

Brief Note on the Project.

NIZAM CHERUVU - SEGMENT – 17/1 in Warangal District.

The Government of Telangana has decided to take up the Water Grid programme as a flag ship item to provide safe drinking water to all rural and urban people at 100 lpcd to rural households and 135 lpcd in municipalities and 150 lpcd in corporation areas.

The provision of safe drinking water deserves top priority to improve the health and economic development of the people in the project area. Majority of people in the Project area are tribal, illiterate and economically very poor. Scarcity of water is one of the major problems in this area.

The people in district purely depend only on ground water for drinking, domestic and agriculture purposes. Warangal District comprises geographically the underlain granites with coarse to medium texture. Dolerite dykes varying from few meters to hundreds of meters traverse the area. These dykes are very hard and compact and stand out prominently in the granite rocks. The ground in the area is limited to secondary porosity developed through fracturing and subsequent weathering. The movement of ground water is controlled by the degree of inter connection of these secondary pores.

So, it is extremely difficult to obtain potable drinking water especially in the project area. The bore wells fitted with hand pumps are yielding very little and proved failure in many places as the water table has depleted very fast due to frequent failures of monsoon in the District. Many of habitations which are covered partially earlier are again looking for relief as the source infrastructure provided is in need of either augmentation or replacement. Due to shallow basin of the area having very poor potential of ground water and over exploited by the farmers for Irrigation purposes by digging many of open wells in their fields, the individual sources of open wells for the PWS Schemes and MPWS Schemes have become seasonal and failed to supply sufficient drinking water to the people in project area, in summer months.

PROJECT DESIGN CRITERIA:

The design parameters adopted for this project component are detailed below:

i) Design Period:

The year 2018 is taken as the proposed year of commissioning and considered as the base year. The ultimate design period of the project is considered as 30 years over the base year.

ii) Design Population & Population Forecast

The base year population is worked out by adding the population increase @ 0.8% growth rate from 2011 to 2018 to the population of 2011. The ultimate design population is worked out by increasing @ 0.8% growth rate in Geometric Progression for 30 years over the base year population. And for urban population the growth rate is considered as 2% in Geometric Progression.

iii) Design Parameters:

Established parameters are followed in the system design. Sources and transmission main lines are designed for ultimate population. Sumps, Water Treatment Plants, balancing and service reservoirs, pumping machinery are designed for prospective population (i.e., 15 years period over base year).

iv) Service Level:

The service level of 100lpcd for rural area, 135lpcd for urban area and 150 lpcd for corporations is considered.

v) System Design Criteria:

- | | |
|--|---|
| 1) Operation Period of Pumping Machinery | 22 hours |
| 2) Treatment | Rapid Sand Filters |
| b) Disinfecting by addition of | Chlorine in gas form |
| 3) Clear Water Sump
Intermediate sumps | 4 hours capacity for |
| 4) Service Storage of prospective
daily demand. | Capacity required for 50%
(i.e. Two fillings) |
| 5) Balancing Reservoir | 30-60minutes |
| 6) Pumping Machinery
Selection – preliminary Design | As per discharge and head |

➤ **Source:** Nizam Cheruvu Balancing Reservoir in Mahabubabad Village of Mahabubabad Mandal in Warangal District. Covering 474 Habitations in Mahabubabad (part) & Dornakal (part) Constituencies.

➤ **Population to be covered:**


- ❖ Rural- 249947
- ❖ Urban- 52394 (Mahabubabad Municipalities)
- ❖ Total- 302341

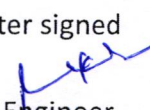
➤ No of Habitations to be covered: 474 habs

Sl.No	Name of the Constituency	Name of the Mandal	Population covered(2011)	No of Habs
1	MAHABUBABAD	Dornakal	55428	96
2		Kuravi	67179	120
3		Mahabubabad	61299	139
4		Kesamudram	66041	119
5	URBAN	Mahabubabad	52394	1
	SEGMENT TOTAL		302341	474


