O}$			
1001   1.0	1	- :		]			7	-00-		9.3
10	: [					HAR. DEA OF BILLIER UPTO 750.0 SER (APPROX).			REPUSAL	
DEPAILS   DOCUMENT		97/13		3.0		DETERMINED.	连			
1.0	ł			'		+90+	-	-90-		2.5
SEPTIME   100	- 1						15%		REFUGAL	1. 1
10-0				4.5			$\prec$			
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1011   11.0	1						QL			
Set   Dia of Nation Records   Compared   C				5.0	7.	DETRUTES	NQ		#.P.T. Bo.4	
10012   11.0								-00-	12/40,-,-,	0.0
PRINCES   COMMENT   6 SOLLENS   18 SOLLENS						TERED UP- \$50.0 CEL	14	ļ	REPUBAL	<u> </u>
DESTRICT   DESTRICT	-			- , , , -		OF PRITUE:	0		\$. p.y. Ro. 5	
08/12 7.5  DETRITIES	ļ					mant, Comm. 1 SOLING		-20-	15/9,7.5/6,7.5/9,2.0/43	2.6
7.3  7.3  7.4  7.5  7.5  7.6  7.6  7.7  7.7  7.7  7.7	-			ĺ		PROJECT HAIL DIA OF BULLETS			REPUBAL	
10-12   11-0	ĺ	08/12		7.6			$\mathcal{O}$			1 1
10-12   11-0			7.3~			F 1	10	-949-	9/34,~,~,~,	D.2
10-12   11.0			ļ			-90-	ゲン		RRFUBAL	1. 1
10-17   11-0			1	1.0			1977			1 1
1012   11.0						1	M	-50-	•	2.5
10-12   11-0				١.					,	
10-12   SILTY CLAY SEARCHED, DIA   SAMESTA FROM 10.0-40.0 Ms.   GRITIST TILLON 19 COLUMN.   Column		09/12		7.0		onante:	Hô	]		] ]
10-12   11.0					]	SILTY CLAY MAKING GRAVEL,	4	-80-	v 4 5 4	2.5
10:12   11.0				ļ		PANELS FROM 20.0-60.0 Ma.	26			
11.0			l	10.0		1			CR4/31sw6:	
13.0	1					; <b>-</b> p>-	10	-90-	i	2.5
### ### ##############################				1	:		120			
12.8  DETAITUR: SILTY CLAY MARING GRAVE SILTY CLAY MARING GRAVE SILTY CLAY MARING GRAVE SAMES FROM 13.0-45.00 sm. L, CGLAY DE COLCUR.  DETAITUR:  DETAITUR:  13.0  DETAITUR:  -DO-  DETA		LOr12		11.0		(Eleta/gi	0			
12.8	- 1				ĺ	-00-	n's	-99-	13/12/7.5/22.1.0/39,-,-	p.±
DETAITURE   DETA	- 1						10			
13.6   DETRITURE				132.			20		196/blaves	
13.4 L. DETRITURE  11/12  14.0 DETRITURE  -DO-  15.0 DETRITURE  -DO-  15.0 DETRITURE  -DO-  15.0 DETRITURE  -DO-  15.0 DETRITURE  -DO-  15.0 DETRITURE  -DO-  17.0 DETRITURE  -D	ł					RETURNED TO BUY HOUNCED, MAY . OUA	is contraction	-90-	2.0/63,	2.2
11/12  14.0  DETAITUR:  -DO-  DETAITUR:  D	-					L. OCION IN CHAR.	Q?	ļ	PEPUSAL	
11/12  14.0  DETRITUE:  -DO-  DETRITUE:  -DO-  DETRITUE:  -DO-  DETRITUE:  -DO-  DETRITUE:  -DO-  DETRITUE:  -DO-  DETRITUE:  -DO-  DETRITUE:  -DO-  DETRITUE:  -DO-  DETRITUE:  -DO-  DETRITUE:  DETR	١			13.9	1	ATA (748)		<u></u>	540/014001	
15.0 DETRITUE:  -DO-  15.0 DETRITUE:  -DO-  16.0 DETRITUE:  -DO-  17.0 DETRITUE:  -DO-  17.0 DETRITUE:  -DO-  DETRITUE:  DETRITUE:  DETRITUE:  -DO-  DETRITUE:  DE	Į					-00-	004	~	REPUBAL	***
15.0 DETRITUE:  -DO-  15.0 DETRITUE:  -DO-  16.0 DETRITUE:  -DO-  17.0 DETRITUE:  -DO-  17.0 DETRITUE:  -DO-  DETRITUE:  DETRITUE:  DETRITUE:  -DO-  DETRITUE:  DE	1	11/12				حمد د را آپيدسا	10,5		, ,	
15.0   DETRITURE	ŀ	41		,		(BERTEN)	Öő			۵.4
12/12 16.0 DETRITUR:   -DO-  -BO-  -	. ]		:			-10-	28	"		
12/12 16.0 DETRITUR:   -DO-  -BO-  -	- 1	1		,,,		DETRUTUE	729		\$, y. T. Ba. 12	
12/12 16.0 DETRITUE: ### ################################	l						QQ	-20-	5/47,-,-,-,-	2.5
12/12 11.0  DETRITUE:  -50-  12/12  11.0  DETRITUE:  -50-  DETRITUE:  50- DETRITUE:  50- DE	ļ						pos			
-50- 50- 15/5,7-3/6,4-0/41,-, 15/5,7-3/6,4-0/41,-, 15/5,7-3/6,4-0/41,-, 15/5,7-3/6,4-0/41,-,	ſ				[			1,111	1.	
17.9 DETRITUE: 00 - 50 - 50 - 50 - 50 - 50 - 50 - 50		12/12		14.0		••	197		Cug/blows:	p.,
	l					-:0-	DO.	-20		
					i		66			1 1
	1			17.2		DETRITA:	ιĝ.			
	ļ					-00-	829	-90-	*	* *
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	}						ΚX			
19.4 18.9	ļ			1	10.0					
( MSLE CLOSED )	١					( *** CO### )				
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Data DEC 15, 1982.

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#### 14B2

# CLIENT: JICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN

STAS I SANAE SAUN/SYLOGE SPICE NOI 14 BORE CHART OF BORIES BOLL

Date	Groved		Taxtace	Serata Escanasered	Lithic	Desmeter	∱¢ <u>ą≿irauon (cił</u> Βί <u>ου Νο.</u> 20 40 60 80	Types
	Water	 Neter	of Layers (in Mains)	NINA Decidantes		CK British	10 40 W	Sampl
25/11	ļ	ļ			100			-
25/11				DETRITUE	120.	ļ :		
	i			BILITY BAND, SEMAING PERSONS,	ΠØń	#3¢	-	0.8
		( I	. :	COMMENS & MALLERS, RESIDED TO SUM-RECURED, HAX. DIA UPTO	$V(\mathcal{J})$			}
				\$50.00 ma. L.GREY IN COLOUR.	100			
	ļ	1.0					8.F.T #0.	
	į	( i		DELIGITATE	134		ema/blova: 15/12,7.5/13,5/41,-,-,-	
	114			-04-	IO(	-00-		0.5
		i					REFUSAL	1
		3.9			0	I	8.P.T #0.2	
	l			ENITE:	17 Y		i	١
		ľ		-PO- WAX DIA OF BOUNDER UTTO		-00-	2.0/40,-,-,-,-	0.0
i	Ι.			950,0 m.	ろし		RETURAL	İ
	[ ,	7.0			14		#.F.T #0.3	
26/11		ļ <b>.</b>		DETRITUE:	$(\mathcal{L}_{\mathcal{S}})$		cas/blows:	
				-50-	10/	-00-	13/43,-,-,-,	D, 8
		1	•		凮	1	REFUGAL	
- 1	Į				O.	l	8.P.T No.4	l
27/11	1	4.6		DETRUTUS:			cus/blows:	
						-00-	15/12,7,5/13,7.5/14,	9.5
		1	l	POTETREN ENCOUNTERED ALLIA Y -CO-	<i>II</i>	1	3/41, asrceal	i i
		I	, ,	DIA OF 1050.0 MH (APPEN).	Ka	[		
		5.0	ł	DETAINUE:	ΙĿ		S.P.T No.5	
					Ι <i>Χ</i> Ū	-200-	12/47,-,-,-,-	0,\$
	Ī		l	-00-	1	1	REPUBAL	1
1			. 1		۲			1
i	1	6.1		STATICAL SAND, BENKING	17		S.P.Y Ro.6	
	:		. 54	PENNERS & CONNESS WITH SOME	o'x C	-00-	15/13,7.5/12,5.5/47,-,-	0.5
			1	MOLUMENS, ROUNDED TO SUB- MOUNDED YELLOWISH CREY IN COL.	化方		REPUBAL	
				MAX.DIA OF BOXICERS OFTO 150mm	136		13/V-AL	
		7.0			N/A			1
	l			CETE (TOP)	$Q_{\perp}$	-62-	_	0.5
				-80-	$\mathbb{R}^{C}$	1	·	
	Į .	l			1.20	<b>.</b>		
	1	1.0			$V_{\mathcal{K}}$		E.P.T Mp. 8 cme/blows:	1
28/13		1	(	DETATION MANIE GAVE.	LOS:	-90-	9.5/42,-,-,-,-,	0,4
		1 :		MOUNTED TO SUB-ROUNDED. DIA	180			l
		ļ.		NAMES FROM 15.0-75.0 pm. L. TELLOW DR COLOUR.	2770		PEFUSAL	
		9.0			4.0		and the second	
				<u>कारत एकः</u>	69	-00-	<del>-</del>	2.2
			1. 1	-50~	190			
- 1		}			624			
29/11		10.0			P#/		E.P.T. Ro. S	l
- 1	1		[	INTERIOR INTERIOR INTERIOR INTERIOR INTERIOR INTERIOR INTERIOR INTERIOR INTERIOR INTERIOR INTERIOR INTERIOR IN	0.	-00-	cas/61ces) 15/9,7.5/12,7.5/3,3/39	,,,
l				-00-	000		-	
-		•			000		PRIVALL	1
i		11.0		DETRITUS:	20.9		8. P. T No. 3	1
	ŀ.				98.		Cas/biors:	D. 0
-				-20-	0.60	-90-	7.3/40,~,~,~,~.	i
1					200		DEFUELL	1
		12.8		(FTETUS)	100		8. P. T 20. 10	
10/11	ļ	13.0		CITY CLAY SEARTING CRAVEL DIA	38	-90-	cme/blovet	
				PANCES FROM 35.0-85.00 pm.	1340		15/9,7.5/7.7.5/10,-,	4.8
j				TH COLOUR	لتزريا		REPUSAL	1
		اجنيب			0.0	- <del></del> -	8.P.T No.11	1
- 1		13.6		produs:	ľÔ.		casiblous;	ļ
į			. 1		QX	+900+	15/13,7.5/9,5.0/43,-,	D.#
	i			·DO-	lox f		BBFUSAL	Į.
i	. ;		<b> </b> _	<u> </u>	E 47			1
į		13.6	13.0					ļ
[		· .		( MOSAE CLOSED )	l	i i		l

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pata DEC 05, 1992.

