

Safe Roads to Prosperity

Roads Authority  
P.O. Box 265  
Opuwo  
September 26, 2017

Our Ref:

Your Ref:

Attention: MR Abraham Ilende

Enquiries: Jackie Rutz  
Telephone: 065-273598  
Fax: 065-273599  
Email: [rutz@ra.org.na](mailto:rutz@ra.org.na)

**SUBJECT: Received your email about road building.**

Dear Sir,

This office hereby acknowledges receipt of your email regarding the construction of a road adjacent to and eventually linking up with a National road, District Road 3648. The project will be executed by the community themselves.

Since the demining work of the police explosives division will be far from the road, this office has no objection in such work to be carried out.

Please feel free to contact us for further clarity.

Regards

Jackie Rutz  
Chief Engineering Technician: Opuwo/Oulapi

Established in terms of the Roads Authority Act, 1999 (Act 17 of 1999)  
Board of Directors: Mr. B. Katjave (Chairperson), Ms. E. Molonga, Ms. L. Brandt, Mr. O. T. Hveluuh, Mr. C. Smith



ATTENTION : Mr. A. Ilende

Client: MAO TSE TUNG PROPERTY RENTAL CC

PROJECT: Community Road

DATE SAMPLE: 03 December 2016

POSITION: Ongulugumbe Village BP

SECTION: Proposed Material

DESCRIPTION OF MATERIAL: Light Brown Silty Gravel

**CALIFORNIA BEARING RATIO (C.B.R.) DATA**

Km/Distance	Sample No	CBR at mm Penetration			Expansion after Soaking %	Moisture Content after Soaking	Modified A.A.S.H.T.O DATA			Laboratory Compaction DATA		
		2.54	5.08	7.62			Max density OMC	CBR at % compaction		Dry density kg/m <sup>3</sup>	% of mod. AASHTO density	Moulding Moisture %
Hole 3	a	81	84	70	0.03	13.2	1929	100%= 90	93%= 39	1933	100.2	
	b	67	50	42	0.06	14.1		98%= 70	90%= 28	1867	96.8	11.4
	c	33	33	33	0.11	15.9	11.4	95%= 59		1783	92.4	
<b>COLTO CLASSIFICATION:</b>		<b>GS</b>										

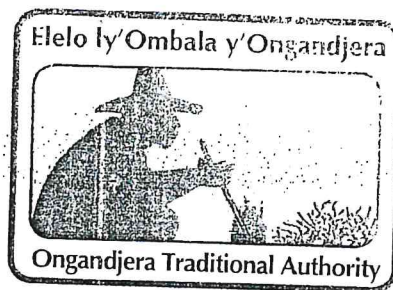
**SCREEN AND MECHANICAL ANALYSIS**

Km/Distance	Sample No	SIEVE ANALYSIS											SOIL/MORTAR ANALYSIS					ATTERBERG CONSTANTS					
		PERCENTAGE PASSING SCREENS mm																GM	LLM	PI	LS		
Depth (mm)	150	106	90	75	63.0	53.0	37.5	26.5	19.0	13.2	4.75	2.00	0.425	0.075	-2.00	-0.425	-0.250	+0.150					
	Hole 3			100	90	81	73	68	61	60	49	41	31	9	24	17	21	14	2.19	25	4	2.0	
	OND 850/16																						
600-1800																							
<b>COLTO CLASSIFICATION:</b>		<b>GS</b>																					

P.O. Box 246 Ondangwa Namibia  
 Tel: +264-65-241515  
 Fax: +264-65-241516  
 Cell: +264-81-1294632  
 E-Mail: gmts@mweb.com.na

Lab Manager Signature: *[Signature]*  
 Date: 11/12/2016

Assistant Engineer Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_



P O BOX 2, OKAHAO  
TEL: 065 252087  
FAX: 065 252088

10 August 2017

To: The Station Commander  
Okahao Police Station  
Private Bag  
Okahao

Dear Sir/Madam

**Road Construction and clearance of landmines**

Ongandjera Traditional Authority presents seasonal greetings to your reputable office and wish you well together with the management team of the police station.