Sl.No	Name of the Structure	Location	Capacity in KL	Staging mtrs	GL	Remarks
1	2	3	4	5	6	8
1	Sump	Nijamchervu	3100		215.66	Non-Forest land
2	Sump	Nijamchervu (urban)	3100		215.66	
3	OHBR	Nijamchervu	400	30.00	296.00	


- **Pumpsets Proposed:** at Head Works @ sump (Nijam cheruvu) – 3nos x 220 HP
- **Municipal Requirement:** Mahabubabad Municipality - 17.02 MLD (As per requirement given by Municipal authorities).
- **Industrial Requirement:** Considered 10% of Total Demand


 Superintending Engineer
 TDWSP Circle, Warangal

Counter signed

 Chief Engineer,
 TDWSP, Hyderabad.

AREA STATEMENT -NIZAM CHERUVU SEGMENT - 17/1- WGL						
Set	Structure type	Pipe Dia	Length in m	width m	Area_Ha	Total area in Ha
1	PIPELINE	200	1415.996	0.80	0.113	0.148
	PIPELINE	63	494.747	0.70	0.035	
2	PIPELINE	63	1001.797	0.80	0.080	0.598
	PIPELINE	200	4694.829	0.80	0.376	
	PIPELINE	63	392.448	0.80	0.031	
	PIPELINE	63	783.748	0.74	0.058	
	PIPELINE	63	489.693	0.80	0.039	
	PIPELINE	63	172.669	0.80	0.014	
3	PIPELINE	225	1466.489	1.00	0.147	0.147
4	PIPELINE	90	5468.045	0.70	0.383	1.146
	PIPELINE	450	285.947	1.00	0.029	
	PIPELINE	63	489.157	0.80	0.039	
	PIPELINE	450	4642.130	1.00	0.464	
	PIPELINE	450	2315.337	1.00	0.232	
5	PIPELINE	63	258.475	0.70	0.018	0.171
	PIPELINE	110	2181.184	0.70	0.153	
6	PIPELINE	63	1646.412	0.70	0.115	0.465
	PIPELINE	63	2196.086	0.70	0.154	
	PIPELINE	63	2801.504	0.70	0.196	
7	PIPELINE	140	2587.952	0.70	0.181	0.314
	PIPELINE	125	812.560	0.70	0.057	
	PIPELINE	110	1082.155	0.70	0.076	
8	PIPELINE	180	743.197	0.80	0.059	0.397
	PIPELINE	200	3305.615	0.80	0.264	
	PIPELINE	63	1041.966	0.70	0.073	
9	PIPELINE	63	2568.033	0.70	0.180	0.328
	PIPELINE	63	681.035	0.70	0.048	
	PIPELINE	90	1430.462	0.70	0.100	
TOTAL			47449.668		3.713	3.713

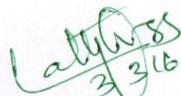

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 Chief Engineer
 TOWSP Hyderabad.