#### 14B3

CLIENT: JICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN SITE : SAMAR BACH/SALOCA SQUEE : SAMAR BACH/SALOCA BORE CHART OF BORING MG.3

Dett	DI BANI	(A) più	sectors	4,,,,,			हेरमस्थानकरम् हेवस शहना रेड्ड २० का स्ट्रा	leen
	Water Lavel	la Maccr	ei lawn	TAN-PIT ENCADRICALES		Di Boring	20 4° 46 M	lypes o Sample
771				DETRITUS:	10.00			
		.	***	SILTY BARD MEASTRO PERMITS. CHRALES & BOULDERS, MOUNCED TO	K.g.			٠.
			!	ista-activity), wax, dia ut	1/	435	• • • • • • • • • • • • • • • • • • • •	0.4
			ł i	MOULTERS UPTO \$00.00 mm.	1/2			
		1,0		CETALTUS:	KЩ		S.P.T Ho.1	
		[	ļ !			-00-	15/4,7.5/13,7.5/42,-,	0.5
- 1				*BO*	//**		REPUBAL	
- 1	1.3	2.0	1	ee e e e e e e e e e e e e			8.P.T #0.2	
1	1	1	ì	CETALITYS:	DΟ		cns/player	
		]		-50-	۲٦	-20-	2.37,+,+,+,+,	0.5
			<b>l</b>	HAX. OLD OF BOULDER UPTO 950 MM.	I A	Ì	REFUSAL	ł
7/11		3.0						ŀ
					<b>-</b>	-20-		2.5
			l	-90-	<b>~</b>			
	İ		l		7 52		المحادي المراجع المناسب	
. 1		4.6		DETRITUS:	ЪÖ	i i	S.P.T #0.3	ŀ
į	İ			SILTY CLAYEY EARD MEASURE FINE- LES COMMES & SOLLEGES, ROUND- TO TO MEASURE FOR MALINE	$\mathbf{O}$	-90	12.5/43,-,-,-	0.4
- 1		•			$\mathcal{M}$		MESART.	
7/11		5.0	l	350m TELLORISI GREY IN CIL.	D)		S.P.T Bo. 4	
"	Ì	′′′′		(EPLIE)			cos/hlors:	2.5
-	ĺ			-20-	PF	-50-	15/12,7.5/4,7.5/36,-,	
. [					150	9	REPUBAL	1
1			i		おかく			5
				ENTRATAS: SULTY CLAY MEASURE PERSONS,	RO	-20-		0.6
				COMMEN & SOULDERS ROUNDED TO SUB-BOUNDED, NAME DIA OF BOXESTEN	ЫĎ	1		
			ļ	UPTO ISOm L. FELLOW IN COL.	\.\r			-
		1.0		CETALITUS:	l./>-			
ĺ					<b>/</b> 7/	-80-	· •	2.5
				-50-	[**).	1		
	l	ĺ.,	l	المنت المنتد المنتد المنتد المنتد	P≍c	]	5.P.T. No.5	
7/11		1.0	1	SCIRITUS:		1	ene/blaves	Ī
		1		-30-	M	-20-	15/29,4/49,-,-,	\$.5
		•	1		PáC	ļ. I	RRFUSAL.	
			ĺ	DETRITUS:	18 B			
				SILTY CLAY MEANING CRAWTEL, MOUNTED TO SUB-MEANINED, MAX.	200	-00-	. ;	9.5
		1	i	DIA UPTO 15 mm L. YELLOW DE				
			1	The state of the s				1
Mi		10.0	·	ERITE:	77		3.2.1. 30.6	
1	i	1	1		00	-240-	3,9/36,-,-,	0.5
1		İ		+50~	000		REPUEAL	
		17.0			0		5.P.T. Bo.7	
			l	CETALTUS:	3		C00/6]GVS1	
	Ì	l	1	-00-	Ξŏ	-90-	7/43,-,-,-,-	2.5
		l	!		محج		REFUELL.	
/12		12.0	[		000		E.P.T. 80.8	
- 1			l	CETAITUS: SILTY CLAY MEMAINO GRAVEL, SOURCED TO SUB-REMOVED, FAM. DIA UPPD 60.00 SM L. CRIY IN COLOUR	20	-80	15/11,7.5/6,2/42,+,	D. #
ı				ROLLED TO BUS MIXMOED, MAX.DIA	Pac		REFUSAL	
			Į i	CPTO \$0.00 SM E. CRIT IN CLEAN	OQ.			
- 1		13.0		DETRACTUS:	20		A.F.T. Ho. 9	1.3
		[	1		ĽΩ	-00	3/34,-,-,-,-	2.5
.				-#0-	ťΥ		REFUSAL	
- 1					böz	5 .		1
į		14.0		CANALITUS:	00	ĺ		
- 1				-po-	00	-00		P.5
ı					012	1.4	1	
/12		15.0		CETRITUE,	194			
′"]					600	100	6 46	4.5
				-00-	200	-20	• :	0.6
- 1		ا ا	,	HAX. DIA OF GRAVES UPTO 45 em.	600	.		
		16.0			المدة			
		I.		DETRIYU6:	97	+90-		0.5
			· ·	-90-	0.0			
		]			የተለታ			
					L			
		17.0		DETRITUE:	500	-pn-		
				.po-	936 818 9	-90-		D. £
		17.0	17.4		286 289	-90-		
			17.4	DETRITUE:	835 838 8	-90-		

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Date DEC 84, 1992.

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#### 14B4

CLIENT: JICA BASIC DESION STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN 

	-			بنسبي	-	~	-	-	-
	1***	Granes	la la	of Larrers	Same Kataryanes	1	freezus.	No en en se paraitation las paraitos	Inger of
	l	FEAR	10011	(re Mirror		814030	(3) Bessel	[1] (	340 pr
			1	(25,000,000)	toe Soil	2000	- All And American	To a the second	1000airata
	<b>64:13</b>	1	1	i	SELTY CLAY, RICH IN RANGE, MAPING PERSONAL & COMMENS	1	412	<b>!</b> .	<sub>2.4</sub>
	i		1	1	MOUNTED TO SER-MOUNTED, MAIL DIS UPTO 18.0 on TELLOWING MOUNTED	į	, m		- ; ;
	l	1	1.	1	COLUMN, MOST CONTRACTOR MOST DE	1			l :
	l	1	1.0	1	1504_10 E			8. P. T. Bo. 1	
	Į .	1	1	1	SETRIFICE CONTINUES OF HER, COR. E BOALCHESS, ROUNDED TO MAN-MOU-	الخذر	-44-	15/6,7.5/5,7.5/6,	2.4
		1	1	1	& BOULEMAN, NOVEMBER TO BUS-ROLD-		, ,	7,5/12,7.5/7	1 :
		1	1	1	NOTE OF STALL STALL SERVICE CALCULAR PROPERTY CA	3		MESTON DANS	1 :
	ł	1	1.5		OLISTAN.	1			
				l	l <del></del> -	łãν	-20-	-	2,2
	l	1	1	ļ	SPAL DIA OF BOLLOCK ENCOUNTERED 1070 am.	198		·	] :
	1	ł	l	1	. ""	19			
	97413	1	3.0	1.1	STATE CLAT SEASONS PROCESS.	Yo.		8.2.7. He. 2	
	ı	1		[	CONCLUS & MALASSIM, RANGED TO SAN-RANGED, HAZ-CIA 1870 43044	ŊQ,	-50-	7/43,-,-,-,-,	8,1
	1		1	l	L. TELLOW IN CILCUM.	Q,		BEFUELL	1 1
	!		1	1					1 :
	1		4.4	i i	DETICINE:			#.P.T. No.3	1
	1	ŀ	1	[	ALITY CLAY MEMORIS CHAPAL. ALUCCIO (C. S.B. ALUCCIO, PAL.	l?ö	- 86	15/21.5/30,-,-	0.0
	1	1		į	TOTA UNITO 15.0 ms. L. TELLOM			REPUBAL	
	er/12	J	l.,	ĺ	112 CZ.O.B.	χō.	-		i I
	Jan. 1.	1	1.1		DELUTIFIE!	ועָס			1
	l			l	-80-	≫	-90-	•	*.*
	1 .	1		Į.	MAL. MIA UPTO 45.00	LA.	"		
		1			DETRUTUS.	$\mathcal{C}_{\mathcal{L}}$			
	ĺ	1	1		SETTL CLAY BENEFITE CHAPTER &				1. 1
	•	1	I	l	MALANDE: NOUNCES TO MA- MANAGED: NAME, DEA LATES \$50.3 am	b\	-40-		7.4
	}	6.5	1	I	L. YSLOW IN COLOR.	( )			
	es/17		2.00	į	·	M/	·		
	l	1	1	]	DELECTED I	HL.			ا ا
	1	1	1		- No.		-84-	- '	*.*
	ł	1	1 .		HAZ. DEA OF BUILDING UPTO \$00-	6			, I
	l	1	9.3			39		1.P.T. Bo.4	
	1	1	1	1	SUTY CLAY MARKING CRAWS	الجنح		13/13,7.5/4,3.0/30,-,	,,
		ł			RLTY CLAY MEMBERS GRAVES. ROJECTO TO SUB-ROLARDO. DEA NAMES PROFE 13.8-35.0 mm	$\mathcal{Z}_{\epsilon}$			""
	l	1			NAMES PROF. (), (~)5,0 ms L. 1920-19 CECUL.	Q.C		BEFVSAL	
		l	*.0	l .		Ϋ́O			
		I	1		CELETATE:	ŁÖ	ا بير		ا ريزا
			1	ļ		Ωō			
	١,	ļ	1			$Q_{ij}$			
	HET S	1	10.0		SETELTIME:	30	1	#.P.T. Bo.5	ļ İ
		į .				9.1		\$/43,-,-,-,-	
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		Į .	12.0	"	SKTRITUE:	(C)	- i	g.P.S. Be.7	
	٠.				FILTY CLAY MERCHIN SPALE, CHAYTE	77	-20-	13/9,7.5/5,7.3/6,	8,6
		l			(UPTO 10.8 cm), ACURCED TO BUS- MUNICIPO WITH L.SCLEDBIS (UPTO	ا/ب	- 1	7,3/4,7,3/7	
				, 1	HO ME TELLOW COLUMNS.	464	1	SERSO MULESO	
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#### ASSOPAK Geneller Sel Entertri & Control of