We received a letter from Ongulugumbe village in Ongandjera area expressing their desire and willingness to meet the GRN halfway for the construction of a gravel road to pass through their village. Ongulugumbe is a village situated in the bushy area where the liberation struggle was fought and the two opposing forces used to crash often, the residents of that village are of the opinion that may be the area might contain some landmines.

It is against this background that the community of ongulugumbe village are humbly requesting your competent and reputable office to assist them with some members of the police force to clear the area from landmines (if any) for the construction of the gravel road within the village.

You are sincerely and humbly requested to contact Mrs Frieda Komeya, cell 0813628828 for further clarification if any.

Thanking you in advance for your – cooperation and understanding

Yours faithfully,  
Ongandjera Traditional Authority



2006-03-11  
Yours faithfully

*KONANTINDA*

Ester O. Nantinda

Secretary: Ongandjera Traditional Authority

Cc: Mrs Frieda Komeya: Ongulugumbe

Ingulugumbé  
3-8-2017

Kaana mbelewa, aasimanekawa, Osh  
nima ekwa shili paleko. Mwene gomukun-  
nda Ingulugumbé, ota kwa shili  
paleke kutja momukunda gwe omu  
na akwa shigwana yomukua  
gwe, yimanga kumwe opo yatsa  
kanéke epangalo ondjila kati sho  
ya kutha ombinga mokulonga opati  
momukunda gwetu. Onkee otaya  
indele opo mpoka yafula iithindi pu  
minihiluse koma shina angoka hage  
minihile omboma mevi, oshoka  
oshitopolwa oshali koki yita tangi  
shotamu ukuko ekwa shili paleko  
ndika. Mwene gomukunda Mun Frida Komeya

THE HEADWOMAN  
FRIDA KOMEYA  
- 3 AUG 2017  
INGULUGUMBE VILLAGE  
KATWI REGION  
TEL: 251 362 8828

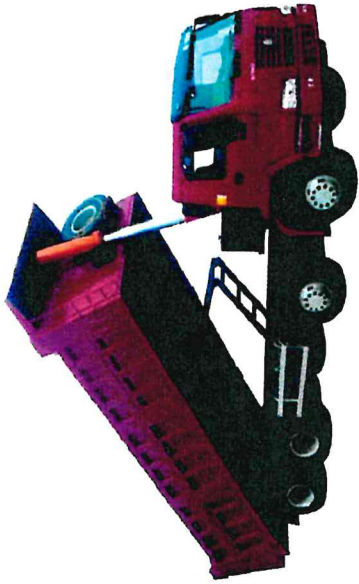
F. Komeya

~~mmmm~~  
(P. Festus)

WEST  
2017

2017-08-01

1 Material haulage Truck



Capacity  
max speed  
slope climbing capability  
dimension (windth)  
Ramp design  
Ramp operating windth  
safety berm/windrow windth  
Water run ways