FOREST AREA STATEMENT IN SEGMENT No.17/1- NIZAM CHERUVU

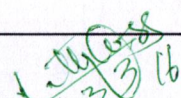
DIVISION	RANGE	SECTION	BEAT	BLOCK	COMP_NO	SET	Dia	Width	Length_mt	Area_Ha
WARANGAL SOUTH	MAHBOOBABAD	KAMBALPALLY	KAMBALPALLY	MOTLATIMMAPUR	1265	9	63	0.70	470.323	0.033
WARANGAL SOUTH	MAHBOOBABAD	KAMBALPALLY	KAMBALPALLY	MOTLATIMMAPUR	1266	9	90	0.70	1430.462	0.100
WARANGAL SOUTH	GUDUR	APPARAJPALLY	APPARAJPALLY	DANSARI FB II	1194	5	63	0.70	258.475	0.018
WARANGAL SOUTH	MAHBOOBABAD	KESAMUDRAM	BERIWADA	DANASARI-1	1183	5	110	0.70	2181.184	0.153
WARANGAL SOUTH	MAHBOOBABAD	KAMBALPALLY	KAMBALPALLY	MOTLATIMMAPUR	1262	9	63	0.70	2568.033	0.180
WARANGAL SOUTH	MAHBOOBABAD	KESAMUDRAM	KESAMUDRAM	DANASARI-1	1178	4	450	1.00	285.947	0.029
WARANGAL SOUTH	MAHBOOBABAD	KESAMUDRAM	KESAMUDRAM	DANASARI-1	1178	4	450	1.00	4642.130	0.464
WARANGAL SOUTH	MAHBOOBABAD	EDULAPUSAPALLY	PENUGONDA	LAXMIPURAM	1198	7	110	0.70	1024.180	0.072
WARANGAL SOUTH	MAHBOOBABAD	KESAMUDRAM	KESAMUDRAM	DANASARI-1	1177	4	90	0.70	5468.084	0.383
WARANGAL SOUTH	MAHBOOBABAD	KESAMUDRAM	KESAMUDRAM	DANASARI-1	1186	6	63	0.70	2196.086	0.154
WARANGAL SOUTH	MAHBOOBABAD	KESAMUDRAM	BERIWADA	DANASARI-1	1186	4	63	0.80	489.157	0.039
WARANGAL SOUTH	MAHBOOBABAD	KESAMUDRAM	KESAMUDRAM	DANASARI-1	1179	4	450	1.00	2315.337	0.232
WARANGAL SOUTH	MAHBOOBABAD	EDULAPUSAPALLY	MAHABUBABAD	DANASARI-1	1192	7	140	0.70	583.318	0.041
WARANGAL SOUTH	MAHBOOBABAD	EDULAPUSAPALLY	EDULAPUSAPALLY	LAXMIPURAM	1200	7	140	0.70	2006.238	0.140
WARANGAL SOUTH	MAHBOOBABAD	EDULAPUSAPALLY	MAHABUBABAD	DANASARI-1	1188	6	63	0.70	2968.964	0.208
WARANGAL SOUTH	MAHBOOBABAD	EDULAPUSAPALLY	EDULAPUSAPALLY	LAXMIPURAM	1201	7	125	0.70	812.560	0.057
WARANGAL SOUTH	MAHBOOBABAD	JAMANDLAPALLY	JAMANDLAPALLY	JAMANDLAPALLY	1225	8	200	0.80	3305.615	0.264
WARANGAL SOUTH	MAHBOOBABAD	TADLAPUSAPALLY	ALAIR	DISRESERVED	1161	1	200	0.80	1415.996	0.113

DIVISION	RANGE	SECTION	BEAT	BLOCK	COMP_NO	SET	Dia	Width	Length_mt	Area_Ha
WARANGAL SOUTH	MAHBOOBABAD	TADLAPUSAPALLY	ALAIR	DISRESERVED	1161	1	63	0.70	494.747	0.035
WARANGAL SOUTH	MAHBOOBABAD	TADLAPUSAPALLY	TADLAPUSAPALLY	DANSARI-III	1168	3	225	1.00	1466.489	0.147
WARANGAL SOUTH	MAHBOOBABAD	TADLAPUSAPALLY	ALAIR	DANSARI-III	1166	2	63	0.80	1001.797	0.080
WARANGAL SOUTH	MAHBOOBABAD	TADLAPUSAPALLY	ALAIR	DANSARI-III	1166	2	200	0.80	4694.829	0.376
WARANGAL SOUTH	MAHBOOBABAD	TADLAPUSAPALLY	ALAIR	DISRESERVED	1164	2	63	0.80	172.669	0.014
WARANGAL SOUTH	MAHBOOBABAD	TADLAPUSAPALLY	ALAIR	DISRESERVED	1164	2	63	0.74	783.748	0.058
WARANGAL SOUTH	MAHBOOBABAD	EDULAPUSAPALLY	MAHABUBABAD	DANASARI-1	1190	6	63	0.70	1745.846	0.122
WARANGAL SOUTH	MAHBOOBABAD	JAMANDLAPALLY	JAMANDLAPALLY	JAMANDLAPALLY	1222	8	180	0.80	743.197	0.059
WARANGAL SOUTH	MAHBOOBABAD	TADLAPUSAPALLY	TADLAPUSAPALLY	DANSARI-III	1170	2	63	0.80	392.448	0.031
WARANGAL SOUTH	MAHBOOBABAD	JAMANDLAPALLY	JAMANDLAPALLY	JAMANDLAPALLY	1221	8	63	0.70	1041.966	0.073
WARANGAL SOUTH	MAHBOOBABAD	TADLAPUSAPALLY	TADLAPUSAPALLY	DANSARI-III	1171	2	63	0.80	489.693	0.039
									47449.518	3.713