#### 15B1

#### CLIENT: JICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN

DATE : HAMPLAL/CHAY BAIDS NO. 15 BOLE CHAY OF BORNES NO.1

Very   Dec   Company   Dec   Company   Dec   D	CHARLES			-		-	e constant			
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1000   1000	A. C. C. C.	<b></b>	\ <u> </u>	<del></del>	YOP SOIL!		***	<del> </del>		****
MARIAN PROMISE TO REPRESENT OF THE PROPERTY	6510	ŀ	ļ	Ī	SMERY RELETY CLAY, WITH MAKE	$\Lambda = I$	1			
TOTAL SOLIDAY - DO-  TOTAL SOLIDAY - DO-  TOTAL SOLIDAY - DO- TOTA			1		MILANIA PENNIZS & COMMENT 175+	I\				5.8
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1.0   2.4   2.4   SETTING   PROMESS OF SAME   1   1   1   1   1   1   1   1   1	1	1			-95-	W			•	\ *"°
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10/10   1.0	]				HELL ROUNDED TO BUT HOUSERD IN	ĺΟÝ				1
DOVID TO PERMILES COMBAINS & COMB		i			THE STATE CLAY.	P <u>.</u> (2)		9 4		
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10.0   10.1   10.1   10.2   10.2   10.2   10.2   10.3					PERSONAL PROPERTY STATE	PĂ:	-30-	29/9.9.9/32		4.8
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10.0   10.0	1 1		8,0		APT-17-18-1	Y.O.		f.P.T. He.		
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19.0   19.0   CETATURE   S.P.T. HO.12   S.P.T. HO.13   S.P.T. HO	1 1		3.9		DETRITUS:	O,		S-P-T. He,	3	: 1
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PRINCES ARE REMINED TO MAN- REMINED CHARGE CHARGES SHIRM  12.0  SONE GRANTIC EXPLISES SHIRM  SONE GRANTIC EXPLISES SHIRM  TORID (120-120 ms)  JERRITURAL  JERRITURAL  PRINCES, COMMINES & SCILLERS IN  SILIT SAMO ARRANCE DIA OF  SOLUZIORE IN PRINCES IN SOLUZIOR  L. GREI CHARGE CHARGE  L. GREI CHARGE CHARGE  DESTITURE  -BO-  JIA.0  11.7  11.7  QUANTITE GREISERINGS. 500 Sem Blow  VITIAN GREI IN CHARGE  REMOVERY 161  GRANTITE GREISERING  SAMO, PRINCESCUL, CHARGE GRAINED,  HERDITURAL  15.10  15.0  16.6  8.7  GRANTITE GREISERING  SAMO, PRINCESCUL, CHARGE GRAINED,  HERDITURAL  11.9  11.0  GRANTITE GREISERING  ARROWS CHARGE		18.5			CLAY CONTENT IS SURDRISED.	300	-50-	19/11.7.0/14	•	D.E
13/10 STRITUS: 00- 00- 00- 00- 00- 00- 00- 00- 00- 00	1 1				PENNELS ARE NOUNTED TO AUG-	0		REPUBAL		
13/10   11.3   11.3   11.3   11.4   11.4   11.4   11.4   11.5			ه. د د	7.5	RUMBED CILCURED L.GRET.	de.				
13/10  12.0  12.0  12.0  12.0  13/10	1 (		,		DETRUTUS :	١٣.		#.2.T. #e.	11	
13/10  13	1 1				-50-	320	*90-	BEFUEAL		9.5
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SILTY SAND ANDROOM DIA OF SOUTH AND	[,,]	l	"			상님	_ [	+ <del></del>		1
10.0   10.0	12,110					) <del>)</del> [		BHFUSAL		P.7
14/10  11.7  11.7  11.7  10.6  COMMITT CONTEST STATE CONTE	1		i . I	,	NOVALDERS 13 MACUT 150 mm	O,O	_		ı	c.\$
14/10   11.7   11.3   CANNITE CHEISSIET. 501 See Blow   C.			اا		r. mezi duldined	)/3	1	4.P.T. 20	ا رر	1.
14/10  11.7  11.3  CANNITE GREISS: SEC. 504 See Blow C.C.  CANNITE GREISS: SEC. 504 See Blow C.C.  CANNITE GREISS: COMMER GRADRED.  WITISH GREY TH CHCAR.  RECOVERY: 765  CRARITE GREISES:  15/10  15.0  CRARITE GREISES:  CRARITE GREISES:  FAMO. NO BURGERS.  A.C.  11.6  6.7  GRANITE GREISES:  FAMO. NO BURGERS.  C.C.  C.				j	DESKITUE	80				
11.7 11.3 GRANITE GENISSISTIC.508 Sem Blow Color	] ]			]	-90-	3 <i>0</i> ,9		RETUGAL		
19/10   15.0   CANATT CENTER CALIED					7 - 1	إدرو				4.5
19/10   15.0   CANATT CENTER CALIED	14/10	.	14.6	11.3	THE PERSON NAMED IN COLUMN NAM	4			. [	4
STITION ORDER THE COLORN.  15/10  15.0  15.0  15.0  15.10	1					1 1				
15/10  15.0  15.0  16.0  17.0  16.0  17.0  18.0	1			į	WITIEN CHEY IN STACKE.	33		-	1	C.3
15/10 15.0 1.6 NANTYE GENISES 100- 15.13 1.6 SETATURE STATE				į	RECOVERY: 761	1,1		,	. 1	7.5
19-90   19-90	13/10		25.0		GWATTE GENTRES: -DD-	11/1				:
18.40   0.7	1 1			1.5	EXTRITUE:				1	
18/10 17.0 GRAFITE GENISES   100   1	1			}	EARD. RO BOLLINGS.	5/4	-gc-	_	1	C.5
18.6 8.7 GNAPITE GENISES: NAND, PASSIVE, UNASEE GRAINED, NRITIEN GREET EN COLOUR. RECOVERY: 481  19/10 17.0 GRAFITE GENISES:  CAMPITE GENISES:  111.9 2.9 RECOVERY: 481									1	4.5
18/10   17.0	Į Į			(		<b>\</b> ;:4		5 1	!	
18/10   17.0   GRAFITE GENERAL   -80-   -80-   -11.9   2.9   FEDERAL 48%   -10-   -10-   -11.9   2.9   FEDERAL 48%   -10-   -1	] ]		16.6	0.7	CHARLE CONTRACT	-/,		-		
18/10 17.6 GRAFITE GRAIPES: 1/2 -80- C. A. S. S. S. S. S. S. S. S. S. S. S. S. S.				- 1	WITTEN CHET THE COLOUR.	) = l	-90-	_		C.8
19/10 17.0 GRANITE GENIEFE: 1/2/ -80- C	1			l	1500/2501 681	111			1	9.5
19.710 17.6 GOARTTE GENIZES:	1			l	<b>  </b>	17/	<u> </u>			
2.9 PRODOVIDES 1 486	19/10		17.0	ĺ	CONNELLE CONTESTS:	42				
23.9 2.9 PRODOVERSO 486	1 1			j		シー	-90-		. 1	C.8
2.9 NOCONSTAN 484 -	1			1	-10>	-1-	1	100	1	T.S
13.9 2.9					PRODUVERS: 48%	الإتر	·		1	7.7
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Date OCT 23, 1992.