Ramp windth  
Ramp slope

2 Borrow pit design

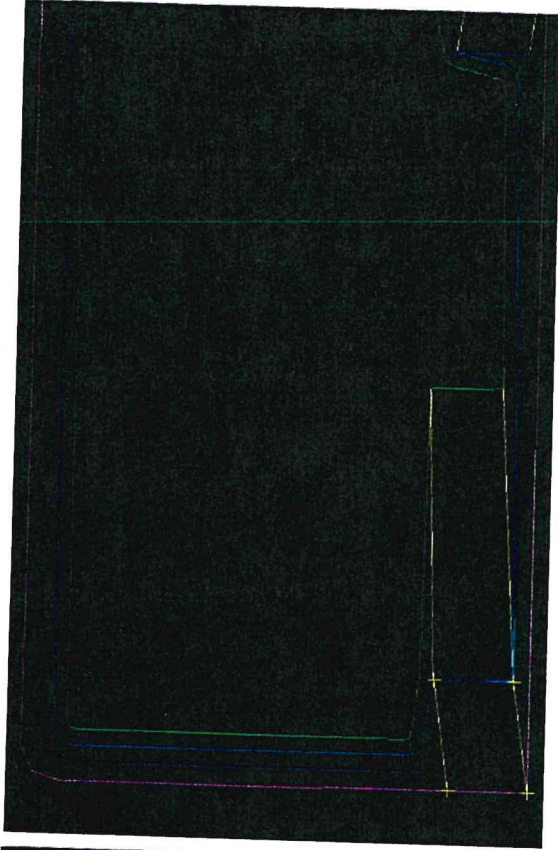
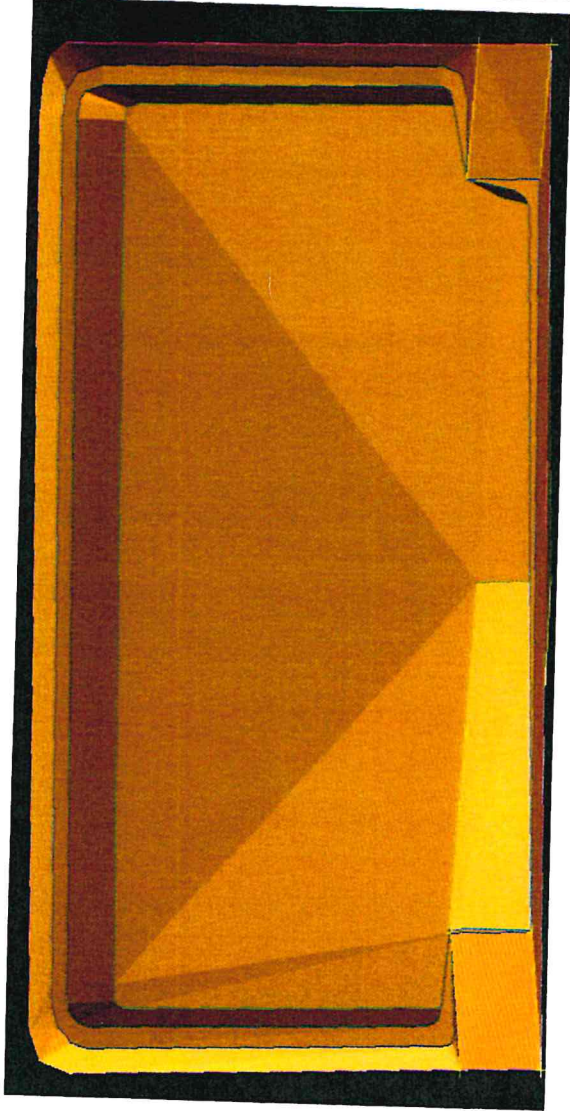
Sand angle of repose  
Compacted silica sand

Excavation depth  
catch berm windth

30 ton  
80 km/h  
40 %  
2.5 m  
dual way  
7.5 3 x truck windth  
2 m  
0.4 m  
9.9 m  
10 m  
1 in 7 **sand** , 1 in 5 on **gravel**  
35 deg  
75 deg  
8 m  
2 m  
1 in 1.5  
1 in 0.3

Wall slope

75 deg



**3** Volumes

Trisolation	Object Name	Trisolation	Object	Trisolation	Object NcTrisolation
1	True sand volume		8063	1	
	Sand S.G		1.5		
	Sand tonnages		<b>12,095</b>		
	starts	01 October 2017			
	Loads per 2 truck	56			ton
	Haulage distance	300			m
	haulage speed loaded	35			km/h
	haulage speed empty	40			km/h

**Sand stripping**

Project schedule

Cycle time	12	(0.20) hour
Operating hours	8	
Manshift	2,240	
number of days	5.40	

Project schedule ends 09 October 2017

**Gravel Excavation**

Project schedule	starts	01 April 2018	
	Loads per 2 truck	56	ton
	Haulage distance	3300	m
	haulage speed loaded	40	km/h
	haulage speed empty	50	km/h
	Cycle time	20	minutes
	Operating hours	8	hours
	Manshift	1,358	ton/day
	number of days	47.62	days

Project schedule ends 16 June 2017





1.3 m  
6.7 m  
8 m  
76,740 †

avei