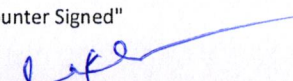

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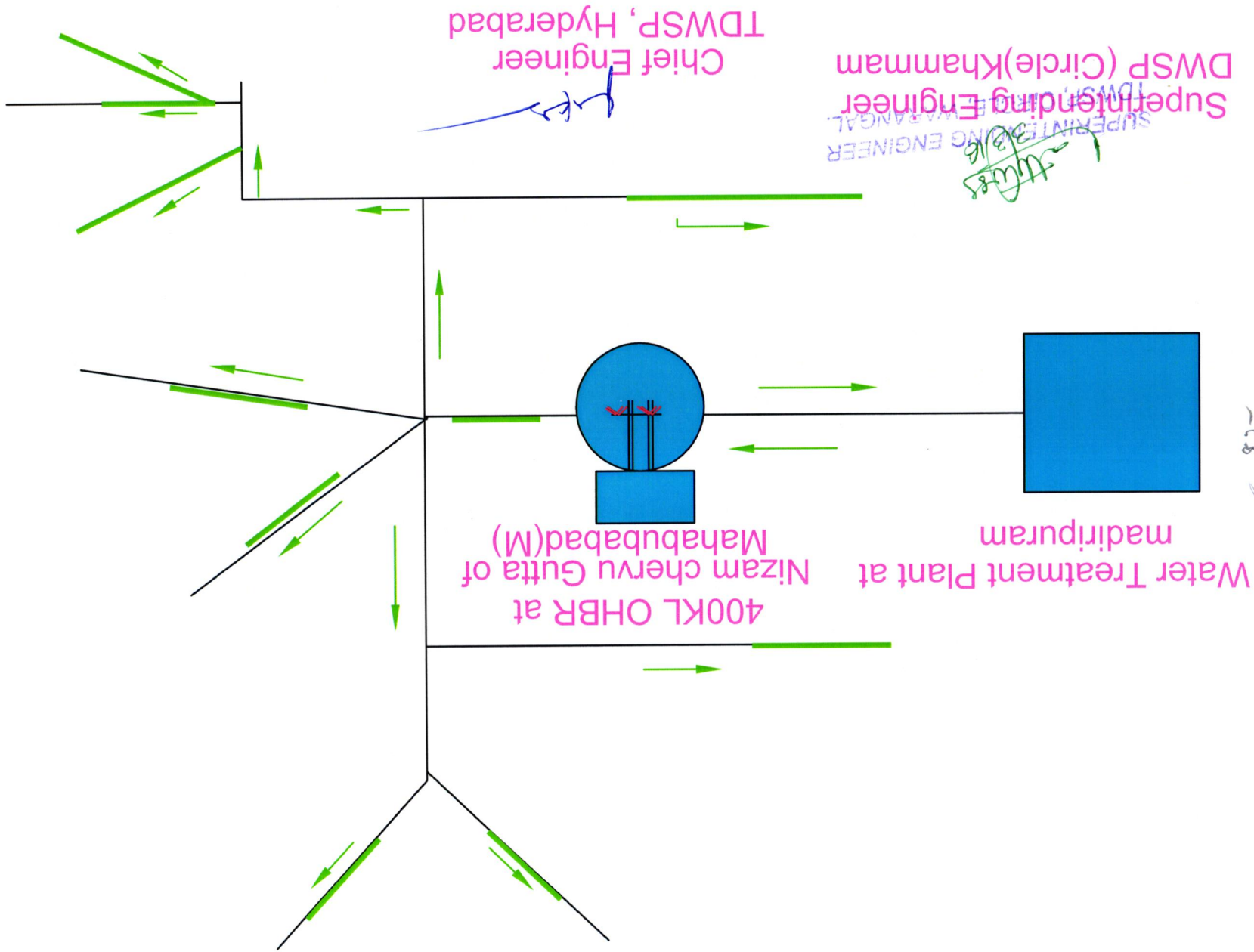
DETAILS OF SURVEY INSTRUMENTS USED				
S.No	Name of the Agency	Instruments used	Persons involved	Period of Survey
1	M/s Design Group of Engineers, Hyderabad	1.DGPS make:Trimble (R4) & Leica	Mr.Ganguly-Surveyor & Ramu-Surveyor	From November 2015 to February 2016
		2.Total Station:Leica (TS 06 Plus)	Mr.M. Sandeep Reddy ,Mr.Kishore & Naresh	