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Ominate Engineers

#### ASSOPAK Continue fait squares & Continues & 15B2

### CLIENT: JICA BASIC DESKIN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN

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		1450	M# 17	en Miter		Jysses weige	(# 8mm)	Torrida o Art 1 Tarabasa	24.2454
1.5	13153				POP BUILD	1			
					GAT TH COLLER, SWALES PROBLES 1 COMMUNES (15-45) Mail.	IV	3.60		0.0
				Ì	RE-MILES TO RE-RUNGO	I۸	_		
			1.0	[	TOP MOLEU . SÓ	VΝ	[	#iPiTi Weil	
	1.0		1.1	1.3	CONFORM OF PRIMARS & COMMANS	S	-20-	15/2,7.3/6,7.5/6,	9.2
		3-8			YETH PARLY SOULDERS IN SANOT	Sa.	****	1.5/4.7.3/9	***
100	1				BILT. RUMAN TO MA-MUNES L. CHEY IS COLUMN.	. U 1		######################################	
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		1	3.0	<b>I</b>	OCTRATION :	0%		5.F.Y. 40.3	
		[		i i	PERMANACIONALES & SCRICTORS WITH OLA MARKE TRUE 350- 750 mm.	000	-90-	REPUBAL	8.8
					MELL MEANING TO BUS MUNICIPAL IN SAME SILL.	(20			
	22/19			•	DEDKINS)	100	-	#. P. T. Ba. 6	
	74.18		' '	•		<u>)</u> "		3.2.101 2310	
		[ .	i '	<b>]</b> .	COMPOSED OF PERSONAL COMMENTS &	يبرع	- 50	REFUEAL	2.5
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	1:	1	) · .	}		بالإ	-00-	33/8,1.3/31	0.8
	1		1		-80-	O			
	23/10					Yo.		REFUSEL E.P.T. Be.S	
•	1		-	1	DESTUTUE	$Q_{i}$	-84-	REPUBL	ا ا
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	i	l		l		ĽΩ			- 1
	<b>}</b> -	İ	1.0	1	DETRUTUE:	<b>1</b>		E.P.T. No.9	ļ
: .	ŀ			ļ .	PONCES, CONNECTS TO SAMEY STATE.	K	-60-	1575,7-575,7-5751,	2.0
	ł	l	l	1	CHARLES VITT DEA RANGES FROM 500-750 min.	0		REPTEL.	
*		1	10.0	ĺ		œ	2.3	#.P.T. 30.10	i
				•	OCCUPANT.	D-17.	-94-	EMO/819481 L1/9,2/26,-,-,	0.0
1			1		•es-	پي		APPEALL	1
			11.0		DESCRIPTION OF	30			1
	]		l''''		SCHE CHARITY C SCHLORE ENGINE	is:	-50-	3.P.T. 90.11	
	]	l	11.4	11.,1	TORD (250-129 ms) CHARLES (DELINE)	4.4	~ 14	000/3/0101 15/9,7.5/8.5/61,	*.*
1.3				j	رسمير چون	13		REFUGAL	6.8
	1010		23.5		OWITE GELM!	. 3			
					man water or tartery crosses.		-30-		4 1
					COALINE COMPLETE CORLEGE, HELTELSHI CORT IN COLCUM, TOP PURPOSE				7.4
	]		12.2		SLIGHTLI WARRENDO, L. GREY COL.,	3.33			ļ
and the second			12.2		CHARITE CHEESE:	30.4			6.5
* .	. :			j ·	-200-	× .	-93-		
the state of the s						3.53			w.s
						10.0			
			14.1	}	Charles Courses				
			14.3		GWATTE CERTIES: HISO. PASSET/E, COMME GRAJIED.		-10-		2.5
			14.1		MOD. MATERY, COMME GRALIED. STYLE GREET IN COLOUR. MATERIAL SAL		-10-		c.s
	33/10				NESO, NASSTYN, COMMIN GRAINED. MITTER CHIT IN COLOUR. MICHIGAN 963		-10-		
	15/10		14.1		NESO, MARITYE, COMMER GRAJIERO. STYLER CHEE IN COLOUR.				•
	13/10				NESO, NASSTYN, COMMIN GRAINED. MITTER CHIT IN COLOUR. MICHIGAN 963		-140-		0.5 C-8
	23/10				MADO MARITY, COMMIT GRAJIED, SYTTER GREE TH COLLUR. RECOVERCY, 645 GRANITE (SERIER)				0.5 C-8
	25/10		11.0		HADO MAKETYE, COMMET GRAJIEDO, SYTYER GREE TH COLLUM, RECOVERCE, 665 GRANITE, CHRISTON, -BOCOVERCE, 270 CRANITE, FORCE MESS.			<del></del> -:	0.5 C-8 8
	25/10				NAME OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF T				6 0.5 C.8 8 8.3
	<b>13/1</b> 0		11.0		HADO MAKETYE, COMMET GRAJIEDO, SYTYER GREE TH COLLUM, RECOVERCE, 665 GRANITE, CHRISTON, -BOCOVERCE, 270 CRANITE, FORCE MESS.		-30-		0.8 C.8 9.8
			11.0		NAME OF THE COLUMN CONTROL OF THE COLUMN IN		-30-		6 0.5 C.8 8 8.3
	25/10		11.0		NACOMENT, COMMET GRAINED, STYLER GREE H. COLOUR.  RECOMENT; 845  GRANITE GREE RB;  -BU  CRANITE GREE RB;  AMO, MARIYE, COMMET GRAINED, MEITIGE GREE IR COLOUR.  MEITIGE GREE IR COLOUR.		- <b>3</b> 0-		6 D.S 8 8 8.8 F.S
			11.0		NAME OF THE COLUMN CONTROL OF THE COLUMN IN		-30-		CLE E E E E E E
			11.0		NAME OF THE COLORS GRAINED, STYLES GREE OF COLORS, RECOVERED, STATE CREE OF THE COLORS GRAINED, SETTING GREE COLORS GRAINED, SETTING GREE COLORS GRAINED, SETTING GREE COLORS, SETTING GREE COLORS, SETTING GREE COLORS, SETTING GREE COLORS, SETTING GREE COLORS, SETTING GREE COLORS, SETTING GREE COLORS, SETTING GREE COLORS, SETTING GREE COLORS, SETTING GREE COLORS, SETTING GREET, SE		- <b>3</b> 0-		6 0.8 C.8 8 8.8 E.8
			11.0		NAME OF THE COLORS GRAINED, STYLES GREY DE COLORS, RECOVERED, 60%  GRANITE CHECKER, 60%  CHARLET CHECKER, 279  CHARLET COLORS GRAINED, 60%  RECOVERED GREY IN COLORS GRAINED, 60%  RECOVERY, 61%  GRANITE GREYERES GRAINED, 60%  RECOVERY, 61%  GRANITE GREYERES GRANIES GRANITE GREYERES		- <b>3</b> 0-		C.# C.# C.# S E.0
			35.0 14.4		NAME OF THE COLORS GRAINED, STYLER CHEE IN CULCUM.  RECOVERED; 045  DROWNERS; 045  DROWNERS; 045  DROWNERS; 047  RECOVERED; 277  CHARITE ORDINES;  MANO, PARKET, COMPAR CHAINED, MEILISM CHEE IN CULCUM.  RECOVERY; 617  GRANITE ORDINES;  MECOVERY; 617  GRANITE ORDINES;		- <b>3</b> 0-		CUE A BUD CUE A
			35.0 14.4		MANUTE COMMET CHAIRED, STYLER CHEE, STYLER CHEE, DICTUCAR, BECOMET, 685  GRANITE CHEE, 579 CHAITE CHEE, COMMET CHAINED, MANUTE CHEE, BECOMET, 579 CHAITE CHEE, COMMET CHAINED, MANUTE CHEE, COMMET CHAINED, MANUTE CHEE, BECOMET, 619 CHAITE CHEE, STR. ST. ST. ST. ST. ST. ST. ST. ST. ST. ST		-60-		6 P. S S S S S S S S S S S S S S S S S S
	24/10		19.4 19.4		NAME OF THE COLORS GRADUED, STYLES GREY DE COLORS, RECOVERY, 60%  GRANTE CHECKER, 20%  PROCESSES CHECKER, 20%  RECOVERY, 279  RECOVERY, 279  RECOVERY, 61%  GRANTE GREENERS  RECOVERY, 61%  GRANTE GREENERS  RECOVERY, 41%  GRANTE GREENERS  PROCESSES  RECOVERY, 41%  GRANTE GREENERS  PROCESSES  RECOVERY, 41%		-60-		CUE A BUD CUE A
			35.0 14.4		NAME OF THE COLORS GRAINED, STYLER CHEE IN CULCUM.  RECOVERED; 045  DROWNERS; 045  DROWNERS; 045  DROWNERS; 047  RECOVERED; 277  CHARITE ORDINES;  MANO, PARKET, COMPAR CHAINED, MEILISM CHEE IN CULCUM.  RECOVERY; 617  GRANITE ORDINES;  MECOVERY; 617  GRANITE ORDINES;		-90- -90-		0.6 0.6 9.6 9.6 0.6 0.6 0.6 0.6
	24/10		19.4 19.4		NAME OF THE COLORS GRADUED, STYLES GREY DE COLORS, RECOVERY, 60%  GRANTE CHECKER, 20%  PROCESSES CHECKER, 20%  RECOVERY, 279  RECOVERY, 279  RECOVERY, 61%  GRANTE GREENERS  RECOVERY, 61%  GRANTE GREENERS  RECOVERY, 41%  GRANTE GREENERS  PROCESSES  RECOVERY, 41%  GRANTE GREENERS  PROCESSES  RECOVERY, 41%		-60-		o pus pus pus sus cus a pus cus a pus a a pus a p a p a p a p a p a p a p a p a p a
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	24/10		19.4 19.4		MARITY COUNT GRAINED, STYLER GREY DE CUCCUR. RECOVERS; 0%5  GRANITE CHILLES;  -BU- RECOVERS; 279 CRANITE GREYERS;  MARITY GRE		-90- -90-		0.6 C.8 e e e e e e e e e e e e e e e e e e e
	24/10		19.4 19.4 19.9		NAME OF THE COLORS OF THE COLO		-90- -90-		0.6 C.8 c c 8 c c 8 c c 8 c c 8 c c 8 c c 8 c c 8 c c 8 c c 8 c c c 8 c c c 8 c
	24/10		19.4 19.4 19.9		MANUFACTOR COLUMN COLUM		-80- -80-		0 0.6 C.S s s s s s s s s s s s s s s s s s s s
	25/19		19.4 19.4 19.9		MARITY CHARLES  SPARTTE CECLOR  SPARTTE CECLOR  -90-  RECOVERS; 995  RECOVERS; 270  CHARLES ORGERS  MARITY CHARLES  MARITY CHA		-80- -80-		0.6 C.8 c c 8 c c 8 c c 8 c c 8 c c 8 c c 8 c c 8 c c 8 c c 8 c c c 8 c c c 8 c
	24/10		19.4 19.4 19.6		MARATTE CHARGES  SPACETTE CHARGES		-80- -80-		0.6 C.8 6.8 8.4 6.8 6.8 6.8 6.8 6.8 6.8 6.8
	25/19		19.4 19.4 19.6		MARATTE CHARGES  SPACETTE CHARGES		-80- -80-		6 0.6 C.S 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
	25/19		19.0 19.0 20.0		MANUFACTOR CHAIRED, STYTER CHEC IN CUCLUM. RECOVERS; 695  GRANITE CHECKER; -90- RECOVERS; 279 CRANITE ORIENS; MANUFACTOR CHAIRED; MILLIAN CHECKER; 615 GRANITE CHECKER; -90- CRA		-80- -80-		0.6 C.S. 6 8.2 C.S. 6 8.3 C.S. 6 8.3 C.S. 6 8.3
	25/19		19.4 19.4 19.6	11.1	MANUFACTOR COLUMN COLUM		-80- -80-		0.6 C.S. 6 8.2 C.S. 6 8.3 C.S. 6 8.3 C.S. 6 8.3
	25/19		19.0 19.0 20.0	31.1	MANUFACTOR CHAIRED, STYTER CHEC IN CUCLUM. RECOVERS; 695  GRANITE CHECKER; -90- RECOVERS; 279 CRANITE ORIENS; MANUFACTOR CHAIRED; MILLIAN CHECKER; 615 GRANITE CHECKER; -90- CRA		-80- -80-		0.6 C.S. 6 8.2 C.S. 6 8.3 C.S. 6 8.3 C.S. 6 8.3
	25/19		19.0 19.0 20.0	31.1	MANUFACTOR COLUMN COLUM		-80- -80-		0.6 C.S. 6 8.2 C.S. 6 8.3 C.S. 6 8.3 C.S. 6 8.3
	25/19		19.0 19.0 20.0	16.6	MANUFACTOR COLUMN COLUM		-80- -80-		0.6 C.S. 6 8.2 C.S. 6 8.3 C.S. 6 8.3 C.S. 6 8.3
	25/19		19.0 19.0 20.0	31.4	MANUFACTOR COLUMN COLUM		-80- -80-	ACS707	0 Pub Pub Pub Pub Pub Pub Pub Pub Pub Pub
	25/19		19.0 19.0 20.0	H.A	MANUFACTOR COLUMN COLUM		-80- -80-	AZSOT	0 Pub Pub Pub Pub Pub Pub Pub Pub Pub Pub
	25/10		19.0 19.0 20.0	16.0	MANUFACTOR COLUMN COLUM		-80- -80-	AZSSIT O	0 Pub Pub Pub Pub Pub Pub Pub Pub Pub Pub
	25/10		19.0 19.0 20.0	31.1	MANUFACTOR COLUMN COLUM		-80- -80-	A250F	0 Pub Pub Pub Pub Pub Pub Pub Pub Pub Pub
	25/10		19.0 19.0 20.0	J	NAME OF THE COLUMN CONTROL OF THE COLUMN C		-80- -80-	هـ	0 Pub Pub Pub Pub Pub Pub Pub Pub Pub Pub
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	25/10		19.0 19.0 20.0	<b>B.3</b>	NAME OF THE COLUMN CONTROL OF THE COLUMN C		-80- -80-	هـ	0 Pub Pub Pub Pub Pub Pub Pub Pub Pub Pub

## ASSOPAK Guarinas Seil Espaners & Contractors

15B3

CLIENT: JICA BASIC DESIGN STUDY TUAM FOR BRIDGES IN N.W.F.P PAKISTAN

BITE ( NAMERAL/STAT BAIDGE NO. 15 BORE CRAFT OF BURIED NO.)

1,000	A PARKET !	Shorth	DESCRIPTION		_		Constituted 1834 Section Car.	
	Water Level	jn Meset	in Heist of Larent (in Heist)	Screw becoming	Lake Sested	Danieri Dinking	Transport Interest Sec.	Person parameter
7.10	-				0			
				CETRITUE	20	639	•	Ç.5
	٠		,	DEARLES COUNTES & SECTIONS. DEARLESS FROM 300-450 EL	KS			
		1.0		TH STORY STITE COL.	m		8.P.T Ho.1	
				ncont/2	2.0		REFUSAL	5.4
i i		•		***	5.2	-00-	PAFORAN	1
09/10		7.0			107		#.P. 7 #s.2	1
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				MAX DIA OF MCARCER UPTO	BC.		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
•		3.0			O		E.P.T Ho. 3	
		ł		-co- petation	YO.	-00-	15/17,7.5/13,,	0.6
		1			20		REPORTE	
	1	4.6			Ϋ́δ		1.P.7 Re.4	1
		1		ochali)gi	O.	-80-	RETWAL	8.8
1		1		HAX DIA OF HIRLERA UPTO				
11/10		\$.0		350.0 ==	Po		8.P. 5 80.5	1
				-ec-	PO.		REPARAL	5.5
					P			
			<b>!</b>		٩		S.P.T 80.6	
1	[	1	•	CETATIONS (250-900 mm) 19 CONVERTINGUE MATRIX COMPOSED CONVERTINGUE MATRIX COMPOSED	O.	-200-	AFTRAL	2.5
		l		OF SHAFT SILTY CLAY.	(a			
	'	7.0		OSTRUTUS:	10(	J	#.P. T #9.7	1
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l		• •			200	3	8.7.7 80.8	1
12/10				PERSONAL BENEFIT IN	10		-	3.5
	1			NAMES FROM 250-350 SEL	Q		ASPUBLL	
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	ŀ			PERSONAL SERVICES IN SERVICES IN	70		-	3.5
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	Ì	١.			Pos	<u> </u>	ABTIMAL	
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14/10		ĺ	Ì	150 mm IN GRAVELLITEROUS MAINL COMPOSED OF CLANKY SAND.	ťо.	,,		
18/10					O	-	ALTHAL	5.8
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				MECHANIST SOS	14.78	-90-	_	w.e
		11.	·- <sub>1.1</sub> -	DED-LONE (BRE BEION)	20			
19/10		îi.e		DETRUTUS: PERSONAL, COMMENDE DE CLASSES SANS	1000	1		
	i i			FIRE MATRIX WARRED OUT.	00		-	C.5
	- : '	116.2	.,	CHANTE CHILDS: (SCE MICH)	1		: 	E.C
20/10		17.0		GRANITE CHELES: NAMO, MASSIVE, COMESE CENTRED.	1/-/-7			C.#
				HATTIM GREY IN COLUMN. RECOVERY: 404	40%	-20-	-	v.c
	1				彩	<b> </b>		
		10.0		CHANTE CHEISE!	27	1		
1	l		ŀ	CHAIRED, MRITTIM, CRIST IN COLOUR, RECOVEREY: 761	50		-	c.s
		19.0	<u> </u>	QNAFITE) -10-	<b>公</b> 公	- 100-		W.C
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AJJOPAK

Date OCT 23, 1992.

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## ASSOPAK Comahay Sol Ferencia A Ontrigion

#### 15B4

CLEHT: ECA HASIC DISHIN STUDY TIAM FOR BRIDGIS IN N.W.F.P PAKISTAN

SIPE | NAMELAL/SIRP BRIGGS NO: 15 BORZ CRAFT OF BORING NO.4

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			1	MAX DIA OF BOLLDER UPTO	$\mathcal{Q}_{\mathcal{C}}$	~		J
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23/10		3.0	1	DETECTIVE:	P>-		S.P.Y Ro.J	1
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				MAX DIA OF BOLLERS UPTG	F/			
	· ·	6.0		DETECTION:	57		S.P.T 30.6	I
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1		7.0	1	DETRITUE:	$\sim$	[	S.P.T NO.7	
	1:	1	[	PERSONAL SERVICES AND ADDRESS OF	12	-∞-	15/9,7.5/6,5/39,	8.4
	1			SAMOY SILTY CLAY, BOLLER GLA RAMES FROM 350-450 mm.	$\mathcal{O}_{\mathcal{C}}$		RETTERL	1
3/10	1		<b>l</b> '		Ö.		S.P.Y Ho. #	
		1		CHATCH:	ΙĎΈ			ľ
				-80-	$\sim$	-90-	strate 💆 a	8.4
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į	1.5			PERMITS, COMMISS & RORLESS IN	10	-80-		ه.و
				SARRY SILTY CLAY, MULLIUM DIA RANGES PREN 250-750 MM.	[0.	""		
. 1		1		NACES 19839 230-730 BM.	₩.T		RETIRAL.	İ
		10.6		DETECTIVE:			S.P.T No.16	
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26/10		11.0	· :	OCHETALS.	$\phi_{i}^{*}Q$		š.p. ž #0.1}	l
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			Į į	BOULERS, DIA RANGES FROM 250- 750 mm IN GRAYELLIFEROUS HAIRLE	<b>7</b> 50	-50-		₽.4
1				CONFORD OF CLAYEY SAND.	14		RETURAL	
	ŀ	ii.ē		(ETRITUE)	79		8.7.2 30.12	l
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1	19.9	25.9	13.0	GANTITE CHEISE!	**		AP-WAY	7.0
7/10		14.0		GRANITE CHEISS: NASO MASSIVE CHARGE GRAINED,	164.54	-: pc		
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1				IN COLOUR.	11/2	1.		a.,
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.		10.0		CHAPTE CHEISE!	```			l
				HAND, HARSIVE, COARSE, GRAINED, MRITISH, GREY IN	715	-90-	+	6.4
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8/10	1.	11.6	100	CHARTE CHEISE	[?? <del>?</del> ][	777		
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ı		21.6		-90-				<b>3.</b> C

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ACCUPAR

### ASSOPAK Consulting Soil Engineers & Contractors

16B1

CLIENT: JICA BASIC DISIGN STUDY TIAM FOR BRIDGIS IN N.W.F.P PARISTAN SITE | REDAR/SHAT SRIDGE NO: 16 BONE CHART OF SORING NO:

Lieta	(iround) Water Level	l Jepth Meint	i hekresu of Layers (in hictor)	Strate Encountered	Seal Syretroi	Danieler Of During	Personal text (New No. 20 40 61 10)	I mes Euro
1/10	WALKET !	-		TOP SOIL:	$\nabla$			
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2/10	1	2.0			177		8.P.T No.2	٠,
1			l	PERMITAS, CORRLES & ROTTANOS		-20-	cme/blows: 13/47,~,~,~,	D. 1
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	'			350-850 ma IN SILIT CLAY.	$\mathcal{O}$		refusal.	
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j		6.0			170		\$.P.T No.6	
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1			l .	-,00-	4	]		
[			· ·		hik.			
/10		4.9	1	DETRITUE:	KY C	)	S.P.P Ho.S	Í
			1	COBBLES , BOLLDERS (250-600ms)	KO:	-00-	30,000	0.1
				CORBLES ,ECHLORES (250-600mm) IN SILIT EARD.	ľŐ		REFUSAL	1
	1			the second second	10°O	<b>!</b> ··	RAFVERG	
/10			į. j	GRANTTE CHÉTAS:	17-7-1			
				HARD, HABOIVE, COARDE, CHURLED, MITTER GREE IN COLOR.	<b>t</b> -50	7.	_	¥.1
. ]			,	MILITION (SAUL TH FREEVEL)	16			. 4
- 1							1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	C.1
Ì		9.7	0.7	DETRUTUS: (SEZ BELOW)	o စီ			
				OETRITUE:	+O:0.			
ı				PERSONAL DE COARSE SANO. MARK	90	-00-	-	¥.1
1			4 6	SANTE COLECTED.	90			1.5
		10.6	1.1	GPANITE: (SEZ MELON)	17/17			
/10		11.0			1.66			
.				opanite greiss: NARD, Massive, Comrse granied.	7.7	-00-		W. 5
		1			133.23	-	1	
- 1		11.7	0.9	DETRITUS:	00			C. #
/10	]	12.0		CONSE SAND WITH SPALL PERSONS.	00.			
, LV		****	7.3	GRANITE CHEISS!	7.17		N. 1. 1	
- [				RARD, MASSIVE, COARSE CRANIED.		-90-	estato profesional estato estato estato estato estato estato estato estato estato estato estato estato estato	M.S
į				MHITIM CHET IN COLOUR.				C. 8
l	l			RELLAKERY 1: 721				
/10		11.0						
ı	j			CHANITE CHOCIES!	77.77			- أبو
Į.				-bo-	<u>%%-</u> 4	-90-	- 1	#. #
					1.56.1			c, s
- 1	i			RECOVERE 601	772	1	1	
J	- [	13.5	1.5					
- {	- 1	Į		( HOLE COLEED )	1			
		2.5					1	:
							4 1	

Remarks

ACCOPAR

W -

Date OCT 25, 1992

Scaler2.5 cmet.2 a

#### ASSOPAK Committee Seel Fragment & Continuous

1682

CLEENT: JICA HASIC DISIGN STUDY THAM FOR BRIDGIS IN N.W.F. PAKUTAN BITE | REDAM/FRAT BAIRUS NO: 16 BORE CRAFT OF BORING NO.1

1 Aprile	I mund	bream	heren	A STATE OF THE PERSON NAMED IN COLUMN 2 IN			Program to the market	
	Lanel	5	of Lawren (ch Moster)		i arke hypoten	Exement Of Bearing	201. 405 Mr1 ≹31 1	Ligher of Surapir
3/10				SILTY CLAYEY SAND: COMMER SAND MEMBERS PERMITS.	#1#A#			
	1			SYA BANGES PROM 2.0-5.0 CFL	7.7	650	-	D. 5
1				BONE CONNECTS ART ALSO EXCUSE-		-	,	
	. :		1	THINED, DIA RANGES FREM 10.0-110 HM.	žii.	l		
		1.0					5.P.T. Bo.1	
				RETRITUE: SILTY CLASEY SAND, MEANING	0	00-	que/blowe: 9.0/37,,-,-	D. S
		ł ·		PERSONAL BONE WOLLERS OCCUS-	10.75			
		1		STORELLY ENGINEERS.	L'A'C		REPUSAL	
		3.0			146		g.p.s. 20.2	
				CONTRACT	QQ	-200-	15/3,7.5/2,7.5/2,7.5/2	D.8
1 1			·	-30-	ľÒ		7.5/3 ==10	
					O		toose sott	
05/10		1.6	Į.		10	<b>!</b>	LOOSE SOIL	
				DELIGITATION OF THE PERSON OF	200	-00-	cme/blove: 15/3,7.9/1,7.5/1,7.5/2	D, E
			1		80		7.5/2 5-4	-,-
							LOGER BUIL	
		4.5			100		E.P.T. #2.4	
				iciation:	30	-200-	000/820001 15/3,7.5/2,7.5/3,7.5/3	2.5
		[	i .	-80-	17,0		7.5/4 2-12	5,5
					ķQ,		LOOSE SAND	
06/10		-, .	1		10	[- <del></del> -	5.P.t. #0.5	
100/10		7.*		personal control	0,0		( caper / 5/2 dest :	
			1	-50-	100	-20-	15/4,7.5/4,7.5/22,-,-	5.8
į					ြင	l		k .
		1.			$\Gamma \cap \Gamma$		E.P.S. Ro. 6	l
		4.3	l	SETAITUS:	ÞØ		ens/blows:	
		l			150	-00	15/6,7.5/6,7.5/5,7.5/7	p. s
	l		1 1 1	E COMMISS. NOUNCED TO RES- ROUNCED HAZ, DIA HEADERED	00	l	REPORAL.	1
	ł		1	75.0	117.			
10/10		7.0	1	non rest.	0.0	]	S.P.S. He.7	l
1			!	DESTITUTE:	1. //-		15/6,7.5/3,7.5/7.3.0/29	D.5
1		1		-00-	00	1	ERFUSAL	
	ŀ	1	- 5			1		
12/19		0.0		STRUCK!	20	]	S.F.T. Bo.#	9.5
	1	1		-20-			2.5/30, -, -, -	
j i		1		Land of the second	$\rho_{x}^{Q}$	"	ARTHAL	w. #
	[	1	Ì	I and the second	500			
		1.0	t .	CONFORMS OF PERSONAL CONNECTS &	O.	1	8.P.T. He.7	i .
	1.	l		ESTABLISHE (220-250 mm), TH	1 177		-	6.4
	!			COMPANY MAND, MANN MANUFALE		1	REPUBAL	4.5
l			1	distrib.	.0	3	*:	
		10.0	1 .		σ̈́o	1	S.P.T. Hold	
		i		SCIPLICAL.	10-	-20-	_	C.5
ı	10.4	1	1	-00-	10	1	REFUEAL	W. S
1		]	1	RECOVERY: 131	10	1		
1	1	11.0			lō	1	\$. P. T. Roll	e.s
1		1.	1	GENTA:	5.0			1
		l	I	+=∞-	16	4		#.5
		1	1	PECOVERT 121	1032	1	AMPURAL.	
14/10	1	12.4	1 .	1	10		\$.7.7. 6012	
[	1 .	1		DETRUTAN	$\mathbf{p}_{\alpha}$	9	4.	c.s
1	!		1 .	CONNECTS & BOULDERS ROUNCED TO	PXY	1		4.5
ĺ	1	1	1 .	SUB-ROUNDED, HAX DIA UPTO 350mm	No.	]	REFVIAL	
ĺ		11.0	1		10	}	5.7.2. Wol3	1
1		1	1	DETECTOR:	120		[ '	
1		1	1	-20-	10	1		
1	1	1	1	I	0	9	REFUSAL	I
13/10	ł	1	1	laman.	00	]	I	2.5
1	1	14,0		DETRUTUS:	0.0			1
1	1	11.3	14.3	CHARTYE CHEISE: HAND HESSIVE COARSE CRAKIED	1.5%	-20-	, -	5.5
1			١.	CHELTE METTING CHET IN COLCUR.	18	]		W.5
L		1.	1 :	RECOVERY: 421	17:27	<b>1</b> -		İ
19/10	1	11.0	1	GMANITE GRIENE:	188	1	1	2.5
1		15.3	1.0	DETRITUE:	0.0	-80-		ì
1			ł	MALL PERSONS IN CORRE END.	14	1	1	H. S
		1		1	δŲ	]		1
1		10.0	1	OKCRUTUS:	PAX	:]		1
1.	1		1	1	100		-	W. 5
1		1	1.3	GANTE GEIN	-0,	1	1	ŀ
1	ł	34.6	1	(BEZ. SLOW)	No.	1		7.5
20/10	1	17.0	1	PANEL PER CHARGE CHALLED	135	1	l ·	
1		1	1	MITTER COLOUR.		<u>,                                    </u>		c.s
1			i	RECOVERED 204	17.5		-	
1		1	1	1	1757	<del>'</del> ]		1
1	1	10,0	1 .	CHARLES CHELES		/		C.2
11		1.	· •	REGIA/(DICT : 75%	從	-20-	1 + 1 + 1 T	W.5
1	1	10.4	1.0	1	1	1	1	1
1				( BOLE CLOSED )	1	1		1
1	1		1	1		1		
		1	1				I	1
	٠		نسبل	<u> </u>				

ASTITAR

Acces à l

Deta CCT 26, 1992

Smelmil,5 emaml.0:

#### 17B1

CLIENT: JICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN Sife , malls bestmono!

Sife , malls bestmono!