 Superintending Engineer
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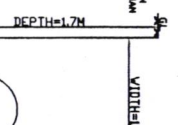
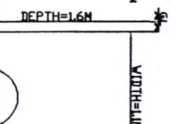
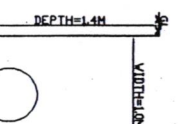
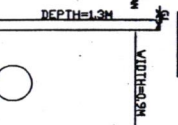
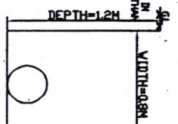
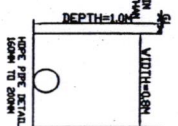
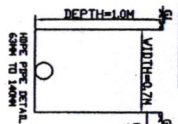

 Chief Engineer
 TDWSP, Hyderabad

Telangana Drinking Water Supply Project-Segment 17/1 of Sub Segment Nizam chervu Gutta



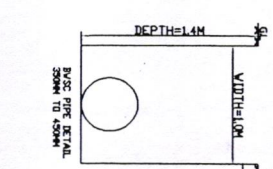
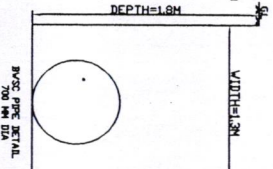
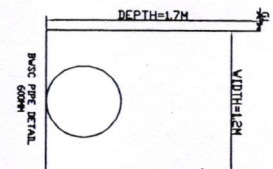
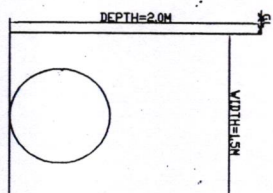
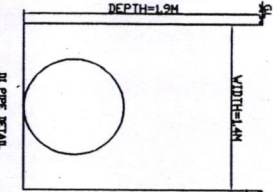
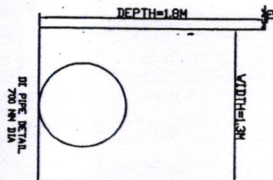
TELANGANA DRINKING WATER SUPPLY PROJECT SEGMENT-17 DRAWING SHOWING THE PIPELINE CROSS SECTION

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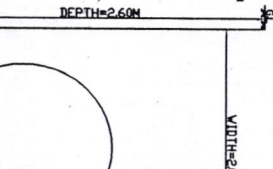
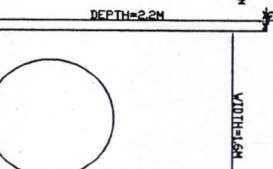
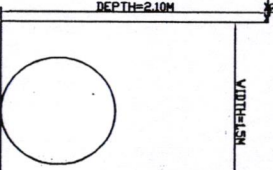
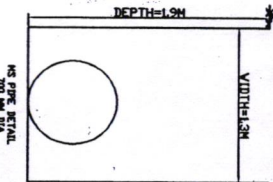
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ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SPECIFIED

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TELANGANA DRINKING WATER SUPPLY PROJECT SEGMENT-17
DRAWING SHOWING THE PIPELINE CROSS SECTION

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