Lie+T	Passi (nassi	la Mener	i buccust of Langua (12 March)	Serius baucomered		Diametet Of Service	10	1 43 3/4 0440   1	36	#¢ i i	1 species
wit	\$0.00° \$1.00°	2000-192		DESCRIPTION OF THE PERSONS ASSESSED.	00	*******	*****				
""				SLITY SAND, SEMANDS PERSONS, COMMUNE & MINISTERS, WILL MINISTER	95	854					8.0
- 1					5%	-					
				40.0 m. YELLONDON OVEY IN CCC.	000 000			s. 2. T	. 24	.,	
ı		1.0		GENETALE:	10	-80-	200/1	27,7.3/			
				-10-	18	.,,,,,		100			l ""
- 1	1.0		ľ	MAY, 1723 OF MAY 1923 456.0 See.	53			A2704			1
		3.3		SERVICE!	0,		/3	3.7.T	. Do	2	
-				-96-	K	-50-	2.5	/43,-,-	,	e v	9.4
1		١.			l ガニ			527US	AL	* +	
บม	l	-,-	ĺ	imparus:	2				. 20		
		] ***		COMPANY SAME MAKE AN APPROVED	80	-90-		(1 <del>115</del> 51 [],-,-,:	•.•.		0.5
		1		PERSONAL CONTRACT & ROLLINGS. WELL, ROMEND TO SER-POSSED HAS	LOW.	~	••••	3.7.7			1
1			1	DEA UPTO 600 att. LORES	Q <sub>O</sub>			arft#		-	1
2/11		4.6	<b>]</b> .	COLUMN TO SERVICE STATE OF THE	Ø,			#.P. E	. He	4	١.
		ĺ		*80*	ľŌč		15/9	7.3/8,	1.0/41	·~·~	4.0
			Ì	MI ROSPINGET DIES BOLOM	F-77.			aeroa	AZ,		
		3.0	į	OF DEA 950 mg. DETERMINED.	0.5	<b> </b>		á.p. 7	Bo	Š	1
		<b>'</b> '''	l	MAL. DEA OF BELLERING UPIN ESSEN	60			110001 17			١.,
	1	1		MI. MA OF EXILENCE OFFICE SECTION	N		***	REPUS			
		3.0	3.0	STATE CAN (SEE MICH)	14:		l			<u>.</u>	1
3/11		7.5	l	SELET GAY:	ودوح	1	294/	3.P.T	. 20	. 6	1
		1	·	ALLE KINCH BITTA CONTENT		-3e-	19/4	,7.5/2,	7.3/3.	7.5/3	0.0
	Į	1	J	I'' AETON IN CATONY		}	7.3/		14		
	]				:::::	<b> </b> -		##31U 5.2.1	# AG	?	
	ŀ	1.0	ł	SELT CAT.				1 040			١.,
		1		-50-		-90	7.9/	,7.5/3, L ==	7.3/J.	11.7/4	•
	1					1	1.3	REDIO.		# S S	1
		1	]	ETHT CAPE				5.P. 9			
	}		1	-85-	==		19/3	,7.5/2,		7.5/3	
							7.5/				
				intravi		<b></b> -	-	#1918 2.9.2	F 30	. S	
		l '''	1	ROBBITLE DELBATED GAL,			200/	.)		j -	l
				NITH PERM BILLY CONTENT. L. YELLOW IN COLOUR. WITH THIS-		-90-	7.3/	7.1/1. <sup>2</sup>	7. 372. 11	1.3/3	2.6
				NATED THE LATES (1.0-). heri OF CLASE SAID.				LOGGE			1
ani	ļ	10.0						#.P.T	. 89	. 16	i
	ļ	1		ETUT GAL	==:	-20-	15/1	7.5/.3	.7.5/.	3,-,	0.1
-		•		•60-	<u> </u>		7.5/	-	,		ì
1		111.0				<u> </u>		FER? S.P.S	LOOP	,	
		''' <b>'</b>	1	STEE CALL			20m //	1 mag s		1	
		1	l	-90-		-30-	7.57	7.5/1,	7,9/2, 17	1.7/1	
		1	}			1		rodii :		4 1	:
		117.0		ELIT CAT	٠			#. P. 9	. Po	. 12 <sup></sup>	
		1		HERN MONT OF SUIT. L. TOLON		-90-	13/2	,1.5/1,		1.1/2	8.4
				CIZZAR. 1919, DIJCRETT LATENS OF CLASES BASE AND PROPERTY.	F		7.3/		-		
		l				<b></b>	- 11	LOOSE	-	٠,	
3/11		13.3	1	SUL CAL				e la avec s			
		l		- +30+		-94	7.5/	7.5/2,	7.5/2, FII	7.3/2	***
	l			•				LOCAR	137	43.7	Γ.
	l	14.0		ILST GAI:			,	#.P. T	. 20	.14	
	[	1	[			-	13/1	7,5/2,	7.5/2	7.5/3	
		1	1	- 80-			7.3/		-16		1
	Ì	1		<u> </u>	4-6-1	<b>.</b>				· i	
		13.0	1	ERTI GALL				S.P. Z		100	
	l	l		l	A-25-	-24	15/3	.1.5/2.	7.5/3,	7.5/4	
		13.3	9.,	ME MON	===		7.5/	AND I S		PSA	
6/11		14.9	l	GERITAI:		1	l	s.p. *		. 16	1
** * <b>1</b>	1	۱''''		CONST. SAID SEARING PERSON.	<u> </u>		100 / 1	7.3/26			
	]		]	COMMENT & BOLLINGS. MELL. NOTHER TO MAN-HOUSED HAR.	1		13/1			•	•
	I		1	DEL 450 May 1, GREET DE COLOUR.	2-2-2	ł		AZTVĀ			ŀ
	l	17.8	1	क्रम् <u>साम्ब</u> ा		1		å.P.X	. 20	.17	1
		1	1	-10-	1	-64-		11.000 t /45,-,-	,-,		
	1	1			L U Bat	1		MEVI		1	
	i			GETATIVE:		1	با	8.7.5			1
7/11		10.0		STATE AND BEHADE PERSONS.		l	/	aleve:			
	1	1		CONSESS & MILECULA WILL MILECULA TO SUN-HILLEGED. HAZ.	-1	-50-	15/3	1.7.5/4		,-,-	•
٠				MA 350 m. L. Grey DJ COLOG.	-:-	1		AZPVI		: '	1
0/11	[	37.6	l	DEDATIVE.	f-E-1					1.	1
		1	1	· •••	K-5-4	l	-	#.P.T		. 12	
	1	1		LARGE BUILDING OF GAMITTIC				43,-,-,	-,-,.	eg,	1 "
	l	[		CHECKITICAL, BELLEVIEDED.	1	4	ا	REFUE	AL	4	1
	]	74.4	1	DETRUTUE I	1-2-1	4	L	\$.P.S	r. #•	.20	١.,
	l	1		-50-			2.0/	37,~,-		•	1"
	1	28.5	5.0		1.		-	AR YOU			1
		1	1	1	1		1				1
	١	1	ł .	( HOLE CLUSED )		1			11.0	200	

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e-coran

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Seziaili Conolis a Seciegist &

#### ASSOPAK Castohing Sail Kapineses & Contrations

CLIENT: JICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.F.P PAKISTAN

SETT I MALIK PUR/BURES SATORE NOT 17 BORE CHAST OF POSTME NO. 3

December   St.	Uses	Linnesd	7122		THE RESERVE AND DESCRIPTION OF THE PERSON OF	-	-	-	yan kilota
13.11   1.12   1.13   1.14   1.15		Water	to Motor	of Laters (se blever)	Earded Entercounty of	i je bec I postavi	Diemeier Of Birring	20 49 60 kg 44 49 kg kg	Types o
13.11   1.12   1.13   1.14   1.15	~	CONSIST TO			DETRITUE!	05.6	10411-4413	Marine Service on the state of the service of the s	
13.11   1.12   1.13   1.14   1.15	3411	1	1	i	SLITT SANO, STAKING PROSLES,	20			١
13.11   1.12   1.13   1.14   1.15		-,-,	1	l	TO BUS NOUNCED. PAR. DIA UPTO	ζę	-		3.2
13.11   1.12   1.13   1.14   1.15		<b>"</b> "		1	150 mm, n. wat 12 12000.	50	<u></u>		1
13.11   1.12   1.13   1.14   1.15			1.0		CHESTANT .	60	<b>j</b>	8.2.2. Sec.)	1
11/11   11/1							-00-	15/12,7.5/41,-,-,	9,3
1.0						bo?	1	REPURAL	1
1.0	21/11		2.0		DETRITUE!	Os	{		ſ
1.0		1			COARSE SAND MENATING PERMISS. COMMISS & BOULDERS WELL NOUNCED	130	-203-	204/h1961 13/9.7.3/3.7.5/43.	
1.0					TO SUB-ROUNCED. HAZ, DIA 350mg.	6×:		1.0/10,	
1.0	1	1		1	and in Colors.	ho	1		
1.5   SECTION   1.5		1		1	CELETANT:	65	1	ene/histori	1
DETAILS   100   10		l	1	1		$P\tilde{\sigma}$	-20-	2.3/40,-,-,-,-	0.5
1.0			1		OF DIA 775 MM. (APPROX)	1191	]	al to sal	l
22/11  3.4  3.7  23/11  3.5  3.7  23/11  3.6  3.7  23/11  3.6  23/11  23/11  3.6  23/11  23/1			4.0	1		VOΞ		5.7.1. Fo.4	
22/11  3.4  3.7  3.7  3.7  3.7  3.7  3.7  3.8  SETT CANI	1				NEW INC.	)};	١	C-0/314051	
22/11   3.4   3.7   3.		1	1		**	IJž	~		
1.		100				γó.		:	ļ
1.0   SUST_CAN_	23/11	l .		-7:5-	SILTY CLAY:	-0		CPG/blows:	Ι.
1. THIN TO CROSS.   10   10   10   10   10   10   10   1		ŀ			POSEARTELY DESPREYED CLAY		-80-	19/3,7.9/2,7.5/2,7.5/3	3.5
1.0		ł			L. YELDH IN COLOR.	4-8-	1	MEDIUM DESSE	l
23/11 23/1 23/1 23/1 23/1 23/1 23/1 23/1		l		1	εμπ αλι	==		8. P. T. 30.6	l
1.04   1.05	]	.					•	G40/314001	
### SULT CAM:    100						323	, ~~~ `	7.5/4 . V=17	Į <b>"</b> ."
### 1.0   ELIT CAN1		ŀ			. •	÷.	1	REDIUM DESER	
### 150-   FERTY GARL	1		7.8	. !	ann an	1-1-1		#.P.T. Re.7	
### PACK CASE   F. P. P. P. P. P. P. P. P. P. P. P. P. P.	1		i				-90-	15/4,7.5/3,7.3/3,7.8/4	P.8
### PATE CARL  12.0    ETAT CARL   CO-   Co-   C					<b>-™</b>			7.5/5 R+19	
22/11 7.6 SILT CAT:  ***TOPHYSIC DELTA** ***TO								MEDIUM DEESS	
10.0			""					400/11 mm :	
10.15   SILT CAT    SILT CAT					40	V-2-1	-20-		
1.6   SILTY CAN   CONTROL   CONTRO						4-4-6		The second of the second	
NUTS RECORD. NUTS STATE	23/11		1.5		21521 579012			5.P.T. 30.5	
13.0   SILTY CARL   D					HATTE HARRE STATE CONTEST		و.	15/7.7.5/1.7.5/2.7.5/2	9.8
13.0   SILTY CLAY:   SO					L. YELLOW IN CHARR, WITH INTE-	4-2-5	".	7.5/2 201	
SILTY CLAY    SILTY CLAY    STATE							l	LOCEY	
10.00   10.0		ĺ	10.0		SILT GAY:			C00/51cost	
THE CLOSE AND LAW FRENCY.   THE COST   THE			i I		POSTATELY INCASELY CLAY WITH		-30-	15/1.7.5/.3.7.5/.5.7.5/1	D. S
11.0   SHAT CAN1				٠ ا	IN COLOR, THIS DISCRETE LATERS		1	10-7 I	
12.8   SHAT GARL		ļ	11.4		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	::::::		TERT LOOSE	
12.6   SHAT CASE		i			NUT GHI			4me/614mes	
12.6				- 1	****			7.3/2 N=6	2.5
12.6		. 1						LOCEE	
11.0   SILT CLAY   D			12.0		ERTL GALL			5.2.2. Eo.12	
11.0   SILT CAT:		- I					-80-	15/3,7.5/2,7.5/2,7.5/3	₽,5
11.0   SILTY CLAY    SILTY C		- 1	-	- 1					
14.0   SILT CAY	24/13	l	31.4			]	. [	MEDIUM DENER	
14.0   SILIT CLAY	•	- 1	"	ĺ			. 1	est/blows:	
13.0   3.1   SILET CLAY: DO				- 1			-80-	7.5/4 0-15	2.5
13.0   3.1   SILET CLAY: DO				1			1	9201NS Neses	٠.
19.0   STLET CLAY   DO		.	24.0	- 1	SILIT CIAY		- 1		
13.0   9.1   STLET CLAY: DO									9.5
13.0   STAT CAY   D3   CONTINUES   D3   CONTINUES   D4   CONTINUES   D5   CONTINUES   D5   CONTINUES   D5   CONTINUES   D5   CONTINUES   D5   CONTINUES   D5   CONTINUES   D5   CONTINUES   CONTINUE		- 1	. ]	· · ·	-po-		- 1	7-5/3 H-12	
13.1 9.5 COMMENT AND MEANING PRINCES, COMMENT & SOURCES					<b> </b>	4			
COMMENT AND MEATING PRIMES, OCCUPANTION OF THE COLUMN OCCUPANT OF THE COLUMN OCCUPANTION O		ł		9.9	DETALTUS:	3	1	per/stays:	
18.0   STATUS    S.P. T. SO.15   S.P. T. SO.15   S.P. T. SO.15   S.P. T. SO.15   S.P. T. SO.17   S.P. T. SO.17   S.P. T. SO.17   S.P. T. SO.17   S.P. T. SO.17   S.P. T. SO.17   S.P. T. SO.17   S.P. T. SO.17   S.P. T. SO.17   S.P. T. SO.17   S.P. T. SO.17   S.P. T. SO.17   S.P. T. SO.17   S.P. T. SO.18   S.P. T. SO.19   S.P. T. SO.	' . I	ı	1	- 1	COARSE SAND MEANING PERSONS.	ōn:	-20-	13/4,7.5/3,7.5/18	9.4
18.0   STRITUS    DC   -00   2.74   2.24   2.25	- 1	- 1	· .		DESCRIPTION OF THE PERSON AND THE PE	<i>P(</i> )	<b> </b>	REPUSAL	
17.0   DETRITURE	ı	1	, ,		ory and are in the control of	·Wi		- 2 P. P. Bo 16	
17.0   DETRITURE	J	- 1		[		5		CRE/b) (No.1	
18.0	- 1	1	J	1	-80-	σo.			5.8
18.0	- 1	. 1	1		1		.	REFUSAL	
18.0	23/11	- 1	17.0	1	OFTENTIAL:	0			
DETRITUE:  SETRITUE:  SUBJECT OF STREET, WELL  POLICE	- 1	1	· [	- 1	F	00	-00-	0.0/43,-,-,-,-	D.5
DETRITUS:  SUITE SAND MEANING PERSONS  COMMENTS & SUITE SAND MEANING PERSONS  COMMENTS & SUITE SAND MEANING PERSONS  DIA 350 mm. L. CREY IN CURCUR.  DIA 350 mm. L. CREY IN CURCUR.  DETRITUS:  DETRIT	ļ	- 1	. 1	_	·	洲	· i		
19.0   COMMITTION   COMMITTIC   COMMITTI		1		- 1		?કંંગી		·	
PROJECTO TO RESPICACED. PM. OC. REPUBAL  19.0 DETAILED TO COMMITTIC COMMITTIC COMMITTICS. RECOMMITTICS. DC. P.S. P. P. P. P. P. P. P. P. P. P. P. P. P.	1	ļ		(	PULL SAME MEAN OF LEADINGS	3	- 1	C00/01001	- 1
DIA 350 ms. L. CREY IN CRICKE.  DEPARTMENT  DO:  LANCE MULLIPHIC COMPOSITION, DECOMPOSITE  COMPOSITION, DECOMPOSIDO  30.0  19.	- 1	- 1	. [	- 1	COMMAND & SEXTLEMENT, MELL	าผา	-90	15/12,1.0/40,-,-,	D . S
24/13 19.9 DEDATE: 100 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2		- 1	- }		DIA 350 ma. L. CREY DE COLORE.	믕	ł	4	
LANCE EXAMPLE OF CHARITIC CONFUSITION, PRODUCTION, PRO	26/13	l	11.0	l	NCTATIVE:	ď١			
THOLE CLUSED)  LANCE EXCLUSE OF CHARTTIC COMPOSITION, DECOMPOSED.  19.0		. [		· [	- 00-	99	ا		2.4
19.0 29.1 5.1 (HOLE CLUSED)	{	. [			LANCE BOLLDEN OF GRANITIC	쏫이	~	7.0/48,-,-,-	
19.0 29.1 5.1 (HOLE CLUSED)			_	i	CHECKTICS, DELCHICOLD.	$\aleph$ 4		<u> </u>	
( HOLE CLUSED )		1			DETD-1748; DD	2.664	.50		P. S
		ļ	44.3	2.1					
				ŀ	( HOLE CLOSED )				
	[	1	4	- [	( POSE ( POSE )	[	1	·	•
				1					AT : *

DATE MOT 27, 1992.

	•			17B3	٠.		Sitt   mails pos/mon	72
LIE				ESIGN STUDY TEAM IN N.W.F.P PAKISTAN			MAISSE NO. 17 DOGS COLKY OF BORING NO.1	
11:54	tunzad Westi Lavel	. to	Ibstance of Lowers (in Motor)	Suela Largements	l sthat Section	Deserves Of Borney	Pencipada test licco ho po 40 ao ao 1 1 1 1	i pper ci Sa sa pie
1/11	<del></del>	10°14.7°,	- Automobile	STRIKE: SLITT BAND, MEANING PRINCES,	0			E.F
	0.0			SLITT BAND, MEANING PRINCES, COMMERS & MODERNS, MELL PRINCESS TO RES-ROUNDED, HALL DIA 1870 450 MM. L. YELLON IN COLORS.		430		3,5
		1.3		orested)	la,		8. P. T. 80. 1	i t
				-80-	Ž,	-50-	9.5/43,-,-, REFURAL	*.*
		1.5		Marital I	00		*** s.P.2. so.2	4
				- 100-	o.	-50-	****/*********************************	8.8
V11		,	İ	DANCE STREET DICTATION DIA 110 ma. CETATION	60 60		REFURAL S.P.T. Do.3	
				CORNER SAND MEASTED PROSERTS, COMMENS & MCHESTS, WELL ROSSEST TO MIN-BOLKERD, MIX. DIA 350mm.	50	-00-	10/47,-,-,-,-	. 2,5
				h. GRET IN COLOUR.	30		REPUBAL	
3/11		4.1		DETECTION)	95	-20-	8.P.Y. No.6 Cm(51000) 13/9,7.3/3,7.5/21,	á. s
					0		3,0/4),- REPUSAL	
		3.9	_	restatives +co-	90		8.P.T. #9.5 cos/9[sect	
		3.3	3.3	(		-200-	6.5/41,-,-,-,- REFVSL	* *
		1.0	. !	SILITY CLAS!			S.P.T. 80.6	
	·			RUCK STATY CONTEST. L. TRALOW IN CLEAR.		-20	15/3,7.5/2,7.5/3,7.5/5 7.5/5 #-15	8.4
		٠,.,			40.0		MEDIUM DEVER S.P.Y. Bo.7	
				-50-		-50.	19/3,7.5/3,7.5/3,7.5/5 7.5/5 2-14	*
4/11				III GAL			MEDIUM DERSK S.P.T. BO.S	
6/11		"		PROGRAMMY PROBATED CLAY WITH NINCE SILTY CONTENT L. YELLOW IN COLUMN, WITH THIS.	4		esc/bloom 15/4,7.5/4,7.5/4,7.5/5 7.5/4 #-57	
				OF CLATES MADE.			- MEDIUM DRESS	
		*.*		NUT GAL		-20-	tee/bloom: 15/3,7.5/2,7.5/3,7.5/4	2,3
				<b>+30</b> -			7.5/4 P-13 MRD3UN_DENES	
		10.0		ILIT CAL		-20	#.F.T. #0.18 em/bloca: 15/2,7.5/1,7.5/1,7.5/1	b.s
				-90-			7.5/2	<b>9.</b> £
		۰۰.۰		mar car			\$.P.T. \$4.22 tm/bloom	
	· .			MERCATELY DESIRATED CLAY MITH MITCH MODET OF SILT, L. TELLO IN COLUMN. TEDS.DISCRETE LANSING	*****	-90-	15/2,7.9/.3,7.9/.5 7.5/1,7.5/3	2.5
MII		12.9		CLAYET SAND ME PRESENT.			5.P.S. Be.12	
				-₩-		-90-	13/2,7.5/2,7.5/2,7.3/3 7.3/4 #=11	, <b>3</b> , 5,
		12.0		enti avi		4. 4	MEDIUM DERES S.P.T. Mo.13	
				-20-		-90-	tos/bleen 19/3,7.5/2,7.5/3,7.9/4 7.5/5 P=14	6.5
	}	14.0		SELUT CLAT:			#2025# D#852 #.P.T. #6.14	
					- Pode	-30-	15/3,7.5/3,7.5/4,7.5/5	4.6
				-00-			REDION DESER	
		15.0 15.2	<sub>6.6</sub>	STILTY CLAY: 10 DETAITME: COMMENT SAND MEMARY PROMISE,	00.	-90-	8.P.T. Bo.15 voc/blows: 13/4,7.3/3,7.3/3,7.5/4,	
				CONSIDER STATEMENT WITH THE ROLL OF THE RO	00	-	3.8/37, REPUBAL	9.5
6/11		16.0		DIA 450 mm. L. GRET DI COLOUR. DETINITARI	Ď		S.P.T. No.16	
				-10-	8	-30-	7.0/49,-,-,-, REFUEAL	b. s
		17.0		disting.	$-\omega$		S.P.T. #0.37	
				-BO-	68 60 60	-90-	19/47,-,-,-, REPUSAL	<b>2.2</b>
7/11		10.0		CHECKITICH, DECLARINGS.	00		S.F.T. #0.18	7.7
				MEDIUM BAND BEARING PERBEAS CONSLES & BOULDES, WELL ROUNDED TO SUB-ROUNDED, MAX.	3	-90-	15/9,7.5/3,7.5/39, 7.5/42,~.	0.6
		19.0		DIA 300 mi. L.ORZY IN CRACUR.			REPUSAL	٠.
				+30+	8	-80	S.P.T. Ho.19	0.0
					00		S/AO, REFUEAL	
		70.0		ETRITUE:	00	-90-	S.P.T. Ha. 28 	<b>D. 5</b>
				-90-	Ď.		ASPUSAL	
	l :	21.0		-00-	000	₽2		b. s
		111	1.1	( HOLE (LOSED )				
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#### 17B4

CLIENT: IICA BASIC DESIGN STUDY TEAM FOR BRIDGES IN N.W.E.P PARISTAN Stre . MALIE OCSTRUCTS Misco MD: 17 BOGS CRAFF by BOSING SQ.4

	~	-	-		IN N.W.F.P PAKISTAN	gasterania e	-	The Real Property lies and the last of the	-
(Asia	ľ	weeks	in see	( potent	Street Escapement	1.00	(No me set	M en en be bei	1 1901 a
	١,	1,2741 	Mater	(et Mystr) - amircus	DETERMINE	3,	tol British	e di si il il di di di di di di di di di di di di di	ba po
1911	7		!		DETRITUE: SHAPE SHAPES	kå			1
	١			1	CONNERS & BOLELAND, WILL ROWSENS	600	459		3.5
1	ı				730 St. L. WILLOWING IN COLCUR.	195			
ĺ	1	Ì	1.0	[	OCCUPANT.	27	[ ]	" #.P.P. Bo.1	1
	1			. '	and the same of th	K* 5.	-90-	10/41, -, -, -,	0.0
1	ŀ	1.4	)		MAK, DIA DP BOLLISH UPTO	000		REFFEL	Į
35/11	Į,		٠٠	( )	550 ms. Sportfull:	000			1
	Ī			l .		2.4	-80-	204/91m61 15/7,7.3/4,7.3/7,	١
l	ł			ł	CONTRE SAND, ROADING PRINCIPS, COMMENT & BUILDING WAY, DIE COTTO 450.4 mil L. GREE IN COLUMN.	1:80		4.0/34 ##PO482.	1
Ī	1	: 1	الحراب الم			120			ĺ
1	ł	30	3.3		DECK TARE	$\mathcal{U}_{6}$		8. F. P. Bo. 3	ļ
	1		[	l	-80-	ď	-80-	15/9,7.9/1,3/34	7.4
	1					Qα	ìi	REPUBLI	ł
23/11	ıÌ.			l	j.,	$\mathcal{O}_{\mathcal{S}}$		3.7.2. Bo. 1	ļ
1	Ì				DETRIPUE: VERY COSTAGE BAND, KTYN FEMILES, CONSILES & STATUTES, MCCL. ROLLANDER TO RES-STANDED BAX. OLD LOTO 150.6 mm. L. CHEY IN COLOR.	KΩ	.50-	2007810001 3/35,~,~,~,	٠.,
ŀ	١	!	. !		COMPLES & BURLINSS, MCCL ROLLINGS TO SEM-SCRIEGO WAY, OLD UPTO	7		RHPUSAL	l
<b>.</b>	ŀ		<b>.</b>		950.6 m. L. GREY IN OXOM.				i
23/11	1		7.0		-54- pt.critigr	þΫ		S.F.T. HO. 5 confelors	ļ
	١					500	- 95-	33/13,7,7/5,4/37,-,-,	7.0
ĺ	ſ		3.1	3.7	STATE CAN (SEE MELON)	- :-		arrest.	1
ļ	1		•.•		STATE CLAS			\$.7.7. Bo. 6	1
	ĺ			[ ]	MINER SILVE CONTENT.		-96-	19/4 7.5/4 2.5/5.7.5/4	0.5
ı	Į				t. YEAR DI CELOUI.	:		1.9/5 s-10	1
23/33	,]	İ	7.6	·			1	Bedron Dayus B.P.T. Re. 7	
· ·	1		.		IDIT CAL		- <del>20</del> 0-	15/3,1.5/3,7.5/4,7.5/5	
i	1	- 1			- (KC)		-	7.3/4 mis	1
	1		L	l				ASDIDA DEPER S.P.T. DO.S	1
	1	1	4.5		SILIT_GATI	3.3		easth (49g)	
l	1					:	-90-	15/6,7.5/4,7.5/5,7.5/5 7.3/7 0021	*.*
)	1							Marine office	l
	١	. ]	1.8		STATE CAY	4		S.P.T. Bo.S	İ
1	Į			· '	MALL NEEDS SETTA CONCESS.		-86-	15/3,7.3/2,7.3/3,7.5/5	0.4
ĺ	ı				NUMBER FILTY CONTROL  NO. TELLOW TH COLOUR. WITH THIS- ROLATED THEN LATTER (1.5-2.5cm)			7.5/5 mas	i
	ı		10.0		OF CLASTIC AND.			_ MEDIUM DEFSE	
ļ.	1				STATE CONT.		-90-	cos/81/001 15/2.7-3/1.7.5/2.7.5/3 7.5/3	
1	Į			1.5	-90-		-	7.5/3	<b> </b>
İ	١				<u> </u>	•		Lingue	1
2411	ł		33.9		EDIT GAE	6		S.P.T. DE.JI	ł
1	Į				-30-	*****	-94-	19/1,7-5/,5,7-5/-5 7-3/1,7-3/2	•.•
•	l					Í	1	THE LOOSE	ĺ
1	ì		13.0		SUST CASI			#.P.T. ##.12	Ì
]	1				PROGRAMMENT OF STATE AT THE PARTY OF STATE AT THE PARTY OF STATE AT THE PARTY OF STATE AND	-	-94-	19/2,7.5/2,7.5/1,7.5/2	0.5
•	Ţ				DE COLOUR. TRIBS DISCRETE LATERS CLASTE SAME AME PRESSORT.			7.5/3 per	•
	ı	1	13.5		SILIT CAT!			50053 #.b.T. #4,13	[
1	١			٠.,	;	E	-	19/3,7.5/2,7.3/2,7.9/3	١
1	ļ				-89-	****		7.3/4 e=12	*.*
	1							Agsien stess	1
1	ı		16.0		SILEL CHI)				ļ
1	ı						-20-	13/3,7.1/2,7.5/4,7.5/3	
40	1				-16-			Negron Beyen	l
25/11	ļ		33.3		INT GAL			" " # . p. 5. Pp. 15"	}
l	1	1	13.2	. ,			*#G+	19/3.7.3/2.7.5/4,7.5/5,	
	ŀ		1314	*.'	A TOTAL COLUMN	00		7.3/6 #-17	""
}	ł			٠,	(#EX 1851/3H)	20	<u> </u>	ALDIVA PARLL	Ì
	1	ļ	16.0	[	persectives connect their persected Principles, connects & gradients, while Schools	8900		8. P. T. Ro. 15	1
	١	1	1		TO REPORTED MAY, DIA 150 MA.	2.0	-94-	19/9,3.0/43,	*.*
	l	4		۱ ۱	LONG DICKUR.	וגייו		er terat	ŀ
l	l	ļ	11,6	1	Rikfini .	O <sub>0</sub>		#.P.T. #4.17	l
•	ļ	]		, ,	1	W 3.1	-56-	12/39,-,-,-	
	Ì				***	00)		SHYPERL	ļ
	ļ	1	11.0		MIRITAR:			#.p.t. #0,15	1
	Į	.		1:	SLIVE SAME MENTING PROMESS,	65 60 80 80		230/b]agg:	1
	1				COMMENT & MOLLOWS MOLL ROLLINGS TO SUB-ROLLINGSS. PAR. SAIL OF BUILDING UPTO 100 mm.	ين و ع	-	\$.9/41,-,-,-,-,-,	0.4
	Į	ł			L. CHET IS COLUMN.		السالا	REPUBL	ļ
25/11	1	. ]	17.0		CETALITY I	00		8.P.S. 80.15	1
-	İ				-80-	ከወ <sup>ያ</sup>	- pg-	15/41,5,0/36,-,-,-,	3.5
	١	ļ	, ,			KOS			Ì
	١		19.9		DETRUTUR:	( Q		#2705AL, 5.7.7. Bo. 28	1
Ī	1	i	{		•≱≎-	65	-,20-	2.0/60,-,-,-,	
Ì	1	į	· 1		LANCE BOLLING OF GRAFITIT	p9'n		REFWEAL	1
ļ.,	1	. ]	[]		CONTROL DESCRIPTION,	<b>6</b> ~		#.p.7. #4.21	1
27/17	1		21,4		œist£≇ì	174	}	C=019[pe41	ł
ĺ	İ	- /[	•		-100-	b\&	-po-	\$4769,-,-,	j
	I	1	-			to c		ABTHEAL	ļ
•	ĺ	Į	21.0		F <u>, </u>	2	-	respirations:	1
	1	- 1			DETERMAND	T-7:	-#D+	13/6,7,3/4,2.0/42,-,	D.8
		- 1			-20-	005		REFUSAL	
	1	. 1							
		1	24.0	7.0	(HOLE CLOSED)		1 4	'	ł

Pode yes

\$681617.5 cmc=1.4 A

AL D

### PHASE - III

# LITHOLOGIC SYMBOLS

1. SOIL

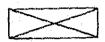
2. DETRITUS

3. SILTY CLAYEY SAND

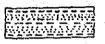
4. SILTY CLAY

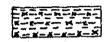
5. GRANITE GNEISS

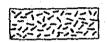
6. MUSCOVITE SCHIST













### ABBREVATIONS

\* Colour - Col.

\* Mineral - Mni.

\* Debbles - Peb.

\* Cobbles - Cob.

\* Disturbed Sample - D.S.

\* Wash Sample - W.S.

\* Core Sample - C.S.

Quartz - QTZ

11B1

CLERATI: HEA BUSIC DESKON STUDY THAN FOR BUDGET ON HIM OF SALESTAN distr is district any students district to the

	-	160	19600	The second				Contract of Section	·
		400	b 0430	1	Comp Surrey		a	Environ at time to	1
i	H.	 1	†~~	<del></del>	THE REST IN THE PERSON NAMED IN	7		<u> </u>	<del>-</del>
					MARIE AND STREET, Driver,	١X١	~;		١.
				-		1 🖳	! "		۱:
		l	13	1	\$2,77 feet man ford \$44.	FE 2.5		3,8,8 60.1	٦.
- 1		Į	1.	l	ATTENDED THE COME EAS.  COMMENT PROBLEM, SECRETAR & SAN,  COME THE COME OF THE	5.29		1071,L1/31,L1/41	13
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1		l	7.1	·	Service.	1,80,000	-	4,7,7 **.7	٠.
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١	ını				MATELLA MARIE I	60		5.2.7 Mo.5 martistes: LG/29,7,5349,-,-,s,s	١.,
١		l			Control of States and the states of the stat		49-	2/15,1,5345,-,-,4,	
1		ì	7,7	l	ļ	(2)	-	8.9.7 mg.7	ł
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ı				•	<b>200</b>	C.		22,579,	<b>3.</b> .
ł				١.		Δöl	***	restants.	
ı	g/JL			1	<del> </del>	댔		7.7.7 H7	
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#### Appendix-7: Collected Data

#### Data Name

#### Issued By

#### 1 Socio-economic Data

a) 7 th 5-Year Plan, July 1, 1988 - June 30, 1993

b) Perspective Plan, 1988 - 2003

 Revenue Expenditure of NWFP for 1988 - 89 to 1990 - 91

 Revenue Expenditure of NWFP for 1989 - 90 to 1991 - 92

e) Road Net Works Break-down in NWFP/FATA 1990

f) District Wise Area, Population, Density and Growth Rate of NWFP, 1961 - 1972 Census

g) Pakistan's Balance of Payments, 1988 - 89

h) Percentage Distribution Based on Major Industry Division of Employed Persons By Employment Status, 1986 - 87

i) Population Growth Survey, 1979

j) Economic Survey of Pakistan for 1988 - 89

k) Total No. of Dev. Schemes for 1991 - 92

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2 Organization

a) Notification dated Peshawar, 30/06/1992

b) Organization Chart

C&W Dept., NWFP Government C&W Dept., NWFP Government

3 Technical and Engineering Data

a) Standard Designs of Bridge Superstructure Precast Post-tensioned Girders

 Hydrological Data, Panjikora River and Its Tributaries, 1992 C&W Dept., NWFP Government

C&W Dept., NWFP Government

4 Map

 Road Inventory Map, 1991
 Abbottabad, Mansehra, Kohistan, Swat, Chitral, Dir, Malakand, Buner

b) North West Frontier Province, Scale 1/666,666

c) West Pakistan, Scale 1/50,000

C&W Dept., NWFP Government Institute of Regional Studies, Peshawar Surveyor General, Government of Pakistan, 1968

